

# NCI Dictionary of Cancer Terms

Snapshot taken 2024-09-10

## **1-(2'-deoxy-2'-fluoro-β-D-arabinofuranosyl) uracil**

A substance being studied in the treatment of advanced solid tumors and lymphomas. It blocks the growth of cells and may cause cancer cells to die. It is a type of uracil analog. Also called FAU.

## **1-methyl-d-tryptophan**

A substance being studied in the treatment of melanoma and many other types of cancer. 1-methyl-d-tryptophan blocks the breakdown of the amino acid tryptophan, which is needed for T cells (a type of immune system cell) to kill tumor cells. Giving 1-methyl-d-tryptophan to patients who have received chemotherapy for cancer may help kill more tumor cells. It is a type of enzyme inhibitor and immunosuppressant. Also called D-1MT.

## **10-propargyl-10-deazaaminopterin**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called folate analogs.

## **111In-Zevalin**

A radiolabeled monoclonal antibody used to find certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the diagnosis of other types of B-cell tumors. 111In-Zevalin is made up of the monoclonal antibody ibritumomab plus the radioisotope indium In 111. It binds to a protein called CD20, which is found on B cells. A machine is used to find which cells in the body have taken up 111In-Zevalin. 111In-Zevalin is a type of radioimmunoconjugate. Also called 111In-ibritumomab tiuxetan and indium In 111-ibritumomab tiuxetan.

## **111In-ibritumomab tiuxetan**

A radiolabeled monoclonal antibody used to find certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the diagnosis of other types of B-cell tumors. 111In-ibritumomab tiuxetan is made up of the monoclonal antibody ibritumomab plus the radioisotope indium In 111. It binds to a protein called CD20, which is found on B cells. A machine is used to find which cells in the body have taken up 111In-ibritumomab tiuxetan. 111In-ibritumomab tiuxetan is a type of radioimmunoconjugate. Also called 111In-Zevalin and indium In 111-ibritumomab tiuxetan.

## **11C-acetate**

A radioactive substance being studied in positron emission tomography (PET) imaging. 11C-acetate gets taken up by cells in the body, and a PET scanner is used to find which cells in the body have taken it up. Since more 11C-acetate is taken up by cancer cells than by normal cells, it can be used to help find cancer in the body and diagnose disease. Also called carbon C 11-acetate.

### **11C-choline**

A radioactive substance being studied in positron emission tomography (PET) imaging to find certain types of cancer. 11C-choline gets taken up by cells in the body and more of it is taken up by cancer cells than by normal cells. A PET scanner is used to find which cells in the body have taken up 11C-choline. Also called carbon C 11-choline.

### **11C-choline PET-CT scan**

A procedure in which a small amount of 11C-choline (a radioactive form of the vitamin choline) is injected into a vein. A scanner and a computer are used to make detailed pictures of areas inside the body where the 11C-choline collects. Cancer cells take up more 11C-choline than normal cells, so the pictures can be used to find cancer cells in the body. Also called carbon C 11-choline PET-CT scan.

### **12-O-tetradecanoylphorbol-13-acetate**

A substance being studied in the treatment of leukemias and lymphomas. It is also being studied in the treatment of other types of cancer. 12-O-tetradecanoylphorbol-13-acetate affects many cell actions and may cause tumor cells to die. It is a type of phorbol ester. Also called tetradecanoylphorbol acetate.

### **123I-MIBG**

A drug containing a form of radioactive iodine called I 123 that is used to find certain types of tumors, including pheochromocytomas and neuroblastomas. Radiation from I 123 may help show where cancer cells are in the body. 123I-MIBG is a type of radioconjugate. Also called AdreView, iobenguane I 123, and iodine I 123-metaiodobenzylguanidine.

### **126-F**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in 126-F have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give 126-F as a treatment for any disease. Also called Cancell, Cantron, Jim's Juice, JS-101, JS-114, Protocol, and Sheridan's Formula.

### **13-cis retinoic acid**

A drug closely related to vitamin A that is used to treat severe acne and may also be used to treat other skin conditions and some types of cancer, including neuroblastoma. It is also being studied in the prevention and treatment of other types of cancer. 13-cis retinoic acid binds to and activates certain protein receptors in cells, including cancer cells. This may slow the growth of cancer cells and change how these cells look and act. 13-cis retinoic acid is a type of retinoid. Also called isotretinoin.

### **131I-MIBG**

A drug that contains a form of radioactive iodine and is used to treat adults and children aged 12 years and older with certain types of malignant pheochromocytoma or paraganglioma that have spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. 131I-MIBG builds up in tumor cells and gives off radiation that may kill them. It is a type of radiotherapeutic agent. Also called Azedra, iobenguane I 131, and iodine I 131-metaiodobenzylguanidine.

### **1572 form**

A form that must be filed by an investigator running a clinical trial to study a new drug or agent. The investigator agrees to follow the U.S. Food and Drug Administration (FDA) Code of Federal Regulations for the clinical trial. The investigator verifies that he or she has the experience and background needed to conduct the trial and that it will be done in a way that is ethical and scientifically sound. Also called Form FDA 1572-Statement of Investigator.

### **17-AAG**

A substance being studied in the treatment of cancer. It is made from an antibiotic called geldanamycin. 17-AAG helps cause the breakdown of certain proteins in the cell, and may kill cancer cells. It is a type of antineoplastic antibiotic and a type of HSP90 inhibitor. Also called 17-N-allylamino-17-demethoxygeldanamycin and tanespimycin.

### **17-N-allylamino-17-demethoxygeldanamycin**

A substance being studied in the treatment of cancer. It is made from an antibiotic called geldanamycin. 17-N-allylamino-17-demethoxygeldanamycin helps cause the breakdown of certain proteins in the cell, and may kill cancer cells. It is a type of antineoplastic antibiotic and a type of HSP90 inhibitor. Also called 17-AAG and tanespimycin.

### **17-dimethylaminoethylamino-17-demethoxygeldanamycin**

17-DMAG. A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called geldanamycin analogs.

### **17p deletion**

The loss of all or part of the short arm (also called the p arm) of chromosome 17. The 17p deletion leads to the loss of the tumor suppressor gene TP53, which is linked to many genetic conditions and some types of cancer, such as leukemia, multiple myeloma, and myelodysplastic syndrome. Checking for the 17p deletion may help diagnose cancer, plan treatment, or make a prognosis. Also called chromosome 17p deletion and deletion 17p.

### **18F-16 alpha-fluoroestradiol**

A radiolabeled substance being studied as an imaging agent in breast cancer. 18F-16 alpha-fluoroestradiol binds to estrogen receptors and gives off radiation that can be detected by a positron emission tomography (PET) scan. The PET scan forms an image that shows where cancer cells with estrogen receptors can be found in the body. Also called 18F-FES and fluorine F 18-16 alpha-fluoroestradiol.

### **18F-EF5**

A radioactive substance being studied in positron emission tomography (PET) imaging to find cancer cells that have a low level of oxygen. This may help predict how well the cancer will respond to treatment. Also called fluorine F 18-EF5.

### **18F-FES**

A radiolabeled substance being studied as an imaging agent in breast cancer. 18F-FES binds to estrogen receptors and gives off radiation that can be detected by a positron emission tomography (PET) scan. The PET scan forms an image that shows where cancer cells with estrogen receptors can be found in the body. Also called 18F-16 alpha-fluoroestradiol and fluorine F 18-16 alpha-fluoroestradiol.

### **18F-FLT**

A radioactive substance being studied in the diagnosis of cancer. 18F-FLT is injected into the blood and builds up in cells that are dividing, including cancer cells. The radiation that it gives off as it decays (breaks down) helps make clear pictures of tumors during a positron emission tomography (PET) scan. Also called 18F-fluorothymidine, 3'-deoxy-3'-(18F) fluorothymidine, and fluorine F 18-fluorothymidine.

### **18F-FMCH**

A radioactive substance being studied in positron emission tomography (PET) imaging to find certain types of cancer. 18F-FMCH gets taken up by cells in the body and more of it is taken up by cancer cells than by normal cells. A PET scanner is used to find which cells in the body have taken up 18F-FMCH. Also called 18F-choline, 18F-fluoromethylcholine, and fluorine F 18-fluoromethylcholine.

### **18F-MISO**

A radioactive substance being studied as an imaging agent in head and neck cancer and other types of cancer. It binds to large molecules in cancer cells that have a low level of oxygen. Radiation given off by 18F-MISO is detected by a positron emission tomography (PET) scan. Knowing the amount of 18F-MISO in the cancer cells may help plan the best treatment and help predict whether the cancer will come back after treatment. Also called 18F-fluoromisonidazole, fluorine F 18-fluoromisonidazole, and FMISO.

### **18F-NaF PET**

A procedure used to find out if cancer has spread to the bone. A small amount of a radioactive substance called 18F-NaF is injected into a vein. A PET scan is then used to make detailed pictures of the bones. Bones with cancer in them take up more 18F-NaF than normal bones do. Also called 18F-sodium fluoride positron emission tomography and fluorine F 18-sodium fluoride PET.

### **18F-choline**

A radioactive substance being studied in positron emission tomography (PET) imaging to find certain types of cancer. 18F-choline gets taken up by cells in the body and more of it is taken up by cancer cells than by normal cells. A PET scanner is used to find which cells in the body have taken up 18F-choline. Also called 18F-fluoromethylcholine, 18F-FMCH, and fluorine F 18-fluoromethylcholine.

### **18F-fludeoxyglucose**

A radioactive form of glucose used in positron emission tomography (PET) imaging. 18F-fludeoxyglucose gets taken up by cells in the body, and a PET scanner is used to find which cells in the body have taken it up. Since more 18F-fludeoxyglucose is taken up by abnormal cells, including cancer cells, than by normal cells, it can be used to find cancer cells in the body and to diagnose cancer and other conditions. Also called fluorine F 18-fludeoxyglucose.

### **18F-fluoromethylcholine**

A radioactive substance being studied in positron emission tomography (PET) imaging to find certain types of cancer. 18F-fluoromethylcholine gets taken up by cells in the body and more of it is taken up by cancer cells than by normal cells. A PET scanner is used to find which cells in the body have taken up 18F-fluoromethylcholine. Also called 18F-choline, 18F-FMCH, and fluorine F 18-fluoromethylcholine.



### **18F-fluoromisonidazole**

A radioactive substance being studied as an imaging agent in head and neck cancer and other types of cancer. It binds to large molecules in cancer cells that have a low level of oxygen. Radiation given off by 18F-fluoromisonidazole is detected by a positron emission tomography (PET) scan. Knowing the amount of 18F-fluoromisonidazole in the cancer cells may help plan the best treatment and help predict whether the cancer will come back after treatment. Also called 18F-MISO, fluorine F 18-fluoromisonidazole, and FMISO.

### **18F-fluorothymidine**

A radioactive substance being studied in the diagnosis of cancer. 18F-fluorothymidine is injected into the blood and builds up in cells that are dividing, including cancer cells. The radiation that it gives off as it decays (breaks down) helps make clear pictures of tumors during a positron emission tomography (PET) scan. Also called 18F-FLT, 3'-deoxy-3'-(18F) fluorothymidine, and fluorine F 18-fluorothymidine.

### **18F-sodium fluoride positron emission tomography**

A procedure used to find out if cancer has spread to the bone. A small amount of a radioactive substance called 18F-sodium fluoride is injected into a vein. A PET scan is then used to make detailed pictures of the bones. Bones with cancer in them take up more 18F-sodium fluoride than normal bones do. Also called 18F-NaF PET and fluorine F 18-sodium fluoride PET.

### **1H-nuclear magnetic resonance spectroscopic imaging**

A noninvasive imaging method that provides information about cellular activity (metabolic information). It is used along with magnetic resonance imaging (MRI) which provides information about the shape and size of the tumor (spatial information). Also called magnetic resonance spectroscopic imaging, MRSI, and proton magnetic resonance spectroscopic imaging.

### **2-D mammography**

A procedure that uses x-rays to take pictures of the inside of the breast. The pictures are usually taken from two different angles, and a computer or x-ray film is used to make 2-D pictures of the breast. 2-D mammography is used to check for breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). Also called 2-dimensional mammography.

### **2-dimensional mammography**

A procedure that uses x-rays to take pictures of the inside of the breast. The pictures are usually taken from two different angles, and a computer or x-ray film is used to make 2-D pictures of the breast. 2-dimensional mammography is used to check for breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). Also called 2-D mammography.

### **2-methoxyestradiol**

2ME2. A drug that prevents the formation of new blood vessels that tumors need in order to grow. It is derived from estrogen and belongs to the family of drugs called angiogenesis inhibitors.

### **21-gene signature**

A lab test that is used to help predict whether breast cancer will come back or spread to other parts of the body. The test looks at the activity level of 21 different genes in breast cancer tissue of people with early-stage (stage I, II, or

IIIA) invasive breast cancer that is estrogen receptor (ER) positive, HER2 negative, and is either node-negative or has spread to 1 to 3 lymph nodes. If the test shows that there is a high risk that the cancer will spread or come back, treatment with chemotherapy may be needed to lower the risk. Also called Oncotype DX breast cancer assay.

### **2IT-BAD monoclonal antibody 170**

A substance being studied in the treatment of cancer. It is made by linking a monoclonal antibody called 170, which binds to a protein called MUC-1, to a substance called 2IT-BAD, which binds radioactive substances. 2IT-BAD monoclonal antibody 170 may be used to detect cancer cells and kill them. It is a type of immunoconjugate.

### **3 Tesla MRI**

A procedure in which radio waves and a powerful magnet linked to a computer are used to make detailed pictures of areas inside the body. These pictures can show the difference between normal and abnormal tissue. 3 Tesla MRI has a stronger magnet and makes better images of organs and soft tissue than other types of MRI do. It is used to make images of the brain, the spine, the soft tissue of joints, and the inside of bones and blood vessels. Also called 3 Tesla magnetic resonance imaging and 3T MRI.

### **3 Tesla magnetic resonance imaging**

A procedure in which radio waves and a powerful magnet linked to a computer are used to make detailed pictures of areas inside the body. These pictures can show the difference between normal and abnormal tissue. 3 Tesla magnetic resonance imaging has a stronger magnet and makes better images of organs and soft tissue than other types of MRI do. It is used to make images of the brain, the spine, the soft tissue of joints, and the inside of bones and blood vessels. Also called 3 Tesla MRI and 3T MRI.

### **3,4-benzpyrene**

A chemical that comes from certain substances when they are not burned completely. It is found in car exhaust, smoke from wood fires, tobacco, oil and gas products, charred or grilled foods, and other sources. It may also be found in water and soil. 3,4-Benzpyrene can cause a skin rash, a burning feeling, skin color changes, warts, and bronchitis. It may also cause cancer. It is a type of polycyclic aromatic hydrocarbon. Also called benzo(a)pyrene.

### **3-AP**

A substance being studied in the treatment of cancer. It is a type of ribonucleotide reductase inhibitor. Also called 3-aminopyridine-2-carboxaldehyde thiosemicarbazone and Triapine.

### **3-D**

A graphic display of depth, width, and height. Also called 3-dimensional.

### **3-D mammography**

A procedure that uses x-rays to take a series of pictures of the inside of the breast from many different angles. A computer is used to make 3-D pictures of the breast from these x-rays. 3-D mammography is used to check for breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). It may allow doctors to see breast tissue, including dense breast tissue, more clearly than with 2-D mammography. This

may make breast tumors or other changes in the breast easier to find. Also called 3-dimensional mammography and digital breast tomosynthesis.

### **3-aminopyridine-2-carboxaldehyde thiosemicarbazone**

A substance being studied in the treatment of cancer. It is a type of ribonucleotide reductase inhibitor. Also called 3-AP and Triapine.

### **3-dimensional**

A graphic display of depth, width, and height. Also called 3-D.

### **3-dimensional conformal radiation therapy**

A procedure that uses a computer to create a 3-dimensional picture of the tumor. This allows doctors to give the highest possible dose of radiation to the tumor, while sparing the normal tissue as much as possible. Also called 3-dimensional radiation therapy and 3D-CRT.

### **3-dimensional mammography**

A procedure that uses x-rays to take a series of pictures of the inside of the breast from many different angles. A computer is used to make 3-D pictures of the breast from these x-rays. 3-dimensional mammography is used to check for breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). It may allow doctors to see breast tissue, including dense breast tissue, more clearly than with 2-D mammography. This may make breast tumors or other changes in the breast easier to find. Also called 3-D mammography and digital breast tomosynthesis.

### **3-dimensional radiation therapy**

A procedure that uses a computer to create a 3-dimensional picture of the tumor. This allows doctors to give the highest possible dose of radiation to the tumor, while sparing the normal tissue as much as possible. Also called 3-dimensional conformal radiation therapy and 3D-CRT.

### **3D-CRT**

A procedure that uses a computer to create a 3-dimensional picture of the tumor. This allows doctors to give the highest possible dose of radiation to the tumor, while sparing the normal tissue as much as possible. Also called 3-dimensional conformal radiation therapy and 3-dimensional radiation therapy.

### **3F8**

A type of monoclonal antibody used in cancer detection or therapy. Monoclonal antibodies are laboratory-produced substances that can locate and bind to cancer cells.

### **3T MRI**

A procedure in which radio waves and a powerful magnet linked to a computer are used to make detailed pictures of areas inside the body. These pictures can show the difference between normal and abnormal tissue. 3T MRI has a stronger magnet and makes better images of organs and soft tissue than other types of MRI do. It is used to make images of the brain, the spine, the soft tissue of joints, and the inside of bones and blood vessels. Also called 3 Tesla magnetic resonance imaging and 3 Tesla MRI.

### **3'-deoxy-3'-(18F) fluorothymidine**

A radioactive substance being studied in the diagnosis of cancer. 3'-deoxy-3'-(18F) fluorothymidine is injected into the blood and builds up in cells that are

dividing, including cancer cells. The radiation that it gives off as it decays (breaks down) helps make clear pictures of tumors during a positron emission tomography (PET) scan. Also called 18F-FLT, 18F-fluorothymidine, and fluorine F 18-fluorothymidine.

#### **4-NQO**

A substance that is used in cancer research to cause tumors in laboratory animals. This is done to test new diets, drugs, and procedures for use in cancer prevention and treatment. Also called 4-nitroquinoline 1-oxide.

#### **4-demethoxydaunorubicin**

A drug used with other drugs to treat adults with acute myeloid leukemia. It is also being studied in the treatment of other types of cancer. 4-demethoxydaunorubicin blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called Idamycin PFS and idarubicin hydrochloride.

#### **4-hydroxytamoxifen**

A form of the drug tamoxifen that is made by the body after taking tamoxifen. It can also be made in the laboratory, and may help decrease breast density. A topical form of 4-hydroxytamoxifen is being studied in breast cancer screening.

#### **4-nitroquinoline 1-oxide**

A substance that is used in cancer research to cause tumors in laboratory animals. This is done to test new diets, drugs, and procedures for use in cancer prevention and treatment. Also called 4-NQO.

#### **44369**

Treatment to suppress or block the production or action of male hormones. This is done by having the testicles removed, by taking female sex hormones, or by taking drugs called antiandrogens. Also called androgen ablation and androgen deprivation.

#### **45 CFR 46**

Laws set by the U.S. Department of Health and Human Services (DHHS) to protect a person from risks in research studies that any federal agency or department has a part in. Also called 45 Code of Federal Regulations Part 46, human participant protection regulations, and Protection of Human Subjects.

#### **45 Code of Federal Regulations Part 46**

Laws set by the U.S. Department of Health and Human Services (DHHS) to protect a person from risks in research studies that any federal agency or department has a part in. Also called 45 CFR 46, human participant protection regulations, and Protection of Human Subjects.

#### **5-FU**

A drug given as an injection to treat cancers of the breast, colon, rectum, stomach, and pancreas and as a cream to treat actinic keratosis (a skin condition that may become cancer) and certain types of basal cell skin cancer. It is used under the brand names Carac, Tolak, Efudex, and Fluoroplex to treat actinic keratosis. It is also used under the brand name Efudex to treat basal cell skin cancer. 5-FU is also being studied in the treatment of other conditions and types of cancer. It stops cells from making DNA and may kill cancer cells. 5-FU is a type of antimetabolite. Also called 5-fluorouracil and fluorouracil.

### **5-FU-leucovorin calcium**

A chemotherapy combination used to treat colorectal cancer. It is also used with radiation therapy to treat esophageal cancer and stomach cancer. It includes the drugs fluorouracil and leucovorin calcium. Also called 5-FU-leucovorin calcium regimen.

### **5-FU-leucovorin calcium regimen**

A chemotherapy combination used to treat colorectal cancer. It is also used with radiation therapy to treat esophageal cancer and stomach cancer. It includes the drugs fluorouracil and leucovorin calcium. Also called 5-FU-leucovorin calcium.

### **5-HIAA**

A substance formed by the breakdown of a hormone called serotonin in the liver. Nerves use serotonin to send messages to one another. After 5-HIAA is broken down from serotonin in the liver, the kidneys filter it from the blood and pass it into the urine. Serotonin and 5-HIAA may be found in higher-than-normal amounts in patients with certain tumors, such as carcinoid tumor. Measuring the amount of 5-HIAA in the urine may help diagnose and monitor carcinoid tumors and other conditions. 5-HIAA is a type of tumor marker. Also called 5-hydroxyindoleacetic acid.

### **5-HT3 receptor antagonist**

A type of drug used to treat certain types of irritable bowel syndrome and relieve nausea and vomiting. It is a type of antiemetic. Also called 5-hydroxytryptamine 3 receptor antagonist and type 3 serotonin receptor antagonist.

### **5-alpha reductase inhibitor**

A substance that blocks an enzyme needed by the body to make dihydrotestosterone (a male sex hormone made from testosterone). Dihydrotestosterone can cause the prostate to grow. 5-alpha reductase inhibitors are used to shrink an enlarged prostate gland and to improve the flow of urine in a condition called benign prostatic hyperplasia (BPH). A 5-alpha reductase inhibitor is a type of enzyme inhibitor.

### **5-fluoro-2-deoxycytidine**

A substance being studied in the treatment of some types of cancer. It may prevent the growth of tumors by stopping cancer cells from dividing and by killing them. It is a type of antimetabolite. Also called FdCyd.

### **5-fluorouracil**

A drug given as an injection to treat cancers of the breast, colon, rectum, stomach, and pancreas and as a cream to treat actinic keratosis (a skin condition that may become cancer) and certain types of basal cell skin cancer. It is used under the brand names Carac, Tolak, Efudex, and Fluoroplex to treat actinic keratosis. It is also used under the brand name Efudex to treat basal cell skin cancer. 5-fluorouracil is also being studied in the treatment of other conditions and types of cancer. It stops cells from making DNA and may kill cancer cells. 5-fluorouracil is a type of antimetabolite. Also called 5-FU and fluorouracil.

### **5-hydroxyindoleacetic acid**

A substance formed by the breakdown of a hormone called serotonin in the liver. Nerves use serotonin to send messages to one another. After 5-hydroxyindoleacetic acid is broken down from serotonin in the liver, the kidneys filter it from the blood and pass it into the urine. Serotonin and 5-hydroxyindoleacetic acid may be found in higher-than-normal amounts in

patients with certain tumors, such as carcinoid tumor. Measuring the amount of 5-hydroxyindoleacetic acid in the urine may help diagnose and monitor carcinoid tumors and other conditions. 5-hydroxyindoleacetic acid is a type of tumor marker. Also called 5-HIAA.

### **5-hydroxytryptamine**

A substance that is found mostly in the digestive tract, central nervous system (brain and spinal cord), and platelets. 5-hydroxytryptamine acts both as a neurotransmitter (a substance that nerves use to send messages to one another) and a vasoconstrictor (a substance that causes blood vessels to narrow). A low level of 5-hydroxytryptamine in the brain is thought to be a cause of depression. Also called serotonin.

### **5-hydroxytryptamine 3 receptor antagonist**

A type of drug used to treat certain types of irritable bowel syndrome and relieve nausea and vomiting. It is a type of antiemetic. Also called 5-HT<sub>3</sub> receptor antagonist and type 3 serotonin receptor antagonist.

### **504 plan**

An education plan for students with disabilities or certain health conditions, such as cancer. By law, these students must have the same access to school programs and activities as students without disabilities. A 504 plan may include extra help in the classroom, such as allowing the student more time to take a test or finish an assignment, or to use a computer or tape recorder. It may also include tutoring and other services, such as speech therapy and physical therapy. It is covered under the U.S. law, Rehabilitation Act of 1973.

### **506U78**

A drug used to treat adults and children aged 1 year and older with T-cell acute lymphoblastic leukemia and T-cell lymphoblastic lymphoma. It is used in patients whose cancer has not gotten better or has recurred (come back) after treatment with other anticancer drugs. 506U78 stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called Arranon and nelarabine.

### **5q minus syndrome**

A rare disorder caused by loss of part of the long arm (q arm) of human chromosome 5. This syndrome affects myeloid (bone marrow) cells, causing treatment-resistant anemia and myelodysplastic syndromes that may lead to acute myelogenous leukemia. Also called 5q- syndrome.

### **5q- syndrome**

A rare disorder caused by loss of part of the long arm (q arm) of human chromosome 5. This syndrome affects myeloid (bone marrow) cells, causing treatment-resistant anemia and myelodysplastic syndromes that may lead to acute myelogenous leukemia. Also called 5q minus syndrome.

### **6-hydroxymethylacylfulvene**

A substance being studied in the treatment of some types of cancer. 6-hydroxymethylacylfulvene attaches to the cell's DNA and may block cancer cell growth. It is a type of alkylating agent. Also called irofulven.

### **70-gene signature**

A lab test that is used to help predict whether breast cancer will come back or spread to other parts of the body. The test looks at the activity level of 70 different genes in breast cancer tissue of people with early-stage (stage I, II, or



IIIA) invasive breast cancer that is less than 5 cm and is either node-negative or has spread to 1 to 3 lymph nodes. If the test shows that there is a high risk that the cancer will spread or come back, treatment with chemotherapy may be needed to lower the risk. Also called MammaPrint.

#### **852A**

A substance being studied in the treatment of certain adult and childhood blood cancers and other types of cancer. 852A may help the patient's immune system block tumor growth. It is a type of immune system modulator.

#### **9-cis retinoic acid**

A substance being studied in the prevention of cancer. It is a type of retinoid.

#### **90Y-DOTA-biotin**

A compound that contains the radioisotope yttrium Y 90 linked to the chemical biotin. Biotin is a molecule that binds strongly to the chemical streptavidin. 90Y-DOTA-biotin will find tumor cells in the body that have been targeted by an antibody linked to streptavidin and kill them. It is being studied together with CC49-streptavidin in the treatment of cancer. Also called yttrium Y 90-DOTA-biotin.

#### **90Y-Zevalin**

A drug used with the drug rituximab to treat certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of B-cell tumors. 90Y-Zevalin contains a monoclonal antibody that binds to a protein called CD20, which is found on B cells. It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. 90Y-Zevalin is a type of radioimmunoconjugate. Also called 90Y-ibritumomab tiuxetan, IDEC-Y2B8, and yttrium Y 90-ibritumomab tiuxetan.

#### **90Y-ibritumomab tiuxetan**

A drug used with the drug rituximab to treat certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of B-cell tumors. 90Y-ibritumomab tiuxetan contains a monoclonal antibody that binds to a protein called CD20, which is found on B cells. It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. 90Y-ibritumomab tiuxetan is a type of radioimmunoconjugate. Also called 90Y-Zevalin, IDEC-Y2B8, and yttrium Y 90-ibritumomab tiuxetan.

#### **99m-Tc-Dx**

A substance being studied as a way to find sentinel lymph nodes in some types of skin cancer and breast cancer. It contains a radioactive substance called technetium linked to a substance called dextran. Dextran helps technetium stay in blood and lymph vessels after it is injected. A machine or probe that detects radioactivity shows which lymph nodes near the tumor have 99m-Tc-Dx in them. Also called Tc-99m Dextran and technetium Tc 99m-dextran.

#### **9cUAB30**

A substance being studied in the treatment and prevention of cancer. It blocks an enzyme that keeps cells alive by adding material to the ends of chromosomes. Blocking this enzyme may cause the cancer cells to die. 9cUAB30 is a type of retinoic acid and a type of telomerase inhibitor.

### **9p21**

A specific part of chromosome 9 called p21, which has a gene that may be involved in stopping tumor cell growth. In some types of cancer cells, including bladder cancer cells, this small part of chromosome 9 may be missing. This may cause cancer cell growth. Checking for 9p21 may help diagnose cancer or find out if cancer has come back. 9p21 is a type of tumor marker.

### **A33**

A type of monoclonal antibody used in cancer detection or therapy. Monoclonal antibodies are laboratory-produced substances that can locate and bind to cancer cells.

### **A6**

A substance being studied in the treatment of cancer. A6 is a small piece of a protein called urokinase (an enzyme that dissolves blood clots or prevents them from forming). It is a type of antiangiogenesis agent and a type of antimetastatic agent. Also called urokinase plasminogen activator (uPA)-derived peptide A6.

### **AAP**

An enzyme that is normally found in healthy kidneys. It may be found at high levels in the urine when there are kidney problems. It is used as a biomarker to detect damage to the kidneys caused by drugs and other agents. It may also be used to diagnose certain kidney and liver disorders. Also called alanine aminopeptidase.

### **AAT deficiency**

An inherited condition in which the body either does not make enough of a protein called alpha-1 antitrypsin (AAT) or makes an abnormal form of AAT. AAT is made in the liver and helps protect the body's organs, especially the liver and lungs, from damage. AAT deficiency can lead to serious lung conditions (including emphysema and bronchiectasis) and liver conditions (including cirrhosis, hepatitis, and liver cancer). It may also cause inflammation of the blood vessels and a rare skin condition that causes painful lumps on or under the skin. Lung problems caused by AAT deficiency almost always occur in adults, but liver and skin problems may occur in both adults and children. AAT deficiency is caused by a mutation (change) in a gene called SERPINA1. Also called alpha-1 antitrypsin deficiency.

### **ABCA1 pathway**

Describes a group of proteins in a cell that work together to help remove extra cholesterol and certain fats from tissue in the body. Changes in the ABCA1 pathway may lead to diseases of the heart and blood vessels. Drugs or substances that affect this pathway are being studied in the prevention and treatment of some diseases.

### **ABCD rating**

A staging system for prostate cancer that uses ABCD. "A" and "B" refer to cancer that is confined to the prostate. "C" refers to cancer that has grown out of the prostate but has not spread to lymph nodes or other places in the body. "D" refers to cancer that has spread to lymph nodes or to other places in the body. Also called Jewett staging system and Whitmore-Jewett staging system.

### **ABI-007**

A form of the anticancer drug paclitaxel that is used alone or with other drugs to treat certain types of breast cancer, non-small cell lung cancer, and pancreatic

cancer. ABI-007 may have fewer side effects and work better than other forms of paclitaxel. It is also being studied in the treatment of other types of cancer. ABI-007 stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called Abraxane, nanoparticle paclitaxel, paclitaxel albumin-stabilized nanoparticle formulation, and protein-bound paclitaxel.

### **ABO blood group system**

A system used to group human blood into different types, based on the presence or absence of certain markers on the surface of red blood cells. The four main blood types are A, B, O, and AB. For a blood transfusion, the ABO blood group system is used to match the blood type of the donor and the person receiving the transfusion. People with blood type O can donate blood to anyone and are called universal donors. People with blood type AB can accept blood from all donors and are called universal recipients. People with type A or B can receive matching blood or type O blood.

### **ABR test**

A test used to detect some types of hearing loss, such as hearing loss caused by injury or tumors that affect nerves involved in hearing. Electrodes are placed on the head and certain tones or clicking sounds are made. The electrodes measure nerve signals in the brain when it reacts to the sounds. Also called auditory brain stem response test, BAER test, and brain stem auditory evoked response test.

### **ABT-263**

A substance being studied in the treatment of lymphomas and other types of cancer. It blocks some of the enzymes that keep cancer cells from dying. It is a type of Bcl-2 family inhibitor. Also called navitoclax.

### **ABT-510**

A substance being studied in the treatment of cancer. It is a type of angiogenesis inhibitor.

### **ABT-751**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called sulfonamides.

### **ABT-869**

A substance being studied in the treatment of several types of cancer. ABT-869 blocks the action of several growth factors. It may also block the growth of new blood vessels that tumors need to grow and may cause cancer cells to die. It is a type of receptor tyrosine kinase inhibitor and a type of angiogenesis inhibitor. Also called multitargeted receptor tyrosine kinase inhibitor ABT-869.

### **ABT-888**

A substance being studied in the treatment of breast cancers caused by mutations (changes) in the BRCA1 and BRCA2 genes. It is also being studied in the treatment of other types of cancer. It blocks an enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. ABT-888 may cause cancer cells to die. It is a type of poly(ADP-ribose) polymerase inhibitor. Also called PARP-1 inhibitor ABT-888 and veliparib.

## **ABVD**

An abbreviation for a chemotherapy combination used to treat Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vinblastine sulfate, and dacarbazine. Also called ABVD regimen.

## **ABVD regimen**

An abbreviation for a chemotherapy combination used to treat Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vinblastine sulfate, and dacarbazine. Also called ABVD.

## **ABVE**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, and etoposide. Also called ABVE regimen, DBVE, and DBVE regimen.

## **ABVE regimen**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, and etoposide. Also called ABVE, DBVE, and DBVE regimen.

## **ABVE-PC**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, etoposide, prednisone, and cyclophosphamide. Also called ABVE-PC regimen, DBVE-PC, and DBVE-PC regimen.

## **ABVE-PC regimen**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, etoposide, prednisone, and cyclophosphamide. Also called ABVE-PC, DBVE-PC, and DBVE-PC regimen.

## **ABX-EGF**

A drug used alone or with other drugs to treat certain types of colorectal cancer that have spread to other parts of the body. It is used in patients whose cancer has not already been treated or whose cancer got worse after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. ABX-EGF binds to a protein called epidermal growth factor receptor (EGFR), which is found on some normal cells and some types of cancer cells. Blocking this protein may help keep cancer cells from growing. ABX-EGF is a type of monoclonal antibody. Also called panitumumab and Vectibix.

## **AC**

An abbreviation for a chemotherapy combination used with other types of therapy to treat breast cancer, including breast cancer that has spread or come back. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide. Also called AC regimen.

### **AC regimen**

An abbreviation for a chemotherapy combination used with other types of therapy to treat breast cancer, including breast cancer that has spread or come back. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide. Also called AC.

### **AC-T**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol). Also called AC-T regimen and AC-Taxol regimen.

### **AC-T regimen**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol). Also called AC-T and AC-Taxol regimen.

### **AC-T-T**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol) and trastuzumab (Herceptin). Also called AC-T-T regimen, AC-TH regimen, and sequential AC/Taxol-Trastuzumab regimen.

### **AC-T-T regimen**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol) and trastuzumab (Herceptin). Also called AC-T-T, AC-TH regimen, and sequential AC/Taxol-Trastuzumab regimen.

### **AC-TH regimen**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol) and trastuzumab (Herceptin). Also called AC-T-T, AC-T-T regimen, and sequential AC/Taxol-Trastuzumab regimen.

### **AC-Taxol regimen**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol). Also called AC-T and AC-T regimen.

### **ACAPHA**

A mixture of six herbs that has been used in China to prevent and treat diseases such as lung and esophageal cancers. It is being studied in the United States and Canada in the prevention of lung cancer in people who used to smoke.

### **ACD gene**

A gene that makes a protein involved in protecting and maintaining telomeres (the ends of chromosomes). Mutations (changes) in the ACD gene may cause damage to chromosomes and DNA, which may lead to abnormal cell growth. ACD gene mutations have been found in a rare, inherited condition called

dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

### **ACE inhibitor**

A drug that is used to lower blood pressure. An ACE inhibitor is a type of antihypertensive agent. Also called angiotensin-converting enzyme inhibitor.

### **ACF**

Clusters of abnormal tube-like glands in the lining of the colon and rectum. ACF form before colorectal polyps and are one of the earliest changes that can be seen in the colon that may lead to cancer. Also called aberrant crypt foci.

### **ACN53**

A substance that has been studied in the treatment of some types of cancer. ACN53 is a weakened adenovirus that carries the p53 gene into tumor cells, causing them to die. It is a type of gene therapy. Also called rAd/p53, recombinant adenovirus-p53, and SCH-58500.

### **ACTH**

A hormone made in the pituitary gland. ACTH acts on the outer part of the adrenal gland to control its release of corticosteroid hormones. More ACTH is made during times of stress. Also called adrenocorticotrophic hormone and corticotropin.

### **ACTHoma**

A rare tumor that makes the hormone adrenocorticotropin (ACTH), which causes the adrenal glands to make too much cortisol. ACTHomas can lead to Cushing syndrome. Signs and symptoms of ACTHomas and Cushing syndrome include a round face, thin arms and legs, severe fatigue and muscle weakness, high blood pressure, high blood sugar, purple or pink stretch marks on the skin, and weight gain, especially in the abdomen. ACTHomas usually form in the pituitary gland or in the islet cells of the pancreas, but they may also form in other organs, including the lung, thyroid, and thymus. ACTHomas may be benign (not cancer) or malignant (cancer). Also called adrenocorticotrophic-secreting tumor.

### **AD 32**

A drug used to treat bladder carcinoma in situ that did not get better after treatment with bacillus Calmette-Guerin (BCG). It is used in patients who cannot have surgery right away to remove all or part of the bladder. AD 32 is given as a solution through a catheter that is placed into the bladder. It blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. AD 32 is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called valrubicin and Valstar.

### **ADA-SCID**

A rare, inherited disorder in which the immune system is damaged, causing a person to have a complete lack of B lymphocytes and T lymphocytes (types of white blood cells that help the body fight infection). People with ADA-SCID are at high risk of developing life-threatening viral, bacterial, and fungal infections and certain types of cancers. Signs and symptoms of ADA-SCID usually occur before 6 months of age and include serious lung infections, chronic diarrhea, skin rashes, and slow growth and development. When symptoms begin later in life,



they are usually milder. ADA-SCID is caused by mutations (changes) in the ADA gene. The ADA gene makes an enzyme called adenosine deaminase, which helps protect lymphocytes from harmful substances in the body. Also called adenosine deaminase-deficient severe combined immunodeficiency.

### **ADC**

A substance made up of a monoclonal antibody chemically linked to a drug. The monoclonal antibody binds to specific proteins or receptors found on certain types of cells, including cancer cells. The linked drug enters these cells and kills them without harming other cells. Some ADCs are used to treat cancer. Also called antibody-drug conjugate.

### **ADCC**

A type of immune reaction in which a target cell or microbe is coated with antibodies and killed by certain types of white blood cells. The white blood cells bind to the antibodies and release substances that kill the target cells or microbes. Also called antibody-dependent cell-mediated cytotoxicity and antibody-dependent cellular cytotoxicity.

### **ADE**

An abbreviation for a chemotherapy combination used to treat childhood acute myeloid leukemia (AML). It includes the drugs cytarabine (Ara-C), daunorubicin hydrochloride, and etoposide phosphate. Also called ADE regimen.

### **ADE regimen**

An abbreviation for a chemotherapy combination used to treat childhood acute myeloid leukemia (AML). It includes the drugs cytarabine (Ara-C), daunorubicin hydrochloride, and etoposide phosphate. Also called ADE.

### **ADH**

A benign (not cancer) condition in which there are more cells than normal in the lining of breast ducts and the cells look abnormal under a microscope. Having ADH increases the risk of breast cancer. Also called atypical ductal breast hyperplasia and atypical ductal hyperplasia.

### **ADI-PEG 20**

A substance being studied in the treatment of melanoma, liver cancer, and other types of cancer. It breaks down the amino acid arginine and may block the growth of cancer cells that need arginine to grow. It is a type of iminohydrolase. Also called pegylated arginine deiminase.

### **ADL**

Activities of daily living. The tasks of everyday life. Basic ADLs include eating, dressing, getting into or out of a bed or chair, taking a bath or shower, and using the toilet. Instrumental activities of daily living (IADL) are activities related to independent living and include preparing meals, managing money, shopping, doing housework, and using a telephone. Also called activities of daily living.

### **AE-941**

A substance made from shark cartilage that is being studied for its ability to prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent.

**AEE788**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called protein tyrosine kinase inhibitors and angiogenesis inhibitors.

**AEG35156**

A substance being studied in the treatment of cancer. AEG35156 may kill cancer cells by blocking the production of a protein called XIAP that helps cells live longer. It also makes cancer cells more sensitive to anticancer drugs. It is a type of antisense oligonucleotide, and a type of chemosensitizing agent. Also called GEM640.

**AFAP**

A rare, inherited disorder in which multiple polyps (abnormal growths) form on the inner walls of the colon and rectum. People with AFAP usually develop fewer than 100 polyps. Benign (not cancer) tumors may also occur in the stomach, small intestine, bone, skin, and soft tissue. People with AFAP have a very high risk of developing colorectal cancer and may also be at risk of developing cancers of the stomach, small intestine, liver, and breast. AFAP is caused by mutations (changes) in the APC gene that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called attenuated familial adenomatous polyposis.

**AFLD**

A condition in which fat builds up in the liver of people who drink large amounts of alcohol. AFLD can be reversed if it is diagnosed early and a person stops drinking alcohol. In some people, the condition can get worse and cause liver inflammation and damage to the cells in the liver. This may lead to cirrhosis (scarring of the liver), liver failure, or liver cancer. Also called alcoholic fatty liver disease.

**AFP**

A protein normally produced by a fetus. AFP levels are usually undetectable in the blood of healthy adult men or women (who are not pregnant). An elevated level of AFP suggests the presence of either a primary liver cancer or germ cell tumor. Also called alpha-fetoprotein.

**AFP464**

A substance being studied in the treatment of cancer. AFP464 kills cancer cells or stops them from dividing. It is a type of aminoflavone.

**AG-013736**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called angiogenesis inhibitors and protein tyrosine kinase inhibitors.

**AG014699**

A drug used to treat adults with certain types of prostate cancer or ovarian epithelial, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. AG014699 blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. AG014699 is a type of PARP inhibitor. Also called PARP-1 inhibitor AG014699, Rubraca, and rucaparib camsylate.

### **AG2037**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called glycinamide ribonucleotide formyl transferase inhibitors.

### **AG3340**

A substance that is being studied in the treatment of cancer. It is a matrix metalloproteinase inhibitor and belongs to the family of drugs called angiogenesis inhibitors. Also called prinomastat.

### **AG337**

A substance that is being studied in the treatment of liver cancer. It belongs to the family of drugs called thymidylate synthase inhibitors. Also called nolatrexed and Thymitaq.

### **AGC**

A finding of abnormal cells in a Pap test. The glandular cells come from the inner part of the cervix or the lining of the uterus. This finding may be a sign of cancer or other serious condition, and more testing may be needed. Also called atypical glandular cells.

### **AGUS**

A term that has been used to describe abnormal cells that come from glands in the walls of the cervix (the lower, narrow end of the uterus). These abnormal cells are found in a small number of Pap smears (a procedure used to detect cervical cancer) and may be a sign of more serious lesions or cancer. The term used now is atypical glandular cells. Also called atypical glandular cells of uncertain significance and atypical glandular cells of undetermined significance.

### **AHA**

One of a group of substances that are found in several types of fruit and in milk. They are used in skin care products to reduce wrinkles and soften the skin. Examples of AHAs are glycolic acid, lactic acid, and citric acid. Also called alpha hydroxyl acid and fruit acid.

### **AI**

The ability of a computer to perform functions that are usually thought of as intelligent human behavior, such as learning, reasoning, problem solving, and decision making. AI uses computer programs that analyze very large amounts of information to learn how to help make decisions or predictions. In medicine, the use of AI may help improve cancer screening and diagnosis and plan treatment. It may also be used in research and in drug discovery and development. Also called artificial intelligence.

### **AI drug**

A drug that blocks the activity of an enzyme called aromatase, which the body uses to make estrogen in the ovaries and other tissues. Blocking aromatase lowers the amount of estrogen made by the body, which may stop the growth of cancer cells that need estrogen to grow. AI drugs are used to treat some types of breast cancer or to keep it from coming back. They may also be used to help prevent breast cancer in some women who are at a high risk of developing it. Examples of AI drugs are anastrozole, letrozole, and exemestane. AI drugs are a type of hormone therapy. Also called aromatase inhibitor.

## **AIDS**

A disease caused by the human immunodeficiency virus (HIV). People with AIDS are at an increased risk for developing certain cancers and for infections that usually occur only in individuals with a weak immune system. Also called acquired immunodeficiency syndrome.

## **AIDS-defining cancer**

A type of cancer that a person infected with human immunodeficiency virus (HIV) is at high risk of developing. If a person with HIV develops one of these cancers, it means they have AIDS. AIDS-defining cancers include Kaposi sarcoma, certain types of non-Hodgkin lymphoma, and cervical cancer.

## **AIDS-related cancer**

A type of cancer that is more likely to occur in people who are infected with the human immunodeficiency virus (HIV). AIDS-related cancers include Kaposi sarcoma, non-Hodgkin lymphoma, cervical cancer, Hodgkin lymphoma, and cancers of the mouth, throat, liver, lung, and anus.

## **AIS**

A condition in which abnormal cells are found in the glandular tissue, which lines certain internal organs and makes and releases substances in the body, such as mucus, digestive juices, and other fluids. These abnormal cells may become cancer and spread into nearby normal tissue. AIS occurs most often in the cervix and lung. Also called adenocarcinoma in situ.

## **AJCC staging system**

A system to describe the amount and spread of cancer in a patient's body, using TNM. T describes the size of the tumor and any spread of cancer into nearby tissue; N describes spread of cancer to nearby lymph nodes; and M describes metastasis (spread of cancer to other parts of the body). This system was created and is updated by the American Joint Committee on Cancer (AJCC) and the International Union Against Cancer (UICC). The AJCC staging system is used to describe most types of cancer. Also called TNM staging system.

## **ALCAR**

A form of the natural substance carnitine that is being studied as a way to prevent tissue damage caused by chemotherapy. Carnitine is made in muscle and liver tissue and is found in certain foods, such as meat, poultry, fish, and some dairy products. It is used by many cells in the body to make energy from fat. Also called acetyl-L-carnitine and acetyl-L-carnitine hydrochloride.

## **ALCL**

An aggressive (fast-growing) type of non-Hodgkin lymphoma that is usually of the T-cell type. The cancer cells express a marker called CD30 or Ki-1 on the surface, and may appear in the lymph nodes, skin, bones, soft tissues, lungs, or liver. Also called anaplastic large cell lymphoma.

## **ALH**

A benign (not cancer) condition in which there are more cells than normal in the breast lobules and the cells look abnormal under a microscope. Having ALH increases the risk of breast cancer. Also called atypical lobular breast hyperplasia and atypical lobular hyperplasia.

### **ALK gene**

A gene that makes a protein that is involved in cell growth. Mutated (changed) forms of the ALK gene and protein have been found in some types of cancer, including neuroblastoma, non-small cell lung cancer, and anaplastic large cell lymphoma. These changes may increase the growth of cancer cells. Checking for changes in the ALK gene in tumor tissue may help to plan cancer treatment. Also called anaplastic lymphoma kinase gene.

### **ALK inhibitor**

A substance that blocks the activity of a protein called anaplastic lymphoma kinase (ALK), which helps control cell growth. Blocking this protein may help keep cancer cells from growing and spreading. Some ALK inhibitors are used to treat cancer. They are a type of targeted therapy. Also called anaplastic lymphoma kinase inhibitor.

### **ALK positive**

Describes cells that have a protein called ALK on their surface. In cancer, it is also used to describe cells that have a change in the structure of the ALK gene or that make too much ALK protein. In normal cells, ALK helps control cell growth. Cancer cells that have the changed ALK gene or make too much ALK protein may grow more quickly. Knowing whether a cancer is ALK positive may help plan treatment. Cancers that may be ALK positive include neuroblastoma, non-small cell lung cancer, and anaplastic large cell lymphoma. Also called anaplastic lymphoma kinase positive.

### **ALL**

A type of leukemia (blood cancer) that comes on quickly and is fast growing. In ALL, there are too many lymphoblasts (immature white blood cells) in the blood and bone marrow. Also called acute lymphoblastic leukemia and acute lymphocytic leukemia.

### **ALTENS**

A procedure in which mild electric currents are applied to certain acupuncture points (spots on the body where an acupuncture needle may be inserted to control pain and other symptoms) on the skin. It is being studied in the treatment of dry mouth caused by radiation therapy for cancer. Also called acupuncture-like transcutaneous electrical nerve stimulation.

### **ALVAC-CEA vaccine**

A cancer vaccine made with a form of the canarypox virus that does not cause disease in people. It is being studied in the treatment of some kinds of cancer. The virus is changed in the laboratory to make a protein called carcinoembryonic antigen (CEA), which is a tumor marker. ALVAC-CEA vaccine may help the immune system find and kill cancer cells that make CEA.

### **AMD**

A condition in which there is a slow breakdown of cells in the center of the retina (the light-sensitive layers of nerve tissue at the back of the eye). This blocks vision in the center of the eye and can cause problems with activities such as reading and driving. AMD is most often seen in people who are over the age of 50. Also called age-related macular degeneration, ARMD, and macular degeneration.

### **AMD 3100**

A drug used with granulocyte colony-stimulating factor before an autologous stem cell transplant in patients with non-Hodgkin lymphoma or multiple myeloma. It is also being studied in the treatment of other types of cancer. AMD 3100 helps move stem cells from the bone marrow to the blood so they can be collected, stored, and then given back to the patient. AMD 3100 is a type of hematopoietic stem cell mobilizer. Also called Mozobil and plerixafor.

### **AMG 102**

A substance being studied in the treatment of cancer. It binds to a protein called hepatocyte growth factor (HGF), which may cause cancer cells to grow. Blocking this may cause cancer cells to die. AMG 102 is a type of monoclonal antibody. Also called anti-HGF monoclonal antibody AMG 102.

### **AMG 162**

A drug used to prevent or treat certain bone problems. AMG 162 is used under the brand name Xgeva to prevent bone problems caused by multiple myeloma or by solid tumors that have spread to the bone. It is also used in certain patients to treat giant cell tumor of the bone that cannot be removed by surgery, and to treat hypercalcemia that is caused by cancer and did not get better after treatment with bisphosphonates. AMG 162 is also used under the brand name Prolia to increase bone mass in certain patients with breast cancer or prostate cancer who have a high risk of breaking bones. It is also used to treat osteoporosis in certain patients who have a high risk of breaking bones. AMG 162 is also being studied in the treatment of other conditions and types of cancer. It binds to a protein called RANKL, which keeps RANKL from binding to another protein called RANK on the surface of certain bone cells, including bone cancer cells. This may help keep bone from breaking down and cancer cells from growing. AMG 162 may also prevent the loss of calcium from the bones. It is a type of monoclonal antibody. Also called denosumab.

### **AMG 531**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults and in certain children with immune thrombocytopenic purpura that did not get better with other treatment. It is also being studied in the treatment of other conditions and types of cancer. AMG 531 binds to the thrombopoietin receptor, which causes the bone marrow to make more platelets. It is a type of thrombopoietin receptor agonist. Also called Nplate and romiplostim.

### **AMG 706**

A substance that is being studied in the treatment of some types of cancer. It belongs to the families of drugs called angiogenesis inhibitors and protein kinase inhibitors.

### **AMH**

A hormone made by the ovaries in females and the testicles in males. AMH helps to form the male and female reproductive organs. It also helps control other hormones that act on the ovaries to make the follicles and eggs grow during a woman's menstrual cycle. Measuring the amount of AMH in the blood may help diagnose infertility and other conditions, such as polycystic ovarian syndrome, menopause, and certain types of ovarian tumors. It may also help determine the sex of an infant, when the sex is not clear. Also called anti-Mullerian hormone.



## AML

A fast-growing cancer in which too many myeloblasts (a type of immature white blood cell) are found in the bone marrow and blood. AML usually gets worse quickly if it is not treated. It can spread outside the blood to other parts of the body, including the lymph nodes, spleen, liver, central nervous system (brain and spinal cord), skin, gums, and testicles. AML is most common in older adults. Also called acute myelogenous leukemia, acute myeloid leukemia, acute nonlymphocytic leukemia, and ANLL.

## AML-MRC

A type of acute myeloid leukemia in which at least 20% of a patient's blood or bone marrow is myeloblasts (immature white blood cells) and the patient has one of the following conditions: 1) has had myelodysplastic syndrome (MDS) or a myelodysplastic/myeloproliferative neoplasm (MDS/MPN) before, 2) cells that have changes in certain chromosomes that are similar to those found in MDS, or 3) at least 50% of the cells (of at least two types of blood cells) are abnormal. AML-MRC usually occurs in older adults and has a poor prognosis. Also called acute myeloid leukemia with myelodysplasia-related changes.

## ANC

A measure of the number of neutrophils in the blood. Neutrophils are a type of white blood cell. They help the body fight infection. An ANC may be used to check for infection, inflammation, leukemia, and other conditions. The lower a person's ANC is, the higher the risk is of getting an infection. Having an ANC of less than 500 means there is a high risk of getting an infection. Cancer treatment, such as chemotherapy, may reduce the ANC. Also called absolute neutrophil count.

## ANH

A form of nutrition that is given as liquids, including liquid foods, through a tube inserted into a vein, under the skin, or into the stomach or small intestine. ANH is given when a person is not able to eat or drink by mouth or has a disease or condition that affects their ability to absorb nutrients through the digestive system. For people near death, it does not help prolong life and is usually not given because it can cause severe problems, such as infection, aspiration (the breathing in of fluid or food into the lungs), diarrhea, and cramping. Also called artificial nutrition and hydration.

## ANLL

A fast-growing cancer in which too many myeloblasts (a type of immature white blood cell) are found in the bone marrow and blood. ANLL usually gets worse quickly if it is not treated. It can spread outside the blood to other parts of the body, including the lymph nodes, spleen, liver, central nervous system (brain and spinal cord), skin, gums, and testicles. ANLL is most common in older adults. Also called acute myelogenous leukemia, acute myeloid leukemia, acute nonlymphocytic leukemia, and AML.

## ANS

The part of the nervous system that controls muscles of internal organs (such as the heart, blood vessels, lungs, stomach, and intestines) and glands (such as salivary glands and sweat glands). One part of the ANS helps the body rest, relax, and digest food and another part helps a person fight or take flight in an emergency. Also called autonomic nervous system and involuntary nervous system.

## **ANV**

Nausea and vomiting that may occur before a chemotherapy treatment session begins in a patient who has had chemotherapy before. ANV is caused by triggers, such as the sights, smells, or sounds of the treatment room. For example, a patient who smells an alcohol swab when starting chemotherapy may later become nauseous or vomit at the smell of an alcohol swab. The more chemotherapy sessions a patient has, the more likely it is that ANV will occur. Also called anticipatory nausea and vomiting.

## **AP23573**

A substance being studied in the treatment of soft tissue and bone cancers. It is also being studied in the treatment of other solid tumors and hematologic cancer. AP23573 stops cells from dividing and may cause cancer cells to die. It is a type of mTOR inhibitor. Also called ridaforolimus.

## **AP5346**

A substance being studied in the treatment of head and neck cancer. It may kill cancer cells by carrying an anticancer drug into the tumor. It is a type of platinum compound.

## **APC**

A type of immune cell that boosts immune responses by showing antigens on its surface to other cells of the immune system. An APC is a type of phagocyte. Also called antigen-presenting cell.

## **APC 8015**

A vaccine used to treat prostate cancer that has spread to other parts of the body. It is used in patients who have few or no symptoms and whose cancer is castration resistant (has not responded to treatments that lower testosterone levels). APC 8015 is made from a patient's immune cells that have been treated in the laboratory with GM-CSF (a type of growth factor) and a protein found on prostate cancer cells. APC 8015 may help the immune system kill prostate cancer cells. It is a type of autologous cellular immunotherapy and a type of dendritic cell vaccine. Also called Provenge and sipuleucel-T.

## **APC vaccine**

A vaccine made of antigens and antigen-presenting cells (APCs). APCs boost an immune response by presenting antigens on their surfaces to other cells of the immune system. Also called antigen-presenting cell vaccine.

## **APC8015F**

A vaccine made from immune system cells taken from a patient with prostate cancer and frozen for future use. The cells are treated in the laboratory with a growth factor attached to a protein called prostatic-acid phosphatase (PAP), which is found on prostate cancer cells. When APC8015F is injected into the patient, it may cause T cells (a type of white blood cell) to kill tumor cells that have PAP on them.

## **API**

The main ingredient in a medicine that causes the desired effect of the medicine. Some medicines contain more than one API that act in different ways in the body. Also called active pharmaceutical ingredient, drug substance, and pharmacologic substance.

## **APL**

An aggressive (fast-growing) type of acute myeloid leukemia in which there are too many immature blood-forming cells in the blood and bone marrow. It is usually marked by an exchange of parts of chromosomes 15 and 17. Also called acute promyelocytic leukemia and promyelocytic leukemia.

## **APN**

A registered nurse who has additional education and training in how to diagnose and treat disease. APNs are licensed at the state level and certified by national nursing organizations. In cancer care, an APN may manage the primary care of patients and their families, based on a practice agreement with a doctor. Also called advanced practice nurse, NP, and nurse practitioner.

## **AR**

A protein that binds male hormones called androgens. ARs are found inside the cells of male reproductive tissue, some other types of tissue, and some cancer cells. In prostate cancer, androgens bind to ARs inside the cancer cells, which causes the cancer cells to grow. Also called androgen receptor.

## **AR negative**

Describes cells that do not have a protein that binds to androgens (male hormones). Cancer cells that are AR negative do not need androgens to grow. This means that they will keep growing when androgens are not present and do not stop growing when treatments that block androgens in the body are used. This can affect how the cancer is treated. Also called androgen receptor negative.

## **AR positive**

Describes cells that have a protein that binds to androgens (male hormones). Cancer cells that are AR positive may need androgens to grow. These cells may stop growing or die when they are treated with substances that block the binding and actions of androgen hormones. Also called androgen receptor positive.

## **ARA-C**

A drug used with other drugs to treat adults and children with acute myeloid leukemia and to prevent and treat a type of leukemia that has spread to the meninges (the tissue that covers and protects the brain and spinal cord). It may also be used to treat acute lymphoblastic leukemia and blastic phase chronic myelogenous leukemia. It is also being studied in the treatment of other types of cancer. ARA-C stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called cytarabine.

## **ARMD**

A condition in which there is a slow breakdown of cells in the center of the retina (the light-sensitive layers of nerve tissue at the back of the eye). This blocks vision in the center of the eye and can cause problems with activities such as reading and driving. ARMD is most often seen in people who are over the age of 50. Also called age-related macular degeneration, AMD, and macular degeneration.

## **ARMS**

A soft tissue tumor that is most common in older children and teenagers. It begins in embryonic muscle cells (cells that develop into muscles in the body). It can occur at many places in the body, but usually occurs in the trunk, arms, or legs. Also called alveolar rhabdomyosarcoma.

## ART

A type of procedure used to treat infertility. The most common type of ART is in vitro fertilization (IVF), which involves removing eggs from a woman's ovary and combining them with sperm in the laboratory to form embryos. The embryos are then either placed in a woman's uterus or frozen for future use. ART sometimes uses donor eggs or sperm or may involve a surrogate or gestational carrier (a woman who carries and gives birth to a baby for a person who is not able to have children). Other types of ART include gamete intrafallopian transfer (GIFT) and zygote intrafallopian transfer (ZIFT), but these are used less often. Also called assisted reproductive technology.

## ASC-H

A finding of abnormal cells in a Pap test. It means there are abnormal squamous cells in the tissue that lines the outer part of the cervix. ASC-H may be a sign of a high-grade squamous intraepithelial lesion (HSIL), which may become cervical cancer if untreated. More testing may be needed. Also called atypical squamous cells, cannot exclude a high-grade lesion.

## ASC-US

A finding of abnormal cells in the tissue that lines the outer part of the cervix. ASC-US is the most common abnormal finding in a Pap test. It may be a sign of infection with certain types of human papillomavirus (HPV) or other types of infection, such as a yeast infection. It may also be a sign of inflammation, low hormone levels (in menopausal women), or a benign (not cancer) growth, such as a cyst or polyp. More testing, such as an HPV test or another Pap test, may be needed. Also called ASCUS and atypical squamous cells of undetermined significance.

## ASCUS

A finding of abnormal cells in the tissue that lines the outer part of the cervix. ASCUS is the most common abnormal finding in a Pap test. It may be a sign of infection with certain types of human papillomavirus (HPV) or other types of infection, such as a yeast infection. It may also be a sign of inflammation, low hormone levels (in menopausal women), or a benign (not cancer) growth, such as a cyst or polyp. More testing, such as an HPV test or another Pap test, may be needed. Also called ASC-US and atypical squamous cells of undetermined significance.

## ASM

A rare condition in which too many mast cells (a type of white blood cell) build up in certain tissues and organs in the body, including the bone marrow, lymph nodes, bone, liver, spleen, and small intestine. ASM may get worse quickly and cause severe symptoms and organ damage. Sometimes, it may become mast cell leukemia (a very rare type of leukemia). ASM usually occurs in adults. Also called aggressive systemic mastocytosis.

## ASPS

A soft tissue tumor that is most common in older children and teenagers. It begins in the soft supporting tissue that connects and surrounds the organs and other tissues. ASPS usually occurs in the legs, but can also occur in the arms, hands, head, or neck. It can cause the growth of new blood vessels that help the tumor grow and spread. Also called alveolar soft part sarcoma.

## **AT/RT**

A very rare, fast-growing cancer that usually forms in the tissues of the central nervous system (CNS), such as the cerebellum (the part of the brain that controls movement and balance) or brain stem. AT/RTs may also form in areas of the body outside the CNS, such as the kidney, but this is rare. Most of these types of tumors are caused by mutations (changes) in the tumor suppressor genes SMARCB1 or SMARCA4, which make proteins that help control cell growth. AT/RTs usually occur in children aged 3 years and younger, but they can also occur in older children and adults. Also called ATT/RHT and atypical teratoid/rhabdoid tumor.

## **AT7519M**

A substance being studied in the treatment of some types of cancer. AT7519M blocks enzymes needed for cells to divide. It is a type of cyclin-dependent kinase inhibitor. Also called CDK inhibitor AT7519M.

## **AT9283**

A substance being studied in the treatment of some types of cancer. It blocks enzymes (Aurora kinases) involved in cell division and may kill cancer cells. AT9283 is a type of serine/threonine protein kinase inhibitor. Also called Aurora kinase inhibitor AT9283.

## **ATLL**

An aggressive (fast-growing) type of T-cell non-Hodgkin lymphoma caused by the human T-cell leukemia virus type 1 (HTLV-1). It is marked by bone and skin lesions, high calcium levels, and enlarged lymph nodes, spleen, and liver. Also called adult T-cell leukemia/lymphoma.

## **ATN-161**

A substance being studied in the treatment of some types of cancer. ATN-161 may prevent the spread of tumor cells and may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent.

## **ATN-224**

A substance being studied in the treatment of cancer. It may prevent the growth of new blood vessels that tumors need to grow. ATN-224 also blocks enzymes that cells need to divide and grow, and it may kill cancer cells. It is a type of antiangiogenesis agent and a type of superoxide dismutase inhibitor. Also called SOD1 inhibitor ATN-224.

## **ATP**

A substance present in all living cells that provides energy for many metabolic processes and is involved in making RNA. ATP made in the laboratory is being studied in patients with advanced solid tumors to see if it can decrease weight loss and improve muscle strength. Also called adenosine triphosphate.

## **ATRA**

A nutrient that the body needs in small amounts to function and stay healthy. ATRA is made in the body from vitamin A and helps cells to grow and develop, especially in the embryo. A form of ATRA made in the laboratory is put on the skin to treat conditions such as acne and is taken by mouth to treat acute promyelocytic leukemia (a fast-growing cancer in which there are too many immature blood-forming cells in the blood and bone marrow). ATRA is being studied in the prevention and treatment of other types of cancer. Also called all-trans retinoic acid, retinoic acid, tretinoin, and vitamin A acid.

### **ATT/RHT**

A very rare, fast-growing cancer that usually forms in the tissues of the central nervous system (CNS), such as the cerebellum (the part of the brain that controls movement and balance) or brain stem. ATT/RHTs may also form in areas of the body outside the CNS, such as the kidney, but this is rare. Most of these types of tumors are caused by mutations (changes) in the tumor suppressor genes SMARCB1 or SMARCA4, which make proteins that help control cell growth. ATT/RHTs usually occur in children aged 3 years and younger, but they can also occur in older children and adults. Also called AT/RT and atypical teratoid/rhabdoid tumor.

### **AVN944**

A substance being studied in the treatment of cancer. It blocks cells from making DNA and RNA and may kill cancer cells. It is a type of inosine monophosphate dehydrogenase (IMPDH) inhibitor.

### **AZD0530**

A substance being studied in the treatment of some types of cancer. AZD0530 blocks enzymes needed for cancer growth. It is a type of tyrosine kinase inhibitor.

### **AZD2171**

A substance being studied in the treatment of some types of cancer. AZD2171 may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of antiangiogenesis agent and a type of vascular endothelial growth factor (VEGF) receptor tyrosine kinase inhibitor. Also called cediranib maleate and Recentin.

### **AZD2281**

A drug used alone or with other drugs to treat adults with certain types of prostate cancer, pancreatic cancer, breast cancer, or ovarian, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. AZD2281 blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. AZD2281 is a type of PARP inhibitor. Also called Lynparza, olaparib, and PARP inhibitor AZD2281.

### **AZD6244**

A drug used to treat children aged 2 years and older with a rare genetic condition called neurofibromatosis type 1. It is used in patients who have plexiform neurofibromas that are causing symptoms and cannot be removed by surgery. It is also being studied in the treatment of some types of cancer. AZD6244 blocks proteins called MEK1 and MEK2, which may help keep abnormal cells or cancer cells from growing. It is a type of kinase inhibitor. Also called Koselugo, MEK inhibitor AZD6244, and selumetinib sulfate.

### **AZQ**

An anticancer drug that is able to cross the blood-brain barrier and kill cancer cells in the central nervous system. Also called diaziquone.

### **AZT**

A drug that inhibits the human immunodeficiency virus (HIV) that causes AIDS. Also called zidovudine.



### **Abecma**

A treatment used for adults with multiple myeloma that came back or did not get better after treatment with at least two lines of anticancer therapy that included an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Abecma is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Abecma binds to a protein called BCMA, which is found on myeloma cells and some types of immune cells. This helps the body's immune system kill cancer cells. Abecma is a type of cellular immunotherapy called CAR T-cell therapy. Also called idecabtagene vicleucel.

### **Abegrin**

A substance being studied in the treatment of some types of cancer and other conditions. Abegrin binds to a protein on the surface of blood vessels and may prevent the growth of new blood vessels that tumors need to grow. It may also prevent the spread of cancer. It is a type of antiangiogenesis agent, a type of metastasis inhibitor, and a type of monoclonal antibody. Also called etaracizumab, humanized monoclonal antibody MEDI-522, and MEDI-522.

### **Abraxane**

A form of the anticancer drug paclitaxel that is used alone or with other drugs to treat certain types of breast cancer, non-small cell lung cancer, and pancreatic cancer. Abraxane may have fewer side effects and work better than other forms of paclitaxel. It is also being studied in the treatment of other types of cancer. Abraxane stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called ABI-007, nanoparticle paclitaxel, paclitaxel albumin-stabilized nanoparticle formulation, and protein-bound paclitaxel.

### **Abrikossoff tumor**

A rare type of soft tissue tumor that usually begins in Schwann cells (cells that hold nerve cells in place). It can occur anywhere in the body, but it usually occurs in or under the skin of the head and neck (especially the mouth or tongue). It may also occur in the chest, breast, esophagus, stomach, or other internal organ. Most Abrikossoff tumors are benign (not cancer), but some may be malignant (cancer) and spread quickly to nearby tissue. They usually occur in middle-aged adults. Also called granular cell tumor.

### **Accolate**

A drug used to prevent and treat symptoms of asthma. It blocks substances that cause inflammation in the lungs. It is a type of antiasthmatic agent and a leukotriene receptor antagonist. Also called zafirlukast.

### **Actemra**

A drug used to treat adults and children aged 2 years and older with severe or life-threatening cytokine release syndrome caused by a type of immunotherapy called chimeric antigen receptor (CAR) T-cell therapy. Actemra is also used to treat certain types of arthritis and a condition that causes inflammation of the lining of the arteries. It is also being studied in the treatment of other conditions. Actemra binds to receptors for a protein called interleukin-6 (IL-6), which is made by white blood cells and other cells in the body. This may help lower the body's immune response and reduce inflammation. Actemra is a type of monoclonal antibody. Also called tocilizumab.

### **Actinex**

A drug put on the skin to treat growths caused by sun exposure. A form of Actinex that is taken by mouth is being studied in the treatment of prostate cancer. Actinex is an antioxidant, and it may block certain enzymes needed for tumor growth. Also called masoprocol, NDGA, and nordihydroguaiaretic acid.

### **Activase**

A form of tissue plasminogen activator that is made in the laboratory. It helps dissolve blood clots and is used to treat heart attacks, strokes, and clots in the lungs. It is also being studied in the treatment of cancer. It is a type of systemic thrombolytic agent. Also called Alteplase, r-tPA, and recombinant tissue plasminogen activator.

### **Actos**

A drug that is used to treat type 2 diabetes and is being studied in the prevention of head and neck cancer. It may be able to stop leukoplakia (a condition affecting the mouth ) from developing into cancer. It is a type of thiazolidinedione. Also called pioglitazone.

### **Adcetris**

A drug used alone or with other drugs to treat adults with certain types of cutaneous or systemic anaplastic large cell lymphoma, peripheral T-cell lymphoma, classic Hodgkin lymphoma, or mycosis fungoides and with other drugs to treat children aged 2 years and older with certain types of classic Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Adcetris contains a monoclonal antibody that binds to a protein called CD30, which is found on some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. Adcetris is a type of antibody-drug conjugate. Also called brentuximab vedotin and SGN-35.

### **Adderall**

A combination of drugs used as a treatment for attention deficit hyperactivity disorder (ADHD) and narcolepsy (a sleep disorder). It is a type of stimulant. Also called dextroamphetamine-amphetamine.

### **Addison disease**

A rare disorder in which the adrenal glands do not make enough of certain hormones. Symptoms include weight loss, loss of appetite, nausea and vomiting, diarrhea, muscle weakness, fatigue, low blood sugar, low blood pressure, and patchy or dark skin. Most cases of the disorder are caused by immune system problems, but may also be caused by infection, cancer, or other diseases. Also called adrenal insufficiency.

### **AdreView**

A drug containing a form of radioactive iodine called I 123 that is used to find certain types of tumors, including pheochromocytomas and neuroblastomas. Radiation from I 123 may help show where cancer cells are in the body. AdreView is a type of radioconjugate. Also called 123I-MIBG, iobenguane I 123, and iodine I 123-metaiodobenzylguanidine.

### **Adriamycin**

A drug that comes from the bacterium *Streptomyces peucetius* and is used alone or with other drugs to treat many types of cancer, including leukemia, lymphoma, neuroblastoma, sarcoma, Wilms tumor, and certain cancers of the lung, breast, stomach, ovary, thyroid, and bladder. It is also being studied in the treatment of

other types of cancer. Adriamycin damages the cell's DNA and may kill cancer cells. It also blocks a certain enzyme needed for cell division and DNA repair. Adriamycin is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called doxorubicin hydrochloride and hydroxydaunorubicin.

### **Adstiladrin**

A drug used to treat adults with a certain type of high-risk bladder cancer that has not invaded the muscle layers of the bladder. It is used in patients whose cancer has not gotten better after treatment with Bacillus Calmette-Guérin (BCG). It is also being studied in the treatment of other types of cancer. Adstiladrin is a weakened adenovirus that carries a copy of the gene for interferon alfa-2b into bladder cancer cells. This may help the body's immune system recognize the cancer cells and kill them. Adstiladrin is given in a solution that is placed directly into the bladder using a thin tube called a catheter. It is a type of gene therapy. Also called nadofaragene firadenovec.

### **Advil**

A drug used to treat fever, swelling, pain, and redness by preventing the body from making a substance that causes inflammation. It is a type of nonsteroidal anti-inflammatory drug (NSAID). Also called ibuprofen and Motrin.

### **Afinitor**

A drug that contains the active ingredient everolimus and is used alone or with other drugs to treat certain types of breast cancer, kidney cancer, and pancreatic, lung, and gastrointestinal neuroendocrine tumors. Afinitor is also used to treat a type of benign kidney tumor called renal angiomyolipoma and a type of benign brain tumor called subependymal giant cell astrocytoma in patients who have tuberous sclerosis. Afinitor blocks a protein involved in cell division, which may help keep abnormal cells, including cancer cells, from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Afinitor is a type of kinase inhibitor and a type of angiogenesis inhibitor.

### **Afinitor Disperz**

A drug that contains the active ingredient everolimus and is used to treat a type of benign brain tumor called subependymal giant cell astrocytoma and certain types of seizures in patients who have tuberous sclerosis. Afinitor Disperz blocks a protein involved in cell division, which may help keep abnormal cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. It may also help prevent or treat seizures in some patients. Afinitor Disperz is a type of kinase inhibitor and a type of angiogenesis inhibitor.

### **Aicardi syndrome**

A rare, genetic disorder marked by a lack of tissue connecting the left and right halves of the brain, seizures, lesions on the back of the eye (retina), and other brain and eye abnormalities. Other problems may include unusual facial features, defects of the hands, spine, and ribs, and developmental and gastrointestinal problems. When Aicardi syndrome occurs, it is almost always in a newborn girl. People with Aicardi syndrome have an increased risk of certain tumors, such as hepatoblastoma (a type of liver cancer) and choroid plexus tumors (a rare tumor that forms in the brain).

### **Akeega**

A combination of niraparib tosylate monohydrate and abiraterone acetate used with prednisone to treat adults with prostate cancer that has spread to other parts of the body and is castration resistant (has not responded to treatments

that lower testosterone levels). It is used in patients who have a certain type of abnormal BRCA gene. Niraparib tosylate monohydrate blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Abiraterone acetate lowers the amount of androgens (male hormones), such as testosterone, made by the body. This may stop the growth of cancer cells that need androgens to grow. The combination of niraparib tosylate monohydrate and abiraterone acetate may work better than either drug alone. Akeega is a type of PARP inhibitor and a type of antiandrogen. Also called niraparib tosylate monohydrate and abiraterone acetate.

### **Akt**

A group of enzymes involved in several processes related to cell growth and survival. Akt enzymes help to transfer signals inside cells. An Akt enzyme is a type of serine/threonine protein kinase. Also called protein kinase B.

### **Akynzeo**

A combination of two drugs used with dexamethasone in adults to prevent nausea and vomiting caused by chemotherapy. Akynzeo blocks the action of certain chemicals in the central nervous system that may trigger nausea and vomiting. Blocking these chemicals may help lessen nausea and vomiting. Akynzeo is a type of antiemetic. Also called netupitant and palonosetron hydrochloride.

### **Alagille syndrome**

A rare disorder in which there are defects in the small tubes that carry bile (fluid that helps digest fat) out of the liver. These small tubes may be narrow or have an abnormal shape, or there may be fewer of them than normal. This can cause bile to build up in the liver, which may lead to cirrhosis (scarring of the liver) and liver damage. Alagille syndrome can also affect other parts of the body, including the heart, kidneys, blood vessels, eyes, face, and spine. It usually occurs in infants and children and may be inherited.

### **Aldara**

A drug that contains the active ingredient imiquimod and is used to treat certain skin conditions. Aldara is used to treat superficial basal cell skin cancer and actinic keratosis (a skin condition that may become cancer) in adults who have a normal immune system. It is also used to treat genital warts or perianal warts in adults and in children aged 12 years or older. Aldara may help the immune system kill abnormal cells, including cancer cells. It is a type of immunomodulating agent.

### **Aldrich syndrome**

An inherited immune disorder that occurs in young boys. It causes eczema (a type of skin inflammation), a decrease in the number of platelets (blood cells that help prevent bleeding), and frequent bacterial infections. People with Aldrich syndrome are at increased risk of developing leukemia and lymphoma. Also called Wiskott-Aldrich syndrome.

### **Alecensa**

A drug used to treat adults with certain types of non-small cell lung cancer that are ALK positive. It used in patients whose cancer has spread to other parts of the body. It is also used to help keep cancer from coming back in patients whose cancer was removed by surgery. Alecensa is also being studied in the treatment of other types of cancer. Alecensa blocks certain proteins made by the ALK

gene, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called alectinib.

### **Alimta**

A drug used alone or with other drugs to treat certain types of non-small cell lung cancer and malignant pleural mesothelioma. It is also being studied in the treatment of other types of cancer. Alimta stops cells from using folic acid to make DNA and may kill cancer cells. It is a type of antimetabolite and a type of antifolate. Also called LY231514, pemetrexed disodium, and Pemetrex.

### **Alkeran Tablets**

A drug used to treat multiple myeloma and ovarian epithelial cancer that cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Alkeran Tablets may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called melphalan.

### **Allegra**

A drug used to treat certain allergy symptoms. It blocks a chemical released during an allergic response that causes itching, sneezing, runny nose, wheezing, and watery eyes. It is a type of antihistamine. Also called fexofenadine.

### **Allovectin-7**

A substance that is being studied as a gene therapy agent in the treatment of cancer. It increases the ability of the immune system to recognize cancer cells and kill them.

### **Aloxi**

A drug used in adults and children aged 1 month and older to prevent nausea and vomiting caused by chemotherapy and nausea and vomiting after surgery. Aloxi blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Aloxi is a type of antiemetic and a type of serotonin receptor antagonist. Also called palonosetron hydrochloride.

### **Alteplase**

A form of tissue plasminogen activator that is made in the laboratory. It helps dissolve blood clots and is used to treat heart attacks, strokes, and clots in the lungs. It is also being studied in the treatment of cancer. It is a type of systemic thrombolytic agent. Also called Activase, r-tPA, and recombinant tissue plasminogen activator.

### **Alunbrig**

A drug used to treat adults with non-small cell lung cancer that has spread and is ALK positive. It is also being studied in the treatment of other types of cancer. Alunbrig blocks certain proteins made by the ALK gene. Blocking these proteins may stop the growth and spread of cancer cells. Alunbrig is a type of tyrosine kinase inhibitor. Also called brigatinib.

### **Alymsys**

A drug that contains the active ingredient bevacizumab and is used to treat many different types of cancer. Alymsys is used alone or with other drugs to treat certain types of cervical cancer, colorectal cancer, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), glioblastoma (a type of brain cancer), and ovarian epithelial, fallopian tube, and primary peritoneal cancer.

Alymsys binds to a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody.

### **Alzheimer dementia**

A brain disorder that usually starts in late middle age or old age and gets worse over time. Symptoms include loss of memory, confusion, difficulty thinking, and changes in language, behavior, and personality. Also called Alzheimer disease.

### **Alzheimer disease**

A brain disorder that usually starts in late middle age or old age and gets worse over time. Symptoms include loss of memory, confusion, difficulty thinking, and changes in language, behavior, and personality. Also called Alzheimer dementia.

### **Amanita phalloides**

A type of poisonous mushroom that has harmful effects on the kidneys and liver. It is responsible for most fatal cases of mushroom poisoning. Also called death cap.

### **Ambien**

A drug used to treat insomnia (inability to sleep), and anxiety. It is a type of imidazopyridine (sedative hypnotic). Also called zolpidem.

### **Ameluz**

A drug that contains the active ingredient aminolevulinic acid hydrochloride and is used with photodynamic therapy to treat actinic keratosis (a skin condition that may become cancer). When Ameluz is taken up by abnormal cells, including cancer cells, and then exposed to certain types of light, it becomes active and kills the cells. Ameluz is a type of photosensitizing agent.

### **Amevive**

A drug that is used to treat certain skin conditions and is being studied in the treatment of cutaneous (skin-related) T-cell cancer and T-cell non-Hodgkin lymphoma. Amevive is made by combining part of an antibody with a protein that blocks the growth some types of T cells. It is a type of fusion protein and a type of immunosuppressant. Also called alefacept.

### **Amplimexon**

A substance that is being studied in the treatment of some types of cancer, including pancreatic, lung, breast, prostate, melanoma, and multiple myeloma. It belongs to the family of drugs called cyanoaziridine derivatives. Also called imexon.

### **Amtagvi**

A treatment used for adults with melanoma that has spread to other parts of the body or cannot be removed by surgery. It is used in patients whose cancer did not get better after treatment with an antibody that blocks PD-1 (and treatment with a BRAF inhibitor, for those with a BRAF mutation). It is also being studied in the treatment of other types of cancer. Amtagvi is made using tumor-infiltrating lymphocytes (a type of immune cell that can recognize and kill tumor cells) from a patient's tumor. These lymphocytes are tested in the laboratory to find out which ones best recognize the tumor cells. The selected lymphocytes are then grown in large numbers in the laboratory and given back to the patient to help the immune system kill the tumor cells. Amtagvi is a type of cellular immunotherapy called tumor-infiltrating lymphocyte therapy. Also called lifileucel.



### **Angiocept**

A substance being studied in the treatment of cancer. Angiocept may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of vascular endothelial growth factor receptor-2 (VEGFR-2) inhibitor and a type of antiangiogenesis agent. Also called CT-322 and VEGFR-2 inhibitor CT-322.

### **Angiozyme**

A substance being studied in the treatment of cancer. Angiozyme is a special type of RNA made in the laboratory. It stops a protein called vascular endothelial growth factor receptor (VEGFR) from being made. This may prevent the growth of new blood vessels that tumors need to grow. It is a type of angiogenesis inhibitor and a type of ribozyme. Also called RPI.4610.

### **Anktiva**

A drug used with bacillus Calmette-Guérin (BCG) to treat adults with bladder cancer that has not invaded the muscle layers of the bladder and with carcinoma in situ. Patients may or may not have a papillary tumor (a tumor that looks like long, thin “finger-like” growths). Anktiva is used in patients whose cancer has not gotten better after treatment with BCG. It is given with BCG as a solution through a catheter (thin tube) that is placed into the bladder. It is also being studied in the treatment of other types of cancer. Anktiva binds to receptors for the protein interleukin-15 (IL-15), which is found on certain types of immune cells. This may help the immune cells kill cancer cells better than BCG alone. Anktiva is a type of IL-15 receptor agonist and a type of immunotherapy. Also called nogapendekin alfa inbakicept.

### **Apidra**

A drug used to control the amount of sugar in the blood of patients with diabetes mellitus. It is a form of the hormone insulin that is made in the laboratory. Apidra gets into the blood faster than insulin when it is injected under the skin before or shortly after a meal. It is a type of therapeutic insulin. Also called insulin glulisine.

### **Apo-2L**

A cell protein that can attach to certain molecules in some cancer cells and may kill the cells. Apo-2L is being studied in the treatment of cancer. Also called TNF-related apoptosis-inducing ligand, TRAIL, and tumor necrosis factor-related apoptosis-inducing ligand.

### **Aptivus**

A drug used with another drug, ritonavir, to treat patients who are infected with HIV (the virus that causes AIDS) and have been treated with other anti-HIV drugs. Aptivus blocks the HIV virus from making copies of itself. It is a type of anti-HIV agent and a type of protease inhibitor. Also called tipranavir sodium.

### **Aranesp**

A drug used to treat anemia caused by chronic kidney disease and some types of chemotherapy. Aranesp is a form of erythropoietin (a substance naturally made by the kidneys) that is made in the laboratory. It helps the bone marrow make more red blood cells. Aranesp is a type of antianemic and a type of erythropoiesis-stimulating agent. Also called darbepoetin alfa.

### **Aredia**

A drug used to treat hypercalcemia (high blood levels of calcium) caused by cancer and bone damage caused by multiple myeloma or by breast cancer that

has spread to the bone. It is also used to treat Paget disease of the bone. It is also being studied in the treatment of other types of cancer. Aredia may help keep bone from breaking down and prevent the loss of calcium from the bones. It is a type of bisphosphonate. Also called pamidronate disodium.

### **Arimidex**

A drug used to treat certain types of breast cancer in postmenopausal women. It is also being studied in the treatment of other types of cancer. Arimidex lowers the amount of estrogen made by the body. This may stop the growth of cancer cells that need estrogen to grow. Arimidex is a type of nonsteroidal aromatase inhibitor. Also called anastrozole.

### **Arixtra**

A drug used to prevent blood clots from forming inside blood vessels in the leg. It is being studied in the prevention of blood clots in some cancer patients, including women having surgery for cancer of the reproductive tract. It is a type of anticoagulant. Also called fondaparinux sodium.

### **Aromasin**

A drug used to treat postmenopausal women with advanced breast cancer or early-stage breast cancer that is estrogen receptor positive (ER+). It is used in patients whose cancer has already been treated with tamoxifen. It is also being studied in the treatment of other types of cancer. Aromasin lowers the amount of estrogen made by the body. This may stop the growth of cancer cells that need estrogen to grow. Aromasin is a type of aromatase inhibitor. Also called exemestane.

### **Arranon**

A drug used to treat adults and children aged 1 year and older with T-cell acute lymphoblastic leukemia and T-cell lymphoblastic lymphoma. It is used in patients whose cancer has not gotten better or has recurred (come back) after treatment with other anticancer drugs. Arranon stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called 506U78 and nelarabine.

### **Arzerra**

A drug used alone or with other drugs to treat certain types of chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. Arzerra binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of leukemia and lymphoma cells. Arzerra may block CD20 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called HuMax-CD20 and ofatumumab.

### **Ashkenazi Jews**

One of two major ancestral groups of Jewish people whose ancestors lived in France and Central and Eastern Europe, including Germany, Poland, and Russia. The other group is called Sephardic Jews and includes those whose ancestors lived in Spain, Portugal, North Africa, and the Middle East. Most Jewish people living in the United States are of Ashkenazi descent.

### **Asparlas**

A drug used with other drugs to treat acute lymphoblastic leukemia in children and young adults aged 1 month to 21 years. It is also being studied in the treatment of other types of cancer. Asparlas is made up of the enzyme L-asparaginase that is linked to a substance called SC-PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium *E. coli*

and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. Asparlas is a type of protein synthesis inhibitor. Also called calaspargase pegol, EZN-2285, and SC-PEG E. coli L-asparaginase.

### **Aspergillus**

Fungi commonly found in soil. Certain types of Aspergillus may cause disease, especially in people who have suppressed immune systems.

### **Augmentin**

A drug used to treat bacterial infections. Adding the chemical clavulanate potassium to the antibiotic amoxicillin increases the amount of time the antibiotic stays active in the body. Augmentin is a type of combination antibiotic. Also called amoxicillin-clavulanate potassium.

### **Augtyro**

A drug used to treat adults with non-small cell lung cancer that has spread and has an abnormal ROS1 gene and adults and children aged 12 years and older with certain types of solid tumors that have an NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Augtyro blocks certain proteins involved in cell signaling and cell growth. Blocking these proteins may help keep cancer cells from growing. Augtyro is a type of kinase inhibitor. Also called repotrectinib.

### **Aurimmune**

A substance being studied in the treatment of some types of cancer. Aurimmune is made in the laboratory by binding a cancer-killing protein called tumor necrosis factor (TNF) to the surface of very tiny particles of gold. These TNF-gold particles may kill cancer cells without harming healthy tissue. Also called colloidal gold-bound tumor necrosis factor and TNF-bound colloidal gold.

### **Aurora B/C kinase inhibitor GSK1070916A**

A substance being studied in the treatment of some types of cancer. It blocks certain enzymes (Aurora kinases) involved in cell division and may kill cancer cells. It is a type of serine/threonine protein kinase inhibitor. Also called GSK1070916A.

### **Aurora kinase inhibitor AT9283**

A substance being studied in the treatment of some types of cancer. It blocks enzymes (Aurora kinases) involved in cell division and may kill cancer cells. Aurora kinase inhibitor AT9283 is a type of serine/threonine protein kinase inhibitor. Also called AT9283.

### **Avage**

A drug used on the skin to treat several skin conditions. It is also being studied in the treatment of basal cell skin cancer and basal cell nevus syndrome. Avage is related to vitamin A and is made in the laboratory. It turns on a gene that may help stop the growth of skin cancer cells. Avage is a type of synthetic retinoid. Also called tazarotene and Tazorac.

### **Avandia**

A drug that helps control the amount of glucose (sugar) in the blood and is being studied in the prevention and treatment of some types of cancer. Avandia stops cells from growing and may prevent the growth of new blood vessels that tumors

need to grow. It is a type of thiazolidinedione and a type of antiangiogenesis agent. Also called rosiglitazone maleate.

### **Avastin**

A drug that contains the active ingredient bevacizumab and is used to treat many different types of cancer. Avastin is used alone or with other drugs to treat certain types of cervical cancer, colorectal cancer, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), glioblastoma (a type of brain cancer), hepatocellular carcinoma (a type of liver cancer), and ovarian epithelial, fallopian tube, and primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Avastin binds to a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody.

### **Avelox**

A drug used to treat bacterial infections. It is a type of fluoroquinolone. Also called moxifloxacin hydrochloride.

### **Aventyl**

A drug used to treat depression. It may also be used to treat panic or anxiety disorders and certain types of pain, and to help people quit smoking. Aventyl increases the levels of norepinephrine and other natural chemicals in the brain. This helps improve mood and may reduce a person's craving for nicotine. It is a type of tricyclic antidepressant. Also called nortriptyline and Pamelor.

### **Avita**

A topical preparation of tretinoin that is used to treat acne. Tretinoin is a form of vitamin A.

### **Avodart**

A drug used to treat symptoms of an enlarged prostate gland. It is being studied in the treatment of male hair loss and prostate cancer. Avodart blocks enzymes the body needs to make male sex hormones. It is a type of 5-alpha reductase inhibitor. Also called dutasteride and GG745.

### **Ayurveda**

A medical system from India that has been used for thousands of years. The goal is to cleanse the body and to restore balance to the body, mind, and spirit. It uses diet, herbal medicines, exercise, meditation, breathing, physical therapy, and other methods. It is a type of Complementary and Alternative Medicine (CAM) therapy. Also called Ayurvedic medicine.

### **Ayurvedic medicine**

A medical system from India that has been used for thousands of years. The goal is to cleanse the body and to restore balance to the body, mind, and spirit. It uses diet, herbal medicines, exercise, meditation, breathing, physical therapy, and other methods. It is a type of Complementary and Alternative Medicine (CAM) therapy. Also called Ayurveda.

### **Ayvakit**

A drug used to treat adults with advanced systemic mastocytosis or certain types of gastrointestinal stromal tumors. It is also being studied in the treatment of other types of cancer. Ayvakit blocks certain proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called avapritinib.

## **Azedra**

A drug that contains a form of radioactive iodine and is used to treat adults and children aged 12 years and older with certain types of malignant pheochromocytoma or paraganglioma that have spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Azedra builds up in tumor cells and gives off radiation that may kill them. It is a type of radiotherapeutic agent. Also called <sup>131</sup>I-MIBG, iobenguane I 131, and iodine I 131-metaiodobenzylguanidine.

## **B cell**

A type of white blood cell that makes antibodies. B cells are part of the immune system and develop from stem cells in the bone marrow. Also called B lymphocyte.

## **B lymphocyte**

A type of white blood cell that makes antibodies. B lymphocytes are part of the immune system and develop from stem cells in the bone marrow. Also called B cell.

## **B-cell acute lymphoblastic leukemia**

An aggressive (fast-growing) type of leukemia (blood cancer) in which too many B-cell lymphoblasts (immature white blood cells) are found in the bone marrow and blood. It is the most common type of acute lymphoblastic leukemia (ALL). Also called B-cell acute lymphocytic leukemia and precursor B-lymphoblastic leukemia.

## **B-cell acute lymphocytic leukemia**

An aggressive (fast-growing) type of leukemia (blood cancer) in which too many B-cell lymphoblasts (immature white blood cells) are found in the bone marrow and blood. It is the most common type of acute lymphoblastic leukemia (ALL). Also called B-cell acute lymphoblastic leukemia and precursor B-lymphoblastic leukemia.

## **B-cell leukemia/lymphoma 2 protein**

A protein that helps control whether a cell lives or dies by blocking a type of cell death called apoptosis. The gene for the B-cell leukemia/lymphoma 2 protein is found on chromosome 18, and transfer of the B-cell leukemia/lymphoma 2 gene to a different chromosome is seen in many B-cell leukemias and lymphomas. This causes the B-cell leukemia/lymphoma 2 protein to be made in larger amounts, which may keep cancer cells from dying. Also called BCL2.

## **B-cell lymphoma**

A type of cancer that forms in B cells (a type of immune system cell). B-cell lymphomas may be either indolent (slow-growing) or aggressive (fast-growing). Most B-cell lymphomas are non-Hodgkin lymphomas. There are many different types of B-cell non-Hodgkin lymphomas. These include Burkitt lymphoma, chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL), diffuse large B-cell lymphoma, follicular lymphoma, and mantle cell lymphoma. Prognosis and treatment depend on type and stage of the cancer.

## **B3 monoclonal antibody**

A substance that binds to a molecule called Lewis Y antigen that is found on many types of tumor cells and some normal cells. It is being studied in the treatment of several types of cancer that express the Lewis Y antigen. It is a type of monoclonal antibody.

### **B43-PAP immunotoxin**

A toxic substance linked to an antibody that attaches to tumor cells and kills them.

### **B7-1**

A protein found on the surface of some immune system cells, including B cells and monocytes. Cells with B7-1 on their surface cause T cells to make substances that help control immune responses. Also called CD80.

### **BAER test**

A test used to detect some types of hearing loss, such as hearing loss caused by injury or tumors that affect nerves involved in hearing. Electrodes are placed on the head and certain tones or clicking sounds are made. The electrodes measure nerve signals in the brain when it reacts to the sounds. Also called ABR test, auditory brain stem response test, and brain stem auditory evoked response test.

### **BAK gel**

A substance being studied in the treatment of peripheral neuropathy (pain, numbness, tingling, burning, or weakness in the hands or feet) caused by chemotherapy. It contains three drugs, baclofen, amitriptyline, and ketamine, that relax muscles by blocking nerve receptors. The gel is applied to the skin of affected areas. It is a type of analgesic. Also called baclofen/amitriptyline/ketamine gel.

### **BAP1 gene**

A gene that makes a protein involved in controlling cell growth, division, and death. This protein may also play a role in repairing damaged DNA and controlling the activity of certain genes. Mutations (changes) in the BAP1 gene may cause abnormal cells, including cancer cells, to grow and spread in the body. BAP1 gene mutations have been found in an inherited condition called BAP1 tumor predisposition syndrome, which causes an increased risk of some types of cancer, including cancers of the skin, eye, kidney, bile duct, and mesothelium (the tissue that lines the chest and abdomen). The BAP1 gene is a type of tumor suppressor gene.

### **BAP1 tumor predisposition syndrome**

A rare inherited disorder that is caused by mutations (changes) in the BAP1 gene. Having this mutation increases the risk of developing certain types of cancerous tumors of the skin, eye, kidney, and mesothelium (the tissue that lines the chest and abdomen). The cancers tend to develop at an early age, are often fast-growing, and are more likely to spread to other parts of the body. Benign (not cancer) tumors of the skin may also occur. Not all people who have a mutation in the BAP1 gene will develop tumors.

### **BAY 43-9006**

A drug used to treat certain types of hepatocellular carcinoma (a type of liver cancer), renal cell carcinoma (a type of kidney cancer), and thyroid cancer. It is also being studied in the treatment of other types of cancer. BAY 43-9006 blocks certain proteins, which may help keep cancer cells from growing and dividing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. BAY 43-9006 is a type of kinase inhibitor and a type of antiangiogenesis agent. Also called Nexavar and sorafenib tosylate.



**BAY 56-3722**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called camptothecins.

**BAY 59-8862**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called taxanes.

**BB-10901**

A substance being studied in the treatment of some types of cancer, including Wilms tumor, neuroblastoma, rhabdomyosarcoma, and other types of soft tissue sarcoma. BB-10901 contains a monoclonal antibody that binds to a protein called CD56 on some types of cancer cells. It also contains an anticancer drug called DM1, which may help kill cancer cells after BB-10901 binds to them. BB-10901 is a type of antibody-drug conjugate. Also called lorvotuzumab mertansine.

**BBB**

A network of blood vessels and tissue that is made up of closely spaced cells and helps keep harmful substances from reaching the brain. The BBB lets some substances, such as water, oxygen, carbon dioxide, and general anesthetics, pass into the brain. It also keeps out bacteria and other substances, such as many anticancer drugs. Also called blood-brain barrier.

**BBBD**

The use of drugs to create openings between cells in the blood-brain barrier. The blood-brain barrier is a protective network of blood vessels and tissue that protects the brain from harmful substances, but can also prevent anticancer drugs from reaching the brain. Once the barrier is opened, anticancer drugs may be infused into an artery that goes to the brain, in order to treat brain tumors. Also called blood-brain barrier disruption.

**BBD**

A group of conditions marked by changes in breast tissue that are not cancer but may become cancer. Types of BBD include atypical ductal hyperplasia, atypical lobular hyperplasia, lobular carcinoma in situ, and complex sclerosing lesion (radial scar). Having BBD increases the risk of breast cancer. Also called borderline breast disease.

**BBIC**

A substance that is made from soybeans and is being studied in the prevention of cancer. It blocks the action of enzymes that are needed for cancer cells to form. It is a type of protease inhibitor. Also called Bowman-Birk inhibitor concentrate.

**BBR 2778**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called antitumor antibiotics. Also called pixantrone.

**BBR 3464**

A substance that is being studied in the treatment of cancer. It belongs to the family of platinum-based drugs.

## **BCG**

A weakened form of the bacterium *Mycobacterium bovis* (bacillus Calmette-Guérin) that does not cause disease. BCG is used in a solution to stimulate the immune system in the treatment of bladder cancer and as a vaccine to prevent tuberculosis. Also called bacillus Calmette-Guérin.

## **BCG solution**

A type of biologic therapy used to treat early stage bladder cancer. The solution is made from a weakened form of a bacterium called *Mycobacterium bovis* (bacillus Calmette-Guérin) that does not cause disease. It is given through a catheter that is placed into the bladder where the solution is held for about two hours. BCG solution may help the body's immune system kill cancer cells. Also called bacillus Calmette-Guérin solution.

## **BCG vaccine**

A vaccine used to prevent tuberculosis (TB) in people who are at a high risk of TB or where TB is common. It is rarely given in the U.S. It is made from a weakened form of a bacterium called *Mycobacterium bovis* (bacillus Calmette-Guérin), which is similar to the bacteria that cause TB. The vaccine may help the body's immune system make antibodies to destroy the TB bacteria. It also may help the immune system kill cancer cells and is being studied in the treatment of melanoma. Also called bacillus Calmette-Guérin vaccine.

## **BCL2**

A protein that helps control whether a cell lives or dies by blocking a type of cell death called apoptosis. The gene for BCL2 is found on chromosome 18, and transfer of the BCL2 gene to a different chromosome is seen in many B-cell leukemias and lymphomas. This causes the BCL2 protein to be made in larger amounts, which may keep cancer cells from dying. Also called B-cell leukemia/lymphoma 2 protein.

## **BCNS**

A rare, inherited disorder that affects many organs and tissues in the body. People with this disorder have a very high risk of developing basal cell skin cancer during adolescence or early adulthood. They are also at risk of developing medulloblastoma (a type of brain cancer) and other types of cancer. BCNS may also cause benign (not cancer) tumors in the jaw, heart, or ovaries. Other signs and symptoms include a large head and unusual facial features; small pits in the skin on the hands and feet; abnormalities of the spine, ribs, or skull; eye problems; and developmental problems. BCNS is caused by a mutation (change) in the PTCH1 gene. Also called basal cell nevus syndrome, Gorlin syndrome, NBCCS, and nevoid basal cell carcinoma syndrome.

## **BCNU**

A drug used alone or with other drugs to treat certain types of brain tumors, Hodgkin lymphoma, and non-Hodgkin lymphoma and with prednisone to treat multiple myeloma. It is also being studied in the treatment of other types of cancer. BCNU damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea. Also called BiCNU and carmustine.

## **BCOP**

A licensed pharmacist with special training in how to design, give, monitor, and change chemotherapy for cancer patients. Also called board certified oncology pharmacy specialist and oncology pharmacy specialist.

### **BCR-ABL fusion gene**

A gene formed when pieces of chromosomes 9 and 22 break off and trade places. The ABL gene from chromosome 9 joins to the BCR gene on chromosome 22 to form the BCR-ABL fusion gene. The changed chromosome 22 with the fusion gene on it is called the Philadelphia chromosome. The BCR-ABL fusion gene is found in most people with chronic myelogenous leukemia, and in some people with acute lymphoblastic leukemia or acute myelogenous leukemia. Also called BCR::ABL fusion gene.

### **BCR-ABL fusion protein**

A protein made from pieces of two genes that get joined together. The BCR-ABL fusion protein is found in most people with chronic myelogenous leukemia, and in some people with acute lymphoblastic leukemia or acute myelogenous leukemia. Inside the leukemia cells, the ABL gene from chromosome 9 joins to the BCR gene on chromosome 22 to form the BCR-ABL fusion gene, which makes the BCR-ABL fusion protein. Also called BCR::ABL fusion protein.

### **BCR::ABL fusion gene**

A gene formed when pieces of chromosomes 9 and 22 break off and trade places. The ABL gene from chromosome 9 joins to the BCR gene on chromosome 22 to form the BCR::ABL fusion gene. The changed chromosome 22 with the fusion gene on it is called the Philadelphia chromosome. The BCR::ABL fusion gene is found in most people with chronic myelogenous leukemia, and in some people with acute lymphoblastic leukemia or acute myelogenous leukemia. Also called BCR-ABL fusion gene.

### **BCR::ABL fusion protein**

A protein made from pieces of two genes that get joined together. The BCR::ABL fusion protein is found in most people with chronic myelogenous leukemia, and in some people with acute lymphoblastic leukemia or acute myelogenous leukemia. Inside the leukemia cells, the ABL gene from chromosome 9 joins to the BCR gene on chromosome 22 to form the BCR::ABL fusion gene, which makes the BCR::ABL fusion protein. Also called BCR-ABL fusion protein.

### **BCRP**

A protein that is involved in making cancer cells resistant (unable to respond) to anticancer drugs. Normally, BCRP works with other proteins to help move many different substances, including drugs and other chemicals, in and out of cells. It is found in stem cells and in normal tissues, including the intestine, liver, brain, and placenta. However, it may also be found in higher than normal amounts in some cancer cells, which can cause them to be unable to respond to certain anticancer drugs. Drugs that block BCRP are being studied in the treatment of some types of cancer. BCRP was first identified in breast cancer cells. Also called breast cancer resistance protein.

### **BCX-1777**

A substance being studied in the treatment of some types of leukemia and lymphoma. It is a type of purine nucleoside phosphorylase (PNP) inhibitor. Also called forodesine hydrochloride.

### **BDC**

A rare type of kidney cancer that grows and spreads quickly. It begins in the duct of Bellini in the kidney. Also called Bellini duct carcinoma.

## **BDCS**

A very rare, inherited disorder that affects the hair follicles on the scalp and other areas of the body where hair normally grows. There is little or no hair growth in the affected areas, and the hair may be lighter in color, coarse in texture, and appear flat and twisted when looked at under a microscope. Other signs and symptoms include little or no sweating; small white bumps or cysts on the face, tops of the hands and feet, the back of the elbow, and the front of the knee; and other skin problems. The signs and symptoms usually appear at birth or during infancy. People with BDCS have an increased risk of developing basal cell skin cancer at an early age, especially on the face. BDCS may be caused by a mutation (change) in the UBE2A gene on the X chromosome. Also called Bazex-Dupré-Christol syndrome.

## **BEACOPP**

An abbreviation for a chemotherapy combination used to treat advanced Hodgkin lymphoma. It includes the drugs bleomycin sulfate, etoposide phosphate, doxorubicin hydrochloride (Adriamycin), cyclophosphamide, vincristine sulfate (Oncovin), procarbazine hydrochloride, and prednisone. Also called BEACOPP regimen.

## **BEACOPP regimen**

An abbreviation for a chemotherapy combination used to treat advanced Hodgkin lymphoma. It includes the drugs bleomycin sulfate, etoposide phosphate, doxorubicin hydrochloride (Adriamycin), cyclophosphamide, vincristine sulfate (Oncovin), procarbazine hydrochloride, and prednisone. Also called BEACOPP.

## **BEP**

An abbreviation for a chemotherapy combination used to treat ovarian and testicular germ cell tumors. It includes the drugs bleomycin sulfate, etoposide phosphate, and cisplatin (Platinol). Also called BEP regimen.

## **BEP regimen**

An abbreviation for a chemotherapy combination used to treat ovarian and testicular germ cell tumors. It includes the drugs bleomycin sulfate, etoposide phosphate, and cisplatin (Platinol). Also called BEP.

## **BG00001**

A gene therapy agent that is being studied in the treatment of cancer. It belongs to the family of drugs called biological response modifiers.

## **BI 2536**

A substance being studied in the treatment of cancer. It prevents cells from dividing and may block the growth of some tumors. It is a type of mitotic inhibitor.

## **BI-RADS**

A reporting system used to describe the results of a mammogram, breast ultrasound, or breast MRI in a standard way. BI-RADS ranks the test findings according to one of seven categories, ranging from normal or benign (not cancer) to highly suspicious or malignant (cancer). Each category includes follow-up recommendations to help manage a person's care. For mammograms, BI-RADS includes four additional categories that describe the level of breast density seen, ranging from little or no dense tissue to very dense tissue. Also called Breast Imaging Reporting and Data System.

**BIBF 1120**

A substance being studied in the treatment of some types of cancer. BIBF 1120 blocks enzymes needed for cells to grow, and may prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called tyrosine kinase inhibitor BIBF 1120.

**BIBX 1382**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called epidermal growth factor receptor (EGFR) inhibitors.

**BL22 immunotoxin**

A bacterial toxic substance linked to an antibody that attaches to cancer cells and kills them. It belongs to the family of drugs called bacterial immunotoxins.

**BLM gene**

A gene that makes a protein involved in maintaining the structure of DNA when DNA is copied in a cell and in repairing damaged DNA. Mutations (changes) in the BLM gene may cause cells to lose their ability to repair damaged DNA, which may lead to abnormal cell growth. BLM gene mutations have been found in an inherited condition called Bloom syndrome. People with this condition have an increased risk of developing cancer at an early age, especially squamous cell skin cancer, leukemia, lymphoma, and gastrointestinal tract cancer.

**BMD**

A measure of the amount of minerals (mostly calcium and phosphorous) contained in a certain volume of bone. BMD measurements are used to diagnose osteoporosis (a condition marked by decreased bone mass), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. Low BMD can occur in patients treated for cancer. Also called bone density, bone mass, and bone mineral density.

**BMD scan**

A procedure that measures the amount of calcium and other minerals in a bone by passing x-rays with two different energy levels through the bone. A BMD scan shows the strength and thickness of a bone and is usually done in the lower spine, hip, lower arm, wrist, fingers, and heel. It is used to diagnose osteoporosis (a condition of lower bone density), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. A BMD scan also measures fat and muscle composition in specific parts of the body, such as the arms, legs, and pelvis. Also called bone densitometry, bone mineral density scan, DEXA scan, dual energy x-ray absorptiometry, and DXA.

**BMI**

Body mass index. A measure that relates body weight to height. BMI is sometimes used to measure total body fat and whether a person is a healthy weight. Excess body fat is linked to an increased risk of some diseases including heart disease and some cancers. Also called body mass index.

**BMS-182751**

A substance being studied in the treatment of prostate and other types of cancer. It contains the metal platinum and may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called JM 216 and satraplatin.

**BMS-184476**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called mitotic inhibitors.

**BMS-188797**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called taxane analogs.

**BMS-214662**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called farnesyltransferase inhibitors.

**BMS-247550**

A drug used alone or with capecitabine to treat breast cancer that is locally advanced or has spread to other parts of the body and did not get better after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. BMS-247550 blocks cell growth by stopping cell division and may kill cancer cells. It is a type of epothilone analog and a type of antimicrotubule agent. Also called ixabepilone and Ixempra.

**BMS-275291**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called matrix metalloproteinase inhibitors (MMPis).

**BMS-354825**

A drug used alone or with other drugs to treat adults and children aged 1 year and older with certain types of chronic myeloid leukemia or acute lymphoblastic leukemia that are Philadelphia chromosome positive. It is also being studied in the treatment of other types of cancer. BMS-354825 blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called dasatinib and Sprycel.

**BMS-599626**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called protein tyrosine kinase inhibitors.

**BMT**

A procedure in which a patient receives healthy stem cells (blood-forming cells) to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy. The healthy stem cells may come from the bone marrow of the patient or from a related or unrelated donor. A BMT may be autologous (using a patient's own stem cells that were collected and saved before treatment), allogeneic (using stem cells from a related or unrelated donor), or syngeneic (using stem cells donated by an identical twin). Also called bone marrow transplant.

**BNCT**

A type of radiation therapy. A substance that contains boron is injected into a blood vessel. The boron collects in tumor cells. The patient then receives radiation therapy with atomic particles called neutrons. The neutrons react with the boron to kill the tumor cells without harming normal cells. BNCT is being studied as a treatment for glioblastoma multiforme and recurrent head and neck cancer. Also called boron neutron capture therapy.



## **BON**

The necrosis (death) of bone tissue caused by treatment with a bisphosphonate (a drug or substance used to treat osteoporosis, bone pain caused by some types of cancer, and high blood calcium). It commonly occurs in the jaw bones. There may be pain, swelling and infection in the areas of necrosis. Also called bisphosphonate-associated osteonecrosis.

## **BPA**

A substance used in a type of radiation therapy called boron neutron capture therapy. BPA is injected into a blood vessel and collects in tumor cells. The patient then receives radiation therapy with atomic particles called neutrons. The neutrons react with BPA to kill the tumor cells without harming normal cells. Also called boron phenylalanine.

## **BPA-F**

A substance used in a type of radiation therapy called boron neutron capture therapy. BPA-F is injected into a blood vessel and collects in tumor cells. The patient then receives radiation therapy with atomic particles called neutrons. The neutrons react with the boron in BPA-F, producing radioactive particles that kill the tumor cells without harming normal cells. Also called boronophenylalanine-fructose complex.

## **BPD**

A serious mental illness marked by unstable moods and impulsive behavior. People with BPD have problems with relationships, family and work life, long-term planning, and self-identity. Symptoms include intense bouts of anger, depression, and anxiety that may lead to self-injury or suicide, drug or alcohol abuse, excessive spending, binge eating, or risky sex. A person with BPD who is diagnosed with cancer may be at an increased risk of suicide. Also called borderline personality disorder.

## **BPDCN**

A rare, fast-growing cancer that affects the blood, bone marrow, and skin. It can also affect the lymph nodes, spleen, and central nervous system. Most patients with BPDCN have red-brown or deep purple skin lesions on one or more areas of the body. BPDCN usually occurs in older adults and is difficult to diagnose and treat. Also called blastic plasmacytoid dendritic cell neoplasm.

## **BPH**

A benign (not cancer) condition in which the prostate gland is larger than normal. As the prostate gets bigger, it may press against the bladder and urethra, which can slow or block the flow of urine from the bladder. This can cause urinary symptoms, such as feeling a need to urinate often or right away, waking up many times during the night to urinate, trouble urinating, leaking urine, pain during urination or after ejaculation (the release of semen through the penis during orgasm), and blood in the urine. BPH does not increase a person's risk of developing prostate cancer. However, if not treated, it can lead to a weak bladder, urinary retention, urinary tract infections, bladder stones, or bladder or kidney damage. BPH is most common in older men. Also called benign prostatic hyperplasia, benign prostatic hypertrophy, and enlarged prostate.

## **BPU**

A substance being studied in the treatment of cancer. It is a type of antitubulin agent. Also called benzoylphenylurea.

### **BRAF (V600E) kinase inhibitor RO5185426**

A drug used to treat Erdheim-Chester disease (a very rare type of histiocytosis) and advanced melanoma that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. BRAF (V600E) kinase inhibitor RO5185426 blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called PLX4032, RG7204, vemurafenib, and Zelboraf.

### **BRAF V600 mutation**

A type of mutation (change) in the BRAF gene that causes a mutant form of the BRAF protein to be made. This results in uncontrolled cell division and growth, which can lead to cancer. Drugs that target this mutant BRAF protein may kill cancer cells or stop them from growing. The BRAF V600 mutation is most commonly found in melanoma, but it may also be found in some other types of cancer, including cancers of the colon, rectum, lung, thyroid, ovary, and brain. Checking for the BRAF V600 mutation in tumor tissue may help plan cancer treatment. There are different forms of the BRAF V600 mutation, including V600E and V600K. V600E is the most common form.

### **BRAF gene**

A gene that makes a protein that is involved in sending signals in cells and in cell growth. Mutated (changed) forms of the BRAF gene and protein have been found in many types of cancer. These changes can increase the growth and spread of cancer cells.

### **BRAF kinase inhibitor**

A substance that blocks a protein called BRAF. BRAF is a kinase enzyme that helps control cell growth and signaling. It may be found in a mutated (changed) form in some types of cancer, including melanoma and colorectal cancer. Blocking mutated BRAF kinase proteins may help keep cancer cells from growing. Some BRAF kinase inhibitors are used to treat cancer.

### **BRCA1 gene**

A gene that makes a protein that repairs damaged DNA. Mutations (changes) in the BRCA1 gene significantly increase the risk of developing breast and ovarian cancer. These mutations can also increase the risk of developing other types of cancer, such as prostate cancer and pancreatic cancer. The BRCA1 gene is located on chromosome 17, which is 1 of the 23 pairs of chromosomes in human cells.

### **BRCA2 gene**

A gene that makes a protein that repairs damaged DNA. Mutations (changes) in the BRCA2 gene significantly increase the risk of developing breast and ovarian cancer. These mutations can also increase the risk of developing other types of cancer, such as prostate cancer and pancreatic cancer. The BRCA2 gene is located on chromosome 13, which is 1 of the 23 pairs of chromosomes in human cells.

### **BRCAPro**

A computer program that uses statistics to predict whether a person has an inherited mutation (change) in the BRCA1 and BRCA2 genes. People who have certain mutations in these genes have a higher than normal risk of breast, ovarian, prostate, and other types of cancer. The program is based on personal and family medical histories of breast and ovarian cancer.

### **BRM therapy**

A type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory. In cancer, some BRM therapies stimulate or suppress the immune system to help the body fight cancer. Other BRM therapies attack specific cancer cells, which may help keep them from growing or kill them. They may also lessen certain side effects caused by some cancer treatments. Types of BRM therapy include immunotherapy (such as cytokines, cancer treatment vaccines, and some antibodies) and some targeted therapies. Also called biological response modifier therapy, biological therapy, and biotherapy.

### **BSE**

A way a person can check their own breasts by feeling for lumps or other changes. BSEs can help a person learn how their breasts normally look and feel and notice when changes occur. Research has shown that doing BSEs does not lower the risk of dying from breast cancer and may lead to extra tests and procedures. Also called breast self-exam.

### **BSH**

A substance used in a type of radiation therapy called boron neutron capture therapy. BSH is injected into a vein and becomes concentrated in tumor cells. The patient then receives radiation treatment with atomic particles called neutrons. The neutrons react with the boron in BSH and make radioactive particles that kill the tumor cells without harming normal cells. Also called sodium borocaptate.

### **BSI-201**

A substance being studied in the treatment of some types of cancer. BSI-201 may kill cancer cells. Also called iniparib.

### **BSS**

A rare, inherited disorder in which tumors form in the hair follicles and sweat glands in the skin. The tumors usually occur on the head and neck, but they can also occur in the salivary glands and in other parts of the body. They tend to be large and increase in number over time and can affect vision, hearing, sense of smell, and the ability to chew and swallow. The tumors usually appear in late childhood or early adolescence. They are usually benign (not cancer) but may become cancer. People with this disorder have an increased risk of developing basal cell skin cancer and salivary gland tumors. BSS is caused by a mutation (change) in the CYLD gene. Also called Brooke-Spiegler syndrome.

### **BTK inhibitor**

A substance that blocks the activity of a protein called Bruton tyrosine kinase (BTK), which plays an important role in the development and maturation of B cells. B cells are a type of white blood cell that makes special proteins called antibodies. BTK inhibitors bind to the BTK protein, which is found on most B cells and some types of cancer cells. Blocking BTK may help keep cancer cells from growing. Some BTK inhibitors are used to treat cancer.

### **BUN**

Nitrogen in the blood that comes from urea (a substance formed by the breakdown of protein in the liver). The kidneys filter urea out of the blood and into the urine. A high level of urea nitrogen in the blood may be a sign of a kidney problem. Also called blood urea nitrogen and urea nitrogen.

## **Balversa**

A drug used to treat adults with urothelial cancer (a type of bladder or urinary tract cancer) that has spread and has an abnormal FGFR3 gene. It is used in patients whose cancer got worse during or after treatment with at least one type of systemic therapy. It is also being studied in the treatment of other types of cancer. Balversa blocks a protein called FGFR, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called erdafitinib.

## **Barrett esophagus**

A condition in which the cells lining the lower part of the esophagus have changed or been replaced with abnormal cells that could lead to cancer of the esophagus. The backing up of stomach contents (reflux) may irritate the esophagus and, over time, cause Barrett esophagus.

## **Bavencio**

A drug that binds to the protein PD-L1 to help immune cells kill cancer cells better and is used to treat different types of cancer. Bavencio is used alone or with other drugs to treat certain types of advanced renal cell carcinoma (a type of kidney cancer), urothelial cancer (a type of cancer in the bladder or urinary tract), and Merkel cell carcinoma (a rare type of skin cancer). It is also being studied in the treatment of other types of cancer. Bavencio may block PD-L1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called avelumab.

## **Bazex-Dupré-Christol syndrome**

A very rare, inherited disorder that affects the hair follicles on the scalp and other areas of the body where hair normally grows. There is little or no hair growth in the affected areas, and the hair may be lighter in color, coarse in texture, and appear flat and twisted when looked at under a microscope. Other signs and symptoms include little or no sweating; small white bumps or cysts on the face, tops of the hands and feet, the back of the elbow, and the front of the knee; and other skin problems. The signs and symptoms usually appear at birth or during infancy. People with Bazex-Dupré-Christol syndrome have an increased risk of developing basal cell skin cancer at an early age, especially on the face. Bazex-Dupré-Christol syndrome may be caused by a mutation (change) in the UBE2A gene on the X chromosome. Also called BDCS.

## **Beckwith-Wiedemann syndrome**

A rare, overgrowth disorder in which babies are large at birth and may develop low blood sugar. Other common symptoms are a large tongue, large internal organs, and defects of the abdominal wall near the navel. Beckwith-Wiedemann syndrome increases the risk of developing certain cancers, especially Wilms tumor.

## **Behçet disease**

A rare disorder that causes the blood vessels to become inflamed. Symptoms include sores in the mouth and on the sex organs and other skin problems, inflammation in parts of the eye, and pain, swelling, and stiffness of the joints. Other serious symptoms include blood clots, blindness, and inflammation of the brain, spinal cord, and digestive system. The symptoms may come and go on their own. Behçet disease is most common in young adults and its cause is unknown. Also called Behçet syndrome.

### **Behçet syndrome**

A rare disorder that causes the blood vessels to become inflamed. Symptoms include sores in the mouth and on the sex organs and other skin problems, inflammation in parts of the eye, and pain, swelling, and stiffness of the joints. Other serious symptoms include blood clots, blindness, and inflammation of the brain, spinal cord, and digestive system. The symptoms may come and go on their own. Behçet syndrome is most common in young adults and its cause is unknown. Also called Behçet disease.

### **Beleodaq**

A drug used to treat adults with peripheral T-cell lymphoma that has come back or has not gotten better with other treatment. It is also being studied in the treatment of other types of cancer. Beleodaq blocks certain enzymes needed for cell division and may kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow and may help make cancer cells easier to kill with other anticancer drugs. It is a type of histone deacetylase inhibitor, a type of antiangiogenesis agent, and a type of chemosensitizer. Also called belinostat and PXD101.

### **Bellini duct carcinoma**

A rare type of kidney cancer that grows and spreads quickly. It begins in the duct of Bellini in the kidney. Also called BDC.

### **Belrapzo**

A drug used to treat chronic lymphocytic leukemia and certain types of non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Belrapzo damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called bendamustine hydrochloride, Bendeka, and Treanda.

### **Bence Jones protein**

A small protein made by plasma cells (white blood cells that produce antibodies). It is found in the urine of most people with multiple myeloma (cancer that begins in plasma cells).

### **Bendeka**

A drug used to treat chronic lymphocytic leukemia and certain types of non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Bendeka damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Belrapzo, bendamustine hydrochloride, and Treanda.

### **Besponsa**

A drug used to treat adults and children aged 1 year and older with B-cell acute lymphoblastic leukemia that is CD22 positive (expresses the protein CD22). It is used in patients whose cancer came back or did not get better with other treatment. It is also being studied in the treatment of other types of cancer. Besponsa contains a monoclonal antibody that binds to CD22, which is found on some leukemia cells. It also contains an anticancer drug, which may help kill cancer cells. Besponsa is a type of antibody-drug conjugate. Also called inotuzumab ozogamicin.

### **Besremi**

A drug used to treat adults with polycythemia vera (a disease in which too many red blood cells are made in the bone marrow). It is also being studied in the

treatment of other conditions and some types of cancer. Besremi is a form of recombinant interferon alfa-2b that is made in the laboratory and linked to a substance called PEG, which makes the drug stay in the body longer. Besremi may lower the number of red blood cells made in the bone marrow. It is a type of cytokine and a type of immunomodulating agent. Also called ropeginterferon alfa-2b.

### **BiCNU**

A drug used alone or with other drugs to treat certain types of brain tumors, Hodgkin lymphoma, and non-Hodgkin lymphoma and with prednisone to treat multiple myeloma. It is also being studied in the treatment of other types of cancer. BiCNU damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea. Also called BCNU and carmustine.

### **BiTE**

A substance made in the laboratory that can bind to two target proteins on the surface of different cells. For example, a BiTE may bind to a certain protein on healthy T cells (a type of immune cell) and, at the same time, to a different protein on cancer cells. This brings the T cells and cancer cells close together so the T cells can more effectively kill the cancer cells. Some BiTEs are being used to treat certain types of cancer, including acute lymphoblastic leukemia, multiple myeloma, lymphoma, and small cell lung cancer. They are a type of targeted therapy. Also called bispecific T-cell engager.

### **Biafine cream**

A substance that is put on the skin to help repair damaged skin. It may be used on certain wounds and burns, and to treat the redness, burning, and peeling caused by radiation therapy.

### **Biomed 101**

A substance that is being studied for its ability to decrease the side effects of interleukin-2 (IL-2).

### **Birt-Hogg-Dubé syndrome**

A rare, inherited disorder in which benign (not cancer) skin lesions called fibrofolliculomas form in the hair follicles on the face, neck, and chest. Patients with Birt-Hogg-Dubé syndrome have an increased risk of kidney cancer and benign kidney tumors. They may also have lung cysts and a condition called a pneumothorax, in which all or part of the lung collapses. The signs and symptoms of Birt-Hogg-Dubé syndrome usually do not appear until young adulthood. It is caused by a mutation (change) in a gene called FLCN.

### **Blackfan–Diamond anemia**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with Blackfan–Diamond anemia may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called congenital hypoplastic anemia, congenital pure red cell aplasia, DBA, Diamond-Blackfan anemia, erythrogenesis imperfecta, and inherited erythroblastopenia.

### **Blincyto**

A drug used to treat adults and children aged 1 month and older with certain types of B-cell acute lymphoblastic leukemia that are CD19 positive (expresses



the protein CD19). It is also being studied in the treatment of other types of cancer. Blincyto binds to CD19, which is found on most B cells (a type of white blood cell) and some types of leukemia cells. It also binds to a protein called CD3, which is found on T cells (another type of white blood cell). This may help the immune system kill cancer cells. Blincyto is a type of bispecific T-cell engager. Also called blinatumomab.

### **Bloom syndrome**

A rare, inherited disorder marked by shorter than average height, a narrow face, a red skin rash that occurs on sun-exposed areas of the body, and an increased risk of cancer. The rash usually occurs on the face, arms, and back of the hands. Small clusters of enlarged blood vessels may appear in the rash and in the eyes. Other signs and symptoms include patches of skin that may be lighter or darker than the skin around them, a small jaw and large ears, a high-pitched voice, fertility problems, learning problems, and other growth and developmental problems. People with this disorder have an increased risk of diabetes, chronic obstructive pulmonary disease, and frequent ear and lung infections. They also have an increased risk of developing cancer at an early age, especially squamous cell skin cancer, leukemia, lymphoma, and gastrointestinal tract cancer. Bloom syndrome is caused by a mutation (change) in the BLM gene that causes cells to have abnormal breaks in the chromosomes. Also called Bloom-Torre-Machacek syndrome.

### **Bloom-Torre-Machacek syndrome**

A rare, inherited disorder marked by shorter than average height, a narrow face, a red skin rash that occurs on sun-exposed areas of the body, and an increased risk of cancer. The rash usually occurs on the face, arms, and back of the hands. Small clusters of enlarged blood vessels may appear in the rash and in the eyes. Other signs and symptoms include patches of skin that may be lighter or darker than the skin around them, a small jaw and large ears, a high-pitched voice, fertility problems, learning problems, and other growth and developmental problems. People with this disorder have an increased risk of diabetes, chronic obstructive pulmonary disease, and frequent ear and lung infections. They also have an increased risk of developing cancer at an early age, especially squamous cell skin cancer, leukemia, lymphoma, and gastrointestinal tract cancer. Bloom-Torre-Machacek syndrome is caused by a mutation (change) in the BLM gene that causes cells to have abnormal breaks in the chromosomes. Also called Bloom syndrome.

### **Bosulif**

A drug used to treat adults and children aged 1 year and older with chronic myelogenous leukemia that is Philadelphia chromosome positive. It is used in some newly diagnosed patients. It is also used in patients who cannot be treated with or have not gotten better after other treatment. It is also being studied in the treatment of other types of cancer. Bosulif blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called bosutinib.

### **Boswellia serrata**

A tree that belongs to the incense tree family. The tree's amber-colored resin is used in incense. The resin has anti-inflammatory effects and has been used to treat arthritis, asthma, and ulcerative colitis. It is also being studied in the treatment of brain tumors. Also called frankincense tree.

## **Botox**

A toxin made by the bacterium *Clostridium botulinum*. It can cause food poisoning. The drug Botox is a form of the toxin that can be used in small amounts to treat certain medical conditions. These include severe underarm sweating and severe muscle spasms in the neck and shoulders. Botox is also used to smooth wrinkles on the face. It is being studied in the treatment of pain in patients with skin leiomyomas (benign smooth muscle tumors) and other conditions. Also called botulinum toxin A and botulinum toxin type A.

## **Bowen disease**

A skin disease marked by scaly or thickened patches on the skin and often caused by prolonged exposure to arsenic. The patches often occur on sun-exposed areas of the skin and in older white men. These patches may become malignant (cancer). Also called precancerous dermatitis and precancerous dermatosis.

## **Bowman-Birk inhibitor concentrate**

A substance that is made from soybeans and is being studied in the prevention of cancer. It blocks the action of enzymes that are needed for cancer cells to form. It is a type of protease inhibitor. Also called BBIC.

## **Braftovi**

A drug used with cetuximab to treat certain types of colorectal cancer and with binimetinib to treat certain types of melanoma and non-small cell lung cancer. It is used in patients whose cancer has a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Braftovi blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called encorafenib.

## **Brassica vegetable**

A member of the family of vegetables that includes broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, kale, and turnips. These vegetables contain substances that may protect against cancer. Also called cruciferous vegetable.

## **Breast Imaging Reporting and Data System**

A reporting system used to describe the results of a mammogram, breast ultrasound, or breast MRI in a standard way. The Breast Imaging Reporting and Data System ranks the test findings according to one of seven categories, ranging from normal or benign (not cancer) to highly suspicious or malignant (cancer). Each category includes follow-up recommendations to help manage a person's care. For mammograms, the Breast Imaging Reporting and Data System includes four additional categories that describe the level of breast density seen, ranging from little or no dense tissue to very dense tissue. Also called BI-RADS.

## **Breslow depth**

A measure of how deeply a melanoma tumor has grown into the skin. The tumor thickness (depth) is usually measured from the top of the tumor to the deepest tumor cells. If the tumor is ulcerated (the skin is broken), it is measured from the base of the ulcer to the deepest tumor cells. Breslow depth is used to help determine the stage of cancer. Thicker tumors are linked with lower survival rates. Also called Breslow thickness.

### **Breslow thickness**

A measure of how deeply a melanoma tumor has grown into the skin. The tumor thickness (depth) is usually measured from the top of the tumor to the deepest tumor cells. If the tumor is ulcerated (the skin is broken), it is measured from the base of the ulcer to the deepest tumor cells. Breslow thickness is used to help determine the stage of cancer. Thicker tumors are linked with lower survival rates. Also called Breslow depth.

### **Breyanzi**

A treatment used for adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, follicular lymphoma, mantle cell lymphoma, or certain types of large B-cell lymphoma that relapsed (came back) or did not get better after treatment with at least one or two lines of systemic therapy. It is also being studied in the treatment of other types of cancer. Breyanzi is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Breyanzi binds to a protein called CD19, which is found on most B-cell lymphoma cells. This helps the body's immune system kill cancer cells. Breyanzi is a type of cellular immunotherapy called CAR T-cell therapy. Also called lisocabtagene maraleucel.

### **Brief Pain Inventory**

A questionnaire used to measure pain.

### **Brooke-Spiegler syndrome**

A rare, inherited disorder in which tumors form in the hair follicles and sweat glands in the skin. The tumors usually occur on the head and neck, but they can also occur in the salivary glands and in other parts of the body. They tend to be large and increase in number over time and can affect vision, hearing, sense of smell, and the ability to chew and swallow. The tumors usually appear in late childhood or early adolescence. They are usually benign (not cancer) but may become cancer. People with this disorder have an increased risk of developing basal cell skin cancer and salivary gland tumors. Brooke-Spiegler syndrome is caused by a mutation (change) in the CYLD gene. Also called BSS.

### **Brukina**

A drug used alone or with another drug to treat adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, or certain types of non-Hodgkin lymphoma, including follicular lymphoma, mantle cell lymphoma, marginal zone lymphoma, and Waldenström's macroglobulinemia. It is also being studied in the treatment of other types of cancer. Brukina blocks a protein called BTK, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called zanubrutinib.

### **BuMel**

An abbreviation for a chemotherapy combination used to prepare patients with high-risk neuroblastoma for a stem cell transplant. It is also being studied in the treatment of other types of cancer. BuMel includes the drugs busulfan and melphalan hydrochloride. Also called BuMel regimen.

### **BuMel regimen**

An abbreviation for a chemotherapy combination used to prepare patients with high-risk neuroblastoma for a stem cell transplant. It is also being studied in the

treatment of other types of cancer. BuMel regimen includes the drugs busulfan and melphalan hydrochloride. Also called BuMel.

### **Burkitt leukemia**

A rare, fast-growing type of leukemia (blood cancer) in which too many white blood cells called B lymphocytes form in the blood and bone marrow. It may start in the lymph nodes as Burkitt lymphoma and then spread to the blood and bone marrow, or it may start in the blood and bone marrow without involvement of the lymph nodes. Both Burkitt leukemia and Burkitt lymphoma have been linked to infection with the Epstein-Barr virus.

### **Burkitt lymphoma**

An aggressive (fast-growing) type of B-cell non-Hodgkin lymphoma that occurs most often in children and young adults. The disease may affect the jaw, central nervous system, bowel, kidneys, ovaries, or other organs. There are three main types of Burkitt lymphoma (sporadic, endemic, and immunodeficiency related). Sporadic Burkitt lymphoma occurs throughout the world, and endemic Burkitt lymphoma occurs in Africa. Immunodeficiency-related Burkitt lymphoma is most often seen in AIDS patients.

### **Busulfex**

A drug that contains the active ingredient busulfan and is used with other drugs to prepare patients with chronic myelogenous leukemia for a donor stem cell transplant. It is also being studied in the treatment of other types of cancer. Busulfex damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent.

### **C cell**

A type of cell in the thyroid. C cells make calcitonin, a hormone that helps control the calcium level in the blood.

### **C-peptide**

A substance made by the pancreas. C-peptide and insulin are both part of a larger molecule that gets split apart before being released into the blood. Abnormal blood levels of C-peptide may occur in certain diseases, such as diabetes or cancer. Also called connecting peptide.

### **C-peptide suppression test**

A test used to help diagnose a type of pancreatic tumor called an insulinoma. After fasting, the patient receives an injection of insulin and the level of C-peptide (a substance released with insulin by the pancreas) in the blood is measured. In patients who have an insulinoma, the level of C-peptide is higher than normal.

### **C-reactive protein**

A protein that is made by the liver when there is inflammation or tissue damage in the body. C-reactive protein levels are usually low or not detectable in the blood of healthy people. A high level of C-reactive protein in the blood may be a sign of certain conditions, including cancer, infection, inflammatory bowel disease, rheumatoid arthritis, and lupus. Increased levels of C-reactive protein may also signal a high risk of heart attack or stroke. Measuring the level of C-reactive protein may be done to help diagnose certain diseases, find out how well treatment is working, or determine a person's risk of developing heart disease. Also called CRP.

## **C-section**

The delivery of a baby through an incision (cut) made in a person's abdomen and uterus. After the baby is delivered, the umbilical cord is clamped and cut, the placenta is removed, and the cuts in the uterus and abdomen are closed with stitches. A C-section may be done if there are problems during labor or if the baby is in distress, is too big, or is in an abnormal position in the uterus. It may also be done if there is more than one baby being delivered, if there are problems with the placenta, or if the person has an infection or other health problem that would prevent having a vaginal delivery. Also called cesarean delivery and cesarean section.

## **CA 15-3**

A protein found on epithelial cells that is part of a larger protein called MUC 1. CA 15-3 may be found in higher than normal amounts in patients with some types of cancer, including breast cancer. Measuring the amount of CA 15-3 in the blood may be useful in checking how well cancer treatment is working or if cancer has come back. CA 15-3 is a type of tumor marker.

## **CA 19-9**

A substance released into the bloodstream by both cancer cells and normal cells. Too much CA 19-9 in the blood can be a sign of pancreatic cancer or other types of cancer or conditions. The amount of CA 19-9 in the blood can be used to help keep track of how well cancer treatments are working or if cancer has come back. It is a type of tumor marker.

## **CA 19-9 assay**

A laboratory test that measures the level of CA 19-9 in the blood. CA 19-9 is a substance released into the blood by both cancer cells and normal cells. Higher than normal amounts of CA 19-9 in the blood can be a sign of pancreatic or other types of cancer or other conditions. The amount of CA 19-9 in the blood can be used to help keep track of how well cancer treatments are working or if cancer has come back. CA 19-9 is a type of tumor marker.

## **CA 27.29**

A protein found on epithelial cells, which line the inside and outside surfaces of the body. It is part of a larger protein called MUC 1. CA 27.29 may be found in higher than normal amounts in patients with some types of cancer, including breast cancer. Measuring the amount of CA 27.29 in the blood may help to find out how well cancer treatment is working or if cancer has come back. CA 27.29 is a type of tumor marker.

## **CA-125**

A substance that may be found in high amounts in the blood of patients with certain types of cancer, including ovarian cancer. CA-125 levels may also help monitor how well cancer treatments are working or if cancer has come back. Also called cancer antigen 125.

## **CAB**

In medicine, a group of non-scientist volunteers that serves as a link between a community and clinical trial researchers. A CAB may review and monitor clinical trials and help teach the community about the trials. Also called Community Advisory Board.

## **CABG**

Surgery in which a healthy blood vessel taken from another part of the body is used to make a new path for blood around a blocked artery leading to the heart. This restores the flow of oxygen and nutrients to the heart. Also called aortocoronary bypass and coronary artery bypass grafting.

## **CAD**

A disease in which there is a narrowing or blockage of the coronary arteries (blood vessels that carry blood and oxygen to the heart). CAD is usually caused by atherosclerosis (a buildup of fatty material and plaque inside the coronary arteries). The disease may cause chest pain, shortness of breath during exercise, and heart attacks. The risk of CAD is increased by having a family history of CAD before age 50, older age, smoking tobacco, high blood pressure, high cholesterol, diabetes, lack of exercise, and obesity. Also called coronary artery disease and coronary heart disease.

## **CAD system**

A computer-based system that uses special software to help look for suspicious areas of tissue on an x-ray image. A CAD system highlights these areas on the image so they can be looked at more closely. A CAD system is used with certain types of imaging, such as mammography or chest x-ray, to help diagnose a disease, such as cancer. Also called computer-aided detection system.

## **CAF**

An abbreviation for a chemotherapy combination used alone or together with other therapies to treat breast cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs cyclophosphamide, doxorubicin hydrochloride (Adriamycin), and fluorouracil. Also called CAF regimen.

## **CAF regimen**

An abbreviation for a chemotherapy combination used alone or together with other therapies to treat breast cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs cyclophosphamide, doxorubicin hydrochloride (Adriamycin), and fluorouracil. Also called CAF.

## **CALR gene**

A gene that makes a protein that is involved in many cell functions. This protein helps control the amount of calcium that is stored in cells. This is thought to play a role in the control of gene activity, cell growth and movement, the attachment of cells to one another, and cell death. Mutated (changed) forms of the CALR gene have been found in some types of blood conditions, including essential thrombocythemia and primary myelofibrosis.

## **CAM**

A term used to describe a medical product or practice that is used together with (complementary) or instead of (alternative) standard medical care. Usually, less is known about most types of CAM than about standard treatments, which go through a long and careful research process to prove they are safe and effective. CAM may include dietary supplements, megadose vitamins, herbal preparations, special teas, acupuncture, massage therapy, magnet therapy, spiritual healing, and meditation. Also called complementary and alternative medicine.

## **CAP-1**

A small piece of a tumor marker called carcinoembryonic antigen (CEA). CEA may be found in the blood of people who have colon cancer, other types of



cancer or diseases, or who smoke tobacco. CAP-1 is used to make a vaccine that may help stimulate the body's immune system to kill cancer cells. Also called carcinoembryonic antigen peptide-1 and CEA peptide-1.

## **CAPIRI**

An abbreviation for a chemotherapy combination used to treat colorectal cancer that has spread to other parts of the body. It is also used to treat esophageal cancer and stomach cancer that are advanced or have spread to other parts of the body. It includes the drugs capecitabine (Xeloda) and irinotecan hydrochloride. Also called CAPIRI regimen, XELIRI, and XELIRI regimen.

## **CAPIRI regimen**

An abbreviation for a chemotherapy combination used to treat colorectal cancer that has spread to other parts of the body. It is also used to treat esophageal cancer and stomach cancer that are advanced or have spread to other parts of the body. It includes the drugs capecitabine (Xeloda) and irinotecan hydrochloride. Also called CAPIRI, XELIRI, and XELIRI regimen.

## **CAPOX**

An abbreviation for a chemotherapy combination used to treat advanced colorectal cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs capecitabine and oxaliplatin. Also called CAPOX regimen.

## **CAPOX regimen**

An abbreviation for a chemotherapy combination used to treat advanced colorectal cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs capecitabine and oxaliplatin. Also called CAPOX.

## **CAR**

A special receptor created in the laboratory that is designed to bind to certain proteins on cancer cells. The CAR is then added to immune cells called T cells. This helps the T cells find and kill cancer cells that have the specific protein that the receptor is designed to bind. These changed T cells called CAR T cells are then grown in large numbers in the laboratory and given to cancer patients. CAR T cells are being studied in the treatment of some types of cancer. Also called chimeric antigen receptor.

## **CAR T-cell therapy**

A type of treatment in which a patient's T cells (a type of immune system cell) are changed in the laboratory so they will attack cancer cells. T cells are taken from a patient's blood. Then the gene for a special receptor that binds to a certain protein on the patient's cancer cells is added to the T cells in the laboratory. The special receptor is called a chimeric antigen receptor (CAR). Large numbers of the CAR T cells are grown in the laboratory and given to the patient by infusion. CAR T-cell therapy is used to treat certain blood cancers, and it is being studied in the treatment of other types of cancer. Also called chimeric antigen receptor T-cell therapy.

## **CAT scan**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-dimensional (3-D) views of tissues and organs. A dye may be injected into a vein or swallowed to help the tissues and organs show up more clearly. A CAT scan may be used to help diagnose disease, plan

treatment, or find out how well treatment is working. Also called computed tomography scan, computerized axial tomography scan, computerized tomography, and CT scan.

### **CAT-8015**

A drug used to treat adults with hairy cell leukemia that came back or did not get better with at least two other systemic therapies, including treatment with a purine nucleoside analog (a type of anticancer drug). CAT-8015 contains a monoclonal antibody that binds to a protein called CD22, which is found on B cells (a type of white blood cell) and some types of leukemia cells. It also contains a bacterial toxin called PE38, which may help kill cancer cells. CAT-8015 is a type of immunotoxin. Also called anti-CD22 immunotoxin CAT-8015, Lumoxiti, and moxetumomab pasudotox.

### **CBC**

A measure of the number of red blood cells, white blood cells, and platelets in the blood. The amount of hemoglobin (substance in the blood that carries oxygen) and the hematocrit (the amount of whole blood that is made up of red blood cells) are also measured. A CBC is used to help diagnose and monitor many conditions. Also called blood cell count, complete blood count, and full blood count.

### **CBC with differential**

A measure of the number of red blood cells, white blood cells, and platelets in the blood, including the different types of white blood cells (neutrophils, lymphocytes, monocytes, basophils, and eosinophils). The amount of hemoglobin (substance in the blood that carries oxygen) and the hematocrit (the amount of whole blood that is made up of red blood cells) are also measured. A CBC with differential is used to help diagnose and monitor many different conditions, including anemia and infection. Also called blood cell count with differential.

### **CBD**

A chemical that comes from the hemp (*Cannabis sativa*) plant. CBD contains very low levels of delta-9-THC (the main chemical that causes the “high” of marijuana). It may help relieve pain, lower inflammation, and reduce anxiety without causing the mind-altering effects of marijuana. CBD comes in many forms, including oils, extracts, capsules, and patches. One specific form has been approved in the United States as a drug to treat seizures in certain people. CBD is also being studied in the treatment of symptoms or side effects caused by cancer and cancer treatment. It is a type of cannabinoid. Also called cannabidiol.

### **CBE**

A physical exam of the breast performed by a health care provider to check for lumps or other changes. Also called clinical breast exam.

### **CBT**

A type of psychotherapy that helps patients change their behavior by changing the way they think and feel about certain things. It is used to treat mental, emotional, personality, and behavioral disorders. Also called cognitive behavior therapy and cognitive therapy.

### **CBT-1**

A substance taken from plants that is being studied in the treatment of cancer. It may help drugs kill tumor cells that have become resistant to drugs. It is a type of multidrug resistance inhibitor and a type of P-glycoprotein antagonist. Also called MDR modulator CBT-1.

### **CC-1088**

A drug that is being studied in the treatment of cancer. It is similar but not identical to thalidomide. CC-1088 belongs to the family of drugs called angiogenesis inhibitors.

### **CC-4047**

A drug that is similar to thalidomide and is used alone or with other drugs to treat adults with certain types of multiple myeloma or Kaposi sarcoma. It is also being studied in the treatment of other types of cancer. CC-4047 may help the immune system kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. CC-4047 is a type of immunomodulating agent and a type of antiangiogenesis agent. Also called pomalidomide and Pomalyst.

### **CC-49**

A type of monoclonal antibody used in cancer detection or therapy. Monoclonal antibodies are laboratory-produced substances that can locate and bind to cancer cells.

### **CC-5013**

A drug that is similar to thalidomide and is used alone or with other drugs to treat adults with certain types of follicular lymphoma, marginal zone lymphoma, mantle cell lymphoma, multiple myeloma, or anemia caused by certain types of myelodysplastic syndromes. It is also being studied in the treatment of other conditions and types of cancer. CC-5013 may help the immune system kill abnormal blood cells or cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. CC-5013 is a type of antiangiogenesis agent and a type of immunomodulating agent. Also called lenalidomide and Revlimid.

### **CC-8490**

A substance that is being studied in the treatment of brain cancer. It belongs to the family of drugs called benzopyrans.

### **CC49-streptavidin**

A substance that is being studied in the treatment of cancer. It is made by combining the monoclonal antibody CC49 with a chemical called streptavidin. It can find tumor cells that have the protein TAG-72 on their surface, including colon, prostate, breast, and ovary cancer cells. After CC49-streptavidin binds to cancer cells, a radioactive compound called yttrium Y 90 DOTA-biotin will find those cells and kill them.

### **CCDI**

A large effort led by the National Cancer Institute to collect, analyze, and share information to address the burden of cancer in children, adolescents, and young adults. The three main goals of CCDI are: (1) to collect data from every child, adolescent, and young adult diagnosed with cancer, (2) to create a national strategy of clinical and molecular testing to speed diagnosis and inform treatment for all types of childhood cancer, and (3) to develop a network of computer systems and programs that merge clinical care and research data to improve

prevention, treatment, quality of life, and survivorship for childhood cancers. Also called Childhood Cancer Data Initiative.

### **CCI-779**

A drug used to treat advanced renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. CCI-779 blocks a protein called mTOR, which helps control cell division. Blocking this protein may help keep cancer cells from growing. CCI-779 is a type of kinase inhibitor. Also called temsirolimus and Torisel.

### **CCNU**

A drug used to treat brain tumors that have already been treated with surgery or radiation therapy and Hodgkin lymphoma that got worse after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. CCNU damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea. Also called Gleostine and lomustine.

### **CCSG**

Funds awarded to certain U.S. institutions by the National Cancer Institute (NCI) for them to become cancer centers in the United States, based on scientific merit. The funds help the cancer centers improve the way they are run and develop new ways to prevent, diagnose, and treat cancer. To receive the award, one goal of the cancer center must be to turn clinical and basic research into better health care. Also called P30 Cancer Center Support Grant.

### **CD117**

A protein found on the surface of many different types of cells. It binds to a substance called stem cell factor (SCF), which causes certain types of blood cells to grow. CD117 may also be found in higher than normal amounts, or in a changed form, on some types of cancer cells, including gastrointestinal stromal tumors and melanoma. Measuring the amount of CD117 in tumor tissue may help diagnose cancer and plan treatment. CD117 is a type of receptor tyrosine kinase and a type of tumor marker. Also called c-kit and stem cell factor receptor.

### **CD134**

A protein being studied in the treatment of cancer. Substances that attach to CD134 on the surface of T cells (a type of white blood cell) may help the T cells grow and kill more cancer cells. CD134 is a type of tumor necrosis factor (TNF) receptor. Also called OX-40.

### **CD20**

A protein found on B cells (a type of white blood cell). It may be found in higher than normal amounts in patients with certain types of B-cell lymphomas and leukemias. Measuring the amount of CD20 on blood cells may help to diagnose cancer or plan cancer treatment. CD20 is a type of tumor marker. Also called CD20 antigen.

### **CD20 antigen**

A protein found on B cells (a type of white blood cell). It may be found in higher than normal amounts in patients with certain types of B-cell lymphomas and leukemias. Measuring the amount of CD20 antigen on blood cells may help to diagnose cancer or plan cancer treatment. CD20 antigen is a type of tumor marker. Also called CD20.

### **CD30 protein**

A protein found on some T cells and B cells (two types of white blood cells). It is a receptor for a protein called tumor necrosis factor, which is involved in cell growth and cell survival. The CD30 protein may be found in higher than normal amounts on some types of cancer cells, including lymphoma cells. Knowing how much CD30 protein is on a patient's cancer cells may help diagnose cancer and plan treatment. The CD30 protein is a type of tumor necrosis factor receptor and a type of tumor marker.

### **CD33 positive**

Describes cells that have a protein called CD33 on their surface. In normal cells, CD33 is involved in cell signaling, cell adhesion, and cell growth. Cancer cells that make too much CD33 may grow more quickly. Knowing whether a cancer is CD33 positive may help plan treatment. Cancers that may be CD33 positive include acute myeloid leukemia and some types of lymphoma.

### **CD34 antigen**

A protein found on the surface of some bone marrow and blood cells.

### **CD4-positive T lymphocyte**

A type of immune cell that stimulates killer T cells, macrophages, and B cells to make immune responses. A CD4-positive T lymphocyte is a type of white blood cell and a type of lymphocyte. Also called helper T cell.

### **CD40-ligand**

A substance that is being studied in the treatment of cancer. It binds to certain immune cells and may suppress cancer growth.

### **CD80**

A protein found on the surface of some immune system cells, including B cells and monocytes. Cells with CD80 on their surface cause T cells to make substances that help control immune responses. Also called B7-1.

### **CDC**

A U.S. federal government agency whose mission is to protect public health by preventing and controlling disease, injury, and disability. The CDC promotes healthy behaviors and safe, healthy environments. It keeps track of health trends, tries to find the cause of health problems and outbreaks of disease, and responds to new public health threats. The CDC works with state health departments and other organizations throughout the country and the world to help prevent and control disease. The CDC is part of the U.S. Public Health Service of the Department of Health and Human Services (DHHS). Also called Centers for Disease Control and Prevention.

### **CDDO**

A substance being studied in the treatment of some types of cancer. CDDO may block enzymes involved in inflammation and cancer growth. It is a type of antineoplastic plant product.

### **CDK inhibitor AT7519M**

A substance being studied in the treatment of some types of cancer. CDK inhibitor AT7519M blocks enzymes needed for cells to divide. It is a type of cyclin-dependent kinase inhibitor. Also called AT7519M.

### **CDK inhibitor SCH 727965**

A substance being studied in the treatment of advanced melanoma (a type of skin cancer) and other types of cancer. It blocks cell division and may cause cancer cells to die. It is a type of cyclin-dependent kinase inhibitor. Also called dinaciclib.

### **CDK4 gene**

A gene that makes a protein involved in the cell cycle (the process a cell goes through each time it divides). Mutations (changes) in the CDK4 gene may cause cells to divide too quickly or in an uncontrolled way. This may cause abnormal cells, including cancer cells, to grow. CDK4 gene mutations have been found in melanoma and in other types of cancer.

### **CDK6 gene**

A gene that makes a protein involved in the cell cycle (the process a cell goes through each time it divides). Mutations (changes) in the CDK6 gene may cause cells to divide too quickly or in an uncontrolled way. This may cause abnormal cells, including cancer cells, to grow. CDK6 gene mutations have been found in some types of cancer.

### **CDKN2A gene**

A gene that makes two major proteins involved in controlling cell growth, cell division, and a type of cell death called apoptosis. Mutations (changes) in the CDKN2A gene may cause cells to grow and divide too quickly or in an uncontrolled way or may keep cells from undergoing apoptosis. This may cause abnormal cells, including cancer cells, to grow. CDKN2A gene mutations have been found in melanoma and in many other types of cancer. The CDKN2A gene is a type of tumor suppressor gene.

### **CEA**

A substance that may be found in the blood of people who have colon cancer, other types of cancer or diseases, or who smoke tobacco. CEA levels may help keep track of how well cancer treatments are working or if cancer has come back. It is a type of tumor marker. Also called carcinoembryonic antigen.

### **CEA assay**

A laboratory test that measures the level of carcinoembryonic antigen (CEA) in the blood. An increased amount of CEA may be found in the blood of people who have colon cancer or other types of cancer, certain other diseases, or who smoke. The amount of CEA in the blood may also help keep track of how well cancer treatments are working or if cancer has come back. CEA is a type of tumor marker. Also called carcinoembryonic antigen assay.

### **CEA peptide-1**

A small piece of a tumor marker called carcinoembryonic antigen (CEA). CEA may be found in the blood of people who have colon cancer, other types of cancer or diseases, or who smoke tobacco. CEA peptide-1 is used to make a vaccine that may help stimulate the body's immune system to kill cancer cells. Also called CAP-1 and carcinoembryonic antigen peptide-1.

### **CEM**

An abbreviation for a chemotherapy combination used to treat high-risk neuroblastoma. It includes the drugs carboplatin, etoposide, and melphalan. Also called CEM regimen.



**CEM regimen**

An abbreviation for a chemotherapy combination used to treat high-risk neuroblastoma. It includes the drugs carboplatin, etoposide, and melphalan. Also called CEM.

**CEP-2563 dihydrochloride**

A substance being studied in the treatment of some types of cancer. CEP-2563 dihydrochloride blocks certain proteins involved in the growth of some tumors and may kill cancer cells. It is a type of receptor tyrosine kinase inhibitor.

**CEP-701**

A drug being studied in the treatment of acute leukemias and some other types of cancer. It binds to a protein that is present on the surface of some types of cancer cells and stops them from dividing. CEP-701 is a type of receptor tyrosine kinase inhibitor and a type of indolocarbazole alkaloid. Also called lestaurtinib.

**CEV**

An abbreviation for a chemotherapy combination used to treat retinoblastoma in children. It includes the drugs carboplatin, etoposide, and vincristine. Also called CEV regimen.

**CEV regimen**

An abbreviation for a chemotherapy combination used to treat retinoblastoma in children. It includes the drugs carboplatin, etoposide, and vincristine. Also called CEV.

**CFC syndrome**

A rare genetic condition that affects many parts of the body, especially the heart, face, and skin. People with CFC syndrome usually have growth, developmental, and learning delays. Other signs and symptoms include heart defects, an abnormally large head, unusual facial features, and problems with the skin, eyes, and the gastrointestinal and nervous systems. People with CFC syndrome may also have thin, dry, curly hair and sparse or no eyelashes or eyebrows. CFC syndrome is a type of disease called a RASopathy that is caused by mutations (changes) in the BRAF, MAP2K1, MAP2K2, or KRAS gene. These genes make proteins involved in a cell signaling pathway that controls many important cell functions. Also called cardiofaciocutaneous syndrome.

**CFS**

A condition that lasts for more than 6 months in which a person feels tired most of the time. They may also have trouble concentrating and carrying out daily activities. Other symptoms include sore throat, fever, muscle weakness, headache, and joint pain. Also called chronic fatigue syndrome.

**CGP 48664**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called S-adenosylmethionine decarboxylase inhibitors.

**CHF**

A condition in which the heart has trouble pumping blood through the body. It may develop over a long period of time. Symptoms include shortness of breath, problems exercising, fatigue, and swelling of the feet, ankles, and abdomen. CHF may be caused by coronary artery disease, a heart attack, or high blood pressure. It usually occurs in people aged 65 years or older. Also called chronic heart failure.

### **CHIR-265**

A substance being studied in the treatment of melanoma. CHIR-265 may block the growth of tumors and the growth of blood vessels from surrounding tissue to the tumor. It is a type of Raf kinase inhibitor and angiogenesis inhibitor.

### **CHOP**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin lymphoma and is being studied in the treatment of other types of cancer. It includes the drugs cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), vincristine sulfate (Oncovin), and prednisone. Also called CHOP regimen.

### **CHOP regimen**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin lymphoma and is being studied in the treatment of other types of cancer. It includes the drugs cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), vincristine sulfate (Oncovin), and prednisone. Also called CHOP.

### **CHOPE**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin lymphoma. It includes the drugs cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), vincristine sulfate (Oncovin), prednisone, and etoposide phosphate. Also called CHOPE regimen.

### **CHOPE regimen**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin lymphoma. It includes the drugs cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), vincristine sulfate (Oncovin), prednisone, and etoposide phosphate. Also called CHOPE.

### **CHPP**

A treatment used during surgery in which a heated solution containing anticancer drugs is infused directly into the abdominal cavity through a thin tube. After removal of as much tumor tissue as possible with surgery, CHPP is given to kill any remaining tumor cells. It is most often used to treat cancers that have spread to the peritoneum (the lining of the abdominal cavity). Also called continuous hyperthermic peritoneal perfusion, HIPEC, and hyperthermic intraperitoneal chemotherapy.

### **CHS 828**

A drug that is being studied in the treatment of solid tumors.

### **CI-1033**

A substance being studied in the treatment of some types of cancer. CI-1033 blocks the action of proteins called epidermal growth factor receptors, and may cause cancer cells to die. It is a type of tyrosine kinase inhibitor. Also called canertinib dihydrochloride.

### **CI-958**

A substance being studied in the treatment of some types of cancer. CI-958 binds to DNA and stops cells, including cancer cells, from repairing damage to DNA and from making more DNA, RNA, and protein. It is a type of DNA intercalator. Also called sedoxantrone trihydrochloride.

### **CI-980**

An anticancer drug that belongs to the family of drugs called mitotic inhibitors. Also called mivobulin isethionate.

### **CI-994**

A substance being studied in the treatment of non-small cell lung cancer. Also called N-acetyldinaline.

### **CIN**

A term used to describe abnormal cells that are found on the surface of the cervix when a biopsy is done. CIN is usually caused by infection with certain types of human papillomavirus (HPV). CIN is not cancer but may become cancer and spread to nearby normal tissue. It is graded on a scale of 1 to 3, based on how abnormal the cells look under a microscope and how much of the cervical tissue is affected. For example, CIN 1 has slightly abnormal cells and is less likely to become cancer than CIN 2 or CIN 3. CIN is sometimes called cervical dysplasia. Also called cervical intraepithelial neoplasia.

### **CIN 1**

A cervical biopsy finding that means slightly abnormal cells were found on the surface of the cervix. CIN 1 is usually caused by infection with certain types of human papillomavirus (HPV). CIN 1 is not cancer and usually goes away on its own without treatment, but sometimes it can become cancer and spread to nearby normal tissue. CIN 1 is sometimes called low-grade or mild dysplasia. Also called cervical squamous intraepithelial neoplasia 1.

### **CIN 2**

A cervical biopsy finding that means moderately abnormal cells were found on the surface of the cervix. CIN 2 is usually caused by infection with certain types of human papillomavirus (HPV). CIN 2 is not cancer but may become cancer and spread to nearby normal tissue if not treated. Treatment for CIN 2 may include cryotherapy, laser therapy, loop electrosurgical procedure (LEEP), or cone biopsy to remove or destroy the abnormal tissue. CIN 2 is sometimes called high-grade or moderate dysplasia. Also called cervical squamous intraepithelial neoplasia 2.

### **CIN 2/3**

A cervical biopsy finding that means a mix of moderately abnormal and severely abnormal cells were found on the surface of the cervix. CIN 2/3 has features of both CIN 2 and CIN 3. It is usually caused by infection with certain types of human papillomavirus (HPV). CIN 2/3 is not cancer but may become cancer and spread to nearby normal tissue if not treated. Treatment for CIN 2/3 may include cryotherapy, laser therapy, loop electrosurgical procedure (LEEP), or cone biopsy to remove or destroy the abnormal tissue. Also called cervical squamous intraepithelial neoplasia 2/3.

### **CIN 3**

A cervical biopsy finding that means severely abnormal cells were found on the surface of the cervix. CIN 3 is usually caused by infection with certain types of human papillomavirus (HPV). CIN 3 is not cancer but may become cancer and spread to nearby normal tissue if not treated. Treatment for CIN 3 may include cryotherapy, laser therapy, loop electrosurgical procedure (LEEP), or cone biopsy to remove or destroy the abnormal tissue. CIN 3 is sometimes called high-grade or severe dysplasia. Also called cervical squamous intraepithelial neoplasia 3.

## **CIS**

The National Cancer Institute's Cancer Information Service (CIS) provides cancer-related information to the public, free of charge. CIS staff provide personalized responses to questions in easy-to-understand language. Help with quitting smoking is also available. Contact CIS by calling 1-800-4-CANCER (1-800-422-6237), or by using the LiveHelp instant-messaging service at <https://livehelp.cancer.gov>. Also called Cancer Information Service.

## **CISNET**

A group of researchers supported by the National Cancer Institute (NCI) who use statistical models to help understand how cancer prevention, screening, and treatment programs can affect the number of new cases of cancer diagnosed each year and the number of deaths from cancer each year. The CISNET is now studying breast, colorectal, esophageal, lung, and prostate cancers. The models they create help guide future cancer control strategies, research priorities, policies, and decision making. Also called Cancer Intervention and Surveillance Modeling Network.

## **CLD**

A type of disorder that affects the lungs and other parts of the respiratory system. It usually develops slowly and may get worse over time. CLD may be caused by smoking tobacco or by breathing in secondhand tobacco smoke, chemical fumes, dust, or other forms of air pollution. Types of CLD include asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, asbestosis, pneumonitis, and other lung conditions. Also called chronic lung disease.

## **CLIA**

Changes to a 1988 U.S. law that sets the standards for all laboratory testing that is done on human tissue, blood, and other body fluid samples used to screen, diagnose, prevent, or treat a disease or condition. The CLIA program makes sure laboratories follow these standards and have quality control programs in place so that patient test results are accurate and reliable. The federal government agencies that manage the CLIA program are the Food and Drug Administration (FDA), the Centers for Medicare and Medicaid Services (CMS), and the Centers for Disease Control and Prevention (CDC). Certain types of laboratory testing, such as testing done in clinical trials, research studies, crime labs, and work-related drug testing, are not covered by the CLIA program. Also called Clinical Laboratory Improvement Amendments.

## **CLL**

An indolent (slow-growing) cancer in which too many immature lymphocytes (white blood cells) are found mostly in the blood and bone marrow. Sometimes, in later stages of the disease, cancer cells are found in the lymph nodes and the disease is called small lymphocytic lymphoma. Also called chronic lymphocytic leukemia.

## **CLL/SLL**

An indolent (slow-growing) cancer in which immature lymphocytes (white blood cells) are found in the blood and bone marrow and/or in the lymph nodes. CLL (chronic lymphocytic leukemia) and SLL (small lymphocytic lymphoma) are the same disease, but in CLL cancer cells are found mostly in the blood and bone marrow. In SLL cancer cells are found mostly in the lymph nodes. CLL/SLL is a type of non-Hodgkin lymphoma. Also called chronic lymphocytic leukemia/small lymphocytic lymphoma.

### **CM-AVM syndrome**

A rare genetic condition that causes abnormalities of blood vessels, including swelling of the capillaries (small blood vessels) near the surface of the skin. The swollen capillaries usually appear as small, round, pink or red spots on the skin of the face, arms, and legs. They may appear at birth or develop during childhood. More serious blood vessel abnormalities that affect the skin, muscle, bone, spine, brain, and heart may also occur. These can lead to serious problems, including abnormal bleeding, migraines, seizures, and congestive heart failure. CM-AVM syndrome is a type of disease called a RASopathy that is caused by mutations (changes) in the RASA1 gene. This gene makes a protein involved in a cell signaling pathway that controls many important cell functions. Also called capillary malformation-arteriovenous malformation syndrome.

### **CMF**

An abbreviation for a chemotherapy combination used alone or with other therapies to treat breast cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs cyclophosphamide, methotrexate, and fluorouracil. Also called CMF regimen.

### **CMF regimen**

An abbreviation for a chemotherapy combination used alone or with other therapies to treat breast cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs cyclophosphamide, methotrexate, and fluorouracil. Also called CMF.

### **CML**

An indolent (slow-growing) cancer in which too many myeloblasts are found in the blood and bone marrow. Myeloblasts are a type of immature blood cell that makes white blood cells called myeloid cells. CML may get worse over time as the number of myeloblasts increases in the blood and bone marrow. This may cause fever, fatigue, easy bleeding, anemia, infection, a swollen spleen, bone pain, or other signs and symptoms. CML is usually marked by a chromosome change called the Philadelphia chromosome, in which a piece of chromosome 9 and a piece of chromosome 22 break off and trade places with each other. It usually occurs in older adults and rarely occurs in children. Also called chronic granulocytic leukemia, chronic myelogenous leukemia, and chronic myeloid leukemia.

### **CMML**

A slowly progressing type of myelodysplastic/myeloproliferative disease in which too many myelomonocytes (a type of white blood cell) are in the bone marrow, crowding out other normal blood cells, such as other white blood cells, red blood cells, and platelets. Also called chronic myelomonocytic leukemia.

### **CMS**

A condition that may occur in patients who have had surgery to remove a tumor in certain parts of the brain, including the cerebellum. CMS usually appears 1 or 2 days after surgery. Symptoms include loss of speech, trouble swallowing and eating, loss of balance, trouble walking, loss of muscle tone, mood swings, and changes in personality. Many of these symptoms go away over time. Also called cerebellar mutism syndrome.

### **CMV**

A virus that may be carried in an inactive state for life by healthy individuals. It is a cause of severe pneumonia in people with a suppressed immune system, such

as those undergoing bone marrow transplantation or those with leukemia or lymphoma. Also called cytomegalovirus.

## **CNS**

The brain and spinal cord. Also called central nervous system.

## **CNS PNET**

A type of cancer that arises from a particular type of cell within the brain or spinal cord. Also called central nervous system primitive neuroectodermal tumor.

## **CNS depressant**

A type of drug that slows down brain activity, which causes the muscles to relax and calms and soothes a person. CNS depressants are used to treat insomnia (trouble sleeping), anxiety, panic attacks, and seizures. They may also be used to relieve anxiety and tension before surgery. Examples of CNS depressants are benzodiazepines, barbiturates, and certain sleep medicines. CNS depressants are sometimes called sedatives or tranquilizers. Also called central nervous system depressant.

## **CNS metastasis**

Cancer that has spread from the original (primary) tumor to the central nervous system (CNS). Also called central nervous system metastasis.

## **CNS prophylaxis**

A type of treatment that uses intrathecal chemotherapy (chemotherapy injected directly into the fluid-filled space between the thin layers of tissue that cover the brain and spinal cord) or high-dose chemotherapy injected into a vein to kill cancer cells in the central nervous system (CNS). Radiation therapy is also sometimes used. CNS prophylaxis is given when the cancer is diagnosed because standard chemotherapy cannot get into the CNS and kill cancer cells that may be hiding in there. It is used to lessen the chance cancer will come back in the CNS after the first treatment. CNS prophylaxis is used with other therapy to treat certain types of leukemia and lymphoma that may spread to the CNS. Also called central nervous system prophylaxis.

## **CNS stimulant**

A type of drug that increases the levels of certain chemicals in the brain and increases alertness, attention, energy, and physical activity. CNS stimulants also raise blood pressure and increase heart rate and breathing rate. They are used to treat depression, attention deficit hyperactivity disorder (a disorder in which a person has problems paying attention, controlling actions, and remaining still or quiet), and narcolepsy (a sleep disorder). Also called central nervous system stimulant.

## **CNS tumor**

A tumor of the central nervous system (CNS), including brain stem glioma, craniopharyngioma, medulloblastoma, and meningioma. Also called central nervous system tumor.

## **CNTO 328**

A drug used to treat a rare condition called multicentric Castleman disease in patients who do not have HIV or human herpesvirus 8. It is also being studied in the treatment of some types of cancer and other conditions. CNTO 328 binds to a protein called interleukin-6 (IL-6), which is made by some white blood cells and other cells in the body. CNTO 328 may help reduce inflammation and stop the



growth of cancer cells or abnormal blood cells. It is a type of monoclonal antibody. Also called anti-IL-6 chimeric monoclonal antibody, cCLB8, siltuximab, and Sylvant.

## **COG**

A large group of researchers, hospitals, and cancer centers that get support from the National Cancer Institute (NCI) to study childhood cancers. The main goal of the COG is to conduct clinical trials that test new ways to prevent, diagnose, and treat cancer in children and adolescents. These clinical trials also include supportive care and childhood cancer survivorship studies. The COG has hospitals and cancer centers in the United States, Canada, Europe, Australia, and New Zealand. It is part of the National Clinical Trials Network (NCTN). Also called Children's Oncology Group.

## **COL-3**

A substance being studied in the treatment of cancer. COL-3 may block the growth of new blood vessels that tumors need to grow. It is a type of matrix metalloproteinase inhibitor and a type of antiangiogenesis agent.

## **COL17A1 gene**

A gene that makes a type of collagen that plays an important role in strengthening and supporting the layers of the skin. Mutations (changes) in the COL17A1 gene may cause the skin to become easily damaged. COL17A1 gene mutations have been found in an inherited condition called junctional epidermolysis bullosa. People with this condition have fragile skin that blisters easily and may have an increased risk of developing squamous cell skin cancer.

## **COL18A1**

A substance being studied in the treatment of cancer. COL18A1 is made from a type of collagen (a protein found in cartilage and other connective tissue). It may prevent the growth of new blood vessels that tumors need to grow. COL18A1 is a type of antiangiogenesis agent. Also called endostatin.

## **COL7A1 gene**

A gene that makes a type of collagen that plays an important role in strengthening and supporting the layers of the skin. Mutations (changes) in the COL7A1 gene may cause the skin to become easily damaged. COL7A1 gene mutations have been found in an inherited condition called dystrophic epidermolysis bullosa. People with this condition have an increased risk of developing squamous cell skin cancer.

## **COPD**

A type of lung disease marked by permanent damage to tissues in the lungs, making it hard to breathe. COPD includes chronic bronchitis, in which the bronchi (large air passages) are inflamed and scarred, and emphysema, in which the alveoli (tiny air sacs) are damaged. It develops over many years and is usually caused by cigarette smoking. Also called chronic obstructive pulmonary disease.

## **COPDAC**

An abbreviation for a chemotherapy combination that is often used with radiation therapy to treat certain types of childhood Hodgkin lymphoma in males. It includes the drugs cyclophosphamide, vincristine sulfate (Oncovin), prednisone, and dacarbazine. Also called COPDAC regimen.

### **COPDAC regimen**

An abbreviation for a chemotherapy combination that is often used with radiation therapy to treat certain types of childhood Hodgkin lymphoma in males. It includes the drugs cyclophosphamide, vincristine sulfate (Oncovin), prednisone, and dacarbazine. Also called COPDAC.

### **COPP**

An abbreviation for a chemotherapy combination used to treat Hodgkin and non-Hodgkin lymphomas. It includes the drugs cyclophosphamide, vincristine sulfate (Oncovin), procarbazine hydrochloride, and prednisone. Also called COPP regimen.

### **COPP regimen**

An abbreviation for a chemotherapy combination used to treat Hodgkin and non-Hodgkin lymphomas. It includes the drugs cyclophosphamide, vincristine sulfate (Oncovin), procarbazine hydrochloride, and prednisone. Also called COPP.

### **COPP-ABV**

An abbreviation for a chemotherapy combination used to treat Hodgkin lymphoma in children. It may be used with radiation therapy. COPP-ABV includes the drugs cyclophosphamide, vincristine sulfate (Oncovin), procarbazine hydrochloride, prednisone, doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, and vinblastine sulfate. Also called COPP-ABV regimen.

### **COPP-ABV regimen**

An abbreviation for a chemotherapy combination used to treat Hodgkin lymphoma in children. It may be used with radiation therapy. COPP-ABV regimen includes the drugs cyclophosphamide, vincristine sulfate (Oncovin), procarbazine hydrochloride, prednisone, doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, and vinblastine sulfate. Also called COPP-ABV.

### **COVID-19**

A highly contagious respiratory disease caused by the SARS-CoV-2 virus. SARS-CoV-2 is thought to spread from person to person through droplets released when an infected person coughs, sneezes, or talks. It may also be spread by touching a surface with the virus on it and then touching one's mouth, nose, or eyes, but this is less common. The most common signs and symptoms of COVID-19 are fever, cough, and trouble breathing. Fatigue, muscle pain, chills, headache, sore throat, runny nose, nausea or vomiting, diarrhea, and a loss of taste or smell may also occur. The signs and symptoms may be mild or severe and usually appear 2 to 14 days after exposure to the SARS-CoV-2 virus. Some people may not have any symptoms but are still able to spread the virus. Most people with COVID-19 recover without needing special treatment. But other people are at higher risk of serious illness. Those at higher risk include older adults and people with serious medical problems, such as heart, lung, or kidney disease, diabetes, cancer, or a weak immune system. Serious illness may include life-threatening pneumonia and organ failure. Research is being done to treat COVID-19 and to prevent infection with SARS-CoV-2. Also called coronavirus disease 19.

### **COX inhibitor**

A type of drug that is used to treat inflammation and pain, and is being studied in the prevention and treatment of cancer. COX inhibitors belong to the family of drugs called nonsteroidal anti-inflammatory drugs (NSAIDs). Also called cyclooxygenase inhibitor.

## **COX-2**

An enzyme that speeds up the formation of substances that cause inflammation and pain. It may also cause tumor cells to grow. Some tumors have high levels of COX-2 and blocking its activity may reduce tumor growth. Also called cyclooxygenase-2 and prostaglandin-endoperoxide synthase 2.

## **COX-2 inhibitor**

A nonsteroidal anti-inflammatory drug used to relieve pain and inflammation. COX-2 inhibitors are being studied in the prevention of colon polyps, and as anticancer drugs. Also called cyclooxygenase-2 inhibitor.

## **CP**

A chemotherapy combination used to treat chronic lymphocytic leukemia (CLL). It includes the drugs chlorambucil hydrochloride and prednisone. Also called chlorambucil-prednisone, chlorambucil-prednisone regimen, and CP regimen.

## **CP regimen**

A chemotherapy combination used to treat chronic lymphocytic leukemia (CLL). It includes the drugs chlorambucil hydrochloride and prednisone. Also called chlorambucil-prednisone, chlorambucil-prednisone regimen, and CP.

## **CP-358,774**

A drug used alone to treat certain types of non-small cell lung cancer and with gemcitabine hydrochloride to treat certain types of pancreatic cancer. It is also being studied in the treatment of other types of cancer. CP-358,774 blocks a protein called EGFR, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called erlotinib hydrochloride, OSI-774, and Tarceva.

## **CP-4055**

A drug used to treat advanced acute myeloid leukemia (AML). It is a form of the anticancer drug cytarabine that may work in patients with leukemia that is resistant to cytarabine. CP-4055 blocks cell division and may kill cancer cells. It is a type of antimetabolite. Also called Elacyt and elacytarabine.

## **CP-547,632**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called vascular endothelial growth factor (VEGF) receptor inhibitors and angiogenesis inhibitors.

## **CP-609,754**

A substance that is being studied in the treatment of cancer.

## **CP-724,714**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called ErbB receptor tyrosine kinase inhibitors.

## **CP/CPPS**

A condition of the prostate gland that continues or gets worse over a long period of time. Symptoms include body aches, pain in the lower back and genital area, a burning feeling during urination, and problems with emptying the bladder all the way. Also called chronic prostatitis/chronic pelvic pain syndrome.

## **CP4071**

A substance that is being studied in the treatment of cancer.

## **CPM**

Surgery to remove the healthy breast in a person who is having or has had the other breast with cancer removed. CPM may be done to reduce the risk of a second breast cancer in people who are at very high risk. Also called contralateral prophylactic mastectomy.

## **CPR**

An emergency procedure used to restart a person's heartbeat and breathing after one or both have stopped. It involves giving strong, rapid pushes to the chest to keep blood moving through the body. Usually, it also involves blowing air into the person's mouth to help with breathing and send oxygen to the lungs. Also called cardiopulmonary resuscitation.

## **CPT 11**

A drug used alone or with other drugs to treat colorectal cancer that has spread to other parts of the body. It is used in patients whose cancer has not already been treated or whose cancer has recurred (come back) or has gotten worse after treatment with anticancer drugs that included fluorouracil. It is also being studied in the treatment of other types of cancer. CPT 11 blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called Camptosar and irinotecan hydrochloride.

## **CQS**

A substance being studied in the treatment of cancer. It is a type of topoisomerase inhibitor. Also called chloroquinoxaline sulfonamide.

## **CRA-024781**

A substance being studied in the treatment of several types of cancer. It blocks enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase (HDAC) inhibitor.

## **CRC**

A type of cell grown in the laboratory from samples of normal cells or cancer cells from patient tissue. These cells can be kept alive for as long as needed and grown to large numbers. The cells are treated with substances that cause them to resemble stem cells (cells from which other types of cells develop) and grow rapidly. Under certain conditions, CRCs can be made to look and act like the original tissue or specific type of tumor from which they came. They are used to study how cancers and other diseases form, and to test new drugs and other types of treatment before they are given to people. Also called conditionally reprogrammed cell.

## **CRISPR-Cas9**

A laboratory tool used to change or "edit" pieces of a cell's DNA. CRISPR-Cas9 uses a specially designed RNA molecule to guide an enzyme called Cas9 to a specific sequence of DNA. Cas9 then cuts the strands of DNA at that point and removes a small piece, causing a gap in the DNA where a new piece of DNA can be added. CRISPR-Cas9 is a breakthrough in science that will have important uses in many kinds of research. In cancer research, it may help to understand how cancer forms and responds to treatment as well as new ways to diagnose, treat, and prevent it.

## **CRO**

A company hired by another company or research center to take over certain parts of running a clinical trial. The company may design, manage, and monitor the trial, and analyze the results. Also called Contract Research Organization.

## **CRP**

A protein that is made by the liver when there is inflammation or tissue damage in the body. CRP levels are usually low or not detectable in the blood of healthy people. A high level of CRP in the blood may be a sign of certain conditions, including cancer, infection, inflammatory bowel disease, rheumatoid arthritis, and lupus. Increased levels of CRP may also signal a high risk of heart attack or stroke. Measuring the level of CRP may be done to help diagnose certain diseases, find out how well treatment is working, or determine a person's risk of developing heart disease. Also called C-reactive protein.

## **CRPC**

Prostate cancer that keeps growing even when the amount of testosterone in the body is reduced to very low levels. Many early-stage prostate cancers need normal levels of testosterone to grow, but CRPCs do not. Also called castrate-resistant prostate cancer.

## **CSF**

The fluid that flows in and around the hollow spaces of the brain and spinal cord, and between two of the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). CSF is made by tissue called the choroid plexus in the ventricles (hollow spaces) in the brain. Also called cerebrospinal fluid.

## **CSP**

A rare tumor that usually forms in the connective tissue of the breast. CSPs tend to grow quickly and get large, but they rarely spread to other parts of the body. Most are benign (not cancer), but some may be malignant (cancer) or borderline (in between benign and malignant). CSPs are usually removed by surgery, but they can come back. They are most common in women between 40 and 50 years of age. Also called cystosarcoma phyllodes of the breast and phyllodes tumor.

## **CSPC**

Prostate cancer that needs androgens (male hormones) to grow and therefore stops growing when androgens are not present. Many early-stage prostate cancers are androgen-dependent, so reducing the amount of androgens in the body or blocking their action may be an effective type of therapy. Also called androgen-dependent prostate cancer, androgen-sensitive prostate cancer, castrate-sensitive prostate cancer, hormone-sensitive prostate cancer, and HSPC.

## **CSS**

The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, to the date of death from the disease. Patients who die from causes unrelated to the disease are not counted in this measurement. In a clinical trial, measuring the CSS is one way to see how well a new treatment works. Also called cause-specific survival.

## **CT angiography**

A procedure that uses x-rays to create a series of detailed pictures of the blood vessels and blood flow inside the body. The pictures are taken from different

angles and are created by a computer linked to an x-ray machine. A dye is injected into a vein to make the blood vessels and blood flow easier to see on the x-ray. CT angiography may be used to check for aneurysms (a bulge in the blood vessel wall), blockages in the arteries, blood clots, and other blood vessel problems. Also called computed tomography angiography and CTA.

### **CT colonography**

A method to examine the inside of the colon by taking a series of x-rays. A computer is used to make 2-dimensional (2-D) and 3-D pictures of the colon from these x-rays. The pictures can be saved, changed to give better viewing angles, and reviewed after the procedure, even years later. Also called computed tomographic colonography, computed tomography colonography, and virtual colonoscopy.

### **CT scan**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-dimensional (3-D) views of tissues and organs. A dye may be injected into a vein or swallowed to help the tissues and organs show up more clearly. A CT scan may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Also called CAT scan, computed tomography scan, computerized axial tomography scan, and computerized tomography.

### **CT-2103**

A form of the anticancer drug paclitaxel combined with a protein called poliglumex that may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of breast cancer, ovarian cancer, lung cancer, and other types of cancer. It belongs to the family of drugs called mitotic inhibitors. Also called paclitaxel poliglumex, paclitaxel polyglutamate, and Xyotax.

### **CT-2106**

A form of the anticancer drug camptothecin that may have fewer side effects and work better than camptothecin. It is being studied in the treatment of cancer. It is a type of DNA topoisomerase inhibitor. Also called polyglutamate camptothecin.

### **CT-2584**

A substance that is being studied in the treatment of cancer. It may prevent the growth of blood vessels from surrounding tissue into a solid tumor.

### **CT-322**

A substance being studied in the treatment of cancer. CT-322 may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of vascular endothelial growth factor receptor-2 (VEGFR-2) inhibitor and a type of antiangiogenesis agent. Also called Angiocept and VEGFR-2 inhibitor CT-322.

### **CT-guided biopsy**

A biopsy procedure that uses a CT scan (a special type of x-ray linked to a computer) to find an abnormal area in the body and help guide the removal of a sample of tissue from that area. A needle is usually used to remove the sample, which is then checked under a microscope for signs of disease. A CT-guided biopsy may be done when the abnormal area is deep inside the body or when the doctor cannot feel a lump or mass.



### **CT53518**

A substance being studied in the treatment of some types of cancer. It may stop cancer cell growth by blocking certain enzymes. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called MLN518 and tandutinib.

### **CTA**

A procedure that uses x-rays to create a series of detailed pictures of the blood vessels and blood flow inside the body. The pictures are taken from different angles and are created by a computer linked to an x-ray machine. A dye is injected into a vein to make the blood vessels and blood flow easier to see on the x-ray. CTA may be used to check for aneurysms (a bulge in the blood vessel wall), blockages in the arteries, blood clots, and other blood vessel problems. Also called computed tomography angiography and CT angiography.

### **CTC**

A cancer cell that breaks away from the original (primary) tumor and enters the bloodstream. CTCs can travel through the blood and form new tumors in other parts of the body. A sample of blood can be used to detect CTCs and learn more about the primary tumor. CTCs are being used as a biomarker in some types of cancer to help plan treatment or make a likely prognosis. Also called circulating tumor cell.

### **CTC1 gene**

A gene that makes a protein involved in protecting and maintaining telomeres (the ends of chromosomes) and in copying DNA. Mutations (changes) in the CTC1 gene may cause damage to chromosomes and DNA, which may lead to abnormal cell growth. CTC1 gene mutations have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

### **CTLA-4**

A protein found on T cells (a type of immune cell) that helps keep the body's immune responses in check. When CTLA-4 is bound to another protein called B7, it helps keep T cells from killing other cells, including cancer cells. Some anticancer drugs, called immune checkpoint inhibitors, are used to block CTLA-4. When this protein is blocked, the "brakes" on the immune system are released and the ability of T cells to kill cancer cells is increased.

### **CTX**

A drug used to treat many types of cancer and a certain type of kidney disease in children. CTX damages the cell's DNA and may kill cancer cells. It may also lower the body's immune response. CTX is a type of alkylating agent. Also called cyclophosphamide.

### **CUP**

A case in which cancer cells are found in the body, but the place where the cells first started growing (the origin or primary site) cannot be determined. Also called cancer of unknown primary origin and carcinoma of unknown primary.

## **CVA**

In medicine, a loss of blood flow to part of the brain, which damages brain tissue. CVAs are caused by blood clots and broken blood vessels in the brain. Symptoms include dizziness, numbness, weakness on one side of the body, and problems with talking, writing, or understanding language. The risk of CVA is increased by high blood pressure, older age, smoking, diabetes, high cholesterol, heart disease, atherosclerosis (a buildup of fatty material and plaque inside the coronary arteries), and a family history of CVA. Also called cerebrovascular accident and stroke.

## **CVP**

An abbreviation for a chemotherapy combination used to treat slow-growing forms of non-Hodgkin lymphoma (NHL) and chronic lymphocytic leukemia (CLL). It includes the drugs cyclophosphamide, vincristine sulfate, and prednisone. Also called CVP regimen.

## **CVP regimen**

An abbreviation for a chemotherapy combination used to treat slow-growing forms of non-Hodgkin lymphoma (NHL) and chronic lymphocytic leukemia (CLL). It includes the drugs cyclophosphamide, vincristine sulfate, and prednisone. Also called CVP.

## **CYC116**

A substance being studied in the treatment of some types of cancer. It blocks certain enzymes involved in cell division and may kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of protein kinase inhibitor and a type of antiangiogenesis agent.

## **CYLD gene**

A gene that makes a protein involved in controlling cell growth, cell division, and a type of cell death called apoptosis. Mutations (changes) in the CYLD gene may cause cells to grow and divide too quickly or in an uncontrolled way. This may cause abnormal cells, including cancer cells, to grow. CYLD gene mutations have been found in an inherited condition called Brooke-Spiegler syndrome and in some types of cancer, including multiple myeloma and cancers of the kidney, liver, uterus, and colon. The CYLD gene is a type of tumor suppressor gene.

## **Cablivi**

A drug used with plasma exchange and immunosuppressive therapy to treat acquired thrombotic thrombocytopenic purpura (aTTP). aTTP is a rare blood disorder in which blood clots form in small blood vessels throughout the body. Cablivi binds to a protein called VWF, which may help keep blood clots from forming. It is a type of nanobody (a tiny antibody). Also called caplacizumab.

## **Cabometyx**

A drug that contains the active ingredient cabozantinib-s-malate and is used alone or with other drugs to treat certain types of hepatocellular carcinoma (a type of liver cancer), renal cell carcinoma (a type of kidney cancer), and differentiated thyroid cancer. It is also being studied in the treatment of other types of cancer. Cabometyx blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Cabometyx is a type of tyrosine kinase inhibitor and a type of angiogenesis inhibitor.

### **Calquence**

A drug used to treat adults with chronic lymphocytic leukemia or small lymphocytic lymphoma and adults with mantle cell lymphoma that has already been treated with at least one other therapy. It is also being studied in the treatment of other types of cancer. Calquence blocks a protein called BTK, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called acalabrutinib maleate monohydrate.

### **Camcevi**

A drug used to treat adults with advanced prostate cancer. Camcevi keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone (a male hormone). Camcevi may stop the growth of cancer cells that need testosterone to grow. It is a type of gonadotropin-releasing hormone (GnRH) agonist. Also called leuprolide mesylate.

### **Campath**

A drug used to treat B-cell chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. Campath binds to a protein called CD52, which is found on some types of immune cells and cancer cells. This may help the immune system kill cancer cells. Campath is a type of monoclonal antibody. Also called alemtuzumab.

### **Camptosar**

A drug used alone or with other drugs to treat colorectal cancer that has spread to other parts of the body. It is used in patients whose cancer has not already been treated or whose cancer has recurred (come back) or has gotten worse after treatment with anticancer drugs that included fluorouracil. It is also being studied in the treatment of other types of cancer. Camptosar blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called CPT 11 and irinotecan hydrochloride.

### **Cancell**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in Cancell have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give Cancell as a treatment for any disease. Also called 126-F, Cantron, Jim's Juice, JS-101, JS-114, Protocol, and Sheridan's Formula.

### **Cancer Information Service**

The National Cancer Institute's Cancer Information Service (CIS) provides cancer-related information to the public, free of charge. CIS staff provide personalized responses to questions in easy-to-understand language. Help with quitting smoking is also available. Contact CIS by calling 1-800-4-CANCER (1-800-422-6237), or by using the LiveHelp instant-messaging service at <https://livehelp.cancer.gov>. Also called CIS.

### **Cancer Intervention and Surveillance Modeling Network**

A group of researchers supported by the National Cancer Institute (NCI) who use statistical models to help understand how cancer prevention, screening, and treatment programs can affect the number of new cases of cancer diagnosed each year and the number of deaths from cancer each year. The Cancer Intervention and Surveillance Modeling Network is now studying breast,

colorectal, esophageal, lung, and prostate cancers. The models they create help guide future cancer control strategies, research priorities, policies, and decision making. Also called CISNET.

### **Cannabis**

The dried leaves and flowering tops of the *Cannabis sativa* or *Cannabis indica* plant. Cannabis contains active chemicals called cannabinoids that cause drug-like effects all through the body, including the central nervous system and the immune system. Cannabis may help treat the symptoms of cancer or the side effects of cancer treatment, such as nausea and vomiting, pain, and cachexia (loss of body weight and muscle mass). Also called marijuana.

### **Cantron**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in Cantron have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give Cantron as a treatment for any disease. Also called 126-F, Cancell, Jim's Juice, JS-101, JS-114, Protocol, and Sheridan's Formula.

### **Caprelsa**

A drug used to treat medullary thyroid cancer that is locally advanced and cannot be removed by surgery or has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Caprelsa blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Caprelsa is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called vandetanib and ZD6474.

### **Carac**

A drug that contains the active ingredient fluorouracil and is used as a cream to treat actinic keratosis (a skin condition that may become cancer). Carac stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **Carbo-Tax regimen**

A chemotherapy combination used to treat endometrial, ovarian, and head and neck cancers, and non-small cell lung cancer that has spread. It includes the drugs carboplatin and paclitaxel (Taxol). Also called carboplatin-Taxol, carboplatin-Taxol regimen, and PC regimen.

### **Cardura**

A drug used to treat high blood pressure and urinary problems caused by an enlarged prostate. It relaxes muscle tissue in blood vessels and in the prostate. Cardura is a type of alpha blocker. Also called doxazosin mesylate.

### **Carney complex**

A rare, inherited disorder marked by dark spots on the skin and tumors in the heart, endocrine glands, skin, and nerves. There are two types of Carney complex, which are caused by mutations (changes) in different genes. Also called Carney syndrome.

### **Carney dyad**

A rare, inherited disorder marked by tumors of the gastrointestinal tract and tumors that form in embryonic nervous tissue in the head, neck, and torso. Also called Carney-Stratakis dyad and Carney-Stratakis syndrome.

### **Carney syndrome**

A rare, inherited disorder marked by dark spots on the skin and tumors in the heart, endocrine glands, skin, and nerves. There are two types of Carney syndrome, which are caused by mutations (changes) in different genes. Also called Carney complex.

### **Carney triad**

A very rare disorder marked by tumors of the gastrointestinal tract (usually the stomach), tumors that form in embryonic nervous tissue in the head, neck, and torso, and tumors that form in cartilage in the lungs. Sometimes tumors also form in the adrenal glands and esophagus. Carney triad is most common in young females.

### **Carney-Stratakis dyad**

A rare, inherited disorder marked by tumors of the gastrointestinal tract and tumors that form in embryonic nervous tissue in the head, neck, and torso. Also called Carney dyad and Carney-Stratakis syndrome.

### **Carney-Stratakis syndrome**

A rare, inherited disorder marked by tumors of the gastrointestinal tract and tumors that form in embryonic nervous tissue in the head, neck, and torso. Also called Carney dyad and Carney-Stratakis dyad.

### **Carnitor**

A form of carnitine, which is a substance made in muscle and liver tissue and found in certain foods, such as meat, poultry, fish, and some dairy products. Carnitor is also a drug that is used to treat patients who do not make enough carnitine and is being studied as a way to prevent tissue damage caused by chemotherapy. Carnitine is a type of dietary supplement. Also called L-carnitine and levocarnitine.

### **Carvykti**

A treatment used for adults with multiple myeloma that came back or did not get better after treatment with at least one line of anticancer therapy that included a proteasome inhibitor and an immunomodulating agent. It is used in patients whose cancer did not respond to treatment with lenalidomide. Carvykti is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Carvykti binds to a protein called BCMA, which is found on myeloma cells and some types of immune cells. This helps the body's immune system kill cancer cells. Carvykti is a type of cellular immunotherapy called CAR T-cell therapy. Also called ciltacabtagene autoleucel.

### **Casodex**

A drug used with another drug to treat prostate cancer that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Casodex binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Casodex blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called bicalutamide.

### **Castleman disease**

A rare disorder in which benign (not cancer) growths form in lymph node tissue. There are two main ways that Castleman disease occurs: localized (unicentric) and multicentric. Unicentric Castleman disease affects only one group of lymph nodes in one part of the body, usually in the chest or abdomen. It may not cause symptoms. Multicentric Castleman disease affects many groups of lymph nodes and lymphoid tissue all through the body. It can weaken the immune system and cause problems such as infection, fever, weight loss, fatigue, night sweats, nerve damage, and anemia. People with Castleman disease have an increased risk of lymphoma. Also called angiofollicular lymph node hyperplasia and giant lymph node hyperplasia.

### **Catapres**

A drug used to treat high blood pressure. It is also being studied in the treatment of certain types of cancer pain and as an aid to stop smoking. It blocks the release of chemicals from nerve endings that make blood vessels constrict (get narrower). Catapres is a type of antihypertensive agent and a type of alpha-adrenergic agonist. Also called clonidine hydrochloride.

### **Celexa**

A drug used to treat depression. It belongs to the families of drugs called antidepressant agents and selective serotonin reuptake inhibitors (SSRIs). Also called citalopram.

### **CellCept**

A drug used to prevent graft-versus-host disease (GVHD) after organ transplants. It is also being studied in the prevention of GVHD after stem cell transplants for cancer, and in the treatment of some autoimmune disorders. CellCept is a type of immunosuppressive agent. Also called mycophenolate mofetil.

### **Centers for Disease Control and Prevention**

A U.S. federal government agency whose mission is to protect public health by preventing and controlling disease, injury, and disability. The Centers for Disease Control and Prevention promotes healthy behaviors and safe, healthy environments. It keeps track of health trends, tries to find the cause of health problems and outbreaks of disease, and responds to new public health threats. The Centers for Disease Control and Prevention works with state health departments and other organizations throughout the country and the world to help prevent and control disease. The Centers for Disease Control and Prevention is part of the U.S. Public Health Service of the Department of Health and Human Services (DHHS). Also called CDC.

### **Cervarix**

A vaccine that is no longer available in the United States but is still used in other countries to protect against infection with two types of human papillomavirus (HPV). Cervarix is used in females aged 9 to 25 years to protect against high-risk HPV types 16 and 18, which most often cause cervical cancer and lesions that may become cervical cancer. Cervarix may also prevent other HPV-related cancers. Also called recombinant human papillomavirus bivalent vaccine.

### **CerviPrep**

A device used to deliver drugs directly to the cervix (the lower, narrow end of the uterus that forms a canal between the uterus and vagina). The CerviPrep covers



the cervix and protects surrounding tissue. Drugs may be injected into the inner part of the cervix through a syringe attached to the device.

### **Cesamet**

A synthetic pill form of an active chemical in marijuana called delta-9-tetrahydrocannabinol (THC). Cesamet is used to treat nausea and vomiting caused by chemotherapy in patients who have not been helped by other therapy. It is a type of cannabinoid. Also called nabilone.

### **CgA**

A protein found inside neuroendocrine cells, which release CgA and certain hormones into the blood. CgA may be found in higher than normal amounts in patients with certain neuroendocrine tumors, small cell lung cancer, prostate cancer, and other conditions. Measuring the amount of CgA in the blood may help to diagnose cancer or other conditions or find out how well treatment is working or if cancer has come back. CgA is a type of tumor marker. Also called chromogranin A.

### **Ch14.18**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF), aldesleukin (IL-2), and 13-cis-retinoic acid to treat children with high-risk neuroblastoma. It is used in patients whose disease has gotten better with other anticancer treatment. Ch14.18 binds to a substance called GD2, which is found on some types of cancer cells. Ch14.18 may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called dinutuximab, MOAB Ch14.18, monoclonal antibody Ch14.18, and Unituxin.

### **Chamberlain procedure**

A procedure in which a tube is inserted into the chest to view the tissues and organs in the area between the lungs and between the breastbone and heart. The tube is inserted through an incision next to the breastbone. This procedure is usually used to get a tissue sample from the lymph nodes on the left side of the chest. Also called anterior mediastinotomy.

### **Chantix**

A drug used to help people stop smoking by acting the same way nicotine acts in the brain. It is a type of nicotine receptor partial agonist. Also called varenicline tartrate.

### **ChiRhoStim**

A drug used to help diagnose gastrinomas (tumors that cause too much gastric acid to be made) and other problems with the pancreas. It is also used to increase secretions from the pancreas and to help identify a duct called the ampulla of Vater. ChiRhoStim is a form of secretin that is made in the laboratory. Secretin causes the pancreas, liver, and stomach to release substances that help digest food. Also called secretin human and synthetic human secretin.

### **Childhood Cancer Data Initiative**

A large effort led by the National Cancer Institute to collect, analyze, and share information to address the burden of cancer in children, adolescents, and young adults. The three main goals of the Childhood Cancer Data Initiative are: (1) to collect data from every child, adolescent, and young adult diagnosed with cancer, (2) to create a national strategy of clinical and molecular testing to speed diagnosis and inform treatment for all types of childhood cancer, and (3) to develop a network of computer systems and programs that merge clinical care

and research data to improve prevention, treatment, quality of life, and survivorship for childhood cancers. Also called CCDI.

### **Children's Oncology Group**

A large group of researchers, hospitals, and cancer centers that get support from the National Cancer Institute (NCI) to study childhood cancers. The main goal of the Children's Oncology Group is to conduct clinical trials that test new ways to prevent, diagnose, and treat cancer in children and adolescents. These clinical trials also include supportive care and childhood cancer survivorship studies. The Children's Oncology Group has hospitals and cancer centers in the United States, Canada, Europe, Australia, and New Zealand. It is part of the National Clinical Trials Network (NCTN). Also called COG.

### **Chinese meridian theory**

In traditional Chinese medicine, meridians are channels that form a network in the body, through which qi (vital energy) flows. Blocked qi causes pain or illness. The flow of qi is restored by using pressure, needles, suction, or heat at hundreds of specific points along the meridians.

### **Chinese rhubarb**

The root of this plant has been used in some cultures to treat certain medical problems. It may have anti-inflammatory and anticancer effects. The scientific name is *Rheum palmatum* or *Rheum officinale*. Also called da-huang, Indian rhubarb, rhubarb, and Turkish rhubarb.

### **Chlamydophila psittaci**

A type of bacterium that can infect humans and animals. It spreads to humans from infected birds and can cause a lung infection called psittacosis. It may also cause an infection of the conjunctiva (the membrane that lines the eyelids and covers the white part of the eye). This may increase the risk of a type of lymphoma called ocular adnexa MALT lymphoma, which is a type of B-cell lymphoma.

### **Cialis**

A drug used to treat erectile dysfunction. It is also being studied in the treatment of sexual problems in patients treated with radiation or surgery for prostate cancer. Cialis blocks the action of a certain enzyme, which can result in increased blood flow to the penis, causing an erection. It is a type of cGMP phosphodiesterase type 5 (PDE5) inhibitor. Also called tadalafil.

### **Cinvanti**

A drug used with other drugs to prevent nausea and vomiting caused by chemotherapy and nausea and vomiting after surgery. Cinvanti blocks the action of a certain chemical in the central nervous system that may trigger nausea and vomiting. Blocking this chemical may help lessen nausea and vomiting. Cinvanti is a type of antiemetic and a type of substance P/neurokinin 1 receptor antagonist. Also called aprepitant and Emend.

### **Cipro**

A drug that is used to treat infections caused by bacteria and is being studied in the treatment of bladder cancer. Cipro is a type of fluoroquinolone. Also called ciprofloxacin.

### **Clark level I skin cancer**

Skin cancer that is found only in the epidermis (outer layer of skin).

**Clark level II skin cancer**

Skin cancer that has spread from the epidermis (outer layer of skin) down into the papillary dermis (the thin top layer of the dermis).

**Clark level III skin cancer**

Skin cancer that has spread down through the papillary dermis (the thin top layer of the dermis) but not into the reticular dermis (the thick bottom layer of the dermis).

**Clark level IV skin cancer**

Skin cancer that has spread down into the reticular dermis (the thick bottom layer of the dermis).

**Clark level V skin cancer**

Skin cancer that has spread down into the subcutaneous tissue (tissue beneath the skin).

**Clark levels**

A system for describing how deep skin cancer has spread into the skin. Levels I-V describe the layers of skin involved.

**Claus model**

A computer program that uses statistics to predict a person's risk for developing breast cancer based on family history.

**Clinical Laboratory Improvement Amendments**

Changes to a 1988 U.S. law that sets the standards for all laboratory testing that is done on human tissue, blood, and other body fluid samples used to screen, diagnose, prevent, or treat a disease or condition. The Clinical Laboratory Improvement Amendments program makes sure laboratories follow these standards and have quality control programs in place so that patient test results are accurate and reliable. The federal government agencies that manage the Clinical Laboratory Improvement Amendments program are the Food and Drug Administration (FDA), the Centers for Medicare and Medicaid Services (CMS), and the Centers for Disease Control and Prevention (CDC). Certain types of laboratory testing, such as testing done in clinical trials, research studies, crime labs, and work-related drug testing, are not covered by the Clinical Laboratory Improvement Amendments program. Also called CLIA.

**Clolar**

A drug used to treat children and young adults aged 1 to 21 years with acute lymphoblastic leukemia. It is used in patients whose cancer came back or did not get better after at least two other types of anticancer treatment. It is also being studied in the treatment of other types of cancer. Clolar stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called clofarabine.

**Cloretazine**

A drug used to treat acute myelogenous leukemia (AML). It is also being studied in the treatment of several other types of cancer. It blocks cell growth by damaging the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called larmustine and Onrigin.

### **Clostridium difficile**

A type of bacterium found in human and animal waste. Clostridium difficile is a common cause of diarrhea that occurs in hospitals. It can also cause diarrhea or other intestinal disorders in patients treated with antibiotics.

### **CoQ10**

A nutrient that the body needs in small amounts to function and stay healthy. CoQ10 helps mitochondria (small structures in the cell) make energy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). CoQ10 is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, beef, soybeans, peanuts, and spinach. It is being studied in the prevention and treatment of some types of cancer and heart disease and in the relief of side effects caused by some cancer treatments. Also called coenzyme Q10, Q10, ubiquinone, and vitamin Q10.

### **Cockayne syndrome**

A rare genetic disorder that is caused by inheriting two mutations (changes) in the ERCC6 gene or in the ERCC8 gene. These genes make proteins involved in DNA repair. Cockayne syndrome is marked by shorter-than-average height, an abnormally small head, premature aging, sensitivity to light, and learning and developmental delays. Other signs and symptoms may include hearing loss, vision problems, tooth decay, bone abnormalities, and nervous system problems. The signs and symptoms usually appear during infancy and get worse over time. Cockayne syndrome is inherited in an autosomal recessive manner.

### **Columvi**

A drug used to treat adults with certain types of diffuse large B-cell lymphoma or large B-cell lymphoma that came back or did not get better after treatment with at least two other systemic therapies. It is also being studied in the treatment of other types of cancer. Columvi binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called CD20, which is found on B cells (another type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Columvi is a type of bispecific monoclonal antibody. Also called glofitamab.

### **Cometriq**

A drug that contains the active ingredient cabozantinib-s-malate and is used to treat progressive medullary thyroid cancer that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Cometriq blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Cometriq is a type of tyrosine kinase inhibitor and a type of angiogenesis inhibitor.

### **Community Advisory Board**

In medicine, a group of non-scientist volunteers that serves as a link between a community and clinical trial researchers. A Community Advisory Board may review and monitor clinical trials and help teach the community about the trials. Also called CAB.

### **Concerta**

A drug used to treat certain behavior disorders, such as attention deficit hyperactivity disorder (ADHD). It is also being studied as a way to improve brain function in patients treated with anticancer drugs. Concerta acts on certain parts of the brain. It is a type of central nervous system stimulant. Also called methylphenidate hydrochloride and Ritalin.

### **Consensus Development Program**

A program of the National Institutes of Health to bring together an independent group of experts to review scientific evidence related to an important public health issue. For a specific issue, a panel of experts (such as doctors and scientists) reviews reports and papers on the subject, listens to information presented by other experts in the field, and hears comments from the general public. Based on the evidence presented, the panel writes a report summarizing the findings, which is made available to the public. The report is not intended to be a practice guideline.

### **Contract Research Organization**

A company hired by another company or research center to take over certain parts of running a clinical trial. The company may design, manage, and monitor the trial, and analyze the results. Also called CRO.

### **Coombs test**

A laboratory test to identify antibodies that can bind to the surface of red blood cells or platelets and destroy them. This test is used to diagnose certain blood disorders in which patients make antibodies to their own red blood cells or platelets. It is also used to determine blood type. Also called antiglobulin test.

### **Copiktra**

A drug used to treat adults with chronic lymphocytic leukemia or small lymphocytic lymphoma that came back or did not get better after treatment with at least two other therapies. It is also being studied in the treatment of other types of cancer. Copiktra blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of kinase inhibitor. Also called duvelisib.

### **Corderone**

A drug used to treat certain types of abnormal heart rhythms that have not gotten better with other drugs. Corderone affects the electrical activity of the heart. It is a type of antiarrhythmic agent. Also called amiodarone hydrochloride.

### **Coreg**

A drug used to treat high blood pressure and certain heart problems. It is also being studied in the prevention and treatment of side effects caused by some anticancer drugs. Coreg blocks certain receptors on nerve cells and causes blood vessels to dilate (widen). It is a type of antihypertensive agent and a type of antianginal agent. Also called carvedilol phosphate.

### **Coriolus versicolor extract**

A substance being studied in the treatment of breast cancer and other types of cancer. Coriolus versicolor is a type of mushroom. Its extract is used with other treatments in some cultures to treat cancer and other conditions. The extract may boost the immune system, slow the growth of some tumor cells, and lessen the side effects of chemotherapy and radiation therapy. It is a type of biological response modifier (BRM) and a type of dietary supplement.

### **Corynebacterium granulosum**

A bacterium that can cause skin disorders. Substances taken from this bacterium can stimulate the immune system and may help kill cancer cells.

## **Cosmegen**

A drug that comes from the bacterium *Streptomyces parvulus* and is used alone or with other drugs to treat adults and children with Ewing sarcoma, gestational trophoblastic tumor, rhabdomyosarcoma, Wilms tumor, or certain types of testicular cancer and adults with certain types of solid tumors. It is also being studied in the treatment of other types of cancer. Cosmegen damages the cell's DNA and may kill cancer cells. It is a type of antineoplastic antibiotic. Also called actinomycin D and dactinomycin.

## **Costello syndrome**

A rare genetic disorder that is caused by a mutation (change) in the HRAS gene. Costello syndrome is marked by shorter-than-average height, unusual facial features, extra folds of skin (especially on the neck, hands, and feet), loose joints, heart problems, and learning and developmental delays. People with Costello syndrome may develop small, non-cancerous wart-like growths called papillomas around the nose, mouth, or anus. They also have an increased risk of developing certain types of cancer, especially rhabdomyosarcoma (a type of soft tissue tumor) and neuroblastoma (cancer that forms from immature nerve cells).

## **Cotellic**

A drug used alone to treat adults with a group of blood disorders called histiocytic neoplasms and with vemurafenib to treat adults with melanoma that has spread or cannot be removed by surgery and has a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Cotellic blocks proteins called MEK1 and MEK2, which may help keep tumor cells from growing. It is a type of kinase inhibitor. Also called cobimetinib fumarate.

## **Cowden disease**

A rare inherited disorder marked by the presence of many benign (not cancer) growths called hamartomas and an increased risk of cancer. Hamartomas form in different parts of the body, especially the skin, mouth, and gastrointestinal tract. Other benign tumors may also occur in the thyroid, breast, uterus, soft tissue, and brain. Other signs and symptoms include a larger-than-average head, abnormal skin changes, blood vessel problems, autism spectrum disorder, and learning and developmental delays. People with Cowden disease have an increased risk of developing certain types of cancer, including melanoma and cancers of the breast, thyroid, endometrium, kidney, colon, and rectum. Cowden disease is usually caused by mutations (changes) in the PTEN gene. Also called Cowden syndrome and multiple hamartoma syndrome.

## **Cowden syndrome**

A rare inherited disorder marked by the presence of many benign (not cancer) growths called hamartomas and an increased risk of cancer. Hamartomas form in different parts of the body, especially the skin, mouth, and gastrointestinal tract. Other benign tumors may also occur in the thyroid, breast, uterus, soft tissue, and brain. Other signs and symptoms include a larger-than-average head, abnormal skin changes, blood vessel problems, autism spectrum disorder, and learning and developmental delays. People with Cowden syndrome have an increased risk of developing certain types of cancer, including melanoma and cancers of the breast, thyroid, endometrium, kidney, colon, and rectum. Cowden syndrome is usually caused by mutations (changes) in the PTEN gene. Also called Cowden disease and multiple hamartoma syndrome.



### **Cozaar**

A drug used to treat high blood pressure. Cozaar blocks the action of chemicals that make blood vessels constrict (get narrower). It is a type of angiotensin II receptor antagonist. Also called losartan potassium.

### **CpG 7909**

A substance that is being studied in the treatment of some types of cancer. It belongs to the family of drugs called biological response modifiers. Also called PF-3512676 and ProMune.

### **Crestor**

A drug used to lower the amount of cholesterol and other harmful substances, such as triglycerides, in the blood. It is also being studied in the prevention and treatment of some types of cancer and other conditions. Crestor blocks an enzyme that helps make cholesterol in the body and it helps break down cholesterol. It also may cause cancer cells to die and may inhibit the growth of blood vessels that cancer cells need to grow. It is a type of HMG-CoA reductase inhibitor and a type of statin. Also called rosuvastatin calcium.

### **Crohn disease**

A condition in which the gastrointestinal tract is inflamed over a long period of time. Crohn disease usually affects the small intestine and colon. Symptoms include fever, diarrhea, stomach cramps, vomiting, and weight loss. Crohn disease increases the risk of colorectal cancer and small intestine cancer. It is a type of inflammatory bowel disease (IBD). Also called regional enteritis.

### **Cubicin**

A drug used to treat certain bacterial skin and bloodstream infections in adults. Cubicin is also being studied in the treatment of fever and neutropenia (an abnormal decrease in the number of neutrophils, a type of white blood cell) in patients with cancer. It is a type of antibiotic. Also called daptomycin.

### **Culturelle**

A live form of a bacterium that makes lactic acid (a substance that is made from sugars found in milk and is also made in the body). Culturelle is given to help with digestion and normal bowel function. It may also help keep the gastrointestinal (GI) tract healthy. It is being studied in the prevention of infections in patients having donor stem cell transplants and in other conditions. Also called *Lactobacillus rhamnosus* GG.

### **Cushing disease**

A condition in which there is too much cortisol (a hormone made by the outer layer of the adrenal gland) in the body. In Cushing disease, this happens when an adenoma (benign tumor) in the pituitary gland makes too much adrenocorticotrophic hormone (ACTH). This causes the adrenal gland to make too much cortisol. Symptoms include a round face, thin arms and legs, severe fatigue and muscle weakness, high blood pressure and high blood sugar, purple or pink stretch marks on the skin, and weight gain, especially in the abdomen.

### **Cushing syndrome**

A condition in which there is too much cortisol (a hormone made by the outer layer of the adrenal gland) in the body. Cushing syndrome may be caused by taking too many steroid drugs or by certain types of tumors. Tumors that make adrenocorticotrophic hormone (ACTH) cause the adrenal gland to make too much cortisol. Symptoms of Cushing syndrome include a round face, thin arms and

legs, severe fatigue and muscle weakness, high blood pressure, high blood sugar, purple or pink stretch marks on the skin, and weight gain, especially in the abdomen. Also called hypercortisolism.

### **Cymbalta**

A drug used to treat depression and peripheral neuropathy (pain, numbness, tingling, burning, or weakness in the hands or feet) that can occur with diabetes. It is also being studied in the treatment of peripheral neuropathy caused by certain anticancer drugs. Cymbalta increases the amount of certain chemicals in the brain that help relieve depression and pain. It is a type of serotonin and norepinephrine reuptake inhibitor. Also called duloxetine hydrochloride.

### **Cyramza**

A drug that binds to the protein vascular endothelial growth factor (VEGF) to help keep new blood vessels from forming and is used to treat different types of cancer. It is used alone or with other drugs to treat certain types of non-small cell lung cancer, hepatocellular carcinoma (a type of liver cancer), colorectal cancer, stomach cancer, and gastroesophageal junction cancer. It is also being studied in the treatment of other types of cancer. Cyramza may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody. Also called anti-VEGFR-2 fully human monoclonal antibody IMC-1121B, IMC-1121B, and ramucirumab.

### **Cytomel**

A drug that is used to treat certain thyroid (a gland located near the voice box) conditions. It is also being studied in the treatment of thyroid cancer. Cytomel is made in the laboratory and is a form of the thyroid hormone triiodothyronine (T3). Also called liothyronine sodium and Triostat.

### **D&C**

A procedure to scrape and remove tissue from the inner lining of the uterus. The cervix is dilated (made larger) and a curette (spoon-shaped instrument) is inserted into the uterus to remove tissue. A tissue sample may then be checked under a microscope for signs of disease, such as infection or cancer. A D&C may also be done after a miscarriage or to treat certain conditions, such as abnormal bleeding. Also called dilatation and curettage and dilation and curettage.

### **D-1MT**

A substance being studied in the treatment of melanoma and many other types of cancer. D-1MT blocks the breakdown of the amino acid tryptophan, which is needed for T cells (a type of immune system cell) to kill tumor cells. Giving D-1MT to patients who have received chemotherapy for cancer may help kill more tumor cells. It is a type of enzyme inhibitor and immunosuppressant. Also called 1-methyl-d-tryptophan.

### **D-20761**

A synthetic luteinizing hormone-releasing hormone (LH-RH) antagonist that suppresses LH and sex steroid levels.

### **D-cycloserine**

A drug used to treat tuberculosis. It is also being studied in the treatment of pain and nerve problems (numbness, tingling) caused by chemotherapy and in the treatment of low back pain, autism, certain anxiety disorders, and schizophrenia. D-cycloserine is a type of antibiotic. Also called Seromycin.

## **DA-EPOCH-R**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), and rituximab. During each treatment cycle, the doses of some of the drugs may be increased or decreased to allow the patient to receive the dose that works the best with the fewest side effects. Also called DA-EPOCH-R regimen, dose-adjusted EPOCH-R, and dose-adjusted EPOCH-R regimen.

## **DA-EPOCH-R regimen**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), and rituximab. During each treatment cycle, the doses of some of the drugs may be increased or decreased to allow the patient to receive the dose that works the best with the fewest side effects. Also called DA-EPOCH-R, dose-adjusted EPOCH-R, and dose-adjusted EPOCH-R regimen.

## **DACA**

A substance being studied in the treatment of cancer. It is a type of topoisomerase inhibitor. Also called acridine carboxamide.

## **DAR**

A log of study drugs kept by an investigator running a clinical trial. It lists many things about each drug, including the drug name, lot number, expiration date, the amount of drug received, used, returned, or thrown away, and the amount left. DARs help make sure that a clinical trial is done safely and correctly. DARs are required by the U.S. Food and Drug Administration (FDA). Also called Drug Accountability Record.

## **DBA**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with DBA may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called Blackfan–Diamond anemia, congenital hypoplastic anemia, congenital pure red cell aplasia, Diamond-Blackfan anemia, erythrogenesis imperfecta, and inherited erythroblastopenia.

## **DBE**

A procedure used to look at the inside of the small intestine. A special instrument made up of two tubes (one inside the other) is inserted through the mouth or rectum and into the small intestine. The inside tube, which is an endoscope with a light and lens for viewing, is moved through part of the small intestine, and a balloon at the end of it is inflated to keep the endoscope in place. Next, the outer tube is moved through the small intestine to reach the end of the endoscope, and a balloon at the end of the outer tube is inflated to keep it in place. Then, the balloon at the end of the endoscope is deflated, and the endoscope is moved through the next part of the small intestine. These steps are repeated many times as the tubes move through the whole small intestine. This allows the doctor to see all of the small intestine. Tissue samples may be removed so they can be checked under a microscope for signs of disease. Also called double balloon endoscopy and double balloon enteroscopy.

## **DBVE**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, and etoposide. Also called ABVE, ABVE regimen, and DBVE regimen.

## **DBVE regimen**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, and etoposide. Also called ABVE, ABVE regimen, and DBVE.

## **DBVE-PC**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, etoposide, prednisone, and cyclophosphamide. Also called ABVE-PC, ABVE-PC regimen, and DBVE-PC regimen.

## **DBVE-PC regimen**

An abbreviation for a chemotherapy combination used with radiation therapy to treat childhood Hodgkin lymphoma. It includes the drugs doxorubicin hydrochloride (Adriamycin), bleomycin sulfate, vincristine sulfate, etoposide, prednisone, and cyclophosphamide. Also called ABVE-PC, ABVE-PC regimen, and DBVE-PC.

## **DCF**

An abbreviation for a chemotherapy combination used to treat certain types of head and neck cancer and stomach cancer. It includes the drugs docetaxel (Taxotere), cisplatin (Platinol), and fluorouracil. Also called docetaxel-cisplatin-fluorouracil, Taxotere-Platinol-fluorouracil, TPF, and TPF regimen.

## **DCIS**

A condition in which abnormal cells are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. In some cases, DCIS may become invasive breast cancer and spread to other tissues. At this time, there is no way to know which abnormal cells could become invasive. Also called ductal carcinoma in situ and intraductal breast carcinoma.

## **DDB2 gene**

A gene that makes a protein involved in many cell functions, including the repair of damaged DNA. Mutations (changes) in the DDB2 gene may cause cells to lose their ability to repair damaged DNA, which may lead to abnormal cell growth. DDB2 gene mutations have been found in an inherited condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

## **DDS**

A rare disorder that causes kidney failure before age 3, abnormal development of the sexual organs, and, in most cases, Wilms tumor (a type of kidney cancer). Children with Denys-Drash syndrome are also at high risk of some other types of cancer. Also called Denys-Drash syndrome.

## **DEB**

A rare, inherited disorder in which blisters form on the skin and the moist inner lining of some organs and body cavities. The blisters usually appear at birth and may occur on certain parts of the body (such as the hands, feet, elbows, and knees) or all over the body (including the mouth, esophagus, and other parts of the gastrointestinal tract, the eyes, and the genitourinary tract). This can lead to scarring in the affected areas and thinning of the skin. Other signs and symptoms include small white bumps on the skin; deformities in the fingers, toes, nails, teeth, and joints; trouble chewing and swallowing; vision loss and other eye problems; anemia; slow growth; and poor nutrition. Some people with DEB have a very high risk of developing squamous cell skin cancer at an early age. There are several types of DEB. It is caused by a mutation (change) in the COL7A1 gene. Also called dystrophic epidermolysis bullosa.

## **DES**

A synthetic form of the hormone estrogen that was prescribed to pregnant women between about 1940 and 1971 because it was thought to prevent miscarriages. DES may increase the risk of uterine, ovarian, or breast cancer in women who took it. It also has been linked to an increased risk of clear cell carcinoma of the vagina or cervix in daughters exposed to DES before birth. Also called diethylstilbestrol.

## **DES daughter**

A female who was exposed before birth to a synthetic form of the hormone estrogen called diethylstilbestrol (DES) because their mother took DES while pregnant with them. DES was prescribed for some pregnant women between about 1940 and 1971 because it was thought to prevent miscarriage, premature labor, and other complications related to pregnancy. It was stopped in 1971 due to medical problems that were seen in the children of women who took it. DES daughters were found to have an increased risk of precancerous lesions in the cervix and clear cell adenocarcinoma of the cervix or vagina. DES daughters may also have an increased risk of breast cancer, pancreatic cancer or other pancreatic disorders, cardiovascular disease, and depression. Other health problems that may have affected DES daughters include early menopause, fertility and pregnancy problems, and structural changes in the female reproductive tract.

## **DES son**

A male who was exposed before birth to a synthetic form of the hormone estrogen called diethylstilbestrol (DES) because their mother took DES while pregnant with them. DES was prescribed to some pregnant women between about 1940 and 1971 because it was thought to prevent miscarriage, premature labor, and other complications related to pregnancy. It was stopped in 1971 due to medical problems that were seen in the children of women who took it. DES sons have an increased risk of cysts in the testicles and may have other testicular problems, such as undescended testicles (a condition in which one or both testicles fail to move from the abdomen into the scrotum) and an increased risk of inflammation or infection of the testicles.

## **DEXA scan**

A procedure that measures the amount of calcium and other minerals in a bone by passing x-rays with two different energy levels through the bone. A DEXA scan shows the strength and thickness of a bone and is usually done in the lower spine, hip, lower arm, wrist, fingers, and heel. It is used to diagnose osteoporosis (a condition of lower bone density), to see how well osteoporosis treatments are

working, and to predict how likely the bones are to break. A DEXA scan also measures fat and muscle composition in specific parts of the body, such as the arms, legs, and pelvis. Also called BMD scan, bone densitometry, bone mineral density scan, dual energy x-ray absorptiometry, and DXA.

#### **DFMO**

A substance being studied in the treatment of cancer. Also called difluoromethylornithine.

#### **DFS**

In cancer, the length of time after primary treatment for a cancer ends that the patient survives without any signs or symptoms of that cancer. In a clinical trial, measuring the DFS is one way to see how well a new treatment works. Also called disease-free survival, relapse-free survival, and RFS.

#### **DHA-paclitaxel**

A combination of DHA (a natural fatty acid) and paclitaxel (an anticancer drug) being studied in the treatment of cancer. It is a type of mitotic inhibitor.

#### **DHEA**

A substance being studied in the prevention of cancer. It is a type of steroid. Also called dehydroepiandrosterone.

#### **DHFR inhibitor**

A substance that can build up in cancer cells and block them from using folate. Folate is a nutrient that rapidly dividing cells need to make DNA. Blocking folate use helps keep cancer cells from growing and may kill them. Some DHFR inhibitors are used to treat cancer. A DHFR inhibitor is a type of antifolate. Also called dihydrofolate reductase inhibitor.

#### **DHHS**

The U.S. federal government agency responsible for protecting the public's health and providing important services, especially for people in need. The DHHS works with state and local governments throughout the country to do research and provide public health services, food and drug safety programs, health insurance programs, and many other services. There are several federal agencies that are a part of the DHHS. They include the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Centers for Medicare and Medicaid Services (CMMS). Also called Department of Health and Human Services and HHS.

#### **DHL**

A rare, aggressive (fast-growing) type of B-cell non-Hodgkin lymphoma caused by changes in the DNA that affect a gene called the MYC gene and either the BCL2 gene or the BCL6 gene. DHL may be hard to treat and has a poor prognosis. It is a type of diffuse large B-cell lymphoma. Also called double-hit lymphoma.

#### **DHPLN**

A childhood condition in which abnormal tissue grows on the outer part of one or both kidneys. DHPLN usually develops into Wilms tumor (a type of childhood kidney cancer) if not treated. Also called diffuse hyperplastic perilobar nephroblastomatosis.



## **DHT**

A hormone made from testosterone in the prostate, testes, and certain other tissues. It is needed to develop and maintain male sex characteristics, such as facial hair, deep voice, and muscle growth. High amounts of DHT may increase the growth of prostate cancer and make it harder to treat. Also called androstanolone and dihydrotestosterone.

## **DICER1 syndrome**

A rare, inherited disorder that is caused by a mutation (change) in a gene called DICER1. Having this mutation increases the risk of certain types of tumors, including tumors of the kidney, thyroid, ovary, cervix, testicle, brain, eye, and lining of the lung. The tumors may be benign (not cancer) or malignant (cancer). A goiter (an enlarged thyroid) and polyps in the colon may also occur. Not all people who have a mutation in the DICER1 gene will develop tumors.

## **DIEP flap**

A type of breast reconstruction in which blood vessels called deep inferior epigastric perforators (DIEP), and the skin and fat connected to them are removed from the lower abdomen and used for reconstruction. Muscle is left in place.

## **DIM**

A substance being studied in the treatment of prostate cancer and in the prevention of cervical cancer. DIM is found in cruciferous vegetables like broccoli, brussels sprouts, cauliflower, cabbage, and kale. It is a type of plant indole. Also called diindolylmethane.

## **DIN**

A condition in which abnormal cells are found in the lining of a breast duct (milk duct). Having DIN may increase the risk of breast cancer in which these abnormal cells become cancer and spread outside the duct to other tissues in the breast. Types of DIN include atypical ductal hyperplasia and ductal carcinoma in situ (DCIS). Also called ductal intraepithelial neoplasia.

## **DIPG**

A rare, fast-growing tumor that forms in cells called glial cells in a part of the brain stem called the pons. DIPGs tend to spread to nearby tissue and other parts of the brain stem, are hard to treat, and have a poor prognosis (outcome). They usually occur in children. Also called diffuse intrinsic pontine glioma.

## **DJ-927**

A substance being studied in the treatment of cancer. It is a type of taxane derivative.

## **DKC**

A rare, inherited disorder that can affect many parts of the body, especially the nails, skin, and mouth. It is marked by abnormally shaped fingernails and toenails that may grow poorly; changes in skin color, especially on the neck and chest; and white patches inside the mouth. Other problems may include hair loss or early graying of the hair, eye and dental problems, osteoporosis, joint problems, liver disease, and a narrowing of the urethra (tube that carries urine from the bladder to the outside of the body) in men. People with DKC may develop serious conditions, such as bone marrow failure, myelodysplastic syndrome, pulmonary fibrosis, and certain types of cancer, especially leukemia and cancers of the head and neck, mouth, anus, and genitals. DKC may be

caused by mutations (changes) in certain genes that affect the length of telomeres (the ends of chromosomes). Also called dyskeratosis congenita.

### **DKC1 gene**

A gene that makes a protein involved in protecting and maintaining telomeres (the ends of chromosomes) and in making a molecule called ribosomal RNA. Mutations (changes) in the DKC1 gene may cause damage to chromosomes and DNA, which may lead to abnormal cell growth. DKC1 gene mutations have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

### **DNA**

The molecule inside cells that contains the genetic information needed for a person and most other organisms to develop and grow and is passed from one generation to the next. DNA is made up of two strands that twist into the shape of a spiral ladder called a double helix. Each strand has a backbone that is made up of sugar and phosphate molecules that attach to one of four bases: adenine (A), thymine (T), guanine (G), and cytosine (C). The bases pair up with one another (A with T, and G with C) to form chemical bonds, which act like rungs on a ladder. This holds the two strands of DNA together. Also called deoxyribonucleic acid.

### **DNA cross-linking agent**

A substance that binds DNA nucleotides together and blocks DNA synthesis. In cancer treatment, DNA cross-linking agents may kill cancer cells by damaging their DNA and stopping them from dividing.

### **DNA gene-expression microarray**

A process that allows thousands of pieces of DNA that are fixed to a glass slide to be analyzed at one time. It is used to identify the genes (pieces of DNA) in specific cells or tissue that are actively used to make RNA, which then may be used to make proteins.

### **DNA index**

In medicine, a measure of the amount of DNA or number of chromosomes in cancer cells compared to that in normal cells. Most human cells, except for egg and sperm cells, normally contain 46 chromosomes (23 pairs) in each cell. Cancer cells that have a DNA index of 1 have about the same amount of DNA or number of chromosomes as normal cells. If the DNA index is more than 1, the cancer cells have a higher-than-normal amount of DNA or extra chromosomes. The DNA index may be used to help plan treatment and estimate prognosis for some types of cancer, such as leukemia and neuroblastoma. Also called DNA ploidy.

### **DNA intercalating agent**

A substance that inserts itself into the DNA structure of a cell and binds to the DNA. This causes DNA damage. In cancer treatment, DNA intercalating agents may kill cancer cells by damaging their DNA and stopping them from dividing.

### **DNA methylase**

An enzyme (a protein that speeds up chemical reactions in the body) that attaches methyl groups to DNA. A methyl group is a chemical group containing one carbon and three hydrogen atoms. Also called DNA methyltransferase.

### **DNA methyltransferase**

An enzyme (a protein that speeds up chemical reactions in the body) that attaches methyl groups to DNA. A methyl group is a chemical group containing one carbon and three hydrogen atoms. Also called DNA methylase.

### **DNA ploidy**

In medicine, a measure of the amount of DNA or number of chromosomes in cancer cells compared to that in normal cells. Most human cells, except for egg and sperm cells, normally contain 46 chromosomes (23 pairs) in each cell. Cancer cells that have a DNA ploidy of 1 have about the same amount of DNA or number of chromosomes as normal cells. If the DNA ploidy is more than 1, the cancer cells have a higher-than-normal amount of DNA or extra chromosomes. The DNA ploidy may be used to help plan treatment and estimate prognosis for some types of cancer, such as leukemia and neuroblastoma. Also called DNA index.

### **DNA repair deficiency syndrome**

A type of inherited disorder caused by mutations (changes) in certain genes involved in DNA repair. Changes in these genes can cause breaks, rearrangements, and other problems in the DNA. There are many different types of DNA repair deficiency syndromes. Most of these syndromes are marked by growth and developmental problems, premature aging, and disorders of the skin and nervous system. Having a DNA repair deficiency syndrome may increase a person's risk of certain types of cancer. Also called DNA repair disorder.

### **DNA repair disorder**

A type of inherited disorder caused by mutations (changes) in certain genes involved in DNA repair. Changes in these genes can cause breaks, rearrangements, and other problems in the DNA. There are many different types of DNA repair disorders. Most of these disorders are marked by growth and developmental problems, premature aging, and disorders of the skin and nervous system. Having a DNA repair disorder may increase a person's risk of certain types of cancer. Also called DNA repair deficiency syndrome.

### **DNA replication**

The process by which a copy of the DNA in a cell is made before the cell divides.

### **DNA sequencing**

A laboratory process used to learn the exact sequence (order) of the four building blocks, or bases, that make up DNA. Information is stored in DNA in a code made by arranging the four bases (identified by the letters A, C, G, and T) in different orders. DNA sequencing can be used to find DNA mutations (changes) that may cause diseases, such as cancer.

### **DNR order**

A legal document in which a person or their proxy (such as a spouse, relative, friend, or lawyer) states that health care providers should not use cardiopulmonary resuscitation (CPR) if that person's heart or breathing stops. CPR is a life-saving procedure used to try to restart the heart and breathing after one or both have stopped. A DNR order is a decision only about CPR. It does not

affect other treatments that may be used to help keep a person alive, such as medicine, food, or fluids. A DNR order may be included as part of an advance directive, such as a living will. Also called do not resuscitate order.

## **DOI**

A procedure that uses light waves to create 2-dimensional (2-D) or 3-dimensional (3-D) pictures of tissues inside the body. DOI may be used to look at blood flow to the tissues and to measure changes in the amount of oxygen in them. This may help show the difference between normal and abnormal tissue. DOI may be especially useful for looking at soft tissue, such as breast and brain tissue. It is being studied as an imaging test to help diagnose early-stage breast cancer and other conditions. Also called diffuse optical imaging.

## **DOT**

A procedure that uses light waves to create 3-dimensional (3-D) pictures of tissues inside the body. The pictures are created by a computer linked to the light source. DOT may be used to look at blood flow to the tissues and to measure changes in the amount of oxygen in them. This may help show the difference between normal and abnormal tissue. DOT may be especially useful for looking at soft tissue, such as breast and brain tissue. It is being studied as an imaging test to help diagnose early-stage breast cancer and other conditions. Also called diffuse optical tomography.

## **DPA**

A legal document that gives one person (such as a spouse, relative, friend, or lawyer) the authority to make medical, legal, or financial decisions for another person. A DPA may go into effect right away or when the person who grants it is no longer able to make decisions for themselves, depending on how it is written. In most cases, a DPA remains in effect until the person who grants it dies or cancels it. It does not need to be renewed over time. Also called durable power of attorney.

## **DPPE**

Belongs to a group of antihormone drugs.

## **DR4**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of DR4 on cancer cells may kill more cells. Also called death receptor 4, TRAIL receptor 1, TRAIL-R1, and tumor necrosis factor receptor superfamily member 10A.

## **DR5**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of DR5 on cancer cells may kill more cells. Also called death receptor 5, TRAIL receptor 2, TRAIL-R2, and tumor necrosis factor receptor superfamily member 10B.

## **DRE**

An examination in which a doctor inserts a lubricated, gloved finger into the rectum to feel for abnormalities. Also called digital rectal examination.

## **DRI**

A set of guidelines developed by U.S. and Canadian scientists to give information about the role of nutrients in human health. These guidelines include the Reference Daily Intakes (RDI), which are the recommended amounts of

nutrients to be eaten each day to meet the needs of most healthy people. This system replaced the Recommended Dietary Allowances (RDA). Also called Dietary Reference Intakes.

#### **DSMB**

Data and Safety Monitoring Board. An impartial group that oversees a clinical trial and reviews the results to see if they are acceptable. This group determines if the trial should be changed or closed. Also called Data and Safety Monitoring Board.

#### **DT2219ARL immunotoxin**

A substance being studied in the treatment of some types of B-cell cancer. It contains an antibody linked to a toxic substance. The antibody binds to proteins called CD19 and CD22 on the surface of B cells, and the toxic substance kills the cells. It is a type of bispecific ligand-directed toxin.

#### **DT388IL3 fusion protein**

A substance being studied in the treatment of myeloid leukemia (a disease in which too many immature non-lymphocyte white blood cells are found in the blood and bone marrow). DT388IL3 fusion protein is made by combining IL-3 with a toxic substance. The IL-3 attaches to the cancer cells and the toxic substance kills them.

#### **DTGM fusion protein**

An anticancer drug formed by the combination of diphtheria toxin and a colony-stimulating factor (GM-CSF). The colony-stimulating factor is attracted to cancer cells, and the diphtheria toxin kills the cells.

#### **DTH**

An inflammatory response that develops 24 to 72 hours after exposure to an antigen that the immune system recognizes as foreign. This type of immune response involves mainly T cells rather than antibodies (which are made by B cells). Also called delayed-type hypersensitivity response.

#### **DU 145**

A cell line made from human prostate cancer cells that is used in the laboratory to study the way prostate cancer cells grow.

#### **DVT**

The formation of a blood clot in a deep vein of the leg or lower pelvis. Symptoms may include pain, swelling, warmth, and redness in the affected area. Also called deep vein thrombosis.

#### **DX-52-1**

An anticancer drug that is a type of antitumor antibiotic. It is an anthracycline.

#### **DX-8951f**

An anticancer drug that is a type of topoisomerase inhibitor. Also called exatecan mesylate.

#### **DXA**

A procedure that measures the amount of calcium and other minerals in a bone by passing x-rays with two different energy levels through the bone. A DXA shows the strength and thickness of a bone and is usually done in the lower spine, hip, lower arm, wrist, fingers, and heel. It is used to diagnose osteoporosis.

(a condition of lower bone density), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. A DXA also measures fat and muscle composition in specific parts of the body, such as the arms, legs, and pelvis. Also called BMD scan, bone densitometry, bone mineral density scan, DEXA scan, and dual energy x-ray absorptiometry.

### **Dabska tumor**

A rare, slow-growing tumor of blood vessels that forms in or under the skin anywhere on the body. Dabska tumors may appear as firm, raised, purplish bumps, which may be small or large. They usually do not spread to other parts of the body. Dabska tumors can occur in children and adults. They are a type of vascular tumor. Also called papillary intralymphatic angioendothelioma.

### **Dacogen**

A drug used to treat adults with myelodysplastic syndromes, including chronic myelomonocytic leukemia. It is also being studied in the treatment of other types of cancer. Dacogen stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called decitabine.

### **Danyelza**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF) to treat children aged 1 year and older and adults with certain types of high-risk neuroblastoma in the bone or bone marrow that came back or did not get better with other treatment. It is also being studied in the treatment of other types of cancer. Danyelza binds to a substance called GD2, which is found on some types of cancer cells. Danyelza may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called naxitamab.

### **Darzalex**

A drug used alone or with other drugs to treat adults with multiple myeloma. It is used in patients whose cancer is newly diagnosed and who can or cannot be treated with an autologous stem cell transplant. Darzalex is also used in patients whose cancer came back or did not get better after treatment with one or more anticancer therapies. It is also being studied in the treatment of other types of cancer. Darzalex binds to a protein called CD38, which is found on some types of immune cells and cancer cells, including myeloma cells. Darzalex may block CD38 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called daratumumab.

### **Darzalex Faspro**

A combination of daratumumab and hyaluronidase used alone or with other drugs to treat adults with certain types of multiple myeloma or light chain amyloidosis. It is also being studied in the treatment of other types of cancer. Daratumumab binds to a protein called CD38, which is found on some types of immune cells and cancer cells, including myeloma cells. Daratumumab may block CD38 and help the immune system kill cancer cells. Hyaluronidase allows daratumumab to be given by injection under the skin. Darzalex Faspro can be given in less time than daratumumab alone, which is given as an infusion. Also called daratumumab and hyaluronidase.

### **Data and Safety Monitoring Board**

An impartial group that oversees a clinical trial and reviews the results to see if they are acceptable. This group determines if the trial should be changed or closed. Also called DSMB.



### **Daurismo**

A drug used with low-dose cytarabine to treat acute myeloid leukemia that is newly diagnosed. It is used in patients who are 75 years and older or in patients who cannot be treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Daurismo blocks a type of protein involved in cell growth and repair and may block the growth of cancer cells. It is a type of hedgehog signaling pathway antagonist. Also called glasdegib maleate.

### **Declomycin**

A substance being studied as a way to detect bone growth in patients receiving bisphosphonates (a type of drug used to treat bone pain caused by some types of cancer) for breast cancer. It binds to newly formed bone. A biopsy is done and bone growth is measured using a special microscope. Declomycin also blocks the uptake of water by the kidney and can bind calcium in bones. It is a type of tetracycline antibiotic and a type of bone-labeling agent. Also called demeclocycline hydrochloride.

### **Defitelio**

A drug used to treat hepatic veno-occlusive disease (a condition in which small veins in the liver are blocked) in adults and children who also have kidney or lung problems after receiving a stem cell transplant. Defitelio may affect the cells that line the inside of blood vessels and may help improve blood flow inside the liver. Also called defibrotide sodium.

### **Demerol**

A drug used to treat moderate to severe pain. It binds to opioid receptors in the central nervous system. Demerol is a type of analgesic agent and a type of opioid. Also called meperidine hydrochloride.

### **Denys-Drash syndrome**

A rare disorder that causes kidney failure before age 3, abnormal development of the sexual organs, and, in most cases, Wilms tumor (a type of kidney cancer). Children with Denys-Drash syndrome are also at high risk of some other types of cancer. Also called DDS.

### **Depakene**

A drug used to treat epileptic seizures and bipolar disorder and to prevent migraine headaches. It is also being studied in the treatment of several types of cancer. It blocks an enzyme that cells need to grow and may cause cancer cells to die. It also blocks the growth of new blood vessels that tumors need to grow. It is a type of anticonvulsant, histone deacetylase (HDAC) inhibitor, antimaniacal, migraine headache prophylactic, and antiangiogenesis agent. Also called Stavzor and valproic acid.

### **Department of Health and Human Services**

The U.S. federal government agency responsible for protecting the public's health and providing important services, especially for people in need. The Department of Health and Human Services works with state and local governments throughout the country to do research and provide public health services, food and drug safety programs, health insurance programs, and many other services. There are several federal agencies that are a part of the Department of Health and Human Services. They include the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Centers for Medicare and Medicaid Services (CMMS). Also called DHHS and HHS.

### **Diamond-Blackfan anemia**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with Diamond-Blackfan anemia may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called Blackfan–Diamond anemia, congenital hypoplastic anemia, congenital pure red cell aplasia, DBA, erythrogenesis imperfecta, and inherited erythroblastopenia.

### **Dietary Reference Intakes**

A set of guidelines developed by U.S. and Canadian scientists to give information about the role of nutrients in human health. These guidelines include the Reference Daily Intakes (RDI), which are the recommended amounts of nutrients to be eaten each day to meet the needs of most healthy people. This system replaced the Recommended Dietary Allowances (RDA). Also called DRI.

### **Dilantin**

A drug used to treat or prevent seizures or convulsions that may be caused by epilepsy, brain surgery, or treatment for brain cancer. It is a type of anticonvulsant agent. Also called phenytoin sodium.

### **Dilaudid**

A drug used to treat moderate to severe pain. It may also be used to treat certain types of cough. Dilaudid is made from morphine and binds to opioid receptors in the central nervous system. It is a type of opioid and a type of analgesic agent. Also called Exalgo, hydromorphone hydrochloride, and Hydrostat IR.

### **Dimericine**

A lotion being studied in the treatment of skin cancer and a skin condition called xeroderma pigmentosum. It has an enzyme contained in very tiny, fat-like particles. The enzyme repairs damage caused by ultraviolet radiation. Dimericine is a type of DNA repair enzyme topical agent. Also called T4N5 liposomal lotion.

### **Down syndrome**

A genetic condition caused by having an extra chromosome 21 in some or all of the body's cells. Down syndrome is marked by growth, developmental, and learning delays that vary from mild to severe. People with Down syndrome often have certain distinct physical features, such as a shorter-than-normal height, a flat face with a short nose, eyes that are slanted and almond-shaped, small ears, a short neck, a tongue that tends to stick out of the mouth, small hands and feet, and a deep line that goes across the palm of the hand. People with Down syndrome may also have muscle weakness, loose joints, heart defects, and other health problems. Having Down syndrome increases the risk of developing Alzheimer disease at an early age, usually around the age of 50, and leukemia, especially in young children. Down syndrome is usually not inherited (passed from parent to child). Also called trisomy 21.

### **Doxil**

A form of the anticancer drug doxorubicin that is contained inside very tiny, fat-like particles and is used alone or with other drugs to treat certain types of ovarian cancer, AIDS-related Kaposi sarcoma, and multiple myeloma. Doxil may have fewer side effects and work better than other forms of doxorubicin hydrochloride. It is also being studied in the treatment of other types of cancer. Doxil is a type of anthracycline antibiotic and a type of topoisomerase inhibitor.

Also called doxorubicin hydrochloride liposome and liposomal doxorubicin hydrochloride.

### **Droxia**

A drug that contains the active ingredient hydroxyurea and is used to treat certain patients with sickle cell anemia. It is also being studied in the treatment of other conditions and some types of cancer. Droxia may help keep abnormal red blood cells from forming, which may reduce the number of painful sickle cell crises and the need for blood transfusions. It is a type of antimetabolite.

### **Drug Accountability Record**

A log of study drugs kept by an investigator running a clinical trial. It lists many things about each drug, including the drug name, lot number, expiration date, the amount of drug received, used, returned, or thrown away, and the amount left. Drug Accountability Records help make sure that a clinical trial is done safely and correctly. Drug Accountability Records are required by the U.S. Food and Drug Administration (FDA). Also called DAR.

### **Dukes A colorectal cancer**

Cancer has formed in the mucosa (innermost layer) of the colon and/or rectum wall and has spread to the submucosa (layer of tissue next to the mucosa) or to the muscle layer of the colon and/or rectum wall. Also called stage I colorectal cancer.

### **Dukes B colorectal cancer**

Cancer has spread (1) through the muscle layer of the colon and/or rectal wall to the serosa (outermost layer) of the colon and/or rectal wall; or (2) through the serosa of the colon and/or rectal wall but has not spread to nearby organs; or (3) through the serosa of the colon and/or rectal wall to nearby organs. Also called stage II colorectal cancer.

### **Dukes C colorectal cancer**

Cancer (1) has spread through the mucosa (innermost layer) of the colon and/or rectal wall to the submucosa (layer of tissue under the mucosa) and may have spread to the muscle layer of the colon and/or rectal wall. Cancer has spread to at least one but not more than 3 nearby lymph nodes, or cancer cells have formed in tissues near the lymph nodes; or cancer has spread through the mucosa of the colon and/or rectal wall to the submucosa. Cancer has spread to at least 4 but not more than 6 nearby lymph nodes. OR, (2) cancer has spread through the muscle layer of the colon and/or rectal wall to the serosa (outermost layer) of the colon and/or rectal wall or has spread through the serosa but not to nearby organs. Cancer has spread to at least one but not more than 3 nearby lymph nodes, or cancer cells have formed in tissues near the lymph nodes; or cancer has spread to the muscle layer of the colon and/or rectal wall or to the serosa of the colon and/or rectal wall. Cancer has spread to at least 4 but not more than 6 nearby lymph nodes; or cancer has spread through the mucosa of the colon and/or rectal wall to the submucosa and may have spread to the muscle layer of the colon and/or rectal wall. Cancer has spread to 7 or more nearby lymph nodes. OR, (3) cancer has spread through the serosa of the colon and/or rectal wall but has not spread to nearby organs. Cancer has spread to at least 4 but not more than 6 nearby lymph nodes; or cancer has spread through the muscle layer of the colon and/or rectal wall to the serosa of the colon and/or rectal wall or has spread through the serosa but has not spread to nearby organs. Cancer has spread to 7 or more nearby lymph nodes; or cancer has spread through the serosa of the colon and/or rectal wall and has spread to

nearby organs. Cancer has spread to one or more nearby lymph nodes, or cancer cells have formed in tissues near the lymph nodes. Also called stage III colorectal cancer.

### **Dukes classification**

A staging system used to describe the extent of colorectal cancer. Stages range from A (early stage) to D (advanced stage).

### **E7070**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called sulfonamides.

### **E7389**

A drug used to treat certain types of breast cancer and liposarcoma (a type of soft tissue sarcoma) that have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. E7389 blocks cell growth by stopping cell division and may kill cancer cells. It is a type of antimicrotubule agent. Also called eribulin mesylate and Halaven.

### **EBM**

A systematic approach to medicine in which doctors and other health care professionals use the best available scientific evidence from clinical research to help make decisions about the care of individual patients. A physician's clinical experience and the patient's values and preferences are also important in the process of using the evidence to make decisions. The use of EBM may help plan the best treatment and improve quality of care and patient outcomes. Also called evidence-based medicine.

### **EBS-DM**

A rare, inherited disorder in which many clusters of blisters form all over the body, especially on the face, hands, feet, arms, legs, and trunk. Blisters may also form in the inner lining of the mouth and other parts of the gastrointestinal tract and the upper respiratory tract. Other signs and symptoms include scarring, changes in skin color, nail problems, and thickening of the skin on the palms of the hands and bottoms of the feet. The signs and symptoms usually appear at birth and tend to get better over time. However, infants with a severe form of the disease die within the first year of life. People with EBS-DM have a high risk of developing basal cell skin cancer by age 55 years. EBS-DM is caused by mutations (changes) in the KRT5 or KRT14 genes. Also called epidermolysis bullosa simplex, Dowling-Meara.

### **EBV**

A common virus that remains dormant in most people. EBV causes infectious mononucleosis and has been associated with certain cancers, including Burkitt lymphoma, immunoblastic lymphoma, nasopharyngeal cancer, and stomach (gastric) cancer. Also called Epstein-Barr virus.

### **ECD**

A very rare disorder in which too many histiocytes (a type of white blood cell) build up in certain tissues and organs and damage them. ECD most often affects the long bones of the arms and legs, but it can also affect the skin, lungs, heart, kidneys, brain, tissue behind the eyes, and the retroperitoneum (the back wall of the abdomen). The symptoms can range from mild to severe and life-threatening. ECD is most common in adults. It is a type of histiocytosis. Also called Erdheim-Chester disease.

## **ECG**

A line graph that shows changes in the electrical activity of the heart over time. It is made by an instrument called an electrocardiograph. The graph can show that there are abnormal conditions, such as blocked arteries, changes in electrolytes (particles with electrical charges), and changes in the way electrical currents pass through the heart tissue. Also called EKG and electrocardiogram.

## **ECM**

A large network of proteins and other molecules that surround, support, and give structure to cells and tissues in the body. The ECM helps cells attach to, and communicate with, nearby cells, and plays an important role in cell growth, cell movement, and other cell functions. The ECM is also involved in repairing damaged tissue. Abnormal changes in the ECM may lead to the development of certain diseases, such as cancer. The ECM of cancer cells can affect how they grow and spread. Also called extracellular matrix.

## **ECT**

A treatment for severe depression and certain mental disorders. A brief seizure is induced by giving electrical stimulation to the brain through electrodes placed on the scalp. Also called electroconvulsive therapy and electroshock therapy.

## **EDTA**

A chemical that binds certain metal ions, such as calcium, magnesium, lead, and iron. It is used in medicine to prevent blood samples from clotting and to remove calcium and lead from the body. It is also used to keep bacteria from forming a biofilm (thin layer stuck to a surface). It is a type of chelating agent. Also called edetic acid and ethylenediaminetetraacetic acid.

## **EEG**

A recording of electrical activity in the brain. It is made by placing electrodes on the scalp (the skin covering the top of the head), and impulses are sent to a special machine. An EEG may be used to diagnose brain and sleep disorders. Also called electroencephalogram.

## **EEG biofeedback**

A treatment being studied to improve brain function in certain brain disorders and in patients treated with chemotherapy for breast cancer. Sensors are placed on a person's head, which allows brain activity to be shown as patterns on a computer screen. A beep or a tone may be used as a reward to a person for changing certain brain activities. EEG biofeedback may help cancer patients deal with the stress and mental side effects of chemotherapy. Also called neurofeedback.

## **EF5**

A drug that is used to plan cancer treatment by measuring oxygen levels in tumor cells.

## **EFS**

In cancer, the length of time after primary treatment for a cancer ends that the patient remains free of certain complications or events that the treatment was intended to prevent or delay. These events may include the return of the cancer or the onset of certain symptoms, such as bone pain from cancer that has spread to the bone. In a clinical trial, measuring the EFS is one way to see how well a new treatment works. Also called event-free survival.

## **EFTs**

A group of cancers that includes Ewing tumor of bone (ETB or Ewing sarcoma of bone), extraosseous Ewing (EOE) tumors, primitive neuroectodermal tumors (PNET or peripheral neuroepithelioma), and Askin tumors (PNET of the chest wall). These tumors all come from the same type of stem cell. Also called Ewing sarcoma family of tumors.

## **EGCG**

A substance found in green tea. It is being studied in the prevention of cancer and some other diseases. It is a type of antioxidant. Also called epigallocatechin-3-gallate.

## **EGD**

A procedure in which an endoscope is passed through the mouth and down the throat into esophagus, stomach, and duodenum (first part of the small intestine) to check for abnormal areas. An endoscope is a thin tube with a light and a video camera attached. It may also have a tool to remove a sample of cells, tissue, or fluid so it can be checked under a microscope for signs of disease. An EGD may be used to help diagnose cancer and other conditions, such as Barrett esophagus (a precancerous condition), ulcers, gastroesophageal reflux disease, and celiac disease. It may also be used to remove polyps or other types of growths, stop bleeding caused by ulcers or other conditions, widen a narrow esophagus, place a feeding tube or drainage tube, or remove foreign objects. Also called esophagogastroduodenoscopy, upper endoscopy, upper gastrointestinal endoscopy, and upper GI endoscopy.

## **EGF**

A protein made by many cells in the body and by some types of tumors. It causes cells to grow and differentiate (become more specialized). It is a type of growth factor and a type of cytokine. Also called epidermal growth factor.

## **EGFR**

A protein found on certain types of cells that binds to a substance called epidermal growth factor. The EGFR protein is involved in cell signaling pathways that control cell division and survival. Sometimes, mutations (changes) in the EGFR gene cause EGFR proteins to be made in higher than normal amounts on some types of cancer cells. This causes cancer cells to divide more rapidly. Drugs that block EGFR proteins are being used in the treatment of some types of cancer. EGFRs are a type of receptor tyrosine kinase. Also called epidermal growth factor receptor, ErbB1, and HER1.

## **EGFR gene**

A gene that makes a protein that is involved in cell growth and cell survival. Mutated (changed) forms of the EGFR gene and protein have been found in some types of cancer, including non-small cell lung cancer. These changes may cause cancer cells to grow and spread in the body. Checking for changes in the EGFR gene in tumor tissue may help plan cancer treatment. Also called epidermal growth factor receptor gene, ERBB1 gene, and HER1 gene.

## **EGFR inhibitor**

A substance that blocks the activity of a protein called epidermal growth factor receptor (EGFR). EGFR is found on the surface of some normal cells and is involved in cell growth. It may also be found at high levels on some types of cancer cells, which causes these cells to grow and divide. Blocking EGFR may keep cancer cells from growing. Some EGFR inhibitors are used to treat cancer.



Also called EGFR tyrosine kinase inhibitor, epidermal growth factor receptor inhibitor, and epidermal growth factor receptor tyrosine kinase inhibitor.

### **EGFR tyrosine kinase inhibitor**

A substance that blocks the activity of a protein called epidermal growth factor receptor (EGFR). EGFR is found on the surface of some normal cells and is involved in cell growth. It may also be found at high levels on some types of cancer cells, which causes these cells to grow and divide. Blocking EGFR may keep cancer cells from growing. Some EGFR tyrosine kinase inhibitors are used to treat cancer. Also called EGFR inhibitor, epidermal growth factor receptor inhibitor, and epidermal growth factor receptor tyrosine kinase inhibitor.

### **EGb761**

A substance that is being studied in the prevention of cognitive dysfunction (slowed ability to think, reason, concentrate, or remember) in patients receiving chemotherapy. It comes from ginkgo biloba leaves.

### **EHR**

An electronic (digital) collection of medical information about a person that is stored on a computer. An EHR includes information about a patient's health history, such as diagnoses, medicines, tests, allergies, immunizations, and treatment plans. EHRs can be seen by all health care providers who are taking care of a patient and can be used by them to help make recommendations about the patient's care. Also called electronic health record and electronic medical record.

### **EKB-569**

A substance being studied in the treatment of some types of cancer. It blocks the action of certain proteins that are part of the epidermal growth factor receptor (EGFR) family of proteins. These proteins may be found in increased amounts on the surface of some types of cancer cells. Blocking the action of these proteins may stop cancer cells from growing and may kill cancer cells. EKB-569 is a type of EGFR inhibitor. Also called pelitinib.

### **EKG**

A line graph that shows changes in the electrical activity of the heart over time. It is made by an instrument called an electrocardiograph. The graph can show that there are abnormal conditions, such as blocked arteries, changes in electrolytes (particles with electrical charges), and changes in the way electrical currents pass through the heart tissue. Also called ECG and electrocardiogram.

### **ELF-EMF**

A type of very low-energy radiation that travels in long waves. Although there have been health concerns, it is not known to cause harmful health effects, including cancer. The most common sources of ELF-EMFs are power lines, electrical wiring, and electrical appliances, such as shavers, hair dryers, and electric blankets. Also called extremely low frequency electromagnetic field.

### **ELISA**

A laboratory technique that uses antibodies linked to enzymes to detect and measure the amount of a substance in a solution, such as serum. The test is done using a solid surface to which the antibodies and other molecules stick. In the final step, an enzyme reaction takes place that causes a color change that can be read using a special machine. There are many different ways that an

ELISA can be done. ELISAs may be used to help diagnose certain diseases. Also called enzyme-linked immunosorbent assay.

#### **EM-1421**

A substance being studied in the treatment of cancer. It blocks proteins needed for cancer growth. It is a type of transcriptional inhibitor. Also called tetra-O-methyl NDGA and tetra-O-methyl nordihydroguaiaretic acid.

#### **EMC**

A rare, slow-growing type of cancer that forms in soft tissues outside the bone and usually has certain changes in the NR4A3 gene that cause abnormal fusion proteins to be made. EMCs usually occur in the thigh but may also occur in the knee, buttock, or chest and abdomen. They may grow large and spread to nearby tissue or to other parts of the body, especially the lungs. They may also come back many years after treatment. EMCs usually occur in middle-aged or older adults and are rare in children and adolescents. They are a type of soft tissue sarcoma. Also called extraskeletal myxoid chondrosarcoma.

#### **EMD 121974**

A substance that is being studied as an anticancer and antiangiogenesis drug. Also called cilengitide.

#### **EMF**

An area of electric and magnetic forces caused by electromagnetic radiation. Researchers are studying whether the EMFs from power lines, electrical appliances, and wireless and cellular telephones can cause cancer or other harmful health effects. Also called electromagnetic field.

#### **EMR**

Radiation that has both electric and magnetic fields and travels in waves. It comes from natural and man-made sources. EMR can vary in strength from low energy to high energy. It includes radio waves, microwaves, infrared light, visible light, ultraviolet light, x-rays, and gamma rays. Also called electromagnetic radiation.

#### **ENT doctor**

A doctor who has special training in diagnosing and treating diseases of the ear, nose, and throat. Also called otolaryngologist.

#### **EOB**

A summary of the costs of a medical treatment or other health care service that an insurance company may send to a patient after the patient has received the service. An EOB usually includes the date the patient received the service, how much the service cost, how much the health insurance plan paid, and how much the patient may need to pay the health care provider. Also called explanation of benefits.

#### **EP-2101**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called cancer vaccines.

#### **EPO906**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called epothilones. Also called epothilone B.

## **EPOCH**

An abbreviation for a chemotherapy combination used to treat aggressive forms of non-Hodgkin lymphoma, including mantle cell lymphoma. It includes the drugs etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, and doxorubicin hydrochloride (hydroxydaunorubicin). Also called EPOCH regimen.

## **EPOCH regimen**

An abbreviation for a chemotherapy combination used to treat aggressive forms of non-Hodgkin lymphoma, including mantle cell lymphoma. It includes the drugs etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, and doxorubicin hydrochloride (hydroxydaunorubicin). Also called EPOCH.

## **EPOCH-R**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs rituximab, etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, and doxorubicin hydrochloride (hydroxydaunorubicin). Also called EPOCH-R regimen, R-EPOCH, and R-EPOCH regimen.

## **EPOCH-R regimen**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs rituximab, etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, and doxorubicin hydrochloride (hydroxydaunorubicin). Also called EPOCH-R, R-EPOCH, and R-EPOCH regimen.

## **EPT**

Treatment that generates electrical pulses through an electrode placed in a tumor to enhance the ability of anticancer drugs to enter tumor cells. Also called electroporation therapy.

## **ER**

A protein found inside the cells of the female reproductive tissue, some other types of tissue, and some cancer cells. The hormone estrogen will bind to the receptors inside the cells and may cause the cells to grow. Also called estrogen receptor.

## **ER negative**

Describes cells that do not have a protein that binds to the hormone estrogen. Cancer cells that are ER negative do not need estrogen to grow. This means that they will keep growing when estrogen is not present and do not stop growing when treated with substances that block estrogen from binding. Also called estrogen receptor negative.

## **ER positive**

Describes cells that have a protein that binds to the hormone estrogen. Cancer cells that are ER positive may need estrogen to grow. These cells may stop growing or die when treated with substances that block the binding and actions of estrogen. Also called estrogen receptor positive.

## **ER-negative PR-negative HER2/neu-negative breast cancer**

A type of breast cancer in which the tumor cells do not have estrogen receptors, progesterone receptors, or large amounts of HER2/neu protein on their surface.

Knowing whether breast cancer is triple negative is important in planning treatment. Also called TNBC and triple-negative breast cancer.

### **ERA-923**

A substance that is being studied as a treatment for cancer. It belongs to a family of drugs called antiestrogens.

### **ERBB1 gene**

A gene that makes a protein that is involved in cell growth and cell survival. Mutated (changed) forms of the ERBB1 gene and protein have been found in some types of cancer, including non-small cell lung cancer. These changes may cause cancer cells to grow and spread in the body. Checking for changes in the ERBB1 gene in tumor tissue may help plan cancer treatment. Also called EGFR gene, epidermal growth factor receptor gene, and HER1 gene.

### **ERCC2 gene**

A gene that makes a protein involved in the first step of making proteins and in repairing damaged DNA. Mutations (changes) in the ERCC2 gene may cause cells to lose their ability to repair damaged DNA, which may lead to abnormal cell growth. ERCC2 gene mutations have been found in several inherited syndromes, including a condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

### **ERCC3 gene**

A gene that makes a protein involved in the first step of making proteins and in repairing damaged DNA. Mutations (changes) in the ERCC3 gene may cause cells to lose their ability to repair damaged DNA, which may lead to abnormal cell growth. ERCC3 gene mutations have been found in several inherited syndromes, including a condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

### **ERCC4 gene**

A gene that makes a protein involved in repairing damaged DNA. Mutations (changes) in the ERCC4 gene may cause cells to lose their ability to repair damaged DNA, which may lead to abnormal cell growth. ERCC4 gene mutations have been found in several inherited syndromes, including a condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

### **ERCC5 gene**

A gene that makes a protein involved in repairing damaged DNA. Mutations (changes) in the ERCC5 gene may cause cells to lose their ability to repair damaged DNA, which may lead to abnormal cell growth. ERCC5 gene mutations have been found in several inherited syndromes, including a condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

### **ERCP**

A procedure that uses an endoscope to examine and x-ray the pancreatic duct, hepatic duct, common bile duct, duodenal papilla, and gallbladder. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. The endoscope is passed through the mouth and down into the first part of the small intestine (duodenum). A smaller tube (catheter) is then inserted through the endoscope

into the bile and pancreatic ducts. A dye is injected through the catheter into the ducts, and an x-ray is taken. Also called endoscopic retrograde cholangiopancreatography.

## **ERMS**

A soft tissue tumor that is most common in infants and young children. It begins in muscles, usually in the head, neck, or genitourinary tract. Also called embryonal rhabdomyosarcoma.

## **ERT**

Treatment with the hormone estrogen to increase the amount of estrogen in the body. It is given to women who have gone through menopause or to women who have early menopause caused by cancer treatment or by having their ovaries removed by surgery. ERT may help relieve symptoms of menopause, such as hot flashes, night sweats, vaginal dryness, and sleep problems. It may also help protect against osteoporosis (thinning of the bones) and lower the risk of breast cancer in postmenopausal women. Also called estrogen replacement therapy.

## **ERUS**

A procedure in which a probe that sends out high-energy sound waves is inserted into the rectum. The sound waves are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissue called a sonogram. ERUS is used to look for abnormalities in the rectum and nearby structures, including the prostate. Also called endorectal ultrasound, transrectal ultrasound, and TRUS.

## **ESA**

A substance that stimulates the bone marrow to make more red blood cells. ESAs are used to treat anemia caused by chronic kidney failure, some anticancer drugs, and certain treatments for HIV. They may also be used to lower the number of blood transfusions needed during and after certain major surgeries. Examples of ESAs are epoetin alfa (Epogen, Procrit) and darbepoetin alfa (Aranesp). Also called erythropoiesis-stimulating agent.

## **ESR**

The distance red blood cells travel in one hour in a sample of blood as they settle to the bottom of a test tube. The sedimentation rate is increased in inflammation, infection, cancer, rheumatic diseases, and diseases of the blood and bone marrow. Also called erythrocyte sedimentation rate and sedimentation rate.

## **ESR1 gene**

A gene that makes one of the two main types of estrogen receptor (ER) proteins. These proteins bind to and receive signals from the hormone estrogen. They are found inside the cells of female reproductive tissue, breast tissue, and many other types of tissue, and some cancer cells. Once activated by estrogen, ER proteins control the activity of certain genes that play an important role in cell growth and metabolism, sexual development, pregnancy, and other reproductive functions. Mutations (changes) in the ESR1 gene can cause the ER protein to be too active or found in higher-than-normal amounts on or in some types of cancer cells, such as breast or endometrial cancer cells. This may cause cancer cells to grow and spread. It may also make cancer cells not respond to certain anticancer drugs. The protein made by the ESR1 gene is a type of nuclear hormone receptor and a type of transcription factor.

## **ESS**

A rare type of cancer that forms in the connective tissue of the lining of the uterus. It may also form in the ovaries, cervix, and vagina, but this is very uncommon. ESSs may be low grade or high grade, depending on how abnormal the cancer cells look under a microscope and how quickly the cancer cells are likely to grow and spread. They usually occur before menopause in women between 40 and 50 years of age. Also called endometrial stromal sarcoma.

## **ET 743**

A drug used to treat liposarcoma and leiomyosarcoma (types of soft tissue sarcoma) that cannot be removed by surgery or have spread to other parts of the body. It is used in patients who have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. ET 743 may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called ecteinascidin, trabectedin, and Yondelis.

## **ETS**

Smoke that comes from the burning of a tobacco product and smoke that is exhaled by smokers. Inhaling ETS is called involuntary or passive smoking. Also called environmental tobacco smoke and secondhand smoke.

## **EUS**

A procedure in which an endoscope is inserted into the body. An endoscope is a thin, tube-like instrument that has a light and a lens for viewing. A probe at the end of the endoscope is used to bounce high-energy sound waves (ultrasound) off internal organs to make a picture (sonogram). Also called endoscopic ultrasound and endosonography.

## **EUS-FNA**

A procedure to take a sample of tissue for examination under a microscope. An endoscope with an ultrasound probe and a biopsy needle at the end is inserted through the mouth into the esophagus. An endoscope is a thin, tube-like instrument that has a light and a lens for viewing. The ultrasound probe is used to bounce high-energy sound waves off internal organs and tissues to make a picture on a monitor. This picture helps the doctor see where to place the biopsy needle. Also called endoscopic ultrasound-guided fine needle aspiration.

## **EZH2 gene**

A gene that makes a protein that is involved in controlling the activity of certain genes and in cell division. Mutations (changes) in the EZH2 gene may cause the protein made by this gene to become overactive, which may cause cancer cells to grow. EZH2 gene mutations have been found in many types of cancer.

## **EZN-2285**

A drug used with other drugs to treat acute lymphoblastic leukemia in children and young adults aged 1 month to 21 years. It is also being studied in the treatment of other types of cancer. EZN-2285 is made up of the enzyme L-asparaginase that is linked to a substance called SC-PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium *E. coli* and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. EZN-2285 is a type of protein synthesis inhibitor. Also called Asparlas, calaspargase pegol, and SC-PEG *E. coli* L-asparaginase.



### **Eastern red cedar**

A type of evergreen tree with hard fragrant wood that is a member of the cypress family. The oil from the wood is used in soaps, shampoos, bath salts, perfumes, aromatherapy, and to keep insects away. The scientific name is *Juniperus virginiana*. Also called cedarwood and red cedar.

### **Edwards syndrome**

A genetic disorder caused by having an extra chromosome 18 in some or all of the body's cells. Edwards syndrome is marked by a low birth weight and certain abnormal features. These include a small, abnormally shaped head; a small jaw and mouth; clenched fists with overlapping fingers; and heart, lung, kidney, intestine, and stomach defects. Many babies with Edwards syndrome die before birth or within the first month of life, but some children live for several years. Having Edwards syndrome increases the risk of certain types of cancer, such as hepatoblastoma (a type of liver cancer) and Wilms tumor (a type of kidney cancer). Also called trisomy 18.

### **Effexor**

A drug used to treat depression and certain anxiety disorders. It may also be used to treat hot flashes in women who are in menopause or are being treated for breast cancer. Effexor increases the levels of the chemicals serotonin and norepinephrine in the brain, which helps improve mood. It is a type of antidepressant and a type of serotonin-norepinephrine reuptake inhibitor. Also called venlafaxine.

### **Efudex**

A drug that contains the active ingredient fluorouracil and is used as a cream to treat actinic keratosis (a skin condition that may become cancer) and basal cell skin cancer that is not invasive and cannot be treated with other therapy. Efudex stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **Eklund displacement views**

A procedure used to do a mammogram (x-ray of the breasts) in women with breast implants. The implant is pushed back against the chest wall and the breast tissue is pulled forward and around it so the tissue can be seen in the mammogram. Also called Eklund views and implant displacement views.

### **Eklund views**

A procedure used to do a mammogram (x-ray of the breasts) in women with breast implants. The implant is pushed back against the chest wall and the breast tissue is pulled forward and around it so the tissue can be seen in the mammogram. Also called Eklund displacement views and implant displacement views.

### **Elacyt**

A drug used to treat advanced acute myeloid leukemia (AML). It is a form of the anticancer drug cytarabine that may work in patients with leukemia that is resistant to cytarabine. Elacyt blocks cell division and may kill cancer cells. It is a type of antimetabolite. Also called CP-4055 and elacytarabine.

### **Elahere**

A drug used to treat adults with folate receptor alpha–positive ovarian epithelial, fallopian tube, or primary peritoneal cancer that has not gotten better after treatment with platinum chemotherapy. It is used in patients whose cancer was

treated with one to three other systemic therapies. It is also being studied in the treatment of other types of cancer. Elahere contains a monoclonal antibody that binds to a protein called folate receptor alpha, which is found on some cancer cells. It also contains an anticancer drug, which may help kill cancer cells. Elahere is a type of antibody-drug conjugate. Also called mirvetuximab soravtansine.

### **Eligard**

A drug used to treat prostate cancer, problems with the endometrium (lining of the uterus), and uterine fibroids (noncancerous growths of the uterus). It is also being studied in the treatment of other conditions and types of cancer. Eligard keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone (a male hormone) in men, and the ovaries to stop making estradiol (a form of the hormone estrogen) in women. Eligard may stop the growth of cancer cells that need testosterone to grow and stop the growth of endometrial tissue and uterine fibroids. It is a type of gonadotropin-releasing hormone (GnRH) agonist. Also called leuprolide acetate and Lupron Depot.

### **Elitek**

A drug used to treat high levels of uric acid in the blood of adults and children with leukemia, lymphoma, or other types of cancer who are receiving certain types of anticancer therapy. Uric acid is a natural substance that can build up in the blood as tumors break down. Elitek helps break down and remove uric acid from the body. It is a type of recombinant enzyme and a type of urate-lowering drug. Also called rasburicase and recombinant urate oxidase.

### **Ellence**

A drug used with other drugs to treat breast cancer that was removed by surgery and has spread to the lymph nodes under the arm. It is also being studied in the treatment of other types of cancer. Ellence blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called epirubicin hydrochloride.

### **Elocon**

A drug that is used in a cream to treat certain skin conditions and in a nasal spray to treat sinus problems caused by allergies. It is being studied as a way to treat inflammation of the skin caused by radiation therapy. Elocon is a type of corticosteroid. Also called mometasone furoate and Nasonex.

### **Eloxatin**

A drug used with other drugs to treat stage III colon cancer that was removed by surgery and colorectal cancer that is advanced. It is also being studied in the treatment of other types of cancer. Eloxatin damages the cell's DNA and may kill cancer cells. It is a type of platinum compound. Also called oxaliplatin.

### **Elrexio**

A drug used to treat adults with multiple myeloma that came back or did not get better after treatment with at least four other anticancer therapies. These therapies had to include an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Elrexio binds to a protein called CD3, which is found on T cells (a type of white blood cell), and to a protein called BCMA, which is found on myeloma cells and some types of immune cells. This

may help the immune system kill cancer cells. Elrexfio is a type of bispecific T-cell engager. Also called elranatamab.

### **Elspar**

A drug that is used to treat acute lymphoblastic leukemia (ALL) and is being studied in the treatment of some other types of cancer. It is an enzyme taken from the bacterium *Escherichia coli* (E. coli). It breaks down the amino acid asparagine and may block the growth of tumor cells that need asparagine to grow. Also called asparaginase and L-asparaginase.

### **Elzonris**

A drug used to treat adults and children aged 2 years and older with a rare blood cancer called blastic plasmacytoid dendritic cell neoplasm. It is also being studied in the treatment of other types of cancer. Elzonris is made up of interleukin-3 (IL-3), which binds to an IL-3 receptor protein called CD123. CD123 may be found in higher than normal amounts on some types of cancer cells. Elzonris is also made up of a diphtheria toxin, which may help kill cancer cells. Elzonris is a type of cytotoxin. Also called tagraxofusp.

### **Emend**

A drug used with other drugs to prevent nausea and vomiting caused by chemotherapy and nausea and vomiting after surgery. Emend blocks the action of a certain chemical in the central nervous system that may trigger nausea and vomiting. Blocking this chemical may help lessen nausea and vomiting. Emend is a type of antiemetic and a type of substance P/neurokinin 1 receptor antagonist. Also called aprepitant and Cinvanti.

### **Empliciti**

A drug used with dexamethasone and either lenalidomide or pomalidomide to treat adults with multiple myeloma. It is used in patients whose cancer was already treated with other anticancer therapies. Empliciti binds to a protein called CS1, which is found on myeloma cells and some types of immune cells. Empliciti may block CS1 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called elotuzumab and HuLuc63.

### **Endo-Pat 2000**

A medical device that tests to see if endothelial cells are damaged. Endothelial cells line the inner walls of blood vessels, lymph vessels, and the heart, and damage to them may be an early sign of heart disease. Endo-Pat 2000 looks for heart disease by using sensors that measure blood flow through a patient's fingers. It is also being used to check blood vessels in patients treated for breast cancer. Also called EndoPat.

### **EndoPat**

A medical device that tests to see if endothelial cells are damaged. Endothelial cells line the inner walls of blood vessels, lymph vessels, and the heart, and damage to them may be an early sign of heart disease. EndoPat looks for heart disease by using sensors that measure blood flow through a patient's fingers. It is also being used to check blood vessels in patients treated for breast cancer. Also called Endo-Pat 2000.

### **English chamomile**

A type of chamomile plant with daisy-like white flowers that is found in Europe, North America, and Argentina. The dried flowers are used in teas to calm and relax, to improve sleep, and to help with stomach problems. Its essential oil

(scented liquid taken from plants) is used in perfumes, shampoos, face creams, lotions, and aromatherapy. The scientific names are *Chamaemelum nobile* and *Anthemis nobilis*. Also called Roman chamomile.

### English lavender

A plant with aromatic leaves and flowers that is a member of the mint family. Oil from the flowers has been used in some cultures to treat certain medical problems, to keep insects away, and to wash in. It is also used in aromatherapy. Perillyl alcohol, a substance found in English lavender, is being studied in cancer prevention and treatment. The scientific name is *Lavandula angustifolia*. Also called lavender and true lavender.

### Enhertu

A drug used to treat adults with certain types of HER2-positive or HER2-low breast cancer, HER2-positive stomach cancer, gastroesophageal junction cancer, or other solid tumor, or non-small cell lung cancer that has a certain mutation in the HER2 gene. It is also being studied in the treatment of other types of cancer. Enhertu contains a monoclonal antibody called trastuzumab that binds to a protein called HER2, which is found on some cancer cells. It also contains an anticancer drug called deruxtecan, which may help kill cancer cells. Enhertu is a type of antibody-drug conjugate. Also called fam-trastuzumab deruxtecan and trastuzumab deruxtecan.

### Ensure

A type of nutrition drink that may help people who cannot get all the nutrients they need from foods and other drinks. Ensure has vitamins, minerals, protein, and fats. It may be added to a person's diet to help build strong bones, rebuild muscle and strength, and help the body heal after injury or surgery. Ensure may be taken by mouth or given through tube feeding. Ensure is a type of polymeric enteral nutrition formula and a type of dietary supplement.

### Epkinly

A drug used to treat adults with certain types of diffuse large B-cell lymphoma, high-grade B-cell lymphoma, or follicular lymphoma that came back or did not get better after treatment with at least two other systemic therapies. It is also being studied in the treatment of other types of cancer. Epkinly binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called CD20, which is found on B cells (another type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Epkinly is a type of bispecific T-cell engager. Also called epcoritamab.

### Epogen

A drug used to treat anemia caused by chronic kidney disease, some types of chemotherapy, and an antiviral drug for HIV infection called zidovudine. It is also used to lower the number of donor blood transfusions needed during and after certain types of surgery. Epogen is a form of erythropoietin (a substance naturally made by the kidneys) that is made in the laboratory. It helps the bone marrow make more red blood cells. Epogen is a type of antianemic and a type of erythropoiesis-stimulating agent. Also called epoetin alfa, Procrit, and Retacrit.

### Epstein-Barr virus

A common virus that remains dormant in most people. Epstein-Barr virus causes infectious mononucleosis and has been associated with certain cancers, including Burkitt lymphoma, immunoblastic lymphoma, nasopharyngeal cancer, and stomach (gastric) cancer. Also called EBV.

## **ErbB1**

A protein found on certain types of cells that binds to a substance called epidermal growth factor. The ErbB1 protein is involved in cell signaling pathways that control cell division and survival. Sometimes, mutations (changes) in the EGFR gene cause ErbB1 proteins to be made in higher than normal amounts on some types of cancer cells. This causes cancer cells to divide more rapidly. Drugs that block ErbB1 proteins are being used in the treatment of some types of cancer. ErbB1s are a type of receptor tyrosine kinase. Also called EGFR, epidermal growth factor receptor, and HER1.

## **Erbitux**

A drug used alone or with other drugs to treat certain types of head and neck cancer and colorectal cancer. It is also being studied in the treatment of other types of cancer. Erbitux binds to a protein called EGFR, which is found on some types of cancer cells. This may help keep cancer cells from growing. Erbitux is a type of monoclonal antibody. Also called cetuximab.

## **Erdheim-Chester disease**

A very rare disorder in which too many histiocytes (a type of white blood cell) build up in certain tissues and organs and damage them. Erdheim-Chester disease most often affects the long bones of the arms and legs, but it can also affect the skin, lungs, heart, kidneys, brain, tissue behind the eyes, and the retroperitoneum (the back wall of the abdomen). The symptoms can range from mild to severe and life-threatening. Erdheim-Chester disease is most common in adults. It is a type of histiocytosis. Also called ECD.

## **Erivedge**

A drug used to treat advanced basal cell carcinoma that has spread to other parts of the body or has come back after surgery. It is also used in patients who cannot be treated with surgery or radiation therapy. It is also being studied in the treatment of other types of cancer. Erivedge blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type of Hedgehog signaling pathway antagonist. Also called GDC-0449 and vismodegib.

## **Erleada**

A drug used to treat prostate cancer that has spread to other parts of the body and is castration sensitive (has responded to treatments that lower testosterone levels) and prostate cancer that has not spread to other parts of the body and is castration resistant (has not responded to treatments that lower testosterone levels). Erleada binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Erleada blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called apalutamide.

## **Erwinaze**

A drug that contains the active ingredient asparaginase *Erwinia chrysanthemi* and is used with other drugs to treat acute lymphoblastic leukemia. It is used in people who cannot take the enzyme asparaginase that comes from the bacterium *E. coli*. It is also being studied in the treatment of other types of cancer. Erwinaze breaks down the amino acid asparagine and may stop the growth of cancer cells that need asparagine to grow. It may also kill cancer cells. Erwinaze is a type of protein synthesis inhibitor.

## **Essiac**

An herbal tea mixture that contains burdock root, Indian rhubarb root, sheep sorrel, and slippery elm bark. It has been claimed to remove toxins from the body, make the immune system stronger, relieve pain, control diabetes, treat AIDS, reduce tumor size, increase cancer survival, and improve quality of life. No clinical trial using Essiac in humans has been reported in a peer-reviewed, scientific journal, and the FDA has not approved the use of Essiac for the treatment of any medical conditions.

## **Ethiodol**

A form of poppy seed oil that contains iodine. Ethiodol is given by injection and builds up in the blood and lymph vessels in tumors. It is used for imaging (taking pictures) of the salivary glands and the lymph system. It is also being studied in the imaging of other organs such as the liver, lung, stomach, and thyroid. It is a type of diagnostic imaging agent. Also called ethiodized oil, iodized oil, and Lipiodol.

## **Ethyol**

A drug used to help protect the kidneys in patients receiving cisplatin for advanced ovarian cancer and to help reduce dry mouth in patients receiving radiation therapy after surgery for head and neck cancer. Ethyol helps protect healthy tissue from some of the side effects caused by certain types of cancer treatment. It is a type of chemoprotective agent and a type of radioprotective agent. Also called amifostine.

## **Etopophos**

A drug used with other drugs to treat small cell lung cancer and certain types of testicular cancer. It is also being studied in the treatment of other types of cancer. Etopophos blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of podophyllotoxin derivative and a type of topoisomerase inhibitor. Also called etoposide phosphate.

## **Evista**

A drug used to reduce the risk of invasive breast cancer in postmenopausal women who are at high risk of developing the disease or who have osteoporosis and to prevent and treat osteoporosis in postmenopausal women. Evista is also being studied in the treatment of other types of cancer. It blocks the effects of the hormone estrogen in breast tissue, which may help keep breast cancer cells from growing. Evista may also help keep bone from breaking down. It is a type of selective estrogen receptor modulator (SERM). Also called raloxifene hydrochloride.

## **Evomela**

A drug that contains the active ingredient melphalan hydrochloride and is given as an infusion to prepare patients with multiple myeloma for a stem cell transplant. It is also being studied in the treatment of other types of cancer. Evomela may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent.

## **Evoxac**

A drug used to treat certain disorders of the salivary gland. It is also being studied as a treatment for dry mouth caused by radiation therapy to the head and neck. It increases the amount of saliva and sweat made by saliva and sweat glands. Evoxac is a type of cholinergic agonist. Also called cevimeline hydrochloride.



### **Ewing sarcoma**

A type of cancer that forms in bone or soft tissue. Also called peripheral primitive neuroectodermal tumor and pPNET.

### **Ewing sarcoma family of tumors**

A group of cancers that includes Ewing tumor of bone (ETB or Ewing sarcoma of bone), extraosseous Ewing (EOE) tumors, primitive neuroectodermal tumors (PNET or peripheral neuroepithelioma), and Askin tumors (PNET of the chest wall). These tumors all come from the same type of stem cell. Also called EFTs.

### **Exalgo**

A drug used to treat moderate to severe pain. It may also be used to treat certain types of cough. Exalgo is made from morphine and binds to opioid receptors in the central nervous system. It is a type of opioid and a type of analgesic agent. Also called Dilaudid, hydromorphone hydrochloride, and Hydrostat IR.

### **Exjade**

A drug used to treat too much iron in the blood caused by blood transfusions. It is being studied in the treatment of myelodysplastic syndromes (a group of diseases in which the bone marrow does not make enough healthy blood cells) and other conditions. Exjade binds to extra iron in the blood. The drug and the iron are passed from the body in urine. It is a type of chelating agent. Also called deferasirox.

### **F1CDx test**

A laboratory test done on a tumor tissue sample to help match a patient's tumor to a specific drug or therapy. An F1CDx test looks at many different genes in the tissue sample to help identify whether a patient's tumor has a specific gene mutation (change) or biomarker that is targeted by a particular drug or therapy. This helps determine whether the drug might be an effective treatment for the patient's tumor. An F1CDx test is a type of companion diagnostic test. FoundationOne is a registered trademark of Foundation Medicine, Inc. Also called FoundationOne CDx test.

### **F511 cream**

A substance being studied in the prevention of palmar-plantar erythrodysesthesia (pain, swelling, numbness, tingling, or redness of the palms of the hands or soles of the feet) in breast cancer patients treated with anticancer drugs. F511 cream contains a substance that is used in products to control excess sweating under the arms and on the palms of the hands and soles of the feet. It is a type of antiperspirant.

### **FAMMM syndrome**

An inherited condition marked by the following: (1) one or more first- or second-degree relatives (parent, sibling, child, grandparent, grandchild, aunt, or uncle) with malignant melanoma; (2) many moles, some of which are atypical (asymmetrical, raised, and/or different shades of tan, brown, black, or red) and often of different sizes; and (3) moles that have specific features when examined under a microscope. FAMMM syndrome increases the risk of melanoma and may increase the risk of pancreatic cancer. Also called familial atypical multiple mole melanoma syndrome.

### **FAP**

An inherited disorder in which many polyps (usually hundreds to thousands) form on the inner walls of the colon and rectum. Polyps are abnormal growths that

may become cancer if they are not removed. People with FAP have a very high risk of developing colorectal cancer at an early age and are also at risk of developing cancers of the stomach, small intestine, pancreas, bile duct, liver, adrenal gland, thyroid, and brain. They may also have dental and eye problems and benign (not cancer) tumors in the stomach, small intestine, bone, soft tissue, skin, and adrenal glands. FAP is caused by mutations (changes) in a gene called APC that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called classic familial adenomatous polyposis, classic familial polyposis, classic FAP, and familial adenomatous polyposis.

### **FAU**

A substance being studied in the treatment of advanced solid tumors and lymphomas. It blocks the growth of cells and may cause cancer cells to die. It is a type of uracil analog. Also called 1-(2'-deoxy-2'-fluoro-β-D-arabinofuranosyl) uracil.

### **FDA**

An agency in the U.S. federal government whose mission is to protect public health by making sure that food, cosmetics, and nutritional supplements are safe to use and truthfully labeled. The FDA also makes sure that drugs, medical devices, and equipment are safe and effective, and that blood for transfusions and transplant tissue are safe. Also called Food and Drug Administration.

### **FDR**

A way of describing how family members are related to each other when there are no other family members in the blood line between them. Examples of an FDR are a parent, sibling, or child. Also called first-degree relative.

### **FEC**

An abbreviation for a chemotherapy combination used with other types of therapy to treat breast cancer, including breast cancer that has spread or come back. It includes the drugs fluorouracil, epirubicin hydrochloride, and cyclophosphamide. Also called FEC regimen.

### **FEC regimen**

An abbreviation for a chemotherapy combination used with other types of therapy to treat breast cancer, including breast cancer that has spread or come back. It includes the drugs fluorouracil, epirubicin hydrochloride, and cyclophosphamide. Also called FEC.

### **FGFR1 gene**

A gene that makes a protein involved in cell division, cell growth and maturation, formation of new blood vessels, wound healing, and the growth and development of many parts of the body. Mutations (changes) in the FGFR1 gene may cause the FGFR1 protein to become overactive, which may cause cells to grow and divide too quickly or in an uncontrolled way. FGFR1 gene mutations have been found in certain genetic conditions and in some types of cancer. Also called fibroblast growth factor receptor 1 gene.

### **FGFR2 gene**

A gene that makes a protein that is involved in cell division, cell maturation, formation of new blood vessels, wound healing, and bone growth and development. A mutation (change) in the FGFR2 gene may cause the FGFR2 protein to become overactive in certain bone disorders, genetic conditions, and cancers. Also called fibroblast growth factor receptor 2 gene.

### **FGFR3 gene**

A gene that makes a protein that is involved in cell division, cell maturation, formation of new blood vessels, wound healing, and bone growth, development, and maintenance. A mutation (change) in the FGFR3 gene may cause the FGFR3 protein to become overactive in certain bone disorders, genetic conditions, and cancers. Also called fibroblast growth factor receptor 3 gene.

### **FH gene**

A gene that makes an enzyme that helps cells in the body use oxygen and make energy. Mutated (changed) forms of the FH gene may cause cells to lose the ability to use oxygen. This may increase the growth of some cells, including abnormal cells and cancer cells. The mutated FH gene has been found in an inherited condition called hereditary leiomyomatosis and renal cell cancer (HLRCC). Patients with HLRCC have an increased risk of kidney cancer and tumors in the skin and uterus. Also called fumarate hydratase gene.

### **FIGC**

A rare, inherited disorder that increases the risk of developing a type of stomach cancer called intestinal gastric adenocarcinoma. This cancer begins in the mucus-producing cells in the innermost lining of the stomach and tends to grow and spread more slowly than other types of stomach cancer. FIGC runs in families, but the gene involved in this disorder is not known. Also called familial intestinal gastric cancer.

### **FIH study**

A type of clinical trial in which a new drug, procedure, or treatment is tested in humans for the first time. FIH studies take place after the new treatment has been tested in laboratory and animal studies and are usually done as phase I clinical trials. Also called first-in-human study.

### **FIHP**

A rare inherited condition in which one or more tumors form in the parathyroid glands (four pea-sized organs found on the thyroid) and cause them to make too much parathyroid hormone. The increased parathyroid hormone causes a loss of calcium from the bones and too much calcium in the blood. Also called familial isolated hyperparathyroidism.

### **FISH**

A laboratory method used to look at genes or chromosomes in cells and tissues. Pieces of DNA that contain a fluorescent dye are made in the laboratory and added to a cell or tissue sample. When these pieces of DNA bind to certain genes or areas on chromosomes in the sample, they light up when viewed under a microscope with a special light. FISH can be used to identify where a specific gene is located on a chromosome, how many copies of the gene are present, and any chromosomal abnormalities. It is used to help diagnose diseases, such as cancer, and help plan treatment. Also called fluorescence in situ hybridization.

### **FIT**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card for testing. The test uses an antibody that binds to a blood protein called hemoglobin to detect any blood. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called fecal immunochemical test, iFOBT, immunoassay fecal occult blood test, immunochemical fecal occult blood test, and immunologic fecal occult blood test.

**FK463**

An antibiotic/antifungal drug used to treat infection.

**FLCN gene**

A gene that makes a protein that may help control cell growth and other important cell functions. Mutated (changed) forms of the FLCN gene may increase the growth of abnormal cells. The mutated FLCN gene has been found in an inherited condition called Birt-Hogg-Dube syndrome (BHDS). Patients with BHDS have an increased risk of kidney cancer and tumors of the skin and lungs. The FLCN gene is a type of tumor suppressor gene. Also called folliculin gene.

**FLT3 gene**

A gene that makes a protein that is involved in the formation and growth of new blood cells. Mutated (changed) forms of the FLT3 gene may cause an overactive FLT3 protein to be made. This may cause the body to make too many immature white blood cells. These changes have been found in some types of leukemia, including acute myeloid leukemia (AML) and acute lymphoblastic leukemia (ALL).

**FMISO**

A radioactive substance being studied as an imaging agent in head and neck cancer and other types of cancer. It binds to large molecules in cancer cells that have a low level of oxygen. Radiation given off by FMISO is detected by a positron emission tomography (PET) scan. Knowing the amount of FMISO in the cancer cells may help plan the best treatment and help predict whether the cancer will come back after treatment. Also called 18F-fluoromisonidazole, 18F-MISO, and fluorine F 18-fluoromisonidazole.

**FNA biopsy**

The removal of fluid, cells, or tissue with a thin needle for examination under a microscope. Also called fine-needle aspiration biopsy.

**FOBT**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card and sent to a doctor or laboratory for testing. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Guaiac FOBT and immunochemical FOBT are two types of FOBTs. Guaiac FOBT uses a chemical substance called guaiac to check for blood in the stool. Immunochemical FOBT uses an antibody to check for blood in the stool. Also called fecal occult blood test.

**FOLFIRI**

An abbreviation for a chemotherapy combination used to treat advanced colorectal cancer that has spread. It is also being studied in the treatment of other types of cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and irinotecan hydrochloride. Also called FOLFIRI regimen.

**FOLFIRI regimen**

An abbreviation for a chemotherapy combination used to treat advanced colorectal cancer that has spread. It is also being studied in the treatment of other types of cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and irinotecan hydrochloride. Also called FOLFIRI.

### **FOLFIRI-Avastin regimen**

A chemotherapy combination used as an initial treatment of colorectal cancer that has spread. It includes the drugs leucovorin (folinic acid), fluorouracil, irinotecan hydrochloride, and bevacizumab. Also called FOLFIRI-bevacizumab and FOLFIRI-bevacizumab regimen.

### **FOLFIRI-bevacizumab**

A chemotherapy combination used as an initial treatment of colorectal cancer that has spread. It includes the drugs leucovorin (folinic acid), fluorouracil, irinotecan hydrochloride, and bevacizumab. Also called FOLFIRI-Avastin regimen and FOLFIRI-bevacizumab regimen.

### **FOLFIRI-bevacizumab regimen**

A chemotherapy combination used as an initial treatment of colorectal cancer that has spread. It includes the drugs leucovorin (folinic acid), fluorouracil, irinotecan hydrochloride, and bevacizumab. Also called FOLFIRI-Avastin regimen and FOLFIRI-bevacizumab.

### **FOLFIRI-cetuximab**

A chemotherapy combination used to treat a certain type of colorectal cancer that has spread to other parts of the body. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, irinotecan hydrochloride, and cetuximab. Also called FOLFIRI-cetuximab regimen.

### **FOLFIRI-cetuximab regimen**

A chemotherapy combination used to treat a certain type of colorectal cancer that has spread to other parts of the body. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, irinotecan hydrochloride, and cetuximab. Also called FOLFIRI-cetuximab.

### **FOLFIRINOX**

An abbreviation for a chemotherapy combination used to treat pancreatic cancer that has spread to other parts of the body. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, irinotecan hydrochloride, and oxaliplatin. Also called FOLFIRINOX regimen.

### **FOLFIRINOX regimen**

An abbreviation for a chemotherapy combination used to treat pancreatic cancer that has spread to other parts of the body. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, irinotecan hydrochloride, and oxaliplatin. Also called FOLFIRINOX.

### **FOLFOX**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens, including FOLFOX-4, FOLFOX-6, modified FOLFOX-6 (mFOLFOX-6), and FOLFOX-7. They differ in the doses and ways in which the three drugs are given. Also called FOLFOX regimen.

### **FOLFOX regimen**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens, including FOLFOX-4, FOLFOX-6, modified FOLFOX-6 (mFOLFOX-6), and

FOLFOX-7. They differ in the doses and ways in which the three drugs are given. Also called FOLFOX.

#### **FOLFOX-4**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called FOLFOX-4 regimen.

#### **FOLFOX-4 regimen**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called FOLFOX-4.

#### **FOLFOX-6**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called FOLFOX-6 regimen.

#### **FOLFOX-6 regimen**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called FOLFOX-6.

#### **FOLFOX-7**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called FOLFOX-7 regimen.

#### **FOLFOX-7 regimen**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called FOLFOX-7.

#### **FR901228**

A drug used to treat adults with cutaneous T-cell lymphoma that has already been treated with at least one other type of systemic therapy. It is also being studied in the treatment of other types of cancer. FR901228 blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of depsipeptide and a type of histone deacetylase inhibitor. Also called Istodax and romidepsin.



## **FSH**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make the follicles and eggs grow. In males, it acts on the testes to make sperm. Also called follicle-stimulating hormone and follitropin.

## **Fanconi anemia**

A rare inherited disorder in which the bone marrow does not make enough blood cells, including red blood cells, white blood cells, and platelets. It is usually diagnosed before age 15 years. Signs and symptoms include frequent infections, a tendency to bleed easily, and extreme tiredness. People with Fanconi anemia may also have brown spots on the skin, short height, malformed thumbs or forearms, small head or eyes, hearing loss, and abnormalities of the kidneys, gastrointestinal tract, heart, genitals, brain, and spinal cord. They also have an increased risk of developing certain types of cancer, including leukemia and cancers of the skin, head, neck, gastrointestinal system, and genitals. Fanconi anemia is caused by mutations (changes) in certain genes involved in DNA repair.

## **Fanconi syndrome**

A group of kidney disorders that cause protein, sugar, minerals, and other nutrients to be lost in the urine. Symptoms include weakness, bone pain, and passing a greater than normal amount of urine. One form of Fanconi syndrome is inherited and is usually found in infants. Fanconi syndrome may also be caused by other diseases, a lack of vitamin D, or exposure to heavy metals or chemicals, including certain anticancer drugs.

## **Fareston**

A drug used to treat postmenopausal women with breast cancer that has spread to other parts of the body. It is used in patients whose cancer is estrogen receptor positive (ER+) or when it is not known if the cancer is ER+ or estrogen receptor negative (ER-). Fareston blocks the effects of the hormone estrogen in breast tissue, which may help keep breast cancer cells from growing. It is a type of selective estrogen receptor modulator (SERM). Also called toremifene citrate.

## **Faslodex**

A drug used to treat certain types of breast cancer. It is used alone or with ribociclib succinate in postmenopausal women who have not been treated with hormone therapy or whose disease got worse after treatment with hormone therapy. It is also used with palbociclib or abemaciclib in women whose disease got worse after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. Faslodex binds to proteins called estrogen receptors, which are found in some breast cancer cells. These proteins may cause cancer cells to grow. Faslodex blocks these proteins and may keep cancer cells from growing. It is a type of antiestrogen. Also called fulvestrant and ICI 182780.

## **FdCyd**

A substance being studied in the treatment of some types of cancer. It may prevent the growth of tumors by stopping cancer cells from dividing and by killing them. It is a type of antimetabolite. Also called 5-fluoro-2-deoxycytidine.

## **Femara**

A drug used to treat certain types of breast cancer in postmenopausal women. It is also being studied in the treatment of other types of cancer. Femara lowers the amount of estrogen made by the body. This may stop the growth of cancer cells

that need estrogen to grow. Femara is a type of aromatase inhibitor. Also called letrozole.

### **Ferguson-Smith syndrome**

A rare, inherited disorder in which many fast-growing tumors that look like squamous cell skin cancer form on the nose, face, ears, arms, and legs. The tumors usually go away on their own, but often leave deep, pitted scars in the skin. The tumors on the arms and legs are often larger and leave flat scars. Ferguson-Smith syndrome is caused by mutations (changes) in the TGFBR1 gene. Also called MSSE and multiple self-healing squamous epithelioma.

### **Ferrlecit**

A form of the mineral iron that is used to treat anemia caused by low amounts of iron in the blood. Anemia is a condition in which the number of red blood cells is below normal. Ferrlecit is a type of hematinic and a dietary supplement. Also called sodium ferric gluconate.

### **Firmagon**

A drug used to treat advanced prostate cancer. Firmagon binds to gonadotropin-releasing hormone (GnRH) receptors in the pituitary gland. This causes the testicles to stop making testosterone. Firmagon may stop the growth of cancer cells that need testosterone to grow. It is a type of GnRH antagonist. Also called degarelix acetate.

### **Flagyl**

A drug that is used to treat infection and is being studied in the treatment of cancer. It is type of antibacterial, antiprotozoal, and anthelmintic. Also called metronidazole.

### **Flomax**

A drug used to treat urinary problems caused by an enlarged prostate. Flomax relaxes the muscles of the prostate and bladder, which helps the flow of urine. It is a type of alpha blocker. Also called tamsulosin hydrochloride.

### **Fluoroplex**

A drug that contains the active ingredient fluorouracil and is used as a cream to treat actinic keratosis (a skin condition that may become cancer). Fluoroplex stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **Folotyn**

A drug used to treat peripheral T-cell lymphoma (a fast-growing form of non-Hodgkin lymphoma) that recurred (came back) or did not get better with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Folotyn stops cells from using folic acid to make DNA. This may help keep cancer cells from growing and may kill them. Folotyn is a type of antimetabolite and a type of dihydrofolate reductase inhibitor. Also called pralatrexate.

### **Food and Drug Administration**

An agency in the U.S. federal government whose mission is to protect public health by making sure that food, cosmetics, and nutritional supplements are safe to use and truthfully labeled. The Food and Drug Administration also makes sure that drugs, medical devices, and equipment are safe and effective, and that blood for transfusions and transplant tissue are safe. Also called FDA.

### **Form FDA 1572-Statement of Investigator**

A form that must be filed by an investigator running a clinical trial to study a new drug or agent. The investigator agrees to follow the U.S. Food and Drug Administration (FDA) Code of Federal Regulations for the clinical trial. The investigator verifies that he or she has the experience and background needed to conduct the trial and that it will be done in a way that is ethical and scientifically sound. Also called 1572 form.

### **Fosamax**

A drug used to treat certain bone conditions, such as osteoporosis and Paget disease of the bone. It is also being studied in the treatment of hypercalcemia (high levels of calcium in the blood) and bone pain caused by cancer. Fosamax slows the breakdown of bone and prevents the loss of calcium. It is a type of bisphosphonate. Also called alendronate sodium.

### **Foscavir**

A drug used to treat infections with herpesviruses in people whose immune systems are weakened by AIDS. It blocks the viruses from making copies of themselves. It is a type of antiviral agent. Also called foscarnet sodium and phosphonoformate trisodium.

### **Fotivda**

A drug used to treat adults with advanced renal cell carcinoma (a type of kidney cancer). It is used in patients whose cancer has relapsed (come back) or has not gotten better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Fotivda blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Fotivda is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called tivozanib hydrochloride.

### **FoundationOne CDx test**

A laboratory test done on a tumor tissue sample to help match a patient's tumor to a specific drug or therapy. A FoundationOne CDx test looks at many different genes in the tissue sample to help identify whether a patient's tumor has a specific gene mutation (change) or biomarker that is targeted by a particular drug or therapy. This helps determine whether the drug might be an effective treatment for the patient's tumor. A FoundationOne CDx test is a type of companion diagnostic test. FoundationOne is a registered trademark of Foundation Medicine, Inc. Also called F1CDx test.

### **Fragmin**

A drug used to prevent blood clots from forming or to treat blood clots that have formed in patients with cancer or other conditions. Fragmin is a type of anticoagulant. Also called dalteparin sodium.

### **Fruzaqla**

A drug used to treat adults with colorectal cancer that has spread to other parts of the body and has already been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Fruzaqla blocks a protein called VEGFR, which may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of antiangiogenesis agent and a type of kinase inhibitor. Also called fruquintinib.

### **Ftorafur**

A substance being studied in the treatment of some types of cancer. It is a combination of tegafur and uracil. The tegafur is taken up by the cancer cells and breaks down into 5-FU, a substance that kills tumor cells. The uracil causes higher amounts of 5-FU to stay inside the cells and kill them. Ftorafur is a type of antimetabolite. Also called tegafur-uracil and UFT.

### **Fulphila**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Fulphila helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called filgrastim-SD/01, Neulasta, Nyvepria, pegfilgrastim, Udenyca, and Ziextenzo.

### **Fusilev**

A drug used to lessen the toxic effects of the anticancer drug methotrexate or other substances that block the action of folic acid. It is also used with fluorouracil as palliative therapy to treat advanced colorectal cancer. Fusilev is a form of folic acid. It is a type of chemoprotective agent and a type of chemosensitizing agent. Also called levoleucovorin calcium.

### **Fyarro**

A form of the drug sirolimus that is used to treat adults with malignant perivascular epithelioid cell tumor that has spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Fyarro may have fewer side effects and work better than other forms of sirolimus. It binds to a protein called mTOR, which may help keep tumor cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Fyarro is a type of kinase inhibitor, a type of angiogenesis inhibitor, and a type of immunosuppressant. Also called sirolimus protein-bound particles.

### **G-CSF**

A drug used under the brand names Neupogen, Zarxio, and Nivestym to treat neutropenia (a lower-than-normal number of white blood cells), prevent infection, and prepare the blood for the collection of certain types of blood cells, and under the brand name Granix to treat neutropenia. G-CSF is used in patients who have certain cancers and neutropenia caused by some types of chemotherapy and in patients who have severe chronic neutropenia that is not caused by cancer treatment. It is also used before an autologous stem cell transplant. G-CSF helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor. Also called filgrastim and granulocyte colony-stimulating factor.

### **G6PD deficiency**

An inherited disorder in which a person doesn't have enough of an enzyme called G6PD that helps red blood cells work the way they should. In G6PD deficiency, the red blood cells break down when the body is exposed to infection, severe stress, or certain drugs, chemicals, or foods. This may lead to a condition called hemolytic anemia. This disorder is most common in African-American men and in men of Middle Eastern or Mediterranean descent. Also called glucose-6-phosphate dehydrogenase deficiency.

## **GAD**

A condition marked by excessive worry and feelings of fear, dread, and uneasiness that last six months or longer. Other symptoms of GAD include being restless, being tired or irritable, muscle tension, not being able to concentrate or sleep well, shortness of breath, fast heartbeat, sweating, and dizziness. Also called generalized anxiety disorder.

## **GAPPS**

A rare, inherited disorder in which many polyps (usually hundreds) form in the lining of the upper part of the stomach. Polyps are abnormal growths that may become cancer if they are not removed. People with GAPPS have an increased risk of developing a type of stomach cancer called intestinal gastric adenocarcinoma. This cancer begins in the mucus-producing cells in the innermost lining of the stomach. GAPPS is caused by certain mutations (changes) in a specific part of the APC gene. The age that people with one of these specific mutations in the APC gene develop GAPPS varies. Also called gastric adenocarcinoma and proximal polyposis of the stomach.

## **GBM**

A fast-growing type of central nervous system tumor that forms from glial (supportive) tissue of the brain and spinal cord and has cells that look very different from normal cells. GBM usually occurs in adults and affects the brain more often than the spinal cord. Also called glioblastoma, glioblastoma multiforme, and grade IV astrocytoma.

## **GBS**

A rare condition in which the body's immune system attacks the nerves located outside the brain and spinal cord. Symptoms of GBS include muscle weakness, muscle pain, numbness, and tingling that often begin in the legs or back and may spread to the arms, upper body, and face. Other symptoms may include problems with vision, speech, swallowing, digestion, and bladder control. GBS can get worse quickly and cause paralysis and other serious or life-threatening problems, such as breathing problems and an abnormal blood pressure or heart rate. Most people with GBS get better over time. GBS is a type of autoimmune disease. Also called Guillain-Barré syndrome.

## **GC1008**

A substance being studied in the treatment of breast cancer that has spread to other parts of the body. It is also being studied in the treatment of other cancers and conditions. GC1008 binds to a protein called transforming growth factor-beta (TGF-beta), which is found on some cancer cells. GC1008 may help keep cancer cells from growing and prevent the growth of new blood vessels that tumors need to grow. It is a type of monoclonal antibody and a type of antiangiogenesis agent. Also called anti-TGF-beta monoclonal antibody GC1008 and fresolimumab.

## **GCP**

An international set of guidelines that helps make sure that the results of a clinical trial are reliable and that the patients are protected. GCP covers the way a clinical trial is designed, conducted, performed, monitored, audited, recorded, analyzed, and reported. Also called Good Clinical Practice.

## **GCT**

A rare tumor that usually forms in bone, but may also form in cartilage, muscle, fat, blood vessels, or other supportive tissue in the body. Most GCTs occur at the

ends of the long bones of the arms and legs, near a joint (such as the knee, wrist, hip, or shoulder). Most are benign (not cancer) but some are malignant (cancer). GCTs usually occur in young and middle-aged adults. Also called giant cell tumor.

#### **GDC-0449**

A drug used to treat advanced basal cell carcinoma that has spread to other parts of the body or has come back after surgery. It is also used in patients who cannot be treated with surgery or radiation therapy. It is also being studied in the treatment of other types of cancer. GDC-0449 blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type of Hedgehog signaling pathway antagonist. Also called Erivedge and vismodegib.

#### **GEM 231**

A drug that may inhibit the growth of malignant tumors.

#### **GEM640**

A substance being studied in the treatment of cancer. GEM640 may kill cancer cells by blocking the production of a protein called XIAP that helps cells live longer. It also makes cancer cells more sensitive to anticancer drugs. It is a type of antisense oligonucleotide, and a type of chemosensitizing agent. Also called AEG35156.

#### **GEMOX**

A chemotherapy combination used to treat pancreatic cancer and some other types of cancer. It includes the drugs gemcitabine hydrochloride and oxaliplatin. Also called gemcitabine-oxaliplatin and gemcitabine-oxaliplatin regimen.

#### **GEP-NET**

A rare type of tumor that can form in the pancreas or in other parts of the gastrointestinal tract, including the stomach, small intestine, colon, rectum, and appendix. GEP-NETs usually form in cells that secrete hormones. Some of these tumors make extra amounts of hormones and other substances that may cause signs and symptoms of disease, including a condition called carcinoid syndrome. GEP-NETs may be benign (not cancer) or malignant (cancer). They are sometimes called carcinoid tumors or islet cell tumors. Also called gastroenteropancreatic neuroendocrine tumor.

#### **GG745**

A drug used to treat symptoms of an enlarged prostate gland. It is being studied in the treatment of male hair loss and prostate cancer. GG745 blocks enzymes the body needs to make male sex hormones. It is a type of 5-alpha reductase inhibitor. Also called Avodart and dutasteride.

#### **GI**

Having to do with the gastrointestinal (GI) tract or GI system. The GI tract includes the mouth, throat, esophagus, stomach, small intestine, large intestine, rectum, and anus. Food and liquids travel through the GI tract as they are swallowed, digested, absorbed, and leave the body as feces. The GI system includes these organs as well as the salivary glands, liver, gallbladder, and pancreas, which make digestive juices and enzymes that help the body digest food and liquids. Also called gastrointestinal.



### **GI14721**

An antitumor drug that belongs to the family of drugs called topoisomerase inhibitors. It is a camptothecin analog.

### **GIST**

A type of tumor that usually begins in cells in the wall of the gastrointestinal tract. Some GISTs may grow slowly over time, while others can grow and spread very quickly. Also called gastrointestinal stromal tumor.

### **GM-CSF**

A substance that helps make more white blood cells, especially granulocytes, macrophages, and cells that become platelets. It is a cytokine that is a type of hematopoietic (blood-forming) agent. Also called granulocyte-macrophage colony-stimulating factor and sargramostim.

### **GM-CSF-secreting breast tumor vaccine**

A vaccine that is being studied as a way to help the body's immune system kill breast cancer cells. To make the vaccine, the GM-CSF gene is put into breast cancer cells in the laboratory. The cells are then treated with radiation to stop them from growing and injected into the same or a different patient. The GM-CSF protein made by the changed breast cancer cells may help the immune system kill breast cancer cells in the body.

### **GM2-KLH vaccine**

A substance used to stimulate the production of antibodies that fight certain cancer cells.

### **GPX-100**

An anticancer drug that belongs to the family of drugs called antitumor antibiotics. It is an anthracycline.

### **GSD**

A type of inherited disorder in which there are problems with how a form of glucose (sugar) called glycogen is stored and used in the body. Certain enzymes that help make or break down glycogen are missing or do not work the way they should. This causes abnormal amounts or types of glycogen in the tissues, especially in the liver and in muscle tissue. There are many types of GSD, which can cause problems in different parts of the body, including the liver, muscles, kidneys, and heart. Also called glycogen storage disease.

### **GSK1070916A**

A substance being studied in the treatment of some types of cancer. It blocks certain enzymes (Aurora kinases) involved in cell division and may kill cancer cells. It is a type of serine/threonine protein kinase inhibitor. Also called Aurora B/C kinase inhibitor GSK1070916A.

### **GTD**

A rare condition in which abnormal cells grow inside the uterus from tissue that forms after conception (the joining of sperm and egg). This tissue is made of trophoblastic cells, which normally surround the fertilized egg in the uterus and help connect the fertilized egg to the wall of the uterus. These cells also form part of the placenta (the organ that passes nutrients from the mother to the fetus). Most GTDs are benign (not cancer) and do not spread, but some types are malignant (cancer) and spread to nearby tissues or other parts of the body. The two main types of GTDs are hydatidiform mole and choriocarcinoma. Also

called gestational trophoblastic disease, gestational trophoblastic tumor, and GTT.

### **GTI-2040**

A substance being studied in the treatment of cancer. It blocks the production of a protein called ribonucleotide reductase, which helps cells make DNA. This may kill cancer cells that need ribonucleotide reductase to grow. It may also make cells more sensitive to anticancer drugs. It is a type of antisense oligonucleotide, and a type of ribonucleotide reductase inhibitor.

### **GTT**

A rare condition in which abnormal cells grow inside the uterus from tissue that forms after conception (the joining of sperm and egg). This tissue is made of trophoblastic cells, which normally surround the fertilized egg in the uterus and help connect the fertilized egg to the wall of the uterus. These cells also form part of the placenta (the organ that passes nutrients from the mother to the fetus). Most GTTs are benign (not cancer) and do not spread, but some types are malignant (cancer) and spread to nearby tissues or other parts of the body. The two main types of GTTs are hydatidiform mole and choriocarcinoma. Also called gestational trophoblastic disease, gestational trophoblastic tumor, and GTD.

### **GVHD**

A condition that occurs when donated stem cells or bone marrow (the graft) see the healthy tissues in the patient's body (the host) as foreign and attack them. It can also occur after an organ transplant. GVHD can cause damage to the host's tissues and organs, especially the skin, liver, intestines, eyes, mouth, hair, nails, joints, muscles, lungs, kidneys, and genitals. The signs and symptoms may be severe and life threatening. GVHD can occur within the first few months after transplant (acute) or much later (chronic). Also called graft-versus-host disease.

### **GW572016**

A drug used with capecitabine or letrozole to treat certain types of HER2-positive breast cancer that are advanced or have spread. It is also being studied in the treatment of other types of cancer. GW572016 blocks EGFR and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called lapatinib ditosylate and Tykerb.

### **GW786034**

A drug used to treat adults with advanced renal cell carcinoma (a type of kidney cancer) or advanced soft tissue sarcoma that has already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. GW786034 blocks certain proteins, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called pazopanib hydrochloride and Votrient.

### **GWAS**

A study that compares DNA markers across the genome (the complete genetic material in a person) in people with a disease or trait to people without the disease or trait. These studies may uncover clues to help prevent, diagnose, and treat disease. Also called genome-wide association study.

### **Gail model**

A computer program that uses personal and family medical history information to estimate a woman's chance of developing breast cancer. Also called Gail risk model.

### **Gail risk model**

A computer program that uses personal and family medical history information to estimate a woman's chance of developing breast cancer. Also called Gail model.

### **Gamifant**

A drug used to treat a rare immune system disorder called primary hemophagocytic lymphohistiocytosis (HLH). It is used in patients whose disease came back, got worse, did not get better, or cannot be treated with other therapy. It is also being studied in the treatment of other conditions. Gamifant binds to an immune system protein called interferon gamma, which is found at higher than normal levels in patients with HLH. This may help lower the body's immune response and reduce inflammation. Gamifant is a type of monoclonal antibody. Also called emapalumab.

### **Gamma Knife therapy**

A treatment using gamma rays, a type of high-energy radiation that can be tightly focused on small tumors or other lesions in the head or neck, so very little normal tissue receives radiation. The gamma rays are aimed at the tumor from many different angles at once, and deliver a large dose of radiation exactly to the tumor in one treatment session. This procedure is a type of stereotactic radiosurgery. Gamma Knife therapy is not a knife and is not surgery. Gamma Knife is a registered trademark of Elekta Instruments, Inc.

### **Gardasil**

A vaccine that is no longer available in the United States but is still used in other countries to protect against infection with four types of human papillomavirus (HPV). Gardasil is used in females and males aged 9 to 26 years to protect against low-risk HPV types 6 and 11, which cause most genital warts, and against high-risk HPV types 16 and 18, which cause most precancerous lesions and cancers of the cervix, vagina, vulva, and anus. Gardasil may also prevent HPV-related cancers of the penis and oropharynx. Also called recombinant human papillomavirus quadrivalent vaccine.

### **Gardasil 9**

A vaccine that is FDA-approved for use in females and males aged 9 to 45 years to protect against infection with nine types of human papillomavirus (HPV). Gardasil 9 protects against low-risk HPV types 6 and 11, which cause most genital warts, and against high-risk HPV types 16, 18, 31, 33, 45, 52, and 58, which cause most precancerous lesions and cancers of the cervix, vagina, vulva, anus, and head and neck, including the oropharynx. Gardasil 9 may also prevent HPV-related cancer of the penis. Also called recombinant human papillomavirus nonavalent vaccine.

### **Gardner syndrome**

A rare, inherited disorder in which many polyps (abnormal growths of tissue) form on the inner walls of the colon and rectum. Other signs and symptoms of Gardner syndrome include dental problems and benign (not cancer) growths or tumors in the bone, soft tissue, skin, adrenal glands, stomach, and small intestine. People with Gardner syndrome have a very high risk of developing colorectal cancer at an early age. They are also at risk of developing cancers of

the small bowel, stomach, pancreas, thyroid, central nervous system, liver, bile ducts, and adrenal gland. Gardner syndrome is caused by a mutation (change) in a gene called APC. It is a type of familial adenomatous polyposis and a type of autosomal dominant genetic disease.

### **Gavreto**

A drug used to treat adults with non-small cell lung cancer that has a RET fusion gene and has spread to other parts of the body and adults and children aged 12 years and older with thyroid cancer that has a RET fusion gene, has spread, and needs treatment with systemic therapy. This includes patients whose thyroid cancer did not respond to radioactive iodine. It is also being studied in the treatment of other types of cancer. Gavreto blocks certain proteins made by the RET fusion gene, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called pralsetinib.

### **Gazyva**

A drug used with other drugs to treat certain types of follicular lymphoma and chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. Gazyva binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of leukemia and lymphoma cells. Gazyva may block CD20 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called obinutuzumab.

### **Gd-DTPA**

A substance used in magnetic resonance imaging (MRI) to help make clear pictures of the brain, spine, heart, soft tissue of joints, and inside bones. Gd-DTPA is being studied in the diagnosis of cancer. It is a type of contrast agent. Also called gadopentetate dimeglumine and Magnevist.

### **Gelclair**

A gel used to lessen pain from mouth sores caused by chemotherapy or radiation therapy, oral surgery, braces, or disease. Gelclair is being studied in the treatment of pain caused by mouth sores in children receiving cancer treatment. It forms a thin layer over the surface of the mouth and throat to prevent irritation while eating, drinking, and talking. Also called polyvinylpyrrolidone-sodium hyaluronate gel.

### **Gemzar**

A drug used alone or with other drugs to treat certain types of breast, non-small cell lung, ovarian, and pancreatic cancers that are advanced or have spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Gemzar stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called gemcitabine hydrochloride and Infugem.

### **Genasense**

A substance being studied in the treatment of cancer. It may kill cancer cells by blocking the production of a protein that makes cancer cells live longer and by making them more sensitive to anticancer drugs. It is a type of antisense oligodeoxyribonucleotide. Also called augmerosen, bcl-2 antisense oligodeoxynucleotide G3139, and oblimersen sodium.

### **German Commission E**

The German Federal Institute for Drugs and Medical Devices Commission E. A committee made up of scientists, toxicologists, doctors, and pharmacists formed by the German government in 1978 to find out if herbs sold in Germany are safe

and effective. The Commission has published information on the uses, side effects, and drug interactions of more than 300 herbs.

### **German chamomile**

A plant whose daisy-like flowers are used in tea to calm and relax, improve sleep, and help stomach problems. German chamomile has been studied in the prevention of mucositis (mouth sores) caused by chemotherapy and radiation therapy. It has also been used in some cultures to treat skin conditions, mild infections, and other disorders. The scientific name is *Matricaria recutita*.

### **Gerota's capsule**

A fibrous envelope of tissue that surrounds the kidney. Also called Gerota's fascia and renal fascia.

### **Gerota's fascia**

A fibrous envelope of tissue that surrounds the kidney. Also called Gerota's capsule and renal fascia.

### **Gerson therapy**

A diet plan that has been claimed to be a treatment for cancer, migraine, tuberculosis, and other diseases. It is a vegetarian diet that includes eating organic fruits and vegetables and 13 glasses of fresh juice each day. It also includes supplements with iodine, vitamin B-12, potassium, thyroid hormone, liver extract, and pancreatic enzymes. No clinical trial to test Gerson therapy has been reported.

### **Gilotrif**

A drug used to treat certain types of non-small cell lung cancer that have spread to other parts of the body. It is used in patients whose cancer has not already been treated and has certain mutations (changes) in the EGFR gene or whose cancer got worse after treatment with platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Gilotrif blocks certain proteins made by the EGFR gene, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Gilotrif is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called afatinib dimaleate.

### **Gleason score**

A way of describing prostate cancer based on how abnormal the cancer cells in a biopsy sample look under a microscope and how quickly they are likely to grow and spread. Most prostate cancers contain cells that are different grades. The Gleason score is calculated by adding together the two grades of cancer cells that make up the largest areas of the biopsied tissue sample. The Gleason score usually ranges from 6 to 10. The lower the Gleason score, the more the cancer cells look like normal cells and are likely to grow and spread slowly. The Gleason score is used to help plan treatment and determine prognosis (outcome).

### **Gleevec**

A drug used to treat certain types of leukemia and other blood cancers, gastrointestinal stromal tumors, skin tumors called dermatofibrosarcoma protuberans, and a rare condition called systemic mastocytosis. It is also being studied in the treatment of other conditions and types of cancer. Gleevec blocks certain proteins made by the BCR::ABL, PDGFR, or c-KIT oncogene, which may help keep cancer cells from growing and may kill them. Gleevec is a type of tyrosine kinase inhibitor. Also called imatinib mesylate and STI571.

### **Gleolan**

A drug that contains the active ingredient aminolevulinic acid hydrochloride and is used during surgery to help find certain types of brain tumors. When Gleolan is taken up by cancer cells and then exposed to certain types of light, it becomes active and may make the cancer cells easier to see. Gleolan is a type of imaging agent and a type of photosensitizing agent.

### **Gleostine**

A drug used to treat brain tumors that have already been treated with surgery or radiation therapy and Hodgkin lymphoma that got worse after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Gleostine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea. Also called CCNU and lomustine.

### **Gliadel Wafer**

A drug used with surgery and radiation therapy to treat high-grade glioma that has not already been treated and with surgery to treat glioblastoma multiforme that has recurred (come back). Gliadel Wafer is a form of carmustine contained in a wafer. The wafer has a coating that dissolves slowly and releases carmustine directly into the area where the brain tumor was removed. This form may have fewer side effects and work better than other forms of carmustine. Gliadel Wafer is a type of alkylating agent and a type of nitrosourea. Also called carmustine implant and polifeprosan 20 carmustine implant.

### **Glucophage**

A drug used to treat diabetes mellitus (a condition in which the body cannot control the level of sugar in the blood). It is also being studied in the treatment of cancer. Glucophage decreases the amount of glucose (a type of sugar) released into the bloodstream from the liver and increases the body's use of the glucose. It is a type of antidiabetic agent. Also called metformin hydrochloride.

### **Glycine max**

A product from a plant of Asian origin that produces beans used in many food products. Glycine max contains isoflavones (estrogen-like substances) that are being studied for the prevention of cancer, hot flashes that occur with menopause, and osteoporosis (loss of bone density). Glycine max in the diet may lower cholesterol levels and reduce the risk of heart disease. Also called soy, soya, and soybean.

### **GnRH**

A hormone made by a part of the brain called the hypothalamus. GnRH causes the pituitary gland in the brain to make and secrete the hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH). In men, these hormones cause the testicles to make testosterone. In women, they cause the ovaries to make estrogen and progesterone. Also called gonadotropin-releasing hormone, LH-RH, LHRH, and luteinizing hormone-releasing hormone.

### **GnRH agonist**

A substance that keeps the testicles and ovaries from making sex hormones by blocking other hormones that are needed to make them. In men, GnRH agonists cause the testicles to stop making testosterone. In women, they cause the ovaries to stop making estrogen and progesterone. Some GnRH agonists are used to treat prostate cancer. Also called GnRHa, gonadotropin-releasing hormone agonist, LHRH agonist, and luteinizing hormone-releasing hormone agonist.



### **GnRH antagonist**

A substance that blocks the pituitary gland from making hormones called follicle-stimulating hormone (FSH) and luteinizing hormone (LH). In men, this causes the testicles to stop making testosterone. In women, this causes the ovaries to stop making estrogen and progesterone. Some GnRH antagonists are used to treat advanced prostate cancer. They are also used to treat certain gynecologic conditions and are being studied in the treatment of hormone-sensitive breast cancer. Also called gonadotropin-releasing hormone antagonist, LHRH antagonist, and luteinizing hormone-releasing hormone antagonist.

### **GnRHa**

A substance that keeps the testicles and ovaries from making sex hormones by blocking other hormones that are needed to make them. In men, GnRHAs cause the testicles to stop making testosterone. In women, they cause the ovaries to stop making estrogen and progesterone. Some GnRHAs are used to treat prostate cancer. Also called GnRH agonist, gonadotropin-releasing hormone agonist, LHRH agonist, and luteinizing hormone-releasing hormone agonist.

### **Golgi apparatus**

A stack of small flat sacs formed by membranes inside the cell's cytoplasm (gel-like fluid). The Golgi apparatus prepares proteins and lipid (fat) molecules for use in other places inside and outside the cell. The Golgi apparatus is a cell organelle. Also called Golgi body and Golgi complex.

### **Golgi body**

A stack of small flat sacs formed by membranes inside the cell's cytoplasm (gel-like fluid). The Golgi body prepares proteins and lipid (fat) molecules for use in other places inside and outside the cell. The Golgi body is a cell organelle. Also called Golgi apparatus and Golgi complex.

### **Golgi complex**

A stack of small flat sacs formed by membranes inside the cell's cytoplasm (gel-like fluid). The Golgi complex prepares proteins and lipid (fat) molecules for use in other places inside and outside the cell. The Golgi complex is a cell organelle. Also called Golgi apparatus and Golgi body.

### **Gonzalez regimen**

An alternative therapy that is being studied as a treatment for pancreatic cancer. It includes a special diet, nutritional supplements, pancreatic enzymes, and coffee enemas.

### **Good Clinical Practice**

An international set of guidelines that helps make sure that the results of a clinical trial are reliable and that the patients are protected. Good Clinical Practice covers the way a clinical trial is designed, conducted, performed, monitored, audited, recorded, analyzed, and reported. Also called GCP.

### **Gorlin syndrome**

A rare, inherited disorder that affects many organs and tissues in the body. People with this disorder have a very high risk of developing basal cell skin cancer during adolescence or early adulthood. They are also at risk of developing medulloblastoma (a type of brain cancer) and other types of cancer. Gorlin syndrome may also cause benign (not cancer) tumors in the jaw, heart, or ovaries. Other signs and symptoms include a large head and unusual facial features; small pits in the skin on the hands and feet; abnormalities of the spine,

ribs, or skull; eye problems; and developmental problems. Gorlin syndrome is caused by a mutation (change) in the PTCH1 gene. Also called basal cell nevus syndrome, BCNS, NBCCS, and nevoid basal cell carcinoma syndrome.

### **Grade Group**

A way of describing prostate cancer based on how abnormal the cancer cells in a biopsy sample look under a microscope and how quickly they are likely to grow and spread. It is based on the Gleason score, which is another type of prostate cancer grading system. Grade Group scores range from 1 to 5. The lower the Grade Group score, the more the cancer cells look like normal cells and are likely to grow and spread slowly. The Grade Group system is used to help plan treatment and determine prognosis (outcome).

### **Granix**

A drug that contains the active ingredient filgrastim and is used in adults and children to treat severe neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Granix helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor.

### **Greene Menopause Index**

A tool used by researchers to study the symptoms of menopause. It is a standard list of 21 questions which women use to rate how much they are bothered by menopause symptoms such as hot flashes, night sweats, rapid heartbeat, and difficulty sleeping.

### **Guillain-Barré syndrome**

A rare condition in which the body's immune system attacks the nerves located outside the brain and spinal cord. Symptoms of Guillain-Barré syndrome include muscle weakness, muscle pain, numbness, and tingling that often begin in the legs or back and may spread to the arms, upper body, and face. Other symptoms may include problems with vision, speech, swallowing, digestion, and bladder control. Guillain-Barré syndrome can get worse quickly and cause paralysis and other serious or life-threatening problems, such as breathing problems and an abnormal blood pressure or heart rate. Most people with Guillain-Barré syndrome get better over time. Guillain-Barré syndrome is a type of autoimmune disease. Also called GBS.

### **H and E staining**

A common laboratory method that uses two dyes called hematoxylin and eosin that make it easier to see different parts of the cell under a microscope. Hematoxylin shows the ribosomes, chromatin (genetic material) within the nucleus, and other structures as a deep blue-purple color. Eosin shows the cytoplasm, collagen, connective tissue, and other structures that surround and support the cell as an orange-pink-red color. H and E staining helps identify different types of cells and tissues and provides important information about the pattern, shape, and structure of cells in a tissue sample. It is used to help diagnose diseases, such as cancer. Also called hematoxylin and eosin staining.

### **H. pylori**

A type of bacterium that causes inflammation and ulcers in the stomach or small intestine. People with H. pylori infections may be more likely to develop cancer in the stomach, including MALT (mucosa-associated lymphoid tissue) lymphoma. Also called *Helicobacter pylori*.

## HAART

Treatment that uses a combination of three or more drugs to treat HIV infection. HAART stops the virus from making copies of itself in the body. This may lessen the damage to the immune system caused by HIV and may slow down the development of AIDS. It may also help prevent transmission of HIV to others, including from mother to child during birth. Also called cART, combination antiretroviral therapy, and highly active antiretroviral therapy.

## HBOC syndrome

An inherited disorder in which the risk of breast cancer (especially before the age of 50) and ovarian cancer is higher than normal. Most cases of HBOC syndrome are caused by certain mutations (changes) in the BRCA1 or the BRCA2 gene. People with HBOC syndrome may also have an increased risk of other types of cancer, including pancreatic cancer, prostate cancer, and melanoma. Also called hereditary breast and ovarian cancer syndrome.

## HBV

A virus that causes hepatitis (inflammation of the liver). It is carried and passed to others through the blood and other body fluids. Different ways the virus is spread include sharing needles with an infected person and being stuck accidentally by a needle contaminated with the virus. Infants born to infected mothers may also become infected with the virus. Although many patients who are infected with HBV may not have symptoms, long-term infection may lead to cirrhosis (scarring of the liver) and liver cancer. Also called hepatitis B virus.

## HCA

A chemical that is formed when meat, poultry, or fish is cooked at high temperatures, such as frying, broiling, and barbecuing. HCAs are carcinogens (substances that may cause cancer). Also called heterocyclic amine.

## HCD20

A substance being studied in the treatment of several types of lymphoma. It binds to the protein CD20, which is found on B cells (a type of immune system cell) and some types of lymphoma cells. This causes the immune system to kill the cancer cells. HCD20 is a type of monoclonal antibody. Also called hA20, IMMU-106, and veltuzumab.

## HCT

The amount of whole blood that is made up of red blood cells. It depends on the number and size of red blood cells. A HCT test is usually part of a complete blood count (CBC). It may be used to check for conditions such as anemia, dehydration, malnutrition, and leukemia. Also called hematocrit.

## HCV

A virus that causes hepatitis (inflammation of the liver). It is carried and passed to others through the blood and other body fluids. Different ways the virus is spread include sharing needles with an infected person and being stuck accidentally by a needle contaminated with the virus. Infants born to infected mothers may also become infected with the virus. Although patients who are infected with HCV may not have symptoms, long-term infection may lead to cirrhosis (scarring of the liver) and liver cancer. These patients may also have an increased risk for certain types of non-Hodgkin lymphoma. Also called hepatitis C virus.

## **HDAC**

An enzyme that removes a small molecule called an acetyl group from histones (proteins found in chromosomes). This changes the way the histones bind to DNA and may affect its activity. HDAC inhibitors are being studied in the treatment of cancer. Also called histone deacetylase.

## **HDAC inhibitor**

A substance that causes a chemical change that stops tumor cells from dividing. HDAC inhibitors are being studied in the treatment of cancer. Also called histone deacetylase inhibitor.

## **HDAC inhibitor SNDX-275**

A substance being studied in the treatment of several types of cancer. It blocks enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase (HDAC) inhibitor. Also called entinostat and SNDX-275.

## **HDGC**

A rare, inherited disorder that increases the risk of developing a type of stomach cancer called diffuse gastric cancer. This cancer grows in the lining of the stomach, which causes the lining to become thick and hard. The cancer is also likely to spread to other parts of the body, such as the liver or bone. Women with HDGC also have an increased risk of developing a type of breast cancer that begins in the lobules (milk glands) of the breast. HDGC is usually caused by mutations (changes) in the CDH1 gene that are inherited in an autosomal dominant manner. It is a type hereditary cancer syndrome. Also called familial diffuse gastric cancer and hereditary diffuse gastric cancer.

## **HDR**

An amount of radiation that is greater than that given in typical radiation therapy. HDR is precisely directed at the tumor to avoid damaging healthy tissue, and may kill more cancer cells in fewer treatments. Also called high-dose radiation.

## **HE4**

A protein found on cells that line the lungs and reproductive organs, such as the ovaries. HE4 may be found in higher than normal amounts in patients with some types of cancer, including ovarian epithelial cancer. Measuring the amount of HE4 in the blood may help plan cancer treatment or find out if cancer is getting worse or has come back. It is a type of tumor marker. Also called human epididymis protein 4.

## **HER1**

A protein found on certain types of cells that binds to a substance called epidermal growth factor. The HER1 protein is involved in cell signaling pathways that control cell division and survival. Sometimes, mutations (changes) in the EGFR gene cause HER1 proteins to be made in higher than normal amounts on some types of cancer cells. This causes cancer cells to divide more rapidly. Drugs that block HER1 proteins are being used in the treatment of some types of cancer. HER1s are a type of receptor tyrosine kinase. Also called EGFR, epidermal growth factor receptor, and ErbB1.

## **HER1 gene**

A gene that makes a protein that is involved in cell growth and cell survival. Mutated (changed) forms of the HER1 gene and protein have been found in some types of cancer, including non-small cell lung cancer. These changes may cause cancer cells to grow and spread in the body. Checking for changes in the

HER1 gene in tumor tissue may help plan cancer treatment. Also called EGFR gene, epidermal growth factor receptor gene, and ERBB1 gene.

## **HER2**

A protein involved in normal cell growth. HER2 may be made in larger than normal amounts by some types of cancer cells, including breast, ovarian, bladder, pancreatic, stomach, and esophageal cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. Checking the amount of HER2 on some types of cancer cells may help plan treatment. Also called c-erbB-2, HER2/neu, human EGF receptor 2, and human epidermal growth factor receptor 2.

## **HER2 negative**

Describes cells that have a small amount or none of a protein called HER2 on their surface. In normal cells, HER2 helps control cell growth. Cancer cells that are HER2 negative may grow more slowly and are less likely to recur (come back) or spread to other parts of the body than cancer cells that have a large amount of HER2 on their surface. Checking to see if a cancer is HER2 negative may help plan treatment. Cancers that may be HER2 negative include breast, bladder, ovarian, pancreatic, and stomach cancers. Also called human epidermal growth factor receptor 2 negative.

## **HER2 positive**

Describes cells that have a protein called HER2 on their surface. In normal cells, HER2 helps control cell growth. Cancer cells that make too much HER2 may grow more quickly and are more likely to spread to other parts of the body. Checking to see if a cancer is HER2 positive may help plan treatment, which may include drugs that kill HER2-positive cancer cells. Cancers that may be HER2 positive include breast, bladder, pancreatic, ovarian, and stomach cancers. Also called c-erbB-2 positive and human epidermal growth factor receptor 2 positive.

## **HER2 test**

A laboratory test that measures the amount of HER2 protein on cancer cells or how many copies of the HER2 gene are in the DNA of cancer cells. The HER2 protein helps control normal cell growth. Larger than normal amounts of the HER2 protein or too many copies of the HER2 gene may be made by some types of cancer, including breast, ovarian, bladder, pancreatic, and stomach cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. A HER2 test may be done to help plan treatment, which may include drugs that target the HER2 protein. It is a type of tumor marker test. Also called HER2/neu test and human epidermal growth factor receptor 2 test.

## **HER2-low breast cancer**

A type of breast cancer in which the cancer cells have a small amount of a protein called HER2 on their surface and do not have more than two copies of the HER2 gene. HER2-low breast cancer has usually been treated like HER2-negative breast cancer because the cancer cells do not make enough HER2 protein for drugs that target HER2 to work. However, newer drugs that target HER2 have been shown to be effective in treating HER2-low breast cancer.

## **HER2/neu**

A protein involved in normal cell growth. HER2/neu may be made in larger than normal amounts by some types of cancer cells, including breast, ovarian, bladder, pancreatic, stomach, and esophageal cancers. This may cause cancer

cells to grow more quickly and spread to other parts of the body. Checking the amount of HER2/neu on some types of cancer cells may help plan treatment. Also called c-erbB-2, HER2, human EGF receptor 2, and human epidermal growth factor receptor 2.

### **HER2/neu test**

A laboratory test that measures the amount of HER2/neu protein on cancer cells or how many copies of the HER2/neu gene are in the DNA of cancer cells. The HER2/neu protein helps control normal cell growth. Larger than normal amounts of the HER2/neu protein or too many copies of the HER2/neu gene may be made by some types of cancer, including breast, ovarian, bladder, pancreatic, and stomach cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. A HER2/neu test may be done to help plan treatment, which may include drugs that target the HER2/neu protein. It is a type of tumor marker test. Also called HER2 test and human epidermal growth factor receptor 2 test.

### **HGS-ETR1**

A substance being studied in the treatment of some types of cancer. It binds to a protein called TRAIL R1 on the surface of some tumor cells. This may kill the tumor cells. HGS-ETR1 is a type of monoclonal antibody. Also called anti-TRAIL R1-mAb and mapatumumab.

### **HGS-ETR2**

A substance being studied in the treatment of some types of cancer. It binds to a protein called TRAIL-R2 on the surface of some tumor cells, which may kill the tumor cells. HGS-ETR2 is a type of monoclonal antibody. Also called anti-TRAIL R2 mAb HGS-ETR2 and lexatumumab.

### **HHS**

The U.S. federal government agency responsible for protecting the public's health and providing important services, especially for people in need. The HHS works with state and local governments throughout the country to do research and provide public health services, food and drug safety programs, health insurance programs, and many other services. There are several federal agencies that are a part of the HHS. They include the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Centers for Medicare and Medicaid Services (CMMS). Also called Department of Health and Human Services and DHHS.

### **HHV**

A type of virus that causes herpes infections and has DNA as its genetic material. There are two types of HHVs. Infections with type 1 viruses cause cold sores on the lips or nostrils. Infections with type 2 viruses cause sores on the genitals (external and internal sex organs and glands). Also called herpes simplex virus, HSV, and human herpesvirus.

### **HHV8**

A type of virus that causes Kaposi sarcoma (a rare cancer in which lesions grow in the skin, lymph nodes, lining of the mouth, nose, and throat, and other tissues of the body). HHV8 also causes certain types of lymphoma (cancer that begins in cells of the immune system). Also called human herpesvirus 8, Kaposi sarcoma-associated herpesvirus, and KSHV.



## **HIF**

One of a group of proteins that play an important role in how cells respond to changing levels of oxygen. When oxygen levels in cells are low, HIFs activate certain genes involved in cell growth and survival. This allows the cells to function and survive even in low oxygen conditions. HIFs may be made in larger than normal amounts by some types of cancer cells. This may cause cancer cells to grow and spread to other parts of the body. Also called hypoxia-inducible factor.

## **HIFU**

A procedure in which high-energy sound waves are aimed directly at an area of abnormal cells or tissue in the body. The waves create heat that kills the cells. HIFU is being studied in the treatment of prostate cancer and some other types of cancer and other diseases. Also called high-intensity focused ultrasound therapy.

## **HIPAA**

A 1996 U.S. law that allows workers and their families to keep their health insurance when they change or lose their jobs. The privacy rule of the HIPAA protects the privacy of a person's health information and keeps it from being misused. It gives people the right to receive and review their health records and to choose with whom their health care providers and health insurance companies share their information (including friends, family members, and caregivers). The law also includes standards for setting up and maintaining secure electronic health records. Also called Health Insurance Portability and Accountability Act and Kassebaum Kennedy Act.

## **HIPEC**

A treatment used during surgery in which a heated solution containing anticancer drugs is infused directly into the abdominal cavity through a thin tube. After removal of as much tumor tissue as possible with surgery, HIPEC is given to kill any remaining tumor cells. It is most often used to treat cancers that have spread to the peritoneum (the lining of the abdominal cavity). Also called CHPP, continuous hyperthermic peritoneal perfusion, and hyperthermic intraperitoneal chemotherapy.

## **HIV**

The cause of acquired immunodeficiency syndrome (AIDS). Also called human immunodeficiency virus.

## **HIV DNA test**

A test to check for human immunodeficiency virus (HIV) infection. HIV is the virus that causes acquired immunodeficiency syndrome (AIDS). An HIV DNA test checks for DNA (genetic material) from the virus in a sample of blood. This test can find HIV in the blood about 9-11 days after the person is infected with the virus. An HIV DNA test may be used to test someone who has just become infected with HIV and it may also be used to test for infection in infants born to mothers infected with HIV.

## **HIV RNA test**

A test to check for human immunodeficiency virus (HIV) infection. HIV is the virus that causes acquired immunodeficiency syndrome (AIDS). An HIV RNA test checks for RNA (genetic material) from the virus in a sample of blood. This test can find HIV in the blood about 9-11 days after the person is infected with the

virus. An HIV RNA test is used to test someone who may have just become infected with HIV.

### **HIV antibody**

A substance produced by certain white blood cells in reaction to contact with the human immunodeficiency virus (HIV).

### **HIV antibody test**

A test to check for human immunodeficiency virus (HIV) infection. HIV is the virus that causes acquired immunodeficiency syndrome (AIDS). An HIV antibody test checks for HIV antibodies in a sample of blood, urine, or saliva. It can take from 2 weeks to 6 months after a person is infected with HIV before the antibodies are found with this test. It is the most common type of HIV test.

### **HIV negative**

Refers to a person who is not infected with the human immunodeficiency virus (HIV). HIV is the virus that causes acquired immunodeficiency syndrome (AIDS).

### **HIV positive**

Refers to a person who is infected with the human immunodeficiency virus (HIV). HIV is the virus that causes acquired immunodeficiency syndrome (AIDS).

### **HIV test**

A test to check for human immunodeficiency virus (HIV) infection. HIV is the virus that causes acquired immunodeficiency syndrome (AIDS). The most common type of HIV test is called the HIV antibody test, which checks for antibodies against HIV in a sample of blood, urine, or fluid from the mouth. It can take from 2 weeks to 6 months after a person is infected with HIV before the antibodies are found with an HIV antibody test. Another type of HIV test checks for RNA or DNA from HIV in a sample of blood. This test can find HIV in a person's blood about 9-11 days after the person is infected with the virus.

### **HIV window period**

The time period that starts when a person becomes infected with the human immunodeficiency virus (HIV) and ends when the body makes enough antibodies against the virus or HIV DNA or RNA to be found with an HIV test. For the test that looks for antibodies against HIV, the HIV window period can last from 2 weeks to 6 months. For the HIV DNA or RNA test, the HIV window period is about 9-11 days. During the HIV window period, an infected person may have negative HIV test results but still be able to infect other people.

### **HLA**

A type of molecule found on the surface of most cells in the body. HLAs play an important part in the body's immune response to foreign substances. They make up a person's tissue type, which varies from person to person. HLA tests are done before a donor stem cell or organ transplant, to find out if tissues match between the donor and the person receiving the transplant. Also called human leukocyte antigen and human lymphocyte antigen.

### **HLA matching**

A process in which blood or tissue samples are tested for human leukocyte antigens (HLAs). HLAs are molecules found on the surface of most cells in the body. They make up a person's tissue type, which varies from person to person. They play an important part in the body's immune response to foreign substances. HLA matching is done before a donor stem cell or organ transplant

to find out if tissues match between the donor and the person receiving the transplant. Also called human leukocyte antigen matching.

### **HLA-A\*02:01 antigen**

A common cell surface marker that is part of the set of HLA antigens that make up a person's tissue type. HLA antigens are found on the surface of most cells in the body, and they play an important role in the body's immune response to foreign substances. The HLA-A\*02:01 antigen is also found on the surface of some types of cancer cells, such as some melanoma cells, which may help trigger the immune system to destroy the cancer cells.

### **HLH**

A rare disorder in which histiocytes and lymphocytes (types of white blood cells) build up in organs including the skin, spleen, and liver, and destroy other blood cells. HLH may be inherited or caused by certain conditions or diseases, including infections, immunodeficiency (inability of the body to fight infections), and cancer. Also called hemophagocytic lymphohistiocytosis.

### **HLRCC**

A rare, inherited disorder in which benign (not cancer) skin lesions called leiomyomas form in the smooth muscle tissue around the hair follicles. They usually form on the arms, legs, chest, and abdomen. Benign leiomyomas may also form as fibroids in the uterus in females. Patients with HLRCC have an increased risk of kidney cancer. The signs and symptoms of HLRCC usually do not appear until young adulthood. HLRCC is caused by a mutation in the FH gene. It is inherited in an autosomal dominant manner. Also called hereditary leiomyomatosis and renal cell cancer syndrome.

### **HMG-CoA reductase inhibitor**

A substance that blocks an enzyme needed by the body to make cholesterol and lowers the amount of cholesterol in the blood. HMG-CoA reductase inhibitor drugs are called statins. Also called hydroxymethylglutaryl-coenzyme A reductase inhibitor.

### **HMGA1**

A protein that binds to the DNA and certain proteins in chromosomes. It is involved in many functions in the cell, and helps protect cells from dying. HMGA1 is found at high levels in several types of cancer cells.

### **HMR 1275**

A substance being studied in the treatment of several types of cancer. It stops cells from dividing and may kill cancer cells. It is a type of cyclin-dependent kinase (CDK) inhibitor. Also called alvocidib and flavopiridol.

### **HMT inhibitor**

A substance that blocks certain enzymes involved in gene expression and cell division. These enzymes may be found in a mutated (changed) form or at high levels in some types of cancer cells. Blocking them may help keep cancer cells from growing. HMT inhibitors are being studied in the treatment of some types of cancer. They are a type of targeted therapy. Also called histone methyltransferase inhibitor.

### **HNPCC**

An inherited disorder that increases the risk of developing colorectal cancer, endometrial cancer, ovarian cancer, and many other types of cancer, such as

cancers of the stomach, small intestine, pancreas, bile duct, urinary tract, and brain, often before age 50. HNPCC is caused by mutations (changes) in genes that affect DNA mismatch repair, a process that fixes mistakes that occur when DNA is copied. These genes are MLH1, MSH2, MSH6, PMS2, and EPCAM. Also called hereditary nonpolyposis colorectal cancer and Lynch syndrome.

### **HPPH**

2-(1-hexyloxyethyl)-2-devinyl pyropheophorbide-a. A drug that is used in photodynamic therapy that is absorbed by tumor cells; when exposed to light, it becomes active and kills the cancer cells.

### **HPRC**

A rare, inherited disorder that increases the risk of a type of kidney cancer called type 1 papillary kidney cancer. This cancer forms in cells that line the small tubes in the kidney that filter waste from the blood and make urine. HPRC often affects both kidneys, and often there is more than one tumor in each kidney. It is caused by mutations (changes) in a gene called MET. HPRC is a type of hereditary cancer syndrome. Also called hereditary papillary renal cancer and hereditary papillary renal carcinoma.

### **HPV**

A group of viruses that infect the cells on the surface of the skin or on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. HPV infections can cause abnormal tissue growth, such as skin warts or genital warts, and other changes to cells, including cancer. Although most HPV infections go away on their own and do not cause cancer, infection with certain types of HPV can last for many years and, if not treated, may become cancer. HPV-related cancers include cancers of the cervix, anus, oropharynx, vagina, vulva, and penis. Also called human papillomavirus.

### **HPV 16**

A type of HPV that is transmitted sexually and causes cancers of the cervix, anus, oropharynx (the middle part of the throat, behind the mouth), vagina, vulva, and penis. A long-lasting infection with HPV 16 can cause cell changes that, if not treated, may worsen over time and become cancer. HPV 16 and HPV 18 are responsible for most HPV-related cancers. Also called human papillomavirus 16.

### **HPV 18**

A type of HPV that is transmitted sexually and causes cancers of the cervix, anus, oropharynx (the middle part of the throat, behind the mouth), vagina, vulva, and penis. A long-lasting infection with HPV 18 can cause cell changes that, if not treated, may worsen over time and become cancer. HPV 18 and HPV 16 are responsible for most HPV-related cancers. Also called human papillomavirus 18.

### **HPV DNA test**

A laboratory test in which cells are scraped from the cervix to look for DNA of human papillomaviruses (HPV). HPV can cause abnormal tissue growth (for example, warts) and other changes to cells. Infection for a long time with certain types of HPV can cause cervical cancer. HPV can also play a role in other types of cancer, such as cancers of the anus, vagina, vulva, penis, and oropharynx. Also called human papillomavirus DNA test.

### **HPV RNA test**

A laboratory test in which cells are scraped from the cervix to look for RNA of the most common types of human papillomavirus (HPV). Certain types of HPV may cause abnormal tissue growth, such as warts, and other changes to cells. Infection for a long time with other types of HPV may cause cervical cancer. An HPV RNA test may be done with a Pap test to check for HPV infection and cervical cancer. HPV infection may also cause other types of cancer, such as cancers of the anus, vagina, vulva, penis, and oropharynx. Also called human papillomavirus RNA test.

### **HPV test**

A laboratory test in which cells are tested for DNA or RNA from certain types of human papillomavirus (HPV) that are known to cause cervical cancer. These high-risk types of HPV can also cause other types of cancer, including cancers of the anus, vagina, vulva, penis, and oropharynx. An HPV test may be used alone for cervical cancer screening (also called primary HPV testing), or it can be done at the same time as a Pap test (called cotesting). An HPV test may also be done after certain abnormal Pap test results. Also called human papillomavirus test.

### **HPV vaccine**

A vaccine that helps protect the body against infection with certain types of human papillomavirus (HPV). HPV infection can cause abnormal tissue growth, such as warts, and other changes to cells. Infection for a long time with certain types of HPV can cause cancers of the cervix, vagina, vulva, anus, penis, and oropharynx. HPV vaccines are being used to prevent some of these cancers. They are also being used to prevent genital warts and abnormal lesions that may lead to some of these cancers. Also called human papillomavirus vaccine.

### **HPV/Pap cotest**

A procedure in which a human papillomavirus (HPV) test and a Pap test are done at the same time to check for cervical cancer. The HPV test looks for DNA or RNA from certain high-risk types of HPV in samples of cells taken from the cervix. The Pap test checks for cervical cancer cells and cell changes that may lead to cervical cancer. The same cell sample may be used for both the HPV test and the Pap test. Women aged 30 to 65 years may have an HPV/Pap cotest every 5 years. Cotesting is more likely to find abnormal cells or cervical cancer than a Pap test alone is. Also called Pap/HPV cotest.

### **HRAS gene**

A gene that makes a protein that is involved in cell signaling pathways that control cell growth and cell death. Mutated (changed) forms of the HRAS gene may be found in some types of cancer. These changes may cause cancer cells to grow and spread in the body.

### **HRR pathway**

Describes a process in a cell in which a group of proteins work together to repair DNA damage. Changes in the HRR pathway that result in the inability to repair DNA may lead to diseases such as cancer. Drugs that affect this pathway are being studied in the prevention and treatment of cancer and other diseases. Also called homologous recombination repair pathway.

### **HRT**

Treatment with hormones to replace natural hormones when the body does not make enough. For example, HRT may be given when the thyroid gland does not make enough thyroid hormone or when the pituitary gland does not make

enough growth hormone. Or, it may be given to women after menopause to replace the hormones estrogen and progesterone that are no longer made by the body. Also called hormone replacement therapy.

## **HSIL**

An area of abnormal cells that forms on the surface of certain organs, such as the cervix, vagina, vulva, anus, and esophagus. HSILs look somewhat to very abnormal when looked at under a microscope. They are usually caused by chronic infection with certain types of human papillomavirus (HPV) and are found when a Pap test or biopsy is done. If not treated, these abnormal cells may become cancer and spread into nearby tissue. A HSIL is sometimes called moderate or severe dysplasia. Also called high-grade squamous intraepithelial lesion.

## **HSP**

One of a group of proteins that help protect cells from stresses such as heat, cold, and low amounts of oxygen or glucose (sugar). HSPs help other proteins function in normal cells and may be present at high levels in cancer cells. Blocking the activity of a HSP called HSP90 is being studied in the treatment of cancer. Other HSPs including HSP70 and gp96 are being studied in vaccines to treat cancer. Also called heat-shock protein and stress protein.

## **HSPC**

Prostate cancer that needs androgens (male hormones) to grow and therefore stops growing when androgens are not present. Many early-stage prostate cancers are androgen-dependent, so reducing the amount of androgens in the body or blocking their action may be an effective type of therapy. Also called androgen-dependent prostate cancer, androgen-sensitive prostate cancer, castrate-sensitive prostate cancer, CSPC, and hormone-sensitive prostate cancer.

## **HSV**

A type of virus that causes herpes infections and has DNA as its genetic material. There are two types of HSVs. Infections with type 1 viruses cause cold sores on the lips or nostrils. Infections with type 2 viruses cause sores on the genitals (external and internal sex organs and glands). Also called herpes simplex virus, HHV, and human herpesvirus.

## **HTLV-1**

A type of virus that infects T cells (a type of white blood cell) and can cause leukemia and lymphoma. HTLV-1 is spread by sharing syringes or needles, through blood transfusions or sexual contact, and from mother to child during birth or breast-feeding. Also called human T-cell leukemia virus type 1 and human T-cell lymphotropic virus type 1.

## **Halaven**

A drug used to treat certain types of breast cancer and liposarcoma (a type of soft tissue sarcoma) that have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Halaven blocks cell growth by stopping cell division and may kill cancer cells. It is a type of antimicrotubule agent. Also called E7389 and eribulin mesylate.

## **Haldol**

A drug used to treat certain mental and neurological disorders. It is also being studied in the treatment of nausea and vomiting caused by some cancer



treatments. It is a type of antiemetic and a type of antipsychotic. Also called haloperidol.

### **Halsted radical mastectomy**

Surgery to remove the whole breast, all of the lymph nodes under the arm, and the chest wall muscles under the breast. For many years, Halsted radical mastectomy was the type of breast cancer surgery used most often, but it is rarely used now. It may be used only when breast cancer has spread to the chest wall muscles. Also called radical mastectomy.

### **Hashimoto disease**

An autoimmune condition of the thyroid gland (a gland located beneath the larynx). It is caused by the formation of antibodies that attack the thyroid gland and it usually causes hypothyroidism (too little thyroid hormone). Symptoms include fatigue, weight gain, constipation, dry skin, depression, and the inability to exercise. It is more common in females and can run in families. Also called autoimmune thyroiditis and Hashimoto thyroiditis.

### **Hashimoto thyroiditis**

An autoimmune condition of the thyroid gland (a gland located beneath the larynx). It is caused by the formation of antibodies that attack the thyroid gland and it usually causes hypothyroidism (too little thyroid hormone). Symptoms include fatigue, weight gain, constipation, dry skin, depression, and the inability to exercise. It is more common in females and can run in families. Also called autoimmune thyroiditis and Hashimoto disease.

### **Health Insurance Portability and Accountability Act**

A 1996 U.S. law that allows workers and their families to keep their health insurance when they change or lose their jobs. The privacy rule of the Health Insurance Portability and Accountability Act protects the privacy of a person's health information and keeps it from being misused. It gives people the right to receive and review their health records and to choose with whom their health care providers and health insurance companies share their information (including friends, family members, and caregivers). The law also includes standards for setting up and maintaining secure electronic health records. Also called HIPAA and Kassebaum Kennedy Act.

### **Hedyotis diffusa**

An herb used in traditional Chinese medicine to treat certain medical problems. It has been used to boost the immune system and may have anticancer effects.

### **Helicobacter pylori**

A type of bacterium that causes inflammation and ulcers in the stomach or small intestine. People with *Helicobacter pylori* infections may be more likely to develop cancer in the stomach, including MALT (mucosa-associated lymphoid tissue) lymphoma. Also called *H. pylori*.

### **Hemangeol**

A drug that contains the active ingredient propranolol hydrochloride and is used to treat infants 5 weeks to 5 months of age with infantile hemangioma (a benign blood vessel tumor). It is also being studied in the treatment of other conditions and some types of cancer. Hemangeol may help shrink certain types of vascular tumors. It is a type of beta blocker.

## **Hepzato**

A drug that contains the active ingredient melphalan hydrochloride and is used to treat adults with uveal melanoma (a type of eye cancer) that has spread to less than half of the liver and cannot be removed by surgery. Hepzato is given as an infusion directly into an artery that leads to the liver. It may kill cancer cells by damaging their DNA and stopping them from dividing. Hepzato is a type of alkylating agent.

## **Herceptin**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Herceptin binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Herceptin is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Hercessi, Herzuma, Kanjinti, Ogivri, Ontruzant, trastuzumab, and Trazimera.

## **Herceptin Hylecta**

A combination of trastuzumab and hyaluronidase used alone or with other drugs to treat adults with certain types of HER2-positive breast cancer. Trastuzumab binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Hyaluronidase allows trastuzumab to be given by injection under the skin. Herceptin Hylecta can be given in less time than trastuzumab alone, which is given as an infusion. Also called trastuzumab and hyaluronidase.

## **Hercessi**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Hercessi binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Hercessi is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Herzuma, Kanjinti, Ogivri, Ontruzant, trastuzumab, and Trazimera.

## **Herzuma**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Herzuma binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Herzuma is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Hercessi, Kanjinti, Ogivri, Ontruzant, trastuzumab, and Trazimera.

## **Hirschsprung disease**

A condition in which certain nerve cells are missing from the muscle layers of part of the large intestine. This causes severe constipation or blockage of the large intestine. Constipation is when stool becomes hard, dry, and difficult to pass and bowel movements occur less often than normal. Other symptoms include swollen abdomen, vomiting, bloody diarrhea, gas, lack of energy, and trouble gaining weight. Hirschsprung disease is present from birth, but the symptoms may not appear until later in a child's life. This condition has been linked to an increased risk of thyroid cancer and neuroblastoma. Also called aganglionic megacolon.

### **Hodgkin and Reed-Sternberg cell**

A type of cell that appears in people with Hodgkin disease. The number of these cells increases as the disease advances. Also called Reed-Sternberg cell.

### **Hodgkin disease**

A cancer of the immune system that is marked by the presence of a type of cell called the Reed-Sternberg cell. The two major types of Hodgkin disease are classic Hodgkin lymphoma and nodular lymphocyte-predominant Hodgkin lymphoma. Signs and symptoms include painless, swollen lymph nodes, an enlarged spleen, fever, weight loss, fatigue, and night sweats. Also called Hodgkin lymphoma.

### **Hodgkin lymphoma**

A cancer of the immune system that is marked by the presence of a type of cell called the Reed-Sternberg cell. The two major types of Hodgkin lymphoma are classic Hodgkin lymphoma and nodular lymphocyte-predominant Hodgkin lymphoma. Signs and symptoms include painless, swollen lymph nodes, an enlarged spleen, fever, weight loss, fatigue, and night sweats. Also called Hodgkin disease.

### **Horner syndrome**

A condition in which one side of the face is flushed, does not produce sweat, and has a constricted pupil and drooping eyelid. It can be caused by an injury to, or paralysis of, nerves in the neck, or by a tumor.

### **Hu3S193**

A monoclonal antibody that is being studied in the treatment of some types of cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. Hu3S193 binds to the protein Lewis(y), which is found on colon, breast, lung, ovary, and prostate cancer cells.

### **HuAFP31**

A monoclonal antibody being studied in the treatment of several types of cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. HuAFP31 attaches to tumor cells that make alpha fetoprotein (AFP). This makes it easier for T cells to find and kill the tumor cells.

### **HuHMFG1**

A monoclonal antibody that binds to the protein MUC1, which is found on breast, ovarian, pancreatic, gastric, and colon cancer cells. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. HuHMFG1 is being studied in the treatment of some types of cancer.

### **HuLuc63**

A drug used with dexamethasone and either lenalidomide or pomalidomide to treat adults with multiple myeloma. It is used in patients whose cancer was already treated with other anticancer therapies. HuLuc63 binds to a protein called CS1, which is found on myeloma cells and some types of immune cells. HuLuc63 may block CS1 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called elotuzumab and Empliciti.

### **HuMax-CD20**

A drug used alone or with other drugs to treat certain types of chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. HuMax-CD20 binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of leukemia and lymphoma cells. HuMax-CD20 may block CD20 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Arzerra and ofatumumab.

### **Huang Lian**

A Chinese herb that has been used as a treatment for a variety of medical problems. It is being studied as an anticancer drug.

### **Hurthle cell neoplasm**

An uncommon type of thyroid tumor that can be benign or malignant.

### **Hycamtin**

A drug used alone or with other drugs to treat certain types of ovarian cancer, small cell lung cancer, and cervical cancer. It is also being studied in the treatment of other types of cancer. Hycamtin blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called topotecan hydrochloride.

### **Hydrea**

A drug that contains the active ingredient hydroxyurea and is used alone or with other anticancer drugs or radiation therapy to treat certain types of chronic myelogenous leukemia and head and neck cancer. It is also being studied in the treatment of other conditions and types of cancer. Hydrea stops cells from making DNA and may kill cancer cells. It may also make cancer cells easier to kill with radiation therapy. Hydrea is a type of antimetabolite.

### **Hydrostat IR**

A drug used to treat moderate to severe pain. It may also be used to treat certain types of cough. Hydrostat IR is made from morphine and binds to opioid receptors in the central nervous system. It is a type of opioid and a type of analgesic agent. Also called Dilaudid, Exalgo, and hydromorphone hydrochloride.

### **Hypericum perforatum**

An herbal product sold as an over-the-counter treatment for depression. It is being studied for its ability to lessen certain side effects of cancer treatment. Also called St. John's wort.

### **Hytrin**

A drug used to treat urinary problems caused by an enlarged prostate. It is also used to treat high blood pressure and is being studied in the treatment of other conditions. Hytrin relaxes muscle tissue in blood vessels and in the prostate. It is a type of alpha blocker. Also called terazosin hydrochloride.

### **IBMFS**

Inherited bone marrow failure syndrome. A rare disorder in which a person's bone marrow is unable to make enough blood cells and there is a family history of the same disorder. There are several different inherited bone marrow failure syndromes. Patients with an IBMFS are at high risk of forming acute leukemia or certain solid tumors. Also called inherited bone marrow failure syndrome.

## **IBS**

A disorder of the intestines commonly marked by abdominal pain, bloating, and changes in a person's bowel habits. This may include diarrhea or constipation, or both, with one occurring after the other. Also called irritable bowel syndrome, irritable colon, mucus colitis, and spastic colon.

## **ICD**

A small device used to correct a heartbeat that is abnormal (too fast, too slow, or irregular). The device is placed by surgery in the chest or abdomen. Wires are passed through a vein to connect the device to the heart. When it detects abnormal heartbeats, it sends an electrical shock to the heart to restore the heartbeat to normal. Also called implantable cardioverter-defibrillator.

## **ICE**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin and Hodgkin lymphomas that have come back and do not respond to other treatments. It includes the drugs ifosfamide, carboplatin, and etoposide phosphate. Also called ICE regimen.

## **ICE regimen**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin and Hodgkin lymphomas that have come back and do not respond to other treatments. It includes the drugs ifosfamide, carboplatin, and etoposide phosphate. Also called ICE.

## **ICI 182780**

A drug used to treat certain types of breast cancer. It is used alone or with ribociclib succinate in postmenopausal women who have not been treated with hormone therapy or whose disease got worse after treatment with hormone therapy. It is also used with palbociclib or abemaciclib in women whose disease got worse after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. ICI 182780 binds to proteins called estrogen receptors, which are found in some breast cancer cells. These proteins may cause cancer cells to grow. ICI 182780 blocks these proteins and may keep cancer cells from growing. It is a type of antiestrogen. Also called Faslodex and fulvestrant.

## **ICI D1694**

An anticancer drug that stops tumor cells from growing by blocking the ability of cells to make DNA. It belongs to the family of drugs called thymidylate synthase inhibitors. Also called raltitrexed.

## **IDC-P**

A type of cancer that usually begins in the glandular (secretory) tissue that lines the prostate and spreads to the ducts within the prostate. IDC-P tends to be large when it is found and tends to grow and spread quickly to other parts of the body. It usually has a poor prognosis (chance of recovery) and is likely to come back after treatment. Also called intraductal carcinoma of the prostate and intraductal prostate carcinoma.

## **IDEC-Y2B8**

A drug used with the drug rituximab to treat certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of B-cell tumors. IDEC-Y2B8 contains a monoclonal antibody that binds to a protein called CD20, which is found on B cells. It also contains a radioactive substance called

yttrium Y 90, which may help kill cancer cells. IDEC-Y2B8 is a type of radioimmunoconjugate. Also called 90Y-ibritumomab tiuxetan, 90Y-Zevalin, and yttrium Y 90-ibritumomab tiuxetan.

### **IDH1 gene**

A gene that makes a protein that helps break down fats for energy and protect cells from harmful molecules. Mutations (changes) in the IDH1 gene have been found in several genetic conditions and in some types of cancer, including acute myelogenous leukemia, myelodysplastic syndromes, and brain cancer. These changes may cause abnormal cells, including cancer cells, to grow and spread in the body. Also called isocitrate dehydrogenase-1 gene.

### **IDH2 gene**

A gene that makes a protein that is found inside small structures in cells called mitochondria and that helps the mitochondria make energy for many cell functions. Mutations (changes) in the IDH2 gene have been found in certain genetic conditions and in some types of cancer, including acute myelogenous leukemia and brain cancer. These changes may cause abnormal cells, including cancer cells, to grow and spread in the body. Also called isocitrate dehydrogenase-2 gene.

### **IDRF**

A term used in the staging of neuroblastoma. It describes certain features of the tumor found on an imaging test, such as an MRI or CT scan, that affect how much of the tumor can be removed by surgery. For example, a tumor that surrounds major blood vessels, such as the aorta or vena cava, or involves two areas of the body, such as the neck and chest, is considered an IDRF. The presence of IDRFs means that it may be more difficult to remove the tumor safely and is a factor in how the stage of disease is determined. Also called image-defined risk factor.

### **IEN**

A term used to describe the presence of abnormal cells on the surface of or in the tissue that lines an organ, such as the cervix, breast, prostate, anus, vagina, vulva, penis, and mouth. The changes in the cells may be low grade or high grade, depending on how abnormal the cells look under a microscope and how much of the tissue is affected. Sometimes, the abnormal cells may become cancer and spread to nearby normal tissue. Also called intraepithelial neoplasia.

### **IEP**

An education plan for children with certain disabilities or health conditions, such as cancer. By law, these children must receive special education services and other support they need in school. An IEP describes which special services the child needs and how those needs will be met. This may include special class placement, extra help with class assignments and tests, tutoring, and other services such as counseling, speech therapy, and physical therapy. IEPs are covered in the U.S. law, Individuals with Disabilities Education Act. Also called individualized education plan.

### **IFA**

A mixture of oil and water that is combined with a specific antigen to boost the immune response to that antigen. It is being studied in immunotherapy and as a way to increase the immune response to cancer vaccines. It is a type of immune modulator. Also called incomplete Freund's adjuvant and Montanide ISA-51.



### **IFN alpha-2B**

A drug used alone or with other drugs to treat adults with AIDS-related Kaposi sarcoma, hairy cell leukemia, certain types of follicular lymphoma or melanoma, genital warts or perianal warts, or chronic hepatitis B or C. It is also being studied in the treatment of other types of cancer and other conditions. IFN alpha-2B is a form of interferon alfa (a substance normally made by cells in the immune system) that is made in the laboratory. It is a type of cytokine and a type of immunomodulating agent. Also called interferon alfa-2b, Intron A, and recombinant interferon alfa-2b.

### **IGF**

A protein made by the body that stimulates the growth of many types of cells. IGF is similar to insulin (a hormone made in the pancreas). There are two forms of IGF called IGF-1 and IGF-2. Higher than normal levels of IGF-1 may increase the risk of several types of cancer. IGF is a type of growth factor and a type of cytokine. Also called insulin-like growth factor and somatomedin.

### **IGF-1R inhibitor OSI-906**

A substance being studied in the treatment of cancer. It blocks a protein called IGF-1R, which is found at high levels in some types of tumors. IGF-1R is needed for cell growth and blocking it may cause tumor cells to die. IGF-1R inhibitor OSI-906 is a type of IGF-1R inhibitor. Also called OSI-906.

### **IGFR**

A protein found on the surface of some types of cells that binds to insulin-like growth factor (IGF). This causes the cells to grow and divide. IGFR is found at high levels on the surface of several types of cancer cells, which causes these cells to grow rapidly in the presence of IGF. Also called insulin-like growth factor receptor.

### **IGRT**

A procedure that uses a computer to create a picture of a tumor to help guide the radiation beam during radiation therapy. The pictures are made using CT, ultrasound, X-ray, or other imaging techniques. IGRT makes radiation therapy more accurate and causes less damage to healthy tissue. Also called image-guided radiation therapy.

### **IH636 grape seed extract**

A substance being studied for its ability to prevent damage to normal tissue caused by radiation therapy. It is a type of antioxidant.

### **IL**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. ILs regulate immune responses. ILs made in the laboratory are used as biological response modifiers to boost the immune system in cancer therapy. An interleukin is a type of cytokine. Also called interleukin.

### **IL-1**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-1 is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. There are two forms of IL-1, alpha and beta, which act the same.

IL-1 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-1 is a type of cytokine. Also called interleukin-1.

### **IL-1-alfa**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-1-alfa, one form of IL-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of IL-1, IL-1-beta, acts the same as IL-1-alfa. IL-1-alfa made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-1-alfa is a type of cytokine. Also called IL-1-alpha, interleukin-1-alfa, and interleukin-1-alpha.

### **IL-1-alpha**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-1-alpha, one form of IL-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of IL-1, IL-1-beta, acts the same as IL-1-alpha. IL-1-alpha made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-1-alpha is a type of cytokine. Also called IL-1-alfa, interleukin-1-alfa, and interleukin-1-alpha.

### **IL-1-beta**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-1-beta, one form of IL-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of IL-1, IL-1-alpha, acts the same as IL-1-beta. IL-1-beta made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-1-beta is a type of cytokine. Also called IL-1B and interleukin-1-beta.

### **IL-10**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-10 is made by activated macrophages and by some T lymphocytes. It reduces inflammation by blocking production of cytokines by immune cells. IL-10 also increases antibody production by plasma cells and helps them live longer. IL-10 made in the laboratory is used as a biological response modifier to boost the immune system. It is a type of cytokine. Also called interleukin-10.

### **IL-11**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-11 is made by support cells in the bone marrow. It causes the growth of several types of blood cells. Oprelvekin (IL-11 made in the laboratory) is used as a biological response modifier to increase the number of platelets, especially in patients receiving chemotherapy for cancer. IL-11 is a type of cytokine. Also called interleukin-11.

## **IL-12**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-12 is made mainly by B lymphocytes and macrophages. It causes other immune cells to make cytokines and increases the growth of T lymphocytes. It may also block the growth of new blood vessels. IL-12 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-12 is a type of cytokine. Also called interleukin-12.

## **IL-13**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-13 is made by a type of T lymphocyte. It reduces inflammation by blocking production of cytokines by macrophages. It also increases the number and activity of B lymphocytes. IL-13 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. It is a type of cytokine. Also called interleukin-13.

## **IL-1B**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-1B, one form of IL-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of IL-1, IL-1-alpha, acts the same as IL-1B. IL-1B made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-1B is a type of cytokine. Also called IL-1-beta and interleukin-1-beta.

## **IL-2**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-2 is made by a type of T lymphocyte. It increases the growth and activity of other T lymphocytes and B lymphocytes, and affects the development of the immune system. Aldesleukin (IL-2 made in the laboratory) is being used as a biological response modifier to boost the immune system in cancer therapy. IL-2 is a type of cytokine. Also called interleukin-2.

## **IL-3**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-3 is made mainly by a type of T lymphocyte. It increases the number of blood cells made by the bone marrow. IL-3 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-3 is a type of cytokine. Also called interleukin-3.

## **IL-4**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-4 is made by a type of T lymphocyte. It causes B lymphocytes to increase and to make antibodies and also increases the production of T lymphocytes. IL-4 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-4 is a type of cytokine. Also called interleukin-4.

## **IL-5**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-5 is made mainly by some T lymphocytes. It causes B lymphocytes to make more antibodies and increases the number of eosinophils.

IL-5 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. It is a type of cytokine. Also called interleukin-5.

#### **IL-6**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-6 is made mainly by some T lymphocytes. It causes B lymphocytes to make more antibodies and also causes fever by affecting areas of the brain that control body temperature. IL-6 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-6 is a type of cytokine. Also called interleukin-6.

#### **IL-7**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. IL-7 is made by cells that cover and support organs, glands, and other structures in the body. It causes the growth of T lymphocytes and B lymphocytes. IL-7 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. IL-7 is a type of cytokine. Also called interleukin-7 and lymphopoietin-1.

#### **ILX-295501**

A substance that is being studied as an anticancer drug. It belongs to the family of drugs called diarylsulfonylureas.

#### **ILX23-7553**

A substance that is being studied as an anticancer drug.

#### **IM**

Within or into muscle. Also called intramuscular.

#### **IM-862**

An anticancer drug that belongs to the family of drugs called angiogenesis inhibitors.

#### **IMC-1121B**

A drug that binds to the protein vascular endothelial growth factor (VEGF) to help keep new blood vessels from forming and is used to treat different types of cancer. It is used alone or with other drugs to treat certain types of non-small cell lung cancer, hepatocellular carcinoma (a type of liver cancer), colorectal cancer, stomach cancer, and gastroesophageal junction cancer. It is also being studied in the treatment of other types of cancer. IMC-1121B may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody. Also called anti-VEGFR-2 fully human monoclonal antibody IMC-1121B, Cyramza, and ramucirumab.

#### **IMC-A12**

A substance being studied in the treatment of some types of cancer. It is a monoclonal antibody that is made in the laboratory and can bind to substances in the body. IMC-A12 blocks the action of a protein needed for cell growth and may kill cancer cells. It is a type of insulin-like growth factor-1 receptor (IGF-1R) inhibitor. Also called cixutumumab.

#### **IMMU-106**

A substance being studied in the treatment of several types of lymphoma. It binds to the protein CD20, which is found on B cells (a type of immune system

cell) and some types of lymphoma cells. This causes the immune system to kill the cancer cells. IMMU-106 is a type of monoclonal antibody. Also called hA20, HCD20, and velutuzumab.

### **IMMU-110**

A substance being studied in the treatment of multiple myeloma and several other types of cancer. It binds to CD74, a protein on the surface of myeloma cells and certain other types of cells. It may help kill cancer cells. IMMU-110 is a type of monoclonal antibody. Also called hLL1 and milatuzumab.

### **IMRT**

A type of 3-dimensional radiation therapy that uses computer-generated images to show the size and shape of the tumor. Thin beams of radiation of different intensities are aimed at the tumor from many angles. This type of radiation therapy reduces the damage to healthy tissue near the tumor. Also called intensity-modulated radiation therapy.

### **IND**

A substance that has been tested in the laboratory and has been approved by the U.S. Food and Drug Administration (FDA) for testing in people. Clinical trials test how well INDs work and whether they are safe to use. An IND may be approved by the FDA for use in one disease or condition but still be considered investigational in other diseases or conditions. Also called experimental drug, investigational agent, investigational drug, and investigational new drug.

### **INS316**

A substance being studied in the diagnosis of lung diseases, including lung cancer. It helps bring up a sample of mucus from deep in the lungs and improves the quality of the sample for testing. It is a type of nucleoside triphosphate.

### **IORT**

Radiation treatment aimed directly at a tumor during surgery. Also called intraoperative radiation therapy.

### **IOUS**

A procedure that uses ultrasound (high-energy sound waves that are bounced off internal tissues and organs) during surgery. Sonograms (pictures made by ultrasound) of the inside of the body are viewed on a computer to help a surgeon find tumors or other problems during the operation. Also called intraoperative ultrasound.

### **IP**

Within the peritoneal cavity (the area that contains the abdominal organs). Also called intraperitoneal.

### **IP6**

A substance found in many foods that come from plants, including corn, wheat, rice, and soybeans, and in large amounts in cereals and legumes. It is being studied in the prevention of cancer. Also called inositol hexaphosphate and phytic acid.

### **IRB**

A group of scientists, doctors, clergy, and patient advocates that reviews and approves the detailed plan for a clinical trial. IRBs are meant to protect the people who take part in a clinical trial. They check to see that the trial is well

designed, legal, ethical, does not involve unneeded risks, and includes a safety plan for patients. There is an IRB at every health care facility that does clinical research, and every trial is reviewed by an IRB before the trial begins. Also called Institutional Review Board.

### **ISIS 2503**

A substance that is being studied in the treatment of cancer.

### **ISIS 3521**

A substance that is being studied in the treatment of cancer.

### **ISIS 5132**

A substance that is being studied in the treatment of cancer.

### **ITD**

A type of genetic change in which a DNA sequence in a gene is copied and inserted right after the original DNA sequence. This changes the sequence of the gene, which can affect the function of the protein made from the gene. ITDs are associated with certain types of cancer, such as acute myeloid leukemia. Also called internal tandem duplication.

### **ITP**

A condition in which platelets (blood cells that cause blood clots to form) are destroyed by the immune system. The low platelet count causes easy bruising and bleeding, which may be seen as purple areas in the skin, mucous membranes, and outer linings of organs. Also called idiopathic thrombocytopenic purpura, immune thrombocytopenia, and immune thrombocytopenic purpura.

### **IU**

A unit used to measure the activity of many vitamins, hormones, enzymes, and drugs. An IU is the amount of a substance that has a certain biological effect. For each substance there is an international agreement on the biological effect that is expected for 1 IU. Also called International Unit.

### **IUD**

A small, plastic T-shaped device that is placed inside the uterus (the small, hollow, pear-shaped organ in a woman's pelvis in which a fetus develops) to prevent pregnancy. IUDs prevent sperm from fertilizing an egg, and prevent fertilized eggs from implanting in the uterus. The use of IUDs is also being studied in the prevention and treatment of endometrial cancer and other conditions. Also called intrauterine device.

### **IV**

Into or within a vein. IV usually refers to a way of giving a drug or other substance through a needle or tube inserted into a vein. Also called intravenous.

### **IVF**

A procedure in which eggs are removed from a woman's ovary and combined with sperm outside the body to form embryos. The embryos are grown in the laboratory for several days and then either placed in a woman's uterus or cryopreserved (frozen) for future use. Also called in vitro fertilization.

### **IVIG**

A substance made from antibodies that have been taken from the blood of many healthy donors. It is given to a patient through a needle or tube inserted into a



vein. IVIGs are used to treat certain types of immune disorders in which there are low amounts of antibodies in the blood. They are also used to treat many different autoimmune disorders, infections, or other conditions. They may also be used to help prevent infections in patients who have had a stem cell or organ transplant. IVIGs are a type of immunotherapy. Also called intravenous immunoglobulin.

### **IVP**

An x-ray image of the kidneys, ureters, and bladder, and prostate in men, that is taken after a contrast dye is injected into a vein. As the dye travels through the bloodstream, it collects in these organs, turning them bright white. This allows the health care provider to see blockages or other urinary tract problems on the x-ray pictures. An IVP may be used to help diagnose certain urinary tract conditions, such as kidney or bladder stones, kidney cysts, urinary tract tumors, and an enlarged prostate. Also called intravenous pyelogram, intravenous urogram, and IVU.

### **IVU**

An x-ray image of the kidneys, ureters, and bladder, and prostate in men, that is taken after a contrast dye is injected into a vein. As the dye travels through the bloodstream, it collects in these organs, turning them bright white. This allows the health care provider to see blockages or other urinary tract problems on the x-ray pictures. An IVU may be used to help diagnose certain urinary tract conditions, such as kidney or bladder stones, kidney cysts, urinary tract tumors, and an enlarged prostate. Also called intravenous pyelogram, intravenous urogram, and IVP.

### **Ibrance**

A drug used to treat women and men with certain types of hormone-receptor positive, HER2-negative breast cancer that is advanced or has spread. It is also being studied in the treatment of other types of cancer. Ibrance blocks certain proteins, which may help keep cancer cells from growing. It is a type of cyclin-dependent kinase inhibitor. Also called palbociclib.

### **Iclusig**

A drug used alone or with other drugs to treat adults with certain types of chronic myelogenous leukemia or Philadelphia chromosome–positive acute lymphoblastic leukemia. It is used in patients whose cancer is newly diagnosed, has the T315I mutation, or cannot be treated with other kinase inhibitors. It is also being studied in the treatment of other types of cancer. Iclusig blocks BCR::ABL and other proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Iclusig is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called ponatinib hydrochloride.

### **Idamycin PFS**

A drug used with other drugs to treat adults with acute myeloid leukemia. It is also being studied in the treatment of other types of cancer. Idamycin PFS blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called 4-demethoxydaunorubicin and idarubicin hydrochloride.

### **Idhifa**

A drug used to treat adults with acute myeloid leukemia that has come back or has not gotten better with other treatment. It is used in patients whose cancer

has a mutation (change) in the IDH2 gene. It is also being studied in the treatment of other types of cancer. Idhifa blocks the protein made by the mutated IDH2 gene. Blocking this protein may help keep cancer cells from growing. Idhifa is a type of enzyme inhibitor. Also called enasidenib mesylate.

### **Ifex**

A drug used with other drugs to treat malignant testicular germ cell tumors that have already been treated with two other types of anticancer drugs. It is also being studied in the treatment of other types of cancer. Ifex damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of antimetabolite. Also called ifosfamide.

### **Ig**

A protein that is made by B cells and plasma cells (types of white blood cells) and helps the body fight infection. Some Igs may be found in higher than normal amounts in patients with certain conditions or certain types of cancer, including multiple myeloma and Waldenstrom macroglobulinemia. Measuring the amount of specific Igs in the blood and urine may help diagnose cancer or find out how well treatment is working or if cancer has come back. Some Igs may be used as tumor markers. Also called immunoglobulin.

### **IgG-RFT5-dgA**

A monoclonal antibody linked to a toxic substance. It is being studied in the treatment of melanoma that has spread to distant parts of the body. IgG-RFT5-dgA is made in the laboratory. It can find and kill certain white blood cells that prevent the immune system from killing cancer cells. Also called RFT5-dgA immunotoxin.

### **Imbruvica**

A drug used alone or with other drugs to treat adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, or Waldenstrom macroglobulinemia (a type of non-Hodgkin lymphoma). It is also used to treat adults and children aged 1 year and older with chronic graft versus host disease. It is also being studied in the treatment of other types of cancer. Imbruvica blocks a protein called BTK, which may help keep cancer cells from growing. It may also lower the body's immune response. Imbruvica is a type of tyrosine kinase inhibitor. Also called ibrutinib.

### **Imdelltra**

A drug used to treat adults with extensive-stage small cell lung cancer that got worse during or after treatment with platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Imdelltra binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called DLL3, which is found on some types of cancer cells. This may help the immune system kill cancer cells. Imdelltra is a type of bispecific T-cell engager. Also called tarlatamab.

### **Imfinzi**

A drug that binds to the protein PD-L1 to help immune cells kill cancer cells better and is used to treat different types of cancer. Imfinzi is used alone or with other drugs to treat adults with certain types of biliary tract cancer (including bile duct cancer and gallbladder cancer), endometrial cancer, hepatocellular carcinoma (a type of liver cancer), non-small cell lung cancer, and small cell lung cancer. It is also being studied in the treatment of other types of cancer. Imfinzi may block PD-L1 and help the immune system kill cancer cells. It is a type of

monoclonal antibody and a type of immune checkpoint inhibitor. Also called durvalumab.

### **Imjudo**

A drug that binds to the protein CTLA-4 to help immune cells kill cancer cells better and is used to treat different types of cancer. Imjudo is used with durvalumab to treat adults with hepatocellular carcinoma (a type of liver cancer) that cannot be removed by surgery. It is also used with durvalumab and platinum chemotherapy to treat adults with non-small cell lung cancer that has spread to other parts of the body and does not have an abnormal EGFR or ALK gene. It is also being studied in the treatment of other types of cancer. Imjudo may block CTLA-4 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called tremelimumab.

### **Imlygic**

A drug used to treat melanoma that has recurred (come back) after surgery. It is used in patients whose cancer is in the skin and lymph nodes and cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Imlygic is made with a form of the herpesvirus that has been changed in the laboratory to infect and break down cancer cells without harming normal cells. It may also help the immune system kill cancer cells. Imlygic is injected directly into tumors in the skin and lymph nodes. It is a type of oncolytic virus therapy. Also called T-VEC and talimogene laherparepvec.

### **Imodium**

A drug used to treat diarrhea. Imodium slows the movement of the muscles in the small intestine to allow more water to be taken out of the feces (waste matter) and more nutrients to be absorbed. Also called loperamide hydrochloride.

### **Inderal**

A drug that contains the active ingredient propranolol hydrochloride and is used to treat high blood pressure, including before surgery in patients with pheochromocytoma, and many other conditions. It is also being studied in the treatment of other conditions and some types of cancer. Inderal blocks certain receptors on nerve cells and causes blood vessels to relax and widen. This improves blood flow and lowers blood pressure and heart rate. Inderal is a type of beta blocker.

### **Indian cress**

Parts of the flowering plant have been used in some cultures to treat certain medical problems. It may have anticancer effects. The scientific name is *Nasturtium officinale*. Also called watercress.

### **Indian elm**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called gray elm, red elm, slippery elm, sweet elm, *Ulmus fulva*, and *Ulmus rubra*.

### **Indian rhubarb**

The root of this plant has been used in some cultures to treat certain medical problems. It may have anti-inflammatory and anticancer effects. The scientific name is *Rheum palmatum* or *Rheum officinale*. Also called Chinese rhubarb, da-huang, rhubarb, and Turkish rhubarb.

### Indian saffron

An East Indian plant that is a member of the ginger family and is used as a spice and food color. It is a major ingredient found in curry powder. The underground stem of the Indian saffron plant has been used for many years in traditional Asian medicine to treat certain conditions. The substance in Indian saffron that gives it a yellow color is called curcumin, which may have antioxidant and anti-inflammatory effects in the body. Indian saffron can be made into a capsule, tablet, extract, powder, or tea and taken by mouth as a dietary supplement. It can also be made into a paste to treat skin conditions. Indian saffron is being studied in the prevention and treatment of some types of cancer. Its scientific name is *Curcuma longa*. Also called jiang huang and turmeric.

### Indian valerian

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, garden valerian, Mexican valerian, Pacific valerian, valerian, *Valeriana officinalis*, and *Valerianae radix*.

### Infugem

A drug used alone or with other drugs to treat certain types of breast, non-small cell lung, ovarian, and pancreatic cancers that are advanced or have spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Infugem stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called gemcitabine hydrochloride and Gemzar.

### Inlyta

A drug used alone or with other drugs to treat advanced renal cell carcinoma (a type of kidney cancer). It is used in patients whose cancer has not already been treated or whose cancer has not gotten better after treatment with one other systemic therapy. It is also being studied in the treatment of other types of cancer. Inlyta blocks proteins called growth factor receptors, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Inlyta is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called axitinib.

### Innohep

A drug that is used with another drug, warfarin, to treat blood clots that form deep in the veins and to prevent new blood clots from forming. It is a type of anticoagulant. Also called tinzaparin sodium.

### Inqovi

A combination of decitabine and cedazuridine used to treat adults with myelodysplastic syndromes, including chronic myelomonocytic leukemia. It is also being studied in the treatment of other types of cancer. Decitabine stops cells from making DNA, which may help keep cancer cells from growing and may kill them. Cedazuridine prevents the breakdown of decitabine in the body, which may allow more cancer cells to be killed. Inqovi is a type of antimetabolite and a type of cytidine deaminase inhibitor. Also called decitabine and cedazuridine.

### Inrebic

A drug used to treat adults with intermediate-risk or high-risk myelofibrosis (MF), including primary MF, post-polycythemia vera MF, and post-essential thrombocythemia MF. It is also being studied in the treatment of other conditions. Inrebic blocks JAK2 and other proteins, which may help keep abnormal blood

cells or cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called fedratinib hydrochloride.

### **Institutional Review Board**

A group of scientists, doctors, clergy, and patient advocates that reviews and approves the detailed plan for a clinical trial. Institutional Review Boards are meant to protect the people who take part in a clinical trial. They check to see that the trial is well designed, legal, ethical, does not involve unneeded risks, and includes a safety plan for patients. There is an Institutional Review Board at every health care facility that does clinical research, and every trial is reviewed by an Institutional Review Board before the trial begins. Also called IRB.

### **International Unit**

A unit used to measure the activity of many vitamins, hormones, enzymes, and drugs. An International Unit is the amount of a substance that has a certain biological effect. For each substance there is an international agreement on the biological effect that is expected for 1 International Unit. Also called IU.

### **Intron A**

A drug used alone or with other drugs to treat adults with AIDS-related Kaposi sarcoma, hairy cell leukemia, certain types of follicular lymphoma or melanoma, genital warts or perianal warts, or chronic hepatitis B or C. It is also being studied in the treatment of other types of cancer and other conditions. Intron A is a form of interferon alfa (a substance normally made by cells in the immune system) that is made in the laboratory. It is a type of cytokine and a type of immunomodulating agent. Also called IFN alpha-2B, interferon alfa-2b, and recombinant interferon alfa-2b.

### **Iressa**

A drug used to treat non-small cell lung cancer that has spread to other parts of the body and has certain mutations (changes) in the EGFR gene. It is used in patients whose cancer has not already been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Iressa blocks certain proteins made by the EGFR gene, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Iressa is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called gefitinib and ZD1839.

### **Isaac syndrome**

A rare nerve disorder that causes constant muscle activity that cannot be controlled, even during sleep. It often affects the muscles in the arms and legs, but may affect the whole body. Symptoms include muscle twitching, weakness, stiffness, and cramping; increased skin temperature, sweating, and heart rate; and problems with chewing, swallowing, speech, and breathing. The disorder often gets worse over time. Isaac syndrome usually occurs in people aged 15 to 60 years. It may occur with certain types of cancer and is sometimes inherited. Also called neuromyotonia.

### **Istodax**

A drug used to treat adults with cutaneous T-cell lymphoma that has already been treated with at least one other type of systemic therapy. It is also being studied in the treatment of other types of cancer. Istodax blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of depsipeptide and a type of histone deacetylase inhibitor. Also called FR901228 and romidepsin.

## **Iwifin**

A drug used to reduce the risk of relapse in adults and children with high-risk neuroblastoma that has gotten better after treatment with certain prior therapies. It is also being studied in the treatment of other conditions and types of cancer. Iwifin blocks an enzyme called ornithine decarboxylase, which may help keep cancer cells from growing. It is a type of enzyme inhibitor. Also called eflornithine hydrochloride.

## **Ixemptra**

A drug used alone or with capecitabine to treat breast cancer that is locally advanced or has spread to other parts of the body and did not get better after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Ixemptra blocks cell growth by stopping cell division and may kill cancer cells. It is a type of epothilone analog and a type of antimicrotubule agent. Also called BMS-247550 and ixabepilone.

## **J-107088**

A substance being studied in the treatment of cancer. It is a type of topoisomerase I inhibitor. Also called edotecarin.

## **J-pouch coloanal anastomosis**

A surgical procedure in which the colon is attached to the anus after the rectum has been removed. A 2-4 inch section of the colon is formed into a J-shaped pouch in order to replace the function of the rectum and store stool until it can be eliminated. This procedure is similar to the side-to-end coloanal anastomosis but a larger pouch is formed.

## **J-pouch colorectal anastomosis**

A surgical procedure in which the colon is attached to the remainder of the rectum after most of it has been removed during surgery for rectal cancer. A 2-inch to 4-inch section of the colon is formed into a J-shaped pouch to store stool until it can be eliminated.

## **JAK2 gene**

A gene that makes a protein that sends signals in cells to promote cell growth and helps control the number of red blood cells, white blood cells, and platelets that are made in the bone marrow. Mutated (changed) forms of the JAK gene have been found in some types of blood conditions, including polycythemia vera, essential thrombocythemia, and primary myelofibrosis. These changes may cause the body to make too many blood cells.

## **JEB**

An abbreviation for a chemotherapy combination used to treat childhood ovarian and testicular germ cell cancers that have spread. It includes the drugs carboplatin (JM8), etoposide phosphate, and bleomycin sulfate. Also called JEB regimen.

## **JEB regimen**

An abbreviation for a chemotherapy combination used to treat childhood ovarian and testicular germ cell cancers that have spread. It includes the drugs carboplatin (JM8), etoposide phosphate, and bleomycin sulfate. Also called JEB.

## **JM 216**

A substance being studied in the treatment of prostate and other types of cancer. It contains the metal platinum and may kill cancer cells by damaging their DNA



and stopping them from dividing. It is a type of alkylating agent. Also called BMS-182751 and satraplatin.

### **JMML**

A rare form of childhood leukemia in which cancer cells often spread into tissues such as the skin, lung, and intestines. Also called juvenile myelomonocytic leukemia.

### **JPS**

A rare, inherited disorder in which multiple abnormal growths called juvenile polyps form in the gastrointestinal tract, usually before the age of 20 years. To be diagnosed with JPS, a person must have one or more of the following: (1) more than five juvenile polyps in the colon or rectum; (2) juvenile polyps in other parts of the gastrointestinal tract, including the stomach or small intestine; (3) any number of juvenile polyps and a family history of JPS. Other signs and symptoms include diarrhea, gastrointestinal bleeding, abdominal pain, anemia, extra fingers and toes, and abnormalities of the heart, brain, roof of the mouth, intestines, urinary tract, and genitals. People with JPS also have an increased risk of colorectal cancer, stomach cancer, small intestine cancer, and pancreatic cancer. JPS is caused by mutations (changes) in the SMAD4 or BMPR1A genes that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called juvenile polyposis syndrome.

### **JS-101**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in JS-101 have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give JS-101 as a treatment for any disease. Also called 126-F, Cancell, Cantron, Jim's Juice, JS-114, Protocol, and Sheridan's Formula.

### **JS-114**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in JS-114 have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give JS-114 as a treatment for any disease. Also called 126-F, Cancell, Cantron, Jim's Juice, JS-101, Protocol, and Sheridan's Formula.

### **Jakafi**

A drug used to treat adults with certain types of primary myelofibrosis (MF), post-polycythemia vera MF, post-essential thrombocythemia MF, or polycythemia vera, and adults and children aged 12 years and older with acute or chronic graft-versus-host disease. It is also being studied in the treatment of some types of cancer. Jakafi blocks a protein called JAK, which may help keep abnormal blood cells or cancer cells from growing. It may also lower the body's immune response. Jakafi is a type of tyrosine kinase inhibitor. Also called ruxolitinib phosphate.

### **Jamshidi needle**

A long, hollow needle with a tapered cutting edge on one end and a handle with a place to attach a syringe on the other end. It is used to remove a sample of tissue from the bone marrow. The needle is inserted through the bone into the bone marrow and the syringe is attached to the top to remove the sample or to

deliver drugs or fluid into the bone. A Jamshidi needle is a type of bone marrow needle.

### **Javlor**

A substance being studied in the treatment of bladder cancer, lung cancer, and other types of cancer. Also called vinflunine.

### **Jaypirca**

A drug used to treat adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, or mantle cell lymphoma that was treated with at least two other types of therapy, including a BTK inhibitor. It is also being studied in the treatment of other types of cancer. Jaypirca blocks a protein called BTK, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called pirtobrutinib.

### **Jelmyto**

A drug that contains the active ingredient mitomycin, which comes from the bacterium *Streptomyces*, and is used to treat adults with a certain type of urothelial cancer. It is given as a solution through a catheter that is placed into the ureter or kidney. Jelmyto damages the cell's DNA and may kill cancer cells. It is a type of antineoplastic antibiotic and a type of alkylating agent.

### **Jemperli**

A drug used alone or with other drugs to treat adults with certain types of endometrial cancer or other solid tumors that have come back or are advanced. These include cancers that have certain mutations (changes) in genes involved in DNA repair. It is also being studied in the treatment of other types of cancer. Jemperli binds to a protein called PD-1, which is found on T cells (a type of immune cell). Jemperli may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called dostarlimab.

### **Jevtana**

A drug used with prednisone to treat prostate cancer that has spread to other parts of the body and is castration resistant (has not responded to treatments that lower testosterone levels). It is used in patients who have already been treated with anticancer drugs that included docetaxel. It is also being studied in the treatment of other types of cancer. Jevtana stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called cabazitaxel and taxoid XRP6258.

### **Jewett staging system**

A staging system for prostate cancer that uses ABCD. "A" and "B" refer to cancer that is confined to the prostate. "C" refers to cancer that has grown out of the prostate but has not spread to lymph nodes or other places in the body. "D" refers to cancer that has spread to lymph nodes or to other places in the body. Also called ABCD rating and Whitmore-Jewett staging system.

### **Jim's Juice**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in Jim's Juice have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give Jim's Juice as a treatment for any disease. Also called 126-F, Cancell, Cantron, JS-101, JS-114, Protocol, and Sheridan's Formula.

**KGF**

A natural substance that stimulates the growth of epithelial cells in the skin and in the lining of the mouth, stomach, and intestines. A form of KGF made in the laboratory is called recombinant human keratinocyte growth factor. Also called keratinocyte growth factor.

**KLH**

A substance taken from a marine organism that may be linked to a specific antigen to boost the immune response to that antigen. KLH is being studied as a way to increase the immune response to cancer vaccines. It is a type of immune modulator. Also called keyhole limpet hemocyanin.

**KOS-862**

A substance being studied in the treatment of cancer. It is a type of mitotic inhibitor and epothilone. Also called epothilone D.

**KPS**

A standard way of measuring the ability of cancer patients to perform ordinary tasks. The KPS scores range from 0 to 100. A higher score means the patient is better able to carry out daily activities. KPS may be used to determine a patient's prognosis, to measure changes in a patient's ability to function, or to decide if a patient could be included in a clinical trial. Also called Karnofsky Performance Status.

**KRAS gene**

A gene that makes a protein that is involved in cell signaling pathways that control cell growth, cell maturation, and cell death. The natural, unchanged form of the gene is called wild-type KRAS. Mutated (changed) forms of the KRAS gene have been found in some types of cancer, including non-small cell lung cancer, colorectal cancer, and pancreatic cancer. These changes may cause cancer cells to grow and spread in the body. Knowing whether a patient's tumor has a wild-type or mutated KRAS gene may help plan cancer treatment.

**KRN5500**

An anticancer drug that is a type of antitumor antibiotic. It is an anthracycline.

**KRN7000**

A drug being studied in the treatment of cancer. It is a biological response modifier that is a type of glycosphingolipid or agelasphin.

**KRT14 gene**

A gene that makes a protein that is a type of keratin involved in forming the structure of certain cells, especially those that make up the skin, hair, and nails, and in the development of sweat glands and fingerprints. Mutations (changes) in the KRT14 gene have been found in an inherited condition called epidermolysis bullosa simplex, which causes the skin to tear and blister easily. People with this condition have an increased risk of developing skin cancer.

**KRT5 gene**

A gene that makes a protein that is a type of keratin involved in forming the structure of certain cells, especially those that make up the skin, hair, and nails, and in the development of skin color. Mutations (changes) in the KRT5 gene have been found in an inherited condition called epidermolysis bullosa simplex, which causes the skin to tear and blister easily. People with this condition have an increased risk of developing skin cancer.

## **KSHV**

A type of virus that causes Kaposi sarcoma (a rare cancer in which lesions grow in the skin, lymph nodes, lining of the mouth, nose, and throat, and other tissues of the body). KSHV also causes certain types of lymphoma (cancer that begins in cells of the immune system). Also called HHV8, human herpesvirus 8, and Kaposi sarcoma-associated herpesvirus.

## **KW2189**

A semisynthetic anticancer drug that is a type of antitumor antibiotic.

## **KX2-391**

A substance being studied in the treatment of cancer. KX2-391 blocks an enzyme needed for growth of cells and may kill cancer cells. It is a type of Src kinase inhibitor.

## **Kadcyla**

A drug used to treat certain patients with HER2-positive breast cancer that has already been treated with trastuzumab and a type of anticancer drug called a taxane. It is also being studied in the treatment of other types of cancer. Kadcyla contains a monoclonal antibody called trastuzumab that binds to a protein called HER2, which is found on some breast cancer cells. It also contains an anticancer drug called DM1, which may help kill cancer cells. Kadcyla is a type of antibody-drug conjugate. Also called ado-trastuzumab emtansine and T-DM1.

## **Kahler disease**

A type of cancer that begins in plasma cells (white blood cells that produce antibodies). Also called multiple myeloma, myelomatosis, and plasma cell myeloma.

## **Kaletra**

A combination of the drugs ritonavir and lopinavir. It is used to treat infection with HIV (the virus that causes AIDS). It is also being studied in the treatment of some types of cancer. Kaletra blocks the ability of HIV to make copies of itself and may help other anticancer drugs work better or may block the growth of cancer cells. Ritonavir blocks the breakdown of lopinavir. Kaletra is a type of anti-HIV agent and a type of protease inhibitor. Also called lopinavir/ritonavir.

## **Kanjinti**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Kanjinti binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Kanjinti is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Hercessi, Herzuma, Ogivri, Ontruzant, trastuzumab, and Trazimera.

## **Kaposi sarcoma**

A type of cancer in which lesions (abnormal areas) grow in the skin, lymph nodes, lining of the mouth, nose, and throat, and other tissues of the body. The lesions are usually purple and are made of cancer cells, new blood vessels, and blood cells. They may begin in more than one place in the body at the same time. Kaposi sarcoma is caused by Kaposi sarcoma-associated herpesvirus (KSHV). In the United States, it usually occurs in people who have a weak immune system caused by AIDS or by drugs used in organ transplants. It is also

seen in older men of Jewish or Mediterranean descent, or in young men in Africa.

### **Kaposi sarcoma-associated herpesvirus**

A type of virus that causes Kaposi sarcoma (a rare cancer in which lesions grow in the skin, lymph nodes, lining of the mouth, nose, and throat, and other tissues of the body). Kaposi sarcoma-associated herpesvirus also causes certain types of lymphoma (cancer that begins in cells of the immune system). Also called HHV8, human herpesvirus 8, and KSHV.

### **Karnofsky Performance Status**

A standard way of measuring the ability of cancer patients to perform ordinary tasks. The Karnofsky Performance Status scores range from 0 to 100. A higher score means the patient is better able to carry out daily activities. Karnofsky Performance Status may be used to determine a patient's prognosis, to measure changes in a patient's ability to function, or to decide if a patient could be included in a clinical trial. Also called KPS.

### **Kasabach-Merritt syndrome**

A rare condition in which the blood is not able to clot and serious bleeding may occur. It occurs in some patients who have blood vessel tumors called tufted angiomas and kaposiform hemangioendotheliomas. These tumors usually form on the skin but may also form in deeper tissues, such as muscle and bone. The tumors may grow quickly and trap and destroy platelets, which are needed to form clots and stop bleeding. Kasabach-Merritt syndrome is most common in infants and young children.

### **Kassebaum Kennedy Act**

A 1996 U.S. law that allows workers and their families to keep their health insurance when they change or lose their jobs. The privacy rule of the Kassebaum Kennedy Act protects the privacy of a person's health information and keeps it from being misused. It gives people the right to receive and review their health records and to choose with whom their health care providers and health insurance companies share their information (including friends, family members, and caregivers). The law also includes standards for setting up and maintaining secure electronic health records. Also called Health Insurance Portability and Accountability Act and HIPAA.

### **Kemstro**

A drug that is used to treat certain types of muscle spasms and is being studied in the treatment of liver cancer. Kemstro relaxes muscles by blocking certain nerve receptors in the spinal cord. It is a type of antispasmodic. Also called baclofen and Lioresal.

### **Kepivance**

A drug used to prevent and treat severe oral mucositis (mouth sores). It is used in patients with blood cancer who are being treated with high-dose chemotherapy and radiation therapy followed by an autologous stem cell transplant. It is also being studied in the prevention and treatment of common side effects in other types of cancer. Kepivance is a form of human keratinocyte growth factor that is made in the laboratory. It binds to certain receptors on the surface of cells in the lining of the mouth, stomach, and intestines. This may help protect healthy tissue from some of the side effects caused by certain types of cancer treatment. Kepivance is a type of cytoprotective agent. Also called palifermin.

## **Keppra**

A drug used to treat seizures (involuntary muscle movements) caused by epilepsy (a group of brain disorders). Keppra is being studied in the treatment of seizures in patients with cancer that has spread to the brain. It is a type of anticonvulsant. Also called levetiracetam.

## **Ketalar**

A drug used to cause a loss of feeling and awareness and to induce sleep in patients having surgery. It is also being studied in the treatment of nerve pain caused by chemotherapy. Ketalar blocks pathways to the brain that are involved in sensing pain. It is a type of general anesthetic. Also called ketamine hydrochloride.

## **Keytruda**

A drug that binds to the protein PD-1 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that express the protein PD-L1, that have certain mutations (changes) in genes involved in DNA repair, or that have a high number of tumor mutations. Keytruda is used alone or with other drugs to treat certain types of biliary tract cancer (including bile duct cancer and gallbladder cancer), breast cancer, cervical cancer, classic Hodgkin lymphoma, colorectal cancer, endometrial cancer, esophageal cancer, gastroesophageal junction cancer, head and neck squamous cell carcinoma (SCC), hepatocellular carcinoma (a type of liver cancer), non-small cell lung cancer, primary mediastinal large B-cell lymphoma, renal cell carcinoma (a type of kidney cancer), skin cancer (SCC of the skin, Merkel cell carcinoma, and melanoma), stomach cancer, urothelial carcinoma (a type of bladder or urinary tract cancer), and other solid tumors. It is also being studied in the treatment of other types of cancer. Keytruda may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called pembrolizumab.

## **Ki-67 proliferation index**

A way to measure how fast cancer cells in a tumor are dividing. Ki-67 is a protein that is found only in cells that are dividing. A high Ki-67 proliferation index means many cells are dividing quickly and that the cancer is likely to grow and spread. A Ki-67 proliferation index over 30% is typically considered high. The Ki-67 proliferation index may be used to help predict how well some cancers, such as breast cancer, will respond to certain treatments, such as chemotherapy. Also called Ki-67 score.

## **Ki-67 score**

A way to measure how fast cancer cells in a tumor are dividing. Ki-67 is a protein that is found only in cells that are dividing. A high Ki-67 score means many cells are dividing quickly and that the cancer is likely to grow and spread. A Ki-67 score over 30% is typically considered high. The Ki-67 score may be used to help predict how well some cancers, such as breast cancer, will respond to certain treatments, such as chemotherapy. Also called Ki-67 proliferation index.

## **Kimmtrak**

A drug used to treat adults with uveal melanoma (a type of eye cancer) that has spread or cannot be removed by surgery. It is used in patients who have the HLA-A\*02:01 antigen. It is also being studied in the treatment of other types of cancer. Kimmtrak binds to certain antigens found on the surfaces of uveal melanoma cells and T cells (a type of immune cell). This may help the immune



system kill cancer cells. Kimmtrak is a type of bispecific fusion protein. Also called tebentafusp.

### **Kinaret**

A substance that is used to treat rheumatoid arthritis, and is being studied in the treatment of cancer. Kinaret blocks the action of interleukin 1 (IL-1). It is a type of interleukin receptor antagonist. Also called anakinra.

### **Kisqali**

A drug used to treat women with certain types of hormone-receptor positive, HER2-negative breast cancer that is advanced or has spread. It is also being studied in the treatment of other types of cancer. Kisqali blocks certain proteins, which may help keep cancer cells from growing. It is a type of cyclin-dependent kinase inhibitor. Also called ribociclib succinate.

### **Klatskin tumor**

Cancer that forms in the area where the left and right hepatic ducts join just outside the liver and form the common hepatic duct. Bile ducts carry bile from the liver and gallbladder to the small intestine. Klatskin tumor is a type of extrahepatic bile duct cancer. Also called perihilar bile duct cancer and perihilar cholangiocarcinoma.

### **Klebsiella**

A bacterium that frequently causes lung, urinary tract, intestinal, and wound infections.

### **Klinefelter syndrome**

A genetic disorder in males caused by having one or more extra X chromosomes. Males with this disorder may have larger than normal breasts, a lack of facial and body hair, a rounded body type, and small testicles. They may learn to speak much later than other children and may have difficulty learning to read and write. Klinefelter syndrome increases the risk of developing extragonadal germ cell tumors and breast cancer.

### **Klippel-Trenaunay syndrome**

A rare disorder that affects the blood vessels, soft tissues, and bones. It may also affect the lymph vessels. Klippel-Trenaunay syndrome is marked by a port-wine stain (a red or purplish birthmark caused by swelling of small blood vessels near the surface of the skin), abnormal overgrowth of bone and soft tissue, and varicose veins or other abnormal veins. It usually affects the legs, but it can also affect the arms or trunk. Klippel-Trenaunay syndrome is present at birth.

### **Korean acupuncture**

A type of acupuncture based on a form of Oriental medicine in which treatment is based on a person's constitution. According to this type of medicine, the constitution is the specific way a person's organs affect health and how he or she looks, thinks, behaves, and responds to treatment. Also called constitutional acupuncture.

### **Koselugo**

A drug used to treat children aged 2 years and older with a rare genetic condition called neurofibromatosis type 1. It is used in patients who have plexiform neurofibromas that are causing symptoms and cannot be removed by surgery. It is also being studied in the treatment of some types of cancer. Koselugo blocks proteins called MEK1 and MEK2, which may help keep abnormal cells or cancer

cells from growing. It is a type of kinase inhibitor. Also called AZD6244, MEK inhibitor AZD6244, and selumetinib sulfate.

### **Kostmann disease**

An inherited disorder in which there is a lower-than-normal number of neutrophils (a type of white blood cell that is important in fighting infections). Infants with the disorder get infections caused by bacteria, and are at an increased risk of acute myelogenous leukemia (AML) or myelodysplasia (a bone marrow disorder). Also called congenital neutropenia, genetic infantile agranulocytosis, infantile genetic agranulocytosis, Kostmann neutropenia, and Kostmann syndrome.

### **Kostmann neutropenia**

An inherited disorder in which there is a lower-than-normal number of neutrophils (a type of white blood cell that is important in fighting infections). Infants with the disorder get infections caused by bacteria, and are at an increased risk of acute myelogenous leukemia (AML) or myelodysplasia (a bone marrow disorder). Also called congenital neutropenia, genetic infantile agranulocytosis, infantile genetic agranulocytosis, Kostmann disease, and Kostmann syndrome.

### **Kostmann syndrome**

An inherited disorder in which there is a lower-than-normal number of neutrophils (a type of white blood cell that is important in fighting infections). Infants with the disorder get infections caused by bacteria, and are at an increased risk of acute myelogenous leukemia (AML) or myelodysplasia (a bone marrow disorder). Also called congenital neutropenia, genetic infantile agranulocytosis, infantile genetic agranulocytosis, Kostmann disease, and Kostmann neutropenia.

### **Krazati**

A drug used alone or with cetuximab to treat adults with colorectal cancer or non-small cell lung cancer that has spread and has a certain mutation (change) in the KRAS gene. It is used in patients whose cancer was treated with other systemic therapy. It is also being studied in the treatment of other types of cancer. Krazati blocks a protein (KRAS G12C) made by the mutated KRAS gene, which may help keep cancer cells from growing and may kill them. It is a type of targeted therapy. Also called adagrasib.

### **Krukenberg tumor**

A tumor in the ovary caused by the spread of stomach cancer.

### **Kymriah**

A drug used to treat adults with certain types of B-cell non-Hodgkin lymphoma and people up to 25 years old with certain types of B-cell acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Kymriah is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Kymriah binds to a protein called CD19, which is found on some leukemia and lymphoma cells. This helps the body's immune system kill cancer cells. Kymriah is a type of CAR T-cell therapy. Also called tisagenlecleucel.

### **Kyprolis**

A drug used alone or with other drugs to treat adults with multiple myeloma that came back or did not get better after treatment with one or more other therapies. It is also being studied in the treatment of other types of cancer. Kyprolis blocks

the action of enzymes called proteasomes, which may help keep cancer cells from growing and may kill them. It is a type of proteasome inhibitor. Also called carfilzomib.

## **L**

A measure of volume for a liquid, using the metric system. One L is equal to 1,000 cubic centimeters (cc), 1,000 milliliters (mL), or 1.0567 quarts (qt). Also called liter.

### **L-3,5,5'-tetraiodothyronine**

A hormone that is made by the thyroid gland and contains iodine. L-3,5,5'-tetraiodothyronine increases the rate of chemical reactions in cells and helps control growth and development. L-3,5,5'-tetraiodothyronine can also be made in the laboratory and is used to treat thyroid disorders. Also called T4, thyroxine, and thyroxine.

### **L-377,202**

A substance that is being studied in the treatment of cancer.

### **L-778,123**

An anticancer drug that belongs to the family of drugs called enzyme inhibitors. It may inhibit the transformation of normal cells into cancer cells.

### **L-MTP-PE**

A drug being studied in the treatment of young adults with bone cancer that has gotten worse or come back. L-MTP-PE activates certain types of white blood cells and helps the immune system kill cancer cells. It is a type of immunostimulant. Also called MEPACT, mifamurtide, and muramyl tripeptide phosphatidylethanolamine.

### **L-arginine**

One of the twenty common amino acids (building blocks of proteins). L-arginine is being studied as a nutritional supplement in the treatment and prevention of cancer and other conditions. Also called arginine.

### **L-asparaginase**

A drug that is used to treat acute lymphoblastic leukemia (ALL) and is being studied in the treatment of some other types of cancer. It is an enzyme taken from the bacterium *Escherichia coli* (E. coli). It breaks down the amino acid asparagine and may block the growth of tumor cells that need asparagine to grow. Also called asparaginase and Elspar.

### **L-carnitine**

A form of carnitine, which is a substance made in muscle and liver tissue and found in certain foods, such as meat, poultry, fish, and some dairy products. L-carnitine is also a drug that is used to treat patients who do not make enough carnitine and is being studied as a way to prevent tissue damage caused by chemotherapy. Carnitine is a type of dietary supplement. Also called Carnitor and levocarnitine.

### **L-glutamic acid**

One of twenty amino acids (molecules that join together to form proteins). L-glutamic acid may help nerve cells send and receive information from other cells. It is being studied for its ability to decrease or prevent nerve damage caused by anticancer drugs. Also called glutamic acid.

### **L-norgestrel**

A form of the hormone progesterone that is made in the laboratory and used to prevent pregnancy. It is being studied in the prevention of ovarian and endometrial cancer, and in the treatment of other conditions. L-norgestrel is a type of oral contraceptive. Also called levonorgestrel and Plan B.

### **L-threo-dihydrosphingosine**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called protein kinase inhibitors. Also called safingol.

### **LAK cell**

A white blood cell that is stimulated in a laboratory to kill tumor cells. Also called lymphokine-activated killer cell.

### **LAMA3 gene**

A gene that makes one of the three subunits of a protein involved in cell growth, cell movement, and cell attachment. This protein helps protect the skin from damage and may be involved in wound healing and in the formation of tooth enamel and the cornea (the clear outer covering of the eye). Mutations (changes) in the LAMA3 gene have been found in an inherited condition called junctional epidermolysis bullosa, which causes the skin to tear and blister easily. People with this condition have an increased risk of developing skin cancer.

### **LAMB3 gene**

A gene that makes one of the three subunits of a protein involved in cell growth, cell movement, and cell attachment. This protein helps protect the skin from damage and may be involved in wound healing and in the formation of tooth enamel and the cornea (the clear outer covering of the eye). Mutations (changes) in the LAMB3 gene have been found in an inherited condition called junctional epidermolysis bullosa, which causes the skin to tear and blister easily. People with this condition have an increased risk of developing skin cancer.

### **LAMC2 gene**

A gene that makes one of the three subunits of a protein involved in cell growth, cell movement, and cell attachment. This protein helps protect the skin from damage and may be involved in wound healing and in the formation of tooth enamel and the cornea (the clear outer covering of the eye). Mutations (changes) in the LAMC2 gene have been found in an inherited condition called junctional epidermolysis bullosa, which causes the skin to tear and blister easily. People with this condition have an increased risk of developing skin cancer.

### **LC-MS**

A laboratory technique that combines two different processes to separate, identify, and measure the amount of different substances in a liquid sample. In the liquid chromatography (LC) part of the process, a liquid sample is passed through a column filled with a material that separates the different substances in the sample. In the mass spectrometry (MS) part of the process, the separated substances then pass through a special machine that reports the molecular weight, structure, identity, and number of different substances in the sample. LC-MS has many uses, including screening for drugs, identifying toxins in the environment, and detecting certain metabolic disorders in infants. Also called liquid chromatography–mass spectrometry.

## **LCH**

A group of rare disorders in which too many Langerhans cells (a type of white blood cell) grow in certain tissues and organs including the bones, skin, and lungs, and damage them. LCH may also affect the pituitary gland (which makes hormones that control other glands and many body functions, especially growth). LCH is most common in children and young adults. Also called Langerhans cell histiocytosis.

## **LCIS**

A condition in which abnormal cells are found in the lobules of the breast. This condition seldom becomes invasive cancer. However, having LCIS in one breast increases the risk of developing breast cancer in either breast. Also called lobular carcinoma in situ.

## **LDCT**

A procedure that uses a computer linked to an x-ray machine that gives off a very low dose of radiation to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-D views of tissues and organs. LDCT is recommended as a screening test for adults who have a high risk of developing lung cancer based on their age and smoking history. Also called low-dose computed tomography and low-dose CT scan.

## **LDE225**

A drug used to treat locally advanced basal cell carcinoma (BCC) that has come back after surgery or radiation therapy. It is also used in patients who cannot be treated with surgery or radiation therapy. LDE225 is also being studied in the treatment of other types of cancer. LDE225 blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type of hedgehog signaling pathway antagonist. Also called erismodegib, Odomzo, and sonidegib phosphate.

## **LDH**

One of a group of enzymes found in the blood and other body tissues, and involved in energy production in cells. An increased amount in the blood may be a sign of tissue damage and some types of cancer or other diseases. Also called lactate dehydrogenase and lactic acid dehydrogenase.

## **LED therapy**

Treatment with drugs that become active and may kill cancer cells when exposed to light. LED therapy is a type of photodynamic therapy, which uses a special type of light to activate the drug. Also called light-emitting diode therapy.

## **LEEP**

A technique that uses electric current passed through a thin wire loop to remove abnormal tissue. Also called loop electrosurgical excision procedure and loop excision.

## **LEP-ETU**

A form of the anticancer drug paclitaxel that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of several types of cancer. LEP-ETU blocks the ability of cells to divide and may kill cancer cells. It is a type of mitotic inhibitor and a type of antimicrotubule agent. Also called liposomal paclitaxel, LipoTaxen, paclitaxel liposome, and PNU-93914.

## **LFS**

A rare, inherited disorder that is caused by mutations (changes) in the TP53 gene. Having Li-Fraumeni syndrome increases the risk of developing many types of cancer. Cancers often develop at an early age, and more than one type of cancer may occur in the same person. LFS is a type of hereditary cancer syndrome. Also called Li-Fraumeni syndrome.

## **LGD1069**

A drug used to treat skin problems caused by cutaneous T-cell lymphoma that did not get better after other treatment. It is also being studied in the treatment of other types of cancer. LGD1069 binds to and activates proteins called retinoid X receptors, which may stop the growth of cancer cells and kill them. It is a type of retinoid. Also called bexarotene and Targretin.

## **LH**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make follicles release their eggs and to make hormones that get the uterus ready for a fertilized egg to be implanted. In males, it acts on the testes to cause cells to grow and make testosterone. Also called interstitial cell-stimulating hormone, luteinizing hormone, and lutropin.

## **LH-RH**

A hormone made by a part of the brain called the hypothalamus. LH-RH causes the pituitary gland in the brain to make and secrete the hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH). In men, these hormones cause the testicles to make testosterone. In women, they cause the ovaries to make estrogen and progesterone. Also called GnRH, gonadotropin-releasing hormone, LHRH, and luteinizing hormone-releasing hormone.

## **LHRH**

A hormone made by a part of the brain called the hypothalamus. LHRH causes the pituitary gland in the brain to make and secrete the hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH). In men, these hormones cause the testicles to make testosterone. In women, they cause the ovaries to make estrogen and progesterone. Also called GnRH, gonadotropin-releasing hormone, LH-RH, and luteinizing hormone-releasing hormone.

## **LHRH agonist**

A substance that keeps the testicles and ovaries from making sex hormones by blocking other hormones that are needed to make them. In men, LHRH agonists cause the testicles to stop making testosterone. In women, they cause the ovaries to stop making estrogen and progesterone. Some LHRH agonists are used to treat prostate cancer. Also called GnRH agonist, GnRHa, gonadotropin-releasing hormone agonist, and luteinizing hormone-releasing hormone agonist.

## **LHRH antagonist**

A substance that blocks the pituitary gland from making hormones called follicle-stimulating hormone (FSH) and luteinizing hormone (LH). In men, this causes the testicles to stop making testosterone. In women, this causes the ovaries to stop making estrogen and progesterone. Some LHRH antagonists are used to treat advanced prostate cancer. They are also used to treat certain gynecologic conditions and are being studied in the treatment of hormone-sensitive breast cancer. Also called GnRH antagonist, gonadotropin-releasing hormone antagonist, and luteinizing hormone-releasing hormone antagonist.



## **LIN**

A condition in which abnormal cells are found in the lobules (glands that make milk) of the breast. This condition rarely becomes cancer. However, having LIN in one breast increases the risk of breast cancer in either breast. Types of LIN include atypical lobular hyperplasia and lobular carcinoma in situ (LCIS). Also called lobular intraepithelial neoplasia and lobular neoplasia.

## **LITT**

A type of treatment that uses heat created by a laser beam to remove or destroy abnormal tissue, such as cancer tissue. During LITT, an imaging test, such as MRI, is used to help guide a wire or catheter (thin tube) into the abnormal area of tissue. A laser inserted through the catheter creates heat, which destroys the abnormal tissue. LITT may be used to treat certain types of brain tumors, including tumors that have spread to the brain from other parts of the body, radiation necrosis (tissue death caused by radiation therapy), and some types of epilepsy. Also called laser interstitial thermal therapy.

## **LMB-1 immunotoxin**

A toxic substance linked to an antibody that attaches to tumor cells and kills them.

## **LMB-2 immunotoxin**

A toxic substance linked to an antibody that attaches to tumor cells and kills them.

## **LMB-7 immunotoxin**

A toxic substance linked to an antibody that attaches to tumor cells and kills them.

## **LMB-9 immunotoxin**

A toxic substance linked to an antibody that attaches to tumor cells and kills them.

## **LMP400**

A substance being studied in the treatment of cancer. It blocks certain enzymes that break and rejoin DNA strands. These enzymes are needed for cells to divide and grow. Blocking them may cause cancer cells to die. LMP400 also helps anticancer drugs kill cancers that are resistant to some other drugs. LMP400 is a type of indenoisoquinoline and a type of topoisomerase inhibitor.

## **LMP776**

A substance being studied in the treatment of cancer. It blocks certain enzymes that break and rejoin DNA strands. These enzymes are needed for cells to divide and grow. Blocking them may cause cancer cells to die. LMP776 also helps anticancer drugs kill cancers that are resistant to some other drugs. LMP776 is a type of indenoisoquinoline and a type of topoisomerase inhibitor.

## **LOXO-101**

A drug used to treat adults and children with certain types of solid tumors that have spread or cannot be removed by surgery and have the NTRK gene fusion. It is also being studied in the treatment of other types of cancer. LOXO-101 blocks the TRK protein, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called larotrectinib sulfate, Trk inhibitor LOXO-101, and Vitrakvi.

## **LP**

A procedure in which a thin, hollow needle is inserted into the lower part of the spine to collect a sample of cerebrospinal fluid (CSF). This is done by placing the needle between two bones in the spine and into the subarachnoid space (the fluid-filled space between the thin layers of tissue around the spinal cord). After the CSF sample is removed, it is checked under a microscope for signs of infection, inflammation, or diseases, such as cancer or certain nervous system conditions. An LP may also be done to measure or reduce CSF pressure around the spinal cord and brain, to inject drugs, such as chemotherapy or anesthesia drugs, directly into the CSF, or to inject contrast dye for certain imaging tests. Also called lumbar puncture and spinal tap.

## **LPHL**

A rare type of Hodgkin lymphoma (a cancer of the immune system). It is marked by the presence of lymphocyte-predominant cells, which used to be called popcorn cells. These cells are different from the typical Reed-Sternberg cells found in classic Hodgkin lymphoma. LPHL may change into diffuse large B-cell lymphoma. Also called lymphocyte-predominant Hodgkin lymphoma, NLPHL, and nodular lymphocyte-predominant Hodgkin lymphoma.

## **LRMDA gene**

A gene that makes a protein involved in the formation of cells that make the pigment melanin, which gives color to skin and eyes. Mutations (changes) in the LRMDA gene have been found in a rare inherited condition called oculocutaneous albinism type 7. People with this condition have vision problems, very fair skin, and a high risk of developing skin cancer.

## **LSIL**

An area of abnormal cells that forms on the surface of certain organs, such as the cervix, vagina, vulva, anus, and esophagus. LSILs look slightly abnormal when looked at under a microscope. They are usually caused by infection with certain types of human papillomavirus (HPV) and are found when a Pap test or biopsy is done. LSILs usually go away on their own without treatment, but sometimes they can become cancer and spread into nearby tissue. LSIL is sometimes called mild dysplasia. Also called low-grade squamous intraepithelial lesion.

## **LU 79553**

An anticancer drug that kills cancer cells by affecting DNA synthesis.

## **LU-103793**

An anticancer drug that reduces the risk of tumor cell growth and reproduction.

## **LUMBAR/PELVIS/SACRAL syndrome**

A rare disorder marked by a hemangioma (a benign blood vessel tumor) that spreads across a large area of the lower back or genital area. Other health problems that affect the urinary system, genitals, rectum, anus, brain, spinal cord, and nerve function may also occur. LUMBAR/PELVIC/SACRAL syndrome is most common in infants.

## **LVA**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph vessels or nodes become damaged or blocked. During an LVA, lymph vessels are rerouted to connect directly to nearby veins in the affected part of the body so that lymph

can flow around the damaged or blocked area. This creates a new path for lymph to re-enter the bloodstream and travel through the body. Also called LVB, lymphaticovenous anastomosis, and lymphovenous bypass.

## **LVB**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph vessels or nodes become damaged or blocked. During an LVB, lymph vessels are rerouted to connect directly to nearby veins in the affected part of the body so that lymph can flow around the damaged or blocked area. This creates a new path for lymph to re-enter the bloodstream and travel through the body. Also called LVA, lymphaticovenous anastomosis, and lymphovenous bypass.

## **LXR alpha pathway**

Describes a group of proteins in a cell that work together to help control how certain genes are expressed and how cholesterol, lipids (fats), bile acids, and steroid hormones are made in the body. Changes in the LXR alpha pathway may lead to diseases such as heart disease and cancer. Drugs or substances that affect this pathway are being studied in the prevention and treatment of cancer and other diseases. Also called liver X receptor alpha pathway.

## **LY231514**

A drug used alone or with other drugs to treat certain types of non-small cell lung cancer and malignant pleural mesothelioma. It is also being studied in the treatment of other types of cancer. LY231514 stops cells from using folic acid to make DNA and may kill cancer cells. It is a type of antimetabolite and a type of antifolate. Also called Alimta, pemetrexed disodium, and Pemfexy.

## **LY293111**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called leukotriene B4 receptor antagonists.

## **LY317615**

A substance being studied in the treatment of certain types of cancer, including non-Hodgkin lymphoma, breast, colon, lung, ovarian, and prostate. LY317615 blocks certain cell signaling pathways, and may prevent the growth of new blood vessels that tumors need to grow. It is a type of serine threonine kinase inhibitor and a type of antiangiogenesis agent. Also called enzastaurin hydrochloride.

## **LY335979**

A substance being studied in the treatment of cancer. LY335979 may help kill cancer cells that are resistant to anticancer drugs. Also called zosuquidar trihydrochloride.

## **LY353381 hydrochloride**

A substance being studied in the treatment of osteoporosis and breast cancer. LY353381 hydrochloride is made in the laboratory and binds to estrogen receptors in the body. It is a type of selective estrogen receptor modulator (SERM). Also called arzoxifene hydrochloride.

## **Lactobacillus rhamnosus GG**

A live form of a bacterium that makes lactic acid (a substance that is made from sugars found in milk and is also made in the body). Lactobacillus rhamnosus GG is given to help with digestion and normal bowel function. It may also help keep the gastrointestinal (GI) tract healthy. It is being studied in the prevention of

infections in patients having donor stem cell transplants and in other conditions. Also called Culturelle.

### **Langerhans cell histiocytosis**

A group of rare disorders in which too many Langerhans cells (a type of white blood cell) grow in certain tissues and organs including the bones, skin, and lungs, and damage them. Langerhans cell histiocytosis may also affect the pituitary gland (which makes hormones that control other glands and many body functions, especially growth). Langerhans cell histiocytosis is most common in children and young adults. Also called LCH.

### **Lanoxin**

A drug used to treat irregular heartbeat and some types of heart failure. It is also being studied in the treatment of some types of cancer. Lanoxin helps the heart work normally by controlling the amount of calcium that goes into the heart muscle. It also may kill cancer cells and make them more sensitive to anticancer drugs. It is a type of cardiac glycoside. Also called digoxin.

### **Lantus**

A drug used to control the amount of sugar in the blood of patients with diabetes. It is a form of the hormone insulin that is made in the laboratory. Lantus controls blood sugar longer than insulin does. It is a type of therapeutic insulin. Also called insulin glargine and insulin glargine recombinant.

### **Latisse**

The drug bimatoprost used to increase the length, thickness, and darkness of eyelashes. It is being studied as a way to increase the growth of eyelashes and eyebrows in patients given chemotherapy for cancer. A sterile brush is used to apply Latisse on the upper and lower margins of the eyelids once a day.

### **Lazcluze**

A drug used with amivantamab to treat adults with non-small cell lung cancer that has spread to other parts of the body or cannot be removed by surgery and has certain mutations (changes) in the EGFR gene. Lazcluze blocks certain proteins made by the mutated EGFR gene, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called lazertinib mesylate hydrate.

### **Legius syndrome**

A rare genetic condition marked by flat brown spots on the skin. The number of brown spots on the skin tends to increase throughout childhood. Other signs and symptoms include an abnormally large head, unusual facial features, and freckling in the armpits and groin. People with this syndrome may have mild learning and developmental delays. Legius syndrome is a type of disease called a RASopathy that is caused by mutations (changes) in the SPRED1 gene. This gene makes a protein involved in a cell signaling pathway that controls many important cell functions. Also called neurofibromatosis type 1-like syndrome.

### **Lenvima**

A drug used alone or with other drugs to treat certain types of endometrial cancer, renal cell carcinoma (a type of kidney cancer), hepatocellular carcinoma (a type of liver cancer), and thyroid cancer. It is also being studied in the treatment of other types of cancer. Lenvima blocks certain proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Lenvima is a type of

tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called lenvatinib mesylate.

### **Leukeran**

A drug used to treat chronic lymphocytic leukemia, Hodgkin lymphoma, and certain types of non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Leukeran damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called chlorambucil.

### **Levulan Kerastick**

A drug that contains the active ingredient aminolevulinic acid hydrochloride and is used with photodynamic therapy to treat actinic keratosis (a skin condition that may become cancer). When Levulan Kerastick is taken up by abnormal cells, including cancer cells, and then exposed to certain types of light, it becomes active and kills the cells. Levulan Kerastick is a type of photosensitizing agent.

### **Lexapro**

A drug used to treat depression and certain anxiety disorders. It belongs to the family of drugs called selective serotonin reuptake inhibitors (SSRIs). Also called escitalopram.

### **Lhermitte's sign**

A sensation similar to an electrical shock radiating from the back of the head down the spine as the neck is bent forward.

### **Li-Fraumeni syndrome**

A rare, inherited disorder that is caused by mutations (changes) in the TP53 gene. Having Li-Fraumeni syndrome increases the risk of developing many types of cancer. Cancers often develop at an early age, and more than one type of cancer may occur in the same person. Li-Fraumeni syndrome is a type of hereditary cancer syndrome. Also called LFS.

### **Libtayo**

A drug that binds to the protein PD-1 to help immune cells kill cancer cells better and is used to treat different types of cancer. Libtayo is used to treat certain types of basal cell carcinoma and cutaneous squamous cell carcinoma (types of skin cancer) that are locally advanced or have spread to other parts of the body. It is also used alone or with other drugs to treat adults with non-small cell lung cancer that is locally advanced or has spread to other parts of the body and may have the PD-L1 protein, but does not have a mutation (change) in the EGFR, ALK, or ROS1 gene. It is also being studied in the treatment of other types of cancer. Libtayo may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called cemiplimab.

### **Lioresal**

A drug that is used to treat certain types of muscle spasms and is being studied in the treatment of liver cancer. Lioresal relaxes muscles by blocking certain nerve receptors in the spinal cord. It is a type of antispasmodic. Also called baclofen and Kemstro.

### **Lipiodol**

A form of poppy seed oil that contains iodine. Lipiodol is given by injection and builds up in the blood and lymph vessels in tumors. It is used for imaging (taking pictures) of the salivary glands and the lymph system. It is also being studied in

the imaging of other organs such as the liver, lung, stomach, and thyroid. It is a type of diagnostic imaging agent. Also called ethiodized oil, Ethiodol, and iodized oil.

### **Lipitor**

A drug used to lower the amount of cholesterol in the blood and to prevent stroke, heart attack, and angina (chest pain). It is also being studied in the prevention and treatment of some types of cancer and other conditions. Lipitor blocks an enzyme that helps make cholesterol in the body. It also causes an increase in the breakdown of cholesterol. It is a type of HMG-CoA reductase inhibitor and a type of statin. Also called atorvastatin calcium.

### **LipoTaxen**

A form of the anticancer drug paclitaxel that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of several types of cancer. LipoTaxen blocks the ability of cells to divide and may kill cancer cells. It is a type of mitotic inhibitor and a type of antimicrotubule agent. Also called LEP-ETU, liposomal paclitaxel, paclitaxel liposome, and PNU-93914.

### **Lofibra**

A drug used to treat high levels of cholesterol and triglycerides in the blood. Lofibra is being studied in the treatment of advanced cancers in young patients and in the treatment of other conditions. It is a type of antilipidemic agent. Also called fenofibrate and TriCor.

### **Lonsurf**

A combination of two drugs used alone or with bevacizumab to treat adults with certain types of colorectal cancer, stomach cancer, or gastroesophageal junction cancer. It is used in patients whose cancer has spread to other parts of the body and has already been treated with other anticancer treatments. It is also being studied in the treatment of other types of cancer. Lonsurf stops cells from making DNA, which may help keep cancer cells from growing and may kill them. It is a type of antimetabolite and a type of thymidine phosphorylase inhibitor. Also called trifluridine and tipiracil hydrochloride.

### **Loqtorzi**

A drug used alone or with other drugs to treat adults with certain types of nasopharyngeal cancer (a type of head and neck cancer). It is also being studied in the treatment of other types of cancer. Loqtorzi binds to a protein called PD-1, which is found on T cells (a type of immune cell). Blocking this protein may help the immune system kill cancer cells. Loqtorzi is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called toripalimab.

### **Lorbrena**

A drug used to treat adults with non-small cell lung cancer that has spread to other parts of the body and is ALK positive. It is also being studied in the treatment of other types of cancer. Lorbrena blocks certain proteins made by the ALK gene. Blocking these proteins may stop the growth and spread of cancer cells. Lorbrena is a type of tyrosine kinase inhibitor. Also called lorlatinib.

### **Lumakras**

A drug used to treat adults with non-small cell lung cancer that has spread and has a certain mutation (change) in the KRAS gene. It is used in patients who have already received at least one other systemic therapy. It is also being



studied in the treatment of other types of cancer. Lumakras blocks a protein (KRAS p.G12C) made by the mutated KRAS gene, which may help keep cancer cells from growing and may kill them. It is a type of targeted therapy. Also called sotorasib.

### **Lumigan**

The drug bimatoprost used to treat glaucoma (a build-up of fluid in the eye). It lowers pressure in the eye by increasing the flow of natural eye fluids out of the eye. One drop of Lumigan is put directly in the eye once a day.

### **Lumoxiti**

A drug used to treat adults with hairy cell leukemia that came back or did not get better with at least two other systemic therapies, including treatment with a purine nucleoside analog (a type of anticancer drug). Lumoxiti contains a monoclonal antibody that binds to a protein called CD22, which is found on B cells (a type of white blood cell) and some types of leukemia cells. It also contains a bacterial toxin called PE38, which may help kill cancer cells. Lumoxiti is a type of immunotoxin. Also called anti-CD22 immunotoxin CAT-8015, CAT-8015, and moxetumomab pasudotox.

### **Lunsumio**

A drug used to treat adults with follicular lymphoma that came back or did not get better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Lunsumio binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called CD20, which is found on B cells (another type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Lunsumio is a type of bispecific monoclonal antibody. Also called mosunetuzumab.

### **Lupron Depot**

A drug used to treat prostate cancer, problems with the endometrium (lining of the uterus), and uterine fibroids (noncancerous growths of the uterus). It is also being studied in the treatment of other conditions and types of cancer. Lupron Depot keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone (a male hormone) in men, and the ovaries to stop making estradiol (a form of the hormone estrogen) in women. Lupron Depot may stop the growth of cancer cells that need testosterone to grow and stop the growth of endometrial tissue and uterine fibroids. It is a type of gonadotropin-releasing hormone (GnRH) agonist. Also called Eligard and leuprolide acetate.

### **Lutathera**

A radioactive drug used to treat adults and children aged 12 years and older with gastroenteropancreatic neuroendocrine tumors that are somatostatin receptor positive. It is also being studied in the treatment of other types of cancer. Lutathera binds to a protein called somatostatin receptor, which is found on some neuroendocrine tumor cells. Lutathera builds up in these cells and gives off radiation that may kill them. It is a type of radioconjugate and a type of somatostatin analog. Also called lutetium Lu 177-dotatate.

### **Luvox**

A drug used to treat obsessive-compulsive disorder. It is a type of antidepressant agent and selective serotonin reuptake inhibitor (SSRI). Also called fluvoxamine.

## **Lymphir**

A drug used to treat adults with stage I, stage II, or stage III cutaneous T-cell lymphoma that came back or did not get better after treatment with at least one other systemic therapy. It is also being studied in the treatment of other types of cancer. Lymphir is made by combining interleukin-2 (IL-2) with a bacterial toxin. The IL-2 part of the drug attaches to the cancer cells and the toxin kills them. Lymphir is a type of immunotoxin and a type of recombinant fusion protein. Also called denileukin diftitox.

## **Lynch syndrome**

An inherited disorder that increases the risk of developing colorectal cancer, endometrial cancer, ovarian cancer, and many other types of cancer, such as cancers of the stomach, small intestine, pancreas, bile duct, urinary tract, and brain, often before age 50. Lynch syndrome is caused by mutations (changes) in genes that affect DNA mismatch repair, a process that fixes mistakes that occur when DNA is copied. These genes are MLH1, MSH2, MSH6, PMS2, and EPCAM. Also called hereditary nonpolyposis colorectal cancer and HNPCC.

## **Lynparza**

A drug used alone or with other drugs to treat adults with certain types of prostate cancer, pancreatic cancer, breast cancer, or ovarian, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Lynparza blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Lynparza is a type of PARP inhibitor. Also called AZD2281, olaparib, and PARP inhibitor AZD2281.

## **Lyrica**

A drug used to treat nerve pain caused by diabetes or herpes zoster infection and certain types of seizures. It is being studied in the prevention and treatment of nerve pain in the hands and feet of cancer patients given chemotherapy. Lyrica is a type of anticonvulsant. Also called pregabalin.

## **Lytgobi**

A drug used to treat adults with intrahepatic cholangiocarcinoma (a type of cancer that forms in the bile ducts inside the liver) that has spread or cannot be removed by surgery and has an FGFR2 gene fusion or other change in the structure of the FGFR2 gene. It is used in patients whose cancer has already been treated. It is also being studied in the treatment of other types of cancer. Lytgobi blocks a protein called FGFR, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called futibatinib.

## **M protein**

An antibody found in unusually large amounts in the blood or urine of people with multiple myeloma and other types of plasma cell tumors. Also called monoclonal protein.

## **M-EDTA**

A substance being studied in the prevention of bacterial infections that occur in catheters (thin tubes that carry fluids into or out of the body). It is a combination of minocycline, an antibiotic that blocks the growth of bacteria, and EDTA, a substance that keeps blood clots from forming. M-EDTA removes metals that bacteria use to form biofilms (thin layers stuck to surfaces). Also called minocycline-EDTA.

## **M200**

A monoclonal antibody that is being studied in the treatment of some types of cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. M200 binds to a protein that is found on cells that line some tumor blood vessels. It is a type of angiogenesis inhibitor. Also called volociximab.

## **MAGE-3 antigen**

A protein found in many types of tumors but not in most normal tissues. Vaccines using pieces of the MAGE-3 protein are being studied for their ability to boost the immune response to cancer cells in patients with cancer.

## **MALT lymphoma**

A type of cancer that arises in cells in mucosal tissue that are involved in antibody production. Also called mucosa-associated lymphoid tissue lymphoma.

## **MAMMOTOME**

A device that uses a computer-guided probe to perform breast biopsies. A biopsy procedure using the MAMMOTOME device can be done on an outpatient basis with a local anesthetic, removes only a small amount of healthy tissue, and doesn't require sutures (stitches) because the incision is very small. MAMMOTOME is a registered trademark of Devicor Medical Products, Inc.

## **MAO inhibitor**

A type of drug used to treat depression. It stops the breakdown of certain chemicals in the brain that help improve a person's mood. A MAO inhibitor is a type of antidepressant. Also called monoamine oxidase inhibitor.

## **MAP**

A rare, inherited disorder in which multiple polyps (abnormal growths) form on the inner walls of the colon and rectum. People with MAP usually develop fewer than 100 colon polyps, and polyps may also occur in the stomach and small intestine. People with MAP have a high risk of developing colorectal cancer. They may also be at increased risk of developing cancers of the stomach, small intestine, ovary, endometrium, bladder, liver, thyroid, and skin. MAP is caused by mutations (changes) in the MUTYH gene that are inherited in an autosomal recessive manner. It is a type of hereditary cancer syndrome. Also called MUTYH-associated polyposis.

## **MAP2K gene**

A member of a group of genes that make proteins that send chemical signals from outside the cell to the cell's nucleus to control many important cell functions, including cell growth, maturation, movement, and survival. Mutations (changes) in MAP2K genes can cause these proteins to be too active or found in higher-than-normal amounts on cancer cells. This may cause cancer cells to grow and spread. Drugs that block the mutant proteins made by MAP2K genes are used to treat many types of cancer. Also called MEK gene.

## **MART-1 antigen**

A protein found on normal melanocytes (cells that make the pigment melanin) in the skin and in the retina. It is also found on most melanomas (cancers that begin in melanocytes). Vaccines using pieces of the MART-1 antigen are being studied for their ability to boost the immune response to cancer cells in patients with melanoma. Also called Melan-A protein and Melanoma Antigen Recognized by T cells 1.

## **MBL**

A condition in which a higher-than-normal number of identical B cells are found in the blood. People with MBL may develop other B-cell diseases, such as chronic lymphocytic leukemia (CLL). Also called monoclonal B-cell lymphocytosis.

## **MC1R**

A protein found in skin and eye cells that make melanin (a pigment that gives color to the skin and helps protect it from damage by ultraviolet light). People with certain changes in the gene for MC1R have a higher risk of developing melanoma (skin cancer that begins in melanocytes). Also called melanocortin 1 receptor and melanotropin receptor.

## **MC5-A scrambler therapy**

A type of treatment for nerve pain that uses electrodes placed on the skin. Electricity is carried from the electrodes through the skin and blocks the pain. The pain may be caused by physical injury, infection, toxic substances, and certain diseases or drugs, including anticancer drugs.

## **MCD test**

A type of blood test that is being studied as a way to screen for many types of cancer at the same time. MCD tests work by measuring biomarkers, such as pieces of DNA, that cancer cells release into the blood as they die. These tests may help find cancer in parts of the body that are not easily accessible for physical exam or biopsy. MCD tests may be used with other screening tests to help find more cancers before they cause symptoms. MCD tests are a type of liquid biopsy. These tests are sometimes called multi-cancer early detection tests or MCED tests. Also called multi-cancer detection test.

## **MDL 101,731**

A drug that belongs to a family of drugs called ribonucleotide reductase inhibitors.

## **MDR modulator CBT-1**

A substance taken from plants that is being studied in the treatment of cancer. It may help drugs kill tumor cells that have become resistant to drugs. It is a type of multidrug resistance inhibitor and a type of P-glycoprotein antagonist. Also called CBT-1.

## **MDS**

A type of cancer in which the bone marrow does not make enough healthy blood cells (white blood cells, red blood cells, and platelets) and there are abnormal cells in the blood and/or bone marrow. When there are fewer healthy blood cells, infection, anemia, or bleeding may occur. Sometimes, MDS becomes acute myeloid leukemia (AML). Also called myelodysplastic syndrome.

## **MDX-010**

A drug that binds to the protein CTLA-4 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that have certain mutations (changes) in genes involved in DNA repair. MDX-010 is used alone or with other drugs to treat certain types of colorectal cancer, esophageal cancer, hepatocellular carcinoma (a type of liver cancer), malignant pleural mesothelioma, melanoma, non-small cell lung cancer, and renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. MDX-010 may block CTLA-4 and help the immune system

kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called ipilimumab and Yervoy.

### **MDX-060**

A monoclonal antibody that is being studied in the treatment of some lymphomas. Monoclonal antibodies are produced in the laboratory and can locate and bind to cancer cells.

### **MEDI-507**

A substance being studied in the treatment of certain types of T-cell lymphoma. It is also being studied in the prevention of organ or tissue rejection after a kidney and/or bone marrow transplant. MEDI-507 binds to a protein called CD2, which is found on some types of immune cells and cancer cells. This may help suppress the body's immune response and it may help kill cancer cells. MEDI-507 is a type of monoclonal antibody. Also called siplizumab.

### **MEDI-522**

A substance being studied in the treatment of some types of cancer and other conditions. MEDI-522 binds to a protein on the surface of blood vessels and may prevent the growth of new blood vessels that tumors need to grow. It may also prevent the spread of cancer. It is a type of antiangiogenesis agent, a type of metastasis inhibitor, and a type of monoclonal antibody. Also called Abegrin, etaracizumab, and humanized monoclonal antibody MEDI-522.

### **MEK gene**

A member of a group of genes that make proteins that send chemical signals from outside the cell to the cell's nucleus to control many important cell functions, including cell growth, maturation, movement, and survival. Mutations (changes) in MEK genes can cause these proteins to be too active or found in higher-than-normal amounts on cancer cells. This may cause cancer cells to grow and spread. Drugs that block the mutant proteins made by MEK genes are used to treat many types of cancer. Also called MAP2K gene.

### **MEK inhibitor**

A substance that blocks proteins called MEK1 and MEK2, which help control cell growth and survival. Blocking these proteins may help keep cancer cells from growing and may kill them. Some MEK inhibitors are used to treat cancer. They are a type of targeted therapy.

### **MEK inhibitor AZD6244**

A drug used to treat children aged 2 years and older with a rare genetic condition called neurofibromatosis type 1. It is used in patients who have plexiform neurofibromas that are causing symptoms and cannot be removed by surgery. It is also being studied in the treatment of some types of cancer. MEK inhibitor AZD6244 blocks proteins called MEK1 and MEK2, which may help keep abnormal cells or cancer cells from growing. It is a type of kinase inhibitor. Also called AZD6244, Koselugo, and selumetinib sulfate.

### **MEK1 protein**

A protein involved in a cell signaling pathway that helps control cell division, cell maturation, and cell death. Mutations (changes) in the gene that makes the MEK1 protein or in other genes in this signaling pathway may cause the MEK1 protein to become overactive in some types of cancer. This may increase the growth of cancer cells. Drugs that block the MEK1 protein are being used in the treatment of some cancers.

## **MEK2 protein**

A protein involved in a cell signaling pathway that helps control cell division, cell maturation, and cell death. Mutations (changes) in the gene that makes the MEK2 protein or in other genes in this signaling pathway may cause the MEK2 protein to become overactive in some types of cancer. This may increase the growth of cancer cells. Drugs that block the MEK2 protein are being used in the treatment of some cancers.

## **MEN syndrome**

An inherited condition that may result in the development of cancers of the endocrine system. There are several types of MEN syndrome, and patients with each type may develop different types of cancer. The altered genes that cause each type can be detected with a blood test. Also called multiple endocrine neoplasia syndrome.

## **MEN-10755**

An anticancer drug that belongs to the family of drugs called antitumor antibiotics.

## **MEN1 syndrome**

A rare, inherited disorder that affects the endocrine glands and can cause tumors in the parathyroid and pituitary glands and the pancreas. These tumors are usually benign (not cancer). They cause the glands to secrete high levels of hormones, which can lead to other medical problems, such as kidney stones, fertility problems, and severe ulcers. In some cases, tumors inside the pancreas can become malignant (cancer). Also called multiple endocrine adenomatosis, multiple endocrine neoplasia type 1 syndrome, and Wermer syndrome.

## **MEN2**

A rare, genetic disorder that affects the endocrine glands and can cause tumors in the thyroid gland, parathyroid glands, and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. MEN2 is caused by a mutation (change) in a gene called RET, and is divided into three subtypes (MEN2A, MEN2B, and FMTC). People with all subtypes of MEN2 have an increased risk of medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. Also called MEN2 syndrome, multiple endocrine adenomatosis type 2, and multiple endocrine neoplasia type 2 syndrome.

## **MEN2 syndrome**

A rare, genetic disorder that affects the endocrine glands and can cause tumors in the thyroid gland, parathyroid glands, and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. MEN2 syndrome is caused by a mutation (change) in a gene called RET, and is divided into three subtypes (MEN2A, MEN2B, and FMTC). People with all subtypes of MEN2 syndrome have an increased risk of medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. Also called MEN2, multiple endocrine adenomatosis type 2, and multiple endocrine neoplasia type 2 syndrome.

## **MEN2A**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the



parathyroid glands and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. An itchy skin condition may also occur. MEN2A is caused by a mutation (change) in a gene called RET. Also called MEN2A syndrome, multiple endocrine adenomatosis type 2A, multiple endocrine neoplasia type 2A syndrome, and Sipple syndrome.

### **MEN2A syndrome**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the parathyroid glands and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. An itchy skin condition may also occur. MEN2A syndrome is caused by a mutation (change) in a gene called RET. Also called MEN2A, multiple endocrine adenomatosis type 2A, multiple endocrine neoplasia type 2A syndrome, and Sipple syndrome.

### **MEN2B**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the adrenal glands and growths around the nerves in the lips, tongue, lining of the mouth, and eyelids. Gastrointestinal symptoms and trouble with the spine or bones in the feet and thighs may also occur. MEN2B is caused by a mutation (change) in a gene called RET. Also called MEN2B syndrome, multiple endocrine adenomatosis type 2B, and multiple endocrine neoplasia type 2B syndrome.

### **MEN2B syndrome**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the adrenal glands and growths around the nerves in the lips, tongue, lining of the mouth, and eyelids. Gastrointestinal symptoms and trouble with the spine or bones in the feet and thighs may also occur. MEN2B syndrome is caused by a mutation (change) in a gene called RET. Also called MEN2B, multiple endocrine adenomatosis type 2B, and multiple endocrine neoplasia type 2B syndrome.

### **MEPACT**

A drug being studied in the treatment of young adults with bone cancer that has gotten worse or come back. MEPACT activates certain types of white blood cells and helps the immune system kill cancer cells. It is a type of immunostimulant. Also called L-MTP-PE, mifamurtide, and muramyl tripeptide phosphatidylethanolamine.

### **MET gene**

A gene that makes a protein that is involved in sending signals within cells and in cell growth and survival. Mutated (changed) forms of the MET gene may cause abnormal cells to grow and spread in the body. Mutations in the MET gene have been found in an inherited condition called hereditary papillary renal carcinoma (HPRC). Patients with HPRC have an increased risk of a type of kidney cancer called papillary renal carcinoma. MET gene mutations have also been found in liver cancer and head and neck cancer. The MET gene is a type of proto-oncogene and a type of receptor tyrosine kinase gene.

### **MET/VEGFR-2 inhibitor GSK1363089**

A substance being studied in the treatment of cancer. MET/VEGFR-2 inhibitor GSK1363089 blocks enzymes involved in the growth and spread of tumor cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called foretinib and XL880.

### **MFS**

The length of time from the start of treatment for cancer that a patient is still alive and the cancer has not spread to other parts of the body. In a clinical trial, measuring the MFS is one way to see how well a new treatment works. Also called metastasis-free survival.

### **MG98**

A substance being studied in the treatment of cancer. It blocks the production of a protein called DNA methyltransferase, which helps control gene expression. This may kill cancer cells that need DNA methyltransferase to grow. It is a type of antisense oligonucleotide.

### **MGCD0103**

A substance being studied in the treatment of several types of cancer. It blocks enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase (HDAC) inhibitor. Also called mocetinostat.

### **MGPT**

A laboratory test in which many genes are studied in a sample of tissue. MGPTs help find mutations (changes) in certain genes that may increase a person's risk of a disease such as cancer. They may also look at the activity of certain genes in a sample of tissue. MGPTs may be used to help plan treatment or help predict whether cancer will spread to other parts of the body or come back. Also called multigene panel test and multigene test.

### **MGUS**

A benign condition in which there is a higher-than-normal level of a protein called M protein in the blood. Patients with MGUS are at an increased risk of developing cancer. Also called monoclonal gammopathy of undetermined significance.

### **MHT**

Treatment with the hormones estrogen and progesterone or with estrogen alone to help relieve symptoms of menopause. Symptoms may include hot flashes, night sweats, vaginal dryness, sleep problems, mood swings, and thinning of the bones. MHT is given to replace the natural hormones that are no longer made by the body. It is given to women who have gone through menopause or who have early menopause caused by cancer treatment or by having their ovaries removed by surgery. Also called menopausal hormone therapy.

### **MIBG scan**

A procedure used to find neuroendocrine tumors, such as neuroblastomas and pheochromocytomas. A small amount of a substance called radioactive MIBG is injected into a vein and travels through the bloodstream. Neuroendocrine tumor cells take up the radioactive MIBG and are detected by a scanner. Also called iobenguane scan and metaiodobenzylguanidine scan.

**MIP test**

A test that measures the strength of the muscles used in breathing. A person inhales and exhales through a device called a manometer, and the pressures are recorded by a computer. Also called maximum inspiratory pressure test.

**MK-0646**

A substance being studied in the treatment of many types of cancer. MK-0646 binds to a protein called insulin-like growth factor receptor (IGFR) on the surface of cells. This may prevent the cells from growing when IGF is present. It may also kill cancer cells. MK-0646 is a type of monoclonal antibody. Also called anti-IGF1R recombinant monoclonal antibody MK-0646.

**MK0752**

A substance being studied in the treatment of cancer. It blocks signals between growing cells and may kill cancer cells. It is a type of signal transduction inhibitor.

**MLH1 gene**

A gene that makes a protein involved in repairing DNA errors that can occur when DNA is copied in a cell. Mutations (changes) in the MLH1 gene may cause unrepaired errors in DNA to build up in the cell, which may lead to abnormal cell growth and cancer. MLH1 gene mutations have been found in the inherited conditions Lynch syndrome and Muir-Torre syndrome. People with these conditions have an increased risk of developing colorectal cancer and other types of cancer. The MLH1 gene is a type of DNA mismatch repair (MMR) gene.

**MLN1202**

A substance being studied as a treatment for atherosclerosis (a build-up of fat in the arteries). It is also being studied in the treatment of cancers that spread to the bone. MLN1202 binds to a protein called CCR2, which is found on the surface of certain bone cells, white blood cells, and cancer cells. MLN1202 blocks the action of a substance that is involved in keeping healthy bone mass. It may help keep the cancer cells from spreading to and growing in the bone. It is a type of monoclonal antibody. Also called anti-CCR2 monoclonal antibody MLN1202.

**MLN2704**

A substance that is being studied in the treatment of prostate cancer. It belongs to the family of drugs called antibody drug conjugates. Also called MLN591DM1.

**MLN518**

A substance being studied in the treatment of some types of cancer. It may stop cancer cell growth by blocking certain enzymes. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called CT53518 and tandutinib.

**MLN591DM1**

A substance that is being studied in the treatment of prostate cancer. It belongs to the family of drugs called antibody drug conjugates. Also called MLN2704.

**MMMT**

A rare type of tumor that is a mixture of carcinoma and sarcoma cells. MMMT usually occurs in the uterus. Also called malignant mixed Müllerian tumor.

## **MMR deficiency**

Describes cells that have mutations (changes) in certain genes that are involved in correcting mistakes made when DNA is copied in a cell. Mismatch repair (MMR) deficient cells usually have many DNA mutations, which may lead to cancer. MMR deficiency is most common in colorectal cancer, other types of gastrointestinal cancer, and endometrial cancer, but it may also be found in cancers of the breast, prostate, bladder, and thyroid and in an inherited disorder called Lynch syndrome. Knowing if a tumor is MMR deficient may help plan treatment or predict how well the tumor will respond to treatment. Also called deficient DNA mismatch repair, deficient mismatch repair, dMMR, and mismatch repair deficiency.

## **MOA**

In medicine, a term used to describe how a drug or other substance produces an effect in the body. For example, a drug's MOA could be how it affects a specific target in a cell, such as an enzyme, or a cell function, such as cell growth. Knowing the MOA of a drug may help provide information about the safety of the drug and how it affects the body. It may also help identify the right dose of a drug and which patients are most likely to respond to treatment. Also called mechanism of action.

## **MOAB Ch14.18**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF), aldesleukin (IL-2), and 13-cis-retinoic acid to treat children with high-risk neuroblastoma. It is used in patients whose disease has gotten better with other anticancer treatment. MOAB Ch14.18 binds to a substance called GD2, which is found on some types of cancer cells. MOAB Ch14.18 may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Ch14.18, dinutuximab, monoclonal antibody Ch14.18, and Unituxin.

## **MOPP**

An abbreviation for a chemotherapy combination used alone or with radiation therapy to treat Hodgkin lymphoma. It includes the drugs mechlorethamine hydrochloride, vincristine sulfate (Oncovin), procarbazine hydrochloride, and prednisone. Also called MOPP regimen.

## **MOPP regimen**

An abbreviation for a chemotherapy combination used alone or with radiation therapy to treat Hodgkin lymphoma. It includes the drugs mechlorethamine hydrochloride, vincristine sulfate (Oncovin), procarbazine hydrochloride, and prednisone. Also called MOPP.

## **MORAb-009**

A substance being studied in the treatment of mesothelioma. MORAb-009 binds to a protein called mesothelin, which is found on some cancer cells. MORAb-009 may help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called amatuximab and anti-mesothelin monoclonal antibody MORAb-009.

## **MP470**

A substance being studied in the treatment of some types of cancer. It may block certain proteins involved in cancer cell growth and DNA repair. Blocking these proteins may make cancer cells more sensitive to anticancer drugs and radiation therapy. MP470 is a type of tyrosine kinase inhibitor. Also called amuvatinib.

## **MPL gene**

A gene that makes a protein that helps control the number of blood cells that are made in the bone marrow, especially platelets. Mutated (changed) forms of the MPL gene may cause the body to make abnormal blood cells or too many platelets. Mutations in this gene have been found in some types of blood conditions, including essential thrombocythemia and primary myelofibrosis.

## **MPNST**

A type of soft tissue sarcoma that develops in cells that form a protective sheath (covering) around peripheral nerves, which are nerves that are outside of the central nervous system (brain and spinal cord). Also called malignant peripheral nerve sheath tumor.

## **MR**

A measure of how fast cancer cells are dividing and growing. To find the MR, the number of cells dividing in a certain amount of cancer tissue is counted. MR is used to help find the stage of melanoma (a type of skin cancer) and other types of cancer. Higher MRs are linked with lower survival rates. Also called mitotic rate.

## **MRA**

A procedure that uses radio waves and a powerful magnet linked to a computer to create detailed pictures of the blood vessels and blood flow inside the body. A dye may be injected into a vein to make the blood vessels and blood flow easier to see. MRA may be used to check for aneurysms (a bulge in the blood vessel wall), blockages in the arteries, blood clots, and other blood vessel problems. Also called magnetic resonance angiography.

## **MRD**

A term used to describe a very small number of cancer cells that remain in the body during or after treatment. MRD can be found only by highly sensitive laboratory methods that are able to find one cancer cell among one million normal cells. Checking to see if there is MRD may help plan treatment, find out how well treatment is working or if cancer has come back, or make a prognosis. MRD testing is used mostly for blood cancers such as lymphoma and leukemia. Also called measurable residual disease and minimal residual disease.

## **MRI**

A procedure that uses radio waves, a powerful magnet, and a computer to make a series of detailed pictures of areas inside the body. A contrast agent, such as gadolinium, may be injected into a vein to help the tissues and organs show up more clearly in the picture. MRI may be used to help diagnose disease, plan treatment, or find out how well treatment is working. It is especially useful for imaging the brain and spinal cord, the heart and blood vessels, the bones, joints, and other soft tissues, the organs in the pelvis and abdomen, and the breast. Also called magnetic resonance imaging, NMRI, and nuclear magnetic resonance imaging.

## **MRI ultrasound fusion-guided biopsy**

A biopsy procedure that combines the pictures from an MRI scan and an ultrasound to create a detailed 3-D image of the prostate. This procedure makes it easier to see an abnormal area of tissue in order to guide the biopsy needle into the abnormal area. A sample of tissue can then be removed and checked under a microscope for signs of cancer. An MRI ultrasound fusion-guided biopsy may help find prostate cancer cells that may be missed with other types of

biopsies. It may help find cancer at an early stage and plan cancer treatment. Also called fusion biopsy.

### **MRI-guided biopsy**

A procedure that uses an MRI scan to find an abnormal area in the breast or prostate to guide the removal of a tissue sample from that area with a needle. The tissue sample is then checked under a microscope for signs of disease, such as cancer. An MRI-guided biopsy may be done when a lump or mass cannot be felt or when the abnormal area cannot be seen on other imaging tests.

### **MRL**

A procedure that uses radio waves, a powerful magnet, and a computer to make a series of detailed pictures of the lymphatic system. A dye is injected into the body to make the lymphatic vessels and lymph nodes easier to see. MRL may be used to check for blockages or leaks in the lymphatic system and to help diagnose certain conditions, such as lymphedema or lymphoma, or find out whether cancer has spread. It may also be used to help plan treatment or find out how well treatment is working. MRL is sometimes used before surgery to learn more about the structure of a person's lymphatic system. Also called magnetic resonance lymphangiography.

### **MRSA**

A type of bacteria that causes an infection that does not respond to common antibiotics, including methicillin, amoxicillin, and penicillin. Most MRSA infections occur on the skin and are mild. However, they can also be serious or life threatening and difficult to treat. MRSA infections usually occur in people with weakened immune systems who are in hospitals, nursing homes, or other health care centers. They can also occur in healthy people who have skin-to-skin contact with others, such as childcare workers, team athletes, and people who live in crowded conditions. Also called methicillin-resistant *Staphylococcus aureus*.

### **MRSI**

A noninvasive imaging method that provides information about cellular activity (metabolic information). It is used along with magnetic resonance imaging (MRI) which provides information about the shape and size of the tumor (spatial information). Also called <sup>1</sup>H-nuclear magnetic resonance spectroscopic imaging, magnetic resonance spectroscopic imaging, and proton magnetic resonance spectroscopic imaging.

### **MS 209**

A substance that is being studied for its ability to make cancer cells respond better to chemotherapy drugs to which they have become resistant. It is a type of quinolone antibiotic.

### **MS-275**

A substance that is being studied in the treatment of cancers of the blood. It belongs to the family of drugs called histone deacetylase inhibitors.

### **MSH2 gene**

A gene that makes a protein involved in repairing DNA errors that can occur when DNA is copied in a cell. Mutations (changes) in the MSH2 gene may cause unrepaired errors in DNA to build up in the cell, which may lead to abnormal cell growth and cancer. MSH2 gene mutations have been found in the inherited conditions Lynch syndrome and Muir-Torre syndrome. People with these



conditions have an increased risk of developing colorectal cancer and other types of cancer. The MSH2 gene is a type of DNA mismatch repair (MMR) gene.

### **MSH6 gene**

A gene that makes a protein involved in repairing DNA errors that can occur when DNA is copied in a cell. Mutations (changes) in the MSH6 gene may cause unrepaired errors in DNA to build up in the cell, which may lead to abnormal cell growth and cancer. MSH6 gene mutations have been found in the inherited conditions Lynch syndrome and Muir-Torre syndrome. People with these conditions have an increased risk of developing colorectal cancer and other types of cancer. The MLH6 gene is a type of DNA mismatch repair (MMR) gene.

### **MSI**

A change that occurs in certain cells (such as cancer cells) in which the number of repeated DNA bases in a microsatellite (a short, repeated sequence of DNA) is different from what it was when the microsatellite was inherited. MSI may be caused by mistakes that don't get corrected when DNA is copied in a cell. It is found most often in colorectal cancer, gastric cancer, and endometrial cancer, but it may also be found in many other types of cancer. Knowing whether a cancer has MSI may help plan the best treatment. Also called microsatellite instability.

### **MSI-H cancer**

Describes cancer cells that have a high number of mutations (changes) within microsatellites. For example, microsatellite testing that shows mutations in 30% or more microsatellites is called microsatellite instability-high. Microsatellites are short, repeated sequences of DNA. MSI-H cancer cells may have a defect in the ability to correct mistakes that occur when DNA is copied in the cell. Microsatellite instability is found most often in colorectal cancer, gastric cancer, and endometrial cancer, but it may also be found in many other types of cancer. Knowing whether cancer is microsatellite instability-high may help plan the best treatment. Also called microsatellite instability-high cancer.

### **MSSE**

A rare, inherited disorder in which many fast-growing tumors that look like squamous cell skin cancer form on the nose, face, ears, arms, and legs. The tumors usually go away on their own, but often leave deep, pitted scars in the skin. The tumors on the arms and legs are often larger and leave flat scars. MSSE is caused by mutations (changes) in the TGFBR1 gene. Also called Ferguson-Smith syndrome and multiple self-healing squamous epithelioma.

### **MTD**

The highest dose of a drug or treatment that does not cause unacceptable side effects. The MTD is determined in clinical trials by testing increasing doses on different groups of people until the highest dose with acceptable side effects is found. Also called maximum tolerated dose.

### **MTS**

A rare, inherited disorder that causes tumors to form in the oil glands in skin and in at least one internal organ. The skin tumors may be benign (not cancer) or malignant (cancer) and usually occur on the face, scalp, and eyelids. The internal tumors are malignant and usually form in the gastrointestinal tract (especially the colon and rectum) or genitourinary tract (endometrium and bladder). MTS is caused by mutations (changes) in the MLH1, MSH2, or MSH6 gene. MTS is a type of Lynch syndrome. Also called Muir-Torre syndrome.

## **MTX**

A drug used alone or with other drugs to treat many types of cancer, certain types of arthritis, and severe psoriasis (a type of skin condition). It is also being studied in the treatment of other conditions and types of cancer. MTX stops cells from using folic acid to make DNA and may kill cancer cells. It may also lower the body's immune response. MTX is a type of antimetabolite and a type of antifolate. Also called methotrexate sodium, Trexall, and Xatmep.

## **MUC-1**

A protein found on certain epithelial cells, which line the inside and outside surfaces of the body. It may be found in higher than normal amounts in patients with some types of cancer, including breast, ovarian, lung, and prostate cancers, or in other conditions. Measuring the amount of MUC-1 in the blood may help to find out how well cancer treatment is working or if cancer has come back. MUC-1 is a type of tumor marker.

## **MUSE**

A method used to treat impotence (inability to have an erection). A suppository, in the form of a very small pellet, is inserted through the tip of the penis into the urethra. The suppository contains the drug alprostadil, which increases the flow of blood to the penis and causes an erection. Also called medicated urethral system for erection.

## **MUTYH-associated polyposis**

A rare, inherited disorder in which multiple polyps (abnormal growths) form on the inner walls of the colon and rectum. People with MUTYH-associated polyposis usually develop fewer than 100 colon polyps, and polyps may also occur in the stomach and small intestine. People with MUTYH-associated polyposis have a high risk of developing colorectal cancer. They may also be at increased risk of developing cancers of the stomach, small intestine, ovary, endometrium, bladder, liver, thyroid, and skin. MUTYH-associated polyposis is caused by mutations (changes) in the MUTYH gene that are inherited in an autosomal recessive manner. It is a type of hereditary cancer syndrome. Also called MAP.

## **MVAC**

An abbreviation for a chemotherapy combination used to treat advanced bladder cancer and urethral cancer. It includes the drugs methotrexate, vinblastine sulfate, doxorubicin hydrochloride (Adriamycin), and cisplatin. Also called MVAC regimen.

## **MVAC regimen**

An abbreviation for a chemotherapy combination used to treat advanced bladder cancer and urethral cancer. It includes the drugs methotrexate, vinblastine sulfate, doxorubicin hydrochloride (Adriamycin), and cisplatin. Also called MVAC.

## **MYC gene family**

A family of genes that makes proteins involved in many cell functions, including cell growth, cell maturation, and cell death. Genetic changes in the DNA sequence of the MYC genes have been found in many types of cancer, including leukemia and lymphoma. These changes may cause cancer cells to grow and spread in the body. Members of the MYC gene family include C-MYC, L-MYC, and N-MYC.

### **MYCN amplification study**

A laboratory test in which cells in a sample of tumor tissue or bone marrow are checked to see how many copies of the MYCN gene are in the tumor DNA. MYCN is important for cell growth. Having more than 10 copies of the gene is called MYCN gene amplification. Tumors with MYCN gene amplification, such as neuroblastoma, are more likely to spread in the body and less likely to respond to treatment.

### **MZL**

An indolent (slow-growing) type of B-cell non-Hodgkin lymphoma that begins forming in certain areas (the marginal zones) of lymph tissue. There are three types based on whether it forms in the spleen, lymph nodes, or other lymphoid tissue that contains a lot of B cells (a type of white blood cell). Also called marginal zone B-cell lymphoma and marginal zone lymphoma.

### **Maffucci syndrome**

A very rare disorder that affects the skin and cartilage. It is marked by benign (not cancer) growths of cartilage in bones. These growths usually occur in the hands or feet, but may also occur in the skull, ribs, and spine. They may cause severely deformed bone, shortening of the arms or legs, broken bones, and other bone problems. Maffucci syndrome is also marked by hemangiomas (benign blood vessel tumors), most often in the skin. People with this syndrome have an increased risk of certain cancers, such as chondrosarcoma (cancer that forms in bone cartilage) or cancers of the ovary or liver. Maffucci syndrome is most common in young children.

### **Magnevist**

A substance used in magnetic resonance imaging (MRI) to help make clear pictures of the brain, spine, heart, soft tissue of joints, and inside bones. Magnevist is being studied in the diagnosis of cancer. It is a type of contrast agent. Also called gadopentetate dimeglumine and Gd-DTPA.

### **MammaPrint**

A lab test that is used to help predict whether breast cancer will come back or spread to other parts of the body. The test looks at the activity level of 70 different genes in breast cancer tissue of people with early-stage (stage I, II, or IIIA) invasive breast cancer that is less than 5 cm and is either node-negative or has spread to 1 to 3 lymph nodes. If the test shows that there is a high risk that the cancer will spread or come back, treatment with chemotherapy may be needed to lower the risk. Also called 70-gene signature.

### **MammoSite**

A system used to deliver internal radiation therapy to breast cancer patients after surgery to remove their cancer. MammoSite targets only the part of the breast where the cancer was found. After a patient has had a lumpectomy to remove the cancer, a small balloon on the end of a catheter (thin tube) is inserted into the empty space left by the surgery. The balloon is then filled with liquid and left in place. Using the catheter, radioactive seeds are put into the balloon twice a day for five days and removed each time. Once treatment has ended, the catheter and balloon are removed. MammoSite is a type of intracavitary brachytherapy and partial breast irradiation therapy (PBRT). Also called balloon catheter radiation.

### **Marcaine**

A drug used to relieve pain by blocking signals at nerve endings. It is being studied in the relief of pain following surgery for cancer. It is a type of local anesthetic. Also called bupivacaine hydrochloride and Sensorcaine.

### **Marfan syndrome**

A genetic condition that affects the connective tissue in many organs and tissues in the body, especially the heart, eyes, bones, joints, and blood vessels, including the aorta. People with Marfan syndrome are often tall and thin, have very long arms, legs, fingers, and toes, and have heart and vision problems. Other common signs and symptoms include a long and narrow face, crowded teeth, curved spine, loose joints, stretch marks in the skin, and chest abnormalities. Marfan syndrome may be inherited (passed from parent to child) and is caused by a mutation (change) in a gene called FBN1.

### **Margenza**

A drug used with other drugs to treat adults with HER2-positive breast cancer that has spread to other parts of the body. It is used in patients who have already received at least two anti-HER2 treatments, including at least one for metastatic disease. It is also being studied in the treatment of other types of cancer. Margenza binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Margenza is a type of monoclonal antibody. Also called margetuximab.

### **Matulane**

A drug used with other drugs to treat advanced Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Matulane damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called procarbazine hydrochloride.

### **Maxamine**

A substance being studied in the treatment of some types of cancer and other conditions. When used together with interleukin-2, Maxamine may help some immune cells find and kill tumor cells. It is a type of biological response modifier. Also called histamine dihydrochloride.

### **Mayo Clinic regimen**

A chemotherapy combination used to treat colorectal cancer. It is also used with radiation therapy to treat esophageal cancer and stomach cancer. It includes the drugs fluorouracil and leucovorin calcium.

### **MeV linear accelerator**

A machine that uses electricity to form a stream of fast-moving subatomic particles. This creates high-energy radiation that may be used to treat cancer. Also called linac, linear accelerator, and mega-voltage linear accelerator.

### **Medicaid**

A public health insurance program for some people or families with limited incomes and resources, including children, pregnant women, older adults, and people with disabilities. People who receive Medicaid have most or all of their health care services paid for by US federal, state, and local governments. Each state government runs its own Medicaid program using federal guidelines, so Medicaid rules and benefits can differ from state to state. To be eligible for Medicaid, a person or family must meet the Medicaid rules of the state in which they live.

## **Medicare**

A U.S. federal health insurance program for people aged 65 years or older and people with certain disabilities. Medicare pays for hospital stays, medical services, and some prescription drugs but people who receive Medicare must pay part of their health care costs.

## **Medicare Part D**

A type of insurance that helps people with Medicare pay for prescription drugs. People with Medicare Part D have to pay an additional premium and part of their prescription drug costs, including deductibles and copayments. Medicare Part D is offered by private insurance companies approved by Medicare. It is a type of supplemental health insurance. Also called Medicare Prescription Drug Coverage.

## **Medicare Prescription Drug Coverage**

A type of insurance that helps people with Medicare pay for prescription drugs. People with Medicare Prescription Drug Coverage have to pay an additional premium and part of their prescription drug costs, including deductibles and copayments. Medicare Prescription Drug Coverage is offered by private insurance companies approved by Medicare. It is a type of supplemental health insurance. Also called Medicare Part D.

## **Mekinist**

A drug used alone or with dabrafenib to treat low-grade glioma (a type of brain tumor) in children aged 1 year and older and certain types of anaplastic thyroid cancer, non-small cell lung cancer, melanoma, and other solid tumors that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Mekinist blocks proteins called MEK1 and MEK2, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called trametinib dimethyl sulfoxide.

## **Mektovi**

A drug used with encorafenib to treat melanoma that has spread or cannot be removed by surgery and has a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Mektovi blocks proteins called MEK1 and MEK2, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called binimetinib.

## **Melan-A protein**

A protein found on normal melanocytes (cells that make the pigment melanin) in the skin and in the retina. It is also found on most melanomas (cancers that begin in melanocytes). Vaccines using pieces of the Melan-A protein are being studied for their ability to boost the immune response to cancer cells in patients with melanoma. Also called MART-1 antigen and Melanoma Antigen Recognized by T cells 1.

## **Melanoma Antigen Recognized by T cells 1**

A protein found on normal melanocytes (cells that make the pigment melanin) in the skin and in the retina. It is also found on most melanomas (cancers that begin in melanocytes). Vaccines using pieces of the Melanoma Antigen Recognized by T cells 1 are being studied for their ability to boost the immune response to cancer cells in patients with melanoma. Also called MART-1 antigen and Melan-A protein.

### **Merkel cell**

A special type of cell found right below the epidermis (top layer of skin). These cells are very close to the nerve endings that receive the sensation of touch and may be involved in touch. The cells also contain substances that may act as hormones.

### **Merkel cell cancer**

A rare type of cancer that forms on or just beneath the skin, usually in parts of the body that have been exposed to the sun. It is most common in older people and in people with weakened immune systems. Also called Merkel cell carcinoma, neuroendocrine carcinoma of the skin, and trabecular cancer.

### **Merkel cell carcinoma**

A rare type of cancer that forms on or just beneath the skin, usually in parts of the body that have been exposed to the sun. It is most common in older people and in people with weakened immune systems. Also called Merkel cell cancer, neuroendocrine carcinoma of the skin, and trabecular cancer.

### **Mesnex**

A drug used to prevent hemorrhagic cystitis (bleeding in the bladder) caused by the anticancer drug ifosfamide. Mesnex helps protect healthy tissue from some of the side effects caused by certain anticancer drugs. It is a type of chemoprotective agent. Also called mesna.

### **Mevacor**

A drug used to lower the amount of cholesterol in the blood. It is also being studied in the prevention and treatment of some types of cancer. Mevacor is a type of HMG-CoA reductase inhibitor (statin). Also called lovastatin.

### **Mexican valerian**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, garden valerian, Indian valerian, Pacific valerian, valerian, *Valeriana officinalis*, and *Valerianae radix*.

### **Mifeprex**

A drug used to end early pregnancies. It is also being studied in the treatment of some types of cancer and other conditions. Mifeprex blocks the action of progesterone, a hormone that helps some cancers grow. It is a type of antiprogesterone. Also called mifepristone and RU 486.

### **Miraluma test**

A type of breast imaging test that is used to detect cancer cells in the breasts of some women who have had abnormal mammograms, or who have dense breast tissue. It is not used for screening or in place of a mammogram. In this test, a woman receives an injection of a small amount of a radioactive substance called technetium 99, which is taken up by cancer cells, and a gamma camera is used to take pictures of the breasts. Also called scintimammography and sestamibi breast imaging.

### **Mithracin**

A drug used to treat some types of testicular cancer. It is also used to treat a higher-than-normal amounts of calcium in the blood or urine. Mithracin binds to DNA and prevents cells from making RNA and proteins. It is a type of antineoplastic antibiotic. Also called mithramycin and plicamycin.



### **MoAb HuM195**

A substance being studied in the treatment of myelodysplastic syndromes and some types of leukemia. It binds to CD33, a protein on the surface of certain normal blood stem cells and some abnormal blood cells. It causes the immune system to kill these cells. MoAb HuM195 is a type of monoclonal antibody. Also called lintuzumab and monoclonal antibody HuM195.

### **Mohs micrographic surgery**

A procedure used to treat certain types of skin cancer, penile cancer, mouth cancer (especially cancer of the lip), and soft tissue sarcoma of the skin. During Mohs micrographic surgery, the visible tumor and a thin layer of tissue around it is removed. The tissue is then checked under a microscope for the presence of cancer cells at all edges of the tumor. If cancer cells are seen, another thin layer of tissue is removed and checked under the microscope. This process is repeated until no more cancer cells are seen. Mohs micrographic surgery removes as little normal tissue as possible. It is most often used to remove skin cancers on the scalp, face, lip, ear, neck, hands, feet, and genitals, including cancer on or just under the skin of the penis. Also called Mohs surgery.

### **Mohs surgery**

A procedure used to treat certain types of skin cancer, penile cancer, mouth cancer (especially cancer of the lip), and soft tissue sarcoma of the skin. During Mohs surgery, the visible tumor and a thin layer of tissue around it is removed. The tissue is then checked under a microscope for the presence of cancer cells at all edges of the tumor. If cancer cells are seen, another thin layer of tissue is removed and checked under the microscope. This process is repeated until no more cancer cells are seen. Mohs surgery removes as little normal tissue as possible. It is most often used to remove skin cancers on the scalp, face, lip, ear, neck, hands, feet, and genitals, including cancer on or just under the skin of the penis. Also called Mohs micrographic surgery.

### **Monjuvi**

A drug used with lenalidomide to treat adults with certain types of diffuse large B-cell lymphoma that relapsed (came back) or did not get better after treatment with other anticancer therapy. It is used in patients who cannot be treated with an autologous stem cell transplant. It is also being studied in the treatment of other types of cancer. Monjuvi binds to a protein called CD19, which is found on most B cells (a type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Monjuvi is a type of monoclonal antibody. Also called tafasitamab.

### **Montanide ISA-51**

A mixture of oil and water that is combined with a specific antigen to boost the immune response to that antigen. It is being studied in immunotherapy and as a way to increase the immune response to cancer vaccines. It is a type of immune modulator. Also called IFA and incomplete Freund's adjuvant.

### **Morinda citrifolia**

A tropical shrub. An extract from the fruit is being studied as a treatment for cancer, and extracts from the fruit, leaves, or roots have been used in some cultures to treat other diseases. Also called noni.

### **Motrin**

A drug used to treat fever, swelling, pain, and redness by preventing the body from making a substance that causes inflammation. It is a type of nonsteroidal

anti-inflammatory drug (NSAID). Also called Advil and ibuprofen.

### **Mozobil**

A drug used with granulocyte colony-stimulating factor before an autologous stem cell transplant in patients with non-Hodgkin lymphoma or multiple myeloma. It is also being studied in the treatment of other types of cancer. Mozobil helps move stem cells from the bone marrow to the blood so they can be collected, stored, and then given back to the patient. Mozobil is a type of hematopoietic stem cell mobilizer. Also called AMD 3100 and plerixafor.

### **Muir-Torre syndrome**

A rare, inherited disorder that causes tumors to form in the oil glands in skin and in at least one internal organ. The skin tumors may be benign (not cancer) or malignant (cancer) and usually occur on the face, scalp, and eyelids. The internal tumors are malignant and usually form in the gastrointestinal tract (especially the colon and rectum) or genitourinary tract (endometrium and bladder). Muir-Torre syndrome is caused by mutations (changes) in the MLH1, MSH2, or MSH6 gene. Muir-Torre syndrome is a type of Lynch syndrome. Also called MTS.

### **Mullerian tumor**

A rare cancer of the uterus, ovary, or fallopian tubes.

### **MultiHance**

A drug used in MRI to help make clear pictures of blood vessels in the brain, spine, and nearby tissues. It is also being studied as a way to find abnormal areas in the liver and other organs and to help diagnose cancer. MultiHance is a type of contrast agent. Also called gadobenate dimeglumine.

### **Mvasi**

A drug that contains the active ingredient bevacizumab and is used to treat many different types of cancer. Mvasi is used alone or with other drugs to treat certain types of cervical cancer, colorectal cancer, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), and glioblastoma (a type of brain cancer). It is also being studied in the treatment of other types of cancer. Mvasi binds to a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody.

### **Mycobutin**

A drug used to prevent the spread of a bacterium called in patients with advanced HIV (the virus that causes AIDS) infection. It blocks an enzyme that the bacteria need to grow. It is a type of antibiotic. Also called rifabutin.

### **Mycostatin**

A drug used to treat infections caused by fungi (a type of microorganism). It is made by certain strains of bacteria and kills fungi by binding to their membranes. Mycostatin is a type of antifungal agent.

### **Myleran**

A drug that contains the active ingredient busulfan and is used to treat chronic myelogenous leukemia. Myleran damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent.

## **Mylotarg**

A drug used alone or with other drugs to treat acute myeloid leukemia that is CD33 positive (expresses the protein CD33). It is used in adults and in children aged 1 month and older whose disease is newly diagnosed. It is also used in adults and in children aged 2 years and older whose disease has come back or has not gotten better with other treatment. It is also being studied in the treatment of other types of cancer. Mylotarg contains a monoclonal antibody that binds to CD33, which is found on some leukemia cells. It also contains an anticancer drug, which may help kill cancer cells. Mylotarg is a type of antibody-drug conjugate. Also called gemtuzumab ozogamicin.

## **Ménétrier disease**

A condition marked by inflammation and ulcers (breaks on the skin or on the surface of an organ) of the mucosa (inner lining) of the stomach and by overgrowth of the cells that make up the mucosa. Symptoms include vomiting, diarrhea, and weight loss. Patients with Ménétrier disease may be at a higher risk of stomach cancer. Also called gastric mucosal hypertrophy and giant hypertrophic gastritis.

## **N-acetyl-L-cysteine**

A drug usually used to reduce the thickness of mucus and ease its removal. It is also used to reverse the toxicity of high doses of acetaminophen. Also called acetylcysteine and N-acetylcysteine.

## **N-acetylcysteine**

A drug usually used to reduce the thickness of mucus and ease its removal. It is also used to reverse the toxicity of high doses of acetaminophen. Also called acetylcysteine and N-acetyl-L-cysteine.

## **N-acetyldinaline**

A substance that is being studied as an anticancer drug in the treatment of non-small cell lung cancer. Also called CI-994.

## **N-benzoyl-staurosporine**

A drug used alone or with other anticancer drugs to treat adults with certain types of acute myeloid leukemia, mast cell leukemia, or systemic mastocytosis. It is also being studied in the treatment of other types of cancer. N-benzoyl-staurosporine blocks certain proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. N-benzoyl-staurosporine is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called midostaurin, PKC412, and Rydapt.

## **N-butyl-N-(4-hydroxybutyl) nitrosamine**

A substance that is used in cancer research to cause bladder tumors in laboratory animals. This is done to test new diets, drugs, and procedures for use in cancer prevention and treatment.

## **NADC**

A type of cancer that is more likely to occur in people who are infected with human immunodeficiency virus (HIV) than in people who are not infected. NADCs include Hodgkin lymphoma and cancers of the mouth, throat, liver, lung, and anus. In addition to HIV infection, other factors, such as older age, infection with other viruses (such as HPV or hepatitis B or C virus), and heavy alcohol or

tobacco use, may increase the risk of developing a NADC. Also called non-AIDS-defining cancer.

### **NAE inhibitor**

A substance that blocks an enzyme called NEDD8-activating enzyme (NAE). NAE is involved in important cell functions, such as cell division. Blocking NAE may help keep cancer cells from growing and may kill them. Some NAE inhibitors are being studied in the treatment of cancer. They are a type of targeted therapy. Also called NEDD8-activating enzyme inhibitor.

### **NAFLD**

A common condition in which fat builds up in the liver of people who drink little or no alcohol. There are two types of NAFLD, simple or nonalcoholic fatty liver (NAFL) and nonalcoholic steatohepatitis (NASH). NAFL causes little or no inflammation or damage in the liver and usually does not cause serious liver problems. NASH is the more serious type of NAFLD. It can cause liver inflammation and damage to the cells in the liver. This may lead to cirrhosis (scarring of the liver), liver failure, or liver cancer. NAFLD usually affects middle-aged and older adults but is becoming more common in children and teens. It is especially common in people who are overweight or who have obesity, diabetes, or high levels of cholesterol and triglycerides (a type of fat) in the blood. Also called nonalcoholic fatty liver disease.

### **NASH**

A type of liver disease in which fat builds up in the liver of people who drink little or no alcohol. This causes inflammation of the liver and damage to the cells in the liver, which may lead to cirrhosis (scarring of the liver) and liver failure. People with NASH are at increased risk of developing liver cancer. It is more common in middle-aged adults, especially in those who are overweight or obese or who have diabetes or high levels of cholesterol and triglycerides (a type of fat) in the blood. Also called nonalcoholic steatohepatitis.

### **NB1011**

A substance that is being studied for its ability to make cancer cells respond to drugs to which they have become resistant. It is a type of nucleoside analog.

### **NBCCS**

A rare, inherited disorder that affects many organs and tissues in the body. People with this disorder have a very high risk of developing basal cell skin cancer during adolescence or early adulthood. They are also at risk of developing medulloblastoma (a type of brain cancer) and other types of cancer. NBCCS may also cause benign (not cancer) tumors in the jaw, heart, or ovaries. Other signs and symptoms include a large head and unusual facial features; small pits in the skin on the hands and feet; abnormalities of the spine, ribs, or skull; eye problems; and developmental problems. NBCCS is caused by a mutation (change) in the PTCH1 gene. Also called basal cell nevus syndrome, BCNS, Gorlin syndrome, and nevoid basal cell carcinoma syndrome.

### **NBI-3001**

A substance being studied in the treatment of cancer. It is made by combining interleukin-4 with a bacterial toxin. NBI-3001 is a type of recombinant chimeric protein. Also called interleukin-4 PE38KDEL cytotoxin and interleukin-4 PE38KDEL immunotoxin.

## **NCCIH**

A federal agency that uses science to explore complementary and integrative health (CIH) practices, trains CIH researchers, and provides authoritative information about CIH to professionals and the public. NCCIH awards grants for research projects, training, and career development in CIH; sponsors conferences, educational programs, and exhibits; studies ways to use proven CIH practices along with conventional medical practice; and supports adding CIH to medical, dental, and nursing school programs. NCCIH is part of the National Institutes of Health. Also called National Center for Complementary and Integrative Health.

## **NCI**

NCI, part of the National Institutes of Health of the United States Department of Health and Human Services, is the Federal Government's principal agency for cancer research. It conducts, coordinates, and funds cancer research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer. Access the NCI Web site at <http://www.cancer.gov>. Also called National Cancer Institute.

## **NCI clinical trials cooperative group**

A group of researchers, cancer centers, and community doctors who are involved in studies that test new ways to screen, prevent, diagnose, and treat cancer. Clinical trials run by cooperative groups are funded and supported by the National Cancer Institute (NCI), and large numbers of patients take part in many locations. The current U.S. cooperative groups are the Alliance for Clinical Trials in Oncology, ECOG-ACRIN Cancer Research Group, NRG Oncology, SWOG, and Children's Oncology Group (COG). The NCI clinical trials cooperative groups are part of the National Clinical Trials Network (NCTN).

## **NCTN**

A National Cancer Institute (NCI) program that gives funds and other support to cancer research organizations to conduct cancer clinical trials. The NCTN helps these organizations develop new clinical trials and manage their regulatory, financial, membership, and scientific committees. It also helps with statistics and data management, Institutional Review Boards (IRBs), and patient tissue sample collection and storage. This support allows researchers to conduct trials that focus on specific cancers and patient populations and new treatment methods. The groups in the NCTN include the Alliance for Clinical Trials in Oncology, ECOG-ACRIN Cancer Research Group, NRG Oncology, SWOG, Children's Oncology Group (COG), and the NCI of Canada-Clinical Trials Group (NCIC-CTG). The NCTN was previously known as the NCI Clinical Trials Cooperative Group Program. Also called National Clinical Trials Network.

## **NCX 4016**

A substance being studied in the prevention of colorectal cancer. It is a form of aspirin that gives off nitric oxide gas and is less irritating to the lining of the stomach than plain aspirin. It is a type of nonsteroidal anti-inflammatory drug (NSAID). Also called nitric oxide-releasing acetylsalicylic acid derivative.

## **NDGA**

A drug put on the skin to treat growths caused by sun exposure. A form of NDGA that is taken by mouth is being studied in the treatment of prostate cancer. NDGA is an antioxidant, and it may block certain enzymes needed for tumor growth. Also called Actinex, masoprocyl, and nordihydroguaiaretic acid.

## **NDV**

Newcastle disease virus. A bird virus that is being studied in the treatment of cancer. It may be used to kill cancer cells directly, or it may be given as a cancer vaccine to stimulate the body's immune system. NDV is a type of biological response modifier and vaccine therapy. Also called Newcastle disease virus.

## **NEDD8-activating enzyme inhibitor**

A substance that blocks an enzyme called NEDD8-activating enzyme (NAE). NAE is involved in important cell functions, such as cell division. Blocking NAE may help keep cancer cells from growing and may kill them. Some NEDD8-activating enzyme inhibitors are being studied in the treatment of cancer. They are a type of targeted therapy. Also called NAE inhibitor.

## **NES**

A procedure in which small electric impulses are used to stimulate muscles that are weak or paralyzed. It helps to increase muscle strength, blood circulation, and range of motion and to lessen muscle spasms. Also called neuromuscular electrical stimulation, NMES, and therapeutic (subthreshold) electrical stimulation.

## **NF-kB**

A group of proteins that help control many functions in a cell, including cell growth and survival. These proteins also control the body's immune and inflammatory responses. NF-kB may be overactive or found in higher than normal amounts in some types of cancer cells. This may lead to cancer cell growth. High levels or overactivity of NF-kB may also lead to inflammatory disorders, such as asthma and ulcerative colitis, and autoimmune disorders, such as rheumatoid arthritis. Also called NF-kappa B and nuclear factor-kappa B.

## **NF-kappa B**

A group of proteins that help control many functions in a cell, including cell growth and survival. These proteins also control the body's immune and inflammatory responses. NF-kappa B may be overactive or found in higher than normal amounts in some types of cancer cells. This may lead to cancer cell growth. High levels or overactivity of NF-kappa B may also lead to inflammatory disorders, such as asthma and ulcerative colitis, and autoimmune disorders, such as rheumatoid arthritis. Also called NF-kB and nuclear factor-kappa B.

## **NF1**

A rare genetic condition that causes brown spots and tumors on the skin, freckling in skin areas not exposed to the sun, tumors on the nerves, and developmental changes in the nervous system, muscles, bone, and skin. Also called neurofibromatosis type 1.

## **NF2**

A genetic condition in which tumors form on the nerves of the inner ear and cause loss of hearing and balance. Tumors may also occur in the brain and on nerves in the skull and spinal cord, and may cause loss of speech, eye movement, and the ability to swallow. Also called acoustic neurofibromatosis and neurofibromatosis type 2.

## **NFE2L2**

A protein that controls how certain genes are expressed. These genes help protect the cell from damage caused by free radicals (unstable molecules made during normal cell metabolism). Free radicals may play a part in cancer, heart



disease, stroke, and other diseases of aging. Also called Nrf2 and nuclear factor (erythroid-derived 2)-like 2.

### **NG tube**

A tube that is inserted through the nose, down the throat and esophagus, and into the stomach. It can be used to give drugs, liquids, and liquid food, or used to remove substances from the stomach. Giving food through an NG tube is a type of enteral nutrition. Also called gastric feeding tube and nasogastric tube.

### **NG-monomethyl-L-arginine**

An amino acid derivative used to counteract high blood pressure caused by interleukin-2.

### **NG-nitro-L-arginine**

A form of the amino acid arginine. An amino acid is a protein building block. NG-nitro-L-arginine is being studied in the treatment of cancer and other conditions. In cancer, it may stop the growth of tumor cells by blocking certain proteins needed for tumor cells to grow and by blocking blood flow to the tumor. It is a type of nitric oxide synthase inhibitor and an antiangiogenesis agent. Also called nitroarginine.

### **NGR-TNF**

A substance being studied in the treatment of cancer. It is made by linking tumor necrosis factor (TNF) to a peptide. The peptide binds to tumor blood vessels, and TNF damages them. It is a type of biological response modifier. Also called tumor vasculature–targeted tumor necrosis factor alpha.

### **NGS**

A term that describes methods used in the lab to learn the order of building blocks (called nucleotides) for millions of DNA or RNA fragments at the same time. Computers are used to piece together the fragments in order to sequence a person or other organism's entire DNA, large segments of DNA or RNA, or the DNA in specific types of cells from a sample of tissue. NGS can also identify changes in certain areas of the genome or in specific genes. There are many different types of NGS methods, including whole-genome sequencing, whole-exome sequencing, multigene panel testing, and transcriptome sequencing. NGS may help researchers understand the cause of certain diseases, such as cancer. Also called massively parallel sequencing and next-generation sequencing.

### **NHL**

Any of a large group of cancers of lymphocytes (white blood cells). NHLs can occur at any age and are often marked by lymph nodes that are larger than normal, fever, and weight loss. There are many different types of NHL. These types can be divided into aggressive (fast-growing) and indolent (slow-growing) types, and they can be formed from either B-cells or T-cells. B-cell NHLs include Burkitt lymphoma, chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL), diffuse large B-cell lymphoma, follicular lymphoma, immunoblastic large cell lymphoma, precursor B-lymphoblastic lymphoma, and mantle cell lymphoma. T-cell NHLs include mycosis fungoides, anaplastic large cell lymphoma, and precursor T-lymphoblastic lymphoma. Lymphomas that occur after bone marrow or stem cell transplantation are usually B-cell NHLs. Prognosis and treatment depend on the stage and type of disease. Also called non-Hodgkin lymphoma.

## **NHP2 gene**

A gene that makes a protein involved in protecting telomeres (the ends of chromosomes), which help keep chromosomes from sticking together or breaking down. The protein also helps stabilize a type of RNA involved in making proteins in the cell. Mutations (changes) in the NHP2 gene may lead to abnormal cell growth and cancer. NHP2 gene mutations have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **NIH**

A federal agency in the U.S. that conducts biomedical research in its own laboratories; supports the research of non-Federal scientists in universities, medical schools, hospitals, and research institutions throughout the country and abroad; helps in the training of research investigators; and fosters communication of medical information. Access the NIH Web site at <http://www.nih.gov>. Also called National Institutes of Health.

## **NILM**

A Pap test finding that means no cancer cells or other abnormal cells have been found on the surface of or in the tissue that lines the cervix. Cell changes that suggest inflammation or infection may be included in this finding. Also called negative for intraepithelial lesion or malignancy, negative Pap test result, and normal Pap test result.

## **NK cell**

A type of immune cell that has granules (small particles) with enzymes that can kill tumor cells or cells infected with a virus. An NK cell is a type of white blood cell. Also called natural killer cell and NK-LGL.

## **NK-LGL**

A type of immune cell that has granules (small particles) with enzymes that can kill tumor cells or cells infected with a virus. An NK-LGL is a type of white blood cell. Also called natural killer cell and NK cell.

## **NK-LGL leukemia**

A type of leukemia in which large natural killer (NK) cells (a type of white blood cell) that contain granules (small particles) are found in the blood. It is a chronic disease that may last for a long time and get worse. Also called natural killer-cell large granular lymphocyte leukemia and NK-LGLL.

## **NK-LGLL**

A type of leukemia in which large natural killer (NK) cells (a type of white blood cell) that contain granules (small particles) are found in the blood. It is a chronic disease that may last for a long time and get worse. Also called natural killer-cell large granular lymphocyte leukemia and NK-LGL leukemia.

## **NKT cell**

A type of immune cell that plays an important role in the body's first immune response to invading microorganisms. NKT cells are a type of T cell that also have certain features of natural killer (NK) cells. They can kill invading microorganisms, such as bacteria and viruses, by releasing cytokines. They can also kill certain cells, such as cancer cells, either directly or by causing other

immune cells to kill them. If NKT cells become inactive, this may contribute to the development and progression of certain diseases, such as cancer. Also called natural killer T cell.

### **NLPHL**

A rare type of Hodgkin lymphoma (a cancer of the immune system). It is marked by the presence of lymphocyte-predominant cells, which used to be called popcorn cells. These cells are different from the typical Reed-Sternberg cells found in classic Hodgkin lymphoma. NLPHL may change into diffuse large B-cell lymphoma. Also called LPHL, lymphocyte-predominant Hodgkin lymphoma, and nodular lymphocyte-predominant Hodgkin lymphoma.

### **NLST**

A lung cancer screening trial sponsored by the National Cancer Institute (NCI). In the trial, low-dose spiral CT scans were compared with chest x-rays for their ability to detect lung cancer early. The trial included more than 50,000 participants who were aged 55 to 74 years, were current or former heavy smokers, and had no signs or symptoms of lung cancer. The results of the trial showed that participants who were screened with spiral CT scans had about a 20% lower risk of dying from lung cancer than those who were screened with chest x-rays. Also called National Lung Screening Trial.

### **NMES**

A procedure in which small electric impulses are used to stimulate muscles that are weak or paralyzed. It helps to increase muscle strength, blood circulation, and range of motion and to lessen muscle spasms. Also called NES, neuromuscular electrical stimulation, and therapeutic (subthreshold) electrical stimulation.

### **NMP22**

A protein found inside the nucleus of a cell. It is involved in making DNA, RNA, and proteins. It also helps control how certain genes are expressed (turned on) in a cell. NMP22 may be found in higher than normal amounts in the urine of patients with some types of cancer, including bladder cancer. Measuring the amount of NMP22 in the urine may help diagnose cancer or find out how well treatment is working. It is a type of tumor marker. Also called nuclear matrix protein 22.

### **NMRI**

A procedure that uses radio waves, a powerful magnet, and a computer to make a series of detailed pictures of areas inside the body. A contrast agent, such as gadolinium, may be injected into a vein to help the tissues and organs show up more clearly in the picture. NMRI may be used to help diagnose disease, plan treatment, or find out how well treatment is working. It is especially useful for imaging the brain and spinal cord, the heart and blood vessels, the bones, joints, and other soft tissues, the organs in the pelvis and abdomen, and the breast. Also called magnetic resonance imaging, MRI, and nuclear magnetic resonance imaging.

### **NMS**

A life-threatening condition that may be caused by certain drugs used to treat mental illness, nausea, or vomiting. Symptoms include high fever, sweating, unstable blood pressure, confusion, and stiffness. Also called neuroleptic malignant syndrome.

**NOP10 gene**

A gene that makes a protein involved in making ribosomes (protein-making structures inside cells) and in maintaining telomeres (the ends of chromosomes). Mutations (changes) in the NOP10 gene have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

**NP**

A registered nurse who has additional education and training in how to diagnose and treat disease. NPs are licensed at the state level and certified by national nursing organizations. In cancer care, an NP may manage the primary care of patients and their families, based on a practice agreement with a doctor. Also called advanced practice nurse, APN, and nurse practitioner.

**NPO**

A Latin abbreviation for “nothing by mouth.”

**NPV**

The likelihood that a person who has a negative test result indeed does not have the disease, condition, biomarker, or mutation (change) in the gene being tested. The NPV is a way of measuring how accurate a specific test is. Also called negative predictive value.

**NR-LU-10 antigen**

A protein found on the surface of some cancers.

**NREM sleep**

The phase of sleep that is considered the quiet or restful phase. During the three stages of NREM sleep, a person falls asleep and then moves from a light sleep into a deep sleep. This is when a person’s brain activity, breathing, and heart rate slow down, body temperature drops, muscles relax, and eye movements stop. NREM sleep plays an important role in helping the body repair tissues, build bone and muscle, and strengthen its immune system. During normal sleep, a person goes through four to five sleep cycles that last about 90 minutes each and include both NREM sleep and REM sleep. Also called non-rapid eye movement sleep and non-REM sleep.

**NSAID**

A drug that works in a different way than a steroid to reduce pain, redness, swelling, and fever in the body. Some NSAIDs may also help keep blood clots from forming. The side effects of NSAIDs include bleeding and stomach, kidney, and heart problems. Examples of NSAIDs are aspirin, ibuprofen, ketoprofen, celecoxib, diclofenac, and ketorolac. NSAIDs may also help prevent some types of cancer. Also called nonsteroidal anti-inflammatory drug.

**NSC 655649**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called antitumor antibiotics and topoisomerase inhibitors. Also called rebeccamycin analog.

### **NTHL1 gene**

A gene that makes a protein involved in the repair of DNA damage. Mutations (changes) in the NTHL1 gene may keep cells from repairing their damaged DNA, which may cause cancer cells to grow. The mutated NTHL1 gene has been found in some patients with an inherited condition called familial adenomatous polyposis 3 (FAP3). FAP3 causes many polyps (abnormal growths) to form on the inner walls of the colon and rectum, which may lead to colorectal cancer. People who have mutations in NTHL1 may also be at increased risk of developing other types of cancer, including endometrial, small intestine, skin, breast, and pancreatic cancers.

### **NTRK gene fusion**

A mutation (change) that occurs when a piece of the chromosome containing a gene called NTRK breaks off and joins with a gene on another chromosome. NTRK gene fusions lead to abnormal proteins called TRK fusion proteins, which may cause cancer cells to grow. NTRK gene fusions may be found in some types of cancer, including cancers of the brain, head and neck, thyroid, soft tissue, lung, and colon. Also called neurotrophic tyrosine receptor kinase gene fusion.

### **NTX-010**

A virus being studied in the treatment of neuroendocrine tumors and other types of cancer. Neuroendocrine tumors form from cells that release hormones in response to a signal from the nervous system. The virus infects and breaks down these tumor cells but not normal cells. It is a type of oncolytic virus. Also called Seneca Valley virus-001 and SVV-001.

### **NUT carcinoma**

A rare type of cancer that forms in the respiratory tract and other places along the middle of the body, from the head to the abdomen. This includes the thymus, the area between the lungs, and the pancreas, liver, and bladder. NUT carcinoma is caused when a piece of chromosome 15 containing the NUT gene breaks off and attaches to another chromosome. It is usually aggressive (fast-growing) and cannot be cured. NUT carcinoma usually occurs in children and young adults.

### **NUT gene**

A gene that causes a rare type of cancer called NUT midline carcinoma, when it is mutated (changed). The mutation occurs when a piece of the chromosome containing the NUT gene breaks off and attaches to another chromosome. In its natural, unchanged form, the NUT gene codes for a protein found in germ cells (reproductive cells) in the testicles and ovaries.

### **NaCl**

Chemical abbreviation for sodium chloride (table salt).

### **Namenda**

A drug used to treat dementia caused by Alzheimer disease. It is also being studied in the treatment of side effects from whole-brain radiation therapy for cancer and other conditions. Namenda blocks the uptake of calcium by certain brain cells and decreases their activity. It is a type of N-methyl-D-aspartate (NMDA) receptor antagonist. Also called memantine hydrochloride.

### **Naprosyn**

A drug used to treat mild pain and the symptoms of arthritis and several other conditions. It is also being studied in the treatment of bone pain in patients with cancer. Naprosyn stops the body from making substances that cause pain and inflammation. It is a type of nonsteroidal anti-inflammatory drug (NSAID) and a type of cyclooxygenase inhibitor. Also called naproxen.

### **Naropin**

A drug used to control pain and to cause a temporary loss of feeling in one part of the body, during and after surgery. It is also being studied for pain control after cancer surgery. It is a type of local anesthetic. Also called ropivacaine hydrochloride.

### **Nasonex**

A drug that is used in a cream to treat certain skin conditions and in a nasal spray to treat sinus problems caused by allergies. It is being studied as a way to treat inflammation of the skin caused by radiation therapy. Nasonex is a type of corticosteroid. Also called Elocon and mometasone furoate.

### **National Cancer Institute**

The National Cancer Institute, part of the National Institutes of Health of the United States Department of Health and Human Services, is the Federal Government's principal agency for cancer research. The National Cancer Institute conducts, coordinates, and funds cancer research, training, health information dissemination, and other programs with respect to the cause, diagnosis, prevention, and treatment of cancer. Access the National Cancer Institute Web site at <http://www.cancer.gov>. Also called NCI.

### **National Center for Complementary and Integrative Health**

A federal agency that uses science to explore complementary and integrative health (CIH) practices, trains CIH researchers, and provides authoritative information about CIH to professionals and the public. The National Center for Complementary and Integrative Health awards grants for research projects, training, and career development in CIH; sponsors conferences, educational programs, and exhibits; studies ways to use proven CIH practices along with conventional medical practice; and supports adding CIH to medical, dental, and nursing school programs. The National Center for Complementary and Integrative Health is part of the National Institutes of Health. Also called NCCIH.

### **National Clinical Trials Network**

A National Cancer Institute (NCI) program that gives funds and other support to cancer research organizations to conduct cancer clinical trials. The National Clinical Trials Network (NCTN) helps these organizations develop new clinical trials and manage their regulatory, financial, membership, and scientific committees. It also helps with statistics and data management, Institutional Review Boards (IRBs), and patient tissue sample collection and storage. This support allows researchers to conduct trials that focus on specific cancers and patient populations and new treatment methods. The groups in the NCTN include the Alliance for Clinical Trials in Oncology, ECOG-ACRIN Cancer Research Group, NRG Oncology, SWOG, Children's Oncology Group (COG), and the NCI of Canada-Clinical Trials Group (NCIC-CTG). The NCTN was previously known as the NCI Clinical Trials Cooperative Group Program. Also called NCTN.



### **National Institutes of Health**

A federal agency in the U.S. that conducts biomedical research in its own laboratories; supports the research of non-Federal scientists in universities, medical schools, hospitals, and research institutions throughout the country and abroad; helps in the training of research investigators; and fosters communication of medical information. Access the National Institutes of Health Web site at <http://www.nih.gov>. Also called NIH.

### **National Lung Screening Trial**

A lung cancer screening trial sponsored by the National Cancer Institute (NCI). In the trial, low-dose spiral CT scans were compared with chest x-rays for their ability to detect lung cancer early. The trial included more than 50,000 participants who were aged 55 to 74 years, were current or former heavy smokers, and had no signs or symptoms of lung cancer. The results of the trial showed that participants who were screened with spiral CT scans had about a 20% lower risk of dying from lung cancer than those who were screened with chest x-rays. Also called NLST.

### **Nerlynx**

A drug used alone or with capecitabine to treat adults with certain types of HER2-positive breast cancer that have already been treated. It is also being studied in the treatment of other types of cancer. Nerlynx blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called neratinib maleate.

### **Neulasta**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Neulasta helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called filgrastim-SD/01, Fulphila, Nyvepria, pegfilgrastim, Udenyca, and Ziextenzo.

### **Neumega**

A drug used to increase the number of blood cells, especially platelets, in some cancer patients receiving chemotherapy. Neumega is a form of interleukin-11 (a cytokine normally made by support cells in the bone marrow) that is made in the laboratory. It is a type of biological response modifier. Also called oprelvekin, recombinant human interleukin-11, and rhIL-11.

### **Neupogen**

A drug that contains the active ingredient filgrastim and is used to treat neutropenia (a lower-than-normal number of white blood cells), prevent infection, and prepare the blood for the collection of certain types of blood cells. Neupogen is used in patients who have certain cancers and neutropenia caused by some types of chemotherapy and in patients who have severe chronic neutropenia that is not caused by cancer treatment. It is also used before an autologous stem cell transplant. Neupogen helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor.

### **Newcastle disease virus**

A bird virus that is being studied in the treatment of cancer. It may be used to kill cancer cells directly, or it may be given as a cancer vaccine to stimulate the

body's immune system. Newcastle disease virus is a type of biological response modifier and vaccine therapy. Also called NDV.

### **Nexavar**

A drug used to treat certain types of hepatocellular carcinoma (a type of liver cancer), renal cell carcinoma (a type of kidney cancer), and thyroid cancer. It is also being studied in the treatment of other types of cancer. Nexavar blocks certain proteins, which may help keep cancer cells from growing and dividing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Nexavar is a type of kinase inhibitor and a type of antiangiogenesis agent. Also called BAY 43-9006 and sorafenib tosylate.

### **Nexium**

A drug that blocks acid from being made in the stomach. It is used to treat acid reflux disease and to prevent certain types of gastrointestinal ulcers. Nexium is being studied in the prevention of esophageal cancer and in the treatment of other conditions, including side effects of chemotherapy. It is a type of anti-ulcer agent. Also called esomeprazole magnesium.

### **Nijmegen breakage syndrome**

A rare inherited disorder marked by a small head, height that is shorter than normal, unusual facial features, and other growth and developmental problems. People with Nijmegen breakage syndrome have a weakened immune system, which may cause them to have frequent sinus, lung, and other respiratory tract infections. They are also at an increased risk of developing certain types of cancer, especially non-Hodgkin lymphoma, rhabdomyosarcoma (a type of soft tissue tumor), and brain cancer. Nijmegen breakage syndrome is caused by a mutation (change) in a gene called NBN, which is involved in DNA repair. It is a type of DNA repair deficiency syndrome and a type of autosomal recessive genetic disease.

### **Nilandron**

A drug used to treat prostate cancer that has spread to other parts of the body. It is used in patients who have had surgery to remove the testicles (orchiectomy). Nilandron binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Nilandron blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called nilutamide.

### **Ninlaro**

A drug used with lenalidomide and dexamethasone to treat multiple myeloma. It is used in patients who received at least one other anticancer treatment. It is also being studied in the treatment of other types of cancer. Ninlaro blocks the action of enzymes called proteasomes, which may help keep cancer cells from growing and may kill them. It is a type of proteasome inhibitor. Also called ixazomib citrate.

### **Nipent**

The active ingredient in a drug that is used to treat hairy cell leukemia and is being studied in the treatment of other types of cancer. Nipent blocks a protein needed for cell growth and may kill cancer cells. It is made by a bacterium. It is a type of adenosine deaminase inhibitor. Also called pentostatin.

## **Nivestym**

A drug that contains the active ingredient filgrastim and is used to treat neutropenia (a lower-than-normal number of white blood cells), prevent infection, and prepare the blood for the collection of certain types of blood cells. Nivestym is used in patients who have certain cancers and neutropenia caused by some types of chemotherapy and in patients who have severe chronic neutropenia that is not caused by cancer treatment. It is also used before an autologous stem cell transplant. Nivestym helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor.

## **Noonan syndrome**

A genetic disorder marked by unusual facial features, being shorter than normal, learning problems, heart defects, bleeding problems, defects in the skeleton (bones of the body), and fertility problems in males. People with Noonan syndrome have an increased risk of certain types of cancer, such as rhabdomyosarcoma (a soft tissue tumor), neuroblastoma (cancer of immature nerve cells), and some types of leukemia.

## **Noonan syndrome with multiple lentigines**

A rare genetic condition that affects many parts of the body, especially the skin, heart, inner ear, and genitals. It is marked by small, dark brown spots on the skin called lentigines, which usually appear on the face, neck, and upper body by age 4 or 5 years. The number of lentigines may increase to the thousands by puberty. Other signs and symptoms of this condition include heart defects, unusual facial features, genital abnormalities, and shorter-than-average height. People with this syndrome may also have hearing loss, an abnormally shaped chest, extra folds of skin on the back of the neck, mild learning problems, and fertility problems. Noonan syndrome with multiple lentigines is a type of disease called a RASopathy that is caused by mutations (changes) in the PTPN11, RAF1, BRAF, or MAP2K1 gene. These genes make proteins involved in a cell signaling pathway that controls many important cell functions. Noonan syndrome with multiple lentigines is sometimes called LEOPARD syndrome.

## **Norvir**

A drug used to treat infection with HIV (the virus that causes AIDS). It is also being studied in the treatment of some types of cancer. Norvir blocks the ability of HIV to make copies of itself and may block the growth of cancer cells. It is a type of anti-HIV agent and a type of protease inhibitor. Also called ritonavir.

## **Nplate**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults and in certain children with immune thrombocytopenic purpura that did not get better with other treatment. It is also being studied in the treatment of other conditions and types of cancer. Nplate binds to the thrombopoietin receptor, which causes the bone marrow to make more platelets. It is a type of thrombopoietin receptor agonist. Also called AMG 531 and romiplostim.

## **Nrf2**

A protein that controls how certain genes are expressed. These genes help protect the cell from damage caused by free radicals (unstable molecules made during normal cell metabolism). Free radicals may play a part in cancer, heart disease, stroke, and other diseases of aging. Also called NFE2L2 and nuclear factor (erythroid-derived 2)-like 2.

### **Nubeqa**

A drug used alone or with docetaxel to treat adults with certain types of prostate cancer. Nubeqa is used in patients whose cancer has spread to other parts of the body and responds to treatment that lowers testosterone levels or whose cancer has not spread to other parts of the body and no longer responds to treatment that lowers testosterone levels. It is also being studied in the treatment of other types of cancer. Nubeqa binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Nubeqa blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called darolutamide.

### **Nucynta**

A drug used to treat moderate to severe pain. It binds to opioid receptors and other molecules in the central nervous system. Nucynta is a type of opioid and a type of analgesic agent. Also called tapentadol hydrochloride.

### **Numorphan**

A drug used to treat moderate to severe pain. It is also used as a sedative before surgery, to help with anesthesia during surgery, during labor, and to treat anxiety caused by some medical conditions. It is made from morphine and binds to opioid receptors in the central nervous system. Numorphan is a type of opioid and a type of analgesic agent. Also called Opana and oxymorphone hydrochloride.

### **Nuvigil**

A drug that is used to treat certain sleep disorders, such as narcolepsy. It makes patients feel more alert and awake. It is also being studied in the treatment of insomnia and fatigue in patients treated for cancer. Nuvigil acts in a part of the brain that controls sleep and wakefulness. It is a type of wakefulness-promoting agent. Also called armodafinil.

### **Nyvepria**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Nyvepria helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called filgrastim-SD/01, Fulphila, Neulasta, pegfilgrastim, Udenyca, and Ziextenzo.

### **O(6)-benzylguanine**

A drug that may improve the response of cancer cells to chemotherapy.

### **OCA**

A group of rare, inherited disorders in which the skin, hair, and eyes have little or no melanin (pigment). Most people with these disorders have very pale skin, white or light-colored hair, and light-colored eyes. People with OCA can also have vision problems, including blurry vision, rapid eye movement, crossed eyes, and increased sensitivity to light. People with these disorders have a high risk of developing squamous cell skin cancer at a very early age. The seven types of OCA are caused by mutations (changes) in the TYR, OCA2, TYRP1, SLC45A2, OCA5, SLC24A5, or C10orf11 gene. These genes are involved in making melanin. The amount of skin, hair, and eye pigment seen in each OCA type

depends on the gene and mutation involved. Also called oculocutaneous albinism.

### **OCA2 gene**

A gene that makes a protein thought to be involved in making melanin (a pigment that gives color to the skin, hair, and eyes). Mutations (changes) in the OCA2 gene have been found in an inherited condition called oculocutaneous albinism. People with this condition have very pale skin and light-colored hair and eyes. They also have a high risk of developing skin cancer at an early age.

### **OCT**

A procedure that uses infrared light waves to give three-dimensional (3-D) pictures of structures inside tissues and organs. The pictures are made by a computer linked to the light source. Also called optical coherence tomography.

### **OED**

The presence of abnormal cells in the tissues of the mouth. These tissues include the lips, the lining of the inside of the cheeks, the gums, the front two thirds of the tongue, the bottom of the mouth under the tongue, the bony part of the roof of the mouth, and the small area behind the wisdom teeth. OED may be found in patches of tissue that look red, white, or a mixture of both colors but can only be diagnosed by looking at the cells under a microscope. It is most commonly caused by tobacco or alcohol use. It may also be caused by infection with certain types of human papillomavirus (HPV). OED is not cancer but may become cancer and spread to nearby normal tissue. It can be mild, moderate, or severe, depending on how abnormal the cells look under a microscope and how much of the tissues in the mouth are affected. Also called oral dysplasia and oral epithelial dysplasia.

### **OEPA**

An abbreviation for a chemotherapy combination that is often used with radiation therapy to treat a certain type of childhood Hodgkin lymphoma in males. It includes the drugs vincristine sulfate (Oncovin), etoposide, prednisone, and doxorubicin hydrochloride (Adriamycin). Also called OEPA regimen.

### **OEPA regimen**

An abbreviation for a chemotherapy combination that is often used with radiation therapy to treat a certain type of childhood Hodgkin lymphoma in males. It includes the drugs vincristine sulfate (Oncovin), etoposide, prednisone, and doxorubicin hydrochloride (Adriamycin). Also called OEPA.

### **OFF**

An abbreviation for a chemotherapy combination used to treat pancreatic cancer. It includes the drugs oxaliplatin, fluorouracil, and leucovorin (folinic acid). Also called OFF regimen.

### **OFF regimen**

An abbreviation for a chemotherapy combination used to treat pancreatic cancer. It includes the drugs oxaliplatin, fluorouracil, and leucovorin (folinic acid). Also called OFF.

### **OGF**

A substance that relieves pain and is being studied in the treatment of some types of cancer. OGFs bind to cells in the body, including tumor cells, which have OGF receptors on the surface. This may help stop the growth of the tumor cells.

It may also prevent the growth of blood vessels that tumors need to grow. An OGF is a type of biological response modifier and a type of antiangiogenesis agent. Also called opioid growth factor.

#### **OGX-011**

A substance being studied in the treatment of cancer. It blocks the production of a protein called clusterin, which helps cells live longer. This may kill cancer cells that need clusterin to grow. It may also make cells more sensitive to anticancer drugs. It is a type of antisense oligonucleotide, and a type of chemosensitizing agent. Also called custirsen sodium.

#### **OHRP**

The office within the U.S. Department of Health and Human Services (DHHS) that protects the rights, welfare, and well-being of people involved in clinical trials. It also makes sure that the research follows the law 45 CFR 46 (Protection of Human Subjects). Also called Office for Human Research Protections.

#### **ON 01910.Na**

A substance being studied in the treatment of cancer. It blocks certain proteins that are needed for cell growth and may kill cancer cells. ON 01910.Na is a type of protein kinase inhibitor and a type of benzyl styryl sulfone analog.

#### **ONYX-015**

A modified cold virus that selectively grows in and destroys certain types of cancer cells and leaves normal cells undamaged.

#### **OPMD**

A group of conditions in which there are abnormal tissue changes in the mouth that may become cancer. These changes may include a lump, thickening, or abnormal patch of red and/or white tissue that forms on the lips, gums, tongue, inner lining of the cheeks, or other areas in the mouth. There are many different types of OPMDs, but the most common types are leukoplakia and erythroplakia. OPMDs may occur in people who have certain rare hereditary conditions, including dyskeratosis congenita, epidermolysis bullosa, xeroderma pigmentosum, and Plummer-Vinson syndrome. Having an OPMD increases a person's risk of developing oral cancer. Also called oral potentially malignant disorder.

#### **OPPA**

An abbreviation for a chemotherapy combination that is often used with radiation therapy to treat a certain type of childhood Hodgkin lymphoma in females. It includes the drugs vincristine sulfate (Oncovin), prednisone, procarbazine hydrochloride, and doxorubicin hydrochloride (Adriamycin). Also called OPPA regimen.

#### **OPPA regimen**

An abbreviation for a chemotherapy combination that is often used with radiation therapy to treat a certain type of childhood Hodgkin lymphoma in females. It includes the drugs vincristine sulfate (Oncovin), prednisone, procarbazine hydrochloride, and doxorubicin hydrochloride (Adriamycin). Also called OPPA.

#### **OPT-80**

A substance being studied in the treatment of diarrhea caused by infection with *Clostridium difficile* (a type of bacteria that can grow without oxygen) in cancer patients. OPT-80 is a type of antibiotic. Also called PAR-101 and tiacumicin B.



## **ORR**

The percentage of people in a study or treatment group who have a partial response or complete response to the treatment within a certain period of time. A partial response is a decrease in the size of a tumor or in the amount of cancer in the body, and a complete response is the disappearance of all signs of cancer in the body. In a clinical trial, measuring the ORR is one way to see how well a new treatment works. Also called objective response rate.

## **OS**

The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, that patients diagnosed with the disease are still alive. In a clinical trial, measuring the OS is one way to see how well a new treatment works. Also called overall survival.

## **OSI-774**

A drug used alone to treat certain types of non-small cell lung cancer and with gemcitabine hydrochloride to treat certain types of pancreatic cancer. It is also being studied in the treatment of other types of cancer. OSI-774 blocks a protein called EGFR, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called CP-358,774, erlotinib hydrochloride, and Tarceva.

## **OSI-7904L**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called thymidylate synthase inhibitors.

## **OSI-906**

A substance being studied in the treatment of cancer. It blocks a protein called IGF-1R, which is found at high levels in some types of tumors. IGF-1R is needed for cell growth and blocking it may cause tumor cells to die. OSI-906 is a type of IGF-1R inhibitor. Also called IGF-1R inhibitor OSI-906.

## **OTC**

Refers to a medicine that can be bought without a prescription (doctor's order). Examples include analgesics (pain relievers), such as aspirin and acetaminophen. Also called nonprescription and over-the-counter.

## **OX-40**

A protein being studied in the treatment of cancer. Substances that attach to OX-40 on the surface of T cells (a type of white blood cell) may help the T cells grow and kill more cancer cells. OX-40 is a type of tumor necrosis factor (TNF) receptor. Also called CD134.

## **Odomzo**

A drug used to treat locally advanced basal cell carcinoma (BCC) that has come back after surgery or radiation therapy. It is also used in patients who cannot be treated with surgery or radiation therapy. Odomzo is also being studied in the treatment of other types of cancer. Odomzo blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type of hedgehog signaling pathway antagonist. Also called erismodegib, LDE225, and sonidegib phosphate.

## **Office for Human Research Protections**

The office within the U.S. Department of Health and Human Services (DHHS) that protects the rights, welfare, and well-being of people involved in clinical

trials. It also makes sure that the research follows the law 45 CFR 46 (Protection of Human Subjects). Also called OHRP.

### Ogivri

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Ogivri binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Ogivri is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Hercessi, Herzuma, Kanjinti, Ontruzant, trastuzumab, and Trazimera.

### Ogsiveo

A drug used to treat adults with desmoid tumors (a type of soft tissue tumor) that have gotten worse and need systemic therapy. It is also being studied in the treatment of other types of cancer. Ogsiveo binds to a protein called gamma secretase, which blocks the activation of other proteins called Notch receptors. Blocking these proteins may help keep tumor cells from growing and may kill them. Ogsiveo is a type of gamma secretase inhibitor. Also called nirogacestat hydrobromide.

### Ojemda

A drug used to treat children aged 6 months and older with low-grade glioma (a type of brain tumor) that has certain mutations (changes) in the BRAF gene. It is used in patients whose tumor came back or did not get better after treatment with other therapy. It is also being studied in the treatment of other types of cancer. Ojemda blocks certain proteins made by the mutated BRAF gene, which may help keep tumor cells from growing. It is a type of kinase inhibitor. Also called tovorafenib.

### Ojjaara

A drug used to treat intermediate-risk or high-risk myelofibrosis (MF), including primary MF, post-polycythemia vera MF, and post-essential thrombocythemia MF, in adults with anemia. Ojjaara blocks JAK and other proteins, which may help keep abnormal blood cells or cancer cells from growing. It is a type of kinase inhibitor. Also called momelotinib dihydrochloride monohydrate.

### Oleptro

A drug used to treat depression. It may also be used to help relieve anxiety and insomnia (trouble sleeping) and to treat certain other disorders. Oleptro increases the level of the chemical serotonin in the brain, which helps improve mood. It is a type of antidepressant. Also called trazodone.

### Ollier disease

A rare disorder that causes benign (not cancer) growths of cartilage in the bones that may become cancer. These growths, called enchondromas, usually occur in the bones of the hands and feet, but they may also occur in the skull, ribs, and spine. They may cause bones to break, to be deformed, or to be shorter than usual. People with Ollier disease have an increased risk of developing certain types of cancer, including chondrosarcoma (cancer that forms in bone cartilage) and cancers of the ovary or liver. Ollier disease is most common in children and young adults. Also called enchondromatosis.

### **Ommaya reservoir**

A device surgically placed under the scalp and used to deliver anticancer drugs to the fluid surrounding the brain and spinal cord.

### **Oncaspar**

A drug used with other drugs to treat adults and children with acute lymphoblastic leukemia. It is used in patients whose cancer has not already been treated or who cannot be treated with asparaginase. It is also being studied in the treatment of other types of cancer. Oncaspar is made up of the enzyme L-asparaginase that is linked to a substance called PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium *E. coli* and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. Oncaspar is a type of protein synthesis inhibitor. Also called PEG-asparaginase and pegaspargase.

### **Onconase**

A substance being studied in the treatment of cancer. It is a type of ribonuclease enzyme. Also called ranpirnase.

### **Oncophage**

A vaccine made from a patient's tumor cells that may help the body's immune system kill cancer cells. This vaccine is used to treat kidney cancer, a type of brain cancer called glioma, and metastatic melanoma (a type of skin cancer that has spread). It is also being studied in the treatment of other types of cancer. Also called gp96 heat shock protein-peptide complex vaccine, gp96 HSP-peptide complex, and vitespen.

### **Oncotype DX breast cancer assay**

A lab test that is used to help predict whether breast cancer will come back or spread to other parts of the body. The test looks at the activity level of 21 different genes in breast cancer tissue of people with early-stage (stage I, II, or IIIA) invasive breast cancer that is estrogen receptor (ER) positive, HER2 negative, and is either node-negative or has spread to 1 to 3 lymph nodes. If the test shows that there is a high risk that the cancer will spread or come back, treatment with chemotherapy may be needed to lower the risk. Also called 21-gene signature.

### **Oncotype DX ductal carcinoma in situ (DCIS) assay**

A test that is being studied as a way to help predict whether ductal carcinoma in situ (DCIS) will come back or become invasive and spread to other tissues in the same breast. The test looks at the activity of 12 different genes in DCIS tissue, and it may be used to help plan treatment.

### **Oncovin**

A drug that contains the active ingredient vincristine sulfate, which is used to treat many types of cancer. Oncovin brand has been taken off the market and is no longer available.

### **Onivyde**

A form of the anticancer drug irinotecan hydrochloride that is contained inside very tiny, fat-like particles and is used with other drugs to treat adults with pancreatic cancer that has spread to other parts of the body. It is used in patients whose cancer has not been treated with other anticancer therapy or has gotten worse after treatment with gemcitabine hydrochloride. It is also being studied in the treatment of other types of cancer. Onivyde may have fewer side effects and

work better than other forms of irinotecan hydrochloride. Onivyde blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called irinotecan sucrosfate and PEP02.

### **Onorigin**

A drug used to treat acute myelogenous leukemia (AML). It is also being studied in the treatment of several other types of cancer. It blocks cell growth by damaging the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Cloretazine and Iaromustine.

### **Ontruzant**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Ontruzant binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Ontruzant is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Hercessi, Herzuma, Kanjinti, Ogivri, trastuzumab, and Trazimera.

### **Onureg**

A drug that contains the active ingredient azacitidine and is used to treat adults with certain types of acute myeloid leukemia. It is used in patients whose cancer is in first complete remission after intensive induction chemotherapy and who were not able to finish intensive therapy that would cure their cancer. Onureg stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **Opana**

A drug used to treat moderate to severe pain. It is also used as a sedative before surgery, to help with anesthesia during surgery, during labor, and to treat anxiety caused by some medical conditions. It is made from morphine and binds to opioid receptors in the central nervous system. Opana is a type of opioid and a type of analgesic agent. Also called Numorphan and oxymorphone hydrochloride.

### **Opdivo**

A drug that binds to the protein PD-1 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that express the protein PD-L1 or that have certain mutations (changes) in genes involved in DNA repair. Opdivo is used alone or with other drugs to treat certain types of classic Hodgkin lymphoma, colorectal cancer, esophageal cancer, gastroesophageal junction cancer, head and neck squamous cell carcinoma, hepatocellular carcinoma (a type of liver cancer), malignant pleural mesothelioma, melanoma, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), stomach cancer, and urothelial carcinoma (a type of bladder or urinary tract cancer). It is also being studied in the treatment of other types of cancer. Opdivo may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called nivolumab.

### **Opdualag**

A combination of nivolumab and relatlimab used to treat adults and children aged 12 years or older with melanoma that has spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer.

Opdualag binds to the proteins PD-1 and LAG-3, which are found on T cells (a type of immune cell). Blocking these proteins may help the immune system kill cancer cells. The combination of nivolumab and relatlimab may work better than either drug alone. Opdualag is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called nivolumab and relatlimab.

### **Orgovyx**

A drug used to treat adults with advanced prostate cancer. Orgovyx binds to gonadotropin-releasing hormone (GnRH) receptors in the pituitary gland, which blocks the pituitary gland from making the hormones follicle-stimulating hormone (FSH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone. Orgovyx may stop the growth of cancer cells that need testosterone to grow. It is a type of GnRH antagonist. Also called relugolix.

### **Oriental medicine**

A medical system that has been used for thousands of years to prevent, diagnose, and treat disease. It is based on the belief that qi (the body's vital energy) flows along meridians (channels) in the body and keeps a person's spiritual, emotional, mental, and physical health in balance. Oriental medicine aims to restore the body's balance and harmony between the natural opposing forces of yin and yang, which can block qi and cause disease. Oriental medicine includes acupuncture, diet, herbal therapy, meditation, physical exercise, and massage. Also called TCM and Traditional Chinese Medicine.

### **Orserdu**

A drug used to treat postmenopausal women and adult men with estrogen receptor-positive, HER2-negative breast cancer that has a mutation (change) in the ESR1 gene and is advanced or has spread to other parts of the body. It is used in patients whose disease got worse after treatment with at least one type of hormone therapy. Orserdu binds to proteins called estrogen receptors, which are found on some breast cancer cells. These proteins may cause cancer cells to grow. Orserdu blocks these proteins and may keep cancer cells from growing. It is a type of estrogen receptor antagonist. Also called elacestrant dihydrochloride.

### **OvaRex**

A monoclonal antibody that is being studied in the treatment of ovarian cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. OvaRex binds to the CA-125 antigen, which is found on most ovarian cancer cells. Also called oregovomab.

### **P-32**

A radioactive form of the element phosphorus used in the treatment of cancer.

### **P30 Cancer Center Support Grant**

Funds awarded to certain U.S. institutions by the National Cancer Institute (NCI) for them to become cancer centers in the United States, based on scientific merit. The funds help the cancer centers improve the way they are run and develop new ways to prevent, diagnose, and treat cancer. To receive the award, one goal of the cancer center must be to turn clinical and basic research into better health care. Also called CCSG.

### **PA**

A health professional who is licensed to do certain medical procedures under the guidance of a doctor. A PA may take medical histories, do physical exams, take

blood and urine samples, care for wounds, and give injections and immunizations. Also called physician assistant.

### **PABA**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Bacteria that live in the intestines need PABA to survive. PABA is found in grains and foods from animals. It is being studied as a radiosensitizer (a substance that makes tumor cells more sensitive to radiation therapy) and in the treatment of certain skin disorders. Also called aminobenzoic acid and para-aminobenzoic acid.

### **PAD**

An abbreviation for a chemotherapy combination used to treat multiple myeloma. It includes the drugs bortezomib, doxorubicin (Adriamycin), and dexamethasone. Also called PAD regimen.

### **PAD regimen**

An abbreviation for a chemotherapy combination used to treat multiple myeloma. It includes the drugs bortezomib, doxorubicin (Adriamycin), and dexamethasone. Also called PAD.

### **PAH**

A type of chemical formed when coal, oil, gas, garbage, tobacco, meat, and other substances are burned. These chemicals are also made for use in many products, including coal tar, creosote, roofing tar, pesticides, mothballs, dandruff shampoos, and some medicines. Being exposed to one of these chemicals over a long time may cause cancer. Also called polycyclic aromatic hydrocarbon.

### **PALA**

A substance that is being studied for its ability to increase the effectiveness of the anticancer drug fluorouracil.

### **PANVAC-V**

A cancer vaccine made with a form of vaccinia virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins, including the tumor markers called CEA and MUC-1, that may help immune cells in the body kill tumor cells. Also called inalimarev and recombinant vaccinia-CEA-MUC-1-TRICOM vaccine.

### **PAP**

An enzyme produced by the prostate. It may be found in increased amounts in men who have prostate cancer. Also called prostatic acid phosphatase.

### **PAR-101**

A substance being studied in the treatment of diarrhea caused by infection with *Clostridium difficile* (a type of bacteria that can grow without oxygen) in cancer patients. PAR-101 is a type of antibiotic. Also called OPT-80 and tiacumicin B.

### **PARN gene**

A gene that makes a protein involved in controlling gene expression and maintaining telomeres (the ends of chromosomes). Mutations (changes) in the PARN gene have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of



bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **PARP**

A type of enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. Inhibitors of one enzyme, PARP-1, are being studied in the treatment of cancer. Also called poly (ADP-ribose) polymerase.

## **PARP inhibitor**

A substance that blocks an enzyme in cells called PARP. PARP helps repair DNA when it becomes damaged. DNA damage may be caused by many things, including exposure to UV light, radiation, certain anticancer drugs, or other substances in the environment. In cancer treatment, blocking PARP may help keep cancer cells from repairing their damaged DNA, causing them to die. PARP inhibitors are a type of targeted therapy. Also called poly (ADP-ribose) polymerase inhibitor.

## **PARP inhibitor AZD2281**

A drug used alone or with other drugs to treat adults with certain types of prostate cancer, pancreatic cancer, breast cancer, or ovarian, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. PARP inhibitor AZD2281 blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. PARP inhibitor AZD2281 is a type of PARP inhibitor. Also called AZD2281, Lynparza, and olaparib.

## **PARP-1**

An enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. Inhibitors of PARP-1 are being studied in the treatment of cancer. Also called poly (ADP-ribose) polymerase-1.

## **PARP-1 inhibitor ABT-888**

A substance being studied in the treatment of breast cancers caused by mutations (changes) in the BRCA1 and BRCA2 genes. It is also being studied in the treatment of other types of cancer. It blocks an enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. PARP-1 inhibitor ABT-888 may cause cancer cells to die. It is a type of poly(ADP-ribose) polymerase inhibitor. Also called ABT-888 and veliparib.

## **PARP-1 inhibitor AG014699**

A drug used to treat adults with certain types of prostate cancer or ovarian epithelial, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. PARP-1 inhibitor AG014699 blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. PARP-1 inhibitor AG014699 is a type of PARP inhibitor. Also called AG014699, Rubraca, and rucaparib camsylate.

## **PBSCT**

A procedure in which a patient receives healthy blood-forming cells (stem cells) to replace their own stem cells that have been destroyed by disease or by the radiation or high doses of anticancer drugs that are given as part of the procedure. The healthy stem cells may come from the blood of the patient or a donor. A PBSCT may be autologous (using a patient's own stem cells that were collected and saved before treatment), allogeneic (using stem cells donated by someone who is not an identical twin), or syngeneic (using stem cells donated by an identical twin). Also called peripheral blood stem cell transplant and peripheral stem cell support.

## **PC regimen**

A chemotherapy combination used to treat endometrial, ovarian, and head and neck cancers, and non-small cell lung cancer that has spread. It includes the drugs carboplatin and paclitaxel (Taxol). Also called Carbo-Tax regimen, carboplatin-Taxol, and carboplatin-Taxol regimen.

## **PC-SPES**

A mixture of eight herbs that has been sold as a dietary supplement and promoted as a way to keep the prostate healthy and to treat prostate cancer. PC-SPES has been studied in the treatment of prostate cancer, but has been taken off the market in the U.S. because of safety concerns.

## **PCA**

A method of pain relief in which the patient controls the amount of pain medicine that is used. When pain relief is needed, the person can receive a preset dose of pain medicine by pressing a button on a computerized pump that is connected to a small tube in the body. Also called patient-controlled analgesia.

## **PCA3 mRNA test**

A laboratory test that measures the amount of genetic material called PCA3 mRNA and PSA mRNA in the first urine sample after a digital rectal examination. PCA3 mRNA and PSA mRNA are made by normal prostate cells and prostate cancer cells but are made in higher amounts by prostate cancer cells. The PCA3 score is based on the ratio of PCA3 mRNA to PSA mRNA in the urine. A high PCA3 score may be a sign of prostate cancer. The PCA3 mRNA test may be done in men with a high PSA level whose biopsy of the prostate did not show cancer. The PCA3 mRNA test is used to help decide if another prostate biopsy may be needed. Also called prostate cancer antigen 3 mRNA test.

## **PCB**

One of a large group of man-made chemical compounds that were used to make many products, including electrical equipment, insulation, fluorescent lights, paints, plastics, rubber, dyes, inks, adhesives, and pesticides. Being exposed to PCBs can cause skin conditions, such as acne and rashes, and eye irritation. Long-term exposure to high levels of PCBs can affect other body systems, and may also cause learning and developmental delays, low birth weight, and cancer. PCBs were banned in the United States in the 1970s, but they may still be found in contaminated soil, air, water, and food. Also called polychlorinated biphenyl.

## **PCNSL**

Primary CNS lymphoma. Cancer that forms in the lymph tissue of the brain, spinal cord, meninges (outer covering of the brain), or eye (called ocular lymphoma). Also called primary central nervous system lymphoma and primary CNS lymphoma.

## PCOS

A condition marked by infertility, enlarged ovaries, menstrual problems, high levels of male hormones, excess hair on the face and body, acne, and obesity. Women with PCOS have an increased risk of diabetes, high blood pressure, heart disease, and endometrial cancer. Also called polycystic ovary syndrome.

## PCP

A doctor or other licensed medical professional, such as a nurse practitioner or physician assistant, who manages a person's health care over time. PCPs diagnose and treat a wide range of common medical conditions. They also provide preventive care, such as disease screenings and immunizations. A PCP may also refer a person to a specialist or coordinate care given by a specialist. Also called primary care provider.

## PCR

A laboratory method used to make many copies of a specific piece of DNA from a sample that contains very tiny amounts of that DNA. PCR allows these pieces of DNA to be amplified so they can be detected. PCR may be used to look for certain changes in a gene or chromosome, which may help find and diagnose a genetic condition or a disease, such as cancer. It may also be used to look at pieces of the DNA of certain bacteria, viruses, or other microorganisms to help diagnose an infection. Also called polymerase chain reaction.

## PCT

A rare disorder that affects the skin and causes painful blisters on parts of the body that are exposed to the sun, usually the hands, arms, and face. The affected skin may be fragile, and it may blister or peel after a minor injury. Other signs and symptoms of PCT include changes in skin color, increased hair growth (especially on the face), and redness, swelling, itching, scarring, and thickening of the affected skin. Liver problems may occur, and patients with PCT may have an increased risk of liver cancer. In PCT, the body does not make enough of an enzyme called uroporphyrinogen decarboxylase. PCT may be inherited, or it may be caused by too much iron in the body, certain infections (such as hepatitis C or HIV infection), smoking, drinking too much alcohol, taking the hormone estrogen, and certain genetic disorders. PCT is usually diagnosed after the age of 30 years. Also called porphyria cutanea tarda.

## PCV

An abbreviation for a chemotherapy combination used to treat certain types of brain tumors. It is often used with radiation therapy. It includes the drugs procarbazine hydrochloride, lomustine (CCNU), and vincristine sulfate. Also called PCV regimen.

## PCV regimen

An abbreviation for a chemotherapy combination used to treat certain types of brain tumors. It is often used with radiation therapy. It includes the drugs procarbazine hydrochloride, lomustine (CCNU), and vincristine sulfate. Also called PCV.

## PD-1

A protein found on T cells (a type of immune cell) that helps keep the body's immune responses in check. When PD-1 is bound to another protein called PD-L1, it helps keep T cells from killing other cells, including cancer cells. Some anticancer drugs, called immune checkpoint inhibitors, are used to block PD-1.

When this protein is blocked, the “brakes” on the immune system are released and the ability of T cells to kill cancer cells is increased.

### **PD-L1**

A protein that acts as a kind of “brake” to keep the body’s immune responses under control. PD-L1 may be found on some normal cells and in higher-than-normal amounts on some types of cancer cells. When PD-L1 binds to another protein called PD-1 (a protein found on T cells), it keeps T cells from killing the PD-L1-containing cells, including the cancer cells. Anticancer drugs called immune checkpoint inhibitors bind to PD-L1 and block its binding to PD-1. This releases the “brakes” on the immune system and leaves T cells free to kill cancer cells.

### **PDGF**

A family of molecules released from platelets (tiny pieces of cells that are found in the blood and that help the blood clot). Forms of PDGF help to heal wounds and to repair damage to blood vessel walls. They also help blood vessels grow. Also called platelet-derived growth factor.

### **PDGFRA gene**

A gene that makes a protein that is involved in cell division and cell survival. Mutated (changed) forms of the PDGFRA gene and protein have been found in some types of cancer, including gastrointestinal stromal tumors and chronic eosinophilic leukemia. These changes may increase the growth of cancer cells. Checking for changes in the PDGFRA gene in tumor tissue may help diagnose some types of cancer and plan treatment. Also called platelet-derived growth factor receptor alpha gene.

### **PDQ**

PDQ is an online source of cancer information that is developed and maintained by the National Cancer Institute (NCI). It makes current, credible, and accurate cancer information available to health professionals and the public. PDQ contains information about cancer treatment, supportive and palliative care, screening, prevention, genetics, and integrative, complementary, and alternative medicine. This information is updated with the most recent evidence from scientific research. PDQ also contains drug information summaries on many cancer-related drugs and dictionaries of cancer terms, drug terms, and genetics terms. Most of this information and more specific information about PDQ can be found on the NCI's website at <http://www.cancer.gov/publications/pdq>. Also called Physician Data Query.

### **PDX**

Tumor tissue that has been taken from a patient and implanted into mice for research purposes. Cancer drugs and other types of treatment may be tested on xenografts to see how well they work before they are given to the patient. PDXs may be used to help plan treatment and learn what the best treatment may be for a patient. They are also being used in the development of new cancer drugs. Also called patient-derived xenograft.

### **PEB**

An abbreviation for a chemotherapy combination used in children to treat certain types of malignant (cancer) germ cell tumors that are not in the brain. It includes the drugs cisplatin (Platinol), etoposide phosphate, and bleomycin sulfate. Also called PEB regimen.

### **PEB regimen**

An abbreviation for a chemotherapy combination used in children to treat certain types of malignant (cancer) germ cell tumors that are not in the brain. It includes the drugs cisplatin (Platinol), etoposide phosphate, and bleomycin sulfate. Also called PEB.

### **PEComa**

A family of rare tumors that form in the soft tissues of the stomach, intestines, lungs, female reproductive organs, and genitourinary organs. Most PEComas are benign (not cancer). They often occur in children with an inherited condition called tuberous sclerosis. Also called perivascular epithelioid cell tumor.

### **PEG**

A polymer made by joining molecules of ethylene oxide and water together in a repeating pattern. PEG can be a liquid or a waxy solid. In medicine, forms of PEG can be used in ointments, in drugs or substances to make them stay in the body longer, or in laxatives. Also called polyethylene glycol.

### **PEG tube**

A tube inserted through the wall of the abdomen directly into the stomach. It allows air and fluid to leave the stomach and can be used to give drugs and liquids, including liquid food, to the patient. Giving food through a PEG tube is a type of enteral nutrition. Also called gastrostomy tube and percutaneous endoscopic tube.

### **PEG-Intron**

A drug that is no longer available in the United States that contains the active ingredient peginterferon alfa-2b and was used to treat chronic hepatitis C. PEG-Intron is a type of cytokine and a type of immunomodulating agent.

### **PEG-MGDF**

A form of megakaryocyte growth and development factor (MGDF) that is made in the laboratory. MGDF comes from the protein thrombopoietin, which is normally made in the body to help make platelets. PEG-MGDF is being studied as a way to increase the number of platelets in patients receiving chemotherapy. Also called PEG-rhMGDF and polyethylene glycosylated recombinant human megakaryocyte growth and development factor.

### **PEG-asparaginase**

A drug used with other drugs to treat adults and children with acute lymphoblastic leukemia. It is used in patients whose cancer has not already been treated or who cannot be treated with asparaginase. It is also being studied in the treatment of other types of cancer. PEG-asparaginase is made up of the enzyme L-asparaginase that is linked to a substance called PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium *E. coli* and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. PEG-asparaginase is a type of protein synthesis inhibitor. Also called Oncaspar and pegaspargase.

### **PEG-rhMGDF**

A form of megakaryocyte growth and development factor (MGDF) that is made in the laboratory. MGDF comes from the protein thrombopoietin, which is normally made in the body to help make platelets. PEG-rhMGDF is being studied as a way to increase the number of platelets in patients receiving chemotherapy. Also

called PEG-MGDF and polyethylene glycosylated recombinant human megakaryocyte growth and development factor.

### **PEI**

An injection of ethanol (alcohol) through the skin directly into a tumor to kill cancer cells. Ultrasound or a CT scan is used to guide the needle into the tumor. Also called alcohol ablation, ethanol ablation, and percutaneous ethanol injection.

### **PEITC**

A substance being studied in the prevention of cancer. It is a naturally occurring compound found in some cruciferous vegetables. Also called phenethyl isothiocyanate.

### **PEP02**

A form of the anticancer drug irinotecan hydrochloride that is contained inside very tiny, fat-like particles and is used with other drugs to treat adults with pancreatic cancer that has spread to other parts of the body. It is used in patients whose cancer has not been treated with other anticancer therapy or has gotten worse after treatment with gemcitabine hydrochloride. It is also being studied in the treatment of other types of cancer. PEP02 may have fewer side effects and work better than other forms of irinotecan hydrochloride. PEP02 blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called irinotecan sucrosfate and Onivyde.

### **PET scan**

A procedure in which a small amount of radioactive glucose (sugar) is injected into a vein, and a scanner is used to make detailed, computerized pictures of areas inside the body where the glucose is taken up. Because cancer cells often take up more glucose than normal cells, the pictures can be used to find cancer cells in the body. Also called positron emission tomography scan.

### **PET-CT scan**

A procedure that combines the pictures from a positron emission tomography (PET) scan and a computed tomography (CT) scan. The PET and CT scans are done at the same time with the same machine. The combined scans give more detailed pictures of areas inside the body than either scan gives by itself. A PET-CT scan may be used to help diagnose disease, such as cancer, plan treatment, or find out how well treatment is working. Also called positron emission tomography-computed tomography scan.

### **PET-MRI scan**

A procedure that combines the pictures from a positron emission tomography (PET) scan and a magnetic resonance imaging (MRI) scan. A PET scan uses a radioactive tracer to highlight abnormal areas in the body. An MRI scan uses radio waves and a powerful magnet to take detailed pictures of tissues in the body. For a PET-MRI scan, the scans are done at the same time with the same machine. The combined scans give more detailed pictures of areas inside the body than either scan gives by itself. The overall amount of radiation a person is exposed to is also reduced. A PET-MRI scan may be used to help diagnose disease, such as cancer, plan treatment, or find out how well treatment is working. Also called positron emission tomography-magnetic resonance imaging scan.



**PF-00299804**

A drug used to treat non-small cell lung cancer that has spread, has not already been treated, and has certain mutations (changes) in the EGFR gene. It is also being studied in the treatment of other types of cancer. PF-00299804 blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called dacomitinib and Vizimpro.

**PF-3512676**

A substance that is being studied in the treatment of some types of cancer. It belongs to the family of drugs called biological response modifiers. Also called CpG 7909 and ProMune.

**PFIC**

A rare, inherited disorder marked by a buildup in the liver of bile (fluid that helps digest fat). This can lead to liver disease and liver failure. It may also increase the risk of liver cancer. PFIC is caused by mutations (changes) in certain genes that make proteins needed to help the liver work the way it should. It usually occurs in infants and children. Also called progressive familial intrahepatic cholestasis.

**PFS**

The length of time during and after the treatment of a disease, such as cancer, that a patient lives with the disease but it does not get worse. In a clinical trial, measuring the PFS is one way to see how well a new treatment works. Also called progression-free survival.

**PFT**

A test used to measure how well the lungs work. It measures how much air the lungs can hold and how quickly air is moved into and out of the lungs. It also measures how much oxygen is used and how much carbon dioxide is given off during breathing. A PFT can be used to diagnose a lung disease and to see how well treatment for the disease is working. Also called lung function test and pulmonary function test.

**PG**

One of several hormone-like substances made by the body. Different PGs control blood pressure, contraction of smooth muscles, and other processes within tissues where they are made. Certain PGs are being studied as cancer biomarkers. Also called prostaglandin.

**PGE1**

A drug that is used to treat impotence (inability to have an erection) and is being studied in the treatment of sexual problems in men who have had surgery for prostate cancer. It is a type of vasodilator. Also called alprostadil and prostaglandin E1.

**PHA-739358**

A substance being studied in the treatment of chronic myelogenous leukemia. PHA-739358 may stop tumor growth by blocking certain enzymes needed for cancer cells to divide and causing them to die. It is a type of kinase inhibitor.

**PHACE syndrome**

A rare disorder marked by a hemangioma (a benign blood vessel tumor) that spreads across an area of the body, usually the face, head, or neck. Other health

problems that affect the large blood vessels, heart, eyes, or brain may also occur. PHACE syndrome may also cause developmental delays, hearing problems, thyroid problems, and migraines. PHACE syndrome usually occurs in infants and is much more common in girls than boys.

## **PHP**

A rare condition in which the pituitary gland stops making most or all hormones. Pituitary hormones help control the way many parts of the body work. Symptoms of the condition depend on the hormones that are missing. They include growth problems (in children), obesity (in adults), hair loss, slow heart rate, low blood sugar, low blood pressure, fatigue, and problems with reproduction. This condition may be caused by a tumor on or near the pituitary gland, infection, stroke, injury, surgery, or radiation therapy. It may also be inherited. Also called panhypopituitarism.

## **PHR**

A collection of information about a person's health that allows the person to manage and track his or her own health information. A PHR may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams, tests, and screenings. It may also include information about medicines taken and health habits, such as diet and exercise. Also called personal health record, personal history, and personal medical history.

## **PHTS**

A group of inherited disorders caused by mutations (changes) in the PTEN gene. In people with PHTS, many benign (not cancer) growths called hamartomas form in different parts of the body, especially the skin, mouth, and gastrointestinal tract. Benign tumors may also occur in the thyroid, breast, uterus, soft tissue, and brain. Other signs and symptoms include a larger-than-average head, abnormal skin changes, blood vessel problems, autism spectrum disorder, and learning and developmental delays. People with PHTS have an increased risk of developing certain types of cancer, including melanoma and cancers of the breast, thyroid, kidney, endometrium, colon, and rectum. Also called PTEN hamartoma tumor syndrome.

## **PI**

The person(s) in charge of a clinical trial or a scientific research grant. The PI prepares and carries out the clinical trial protocol (plan for the study) or research paid for by the grant. The PI also analyzes the data and reports the results of the trial or grant research. Also called principal investigator.

## **PI-88**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called antiangiogenesis agents.

## **PI3 kinase**

A type of enzyme that transmits signals in cells and that helps control cell growth. Some tumors have higher-than-normal levels of PI3 kinase. Also called phosphatidylinositol-3 kinase and PI3K.

## **PI3K**

A type of enzyme that transmits signals in cells and that helps control cell growth. Some tumors have higher-than-normal levels of PI3K. Also called phosphatidylinositol-3 kinase and PI3 kinase.

## **PICC**

A device used to draw blood and give treatments, including intravenous fluids, drugs, or blood transfusions. A thin, flexible tube is inserted into a vein in the upper arm and guided (threaded) into a large vein above the right side of the heart called the superior vena cava. A needle is inserted into a port outside the body to draw blood or give fluids. A PICC may stay in place for weeks or months and helps avoid the need for repeated needle sticks. Also called peripherally inserted central catheter.

## **PID**

A condition in which the female reproductive organs are inflamed. It may affect the uterus, fallopian tubes, ovaries, and certain ligaments. PID is usually caused by a bacterial infection. It may cause infertility and an increased risk of an ectopic pregnancy (pregnancy in the fallopian tubes). Also called pelvic inflammatory disease.

## **PIK3CA gene**

A gene that makes one of the proteins in an enzyme called PI3K, which is involved in many important functions in a cell. Mutations (changes) in the PIK3CA gene may cause the PI3K enzyme to become overactive, which may cause cancer cells to grow. PIK3CA gene mutations have been found in many types of cancer, including cancers of the breast, lung, ovary, stomach, brain, colon, and rectum. They have also been found in some genetic conditions.

## **PIN**

Noncancerous growth of cells lining the internal and external surfaces of the prostate gland. Having high-grade PIN may increase the risk of developing prostate cancer. Also called prostatic intraepithelial neoplasia.

## **PJS**

A rare genetic disorder in which many polyps (abnormal growths of tissue) form in the lining of the gastrointestinal tract, and dark-colored spots appear on certain areas of the skin, such as around the mouth, eyes, and nose. People with PJS have a very high risk of developing gastrointestinal cancer and other types of cancer, including cancers of the breast, pancreas, ovary, lung, and cervix. PJS is usually caused by mutations (changes) in the STK11 gene. Some people with PJS do not have a mutation in the STK11 gene. In these cases, the cause of the disorder is unknown. Also called Peutz-Jeghers syndrome.

## **PKC**

An enzyme found throughout the body's tissues and organs. Several forms of PKC are involved in many cellular functions. PKC is being studied in the treatment of cancer. Also called protein kinase C.

## **PKC412**

A drug used alone or with other anticancer drugs to treat adults with certain types of acute myeloid leukemia, mast cell leukemia, or systemic mastocytosis. It is also being studied in the treatment of other types of cancer. PKC412 blocks certain proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. PKC412 is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called midostaurin, N-benzoyl-staurosporine, and Rydapt.

## PKU

An inherited disorder that causes a build-up of a substance called phenylalanine in the blood and other body fluids. Phenylalanine is an amino acid (a building block of proteins), so certain foods, such as meat, eggs, nuts, and milk, contain high levels. Some artificial sweeteners, such as aspartame, also contain high levels of phenylalanine. The signs and symptoms of PKU can be mild or severe and may include light skin and hair, skin rashes, seizures, developmental delays, and movement, behavioral, and mental or psychological problems. The breath, skin, or urine may also have a musty odor. If not treated, PKU can lead to permanent intellectual disability. All babies born in the United States and many other countries are screened for PKU using a simple blood test. There is no cure, but PKU can be managed with a diet low in phenylalanine. Also called phenylketonuria.

## PLCIS

A condition in which abnormal cells are found in the lobules (milk glands) of the breast. The cells tend to look larger and more abnormal under a microscope than cells from the more common classic lobular carcinoma in situ (LCIS). PLCIS is more likely to become invasive breast cancer and spread to other tissues in the breast than the more common form is. PLCIS usually occurs in postmenopausal women. Also called pleomorphic lobular carcinoma in situ.

## PLL

A type of chronic lymphocytic leukemia (CLL) in which too many immature white blood cells (prolymphocytes) are found in the blood and bone marrow. PLL usually progresses more rapidly than classic CLL. Also called prolymphocytic leukemia.

## PLX4032

A drug used to treat Erdheim-Chester disease (a very rare type of histiocytosis) and advanced melanoma that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. PLX4032 blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called BRAF (V600E) kinase inhibitor RO5185426, RG7204, vemurafenib, and Zelboraf.

## PML gene

A gene that makes a protein that helps control cell growth and cell division. Mutations (changes) in the PML gene can occur when a piece of the chromosome containing the PML gene breaks off and joins with a gene called RARA on another chromosome. These changes may cause too many immature white blood cells to build up in the blood and bone marrow. This can lead to an aggressive (fast-growing) type of acute myeloid leukemia called acute promyelocytic leukemia. The PML gene is a type of tumor suppressor gene. Also called promyelocytic leukemia gene.

## PMN

A type of immune cell that has granules (small particles) with enzymes that are released during infections, allergic reactions, and asthma. Neutrophils, eosinophils, and basophils are PMNs. A PMN is a type of white blood cell. Also called granular leukocyte, granulocyte, and polymorphonuclear leukocyte.

## PN401

A drug used in the emergency treatment of adults and children who receive too much fluorouracil or capecitabine or who have heart or central nervous system

toxicity or other serious side effects that occur within 4 days of ending treatment with these drugs. PN401 may help protect healthy cells from some of the side effects caused by certain anticancer drugs. It is a type of chemoprotective agent and a type of pyrimidine analog. Also called triacetyluridine, uridine triacetate, and Vistogard.

## **PNA**

A type of anticancer drug that is similar to a natural chemical compound called purine. Cells use purine to make the chemical building blocks of DNA and RNA. PNAs may kill cells, including cancer cells, by blocking important enzymes needed to make DNA and RNA and by damaging DNA. Some PNAs are used to treat certain types of leukemia and lymphoma. Also called purine nucleoside analog.

## **PNET**

One of a group of cancers that develop from the same type of early cells, and share certain biochemical and genetic features. Some PNETs develop in the brain and central nervous system (CNS-PNET), and others develop in sites outside of the brain such as the limbs, pelvis, and chest wall (peripheral PNET). Also called primitive neuroectodermal tumor.

## **PNH**

Paroxysmal nocturnal hemoglobinuria. A rare disorder in which red blood cells are easily destroyed by certain immune system proteins. Symptoms include blood clots, and red or brownish urine in the morning. Aplastic anemia (decreased production of blood cells) may lead to PNH, and people with this disorder are at increased risk of acute myelogenous leukemia. Also called paroxysmal nocturnal hemoglobinuria.

## **PNU 166148**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called topoisomerase inhibitors.

## **PNU-93914**

A form of the anticancer drug paclitaxel that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of several types of cancer. PNU-93914 blocks the ability of cells to divide and may kill cancer cells. It is a type of mitotic inhibitor and a type of antimicrotubule agent. Also called LEP-ETU, liposomal paclitaxel, LipoTaxen, and paclitaxel liposome.

## **POLH gene**

A gene that makes a protein involved in copying DNA before a cell divides and in repairing damaged DNA. Mutations (changes) in the POLH gene have been found in an inherited condition called xeroderma pigmentosum. People with this condition have an extreme sensitivity to UV light and a very high risk of developing skin cancer and other types of cancer.

## **PP**

A small protein made by the pancreas that helps control the release of other substances made by the pancreas. The amount of PP in the blood increases after a person eats. It may also increase with age, and in certain diseases, such as diabetes and pancreatic cancer. Also called pancreatic polypeptide.

### **PPAR gamma pathway**

Describes a group of proteins in a cell that work together to help control how certain genes are expressed and the use of lipids (fats) and glucose (sugar) in the body. Changes in the PPAR gamma pathway may lead to diseases such as heart disease, diabetes, and cancer. Drugs or substances that affect this pathway are being studied in the prevention and treatment of cancer and other diseases. Also called peroxisome proliferator-activated receptor gamma pathway.

### **PPI**

A substance used to treat certain disorders of the stomach and intestines, such as heartburn and ulcers. PPIs block the actions of an enzyme in the stomach and reduce the amount of acid made in the stomach. Also called proton pump inhibitor.

### **PPN**

A form of short-term nutritional support that is given directly into the bloodstream through a catheter placed into a vein. PPN bypasses the digestive system and may be given when a person has a disease or condition that affects their ability to absorb nutrients through the digestive system. PPN is supplemental nutrition that is given when a person cannot get enough calories or the right amount of nutrients that their body needs from the food they are eating. Also called partial parenteral nutrition.

### **PPV**

The likelihood that a person who has a positive test result does have the disease, condition, biomarker, or mutation (change) in the gene being tested. The PPV is a way of measuring how accurate a specific test is. Also called positive predictive value.

### **PR**

A protein found inside the cells of the female reproductive tissue, some other types of tissue, and some cancer cells. The hormone progesterone will bind to the receptors inside the cells and may cause the cells to grow. Also called progesterone receptor.

### **PR negative**

Describes cells that do not have a protein that binds to the hormone progesterone. Cancer cells that are PR negative do not need progesterone to grow. This means that they will keep growing when progesterone is not present and do not stop growing when treated with substances that block progesterone from binding. Also called progesterone receptor negative.

### **PR positive**

Describes cells that have a protein that binds to the hormone progesterone. Cancer cells that are PR positive may need progesterone to grow. These cells may stop growing or die when treated with substances that block the binding and actions of progesterone. Also called progesterone receptor positive.

### **PR-104**

A substance being studied in the treatment of cancer. PR-104 becomes active when cancer cells don't receive enough oxygen. It may kill cancer cells by damaging their DNA.



## **PRCA**

A rare disorder in which the bone marrow does not make enough red blood cells. Signs and symptoms include fatigue, pale skin, breathing problems, dizziness, and headaches. PRCA mainly affects adults and may be caused by infection, kidney failure, an autoimmune disease (such as lupus or rheumatoid arthritis), pregnancy, a thymoma (tumor of the thymus gland), and certain types of cancer, including leukemia. It may also be caused by taking certain medicines. PRCA may also be inherited and seen in the first year of life, but this is very rare. Also called pure red cell aplasia.

## **PRCC**

A type of kidney cancer that forms in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. Most papillary tumors look like long, thin finger-like growths under a microscope. There are two types of PRCC: type 1 and type 2. Type 1 tends to grow slowly and spread to other parts of the body less often than type 2. Patients with a genetic disorder called hereditary papillary renal cancer have an increased risk of type 1 PRCC. Patients with a genetic disorder called hereditary leiomyomatosis and renal cell cancer have an increased risk of type 2 PRCC. Also called papillary kidney cancer and papillary renal cell carcinoma.

## **PRES**

A rare condition marked by headaches, vision problems, mental changes, seizures, and swelling in the brain. The symptoms of PRES usually come on quickly and can be serious and life threatening. When treated, symptoms often go away within days or weeks. PRES may occur in patients with certain conditions, such as high blood pressure, eclampsia, severe infection, kidney disease, and certain autoimmune diseases. It may also occur in patients treated with certain anticancer drugs and immunosuppressive drugs. Also called posterior reversible encephalopathy syndrome, reversible posterior leukoencephalopathy syndrome, and RPLS.

## **PRO**

Information about a patient's health that comes directly from the patient. Examples of PROs include a patient's description of their symptoms, their satisfaction with care, and how a disease or treatment affects their physical, mental, emotional, spiritual, and social well-being. In clinical trials, PROs may provide information about the side effects of the new treatment being studied. The use of patient-reported outcomes may help plan the best treatment and improve quality of care. Also called patient-reported outcome.

## **PRRT**

A type of radiation therapy used to treat certain types of neuroendocrine tumors. A radioactive chemical is linked to a peptide (small protein) that targets cancer cells. When this radioactive peptide is injected into the body, it binds to a specific receptor found on some cancer cells. The radioactive peptide builds up in these cells and helps kill the cancer cells without harming normal cells. PRRT is a type of targeted therapy. Also called peptide receptor radionuclide therapy.

## **PS-341**

A drug used to treat adults with multiple myeloma or mantle cell lymphoma. It is also being studied in the treatment of other types of cancer. PS-341 blocks the action of enzymes called proteasomes, which may help keep cancer cells from

growing and may kill them. It is a type of proteasome inhibitor. Also called bortezomib and Velcade.

## **PSA**

A protein made by the prostate gland and found in the blood. PSA blood levels may be higher than normal in men who have prostate cancer, benign prostatic hyperplasia (BPH), or infection or inflammation of the prostate gland. Also called prostate-specific antigen.

## **PSA bounce**

A brief rise and then fall in the blood level of PSA (prostate-specific antigen) that occurs in some patients 1-3 years after receiving radiation treatment for prostate cancer. PSA bounce does not mean that the cancer has come back. It may be caused by the release of PSA from destroyed cancer cells or from normal prostate tissue exposed to the radiation treatment.

## **PSA failure**

A rise in the blood level of PSA (prostate-specific antigen) in prostate cancer patients after treatment with surgery or radiation. PSA failure may occur in patients who do not have symptoms. It may mean that the cancer has come back. Also called biochemical recurrence and biochemical relapse.

## **PSA test**

A laboratory test that measures the amount of prostate-specific antigen (PSA) found in the blood. PSA is a protein made by the prostate gland. The amount of PSA may be higher in men who have prostate cancer, benign prostatic hyperplasia (BPH), or infection or inflammation of the prostate. Also called prostate-specific antigen test.

## **PSA velocity**

A measurement of how fast PSA levels in the blood increase over time. A high PSA velocity may be a sign of prostate cancer and may help find fast-growing prostate cancers.

## **PSC 833**

A substance that is being studied for its ability to prevent or overcome the resistance of tumor cells to some anticancer drugs. It belongs to the family of drugs called cyclosporine analogs.

## **PSMA**

A protein that is usually found on the surface of normal prostate cells but is found in higher amounts on prostate cancer cells. PSMA may be used as a target in imaging to help find prostate cancer cells, especially those that may have come back or spread to other parts of the body. Research is being done to learn more about PSMA and how it may also be used as a target for certain anticancer drugs. Also called prostate-specific membrane antigen.

## **PSMA PET scan**

An imaging procedure that is used to help find prostate cancer cells in the body. For this procedure, a cell-targeting molecule linked to a radioactive substance is injected into the body and travels through the blood. It attaches to a protein called prostate-specific membrane antigen (PSMA) that is found on the surface of prostate cancer cells. A PET scanner detects high concentrations of the radioactive molecule and shows where the prostate cancer cells are in the body. A PSMA PET scan may be used to help diagnose prostate cancer that may have

come back or spread to other parts of the body. It may also be used to help plan treatment. Also called prostate-specific membrane antigen PET scan.

### **PT-100**

A substance being studied in the treatment of cancer, including certain types of lung, pancreas, and brain cancer. PT-100 may help the immune system block the growth of cancer cells. It may also increase the growth of new blood cells. It is a type of enzyme inhibitor. Also called talabostat mesylate.

### **PTC**

A procedure to x-ray the hepatic and common bile ducts. A contrasting agent is injected into the liver or bile duct, and the ducts are then x-rayed to find the point of obstruction. Also called percutaneous transhepatic cholangiography.

### **PTCD**

A procedure to drain bile to relieve pressure in the bile ducts caused by a blockage. An x-ray of the liver and bile ducts locates the blockage of bile flow. Images made by ultrasound guide placement of a stent (tube), which remains in the liver. Bile drains through the stent into the small intestine or into a collection bag outside the body. This procedure may relieve jaundice before surgery. Also called percutaneous transhepatic biliary drainage and percutaneous transhepatic cholangiodrainage.

### **PTCH1 gene**

A gene that is part of a cell signaling pathway involved in the formation of tissues and organs, cell growth, and cell division during embryonic development. Mutations (changes) in the PTCH1 gene may cause cells to grow and divide too quickly or in an uncontrolled way. This may cause abnormal cells, including cancer cells, to grow. PTCH1 gene mutations have been found in an inherited condition called basal cell nevus syndrome and in many types of cancer, including basal cell skin cancer, medulloblastoma (a type of brain cancer), breast cancer, and colon cancer. The PTCH1 gene is a type of tumor suppressor gene.

### **PTCH2 gene**

A gene that is part of a cell signaling pathway involved in the formation of tissues and organs, cell growth, and cell division during embryonic development. Mutations (changes) in the PTCH2 gene may cause cells to grow and divide too quickly or in an uncontrolled way. This may cause abnormal cells, including cancer cells, to grow. PTCH2 gene mutations have been found in an inherited condition called basal cell nevus syndrome and in some types of cancer, including basal cell skin cancer and medulloblastoma (a type of brain cancer). The PTCH2 gene is a type of tumor suppressor gene.

### **PTEN**

A protein that helps control many cell functions, including cell division and cell death. Mutations (changes) in the gene that makes PTEN are found in many types of cancer and other diseases. It is a type of tumor suppressor protein. Also called PTEN tyrosine phosphatase.

### **PTEN gene**

A gene that makes a protein involved in controlling many cell functions, including cell division and cell death. The PTEN protein may also be involved in cell movement, the attachment of cells to surrounding tissues, and the formation of new blood vessels. Mutations (changes) in the PTEN gene have been found in

many types of cancer and in several disorders in which people develop benign (not cancer) tumors. The PTEN gene is a type of tumor suppressor gene.

### **PTEN hamartoma tumor syndrome**

A group of inherited disorders caused by mutations (changes) in the PTEN gene. In people with PTEN hamartoma tumor syndrome, many benign (not cancer) growths called hamartomas form in different parts of the body, especially the skin, mouth, and gastrointestinal tract. Benign tumors may also occur in the thyroid, breast, uterus, soft tissue, and brain. Other signs and symptoms include a larger-than-average head, abnormal skin changes, blood vessel problems, autism spectrum disorder, and learning and developmental delays. People with PTEN hamartoma tumor syndrome have an increased risk of developing certain types of cancer, including melanoma and cancers of the breast, thyroid, kidney, endometrium, colon, and rectum. Also called PHTS.

### **PTEN tyrosine phosphatase**

A protein that helps control many cell functions, including cell division and cell death. Mutations (changes) in the gene that makes PTEN tyrosine phosphatase are found in many types of cancer and other diseases. It is a type of tumor suppressor protein. Also called PTEN.

### **PTH**

A substance made by the parathyroid gland that helps the body store and use calcium. A higher-than-normal amount of PTH causes high levels of calcium in the blood and may be a sign of disease. Also called parathormone, parathyrin, and parathyroid hormone.

### **PTK787/ZK 222584**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called protein tyrosine kinase inhibitors and VEGF receptor kinase inhibitors. Also called vatalanib.

### **PTLD**

A condition in which a group of B-cells grow out of control after an organ transplant in patients with weakened immune systems. This usually happens if the patient has also been infected with Epstein-Barr virus. PTLD may progress to non-Hodgkin lymphoma. Also called post-transplant lymphoproliferative disorder.

### **PTSD**

An anxiety disorder that develops in reaction to physical injury or severe mental or emotional distress, such as military combat, violent assault, natural disaster, or other life-threatening events. Having cancer may also lead to PTSD. Symptoms interfere with day-to-day living and include reliving the event in nightmares or flashbacks; avoiding people, places, and things connected to the event; feeling alone and losing interest in daily activities; and having trouble concentrating and sleeping. Also called post-traumatic stress disorder.

### **PUVA therapy**

A type of photodynamic therapy used to treat skin conditions such as psoriasis, vitiligo, and skin nodules of cutaneous T-cell lymphoma. The patient receives psoralen (a drug that becomes active when it is exposed to light) by mouth or applied to the skin, followed by ultraviolet A radiation. PUVA therapy may increase the risk of getting skin cancer. Also called psoralen and ultraviolet A therapy.

## **PV**

The science and practice of continuously reviewing the safety of drugs as they are tested in clinical trials and marketed for use. As part of PV, data about the problems caused by treatment with a drug are collected and analyzed. This process helps find ways to prevent adverse events and improve the safety of drugs. Also called pharmacovigilance.

## **PV701**

A virus that is being studied in the treatment of cancer. It belongs to the family of viruses that cause Newcastle disease in birds.

## **PXD101**

A drug used to treat adults with peripheral T-cell lymphoma that has come back or has not gotten better with other treatment. It is also being studied in the treatment of other types of cancer. PXD101 blocks certain enzymes needed for cell division and may kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow and may help make cancer cells easier to kill with other anticancer drugs. It is a type of histone deacetylase inhibitor, a type of antiangiogenesis agent, and a type of chemosensitizer. Also called Beleodaq and belinostat.

## **Pacific valerian**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, garden valerian, Indian valerian, Mexican valerian, valerian, *Valeriana officinalis*, and *Valerianae radix*.

## **Padcev**

A drug used alone or with pembrolizumab to treat adults with certain types of urothelial cancer (a type of cancer in the bladder or urinary tract) that have spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Padcev contains a monoclonal antibody that binds to a protein called nectin-4, which is found on some cancer cells. It also contains an anticancer drug, which may help kill cancer cells. Padcev may also help the immune system kill cancer cells. It is a type of antibody-drug conjugate. Also called enfortumab vedotin.

## **Paget disease of bone**

A chronic condition in which both the breakdown and regrowth of bone are increased. Paget disease of bone occurs most frequently in the pelvic and leg bones, skull, and lower spine. It is most common in older individuals, and may lead to bone pain, deformities, and fractures. Also called osteitis deformans.

## **Paget disease of the nipple**

A condition in which abnormal cells are found in the nipple. Symptoms commonly include itching and burning and an eczema-like condition around the nipple. There may also be oozing or bleeding from the nipple.

## **Pamelor**

A drug used to treat depression. It may also be used to treat panic or anxiety disorders and certain types of pain, and to help people quit smoking. Pamelor increases the levels of norepinephrine and other natural chemicals in the brain. This helps improve mood and may reduce a person's craving for nicotine. It is a type of tricyclic antidepressant. Also called Aventyl and nortriptyline.

### **Pancoast tumor**

A type of lung cancer that begins in the upper part of a lung and spreads to nearby tissues such as the ribs and vertebrae. Most Pancoast tumors are non-small cell cancers. Also called pulmonary sulcus tumor.

### **Pap smear**

A procedure in which a small brush is used to gently remove cells from the surface of the cervix and the area around it so they can be checked under a microscope for cervical cancer or cell changes that may lead to cervical cancer. A Pap smear may also help find other conditions, such as infections or inflammation. It is usually done at the same time as a pelvic exam and may also be done at the same time as a test for certain types of human papillomavirus (HPV). Also called Pap test and Papanicolaou test.

### **Pap test**

A procedure in which a small brush is used to gently remove cells from the surface of the cervix and the area around it so they can be checked under a microscope for cervical cancer or cell changes that may lead to cervical cancer. A Pap test may also help find other conditions, such as infections or inflammation. It is usually done at the same time as a pelvic exam and may also be done at the same time as a test for certain types of human papillomavirus (HPV). Also called Pap smear and Papanicolaou test.

### **Pap/HPV cotest**

A procedure in which a human papillomavirus (HPV) test and a Pap test are done at the same time to check for cervical cancer. The HPV test looks for DNA or RNA from certain high-risk types of HPV in samples of cells taken from the cervix. The Pap test checks for cervical cancer cells and cell changes that may lead to cervical cancer. The same cell sample may be used for both the HPV test and the Pap test. Women aged 30 to 65 years may have a Pap/HPV cotest every 5 years. Cotesting is more likely to find abnormal cells or cervical cancer than a Pap test alone is. Also called HPV/Pap cotest.

### **Papanicolaou test**

A procedure in which a small brush is used to gently remove cells from the surface of the cervix and the area around it so they can be checked under a microscope for cervical cancer or cell changes that may lead to cervical cancer. A Papanicolaou test may also help find other conditions, such as infections or inflammation. It is usually done at the same time as a pelvic exam and may also be done at the same time as a test for certain types of human papillomavirus (HPV). Also called Pap smear and Pap test.

### **Parkinson disease**

A progressive disorder of the nervous system marked by muscle tremors, muscle rigidity, decreased mobility, stooped posture, slow voluntary movements, and a mask-like facial expression.

### **Paterson-Kelly syndrome**

A disorder marked by anemia caused by iron deficiency, and a web-like growth of membranes in the throat that makes swallowing difficult. Having Paterson-Kelly syndrome may increase the risk of developing esophageal cancer. Also called Plummer-Vinson syndrome and sideropenic dysphagia.



### **Paxil**

A drug used to treat depression and anxiety disorders. It is a type of selective serotonin reuptake inhibitor (SSRI). Also called paroxetine hydrochloride.

### **PediaSure**

A nutritional drink that helps children who cannot get everything they need in their diet from foods and other drinks. It may be given through a small tube that is inserted through the nose into the stomach or the small intestine. It may also be given through a tube that is put into the stomach or the intestinal tract through an opening made on the outside of the abdomen. Also called pediatric polymeric enteral nutrition formula.

### **Pedmark**

A drug used to reduce the risk of hearing loss in children aged 1 month and older who are receiving cisplatin (a type of anticancer drug) for solid tumors that have not spread to other parts of the body. It is also being studied in the prevention and treatment of other conditions. Pedmark is a type of chemoprotective agent. Also called sodium thiosulfate anhydrous.

### **Pegasys**

A drug used to treat hepatitis C infections. It is also being studied in the treatment and prevention of cancer. It is a cytokine that is modified in the laboratory. It is a type of biological response modifier. Also called peginterferon alfa-2a.

### **Pemazyre**

A drug used to treat adults with certain types of cholangiocarcinoma (bile duct cancer), myeloid cancer, or lymphoid cancer that have certain changes in the structure of the FGFR1 gene or FGFR2 gene. It is also being studied in the treatment of other types of cancer. Pemazyre blocks a protein called FGFR, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called pemigatinib.

### **Pemfexy**

A drug used alone or with other drugs to treat certain types of non-small cell lung cancer and malignant pleural mesothelioma. It is also being studied in the treatment of other types of cancer. Pemfexy stops cells from using folic acid to make DNA and may kill cancer cells. It is a type of antimetabolite and a type of antifolate. Also called Alimta, LY231514, and pemetrexed disodium.

### **Pentam**

A drug used to treat infections caused by certain microorganisms. It is also being studied in the treatment of melanoma. It prevents DNA from being copied and may kill cancer cells. It is a type of antifungal agent, a type of antiprotozoal agent, and a type of PRL phosphatase inhibitor. Also called pentamidine isethionate.

### **Perjeta**

A drug used with other drugs to treat breast cancer that is HER2 positive. It is used in patients whose cancer has spread to other parts of the body and has not already been treated with other anticancer drugs. It is also used before surgery in patients with locally advanced, inflammatory, or early-stage breast cancer and after surgery in patients with early-stage breast cancer who have a high risk that their cancer will recur (come back). It is also being studied in the treatment of other types of cancer. Perjeta binds to a protein called HER2, which is found on

some cancer cells. Blocking this protein may help kill cancer cells. Perjeta is a type of monoclonal antibody. Also called pertuzumab.

### **Peutz-Jeghers syndrome**

A rare genetic disorder in which many polyps (abnormal growths of tissue) form in the lining of the gastrointestinal tract, and dark-colored spots appear on certain areas of the skin, such as around the mouth, eyes, and nose. People with Peutz-Jeghers syndrome have a very high risk of developing gastrointestinal cancer and other types of cancer, including cancers of the breast, pancreas, ovary, lung, and cervix. Peutz-Jeghers syndrome is usually caused by mutations (changes) in the STK11 gene. Some people with Peutz-Jeghers syndrome do not have a mutation in the STK11 gene. In these cases, the cause of the disorder is unknown. Also called PJS.

### **Phesgo**

A combination of pertuzumab, trastuzumab, and hyaluronidase used with other drugs to treat adults with HER2-positive breast cancer. It is used before surgery in patients with locally advanced, inflammatory, or early-stage breast cancer and after surgery in patients with early-stage breast cancer who have a high risk that their cancer will recur (come back). It is also used to treat patients with breast cancer that has spread to other parts of the body and has not already been treated with anti-HER2 therapy or chemotherapy. Pertuzumab and trastuzumab bind to a protein called HER2, which is found on some breast cancer cells. Pertuzumab and trastuzumab may block HER2 and help the immune system kill cancer cells. Hyaluronidase allows pertuzumab and trastuzumab to be given by injection under the skin. Phesgo can be given in less time than pertuzumab or trastuzumab alone, which are given as infusions. Also called pertuzumab, trastuzumab, and hyaluronidase.

### **Philadelphia chromosome**

An abnormal version of chromosome 22 that contains a fusion of two genes, the ABL gene and the BCR gene. This fusion gene is made when part of the ABL gene on chromosome 9 breaks off and attaches to the BCR gene on chromosome 22. The protein made by the BCR::ABL fusion gene can cause immature white blood cells to grow uncontrollably and build up in the bone marrow and blood. The Philadelphia chromosome is found in the bone marrow cells of almost all people with chronic myelogenous leukemia and some people with acute lymphocytic leukemia or acute myelogenous leukemia.

### **Photofrin**

A drug used to treat some types of cancer. When absorbed by cancer cells and exposed to light, Photofrin becomes active and kills the cancer cells. It is a type of photodynamic therapy agent. Also called porfimer sodium.

### **Physician Data Query**

Physician Data Query is an online source of cancer information that is developed and maintained by the National Cancer Institute (NCI). It makes current, credible, and accurate cancer information available to health professionals and the public. Physician Data Query contains information about cancer treatment, supportive and palliative care, screening, prevention, genetics, and integrative, complementary, and alternative medicine. This information is updated with the most recent evidence from scientific research. Physician Data Query also contains drug information summaries on many cancer-related drugs and dictionaries of cancer terms, drug terms, and genetics terms. Most of this information and more specific information about Physician Data Query can be

found on the NCI's website at <http://www.cancer.gov/publications/pdq>. Also called PDQ.

### **Picato**

A drug applied to the skin to treat actinic keratosis (thick, scaly growths on the skin that may become cancer). Picato may help kill abnormal cells. It is a type of cytotoxic agent. Also called ingenol mebutate gel.

### **Piqray**

A drug used with fulvestrant to treat postmenopausal women, and men, with hormone-receptor positive, HER2-negative breast cancer that is advanced or has spread and has a mutation (change) in the PIK3CA gene. It is used in patients whose cancer got worse during or after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. Piqray blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of kinase inhibitor. Also called alpelisib.

### **Piritrexim**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called folate antagonists.

### **Plan B**

A form of the hormone progesterone that is made in the laboratory and used to prevent pregnancy. It is being studied in the prevention of ovarian and endometrial cancer, and in the treatment of other conditions. Plan B is a type of oral contraceptive. Also called L-norgestrel and levonorgestrel.

### **Platinol**

A drug that contains the active ingredient cisplatin, which is used to treat certain types of bladder cancer, ovarian cancer, and testicular cancer. Platinol brand has been taken off the market and is no longer available.

### **Plenaxis**

A drug used to reduce the amount of testosterone made in patients with advanced symptomatic prostate cancer for which no other treatment options are available. It belongs to the family of drugs called gonadotropin-releasing hormone (GnRH) antagonists. Also called abarelix.

### **Plummer-Vinson syndrome**

A disorder marked by anemia caused by iron deficiency, and a web-like growth of membranes in the throat that makes swallowing difficult. Having Plummer-Vinson syndrome may increase the risk of developing esophageal cancer. Also called Paterson-Kelly syndrome and sideropenic dysphagia.

### **Pluvicto**

A radioactive drug used to treat adults with PSMA-positive prostate cancer that has spread to other parts of the body and has not responded to treatments that lower testosterone levels. It is used in patients whose cancer has been treated with an androgen receptor inhibitor and a type of anticancer drug called a taxane. Pluvicto binds to a protein called PSMA, which is found on some prostate cancer cells. It gives off radiation that may kill the cancer cells. Pluvicto is a type of radioconjugate. Also called lutetium Lu 177 vipivotide tetraxetan.

### **Polivy**

A drug used with other drugs to treat adults with certain types of diffuse large B-cell lymphoma. It is also being studied in the treatment of other types of cancer. Polivy contains a monoclonal antibody that binds to a protein called CD79B, which is found on B cells (a type of white blood cell) and some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. Polivy is a type of antibody-drug conjugate. Also called polatuzumab vedotin.

### **Polyphenon E**

A mixture that is prepared from the leaves of the Camellia sinensis plant. It contains substances called catechins, which are antioxidants. Antioxidants help protect cells from damage caused by certain chemicals that may increase the risk of cancer and other diseases. Polyphenon E is being studied in the prevention of cancer and other diseases. It is a trademarked product of Mitsui Norin Co., Ltd.

### **Pomalyst**

A drug that is similar to thalidomide and is used alone or with other drugs to treat adults with certain types of multiple myeloma or Kaposi sarcoma. It is also being studied in the treatment of other types of cancer. Pomalyst may help the immune system kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. Pomalyst is a type of immunomodulating agent and a type of antiangiogenesis agent. Also called CC-4047 and pomalidomide.

### **Portrazza**

A drug used with gemcitabine and cisplatin to treat squamous non-small cell lung cancer that has spread to other parts of the body. It is used in patients whose cancer has not been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Portrazza binds to a protein called epidermal growth factor receptor (EGFR), which is found on some types of cancer cells. Blocking this protein may help keep cancer cells from growing. Portrazza is a type of monoclonal antibody. Also called necitumumab.

### **Poteligeo**

A drug used to treat adults with mycosis fungoides or Sezary syndrome (types of cutaneous T-cell lymphoma) that came back or did not get better after treatment with at least one systemic therapy. It is also being studied in the treatment of other types of cancer. Poteligeo binds to a protein called CCR4, which is found on some T cells (a type of white blood cell) and some types of lymphoma cells. Poteligeo may block this protein and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called mogamulizumab.

### **Pravachol**

A drug used to lower the amount of cholesterol in the blood and to prevent stroke and heart attack. It is also being studied in the treatment of cancer and other conditions. Pravachol blocks an enzyme that helps make cholesterol in the body. It may also make tumor cells more sensitive to anticancer drugs. It is a type of HMG-CoA reductase inhibitor, a type of statin, and a type of chemosensitizer. Also called pravastatin sodium.

### **Prevacid**

A drug that reduces the amount of acid made in the stomach. It is used to treat stomach ulcers, gastroesophageal reflux disease (a condition in which acid from the stomach causes heartburn), and conditions in which the stomach makes too

much acid. Prevacid is a type of proton pump inhibitor (PPI). Also called lansoprazole.

### **Prialt**

A drug used in the treatment of chronic pain. Also called SNX 111 and ziconotide.

### **Prinivil**

A drug used to treat high blood pressure and certain heart conditions. It is also being studied in the prevention and treatment of side effects caused by some anticancer drugs. It blocks certain enzymes that cause blood vessels to constrict (narrow). It is a type of angiotensin-converting enzyme (ACE) inhibitor. Also called lisinopril and Zestril.

### **ProMune**

A substance that is being studied in the treatment of some types of cancer. It belongs to the family of drugs called biological response modifiers. Also called CpG 7909 and PF-3512676.

### **Procrit**

A drug used to treat anemia caused by chronic kidney disease, some types of chemotherapy, and an antiviral drug for HIV infection called zidovudine. It is also used to lower the number of donor blood transfusions needed during and after certain types of surgery. Procrit is a form of erythropoietin (a substance naturally made by the kidneys) that is made in the laboratory. It helps the bone marrow make more red blood cells. Procrit is a type of antianemic and a type of erythropoiesis-stimulating agent. Also called epoetin alfa, Epogen, and Retacrit.

### **Proleukin**

A drug used to treat adults with melanoma or renal cell carcinoma (a type of kidney cancer) that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Proleukin is a form of interleukin-2 that is made in the laboratory. Proleukin increases the activity and growth of white blood cells called T lymphocytes and B lymphocytes, which may help the immune system kill cancer cells. Proleukin is a type of cytokine and a type of immunomodulating agent. Also called aldesleukin and recombinant human interleukin-2.

### **Prolia**

A drug that contains the active ingredient denosumab and is used to treat certain bone problems. Prolia is used to increase bone mass in certain patients with breast cancer or prostate cancer who have a high risk of breaking bones. It is also used to treat osteoporosis in certain patients who have a high risk of breaking bones. Prolia binds to a protein called RANKL, which keeps RANKL from binding to another protein called RANK on the surface of certain bone cells. This may help keep bone from breaking down. Prolia is a type of monoclonal antibody.

### **Promacta**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults and children with chronic immune thrombocytopenic purpura that did not get better with other treatment. Promacta is also used to treat severe aplastic anemia. It is also being studied in the treatment of other conditions and types of cancer. Promacta binds to the thrombopoietin receptor, which causes the bone marrow to make more platelets. It is a type of thrombopoietin receptor agonist. Also called eltrombopag olamine.

### **Prost 30**

A monoclonal antibody that is being studied in the detection and treatment of cancer. Monoclonal antibodies are produced in the laboratory and can locate and bind to cancer cells.

### **ProstaScint**

A substance used to detect prostate cancer. It contains a monoclonal antibody that binds to prostate cells, linked to a substance that can bind radioisotopes. ProstaScint is combined with indium 111 and injected into the body. A gamma camera (a special camera that detects radioactivity) is used to find prostate cancer cells in the body. ProstaScint is a type of immunoconjugate. Also called capromab pendetide.

### **ProstaScint scan**

An imaging test used to detect prostate cancer. The patient receives an injection of an indium 111-labeled form of ProstaScint, which contains a monoclonal antibody that binds to prostate cells. A gamma camera (a special camera that detects radioactivity) is used to find prostate cancer cells in the body.

### **Protection of Human Subjects**

Laws set by the U.S. Department of Health and Human Services (DHHS) to protect a person from risks in research studies that any federal agency or department has a part in. Also called 45 CFR 46, 45 Code of Federal Regulations Part 46, and human participant protection regulations.

### **Protocel**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in Protocel have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give Protocel as a treatment for any disease. Also called 126-F, Cancell, Cantron, Jim's Juice, JS-101, JS-114, and Sheridan's Formula.

### **Provenge**

A vaccine used to treat prostate cancer that has spread to other parts of the body. It is used in patients who have few or no symptoms and whose cancer is castration resistant (has not responded to treatments that lower testosterone levels). Provenge is made from a patient's immune cells that have been treated in the laboratory with GM-CSF (a type of growth factor) and a protein found on prostate cancer cells. Provenge may help the immune system kill prostate cancer cells. It is a type of autologous cellular immunotherapy and a type of dendritic cell vaccine. Also called APC 8015 and sipuleucel-T.

### **Proxinium**

A substance being studied in the treatment of certain types of head and neck cancer. Proxinium is made by linking a monoclonal antibody fragment to a toxic protein that may kill cancer cells. It binds to EpCAM (a protein on the surface of epithelial cells and some types of cancer cells). Also called anti-EpCAM-Pseudomonas-exotoxin fusion protein and VB4-845.

### **Pulmozyme**

A drug given in an aerosol mist to decrease the thickness of mucus in the lungs of patients with cystic fibrosis. It is also being studied as a treatment to reduce the thickness of saliva in patients being treated for head and neck cancer.



Pulmozyme contains an enzyme that breaks the DNA in mucus into small pieces and makes the mucus thinner. Also called dornase alfa inhalation solution.

### **Purinethol**

A drug used with other drugs to treat adults and children with acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Purinethol stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called mercaptopurine and Purixan.

### **Purixan**

A drug used with other drugs to treat adults and children with acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Purixan stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called mercaptopurine and Purinethol.

### **Q10**

A nutrient that the body needs in small amounts to function and stay healthy. Q10 helps mitochondria (small structures in the cell) make energy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). Q10 is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, beef, soybeans, peanuts, and spinach. It is being studied in the prevention and treatment of some types of cancer and heart disease and in the relief of side effects caused by some cancer treatments. Also called coenzyme Q10, CoQ10, ubiquinone, and vitamin Q10.

### **QA**

A process that looks at activities or products on a regular basis to make sure they are being done at the required level of excellence. In clinical trials, QA makes sure that all parts of the trial follow the law and the Good Clinical Practice guidelines. Also called quality assurance.

### **QNBC**

A type of breast cancer in which the tumor cells do not have estrogen receptors, progesterone receptors, androgen receptors, or large amounts of HER2/neu protein on their surface. Knowing whether breast cancer is quadruple negative is important in planning treatment. Also called quadruple-negative breast cancer.

### **QS21**

A substance from plants that is being studied together with vaccine therapy for its ability to improve the way the immune system responds to disease. It belongs to the family of drugs called saponin adjuvants.

### **Qinlock**

A drug used to treat adults with advanced gastrointestinal stromal tumor. It is used in patients whose cancer was already treated with at least three other kinase inhibitors, including imatinib mesylate. It is also being studied in the treatment of other types of cancer. Qinlock blocks certain proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called ripretinib.

### **Quadramet**

A drug used to treat bone pain caused by bone cancer and other cancers that have spread to the bone. It contains a radioactive substance called samarium Sm 153. Quadramet collects in bone and gives off radiation that may kill cancer cells. Also called samarium Sm 153-lexidronam pentasodium.

## **R-CHOP**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin lymphoma and mantle cell lymphoma and is being studied in the treatment of other types of cancer. It includes the drugs rituximab, cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), vincristine sulfate (Oncovin), and prednisone. Also called R-CHOP regimen.

## **R-CHOP regimen**

An abbreviation for a chemotherapy combination that is used to treat non-Hodgkin lymphoma and mantle cell lymphoma and is being studied in the treatment of other types of cancer. It includes the drugs rituximab, cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), vincristine sulfate (Oncovin), and prednisone. Also called R-CHOP.

## **R-CVP**

An abbreviation for a chemotherapy combination used to treat indolent (slow-growing) non-Hodgkin lymphoma. It includes the drugs rituximab, cyclophosphamide, vincristine sulfate, and prednisone. Also called R-CVP regimen.

## **R-CVP regimen**

An abbreviation for a chemotherapy combination used to treat indolent (slow-growing) non-Hodgkin lymphoma. It includes the drugs rituximab, cyclophosphamide, vincristine sulfate, and prednisone. Also called R-CVP.

## **R-EPOCH**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs rituximab, etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, and doxorubicin hydrochloride (hydroxydaunorubicin). Also called EPOCH-R, EPOCH-R regimen, and R-EPOCH regimen.

## **R-EPOCH regimen**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs rituximab, etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, and doxorubicin hydrochloride (hydroxydaunorubicin). Also called EPOCH-R, EPOCH-R regimen, and R-EPOCH.

## **R-ICE**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs rituximab, ifosfamide, carboplatin, and etoposide phosphate. Also called R-ICE regimen.

## **R-ICE regimen**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs rituximab, ifosfamide, carboplatin, and etoposide phosphate. Also called R-ICE.

## **R-flurbiprofen**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called nonsteroidal anti-inflammatory drugs (NSAIDs).

**R101933**

A substance that is being studied for its ability to make cancer cells respond to drugs to which they have become resistant. It belongs to the family of drugs called multidrug resistance inhibitors.

**R115777**

A substance that is being studied in the treatment of acute myeloid leukemia (AML) and other types of cancer. It belongs to the family of drugs called farnesyltransferase inhibitors. Also called tipifarnib and Zarnestra.

**R1507**

A human monoclonal antibody being studied in the treatment of several types of cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. R1507 blocks the action of a protein needed for cell growth and may kill cancer cells. It is a type of insulin-like growth factor-1 receptor (IGF-1R) inhibitor.

**R788 sodium**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults with chronic immune thrombocytopenia (ITP) that did not get better with other treatment. ITP is a condition in which platelets are destroyed by the immune system. R788 sodium is also being studied in the treatment of other conditions and types of cancer. It blocks an enzyme called Syk, which may help keep the immune system from destroying platelets. R788 sodium is a type of tyrosine kinase inhibitor. Also called fostamatinib disodium, Syk kinase inhibitor R-935788, and Tavalisse.

**RAD001**

A drug used alone or with other drugs to treat certain types of breast cancer, kidney cancer, and pancreatic, lung, and gastrointestinal neuroendocrine tumors. It is used under the brand name Afinitor to treat these cancers and to treat a type of benign kidney tumor called renal angiomyolipoma and a type of benign brain tumor called subependymal giant cell astrocytoma in patients who have tuberous sclerosis. RAD001 is also used under the brand name Afinitor Disperz to treat subependymal giant cell astrocytoma and certain types of seizures in patients who have tuberous sclerosis. It is also used under the brand name Zortress to keep the body from rejecting a kidney or liver transplant. RAD001 is also being studied in the treatment of other conditions and types of cancer. It blocks a protein involved in cell division, which may help keep abnormal cells, including cancer cells, from growing. It may also prevent the growth of new blood vessels that tumors need to grow. RAD001 also lowers the body's immune response. It is a type of kinase inhibitor, a type of angiogenesis inhibitor, and a type of immunosuppressant. Also called everolimus.

**RARA gene**

A gene that makes a protein that controls the activity of certain genes that help white blood cells mature. Mutations (changes) in the RARA gene can occur when a piece of the chromosome containing the RARA gene breaks off and joins with a gene called PML on another chromosome. These changes may cause too many immature white blood cells to build up in the blood and bone marrow. This can lead to an aggressive (fast-growing) type of acute myeloid leukemia called acute promyelocytic leukemia. The protein made by the RARA gene is a type of transcription factor. Also called retinoic acid receptor alpha gene.

## **RAS gene family**

A family of genes that make proteins involved in cell signaling pathways that control cell growth and cell death. Mutated (changed) forms of the RAS gene may be found in some types of cancer. These changes may cause cancer cells to grow and spread in the body. Members of the RAS gene family include KRAS, HRAS, and NRAS.

## **RASopathy syndrome**

A group of rare conditions caused by mutations (changes) in certain genes that make proteins involved in the Ras/MAPK cell signaling pathway. This pathway plays an important role in controlling many cell functions, including cell growth, cell maturation, and cell death. There are many different RASopathy syndromes. Most of these syndromes are marked by unusual facial features, heart defects, skin abnormalities, and problems with the eyes, muscles, and bones. There may also be gastrointestinal and nervous system problems and growth, learning, and developmental delays. Having a RASopathy syndrome may increase a person's risk of certain types of cancer. RASopathy syndromes include cardiofaciocutaneous syndrome, Costello syndrome, Legius syndrome, neurofibromatosis type 1, Noonan syndrome, and capillary malformation-arteriovenous malformation syndrome.

## **RAV12**

A monoclonal antibody that is being studied in the treatment of some types of cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to cancer cells. It binds to a carbohydrate (sugar) molecule that is found on gastric, colon, pancreatic, prostate, ovarian, breast, and kidney cancer cells.

## **RBC**

A type of blood cell that is made in the bone marrow and found in the blood. RBCs contain a protein called hemoglobin, which carries oxygen from the lungs to all parts of the body. Checking the number of RBCs in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as anemia, dehydration, malnutrition, and leukemia. Also called erythrocyte and red blood cell.

## **RECIST**

A standard way to measure how well a cancer patient responds to treatment. It is based on whether tumors shrink, stay the same, or get bigger. To use RECIST, there must be at least one tumor that can be measured on x-rays, CT scans, or MRI scans. The types of response a patient can have are a complete response (CR), a partial response (PR), progressive disease (PD), and stable disease (SD). Also called Response Evaluation Criteria In Solid Tumors.

## **RECQL4 gene**

A gene that makes a protein involved in unwinding strands of DNA that are to be copied prior to cell division and in repairing damaged DNA. Mutations (changes) in the RECQL4 gene have been found in certain inherited conditions, including Rothmund-Thomson syndrome (RTS). People with RTS have an increased risk of developing certain types of cancer at an early age, including bone cancer and skin cancer.

## **REM sleep**

The phase of sleep in which most dreams occur. During REM sleep, a person's brain activity, breathing, heart rate, and blood pressure increase, and the eyes move rapidly while closed. The muscles in the arms and legs become

temporarily unable to move. REM sleep is thought to play an important role in memory and learning. During normal sleep, a person goes through four to five sleep cycles that last about 90 minutes each and include both REM sleep and non-REM sleep (light to deep sleep). Also called rapid eye movement sleep.

### **RET gene**

A gene that makes a protein that plays an important role in cell growth and differentiation and in the development of nerve cells in the body. Mutations (changes) in the RET gene may cause the protein made by this gene to become overactive, which may cause abnormal cells, including cancer cells, to grow. RET gene mutations have been found in certain genetic conditions, including MEN2 syndrome and Hirschsprung disease, and in some types of cancer, including non-small cell lung cancer and thyroid cancer. The RET gene is a type of proto-oncogene and a type of receptor tyrosine kinase gene.

### **RFS**

In cancer, the length of time after primary treatment for a cancer ends that the patient survives without any signs or symptoms of that cancer. In a clinical trial, measuring the RFS is one way to see how well a new treatment works. Also called DFS, disease-free survival, and relapse-free survival.

### **RFT5-dgA immunotoxin**

A monoclonal antibody linked to a toxic substance. It is being studied in the treatment of melanoma that has spread to distant parts of the body. RFT5-dgA immunotoxin is made in the laboratory. It can find and kill certain white blood cells that prevent the immune system from killing cancer cells. Also called IgG-RFT5-dgA.

### **RG7204**

A drug used to treat Erdheim-Chester disease (a very rare type of histiocytosis) and advanced melanoma that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. RG7204 blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called BRAF (V600E) kinase inhibitor RO5185426, PLX4032, vemurafenib, and Zelboraf.

### **RK-0202**

A substance that is being studied in the prevention of oral mucositis in patients receiving radiation therapy or chemotherapy for head and neck cancer.

### **RLS**

A condition in which a person has a strong urge to move his or her legs in order to stop uncomfortable sensations. These include burning, itching, creeping, tugging, crawling, or pain. These feelings usually happen when a person is lying or sitting down, and are worse at night. They can also occur in other parts of the body. Also called restless legs syndrome.

### **RMP-7**

A substance that is being studied for its ability to help other drugs reach the brain. It belongs to the family of drugs called bradykinin agonists. Also called lobradimil.

### **RNA**

One of two types of nucleic acid made by cells. RNA contains information that has been copied from DNA (the other type of nucleic acid). Cells make several

different forms of RNA, and each form has a specific job in the cell. Many forms of RNA have functions related to making proteins. RNA is also the genetic material of some viruses instead of DNA. RNA can be made in the laboratory and used in research studies. Also called ribonucleic acid.

### **RNA sequencing**

A laboratory method used to learn the exact sequence (order) of the building blocks that make up all RNA molecules in a cell. In a cell, RNA is copied from pieces of DNA and contains information to make proteins and perform other important functions. RNA sequencing is used to learn more about which genes are expressed (turned on) in different types of cells and when and how these genes are expressed. This may help researchers understand the cause of certain diseases, such as cancer.

### **RO4929097**

A substance being studied in the treatment of cancer. It blocks certain enzymes that are needed for cell growth. This may slow the growth of cancer cells. It may also decrease the growth of new blood vessels that tumors need to grow. It is a type of gamma-secretase inhibitor and a type of Notch signaling inhibitor.

### **ROS1 gene**

A gene that makes a protein that is involved in sending signals in cells and in cell growth. Mutated (changed) forms of the ROS1 gene and protein have been found in some types of cancer, including non-small cell lung cancer (NSCLC), a type of brain cancer called glioblastoma multiforme, and cancers of the bile duct, ovary, stomach, colon, and rectum. The protein made by the ROS1 gene is a type of receptor tyrosine kinase.

### **ROS1 inhibitor**

A substance that blocks the activity of an abnormal protein called ROS1 fusion protein, which is found on some types of cancer cells. Blocking the ROS1 fusion protein may help keep cancer cells that have it from growing and spreading. Some ROS1 inhibitors are used to treat cancer. They are a type of targeted therapy.

### **ROS1 positive**

Describes cells that have a protein called ROS1 on their surface. In cancer, it is also used to describe cells that have a change in the structure of the ROS1 gene or a ROS1 fusion protein on their surface. In normal cells, ROS1 is involved in cell signaling and cell growth. Cancer cells that have the changed ROS1 gene or the ROS1 fusion protein may grow more quickly. Knowing whether a cancer is ROS1 positive may help plan treatment. Cancers that may be ROS1 positive include non-small cell lung cancer, a type of brain cancer called glioblastoma multiforme, and cancers of the bile duct, ovary, stomach, colon, and rectum.

### **RPI.4610**

A substance being studied in the treatment of cancer. RPI.4610 is a special type of RNA made in the laboratory. It stops a protein called vascular endothelial growth factor receptor (VEGFR) from being made. This may prevent the growth of new blood vessels that tumors need to grow. It is a type of angiogenesis inhibitor and a type of ribozyme. Also called Angiozyme.

### **RPLS**

A rare condition marked by headaches, vision problems, mental changes, seizures, and swelling in the brain. The symptoms of RPLS usually come on



quickly and can be serious and life threatening. When treated, symptoms often go away within days or weeks. RPLS may occur in patients with certain conditions, such as high blood pressure, eclampsia, severe infection, kidney disease, and certain autoimmune diseases. It may also occur in patients treated with certain anticancer drugs and immunosuppressive drugs. Also called posterior reversible encephalopathy syndrome, PRES, and reversible posterior leukoencephalopathy syndrome.

#### **RPR 109881A**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called taxanes.

#### **RRP**

A rare condition in which wart-like growths called papillomas grow in the respiratory tract (air passages leading from the nose and mouth into the lungs). The papillomas most often grow in the larynx (voice box) and vocal cords. They can grow quickly, and they often grow back after they have been removed by surgery. Signs and symptoms of RRP include hoarseness, chronic cough, swallowing problems, and breathing problems, which may sometimes be life-threatening. RRP is caused by infection with certain types of human papillomavirus (HPV). It can occur in both children and adults. Also called recurrent respiratory papillomatosis.

#### **RSR13**

A substance being studied in the treatment of brain tumors and some other types of cancer. It increases the amount of oxygen in tumor tissues, which may make the tumor cells easier to kill with radiation therapy. RSR13 is a type of radiosensitizing agent. Also called efaproxiral.

#### **RSV**

A virus that causes respiratory infections with cold-like symptoms. Also called respiratory syncytial virus.

#### **RT-PCR**

A laboratory method used to make many copies of a specific genetic sequence for analysis. It uses an enzyme called reverse transcriptase to change a specific piece of RNA into a matching piece of DNA. This piece of DNA is then amplified (made in large numbers) by another enzyme called DNA polymerase. The amplified DNA copies help tell whether a specific mRNA molecule is being made by a gene. RT-PCR may be used to look for certain changes in a gene or chromosome or for activation of certain genes, which may help diagnose a disease, such as cancer. It may also be used to study the RNA of certain viruses, such as the human immunodeficiency virus (HIV) and the hepatitis C virus, to help diagnose and monitor an infection. Also called reverse transcription-polymerase chain reaction.

#### **RTA 744**

A substance being studied in the treatment of adult brain tumors. RTA 744 crosses the blood-brain barrier and blocks an enzyme needed for cancer growth. It is a type of topoisomerase inhibitor. Also called topoisomerase II inhibitor RTA 744.

#### **RTEL1 gene**

A gene that makes a protein involved in maintaining telomeres (the ends of chromosomes) and in repairing DNA. Mutations (changes) in the RTEL1 gene

have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **RTK**

A member of a group of proteins called tyrosine kinases that are found on the surface of cells. RTKs play an important role in many cell functions, including cell-to-cell communication and cell division, maturation, movement, metabolism, and survival. Sometimes, the genes that make RTKs have mutations (changes) that cause RTKs to be overactive or be found in higher-than-normal amounts. This may cause cancer cells to grow. Drugs that block the mutant RTKs are being used to treat some types of cancer. Also called receptor tyrosine kinase.

## **RTS**

A rare, inherited disorder that affects many parts of the body, especially the skin, eyes, bones, hair, and teeth. The main sign or symptom is a red blistering rash on the face that begins in early infancy. Over time, the rash can spread to the arms, legs, and buttocks and cause patchy skin coloring, areas of thin skin, and small clusters of blood vessels under the skin. Other signs and symptoms include slow growth and shorter-than-average height; little or no hair, including eyelashes and eyebrows; abnormalities of the nails, teeth, and bones; gastrointestinal problems; and blood problems. People with RTS have an increased risk of developing cancer at an early age, especially osteosarcoma (a type of bone cancer), basal cell skin cancer, and squamous cell skin cancer. RTS may be caused by a mutation (change) in the RECQL4 gene. Also called poikiloderma congenitale and Rothmund-Thomson syndrome.

## **RU 486**

A drug used to end early pregnancies. It is also being studied in the treatment of some types of cancer and other conditions. RU 486 blocks the action of progesterone, a hormone that helps some cancers grow. It is a type of antiprogestosterone. Also called Mifeprex and mifepristone.

## **Raftilose Synergy 1**

A substance that is used to improve the health of the digestive system and bones and is being studied in the prevention of colon cancer. Raftilose Synergy 1 is made by combining two substances that occur naturally in many plants, including chicory root, wheat, bananas, onion, and garlic. Raftilose Synergy 1 helps healthy bacteria grow in the intestines and helps the body absorb calcium and magnesium. Also called oligofructose-enriched inulin.

## **Rapamune**

A drug used to keep the body from rejecting organ and bone marrow transplants. Rapamune blocks certain white blood cells that can reject foreign tissues and organs. It also blocks a protein that is involved in cell division. It is a type of antibiotic, a type of immunosuppressant, and a type of serine/threonine kinase inhibitor. Rapamune was previously called rapamycin. Also called sirolimus.

## **ReVia**

A drug that blocks the action of opiates (drugs used to treat pain). It may be used in the treatment of intravenous opiate addiction or alcohol dependence. ReVia is also being studied in the treatment of breast cancer. It may block the effects of

the hormone estrogen, which causes some breast cancer cells to grow, or block the blood flow to tumors. It is a type of opiate antagonist. Also called naltrexone hydrochloride and Vivitrol.

### **Reblozyl**

A drug used to treat anemia in adults with certain types of myelodysplastic syndromes or myelodysplastic/myeloproliferative neoplasms who need regular red blood cell transfusions and whose anemia did not respond to or cannot be treated with an erythropoiesis-stimulating agent. Reblozyl is also used to treat anemia in adults with beta thalassemia (an inherited blood disorder) who need regular red blood cell transfusions. It is also being studied in the treatment of other conditions. Reblozyl helps the bone marrow make more red blood cells. It is a type of antianemic and a type of recombinant fusion protein. Also called luspatercept.

### **Recentin**

A substance being studied in the treatment of some types of cancer. Recentin may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of antiangiogenesis agent and a type of vascular endothelial growth factor (VEGF) receptor tyrosine kinase inhibitor. Also called AZD2171 and cediranib maleate.

### **Reed-Sternberg cell**

A type of cell that appears in people with Hodgkin disease. The number of these cells increases as the disease advances. Also called Hodgkin and Reed-Sternberg cell.

### **Regenecare**

A substance being studied in the treatment of certain types of skin rash and skin pain in cancer patients. The ingredients of Regenecare are collagen, aloe vera, vitamin E, and lidocaine. It may help stop bleeding, form new blood vessels, keep the skin moist, and relieve pain and itching. It is a type of topical anesthetic and a type of wound repair agent.

### **Reglan**

A drug that increases the motility (movements and contractions) of the stomach and upper intestine. It is used to treat certain stomach problems and nausea and vomiting caused by chemotherapy. It is a type of antiemetic and a type of motility agent. Also called metoclopramide.

### **Relenza**

A drug used to prevent and to treat influenza virus infections. It blocks the release of the virus from infected cells. It is a type of antiviral agent. Also called zanamivir.

### **Relistor**

A drug used to relieve constipation caused by the use of opioids (pain killers that are like morphine). It is used in adults with pain caused by cancer or treatment for cancer or by other advanced disease. Relistor binds to opioid receptors outside the brain and may block the side effects of opioid drugs without affecting their ability to relieve pain. Relistor is a type of peripheral opioid receptor antagonist. Also called methylnaltrexone bromide.

## **Remeron**

A drug used to treat depression. Remeron increases the levels of the chemicals serotonin and norepinephrine in the brain, which helps improve mood. It is a type of antidepressant. Also called mirtazapine.

## **Renova**

A topical preparation of tretinoin that is used to treat acne. Tretinoin is a form of vitamin A.

## **Response Evaluation Criteria In Solid Tumors**

A standard way to measure how well a cancer patient responds to treatment. It is based on whether tumors shrink, stay the same, or get bigger. To use Response Evaluation Criteria In Solid Tumors, there must be at least one tumor that can be measured on x-rays, CT scans, or MRI scans. The types of response a patient can have are a complete response (CR), a partial response (PR), progressive disease (PD), and stable disease (SD). Also called RECIST.

## **Retacrit**

A drug used to treat anemia caused by chronic kidney disease, some types of chemotherapy, and an antiviral drug for HIV infection called zidovudine. It is also used to lower the number of donor blood transfusions needed during and after certain types of surgery. Retacrit is a form of erythropoietin (a substance naturally made by the kidneys) that is made in the laboratory. It helps the bone marrow make more red blood cells. Retacrit is a type of antianemic and a type of erythropoiesis-stimulating agent. Also called epoetin alfa, Epogen, and Procrit.

## **Retevmo**

A drug used to treat certain types of non-small cell lung cancer in adults and certain types of thyroid cancer or other solid tumor in adults and children aged 2 years and older. It is used in patients whose cancer has an abnormal RET gene. It is also being studied in the treatment of other types of cancer. Retevmo blocks certain proteins, including those made by the RET fusion gene or the mutated RET gene. Blocking these proteins may help keep cancer cells from growing. Retevmo is a type of tyrosine kinase inhibitor. Also called selpercatinib.

## **Retin-A**

A topical preparation of tretinoin that is used to treat acne. Tretinoin is a form of vitamin A.

## **Retin-A-Micro**

A topical preparation of tretinoin that is used to treat acne. Tretinoin is a form of vitamin A.

## **RevM10 gene**

An antiviral gene that is being studied in the treatment of cancer in patients who have HIV, the virus that causes AIDS.

## **Revlimid**

A drug that is similar to thalidomide and is used alone or with other drugs to treat adults with certain types of follicular lymphoma, marginal zone lymphoma, mantle cell lymphoma, multiple myeloma, or anemia caused by certain types of myelodysplastic syndromes. It is also being studied in the treatment of other conditions and types of cancer. Revlimid may help the immune system kill abnormal blood cells or cancer cells. It may also prevent the growth of new blood

vessels that tumors need to grow. Revlimid is a type of antiangiogenesis agent and a type of immunomodulating agent. Also called CC-5013 and lenalidomide.

### **Reye syndrome**

A rare disease that damages the brain and liver and causes death if not treated. It occurs most often in children younger than 15 years who have had a fever-causing virus, such as chickenpox or flu. Taking aspirin during a viral illness may increase the risk of Reye syndrome.

### **Rezlidhia**

A drug used to treat adults with acute myeloid leukemia that has come back or has not gotten better with other treatment and has a mutation (change) in the IDH1 gene. It is also being studied in the treatment of other types of cancer. Rezlidhia blocks the protein made by the mutated IDH1 gene. Blocking this protein may help keep cancer cells from growing. Rezlidhia is a type of enzyme inhibitor. Also called olutasidenib.

### **Riabni**

A drug that contains the active ingredient rituximab and is used alone or with other drugs to treat adults with certain types of B-cell non-Hodgkin lymphoma or chronic lymphocytic leukemia that are CD20 positive. It is also being studied in the treatment of other conditions and types of cancer. Riabni binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Riabni is a type of monoclonal antibody.

### **Richter syndrome**

A rare condition in which chronic lymphocytic leukemia (CLL) changes into a fast-growing type of lymphoma. Symptoms of Richter syndrome include fever, loss of weight and muscle mass, and other health problems. Also called Richter transformation.

### **Richter transformation**

A rare condition in which chronic lymphocytic leukemia (CLL) changes into a fast-growing type of lymphoma. Symptoms of Richter transformation include fever, loss of weight and muscle mass, and other health problems. Also called Richter syndrome.

### **Right to Try Act**

A U.S. law that allows patients access to certain drugs that have not been approved by the U.S. Food and Drug Administration (FDA). The patient must be unable to receive the drug in a clinical trial and must have a life-threatening illness for which other treatments are not available. Drugs used under the Right to Try Act must have been tested in a phase 1 clinical trial (the first step of testing a new treatment in people) and must be undergoing study to be approved by the FDA. Companies who develop and make drugs determine whether to make their products available to patients who qualify for access under the Right to Try Act.

### **Rilutek**

A drug used to treat a nerve disease called amyotrophic lateral sclerosis (ALS). It is also being studied in the treatment of melanoma (a type of skin cancer). Rilutek blocks the release of a substance that melanoma cells need to grow. It is a type of glutamate release inhibitor. Also called riluzole.

### **Risperdal**

A drug used to treat certain mental disorders, such as schizophrenia and bipolar disease. It may also be used to treat certain behavior problems in children. Risperdal blocks the action of certain chemicals in the brain. It is a type of antipsychotic. Also called risperidone.

### **Ritalin**

A drug used to treat certain behavior disorders, such as attention deficit hyperactivity disorder (ADHD). It is also being studied as a way to improve brain function in patients treated with anticancer drugs. Ritalin acts on certain parts of the brain. It is a type of central nervous system stimulant. Also called Concerta and methylphenidate hydrochloride.

### **Rituxan**

A drug that contains the active ingredient rituximab and is used alone or with other drugs to treat adults and children aged 6 months and older with certain types of B-cell non-Hodgkin lymphoma, adults with chronic lymphocytic leukemia, and children aged 6 months and older with B-cell acute leukemia. It is used in patients whose cancer is CD20 positive. It is also being studied in the treatment of other conditions and types of cancer. Rituxan binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Rituxan is a type of monoclonal antibody.

### **Rituxan Hycela**

A combination of rituximab and hyaluronidase used to treat adults with certain types of follicular lymphoma, diffuse large B-cell lymphoma, or chronic lymphocytic leukemia. Rituximab binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Hyaluronidase allows rituximab to be given by injection under the skin. Rituxan Hycela can be given in less time than rituximab alone, which is given as an infusion. Also called rituximab and hyaluronidase.

### **Ro 31-7453**

A substance that is being studied in the treatment of cancer. It may prevent cancer cells from dividing. It belongs to the family of drugs called cell cycle inhibitors.

### **Ro 50-3821**

A substance that is being studied in the treatment of anemia in patients who are receiving chemotherapy. It is a form of erythropoietin (a substance produced in the kidneys that stimulates the production of red blood cells) that has been changed in the laboratory. Also called methoxypolyethylene glycol epoetin beta.

### **Roman chamomile**

A type of chamomile plant with daisy-like white flowers that is found in Europe, North America, and Argentina. The dried flowers are used in teas to calm and relax, to improve sleep, and to help with stomach problems. Its essential oil (scented liquid taken from plants) is used in perfumes, shampoos, face creams, lotions, and aromatherapy. The scientific names are *Chamaemelum nobile* and *Anthemis nobilis*. Also called English chamomile.



### **Rombo syndrome**

A very rare, inherited disorder that causes a bluish-red skin color on the lips, hands, and feet. It also causes skin lesions that leave pitted scars, usually on the cheeks. Other signs and symptoms include little or no hair growth in the affected areas and thin or missing eyelashes and eyebrows; small, yellowish bumps that cause the skin to become rough; thinning of the skin; and other skin problems. The signs and symptoms usually appear between 7 and 10 years of age. People with Rombo syndrome have a very high risk of developing basal cell skin cancer, usually around the age of 35 years. The gene involved in Rombo syndrome is not known.

### **Roswell Park regimen**

A chemotherapy combination used to treat colorectal cancer. It is also used with radiation therapy to treat esophageal cancer and stomach cancer. It includes the drugs fluorouracil and leucovorin calcium.

### **Rothmund-Thomson syndrome**

A rare, inherited disorder that affects many parts of the body, especially the skin, eyes, bones, hair, and teeth. The main sign or symptom is a red blistering rash on the face that begins in early infancy. Over time, the rash can spread to the arms, legs, and buttocks and cause patchy skin coloring, areas of thin skin, and small clusters of blood vessels under the skin. Other signs and symptoms include slow growth and shorter-than-average height; little or no hair, including eyelashes and eyebrows; abnormalities of the nails, teeth, and bones; gastrointestinal problems; and blood problems. People with Rothmund-Thomson syndrome have an increased risk of developing cancer at an early age, especially osteosarcoma (a type of bone cancer), basal cell skin cancer, and squamous cell skin cancer. Rothmund-Thomson syndrome may be caused by a mutation (change) in the RECQL4 gene. Also called poikiloderma congenitale and RTS.

### **Rozlytrek**

A drug used in adults to treat non-small cell lung cancer that has spread and is ROS1 positive and in adults and children aged 1 month and older to treat certain types of solid tumors that have an NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Rozlytrek blocks certain proteins involved in cell signaling and cell growth. Blocking these proteins may help keep cancer cells from growing and may kill them. Rozlytrek is a type of tyrosine kinase inhibitor. Also called entrectinib.

### **Rubinstein-Taybi syndrome**

A rare, genetic disorder marked by being short, having wide big toes and thumbs, certain facial features, and problems in developing and learning. Other problems may include heart and kidney defects, eye and dental problems, and obesity. People with Rubinstein syndrome have an increased risk of some types of leukemia and brain tumors.

### **Rubraca**

A drug used to treat adults with certain types of prostate cancer or ovarian epithelial, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Rubraca blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Rubraca is a type of PARP inhibitor. Also called AG014699, PARP-1 inhibitor AG014699, and rucaparib camsylate.

## **Ruxience**

A drug that contains the active ingredient rituximab and is used alone or with other drugs to treat adults with certain types of B-cell non-Hodgkin lymphoma or chronic lymphocytic leukemia that are CD20 positive. It is also being studied in the treatment of other conditions and types of cancer. Ruxience binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Ruxience is a type of monoclonal antibody.

## **Rybrevant**

A drug used alone or with other drugs to treat adults with non-small cell lung cancer that has spread and has an abnormal EGFR gene. It is used in patients whose cancer has not been treated with other anticancer therapy or has gotten worse during or after platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Rybrevant binds to receptors for proteins called EGF and MET, which are found on some types of cancer cells. Blocking these proteins may help keep cancer cells from growing. Rybrevant is a type of bispecific antibody. Also called amivantamab.

## **Rydapt**

A drug used alone or with other anticancer drugs to treat adults with certain types of acute myeloid leukemia, mast cell leukemia, or systemic mastocytosis. It is also being studied in the treatment of other types of cancer. Rydapt blocks certain proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Rydapt is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called midostaurin, N-benzoyl-staurosporine, and PKC412.

## **Rylaze**

A drug that is a recombinant form of asparaginase *Erwinia chrysanthemi* and is used with other drugs to treat adults and children aged 1 month or older with acute lymphoblastic leukemia or lymphoblastic lymphoma. It is used in people who cannot take the enzyme asparaginase that comes from the bacterium *E. coli*. Rylaze breaks down the amino acid asparagine and may stop the growth of cancer cells that need asparagine to grow. It may also kill cancer cells. Rylaze is a type of protein synthesis inhibitor.

## **Rytelo**

A drug used to treat low-risk or intermediate-1 risk myelodysplastic syndromes in adults with anemia. It is used in patients who need regular red blood cell transfusions and did not respond to or cannot be treated with an erythropoiesis-stimulating agent. It is also being studied in the treatment of other types of cancer. Rytelo binds to an enzyme called telomerase, which is found at high levels in certain types of cells, including cancer cells. Blocking the activity of this enzyme may help keep cancer cells from growing and dividing and cause them to die. Rytelo is a type of enzyme inhibitor. Also called imetelstat sodium.

## **S-1**

A drug that is being studied for its ability to enhance the effectiveness of fluorouracil and prevent gastrointestinal side effects caused by fluorouracil. It belongs to the family of drugs called antimetabolites.

## **S-phase fraction**

A measure of the percentage of cells in a tumor that are in the phase of the cell cycle during which DNA is synthesized. The S-phase fraction may be used with

the proliferative index to give a more complete understanding of how fast a tumor is growing.

### **S100 calcium binding protein A8**

A protein that is made by many different types of cells and is involved in processes that take place both inside and outside of the cell. It is made in larger amounts in inflammatory diseases such as rheumatoid arthritis, and in some types of cancer. It is being studied as a biomarker for breast cancer. Also called calgranulin A.

### **S100 calcium binding protein A9**

A protein that is made by many different types of cells and is involved in processes that take place both inside and outside of the cell. It is made in larger amounts in inflammatory diseases such as rheumatoid arthritis, and in some types of cancer. It is being studied as a biomarker for breast cancer. Also called calgranulin B.

### **SAB**

A temporary loss of feeling in the abdomen and/or the lower part of the body. Special drugs called anesthetics are injected into the fluid in the lower part of the spinal column to cause the loss of feeling. The patient stays awake during the procedure. It is a type of regional anesthesia. Also called spinal anesthesia, spinal block, and subarachnoid block.

### **SABR**

A type of external radiation therapy that uses special equipment to position a patient and precisely deliver radiation to tumors in the body (except the brain). The total dose of radiation is divided into smaller doses given over several days. This type of radiation therapy helps spare normal tissue. Also called SBRT, stereotactic ablative body radiation therapy, and stereotactic body radiation therapy.

### **SAHA**

A drug used to treat cutaneous T-cell lymphoma that came back, got worse, or did not get better during or after treatment with two systemic therapies. It is also being studied in the treatment of other types of cancer. SAHA blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase inhibitor. Also called suberoylanilide hydroxamic acid, vorinostat, and Zolinza.

### **SARS-CoV-2**

The virus that causes a respiratory disease called coronavirus disease 19 (COVID-19). SARS-CoV-2 is a member of a large family of viruses called coronaviruses. These viruses can infect people and some animals. SARS-CoV-2 was first known to infect people in 2019. The virus is thought to spread from person to person through droplets released when an infected person coughs, sneezes, or talks. It may also be spread by touching a surface with the virus on it and then touching one's mouth, nose, or eyes, but this is less common. Research is being done to treat COVID-19 and to prevent infection with SARS-CoV-2. Also called severe acute respiratory syndrome coronavirus 2.

### **SB-715992**

A substance being studied in the treatment of cancer. SB-715992 blocks a protein that tumor cells need to divide. It is a type of mitotic inhibitor. Also called ispinesib.

**SB939**

A substance being studied in the treatment of several types of cancer. SB939 blocks the action of an enzyme called histone deacetylase (HDAC) and may stop tumor cells from dividing. It is a type of HDAC inhibitor.

**SBRT**

A type of external radiation therapy that uses special equipment to position a patient and precisely deliver radiation to tumors in the body (except the brain). The total dose of radiation is divided into smaller doses given over several days. This type of radiation therapy helps spare normal tissue. Also called SABR, stereotactic ablative body radiation therapy, and stereotactic body radiation therapy.

**SC-70935**

A substance being studied for its ability to stimulate the production of blood cells during chemotherapy. It is a type of colony-stimulating factor. Also called leridistim.

**SC-PEG E. coli L-asparaginase**

A drug used with other drugs to treat acute lymphoblastic leukemia in children and young adults aged 1 month to 21 years. It is also being studied in the treatment of other types of cancer. SC-PEG E. coli L-asparaginase is made up of the enzyme L-asparaginase that is linked to a substance called SC-PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium E. coli and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. SC-PEG E. coli L-asparaginase is a type of protein synthesis inhibitor. Also called Asparlas, calaspargase pegol, and EZN-2285.

**SCF**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. SCF is a type of cytokine and a type of growth factor. Also called kit ligand and stem cell factor.

**SCH 66336**

An anticancer drug that belongs to the family of drugs called enzyme inhibitors. Also called lonafarnib.

**SCH-58500**

A substance that has been studied in the treatment of some types of cancer. SCH-58500 is a weakened adenovirus that carries the p53 gene into tumor cells, causing them to die. It is a type of gene therapy. Also called ACN53, rAd/p53, and recombinant adenovirus-p53.

**SCID**

A rare, inherited disease that is marked by a lack of B lymphocytes (white blood cells that make antibodies and help fight infections) and a lack of T lymphocytes (white blood cells that attack virus-infected cells, foreign cells, and cancer cells). Patients with this disease have a high risk of developing viral, bacterial, and fungal infections. Also called severe combined immunodeficiency disease.

**SDOH**

The social, economic, and physical conditions in the places where people are born and where they live, learn, work, play, and get older that can affect their

health, well-being, and quality of life. SDOH includes factors such as education level, income, employment, housing, transportation, and access to healthy food, clean air and water, and health care services. SDOH has an important effect on health outcomes, especially in certain groups of people. For example, people who cannot afford healthy food or who do not live in a safe area for exercise are more likely to have a poor diet, be physically inactive, and have obesity. This can increase their risk of developing certain diseases, such as cancer. Also called social determinants of health.

### **SDR**

A way of describing how family members are related to each other when there is one other family member in the blood line between them. Examples of an SDR are an aunt, uncle, grandparent, grandchild, niece, nephew, or half-sibling. Also called second-degree relative.

### **SDS**

A rare, inherited disorder in which the pancreas and bone marrow do not work the way they should. Symptoms include problems digesting food, a low number of neutrophils (a type of white blood cell), bone problems, and being short. Infants with the disorder get bacterial infections and are at an increased risk of aplastic anemia, myelodysplastic syndrome, and leukemia. Also called Shwachman syndrome and Shwachman-Diamond syndrome.

### **SDX-102**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called antimetabolites. Also called alanosine.

### **SEER Program**

A program of the National Cancer Institute that uses information collected by cancer registries to report on the number of new cases of cancer diagnosed and the number of cancer deaths across different geographic areas in the United States. These cancer statistics are updated every year and provide information on cancer cases based on patient demographics (such as age, gender, race, and ethnic group), the primary tumor site, the form and structure of the tumor, the stage of cancer at diagnosis, the first course of treatment, and patient survival information. The SEER Program also works with other organizations involved in cancer surveillance activities and supports research studies on cancer prevention and control. Also called Surveillance, Epidemiology, and End Results Program.

### **SEGA**

A benign (not cancer), slow-growing tumor that usually forms in the walls of fluid-filled spaces in the brain. The tumors are made up of large, star-shaped cells called astrocytes. SEGAs are common in patients with tuberous sclerosis (an inherited disorder in which benign tumors form in the brain and other parts of the body). Also called subependymal giant cell astrocytoma.

### **SERD**

A drug that binds to and breaks down proteins called estrogen receptors (ERs), which are found inside the cells of female reproductive tissue, breast tissue, and other types of tissue, and some cancer cells. These drugs keep the hormone estrogen from binding to the ERs inside the cells and block the effects of estrogen in the body. Some breast cancer cells and other types of cancer cells have ERs and may need estrogen to grow. Treatment with SERDs may keep these cancer cells from growing. Examples of SERDs that have been approved

to treat some types of breast cancer are fulvestrant and elacestrant. Also called selective estrogen receptor degrader.

### **SERM**

A drug that acts like estrogen on some tissues but blocks the effect of estrogen on other tissues. Tamoxifen and raloxifene are SERMs. Also called selective estrogen receptor modulator.

### **SES**

A way of describing people based on their education, income, and type of job. SES is usually described as low, medium, and high. People with a lower SES usually have less access to financial, educational, social, and health resources than those with a higher SES. As a result, they are more likely to be in poor health and have chronic health conditions and disabilities. Also called socioeconomic status.

### **SGI-110**

A substance being studied in the treatment of some types of cancer. SGI-110 may stop the growth of tumor cells by blocking some of the enzymes needed for cells to divide. It may also make cancer cells more sensitive to other anticancer drugs. SGI-110 is a type of antimetabolite. Also called guadecitabine.

### **SGN-00101**

A substance that is being studied in the prevention of cancer. It belongs to the family of drugs called fusion proteins.

### **SGN-30**

A monoclonal antibody that binds to cells that have the CD30 antigen on their surface, including Hodgkin disease cells and cells from anaplastic large cell lymphoma, and cutaneous T-cell lymphoma. SGN-30 is being studied in the treatment of cancer. It is a type of monoclonal antibody.

### **SGN-35**

A drug used alone or with other drugs to treat adults with certain types of cutaneous or systemic anaplastic large cell lymphoma, peripheral T-cell lymphoma, classic Hodgkin lymphoma, or mycosis fungoides and with other drugs to treat children aged 2 years and older with certain types of classic Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. SGN-35 contains a monoclonal antibody that binds to a protein called CD30, which is found on some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. SGN-35 is a type of antibody-drug conjugate. Also called Adcetris and brentuximab vedotin.

### **SGN-40**

A monoclonal antibody that binds to cells that have the CD40 antigen on their surface, including cells from multiple myeloma, non-Hodgkin lymphoma, and chronic lymphocytic leukemia. SGN-40 is being studied in the treatment of cancer. It is a type of monoclonal antibody.

### **SGOT**

An enzyme found in the liver, heart, and other tissues. A high level of SGOT released into the blood may be a sign of liver or heart damage, cancer, or other diseases. Also called aspartate transaminase and serum glutamic-oxaloacetic transaminase.



## **SGPT**

An enzyme found in the liver and other tissues. A high level of SGPT released into the blood may be a sign of liver damage, cancer, or other diseases. Also called alanine transferase and serum glutamate pyruvate transaminase.

## **SIDS**

A disorder marked by the sudden and unexpected death of a healthy child who is younger than one year old, usually during sleep. The cause of SIDS is not known. Also called crib death and sudden infant death syndrome.

## **SIL**

An abnormal growth of squamous cells that forms on the surface of certain organs, such as the cervix, vagina, vulva, anus, penis, or back of the throat. Squamous cells are thin, flat cells that look like fish scales under a microscope. SILs may be low grade or high grade, depending on how abnormal the cells look under a microscope and how much of the tissue is affected. They are usually caused by chronic infection with certain types of human papillomavirus (HPV) and are found when a Pap test or biopsy is done. If not treated, some SILs may become cancer and spread into nearby normal tissue. Also called squamous intraepithelial lesion.

## **SIRS**

A serious condition in which there is inflammation throughout the whole body. SIRS may be caused by an infection, trauma, surgery, ischemia (lack of blood supply to a part of the body), or certain conditions, such as an autoimmune disorder or pancreatitis. To be diagnosed with SIRS, a person must have two or more of the following: low or high body temperature, increased heart rate, increased breathing rate, and an abnormal white blood cell count. When SIRS occurs as a result of a known infection, it may be called sepsis. Sepsis can be severe or life threatening and lead to multiple organ failure and shock. Also called systemic inflammatory response syndrome.

## **SJG-136**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called DNA cross-linking agents.

## **SK&F106615**

A substance being studied in the treatment of certain multiple myelomas and other advanced cancers. SK&F106615 may block the growth of tumors and may prevent the growth of new blood vessels that tumors need to grow. SK&F106615 is a type of signal transduction inhibitor and a type of antiangiogenesis agent. Also called atiprimod and azaspirane.

## **SL-11047**

A substance that is being studied in the treatment of lymphoma. It belongs to the family of drugs called polyamine analogs.

## **SLC24A5 gene**

A gene that makes a protein involved in giving color to the skin, hair, and eyes. Mutations (changes) in the SLC24A5 gene have been found in an inherited condition called oculocutaneous albinism. People with this condition have very pale skin and light-colored hair and eyes. They also have a high risk of developing skin cancer at an early age.

### **SLC45A2 gene**

A gene that makes a protein involved in making melanin (a pigment that gives color to the skin, hair, and eyes). Mutations (changes) in the SLC45A2 gene have been found in an inherited condition called oculocutaneous albinism. People with this condition have very pale skin and light-colored hair and eyes. They also have a high risk of developing skin cancer at an early age.

### **SLE**

A chronic, inflammatory, connective tissue disease that can affect many organs including the joints, skin, heart, lungs, kidneys, and nervous system. It is marked by many different symptoms; however, not everyone with SLE has all of the symptoms. Also called lupus and systemic lupus erythematosus.

### **SLL**

An indolent (slow-growing) type of lymphoma in which too many immature lymphocytes (white blood cells) are found mostly in the lymph nodes. This causes the lymph nodes to become larger than normal. Sometimes cancer cells are found in the blood and bone marrow, and the disease is called chronic lymphocytic leukemia. The disease is most often seen in people older than 50 years. SLL is a type of non-Hodgkin Lymphoma. Also called small lymphocytic lymphoma and well-differentiated lymphocytic lymphoma.

### **SM-AHN**

A rare condition in which too many mast cells (a type of white blood cell) build up in certain tissues and organs in the body, including the bone marrow, lymph nodes, bone, liver, spleen, and small intestine, and may damage them. In SM-AHN, this mast cell buildup occurs together with another blood disorder, usually a myelodysplastic syndrome, myeloproliferative disorder, or acute myeloid leukemia (AML). SM-AHN usually occurs in adults. Also called systemic mastocytosis with associated hematologic neoplasm.

### **SN-38 liposome**

A form of the anticancer drug irinotecan that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than irinotecan alone. SN-38 liposome is being studied in the treatment of advanced colorectal cancer and other types of cancer. SN-38 liposome blocks the ability of cells to divide and grow. It may stop the growth of tumor cells. It is a type of topoisomerase inhibitor and a type of irinotecan (CPT-11) derivative. Also called liposomal SN-38.

### **SNDX-275**

A substance being studied in the treatment of several types of cancer. It blocks enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase (HDAC) inhibitor. Also called entinostat and HDAC inhibitor SNDX-275.

### **SNP**

The most common type of change in DNA (molecules inside cells that carry genetic information). SNPs occur when a single nucleotide (building block of DNA) is replaced with another. These changes may cause disease, and may affect how a person reacts to bacteria, viruses, drugs, and other substances. Also called single nucleotide polymorphism.

### **SNRI**

A type of drug that is used to treat depression and some other conditions. SNRIs stop or delay substances called serotonin and norepinephrine from being

reabsorbed in the brain, which leaves more of them available for the brain to use. Raising serotonin and norepinephrine levels can help regulate mood and relieve depression and chronic pain. SNRIs include drugs such as duloxetine and venlafaxine. Also called serotonin-norepinephrine reuptake inhibitor.

### **SNX 111**

A drug used in the treatment of chronic pain. Also called Prialt and ziconotide.

### **SNX-5422**

A substance being studied in the treatment of cancer. SNX-5422 blocks a protein needed for cells to grow and may kill cancer cells. It is a type of heat shock protein 90 inhibitor.

### **SNX-5422 mesylate**

A substance being studied in the treatment of cancer. SNX-5422 mesylate blocks a protein needed for cells to grow and may kill cancer cells. It is a type of heat shock protein 90 inhibitor.

### **SOD1 inhibitor ATN-224**

A substance being studied in the treatment of cancer. It may prevent the growth of new blood vessels that tumors need to grow. SOD1 inhibitor ATN-224 also blocks enzymes that cells need to divide and grow, and it may kill cancer cells. It is a type of antiangiogenesis agent and a type of superoxide dismutase inhibitor. Also called ATN-224.

### **SOP**

Written instructions for doing a specific task in a certain way. In clinical trials, SOPs are set up to store records, collect data, screen and enroll subjects, and submit Institutional Review Board (IRB) applications and renewals. Also called Standard Operating Procedure.

### **SPECT**

A special type of computed tomography (CT) scan in which a small amount of a radioactive drug is injected into a vein and a scanner is used to make detailed images of areas inside the body where the radioactive material is taken up by the cells. SPECT can give information about blood flow to tissues and chemical reactions (metabolism) in the body. Also called single-photon emission computed tomography.

### **SPF**

A scale for rating the level of sunburn protection in sunscreen products. The higher the SPF, the more sunburn protection it gives. Sunscreens with a value of 2 through 11 give minimal protection against sunburns. Sunscreens with a value of 12 through 29 give moderate protection. SPFs of 30 or higher give high protection against sunburn. Also called sun protection factor.

### **SR-29142**

A drug that may protect healthy tissue from the toxic effects of anticancer drugs.

### **SR-45023A**

An anticancer drug that belongs to the family of drugs called bisphosphonates. It affects cancer cell receptors governing cell growth and cell death.

### **SR49059**

A substance being studied in the treatment of cancer. It inhibits a hormone growth factor that causes some cancer cells to divide. It is a type of vasopressin receptor antagonist.

### **SRS**

A type of radionuclide scan used to find carcinoid and other types of tumors. Radioactive octreotide, a drug similar to somatostatin, is injected into a vein and travels through the bloodstream. The radioactive octreotide attaches to tumor cells that have receptors for somatostatin. A radiation-measuring device detects the radioactive octreotide, and makes pictures showing where the tumor cells are in the body. Also called octreotide scan and somatostatin receptor scintigraphy.

### **SSG**

A substance being studied in the treatment of certain solid tumors, lymphoma, and myeloma. SSG may block enzymes needed for cancer growth. It is a type of pentavalent antimonial. Also called sodium stibogluconate.

### **SSRI**

A type of drug that is used to treat depression and some other conditions. SSRIs stop or delay the body from reabsorbing a substance called serotonin, which leaves more of it available for the body to use. Raising serotonin levels can help regulate mood, appetite, digestion, sleep, and many other bodily functions. SSRIs include drugs such as citalopram, escitalopram, fluoxetine, paroxetine, and sertraline. Also called selective serotonin reuptake inhibitor.

### **ST1481**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called topoisomerase inhibitors. Also called gimatecan.

### **STD**

A disease caused by infection with certain bacteria, viruses, or other microorganisms that can be passed from one person to another through blood, semen, vaginal fluids, or other body fluids, during oral, anal, or genital sex with an infected partner. These diseases can also be spread through sharing needles, blood transfusions, breastfeeding, or from an infected mother to an infant during pregnancy and childbirth. Symptoms of STDs may include sores, blisters, or bumps on the genitals or in the mouth or rectal area, pain or burning during urination or sex, unusual drainage or bleeding from the penis or vagina, itching and redness in the genital or anal area, pain in the lower abdomen, fever, and sore, swollen lymph nodes, especially in the groin. There are many types of STDs, including human papillomavirus (HPV), HIV, genital herpes, chlamydia, gonorrhea, and syphilis. If not treated, some STDs can lead to long-term health problems. Also called sexually transmitted disease, sexually transmitted infection, and STI.

### **STI**

A disease caused by infection with certain bacteria, viruses, or other microorganisms that can be passed from one person to another through blood, semen, vaginal fluids, or other body fluids, during oral, anal, or genital sex with an infected partner. These diseases can also be spread through sharing needles, blood transfusions, breastfeeding, or from an infected mother to an infant during pregnancy and childbirth. Symptoms of STIs may include sores, blisters, or bumps on the genitals or in the mouth or rectal area, pain or burning during urination or sex, unusual drainage or bleeding from the penis or vagina, itching

and redness in the genital or anal area, pain in the lower abdomen, fever, and sore, swollen lymph nodes, especially in the groin. There are many types of STIs, including human papillomavirus (HPV), HIV, genital herpes, chlamydia, gonorrhea, and syphilis. If not treated, some STIs can lead to long-term health problems. Also called sexually transmitted disease, sexually transmitted infection, and STD.

### **STI571**

A drug used to treat certain types of leukemia and other blood cancers, gastrointestinal stromal tumors, skin tumors called dermatofibrosarcoma protuberans, and a rare condition called systemic mastocytosis. It is also being studied in the treatment of other conditions and types of cancer. STI571 blocks certain proteins made by the BCR::ABL, PDGFR, or c-KIT oncogene, which may help keep cancer cells from growing and may kill them. STI571 is a type of tyrosine kinase inhibitor. Also called Gleevec and imatinib mesylate.

### **SU006668**

A substance being studied in the treatment of cancer. SU006668 blocks proteins involved in the growth and spread of cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called orantinib and SU6668.

### **SU011248**

A drug used to treat adults with certain types of gastrointestinal stromal tumors, pancreatic neuroendocrine tumors, or renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. SU011248 blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. SU011248 is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called SU11248, sunitinib malate, and Sutent.

### **SU101**

An anticancer drug that works by inhibiting a cancer cell growth factor. Also called leflunomide.

### **SU11248**

A drug used to treat adults with certain types of gastrointestinal stromal tumors, pancreatic neuroendocrine tumors, or renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. SU11248 blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. SU11248 is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called SU011248, sunitinib malate, and Sutent.

### **SU5416**

A substance that has been studied in the treatment of cancer. It belongs to the families of drugs called angiogenesis inhibitors and tyrosine kinase inhibitors. Also called semaxanib.

### **SU6668**

A substance being studied in the treatment of cancer. SU6668 blocks proteins involved in the growth and spread of cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called orantinib and SU006668.

## **SUFU gene**

A gene that is part of a cell signaling pathway involved in the formation of tissues and organs, cell growth, and cell division during embryonic development. Mutations (changes) in the SUFU gene may cause cells to grow and divide too quickly or in an uncontrolled way. This may cause abnormal cells, including cancer cells, to grow. SUFU gene mutations have been found in an inherited condition called basal cell nevus syndrome and in a type of brain cancer called medulloblastoma. The SUFU gene is a type of tumor suppressor gene.

## **SV40**

Simian virus 40. A virus that infects some types of monkeys. It may also infect humans, and was found in some polio vaccines tested in the early 1960s. Although the virus has been shown to cause cancer in laboratory animals, there is no evidence that it causes cancer in people. Also called simian virus 40.

## **SVV-001**

A virus being studied in the treatment of neuroendocrine tumors and other types of cancer. Neuroendocrine tumors form from cells that release hormones in response to a signal from the nervous system. The virus infects and breaks down these tumor cells but not normal cells. It is a type of oncolytic virus. Also called NTX-010 and Seneca Valley virus-001.

## **SWS**

A rare, congenital disorder that affects the brain, skin, and eyes. Abnormal blood vessel growth occurs in the trigeminal nerve in the face and the meninges (covering) of the brain. This abnormal growth causes red or purple skin discoloration (sometimes called a port wine stain), usually on one side of the face, and can also cause seizures, learning disabilities, and glaucoma. Also called Sturge-Weber syndrome.

## **Sancuso**

A drug used alone or with other drugs in adults to prevent nausea and vomiting caused by chemotherapy. Sancuso blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Sancuso is a type of antiemetic and a type of serotonin receptor antagonist. Also called granisetron and Sustol.

## **Sarclisa**

A drug used with other drugs to treat adults with multiple myeloma. It is used in patients whose cancer has already been treated with at least two therapies that included lenalidomide and a proteasome inhibitor. It is also used in patients whose cancer relapsed (came back) or did not get better after treatment with one to three other therapies. It is also being studied in the treatment of other types of cancer. Sarclisa binds to a protein called CD38, which is found on some types of immune cells and cancer cells, including myeloma cells. Sarclisa may block CD38 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called isatuximab.

## **Scemblix**

A drug used to treat adults with chronic phase chronic myelogenous leukemia that is Philadelphia chromosome positive. It is used in patients whose cancer has the T315I mutation or whose cancer was treated with at least two other tyrosine kinase inhibitors. It is also being studied in the treatment of other types of cancer. Scemblix blocks the BCR::ABL fusion protein, which may help keep cancer cells



from growing and may kill them. Scemblix is a type of tyrosine kinase inhibitor. Also called asciminib hydrochloride.

### **Schedule I controlled substance**

A drug or other substance that has a high chance of being abused or causing addiction and has no FDA-approved medical use in the United States. Schedule I controlled substances are tightly regulated by the federal government. Examples of Schedule I drugs are heroin, LSD, and ecstasy. Although marijuana (Cannabis) is classified as a Schedule I controlled substance by the federal government, some states have passed laws that allow the medical and recreational use of marijuana. Also called Schedule I drug.

### **Schedule I drug**

A drug or other substance that has a high chance of being abused or causing addiction and has no FDA-approved medical use in the United States. Schedule I drugs are tightly regulated by the federal government. Examples of Schedule I drugs are heroin, LSD, and ecstasy. Although marijuana (Cannabis) is classified as a Schedule I drug by the federal government, some states have passed laws that allow the medical and recreational use of marijuana. Also called Schedule I controlled substance.

### **Schiller test**

A test in which iodine is applied to the cervix. The iodine colors healthy cells brown; abnormal cells remain unstained, usually appearing white or yellow.

### **Schwann cell**

A type of glial cell of the peripheral nervous system that helps separate and insulate nerve cells.

### **Sclerosol Intrapleural Aerosol**

A mist or powdered form of the mineral magnesium silicate that is used to prevent malignant pleural effusions from coming back. Malignant pleural effusion is a condition in which cancer causes an abnormal collection of fluid in the space between the lung and chest wall. When Sclerosol Intrapleural Aerosol is given through a tube inserted into the pleural space, it causes the space to close up so fluid cannot collect there. Sclerosol Intrapleural Aerosol is a type of sclerosing agent. Also called Sterile Talc Powder, Steritalc, and talc.

### **Scutellaria barbata**

An herb that belongs to a group of herbs named the Scutellaria species or scullcap. Both the root and the above-ground part have been used to make herbal medicines. The root has been used in traditional Chinese medicine to treat lung cancer and other medical problems.

### **Se-methyl-seleno-L-cysteine**

A substance that contains the element selenium (a nutrient that protects cells against damage) and is found in certain plants such as garlic and broccoli. Se-methyl-seleno-L-cysteine can act as an antioxidant and may help prevent or slow the growth of cancer cells. It is a type of amino acid.

### **Seneca Valley virus-001**

A virus being studied in the treatment of neuroendocrine tumors and other types of cancer. Neuroendocrine tumors form from cells that release hormones in response to a signal from the nervous system. The virus infects and breaks

down these tumor cells but not normal cells. It is a type of oncolytic virus. Also called NTX-010 and SVV-001.

### **Sensorcaine**

A drug used to relieve pain by blocking signals at nerve endings. It is being studied in the relief of pain following surgery for cancer. It is a type of local anesthetic. Also called bupivacaine hydrochloride and Marcaine.

### **Seromycin**

A drug used to treat tuberculosis. It is also being studied in the treatment of pain and nerve problems (numbness, tingling) caused by chemotherapy and in the treatment of low back pain, autism, certain anxiety disorders, and schizophrenia. Seromycin is a type of antibiotic. Also called D-cycloserine.

### **Sertoli-Leydig cell tumor of the ovary**

A rare type of ovarian tumor in which the tumor cells secrete a male sex hormone. This may cause virilization (the appearance of male physical characteristics in females). Also called androblastoma and arrhenoblastoma.

### **Serzone**

A drug used to treat depression. It belongs to the family of drugs called antidepressant agents. Also called nefazodone.

### **Sheridan's Formula**

A liquid mixture that has been promoted as a treatment for cancer and other diseases. None of the ingredients thought to be in Sheridan's Formula have been shown to be effective in preventing or treating any type of cancer. Since 1989, it has been illegal in the United States to make, sell, or give Sheridan's Formula as a treatment for any disease. Also called 126-F, Cancell, Cantron, Jim's Juice, JS-101, JS-114, and Protocol.

### **Sho-saiko-to**

A Japanese formulation of seven Chinese herbs that is being studied as a treatment for cancer.

### **Shwachman syndrome**

A rare, inherited disorder in which the pancreas and bone marrow do not work the way they should. Symptoms include problems digesting food, a low number of neutrophils (a type of white blood cell), bone problems, and being short. Infants with the disorder get bacterial infections and are at an increased risk of aplastic anemia, myelodysplastic syndrome, and leukemia. Also called SDS and Shwachman-Diamond syndrome.

### **Shwachman-Diamond syndrome**

A rare, inherited disorder in which the pancreas and bone marrow do not work the way they should. Symptoms include problems digesting food, a low number of neutrophils (a type of white blood cell), bone problems, and being short. Infants with the disorder get bacterial infections and are at an increased risk of aplastic anemia, myelodysplastic syndrome, and leukemia. Also called SDS and Shwachman syndrome.

### **Silybum marianum**

A plant that has been used in some cultures to treat certain medical problems, including stomach, liver, and gallbladder disorders. The active extract of Silybum

marianum seeds is called silymarin. It is being studied in the prevention of liver damage caused by some cancer treatments. Also called milk thistle.

### **Singulair**

A drug used to treat symptoms of asthma, such as trouble breathing, tight chest, wheezing, coughing, and runny nose. Singulair blocks the action of a substance that causes airways in the lungs to narrow and causes other symptoms of asthma. It is a type of leukotriene receptor antagonist and a type of antiasthmatic agent. Also called montelukast sodium.

### **Sipple syndrome**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the parathyroid glands and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. An itchy skin condition may also occur. Sipple syndrome is caused by a mutation (change) in a gene called RET. Also called MEN2A, MEN2A syndrome, multiple endocrine adenomatosis type 2A, and multiple endocrine neoplasia type 2A syndrome.

### **Sjögren syndrome**

An autoimmune disease that affects the tear glands and salivary glands, and may affect glands in the stomach, pancreas, and intestines. The disease causes dry eyes and mouth, and may cause dryness in the nose, throat, air passages, skin, and vagina. It may also cause inflammation in the joints, muscles, and skin; pneumonia; tingling in the fingers and toes; and fatigue. It often occurs with rheumatoid arthritis or other connective tissue diseases.

### **SnET2**

An anticancer drug that is also used in cancer prevention. It belongs to the family of drugs called photosensitizing agents. Also called tin ethyl etiopurpurin.

### **Soliris**

A drug used to prevent red blood cells from being destroyed in patients with a rare red blood cell disorder called paroxysmal nocturnal hemoglobinuria (PNH). It is also used to treat another rare disorder called atypical hemolytic uremic syndrome (aHUS), in which blood clots form in small blood vessels. Soliris binds to an immune system protein called C5. This helps keep red blood cells from breaking down and helps keep blood clots from forming. Soliris is a type of monoclonal antibody. Also called eculizumab.

### **Soltamox**

A drug used to treat certain types of breast cancer in women and men, to prevent invasive breast cancer in women who have had ductal carcinoma in situ (abnormal cells in the ducts of the breast), and to prevent breast cancer in women who are at a high risk of developing the disease. It is also being studied in the treatment of other types of cancer. Soltamox blocks the effects of the hormone estrogen in breast tissue, which may help keep breast cancer cells from growing. It is a type of selective estrogen receptor modulator (SERM). Also called tamoxifen citrate.

### **Somatuline Depot**

A drug that is similar to somatostatin (a hormone made by the body) and is used to treat certain types of gastroenteropancreatic neuroendocrine tumors, carcinoid

syndrome, and acromegaly (a condition in which the pituitary gland makes too much growth hormone). Somatuline Depot may help stop the body from making extra amounts of certain hormones, including growth hormone, insulin, glucagon, and hormones that affect digestion. It may also help keep certain types of tumor cells from growing. Somatuline Depot is a type of somatostatin analog. Also called lanreotide acetate.

### **Sprycel**

A drug used alone or with other drugs to treat adults and children aged 1 year and older with certain types of chronic myeloid leukemia or acute lymphoblastic leukemia that are Philadelphia chromosome positive. It is also being studied in the treatment of other types of cancer. Sprycel blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called BMS-354825 and dasatinib.

### **St. Benedict's thistle**

A plant whose leaves, stems, and flowers have been used in some cultures to treat certain medical problems. St. Benedict's thistle may have anti-inflammatory and anticancer effects. The scientific name is *Cnicus benedictus*. Also called blessed thistle, cardin, holy thistle, and spotted thistle.

### **St. John's wort**

An herbal product sold as an over-the-counter treatment for depression. It is being studied for its ability to lessen certain side effects of cancer treatment. Also called *Hypericum perforatum*.

### **Standard Operating Procedure**

Written instructions for doing a specific task in a certain way. In clinical trials, Standard Operating Procedures are set up to store records, collect data, screen and enroll subjects, and submit Institutional Review Board (IRB) applications and renewals. Also called SOP.

### **Stanford V**

An abbreviation for a chemotherapy combination that is used to treat Hodgkin lymphoma and is being studied in the treatment of other types of cancer. It includes the drugs mechlorethamine, doxorubicin hydrochloride, vinblastine sulfate, vincristine sulfate, bleomycin sulfate, etoposide phosphate, and prednisone and was developed at Stanford University. Also called Stanford V regimen.

### **Stanford V regimen**

An abbreviation for a chemotherapy combination that is used to treat Hodgkin lymphoma and is being studied in the treatment of other types of cancer. It includes the drugs mechlorethamine, doxorubicin hydrochloride, vinblastine sulfate, vincristine sulfate, bleomycin sulfate, etoposide phosphate, and prednisone and was developed at Stanford University. Also called Stanford V.

### **Stavzor**

A drug used to treat epileptic seizures and bipolar disorder and to prevent migraine headaches. It is also being studied in the treatment of several types of cancer. It blocks an enzyme that cells need to grow and may cause cancer cells to die. It also blocks the growth of new blood vessels that tumors need to grow. It is a type of anticonvulsant, histone deacetylase (HDAC) inhibitor, antimaniacal, migraine headache prophylactic, and antiangiogenesis agent. Also called Depakene and valproic acid.

## **Stemgen**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. It is being studied in the treatment of myelodysplasia. Stemgen is a type of recombinant stem cell growth factor. Also called ancestim, r-metHuSCF, and recombinant human methionyl stem cell factor.

## **Sterile Talc Powder**

A mist or powdered form of the mineral magnesium silicate that is used to prevent malignant pleural effusions from coming back. Malignant pleural effusion is a condition in which cancer causes an abnormal collection of fluid in the space between the lung and chest wall. When Sterile Talc Powder is given through a tube inserted into the pleural space, it causes the space to close up so fluid cannot collect there. Sterile Talc Powder is a type of sclerosing agent. Also called Sclerosol Intrapleural Aerosol, Steritalc, and talc.

## **Steritalc**

A mist or powdered form of the mineral magnesium silicate that is used to prevent malignant pleural effusions from coming back. Malignant pleural effusion is a condition in which cancer causes an abnormal collection of fluid in the space between the lung and chest wall. When Steritalc is given through a tube inserted into the pleural space, it causes the space to close up so fluid cannot collect there. Steritalc is a type of sclerosing agent. Also called Sclerosol Intrapleural Aerosol, Sterile Talc Powder, and talc.

## **Stewart-Treves syndrome**

A rare disorder marked by the presence of an angiosarcoma (a malignant tumor of blood or lymph vessels) in a person with chronic (long-term) lymphedema. Lymphedema is a condition in which extra lymph fluid builds up in tissues and causes swelling, usually in the arm or leg. Stewart-Treves syndrome usually occurs in patients with breast cancer who develop chronic lymphedema after surgery to remove the breast and lymph nodes under the arm.

## **Stivarga**

A drug used to treat certain types of colorectal cancer, gastrointestinal stromal tumors, and hepatocellular carcinoma (a type of liver cancer). It is also being studied in the treatment of other types of cancer. Stivarga blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Stivarga is a type of kinase inhibitor and a type of antiangiogenesis agent. Also called regorafenib.

## **Stromagen**

A product that is made of special stem cells taken from a patient's bone marrow and grown in the laboratory. After a patient's bone marrow is destroyed by treatment with whole body irradiation or chemotherapy, these cells are injected back into the patient to help rebuild bone marrow. Stromagen has been studied in the prevention of graft-versus-host disease during stem cell transplant in patients receiving treatment for cancer. Stromagen is used in cellular therapy. Also called autologous expanded mesenchymal stem cells OTI-010.

## **Sturge-Weber syndrome**

A rare, congenital disorder that affects the brain, skin, and eyes. Abnormal blood vessel growth occurs in the trigeminal nerve in the face and the meninges (covering) of the brain. This abnormal growth causes red or purple skin

discoloration (sometimes called a port wine stain), usually on one side of the face, and can also cause seizures, learning disabilities, and glaucoma. Also called SWS.

### **Sun's Soup**

A mixture of vegetables and other edible plants that has been studied in the treatment of cancer. The vegetables include soybean, shiitake mushroom, mung bean, red date, scallion, garlic, leek, lentil, Hawthorn fruit, onion, ginseng, Angelica root, licorice, dandelion root, senega root, ginger, olive, sesame seed, and parsley. Sun's Soup is available in the United States as a dietary supplement.

### **Supprelin LA**

A drug used to treat early puberty in males and females. Supprelin LA keeps the testicles and ovaries from making sex hormones by blocking other hormones that are needed to make them. This causes the testicles to stop making testosterone in males, and the ovaries to stop making estradiol (a form of the hormone estrogen) in females. Supprelin LA contains the active ingredient histrelin acetate. It is a type of LHRH (or GnRH) agonist and a type of androgen deprivation therapy that is reversible.

### **Surgeon General**

The chief medical doctor and health educator for the United States. The mission of the U.S. Surgeon General is to give the public the best scientific information available on how to improve health and lower the risk of illness and injury. The U.S. Surgeon General oversees the U.S. Public Health Service and is chosen by the U.S. President. Each state public health agency and branch of the U.S. military also has its own Surgeon General. The office of the U.S. Surgeon General is part of the Department of Health and Human Services (DHHS).

### **Surveillance, Epidemiology, and End Results Program**

A program of the National Cancer Institute that uses information collected by cancer registries to report on the number of new cases of cancer diagnosed and the number of cancer deaths across different geographic areas in the United States. These cancer statistics are updated every year and provide information on cancer cases based on patient demographics (such as age, gender, race, and ethnic group), the primary tumor site, the form and structure of the tumor, the stage of cancer at diagnosis, the first course of treatment, and patient survival information. The Surveillance, Epidemiology, and End Results Program also works with other organizations involved in cancer surveillance activities and supports research studies on cancer prevention and control. Also called SEER Program.

### **Sustiva**

A drug used with other drugs to treat infection with the human immunodeficiency virus (HIV). It blocks HIV from making copies of itself. It is a type of non-nucleoside reverse transcriptase inhibitor and a type of antiviral agent. Also called efavirenz.

### **Sustol**

A drug used alone or with other drugs in adults to prevent nausea and vomiting caused by chemotherapy. Sustol blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Sustol is a type of



antiemetic and a type of serotonin receptor antagonist. Also called granisetron and Sancuso.

### **Sutent**

A drug used to treat adults with certain types of gastrointestinal stromal tumors, pancreatic neuroendocrine tumors, or renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. Sutent blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Sutent is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called SU011248, SU11248, and sunitinib malate.

### **Swyer syndrome**

A rare genetic condition in which people who have an X chromosome and a Y chromosome (the usual pattern for males) look female. They have normal female reproductive organs, including a uterus, fallopian tubes, and vagina. However, the ovaries do not develop and are replaced by clumps of tissue where they would normally form. Swyer syndrome is usually not diagnosed until puberty, when menstrual periods do not begin as they should. Having Swyer syndrome increases the risk of certain types of germ cell tumors.

### **Syk kinase inhibitor R-935788**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults with chronic immune thrombocytopenia (ITP) that did not get better with other treatment. ITP is a condition in which platelets are destroyed by the immune system. Syk kinase inhibitor R-935788 is also being studied in the treatment of other conditions and types of cancer. It blocks an enzyme called Syk, which may help keep the immune system from destroying platelets. Syk kinase inhibitor R-935788 is a type of tyrosine kinase inhibitor. Also called fostamatinib disodium, R788 sodium, and Tavalisse.

### **Sylatron**

A drug that is no longer available in the United States that contains the active ingredient peginterferon alfa-2b and was used to prevent melanoma from coming back after it has been removed by surgery. Sylatron is a type of cytokine and a type of immunomodulating agent.

### **Sylvant**

A drug used to treat a rare condition called multicentric Castleman disease in patients who do not have HIV or human herpesvirus 8. It is also being studied in the treatment of some types of cancer and other conditions. Sylvant binds to a protein called interleukin-6 (IL-6), which is made by some white blood cells and other cells in the body. Sylvant may help reduce inflammation and stop the growth of cancer cells or abnormal blood cells. It is a type of monoclonal antibody. Also called anti-IL-6 chimeric monoclonal antibody, cCLB8, CNTO 328, and siltuximab.

### **Synribo**

A drug used to treat adults with certain types of chronic myelogenous leukemia that cannot be treated with tyrosine kinase inhibitors (a type of anticancer drug) or that have not gotten better after treatment with at least two tyrosine kinase inhibitors. It is also being studied in the treatment of other types of cancer. Synribo blocks certain proteins involved in cell growth and may kill cancer cells. It is a type of plant alkaloid and a type of protein synthesis inhibitor. Also called homoharringtonine and omacetaxine mepesuccinate.

### **Sézary cell**

A cancerous T cell (a type of white blood cell) found in the blood, skin, and lymph nodes of patients who have a fast-growing type of skin lymphoma called Sézary syndrome. Under a microscope, Sézary cells have an abnormally shaped nucleus and look larger than normal T cells.

### **Sézary syndrome**

A cancer that affects the skin. It is a form of cutaneous T-cell lymphoma.

### **T cell**

A type of white blood cell. T cells are part of the immune system and develop from stem cells in the bone marrow. They help protect the body from infection and may help fight cancer. Also called T lymphocyte and thymocyte.

### **T lymphocyte**

A type of white blood cell. T lymphocytes are part of the immune system and develop from stem cells in the bone marrow. They help protect the body from infection and may help fight cancer. Also called T cell and thymocyte.

### **T reg**

A type of immune cell that blocks the actions of some other types of lymphocytes, to keep the immune system from becoming over-active. T regs are being studied in the treatment of cancer. A T reg is a type of white blood cell and a type of lymphocyte. Also called regulatory T cell, suppressor T cell, and T-regulatory cell.

### **T-3**

A thyroid hormone. Also called triiodothyronine.

### **T-DM1**

A drug used to treat certain patients with HER2-positive breast cancer that has already been treated with trastuzumab and a type of anticancer drug called a taxane. It is also being studied in the treatment of other types of cancer. T-DM1 contains a monoclonal antibody called trastuzumab that binds to a protein called HER2, which is found on some breast cancer cells. It also contains an anticancer drug called DM1, which may help kill cancer cells. T-DM1 is a type of antibody-drug conjugate. Also called ado-trastuzumab emtansine and Kadcyla.

### **T-LGL leukemia**

A type of leukemia in which large T lymphocytes (a type of white blood cell) that contain granules (small particles) are found in the blood. It is a chronic disease that may last for a long time and get worse. Also called T-cell large granular lymphocyte leukemia.

### **T-VEC**

A drug used to treat melanoma that has recurred (come back) after surgery. It is used in patients whose cancer is in the skin and lymph nodes and cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. T-VEC is made with a form of the herpesvirus that has been changed in the laboratory to infect and break down cancer cells without harming normal cells. It may also help the immune system kill cancer cells. T-VEC is injected directly into tumors in the skin and lymph nodes. It is a type of oncolytic virus therapy. Also called Imlygic and talimogene laherparepvec.

### **T-cell acute lymphoblastic leukemia**

An aggressive (fast-growing) type of leukemia (blood cancer) in which too many T-cell lymphoblasts (immature white blood cells) are found in the bone marrow and blood. Also called precursor T-lymphoblastic leukemia and T-cell acute lymphocytic leukemia.

### **T-cell acute lymphocytic leukemia**

An aggressive (fast-growing) type of leukemia (blood cancer) in which too many T-cell lymphoblasts (immature white blood cells) are found in the bone marrow and blood. Also called precursor T-lymphoblastic leukemia and T-cell acute lymphoblastic leukemia.

### **T-cell depletion**

Treatment to destroy T cells, which play an important role in the immune response. Elimination of T cells from a bone marrow graft from a donor may reduce the chance of an immune reaction against the recipient's tissues.

### **T-cell exhaustion**

Describes a condition in which T cells (a type of immune cell) lose their ability to kill certain cells, such as cancer cells or cells infected with a virus. This can happen when cancer, chronic infection, or other conditions cause the body's immune system to stay active for a long time. Exhausted T cells have high amounts of immune checkpoint proteins on their surface, which may keep the activity of the T cells suppressed. In cancer treatment, drugs that target these proteins may be given to allow the T cells to better kill cancer cells. Learning more about T-cell exhaustion may help in the development of new types of immunotherapy to treat cancer.

### **T-cell large granular lymphocyte leukemia**

A type of leukemia in which large T lymphocytes (a type of white blood cell) that contain granules (small particles) are found in the blood. It is a chronic disease that may last for a long time and get worse. Also called T-LGL leukemia.

### **T-cell lymphoma**

A type of cancer that forms in T cells (a type of immune system cell). T-cell lymphomas may be either indolent (slow-growing) or aggressive (fast-growing). Most T-cell lymphomas are non-Hodgkin lymphomas. There are many different types of T-cell non-Hodgkin lymphomas. These include mycosis fungoides, anaplastic large cell lymphoma, and precursor T-lymphoblastic lymphoma. Prognosis and treatment depend on type and stage of the cancer.

### **T-cell receptor**

A group of proteins found on T cells (a type of immune cell that recognizes and binds to foreign substances). T-cell receptors bind to certain antigens (proteins) found on abnormal cells, cancer cells, cells from other organisms, and cells infected with a virus or another microorganism. This interaction causes the T cells to attack these cells and helps the body fight infection, cancer, or other diseases. Also called TCR.

### **T-cell receptor gene rearrangement test**

A laboratory test in which cells in a sample of blood or bone marrow are checked to see if there are certain changes in the genes that make receptors on T cells (white blood cells). Testing for these gene changes can tell whether large numbers of T cells with a certain T-cell receptor are being made. This may be a sign of T-cell lymphoma or leukemia.

### **T-cell transfer therapy**

A type of immunotherapy in which T cells (a type of immune cell) are given to a patient to help the body fight diseases, such as cancer. In cancer therapy, T cells are usually taken from the patient's own blood or tumor tissue, grown in large numbers in the laboratory, and then given back to the patient to help the immune system fight the cancer. Sometimes, the T cells are changed in the laboratory to make them better able to target the patient's cancer cells and kill them. Types of T-cell transfer therapy include chimeric antigen receptor T-cell (CAR T-cell) therapy and tumor-infiltrating lymphocyte (TIL) therapy. T-cell transfer therapy that uses T cells from a donor is being studied in the treatment of some types of cancer and some infections. Also called adoptive cell therapy, adoptive cell transfer, and cellular adoptive immunotherapy.

### **T-lymphoblastic lymphoma**

A type of non-Hodgkin lymphoma in which too many T-cell lymphoblasts (immature white blood cells) are found in the lymph nodes and spleen. It is most common in young men. Also called precursor T-lymphoblastic lymphoma.

### **T-regulatory cell**

A type of immune cell that blocks the actions of some other types of lymphocytes, to keep the immune system from becoming over-active. T-regulatory cells are being studied in the treatment of cancer. A T-regulatory cell is a type of white blood cell and a type of lymphocyte. Also called regulatory T cell, suppressor T cell, and T reg.

### **T138067**

An anticancer drug that belongs to the family of drugs called mitotic inhibitors. It inhibits the growth of cancer cells by preventing cell division.

### **T315I mutation**

A type of mutation (change) in the BCR::ABL fusion protein, which is an abnormal protein found in most people with chronic myelogenous leukemia and in some with acute lymphoblastic leukemia. The T315I mutation may make cancer cells resistant (unable to respond) to anticancer drugs called tyrosine kinase inhibitors. Checking for the T315I mutation in cancer cells may help plan cancer treatment.

### **T4**

A hormone that is made by the thyroid gland and contains iodine. T4 increases the rate of chemical reactions in cells and helps control growth and development. T4 can also be made in the laboratory and is used to treat thyroid disorders. Also called L-3,5,5'-tetraiodothyronine, thyroxin, and thyroxine.

### **T4N5 liposomal lotion**

A lotion being studied in the treatment of skin cancer and a skin condition called xeroderma pigmentosum. It has an enzyme contained in very tiny, fat-like particles. The enzyme repairs damage caused by ultraviolet radiation. T4N5 liposomal lotion is a type of DNA repair enzyme topical agent. Also called Dimericine.

### **T900607**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called tubulin-binding agents.

## **TAC**

An abbreviation for a chemotherapy combination used with other types of therapy to treat breast cancer. It includes the drugs docetaxel (Taxotere), doxorubicin hydrochloride (Adriamycin), and cyclophosphamide. Also called TAC regimen.

## **TAC regimen**

An abbreviation for a chemotherapy combination used with other types of therapy to treat breast cancer. It includes the drugs docetaxel (Taxotere), doxorubicin hydrochloride (Adriamycin), and cyclophosphamide. Also called TAC.

## **TAC-101**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called synthetic retinoids and angiogenesis inhibitors.

## **TACE**

A procedure in which the blood supply to a tumor is blocked after anticancer drugs are given in blood vessels near the tumor. Sometimes, the anticancer drugs are attached to small beads that are injected into an artery that feeds the tumor. The beads block blood flow to the tumor as they release the drug. This allows a higher amount of drug to reach the tumor for a longer period of time, which may kill more cancer cells. It also causes fewer side effects because very little of the drug reaches other parts of the body. TACE is used to treat liver cancer. Also called chemoembolization and transarterial chemoembolization.

## **TAE**

A procedure in which the blood supply to a tumor or an abnormal area of tissue is blocked. During TAE, a small incision (cut) is made in the inner thigh and a catheter (thin, flexible tube) is inserted and guided into an artery near the tumor or abnormal tissue. Once the catheter is in place, small particles made of tiny gelatin sponges or beads are injected. This blocks the artery and stops the flow of blood to the tumor or abnormal area of tissue. TAE is used to treat some types of liver cancer, kidney cancer, and neuroendocrine tumors. It may also be used to treat uterine fibroids, aneurysms, and other conditions. Also called arterial embolization and transarterial embolization.

## **TAG-72 antigen**

A protein/sugar complex found on the surface of many cancer cells, including breast, colon, and pancreatic cells.

## **TAM**

A bone marrow disorder that can occur in newborns who have Down syndrome. It is marked by abnormal, immature blood-forming cells in the blood and bone marrow (especially the cells involved in making platelets). The liver may also be larger than normal. TAM is caused by mutations (changes) in a gene called GATA1. TAM usually goes away on its own within the first 3 months of life. Sometimes TAM causes severe or life-threatening problems, such as bleeding problems, infection, heart, kidney, and liver failure, and abnormal build-up of fluid in the tissues that cover the organs in the body. Infants who have TAM have an increased risk of developing acute myeloid leukemia (AML) before the age of 3 years. Also called TMD, transient abnormal myelopoiesis, transient leukemia, and transient myeloproliferative disorder.

## **TB**

A disease caused by a specific type of bacteria that spreads from one person to another through the air. TB can affect many parts of the body, but most often affects the lungs. A person may not have symptoms of TB for years, but they may appear when the patient becomes ill with a serious condition like diabetes, AIDS, or cancer. TB can usually be treated and cured with antibiotics. Also called tuberculosis.

## **TBI**

A type of radiation therapy that is given to the entire body. TBI is often used with high-dose anticancer drugs to help prepare a patient for a stem cell transplant. It is done to kill any cancer cells that are left in the body and helps make room in the patient's bone marrow for new blood stem cells to grow. TBI may also help prevent the body's immune system from rejecting the transplanted stem cells. Also called total-body irradiation.

## **TCE**

A device used to look at tissues in the esophagus. It is a tiny capsule with a laser scanner inside and a very thin cord attached to it. The patient swallows the capsule and the thin cord helps keep the capsule in a specific area in the esophagus. The cord is also used to remove the capsule. Pictures are taken by the laser scanner and sent to a computer for viewing. A TCE is used to find early cancers of the esophagus and other parts of the body. Also called tethered capsule endoscope.

## **TCGA**

A project to identify the complete set of DNA changes in many different types of cancer. Studying these changes may help researchers understand how different types of cancer form. This may lead to new ways to prevent, diagnose, and treat cancer. TCGA is led by the National Cancer Institute (NCI) and the National Human Genome Research Institute (NHGRI), which are parts of the National Institutes of Health (NIH). Also called The Cancer Genome Atlas.

## **TCM**

A medical system that has been used for thousands of years to prevent, diagnose, and treat disease. It is based on the belief that qi (the body's vital energy) flows along meridians (channels) in the body and keeps a person's spiritual, emotional, mental, and physical health in balance. TCM aims to restore the body's balance and harmony between the natural opposing forces of yin and yang, which can block qi and cause disease. TCM includes acupuncture, diet, herbal therapy, meditation, physical exercise, and massage. Also called Oriental medicine and Traditional Chinese Medicine.

## **TCR**

A group of proteins found on T cells (a type of immune cell that recognizes and binds to foreign substances). TCRs bind to certain antigens (proteins) found on abnormal cells, cancer cells, cells from other organisms, and cells infected with a virus or another microorganism. This interaction causes the T cells to attack these cells and helps the body fight infection, cancer, or other diseases. Also called T-cell receptor.

## **TDR**

A way of describing how family members are related to each other when there are two other family members in the blood line between them. Examples of a TDR are a first cousin, great-grandparent, great-aunt, great-uncle, great-niece,



great-nephew, great-grandchild, half-aunt, or half-uncle. Also called third-degree relative.

## **TENS**

A procedure in which mild electric currents are applied to some areas of the skin. Also called transcutaneous electrical nerve stimulation.

## **TERC gene**

A gene that makes a protein involved in maintaining telomeres (the ends of chromosomes) and in repairing chromosomes. Mutations (changes) in the TERC gene have been found in a rare, inherited condition called dyskeratosis congenita (DKC) and in some other conditions. People with DKC have abnormal changes in the skin and nails and white patches inside the mouth. They also have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **TERT gene**

A gene that makes a protein involved in maintaining telomeres (the ends of chromosomes). Mutations (changes) in the TERT gene have been found in some types of cancer, including melanoma, acute myeloid leukemia, breast cancer, and cholangiocarcinoma (cancer that forms in the bile ducts). Mutations in the TERT gene have also been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **TESA**

A procedure in which a sample of sperm cells and tissue are removed from the testicle through a small needle attached to a syringe. The sperm is separated from the tissue and looked at under a microscope in the laboratory. It may then be used right away to fertilize eggs or frozen for future infertility treatment. TESA may be useful for men who have fertility problems caused by a blockage that keeps sperm from being ejaculated. This could be caused by previous vasectomy, certain genetic conditions, ejaculation problems, infection, or other conditions. It may also be useful for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. TESA is a type of sperm retrieval method. Also called testicular sperm aspiration.

## **TESE**

A procedure in which sperm cells are removed and either used right away to fertilize eggs or frozen for future infertility treatment. Tissue is removed from the testicle through a small incision (cut) and looked at under a microscope in the laboratory to find sperm cells. TESE may be useful for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. TESE is a type of sperm retrieval method. Also called testicular sperm extraction.

## **TG4010**

A substance that is being studied as an anticancer drug.

## **TGCT**

A type of rare tumor that forms in the synovium (tissue that lines the joints), the tendon sheath (tissue that covers the tendons), or the bursa (a fluid-filled sac between bones, tendons, and muscles). These tumors cause the affected synovium, tendon sheath, or bursa to thicken and overgrow. TGCTs can occur in any joint. Although TGCTs are not cancer, they can grow and cause damage to surrounding tissues or structures. Symptoms may include reduced movement or pain in the affected joint and a locking or catching sensation when moving the joint. TGCTs usually occur in young and middle-aged adults. Also called tenosynovial giant cell tumor.

## **TGFB1 gene**

A gene that makes a protein involved in controlling cell growth, cell division, cell differentiation, cell movement, and cell death. Mutations (changes) in the TGFB1 gene have been found in an inherited condition called multiple self-healing squamous epithelioma (MSSE) and in some other conditions. People with MSSE develop many fast-growing tumors that look like squamous cell skin cancer.

## **THU**

A substance being studied in the treatment of some types of cancer. It may help make cancer cells easier to kill with radiation therapy. THU is a type of radiosensitizing agent, a type of multidrug resistance modulator, and a type of cytidine deaminase inhibitor. Also called tetrahydrouridine.

## **TIL**

A type of immune cell that has moved from the blood into a tumor. TILs can recognize and kill cancer cells. In cancer therapy, TILs are removed from a patient's tumor, grown in large numbers in a laboratory, and then given back to the patient to help the immune system kill the cancer cells. Also called tumor-infiltrating lymphocyte.

## **TIL therapy**

A type of treatment in which tumor-infiltrating lymphocytes (a type of immune cell that can recognize and kill cancer cells) are removed from a patient's tumor and grown in large numbers in a laboratory. These lymphocytes are then given back to the patient by infusion to help the immune system kill the cancer cells. Also called tumor-infiltrating lymphocyte therapy.

## **TINF2 gene**

A gene that makes a protein involved in protecting telomeres (the ends of chromosomes), which help keep chromosomes from sticking together or breaking down. Mutations (changes) in the TINF2 gene may cause damage to chromosomes and DNA, which may lead to abnormal cell growth. TINF2 gene mutations have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **TLF**

A drug being studied in the treatment of kidney cancer that has spread. It is also being studied in the treatment of other types of cancer and other conditions. TLF increases the activity of dendritic cells (a type of immune cell) to help kill cancer

cells. It is a form of human lactoferrin (a protein found in milk, tears, mucus, bile, and some white blood cells) that is made in the laboratory. TLF is a type of recombinant protein and a type of immunomodulatory protein. Also called talactoferrin and talactoferrin alfa.

### **TLK286**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called glutathione analogs. Also called Telcyta.

### **TM**

A mental technique used to promote relaxation, reduce stress, and improve quality of life. TM is the registered trademark of the Maharishi Foundation Ltd. Also called Transcendental Meditation.

### **TMB**

The total number of mutations (changes) found in the DNA of cancer cells. Knowing the TMB may help plan the best treatment. For example, tumors that have a high number of mutations appear to be more likely to respond to certain types of immunotherapy. TMB is being used as a type of biomarker. Also called tumor mutational burden.

### **TMC6 gene**

A gene that makes a protein involved in forming channels through which proteins and other molecules move inside cells. Mutations (changes) in the TMC6 gene have been found in an inherited condition called epidermodysplasia verruciformis. People with this condition have a high risk of developing chronic infections with certain types of human papillomavirus (HPV) and skin cancer at an early age.

### **TMC8 gene**

A gene that makes a protein involved in forming channels through which proteins and other molecules move inside cells. Mutations (changes) in the TMC8 gene have been found in an inherited condition called epidermodysplasia verruciformis. People with this condition have a high risk of developing chronic infections with certain types of human papillomavirus (HPV) and skin cancer at an early age.

### **TMD**

A bone marrow disorder that can occur in newborns who have Down syndrome. It is marked by abnormal, immature blood-forming cells in the blood and bone marrow (especially the cells involved in making platelets). The liver may also be larger than normal. TMD is caused by mutations (changes) in a gene called GATA1. TMD usually goes away on its own within the first 3 months of life. Sometimes TMD causes severe or life-threatening problems, such as bleeding problems, infection, heart, kidney, and liver failure, and abnormal build-up of fluid in the tissues that cover the organs in the body. Infants who have TMD have an increased risk of developing acute myeloid leukemia (AML) before the age of 3 years. Also called TAM, transient abnormal myelopoiesis, transient leukemia, and transient myeloproliferative disorder.

### **TNBC**

A type of breast cancer in which the tumor cells do not have estrogen receptors, progesterone receptors, or large amounts of HER2/neu protein on their surface. Knowing whether breast cancer is triple negative is important in planning

treatment. Also called ER-negative PR-negative HER2/neu-negative breast cancer and triple-negative breast cancer.

## **TNF**

A protein made by white blood cells in response to an antigen (substance that causes the immune system to make a specific immune response) or infection. TNF can also be made in the laboratory. It may boost a person's immune response, and also may cause necrosis (cell death) of some types of tumor cells. TNF is being studied in the treatment of some types of cancer. It is a type of cytokine. Also called tumor necrosis factor.

## **TNF-bound colloidal gold**

A substance being studied in the treatment of some types of cancer. TNF-bound colloidal gold is made in the laboratory by binding a cancer-killing protein called tumor necrosis factor (TNF) to the surface of very tiny particles of gold. These TNF-gold particles may kill cancer cells without harming healthy tissue. Also called Aurimmune and colloidal gold-bound tumor necrosis factor.

## **TNF-related apoptosis-inducing ligand**

A cell protein that can attach to certain molecules in some cancer cells and may kill the cells. TNF-related apoptosis-inducing ligand is being studied in the treatment of cancer. Also called Apo-2L, TRAIL, and tumor necrosis factor-related apoptosis-inducing ligand.

## **TNFerade**

A gene therapy product that is being studied in combination with radiation therapy in the treatment of cancer.

## **TNM staging system**

A system to describe the amount and spread of cancer in a patient's body, using TNM. T describes the size of the tumor and any spread of cancer into nearby tissue; N describes spread of cancer to nearby lymph nodes; and M describes metastasis (spread of cancer to other parts of the body). This system was created and is updated by the American Joint Committee on Cancer (AJCC) and the International Union Against Cancer (UICC). The TNM staging system is used to describe most types of cancer. Also called AJCC staging system.

## **TNP-470**

A substance being studied in the treatment of cancer. It may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent.

## **TORS**

Surgery in which a robot with arms is used to remove cancer from hard-to-reach areas of the mouth and throat. Cameras attached to the robot give a 3-dimensional (3D) image that a surgeon can see. The surgeon guides tools at the ends of the robot arms to remove the cancer. Also called transoral robotic surgery.

## **TP-38 immunotoxin**

A substance being studied in the treatment of brain tumors. It combines a protein that binds to certain tumor cells with a bacterial toxin that kills tumor cells.

### **TP53 gene**

A gene that makes a protein that is found inside the nucleus of cells and plays a key role in controlling cell division and cell death. Mutations (changes) in the TP53 gene may cause cancer cells to grow and spread in the body. These changes have been found in a genetic condition called Li-Fraumeni syndrome and in many types of cancer. The TP53 gene is a type of tumor suppressor gene. Also called p53 gene and tumor protein p53 gene.

### **TPF**

An abbreviation for a chemotherapy combination used to treat certain types of head and neck cancer and stomach cancer. It includes the drugs docetaxel (Taxotere), cisplatin (Platinol), and fluorouracil. Also called DCF, docetaxel-cisplatin-fluorouracil, Taxotere-Platinol-fluorouracil, and TPF regimen.

### **TPF regimen**

An abbreviation for a chemotherapy combination used to treat certain types of head and neck cancer and stomach cancer. It includes the drugs docetaxel (Taxotere), cisplatin (Platinol), and fluorouracil. Also called DCF, docetaxel-cisplatin-fluorouracil, Taxotere-Platinol-fluorouracil, and TPF.

### **TPN**

A form of long-term nutritional support that is given directly into the bloodstream through a catheter placed into a vein. TPN bypasses the digestive system and may be given when a person is not able to eat or drink by mouth or has a disease or condition that affects their ability to absorb nutrients through the digestive system. TPN is complete nutrition that provides all the calories, proteins, carbohydrates, fats, vitamins, and minerals that a person needs when they cannot digest food. Also called total parenteral nutrition.

### **TPO**

A substance made by the body that helps make blood cells, especially platelets. A form of TPO made in the laboratory is called recombinant human TPO and rHu TPO. TPO is being studied as a way to increase the number of platelets in cancer patients receiving chemotherapy. Also called thrombopoietin.

### **TRAIL**

A cell protein that can attach to certain molecules in some cancer cells and may kill the cells. TRAIL is being studied in the treatment of cancer. Also called Apo-2L, TNF-related apoptosis-inducing ligand, and tumor necrosis factor-related apoptosis-inducing ligand.

### **TRAIL receptor 1**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of TRAIL receptor 1 on cancer cells may kill more cells. Also called death receptor 4, DR4, TRAIL-R1, and tumor necrosis factor receptor superfamily member 10A.

### **TRAIL receptor 2**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of TRAIL receptor 2 on cancer cells may kill more cells. Also called death receptor 5, DR5, TRAIL-R2, and tumor necrosis factor receptor superfamily member 10B.

### **TRAIL-R1**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of TRAIL-R1 on cancer cells may kill more cells. Also called death receptor 4, DR4, TRAIL receptor 1, and tumor necrosis factor receptor superfamily member 10A.

### **TRAIL-R2**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of TRAIL-R2 on cancer cells may kill more cells. Also called death receptor 5, DR5, TRAIL receptor 2, and tumor necrosis factor receptor superfamily member 10B.

### **TRAM flap**

A type of surgery used to rebuild the shape of the breast after a mastectomy. A muscle in the lower abdomen called the rectus abdominis, along with skin, fat, and blood vessels, is moved from the lower abdomen to the chest. This is usually done by passing the muscle tissue and blood vessels through a tunnel under the skin to the chest. A TRAM flap forms a natural-looking breast, so the patient usually does not need a breast implant. It is a type of breast reconstruction. Also called transverse rectus abdominis myocutaneous flap.

### **TRK protein family**

A family of proteins that are found on nerve cells. They are involved in cell signaling pathways that control cell growth, cell maturation, and cell survival. The genes that make the TRK proteins may have mutations (changes) that cause abnormal TRK proteins to be made. These abnormal proteins may be too active or found in higher than normal amounts on some types of cancer cells, which may cause cancer cells to grow. Drugs that block TRK proteins are being used in the treatment of some types of cancer. TRK proteins are receptor tyrosine kinases. Also called tropomyosin receptor kinase protein family.

### **TRPV6**

A protein found in cell membranes that moves calcium into cells. Levels of TRPV6 are lower than normal in patients who don't have enough vitamin D. High levels of the protein may be found in breast cancer tissue. It is a type of calcium channel protein. Also called transient receptor potential cation channel, subfamily V, member 6.

### **TRUS**

A procedure in which a probe that sends out high-energy sound waves is inserted into the rectum. The sound waves are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissue called a sonogram. TRUS is used to look for abnormalities in the rectum and nearby structures, including the prostate. Also called endorectal ultrasound, ERUS, and transrectal ultrasound.

### **TSEB radiation therapy**

A type of radiation therapy using electrons that is directed at the entire surface of the body. This type of radiation goes into the outer layers of the skin, but does not go deeper into tissues and organs below the skin. Also called total skin electron beam radiation therapy.

### **TSH**

A hormone produced by the pituitary gland. TSH stimulates the release of thyroid hormone from thyroglobulin. It also stimulates the growth of thyroid follicular



cells. An abnormal TSH level may mean that the thyroid hormonal regulation system is out of control, usually as a result of a benign condition (hyperthyroidism or hypothyroidism). Also called thyroid-stimulating hormone.

### **TSNA**

A type of harmful, cancer-causing chemical found in tobacco and tobacco smoke. TSNA's are formed when tobacco leaves are grown, cured, aged, and processed. Tobacco products can contain different amounts of TSNA's, depending on how they are made. Also called tobacco-specific nitrosamine.

### **TTI-237**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called mitotic inhibitors.

### **TTMB**

A procedure being studied in the diagnosis of prostate cancer and in planning prostate cancer treatment. Ultrasound is used to create a map of the prostate so the whole prostate gland can be seen in three dimensions and divided into 24 areas. Needles are then inserted through a template into each of the 24 areas and tissue is removed to be checked under a microscope. Also called transperineal template-guided prostate mapping biopsy.

### **TTP**

The length of time from the date of diagnosis or the start of treatment for a disease until the disease starts to get worse or spread to other parts of the body. In a clinical trial, measuring the TTP is one way to see how well a new treatment works. Also called time to progression.

### **TUEVAP**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra into the prostate. A ball or special wire loop on the instrument heats the prostate tissue and turns it to vapor. This relieves pressure and improves urine flow. Also called transurethral electroevaporation of the prostate, transurethral electrovaporization of the prostate, and TUVAP.

### **TUIP**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra and one or two small cuts are made in the bladder neck and prostate. This relieves pressure and improves urine flow. Also called transurethral incision of the prostate.

### **TUMT**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra into the bladder. A small microwave antenna on the instrument heats nearby prostate tissue and destroys it. This relieves pressure and improves urine flow. Also called transurethral microwave thermotherapy.

### **TUNA**

A procedure that is used to treat benign prostatic hypertrophy (BPH). An instrument with a small probe that gives off low-level radiofrequency energy is inserted through the urethra into the prostate. The energy from the probe heats nearby prostate tissue and destroys it. This relieves pressure and improves urine flow. Also called transurethral needle ablation and transurethral radiofrequency ablation.

## **TUR**

Surgery performed with a special instrument inserted through the urethra. Also called transurethral resection.

## **TURP**

Surgery to remove tissue from the prostate using an instrument inserted through the urethra. Also called transurethral resection of the prostate.

## **TUVP**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra into the prostate. A ball or special wire loop on the instrument heats the prostate tissue and turns it to vapor. This relieves pressure and improves urine flow. Also called transurethral electroevaporation of the prostate, transurethral electrovaporization of the prostate, and TUEVAP.

## **TVS**

A procedure used to examine the vagina, uterus, fallopian tubes, ovaries, and bladder. An instrument is inserted into the vagina that causes sound waves to bounce off organs inside the pelvis. These sound waves create echoes that are sent to a computer, which creates a picture called a sonogram. Also called transvaginal sonography and transvaginal ultrasound.

## **TYR gene**

A gene that makes a protein involved in making melanin (a pigment that gives color to the skin, hair, and eyes). Mutations (changes) in the TYR gene have been found in an inherited condition called oculocutaneous albinism. People with this condition have very pale skin and light-colored hair and eyes. They also have a high risk of developing skin cancer at an early age.

## **TYRP1 gene**

A gene that makes a protein involved in making melanin (a pigment that gives color to skin, hair, and eyes). Mutations (changes) in the TYRP1 gene have been found in an inherited condition called oculocutaneous albinism. People with this condition have very pale skin and light-colored hair and eyes. They also have a high risk of developing skin cancer at an early age.

## **TZT-1027**

A substance being studied in the treatment of cancer. It is a type of tubulin inhibitor. Also called soblidotin.

## **Tabloid**

A drug used to treat acute myeloid leukemia. It is also being studied in the treatment of other types of cancer. Tabloid stops cells from making DNA and RNA and may kill cancer cells. It is a type of antimetabolite. Also called thioguanine.

## **Tabrecta**

A drug used to treat adults with non-small cell lung cancer that has spread and has a certain mutation (change) in the MET gene. It is also being studied in the treatment of other types of cancer. Tabrecta blocks a protein made by the MET gene, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called capmatinib hydrochloride.

### **Tafinlar**

A drug used alone or with trametinib to treat low-grade glioma (a type of brain tumor) in children aged 1 year and older and certain types of anaplastic thyroid cancer, non-small cell lung cancer, melanoma, and other solid tumors that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Tafinlar blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called dabrafenib mesylate.

### **Tagrisso**

A drug used alone or with other drugs to treat adults with certain types of non-small cell lung cancer that have an abnormal EGFR gene. It is also being studied in the treatment of other types of cancer. Tagrisso blocks certain proteins made by the mutated EGFR gene, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called osimertinib mesylate.

### **Talvay**

A drug used to treat adults with multiple myeloma that came back or did not get better after treatment with at least four other anticancer therapies. These therapies had to include an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Talvay binds to a protein called CD3, which is found on T cells (a type of white blood cell), and to a protein called GPRC5D, which is found on myeloma cells and some other types of cells. This may help the immune system kill cancer cells. Talvay is a type of bispecific T-cell engager. Also called talquetamab.

### **Talzenna**

A drug used alone to treat adults with HER2-negative breast cancer that has spread and has certain mutations (changes) in the BRCA1 or BRCA2 gene and with enzalutamide to treat adults with prostate cancer that has spread, has not responded to treatments that lower testosterone levels, and has a mutation in the HRR gene. It is also being studied in the treatment of other types of cancer. Talzenna blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Talzenna is a type of PARP inhibitor. Also called talazoparib tosylate.

### **Tamiflu**

A drug used to prevent and to treat influenza virus infections. It blocks the release of the virus from infected cells. It is a type of antiviral agent. Also called oseltamivir phosphate.

### **Tarceva**

A drug used alone to treat certain types of non-small cell lung cancer and with gemcitabine hydrochloride to treat certain types of pancreatic cancer. It is also being studied in the treatment of other types of cancer. Tarceva blocks a protein called EGFR, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called CP-358,774, erlotinib hydrochloride, and OSI-774.

### **Targretin**

A drug used to treat skin problems caused by cutaneous T-cell lymphoma that did not get better after other treatment. It is also being studied in the treatment of other types of cancer. Targretin binds to and activates proteins called retinoid X

receptors, which may stop the growth of cancer cells and kill them. It is a type of retinoid. Also called bexarotene and LGD1069.

### **Tarvacin**

A substance being studied in the treatment of several types of cancer and infections caused by certain viruses. It binds to substances on the surface of tumor cells, certain viruses, and cells infected with a virus. The immune system detects Tarvacin on the cells and the viruses and may destroy them. It is a type of monoclonal antibody and a type of targeted therapy agent. Also called bavituximab.

### **Tasigna**

A drug used to treat certain types of chronic myelogenous leukemia that are Philadelphia chromosome positive. It is also being studied in the treatment of other types of cancer. Tasigna blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called nilotinib.

### **Tavalisse**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults with chronic immune thrombocytopenia (ITP) that did not get better with other treatment. ITP is a condition in which platelets are destroyed by the immune system. Tavalisse is also being studied in the treatment of other conditions and types of cancer. It blocks an enzyme called Syk, which may help keep the immune system from destroying platelets. Tavalisse is a type of tyrosine kinase inhibitor. Also called fostamatinib disodium, R788 sodium, and Syk kinase inhibitor R-935788.

### **Taxotere**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, gastroesophageal junction cancer, non-small cell lung cancer, prostate cancer, and squamous cell carcinoma of the head and neck. It is also being studied in the treatment of other types of cancer. Taxotere stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called docetaxel.

### **Taxotere-Platinol-fluorouracil**

A chemotherapy combination used to treat certain types of head and neck cancer and stomach cancer. It includes the drugs docetaxel (Taxotere), cisplatin (Platinol), and fluorouracil. Also called DCF, docetaxel-cisplatin-fluorouracil, TPF, and TPF regimen.

### **Tazorac**

A drug used on the skin to treat several skin conditions. It is also being studied in the treatment of basal cell skin cancer and basal cell nevus syndrome. Tazorac is related to vitamin A and is made in the laboratory. It turns on a gene that may help stop the growth of skin cancer cells. Tazorac is a type of synthetic retinoid. Also called Avage and tazarotene.

### **Tazverik**

A drug used to treat adults and children aged 16 years and older with a rare type of soft tissue sarcoma called epithelioid sarcoma and adults with certain types of follicular lymphoma. It is also being studied in the treatment of other types of cancer. Tazverik blocks certain enzymes involved in gene expression and cell division. Blocking these enzymes may help keep cancer cells from growing.

Tazverik is a type of histone methyltransferase inhibitor. Also called tazemetostat hydrobromide.

### **Tc 99m sulfur colloid**

A substance being studied as a way to find cancer in the body. It is also used to find sentinel lymph nodes in breast cancer. It contains a radioactive substance called technetium linked to a substance called sulfur colloid. Sulfur colloid is taken up by special cells in lymph tissue, and in the liver, spleen, and bone marrow after it is injected. A machine or probe that detects radioactivity is used to find where the Tc 99m sulfur colloid is in the body. Also called Tc-99m SC and technetium Tc 99m-sulfur colloid.

### **Tc-99m Dextran**

A substance being studied as a way to find sentinel lymph nodes in some types of skin cancer and breast cancer. It contains a radioactive substance called technetium linked to a substance called dextran. Dextran helps technetium stay in blood and lymph vessels after it is injected. A machine or probe that detects radioactivity shows which lymph nodes near the tumor have Tc-99m Dextran in them. Also called 99m-Tc-Dx and technetium Tc 99m-dextran.

### **Tc-99m SC**

A substance being studied as a way to find cancer in the body. It is also used to find sentinel lymph nodes in breast cancer. It contains a radioactive substance called technetium linked to a substance called sulfur colloid. Sulfur colloid is taken up by special cells in lymph tissue, and in the liver, spleen, and bone marrow after it is injected. A machine or probe that detects radioactivity is used to find where the Tc-99m SC is in the body. Also called Tc 99m sulfur colloid and technetium Tc 99m-sulfur colloid.

### **Tecartus**

A drug used to treat adults with mantle cell lymphoma or B-cell acute lymphoblastic leukemia that came back or did not get better after other treatment. It is also being studied in the treatment of other types of cancer. Tecartus is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Tecartus binds to a protein called CD19, which is found on some lymphoma cells and leukemia cells. This helps the body's immune system kill cancer cells. Tecartus is a type of CAR T-cell therapy. Also called brexucabtagene autoleucel.

### **Tecelra**

A treatment used for adults with synovial sarcoma that has the MAGE-A4 antigen and has spread to other parts of the body or cannot be removed by surgery. It is used in patients who have certain HLA-A\*02 antigens and have received chemotherapy. It is also being studied in the treatment of other types of cancer. Tecelra is made using a patient's T cells (a type of immune system cell). A special T-cell receptor that can recognize the MAGE-A4 antigen is added to the T cells in the laboratory. These changed T cells are then grown in large numbers in the laboratory and given back to the patient by infusion. Tecelra binds to the MAGE-A4 antigen, which is found on some types of cancer cells. This helps the body's immune system kill cancer cells. Tecelra is a type of cellular immunotherapy. Also called afamitresgene autoleucel.

### **Tecentriq**

A drug that binds to the protein PD-L1 to help immune cells kill cancer cells better and is used to treat different types of cancer, including cancers that express PD-L1. Tecentriq is used alone or with other drugs to treat adults with certain types of hepatocellular carcinoma (a type of liver cancer), melanoma, non-small cell lung cancer, or small cell lung cancer. It is also used alone to treat adults and children aged 2 years and older with alveolar soft part sarcoma that has spread to other parts of the body or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Tecentriq may block PD-L1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called atezolizumab.

### **Tecvayli**

A drug used to treat adults with multiple myeloma that came back or did not get better after treatment with at least four other anticancer therapies, including an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Tecvayli binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called BCMA, which is found on myeloma cells and some B cells (another type of white blood cell). This may help the immune system kill cancer cells. Tecvayli is a type of bispecific monoclonal antibody. Also called teclistamab.

### **Telcyta**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called glutathione analogs. Also called TLK286.

### **Temodar**

A drug used alone or with radiation therapy to treat adults with glioblastoma or anaplastic astrocytoma (types of brain tumors). It is used in patients whose cancer is newly diagnosed or did not get better with other treatment. It is also being studied in the treatment of other types of cancer. Temodar damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called temozolomide.

### **Tepadina**

A drug used to treat certain types of bladder cancer, breast cancer, ovarian cancer, and malignant effusion (a condition in which cancer causes an abnormal amount of fluid to collect in hollow spaces or between tissues of the body). It is also being studied in the treatment of other types of cancer. Tepadina damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called thiotepea.

### **Tepmetko**

A drug used to treat adults with non-small cell lung cancer that has spread to other parts of the body and has a certain mutation (change) in the MET gene. It is also being studied in the treatment of other types of cancer. Tepmetko blocks a protein made by the MET gene, which may help keep cancer cells from growing and spreading and may kill them. It is a type of tyrosine kinase inhibitor. Also called tepotinib hydrochloride.

### **Tevimbra**

A drug used to treat adults with squamous cell carcinoma of the esophagus that cannot be removed by surgery or has spread to other parts of the body. It is used in patients whose cancer was treated with systemic therapy that did not include a PD-1 inhibitor or PD-L1 inhibitor. It is also being studied in the treatment of other



types of cancer. Tevimbra binds to a protein called PD-1, which is found on T cells (a type of immune cell). Blocking this protein may help the immune system kill cancer cells. Tevimbra is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called tislelizumab.

### **Thalomid**

A drug used with dexamethasone to treat multiple myeloma in patients who have been just diagnosed. It is also used to treat a painful skin disease related to leprosy. It is also being studied in the treatment of other types of cancer. Thalomid may help the immune system kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. Thalomid is a type of antiangiogenesis agent and a type of immunomodulating agent. Also called thalidomide.

### **The Cancer Genome Atlas**

A project to identify the complete set of DNA changes in many different types of cancer. Studying these changes may help researchers understand how different types of cancer form. This may lead to new ways to prevent, diagnose, and treat cancer. The Cancer Genome Atlas is led by the National Cancer Institute (NCI) and the National Human Genome Research Institute (NHGRI), which are parts of the National Institutes of Health (NIH). Also called TCGA.

### **Theraloc**

A substance being studied in the treatment of some types of cancer. Theraloc binds to a protein called epidermal growth factor receptor (EGFR), which is found on some normal cells and some types of cancer cells. Blocking this protein may help keep cancer cells from growing. Theraloc is a type of monoclonal antibody. Also called nimotuzumab.

### **Thymitaq**

A substance that is being studied in the treatment of liver cancer. It belongs to the family of drugs called thymidylate synthase inhibitors. Also called AG337 and nolatrexed.

### **Thyrogen**

A form of thyroid-stimulating hormone (TSH) that is made in the laboratory. It is used to test for remaining or recurring cancer cells in patients who have been treated for thyroid cancer. Also called thyrotropin alfa.

### **Tibsovo**

A drug used alone or with other drugs to treat adults with certain types of acute myeloid leukemia, cholangiocarcinoma (a type of bile duct cancer), or myelodysplastic syndromes that have a mutation (change) in the IDH1 gene. It is also being studied in the treatment of other types of cancer. Tibsovo blocks the protein made by the mutated IDH1 gene, which may help keep cancer cells from growing. It is a type of enzyme inhibitor and a type of targeted therapy. Also called ivosidenib.

### **Tivdak**

A drug used to treat adults with cervical cancer that has come back or has spread. It is used in patients whose cancer got worse during or after chemotherapy. It is also being studied in the treatment of other types of cancer. Tivdak contains a monoclonal antibody that binds to a protein called tissue factor, which is found on some cancer cells. It also contains an anticancer drug, which may help kill cancer cells. Tivdak may also prevent the growth of new blood

vessels that tumors need to grow. It is a type of antibody-drug conjugate and a type of antiangiogenesis agent. Also called tisotumab vedotin.

### **Tolak**

A drug that contains the active ingredient fluorouracil and is used as a cream to treat actinic keratosis (a skin condition that may become cancer). Tolak stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **Torisel**

A drug used to treat advanced renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. Torisel blocks a protein called mTOR, which helps control cell division. Blocking this protein may help keep cancer cells from growing. Torisel is a type of kinase inhibitor. Also called CCI-779 and temsirolimus.

### **Totect**

A drug that contains the active ingredient dexrazoxane and is used to treat severe side effects caused by certain types of anticancer drugs. It is used to reduce heart damage in women who are receiving doxorubicin for breast cancer that has spread to other parts of the body. It is also used to treat the toxic effects of an anticancer drug that leaks from a vein into surrounding tissue and causes tissue damage. Totect is a type of cardioprotective agent, a type of chemoprotective agent, and a type of topoisomerase inhibitor.

### **Traditional Chinese Medicine**

A medical system that has been used for thousands of years to prevent, diagnose, and treat disease. It is based on the belief that qi (the body's vital energy) flows along meridians (channels) in the body and keeps a person's spiritual, emotional, mental, and physical health in balance. Traditional Chinese medicine aims to restore the body's balance and harmony between the natural opposing forces of yin and yang, which can block qi and cause disease. Traditional Chinese medicine includes acupuncture, diet, herbal therapy, meditation, physical exercise, and massage. Also called Oriental medicine and TCM.

### **Transcendental Meditation**

A mental technique used to promote relaxation, reduce stress, and improve quality of life. Transcendental Meditation is the registered trademark of the Maharishi Foundation Ltd. Also called TM.

### **Traumeel S**

A substance that contains minerals and extracts of 14 plants, including belladonna, arnica, St. John's wort, and Echinacea. It is being studied as a mouth rinse treatment for oral mucositis (painful mouth sores) caused by cancer therapy. It is known as a homeopathic remedy.

### **Trazimera**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Trazimera binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Trazimera is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Hercessi, Herzuma, Kanjinti, Ogivri, Ontruzant, and trastuzumab.

### **Treanda**

A drug used to treat chronic lymphocytic leukemia and certain types of non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Treanda damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Belrapzo, bendamustine hydrochloride, and Bendeka.

### **Trelstar**

A drug that is used to treat advanced prostate cancer, and is being studied in the treatment of breast cancer. It belongs to the family of hormonal drugs called gonadotropin-releasing hormone analogs. Also called triptorelin.

### **Trexall**

A drug used alone or with other drugs to treat many types of cancer, certain types of arthritis, and severe psoriasis (a type of skin condition). It is also being studied in the treatment of other conditions and types of cancer. Trexall stops cells from using folic acid to make DNA and may kill cancer cells. It may also lower the body's immune response. Trexall is a type of antimetabolite and a type of antifolate. Also called methotrexate sodium, MTX, and Xatmep.

### **TriCor**

A drug used to treat high levels of cholesterol and triglycerides in the blood. TriCor is being studied in the treatment of advanced cancers in young patients and in the treatment of other conditions. It is a type of antilipidemic agent. Also called fenofibrate and Lofibra.

### **Triapine**

A substance being studied in the treatment of cancer. It is a type of ribonucleotide reductase inhibitor. Also called 3-aminopyridine-2-carboxaldehyde thiosemicarbazone and 3-AP.

### **Trifolium pratense**

A plant whose flowers have been used in some cultures to treat certain medical problems. It is being studied in the relief of menopausal symptoms and may have anticancer effects. Also called purple clover, red clover, and wild clover.

### **Trilisate**

A substance used to treat arthritis and relieve pain, inflammation, and fever. It is also being studied in the treatment of acute myeloid leukemia (AML). Trilisate blocks the action of a substance that sends a pain message to the brain. It is a type of nonsteroidal anti-inflammatory drug (NSAID). Also called choline magnesium trisalicylate.

### **Triostat**

A drug that is used to treat certain thyroid (a gland located near the voice box) conditions. It is also being studied in the treatment of thyroid cancer. Triostat is made in the laboratory and is a form of the thyroid hormone triiodthyronine (T3). Also called Cytomel and liothyronine sodium.

### **Trisenox**

A drug used to treat acute promyelocytic leukemia that has a certain chromosome abnormality or a fusion gene called PML::RARA. It is used with tretinoin in some newly diagnosed adults. It is also used alone in patients whose cancer has not gotten better or has come back after treatment with other anticancer drugs. Trisenox is also being studied in the treatment of other types of

cancer. Trisenox damages a fusion protein made by the PML::RARA fusion gene. This may help keep cancer cells from growing and may kill them. Also called arsenic trioxide.

### **Trk inhibitor LOXO-101**

A drug used to treat adults and children with certain types of solid tumors that have spread or cannot be removed by surgery and have the NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Trk inhibitor LOXO-101 blocks the TRK protein, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called larotrectinib sulfate, LOXO-101, and Vitrakvi.

### **Trodelvy**

A drug used to treat adults with certain types of breast cancer or urothelial cancer (a type of cancer in the bladder or urinary tract) that have already been treated with other therapy. It is also being studied in the treatment of other types of cancer. Trodelvy contains a monoclonal antibody called sacituzumab that binds to a protein called TROP2, which is found on some cancer cells. It also contains an anticancer drug called SN-38, which may help kill cancer cells. Trodelvy is a type of antibody-drug conjugate. Also called sacituzumab govitecan.

### **Truqap**

A drug used with fulvestrant to treat adults with hormone-receptor positive, HER2-negative breast cancer that has spread and has an abnormal PIK3CA, AKT1, or PTEN gene. It is used in patients whose cancer came back or got worse during or after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. Truqap blocks a protein called AKT, which is involved in cell signaling, cell growth, and cell survival. Blocking this protein may help keep cancer cells from growing and may kill them. Truqap is a type of kinase inhibitor. Also called capivasertib.

### **Truxima**

A drug that contains the active ingredient rituximab and is used alone or with other drugs to treat adults with certain types of B-cell non-Hodgkin lymphoma or chronic lymphocytic leukemia that are CD20 positive. It is also being studied in the treatment of other conditions and types of cancer. Truxima binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Truxima is a type of monoclonal antibody.

### **Tukysa**

A drug used with other drugs to treat adults with certain types of HER2-positive breast cancer or certain types of HER2-positive colorectal cancer that do not have a mutation (change) in the RAS gene. It is also being studied in the treatment of other types of cancer. Tukysa blocks a protein called HER2, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called tucatinib.

### **Turalio**

A drug used to treat adults with tenosynovial giant cell tumor (a rare, usually benign tumor that affects the joints). It is used in patients who have a severe form of the disease that is not likely to get better with surgery. It is also being studied in the treatment of some types of cancer and other conditions. Turalio blocks certain proteins, which may help keep tumor cells from growing and

spreading. It is a type of tyrosine kinase inhibitor. Also called pexidartinib hydrochloride.

### **Turcot syndrome**

A rare, inherited disorder in which polyps (abnormal growths of tissue) form on the inside walls of the colon and rectum, and tumors form in the brain. There are two types of Turcot syndrome, which are caused by mutations (changes) in different genes. People with Turcot syndrome have a higher-than-normal risk of colorectal cancer and brain cancer, especially glioblastoma and medulloblastoma.

### **Turkish rhubarb**

The root of this plant has been used in some cultures to treat certain medical problems. It may have anti-inflammatory and anticancer effects. The scientific name is *Rheum palmatum* or *Rheum officinale*. Also called Chinese rhubarb, da-huang, Indian rhubarb, and rhubarb.

### **Turner syndrome**

A genetic condition that occurs in females who have a missing or abnormal X chromosome (sex chromosome). Turner syndrome is marked by a shorter-than-average height, ovaries that do not function normally, and infertility. Other signs and symptoms may include extra folds of skin on the neck, a low hairline at the back of the neck, swelling of the hands and feet, and heart, kidney, bone, and hearing problems. Turner syndrome is present at birth but its signs and symptoms may occur slowly over time. Having Turner syndrome increases the risk of germ cell tumors in the ovaries.

### **Tykerb**

A drug used with capecitabine or letrozole to treat certain types of HER2-positive breast cancer that are advanced or have spread. It is also being studied in the treatment of other types of cancer. Tykerb blocks EGFR and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called GW572016 and lapatinib ditosylate.

### **UCN-01**

An anticancer drug that belongs to the family of drugs called staurosporine analogs.

### **UFT**

A substance being studied in the treatment of some types of cancer. It is a combination of tegafur and uracil. The tegafur is taken up by the cancer cells and breaks down into 5-FU, a substance that kills tumor cells. The uracil causes higher amounts of 5-FU to stay inside the cells and kill them. UFT is a type of antimetabolite. Also called Ftorafur and tegafur-uracil.

### **UGT1A1**

A substance that is being studied as a treatment for cancer. It is an enzyme produced by the liver and intestine.

### **USB1 gene**

A gene that makes an enzyme involved in protecting a certain type of RNA from damage, which helps the RNA perform its role in making proteins. Mutations (changes) in the USB1 gene have been found in Rothmund-Thomson syndrome, which increases the risk of skin cancer. Mutations in this gene have also been found in dyskeratosis congenita (DKC), which causes abnormal changes in the

skin and nails and white patches inside the mouth. People with DKC have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **USPSTF**

A volunteer group of health experts who review published research and make recommendations about prevention health care methods such as screening tests, counseling, immunizations, and medicines. Before making a recommendation, the USPSTF looks at the strength (scientific quality and correctness) of the evidence found in the research and the benefits and harms of each method being reviewed. Recommendations are made to help health care providers and patients decide whether a specific method is right for a patient's needs. The recommendations may change as new research studies are published. Also called United States Preventive Services Task Force.

## **UTI**

A condition in which bacteria invade and grow in the urinary tract (the kidneys, ureters, bladder, and urethra). Most UTIs occur in the bladder or urethra. Signs and symptoms may include pain or burning during urination, cloudy or bad-smelling urine, blood in the urine, feeling a need to urinate often or right away, pain in the back or lower abdomen, fever, chills, and fatigue. Certain conditions, such as diabetes, hormone changes, kidney stones, an enlarged prostate, or a spinal cord injury, may increase the risk of a UTI. Other risk factors include radiation therapy or surgery to the pelvis, taking certain types of medicines (such as anticancer drugs), or using a catheter to empty the bladder. UTIs are common, especially in women. Also called urinary tract infection.

## **UV radiation**

Invisible rays that are part of the energy that comes from the sun. UV radiation that reaches the Earth's surface is made up of two types of rays, called UVA and UVB. UV radiation also comes from sun lamps and tanning beds. It can cause skin damage, premature aging, melanoma, and other types of skin cancer. It can also cause problems with the eyes and the immune system. Skin specialists recommend that people use sunscreens that protect the skin from both kinds of UV radiation. In medicine, UV radiation also comes from special lamps or a laser and is used to treat certain skin conditions such as psoriasis, vitiligo, and skin tumors of cutaneous T-cell lymphoma. Also called ultraviolet radiation.

## **UVA radiation**

Invisible rays that are part of the energy that comes from the sun. UVA radiation also comes from sun lamps and tanning beds. UVA radiation may cause premature aging of the skin and skin cancer. It may also cause problems with the eyes and the immune system. Skin specialists recommend that people use sunscreens that protect the skin from ultraviolet radiation. In medicine, UVA radiation also comes from special lamps or a laser and is used to treat certain skin conditions such as psoriasis, vitiligo, and skin tumors of cutaneous T-cell lymphoma. Also called ultraviolet A radiation.

## **UVB radiation**

Invisible rays that are part of the energy that comes from the sun. UVB radiation causes sunburn, darkening and thickening of the outer layer of the skin, and melanoma and other types of skin cancer. It may also cause problems with the eyes and the immune system. Skin specialists recommend that people use sunscreens that protect the skin from ultraviolet radiation. In medicine, UVB



radiation also comes from special lamps or a laser and is used to treat certain skin conditions such as psoriasis, vitiligo, and skin tumors of cutaneous T-cell lymphoma. Also called ultraviolet B radiation.

### **UVC radiation**

Invisible rays that are part of the energy that comes from the sun. Most UVC radiation from the sun is blocked from the Earth's surface by the ozone layer. In medicine, UVC radiation may also come from special lamps or a laser and is used to kill germs or to help heal wounds. It is also used to treat certain skin conditions such as psoriasis, vitiligo, and skin nodules of cutaneous T-cell lymphoma. Also called ultraviolet C radiation.

### **Udenyca**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Udenyca helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called filgrastim-SD/01, Fulphila, Neulasta, Nyvepria, pegfilgrastim, and Ziextenzo.

### **Ulmus fulva**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called gray elm, Indian elm, red elm, slippery elm, sweet elm, and *Ulmus rubra*.

### **Ulmus rubra**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called gray elm, Indian elm, red elm, slippery elm, sweet elm, and *Ulmus fulva*.

### **Ultomiris**

A drug used to treat adults with paroxysmal nocturnal hemoglobinuria (a rare red blood cell disorder) and adults and children aged 1 month and older with atypical hemolytic uremic syndrome (a very rare disorder in which tiny blood clots form in small blood vessels). It is also being studied in the treatment of other conditions. Ultomiris binds to an immune system protein called C5. This may help keep red blood cells from breaking down and blood clots from forming. Ultomiris is a type of monoclonal antibody. Also called ravulizumab.

### **Ultram**

A drug used to treat moderate to severe pain in adults. It binds to opioid receptors in the central nervous system. Ultram is a type of analgesic agent and a type of opioid. Also called tramadol hydrochloride.

### **United States Preventive Services Task Force**

A volunteer group of health experts who review published research and make recommendations about prevention health care methods such as screening tests, counseling, immunizations, and medicines. Before making a recommendation, the United States Preventive Services Task Force looks at the strength (scientific quality and correctness) of the evidence found in the research and the benefits and harms of each method being reviewed. Recommendations are made to help health care providers and patients decide whether a specific method is right for a patient's needs. The recommendations may change as new research studies are published. Also called USPSTF.

## **Unituxin**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF), aldesleukin (IL-2), and 13-cis-retinoic acid to treat children with high-risk neuroblastoma. It is used in patients whose disease has gotten better with other anticancer treatment. Unituxin binds to a substance called GD2, which is found on some types of cancer cells. Unituxin may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Ch14.18, dinutuximab, MOAB Ch14.18, and monoclonal antibody Ch14.18.

## **VAC**

An abbreviation for a chemotherapy combination used to treat rhabdomyosarcoma in children. It is also used to treat certain types of ovarian germ cell tumors. VAC includes the drugs vincristine sulfate, dactinomycin (actinomycin-D), and cyclophosphamide. Also called VAC regimen.

## **VAC regimen**

An abbreviation for a chemotherapy combination used to treat rhabdomyosarcoma in children. It is also used to treat certain types of ovarian germ cell tumors. VAC regimen includes the drugs vincristine sulfate, dactinomycin (actinomycin-D), and cyclophosphamide. Also called VAC.

## **VAC-IE**

An abbreviation for a chemotherapy combination used to treat Ewing sarcoma and other sarcomas, such as mesenchymal chondrosarcoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and cyclophosphamide, followed by ifosfamide and etoposide phosphate. Also called VAC-IE regimen, VAdriaC-IE, and VAdriaC-IE regimen.

## **VAC-IE regimen**

An abbreviation for a chemotherapy combination used to treat Ewing sarcoma and other sarcomas, such as mesenchymal chondrosarcoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and cyclophosphamide, followed by ifosfamide and etoposide phosphate. Also called VAC-IE, VAdriaC-IE, and VAdriaC-IE regimen.

## **VACB**

A procedure in which a small sample of tissue is removed from the breast. An imaging device is used to guide a hollow probe connected to a vacuum device. The probe is inserted through a tiny cut made in numbed skin on the breast. The tissue sample is removed using gentle vacuum suction and a small rotating knife within the probe. Then the tissue sample is studied under a microscope to check for signs of disease. This procedure causes very little scarring and no stitches are needed. Also called vacuum-assisted biopsy and vacuum-assisted core biopsy.

## **VAIN**

Abnormal cells are found in tissue lining the vagina (birth canal). These abnormal cells may become cancer and spread into the vaginal wall. Also called vaginal intraepithelial neoplasia.

## **VAMP**

An abbreviation for a chemotherapy combination used with radiation therapy to treat low-risk childhood Hodgkin lymphoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), methotrexate, and prednisone. Also called VAMP regimen.

### **VAMP regimen**

An abbreviation for a chemotherapy combination used with radiation therapy to treat low-risk childhood Hodgkin lymphoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), methotrexate, and prednisone. Also called VAMP.

### **VAS**

A tool used to help a person rate the intensity of certain sensations and feelings, such as pain. The visual analog scale for pain is a straight line with one end meaning no pain and the other end meaning the worst pain imaginable. A patient marks a point on the line that matches the amount of pain he or she feels. It may be used to help choose the right dose of pain medicine. Also called visual analog scale.

### **VAdriaC**

An abbreviation for a chemotherapy combination used to treat Ewing sarcoma and other sarcomas, such as mesenchymal chondrosarcoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and cyclophosphamide. Also called VAdriaC regimen.

### **VAdriaC regimen**

An abbreviation for a chemotherapy combination used to treat Ewing sarcoma and other sarcomas, such as mesenchymal chondrosarcoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and cyclophosphamide. Also called VAdriaC.

### **VAdriaC-IE**

An abbreviation for a chemotherapy combination used to treat Ewing sarcoma and other sarcomas, such as mesenchymal chondrosarcoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and cyclophosphamide, followed by ifosfamide and etoposide phosphate. Also called VAC-IE, VAC-IE regimen, and VAdriaC-IE regimen.

### **VAdriaC-IE regimen**

An abbreviation for a chemotherapy combination used to treat Ewing sarcoma and other sarcomas, such as mesenchymal chondrosarcoma. It includes the drugs vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and cyclophosphamide, followed by ifosfamide and etoposide phosphate. Also called VAC-IE, VAC-IE regimen, and VAdriaC-IE.

### **VB4-845**

A substance being studied in the treatment of certain types of head and neck cancer. VB4-845 is made by linking a monoclonal antibody fragment to a toxic protein that may kill cancer cells. It binds to EpCAM (a protein on the surface of epithelial cells and some types of cancer cells). Also called anti-EpCAM-Pseudomonas-exotoxin fusion protein and Proxinium.

### **VEGF**

A substance made by cells that stimulates new blood vessel formation. Also called vascular endothelial growth factor.

### **VEGF Trap**

A drug used with other drugs to treat colorectal cancer that has spread to other parts of the body and has not gotten better with other chemotherapy. It is also being studied in the treatment of other types of cancer. VEGF Trap blocks a

protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent. Also called vascular endothelial growth factor trap, Zaltrap, and ziv-aflibercept.

### **VEGF-AS**

A substance that has been studied in the treatment of cancer. It binds to the RNA for a protein called vascular endothelial growth factor (VEGF) that stimulates the growth of new blood vessels. VEGF-AS blocks the cell's ability to make VEGF, which may kill tumors that need new blood vessels to grow. It is a type of antisense oligonucleotide and a type of gene expression inhibitor. Also called vascular endothelial growth factor-antisense oligonucleotide.

### **VEGFR tyrosine kinase inhibitor**

A substance that blocks an enzyme needed to form blood vessels. Also called vascular endothelial growth factor receptor tyrosine kinase inhibitor.

### **VEGFR-2 inhibitor CT-322**

A substance being studied in the treatment of cancer. VEGFR-2 inhibitor CT-322 may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of vascular endothelial growth factor receptor-2 (VEGFR-2) inhibitor and a type of antiangiogenesis agent. Also called Angiocept and CT-322.

### **VHL disease**

A rare, inherited disorder that causes tumors and cysts to grow in certain parts of the body, including the brain, spinal cord, eyes, inner ear, adrenal glands, pancreas, kidney, and reproductive tract. The tumors are usually benign (not cancer), but some may be malignant (cancer). Patients with VHL disease have an increased risk of certain types of cancer, especially kidney cancer and pancreatic cancer. The signs and symptoms of VHL disease usually do not appear until young adulthood. It is caused by a mutation (change) in the VHL gene. Also called VHL syndrome, von Hippel-Lindau disease, and von Hippel-Lindau syndrome.

### **VHL gene**

A gene that makes a protein that helps control cell growth, cell division, and other important cell functions. Mutated (changed) forms of the VHL gene may increase the growth of cells, including abnormal cells. This mutated gene has been found in nearly all patients with an inherited condition called VHL syndrome. VHL syndrome can cause kidney cancer and tumors of the brain, spinal cord, eye, ear, adrenal glands, pancreas, or other parts of the body. The VHL gene is a type of tumor suppressor gene. Also called von Hippel-Lindau gene.

### **VHL syndrome**

A rare, inherited disorder that causes tumors and cysts to grow in certain parts of the body, including the brain, spinal cord, eyes, inner ear, adrenal glands, pancreas, kidney, and reproductive tract. The tumors are usually benign (not cancer), but some may be malignant (cancer). Patients with VHL syndrome have an increased risk of certain types of cancer, especially kidney cancer and pancreatic cancer. The signs and symptoms of VHL syndrome usually do not appear until young adulthood. It is caused by a mutation (change) in the VHL gene. Also called VHL disease, von Hippel-Lindau disease, and von Hippel-Lindau syndrome.

## **VIN**

Abnormal cells are found on the surface of the vulvar skin. These abnormal cells may become cancer and spread into nearby tissue. Also called vulvar carcinoma in situ and vulvar intraepithelial neoplasia.

## **VIP**

An abbreviation for a chemotherapy combination used to treat advanced testicular cancer. It is often used in patients who cannot receive bleomycin. It includes the drugs etoposide (VePesid), ifosfamide, and cisplatin (Platinol). Also called VIP regimen.

## **VIP hormone**

A hormone found in the pancreas, intestine, and central nervous system. It has many actions in the body, such as helping to control the secretion of water, salts, enzymes, and gastric acid during digestion. It also causes smooth muscles in the digestive tract, the heart, and the blood vessels to relax. It also has effects on the immune system and the central nervous system. Certain tumors in the pancreas make large amounts of VIP hormone. Also called vasoactive intestinal peptide.

## **VIP regimen**

An abbreviation for a chemotherapy combination used to treat advanced testicular cancer. It is often used in patients who cannot receive bleomycin. It includes the drugs etoposide (VePesid), ifosfamide, and cisplatin (Platinol). Also called VIP.

## **VIP-producing neuroendocrine tumor**

A very rare tumor that usually forms in the islet cells of the pancreas and makes the hormone vasoactive intestinal peptide (VIP). VIP helps control the secretion of water, salts, enzymes, and gastric acid during digestion and relaxes certain muscles in the digestive tract. Signs and symptoms of VIP-producing neuroendocrine tumor include chronic watery diarrhea, dehydration, abdominal pain, nausea, flushing or redness in the face, weight loss, and very low levels of potassium in the blood. Most VIP-producing neuroendocrine tumors are cancer and have often spread to other parts of the body when they are found. VIP-producing neuroendocrine tumor is a type of pancreatic neuroendocrine tumor. Also called VIP-secreting tumor and VIPoma.

## **VIP-secreting tumor**

A very rare tumor that usually forms in the islet cells of the pancreas and makes the hormone vasoactive intestinal peptide (VIP). VIP helps control the secretion of water, salts, enzymes, and gastric acid during digestion and relaxes certain muscles in the digestive tract. Signs and symptoms of VIP-secreting tumor include chronic watery diarrhea, dehydration, abdominal pain, nausea, flushing or redness in the face, weight loss, and very low levels of potassium in the blood. Most VIP-secreting tumors are cancer and have often spread to other parts of the body when they are found. VIP-secreting tumor is a type of pancreatic neuroendocrine tumor. Also called VIP-producing neuroendocrine tumor and VIPoma.

## **VIPoma**

A very rare tumor that usually forms in the islet cells of the pancreas and makes the hormone vasoactive intestinal peptide (VIP). VIP helps control the secretion of water, salts, enzymes, and gastric acid during digestion and relaxes certain muscles in the digestive tract. Signs and symptoms of VIPoma include chronic watery diarrhea, dehydration, abdominal pain, nausea, flushing or redness in the

face, weight loss, and very low levels of potassium in the blood. Most VIPomas are cancer and have often spread to other parts of the body when they are found. VIPoma is a type of pancreatic neuroendocrine tumor. Also called VIP-producing neuroendocrine tumor and VIP-secreting tumor.

### **VLNT**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph nodes or vessels become damaged or blocked. During a VLNT, healthy tissue containing lymph nodes and vessels is taken from one part of the body, such as the neck, abdomen, or groin, and moved to the area with the damaged lymph nodes, usually in a person's arm or leg. This may cause the lymph nodes and vessels in the healthy tissue to grow and help improve the flow of lymph in that area. Also called lymphovenous transplant and vascularized lymph node transfer.

### **VNP20009**

A genetically modified Salmonella bacterium that is injected into the tumor. It is being studied for its ability to shrink solid tumors.

### **VNP40101M**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called alkylating agents.

### **VP-16**

The active ingredient in a drug used with other drugs to treat small cell lung cancer and certain types of testicular cancer. It is also being studied in the treatment of other types of cancer. VP-16 blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of podophyllotoxin derivative and a type of topoisomerase inhibitor. Also called etoposide.

### **VUS**

A change in a gene's DNA sequence that has an unknown effect on a person's health. There is usually not enough information about a VUS to know whether it increases a person's risk of developing a disease, such as cancer. Also called unclassified variant, variant of uncertain significance, and variant of unknown significance.

### **VX 853**

A drug being studied to make cancer cells less resistant to the effects of chemotherapy.

### **VX-710**

A drug being studied to make cancer cells less resistant to the effects of chemotherapy.

### **Valchlor**

A drug used on the skin to treat stage I mycosis fungoides (a type of cutaneous T-cell lymphoma) in patients who have already been treated with other therapy. It is also being studied in the treatment of other types of cancer. Valchlor damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called mechlorethamine hydrochloride and mustine.



### **Valeriana officinalis**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, garden valerian, Indian valerian, Mexican valerian, Pacific valerian, valerian, and Valeriana radix.

### **Valeriana radix**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, garden valerian, Indian valerian, Mexican valerian, Pacific valerian, valerian, and Valeriana officinalis.

### **Valium**

A drug used to treat mild to moderate anxiety and tension and to relax muscles. It is a type of benzodiazepine. Also called diazepam.

### **Valstar**

A drug used to treat bladder carcinoma in situ that did not get better after treatment with bacillus Calmette-Guerin (BCG). It is used in patients who cannot have surgery right away to remove all or part of the bladder. Valstar is given as a solution through a catheter that is placed into the bladder. It blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. Valstar is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called AD 32 and valrubicin.

### **Vanflyta**

A drug used with certain chemotherapy drugs and then alone as maintenance therapy to treat adults with newly diagnosed acute myeloid leukemia that has a certain mutation in the FLT3 gene. It is also being studied in the treatment of other types of cancer. Vanflyta blocks FLT3 and other proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called quizartinib dihydrochloride.

### **Vantas**

A drug used as palliative therapy for advanced prostate cancer. Vantas keeps the testicles from making the male hormone testosterone by blocking other hormones that are needed to make it. This may slow or stop the growth of cancer cells that need testosterone to grow. Vantas contains the active ingredient histrelin acetate. It is a type of LHRH (or GnRH) agonist and a type of androgen deprivation therapy that is reversible.

### **Varubi**

A drug used with other drugs in adults to prevent nausea and vomiting caused by chemotherapy. Varubi blocks the action of a certain chemical in the central nervous system that may trigger nausea and vomiting. Blocking this chemical may lessen nausea and vomiting. Varubi is a type of antiemetic and a type of substance P/neurokinin 1 receptor antagonist. Also called rolapitant hydrochloride.

### **VeIP**

An abbreviation for a chemotherapy combination used to treat advanced ovarian and testicular germ cell cancers. It includes the drugs vinblastine sulfate (Velban), ifosfamide (Ifex), and cisplatin (Platinol). Also called VeIP regimen.

### **VelP regimen**

An abbreviation for a chemotherapy combination used to treat advanced ovarian and testicular germ cell cancers. It includes the drugs vinblastine sulfate (Velban), ifosfamide (Ifex), and cisplatin (Platinol). Also called VelP.

### **Vectibix**

A drug used alone or with other drugs to treat certain types of colorectal cancer that have spread to other parts of the body. It is used in patients whose cancer has not already been treated or whose cancer got worse after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Vectibix binds to a protein called epidermal growth factor receptor (EGFR), which is found on some normal cells and some types of cancer cells. Blocking this protein may help keep cancer cells from growing. Vectibix is a type of monoclonal antibody. Also called ABX-EGF and panitumumab.

### **Velban**

A drug that contains the active ingredient vinblastine sulfate, which is used to treat many types of cancer. Velban brand has been taken off the market and is no longer available.

### **Velcade**

A drug used to treat adults with multiple myeloma or mantle cell lymphoma. It is also being studied in the treatment of other types of cancer. Velcade blocks the action of enzymes called proteasomes, which may help keep cancer cells from growing and may kill them. It is a type of proteasome inhibitor. Also called bortezomib and PS-341.

### **Venclexta**

A drug used alone or with other drugs to treat certain adults with acute myeloid leukemia that is newly diagnosed and adults with chronic lymphocytic leukemia or small lymphocytic lymphoma. It is also being studied in the treatment of other types of cancer. Venclexta binds to a protein called BCL2, which is found on some types of cancer cells. Blocking this protein may help kill cancer cells and may make them more sensitive to anticancer drugs. Venclexta is a type of BCL2 inhibitor. Also called venetoclax.

### **Versed**

A drug used to treat anxiety and tension and to relax muscles. Versed is also being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of benzodiazepine. Also called midazolam hydrochloride.

### **Verzenio**

A drug used alone or with other drugs to treat adults with certain types of hormone-receptor positive, HER2-negative breast cancer. It is also being studied in the treatment of other types of cancer. Verzenio blocks certain proteins, which may help keep cancer cells from growing. It is a type of cyclin-dependent kinase inhibitor. Also called abemaciclib.

### **Vesanoid**

An oral preparation of tretinoin that is used to treat acute promyelocytic leukemia, usually together with other drugs. It is being studied in the treatment and prevention of other types of cancer. Tretinoin is a form of vitamin A.

### **Viagra**

A drug used to treat erectile dysfunction. Viagra relaxes the smooth muscle of the penis to allow increased blood flow and erection. It is a type of phosphodiesterase inhibitor. Also called sildenafil.

### **Vidaza**

A drug that contains the active ingredient azacitidine and is used to treat adults with certain types of myelodysplastic syndromes and children aged 1 month and older with newly diagnosed juvenile myelomonocytic leukemia. It is also being studied in the treatment of other types of cancer. Vidaza stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **Vioxx**

A drug that was being used for pain relief and was being studied for its ability to prevent cancer and to prevent the growth of new blood vessels that tumors need to grow. It is a type of nonsteroidal anti-inflammatory drug and a type of antiangiogenesis agent. Vioxx was taken off the market in the U.S. because of safety concerns. Also called rofecoxib.

### **Virulizin**

A substance that activates some types of immune system cells, and is being studied as a treatment for cancer. It belongs to the family of drugs called biological therapy agents.

### **Vistogard**

A drug used in the emergency treatment of adults and children who receive too much fluorouracil or capecitabine or who have heart or central nervous system toxicity or other serious side effects that occur within 4 days of ending treatment with these drugs. Vistogard may help protect healthy cells from some of the side effects caused by certain anticancer drugs. It is a type of chemoprotective agent and a type of pyrimidine analog. Also called PN401, triacetyluridine, and uridine triacetate.

### **Vitex**

An extract made from the fruit of the chaste tree (*Vitex agnus-castus*) found in parts of Asia and Europe. It is claimed to treat infertility and to lessen symptoms that may occur before or during a woman's menstrual period, such as headaches and irregular bleeding. Vitex may affect levels of reproductive hormones in the blood. It is a type of phytochemistry. Also called chaste tree berry and monk's pepper.

### **Vitrakvi**

A drug used to treat adults and children with certain types of solid tumors that have spread or cannot be removed by surgery and have the NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Vitrakvi blocks the TRK protein, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called larotrectinib sulfate, LOXO-101, and Trk inhibitor LOXO-101.

### **Vivitrol**

A drug that blocks the action of opiates (drugs used to treat pain). It may be used in the treatment of intravenous opiate addiction or alcohol dependence. Vivitrol is also being studied in the treatment of breast cancer. It may block the effects of the hormone estrogen, which causes some breast cancer cells to grow, or block

the blood flow to tumors. It is a type of opiate antagonist. Also called naltrexone hydrochloride and ReVia.

### **Vizimpro**

A drug used to treat non-small cell lung cancer that has spread, has not already been treated, and has certain mutations (changes) in the EGFR gene. It is also being studied in the treatment of other types of cancer. Vizimpro blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called dacomitinib and PF-00299804.

### **Voltaren**

A drug that is used to treat the symptoms of rheumatoid arthritis and is being studied in the prevention and treatment of some types of skin cancer. It blocks substances that cause inflammation and pain. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of cyclooxygenase inhibitor, a type of nonsteroidal anti-inflammatory drug (NSAID), and a type of antiangiogenesis agent. Also called diclofenac sodium.

### **Voltaren gel**

The gel form of a drug that is used to treat the symptoms of rheumatoid arthritis and is being studied in the prevention and treatment of some types of skin cancer. It blocks substances that cause inflammation and pain. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of cyclooxygenase inhibitor, a type of nonsteroidal anti-inflammatory drug (NSAID), and a type of antiangiogenesis agent. Also called diclofenac sodium gel.

### **Vonjo**

A drug used to treat adults with intermediate-risk or high-risk myelofibrosis (MF), including primary MF, post-polycythemia vera MF, and post-essential thrombocythemia MF. It is used in patients who have a very low blood platelet count. It is also being studied in the treatment of other conditions and some types of cancer. Vonjo blocks JAK2 and other proteins, which may help keep abnormal blood cells or cancer cells from growing. It is a type of kinase inhibitor. Also called pacritinib citrate.

### **Voranigo**

A drug used to treat adults and children aged 12 years and older with grade 2 astrocytoma or oligodendroglioma (types of brain tumors) that has an abnormal IDH1 or IDH2 gene. It is used in patients who had a biopsy or surgery to remove the tumor. It is also being studied in the treatment of other types of cancer. Voranigo blocks the proteins made by the mutated IDH1 and IDH2 genes, which may help keep cancer cells from growing. It is a type of enzyme inhibitor and a type of targeted therapy. Also called vorasidenib citrate.

### **Voraxaze**

A drug used to treat toxic levels of the anticancer drug methotrexate in the blood of adults and children with kidney problems. Voraxaze is a bacterial enzyme that helps break down and remove methotrexate from the body. It may also help certain drugs kill cancer cells. Voraxaze is a type of chemoprotective agent and a type of prodrug activator. Also called carboxypeptidase-G2 and glucarpidase.

### **Votrient**

A drug used to treat adults with advanced renal cell carcinoma (a type of kidney cancer) or advanced soft tissue sarcoma that has already been treated with other anticancer drugs. It is also being studied in the treatment of other types of

cancer. Votrient blocks certain proteins, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called GW786034 and pazopanib hydrochloride.

### **Vyxeos**

A form of the anticancer drugs daunorubicin hydrochloride and cytarabine that is contained inside very tiny, fat-like particles and is used to treat adults with certain types of newly diagnosed acute myeloid leukemia. Vyxeos may have fewer side effects and work better than other forms of these drugs. It is also being studied in the treatment of other types of cancer. Vyxeos is a type of anthracycline antibiotic, a type of topoisomerase inhibitor, and a type of antimetabolite. Also called daunorubicin hydrochloride and cytarabine liposome.

### **WAGR syndrome**

A rare, genetic disorder that is present at birth and has two or more of the following features: Wilms tumor (a type of kidney cancer), Aniridia (little or no iris, which is the colored part of the eye), defects in the Genitourinary tract (organs of the reproductive and urinary systems), and a Range of developmental delays. This syndrome occurs when part of chromosome 11 is missing.

### **WBC**

A type of blood cell that is made in the bone marrow and found in the blood and lymph tissue. WBCs are part of the body's immune system. They help the body fight infection and other diseases. Types of WBCs are granulocytes (neutrophils, eosinophils, and basophils), monocytes, and lymphocytes (T cells and B cells). Checking the number of WBCs in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as infection, inflammation, allergies, and leukemia. Also called leukocyte and white blood cell.

### **WBRT**

A type of external radiation therapy used to treat patients who have cancer in the brain. It is often used to treat patients whose cancer has spread to the brain, or who have more than one tumor or tumors that cannot be removed by surgery. Radiation is given to the whole brain over a period of many weeks. Also called whole-brain radiation therapy and whole-brain radiotherapy.

### **WEE1 protein**

A protein that is found inside the nucleus of a cell and plays a key role in controlling how cells grow and divide. The WEE1 protein may be found in higher-than-normal amounts in some types of cancer cells. This may cause cancer cells to grow and spread. Drugs that block the WEE1 protein are being studied in the treatment of some types of cancer. The WEE1 protein is a type of tyrosine kinase.

### **WES**

A laboratory method that is used to learn the exact order of all the building blocks that make up the pieces of a person's DNA that contain information for making proteins. These pieces, called exons, are thought to make up about 1% of a person's genome (complete set of DNA). WES is used to find mutations (changes) in genes that may cause diseases, such as cancer. Also called whole exome sequencing and WXS.

## **WGS**

A laboratory method that is used to learn the exact order of all of the building blocks (nucleotides) that make up a person's genome (complete set of DNA). WGS is used to find changes that may cause diseases, such as cancer. Also called whole genome sequencing.

## **WHO**

A part of the United Nations that deals with major health issues around the world. The WHO sets standards for disease control, health care, and medicines; conducts education and research programs; and publishes scientific papers and reports. A major goal is to improve access to health care for people in developing countries and in groups who do not get good health care. The headquarters are located in Geneva, Switzerland. Also called World Health Organization.

## **WOC nurse**

A registered nurse who has additional education and training in how to care for people who have a wound, an ostomy (an opening made by surgery, from an area inside the body to the outside), or problems with continence (ability to control the flow of urine or the passage of stool). Also called wound, ostomy, and continence nurse.

## **WRAP53 gene**

A gene that makes a protein involved in the function of telomeres (the ends of chromosomes), which help keep chromosomes from sticking together or breaking down. Mutations (changes) in the WRAP53 gene may cause damage to chromosomes and DNA, which may lead to abnormal cell growth. WRAP53 gene mutations have been found in a rare, inherited condition called dyskeratosis congenita, which causes abnormal changes in the skin and nails and white patches inside the mouth. People with this condition have an increased risk of bone marrow failure (a condition in which the bone marrow does not make enough blood cells), myelodysplastic syndrome, pulmonary fibrosis (scarring of the lungs), and certain types of cancer.

## **WRN gene**

A gene that makes a protein involved in unwinding DNA and repairing damaged DNA. Mutations (changes) in the WRN gene may keep cells from repairing their DNA, which may cause abnormal cells, including cancer cells, to grow. WRN gene mutations have been found in many types of cancer and in an inherited condition called Werner syndrome, which increases the risk of certain types of cancer.

## **WS**

A rare, inherited disorder marked by rapid aging that begins in early adolescence or young adulthood and an increased risk of cancer. Signs and symptoms include shorter-than-average height, thinning and graying hair, skin changes, thin arms and legs, voice changes, and unusual facial features. This disorder can also lead to health problems, such as cataracts, skin ulcers, severe hardening of the arteries, diabetes, osteoporosis, and fertility problems. People with WS have an increased risk of cancer, especially thyroid cancer, skin cancer, and sarcoma (a type of bone or soft tissue cancer). WS is caused by a mutation (change) in the WRN gene, which makes a protein involved in DNA repair. Also called adult progeria and Werner syndrome.



### **WX-671**

A substance being studied in the treatment of several types of cancer. It blocks the action of certain enzymes, and it may help keep cancer cells from growing and spreading. It is a type of serine protease inhibitor.

### **WXS**

A laboratory method that is used to learn the exact order of all the building blocks that make up the pieces of a person's DNA that contain information for making proteins. These pieces, called exons, are thought to make up about 1% of a person's genome (complete set of DNA). WXS is used to find mutations (changes) in genes that may cause diseases, such as cancer. Also called WES and whole exome sequencing.

### **Waldenström macroglobulinemia**

An indolent (slow-growing) type of non-Hodgkin lymphoma marked by abnormal levels of IgM antibodies in the blood and an enlarged liver, spleen, or lymph nodes. Also called lymphoplasmacytic lymphoma.

### **Waldeyer's ring**

A ring of lymphoid tissue found in the throat. The Waldeyer's ring is made up of the tonsils, adenoids, and other lymphoid tissue. It contains lymphocytes (a type of immune cell) that help the body fight infection and disease.

### **Welireg**

A drug used to treat adults with renal cell carcinoma (a type of kidney cancer) that is advanced and adults with certain cancers linked to von Hippel-Lindau disease that do not need surgery right away, including renal cell carcinoma, central nervous system hemangioblastoma (a type of blood vessel tumor), and pancreatic neuroendocrine tumor. It is also being studied in the treatment of other types of cancer. Welireg blocks a certain protein, which may help keep tumor cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Also called belzutifan.

### **Wellbutrin**

A drug used to treat depression and certain other disorders. It is also used to help people stop smoking. Wellbutrin increases the levels of the chemicals dopamine, serotonin, and norepinephrine in the brain. This helps improve mood and can lessen cravings for nicotine. It is a type of antidepressant and a type of nicotine receptor antagonist. Also called bupropion hydrochloride and Zyban.

### **Wermer syndrome**

A rare, inherited disorder that affects the endocrine glands and can cause tumors in the parathyroid and pituitary glands and the pancreas. These tumors are usually benign (not cancer). They cause the glands to secrete high levels of hormones, which can lead to other medical problems, such as kidney stones, fertility problems, and severe ulcers. In some cases, tumors inside the pancreas can become malignant (cancer). Also called MEN1 syndrome, multiple endocrine adenomatosis, and multiple endocrine neoplasia type 1 syndrome.

### **Werner syndrome**

A rare, inherited disorder marked by rapid aging that begins in early adolescence or young adulthood and an increased risk of cancer. Signs and symptoms include shorter-than-average height, thinning and graying hair, skin changes, thin arms and legs, voice changes, and unusual facial features. This disorder can also lead to health problems, such as cataracts, skin ulcers, severe hardening of

the arteries, diabetes, osteoporosis, and fertility problems. People with Werner syndrome have an increased risk of cancer, especially thyroid cancer, skin cancer, and sarcoma (a type of bone or soft tissue cancer). Werner syndrome is caused by a mutation (change) in the WRN gene, which makes a protein involved in DNA repair. Also called adult progeria and WS.

### **Western medicine**

A system in which medical doctors and other health care professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called allopathic medicine, biomedicine, conventional medicine, mainstream medicine, and orthodox medicine.

### **Whipple procedure**

A type of surgery used to treat pancreatic cancer. The head of the pancreas, the duodenum, a portion of the stomach, and other nearby tissues are removed. Also called pancreatoduodenectomy.

### **Whitmore-Jewett staging system**

A staging system for prostate cancer that uses ABCD. "A" and "B" refer to cancer that is confined to the prostate. "C" refers to cancer that has grown out of the prostate but has not spread to lymph nodes or other places in the body. "D" refers to cancer that has spread to lymph nodes or to other places in the body. Also called ABCD rating and Jewett staging system.

### **Wilms tumor**

A disease in which malignant (cancer) cells are found in the kidney, and may spread to the lungs, liver, or nearby lymph nodes. Wilms tumor usually occurs in children younger than 5 years old.

### **Wilson disease**

A rare, inherited disorder in which too much copper builds up in the body. The extra copper is stored in the body's tissues and organs, especially in the liver, brain, and eyes. This can cause liver disease, central nervous system (brain and spinal cord) problems, and mental problems. Signs and symptoms of Wilson disease include yellowing of the skin and the whites of the eyes, a gold or brown ring around the colored part of the eyes, swelling in the abdomen and legs, fatigue, loss of appetite, problems with speech and swallowing, uncontrolled movements or muscle stiffness, anxiety, depression, and mood swings. Wilson disease is caused by mutations (changes) in the ATP7B gene. It is a genetic disorder that is inherited in an autosomal recessive manner and is usually diagnosed in teens and young adults. It is a type of copper storage disease. Also called hepatolenticular degeneration.

### **Wiskott-Aldrich syndrome**

An inherited immune disorder that occurs in young boys. It causes eczema (a type of skin inflammation), a decrease in the number of platelets (blood cells that help prevent bleeding), and frequent bacterial infections. People with Wiskott-Aldrich syndrome are at increased risk of developing leukemia and lymphoma. Also called Aldrich syndrome.

### **Wobe-Mugos E**

A mixture made from an extract of the calf thymus gland and enzymes (proteins that speed up chemical reactions in the body) from the papaya plant, the pancreas of cows, and the pancreas of pigs. It has been used in Europe as a treatment for a variety of cancers and for herpes virus infections.

## **World Health Organization**

A part of the United Nations that deals with major health issues around the world. The World Health Organization sets standards for disease control, health care, and medicines; conducts education and research programs; and publishes scientific papers and reports. A major goal is to improve access to health care for people in developing countries and in groups who do not get good health care. The headquarters are located in Geneva, Switzerland. Also called WHO.

## **X-linked dominant inheritance**

One of the ways a genetic trait or condition caused by a mutated (changed) gene on the X chromosome can be passed down (inherited) from parent to child. In X-linked dominant inheritance, a genetic condition can occur when the child inherits one copy of a mutated (changed) gene on the X chromosome from one parent. Daughters have a 50% chance of inheriting the mutated X-linked gene from their mother and a 100% chance of inheriting the mutated X-linked gene from their father. Sons have a 50% chance of inheriting the mutated X-linked gene from their mother and a 0% chance of inheriting the mutated X-linked gene from their father.

## **X-linked recessive inheritance**

One of the ways a genetic trait or condition caused by a mutated (changed) gene on the X chromosome can be passed down (inherited) from parent to child. In X-linked recessive inheritance, a daughter inherits a single mutated gene on the X chromosome from one of her parents. The X chromosome she inherits from the other parent will usually cancel the effect of the mutation, and she most likely will not have the genetic condition. If she inherits a mutated copy of the gene from both parents, she will be affected with the condition. Fathers cannot pass X-linked recessive conditions to their sons. When a son inherits a mutated gene on the X chromosome from his mother, the genetic condition is more likely to occur. X-linked recessive conditions most often occur in males.

## **XELIRI**

An abbreviation for a chemotherapy combination used to treat colorectal cancer that has spread to other parts of the body. It is also used to treat esophageal cancer and stomach cancer that are advanced or have spread to other parts of the body. It includes the drugs capecitabine (Xeloda) and irinotecan hydrochloride. Also called CAPIRI, CAPIRI regimen, and XELIRI regimen.

## **XELIRI regimen**

An abbreviation for a chemotherapy combination used to treat colorectal cancer that has spread to other parts of the body. It is also used to treat esophageal cancer and stomach cancer that are advanced or have spread to other parts of the body. It includes the drugs capecitabine (Xeloda) and irinotecan hydrochloride. Also called CAPIRI, CAPIRI regimen, and XELIRI.

## **XELOX**

An abbreviation for a chemotherapy combination used to treat colorectal cancer that has spread. It is also being studied in the treatment of other types of cancer. It includes the drugs capecitabine (Xeloda) and oxaliplatin. Also called XELOX regimen.

## **XELOX regimen**

An abbreviation for a chemotherapy combination used to treat colorectal cancer that has spread. It is also being studied in the treatment of other types of cancer. It includes the drugs capecitabine (Xeloda) and oxaliplatin. Also called XELOX.

### **XK469R**

A substance that is being studied in the treatment of leukemia. It belongs to the family of drugs called topoisomerase inhibitors.

### **XL880**

A substance being studied in the treatment of cancer. XL880 blocks enzymes involved in the growth and spread of tumor cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called foretinib and MET/VEGFR-2 inhibitor GSK1363089.

### **XP**

A rare inherited disorder marked by an extreme sensitivity to ultraviolet light, such as from the sun, and a high risk of developing cancer. The signs and symptoms of XP are usually seen in children by age 2 years. Affected children may develop a severe blistering sunburn after a short time in the sun, freckling of the skin, dry skin, and changes in skin color in sun-exposed areas. They may also develop eye problems and problems with the nervous system. People with XP have a very high risk of developing skin cancer, usually by age 10 years, and other types of cancer, including cancers of the eyes, brain, and, in smokers, the lungs. XP is caused by mutations (changes) in certain genes involved in repairing damaged DNA. Also called xeroderma pigmentosum.

### **XPA gene**

A gene that makes a protein involved in repairing damaged DNA. Mutations (changes) in the XPA gene may keep cells from repairing their DNA, which may cause abnormal cells, including cancer cells, to grow. XPA gene mutations have been found in an inherited condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

### **XPC gene**

A gene that makes a protein involved in repairing damaged DNA. Mutations (changes) in the XPC gene may keep cells from repairing their DNA, which may cause abnormal cells, including cancer cells, to grow. XPC gene mutations have been found in an inherited condition called xeroderma pigmentosum. People with this condition have a very high risk of developing skin cancer and other types of cancer.

### **XR9576**

A substance that is being studied in the treatment of cancer. It may help tumor cells respond again to drugs they have become resistant (unable to respond) to. XR9576 is a type of multidrug resistance inhibitor and a type of P-glycoprotein antagonist. Also called tariquidar.

### **XRP9881**

A substance that is being studied in the treatment of breast cancer. It belongs to the family of drugs called taxane derivatives.

### **Xalkori**

A drug used to treat certain types of ALK-positive inflammatory myofibroblastic tumors in adults and children aged 1 year and older, ALK-positive systemic anaplastic large cell lymphoma in young adults and children aged 1 year and older, and ALK-positive or ROS1-positive non-small cell lung cancer. It is also being studied in the treatment of other types of cancer. Xalkori blocks certain

proteins made by the ALK and ROS1 genes, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called crizotinib.

### **Xanax**

A drug used to treat anxiety disorders and panic attacks. It is being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of benzodiazepine. Also called alprazolam.

### **Xatmep**

A drug used alone or with other drugs to treat many types of cancer, certain types of arthritis, and severe psoriasis (a type of skin condition). It is also being studied in the treatment of other conditions and types of cancer. Xatmep stops cells from using folic acid to make DNA and may kill cancer cells. It may also lower the body's immune response. Xatmep is a type of antimetabolite and a type of antifolate. Also called methotrexate sodium, MTX, and Trexall.

### **Xeloda**

A drug used alone or with other drugs to treat certain types of colorectal cancer, breast cancer, esophageal cancer, gastroesophageal junction cancer, stomach cancer, and pancreatic cancer. It is also being studied in the treatment of other types of cancer. Xeloda is taken up by cancer cells and breaks down into fluorouracil, a substance that kills cancer cells. Xeloda is a type of antimetabolite. Also called capecitabine.

### **Xgeva**

A drug that contains the active ingredient denosumab and is used to prevent or treat certain bone problems. Xgeva is used to prevent bone problems caused by multiple myeloma or by solid tumors that have spread to the bone. It is also used in certain patients to treat giant cell tumor of the bone that cannot be removed by surgery, and to treat hypercalcemia that is caused by cancer and did not get better after treatment with bisphosphonates. Xgeva binds to a protein called RANKL, which keeps RANKL from binding to another protein called RANK on the surface of certain bone cells, including bone cancer cells. This may help keep bone from breaking down and cancer cells from growing. Xgeva may also prevent the loss of calcium from the bones. It is a type of monoclonal antibody.

### **Xofigo**

A radioactive drug used to treat prostate cancer that has spread to the bone and is causing symptoms but has not spread to other organs. It is used in patients whose cancer is castration resistant (has not responded to treatments that lower testosterone levels). It is also being studied in the treatment of other types of cancer. Xofigo contains a radioactive substance called radium Ra 223. It collects in bone and gives off radiation that may kill cancer cells. Xofigo is a type of radiotherapeutic agent. Also called radium Ra 223-dichloride.

### **Xospata**

A drug used to treat adults with acute myeloid leukemia that came back or did not get better with other treatment and has a mutation (change) in the FLT3 gene. Xospata blocks certain proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called gilteritinib fumarate.

### **Xpovio**

A drug used alone or with other drugs to treat adults with certain types of diffuse large B-cell lymphoma or multiple myeloma. It is used in patients whose cancer has already been treated with other anticancer therapy. It is also being studied in

the treatment of other types of cancer. Xpovio blocks a protein called CRM1, which may help keep cancer cells from growing and may kill them. It is a type of small molecule inhibitor. Also called selinexor.

### **Xtandi**

A drug used to treat certain types of prostate cancer. It is also being studied in the treatment of other types of cancer. Xtandi binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Xtandi blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called enzalutamide.

### **Xyotax**

A form of the anticancer drug paclitaxel combined with a protein called poliglumex that may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of breast cancer, ovarian cancer, lung cancer, and other types of cancer. It belongs to the family of drugs called mitotic inhibitors. Also called CT-2103, paclitaxel poliglumex, and paclitaxel polyglutamate.

### **YKL-40**

A substance that may be found in higher-than-normal amounts in the blood of patients with certain types of cancer and inflammatory diseases. It is a type of glycoprotein.

### **YM598**

A substance that is being studied as a treatment for advanced prostate cancer and for pain caused by prostate cancer that has spread to the bone. It belongs to the family of drugs called endothelin ETA receptor antagonists.

### **Yervoy**

A drug that binds to the protein CTLA-4 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that have certain mutations (changes) in genes involved in DNA repair. Yervoy is used alone or with other drugs to treat certain types of colorectal cancer, esophageal cancer, hepatocellular carcinoma (a type of liver cancer), malignant pleural mesothelioma, melanoma, non-small cell lung cancer, and renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. Yervoy may block CTLA-4 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called ipilimumab and MDX-010.

### **Yescarta**

A drug used to treat adults with follicular lymphoma or certain types of large B-cell lymphoma that relapsed (came back) or did not get better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Yescarta is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Yescarta binds to a protein called CD19, which is found on most B-cell lymphoma cells. This helps the body's immune system kill cancer cells. Yescarta is a type of CAR T-cell therapy. Also called axicabtagene ciloleucel.



## **Yondelis**

A drug used to treat liposarcoma and leiomyosarcoma (types of soft tissue sarcoma) that cannot be removed by surgery or have spread to other parts of the body. It is used in patients who have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Yondelis may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called ecteinascidin, ET 743, and trabectedin.

## **Yonsa**

A drug that contains the active ingredient abiraterone acetate and is used with methylprednisolone to treat prostate cancer that has spread to other parts of the body. It is used in patients whose cancer is castration resistant (has not responded to treatments that lower testosterone levels). Yonsa lowers the amount of androgens (male hormones), such as testosterone, made by the body. This may stop the growth of cancer cells that need androgens to grow. Yonsa is a type of antiandrogen.

## **ZD0473**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called platinum analogs.

## **ZD1839**

A drug used to treat non-small cell lung cancer that has spread to other parts of the body and has certain mutations (changes) in the EGFR gene. It is used in patients whose cancer has not already been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. ZD1839 blocks certain proteins made by the EGFR gene, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. ZD1839 is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called gefitinib and Iressa.

## **ZD4054**

A substance that is being studied in the treatment of prostate cancer. It belongs to the family of drugs called endothelin-receptor antagonists.

## **ZD6126**

A substance that has been studied in the treatment of several types of cancer. ZD6126 destroys blood vessels in tumors and may prevent the growth of new blood vessels that tumors need to grow. It is a type of vascular targeting agent and a type of antiangiogenesis agent.

## **ZD6474**

A drug used to treat medullary thyroid cancer that is locally advanced and cannot be removed by surgery or has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. ZD6474 blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. ZD6474 is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Caprelsa and vandetanib.

## **ZDX**

A drug used to treat prostate cancer, relieve the symptoms of advanced breast cancer, and treat problems with the endometrium (lining of the uterus). ZDX keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop

making testosterone (a male hormone) in men, and the ovaries to stop making estradiol (a form of the hormone estrogen) in women. ZDX may stop the growth of cancer cells that need testosterone or estrogen to grow. It is a type of LHRH agonist. Also called goserelin acetate and Zoladex.

### **Zaltrap**

A drug used with other drugs to treat colorectal cancer that has spread to other parts of the body and has not gotten better with other chemotherapy. It is also being studied in the treatment of other types of cancer. Zaltrap blocks a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent. Also called vascular endothelial growth factor trap, VEGF Trap, and ziv-aflibercept.

### **Zarnestra**

A substance that is being studied in the treatment of acute myeloid leukemia (AML) and other types of cancer. It belongs to the family of drugs called farnesyltransferase inhibitors. Also called R115777 and tipifarnib.

### **Zarxio**

A drug that contains the active ingredient filgrastim and is used to treat neutropenia (a lower-than-normal number of white blood cells), prevent infection, and prepare the blood for the collection of certain types of blood cells. Zarxio is used in patients who have certain cancers and neutropenia caused by some types of chemotherapy and in patients who have severe chronic neutropenia that is not caused by cancer treatment. It is also used before an autologous stem cell transplant. Zarxio helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor.

### **Zejula**

A drug used to treat adults with certain types of ovarian epithelial, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Zejula blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Zejula is a type of PARP inhibitor. Also called niraparib tosylate monohydrate.

### **Zelboraf**

A drug used to treat Erdheim-Chester disease (a very rare type of histiocytosis) and advanced melanoma that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Zelboraf blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called BRAF (V600E) kinase inhibitor RO5185426, PLX4032, RG7204, and vemurafenib.

### **Zenapax**

A drug used to keep the body from rejecting kidney transplants. It is also being studied in the treatment of some types of cancer and other conditions. Zenapax binds to receptors for a protein called interleukin-2, which are found on some types of immune cells and cancer cells. This may help suppress the body's immune response and it may help kill cancer cells. Zenapax is a type of monoclonal antibody. Also called dacliximab and daclizumab.

### **Zepzelca**

A drug used to treat adults with small cell lung cancer that has spread to other parts of the body and got worse during or after treatment with platinum

chemotherapy. It is also being studied in the treatment of other types of cancer. Zepzelca may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called lurbinectedin.

### **Zestril**

A drug used to treat high blood pressure and certain heart conditions. It is also being studied in the prevention and treatment of side effects caused by some anticancer drugs. It blocks certain enzymes that cause blood vessels to constrict (narrow). It is a type of angiotensin-converting enzyme (ACE) inhibitor. Also called lisinopril and Prinivil.

### **Zevalin**

A drug used to treat adults with certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Zevalin contains a monoclonal antibody that binds to a protein called CD20, which is found on B cells and some types of lymphoma cells. It also contains the compound tiuxetan, which allows certain radioactive substances to be attached to the monoclonal antibody. This may help kill cancer cells. Zevalin is a type of monoclonal antibody and a type of immunoconjugate. Also called ibritumomab tiuxetan.

### **Zheng**

In traditional Chinese medicine, a way of diagnosing disease based on observing a set of signs and symptoms. A practitioner checks Zheng by looking at the patient; asking questions; feeling the pulse, organs, and tissues; listening to body sounds; and smelling the body.

### **Ziextenzo**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Ziextenzo helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called filgrastim-SD/01, Fulphila, Neulasta, Nyvepria, pegfilgrastim, and Udenyca.

### **Zinecard**

A drug that contains the active ingredient dexrazoxane and is used to reduce heart damage in women who are receiving doxorubicin for breast cancer that has spread to other parts of the body. Zinecard is a type of cardioprotective agent, a type of chemoprotective agent, and a type of topoisomerase inhibitor.

### **Zirabev**

A drug that contains the active ingredient bevacizumab and is used to treat many different types of cancer. Zirabev is used alone or with other drugs to treat certain types of cervical cancer, colorectal cancer, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), and glioblastoma (a type of brain cancer). It is also being studied in the treatment of other types of cancer. Zirabev binds to a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody.

### **Zocor**

A drug used to lower the amount of cholesterol and other harmful substances in the blood, such as triglycerides. It is also being studied in the treatment of cancer and other conditions. Zocor blocks an enzyme that helps make cholesterol in the

body. It is a type of HMG-CoA reductase inhibitor and a type of statin. Also called simvastatin.

### **Zofran**

A drug used to prevent nausea and vomiting caused by chemotherapy and radiation therapy and nausea and vomiting after surgery. Zofran blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Zofran is a type of antiemetic and a type of serotonin receptor antagonist. Also called ondansetron hydrochloride.

### **Zoladex**

A drug used to treat prostate cancer, relieve the symptoms of advanced breast cancer, and treat problems with the endometrium (lining of the uterus). Zoladex keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone (a male hormone) in men, and the ovaries to stop making estradiol (a form of the hormone estrogen) in women. Zoladex may stop the growth of cancer cells that need testosterone or estrogen to grow. It is a type of LHRH agonist. Also called goserelin acetate and ZDX.

### **Zolinza**

A drug used to treat cutaneous T-cell lymphoma that came back, got worse, or did not get better during or after treatment with two systemic therapies. It is also being studied in the treatment of other types of cancer. Zolinza blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase inhibitor. Also called SAHA, suberoylanilide hydroxamic acid, and vorinostat.

### **Zollinger-Ellison syndrome**

A disorder in which tumors of the pancreatic islet cells produce large amounts of gastrin (a hormone), leading to excess acid in the stomach and, possibly, a peptic ulcer (ulcer of the stomach or the upper part of the small intestine).

### **Zoloft**

A drug used to treat depression. It is a type of selective serotonin reuptake inhibitor (SSRI). Also called sertraline.

### **Zometa**

A drug used alone to treat hypercalcemia (high blood levels of calcium) caused by cancer and with other anticancer drugs to treat multiple myeloma and cancers that have spread to the bone. It is also being studied in the treatment of other types of cancer. Zometa may help keep bone from breaking down and prevent the loss of calcium from the bones. It is a type of bisphosphonate. Also called zoledronate and zoledronic acid.

### **Zortress**

A drug that contains the active ingredient everolimus and is used with other drugs to keep the body from rejecting a kidney or liver transplant. Zortress lowers the body's immune response. It is a type of immunosuppressant and a type of kinase inhibitor.

### **Zyban**

A drug used to treat depression and certain other disorders. It is also used to help people stop smoking. Zyban increases the levels of the chemicals

dopamine, serotonin, and norepinephrine in the brain. This helps improve mood and can lessen cravings for nicotine. It is a type of antidepressant and a type of nicotine receptor antagonist. Also called bupropion hydrochloride and Wellbutrin.

### **Zyclara**

A drug that contains the active ingredient imiquimod and is used to treat certain skin conditions. Zyclara is used to treat actinic keratosis (a skin condition that may become cancer) in adults who have a normal immune system. It is also used to treat genital warts or perianal warts in adults and in children aged 12 years or older. Zyclara may help the immune system kill abnormal cells. It is a type of immunomodulating agent.

### **Zydelig**

A drug used with rituximab to treat chronic lymphocytic leukemia that has come back. It is also being studied in the treatment of other types of cancer. Zydelig blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of kinase inhibitor. Also called idelalisib.

### **Zykadia**

A drug used to treat adults with non-small cell lung cancer that has spread and is ALK positive. It is also being studied in the treatment of other types of cancer. Zykadia blocks certain proteins made by the ALK gene. Blocking these proteins may stop the growth and spread of cancer cells. Zykadia is a type of tyrosine kinase inhibitor. Also called ceritinib.

### **Zynlonta**

A drug used to treat adults with certain types of B-cell non-Hodgkin lymphoma that relapsed (came back) or did not get better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Zynlonta contains a monoclonal antibody that binds to a protein called CD19, which is found on some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. Zynlonta is a type of antibody-drug conjugate. Also called loncastuximab tesirine.

### **Zynyz**

A drug used to treat adults with Merkel cell carcinoma (a type of skin cancer) that has come back or has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Zynyz binds to a protein called PD-1, which is found on T cells (a type of immune cell). Zynyz may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called retifanlimab.

### **Zyprexa**

A drug used to treat certain mental disorders. It is also being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of antipsychotic and a type of monoamine antagonist. Also called olanzapine and Zyprexa Zydis.

### **Zyprexa Zydis**

A drug used to treat certain mental disorders. It is also being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of antipsychotic and a type of monoamine antagonist. Also called olanzapine and Zyprexa.

## **Zytiga**

A drug used with other drugs to treat prostate cancer that has spread to other parts of the body. Zytiga is used under the brand name Zytiga to treat patients whose cancer is castration resistant (has not responded to treatments that lower testosterone levels) or whose cancer is high risk and castration sensitive (has responded to treatments that lower testosterone levels). It is also used under the brand name Yonsa to treat patients whose cancer is castration resistant. Zytiga is also being studied in the treatment of other types of cancer. It lowers the amount of androgens (male hormones), such as testosterone, made by the body. This may stop the growth of cancer cells that need androgens to grow. Zytiga is a type of antiandrogen.

## **[18F]-labeled substance P antagonist receptor quantifier**

A radiolabeled substance being studied in PET imaging of the brain. It is also being studied as a way to find where cancer cells have spread in patients with pancreatic cancer. It binds to cell receptors for substance P, also known as neurokinin-1, which is found on nerve cells and on some types of cancer cells, such as pancreatic cancer cells. [18F]-labeled substance P antagonist receptor quantifier is a type of PET radioligand and a type of radiolabeled neurokinin-1 receptor antagonist.

## **[18F]SPA-RQ**

A radiolabeled substance being studied in PET imaging of the brain. It is also being studied as a way to find where cancer cells have spread in patients with pancreatic cancer. It binds to cell receptors for substance P.

## **aTTP**

A rare condition in which blood clots form in small blood vessels throughout the body. These clots can block the flow of blood and oxygen to the body's organs, which leads to a lower-than-normal number of platelets in the blood. Signs and symptoms of aTTP include purple bruises or tiny red or purple spots on the skin, bleeding problems, anemia, fever, chest pain, nervous system problems, and kidney problems. aTTP occurs when the body starts producing antibodies that block an enzyme called ADAMTS13, which is involved in blood clotting. It may be brought on by certain diseases or conditions (such as pregnancy, cancer, lupus, HIV, or other infections), certain medicines (such as chemotherapy or hormone therapy), or certain procedures (such as surgery or a stem cell transplant). aTTP usually occurs in adults. Also called acquired thrombotic thrombocytopenic purpura.

## **abarelix**

A drug used to reduce the amount of testosterone made in patients with advanced symptomatic prostate cancer for which no other treatment options are available. It belongs to the family of drugs called gonadotropin-releasing hormone (GnRH) antagonists. Also called Plenaxis.

## **abdomen**

The area of the body that contains the pancreas, stomach, intestines, liver, gallbladder, and other organs.

## **abdominal**

Having to do with the abdomen, which is the part of the body between the chest and the hips that contains the pancreas, stomach, intestines, liver, gallbladder, and other organs.



### **abdominal breathing**

A relaxation technique in which a person focuses on taking slow, deep breaths. Abdominal breathing involves breathing in slowly through the nose and then out through the mouth using the diaphragm (the thin muscle that separates the chest from the abdomen) and abdominal muscles. This helps boost the amount of oxygen in the blood, lowers blood pressure and heart rate, and reduces muscle tension. Abdominal breathing may be used to help relieve stress, pain, and anxiety. Also called deep breathing and diaphragmatic breathing.

### **abdominal ultrasound**

A procedure used to examine the organs in the abdomen. An ultrasound transducer (probe) is pressed firmly against the skin of the abdomen. High-energy sound waves from the transducer bounce off tissues and create echoes. The echoes are sent to a computer, which makes a picture called a sonogram. Also called transabdominal ultrasound.

### **abdominal wall**

The layers of skin, muscles, fat, and other tissues that surround and protect the organs inside the abdomen. The abdomen is located between the chest and the pelvis and contains the stomach, intestines, liver, pancreas, gallbladder, and other organs. The muscles in the abdominal wall are used when a person sneezes, coughs, vomits, or has a bowel movement. The abdominal wall also helps support movement of the spine.

### **abdominal x-ray**

An x-ray of the organs inside the abdomen. An x-ray is a type of radiation that can pass through the body and onto film, making pictures of areas inside the body. X-rays may be used to help diagnose disease.

### **abdominoperineal resection**

Surgery to remove the anus, the rectum, and part of the sigmoid colon through an incision made in the abdomen. The end of the intestine is attached to an opening in the surface of the abdomen and body waste is collected in a disposable bag outside of the body. This opening is called a colostomy. Lymph nodes that contain cancer may also be removed during this operation.

### **abemaciclib**

A drug used alone or with other drugs to treat adults with certain types of hormone-receptor positive, HER2-negative breast cancer. It is also being studied in the treatment of other types of cancer. Abemaciclib blocks certain proteins, which may help keep cancer cells from growing. It is a type of cyclin-dependent kinase inhibitor. Also called Verzenio.

### **aberrant crypt foci**

Clusters of abnormal tube-like glands in the lining of the colon and rectum. Aberrant crypt foci form before colorectal polyps and are one of the earliest changes that can be seen in the colon that may lead to cancer. Also called ACF.

### **abiraterone acetate**

A drug used with other drugs to treat prostate cancer that has spread to other parts of the body. Abiraterone acetate is used under the brand name Zytiga to treat patients whose cancer is castration resistant (has not responded to treatments that lower testosterone levels) or whose cancer is high risk and castration sensitive (has responded to treatments that lower testosterone levels). It is also used under the brand name Yonsa to treat patients whose cancer is

castration resistant. Abiraterone acetate is also being studied in the treatment of other types of cancer. It lowers the amount of androgens (male hormones), such as testosterone, made by the body. This may stop the growth of cancer cells that need androgens to grow. Abiraterone acetate is a type of antiandrogen.

### **ablation**

In medicine, the removal or destruction of a body part or tissue or its function. Ablation may be performed by surgery, hormones, drugs, radiofrequency, heat, or other methods.

### **abnormal**

Not normal. Describes a state, condition, or behavior that is unusual or different from what is considered normal. In medicine, an abnormal lesion or growth in or on the body may be benign (not cancer), precancerous or premalignant (likely to become cancer), or malignant (cancer). Also called atypical.

### **abscess**

An enclosed collection of pus in tissues, organs, or confined spaces in the body. An abscess is a sign of infection and is usually swollen and inflamed.

### **abscopal effect**

Describes the shrinking or disappearance of tumors in parts of the body that were not the direct target of local therapy, such as radiation therapy. It is thought that in the abscopal effect, the immune system is stimulated to fight cancer in the whole body as a result of the local therapy. Learning more about the abscopal effect may help in the development of new cancer treatments, especially for metastatic cancer.

### **absolute neutrophil count**

A measure of the number of neutrophils in the blood. Neutrophils are a type of white blood cell. They help the body fight infection. An absolute neutrophil count may be used to check for infection, inflammation, leukemia, and other conditions. The lower a person's absolute neutrophil count is, the higher the risk is of getting an infection. Having an absolute neutrophil count of less than 500 means there is a high risk of getting an infection. Cancer treatment, such as chemotherapy, may reduce the absolute neutrophil count. Also called ANC.

### **absolute risk**

A measure of the risk of a certain event happening. In cancer research, absolute risk is the likelihood that a person who is free of a specific type of cancer at a given age will develop that cancer over a certain period of time. For example, a woman 35 years of age, with no known risk factors for breast cancer, has an absolute risk of getting breast cancer over a lifetime of 90 years of about 13%, meaning she has a 1 in 8 chance of developing breast cancer. This also means the chance that she will never have breast cancer is about 87%, or 7 in 8.

### **absorption**

The process of taking nutrients from the digestive system into the blood so they can be used in the body.

### **acalabrutinib maleate monohydrate**

A drug used to treat adults with chronic lymphocytic leukemia or small lymphocytic lymphoma and adults with mantle cell lymphoma that has already been treated with at least one other therapy. It is also being studied in the treatment of other types of cancer. Acalabrutinib maleate monohydrate blocks a

protein called BTK, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Calquence.

### **accelerated approval**

An official process that allows a new drug to be approved by the U.S. Food and Drug Administration (FDA) before it has gone through all of the required levels of testing in humans. It is only used for drugs that treat serious or life-threatening diseases for which other treatments may not be available or may no longer be effective. A drug may be approved through the accelerated approval process if it has shown certain signs in clinical trials that it might be beneficial for patients, such as a shrinking tumor. Further testing of the drug is required after it has received accelerated approval and is on the market to confirm that it really works. Accelerated approval is one way that patients can receive promising new drugs when other treatment options may not exist.

### **accelerated partial-breast irradiation**

A type of radiation therapy given only to the part of the breast that has cancer in it. Accelerated partial-breast irradiation gives a higher dose over a shorter time than is given in standard whole-breast radiation therapy. Accelerated partial-breast irradiation may be given using internal or external sources of radiation. Also called partial-breast irradiation.

### **accelerated phase chronic myelogenous leukemia**

A phase of chronic myelogenous leukemia in which the disease is progressing. In this phase, 10% to 19% of the cells in the blood and bone marrow are blast cells (immature blood cells).

### **accelerated radiation therapy**

Radiation treatment in which the total dose of radiation is given over a shorter period of time (fewer days) compared to standard radiation therapy.

### **accelerated-fraction radiation therapy**

Radiation treatment in which the total dose of radiation is divided into small doses and the treatments are given more than once a day. The total dose of radiation is also given over a shorter period of time (fewer days) compared to standard radiation therapy.

### **acetaminophen**

A drug that reduces pain and fever (but not inflammation). It belongs to the family of drugs called analgesics.

### **acetate**

A form of acetic acid (an acid found in vinegar).

### **acetic acid**

An acid found in vinegar. Acetic acid is also used to dissolve substances needed to make some medicines and other products, such as plastics.

### **acetone**

A chemical substance found naturally in small amounts in plants, trees, volcanoes, and forest fires. Acetone is also made by the body when fats are broken down. It is also found in tobacco smoke, car exhaust, and trash landfills. In industry, acetone is used in some plastics, fibers, medicines, household cleaners, glues, and nail polish removers. Being exposed to high levels of acetone may irritate the skin, eyes, nose, throat, and lungs. It can cause

headaches, nausea, vomiting, dizziness, confusion, loss of consciousness, and other health problems.

### **acetyl group**

A small molecule made of two carbon, three hydrogen, and one oxygen atoms. Acetyl groups are added to or removed from other molecules and may affect how the molecules act in the body.

### **acetyl-L-carnitine**

A form of the natural substance carnitine that is being studied as a way to prevent tissue damage caused by chemotherapy. Carnitine is made in muscle and liver tissue and is found in certain foods, such as meat, poultry, fish, and some dairy products. It is used by many cells in the body to make energy from fat. Also called acetyl-L-carnitine hydrochloride and ALCAR.

### **acetyl-L-carnitine hydrochloride**

A form of the natural substance carnitine that is being studied as a way to prevent tissue damage caused by chemotherapy. Carnitine is made in muscle and liver tissue and is found in certain foods, such as meat, poultry, fish, and some dairy products. It is used by many cells in the body to make energy from fat. Also called acetyl-L-carnitine and ALCAR.

### **acetylation**

A chemical reaction in which a small molecule called an acetyl group is added to other molecules. Acetylation of proteins may affect how they act in the body.

### **acetylcholine**

A chemical made by some types of nerve cells. It is used to send messages to other cells, including other nerve cells, muscle cells, and gland cells. It is released from the nerve ending and carries signals to cells on the other side of a synapse (space between nerve cells and other cells). Acetylcholine helps control memory and the action of certain muscles. It is a type of neurotransmitter.

### **acetylcysteine**

A drug usually used to reduce the thickness of mucus and ease its removal. It is also used to reverse the toxicity of high doses of acetaminophen. Also called N-acetyl-L-cysteine and N-acetylcysteine.

### **achlorhydria**

A lack of hydrochloric acid in the digestive juices in the stomach. Hydrochloric acid helps digest food.

### **acid**

A chemical that gives off hydrogen ions in water and forms salts by combining with certain metals. Acids have a sour taste and turn certain dyes red. Some acids made by the body, such as gastric acid, can help organs work the way they should. An example of an acid is hydrochloric acid. Acidity is measured on a scale called the pH scale. On this scale, a value of 7 is neutral, and a pH value of less than 7 to 0 shows increasing acidity.

### **acid-base balance**

In medicine, the state of having the right amount of acid and base in the blood and other body fluids. Keeping a normal acid-base balance is important for the body to work the way it should. Also called acid-base equilibrium.

### **acid-base equilibrium**

In medicine, the state of having the right amount of acid and base in the blood and other body fluids. Keeping a normal acid-base equilibrium is important for the body to work the way it should. Also called acid-base balance.

### **acidification**

The process of making or becoming an acid. An acid is a substance that gives off hydrogen ions in water and forms salts by combining with certain metals.

### **acidity**

Describes the amount of acid in a substance. An acid is a chemical that gives off hydrogen ions in water and forms salts by combining with certain metals. Acidity is measured on a scale called the pH scale. On this scale, a pH value of 7 is neutral, and a pH value of less than 7 to 0 shows increasing acidity.

### **acitretin**

A substance that is used in the prevention of cancer and in the treatment of psoriasis. It belongs to the family of drugs called retinoids.

### **acne**

A disorder of the skin in which oil glands and hair glands become inflamed.

### **acneiform dermatitis**

A skin condition that causes small, raised, acne-like bumps to form, usually on the face, scalp, chest, and upper back. The bumps on the affected skin are usually red and filled with pus and may crust over. They may also become painful, tender, and itchy. Sometimes, the affected skin becomes infected. Acneiform dermatitis may be caused by an infection or by treatment with certain drugs, including some anticancer drugs, such as epidermal growth factor receptor (EGFR) inhibitors. Also called acneiform eruption and acneiform rash.

### **acneiform eruption**

A skin condition that causes small, raised, acne-like bumps to form, usually on the face, scalp, chest, and upper back. The bumps on the affected skin are usually red and filled with pus and may crust over. They may also become painful, tender, and itchy. Sometimes, the affected skin becomes infected. Acneiform eruption may be caused by an infection or by treatment with certain drugs, including some anticancer drugs, such as epidermal growth factor receptor (EGFR) inhibitors. Also called acneiform dermatitis and acneiform rash.

### **acneiform rash**

A skin condition that causes small, raised, acne-like bumps to form, usually on the face, scalp, chest, and upper back. The bumps on the affected skin are usually red and filled with pus and may crust over. They may also become painful, tender, and itchy. Sometimes, the affected skin becomes infected. Acneiform rash may be caused by an infection or by treatment with certain drugs, including some anticancer drugs, such as epidermal growth factor receptor (EGFR) inhibitors. Also called acneiform dermatitis and acneiform eruption.

### **acolbifene hydrochloride**

A substance being studied in the prevention of breast cancer in women at high risk of breast cancer. Acolbifene hydrochloride binds to estrogen receptors in the body and blocks the effects of estrogen in the breast. It is a type of selective estrogen receptor modulator (SERM).

## **acoustic**

Having to do with sound or hearing.

## **acoustic neurofibromatosis**

A genetic condition in which tumors form on the nerves of the inner ear and cause loss of hearing and balance. Tumors may also occur in the brain and on nerves in the skull and spinal cord, and may cause loss of speech, eye movement, and the ability to swallow. Also called neurofibromatosis type 2 and NF2.

## **acoustic neuroma**

A benign (not cancer) tumor that forms on the nerves in the inner ear and can affect hearing and balance. Acoustic neuromas usually grow slowly and affect one side of the body. Common signs and symptoms include hearing loss or ringing in one ear, loss of balance, dizziness, and numbness and paralysis in the face. Sometimes these tumors may grow large and press against the facial nerve or other nearby nerves. Rarely, they may press against certain parts of the brain, which could be life threatening. Acoustic neuromas that affect the nerves in both ears are often caused by a genetic disorder called neurofibromatosis type 2. Acoustic neuromas usually occur in people aged 30 to 60 years. Also called vestibular schwannoma.

## **acquired immunity**

A type of immunity that develops when a person's immune system responds to a foreign substance or microorganism, or that occurs after a person receives antibodies from another source. The two types of acquired immunity are adaptive and passive. Adaptive immunity occurs in response to being infected with or vaccinated against a microorganism. The body makes an immune response, which can prevent future infection with the microorganism. Passive immunity occurs when a person receives antibodies to a disease or toxin rather than making them through his or her own immune system.

## **acquired immunodeficiency syndrome**

A disease caused by the human immunodeficiency virus (HIV). People with acquired immunodeficiency syndrome are at an increased risk for developing certain cancers and for infections that usually occur only in individuals with a weak immune system. Also called AIDS.

## **acquired pure red cell aplasia**

A rare disorder in which the bone marrow makes almost no red blood cells. It may be caused by infection or by certain drugs. Patients with this disorder may also have a thymoma (a tumor of the thymus) or an autoimmune condition such as lupus erythematosus or rheumatoid arthritis.

## **acquired thrombotic thrombocytopenic purpura**

A rare condition in which blood clots form in small blood vessels throughout the body. These clots can block the flow of blood and oxygen to the body's organs, which leads to a lower-than-normal number of platelets in the blood. Signs and symptoms of acquired thrombotic thrombocytopenic purpura include purple bruises or tiny red or purple spots on the skin, bleeding problems, anemia, fever, chest pain, nervous system problems, and kidney problems. Acquired thrombotic thrombocytopenic purpura occurs when the body starts producing antibodies that block an enzyme called ADAMTS13, which is involved in blood clotting. It may be brought on by certain diseases or conditions (such as pregnancy, cancer, lupus, HIV, or other infections), certain medicines (such as chemotherapy or hormone



therapy), or certain procedures (such as surgery or a stem cell transplant).  
acquired thrombotic thrombocytopenic purpura usually occurs in adults. Also called aTTP.

### **acridine carboxamide**

A substance being studied in the treatment of cancer. It is a type of topoisomerase inhibitor. Also called DACA.

### **acrochordon**

A common benign (not cancer) skin growth that appears as a small, raised, brown or skin-colored bump that may have a short, narrow stalk. Acrochordons usually occur in areas where the skin folds, such as the neck, armpit, inner thigh, and eyelid. They are usually painless and do not grow or change but may become painful if rubbed or scratched. They most often occur in older adults and in people who are overweight or have diabetes. Also called skin tag.

### **acromegaly**

A condition in which the pituitary gland makes too much growth hormone after normal growth of the skeleton is finished. This causes the bones of the hands, feet, head, and face to grow larger than normal. Acromegaly can be caused by a pituitary gland tumor.

### **acrylonitrile**

A substance used to make plastics, rubber, and textiles. Being exposed to acrylonitrile may increase the risk of developing certain cancers, such as lung, brain, or prostate cancer.

### **actinic keratosis**

A thick, scaly patch of skin that may become cancer. It usually forms on areas exposed to the sun, such as the face, scalp, back of the hands, or chest. It is most common in people with fair skin. Also called senile keratosis and solar keratosis.

### **actinomycin D**

A drug that comes from the bacterium *Streptomyces parvulus* and is used alone or with other drugs to treat adults and children with Ewing sarcoma, gestational trophoblastic tumor, rhabdomyosarcoma, Wilms tumor, or certain types of testicular cancer and adults with certain types of solid tumors. It is also being studied in the treatment of other types of cancer. Actinomycin D damages the cell's DNA and may kill cancer cells. It is a type of antineoplastic antibiotic. Also called Cosmegen and dactinomycin.

### **action study**

In cancer prevention clinical trials, a study that focuses on finding out whether actions people take can prevent cancer.

### **activate**

In biology, to stimulate a cell in a resting state to become active. This causes biochemical and functional changes in the activated cell.

### **active pharmaceutical ingredient**

The main ingredient in a medicine that causes the desired effect of the medicine. Some medicines contain more than one active pharmaceutical ingredient that act in different ways in the body. Also called API, drug substance, and pharmacologic substance.

**active surveillance**

Closely watching a patient's condition but not giving any treatment unless there are changes in test results that show the condition is getting worse. Active surveillance may be used to avoid or delay the need for treatments such as radiation therapy or surgery, which can cause side effects or other problems. During active surveillance, certain exams and tests, such as blood tests, imaging tests, and biopsies, are done on a regular schedule to monitor the condition. Active surveillance may be used in certain types of prostate cancer and in some other types of cancer. It is a type of expectant management.

**activities of daily living**

The tasks of everyday life. These activities include eating, dressing, getting into or out of a bed or chair, taking a bath or shower, and using the toilet. Instrumental activities of daily living are activities related to independent living and include preparing meals, managing money, shopping, doing housework, and using a telephone. Also called ADL.

**acupoint**

A specific spot on the body where an acupuncture needle may be inserted to control pain and other symptoms. Also called acupuncture point.

**acupressure**

The application of pressure or localized massage to specific sites on the body to control symptoms such as pain or nausea. It is a type of complementary and alternative medicine.

**acupuncture**

The technique of inserting thin needles through the skin at specific points on the body to control pain and other symptoms. It is a type of complementary and alternative medicine.

**acupuncture needle**

A stainless steel needle that is slightly thicker than a human hair. Acupuncture needles are inserted through the skin at specific points on the body to control pain and other symptoms.

**acupuncture point**

A specific spot on the body where an acupuncture needle may be inserted to control pain and other symptoms. Also called acupoint.

**acupuncture point injection**

A procedure in which drugs, vitamins, herbal extracts, or other fluids are injected into the body at an acupuncture point using a syringe and needle.

**acupuncture-like transcutaneous electrical nerve stimulation**

A procedure in which mild electric currents are applied to certain acupuncture points (spots on the body where an acupuncture needle may be inserted to control pain and other symptoms) on the skin. It is being studied in the treatment of dry mouth caused by radiation therapy for cancer. Also called ALTENS.

**acupuncturist**

A person trained in acupuncture (therapy that uses thin needles inserted through the skin at specific points on the body to control pain and other symptoms). Acupuncture is a type of complementary and alternative medicine.

**acustimulation**

Mild electrical stimulation of acupuncture points to control symptoms such as nausea and vomiting.

**acute**

Symptoms or signs that begin and worsen quickly; not chronic.

**acute bacterial prostatitis**

Inflammation of the prostate gland that begins suddenly and gets worse quickly. It is caused by a bacterial infection. Symptoms include fever and chills, body aches, pain in the lower back and genital area, a burning feeling during urination, and problems with emptying the bladder all the way.

**acute leukemia**

A rapidly progressing cancer that starts in blood-forming tissue such as the bone marrow, and causes large numbers of white blood cells to be produced and enter the blood stream.

**acute lymphoblastic leukemia**

A type of leukemia (blood cancer) that comes on quickly and is fast growing. In acute lymphoblastic leukemia, there are too many lymphoblasts (immature white blood cells) in the blood and bone marrow. Also called acute lymphocytic leukemia and ALL.

**acute lymphocytic leukemia**

A type of leukemia (blood cancer) that comes on quickly and is fast growing. In acute lymphocytic leukemia, there are too many lymphoblasts (immature white blood cells) in the blood and bone marrow. Also called acute lymphoblastic leukemia and ALL.

**acute myelogenous leukemia**

A fast-growing cancer in which too many myeloblasts (a type of immature white blood cell) are found in the bone marrow and blood. Acute myelogenous leukemia usually gets worse quickly if it is not treated. It can spread outside the blood to other parts of the body, including the lymph nodes, spleen, liver, central nervous system (brain and spinal cord), skin, gums, and testicles. Acute myelogenous leukemia is most common in older adults. Also called acute myeloid leukemia, acute nonlymphocytic leukemia, AML, and ANLL.

**acute myeloid leukemia**

A fast-growing cancer in which too many myeloblasts (a type of immature white blood cell) are found in the bone marrow and blood. Acute myeloid leukemia usually gets worse quickly if it is not treated. It can spread outside the blood to other parts of the body, including the lymph nodes, spleen, liver, central nervous system (brain and spinal cord), skin, gums, and testicles. Acute myeloid leukemia is most common in older adults. Also called acute myelogenous leukemia, acute nonlymphocytic leukemia, AML, and ANLL.

**acute myeloid leukemia with myelodysplasia-related changes**

A type of acute myeloid leukemia in which at least 20% of a patient's blood or bone marrow is myeloblasts (immature white blood cells) and the patient has one of the following conditions: 1) has had myelodysplastic syndrome (MDS) or a myelodysplastic/myeloproliferative neoplasm (MDS/MPN) before, 2) cells that have changes in certain chromosomes that are similar to those found in MDS, or 3) at least 50% of the cells (of at least two types of blood cells) are abnormal.

Acute myeloid leukemia with myelodysplasia-related changes usually occurs in older adults and has a poor prognosis. Also called AML-MRC.

### **acute nonlymphocytic leukemia**

A fast-growing cancer in which too many myeloblasts (a type of immature white blood cell) are found in the bone marrow and blood. Acute nonlymphocytic leukemia usually gets worse quickly if it is not treated. It can spread outside the blood to other parts of the body, including the lymph nodes, spleen, liver, central nervous system (brain and spinal cord), skin, gums, and testicles. Acute nonlymphocytic leukemia is most common in older adults. Also called acute myelogenous leukemia, acute myeloid leukemia, AML, and ANLL.

### **acute pain**

Pain that comes on quickly, can be severe, but lasts a relatively short time.

### **acute paronychia**

An infection of the soft tissue around a fingernail or toenail that begins suddenly and can get worse quickly. It is usually caused when bacteria enter through a break in the skin from a hangnail or ingrown toenail, by damage to the cuticle (skin at the base of the nail), or by an injury to the area where the nail and skin meet. Acute paronychia may also sometimes be caused by treatment with certain drugs used to treat cancer or immune system disorders. Signs and symptoms include pain, tenderness, warmth, redness, and swelling around the nail. Pus may form in the skin around or under the nail. When treated, acute paronychia usually heals within 10 days.

### **acute promyelocytic leukemia**

An aggressive (fast-growing) type of acute myeloid leukemia in which there are too many immature blood-forming cells in the blood and bone marrow. It is usually marked by an exchange of parts of chromosomes 15 and 17. Also called APL and promyelocytic leukemia.

### **acute radiation sickness**

Serious illness caused by being exposed to high doses of certain types of radiation, usually over a short period of time. Symptoms of acute radiation sickness usually occur right after exposure but they may happen over time, and they may come and go. Symptoms include nausea and vomiting, diarrhea, headache, dizziness, weakness, fatigue, bleeding, hair loss, swelling, itching, and redness of the skin, and other skin problems. Very large doses of radiation may cause death. Also called acute radiation syndrome, radiation poisoning, radiation sickness, and radiation sickness syndrome.

### **acute radiation syndrome**

Serious illness caused by being exposed to high doses of certain types of radiation, usually over a short period of time. Symptoms of acute radiation syndrome usually occur right after exposure but they may happen over time, and they may come and go. Symptoms include nausea and vomiting, diarrhea, headache, dizziness, weakness, fatigue, bleeding, hair loss, swelling, itching, and redness of the skin, and other skin problems. Very large doses of radiation may cause death. Also called acute radiation sickness, radiation poisoning, radiation sickness, and radiation sickness syndrome.

### **acyclovir**

A substance used to prevent or treat cytomegalovirus and herpes simplex infections that may occur when the body is immunosuppressed. It belongs to the

family of drugs called antivirals.

### **adagrasib**

A drug used alone or with cetuximab to treat adults with colorectal cancer or non-small cell lung cancer that has spread and has a certain mutation (change) in the KRAS gene. It is used in patients whose cancer was treated with other systemic therapy. It is also being studied in the treatment of other types of cancer.

Adagrasib blocks a protein (KRAS G12C) made by the mutated KRAS gene, which may help keep cancer cells from growing and may kill them. It is a type of targeted therapy. Also called Krazati.

### **adaptive immunity**

A type of immunity that develops when a person's immune system responds to a foreign substance or microorganism, such as after an infection or vaccination.

Adaptive immunity involves specialized immune cells and antibodies that attack and destroy foreign invaders and are able to prevent disease in the future by remembering what those substances look like and mounting a new immune response. Adaptive immunity may last for a few weeks or months or for a long time, sometimes for a person's entire life.

### **addiction**

An uncontrollable craving, seeking, and use of a substance, such as a drug or alcohol.

### **adenine**

A chemical compound that is used to make one of the building blocks of DNA and RNA. It is also a part of many substances in the body that give energy to cells. Adenine is a type of purine.

### **adenocarcinoma**

Cancer that forms in the glandular tissue, which lines certain internal organs and makes and releases substances in the body, such as mucus, digestive juices, and other fluids. Most cancers of the breast, lung, esophagus, stomach, colon, rectum, pancreas, prostate, and uterus are adenocarcinomas.

### **adenocarcinoma in situ**

A condition in which abnormal cells are found in the glandular tissue, which lines certain internal organs and makes and releases substances in the body, such as mucus, digestive juices, and other fluids. These abnormal cells may become cancer and spread into nearby normal tissue. Adenocarcinoma in situ occurs most often in the cervix and lung. Also called AIS.

### **adenoid cystic carcinoma**

A rare type of cancer that begins in cells that line certain internal organs and make and release substances in the body, such as mucus, saliva, or other fluids. Adenoid cystic carcinoma occurs most often in the salivary glands, but it can also occur in other parts of the body, such as the voice box, windpipe, lacrimal gland (the gland that makes tears), breast, and uterus. Adenoid cystic carcinoma usually grows slowly. It tends to spread along the nerves to nearby tissue and in the blood. In rare cases, it may spread to the lymph nodes or to other parts of the body, especially the lungs.

### **adenoma**

A tumor that is not cancer. It starts in gland-like cells of the epithelial tissue (thin layer of tissue that covers organs, glands, and other structures within the body).

### **adenopathy**

Large or swollen lymph glands.

### **adenosarcoma**

A tumor that is a mixture of an adenoma (a tumor that starts in the gland-like cells of epithelial tissue) and a sarcoma (a tumor that starts in bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue). An example of an adenosarcoma is Wilms tumor.

### **adenosine deaminase-deficient severe combined immunodeficiency**

A rare, inherited disorder in which the immune system is damaged, causing a person to have a complete lack of B lymphocytes and T lymphocytes (types of white blood cells that help the body fight infection). People with adenosine deaminase-deficient severe combined immunodeficiency are at high risk of developing life-threatening viral, bacterial, and fungal infections and certain types of cancers. Signs and symptoms of adenosine deaminase-deficient severe combined immunodeficiency usually occur before 6 months of age and include serious lung infections, chronic diarrhea, skin rashes, and slow growth and development. When symptoms begin later in life, they are usually milder. Adenosine deaminase-deficient severe combined immunodeficiency is caused by mutations (changes) in the ADA gene. The ADA gene makes an enzyme called adenosine deaminase, which helps protect lymphocytes from harmful substances in the body. Also called ADA-SCID.

### **adenosine triphosphate**

A substance present in all living cells that provides energy for many metabolic processes and is involved in making RNA. Adenosine triphosphate made in the laboratory is being studied in patients with advanced solid tumors to see if it can decrease weight loss and improve muscle strength. Also called ATP.

### **adenosis**

A disease or abnormal change in a gland. Breast adenosis is a benign condition in which the lobules are larger than usual.

### **adenosquamous carcinoma**

A type of cancer that contains two types of cells: squamous cells (thin, flat cells that line certain organs) and gland-like cells.

### **adenovirus**

A member of a family of viruses that can cause infections in the respiratory tract, eye, and gastrointestinal tract. Forms of adenoviruses that do not cause disease are used in gene therapy. They carry genes that may fix defects in cells or kill cancer cells.

### **adenovirus vector**

A form of a common virus called adenovirus that is used to deliver genetic material, such as a new gene or a normal copy of a mutated (changed) gene, directly into the nucleus of a cell. Before adenovirus is used in this way, it is changed in the laboratory so that it cannot cause disease in people. When an adenovirus vector is used for gene therapy, a broken, defective, or missing gene inside the body's cells can be repaired or replaced with a healthy version of that gene. Adenovirus vectors may also carry genes that can change abnormal cells, such as cancer cells, back to normal. And they may be used in vaccines to help prevent certain types of viral infections.



**adipokine**

One of a large group of molecules that is made by fat cells in the body. Adipokines circulate in the blood and help control many important body functions, including appetite, fat storage, glucose and fat metabolism, blood pressure, inflammation, and immune response. Changes in the levels of adipokines in the blood may play a role in the development of obesity and other diseases, such as diabetes, heart disease, and cancer. Adipokines can act as hormones, growth factors, and cytokines, and include the molecules leptin, adiponectin, resistin, and many others.

**adjunct agent**

In cancer therapy, a drug or substance used in addition to the primary therapy.

**adjunct therapy**

Another treatment used together with the primary treatment. Its purpose is to assist the primary treatment. Also called adjunctive therapy.

**adjunctive therapy**

Another treatment used together with the primary treatment. Its purpose is to assist the primary treatment. Also called adjunct therapy.

**adjustment disorder**

A condition in which a person responds to a stressful event (such as an illness, job loss, or divorce) with extreme emotions and actions that cause problems at work and home.

**adjuvant chemotherapy**

Anticancer drugs given after the primary (or first) treatment to kill any cancer cells that remain in the body and to lower the risk that the cancer will come back. For example, adjuvant chemotherapy may be given after breast cancer surgery to kill any remaining breast cancer cells and to help keep the cancer from coming back. Adjuvant chemotherapy may sometimes be called preventative chemotherapy.

**adjuvant therapy**

Additional cancer treatment given after the primary treatment to lower the risk that the cancer will come back. Adjuvant therapy may include chemotherapy, radiation therapy, hormone therapy, targeted therapy, or biological therapy.

**administration**

In medicine, the act of giving a treatment, such as a drug, to a patient. It can also refer to the way it is given, the dose, or how often it is given.

**adnexal mass**

A lump in tissue near the uterus, usually in the ovary or fallopian tube. Adnexal masses include ovarian cysts, ectopic (tubal) pregnancies, and benign (not cancer) or malignant (cancer) tumors.

**ado-trastuzumab emtansine**

A drug used to treat certain patients with HER2-positive breast cancer that has already been treated with trastuzumab and a type of anticancer drug called a taxane. It is also being studied in the treatment of other types of cancer. Ado-trastuzumab emtansine contains a monoclonal antibody called trastuzumab that binds to a protein called HER2, which is found on some breast cancer cells. It also contains an anticancer drug called DM1, which may help kill cancer cells.

Ado-trastuzumab emtansine is a type of antibody-drug conjugate. Also called Kadcyla and T-DM1.

### **adolescent**

A young person who has begun puberty but has not yet become an adult. During adolescence, a child experiences physical, hormonal, and developmental changes that mark the transition into adulthood. Adolescence generally occurs between the ages of 10 and 19 years.

### **adoptive cell therapy**

A type of immunotherapy in which T cells (a type of immune cell) are given to a patient to help the body fight diseases, such as cancer. In cancer therapy, T cells are usually taken from the patient's own blood or tumor tissue, grown in large numbers in the laboratory, and then given back to the patient to help the immune system fight the cancer. Sometimes, the T cells are changed in the laboratory to make them better able to target the patient's cancer cells and kill them. Types of adoptive cell therapy include chimeric antigen receptor T-cell (CAR T-cell) therapy and tumor-infiltrating lymphocyte (TIL) therapy. Adoptive cell therapy that uses T cells from a donor is being studied in the treatment of some types of cancer and some infections. Also called adoptive cell transfer, cellular adoptive immunotherapy, and T-cell transfer therapy.

### **adoptive cell transfer**

A type of immunotherapy in which T cells (a type of immune cell) are given to a patient to help the body fight diseases, such as cancer. In cancer therapy, T cells are usually taken from the patient's own blood or tumor tissue, grown in large numbers in the laboratory, and then given back to the patient to help the immune system fight the cancer. Sometimes, the T cells are changed in the laboratory to make them better able to target the patient's cancer cells and kill them. Types of adoptive cell transfer include chimeric antigen receptor T-cell (CAR T-cell) therapy and tumor-infiltrating lymphocyte (TIL) therapy. Adoptive cell transfer that uses T cells from a donor is being studied in the treatment of some types of cancer and some infections. Also called adoptive cell therapy, cellular adoptive immunotherapy, and T-cell transfer therapy.

### **adrenal cancer**

Cancer that forms in the tissues of the adrenal glands (two glands located just above the kidneys). The adrenal glands make hormones that control heart rate, blood pressure, and other important body functions. Adrenal cancer that starts in the outside layer of the adrenal gland is called adrenocortical carcinoma. Adrenal cancer that starts in the center of the adrenal gland is called malignant pheochromocytoma.

### **adrenal cortex**

The outer part of the adrenal gland (a small organ on top of each kidney). The adrenal cortex makes androgen and corticosteroid hormones.

### **adrenal gland**

A small gland that makes steroid hormones, adrenaline, and noradrenaline. These hormones help control heart rate, blood pressure, and other important body functions. There are two adrenal glands, one on top of each kidney. Also called suprarenal gland.

### **adrenal insufficiency**

A rare disorder in which the adrenal glands do not make enough of certain hormones. Symptoms include weight loss, loss of appetite, nausea and vomiting, diarrhea, muscle weakness, fatigue, low blood sugar, low blood pressure, and patchy or dark skin. Most cases of the disorder are caused by immune system problems, but may also be caused by infection, cancer, or other diseases. Also called Addison disease.

### **adrenal medulla**

The inner part of the adrenal gland (a small organ on top of each kidney). The adrenal medulla makes chemicals such as epinephrine (adrenaline) and norepinephrine (noradrenaline) which are involved in sending nerve signals.

### **adrenalectomy**

Surgery to remove one or both adrenal glands (a small organ on top of each kidney).

### **adrenaline**

A hormone and neurotransmitter. Also called epinephrine.

### **adrenocortical**

Having to do with or made by the outer layer of the adrenal gland, which produces steroid hormones. There is an adrenal gland on top of each kidney.

### **adrenocortical cancer**

A rare cancer that forms in the outer layer of tissue of the adrenal gland (a small organ on top of each kidney that makes steroid hormones, adrenaline, and noradrenaline to control heart rate, blood pressure, and other body functions). Also called adrenocortical carcinoma and cancer of the adrenal cortex.

### **adrenocortical carcinoma**

A rare cancer that forms in the outer layer of tissue of the adrenal gland (a small organ on top of each kidney that makes steroid hormones, adrenaline, and noradrenaline to control heart rate, blood pressure, and other body functions). Also called adrenocortical cancer and cancer of the adrenal cortex.

### **adrenocorticotrophic hormone**

A hormone made in the pituitary gland. Adrenocorticotrophic hormone acts on the outer part of the adrenal gland to control its release of corticosteroid hormones. More adrenocorticotrophic hormone is made during times of stress. Also called ACTH and corticotropin.

### **adrenocorticotrophic-secreting tumor**

A rare tumor that makes the hormone adrenocorticotropin (ACTH), which causes the adrenal glands to make too much cortisol. Adrenocorticotrophic-secreting tumors can lead to Cushing syndrome. Signs and symptoms of adrenocorticotrophic-secreting tumors and Cushing syndrome include a round face, thin arms and legs, severe fatigue and muscle weakness, high blood pressure, high blood sugar, purple or pink stretch marks on the skin, and weight gain, especially in the abdomen. Adrenocorticotrophic-secreting tumors usually form in the pituitary gland or in the islet cells of the pancreas, but they may also form in other organs, including the lung, thyroid, and thymus. Adrenocorticotrophic-secreting tumors may be benign (not cancer) or malignant (cancer). Also called ACTHoma.

### **adult T-cell leukemia/lymphoma**

An aggressive (fast-growing) type of T-cell non-Hodgkin lymphoma caused by the human T-cell leukemia virus type 1 (HTLV-1). It is marked by bone and skin lesions, high calcium levels, and enlarged lymph nodes, spleen, and liver. Also called ATLL.

### **adult progeria**

A rare, inherited disorder marked by rapid aging that begins in early adolescence or young adulthood and an increased risk of cancer. Signs and symptoms include shorter-than-average height, thinning and graying hair, skin changes, thin arms and legs, voice changes, and unusual facial features. This disorder can also lead to health problems, such as cataracts, skin ulcers, severe hardening of the arteries, diabetes, osteoporosis, and fertility problems. People with adult progeria have an increased risk of cancer, especially thyroid cancer, skin cancer, and sarcoma (a type of bone or soft tissue cancer). Adult progeria is caused by a mutation (change) in the WRN gene, which makes a protein involved in DNA repair. Also called Werner syndrome and WS.

### **adult rickets**

A condition in adults in which bones become soft and deformed because they don't have enough calcium and phosphorus. It is usually caused by not having enough vitamin D in the diet, not getting enough sunlight, or a problem with the way the body uses vitamin D. Symptoms include bone pain and muscle weakness. When the condition occurs in children, it is called rickets. Also called osteomalacia.

### **adult-type fibrosarcoma**

A type of cancer that forms in fibrous (connective) tissue. It can occur anywhere in the body. Adult-type fibrosarcoma may spread to nearby tissue or to other parts of the body, such as the lungs or bones. It may also recur (come back) after treatment. Adult-type fibrosarcoma usually occurs in young and middle-aged adults, but it can also occur in children. It is a type of soft tissue sarcoma.

### **adulterant**

A substance added to a product but not listed as an ingredient, or a substance that ends up in a product by accident when the product is made. Adulterants may be in foods, drugs, and other products. An adulterant may cause a product to be harmful, cheaper to make, or not work as it should.

### **advance directive**

A legal document that states a person's wishes about receiving medical care if that person is no longer able to make medical decisions because of a serious illness or injury. An advance directive may also give a person (such as a spouse, relative, or friend) the authority to make medical decisions for another person when that person can no longer make decisions. There are different types of advance directives, including a living will, durable power of attorney (DPA) for health care, and do not resuscitate (DNR) orders. In the United States, the laws for advance directives may be different for each state, and each state may allow only certain types of advance directives.

### **advanced cancer**

A term that is often used to describe cancer that is unlikely to be cured. However, some advanced cancers can be controlled for many years with treatment and are thought of as a chronic illness. Treatment may be given to help shrink the tumor, slow the growth of cancer cells, relieve symptoms, or help a person live longer.

Advanced cancer may also be used to describe cancer that has spread from where it first started to nearby tissue, lymph nodes, or other parts of the body.

### **advanced practice nurse**

A registered nurse who has additional education and training in how to diagnose and treat disease. Advanced practice nurses are licensed at the state level and certified by national nursing organizations. In cancer care, an advanced practice nurse may manage the primary care of patients and their families, based on a practice agreement with a doctor. Also called APN, NP, and nurse practitioner.

### **advanced practice provider**

A medical professional who is not a doctor but has special training and is licensed to diagnose, treat, and manage many common medical conditions. Advanced practice providers can perform physical exams, order laboratory tests and imaging tests, review test results, prescribe medications, perform or assist with certain procedures, such as biopsies, and make referrals to other health care providers. They may also provide information about screening tests and give counseling on living a healthy lifestyle, such as changes in diet and exercise and quitting smoking. Examples of advanced practice providers are nurse practitioners and physician assistants.

### **adverse effect**

An undesired effect of a drug or other type of treatment, such as surgery. Adverse effects can range from mild to severe and can be life-threatening. Also called adverse event and adverse reaction.

### **adverse event**

An undesired effect of a drug or other type of treatment, such as surgery. Adverse events can range from mild to severe and can be life-threatening. Also called adverse effect and adverse reaction.

### **adverse reaction**

An undesired effect of a drug or other type of treatment, such as surgery. Adverse reactions can range from mild to severe and can be life-threatening. Also called adverse effect and adverse event.

### **aerobic**

In biochemistry, reactions that need oxygen to happen or happen when oxygen is present.

### **aerobic exercise**

Physical activity that increases the heart rate and the body's use of oxygen. It helps improve a person's physical fitness.

### **aerobic metabolism**

A chemical process in which oxygen is used to make energy from carbohydrates (sugars). Also called aerobic respiration, cell respiration, and oxidative metabolism.

### **aerobic respiration**

A chemical process in which oxygen is used to make energy from carbohydrates (sugars). Also called aerobic metabolism, cell respiration, and oxidative metabolism.

### **aerodigestive tract**

The combined organs and tissues of the respiratory tract and the upper part of the digestive tract (including the lips, mouth, tongue, nose, throat, vocal cords, and part of the esophagus and windpipe).

### **aerosolize**

In medicine, to turn a liquid drug into a fine mist that can be inhaled.

### **aesthetic flat closure**

A type of surgery that is done to rebuild the shape of the chest wall after one or both breasts are removed. An aesthetic flat closure may also be done after removal of a breast implant that was used to restore breast shape. During an aesthetic flat closure, extra skin, fat, and other tissue in the breast area are removed. The remaining tissue is then tightened and smoothed out so that the chest wall appears flat.

### **afamitresgene autoleucel**

A treatment used for adults with synovial sarcoma that has the MAGE-A4 antigen and has spread to other parts of the body or cannot be removed by surgery. It is used in patients who have certain HLA-A\*02 antigens and have received chemotherapy. It is also being studied in the treatment of other types of cancer. Afamitresgene autoleucel is made using a patient's T cells (a type of immune system cell). A special T-cell receptor that can recognize the MAGE-A4 antigen is added to the T cells in the laboratory. These changed T cells are then grown in large numbers in the laboratory and given back to the patient by infusion. Afamitresgene autoleucel binds to the MAGE-A4 antigen, which is found on some types of cancer cells. This helps the body's immune system kill cancer cells. Afamitresgene autoleucel is a type of cellular immunotherapy. Also called Tecelra.

### **afatinib dimaleate**

A drug used to treat certain types of non-small cell lung cancer that have spread to other parts of the body. It is used in patients whose cancer has not already been treated and has certain mutations (changes) in the EGFR gene or whose cancer got worse after treatment with platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Afatinib dimaleate blocks certain proteins made by the EGFR gene, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Afatinib dimaleate is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Gilotrif.

### **affected individual**

In genetics, a term used to describe a person who has a certain genetic trait or who shows the signs and symptoms of a certain genetic disease.

### **affinity**

In chemistry and biology, the strength of the attraction between two substances, such as two chemicals, or an antigen and an antibody.

### **affinity reagent**

In chemistry and biology, a compound that binds specific substances, such as proteins or nucleic acids. Many affinity reagents are antibodies. They are used to analyze tissue samples to help diagnose diseases.



### **afib**

An irregular heartbeat that occurs when the electrical signals in the atria (the two upper chambers of the heart) fire rapidly at the same time. This causes the heart to beat faster than normal. Although afib can occur without any signs or symptoms, it may sometimes cause fatigue, chest pain, heart palpitations, trouble breathing, low blood pressure, dizziness or fainting, weakness, and other signs and symptoms. Afib may be caused by certain conditions, such as high blood pressure, heart attack, coronary artery disease, abnormal heart valves, congenital heart disease, lung disease, viral infections, or an overactive thyroid gland. Previous heart surgery, stress, or exposure to caffeine, tobacco, alcohol, or certain medicines may also lead to afib. It may go away on its own or it may last for many years. If not treated, afib can lead to serious problems, such as blood clots, stroke, and heart failure. It is more common in older adults. Also called atrial fibrillation.

### **aflatoxin**

A harmful substance made by certain types of mold (*Aspergillus flavus* and *Aspergillus parasiticus*) that is often found on poorly stored grains and nuts. Consumption of foods contaminated with aflatoxin is a risk factor for primary liver cancer.

### **aganglionic megacolon**

A condition in which certain nerve cells are missing from the muscle layers of part of the large intestine. This causes severe constipation or blockage of the large intestine. Constipation is when stool becomes hard, dry, and difficult to pass and bowel movements occur less often than normal. Other symptoms include swollen abdomen, vomiting, bloody diarrhea, gas, lack of energy, and trouble gaining weight. Aganglionic megacolon is present from birth, but the symptoms may not appear until later in a child's life. This condition has been linked to an increased risk of thyroid cancer and neuroblastoma. Also called Hirschsprung disease.

### **age-adjusted rate**

A statistical measure that allows groups of people to be compared in a way that the age distribution differences between the groups in a study do not affect what is being measured. For example, when comparing cancer incidence in different racial or ethnic groups, it is important to adjust for the age distribution of the people in each group. Since cancer occurs more often in older people, if one group has more older people than the other, the results without such adjustment could be misleading.

### **age-related macular degeneration**

A condition in which there is a slow breakdown of cells in the center of the retina (the light-sensitive layers of nerve tissue at the back of the eye). This blocks vision in the center of the eye and can cause problems with activities such as reading and driving. Age-related macular degeneration is most often seen in people who are over the age of 50. Also called AMD, ARMD, and macular degeneration.

### **agent study**

In cancer prevention, a clinical trial that studies whether taking certain medicines, vitamins, minerals, or food supplements can prevent cancer. Also called chemoprevention study.

**agglutinin**

A substance that makes particles (such as bacteria or cells) stick together to form a clump or a mass.

**aggravating factor**

Something that makes a condition worse. For example, tobacco smoke is an aggravating factor for asthma.

**aggressive**

In medicine, describes a tumor or disease that forms, grows, or spreads quickly. It may also describe treatment that is more severe or intense than usual.

**aggressive fibromatosis**

A type of soft tissue tumor that forms in fibrous (connective) tissue, usually in the arms, legs, or abdomen. It may also occur in the head and neck. Aggressive fibromatoses are usually benign (not cancer). They often recur (come back) after treatment and spread to nearby tissue, but they rarely spread to other parts of the body. They may occur in adults or children. Also called desmoid tumor and desmoid-type fibromatosis.

**aggressive lymphoma**

A type of lymphoma that grows and spreads quickly and has severe symptoms. Also called high-grade lymphoma and intermediate-grade lymphoma.

**aggressive systemic mastocytosis**

A rare condition in which too many mast cells (a type of white blood cell) build up in certain tissues and organs in the body, including the bone marrow, lymph nodes, bone, liver, spleen, and small intestine. Aggressive systemic mastocytosis may get worse quickly and cause severe symptoms and organ damage. Sometimes, it may become mast cell leukemia (a very rare type of leukemia). Aggressive systemic mastocytosis usually occurs in adults. Also called ASM.

**agitation**

A condition in which a person is unable to relax and be still. The person may be very tense and irritable, and become easily annoyed by small things. He or she may be eager to have an argument, and be unwilling to work with caregivers to make the situation better.

**agnogenic myeloid metaplasia**

A progressive, chronic disease in which the bone marrow is replaced by fibrous tissue and blood is made in organs such as the liver and the spleen, instead of in the bone marrow. This disease is marked by an enlarged spleen and progressive anemia. Also called chronic idiopathic myelofibrosis, idiopathic myelofibrosis, myelosclerosis with myeloid metaplasia, and primary myelofibrosis.

**agonist**

A drug or substance that binds to a receptor inside a cell or on its surface and causes the same action as the substance that normally binds to the receptor.

**agoraphobia**

An intense fear of being in open places or in situations where it may be hard to escape, or where help may not be available. People with agoraphobia are usually very anxious about having a panic attack in a public place. They may also have a fear of being alone or have trouble leaving their home. They usually

avoid elevators, bridges, and public places. Agoraphobia is a type of phobia and a type of anxiety disorder.

### **agranulocyte**

A type of white blood cell. Monocytes and lymphocytes are agranulocytes.

### **agranulocytosis**

A serious condition that occurs when there is an extremely low number of granulocytes (a type of white blood cell) in the blood. Granulocytes are an important part of the immune system and help the body fight infection. Having very low levels of granulocytes in the blood can lead to serious or life-threatening infections. Signs and symptoms of agranulocytosis include fever, chills, weakness, sore throat, sores in the mouth or throat, bleeding gums, bone pain, low blood pressure, fast heartbeat, and trouble breathing. Agranulocytosis may be inherited or caused by certain autoimmune or bone marrow disorders, infection, poor nutrition, cancer treatment (such as chemotherapy or bone marrow transplant), or exposure to certain toxins, chemicals, or medicines.

### **alanine aminopeptidase**

An enzyme that is normally found in healthy kidneys. It may be found at high levels in the urine when there are kidney problems. It is used as a biomarker to detect damage to the kidneys caused by drugs and other agents. It may also be used to diagnose certain kidney and liver disorders. Also called AAP.

### **alanine transferase**

An enzyme found in the liver and other tissues. A high level of alanine transferase released into the blood may be a sign of liver damage, cancer, or other diseases. Also called serum glutamate pyruvate transaminase and SGPT.

### **alanosine**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called antimetabolites. Also called SDX-102.

### **albinism**

A group of genetic conditions marked by little or none of the pigment melanin in the skin, hair, and/or eyes. People with albinism may have vision problems and white or yellow hair; reddish, violet, blue or brown eyes; and pale skin.

### **albumin**

A type of protein found in blood, egg white, milk, and other substances.

### **alcohol**

A chemical substance found in drinks such as beer, wine, and liquor. It is also found in some medicines, mouthwashes, household products, and essential oils (scented liquid taken from certain plants). It is made by a chemical process called fermentation that uses sugars and yeast. There are different types of alcohol. The type used to make alcoholic drinks is called ethyl alcohol (ethanol). Drinking regular or large amounts of alcohol may increase the risk of certain types of cancer, such as cancer of the mouth, throat, esophagus, breast, liver, colon, and rectum.

### **alcohol ablation**

An injection of ethanol (alcohol) through the skin directly into a tumor to kill cancer cells. Ultrasound or a CT scan is used to guide the needle into the tumor. Also called ethanol ablation, PEI, and percutaneous ethanol injection.

### **alcohol dependence**

A chronic disease in which a person craves drinks that contain alcohol and is unable to control his or her drinking. A person with this disease also needs to drink greater amounts to get the same effect and has withdrawal symptoms after stopping alcohol use. Alcohol dependence affects physical and mental health, and can cause problems with family, friends, and work. Regular heavy alcohol intake increases the risk of several types of cancer. Also called alcoholism.

### **alcoholic fatty liver disease**

A condition in which fat builds up in the liver of people who drink large amounts of alcohol. Alcoholic fatty liver disease can be reversed if it is diagnosed early and a person stops drinking alcohol. In some people, the condition can get worse and cause liver inflammation and damage to the cells in the liver. This may lead to cirrhosis (scarring of the liver), liver failure, or liver cancer. Also called AFLD.

### **alcoholism**

A chronic disease in which a person craves drinks that contain alcohol and is unable to control his or her drinking. A person with this disease also needs to drink greater amounts to get the same effect and has withdrawal symptoms after stopping alcohol use. Alcoholism affects physical and mental health, and can cause problems with family, friends, and work. Regular heavy alcohol intake increases the risk of several types of cancer. Also called alcohol dependence.

### **aldehyde**

A type of chemical substance made from alcohol. Aldehydes are found in essential oils (scented liquid taken from plants).

### **aldesleukin**

A drug used to treat adults with melanoma or renal cell carcinoma (a type of kidney cancer) that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Aldesleukin is a form of interleukin-2 that is made in the laboratory. Aldesleukin increases the activity and growth of white blood cells called T lymphocytes and B lymphocytes, which may help the immune system kill cancer cells. Aldesleukin is a type of cytokine and a type of immunomodulating agent. Also called Proleukin and recombinant human interleukin-2.

### **aldosterone**

A steroid hormone made by the adrenal cortex (the outer layer of the adrenal gland). It helps control the balance of water and salts in the kidney by keeping sodium in and releasing potassium from the body. Too much aldosterone can cause high blood pressure and a build-up of fluid in body tissues. Aldosterone is a type of mineralocorticoid hormone.

### **alectinib**

A drug used to treat adults with certain types of non-small cell lung cancer that are ALK positive. It used in patients whose cancer has spread to other parts of the body. It is also used to help keep cancer from coming back in patients whose cancer was removed by surgery. Alectinib is also being studied in the treatment of other types of cancer. Alectinib blocks certain proteins made by the ALK gene, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Alecensa.

### **alefacept**

A drug that is used to treat certain skin conditions and is being studied in the treatment of cutaneous (skin-related) T-cell cancer and T-cell non-Hodgkin lymphoma. Alefacept is made by combining part of an antibody with a protein that blocks the growth some types of T cells. It is a type of fusion protein and a type of immunosuppressant. Also called Amevive.

### **alemtuzumab**

A drug used to treat B-cell chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. Alemtuzumab binds to a protein called CD52, which is found on some types of immune cells and cancer cells. This may help the immune system kill cancer cells. Alemtuzumab is a type of monoclonal antibody. Also called Campath.

### **alendronate sodium**

A drug used to treat certain bone conditions, such as osteoporosis and Paget disease of the bone. It is also being studied in the treatment of hypercalcemia (high levels of calcium in the blood) and bone pain caused by cancer. Alendronate sodium slows the breakdown of bone and prevents the loss of calcium. It is a type of bisphosphonate. Also called Fosamax.

### **alimentary tract**

The organs that food and liquids travel through when they are swallowed, digested, absorbed, and leave the body as feces. These organs include the mouth, pharynx (throat), esophagus, stomach, small intestine, large intestine, rectum, and anus. The alimentary tract is part of the digestive system. Also called digestive tract and gastrointestinal tract.

### **alisertib sodium**

A substance that binds to a protein called Aurora A kinase and blocks its activity. Aurora A kinase plays an important role in cell division and may be found on some cancer cells. Blocking this protein may help keep cancer cells from growing and may kill them. Alisertib sodium is being studied in the treatment of some types of cancer. It is a type of protein kinase inhibitor.

### **alkali**

A chemical that can dissolve in water, combine with acids to form salts, and make acids less acidic. Alkalis have a bitter taste and turn certain dyes blue. Some alkalis can help the body work the way it should. An example of an alkali is sodium hydroxide.

### **alkalinity**

Refers to the amount of alkali. An alkali is a chemical that can dissolve in water, combine with acids to form salts, and make acids less acidic.

### **alkalinization**

A process that lowers the amount of acid in a solution. In medicine, an alkali, such as sodium bicarbonate, may be given to patients to lower high levels of acid in the blood or urine that can be caused by certain medicines or conditions.

### **alkaloid**

A member of a large group of substances found in plants and in some fungi. Alkaloids contain nitrogen and can be made in the laboratory. Nicotine, caffeine, codeine, and vincristine are alkaloids. Some alkaloids, such as vincristine, are used to treat cancer.

**alkylating agent**

A type of drug that is used in the treatment of cancer. It interferes with the cell's DNA and inhibits cancer cell growth.

**all-cause mortality**

A term that refers to death from any cause. In statistics, all-cause mortality is usually a measure of the total number of deaths from any cause in a specific group of people over a specific period of time. For example, all-cause mortality may be reported for people who live in one area of the country or who are of a specific gender, age, race, or ethnic group.

**all-trans retinoic acid**

A nutrient that the body needs in small amounts to function and stay healthy. All-trans retinoic acid is made in the body from vitamin A and helps cells to grow and develop, especially in the embryo. A form of all-trans retinoic acid made in the laboratory is put on the skin to treat conditions such as acne and is taken by mouth to treat acute promyelocytic leukemia (a fast-growing cancer in which there are too many immature blood-forming cells in the blood and bone marrow). All-trans retinoic acid is being studied in the prevention and treatment of other types of cancer. Also called ATRA, retinoic acid, tretinoin, and vitamin A acid.

**allele**

One of two or more alternative versions of a gene. A person inherits two alleles for each gene, one from the mother and one from the father. These two alleles may be the same or different. The alleles a person inherits help determine certain traits or characteristics, such as hair, skin, and eye color, height, and blood type. In some cases, one or both alleles may be mutated (changed from the original, normal version), which may cause disease.

**allelic heterogeneity**

A term that describes when different mutations (changes) in a single gene cause the same disease or condition. Each mutation by itself is enough to cause the disease or condition. For example, cystic fibrosis (an inherited disorder that affects the lungs and digestive system) is caused by having one of many different mutations in the CFTR gene.

**allergen**

A substance that causes an allergic response. Examples include pollen, molds, and certain foods.

**allergic response**

A hypersensitive immune reaction to a substance that normally is harmless or would not cause an immune response in most people. An allergic response may cause harmful symptoms such as itching or inflammation or tissue injury.

**allogeneic**

Taken from different individuals of the same species. Also called allogenic.

**allogeneic bone marrow transplant**

A procedure in which a patient receives healthy stem cells (blood-forming cells) from a donor to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy. In an allogeneic bone marrow transplant, the healthy stem cells come from the bone marrow of a related donor who is not an identical twin of the patient or from an unrelated donor who is genetically similar to the patient.



### **allogeneic stem cell transplant**

A procedure in which a patient receives healthy blood-forming cells (stem cells) from a donor to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy. In an allogeneic stem cell transplant, the healthy stem cells may come from the blood or bone marrow of a related donor who is not an identical twin of the patient or from an unrelated donor who is genetically similar to the patient. An allogeneic stem cell transplant is most often used to treat blood cancers, such as leukemia and lymphoma, and certain types of blood or immune system disorders.

### **allogenic**

Taken from different individuals of the same species. Also called allogeneic.

### **allograft**

The transplant of an organ, tissue, or cells from one individual to another individual of the same species who is not an identical twin.

### **allopathic medicine**

A system in which medical doctors and other health care professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called biomedicine, conventional medicine, mainstream medicine, orthodox medicine, and Western medicine.

### **allopurinol**

A drug that lowers high levels of uric acid (a byproduct of metabolism) in the blood caused by some cancer treatments.

### **aloe-emodin**

A substance found in certain plants, including aloe vera. It belongs to a family of compounds called anthraquinones, which have shown anti-inflammatory and anticancer effects.

### **alopecia**

The lack or loss of hair from areas of the body where hair is usually found. Alopecia can be a side effect of some cancer treatments.

### **alpelisib**

A drug used with fulvestrant to treat postmenopausal women, and men, with hormone-receptor positive, HER2-negative breast cancer that is advanced or has spread and has a mutation (change) in the PIK3CA gene. It is used in patients whose cancer got worse during or after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. Alpelisib blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of kinase inhibitor. Also called Piqray.

### **alpha emitter radiation therapy**

Therapy that uses a radioactive substance that gives off a type of high-energy radiation called an alpha-particle to kill cancer cells. The radioactive substance is injected into a vein, travels through the blood, and collects in certain tissues in the body, such as areas of bone with cancer. This type of radiation may cause less damage to nearby healthy tissue. Alpha emitter radiation therapy is used to treat prostate cancer that has spread to the bone, and it is being studied in the treatment of other types of cancer.

### **alpha hydroxyl acid**

One of a group of substances that are found in several types of fruit and in milk. They are used in skin care products to reduce wrinkles and soften the skin. Examples of alpha hydroxyl acids are glycolic acid, lactic acid, and citric acid. Also called AHA and fruit acid.

### **alpha-1 antitrypsin deficiency**

An inherited condition in which the body either does not make enough of a protein called alpha-1 antitrypsin (AAT) or makes an abnormal form of AAT. AAT is made in the liver and helps protect the body's organs, especially the liver and lungs, from damage. Alpha-1 antitrypsin deficiency can lead to serious lung conditions (including emphysema and bronchiectasis) and liver conditions (including cirrhosis, hepatitis, and liver cancer). It may also cause inflammation of the blood vessels and a rare skin condition that causes painful lumps on or under the skin. Lung problems caused by alpha-1 antitrypsin deficiency almost always occur in adults, but liver and skin problems may occur in both adults and children. Alpha-1 antitrypsin deficiency is caused by a mutation (change) in a gene called SERPINA1. Also called AAT deficiency.

### **alpha-adrenergic antagonist**

A substance that relaxes muscle tissue in blood vessels and in the prostate gland, which improves the flow of urine and blood. Alpha-adrenergic antagonists are used to treat the symptoms of many conditions, such as benign prostatic hyperplasia (BPH), high blood pressure, and some blood circulation problems. Also called alpha-blocker.

### **alpha-blocker**

A substance that relaxes muscle tissue in blood vessels and in the prostate gland, which improves the flow of urine and blood. Alpha-blockers are used to treat the symptoms of many conditions, such as benign prostatic hyperplasia (BPH), high blood pressure, and some blood circulation problems. Also called alpha-adrenergic antagonist.

### **alpha-fetoprotein**

A protein normally produced by a fetus. Alpha-fetoprotein levels are usually undetectable in the blood of healthy adult men or women (who are not pregnant). An elevated level of alpha-fetoprotein suggests the presence of either a primary liver cancer or germ cell tumor. Also called AFP.

### **alpha-lipoic acid**

A substance that is being studied for its ability to protect normal cells from the side effects of chemotherapy and prevent peripheral neuropathy (numbness, tingling, burning, and weakness in the hands or feet). Alpha-lipoic acid is made by the body and can be found in foods such as organ meats, spinach, broccoli, peas, brussel sprouts, and rice bran. It can also be made in the laboratory. Alpha-lipoic acid is a type of antioxidant and chemoprotective agent.

### **alpha-tocopherol**

A nutrient that the body needs in small amounts to stay healthy and work the way it should. It is fat-soluble (can dissolve in fats and oils) and is found in seeds, nuts, leafy green vegetables, and vegetable oils. Alpha-tocopherol boosts the immune system and helps keep blood clots from forming. It also helps prevent cell damage caused by free radicals (highly reactive chemicals). Alpha-tocopherol is being studied in the prevention and treatment of some types of cancer. It is a type of antioxidant. Also called vitamin E.

**alprazolam**

A drug used to treat anxiety disorders and panic attacks. It is being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of benzodiazepine. Also called Xanax.

**alprostadil**

A drug that is used to treat impotence (inability to have an erection) and is being studied in the treatment of sexual problems in men who have had surgery for prostate cancer. It is a type of vasodilator. Also called PGE1 and prostaglandin E1.

**alteration**

A change resulting in something that is different from the original.

**alternative medicine**

Treatments that are used instead of standard treatments. Standard treatments are based on the results of scientific research and are currently accepted and widely used. Less research has been done for most types of alternative medicine. Alternative medicine may include special diets, megadose vitamins, herbal preparations, special teas, and magnet therapy. For example, a special diet may be used instead of anticancer drugs as a treatment for cancer.

**altretamine**

An anticancer drug that belongs to the family of drugs called alkylating agents.

**alum**

A chemical substance that contains aluminum sulfate and a second chemical, usually potassium sulfate. It is used to shrink tissues, to stop bleeding, and to boost the immune response to a vaccine.

**aluminum**

A metallic element that is found combined with other elements in the earth's crust. It is also found in small amounts in soil, water, and many foods. It is used in medicine and dentistry and in many products such as foil, cans, pots and pans, airplanes, siding, and roofs. High levels of aluminum in the body can be harmful.

**alveolar rhabdomyosarcoma**

A soft tissue tumor that is most common in older children and teenagers. It begins in embryonic muscle cells (cells that develop into muscles in the body). It can occur at many places in the body, but usually occurs in the trunk, arms, or legs. Also called ARMS.

**alveolar soft part sarcoma**

A soft tissue tumor that is most common in older children and teenagers. It begins in the soft supporting tissue that connects and surrounds the organs and other tissues. Alveolar soft part sarcoma usually occurs in the legs, but can also occur in the arms, hands, head, or neck. It can cause the growth of new blood vessels that help the tumor grow and spread. Also called ASPS.

**alveoli**

Tiny air sacs at the end of the bronchioles (tiny branches of air tubes in the lungs). The alveoli are where the lungs and the blood exchange oxygen and carbon dioxide during the process of breathing in and breathing out. Oxygen breathed in from the air passes through the alveoli and into the blood and travels

to the tissues throughout the body. Carbon dioxide travels in the blood from the body's tissues and passes through the alveoli to be breathed out.

### **alvocidib**

A substance being studied in the treatment of several types of cancer. It stops cells from dividing and may kill cancer cells. It is a type of cyclin-dependent kinase (CDK) inhibitor. Also called flavopiridol and HMR 1275.

### **amantadine hydrochloride**

A drug used to treat infections caused by the influenza A virus. It blocks the ability of the virus to infect cells and to make more virus particles. It is also used to treat the symptoms of Parkinson disease. Amantidine hydrochloride is a type of antiviral agent.

### **amatuximab**

A substance being studied in the treatment of mesothelioma. Amatuximab binds to a protein called mesothelin, which is found on some cancer cells. Amatuximab may help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called anti-mesothelin monoclonal antibody MORAb-009 and MORAb-009.

### **amelanotic melanoma**

A type of skin cancer in which the cells do not make the pigment melanin. Skin lesions are often irregular and may be pink, red, or have light brown, tan, or gray at the edges.

### **ameloblastoma**

A rare tumor that begins in the cells that form the tooth enamel (the hard, outer covering that protects the teeth) and most often occurs in the jaw near the molars. Ameloblastomas are usually not cancer, but they can grow quickly, cause pain and swelling, and damage nearby tissue. Rarely, they may come back or spread to other parts of the body. Ameloblastomas usually occur in adults.

### **amifostine**

A drug used to help protect the kidneys in patients receiving cisplatin for advanced ovarian cancer and to help reduce dry mouth in patients receiving radiation therapy after surgery for head and neck cancer. Amifostine helps protect healthy tissue from some of the side effects caused by certain types of cancer treatment. It is a type of chemoprotective agent and a type of radioprotective agent. Also called Ethiol.

### **amikacin**

An antibiotic drug used to treat infection. It belongs to the family of drugs called aminoglycoside antibiotics.

### **amino acid**

One of several molecules that join together to form proteins. There are 20 common amino acids found in proteins.

### **amino acid sequence**

The arrangement of amino acids in a protein. Proteins can be made from 20 different kinds of amino acids, and the structure and function of each protein are determined by the kinds of amino acids used to make it and how they are arranged.

### **aminobenzoic acid**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Bacteria that live in the intestines need aminobenzoic acid to survive. Aminobenzoic acid is found in grains and foods from animals. It is being studied as a radiosensitizer (a substance that makes tumor cells more sensitive to radiation therapy) and in the treatment of certain skin disorders. Also called PABA and para-aminobenzoic acid.

### **aminocamptothecin**

An anticancer drug that belongs to the family of drugs called topoisomerase inhibitors.

### **aminoglutethimide**

An anticancer drug that belongs to the family of drugs called nonsteroidal aromatase inhibitors. Aminoglutethimide is used to decrease the production of sex hormones (estrogen in women or testosterone in men) and suppress the growth of tumors that need sex hormones to grow.

### **aminoglycoside antibiotic**

A substance that works against many types of bacteria and includes streptomycin, gentamicin, and neomycin. An aminoglycoside antibiotic is used to treat bacterial infections.

### **aminolevulinic acid hydrochloride**

A drug used under the brand names Ameluz and Levulan Kerastick with photodynamic therapy to treat actinic keratosis (a skin condition that may become cancer) and under the brand name Gleolan as an imaging agent during surgery for certain types of brain tumors. Aminolevulinic acid hydrochloride is also being studied in the treatment of other conditions and types of cancer. When aminolevulinic acid hydrochloride is taken up by abnormal cells, including cancer cells, and is then exposed to certain types of light, it becomes active and kills the cells. It may also help find some types of cancer cells when they are exposed to certain types of light. Aminolevulinic acid hydrochloride is a type of photosensitizing agent.

### **aminopterin**

An anticancer drug that belongs to the family of drugs called antimetabolites.

### **amiodarone hydrochloride**

A drug used to treat certain types of abnormal heart rhythms that have not gotten better with other drugs. Amiodarone hydrochloride affects the electrical activity of the heart. It is a type of antiarrhythmic agent. Also called Corderone.

### **amitriptyline hydrochloride**

A drug that is used to treat depression and may be given to treat anxiety, sleep disorders, and pain. It is also being studied in an oral or gel form in the treatment of nerve pain caused by chemotherapy. Amitriptyline hydrochloride is a type of tricyclic antidepressant.

### **amivantamab**

A drug used alone or with other drugs to treat adults with non-small cell lung cancer that has spread and has an abnormal EGFR gene. It is used in patients whose cancer has not been treated with other anticancer therapy or has gotten worse during or after platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Amivantamab binds to receptors for proteins

called EGF and MET, which are found on some types of cancer cells. Blocking these proteins may help keep cancer cells from growing. Amivantamab is a type of bispecific antibody. Also called Rybrevant.

### **ammonia**

A gas made of nitrogen and hydrogen. It has a strong odor and can irritate the skin, eyes, nose, throat, and lungs. Ammonia is made by bacteria and decaying plants and animals and is found in water, soil, and air. Ammonia is also made by the body when proteins break down. In the laboratory, ammonia can be changed to a liquid and used in medicines, fertilizers, household cleaning liquids, and other products. It is also added to cigarettes to increase the effect of nicotine on the body.

### **ammonium tetrathiomolybdate**

A substance being studied in the treatment of many types of cancer. Ammonium tetrathiomolybdate removes extra copper from the body. Removing the copper may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. Ammonium tetrathiomolybdate is a type of chelating agent and a type of antiangiogenesis agent.

### **amniotic fluid**

The clear or slightly yellow fluid that surrounds and protects an unborn baby as it grows during pregnancy. Amniotic fluid cushions the baby and helps keep the temperature in the womb constant. It also helps the growing baby's lungs, digestive system, and bones develop properly. Amniotic fluid contains some of the baby's cells and other substances. Samples of amniotic fluid may be taken to check the health of the baby and to test for genetic changes that may be a sign of a genetic disease or condition. Amniotic fluid also may be used to learn the sex of the baby.

### **amonafile**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called topoisomerase inhibitors and intercalating agents.

### **amoxicillin**

A drug used to treat some bacterial infections. Amoxicillin is a form of penicillin that is made in the laboratory. It kills certain types of bacteria. It is a type of antibiotic.

### **amoxicillin-clavulanate potassium**

A drug used to treat bacterial infections. Adding the chemical clavulanate potassium to the antibiotic amoxicillin increases the amount of time the antibiotic stays active in the body. Amoxicillin-clavulanate potassium is a type of combination antibiotic. Also called Augmentin.

### **amphotericin B**

A drug used in the treatment of infections caused by fungi. It is a type of antifungal.

### **ampulla**

A sac-like enlargement of a canal or duct.

### **ampulla of Vater**

An enlargement of the ducts from the liver and pancreas at the point where they enter the small intestine.



**ampulla of Vater cancer**

Cancer that forms in the ampulla of Vater (an enlargement of the ducts from the liver and pancreas where they join and enter the small intestine). Symptoms include jaundice, abdominal pain, nausea, vomiting, and weight loss. Also called ampullary cancer.

**ampullary cancer**

Cancer that forms in the ampulla of Vater (an enlargement of the ducts from the liver and pancreas where they join and enter the small intestine). Symptoms include jaundice, abdominal pain, nausea, vomiting, and weight loss. Also called ampulla of Vater cancer.

**amputation**

The removal by surgery of a limb (arm or leg) or other body part because of injury or disease, such as diabetes or cancer.

**amrubicin**

A substance being studied in the treatment of lung cancer. It is a type of anthracycline analog.

**amsacrine**

An anticancer drug that belongs to the family of drugs called topoisomerase inhibitors.

**amuvatinib**

A substance being studied in the treatment of some types of cancer. It may block certain proteins involved in cancer cell growth and DNA repair. Blocking these proteins may make cancer cells more sensitive to anticancer drugs and radiation therapy. Amuvatinib is a type of tyrosine kinase inhibitor. Also called MP470.

**amygdalin**

A substance found in the pits of some fruits, such as apricots, and in raw nuts and plants. Amygdalin has been used in some countries as a treatment for cancer, but it has not been shown to work in human clinical trials. It is not approved for use in the United States. Amygdalin is sometimes called vitamin B17.

**amylase**

An enzyme that helps the body digest starches.

**amyloidosis**

A group of diseases in which protein builds up in certain organs (localized amyloidosis) or throughout the body (systemic amyloidosis). Amyloidosis may be either primary (with no known cause), secondary (caused by another disease, including some types of cancer, such as multiple myeloma), or hereditary (passed down from parents to children). Many organs are affected by amyloidosis. The organs affected may depend on whether the amyloidosis is the primary, secondary, or hereditary form.

**anabolic steroid**

A type of steroid that is used in medicine to repair body tissues and to increase appetite and the growth of muscles. Anabolic steroids are made in the laboratory from testosterone (a male hormone).

### **anagrelide**

A drug that is used to decrease the number of platelets in the blood in order to prevent blood clotting.

### **anakinra**

A substance that is used to treat rheumatoid arthritis, and is being studied in the treatment of cancer. Anakinra blocks the action of interleukin 1 (IL-1). It is a type of interleukin receptor antagonist. Also called Kinaret.

### **anal**

Having to do with the anus. The anus is the opening of the rectum (last part of the large intestine) to the outside of the body.

### **anal Pap smear**

A procedure in which cells are scraped from the lining of the anus (the opening of the rectum to the outside of the body) and looked at under a microscope. It is used to find cancer and changes in cells that may lead to cancer. An anal Pap smear can also show conditions that are not cancer, such as infection or inflammation. Also called anal Pap test.

### **anal Pap test**

A procedure in which cells are scraped from the lining of the anus (the opening of the rectum to the outside of the body) and looked at under a microscope. It is used to find cancer and changes in cells that may lead to cancer. An anal Pap test can also show conditions that are not cancer, such as infection or inflammation. Also called anal Pap smear.

### **anal cancer**

Cancer that forms in tissues of the anus. The anus is the opening of the rectum (last part of the large intestine) to the outside of the body.

### **anal dysplasia**

The abnormal growth of cells in the lining of the anal canal or in the skin around the outside of the anus called the perianal area. Anal dysplasia is usually caused by certain types of human papillomavirus (HPV). It can be low grade or high grade, depending on how abnormal the cells look under a microscope and how much of the anal tissue is affected. Anal dysplasia is not cancer but may become cancer and spread to nearby normal tissue. It is sometimes called anal intraepithelial neoplasia (AIN) or anal squamous intraepithelial lesion.

### **anal wart**

A raised growth in or around the anus caused by human papillomavirus (HPV). HPV can spread by skin-to-skin contact, usually during oral, anal, or genital sex with an infected partner. Anal warts often appear as small, light brown or skin-colored bumps that may be clumped together. They are usually painless and do not cause any symptoms, so a person may not know they have them. However, sometimes they can grow large and cause itching and bleeding. Anal warts may come back after treatment. People who have had anal warts have an increased risk of developing anal cancer.

### **analgesia**

Pain relief.

**analgesic**

A drug that reduces pain. Analgesics include aspirin, acetaminophen, and ibuprofen.

**analog**

In chemistry, a substance that is similar, but not identical, to another.

**analysis**

A process in which anything complex is separated into simple or less complex parts.

**anaphylactic shock**

A severe and sometimes life-threatening immune system reaction to an antigen that a person has been previously exposed to. The reaction may include itchy skin, edema, collapsed blood vessels, fainting, difficulty in breathing, and death.

**anaplastic**

A term used to describe cancer cells that divide rapidly and have little or no resemblance to normal cells.

**anaplastic large cell lymphoma**

An aggressive (fast-growing) type of non-Hodgkin lymphoma that is usually of the T-cell type. The cancer cells express a marker called CD30 or Ki-1 on the surface, and may appear in the lymph nodes, skin, bones, soft tissues, lungs, or liver. Also called ALCL.

**anaplastic lymphoma kinase**

A protein that helps control cell growth. It is made by the anaplastic lymphoma kinase (ALK) gene, which may be changed in some types of cancer, such as anaplastic large cell lymphoma, neuroblastoma, and non-small cell lung cancer. These changes in the ALK gene can cause the cancer cells to grow and spread. Anaplastic lymphoma kinase is a type of receptor tyrosine kinase.

**anaplastic lymphoma kinase gene**

A gene that makes a protein that is involved in cell growth. Mutated (changed) forms of the anaplastic lymphoma kinase gene and protein have been found in some types of cancer, including neuroblastoma, non-small cell lung cancer, and anaplastic large cell lymphoma. These changes may increase the growth of cancer cells. Checking for changes in the anaplastic lymphoma kinase gene in tumor tissue may help to plan cancer treatment. Also called ALK gene.

**anaplastic lymphoma kinase inhibitor**

A substance that blocks the activity of a protein called anaplastic lymphoma kinase (ALK), which helps control cell growth. Blocking this protein may help keep cancer cells from growing and spreading. Some anaplastic lymphoma kinase inhibitors are used to treat cancer. They are a type of targeted therapy. Also called ALK inhibitor.

**anaplastic lymphoma kinase positive**

Describes cells that have a protein called ALK on their surface. In cancer, it is also used to describe cells that have a change in the structure of the ALK gene or that make too much ALK protein. In normal cells, ALK helps control cell growth. Cancer cells that have the changed ALK gene or make too much ALK protein may grow more quickly. Knowing whether a cancer is anaplastic lymphoma kinase positive may help plan treatment. Cancers that may be

anaplastic lymphoma kinase positive include neuroblastoma, non-small cell lung cancer, and anaplastic large cell lymphoma. Also called ALK positive.

### **anaplastic thyroid cancer**

A rare, aggressive type of thyroid cancer in which the malignant (cancer) cells look very different from normal thyroid cells.

### **anastomosis**

A procedure to connect healthy sections of tubular structures in the body after the diseased portion has been surgically removed.

### **anastrozole**

A drug used to treat certain types of breast cancer in postmenopausal women. It is also being studied in the treatment of other types of cancer. Anastrozole lowers the amount of estrogen made by the body. This may stop the growth of cancer cells that need estrogen to grow. Anastrozole is a type of nonsteroidal aromatase inhibitor. Also called Arimidex.

### **anatomic**

Having to do with anatomy (the study of the structure of a plant or animal).

### **anatomist**

A person who has special training in anatomy (the study of the structures of animals or plants).

### **anatomy**

The study of the structure of a plant or animal. Human anatomy includes the cells, tissues, and organs that make up the body and how they are organized in the body.

### **ancestim**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. It is being studied in the treatment of myelodysplasia. Ancestim is a type of recombinant stem cell growth factor. Also called r-metHuSCF, recombinant human methionyl stem cell factor, and Stemgen.

### **ancillary test**

In a clinical trial, a medical test on a patient that is not a part of the original study design.

### **androblastoma**

A rare type of ovarian tumor in which the tumor cells secrete a male sex hormone. This may cause virilization (the appearance of male physical characteristics in females). Also called arrhenoblastoma and Sertoli-Leydig cell tumor of the ovary.

### **androgen**

A type of hormone that promotes the development and maintenance of male sex characteristics.

### **androgen ablation**

Treatment to suppress or block the production or action of male hormones. This is done by having the testicles removed, by taking female sex hormones, or by

taking drugs called antiandrogens. Also called 44369 and androgen deprivation.

### **androgen deprivation**

Treatment to suppress or block the production or action of male hormones. This is done by having the testicles removed, by taking female sex hormones, or by taking drugs called antiandrogens. Also called 44369 and androgen ablation.

### **androgen receptor**

A protein that binds male hormones called androgens. Androgen receptors are found inside the cells of male reproductive tissue, some other types of tissue, and some cancer cells. In prostate cancer, androgens bind to androgen receptors inside the cancer cells, which causes the cancer cells to grow. Also called AR.

### **androgen receptor antagonist**

A substance that keeps androgens (male sex hormones) from binding to proteins called androgen receptors, which are found in normal prostate cells, some prostate cancer cells, and in cells of some other tissues. Preventing this binding blocks the effects of these hormones in the body. Treatment with androgen receptor antagonists may keep prostate cancer cells from growing. Examples of androgen receptor antagonists used to treat prostate cancer are apalutamide, bicalutamide, darolutamide, enzalutamide, flutamide, and nilutamide. Also called androgen receptor blocker and antiandrogen.

### **androgen receptor blocker**

A substance that keeps androgens (male sex hormones) from binding to proteins called androgen receptors, which are found in normal prostate cells, some prostate cancer cells, and in cells of some other tissues. Preventing this binding blocks the effects of these hormones in the body. Treatment with androgen receptor blockers may keep prostate cancer cells from growing. Examples of androgen receptor blockers used to treat prostate cancer are apalutamide, bicalutamide, darolutamide, enzalutamide, flutamide, and nilutamide. Also called androgen receptor antagonist and antiandrogen.

### **androgen receptor negative**

Describes cells that do not have a protein that binds to androgens (male hormones). Cancer cells that are androgen receptor negative do not need androgens to grow. This means that they will keep growing when androgens are not present and do not stop growing when treatments that block androgens in the body are used. This can affect how the cancer is treated. Also called AR negative.

### **androgen receptor positive**

Describes cells that have a protein that binds to androgens (male hormones). Cancer cells that are androgen receptor positive may need androgens to grow. These cells may stop growing or die when they are treated with substances that block the binding and actions of androgen hormones. Also called AR positive.

### **androgen-dependent prostate cancer**

Prostate cancer that needs androgens (male hormones) to grow and therefore stops growing when androgens are not present. Many early-stage prostate cancers are androgen-dependent, so reducing the amount of androgens in the body or blocking their action may be an effective type of therapy. Also called androgen-sensitive prostate cancer, castrate-sensitive prostate cancer, CSPC, hormone-sensitive prostate cancer, and HSPC.

### **androgen-independent**

Describes the ability of tumor cells to grow in the absence of androgens (hormones that promote the development and maintenance of male sex characteristics). Many early prostate cancers require androgens for growth, but advanced prostate cancers are often androgen-independent.

### **androgen-sensitive prostate cancer**

Prostate cancer that needs androgens (male hormones) to grow and therefore stops growing when androgens are not present. Many early-stage prostate cancers are androgen-dependent, so reducing the amount of androgens in the body or blocking their action may be an effective type of therapy. Also called androgen-dependent prostate cancer, castrate-sensitive prostate cancer, CSPC, hormone-sensitive prostate cancer, and HSPC.

### **androstanolone**

A hormone made from testosterone in the prostate, testes, and certain other tissues. It is needed to develop and maintain male sex characteristics, such as facial hair, deep voice, and muscle growth. High amounts of androstanolone may increase the growth of prostate cancer and make it harder to treat. Also called DHT and dihydrotestosterone.

### **anecdotal report**

An incomplete description of the medical and treatment history of one or more patients. Anecdotal reports may be published in places other than peer-reviewed, scientific journals.

### **anemia**

A condition in which the number of red blood cells is below normal.

### **anesthesia**

A loss of feeling or awareness caused by drugs or other substances. Anesthesia keeps patients from feeling pain during surgery or other procedures. Local anesthesia is a loss of feeling in one small area of the body. Regional anesthesia is a loss of feeling in a part of the body, such as an arm or leg. General anesthesia is a loss of feeling and a complete loss of awareness that feels like a very deep sleep.

### **anesthesiologist**

A doctor who has special training in giving drugs or other agents to prevent or relieve pain during surgery or other procedures.

### **anesthetic**

A drug or other substance that causes a loss of feeling or awareness. Local anesthetics cause a loss of feeling in one small area of the body. Regional anesthetics cause a loss of feeling in a part of the body, such as an arm or leg. General anesthetics cause a loss of feeling and a complete loss of awareness that feels like a very deep sleep.

### **anetholtrithione**

A substance that is being studied in the treatment of cancer.

### **aneuploidy**

A condition in which there are extra or missing chromosomes in some or all the cells in the body. Human cells, except for egg and sperm cells, normally contain 23 pairs of chromosomes, for a total of 46 chromosomes in each cell. With



aneuploidy, the number of chromosomes does not equal 46. For example, people with Down syndrome have three copies of chromosome 21 in each cell.

### **angelica root**

The root of any of a group of herbs called Angelica. It has been used in some cultures to treat certain medical problems, including gastrointestinal problems such as loss of appetite, feelings of fullness, and gas.

### **angiofibroma**

A benign (not cancer) tumor that is made up of blood vessels and fibrous (connective) tissue. Angiofibromas usually appear as small, red bumps on the face, especially on the nose and cheeks. They are common in patients with tuberous sclerosis (a genetic disorder that causes skin lesions, seizures, and mental problems). Angiofibromas are a type of vascular tumor.

### **angiofollicular lymph node hyperplasia**

A rare disorder in which benign (not cancer) growths form in lymph node tissue. There are two main ways that angiofollicular lymph node hyperplasia occurs: localized (unicentric) and multicentric. Unicentric angiofollicular lymph node hyperplasia affects only one group of lymph nodes in one part of the body, usually in the chest or abdomen. It may not cause symptoms. Multicentric angiofollicular lymph node hyperplasia affects many groups of lymph nodes and lymphoid tissue all through the body. It can weaken the immune system and cause problems such as infection, fever, weight loss, fatigue, night sweats, nerve damage, and anemia. People with angiofollicular lymph node hyperplasia have an increased risk of lymphoma. Also called Castleman disease and giant lymph node hyperplasia.

### **angiogenesis**

Blood vessel formation. Tumor angiogenesis is the growth of new blood vessels that tumors need to grow. This process is caused by the release of chemicals by the tumor and by host cells near the tumor.

### **angiogenesis inhibitor**

A drug or substance that keeps new blood vessels from forming. In cancer treatment, angiogenesis inhibitors may prevent the growth of new blood vessels that tumors need to grow. Also called antiangiogenesis agent.

### **angiogram**

An x-ray or computer image (CT scan or MRI) of the blood vessels and blood flow in the body. A dye may be injected through a catheter (small tube) into an artery or vein to make the blood vessels easier to see. An angiogram may be used to check for an aneurysm (a bulge in a blood vessel wall), blockages in arteries, blood clots, or other problems, such as a tumor.

### **angiography**

A procedure to x-ray blood vessels. The blood vessels can be seen because of an injection of a dye that shows up in the x-ray.

### **angioimmunoblastic T-cell lymphoma**

An aggressive (fast-growing) type of T-cell non-Hodgkin lymphoma marked by enlarged lymph nodes and hypergammaglobulinemia (increased antibodies in the blood). Other symptoms may include a skin rash, fever, weight loss, or night sweats.

### **angiolymphoid hyperplasia with eosinophilia**

A rare benign (not cancer) tumor of small blood vessels surrounded by lymphocytes and eosinophils (types of white blood cells). Angiolymphoid hyperplasia with eosinophilia usually forms on or in the skin, especially the skin of the head, but can occur in other areas of the body, such as in bone. On the skin, it may appear as firm pink to red bumps that may be itchy or painful. If the tumor is in bone, it may cause swelling and pain. Angiolymphoid hyperplasia with eosinophilia is sometimes caused by injury and often comes back after treatment. Angiolymphoid hyperplasia with eosinophilia is most common in young and middle-aged adults. It is a type of vascular tumor. Also called epithelioid hemangioma and histiocytoid hemangioma.

### **angiomyolipoma**

A benign (noncancer) tumor of fat and muscle tissue that usually is found in the kidney. Angiomyolipomas rarely cause symptoms, but may bleed or grow large enough to be painful or cause kidney failure. They are common in patients with tuberous sclerosis (a genetic disorder in which benign tumors grow in the kidneys, brain, eyes, heart, lungs, and skin, causing seizures, mental problems, and skin lesions).

### **angioplasty**

A procedure to enlarge the opening in a blood vessel that has become narrowed or blocked by plaque (a buildup of fat and cholesterol on the inner wall of the blood vessel). Examples of angioplasty are balloon angioplasty and laser angioplasty.

### **angiosarcoma**

A type of cancer that begins in the cells that line blood vessels or lymph vessels. Cancer that begins in blood vessels is called hemangiosarcoma. Cancer that begins in lymph vessels is called lymphangiosarcoma.

### **angiostatin**

A protein normally made by the body. It can also be made in the laboratory, and is being studied in the treatment of cancer. Angiostatin may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent.

### **angiotensin-converting enzyme inhibitor**

A drug that is used to lower blood pressure. An angiotensin-converting enzyme inhibitor is a type of antihypertensive agent. Also called ACE inhibitor.

### **anhidrosis**

A rare condition in which the sweat glands make little or no sweat. It can affect the whole body or a small part of the body. Anhidrosis may be caused by severe burns, radiation, infection, inflammation, or other injuries to the skin. It may also be caused by certain medicines and some conditions that affect the skin, nerves, connective tissue, or sweat glands. It may be inherited as part of a genetic condition or develop later in life. Also called hypohidrosis.

### **anhydrovinblastine**

An anticancer drug that belongs to the family of drugs called mitotic inhibitors.

### **anidulafungin**

A drug that is used to treat infections caused by fungi. It belongs to the family of drugs called antifungals.

**animal model**

An animal with a disease either the same as or like a disease in humans. Animal models are used to study the development and progression of diseases and to test new treatments before they are given to humans. Animals with transplanted human cancers or other tissues are called xenograft models.

**animal study**

A laboratory experiment using animals to study the development and progression of diseases. Animal studies also test how safe and effective new treatments are before they are tested in people.

**animal-assisted therapy**

A type of therapy that uses dogs or other pets to improve the physical and mental health of patients with certain acute or chronic diseases. It is being studied as a way to relieve distress in cancer patients undergoing treatment for pain. Also called pet-facilitated therapy.

**aniridia**

A disorder in which a person is born without part or all of the iris (colored tissue at the front of the eyeball). Aniridia usually affects both eyes and causes other eye problems, including being sensitive to light and loss of vision.

**annamycin**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called anthracycline antibiotics.

**anorexia**

An abnormal loss of the appetite for food. Anorexia can be caused by cancer, AIDS, a mental disorder (i.e., anorexia nervosa), or other diseases.

**anorexia nervosa**

An eating disorder marked by an intense fear of gaining weight, a refusal to maintain a healthy weight, and a distorted body image. People with anorexia nervosa have an abnormal loss of appetite for food, try to avoid eating, and eat as little as possible.

**anoscopy**

A procedure in which a short, lighted tube called an anoscope is inserted into the anus and lower part of the rectum to check for abnormal areas. The anoscope may be used with a special magnifying instrument called a colposcope and a weak acetic acid solution to make abnormal tissue easier to see. Tissue samples may be removed so they can be checked under a microscope for signs of disease. An anoscopy may be used to help diagnose cancers of the anus or rectum. It may also be used to diagnose other conditions, such as hemorrhoids, anal fissures (tears), and anal polyps.

**ansamycin**

An anticancer drug that belongs to the family of drugs called antineoplastic antibiotics.

**antagonist**

In medicine, a substance that stops the action or effect of another substance. For example, a drug that blocks the stimulating effect of estrogen on a tumor cell is called an estrogen receptor antagonist.

**antenatal**

Having to do with the time a female is pregnant, before birth occurs. Also called prenatal.

**anterior**

In human anatomy, has to do with the front of a structure, or a structure found toward the front of the body.

**anterior mediastinotomy**

A procedure in which a tube is inserted into the chest to view the tissues and organs in the area between the lungs and between the breastbone and heart. The tube is inserted through an incision next to the breastbone. This procedure is usually used to get a tissue sample from the lymph nodes on the left side of the chest. Also called Chamberlain procedure.

**anterior mediastinum**

The area in the front part of the chest between the lungs. Also called prevascular space.

**anterior pelvic exenteration**

Surgery to remove the urethra, lower part of the ureters, uterus, cervix, vagina, and bladder.

**anterior urethral cancer**

A disease in which malignant (cancer) cells are found in the part of the urethra (the tube through which urine leaves the body) that is closest to the outside of the body.

**anthracenedione**

An anticancer drug that belongs to the family of drugs called anticancer antibiotics.

**anthracycline**

A type of antibiotic that comes from certain types of Streptomyces bacteria. Anthracyclines are used to treat many types of cancer. Anthracyclines damage the DNA in cancer cells, causing them to die. Daunorubicin, doxorubicin, and epirubicin are anthracyclines.

**anthraquinone**

A type of anticancer drug.

**anti-CCR2 monoclonal antibody MLN1202**

A substance being studied as a treatment for atherosclerosis (a build-up of fat in the arteries). It is also being studied in the treatment of cancers that spread to the bone. Anti-CCR2 monoclonal antibody MLN1202 binds to a protein called CCR2, which is found on the surface of certain bone cells, white blood cells, and cancer cells. Anti-CCR2 monoclonal antibody MLN1202 blocks the action of a substance that is involved in keeping healthy bone mass. It may help keep the cancer cells from spreading to and growing in the bone. It is a type of monoclonal antibody. Also called MLN1202.

**anti-CD19 immunotoxin**

A monoclonal antibody linked to a toxic substance. It is being studied in the treatment of some types of B-cell cancer. Anti-CD19 immunotoxin is made in the

laboratory. It binds to CD19, a protein on the surface of normal B cells and B-cell tumors, and kills the cells.

#### **anti-CD22 immunotoxin**

A monoclonal antibody linked to a toxic substance. It is being studied in the treatment of some types of B-cell cancer. Anti-CD22 immunotoxin is made in the laboratory. It binds to CD22, a protein on the surface of normal B cells and B-cell tumors, and kills the cells.

#### **anti-CD22 immunotoxin CAT-8015**

A drug used to treat adults with hairy cell leukemia that came back or did not get better with at least two other systemic therapies, including treatment with a purine nucleoside analog (a type of anticancer drug). Anti-CD22 immunotoxin CAT-8015 contains a monoclonal antibody that binds to a protein called CD22, which is found on B cells (a type of white blood cell) and some types of leukemia cells. It also contains a bacterial toxin called PE38, which may help kill cancer cells. Anti-CD22 immunotoxin CAT-8015 is a type of immunotoxin. Also called CAT-8015, Lumoxiti, and moxetumomab pasudotox.

#### **anti-CD38 monoclonal antibody**

A substance that binds to a protein called CD38, which is found on some types of blood cells and in high levels on some cancer cells, including myeloma cells. Anti-CD38 monoclonal antibody may block the CD38 protein and help the immune system kill cancer cells. Some anti-CD38 monoclonal antibodies are being used to treat multiple myeloma. They are also being studied in the treatment of other types of cancer.

#### **anti-CD45 monoclonal antibody**

A substance being studied in the treatment of some types of leukemia and lymphoma. Anti-CD45 monoclonal antibody binds to a protein called CD45, which is found on most types of blood cells and some types of leukemia and lymphoma cells. Anti-CD45 monoclonal antibody may help the immune system kill cancer cells. It is a type of monoclonal antibody.

#### **anti-CEA antibody**

An antibody against carcinoembryonic antigen (CEA), a protein present on certain types of cancer cells.

#### **anti-EpCAM-Pseudomonas-exotoxin fusion protein**

A substance being studied in the treatment of certain types of head and neck cancer. Anti-EpCAM-Pseudomonas-exotoxin fusion protein is made by linking a monoclonal antibody fragment to a toxic protein that may kill cancer cells. It binds to EpCAM (a protein on the surface of epithelial cells and some types of cancer cells). Also called Proxinium and VB4-845.

#### **anti-GD2 therapy**

A type of treatment that helps the body's immune system recognize and destroy cancer cells that have GD2 on their surface. GD2 is an antigen that is found in high levels on some types of cancer cells, such as neuroblastoma cells. Anti-GD2 monoclonal antibodies bind to GD2 on the cancer cells, which causes them to die. Some anti-GD2 monoclonal antibodies are being used in the treatment of neuroblastoma.

### **anti-HGF monoclonal antibody AMG 102**

A substance being studied in the treatment of cancer. It binds to a protein called hepatocyte growth factor (HGF), which may cause cancer cells to grow. Blocking this may cause cancer cells to die. Anti-HGF monoclonal antibody AMG 102 is a type of monoclonal antibody. Also called AMG 102.

### **anti-IGF1R recombinant monoclonal antibody MK-0646**

A substance being studied in the treatment of many types of cancer. Anti-IGF1R recombinant monoclonal antibody MK-0646 binds to a protein called insulin-like growth factor receptor (IGFR) on the surface of cells. This may prevent the cells from growing when IGF is present. It may also kill cancer cells. Anti-IGF1R recombinant monoclonal antibody MK-0646 is a type of monoclonal antibody. Also called MK-0646.

### **anti-IL-6 chimeric monoclonal antibody**

A drug used to treat a rare condition called multicentric Castleman disease in patients who do not have HIV or human herpesvirus 8. It is also being studied in the treatment of some types of cancer and other conditions. Anti-IL-6 chimeric monoclonal antibody binds to a protein called interleukin-6 (IL-6), which is made by some white blood cells and other cells in the body. Anti-IL-6 chimeric monoclonal antibody may help reduce inflammation and stop the growth of cancer cells or abnormal blood cells. It is a type of monoclonal antibody. Also called cCLB8, CNTO 328, siltuximab, and Sylvant.

### **anti-Mullerian hormone**

A hormone made by the ovaries in females and the testicles in males. Anti-Mullerian hormone helps to form the male and female reproductive organs. It also helps control other hormones that act on the ovaries to make the follicles and eggs grow during a woman's menstrual cycle. Measuring the amount of anti-Mullerian hormone in the blood may help diagnose infertility and other conditions, such as polycystic ovarian syndrome, menopause, and certain types of ovarian tumors. It may also help determine the sex of an infant, when the sex is not clear. Also called AMH.

### **anti-TGF-beta monoclonal antibody GC1008**

A substance being studied in the treatment of breast cancer that has spread to other parts of the body. It is also being studied in the treatment of other cancers and conditions. Anti-TGF-beta monoclonal antibody GC1008 binds to a protein called transforming growth factor-beta (TGF-beta), which is found on some cancer cells. Anti-TGF-beta monoclonal antibody GC1008 may help keep cancer cells from growing and prevent the growth of new blood vessels that tumors need to grow. It is a type of monoclonal antibody and a type of antiangiogenesis agent. Also called fresolimumab and GC1008.

### **anti-TRAIL R1-mAb**

A substance being studied in the treatment of some types of cancer. It binds to a protein called TRAIL R1 on the surface of some tumor cells. This may kill the tumor cells. Anti-TRAIL R1-mAb is a type of monoclonal antibody. Also called HGS-ETR1 and mapatumumab.

### **anti-TRAIL R2 mAb HGS-ETR2**

A substance being studied in the treatment of some types of cancer. It binds to a protein called TRAIL-R2 on the surface of some tumor cells, which may kill the tumor cells. Anti-TRAIL R2 mAb HGS-ETR2 is a type of monoclonal antibody. Also called HGS-ETR2 and lexatumumab.



### **anti-VEGFR monoclonal antibody**

A substance that binds to receptors for a protein called vascular endothelial growth factor (VEGF), which may be found on some types of cancer cells. This may prevent the growth of new blood vessels that tumors need to grow. There are different types of anti-VEGFR monoclonal antibodies being studied in the treatment of cancer. These substances are a type of antiangiogenesis agent and a type of monoclonal antibody.

### **anti-VEGFR-2 fully human monoclonal antibody IMC-1121B**

A drug that binds to the protein vascular endothelial growth factor (VEGF) to help keep new blood vessels from forming and is used to treat different types of cancer. It is used alone or with other drugs to treat certain types of non-small cell lung cancer, hepatocellular carcinoma (a type of liver cancer), colorectal cancer, stomach cancer, and gastroesophageal junction cancer. It is also being studied in the treatment of other types of cancer. Anti-VEGFR-2 fully human monoclonal antibody IMC-1121B may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody. Also called Cyramza, IMC-1121B, and ramucirumab.

### **anti-idiotypic vaccine**

A vaccine made of antibodies that see other antibodies as the antigen and bind to it. Anti-idiotypic vaccines can stimulate the body to produce antibodies against tumor cells.

### **anti-inflammatory**

Having to do with reducing inflammation.

### **anti-inflammatory agent**

A drug or substance that reduces inflammation (redness, swelling, and pain) in the body. Anti-inflammatory agents block certain substances in the body that cause inflammation. They are used to treat many different conditions. Some anti-inflammatory agents are being studied in the prevention and treatment of cancer.

### **anti-mesothelin monoclonal antibody MORAb-009**

A substance being studied in the treatment of mesothelioma. Anti-mesothelin monoclonal antibody MORAb-009 binds to a protein called mesothelin, which is found on some cancer cells. Anti-mesothelin monoclonal antibody MORAb-009 may help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called amatuximab and MORAb-009.

### **anti-seizure medication**

A type of drug that is used to prevent or treat seizures or convulsions by controlling abnormal electrical activity in the brain. Anti-seizure medications are used to treat epilepsy and other seizure disorders. They are also used to treat medical conditions, such as bipolar disorder, nerve pain, migraine headaches, fibromyalgia, and restless leg syndrome. There are many different types of anti-seizure medications. Also called anticonvulsant and antiepileptic.

### **antiandrogen**

A substance that keeps androgens (male sex hormones) from binding to proteins called androgen receptors, which are found in normal prostate cells, some prostate cancer cells, and in cells of some other tissues. Preventing this binding blocks the effects of these hormones in the body. Treatment with antiandrogens may keep prostate cancer cells from growing. Examples of antiandrogens used to treat prostate cancer are apalutamide, bicalutamide, darolutamide,

enzalutamide, flutamide, and nilutamide. Also called androgen receptor antagonist and androgen receptor blocker.

### **antiandrogen therapy**

Treatment with drugs to block the action of androgens (male hormones) in the body. Androgens, such as testosterone, bind to proteins called androgen receptors, which are found in prostate cancer cells and in cells of some other tissues. Antiandrogen therapy keeps androgens from binding to these receptors and may keep cancer cells from growing. It is used to treat prostate cancer.

### **antiangiogenesis**

Prevention of the growth of new blood vessels.

### **antiangiogenesis agent**

A drug or substance that keeps new blood vessels from forming. In cancer treatment, antiangiogenesis agents may prevent the growth of new blood vessels that tumors need to grow. Also called angiogenesis inhibitor.

### **antiangiogenic**

Having to do with reducing the growth of new blood vessels.

### **antianxiety agent**

A drug used to treat symptoms of anxiety, such as feelings of fear, dread, uneasiness, and muscle tightness, that may occur as a reaction to stress. Most antianxiety agents block the action of certain chemicals in the nervous system. Also called anxiolytic and anxiolytic agent.

### **antiapoptotic**

Something that prevents apoptosis. Apoptosis is a type of cell death in which a series of molecular steps in a cell leads to its death.

### **antibacterial**

A substance that kills bacteria or stops them from growing and causing disease.

### **antibiotic**

A drug used to treat infections caused by bacteria and other microorganisms.

### **antibody**

A protein made by plasma cells (a type of white blood cell) in response to an antigen (a substance that causes the body to make a specific immune response). Each antibody can bind to only one specific antigen. The purpose of this binding is to help destroy the antigen. Some antibodies destroy antigens directly. Others make it easier for white blood cells to destroy the antigen. An antibody is a type of immunoglobulin.

### **antibody therapy**

Treatment that uses antibodies to help the body fight cancer, infection, or other diseases. Antibodies are proteins made by the immune system that bind to specific markers on cells or tissues. Monoclonal antibodies are a type of antibody made in the laboratory that can be used in diagnosis or treatment. In cancer treatment, monoclonal antibodies may kill cancer cells directly, they may block development of tumor blood vessels, or they may help the immune system kill cancer cells.

**antibody-dependent cell-mediated cytotoxicity**

A type of immune reaction in which a target cell or microbe is coated with antibodies and killed by certain types of white blood cells. The white blood cells bind to the antibodies and release substances that kill the target cells or microbes. Also called ADCC and antibody-dependent cellular cytotoxicity.

**antibody-dependent cellular cytotoxicity**

A type of immune reaction in which a target cell or microbe is coated with antibodies and killed by certain types of white blood cells. The white blood cells bind to the antibodies and release substances that kill the target cells or microbes. Also called ADCC and antibody-dependent cell-mediated cytotoxicity.

**antibody-drug conjugate**

A substance made up of a monoclonal antibody chemically linked to a drug. The monoclonal antibody binds to specific proteins or receptors found on certain types of cells, including cancer cells. The linked drug enters these cells and kills them without harming other cells. Some antibody-drug conjugates are used to treat cancer. Also called ADC.

**anticachexia**

Describes a drug or effect that works against cachexia (loss of body weight and muscle mass).

**anticancer antibiotic**

A type of anticancer drug that blocks cell growth by interfering with DNA, the genetic material in cells. Also called antineoplastic antibiotic and antitumor antibiotic.

**anticancer therapy**

Treatment to stop or prevent cancer. Types of anticancer therapy include chemotherapy, radiation therapy, surgery, immunotherapy, and others.

**anticarcinogenic**

Having to do with preventing or delaying the development of cancer.

**anticipatory nausea and vomiting**

Nausea and vomiting that may occur before a chemotherapy treatment session begins in a patient who has had chemotherapy before. Anticipatory nausea and vomiting is caused by triggers, such as the sights, smells, or sounds of the treatment room. For example, a patient who smells an alcohol swab when starting chemotherapy may later become nauseous or vomit at the smell of an alcohol swab. The more chemotherapy sessions a patient has, the more likely it is that anticipatory nausea and vomiting will occur. Also called ANV.

**anticoagulant**

A substance that is used to prevent and treat blood clots in blood vessels and the heart. Also called blood thinner.

**anticonvulsant**

A type of drug that is used to prevent or treat seizures or convulsions by controlling abnormal electrical activity in the brain. Anticonvulsants are used to treat epilepsy and other seizure disorders. They are also used to treat medical conditions, such as bipolar disorder, nerve pain, migraine headaches, fibromyalgia, and restless leg syndrome. There are many different types of anticonvulsants. Also called anti-seizure medication and antiepileptic.

**antidepressant**

A drug used to treat depression.

**antidiarrheal**

A substance used to treat diarrhea (frequent and watery bowel movements).

**antidiuretic hormone**

A hormone that helps blood vessels constrict and helps the kidneys control the amount of water and salt in the body. This helps control blood pressure and the amount of urine that is made. Antidiuretic hormone is made by a part of the brain called the hypothalamus and is secreted into the blood by the pituitary gland. Certain types of tumors may release high amounts of antidiuretic hormone, which can cause low levels of sodium in the blood and the body to retain water. Also called arginine vasopressin and vasopressin.

**antiemetic**

A drug that prevents or reduces nausea and vomiting.

**antiepileptic**

A type of drug that is used to prevent or treat seizures or convulsions by controlling abnormal electrical activity in the brain. Antiepileptics are used to treat epilepsy and other seizure disorders. They are also used to treat medical conditions, such as bipolar disorder, nerve pain, migraine headaches, fibromyalgia, and restless leg syndrome. There are many different types of antiepileptics. Also called anti-seizure medication and anticonvulsant.

**antiestrogen**

A substance that keeps cells from making or using estrogen (a hormone that plays a role in female sex characteristics, the menstrual cycle, and pregnancy). Antiestrogens may stop some cancer cells from growing and are used to prevent and treat breast cancer. They are also being studied in the treatment of other types of cancer. An antiestrogen is a type of hormone antagonist. Also called estrogen blocker.

**antifibrinolytic agent**

A type of drug that helps the blood clot. It prevents the breakdown of a protein called fibrin, which is the main protein in a blood clot. Antifibrinolytic agents may be used to help prevent or treat serious bleeding in patients who have certain conditions, such as hemophilia, very heavy menstrual bleeding, or some types of vascular tumors. They may also be used to help prevent or control bleeding during or after surgery or after a traumatic injury.

**antifolate**

A type of drug that stops cells from using folic acid to make DNA and may kill cancer cells. Certain antifolates are used to treat some types of cancer and inflammatory conditions, such as rheumatoid arthritis. Also called folate antagonist and folic acid antagonist.

**antifungal**

A drug that treats infections caused by fungi.

**antigen**

Any substance that causes the body to make an immune response against that substance. Antigens include toxins, chemicals, bacteria, viruses, or other substances that come from outside the body. Body tissues and cells, including

cancer cells, also have antigens on them that can cause an immune response. These antigens can also be used as markers in laboratory tests to identify those tissues or cells.

### **antigen-presenting cell**

A type of immune cell that boosts immune responses by showing antigens on its surface to other cells of the immune system. An antigen-presenting cell is a type of phagocyte. Also called APC.

### **antigen-presenting cell vaccine**

A vaccine made of antigens and antigen-presenting cells (APCs). APCs boost an immune response by presenting antigens on their surfaces to other cells of the immune system. Also called APC vaccine.

### **antiglobulin test**

A laboratory test to identify antibodies that can bind to the surface of red blood cells or platelets and destroy them. This test is used to diagnose certain blood disorders in which patients make antibodies to their own red blood cells or platelets. It is also used to determine blood type. Also called Coombs test.

### **antihistamine**

A type of drug that blocks the action of histamines, which can cause fever, itching, sneezing, a runny nose, and watery eyes. Antihistamines are used to prevent fevers in patients receiving blood transfusions and to treat allergies, coughs, and colds.

### **antihormone therapy**

Treatment with drugs, surgery, or radiation in order to block the production or action of a hormone. Antihormone therapy may be used in cancer treatment because certain hormones are able to stimulate the growth of some types of tumors.

### **antihypertensive agent**

A type of drug used to treat high blood pressure. There are many different types of antihypertensive agents, and they work in different ways to lower blood pressure. Some remove extra fluid and salt from the body. Others relax and widen the blood vessels or slow the heartbeat. A person may respond better and have fewer side effects with one drug than with another. Some patients need more than one antihypertensive agent to lower their blood pressure.

### **antilymphocyte globulin**

Serum from blood that contains antibodies that bind to human T cells. Antilymphocyte globulin is given to a patient before a stem cell transplant to kill T cells and lower the risk of graft-versus-host disease (GVHD). It is also used to treat GVHD and after a kidney transplant to help keep the body from rejecting the kidney. Also called antithymocyte globulin.

### **antimetabolite**

A drug that is very similar to natural chemicals in a normal biochemical reaction in cells but different enough to interfere with the normal division and functions of cells.

### **antimicrobial**

A substance that kills microorganisms such as bacteria or mold, or stops them from growing and causing disease.

**antimicrotubule agent**

A type of drug that blocks cell growth by stopping mitosis (cell division). Antimicrotubule agents interfere with microtubules (cellular structures that help move chromosomes during mitosis). They are used to treat cancer.

**antimitotic agent**

A type of drug that blocks cell growth by stopping mitosis (cell division). They are used to treat cancer. Also called mitotic inhibitor.

**antineoplastic**

Blocking the formation of neoplasms (growths that may become cancer).

**antineoplastic antibiotic**

A type of anticancer drug that blocks cell growth by interfering with DNA, the genetic material in cells. Also called anticancer antibiotic and antitumor antibiotic.

**antineoplaston**

A substance isolated from normal human blood and urine that is being tested as a type of treatment for some tumors and AIDS.

**antioncogene**

A type of gene that makes a protein called a tumor suppressor protein that helps control cell growth. Mutations (changes in DNA) in antioncogenes may lead to cancer. Also called tumor suppressor gene.

**antioxidant**

A substance that protects cells from the damage caused by free radicals (unstable molecules made by the process of oxidation during normal metabolism). Free radicals may play a part in cancer, heart disease, stroke, and other diseases of aging. Antioxidants include beta-carotene, lycopene, vitamins A, C, and E, and other natural and manufactured substances.

**antiparasitic**

A drug used to treat infections caused by bacteria and parasites. It is also used in the treatment of some cancers.

**antiprogestin**

A substance that prevents cells from making or using progesterone (a hormone that plays a role in the menstrual cycle and pregnancy). Antiprogestins may stop some cancer cells from growing and they are being studied in the treatment of breast cancer. An antiprogestin is a type of hormone antagonist.

**antipsychotic**

A type of drug used to treat symptoms of psychosis. These include hallucinations (sights, sounds, smells, tastes, or touches that a person believes to be real but are not real), delusions (false beliefs), and dementia (loss of the ability to think, remember, learn, make decisions, and solve problems). Most antipsychotics block the action of certain chemicals in the nervous system. Also called antipsychotic agent and neuroleptic agent.

**antipsychotic agent**

A type of drug used to treat symptoms of psychosis. These include hallucinations (sights, sounds, smells, tastes, or touches that a person believes to be real but are not real), delusions (false beliefs), and dementia (loss of the ability to think, remember, learn, make decisions, and solve problems). Most antipsychotic



agents block the action of certain chemicals in the nervous system. Also called antipsychotic and neuroleptic agent.

### **antiretroviral therapy**

Treatment with drugs that inhibit the ability of the human immunodeficiency virus (HIV) or other types of retroviruses to multiply in the body.

### **antisense DNA**

Small pieces of DNA that can bind to specific molecules of RNA and block the cell's ability to use the RNA to make a protein or work in other ways. Antisense DNA may be used to block the production of proteins needed for cell growth. It is being studied in the treatment of many types of cancer.

### **antisense RNA**

Small pieces of RNA that can bind to specific molecules of RNA and block the cell's ability to use the RNA to make a protein or work in other ways. Antisense RNA may be used to block the production of proteins needed for cell growth. It is being studied in the treatment of many types of cancer.

### **antisense agent**

Small pieces of DNA or RNA that can bind to specific molecules of RNA. This blocks the ability of the RNA to make a protein or work in other ways. Antisense agents may be used to block the production of proteins needed for cell growth. They are being studied in the treatment of several types of cancer. Also called antisense oligonucleotide.

### **antisense c-fos**

A substance that has been studied in the treatment of cancer and is being studied in the treatment of rheumatoid arthritis and certain skin conditions. It blocks the production of a protein called c-fos, which helps control cell growth. This may kill cancer cells that need c-fos to grow. It is a type of antisense oligonucleotide. Also called c-fos antisense oligonucleotide.

### **antisense oligonucleotide**

Small pieces of DNA or RNA that can bind to specific molecules of RNA. This blocks the ability of the RNA to make a protein or work in other ways. Antisense oligonucleotides may be used to block the production of proteins needed for cell growth. They are being studied in the treatment of several types of cancer. Also called antisense agent.

### **antisense oligonucleotide therapy**

Treatment with antisense oligonucleotides. These are small pieces of DNA or RNA that can bind to specific molecules of RNA. This blocks the cell's ability to use the RNA to make a protein or work in other ways. Antisense oligonucleotides are being studied in the treatment of many types of cancer. Also called antisense therapy.

### **antisense therapy**

Treatment with antisense oligonucleotides. These are small pieces of DNA or RNA that can bind to specific molecules of RNA. This blocks the cell's ability to use the RNA to make a protein or work in other ways. Antisense oligonucleotides are being studied in the treatment of many types of cancer. Also called antisense oligonucleotide therapy.

**antisocial**

Describes behavior that ignores the rights of others and the practices and laws of society.

**antithymocyte globulin**

Serum from blood that contains antibodies that bind to human T cells. Antithymocyte globulin is given to a patient before a stem cell transplant to kill T cells and lower the risk of graft-versus-host disease (GVHD). It is also used to treat GVHD and after a kidney transplant to help keep the body from rejecting the kidney. Also called antilymphocyte globulin.

**antituberculosis**

Describes a drug or effect that works against tuberculosis (a contagious bacterial infection that usually affects the lungs).

**antitumor**

Having to do with stopping abnormal cell growth.

**antitumor antibiotic**

A type of anticancer drug that blocks cell growth by interfering with DNA, the genetic material in cells. Also called anticancer antibiotic and antineoplastic antibiotic.

**antiviral**

A drug used to treat infections caused by viruses.

**anus**

The opening of the rectum to the outside of the body.

**anxiety**

Feelings of fear, dread, and uneasiness that may occur as a reaction to stress. A person with anxiety may sweat, feel restless and tense, and have a rapid heart beat. Extreme anxiety that happens often over time may be a sign of an anxiety disorder.

**anxiety disorder**

A condition in which a person has excessive worry and feelings of fear, dread, and uneasiness. Other symptoms may include sweating, restlessness, irritability, fatigue, poor concentration, trouble sleeping, trouble breathing, a fast heartbeat, and dizziness. The symptoms can get worse over time and affect a person's day-to-day life. Anxiety disorders may be caused by a medical problem, a traumatic or stressful event, certain medicines, or other factors. There are many types of anxiety disorders, including generalized anxiety disorder, social anxiety disorder, panic disorder, post-traumatic stress disorder, and phobia-related disorders.

**anxiolysis**

A level of sedation in which a person is very relaxed and may be awake. The person is able to answer questions and follow instructions. Anxiolysis is caused by special drugs and is used to help relieve anxiety during certain medical or surgical procedures. Also called minimal sedation.

**anxiolytic**

A drug used to treat symptoms of anxiety, such as feelings of fear, dread, uneasiness, and muscle tightness, that may occur as a reaction to stress. Most

anxiolytics block the action of certain chemicals in the nervous system. Also called antianxiety agent and anxiolytic agent.

### **anxiolytic agent**

A drug used to treat symptoms of anxiety, such as feelings of fear, dread, uneasiness, and muscle tightness, that may occur as a reaction to stress. Most anxiolytic agents block the action of certain chemicals in the nervous system. Also called antianxiety agent and anxiolytic.

### **aorta**

The largest artery in the body. It carries oxygen-rich blood away from the heart to vessels that reach the rest of the body.

### **aortocoronary bypass**

Surgery in which a healthy blood vessel taken from another part of the body is used to make a new path for blood around a blocked artery leading to the heart. This restores the flow of oxygen and nutrients to the heart. Also called CABG and coronary artery bypass grafting.

### **apalutamide**

A drug used to treat prostate cancer that has spread to other parts of the body and is castration sensitive (has responded to treatments that lower testosterone levels) and prostate cancer that has not spread to other parts of the body and is castration resistant (has not responded to treatments that lower testosterone levels). Apalutamide binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Apalutamide blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called Erleada.

### **apheresis**

A process in which a machine removes blood stem cells or other parts of the blood from a person's bloodstream then returns the rest to the body. During apheresis, blood flows through a catheter inserted into a large vein in a person's arm or chest into a machine that separates and removes stem cells or other types of blood cells (such as platelets, white blood cells, or red blood cells), or plasma (the liquid part of the blood) from the blood. The rest of the blood is then returned to the body through the catheter. Apheresis may be done to collect blood stem cells before a stem cell transplant or to remove abnormal blood cells or proteins from the blood. It may be used to treat certain types of blood disorders, blood cancer, autoimmune disorders, or other conditions. Also called pheresis.

### **aplastic anemia**

A condition in which the bone marrow is unable to produce blood cells.

### **aplidine**

A substance that is being studied in the treatment of cancer. It is obtained from a marine organism.

### **apocrine gland**

A type of gland that is found in the skin, breast, eyelid, and ear. Apocrine glands in the breast secrete fat droplets into breast milk and those in the ear help form earwax. Apocrine glands in the skin and eyelid are sweat glands. Most apocrine glands in the skin are in the armpits, the groin, and the area around the nipples.

of the breast. Apocrine glands in the skin are scent glands, and their secretions usually have an odor. Another type of gland (eccrine gland or simple sweat gland) produces most sweat.

### **apolizumab**

A substance being studied in the treatment of hematologic (blood) cancers. Apolizumab binds to a protein called ID10, which is found on the surface of some types of immune cells and cancer cells. It may help the immune system kill cancer cells. It is a type of monoclonal antibody.

### **apoptosis**

A type of cell death in which a series of molecular steps in a cell lead to its death. This is one method the body uses to get rid of unneeded or abnormal cells. The process of apoptosis may be blocked in cancer cells. Also called programmed cell death.

### **appendage**

In medicine, a body part (such as an arm or leg) that is attached to the main part of the body.

### **appendectomy**

Surgery to remove the appendix (small finger-shaped pouch at the end of the first part of the large intestine).

### **appendix**

A small, fingerlike pouch that sticks out from the cecum (the first part of the large intestine near the end of the small intestine).

### **appetite**

A desire to satisfy a physical or mental need, such as for food, sex, or adventure.

### **aprepitant**

A drug used with other drugs to prevent nausea and vomiting caused by chemotherapy and nausea and vomiting after surgery. Aprepitant blocks the action of a certain chemical in the central nervous system that may trigger nausea and vomiting. Blocking this chemical may help lessen nausea and vomiting. Aprepitant is a type of antiemetic and a type of substance P/neurokinin 1 receptor antagonist. Also called Cinvanti and Emend.

### **aqueous**

Having to do with water.

### **arctigenin**

A substance found in certain plants, including burdock. It has shown antiviral and anticancer effects. Arctigenin belongs to a group of substances called lignans.

### **arctiin**

A substance found in certain plants, including burdock. It has shown anticancer effects. Arctiin belongs to a group of substances called lignans.

### **areola**

The area of dark-colored skin on the breast that surrounds the nipple.

## **arginine**

One of the twenty common amino acids (building blocks of proteins). Arginine is being studied as a nutritional supplement in the treatment and prevention of cancer and other conditions. Also called L-arginine.

## **arginine butyrate**

A substance that is being studied in the treatment of cancer.

## **arginine vasopressin**

A hormone that helps blood vessels constrict and helps the kidneys control the amount of water and salt in the body. This helps control blood pressure and the amount of urine that is made. Arginine vasopressin is made by a part of the brain called the hypothalamus and is secreted into the blood by the pituitary gland. Certain types of tumors may release high amounts of arginine vasopressin, which can cause low levels of sodium in the blood and the body to retain water. Also called antidiuretic hormone and vasopressin.

## **argon beam coagulator ablation**

A procedure that destroys tissue with an electrical current passed through a stream of argon gas to the tissue. It is used to treat endometriosis and other conditions, and to stop blood loss during surgery.

## **armodafinil**

A drug that is used to treat certain sleep disorders, such as narcolepsy. It makes patients feel more alert and awake. It is also being studied in the treatment of insomnia and fatigue in patients treated for cancer. Armodafinil acts in a part of the brain that controls sleep and wakefulness. It is a type of wakefulness-promoting agent. Also called Nuvigil.

## **aromatase inhibitor**

A drug that blocks the activity of an enzyme called aromatase, which the body uses to make estrogen in the ovaries and other tissues. Blocking aromatase lowers the amount of estrogen made by the body, which may stop the growth of cancer cells that need estrogen to grow. Aromatase inhibitors are used to treat some types of breast cancer or to keep it from coming back. They may also be used to help prevent breast cancer in some women who are at a high risk of developing it. Examples of aromatase inhibitors are anastrozole, letrozole, and exemestane. Aromatase inhibitors are a type of hormone therapy. Also called AI drug.

## **aromatherapist**

A person who practices a type of complementary medicine called aromatherapy. This therapy uses plant oils that give off strong, pleasant smells to promote relaxation and a sense of well-being. The plant oils are usually inhaled or put on the skin using wet cloths, baths, or massage.

## **aromatherapy**

A type of complementary and alternative medicine that uses plant oils that give off strong pleasant aromas (smells) to promote relaxation, a sense of well-being, and healing.

## **aromatherapy infusion**

The process of heating (without boiling) a mixture of water and an essential oil (scented liquid taken from a plant) to release a pleasant aroma. Aromatherapy infusion may also refer to the process of heating an herb in liquid to release the

essential oils. Inhaled oxygen scented by aromatherapy infusion is being studied as a complementary therapy (used in addition to standard treatments) to relieve pain and shorten recovery time in patients undergoing colonoscopy.

### **aromatherapy massage**

A type of complementary and alternative medicine that uses rubbing and kneading of the skin with plant oils that give off strong, pleasant aromas (smells) to promote relaxation, a sense of well-being, and healing.

### **aromatic**

Having an odor, which often is pleasant or spicy.

### **arousal**

The state of being alert and ready to respond, or waking from sleep.

### **arrhenoblastoma**

A rare type of ovarian tumor in which the tumor cells secrete a male sex hormone. This may cause virilization (the appearance of male physical characteristics in females). Also called androblastoma and Sertoli-Leydig cell tumor of the ovary.

### **arsenic**

A poisonous chemical used to kill weeds and pests. Also used in cancer therapy.

### **arsenic trioxide**

A drug used to treat acute promyelocytic leukemia that has a certain chromosome abnormality or a fusion gene called PML::RARA. It is used with tretinoin in some newly diagnosed adults. It is also used alone in patients whose cancer has not gotten better or has come back after treatment with other anticancer drugs. Arsenic trioxide is also being studied in the treatment of other types of cancer. Arsenic trioxide damages a fusion protein made by the PML::RARA fusion gene. This may help keep cancer cells from growing and may kill them. Also called Trisenox.

### **art therapy**

Treatment that uses the making of art and the response to art to improve one's physical, mental, and emotional well-being. Art therapy is sometimes used together with psychotherapy (talk therapy).

### **arterial embolization**

A procedure in which the blood supply to a tumor or an abnormal area of tissue is blocked. During arterial embolization, a small incision (cut) is made in the inner thigh and a catheter (thin, flexible tube) is inserted and guided into an artery near the tumor or abnormal tissue. Once the catheter is in place, small particles made of tiny gelatin sponges or beads are injected. This blocks the artery and stops the flow of blood to the tumor or abnormal area of tissue. Arterial embolization is used to treat some types of liver cancer, kidney cancer, and neuroendocrine tumors. It may also be used to treat uterine fibroids, aneurysms, and other conditions. Also called TAE and transarterial embolization.

### **arteriogram**

An x-ray of arteries. The person receives an injection of a dye that outlines the vessels on the x-ray.



**arteriography**

A procedure to x-ray arteries. The arteries can be seen because of an injection of a dye that outlines the vessels on the x-ray.

**artery**

A blood vessel that carries blood from the heart to tissues and organs in the body.

**arthralgia**

Joint pain.

**arthritis**

A disease that causes inflammation and pain in the joints.

**artificial intelligence**

The ability of a computer to perform functions that are usually thought of as intelligent human behavior, such as learning, reasoning, problem solving, and decision making. Artificial intelligence uses computer programs that analyze very large amounts of information to learn how to help make decisions or predictions. In medicine, the use of artificial intelligence may help improve cancer screening and diagnosis and plan treatment. It may also be used in research and in drug discovery and development. Also called AI.

**artificial nutrition and hydration**

A form of nutrition that is given as liquids, including liquid foods, through a tube inserted into a vein, under the skin, or into the stomach or small intestine. Artificial nutrition and hydration is given when a person is not able to eat or drink by mouth or has a disease or condition that affects their ability to absorb nutrients through the digestive system. For people near death, it does not help prolong life and is usually not given because it can cause severe problems, such as infection, aspiration (the breathing in of fluid or food into the lungs), diarrhea, and cramping. Also called ANH.

**artificial pacemaker**

An electronic device that is implanted in the body to monitor heart rate and rhythm. It gives the heart electrical stimulation when it does not beat normally. It runs on batteries and has long, thin wires that connect it to the heart. Also called cardiac pacemaker and pacemaker.

**arzoxifene hydrochloride**

A substance being studied in the treatment of osteoporosis and breast cancer. Arzoxifene hydrochloride is made in the laboratory and binds to estrogen receptors in the body. It is a type of selective estrogen receptor modulator (SERM). Also called LY353381 hydrochloride.

**asbestos**

A group of minerals that take the form of tiny fibers. Asbestos has been used as insulation against heat and fire in buildings. Loose asbestos fibers breathed into the lungs can cause several serious diseases, including lung cancer and malignant mesothelioma (cancer found in the lining of the lungs, chest, or abdomen). Asbestos that is swallowed may cause cancer of the gastrointestinal tract.

### **asbestosis**

A lung disease caused by breathing in particles of asbestos (a group of minerals that take the form of tiny fibers). Symptoms include coughing, trouble breathing, and chest pain caused by scarring and permanent damage to lung tissue. Asbestosis increases the risk of lung cancer and malignant mesothelioma (cancer found in the lining of the lungs, chest, or abdomen).

### **asciminib hydrochloride**

A drug used to treat adults with chronic phase chronic myelogenous leukemia that is Philadelphia chromosome positive. It is used in patients whose cancer has the T315I mutation or whose cancer was treated with at least two other tyrosine kinase inhibitors. It is also being studied in the treatment of other types of cancer. Asciminib hydrochloride blocks the BCR::ABL fusion protein, which may help keep cancer cells from growing and may kill them. Asciminib hydrochloride is a type of tyrosine kinase inhibitor. Also called Scemblix.

### **ascites**

Abnormal buildup of fluid in the abdomen that may cause swelling. In late-stage cancer, tumor cells may be found in the fluid in the abdomen. Ascites also occurs in patients with liver disease.

### **ascorbic acid**

A nutrient that the body needs in small amounts to function and stay healthy. Ascorbic acid helps fight infections, heal wounds, and keep tissues healthy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). Ascorbic acid is found in all fruits and vegetables, especially citrus fruits, strawberries, cantaloupe, green peppers, tomatoes, broccoli, leafy greens, and potatoes. It is water-soluble (can dissolve in water) and must be taken in every day. Ascorbic acid is being studied in the prevention and treatment of some types of cancer. Also called vitamin C.

### **aseptic necrosis**

A condition in which there is a loss of blood flow to bone tissue, which causes the bone to die. It is most common in the hips, knees, shoulders, and ankles. It may be caused by long-term use of steroid medicines, alcohol abuse, joint injuries, and certain diseases, such as cancer and arthritis. It may also occur at some point in time after cancer treatment that included methotrexate, bisphosphonates, or corticosteroids. Also called avascular necrosis, ischemic necrosis, and osteonecrosis.

### **asparaginase**

A drug that is used to treat acute lymphoblastic leukemia (ALL) and is being studied in the treatment of some other types of cancer. It is an enzyme taken from the bacterium *Escherichia coli* (E. coli). It breaks down the amino acid asparagine and may block the growth of tumor cells that need asparagine to grow. Also called Elspar and L-asparaginase.

### **asparaginase *Erwinia chrysanthemi***

A drug that is made up of the enzyme asparaginase, which comes from the bacterium *Erwinia chrysanthemi*, and is used with other drugs under the brand name Erwinaze to treat acute lymphoblastic leukemia (ALL) and under the brand name Rylaze to treat adults and children aged 1 month or older with ALL or lymphoblastic lymphoma. It is used in people who cannot take asparaginase that comes from the bacterium E. coli. It is also being studied in the treatment of other types of cancer. Asparaginase *Erwinia chrysanthemi* breaks down the

amino acid asparagine and may stop the growth of cancer cells that need asparagine to grow. It may also kill cancer cells. Asparaginase *Erwinia chrysanthemi* is a type of protein synthesis inhibitor.

### **aspartate transaminase**

An enzyme found in the liver, heart, and other tissues. A high level of aspartate transaminase released into the blood may be a sign of liver or heart damage, cancer, or other diseases. Also called serum glutamic-oxaloacetic transaminase and SGOT.

### **aspergillosis**

An infectious fungal disease that occurs most often in the skin, ears, nasal sinuses, and lungs of people with suppressed immune systems.

### **aspirate**

Aspirate (pronounced AS-pih-rit) refers to fluid, tissue, or other substance that is withdrawn from a body cavity, cyst, or tumor. Aspirate (pronounced AS-pih-rayt) refers to the act of withdrawing the fluid, tissue, or other substance through a needle. It also refers to the accidental breathing in of food or fluid into the lungs. This can cause serious problems, such as pneumonia and other lung problems.

### **aspiration**

Removal of fluid or tissue through a needle. Also, the accidental breathing in of food or fluid into the lungs.

### **aspirin**

A drug that reduces pain, fever, inflammation, and blood clotting. Aspirin belongs to the family of drugs called nonsteroidal anti-inflammatory agents. It is also being studied in cancer prevention.

### **assay**

A laboratory test to find and measure the amount of a specific substance.

### **assent process**

A process that is required by law in which children or adolescents are given easy-to-understand information about a clinical trial to help them decide if they want to take part in the trial. The patient is given a chance to ask questions about what will happen during the trial, why it's being done, and what they will be asked to do. Formal consent to enter the trial comes from the parent or guardian.

### **assessment**

In health care, a process used to learn about a patient's condition. This may include a complete medical history, medical tests, a physical exam, a test of learning skills, tests to find out if the patient is able to carry out the tasks of daily living, a mental health evaluation, and a review of social support and community resources available to the patient.

### **asset**

Something that has financial value and that a person owns, benefits from, or has use of. Money, jewelry, artwork, investments, real estate, and cars are examples of assets.

### **assisted reproductive technology**

A type of procedure used to treat infertility. The most common type of assisted reproductive technology is in vitro fertilization (IVF), which involves removing

eggs from a woman's ovary and combining them with sperm in the laboratory to form embryos. The embryos are then either placed in a woman's uterus or frozen for future use. Assisted reproductive technology sometimes uses donor eggs or sperm or may involve a surrogate or gestational carrier (a woman who carries and gives birth to a baby for a person who is not able to have children). Other types of assisted reproductive technology include gamete intrafallopian transfer (GIFT) and zygote intrafallopian transfer (ZIFT), but these are used less often. Also called ART.

### **assistive device**

A tool that helps a person with a disability to do a certain task. Examples are a cane, wheelchair, scooter, walker, hearing aid, or special bed.

### **assistive technology**

Any device or technology that helps a disabled person. Examples are special grips for holding utensils, computer screen monitors to help a person with low vision read more easily, computers controlled by talking, telephones that make the sound louder, and lifters to help a person rise out of a chair.

### **asthenia**

Weakness; lack of energy and strength.

### **asthma**

A chronic disease in which the bronchial airways in the lungs become narrowed and swollen, making it difficult to breathe. Symptoms include wheezing, coughing, tightness in the chest, shortness of breath, and rapid breathing. An asthma attack may be brought on by pet hair, dust, smoke, pollen, mold, exercise, cold air, or stress.

### **astrocyte**

A large, star-shaped cell that holds nerve cells in place and helps them develop and work the way they should. An astrocyte is a type of glial cell.

### **astrocytoma**

A type of glioma that forms in star-shaped cells called astrocytes in the brain and spinal cord. Astrocytomas may be benign (not cancer) or malignant (cancer). They are grouped based on their grade, which is determined by how abnormal the tumor cells look under a microscope and how quickly the tumor is likely to grow, spread, and come back after treatment. Low-grade astrocytomas, such as pilocytic astrocytomas, tend to grow slowly and are more common in children. High-grade astrocytomas, such as glioblastoma, tend to grow and spread within the brain and spinal cord quickly and are more common in adults.

### **asymmetry**

Lack or absence of balanced proportions between parts of a thing.

### **asymptomatic**

Having no signs or symptoms of disease.

### **asymptomatic inflammatory prostatitis**

Inflammation of the prostate gland where the only symptom is the presence of white blood cells in the prostate fluid.

**atamestane**

A substance that is being studied in the treatment of cancer. Atamestane blocks the production of the hormone estrogen in the body. It belongs to the family of drugs called antiestrogens.

**ataxia**

Loss of muscle coordination.

**ataxia-telangiectasia**

A rare, inherited, progressive, degenerative disease of childhood that causes loss of muscle control, a weakened immune system, and an increased risk of cancer.

**ataxic gait**

Awkward, uncoordinated walking.

**atelectasis**

Failure of the lung to expand (inflate) completely. This may be caused by a blocked airway, a tumor, general anesthesia, pneumonia or other lung infections, lung disease, or long-term bedrest with shallow breathing. Sometimes called a collapsed lung.

**atezolizumab**

A drug that binds to the protein PD-L1 to help immune cells kill cancer cells better and is used to treat different types of cancer, including cancers that express PD-L1. Atezolizumab is used alone or with other drugs to treat adults with certain types of hepatocellular carcinoma (a type of liver cancer), melanoma, non-small cell lung cancer, or small cell lung cancer. It is also used alone to treat adults and children aged 2 years and older with alveolar soft part sarcoma that has spread to other parts of the body or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Atezolizumab may block PD-L1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Tecentriq.

**athymic nude mouse**

A type of laboratory mouse that is hairless, lacks a normal thymus gland, and has a defective immune system because of a genetic mutation. Athymic nude mice are often used in cancer research because they do not reject tumor cells, from mice or other species.

**atiprimod**

A substance being studied in the treatment of certain multiple myelomas and other advanced cancers. Atiprimod may block the growth of tumors and may prevent the growth of new blood vessels that tumors need to grow. Atiprimod is a type of signal transduction inhibitor and a type of antiangiogenesis agent. Also called azaspirane and SK&F106615.

**atom**

The smallest part of a substance that cannot be broken down chemically. Each atom has a nucleus (center) made up of protons (positive particles) and neutrons (particles with no charge). Electrons (negative particles) move around the nucleus. Atoms of different elements contain different numbers of protons, neutrons, and electrons.

### **atorvastatin calcium**

A drug used to lower the amount of cholesterol in the blood and to prevent stroke, heart attack, and angina (chest pain). It is also being studied in the prevention and treatment of some types of cancer and other conditions. Atorvastatin calcium blocks an enzyme that helps make cholesterol in the body. It also causes an increase in the breakdown of cholesterol. It is a type of HMG-CoA reductase inhibitor and a type of statin. Also called Lipitor.

### **atrasentan**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called endothelin-1 protein receptor antagonists.

### **atrial fibrillation**

An irregular heartbeat that occurs when the electrical signals in the atria (the two upper chambers of the heart) fire rapidly at the same time. This causes the heart to beat faster than normal. Although atrial fibrillation can occur without any signs or symptoms, it may sometimes cause fatigue, chest pain, heart palpitations, trouble breathing, low blood pressure, dizziness or fainting, weakness, and other signs and symptoms. Atrial fibrillation may be caused by certain conditions, such as high blood pressure, heart attack, coronary artery disease, abnormal heart valves, congenital heart disease, lung disease, viral infections, or an overactive thyroid gland. Previous heart surgery, stress, or exposure to caffeine, tobacco, alcohol, or certain medicines may also lead to atrial fibrillation. It may go away on its own or it may last for many years. If not treated, atrial fibrillation can lead to serious problems, such as blood clots, stroke, and heart failure. It is more common in older adults. Also called afib.

### **atrophic gastritis**

A condition marked by chronic inflammation and thinning of the inner lining of the stomach. It may also involve the loss of gland cells in the stomach lining that release substances that help digest food. Atrophic gastritis may be caused by an infection with the bacteria *H. pylori* that continues or gets worse over a long period of time or by certain autoimmune conditions. People who have atrophic gastritis may have an increased risk of stomach cancer or gastrointestinal neuroendocrine tumors.

### **atrophic vaginitis**

A condition in which the tissues lining the inside of the vagina (birth canal) become thin, dry, and inflamed. This is caused by a decrease in the amount of estrogen (a female hormone) made by the body. Symptoms of atrophic vaginitis include vaginal dryness, itching, and burning, and pain during sexual intercourse. Other symptoms include a burning feeling while urinating, feeling a need to urinate often or right away, and being unable to control the flow of urine. Atrophic vaginitis most commonly occurs in women who have gone through menopause naturally or who have early menopause caused by certain types of cancer treatment (such as radiation therapy to the pelvis or chemotherapy) or by having their ovaries removed by surgery. Also called vaginal atrophy.

### **atropine sulfate**

A drug used to block nerve stimulation of muscles and glands and relax smooth muscles. It is also used to increase heart rate, reduce secretions, and treat the effects of certain poisons. It is a type of antimuscarinic agent and a type of tropane alkaloid.



### **atropine suppression test**

A test used to help find out if secretion of pancreatic polypeptide (a protein released by the pancreas) is normal or caused by a tumor. A drug called atropine sulfate is injected into the patient's vein and level of pancreatic polypeptide in the blood is measured. If there is a tumor, the injection will not change the level of pancreatic polypeptide. If there is no tumor, the level of pancreatic polypeptide will drop.

### **attending physician**

A medical doctor who is responsible for the overall care of a patient in a hospital or clinic setting. An attending physician may also supervise and teach medical students, interns, and residents involved in the patient's care.

### **attenuated**

Weakened or thinned. Attenuated strains of disease-causing bacteria and viruses are often used as vaccines. The weakened strains are used as vaccines because they stimulate a protective immune response while causing no disease or only mild disease in the person receiving the vaccine.

### **attenuated familial adenomatous polyposis**

A rare, inherited disorder in which multiple polyps (abnormal growths) form on the inner walls of the colon and rectum. People with attenuated familial adenomatous polyposis usually develop fewer than 100 polyps. Benign (not cancer) tumors may also occur in the stomach, small intestine, bone, skin, and soft tissue. People with attenuated familial adenomatous polyposis have a very high risk of developing colorectal cancer and may also be at risk of developing cancers of the stomach, small intestine, liver, and breast. Attenuated familial adenomatous polyposis is caused by mutations (changes) in the APC gene that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called AFAP.

### **atypia**

State of being not typical or normal. In medicine, atypia is an abnormality in cells in tissue.

### **atypical**

Not normal. Describes a state, condition, or behavior that is unusual or different from what is considered normal. In medicine, an atypical lesion or growth in or on the body may be benign (not cancer), precancerous or premalignant (likely to become cancer), or malignant (cancer). Also called abnormal.

### **atypical ductal breast hyperplasia**

A benign (not cancer) condition in which there are more cells than normal in the lining of breast ducts and the cells look abnormal under a microscope. Having atypical ductal breast hyperplasia increases the risk of breast cancer. Also called ADH and atypical ductal hyperplasia.

### **atypical ductal hyperplasia**

A benign (not cancer) condition in which there are more cells than normal in the lining of breast ducts and the cells look abnormal under a microscope. Having atypical ductal hyperplasia increases the risk of breast cancer. Also called ADH and atypical ductal breast hyperplasia.

### **atypical glandular cells**

A finding of abnormal cells in a Pap test. The glandular cells come from the inner part of the cervix or the lining of the uterus. This finding may be a sign of cancer or other serious condition, and more testing may be needed. Also called AGC.

### **atypical glandular cells of uncertain significance**

A term that has been used to describe abnormal cells that come from glands in the walls of the cervix (the lower, narrow end of the uterus). These abnormal cells are found in a small number of Pap smears (a procedure used to detect cervical cancer) and may be a sign of more serious lesions or cancer. The term used now is atypical glandular cells. Also called AGUS and atypical glandular cells of undetermined significance.

### **atypical glandular cells of undetermined significance**

A term that has been used to describe abnormal cells that come from glands in the walls of the cervix (the lower, narrow end of the uterus). These abnormal cells are found in a small number of Pap smears (a procedure used to detect cervical cancer) and may be a sign of more serious lesions or cancer. The term used now is atypical glandular cells. Also called AGUS and atypical glandular cells of uncertain significance.

### **atypical hyperplasia**

A benign (not cancer) condition in which cells look abnormal under a microscope and are increased in number.

### **atypical lobular breast hyperplasia**

A benign (not cancer) condition in which there are more cells than normal in the breast lobules and the cells look abnormal under a microscope. Having atypical lobular breast hyperplasia increases the risk of breast cancer. Also called ALH and atypical lobular hyperplasia.

### **atypical lobular hyperplasia**

A benign (not cancer) condition in which there are more cells than normal in the breast lobules and the cells look abnormal under a microscope. Having atypical lobular hyperplasia increases the risk of breast cancer. Also called ALH and atypical lobular breast hyperplasia.

### **atypical mole**

A type of mole that looks different from a common mole. Several different types of moles are called atypical. Atypical moles are often larger than common moles and have regular or ragged or blurred borders that are not easy to see. Colors of atypical moles may be the same as the rest of the skin, or lighter, darker, or uneven. Parts or all of the mole may be raised above the skin surface. It is rare, but some atypical moles can develop into melanoma (a type of skin cancer). An atypical mole is sometimes called a Spitz nevus, a congenital nevus, a birthmark, or a dysplastic nevus.

### **atypical squamous cells of undetermined significance**

A finding of abnormal cells in the tissue that lines the outer part of the cervix. Atypical squamous cells of undetermined significance is the most common abnormal finding in a Pap test. It may be a sign of infection with certain types of human papillomavirus (HPV) or other types of infection, such as a yeast infection. It may also be a sign of inflammation, low hormone levels (in menopausal women), or a benign (not cancer) growth, such as a cyst or polyp.

More testing, such as an HPV test or another Pap test, may be needed. Also called ASC-US and ASCUS.

### **atypical squamous cells, cannot exclude a high-grade lesion**

A finding of abnormal cells in a Pap test. It means there are abnormal squamous cells in the tissue that lines the outer part of the cervix. Atypical squamous cells, cannot exclude a high-grade lesion may be a sign of a high-grade squamous intraepithelial lesion (HSIL), which may become cervical cancer if untreated. More testing may be needed. Also called ASC-H.

### **atypical teratoid/rhabdoid tumor**

A very rare, fast-growing cancer that usually forms in the tissues of the central nervous system (CNS), such as the cerebellum (the part of the brain that controls movement and balance) or brain stem. Atypical teratoid/rhabdoid tumors may also form in areas of the body outside the CNS, such as the kidney, but this is rare. Most of these types of tumors are caused by mutations (changes) in the tumor suppressor genes SMARCB1 or SMARCA4, which make proteins that help control cell growth. Atypical teratoid/rhabdoid tumors usually occur in children aged 3 years and younger, but they can also occur in older children and adults. Also called AT/RT and ATT/RHT.

### **auditory**

Having to do with the ear and the sense of hearing.

### **auditory brain stem response test**

A test used to detect some types of hearing loss, such as hearing loss caused by injury or tumors that affect nerves involved in hearing. Electrodes are placed on the head and certain tones or clicking sounds are made. The electrodes measure nerve signals in the brain when it reacts to the sounds. Also called ABR test, BAER test, and brain stem auditory evoked response test.

### **augmerosen**

A substance being studied in the treatment of cancer. It may kill cancer cells by blocking the production of a protein that makes cancer cells live longer and by making them more sensitive to anticancer drugs. It is a type of antisense oligodeoxyribonucleotide. Also called bcl-2 antisense oligodeoxynucleotide G3139, Genasense, and oblimersen sodium.

### **auricular**

Having to do with the ear.

### **auricular acupuncture**

A type of acupuncture in which thin needles are inserted at specific points on the outer ear to control pain and other symptoms. It is thought that the outer ear contains a “map” of the whole body and that specific points on this map match up with certain parts of the body. Also called ear acupuncture.

### **aurotherapy**

A procedure that uses gold salts (a salt form of the metal element gold) to treat diseases, such as rheumatoid arthritis. The gold salts stop cells from releasing chemicals that can harm tissues. Also called chrysotherapy and gold therapy.

### **autoantibody**

An antibody made against substances formed by a person's own body. Autoantibodies can directly destroy cells that have the substances on them or

can make it easier for other white blood cells to destroy them. Some autoimmune diseases are caused by autoantibodies.

### **autoclave**

A device that uses steam under high pressure to sterilize medical and laboratory supplies and equipment.

### **autoclave-resistant factor**

A substance found in soybeans that may slow down or stop the spread of cancer. This substance does not break down in an autoclave (a device that uses steam under high pressure to sterilize medical and laboratory supplies and equipment).

### **autoimmune condition**

A condition in which the body's immune system mistakes its own healthy tissues as foreign and attacks them. Most autoimmune conditions cause inflammation that can affect many parts of the body. The parts of the body affected depend on which autoimmune condition a person has. Common signs and symptoms include fatigue, fever, muscle aches, joint pain and swelling, skin problems, abdominal pain, digestion problems, and swollen glands. The symptoms often come and go and can be mild or severe. There are many different types of autoimmune conditions. They are more common in women and can run in families. Also called autoimmune disease.

### **autoimmune disease**

A condition in which the body's immune system mistakes its own healthy tissues as foreign and attacks them. Most autoimmune diseases cause inflammation that can affect many parts of the body. The parts of the body affected depend on which autoimmune disease a person has. Common signs and symptoms include fatigue, fever, muscle aches, joint pain and swelling, skin problems, abdominal pain, digestion problems, and swollen glands. The symptoms often come and go and can be mild or severe. There are many different types of autoimmune diseases. They are more common in women and can run in families. Also called autoimmune condition.

### **autoimmune enteropathy**

A rare disease in which certain cells in the intestine are destroyed by a patient's immune system. It causes severe, chronic, diarrhea and usually occurs in children.

### **autoimmune hemolytic anemia**

A condition in which the body's immune system stops red blood cells from forming or causes them to clump together. Autoimmune hemolytic anemia can occur in patients who have chronic lymphocytic leukemia (CLL). Also called immune complex hemolytic anemia and immunohemolytic anemia.

### **autoimmune paraneoplastic disease**

A condition that can occur in some people with cancer when the body's immune system becomes overactive and attacks healthy cells while trying to kill cancer cells. Autoimmune paraneoplastic diseases may cause damage to many different tissues and organs, including the skin, blood, kidneys, nervous system, and muscles and bones. These diseases occur most often in middle-aged adults with thymoma, lymphoma, or cancers of the breast, lung, or ovary. Signs and symptoms may occur before a cancer diagnosis is made.

### **autoimmune thyroiditis**

An autoimmune condition of the thyroid gland (a gland located beneath the larynx). It is caused by the formation of antibodies that attack the thyroid gland and it usually causes hypothyroidism (too little thyroid hormone). Symptoms include fatigue, weight gain, constipation, dry skin, depression, and the inability to exercise. It is more common in females and can run in families. Also called Hashimoto disease and Hashimoto thyroiditis.

### **autologous**

Taken from an individual's own tissues, cells, or DNA.

### **autologous bone marrow**

In transplantation, refers to a person's own bone marrow. Bone marrow is the soft, sponge-like tissue in the center of most large bones that produces white blood cells, red blood cells, and platelets.

### **autologous bone marrow transplant**

A procedure in which a patient's healthy stem cells (blood-forming cells) are collected from the bone marrow before treatment, stored, and then given back to the patient after treatment. An autologous bone marrow transplant replaces a patient's stem cells that were destroyed by treatment with radiation or high doses of chemotherapy.

### **autologous expanded mesenchymal stem cells OTI-010**

A product that is made of special stem cells taken from a patient's bone marrow and grown in the laboratory. After a patient's bone marrow is destroyed by treatment with whole body irradiation or chemotherapy, these cells are injected back into the patient to help rebuild bone marrow. Autologous expanded mesenchymal stem cells OTI-010 has been studied in the prevention of graft-versus-host disease during stem cell transplant in patients receiving treatment for cancer. Autologous expanded mesenchymal stem cells OTI-010 is used in cellular therapy. Also called Stromagen.

### **autologous lymphocyte**

In transplantation, refers to a person's own white blood cells. Lymphocytes have a number of roles in the immune system, including the production of antibodies and other substances that fight infections and other diseases.

### **autologous stem cell transplant**

A procedure in which a patient's healthy stem cells (blood-forming cells) are collected from the blood or bone marrow before treatment, stored, and then given back to the patient after treatment. An autologous stem cell transplant replaces a patient's stem cells that were destroyed by treatment with radiation or high doses of chemotherapy. An autologous stem cell transplant is most often used to treat blood cancers, such as leukemia and lymphoma.

### **autologous tumor cell**

A cancer cell from an individual's own tumor.

### **autonomic nervous system**

The part of the nervous system that controls muscles of internal organs (such as the heart, blood vessels, lungs, stomach, and intestines) and glands (such as salivary glands and sweat glands). One part of the autonomic nervous system helps the body rest, relax, and digest food and another part helps a person fight or take flight in an emergency. Also called ANS and involuntary nervous system.

### **autonomic nervous system disorder**

A condition that affects the part of the nervous system called the autonomic nervous system (ANS). The ANS controls many important automatic body processes, such as blood pressure, heart rate, breathing, body temperature, digestion, sweating, urination, and sexual response. An autonomic nervous system disorder can affect all or part of the ANS and can cause serious problems, such as heart and blood pressure problems, trouble breathing or swallowing, or impotence in males. There are many different types of autonomic nervous system disorders. They may be inherited or caused by injury or by conditions such as diabetes, Parkinson disease, autoimmune disease, and alcoholism. Sometimes, the cause is not known. Also called dysautonomia.

### **autophagy**

A process by which a cell breaks down and destroys old, damaged, or abnormal proteins and other substances in its cytoplasm (the fluid inside a cell). The breakdown products are then recycled for important cell functions, especially during periods of stress or starvation. Autophagy also helps destroy bacteria and viruses that cause infection and may prevent normal cells from becoming cancer cells. Once cancer has formed, autophagy may protect the cancer cells by providing extra nutrients to them or by keeping anticancer drugs or other substances from destroying them. Autophagy may also affect the body's immune response against viruses, bacteria, and cancer cells.

### **autosomal**

Having to do with the 22 pairs of numbered chromosomes found in most human cells. The chromosome pairs are numbered from 1 to 22 based on their size or the number of genes each pair contains. The sex chromosomes (the X and Y chromosomes) determine whether a person is male or female and are not considered autosomal chromosomes.

### **autosomal dominant inheritance**

One of the ways a genetic trait or a genetic condition can be passed down (inherited) from parent to child. In autosomal dominant inheritance, a genetic condition can occur when the child inherits one copy of a mutated (changed) gene from one parent. A child who has a parent with the mutated gene has a 50% chance of inheriting that mutated gene.

### **autosomal recessive inheritance**

One of the ways a genetic trait or a genetic condition can be passed down (inherited) from parent to child. In autosomal recessive inheritance, a genetic condition occurs when the child inherits one mutated copy of a gene from each parent. The parents usually do not have the condition. The parents are called carriers because they each carry one copy of the mutated gene and can pass it to their children.

### **avapritinib**

A drug used to treat adults with advanced systemic mastocytosis or certain types of gastrointestinal stromal tumors. It is also being studied in the treatment of other types of cancer. Avapritinib blocks certain proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Ayvakit.

### **avascular necrosis**

A condition in which there is a loss of blood flow to bone tissue, which causes the bone to die. It is most common in the hips, knees, shoulders, and ankles. It may



be caused by long-term use of steroid medicines, alcohol abuse, joint injuries, and certain diseases, such as cancer and arthritis. It may also occur at some point in time after cancer treatment that included methotrexate, bisphosphonates, or corticosteroids. Also called aseptic necrosis, ischemic necrosis, and osteonecrosis.

### **avelumab**

A drug that binds to the protein PD-L1 to help immune cells kill cancer cells better and is used to treat different types of cancer. Avelumab is used alone or with other drugs to treat certain types of advanced renal cell carcinoma (a type of kidney cancer), urothelial cancer (a type of cancer in the bladder or urinary tract), and Merkel cell carcinoma (a rare type of skin cancer). It is also being studied in the treatment of other types of cancer. Avelumab may block PD-L1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Bavencio.

### **avoidance**

The act of staying away from people, places, and thoughts that may cause anxiety, pain, or unpleasant feelings. Some types of cancer-related avoidance include refusing to accept a cancer diagnosis or get treatment, and using alcohol or other drugs to forget about having cancer.

### **axicabtagene ciloleucel**

A drug used to treat adults with follicular lymphoma or certain types of large B-cell lymphoma that relapsed (came back) or did not get better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Axicabtagene ciloleucel is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Axicabtagene ciloleucel binds to a protein called CD19, which is found on most B-cell lymphoma cells. This helps the body's immune system kill cancer cells. Axicabtagene ciloleucel is a type of CAR T-cell therapy. Also called Yescarta.

### **axilla**

The underarm or armpit.

### **axillary**

Pertaining to the armpit area, including the lymph nodes that are located there.

### **axillary dissection**

Surgery to remove lymph nodes found in the armpit region. Also called axillary lymph node dissection.

### **axillary lymph node**

A lymph node in the armpit region that drains lymph from the breast and nearby areas.

### **axillary lymph node dissection**

Surgery to remove lymph nodes found in the armpit region. Also called axillary dissection.

### **axitinib**

A drug used alone or with other drugs to treat advanced renal cell carcinoma (a type of kidney cancer). It is used in patients whose cancer has not already been treated or whose cancer has not gotten better after treatment with one other systemic therapy. It is also being studied in the treatment of other types of cancer. Axitinib blocks proteins called growth factor receptors, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Axitinib is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Inlyta.

### **azacitidine**

A drug used under the brand names Onureg to treat adults with certain types of acute myeloid leukemia and Vidaza to treat adults with certain types of myelodysplastic syndromes and children aged 1 month and older with newly diagnosed juvenile myelomonocytic leukemia. It is also being studied in the treatment of other types of cancer. Azacitidine stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **azaspirane**

A substance being studied in the treatment of certain multiple myelomas and other advanced cancers. Azaspirane may block the growth of tumors and may prevent the growth of new blood vessels that tumors need to grow. Azaspirane is a type of signal transduction inhibitor and a type of antiangiogenesis agent. Also called atiprimod and SK&F106615.

### **azathioprine sodium**

A drug used to keep a patient from rejecting a transplanted kidney. It is also used in the treatment of rheumatoid arthritis that does not get better with other types of treatment. Azathioprine sodium blocks the growth of white blood cells and the synthesis of DNA, RNA, and protein. It is a type of immunosuppressant.

### **azoospermia**

A condition in which there are no sperm in the semen when a man ejaculates. This may be because the man does not make sperm or because the sperm is blocked from entering the semen. Azoospermia may be caused by hormone problems, certain genetic conditions, previous vasectomy or other surgery, or other conditions. It may also be caused by certain cancer treatments. Azoospermia can cause infertility (the inability to produce children).

### **azoxymethane**

A substance that is used in cancer research to cause colon tumors in laboratory animals. This is done to test new diets, drugs, and procedures for use in cancer prevention and treatment.

### **azygos vein**

A blood vessel that carries blood from the back walls of the chest and abdomen to the heart. The azygos vein is on the right side of the middle part of the spine.

### **bacillus Calmette-Guérin**

A weakened form of the bacterium *Mycobacterium bovis* (bacillus Calmette-Guérin) that does not cause disease. Bacillus Calmette-Guérin is used in a solution to stimulate the immune system in the treatment of bladder cancer and as a vaccine to prevent tuberculosis. Also called BCG.

### **bacillus Calmette-Guérin solution**

A type of biologic therapy used to treat early stage bladder cancer. The solution is made from a weakened form of a bacterium called *Mycobacterium bovis* (bacillus Calmette-Guérin) that does not cause disease. It is given through a catheter that is placed into the bladder where the solution is held for about two hours. Bacillus Calmette-Guérin solution may help the body's immune system kill cancer cells. Also called BCG solution.

### **bacillus Calmette-Guérin vaccine**

A vaccine used to prevent tuberculosis (TB) in people who are at a high risk of TB or where TB is common. It is rarely given in the U.S. It is made from a weakened form of a bacterium called *Mycobacterium bovis* (bacillus Calmette-Guérin), which is similar to the bacteria that cause TB. The vaccine may help the body's immune system make antibodies to destroy the TB bacteria. It also may help the immune system kill cancer cells and is being studied in the treatment of melanoma. Also called BCG vaccine.

### **backbone**

The bones, muscles, tendons, and other tissues that reach from the base of the skull to the tailbone. The backbone encloses the spinal cord and the fluid surrounding the spinal cord. Also called spinal column, spine, and vertebral column.

### **baclofen**

A drug that is used to treat certain types of muscle spasms and is being studied in the treatment of liver cancer. Baclofen relaxes muscles by blocking certain nerve receptors in the spinal cord. It is a type of antispasmodic. Also called Kemstro and Lioresal.

### **baclofen/amitriptyline/ketamine gel**

A substance being studied in the treatment of peripheral neuropathy (pain, numbness, tingling, burning, or weakness in the hands or feet) caused by chemotherapy. It contains three drugs, baclofen, amitriptyline, and ketamine, that relax muscles by blocking nerve receptors. The gel is applied to the skin of affected areas. It is a type of analgesic. Also called BAK gel.

### **bacteria**

A large group of single-cell microorganisms. Some cause infections and disease in animals and humans. The singular of bacteria is bacterium.

### **bacterial toxin**

A harmful substance made by bacteria that can cause illness. Bacterial toxins can also be made in the laboratory and attached to monoclonal antibodies that bind to cancer cells. These toxins may help kill cancer cells without harming normal cells.

### **balloon angioplasty**

A procedure to enlarge the opening in a blood vessel that has become narrowed or blocked by plaque (a buildup of fat and cholesterol on the inner wall of the blood vessel). A small balloon is filled with air inside the blood vessel to push the plaque against the blood vessel wall and increase the opening.

### **balloon catheter radiation**

A system used to deliver internal radiation therapy to breast cancer patients after surgery to remove their cancer. Balloon catheter radiation targets only the part of

the breast where the cancer was found. After a patient has had a lumpectomy to remove the cancer, a small balloon on the end of a catheter (thin tube) is inserted into the empty space left by the surgery. The balloon is then filled with liquid and left in place. Using the catheter, radioactive seeds are put into the balloon twice a day for five days and removed each time. Once treatment has ended, the catheter and balloon are removed. Balloon catheter radiation is a type of intracavitary brachytherapy and partial breast irradiation therapy (PBRT). Also called MammoSite.

### **bankruptcy**

The situation that occurs when a person or business is not able to pay back debts. Filing for bankruptcy is a legal process that is handled by a U.S. federal court. This process can help people get rid of their debt or reduce their debt through a repayment plan. Certain events, such as job loss, divorce, a long illness, or hospitalization, can affect a person's ability to pay bills and lead to debt and bankruptcy. Filing for bankruptcy helps people get a fresh start financially, but it also affects their ability to borrow money or have credit in the future.

### **barbiturate**

A type of drug that causes a decrease in brain activity. Barbiturates may be used to treat insomnia, seizures, and convulsions, and to relieve anxiety and tension before surgery. A barbiturate is a type of central nervous system (CNS) depressant.

### **bariatric surgery**

Surgery done to help people who are obese lose weight. There are different types of bariatric surgery, and each type changes the way the digestive system works. Some types make the stomach smaller, which decreases the amount of food that it can hold so the person feels full sooner and eats less. Other types make changes to the stomach and the small intestine, which decreases the nutrients and calories that are absorbed from food. Bariatric surgery can improve many obesity-related health problems, such as diabetes, high blood pressure, unhealthy cholesterol levels, sleep apnea, and knee, hip, or other body pain. Having bariatric surgery may also decrease the risk of some cancers, including endometrial cancer. Also called weight loss surgery.

### **barium enema**

A procedure in which a liquid that contains barium sulfate is put through the anus into the rectum and colon. Barium sulfate is a silver-white metallic compound that helps show pictures of the colon, rectum, and anus on an x-ray.

### **barium solution**

A liquid that contains barium sulfate (a form of the silver-white metallic element barium). It is used to show pictures of parts of the digestive system in x-rays.

### **barium sulfate**

A silver-white metallic compound made from the mineral barite. It is mixed with water and used in barium swallows and barium enemas to help show parts of the digestive system on an x-ray.

### **barium swallow**

A series of x-ray pictures of the upper gastrointestinal (GI) tract, including the throat, esophagus, stomach, and the first part of the small intestine (duodenum). The x-ray pictures are taken after the patient drinks a liquid that contains barium sulfate (a silver-white metallic compound). The barium sulfate coats and outlines

the inner walls of the upper GI tract so they can be seen on the x-ray pictures. Also called upper gastrointestinal series and upper GI series.

### **barium-meal photofluorography**

A procedure that uses x-rays to take a series of pictures of the esophagus, stomach, and duodenum (the first part of the small intestine). The x-ray pictures are taken after the patient drinks a liquid that contains barium (a silver-white metallic compound). The barium coats and outlines the inner walls of the esophagus, stomach, and duodenum so they can be seen on the x-ray pictures. Photographs are then taken of the x-ray images and made into a short film to make the organs easier to see. This makes it possible to see the motion of the organs and exposes the patient to less radiation.

### **barrier**

Something that blocks, prevents, separates, or limits.

### **basal cell**

A small, round cell found in the lower part (or base) of the epidermis, the outer layer of the skin.

### **basal cell cancer**

Cancer that begins in the lower part of the epidermis (the outer layer of the skin). It may appear as a small white or flesh-colored bump that grows slowly and may bleed. Basal cell cancers are usually found on areas of the body exposed to the sun. Basal cell cancers rarely metastasize (spread) to other parts of the body. They are the most common form of skin cancer. Also called basal cell carcinoma.

### **basal cell carcinoma**

Cancer that begins in the lower part of the epidermis (the outer layer of the skin). It may appear as a small white or flesh-colored bump that grows slowly and may bleed. Basal cell carcinomas are usually found on areas of the body exposed to the sun. Basal cell carcinomas rarely metastasize (spread) to other parts of the body. They are the most common form of skin cancer. Also called basal cell cancer.

### **basal cell nevus syndrome**

A rare, inherited disorder that affects many organs and tissues in the body. People with this disorder have a very high risk of developing basal cell skin cancer during adolescence or early adulthood. They are also at risk of developing medulloblastoma (a type of brain cancer) and other types of cancer. Basal cell nevus syndrome may also cause benign (not cancer) tumors in the jaw, heart, or ovaries. Other signs and symptoms include a large head and unusual facial features; small pits in the skin on the hands and feet; abnormalities of the spine, ribs, or skull; eye problems; and developmental problems. Basal cell nevus syndrome is caused by a mutation (change) in the PTCH1 gene. Also called BCNS, Gorlin syndrome, NBCCS, and nevoid basal cell carcinoma syndrome.

### **base**

In chemistry, a substance that can accept hydrogen ions in water and can neutralize an acid. Bases feel soapy or slippery on the skin and they can turn certain dyes blue. An example of a base is sodium hydroxide. Basicity is measured on a scale called the pH scale. On this scale, a pH value of 7 is neutral, and a pH value of more than 7 to 14 shows increasing basicity.

**base pair**

Molecules called nucleotides, on opposite strands of the DNA double helix, that form chemical bonds with one another. These chemical bonds act like rungs in a ladder and help hold the two strands of DNA together. There are four nucleotides, or bases, in DNA: adenine (A), cytosine (C), guanine (G), and thymine (T). These bases form specific pairs (A with T, and G with C).

**baseline**

An initial measurement of a condition that is taken at an early time point and used for comparison over time to look for changes. For example, the size of a tumor will be measured before treatment (baseline) and then afterwards to see if the treatment had an effect.

**basicity**

In chemistry, the quality of being a base (not an acid). A base is a substance that can accept hydrogen ions in water and can neutralize an acid. Basicity is measured on a scale called the pH scale. On this scale, a pH value of 7 is neutral, and a pH value of more than 7 to 14 shows increasing basicity.

**basket trial**

A type of clinical trial that tests how well a new drug or other substance works in patients who have different types of cancer that all have the same mutation or biomarker. In basket trials, patients all receive the same treatment that targets the specific mutation or biomarker found in their cancer. Basket trials may allow new drugs to be tested and approved more quickly than traditional clinical trials. Basket trials may also be useful for studying rare cancers and cancers with rare genetic changes. Also called bucket trial.

**basophil**

A type of immune cell that has granules (small particles) with enzymes that are released during allergic reactions and asthma. A basophil is a type of white blood cell and a type of granulocyte.

**batimastat**

An anticancer drug that belongs to the family of drugs called angiogenesis inhibitors. Batimastat is a matrix metalloproteinase inhibitor.

**batracylin**

A substance being studied in the treatment of cancer. It may kill cancer cells by causing damage to the DNA. Batracylin is a type of heterocyclic aryl amine.

**bavituximab**

A substance being studied in the treatment of several types of cancer and infections caused by certain viruses. It binds to substances on the surface of tumor cells, certain viruses, and cells infected with a virus. The immune system detects bavituximab on the cells and the viruses and may destroy them. It is a type of monoclonal antibody and a type of targeted therapy agent. Also called Tarvacin.

**bcl-2 antisense oligodeoxynucleotide G3139**

A substance being studied in the treatment of cancer. It may kill cancer cells by blocking the production of a protein that makes cancer cells live longer and by making them more sensitive to anticancer drugs. It is a type of antisense oligodeoxyribonucleotide. Also called augmerosen, Genasense, and oblimersen sodium.



### **beclin 1**

A protein involved in autophagy (the process by which a cell destroys proteins and other substances in its cytoplasm). Beclin 1 is found at lower levels in several types of cancer cells than in normal cells. It is a type of tumor suppressor.

### **beclomethasone**

A drug being studied in the treatment of graft-versus-host disease. It belongs to a family of drugs called corticosteroids.

### **bedsore**

Damage to an area of the skin caused by constant pressure on the area for a long time. This pressure can lessen blood flow to the affected area, which may lead to tissue damage and tissue death. Bedsores often form on the skin covering bony areas of the body, such as the back, tailbone, hips, buttocks, elbows, heels, and ankles. Patients who are not able to get out of bed or change their position, or who always use a wheelchair have an increased risk of bedsores. Signs and symptoms include changes in skin color and swelling, warmth, tenderness, and pain in the affected area. If untreated, the skin may crack, blister, or break open and form a sore or ulcer, which may have pus-like drainage. Bedsores often heal slowly and if not treated can damage tissues deep under the skin, including fat, muscle, and bone. Also called decubitus ulcer, pressure sore, and pressure ulcer.

### **behavior modification**

A technique used to help people change the way they react to certain triggers in the environment that cause a negative reaction. In cancer treatment, behavior modification may be used to help patients who have become nauseous during previous cancer treatments cope with nausea they feel when they enter the therapy room to begin a new round of treatment.

### **belching**

The release of air or gas from the stomach or esophagus through the mouth. Belching is usually caused by a buildup of air in the esophagus or upper part of the stomach when too much air is swallowed. This can occur when eating or drinking too fast, talking while eating, drinking carbonated drinks, chewing gum, smoking, or having an anxiety attack. Belching may also be a side effect of certain medicines or a symptom of some gastrointestinal conditions and digestive problems, such as gastroesophageal reflux disease, gastritis, and stomach ulcers or infections. Also called burping and eructation.

### **belinostat**

A drug used to treat adults with peripheral T-cell lymphoma that has come back or has not gotten better with other treatment. It is also being studied in the treatment of other types of cancer. Belinostat blocks certain enzymes needed for cell division and may kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow and may help make cancer cells easier to kill with other anticancer drugs. It is a type of histone deacetylase inhibitor, a type of antiangiogenesis agent, and a type of chemosensitizer. Also called Beleodaq and PXD101.

### **belotecan hydrochloride**

A substance being studied in the treatment of small cell lung cancer and other types of cancer. It blocks certain enzymes needed for cell division and DNA

repair, and it may kill cancer cells. It is a type of camptothecin analog and a type of topoisomerase inhibitor.

### **belzutifan**

A drug used to treat adults with renal cell carcinoma (a type of kidney cancer) that is advanced and adults with certain cancers linked to von Hippel-Lindau disease that do not need surgery right away, including renal cell carcinoma, central nervous system hemangioblastoma (a type of blood vessel tumor), and pancreatic neuroendocrine tumor. It is also being studied in the treatment of other types of cancer. Belzutifan blocks a certain protein, which may help keep tumor cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Also called Welireg.

### **bench-to-bedside**

A term used to describe the process by which the results of research done in the laboratory are directly used to develop new ways to treat patients.

### **bendamustine hydrochloride**

A drug used to treat chronic lymphocytic leukemia and certain types of non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Bendamustine hydrochloride damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Belrapzo, Bendeka, and Treanda.

### **benign**

Not cancer. Benign tumors may grow larger but do not spread to other parts of the body. Also called nonmalignant.

### **benign breast disease**

A group of conditions marked by changes in breast tissue that are benign (not cancer). There are different types of benign breast disease, including some types caused by an increase in the number of cells or by the growth of abnormal cells in the breast ducts or lobes. Signs and symptoms of benign breast disease include irregular lumps or cysts, breast swelling or discomfort, skin redness or thickening, and nipple discharge. Most benign breast conditions do not increase the risk of breast cancer. Also called mammary dysplasia.

### **benign proliferative breast disease**

A group of noncancerous conditions marked by an increase in the growth of certain cells in the breast. Having one of these conditions may increase the risk of breast cancer. Examples include ductal hyperplasia, lobular hyperplasia, and papillomas.

### **benign prostatic hyperplasia**

A benign (not cancer) condition in which the prostate gland is larger than normal. As the prostate gets bigger, it may press against the bladder and urethra, which can slow or block the flow of urine from the bladder. This can cause urinary symptoms, such as feeling a need to urinate often or right away, waking up many times during the night to urinate, trouble urinating, leaking urine, pain during urination or after ejaculation (the release of semen through the penis during orgasm), and blood in the urine. Benign prostatic hyperplasia does not increase a person's risk of developing prostate cancer. However, if not treated, it can lead to a weak bladder, urinary retention, urinary tract infections, bladder stones, or bladder or kidney damage. Benign prostatic hyperplasia is most common in older men. Also called benign prostatic hypertrophy, BPH, and enlarged prostate.

### **benign prostatic hypertrophy**

A benign (not cancer) condition in which the prostate gland is larger than normal. As the prostate gets bigger, it may press against the bladder and urethra, which can slow or block the flow of urine from the bladder. This can cause urinary symptoms, such as feeling a need to urinate often or right away, waking up many times during the night to urinate, trouble urinating, leaking urine, pain during urination or after ejaculation (the release of semen through the penis during orgasm), and blood in the urine. Benign prostatic hypertrophy does not increase a person's risk of developing prostate cancer. However, if not treated, it can lead to a weak bladder, urinary retention, urinary tract infections, bladder stones, or bladder or kidney damage. Benign prostatic hypertrophy is most common in older men. Also called benign prostatic hyperplasia, BPH, and enlarged prostate.

### **benign tumor**

A growth that is not cancer. It does not invade nearby tissue or spread to other parts of the body.

### **benign vascular tumor**

A type of benign (not cancer) tumor that forms from cells that make blood vessels or lymph vessels. Benign vascular tumors may occur anywhere in the body, and a patient may have several tumors in different parts of the body. They may grow large and sometimes spread to nearby tissue. The most common type of benign vascular tumor is hemangioma, which usually occurs in infants and goes away on its own.

### **benzaldehyde**

A chemical used in flavorings and in some dyes, perfumes, and medicines. It is found in essential oils made from almonds and peach pits and in other foods. It can also be made in the laboratory.

### **benzene**

A chemical that is used widely by the chemical industry, and is also found in tobacco smoke, vehicle emissions, and gasoline fumes. Exposure to benzene may increase the risk of developing leukemia.

### **benzo(a)pyrene**

A chemical that comes from certain substances when they are not burned completely. It is found in car exhaust, smoke from wood fires, tobacco, oil and gas products, charred or grilled foods, and other sources. It may also be found in water and soil. Benzo(a)pyrene can cause a skin rash, a burning feeling, skin color changes, warts, and bronchitis. It may also cause cancer. It is a type of polycyclic aromatic hydrocarbon. Also called 3,4-benzpyrene.

### **benzodiazepine**

A type of drug used to relieve anxiety and insomnia (trouble sleeping). Benzodiazepines are also used to relax muscles and prevent seizures. They increase the effect of a chemical in the brain called GABA, which is a neurotransmitter (a substance that nerves use to send messages to one another). This causes brain activity to slow down. Benzodiazepines are a type of CNS depressant.

### **benzoylphenylurea**

A substance being studied in the treatment of cancer. It is a type of antitubulin agent. Also called BPU.

**benzydamine**

A substance being studied as a mouth rinse treatment for oral mucositis (painful mouth sores) caused by cancer therapy. It is a type of nonsteroidal anti-inflammatory drug (NSAID).

**bereavement**

A state of sadness, grief, and mourning after the loss of a loved one.

**bergamot**

A type of orange tree grown in Italy. The essential oil from the peel of this orange is used in perfume, to get rid of insects, and to flavor tea. Bergamot oil is also used in aromatherapy for depression, anxiety, and poor digestion. The scientific name for the bergamot orange tree is *Citrus bergamia*.

**best practice**

Treatment that is accepted by medical experts as a proper treatment for a certain type of disease and that is widely used by health care professionals. Also called standard medical care, standard of care, and standard therapy.

**beta alethine**

A substance that is being studied in the treatment of cancer. It belongs to a family of chemicals called disulfides.

**beta carotene**

A substance found in yellow and orange fruits and vegetables and in dark green, leafy vegetables. The body can make vitamin A from beta carotene. Beta carotene is being studied in the prevention of some types of cancer. It is a type of antioxidant.

**beta cell neoplasm**

An abnormal mass that grows in the beta cells of the pancreas that make insulin. Beta cell neoplasms are usually benign (not cancer). They secrete insulin and are the most common cause of low blood sugar caused by having too much insulin in the body. Also called beta cell tumor of the pancreas, insulinoma, and pancreatic insulin-producing tumor.

**beta cell tumor of the pancreas**

An abnormal mass that grows in the beta cells of the pancreas that make insulin. Beta cell tumors of the pancreas are usually benign (not cancer). They secrete insulin and are the most common cause of low blood sugar caused by having too much insulin in the body. Also called beta cell neoplasm, insulinoma, and pancreatic insulin-producing tumor.

**beta hemolytic streptococcus group B**

A type of bacterium often found in the vagina. It can cause systemic infections in people with suppressed immune systems.

**beta-2-microglobulin**

A small protein normally found on the surface of many cells, including lymphocytes, and in small amounts in the blood and urine. An increased amount in the blood or urine may be a sign of certain diseases, including some types of cancer, such as multiple myeloma or lymphoma.

### **beta-adrenergic antagonist**

A type of drug that blocks the action of substances, such as adrenaline, on nerve cells and causes blood vessels to relax and dilate (widen). This allows blood to flow more easily and lowers blood pressure and the heart rate. Beta-adrenergic antagonists are used to treat high blood pressure, chest pain (angina), abnormal heart rate (arrhythmia), congestive heart failure, and several other conditions. They may also shrink certain types of vascular tumors, such as hemangiomas. Also called beta-adrenergic blocking agent and beta-blocker.

### **beta-adrenergic blocking agent**

A type of drug that blocks the action of substances, such as adrenaline, on nerve cells and causes blood vessels to relax and dilate (widen). This allows blood to flow more easily and lowers blood pressure and the heart rate. Beta-adrenergic blocking agents are used to treat high blood pressure, chest pain (angina), abnormal heart rate (arrhythmia), congestive heart failure, and several other conditions. They may also shrink certain types of vascular tumors, such as hemangiomas. Also called beta-adrenergic antagonist and beta-blocker.

### **beta-blocker**

A type of drug that blocks the action of substances, such as adrenaline, on nerve cells and causes blood vessels to relax and dilate (widen). This allows blood to flow more easily and lowers blood pressure and the heart rate. Beta-blockers are used to treat high blood pressure, chest pain (angina), abnormal heart rate (arrhythmia), congestive heart failure, and several other conditions. They may also shrink certain types of vascular tumors, such as hemangiomas. Also called beta-adrenergic antagonist and beta-adrenergic blocking agent.

### **beta-endorphin**

A substance produced in the brain, especially in the pituitary gland, that blocks the sensation of pain. It is produced in response to pain, exercise, and other forms of stress. It is a type of polypeptide hormone.

### **beta-glucan**

A substance found in bacteria, plants, and certain foods, such as baker's yeast, cereal grains, and mushrooms. It is a type of polysaccharide that is made of a string of glucose (sugar) molecules joined together. Beta-glucan may stimulate the immune system and help kill cancer cells. It is being studied in the treatment of cancer. It is a type of biological response modifier.

### **beta-hCG**

A hormone found in the blood and urine during pregnancy. It may also be found in higher than normal amounts in patients with some types of cancer, including testicular, ovarian, liver, stomach, and lung cancers, and in other disorders. Measuring the amount of beta-hCG in the blood or urine of cancer patients may help to diagnose cancer and find out how well cancer treatment is working. Beta-hCG is a type of tumor marker. Also called beta-human chorionic gonadotropin.

### **beta-human chorionic gonadotropin**

A hormone found in the blood and urine during pregnancy. It may also be found in higher than normal amounts in patients with some types of cancer, including testicular, ovarian, liver, stomach, and lung cancers, and in other disorders. Measuring the amount of beta-human chorionic gonadotropin in the blood or urine of cancer patients may help to diagnose cancer and find out how well cancer treatment is working. Beta-human chorionic gonadotropin is a type of tumor marker. Also called beta-hCG.

### **beta-sitosterol**

A substance found in various nuts, beans, seeds, fruits, and vegetables. It may also be used in dietary supplements. Beta-sitosterol may help lower cholesterol levels in the blood by decreasing the amount of cholesterol absorbed from the diet. It may also slow the growth of some types of cancer cells and kill them. It is a type of phytosterol.

### **betel quid with tobacco**

A type of smokeless tobacco that is made in India and is widely used throughout Asia. It is a mixture of tobacco, crushed areca nut (also called betel nut), spices, and other ingredients. It is used like chewing tobacco and is placed in the mouth, usually between the gum and cheek. Betel quid with tobacco contains nicotine and many harmful, cancer-causing chemicals. Using it can lead to nicotine addiction and can cause cancers of the lip, mouth, tongue, throat, and esophagus. Also called gutka.

### **bevacizumab**

A drug that binds to the protein VEGF to help keep new blood vessels from forming and is used to treat many different types of cancer. Bevacizumab is used under the brand names Alymsys, Mvasi, Avastin, and Zirabev, alone or with other drugs, to treat certain types of cervical cancer, colorectal cancer, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), and glioblastoma (a type of brain cancer). The Alymsys and Avastin brands of bevacizumab are also used to treat certain types of ovarian epithelial, fallopian tube, and primary peritoneal cancer. The Avastin brand is also used to treat certain types of hepatocellular carcinoma (a type of liver cancer). Bevacizumab is also being studied in the treatment of other types of cancer. It may prevent the growth of new blood vessels that tumors need to grow. Bevacizumab is a type of antiangiogenesis agent and a type of monoclonal antibody.

### **bexarotene**

A drug used to treat skin problems caused by cutaneous T-cell lymphoma that did not get better after other treatment. It is also being studied in the treatment of other types of cancer. Bexarotene binds to and activates proteins called retinoid X receptors, which may stop the growth of cancer cells and kill them. It is a type of retinoid. Also called LGD1069 and Targretin.

### **bias**

In a scientific research study or clinical trial, a flaw in the study design or the method of collecting or interpreting information. Biases can lead to incorrect conclusions about what the study or clinical trial showed.

### **bicalutamide**

A drug used with another drug to treat prostate cancer that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Bicalutamide binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Bicalutamide blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called Casodex.

### **bidi**

A cigarette made by rolling tobacco by hand in a dried leaf from the tendu tree (a member of the ebony family). Most bidis are made in India, and they come in different flavors.



**bilateral**

Affecting both the right and left sides of the body.

**bilateral cancer**

Cancer that occurs in both of a pair of organs, such as both breasts, ovaries, eyes, lungs, kidneys, or adrenal glands, at the same time.

**bilateral nephrectomy**

Surgery to remove both kidneys.

**bilateral prophylactic mastectomy**

Surgery to remove both breasts in order to reduce the risk of developing breast cancer.

**bilateral salpingo-oophorectomy**

Surgery to remove both ovaries and both fallopian tubes.

**bile**

A fluid made by the liver and stored in the gallbladder. Bile is excreted into the small intestine, where it helps digest fat.

**bile duct**

A tube through which bile passes in and out of the liver.

**bile duct cancer**

A rare cancer that forms in the bile ducts. A bile duct is a tube that carries bile (fluid made by the liver) between the liver and gallbladder and the small intestine. Intrahepatic bile duct cancer is found inside the liver. Extrahepatic bile duct cancer is found outside the liver. Also called cholangiocarcinoma.

**biliary**

Having to do with the liver, bile ducts, and/or gallbladder.

**biliary bypass**

Surgery done to help relieve symptoms caused by a blocked bile duct. During a biliary bypass, the gallbladder or a part of the bile duct before the blockage is connected to either a part of the bile duct that is past the blockage or to the small intestine. This allows bile (fluid made by the liver) to flow around the blockage to the gallbladder or small intestine. A blocked bile duct may be caused by cancer or other conditions, such as gallstones, infection, or scar tissue. A biliary bypass is usually done in patients who have bile duct tumors that cannot be completely removed by surgery.

**biliary cirrhosis**

A type of chronic liver disease in which the tubes that carry bile (fluid that helps digest fat) out of the liver become damaged or blocked over time. This can cause bile and toxic substances to build up in the liver, which may lead to cirrhosis (scarring of the liver) and liver failure. It may also increase the risk of liver cancer. Biliary cirrhosis may be caused by gallstones, injury to the bile ducts, autoimmune disorders, and certain other conditions.

**biliary system**

The organs and ducts that make and store bile (a fluid made by the liver that helps digest fat), and release it into the small intestine. The biliary system

includes the gallbladder and bile ducts inside and outside the liver. Also called biliary tract.

### **biliary tract**

The organs and ducts that make and store bile (a fluid made by the liver that helps digest fat), and release it into the small intestine. The biliary tract includes the gallbladder and bile ducts inside and outside the liver. Also called biliary system.

### **biliary tract cancer**

A rare cancer that forms in the cells that line the bile ducts, gallbladder, or ampulla of Vater (the area where the bile ducts from the liver and pancreas join and enter the first part of the small intestine). Biliary tract cancers tend to grow and spread quickly. They are usually diagnosed at an advanced stage and have a poor prognosis (outcome).

### **bilirubin**

Substance formed when red blood cells are broken down. Bilirubin is part of the bile, which is made in the liver and is stored in the gallbladder. The abnormal buildup of bilirubin causes jaundice.

### **bimatoprost**

A drug used under the name Latisse to increase the length, thickness, and darkness of eyelashes. It is being studied as a way to increase the growth of eyelashes and eyebrows in patients given chemotherapy for cancer. Bimatoprost is also used under the name Lumigan to treat glaucoma (a build-up of fluid in the eye). It lowers pressure in the eye by increasing the flow of natural eye fluids out of the eye. It is a type of prostaglandin analog.

### **binding agent**

A substance that makes a loose mixture stick together. For example, binding agents can be used to make solid pills from loose powders.

### **binimetinib**

A drug used with encorafenib to treat melanoma that has spread or cannot be removed by surgery and has a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Binimetinib blocks proteins called MEK1 and MEK2, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called Mektovi.

### **bioactive compound**

A type of chemical found in small amounts in plants and certain foods (such as fruits, vegetables, nuts, oils, and whole grains). Bioactive compounds have actions in the body that may promote good health. They are being studied in the prevention of cancer, heart disease, and other diseases. Examples of bioactive compounds include lycopene, resveratrol, lignan, tannins, and indoles.

### **bioavailable**

The ability of a drug or other substance to be absorbed and used by the body. Orally bioavailable means that a drug or other substance that is taken by mouth can be absorbed and used by the body.

### **biochanin A**

An isoflavone found in soy products. Soy isoflavones (estrogen-like substances made by some plants) are being studied to see if they help prevent cancer.

### **biochemical reactions**

In living cells, chemical reactions that help sustain life and allow cells to grow.

### **biochemical recurrence**

A rise in the blood level of PSA (prostate-specific antigen) in prostate cancer patients after treatment with surgery or radiation. Biochemical recurrence may occur in patients who do not have symptoms. It may mean that the cancer has come back. Also called biochemical relapse and PSA failure.

### **biochemical relapse**

A rise in the blood level of PSA (prostate-specific antigen) in prostate cancer patients after treatment with surgery or radiation. Biochemical relapse may occur in patients who do not have symptoms. It may mean that the cancer has come back. Also called biochemical recurrence and PSA failure.

### **biochemist**

A scientist who has special training in the study of the chemicals and processes that occur in all living things.

### **biofeedback**

A method of learning to voluntarily control certain body functions such as heartbeat, blood pressure, and muscle tension with the help of a special machine. This method can help control pain.

### **biofilm**

A layer of bacteria or other microbes that grows on and sticks to the surface of a structure. A biofilm may cover natural surfaces, such as teeth. They may also grow in or on medical devices, such as catheters or artificial joints. Bacteria growing as a biofilm are hard to treat with antibiotics.

### **bioinformatics**

A field of science that uses computers, databases, math, and statistics to collect, store, organize, and analyze large amounts of biological, medical, and health information. Information may come from many sources, including genetic and molecular research studies, patient statistics, tissue specimens, clinical trials, and scientific journals. Also called computational biology.

### **biologic agent**

A substance that is made from a living organism or its products and is used in the prevention, diagnosis, or treatment of cancer and other diseases. Biologic agents include antibodies, interleukins, and vaccines. Also called biological agent and biological drug.

### **biological**

Pertaining to biology or to life and living things. In medicine, refers to a substance made from a living organism or its products. Biologicals may be used to prevent, diagnose, treat or relieve of symptoms of a disease. For example, antibodies, interleukins, and vaccines are biologicals. Biological also refers to parents and children who are related by blood.

### **biological agent**

A substance that is made from a living organism or its products and is used in the prevention, diagnosis, or treatment of cancer and other diseases. Biological agents include antibodies, interleukins, and vaccines. Also called biologic agent and biological drug.

### **biological drug**

A substance that is made from a living organism or its products and is used in the prevention, diagnosis, or treatment of cancer and other diseases. Biological drugs include antibodies, interleukins, and vaccines. Also called biologic agent and biological agent.

### **biological profile**

A summary of the biological actions of a substance. A biological profile may come from patient data or from tests done in the laboratory or in animals.

### **biological response modifier therapy**

A type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory. In cancer, some biological response modifier therapies stimulate or suppress the immune system to help the body fight cancer. Other biological response modifier therapies attack specific cancer cells, which may help keep them from growing or kill them. They may also lessen certain side effects caused by some cancer treatments. Types of biological response modifier therapy include immunotherapy (such as cytokines, cancer treatment vaccines, and some antibodies) and some targeted therapies. Also called biological therapy, biotherapy, and BRM therapy.

### **biological therapy**

A type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory. In cancer, some biological therapies stimulate or suppress the immune system to help the body fight cancer. Other biological therapies attack specific cancer cells, which may help keep them from growing or kill them. They may also lessen certain side effects caused by some cancer treatments. Types of biological therapy include immunotherapy (such as cytokines, cancer treatment vaccines, and some antibodies) and some targeted therapies. Also called biological response modifier therapy, biotherapy, and BRM therapy.

### **biomarker**

A biological molecule found in blood, other body fluids, or tissues that is a sign of a normal or abnormal process, or of a condition or disease. A biomarker may be used to see how well the body responds to a treatment for a disease or condition. Also called molecular marker and signature molecule.

### **biomarker testing**

A laboratory method that uses a sample of tissue, blood, or other body fluid to check for certain genes, proteins, or other molecules that may be a sign of a disease or condition, such as cancer. Biomarker testing can also be used to check for certain changes in a gene or chromosome that may increase a person's risk of developing cancer or other diseases. Biomarker testing may be done with other procedures, such as biopsies, to help diagnose some types of cancer. It may also be used to help plan treatment, find out how well treatment is working, make a prognosis, or predict whether cancer will come back or spread to other parts of the body. Also called molecular profiling and molecular testing.

### **biomedicine**

A system in which medical doctors and other health care professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called allopathic medicine, conventional medicine, mainstream medicine, orthodox medicine, and Western medicine.

### **biometrics**

The science of collecting and analyzing biologic or health data using statistical methods. Biometrics may be used to help learn the possible causes of a cancer or how often a cancer occurs in a certain group of people. Also called biometry and biostatistics.

### **biometry**

The science of collecting and analyzing biologic or health data using statistical methods. Biometry may be used to help learn the possible causes of a cancer or how often a cancer occurs in a certain group of people. Also called biometrics and biostatistics.

### **biopsy**

The removal of cells or tissues for examination by a pathologist. The pathologist may study the tissue under a microscope or perform other tests on the cells or tissue. There are many different types of biopsy procedures. The most common types include: (1) incisional biopsy, in which only a sample of tissue is removed; (2) excisional biopsy, in which an entire lump or suspicious area is removed; and (3) needle biopsy, in which a sample of tissue or fluid is removed with a needle. When a wide needle is used, the procedure is called a core biopsy. When a thin needle is used, the procedure is called a fine-needle aspiration biopsy.

### **biopsy specimen**

Tissue removed from the body and examined under a microscope to determine whether disease is present.

### **biorepository**

A facility that collects, catalogs, and stores samples of biological material, such as urine, blood, tissue, cells, DNA, RNA, and protein, from humans, animals, or plants for laboratory research. If the samples are from people, medical information may also be stored along with a written consent to use the samples in laboratory studies.

### **biosimilar drug**

A biological drug that is very much like another biological drug (called the reference drug) that has already been approved by the U.S. Food and Drug Administration (FDA). Biosimilar drugs and reference drugs are made from living organisms but they may be made in different ways and of slightly different substances. To be called a biosimilar drug, a biological drug must be shown to be as safe as, work as well as, and work in the same way as its reference drug. It must also be used in the same way, at the same dose, and for the same condition as the reference drug. Biosimilar drugs must be approved by FDA, and may cost less than the reference drugs.

### **biospecimen**

A sample of material, such as urine, blood, tissue, cells, DNA, RNA, or protein, from humans, animals, or plants. Biospecimens may be used for a laboratory test or stored in a biorepository to be used for research.

### **biostatistics**

The science of collecting and analyzing biologic or health data using statistical methods. Biostatistics may be used to help learn the possible causes of a cancer or how often a cancer occurs in a certain group of people. Also called biometrics and biometry.

## **biotherapy**

A type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory. In cancer, some biotherapies stimulate or suppress the immune system to help the body fight cancer. Other biotherapies attack specific cancer cells, which may help keep them from growing or kill them. They may also lessen certain side effects caused by some cancer treatments. Types of biotherapy include immunotherapy (such as cytokines, cancer treatment vaccines, and some antibodies) and some targeted therapies. Also called biological response modifier therapy, biological therapy, and BRM therapy.

## **biotin**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Biotin helps some enzymes break down substances in the body for energy and helps tissues develop. It is found in yeast, whole milk, egg yolks, and organ meats. Biotin is water-soluble (can dissolve in water) and must be taken in every day. Not enough biotin can cause skin, nerve, and eye disorders. Biotin is present in larger amounts in some cancer tissue than in normal tissue. Attaching biotin to substances used to treat some types of cancer helps them find cancer cells. Also called vitamin H.

## **birth canal**

The muscular canal that goes from the uterus to the outside of the body. During birth, the baby passes through the birth canal. Also called vagina.

## **birth control**

The use of drugs, devices, or surgery to prevent pregnancy. There are many different types of birth control. These include barrier methods to keep sperm from fertilizing the egg, hormone methods, intrauterine devices (IUDs), and surgery to close the fallopian tubes in women or close off the two tubes that carry sperm out of the testicles in men. Also called contraception.

## **birth control pill**

A pill used to prevent pregnancy. It contains hormones that block the release of eggs from the ovaries. Most birth control pills include estrogen and progestin. Also called oral contraceptive pill.

## **bismuth**

A silver-white metal used in medicines and other products. Certain forms of bismuth are used to treat diarrhea, heartburn, and upset stomach. Bismuth is also used with certain other drugs to treat stomach ulcers.

## **bispecific T-cell engager**

A substance made in the laboratory that can bind to two target proteins on the surface of different cells. For example, a bispecific T-cell engager may bind to a certain protein on healthy T cells (a type of immune cell) and, at the same time, to a different protein on cancer cells. This brings the T cells and cancer cells close together so the T cells can more effectively kill the cancer cells. Some bispecific T-cell engagers are being used to treat certain types of cancer, including acute lymphoblastic leukemia, multiple myeloma, lymphoma, and small cell lung cancer. They are a type of targeted therapy. Also called BiTE.

## **bispecific antibody**

A type of antibody that can bind to two different antigens at the same time. Bispecific antibodies are being studied in the imaging and treatment of cancer.



They are made in the laboratory.

### **bispecific fusion protein**

A protein made in the laboratory that can bind to two different molecules on two different cells at the same time. For example, a bispecific fusion protein may bind to a certain molecule on cancer cells and, at the same time, bind to a different molecule on T cells (a type of immune cell). This helps the body's T cells get close enough to the cancer cells to kill them. Bispecific fusion proteins may be used as a type of immunotherapy to treat some types of cancer.

### **bispecific monoclonal antibody**

An antibody that can bind to two different antigens at the same time. Bispecific monoclonal antibodies are being studied in the imaging and treatment of cancer. They are made in the laboratory.

### **bisphosphonate**

A drug or substance used to treat hypercalcemia (abnormally high blood calcium) and bone pain caused by some types of cancer. Forms of bisphosphonates are also used to treat osteoporosis and for bone imaging. Bisphosphonates inhibit a type of bone cell that breaks down bone. Also called diphosphonate.

### **bisphosphonate-associated osteonecrosis**

The necrosis (death) of bone tissue caused by treatment with a bisphosphonate (a drug or substance used to treat osteoporosis, bone pain caused by some types of cancer, and high blood calcium). It commonly occurs in the jaw bones. There may be pain, swelling and infection in the areas of necrosis. Also called BON.

### **bivalent vaccine**

A vaccine that works by stimulating an immune response against two different antigens, such as two different viruses or other microorganisms. For example, Cervarix is a bivalent vaccine that helps protect the body against infection with two different types of human papillomaviruses (HPV).

### **bizelesin**

An anticancer drug that belongs to the family of drugs called alkylating agents. It is also an antitumor antibiotic.

### **black cohosh**

An eastern North American perennial herb. A substance obtained from the root of the plant has been used in some cultures to treat a number of medical problems. It is being studied in the treatment of hot flashes and other symptoms of menopause. The scientific name is *Cimicifuga racemosa*. Also called black snakeroot, bugbane, bugwort, and rattlesnake root.

### **black snakeroot**

An eastern North American perennial herb. A substance obtained from the root of the plant has been used in some cultures to treat a number of medical problems. It is being studied in the treatment of hot flashes and other symptoms of menopause. The scientific name is *Cimicifuga racemosa*. Also called black cohosh, bugbane, bugwort, and rattlesnake root.

### **bladder**

The organ that stores urine.

### **bladder cancer**

Cancer that forms in tissues of the bladder (the organ that stores urine). Most bladder cancers are transitional cell carcinomas (cancer that begins in cells that normally make up the inner lining of the bladder). Other types include squamous cell carcinoma (cancer that begins in thin, flat cells) and adenocarcinoma (cancer that begins in cells that make and release mucus and other fluids). The cells that form squamous cell carcinoma and adenocarcinoma develop in the inner lining of the bladder as a result of chronic irritation and inflammation.

### **blast**

An immature blood cell.

### **blast crisis**

A phase of chronic myelogenous leukemia in which tiredness, fever, and an enlarged spleen occur during the blastic phase, when more than 30% of the cells in the blood or bone marrow are blast cells (immature blood cells).

### **blastic phase chronic myelogenous leukemia**

A phase of chronic myelogenous leukemia in which 20% or more of the cells in the blood or bone marrow are blast cells (immature blood cells). When tiredness, fever, and an enlarged spleen occur during the blastic phase, it is called blast crisis.

### **blastic plasmacytoid dendritic cell neoplasm**

A rare, fast-growing cancer that affects the blood, bone marrow, and skin. It can also affect the lymph nodes, spleen, and central nervous system. Most patients with blastic plasmacytoid dendritic cell neoplasm have red-brown or deep purple skin lesions on one or more areas of the body. Blastic plasmacytoid dendritic cell neoplasm usually occurs in older adults and is difficult to diagnose and treat. Also called BPDCN.

### **bleomycin sulfate**

A drug that comes from the bacterium *Streptomyces verticillus* and is used alone or with other drugs to treat many types of cancer, including Hodgkin lymphoma, non-Hodgkin lymphoma, testicular cancer, malignant pleural effusion, and squamous cell carcinoma of the cervix, head and neck, penis, and vulva. It is also being studied in the treatment of other types of cancer. Bleomycin sulfate damages the cell's DNA and may kill cancer cells. It is a type of antineoplastic antibiotic. Bleomycin is the active ingredient of bleomycin sulfate.

### **blessed thistle**

A plant whose leaves, stems, and flowers have been used in some cultures to treat certain medical problems. Blessed thistle may have anti-inflammatory and anticancer effects. The scientific name is *Cnicus benedictus*. Also called cardin, holy thistle, spotted thistle, and St. Benedict's thistle.

### **blinatumomab**

A drug used to treat adults and children aged 1 month and older with certain types of B-cell acute lymphoblastic leukemia that are CD19 positive (expresses the protein CD19). It is also being studied in the treatment of other types of cancer. Blinatumomab binds to CD19, which is found on most B cells (a type of white blood cell) and some types of leukemia cells. It also binds to a protein called CD3, which is found on T cells (another type of white blood cell). This may help the immune system kill cancer cells. Blinatumomab is a type of bispecific T-cell engager. Also called Blincyto.

**blinded study**

A type of study in which the patients (single-blinded) or the patients and their doctors (double-blinded) do not know which drug or treatment is being given. The opposite of a blinded study is an open label study.

**blister**

A fluid-filled sac in the outer layer of skin. It can be caused by rubbing, heat, or diseases of the skin. Also called skin vesicle.

**bloating**

A swelling or feeling of fullness in the abdomen. Bloating is usually the result of gas in the intestines and can be caused by many things, including overeating, lactose intolerance, and constipation. Bloating can also be a side effect of cancer or cancer treatment.

**blood**

A tissue with red blood cells, white blood cells, platelets, and other substances suspended in fluid called plasma. Blood takes oxygen and nutrients to the tissues, and carries away wastes.

**blood cancer**

Cancer that begins in blood-forming tissue, such as the bone marrow, or in the cells of the immune system. Examples of blood cancer are leukemia, lymphoma, and multiple myeloma. Also called hematologic cancer.

**blood cell count**

A measure of the number of red blood cells, white blood cells, and platelets in the blood. The amount of hemoglobin (substance in the blood that carries oxygen) and the hematocrit (the amount of whole blood that is made up of red blood cells) are also measured. A blood cell count is used to help diagnose and monitor many conditions. Also called CBC, complete blood count, and full blood count.

**blood cell count with differential**

A measure of the number of red blood cells, white blood cells, and platelets in the blood, including the different types of white blood cells (neutrophils, lymphocytes, monocytes, basophils, and eosinophils). The amount of hemoglobin (substance in the blood that carries oxygen) and the hematocrit (the amount of whole blood that is made up of red blood cells) are also measured. A blood cell count with differential is used to help diagnose and monitor many different conditions, including anemia and infection. Also called CBC with differential.

**blood chemistry study**

A test done on a sample of blood to measure the amount of certain substances in the body. These substances include electrolytes (such as sodium, potassium, and chloride), fats, proteins, glucose (sugar), and enzymes. Blood chemistry studies give important information about how well a person's kidneys, liver, and other organs are working. An abnormal amount of a substance in the blood can be a sign of disease or side effect of treatment. Blood chemistry studies are used to help diagnose and monitor many conditions before, during, and after treatment. Also called blood chemistry test.

### **blood chemistry test**

A test done on a sample of blood to measure the amount of certain substances in the body. These substances include electrolytes (such as sodium, potassium, and chloride), fats, proteins, glucose (sugar), and enzymes. Blood chemistry tests give important information about how well a person's kidneys, liver, and other organs are working. An abnormal amount of a substance in the blood can be a sign of disease or side effect of treatment. Blood chemistry tests are used to help diagnose and monitor many conditions before, during, and after treatment. Also called blood chemistry study.

### **blood circulation**

The flow or movement of blood throughout the body. Blood carries oxygen, nutrients, and other important substances from the heart, through the blood vessels, to the rest of the body's cells, tissues, and organs. It also helps to get rid of waste products, such as carbon dioxide, from the body. Also called bloodstream.

### **blood clot**

A mass of blood that forms when blood platelets, proteins, and cells stick together. When a blood clot is attached to the wall of a blood vessel, it is called a thrombus. When it moves through the bloodstream and blocks the flow of blood in another part of the body, it is called an embolus.

### **blood culture**

A laboratory test to check for bacteria, yeast, fungi, or other microorganisms in the blood. Blood cultures can help identify the type of microorganism that is causing an infection. This helps determine the best treatment. They may be used to help diagnose septicemia (a serious blood infection) and other conditions.

### **blood draw**

A procedure in which a needle is used to take blood from a vein, usually for laboratory testing. A blood draw may also be done to remove extra red blood cells from the blood, to treat certain blood disorders. Also called phlebotomy and venipuncture.

### **blood poisoning**

Disease caused by the spread of bacteria and their toxins in the bloodstream. Also called septicemia and toxemia.

### **blood pressure**

The force of circulating blood on the walls of the arteries. Blood pressure is taken using two measurements: systolic (measured when the heart beats, when blood pressure is at its highest) and diastolic (measured between heart beats, when blood pressure is at its lowest). Blood pressure is written with the systolic blood pressure first, followed by the diastolic blood pressure (for example 120/80).

### **blood stasis**

In traditional Chinese medicine, a condition described as slowing or pooling of blood, which may cause pain or other symptoms.

### **blood stem cell**

An immature cell that can develop into all types of blood cells, including white blood cells, red blood cells, and platelets. Blood stem cells are found in the peripheral blood and the bone marrow. Also called hematopoietic stem cell.

**blood sugar**

Glucose (a type of sugar) found in the blood. Also called glycemia.

**blood test**

A test done on a sample of blood to measure the amount of certain substances in the blood or to count different types of blood cells. Blood tests may be done to look for signs of disease or agents that cause disease, to check for antibodies or tumor markers, or to see how well treatments are working.

**blood thinner**

A substance that is used to prevent and treat blood clots in blood vessels and the heart. Also called anticoagulant.

**blood transfusion**

A procedure in which whole blood or parts of blood are put into a patient's bloodstream through a vein. The blood may be donated by another person or it may have been taken from the patient and stored until needed. Also called transfusion.

**blood urea nitrogen**

Nitrogen in the blood that comes from urea (a substance formed by the breakdown of protein in the liver). The kidneys filter urea out of the blood and into the urine. A high level of urea nitrogen in the blood may be a sign of a kidney problem. Also called BUN and urea nitrogen.

**blood vessel**

A tube through which the blood circulates in the body. Blood vessels include a network of arteries, arterioles, capillaries, venules, and veins.

**blood-brain barrier**

A network of blood vessels and tissue that is made up of closely spaced cells and helps keep harmful substances from reaching the brain. The blood-brain barrier lets some substances, such as water, oxygen, carbon dioxide, and general anesthetics, pass into the brain. It also keeps out bacteria and other substances, such as many anticancer drugs. Also called BBB.

**blood-brain barrier disruption**

The use of drugs to create openings between cells in the blood-brain barrier. The blood-brain barrier is a protective network of blood vessels and tissue that protects the brain from harmful substances, but can also prevent anticancer drugs from reaching the brain. Once the barrier is opened, anticancer drugs may be infused into an artery that goes to the brain, in order to treat brain tumors. Also called BBBD.

**bloodstream**

The flow or movement of blood throughout the body. Blood carries oxygen, nutrients, and other important substances from the heart, through the blood vessels, to the rest of the body's cells, tissues, and organs. It also helps to get rid of waste products, such as carbon dioxide, from the body. Also called blood circulation.

**board certified oncology pharmacy specialist**

A licensed pharmacist with special training in how to design, give, monitor, and change chemotherapy for cancer patients. Also called BCOP and oncology pharmacy specialist.

### **body image**

The way a person thinks about his or her body and how it looks to others.

### **body mass index**

A measure that relates body weight to height. BMI is sometimes used to measure total body fat and whether a person is a healthy weight. Excess body fat is linked to an increased risk of some diseases including heart disease and some cancers. Also called BMI.

### **bolus dose**

A single dose of a drug or other substance given over a short period of time. It is usually given by infusion or injection into a blood vessel. It may also be given by mouth.

### **bombesin**

A peptide (small protein) found in the brain, gastrointestinal tract, and lungs. It causes the release of certain hormones and enzymes. It also causes smooth muscles to contract. Bombesin is found at high levels on small cell lung cancer cells and on other types of cancer cells. It is a type of neuropeptide and a type of hormone.

### **bone cancer**

Primary bone cancer is cancer that forms in cells of the bone. Some types of primary bone cancer are osteosarcoma, Ewing sarcoma, malignant fibrous histiocytoma, and chondrosarcoma. Secondary bone cancer is cancer that spreads to the bone from another part of the body (such as the prostate, breast, or lung).

### **bone densitometry**

A procedure that measures the amount of calcium and other minerals in a bone by passing x-rays with two different energy levels through the bone. A bone densitometry shows the strength and thickness of a bone and is usually done in the lower spine, hip, lower arm, wrist, fingers, and heel. It is used to diagnose osteoporosis (a condition of lower bone density), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. A bone densitometry also measures fat and muscle composition in specific parts of the body, such as the arms, legs, and pelvis. Also called BMD scan, bone mineral density scan, DEXA scan, dual energy x-ray absorptiometry, and DXA.

### **bone density**

A measure of the amount of minerals (mostly calcium and phosphorous) contained in a certain volume of bone. Bone density measurements are used to diagnose osteoporosis (a condition marked by decreased bone mass), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. Low bone density can occur in patients treated for cancer. Also called BMD, bone mass, and bone mineral density.

### **bone marrow**

The soft, spongy tissue that has many blood vessels and is found in the center of most bones. There are two types of bone marrow: red and yellow. Red bone marrow contains blood stem cells that can become red blood cells, white blood cells, or platelets. Yellow bone marrow is made mostly of fat and contains stem cells that can become cartilage, fat, or bone cells.



### **bone marrow ablation**

A procedure to destroy bone marrow using radiation or high doses of anticancer drugs. It is done before a bone marrow or blood stem cell transplant to kill cancer cells and bone marrow cells. This makes room for healthy stem cells.

### **bone marrow aspiration**

A procedure in which a small sample of bone marrow is removed, usually from the hip bone, breastbone, or thigh bone. A small area of skin and the surface of the bone underneath are numbed with an anesthetic. Then, a special wide needle is pushed into the bone. A sample of liquid bone marrow is removed with a syringe attached to the needle. The bone marrow is sent to a laboratory to be looked at under a microscope. This procedure may be done at the same time as a bone marrow biopsy.

### **bone marrow aspiration and biopsy**

A procedure in which a small sample of bone marrow (soft, sponge-like tissue in the center of most bones) and bone is removed. A small area of skin and the surface of the bone underneath are numbed with an anesthetic. Then a special wide needle is pushed into the bone. A sample of liquid bone marrow is removed with a syringe attached to the needle. The syringe is then removed and the needle is rotated to remove a sample of the bone and the bone marrow. Both the bone marrow and bone samples are sent to a laboratory to be looked at under a microscope.

### **bone marrow biopsy**

A procedure in which a small sample of bone with bone marrow inside it is removed, usually from the hip bone. A small area of skin and the surface of the bone underneath are numbed with an anesthetic. Then, a special, wide needle is pushed into the bone and rotated to remove a sample of bone with the bone marrow inside it. The sample is sent to a laboratory to be looked at under a microscope. This procedure may be done at the same time as a bone marrow aspiration.

### **bone marrow cancer**

Cancer that forms in the blood-forming stem cells of the bone marrow (soft sponge-like tissue in the center of most bones). Bone marrow cancer includes leukemias and multiple myeloma.

### **bone marrow metastasis**

Cancer that has spread from the original (primary) tumor to the bone marrow.

### **bone marrow transplant**

A procedure in which a patient receives healthy stem cells (blood-forming cells) to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy. The healthy stem cells may come from the bone marrow of the patient or from a related or unrelated donor. A bone marrow transplant may be autologous (using a patient's own stem cells that were collected and saved before treatment), allogeneic (using stem cells from a related or unrelated donor), or syngeneic (using stem cells donated by an identical twin). Also called BMT.

### **bone mass**

A measure of the amount of minerals (mostly calcium and phosphorous) contained in a certain volume of bone. Bone mass measurements are used to diagnose osteoporosis (a condition marked by decreased bone mass), to see

how well osteoporosis treatments are working, and to predict how likely the bones are to break. Low bone mass can occur in patients treated for cancer. Also called BMD, bone density, and bone mineral density.

### **bone metastasis**

Cancer that has spread from the original (primary) tumor to the bone.

### **bone mineral density**

A measure of the amount of minerals (mostly calcium and phosphorous) contained in a certain volume of bone. Bone mineral density measurements are used to diagnose osteoporosis (a condition marked by decreased bone mass), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. Low bone mineral density can occur in patients treated for cancer. Also called BMD, bone density, and bone mass.

### **bone mineral density scan**

A procedure that measures the amount of calcium and other minerals in a bone by passing x-rays with two different energy levels through the bone. A bone mineral density scan shows the strength and thickness of a bone and is usually done in the lower spine, hip, lower arm, wrist, fingers, and heel. It is used to diagnose osteoporosis (a condition of lower bone density), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. A bone mineral density scan also measures fat and muscle composition in specific parts of the body, such as the arms, legs, and pelvis. Also called BMD scan, bone densitometry, DEXA scan, dual energy x-ray absorptiometry, and DXA.

### **bone scan**

A procedure to check for abnormal areas or damage in the bones. A very small amount of radioactive material is injected into a vein and travels through the blood. The radioactive material collects in the bones and is detected by a scanner (a special camera that takes pictures of the inside of the body). A bone scan may be used to diagnose bone tumors or cancer that has spread to the bone. It may also be used to help diagnose fractures, bone infections, or other bone problems. Also called bone scintigraphy.

### **bone scintigraphy**

A procedure to check for abnormal areas or damage in the bones. A very small amount of radioactive material is injected into a vein and travels through the blood. The radioactive material collects in the bones and is detected by a scanner (a special camera that takes pictures of the inside of the body). A bone scintigraphy may be used to diagnose bone tumors or cancer that has spread to the bone. It may also be used to help diagnose fractures, bone infections, or other bone problems. Also called bone scan.

### **bone tissue**

Tissue that gives strength and structure to bones. Bone is made up of compact tissue (the hard, outer layer) and cancellous tissue (the spongy, inner layer that contains red marrow). Bone tissue is maintained by bone-forming cells called osteoblasts and cells that break down bone called osteoclasts. Bones also contain blood vessels, nerves, proteins, vitamins, and minerals. Also called osseous tissue.

**bone-seeking radioisotope**

A radioactive substance that is given through a vein, and collects in bone cells and in tumor cells that have spread to the bone. It kills cancer cells by giving off low-level radiation.

**booster**

In medicine, refers to a vaccination given after a previous vaccination. A booster helps maintain or increase a protective immune response.

**borderline breast disease**

A group of conditions marked by changes in breast tissue that are not cancer but may become cancer. Types of borderline breast disease include atypical ductal hyperplasia, atypical lobular hyperplasia, lobular carcinoma in situ, and complex sclerosing lesion (radial scar). Having borderline breast disease increases the risk of breast cancer. Also called BBD.

**borderline personality disorder**

A serious mental illness marked by unstable moods and impulsive behavior. People with borderline personality disorder have problems with relationships, family and work life, long-term planning, and self-identity. Symptoms include intense bouts of anger, depression, and anxiety that may lead to self-injury or suicide, drug or alcohol abuse, excessive spending, binge eating, or risky sex. A person with borderline personality disorder who is diagnosed with cancer may be at an increased risk of suicide. Also called BPD.

**boron neutron capture therapy**

A type of radiation therapy. A substance that contains boron is injected into a blood vessel. The boron collects in tumor cells. The patient then receives radiation therapy with atomic particles called neutrons. The neutrons react with the boron to kill the tumor cells without harming normal cells. Boron neutron capture therapy is being studied as a treatment for glioblastoma multiforme and recurrent head and neck cancer. Also called BNCT.

**boron phenylalanine**

A substance used in a type of radiation therapy called boron neutron capture therapy. Boron phenylalanine is injected into a blood vessel and collects in tumor cells. The patient then receives radiation therapy with atomic particles called neutrons. The neutrons react with boron phenylalanine to kill the tumor cells without harming normal cells. Also called BPA.

**boronophenylalanine-fructose complex**

A substance used in a type of radiation therapy called boron neutron capture therapy. Boronophenylalanine-fructose complex is injected into a blood vessel and collects in tumor cells. The patient then receives radiation therapy with atomic particles called neutrons. The neutrons react with the boron in boronophenylalanine-fructose complex, producing radioactive particles that kill the tumor cells without harming normal cells. Also called BPA-F.

**bortezomib**

A drug used to treat adults with multiple myeloma or mantle cell lymphoma. It is also being studied in the treatment of other types of cancer. Bortezomib blocks the action of enzymes called proteasomes, which may help keep cancer cells from growing and may kill them. It is a type of proteasome inhibitor. Also called PS-341 and Velcade.

### **bosutinib**

A drug used to treat adults and children aged 1 year and older with chronic myelogenous leukemia that is Philadelphia chromosome positive. It is used in some newly diagnosed patients. It is also used in patients who cannot be treated with or have not gotten better after other treatment. It is also being studied in the treatment of other types of cancer. Bosutinib blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Bosulif.

### **botanical**

Having to do with, or derived from, plants.

### **botulinum toxin A**

A toxin made by the bacterium *Clostridium botulinum*. It can cause food poisoning. The drug Botox is a form of the toxin that can be used in small amounts to treat certain medical conditions. These include severe underarm sweating and severe muscle spasms in the neck and shoulders. Botulinum toxin A is also used to smooth wrinkles on the face. It is being studied in the treatment of pain in patients with skin leiomyomas (benign smooth muscle tumors) and other conditions. Also called Botox and botulinum toxin type A.

### **botulinum toxin type A**

A toxin made by the bacterium *Clostridium botulinum*. It can cause food poisoning. The drug Botox is a form of the toxin that can be used in small amounts to treat certain medical conditions. These include severe underarm sweating and severe muscle spasms in the neck and shoulders. Botulinum toxin type A is also used to smooth wrinkles on the face. It is being studied in the treatment of pain in patients with skin leiomyomas (benign smooth muscle tumors) and other conditions. Also called Botox and botulinum toxin A.

### **bowel**

The long, tube-shaped organ in the abdomen that completes the process of digestion. The bowel has two parts, the small bowel and the large bowel. Also called intestine.

### **bowel function**

The way the intestines work in terms of how often there are bowel movements, the ability to control when to have a bowel movement, and whether the stools are hard and dry as in constipation or watery as in diarrhea.

### **bowel movement**

Movement of feces (undigested food, bacteria, mucus, and cells from the lining of the intestines) through the bowel and out the anus. Also called defecation.

### **bowel obstruction**

A partial or complete block of the small or large intestine that keeps food, liquid, gas, and stool from moving through the intestines in a normal way. Bowel obstructions may be caused by a twist in the intestines, hernias, inflammation, scar tissue from surgery, and certain types of cancer, such as cancers of the stomach, colon, and ovary. They may also be caused by conditions that affect the muscles of the intestine, such as paralysis. Signs and symptoms may include pain and swelling in the abdomen, constipation, diarrhea, vomiting, and problems passing gas. Most bowel obstructions occur in the small intestine. Also called intestinal obstruction.

### **brachial plexopathy**

A condition marked by numbness, tingling, pain, weakness, or limited movement in the arm or hand. It is caused by an impairment of the brachial plexus, a network of nerves that affect the arm and hand.

### **brachial plexus**

A network of nerves that sends signals from the spine to the arm and hand.

### **brachytherapy**

A type of radiation therapy in which a radioactive substance is sealed inside materials that can be implanted, such as pellets, seeds, ribbons, wires, needles, or capsules, and placed inside the body, directly into or near a tumor or within a body cavity. The implant may be placed through a small flexible tube called a catheter or through an applicator device. It may be kept in place for a few minutes, for many days, or for the rest of a person's life. Brachytherapy is often used to treat cancers of the head and neck, breast, cervix, prostate, and eye. Also called implant radiation therapy, internal radiation therapy, and radiation brachytherapy.

### **brain**

The organ inside the head that controls all body functions of a human being. Made up of billions of nerve cells, the brain is protected by the cranium (the bones that form the head). It is made up of three major parts: the cerebrum, the cerebellum, and the brain stem. The cerebrum is the largest part of the brain and controls thinking, learning, problem solving, emotions, memory, speech, reading, writing, and voluntary movement. The cerebellum controls fine motor movement, balance, and posture. The brain stem controls breathing, heart rate, and the nerves and muscles used to see, hear, walk, talk, and eat. The brain stem connects the brain to the spinal cord. The brain and the spinal cord make up the central nervous system.

### **brain metastasis**

Cancer that has spread from the original (primary) tumor to the brain.

### **brain stem**

The part of the brain that is connected to the spinal cord. The brain stem is in the lowest part of the brain (just above the back of the neck) and is made up of the midbrain, pons, and medulla oblongata. It controls many vital functions, such as breathing, heart rate, and blood pressure, and the nerves and muscles used in seeing, hearing, walking, talking, and eating.

### **brain stem auditory evoked response test**

A test used to detect some types of hearing loss, such as hearing loss caused by injury or tumors that affect nerves involved in hearing. Electrodes are placed on the head and certain tones or clicking sounds are made. The electrodes measure nerve signals in the brain when it reacts to the sounds. Also called ABR test, auditory brain stem response test, and BAER test.

### **brain stem glioma**

A tumor that forms from cells called glial cells in the brain stem (the part of the brain that is connected to the spinal cord). Glial cells support and protect the nerve cells in the brain and help them work the way they should. Most brain stem gliomas are diffuse intrinsic pontine gliomas (DIPGs), which are fast-growing tumors that form in a part of the brain stem called the pons. These tumors tend

to spread throughout the brain stem and are hard to treat. Brain stem gliomas usually occur in children.

### **brain stem tumor**

A tumor in the part of the brain that connects to the spinal cord (the brain stem).

### **brain tumor**

The growth of abnormal cells in the tissues of the brain. Brain tumors can be benign (not cancer) or malignant (cancer).

### **breakthrough pain**

A sudden increase in pain that may occur in patients who already have chronic pain from cancer, arthritis, fibromyalgia, or other conditions. Breakthrough pain usually lasts for a short time. During breakthrough pain, the level of pain may be severe but the type of pain and where it is in the body are usually the same as the patient's chronic pain. Breakthrough pain may occur with stress, illness, and certain activities, such as exercising or coughing, or when the dose of pain medicine that the patient is taking wears off. Breakthrough pain is usually not a symptom of a new condition or a condition that has gotten worse. Also called pain flare.

### **breast**

Glandular organ located on the chest. The breast is made up of connective tissue, fat, and breast tissue that contains the glands that can make milk. Also called mammary gland.

### **breast biopsy clip**

A tiny, metal object that is placed into the breast during a biopsy to mark the area where the biopsy was done. The clip or marker is left inside the breast so it can be seen on a mammogram or other imaging test performed in the future. The clip does not cause any pain or harm the body. Also called breast biopsy marker.

### **breast biopsy marker**

A tiny, metal object that is placed into the breast during a biopsy to mark the area where the biopsy was done. The clip or marker is left inside the breast so it can be seen on a mammogram or other imaging test performed in the future. The clip does not cause any pain or harm the body. Also called breast biopsy clip.

### **breast cancer**

Cancer that forms in tissues of the breast. The most common type of breast cancer is ductal carcinoma, which begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). Another type of breast cancer is lobular carcinoma, which begins in the lobules (milk glands) of the breast. Invasive breast cancer is breast cancer that has spread from where it began in the breast ducts or lobules to surrounding normal tissue. Breast cancer occurs in both men and women, although male breast cancer is rare.

### **breast cancer resistance protein**

A protein that is involved in making cancer cells resistant (unable to respond) to anticancer drugs. Normally, breast cancer resistance protein works with other proteins to help move many different substances, including drugs and other chemicals, in and out of cells. It is found in stem cells and in normal tissues, including the intestine, liver, brain, and placenta. However, it may also be found in higher than normal amounts in some cancer cells, which can cause them to be unable to respond to certain anticancer drugs. Drugs that block breast cancer



resistance protein are being studied in the treatment of some types of cancer. Breast cancer resistance protein was first identified in breast cancer cells. Also called BCRP.

### **breast carcinoma in situ**

A condition in which abnormal cells are found in the tissues of the breast. There are 2 types of breast carcinoma in situ: ductal carcinoma in situ (DCIS) and Paget disease of the nipple. DCIS is a condition in which the abnormal cells are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Paget disease of the nipple is a condition in which abnormal cells are found in the skin cells of the nipple and may spread to the areola. Patients with Paget disease of the nipple may also have DCIS or invasive breast cancer in the same breast. Also called stage 0 breast carcinoma in situ.

### **breast columnar cell lesion**

A common breast biopsy finding in which the cuboidal (square-ish) cells that normally line the lobules (milk glands) of the breast are replaced with one or more layers of column-shaped cells called columnar cells. These columnar cells may look like normal cells or abnormal cells under a microscope. The lobules may also look larger than normal. Breast columnar cell lesions often occur with deposits of calcium in the breast tissue. Breast columnar cell lesions are not cancer but may increase the risk of certain other breast conditions or invasive breast cancer.

### **breast cyst**

A fluid-filled sac that forms in the breast that is sometimes filled with a mix of fluid and solid material. Breast cysts may occur in one or both breasts, and there may be more than one. Most cysts feel like a round or oval lump with a smooth, well-defined border that moves easily under the skin of the breast. But some cysts are too small to be felt. Symptoms may include pain or tenderness in the breast, especially around the time of a menstrual period, or a clear or cloudy fluid discharge from the nipple. Most breast cysts are not cancer and do not increase the risk of breast cancer. They can occur at any age but are most common in premenopausal women and in women taking hormone therapy for menopause.

### **breast density**

A term used to describe the amount of dense tissue compared to the amount of fatty tissue in the breast on a mammogram. Dense breast tissue has more fibrous and glandular tissue than fat. There are different levels of breast density, ranging from little or no dense tissue to very dense tissue. The more density, the harder it may be to find tumors or other changes on a mammogram.

### **breast duct**

A thin tube in the breast that carries milk from the breast lobules to the nipple. Also called milk duct.

### **breast duct ectasia**

A benign (not cancer) condition in which a milk duct under the nipple widens and thickens. This can cause the milk duct to become blocked and fluid to build up inside it. There are usually no symptoms, but sometimes there may be a thick nipple discharge or redness or tenderness of the nipple and nearby breast tissue. Breast duct ectasia is most common in women who are near menopause or have gone through it. Also called mammary duct ectasia.

### **breast duct endoscopy**

A method used to examine the lining of the breast ducts to look for abnormal tissue. A very thin, flexible, lighted tube attached to a camera is inserted through the nipple, and threaded into the breast ducts deep in the breast. Tissue and fluid samples may be removed during the procedure.

### **breast fibrosis**

A benign (not cancer) condition in which thickened or fibrous (scar-like) tissue is found in the breast. The areas of fibrosis usually feel firm, rubbery, or hard under the skin. Breast fibrosis may occur along with other changes in the breast, including cysts, breast swelling or discomfort, and nipple discharge. These changes may come and go throughout the menstrual cycle and usually stop after menopause. Breast fibrosis can occur at any age but is most common in younger women. Having breast fibrosis does not increase the risk of breast cancer.

### **breast implant**

A silicone gel-filled or saline-filled sac placed under the chest muscle to restore breast shape.

### **breast lobe**

A section of the breast that contains the lobules (the glands that make milk).

### **breast lobule**

A small part of a lobe in the breast. A breast lobule is a gland that makes milk.

### **breast pain**

Pain or discomfort in one or both breasts. The pain can be mild or severe and affect one area of the breast or the whole breast, including under the arm. It may also come from nearby muscles or joints outside the breast. Breast pain in women is most often caused by hormone changes before and during the menstrual cycle. It may also be unrelated to the menstrual cycle, with causes that include pregnancy, breastfeeding, smoking, too much caffeine or fat in the diet, certain medicines, breast surgery, injury to the breast or chest wall, or certain breast conditions. It is rarely caused by breast cancer. Breast pain can occur in both women and men. Also called mastalgia.

### **breast reconstruction**

Surgery to rebuild the shape of the breast after a mastectomy.

### **breast self-exam**

A way a person can check their own breasts by feeling for lumps or other changes. Breast self-exams can help a person learn how their breasts normally look and feel and notice when changes occur. Research has shown that doing breast self-exams does not lower the risk of dying from breast cancer and may lead to extra tests and procedures. Also called BSE.

### **breast-conserving surgery**

Surgery to remove cancer or other abnormal tissue from the breast and some normal tissue around it, but not the breast itself. Some lymph nodes under the arm may be removed for biopsy. Part of the chest wall lining may also be removed if the cancer is near it. Also called breast-sparing surgery, lumpectomy, partial mastectomy, quadrantectomy, and segmental mastectomy.

### **breast-sparing surgery**

Surgery to remove cancer or other abnormal tissue from the breast and some normal tissue around it, but not the breast itself. Some lymph nodes under the arm may be removed for biopsy. Part of the chest wall lining may also be removed if the cancer is near it. Also called breast-conserving surgery, lumpectomy, partial mastectomy, quadrantectomy, and segmental mastectomy.

### **breastbone**

The long flat bone that forms the center front of the chest wall. The breastbone is attached to the collarbone and the first seven ribs. Also called sternum.

### **breastfeeding**

The act of feeding breast milk to an infant. Babies can be fed directly from the mother's breast, or breast milk can be pumped and then fed to the baby from a bottle. Breast milk contains calories, vitamins, minerals, and other important nutrients that help an infant grow and develop. It also contains antibodies, which help protect the infant against some infections. Breastfeeding also helps protect the infant and mother against certain diseases or conditions. Also called nursing.

### **brentuximab vedotin**

A drug used alone or with other drugs to treat adults with certain types of cutaneous or systemic anaplastic large cell lymphoma, peripheral T-cell lymphoma, classic Hodgkin lymphoma, or mycosis fungoides and with other drugs to treat children aged 2 years and older with certain types of classic Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Brentuximab vedotin contains a monoclonal antibody that binds to a protein called CD30, which is found on some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. Brentuximab vedotin is a type of antibody-drug conjugate. Also called Adcetris and SGN-35.

### **brexucabtagene autoleucel**

A drug used to treat adults with mantle cell lymphoma or B-cell acute lymphoblastic leukemia that came back or did not get better after other treatment. It is also being studied in the treatment of other types of cancer. Brexucabtagene autoleucel is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Brexucabtagene autoleucel binds to a protein called CD19, which is found on some lymphoma cells and leukemia cells. This helps the body's immune system kill cancer cells. Brexucabtagene autoleucel is a type of CAR T-cell therapy. Also called Tecartus.

### **brigatinib**

A drug used to treat adults with non-small cell lung cancer that has spread and is ALK positive. It is also being studied in the treatment of other types of cancer. Brigatinib blocks certain proteins made by the ALK gene. Blocking these proteins may stop the growth and spread of cancer cells. Brigatinib is a type of tyrosine kinase inhibitor. Also called Alunbrig.

### **brivanib alaninate**

A substance being studied in the treatment of cancer. Brivanib alaninate may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of vascular endothelial growth factor receptor 2 inhibitor and a type of antiangiogenesis agent.

**brivudine**

A substance that is being studied in the treatment of infections caused by herpesvirus, including herpes-zoster (shingles). It belongs to the family of drugs called antivirals.

**broad ligament**

The layer of tissue that connects the sides of the uterus to the walls and floor of the pelvis. The broad ligament covers the uterus, ovaries, and fallopian tubes. It also includes nerves and blood vessels to these organs.

**broccoli sprout extract**

A substance being studied in the prevention of cancer. Broccoli sprout extract comes from newly sprouted broccoli. It causes cells to make enzymes that may protect them against cancer-causing toxins in the body, and it may also block the growth of cancer cells.

**bromelain**

An enzyme found in pineapples that breaks down other proteins, such as collagen and muscle fiber, and has anti-inflammatory properties. It is used as a meat tenderizer in the food industry.

**bronchi**

The large air passages that lead from the trachea (windpipe) to the lungs.

**bronchial**

Having to do with the bronchi, which are the larger air passages of the lungs, including those that lead from the trachea (windpipe) to the lungs and those within the lungs.

**bronchial adenoma**

Cancer that forms in tissues of the bronchi (large air passages in the lungs including those that lead to the lungs from the windpipe).

**bronchial brush biopsy**

A procedure in which cells are taken from the inside of the airways that lead to the lungs. A bronchoscope (a thin, tube-like instrument with a light and a lens for viewing) is inserted through the nose or mouth into the lungs. A small brush is then used to remove cells from the airways. These cells are then looked at under a microscope. A bronchial brush biopsy is used to find cancer and changes in cells that may lead to cancer. It is also used to help diagnose other lung conditions. Also called bronchial brushing.

**bronchial brushing**

A procedure in which cells are taken from the inside of the airways that lead to the lungs. A bronchoscope (a thin, tube-like instrument with a light and a lens for viewing) is inserted through the nose or mouth into the lungs. A small brush is then used to remove cells from the airways. These cells are then looked at under a microscope. A bronchial brushing is used to find cancer and changes in cells that may lead to cancer. It is also used to help diagnose other lung conditions. Also called bronchial brush biopsy.

**bronchial washing**

A procedure in which cells are taken from the inside of the airways that lead to the lungs. A bronchoscope (a thin, tube-like instrument with a light and a lens for viewing) is inserted through the nose or mouth into the lungs. A mild salt solution

is washed over the surface of the airways to collect cells, which are then looked at under a microscope. Bronchial washing is used to find infections. It may also help find cancer or changes in cells that may lead to cancer.

### **bronchiole**

A tiny branch of air tubes in the lungs.

### **bronchiolitis obliterans**

A condition in which the bronchioles (tiny branches of air tubes in the lungs) become inflamed and blocked. It may be caused by breathing in gases or particles that irritate the bronchioles. This irritation causes scar tissue to form, and makes breathing difficult. Bronchiolitis obliterans may be caused by other factors, and can also occur after a transplant with an organ or stem cells from a matched donor.

### **bronchitis**

Inflammation (swelling and reddening) of the bronchi.

### **bronchodilator**

A type of drug that causes small airways in the lungs to open up. Bronchodilators are inhaled and are used to treat breathing disorders, such as asthma or emphysema.

### **bronchogenic carcinoma**

Cancer that begins in the tissue that lines or covers the airways of the lungs, including small cell and non-small cell lung cancer.

### **bronchoscope**

A thin, tube-like instrument used to examine the inside of the trachea, bronchi (air passages that lead to the lungs), and lungs. A bronchoscope has a light and a lens for viewing, and may have a tool to remove tissue.

### **bronchoscopy**

A procedure that uses a bronchoscope to examine the inside of the trachea, bronchi (air passages that lead to the lungs), and lungs. A bronchoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. The bronchoscope is inserted through the nose or mouth. Bronchoscopy may be used to detect cancer or to perform some treatment procedures.

### **bronchus**

A large airway that leads from the trachea (windpipe) to a lung. The plural of bronchus is bronchi.

### **brostallicin hydrochloride**

A substance being studied in the treatment of cancer. Brostallicin hydrochloride binds to DNA and may kill cancer cells. It may also help other drugs kill cancer cells. It is a type of DNA minor groove binding agent.

### **broxuridine**

A drug that makes cancer cells more sensitive to radiation and is also used as a diagnostic agent to determine how fast cancer cells grow.

**bryostatin 1**

A substance being studied in the treatment of cancer and certain brain conditions such as Alzheimer disease and stroke. It binds to an enzyme involved in cell growth and it may help anticancer drugs work better. Bryostatin 1 comes from a marine organism. It is a type of protein kinase C modulator.

**buccal mucosa**

The inner lining of the cheeks.

**bucket trial**

A type of clinical trial that tests how well a new drug or other substance works in patients who have different types of cancer that all have the same mutation or biomarker. In bucket trials, patients all receive the same treatment that targets the specific mutation or biomarker found in their cancer. Bucket trials may allow new drugs to be tested and approved more quickly than traditional clinical trials. Bucket trials may also be useful for studying rare cancers and cancers with rare genetic changes. Also called basket trial.

**budesonide**

A drug used in the treatment of asthma and rhinitis. It is also being studied in the treatment of cancer. Budesonide belongs to the family of drugs called steroids.

**bugbane**

An eastern North American perennial herb. A substance obtained from the root of the plant has been used in some cultures to treat a number of medical problems. It is being studied in the treatment of hot flashes and other symptoms of menopause. The scientific name is *Cimicifuga racemosa*. Also called black cohosh, black snakeroot, bugwort, and rattlesnake root.

**bugwort**

An eastern North American perennial herb. A substance obtained from the root of the plant has been used in some cultures to treat a number of medical problems. It is being studied in the treatment of hot flashes and other symptoms of menopause. The scientific name is *Cimicifuga racemosa*. Also called black cohosh, black snakeroot, bugbane, and rattlesnake root.

**bulbar conjunctivitis**

A condition in which the thin layer of tissue that covers the sclera (the white part of the eye) becomes inflamed. The cause is usually not known, but it may occur with certain inflammatory conditions, such as lupus and rheumatoid arthritis. Signs and symptoms include redness, swelling, tenderness, mild pain in the eye, and sensitivity to light. Bulbar conjunctivitis usually does not affect vision and often goes away without treatment. Also called episcleritis.

**bulk-forming agent**

A substance, such as fiber in food, that adds bulk and water to stools so that they can pass more easily through the intestines (lower part of the digestive tract).

**bupivacaine hydrochloride**

A drug used to relieve pain by blocking signals at nerve endings. It is being studied in the relief of pain following surgery for cancer. It is a type of local anesthetic. Also called Marcaine and Sensorcaine.



### **buprenorphine hydrochloride**

A drug used to treat moderate to severe pain. It is also used to treat addiction to heroin and other opiates, such as morphine. Buprenorphine hydrochloride binds to opioid receptors in the central nervous system. It is a type of analgesic agent and a type of opioid.

### **bupropion hydrochloride**

A drug used to treat depression and certain other disorders. It is also used to help people stop smoking. Bupropion hydrochloride increases the levels of the chemicals dopamine, serotonin, and norepinephrine in the brain. This helps improve mood and can lessen cravings for nicotine. It is a type of antidepressant and a type of nicotine receptor antagonist. Also called Wellbutrin and Zyban.

### **burdock**

A plant whose seeds and root have been used in some cultures to treat certain medical problems. It may have antioxidant effects. The scientific name is *Arctium lappa*. Also called happy major and lappa.

### **burping**

The release of air or gas from the stomach or esophagus through the mouth. Burping is usually caused by a buildup of air in the esophagus or upper part of the stomach when too much air is swallowed. This can occur when eating or drinking too fast, talking while eating, drinking carbonated drinks, chewing gum, smoking, or having an anxiety attack. Burping may also be a side effect of certain medicines or a symptom of some gastrointestinal conditions and digestive problems, such as gastroesophageal reflux disease, gastritis, and stomach ulcers or infections. Also called belching and eructation.

### **burr hole**

A small opening in the skull made with a surgical drill.

### **bursitis**

Inflammation (swelling, pain, and warmth) of a bursa. A bursa is a flat, fluid-filled sac found between a bone and a tendon or muscle. It forms a cushion to help the tendon or muscle slide smoothly over the bone. Bursitis may be caused by long-term overuse, trauma, rheumatoid arthritis, gout, or infection. It usually affects the shoulder, knee, elbow, hip, or foot.

### **buserelin**

An anticancer drug that belongs to the family of drugs called gonadotropin-releasing hormones. In prostate cancer therapy, buserelin blocks the production of testosterone in the testicles.

### **buspirone**

A drug that is used to treat certain anxiety disorders. It belongs to the family of drugs called anti-anxiety agents.

### **busulfan**

A drug used under the brand name Myleran to treat chronic myelogenous leukemia (CML) and with other drugs under the brand name Busulfex to prepare patients with CML for a donor stem cell transplant. It is also being studied in the treatment of other types of cancer. Busulfan damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent.

**butane**

A colorless gas that catches fire easily and is used as fuel. It is found in gasoline, lighter fluid, and some aerosol sprays. Butane is also one of many harmful chemicals found in tobacco smoke.

**buthionine sulfoximine**

A drug that may help prevent resistance to some anticancer drugs.

**buttock**

One of two round, fleshy mounds of tissue behind the pelvis. The buttocks are made up of fat and thick muscle tissue that help support the body while sitting. The muscles in the buttocks are also used to move the hips and thighs.

**bypass**

A surgical procedure in which the doctor creates a new pathway for the flow of body fluids.

**c-ABL**

An enzyme that is involved in many cell processes, such as cell division. The gene for c-ABL is on chromosome 9. In most people with chronic myelogenous leukemia, the part of chromosome 9 with c-ABL has broken off and traded places with part of chromosome 22 to form the BCR::ABL fusion gene.

**c-erbB-2**

A protein involved in normal cell growth. C-erbB-2 may be made in larger than normal amounts by some types of cancer cells, including breast, ovarian, bladder, pancreatic, stomach, and esophageal cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. Checking the amount of c-erbB-2 on some types of cancer cells may help plan treatment. Also called HER2, HER2/neu, human EGF receptor 2, and human epidermal growth factor receptor 2.

**c-erbB-2 positive**

Describes cells that have a protein called HER2 on their surface. In normal cells, HER2 helps control cell growth. Cancer cells that make too much HER2 may grow more quickly and are more likely to spread to other parts of the body. Checking to see if a cancer is c-erbB-2 positive may help plan treatment, which may include drugs that kill c-erbB-2-positive cancer cells. Cancers that may be c-erbB-2 positive include breast, bladder, pancreatic, ovarian, and stomach cancers. Also called HER2 positive and human epidermal growth factor receptor 2 positive.

**c-fos antisense oligonucleotide**

A substance that has been studied in the treatment of cancer and is being studied in the treatment of rheumatoid arthritis and certain skin conditions. It blocks the production of a protein called c-fos, which helps control cell growth. This may kill cancer cells that need c-fos to grow. It is a type of antisense oligonucleotide. Also called antisense c-fos.

**c-kit**

A protein found on the surface of many different types of cells. It binds to a substance called stem cell factor (SCF), which causes certain types of blood cells to grow. C-kit may also be found in higher than normal amounts, or in a changed form, on some types of cancer cells, including gastrointestinal stromal tumors and melanoma. Measuring the amount of c-kit in tumor tissue may help

diagnose cancer and plan treatment. C-kit is a type of receptor tyrosine kinase and a type of tumor marker. Also called CD117 and stem cell factor receptor.

### **cART**

Treatment that uses a combination of three or more drugs to treat HIV infection. cART stops the virus from making copies of itself in the body. This may lessen the damage to the immune system caused by HIV and may slow down the development of AIDS. It may also help prevent transmission of HIV to others, including from mother to child during birth. Also called combination antiretroviral therapy, HAART, and highly active antiretroviral therapy.

### **cCLB8**

A drug used to treat a rare condition called multicentric Castleman disease in patients who do not have HIV or human herpesvirus 8. It is also being studied in the treatment of some types of cancer and other conditions. CCLB8 binds to a protein called interleukin-6 (IL-6), which is made by some white blood cells and other cells in the body. CCLB8 may help reduce inflammation and stop the growth of cancer cells or abnormal blood cells. It is a type of monoclonal antibody. Also called anti-IL-6 chimeric monoclonal antibody, CNTO 328, siltuximab, and Sylvant.

### **cabazitaxel**

A drug used with prednisone to treat prostate cancer that has spread to other parts of the body and is castration resistant (has not responded to treatments that lower testosterone levels). It is used in patients who have already been treated with anticancer drugs that included docetaxel. It is also being studied in the treatment of other types of cancer. Cabazitaxel stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called Jevtana and taxoid XRP6258.

### **cabozantinib-s-malate**

A drug used alone or with other drugs under the brand name Cabometyx to treat certain types of hepatocellular carcinoma (a type of liver cancer), renal cell carcinoma (a type of kidney cancer), and differentiated thyroid cancer and under the brand name Cometriq to treat certain types of medullary thyroid cancer. Cabozantinib-s-malate is also being studied in the treatment of other types of cancer. It blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Cabozantinib-s-malate is a type of tyrosine kinase inhibitor and a type of angiogenesis inhibitor.

### **cachexia**

Loss of body weight and muscle mass, and weakness that may occur in patients with cancer, AIDS, or other chronic diseases.

### **cadmium**

A metallic element that occurs naturally in tiny amounts in air, water, soil, and food. It is a byproduct of zinc refining and is used to make batteries, pigments, plastics, alloys, and electroplate. It is also found in tobacco and tobacco smoke. Exposure to high levels of cadmium may cause certain cancers and other health problems.

### **caffeine**

A substance found in the leaves and beans of the coffee tree, in tea, yerba mate, guarana berries, and in small amounts in cocoa. It can also be made in the

laboratory, and is added to some soft drinks, foods, and medicines. Caffeine increases brain activity, alertness, attention, and energy. It may also increase blood pressure, heart rate, breathing rate, and the loss of water from the body in urine.

### **calaspargase pegol**

A drug used with other drugs to treat acute lymphoblastic leukemia in children and young adults aged 1 month to 21 years. It is also being studied in the treatment of other types of cancer. Calaspargase pegol is made up of the enzyme L-asparaginase that is linked to a substance called SC-PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium *E. coli* and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. Calaspargase pegol is a type of protein synthesis inhibitor. Also called Asparlas, EZN-2285, and SC-PEG *E. coli* L-asparaginase.

### **calbindin**

A group of proteins that bind calcium and move it into cells. Calbindins are found in many different tissues in the body.

### **calcification**

Deposits of calcium in the tissues. Calcification in the breast can be seen on a mammogram, but cannot be detected by touch. There are two types of breast calcification, macrocalcification and microcalcification. Macrocalcifications are large deposits and are usually not related to cancer. Microcalcifications are specks of calcium that may be found in an area of rapidly dividing cells. Many microcalcifications clustered together may be a sign of cancer.

### **calcinosis**

A condition in which abnormal amounts of calcium salts are found in soft tissue, such as muscle.

### **calcitonin**

A hormone formed by the C cells of the thyroid gland. It helps maintain a healthy level of calcium in the blood. When the calcium level is too high, calcitonin lowers it.

### **calcitriol**

The active form of vitamin D. Calcitriol is formed in the kidneys or made in the laboratory. It is used as a drug to increase calcium levels in the body in order to treat skeletal and tissue-related calcium deficiencies caused by kidney or thyroid disorders.

### **calcium**

A mineral needed for healthy teeth, bones, and other body tissues. It is the most common mineral in the body. A deposit of calcium in body tissues, such as breast tissue, may be a sign of disease.

### **calcium Ca 41-chloride aqueous solution**

A substance used to diagnose and monitor cancer that has spread to the bones. It is also used to study the turnover of bone tissue and to diagnose other conditions that affect the bones, such as osteoporosis. Calcium Ca 41 is a form of calcium that gives off radiation. It is passed from the body in the urine.

### **calcium Ca 46-chloride aqueous solution**

A substance used to study the turnover of bone tissue in certain diseases, such as osteoporosis or cancer that has spread to the bone. Calcium Ca 46 is a form of calcium that gives off radiation. It is passed from the body in the urine.

### **calcium antagonist**

A type of drug that keeps calcium from entering the muscle cells of the heart and blood vessels. This causes the blood vessels to relax and widen, which allows the blood to flow more easily and lowers blood pressure. Some calcium antagonists may also slow the heartbeat. Calcium antagonists are used to treat high blood pressure, chest pain (angina), abnormal heartbeat (arrhythmia), and several other conditions. Also called calcium channel blocker.

### **calcium carbonate**

A form of the mineral calcium that is used to prevent or treat osteoporosis (a decrease in bone mass and density) and to treat heartburn and upset stomach. It is also being studied in the prevention of bone problems in people with cancer. It is a type of dietary supplement.

### **calcium channel blocker**

A type of drug that keeps calcium from entering the muscle cells of the heart and blood vessels. This causes the blood vessels to relax and widen, which allows the blood to flow more easily and lowers blood pressure. Some calcium channel blockers may also slow the heartbeat. Calcium channel blockers are used to treat high blood pressure, chest pain (angina), abnormal heartbeat (arrhythmia), and several other conditions. Also called calcium antagonist.

### **calcium gluconate**

The mineral calcium combined with a form of the sugar glucose. It is used to prevent and treat osteoporosis (a decrease in bone mass and density). It is also being studied in the treatment of bone loss and nerve damage caused by chemotherapy. It is a type of dietary supplement.

### **calcium infusion test**

A test used to help diagnose a type of pancreatic islet cell tumor called a gastrinoma. The patient receives a 3-hour infusion of a substance called calcium gluconate and the amount of gastrin in the blood is measured. An increase in the level of gastrin in the blood after the infusion may be a sign of a gastrinoma.

### **calendula ointment**

A substance made from the flower of the marigold plant *Calendula officinalis*. Calendula-based skin products have been used to treat minor cuts, burns, and skin irritation. The products that are available in the United States may not contain the same amount or mixture of ingredients and may not be effective. Another product, Calendula ointment, is being studied in France in the prevention of dermatitis in patients having radiation therapy for breast cancer. The ointment being studied is not available in the United States.

### **calgranulin A**

A protein that is made by many different types of cells and is involved in processes that take place both inside and outside of the cell. It is made in larger amounts in inflammatory diseases such as rheumatoid arthritis, and in some types of cancer. It is being studied as a biomarker for breast cancer. Also called S100 calcium binding protein A8.

### **calgranulin B**

A protein that is made by many different types of cells and is involved in processes that take place both inside and outside of the cell. It is made in larger amounts in inflammatory diseases such as rheumatoid arthritis, and in some types of cancer. It is being studied as a biomarker for breast cancer. Also called S100 calcium binding protein A9.

### **caloric intake**

Refers to the number of calories (energy content) consumed.

### **calorie**

A measurement of the energy content of food. The body needs calories as to perform its functions, such as breathing, circulating the blood, and physical activity. When a person is sick, their body may need extra calories to fight fever or other problems.

### **camphor**

A substance that comes from the wood and bark of the camphor tree or is made in the laboratory. It has a very unique smell and taste and is used in commercial products (for example, mothballs). Camphor is used in topical anti-infective and anti-pruritic (anti-itching) agents.

### **camptothecin**

An anticancer drug that belongs to the family of drugs called topoisomerase inhibitors.

### **camptothecin analog**

An anticancer drug related in structure to camptothecin, a topoisomerase inhibitor. One such drug is aminocamptothecin.

### **cancer**

A term for diseases in which abnormal cells divide without control and can invade nearby tissues. Cancer cells can also spread to other parts of the body through the blood and lymph systems. There are several main types of cancer. Carcinoma is a cancer that begins in the skin or in tissues that line or cover internal organs. Sarcoma is a cancer that begins in bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue. Leukemia is a cancer that begins in blood-forming tissue, such as the bone marrow, and causes too many abnormal blood cells to be made. Lymphoma and multiple myeloma are cancers that begin in the cells of the immune system. Central nervous system cancers are cancers that begin in the tissues of the brain and spinal cord. Also called malignancy.

### **cancer antigen 125**

A substance that may be found in high amounts in the blood of patients with certain types of cancer, including ovarian cancer. Cancer antigen 125 levels may also help monitor how well cancer treatments are working or if cancer has come back. Also called CA-125.

### **cancer cell line**

Cancer cells that keep dividing and growing over time, under certain conditions in a laboratory. Cancer cell lines are used in research to study the biology of cancer and to test cancer treatments.



### **cancer cluster**

The occurrence of a larger-than-expected number of cases of cancer within a group of people in a geographic area over a period of time.

### **cancer of the adrenal cortex**

A rare cancer that forms in the outer layer of tissue of the adrenal gland (a small organ on top of each kidney that makes steroid hormones, adrenaline, and noradrenaline to control heart rate, blood pressure, and other body functions). Also called adrenocortical cancer and adrenocortical carcinoma.

### **cancer of unknown primary origin**

A case in which cancer cells are found in the body, but the place where the cells first started growing (the origin or primary site) cannot be determined. Also called carcinoma of unknown primary and CUP.

### **cancer predisposing gene mutation**

A term used to describe mutations (changes) in certain genes that may increase a person's risk of some types of cancer. For example, a person who has certain mutations in the BRCA1 or BRCA2 gene has higher than normal risks of developing breast cancer and ovarian cancer. Cancer predisposing gene mutations are usually inherited (passed from parent to child) and may be seen within families. Knowing if a person has a cancer predisposing gene mutation may help prevent, diagnose, and treat cancer. Not all people who have a cancer predisposing gene mutation will develop cancer. Also called cancer susceptibility gene mutation.

### **cancer predisposition gene**

A term used to describe a gene that may increase a person's risk of developing some types of cancer if it has certain mutations (changes). For example, a person who has mutations in the BRCA1 or BRCA2 gene has more risk than normal of developing breast cancer and/or ovarian cancer. Cancer predisposition genes are usually passed from parent to child and may be seen within families. Knowing if a person has a cancer predisposition gene may help prevent, diagnose, and treat cancer. Not all people who have a cancer predisposition gene will develop cancer. Also called cancer susceptibility gene.

### **cancer prevention vaccine**

A type of vaccine that helps protect the body against infection with viruses that can cause certain types of cancer later in life. Two types of cancer prevention vaccines are approved in the United States. The human papillomavirus (HPV) vaccine, Gardasil 9, prevents infection with certain types of HPV that can cause cancers of the cervix, vagina, vulva, anus, penis, and oropharynx (throat). The hepatitis B virus (HBV) vaccine prevents infection that can cause serious liver disease, including liver cancer.

### **cancer subtype**

Describes the smaller groups that a type of cancer can be divided into, based on certain characteristics of the cancer cells. These characteristics include how the cancer cells look under a microscope and whether there are certain substances in or on the cells or certain changes to the DNA of the cells. It is important to know the subtype of a cancer in order to plan treatment and determine prognosis.

### **cancer susceptibility gene**

A term used to describe a gene that may increase a person's risk of developing some types of cancer if it has certain mutations (changes). For example, a person who has mutations in the BRCA1 or BRCA2 gene has more risk than normal of developing breast cancer and/or ovarian cancer. Cancer susceptibility genes are usually passed from parent to child and may be seen within families. Knowing if a person has a cancer susceptibility gene may help prevent, diagnose, and treat cancer. Not all people who have a cancer susceptibility gene will develop cancer. Also called cancer predisposition gene.

### **cancer susceptibility gene mutation**

A term used to describe mutations (changes) in certain genes that may increase a person's risk of some types of cancer. For example, a person who has certain mutations in the BRCA1 or BRCA2 gene has higher than normal risks of developing breast cancer and ovarian cancer. Cancer susceptibility gene mutations are usually inherited (passed from parent to child) and may be seen within families. Knowing if a person has a cancer susceptibility gene mutation may help prevent, diagnose, and treat cancer. Not all people who have a cancer susceptibility gene mutation will develop cancer. Also called cancer predisposing gene mutation.

### **cancer treatment vaccine**

A type of treatment that helps the body's immune system recognize and destroy cancer cells. A cancer treatment vaccine may be made from a patient's own tumor cells, from their dendritic cells (a type of immune cell), or from certain proteins or other molecules found on the cancer cells of many people with that cancer. Another type of cancer treatment vaccine is made from a virus that infects and breaks down cancer cells. Cancer treatment vaccines are being used to treat certain types of prostate cancer and melanoma. They are also being studied in the treatment of other types of cancer. Cancer treatment vaccines are a type of immunotherapy.

### **cancer-related post-traumatic stress**

A condition that develops in some people who are diagnosed with cancer. Symptoms of cancer-related post-traumatic stress (PTS) include having frightening thoughts or trouble sleeping, being distracted or overexcited, feeling alone, or losing interest in daily activities. Symptoms may also include feelings of shock, fear, helplessness, or horror. Cancer-related PTS can occur anytime after diagnosis, including during or after treatment. Relaxation training, counseling, support groups, and certain medicines may be used to reduce symptoms of PTS.

### **candidiasis**

A condition in which *Candida albicans*, a type of yeast, grows out of control in moist skin areas of the body. It is usually a result of a weakened immune system, but can be a side effect of chemotherapy or treatment with antibiotics. Candidiasis usually affects the mouth (oral candidiasis); however, rarely, it spreads throughout the entire body. Also called candidosis and thrush.

### **candidosis**

A condition in which *Candida albicans*, a type of yeast, grows out of control in moist skin areas of the body. It is usually a result of a weakened immune system, but can be a side effect of chemotherapy or treatment with antibiotics. Candidosis usually affects the mouth (oral candidosis); however, rarely, it spreads throughout the entire body. Also called candidiasis and thrush.

### **canertinib dihydrochloride**

A substance being studied in the treatment of some types of cancer. Canertinib dihydrochloride blocks the action of proteins called epidermal growth factor receptors, and may cause cancer cells to die. It is a type of tyrosine kinase inhibitor. Also called CI-1033.

### **cannabidiol**

A chemical that comes from the hemp (*Cannabis sativa*) plant. Cannabidiol contains very low levels of delta-9-THC (the main chemical that causes the “high” of marijuana). It may help relieve pain, lower inflammation, and reduce anxiety without causing the mind-altering effects of marijuana. Cannabidiol comes in many forms, including oils, extracts, capsules, and patches. One specific form has been approved in the United States as a drug to treat seizures in certain people. Cannabidiol is also being studied in the treatment of symptoms or side effects caused by cancer and cancer treatment. It is a type of cannabinoid. Also called CBD.

### **cannabinoid**

A type of chemical in marijuana that causes drug-like effects all through the body, including the central nervous system and the immune system. The main active cannabinoid in marijuana is delta-9-tetrahydrocannabinol (THC). Cannabinoids may help treat the symptoms of cancer or the side effects of cancer treatment.

### **capecitabine**

A drug used alone or with other drugs to treat certain types of colorectal cancer, breast cancer, esophageal cancer, gastroesophageal junction cancer, stomach cancer, and pancreatic cancer. It is also being studied in the treatment of other types of cancer. Capecitabine is taken up by cancer cells and breaks down into fluorouracil, a substance that kills cancer cells. Capecitabine is a type of antimetabolite. Also called Xeloda.

### **capillary**

The smallest type of blood vessel. A capillary connects an arteriole (small artery) to a venule (small vein) to form a network of blood vessels in almost all parts of the body. The wall of a capillary is thin and leaky, and capillaries are involved in the exchange of fluids and gases between tissues and the blood.

### **capillary leak syndrome**

A condition in which fluid and proteins leak out of tiny blood vessels and flow into surrounding tissues, resulting in dangerously low blood pressure. Capillary leak syndrome may lead to multiple organ failure and shock.

### **capillary malformation**

An overgrowth of capillaries (small blood vessels) near the surface of the skin. Capillary malformations are present at birth and look like pink, red, or purple patches on the skin. They usually appear on the face or neck but can occur anywhere. Large capillary malformations are sometimes called port-wine stains, which tend to grow and become darker over time. They may also become raised or bumpy. Most capillary malformations do not cause health problems, but some may be associated with certain rare conditions such as Sturge-Weber syndrome, Klippel-Trenaunay syndrome, and Proteus syndrome.

### **capillary malformation-arteriovenous malformation syndrome**

A rare genetic condition that causes abnormalities of blood vessels, including swelling of the capillaries (small blood vessels) near the surface of the skin. The

swollen capillaries usually appear as small, round, pink or red spots on the skin of the face, arms, and legs. They may appear at birth or develop during childhood. More serious blood vessel abnormalities that affect the skin, muscle, bone, spine, brain, and heart may also occur. These can lead to serious problems, including abnormal bleeding, migraines, seizures, and congestive heart failure. Capillary malformation-arteriovenous malformation syndrome is a type of disease called a RASopathy that is caused by mutations (changes) in the RASA1 gene. This gene makes a protein involved in a cell signaling pathway that controls many important cell functions. Also called CM-AVM syndrome.

### **capivasertib**

A drug used with fulvestrant to treat adults with hormone-receptor positive, HER2-negative breast cancer that has spread and has an abnormal PIK3CA, AKT1, or PTEN gene. It is used in patients whose cancer came back or got worse during or after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. Capivasertib blocks a protein called AKT, which is involved in cell signaling, cell growth, and cell survival. Blocking this protein may help keep cancer cells from growing and may kill them. Capivasertib is a type of kinase inhibitor. Also called Truqap.

### **caplacizumab**

A drug used with plasma exchange and immunosuppressive therapy to treat acquired thrombotic thrombocytopenic purpura (aTTP). aTTP is a rare blood disorder in which blood clots form in small blood vessels throughout the body. Caplacizumab binds to a protein called VWF, which may help keep blood clots from forming. It is a type of nanobody (a tiny antibody). Also called Cablivi.

### **capmatinib hydrochloride**

A drug used to treat adults with non-small cell lung cancer that has spread and has a certain mutation (change) in the MET gene. It is also being studied in the treatment of other types of cancer. Capmatinib hydrochloride blocks a protein made by the MET gene, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Taveglo.

### **capromab pendetide**

A substance used to detect prostate cancer. It contains a monoclonal antibody that binds to prostate cells, linked to a substance that can bind radioisotopes. Capromab pendetide is combined with indium 111 and injected into the body. A gamma camera (a special camera that detects radioactivity) is used to find prostate cancer cells in the body. Capromab pendetide is a type of immunoconjugate. Also called ProstaScint.

### **capsaicin**

A component of certain plants, including cayenne and red pepper, used topically for peripheral nerve pain. It is also being studied for controlling mucositis pain after chemotherapy and radiation therapy.

### **capsule**

In medicine, a sac of tissue and blood vessels that surrounds an organ, joint, or tumor. A capsule is also a form used for medicine that is taken by mouth. It usually has a shell made of gelatin with the medicine inside.

### **capsule endoscope**

A device used to look at the inside of the intestines and other parts of the digestive tract. It is a capsule that is about the size of a large pill, with a lens, a

light, a camera, a radio transmitter, and a battery inside. The patient swallows the capsule and it takes pictures as it travels through the digestive tract. The pictures are sent to a small recorder that is worn on the patient's waist or shoulder. The pictures are then viewed on a computer by the doctor to check for signs of disease. The capsule endoscope passes out of the body during a bowel movement. Also called wireless capsule endoscope.

### **capsule endoscopy**

A procedure used to look at the inside of the intestines and other parts of the digestive tract. The patient swallows a capsule about the size of a large pill. The capsule contains a tiny wireless camera that travels through the digestive tract. It takes pictures of the inside of the digestive tract and sends them to a small recorder that is worn on the patient's waist or shoulder. The pictures are then viewed on a computer by the doctor to check for signs of disease. The capsule passes out of the body during a bowel movement.

### **captopril**

A drug used to treat high blood pressure that is also being studied in the prevention of side effects caused by radiation therapy used in the treatment of cancer. It belongs to the family of drugs called ACE inhibitors.

### **carbamide**

A substance formed by the breakdown of protein in the liver. The kidneys filter carbamide out of the blood and into the urine. Carbamide can also be made in the laboratory. A topical form of carbamide is being studied in the treatment of hand-foot syndrome (pain, swelling, numbness, tingling, or redness of the hands or feet that may occur as a side effect of certain anticancer drugs). Also called urea.

### **carbendazim**

An anticancer drug that belongs to the family of drugs called antifungal agents.

### **carbogen**

An inhaled form of oxygen and carbon dioxide that has more oxygen than air has. It is being studied in the treatment of cancer and other conditions. It may increase the amount of oxygen in cancer cells, which may make them easier to kill with radiation therapy. Carbogen is a type of radiosensitizing agent.

### **carbohydrate**

A sugar molecule. Carbohydrates can be small and simple (for example, glucose) or they can be large and complex (for example, polysaccharides such as starch, chitin or cellulose).

### **carbolic acid**

A very poisonous chemical substance made from tar and also found in some plants and essential oils (scented liquid taken from plants). Carbolic acid is used to make plastics, nylon, epoxy, medicines, and to kill germs. Also called phenol.

### **carbon C 11-acetate**

A radioactive substance being studied in positron emission tomography (PET) imaging. Carbon C 11-acetate gets taken up by cells in the body, and a PET scanner is used to find which cells in the body have taken it up. Since more carbon C 11-acetate is taken up by cancer cells than by normal cells, it can be used to help find cancer in the body and diagnose disease. Also called 11C-acetate.

### **carbon C 11-choline**

A radioactive substance being studied in positron emission tomography (PET) imaging to find certain types of cancer. Carbon C 11-choline gets taken up by cells in the body and more of it is taken up by cancer cells than by normal cells. A PET scanner is used to find which cells in the body have taken up carbon C 11-choline. Also called 11C-choline.

### **carbon C 11-choline PET-CT scan**

A procedure in which a small amount of carbon C 11-choline (a radioactive form of the vitamin choline) is injected into a vein. A scanner and a computer are used to make detailed pictures of areas inside the body where the carbon C 11-choline collects. Cancer cells take up more carbon C 11-choline than normal cells, so the pictures can be used to find cancer cells in the body. Also called 11C-choline PET-CT scan.

### **carbon dioxide**

A colorless, odorless gas. It is a waste product made by the body. Carbon dioxide travels in the blood from the body's tissues to the lungs. Breathing out clears carbon dioxide from the lungs.

### **carbon monoxide**

A poisonous gas that has no color or odor. It is given off by burning fuel (as in exhaust from cars or household heaters) and tobacco products. Carbon monoxide prevents red blood cells from carrying enough oxygen for cells and tissues to live.

### **carboplatin**

A drug used to treat advanced ovarian cancer that has never been treated or has come back after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Carboplatin works in a way similar to the anticancer drug cisplatin and causes fewer side effects. It damages the cell's DNA and may kill cancer cells. Carboplatin is a type of platinum compound.

### **carboplatin-Taxol**

A chemotherapy combination used to treat endometrial, ovarian, and head and neck cancers, and non-small cell lung cancer that has spread. It includes the drugs carboplatin and paclitaxel (Taxol). Also called Carbo-Tax regimen, carboplatin-Taxol regimen, and PC regimen.

### **carboplatin-Taxol regimen**

A chemotherapy combination used to treat endometrial, ovarian, and head and neck cancers, and non-small cell lung cancer that has spread. It includes the drugs carboplatin and paclitaxel (Taxol). Also called Carbo-Tax regimen, carboplatin-Taxol, and PC regimen.

### **carboplatin-Taxol-bevacizumab regimen**

A chemotherapy combination used to treat advanced, nonsquamous non-small cell lung cancer. It includes the drugs carboplatin, paclitaxel (Taxol), and bevacizumab. Also called carboplatin-paclitaxel-bevacizumab regimen.

### **carboplatin-paclitaxel-bevacizumab regimen**

A chemotherapy combination used to treat advanced, nonsquamous non-small cell lung cancer. It includes the drugs carboplatin, paclitaxel (Taxol), and bevacizumab. Also called carboplatin-Taxol-bevacizumab regimen.



### **carboxyamidotriazole**

An anticancer drug that belongs to the family of drugs called angiogenesis inhibitors.

### **carboxypeptidase-G2**

A drug used to treat toxic levels of the anticancer drug methotrexate in the blood of adults and children with kidney problems. Carboxypeptidase-G2 is a bacterial enzyme that helps break down and remove methotrexate from the body. It may also help certain drugs kill cancer cells. Carboxypeptidase-G2 is a type of chemoprotective agent and a type of prodrug activator. Also called glucarpidase and Voraxaze.

### **carcinoembryonic antigen**

A substance that may be found in the blood of people who have colon cancer, other types of cancer or diseases, or who smoke tobacco. Carcinoembryonic antigen levels may help keep track of how well cancer treatments are working or if cancer has come back. It is a type of tumor marker. Also called CEA.

### **carcinoembryonic antigen assay**

A laboratory test that measures the level of carcinoembryonic antigen (CEA) in the blood. An increased amount of CEA may be found in the blood of people who have colon cancer or other types of cancer, certain other diseases, or who smoke. The amount of CEA in the blood may also help keep track of how well cancer treatments are working or if cancer has come back. CEA is a type of tumor marker. Also called CEA assay.

### **carcinoembryonic antigen peptide-1**

A small piece of a tumor marker called carcinoembryonic antigen (CEA). CEA may be found in the blood of people who have colon cancer, other types of cancer or diseases, or who smoke tobacco. Carcinoembryonic antigen peptide-1 is used to make a vaccine that may help stimulate the body's immune system to kill cancer cells. Also called CAP-1 and CEA peptide-1.

### **carcinogen**

Any substance that causes cancer.

### **carcinogenesis**

The process by which normal cells are transformed into cancer cells.

### **carcinoid syndrome**

A combination of symptoms caused by the release of serotonin and other substances from carcinoid tumors of the gastrointestinal tract. Symptoms may include flushing of the face, flat angiomas (small collections of dilated blood vessels) of the skin, diarrhea, bronchial spasms, rapid pulse, and sudden drops in blood pressure.

### **carcinoid tumor**

A slow-growing type of tumor usually found in the gastrointestinal system (most often in the small intestine and rectum), and sometimes in the lungs or other sites. Carcinoid tumors may spread to the liver or other sites in the body, and they may secrete substances such as serotonin or prostaglandins, causing carcinoid syndrome.

### **carcinoma**

Cancer that begins in the skin or in tissues that line or cover internal organs.

### **carcinoma in situ**

A condition in which abnormal cells that look like cancer cells under a microscope are found only in the place where they first formed and haven't spread to nearby tissue. At some point, these cells may become cancerous and spread into nearby normal tissue. There are many different types of carcinoma in situ depending on the type of tissue in which it began. These include adenocarcinoma in situ (of the cervix, lungs, and gastrointestinal tract), ductal carcinoma in situ (of the breast), and squamous cell carcinoma in situ (of the skin, mouth, and larynx). Also called stage 0 disease.

### **carcinoma of unknown primary**

A case in which cancer cells are found in the body, but the place where the cells first started growing (the origin or primary site) cannot be determined. Also called cancer of unknown primary origin and CUP.

### **carcinomatosis**

A serious condition in which cancer cells from an original (primary) tumor spread to form many tumors throughout the body or to a large area of the body. In most cases, carcinomatosis is a sign that the cancer is getting worse and cannot be cured. The most common types of carcinomatosis are leptomeningeal carcinomatosis (affects the thin layers of tissue that cover and protect the brain and spinal cord), lymphangitic carcinomatosis (usually affects the lungs), and peritoneal carcinomatosis (affects the tissue that lines the abdominal wall and covers most of the organs in the abdomen). Also called carcinosis.

### **carcinomatous lymphangitis**

A serious condition in which cancer cells spread from the original (primary) tumor to the lymph vessels (the thin tubes that carry lymph and white blood cells through the body's lymph system). The cancer cells build up in the lymph vessels, which causes them to become blocked. Carcinomatous lymphangitis usually occurs in the lungs. It can happen in many types of cancer, but it is most common in people with cancers of the breast, lung, colon, stomach, pancreas, or prostate. Also called lymphangitic carcinomatosis.

### **carcinomatous meningitis**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and cerebrospinal fluid and pressure to build up in the brain. Carcinomatous meningitis can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called leptomeningeal carcinoma, leptomeningeal carcinomatosis, leptomeningeal metastasis, meningeal carcinomatosis, meningeal metastasis, and neoplastic meningitis.

### **carcinosarcoma**

A malignant tumor that is a mixture of carcinoma (cancer of epithelial tissue, which is skin and tissue that lines or covers the internal organs) and sarcoma (cancer of connective tissue, such as bone, cartilage, and fat).

### **carcinosis**

A serious condition in which cancer cells from an original (primary) tumor spread to form many tumors throughout the body or to a large area of the body. In most cases, carcinosis is a sign that the cancer is getting worse and cannot be cured. The most common types of carcinosis are leptomeningeal carcinomatosis (affects the thin layers of tissue that cover and protect the brain and spinal cord),

lymphangitic carcinomatosis (usually affects the lungs), and peritoneal carcinomatosis (affects the tissue that lines the abdominal wall and covers most of the organs in the abdomen). Also called carcinomatosis.

### **carcinostatic**

Pertaining to slowing or stopping the growth of cancer.

### **cardia**

The part of the stomach that is closest to the esophagus. Food and liquids pass through the cardia to enter the stomach from the esophagus. A valve near the cardia helps keep stomach contents from backing up into the esophagus.

### **cardiac**

Having to do with the heart.

### **cardiac catheterization**

A procedure used to diagnose and treat some heart conditions. During cardiac catheterization, a flexible tube called a catheter is inserted into a blood vessel in the arm, groin, upper thigh, or neck. The catheter is then guided through the aorta into the heart using a special x-ray machine. A cardiac catheterization may be done to measure blood pressure and oxygen levels in different parts of the heart, to check how well the heart muscle is working, to take a sample of tissue from the heart, or to look for defects in the valves or chambers of the heart. A dye may be injected through the catheter in order to look at blood flow in the heart and to check for blockages in the arteries leading to the heart.

### **cardiac pacemaker**

An electronic device that is implanted in the body to monitor heart rate and rhythm. It gives the heart electrical stimulation when it does not beat normally. It runs on batteries and has long, thin wires that connect it to the heart. Also called artificial pacemaker and pacemaker.

### **cardiac sarcoma**

A rare cancer that develops in tissues of the heart. Also called heart cancer.

### **cardiac tamponade**

A serious condition that occurs when extra fluid or blood builds up in the space between the heart and the pericardium (the sac around the heart). The extra fluid causes pressure on the heart, which keeps it from pumping enough blood to the rest of the body. Cardiac tamponade is life-threatening and can lead to shock and organ failure if not treated right away. It may be caused by cancer, infection, chest injury, heart surgery, radiation therapy to the chest, autoimmune disease, and heart, thyroid, or kidney problems. Also called pericardial tamponade.

### **cardin**

A plant whose leaves, stems, and flowers have been used in some cultures to treat certain medical problems. Cardin may have anti-inflammatory and anticancer effects. The scientific name is *Cnicus benedictus*. Also called blessed thistle, holy thistle, spotted thistle, and St. Benedict's thistle.

### **cardiofaciocutaneous syndrome**

A rare genetic condition that affects many parts of the body, especially the heart, face, and skin. People with cardiofaciocutaneous syndrome usually have growth, developmental, and learning delays. Other signs and symptoms include heart defects, an abnormally large head, unusual facial features, and problems with

the skin, eyes, and the gastrointestinal and nervous systems. People with cardiofaciocutaneous syndrome may also have thin, dry, curly hair and sparse or no eyelashes or eyebrows. Cardiofaciocutaneous syndrome is a type of disease called a RASopathy that is caused by mutations (changes) in the BRAF, MAP2K1, MAP2K2, or KRAS gene. These genes make proteins involved in a cell signaling pathway that controls many important cell functions. Also called CFC syndrome.

### **cardiologist**

A doctor who has special training to diagnose and treat diseases of the heart and blood vessels.

### **cardiology**

A branch of medicine that specializes in diagnosing and treating diseases of the heart, blood vessels, and circulatory system. These diseases include coronary artery disease, heart rhythm problems, and heart failure.

### **cardiopulmonary**

Having to do with the heart and lungs.

### **cardiopulmonary resuscitation**

An emergency procedure used to restart a person's heartbeat and breathing after one or both have stopped. It involves giving strong, rapid pushes to the chest to keep blood moving through the body. Usually, it also involves blowing air into the person's mouth to help with breathing and send oxygen to the lungs. Also called CPR.

### **cardiotoxicity**

Toxicity that affects the heart.

### **cardiovascular**

Having to do with the heart and blood vessels.

### **cardiovascular disease**

A type of disease that affects the heart or blood vessels. The risk of certain cardiovascular diseases may be increased by smoking, high blood pressure, high cholesterol, unhealthy diet, lack of exercise, and obesity. The most common cardiovascular disease is coronary artery disease (narrow or blocked coronary arteries), which can lead to chest pain, heart attacks, or stroke. Other cardiovascular diseases include congestive heart failure, heart rhythm problems, congenital heart disease (heart disease at birth), and endocarditis (inflamed inner layer of the heart). Also called heart disease.

### **caregiver**

A person who gives care to people who need help taking care of themselves. Examples include children, the elderly, or patients who have chronic illnesses or are disabled. Caregivers may be health professionals, family members, friends, social workers, or members of the clergy. They may give care at home or in a hospital or other health care setting.

### **carfilzomib**

A drug used alone or with other drugs to treat adults with multiple myeloma that came back or did not get better after treatment with one or more other therapies. It is also being studied in the treatment of other types of cancer. Carfilzomib blocks the action of enzymes called proteasomes, which may help keep cancer

cells from growing and may kill them. It is a type of proteasome inhibitor. Also called Kyprolis.

### **carina of trachea**

A ridge at the base of the trachea (windpipe) that separates the openings of the right and left main bronchi (the large air passages that lead from the trachea to the lungs). Also called tracheal carina.

### **carmustine**

A drug used alone or with other drugs to treat certain types of brain tumors, Hodgkin lymphoma, and non-Hodgkin lymphoma and with prednisone to treat multiple myeloma. It is also being studied in the treatment of other types of cancer. Carmustine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea. Also called BCNU and BiCNU.

### **carmustine implant**

A drug used with surgery and radiation therapy to treat high-grade glioma that has not already been treated and with surgery to treat glioblastoma multiforme that has recurred (come back). Carmustine implant is a form of carmustine contained in a wafer. The wafer has a coating that dissolves slowly and releases carmustine directly into the area where the brain tumor was removed. This form may have fewer side effects and work better than other forms of carmustine. Carmustine implant is a type of alkylating agent and a type of nitrosourea. Also called Gliadel Wafer and polifeprosan 20 carmustine implant.

### **carnitine**

A substance made in the muscle and liver tissue and found in certain foods, such as meat, poultry, fish, and some dairy products. It is used by many cells in the body to make energy from fatty acids.

### **carotenoid**

A yellow, red, or orange substance found mostly in plants, including carrots, sweet potatoes, dark green leafy vegetables, and many fruits, grains, and oils. Some carotenoids are changed into vitamin A in the body and some are being studied in the prevention of cancer. A carotenoid is a type of antioxidant and a type of provitamin.

### **carotid artery**

A major artery that carries blood from the heart to the head. There is a carotid artery on each side of the neck, and each one splits into two branches. The interior branch carries blood to the brain and eyes, and the exterior branch carries blood to the face, tongue, and outside parts of the head.

### **carrier**

In genetics, a person who has one copy of a mutated (changed) disease-causing gene but has no symptoms or mild symptoms. Carriers can pass on the mutated gene to a biological child. If a child inherits one mutated copy of a gene from each parent, they will usually show symptoms of the disease or condition.

### **carrier oil**

An oil with little or no scent that is used to dilute or "carry" essential oils (scented liquid taken from plants).

**cartilage**

A tough, flexible tissue that lines joints and gives structure to the nose, ears, larynx, and other parts of the body.

**carvedilol phosphate**

A drug used to treat high blood pressure and certain heart problems. It is also being studied in the prevention and treatment of side effects caused by some anticancer drugs. Carvedilol phosphate blocks certain receptors on nerve cells and causes blood vessels to dilate (widen). It is a type of antihypertensive agent and a type of antianginal agent. Also called Coreg.

**carzelesin**

An anticancer drug that belongs to the family of drugs called alkylating agents.

**case management nurse**

A registered nurse who has special training in how to plan, manage, and evaluate all aspects of patient care, especially for patients who get treatment over a long time. Also called nurse case manager.

**case report**

A detailed report of the diagnosis, treatment, and follow-up of an individual patient. Case reports also contain some demographic information about the patient (for example, age, gender, ethnic origin).

**case series**

A group or series of case reports involving patients who were given similar treatment. Reports of case series usually contain detailed information about the individual patients. This includes demographic information (for example, age, gender, ethnic origin) and information on diagnosis, treatment, response to treatment, and follow-up after treatment.

**case-control study**

A study that compares two groups of people: those with the disease or condition under study (cases) and a very similar group of people who do not have the disease or condition (controls). Researchers study the medical and lifestyle histories of the people in each group to learn what factors may be associated with the disease or condition. For example, one group may have been exposed to a particular substance that the other was not. Also called retrospective study.

**caspofungin acetate**

A drug used to prevent or treat infections caused by a fungus (a type of microorganism). It belongs to the family of drugs called antifungal agents.

**castrate-resistant prostate cancer**

Prostate cancer that keeps growing even when the amount of testosterone in the body is reduced to very low levels. Many early-stage prostate cancers need normal levels of testosterone to grow, but castrate-resistant prostate cancers do not. Also called CRPC.

**castrate-sensitive prostate cancer**

Prostate cancer that needs androgens (male hormones) to grow and therefore stops growing when androgens are not present. Many early-stage prostate cancers are androgen-dependent, so reducing the amount of androgens in the body or blocking their action may be an effective type of therapy. Also called



androgen-dependent prostate cancer, androgen-sensitive prostate cancer, CSPC, hormone-sensitive prostate cancer, and HSPC.

### **castration**

Removal or destruction of the testicles or ovaries using radiation, surgery, or drugs. Medical castration refers to the use of drugs to suppress the function of the ovaries or testicles.

### **cataract**

A condition in which the lens of the eye becomes cloudy. Symptoms include blurred, cloudy, or double vision; sensitivity to light; and difficulty seeing at night. Without treatment, cataracts can cause blindness. There are many different types and causes of cataracts. They may occur in people of all ages, but are most common in the elderly.

### **catch-up vaccination**

The practice of giving a vaccine to people who did not receive it at the recommended age. Catch-up vaccines may be given to a person who has not been previously vaccinated, who has missed a scheduled vaccine dose, or who has not completed a vaccine series. They may also be given to some people, such as those with a weakened immune system, who might be at high risk of certain types of infection, such as human papillomavirus (HPV) infection.

### **catechin**

A substance found in tea that helps protect cells from damage caused by free radicals. Free radicals are unstable molecules that are made during normal cell metabolism (chemical changes that take place in a cell). They can build up in cells and cause damage to other molecules. This damage may increase the risk of cancer and other diseases. Catechins are being studied in the prevention and treatment of cancer. A catechin is a type of antioxidant.

### **catechol**

A chemical originally isolated from a type of mimosa tree. Catechol is used as an astringent, an antiseptic, and in photography, electroplating, and making other chemicals. It can also be made in the laboratory.

### **catecholamine**

A type of neurohormone (a chemical that is made by nerve cells and used to send signals to other cells). Catecholamines are important in stress responses. High levels cause high blood pressure which can lead to headaches, sweating, pounding of the heart, pain in the chest, and anxiety. Examples of catecholamines include dopamine, epinephrine (adrenaline), and norepinephrine (noradrenaline).

### **catheter**

A flexible tube used to deliver fluids into or withdraw fluids from the body.

### **cause-specific survival**

The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, to the date of death from the disease. Patients who die from causes unrelated to the disease are not counted in this measurement. In a clinical trial, measuring the cause-specific survival is one way to see how well a new treatment works. Also called CSS.

**cauterize**

To destroy tissue using a hot or cold instrument, an electrical current, or a chemical that burns or dissolves the tissue. This process may be used to kill certain types of small tumors or to seal off blood vessels to stop bleeding.

**cavity**

A hollow area or hole. It may describe a body cavity (such as the space within the abdomen) or a hole in a tooth caused by decay.

**cc**

A measure of volume in the metric system. One thousand ccs equal one liter. Also called cubic centimeter, milliliter, and mL.

**ccRCC**

A type of kidney cancer in which the cells look clear or very pale when viewed under a microscope. ccRCC begins in cells that line tiny tubes in the kidney. These tubes return filtered nutrients, fluids, and other substances that the body needs back to the blood. ccRCC is the most common type of kidney cancer in adults. People with an inherited condition called von Hippel-Lindau syndrome are at an increased risk of developing ccRCC. Also called clear cell renal cell cancer, clear cell renal cell carcinoma, and conventional renal cell carcinoma.

**cecum**

A pouch that forms the first part of the large intestine. It connects the small intestine to the colon, which is part of the large intestine.

**cedarwood**

A type of evergreen tree with hard fragrant wood that is a member of the cypress family. The oil from the wood is used in soaps, shampoos, bath salts, perfumes, aromatherapy, and to keep insects away. The scientific name is *Juniperus virginiana*. Also called Eastern red cedar and red cedar.

**cediranib maleate**

A substance being studied in the treatment of some types of cancer. Cediranib maleate may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of antiangiogenesis agent and a type of vascular endothelial growth factor (VEGF) receptor tyrosine kinase inhibitor. Also called AZD2171 and Recentin.

**cefepime**

A drug used to treat infection. It belongs to the family of drugs called cephalosporin antibiotics.

**cefixime**

An antibiotic drug used to treat infection. It belongs to the family of drugs called cephalosporins.

**ceftriaxone**

A drug used to treat infection. It belongs to the family of drugs called cephalosporin antibiotics.

**celecoxib**

A drug that reduces pain. Celecoxib belongs to the family of drugs called nonsteroidal anti-inflammatory agents. It is being studied in the prevention of cancer.

## **celiac disease**

A digestive disease that is caused by an immune response to a protein called gluten, which is found in wheat, rye, barley, and oats. Celiac disease damages the lining of the small intestine and interferes with the absorption of nutrients from food. A person with celiac disease may become malnourished no matter how much food is consumed.

## **cell**

In biology, the smallest unit that can live on its own and that makes up all living organisms and the tissues of the body. A cell has three main parts: the cell membrane, the nucleus, and the cytoplasm. The cell membrane surrounds the cell and controls the substances that go into and out of the cell. The nucleus is a structure inside the cell that contains the nucleolus and most of the cell's DNA. It is also where most RNA is made. The cytoplasm is the fluid inside the cell. It contains other tiny cell parts that have specific functions, including the Golgi complex, the mitochondria, and the endoplasmic reticulum. The cytoplasm is where most chemical reactions take place and where most proteins are made. The human body has more than 30 trillion cells.

## **cell culture**

The growth of microorganisms such as bacteria and yeast, or human, plant, or animal cells in the laboratory. Cell cultures may be used to diagnose infections, to test new drugs, and in research.

## **cell cycle**

The process a cell goes through each time it divides. The cell cycle consists of a series of steps during which the chromosomes and other cell material double to make two copies. The cell then divides into two daughter cells, each receiving one copy of the doubled material. The cell cycle is complete when each daughter cell is surrounded by its own outer membrane. Also called mitotic cycle.

## **cell cycle inhibitor**

A substance used to block the cell division cycle, which is a series of steps a cell goes through each time it divides. There are many different types of cell cycle inhibitors. Some only work at specific steps in the cell cycle. Others work at any point in the cell cycle. Certain drugs that inhibit the cell cycle are being studied in the treatment of cancer.

## **cell differentiation**

The process during which young, immature (unspecialized) cells take on individual characteristics and reach their mature (specialized) form and function.

## **cell division**

The process by which a single parent cell splits to form new cells, known as daughter cells. There are two types of cell division: mitosis and meiosis.

## **cell motility**

The ability of a cell to move.

## **cell proliferation**

An increase in the number of cells as a result of cell growth and cell division.

## **cell respiration**

A chemical process in which oxygen is used to make energy from carbohydrates (sugars). Also called aerobic metabolism, aerobic respiration, and oxidative

metabolism.

### **cell signaling**

The process by which a cell responds to substances outside the cell through signaling molecules found on the surface of and inside the cell. Most molecules that lead to cell signaling are chemical substances, such as hormones, neurotransmitters, and growth factors, that bind to a specific protein receptor (signaling molecule) on or in a cell. The signals are then passed from one molecule to another inside the cell, which results in a specific cell response, such as cell division or cell death. Cell signaling is important for cells to grow and work normally. Cells that have abnormal signaling molecules may become cancer cells. Also called signal transduction.

### **cell type**

Describes the kinds of cells found in normal or cancer tissue. The cell type is usually identified by looking under a microscope. Some examples of cell types are lymphocytes, melanocytes, and squamous cells. In cancer, it is important to know the cell type in order to diagnose the cancer, plan treatment, and determine prognosis.

### **cell-cell signaling**

The transfer of information from one cell to another. Cells signal each other by direct contact with each other or by the release of a substance from one cell that is taken up by another cell. Cell-cell signaling is important for cells to grow and work normally. Cells that lose the ability to respond to signals from other cells may become cancer cells. Also called cell-to-cell signaling and intercellular communication.

### **cell-cycle regulation**

Any process that controls the series of events by which a cell goes through the cell cycle. During the cell cycle, a cell makes a copy of its DNA and other contents, and divides in two. When cell cycle regulation doesn't happen correctly, cells may divide in an uncontrolled way, and diseases such as cancer can occur.

### **cell-to-cell signaling**

The transfer of information from one cell to another. Cells signal each other by direct contact with each other or by the release of a substance from one cell that is taken up by another cell. Cell-to-cell signaling is important for cells to grow and work normally. Cells that lose the ability to respond to signals from other cells may become cancer cells. Also called cell-cell signaling and intercellular communication.

### **cellular adhesion**

The close adherence (bonding) to adjoining cell surfaces.

### **cellular adoptive immunotherapy**

A type of immunotherapy in which T cells (a type of immune cell) are given to a patient to help the body fight diseases, such as cancer. In cancer therapy, T cells are usually taken from the patient's own blood or tumor tissue, grown in large numbers in the laboratory, and then given back to the patient to help the immune system fight the cancer. Sometimes, the T cells are changed in the laboratory to make them better able to target the patient's cancer cells and kill them. Types of cellular adoptive immunotherapy include chimeric antigen receptor T-cell (CAR T-cell) therapy and tumor-infiltrating lymphocyte (TIL) therapy. Cellular adoptive immunotherapy that uses T cells from a donor is being studied in the treatment of

some types of cancer and some infections. Also called adoptive cell therapy, adoptive cell transfer, and T-cell transfer therapy.

### **cellular metabolism**

The sum of all chemical changes that take place in a cell through which energy and basic components are provided for essential processes, including the synthesis of new molecules and the breakdown and removal of others.

### **cellulitis**

An acute, spreading infection of the deep tissues of the skin and muscle that causes the skin to become warm and tender and may also cause fever, chills, swollen lymph nodes, and blisters.

### **cellulose**

A building block of plant cells and fiber. Cellulose cannot be digested by people, and is used to add bulk to the diet.

### **cemiplimab**

A drug that binds to the protein PD-1 to help immune cells kill cancer cells better and is used to treat different types of cancer. Cemiplimab is used to treat certain types of basal cell carcinoma and cutaneous squamous cell carcinoma (types of skin cancer) that are locally advanced or have spread to other parts of the body. It is also used alone or with other drugs to treat adults with non-small cell lung cancer that is locally advanced or has spread to other parts of the body and may have the PD-L1 protein, but does not have a mutation (change) in the EGFR, ALK, or ROS1 gene. It is also being studied in the treatment of other types of cancer. Cemiplimab may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Libtayo.

### **centimeter**

A measure of length in the metric system. There are 100 centimeters in a meter and 2½ centimeters in an inch.

### **central nervous system**

The brain and spinal cord. Also called CNS.

### **central nervous system depressant**

A type of drug that slows down brain activity, which causes the muscles to relax and calms and soothes a person. Central nervous system depressants are used to treat insomnia (trouble sleeping), anxiety, panic attacks, and seizures. They may also be used to relieve anxiety and tension before surgery. Examples of central nervous system depressants are benzodiazepines, barbiturates, and certain sleep medicines. Central nervous system depressants are sometimes called sedatives or tranquilizers. Also called CNS depressant.

### **central nervous system metastasis**

Cancer that has spread from the original (primary) tumor to the central nervous system (CNS). Also called CNS metastasis.

### **central nervous system primitive neuroectodermal tumor**

A type of cancer that arises from a particular type of cell within the brain or spinal cord. Also called CNS PNET.

### **central nervous system prophylaxis**

A type of treatment that uses intrathecal chemotherapy (chemotherapy injected directly into the fluid-filled space between the thin layers of tissue that cover the brain and spinal cord) or high-dose chemotherapy injected into a vein to kill cancer cells in the central nervous system (CNS). Radiation therapy is also sometimes used. Central nervous system prophylaxis is given when the cancer is diagnosed because standard chemotherapy cannot get into the CNS and kill cancer cells that may be hiding in there. It is used to lessen the chance cancer will come back in the CNS after the first treatment. Central nervous system prophylaxis is used with other therapy to treat certain types of leukemia and lymphoma that may spread to the CNS. Also called CNS prophylaxis.

### **central nervous system stimulant**

A type of drug that increases the levels of certain chemicals in the brain and increases alertness, attention, energy, and physical activity. Central nervous system stimulants also raise blood pressure and increase heart rate and breathing rate. They are used to treat depression, attention deficit hyperactivity disorder (a disorder in which a person has problems paying attention, controlling actions, and remaining still or quiet), and narcolepsy (a sleep disorder). Also called CNS stimulant.

### **central nervous system tumor**

A tumor of the central nervous system, including brain stem glioma, craniopharyngioma, medulloblastoma, and meningioma. Also called CNS tumor.

### **central venous access catheter**

A device used to draw blood and give treatments, including intravenous fluids, drugs, or blood transfusions. A thin, flexible tube is inserted into a vein, usually below the collarbone. It is guided (threaded) into a large vein above the right side of the heart called the superior vena cava. A needle is inserted into a port outside of the body to draw blood or give fluids. A central venous access catheter may stay in place for weeks or months and helps avoid the need for repeated needle sticks. There are several types of central venous access catheters.

### **cephalexin**

An antibiotic drug that belongs to the family of drugs called cephalosporins.

### **cephalosporin**

A drug used to treat bacterial infections. It belongs to the family of drugs called antibiotics.

### **ceramide**

A type of lipid (fat) found in the membranes of cells and the covers of nerves. Some ceramides are important in signal transduction (the process by which a cell responds to substances in its environment) and may cause some types of cells to die. Ceramides are being studied in the treatment of cancer.

### **cerclage**

A procedure in which a special stitch or band is placed around the cervix to help keep it closed during pregnancy. A cerclage may be done to prevent a miscarriage or premature birth (the birth of a baby before 37 weeks of pregnancy) due to having a weakened cervix. In a person whose cervix has been removed by surgery, the stitch or band is placed on the lower end of the uterus.



### **cerebellar hemangioblastoma**

A benign, slow-growing tumor in the cerebellum (part of the brain at the back of the head), made up of abnormal blood vessel growth. People with von Hippel-Landau disease have an increased risk of developing hemangioblastomas.

### **cerebellar mutism syndrome**

A condition that may occur in patients who have had surgery to remove a tumor in certain parts of the brain, including the cerebellum. Cerebellar mutism syndrome usually appears 1 or 2 days after surgery. Symptoms include loss of speech, trouble swallowing and eating, loss of balance, trouble walking, loss of muscle tone, mood swings, and changes in personality. Many of these symptoms go away over time. Also called CMS.

### **cerebellopontine**

Having to do with two structures of the brain, the cerebellum (located at the lower back of the brain) and the pons (located at the base of the brain in front of the cerebellum) and the area between them.

### **cerebellum**

The portion of the brain in the back of the head between the cerebrum and the brain stem. The cerebellum controls balance for walking and standing, and other complex motor functions.

### **cerebral hemisphere**

One half of the cerebrum, the part of the brain that controls muscle functions and also controls speech, thought, emotions, reading, writing, and learning. The right hemisphere controls the muscles on the left side of the body, and the left hemisphere controls the muscles on the right side of the body.

### **cerebrospinal fluid**

The fluid that flows in and around the hollow spaces of the brain and spinal cord, and between two of the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). Cerebrospinal fluid is made by tissue called the choroid plexus in the ventricles (hollow spaces) in the brain. Also called CSF.

### **cerebrospinal fluid diversion**

A process that uses a shunt (a long, thin tube) to drain extra cerebrospinal fluid (CSF) that has built up around the brain or spinal cord. The shunt is placed in a ventricle (fluid-filled space) of the brain or in a fluid-filled space between the thin layers of tissue around the spinal cord. It is then threaded under the skin to another part of the body, usually the abdomen, heart, or space between the chest wall and the lungs. The shunt carries extra CSF away from the brain or spinal cord so it may be absorbed elsewhere in the body. This decreases the fluid and pressure on the brain or spinal cord.

### **cerebrospinal fluid shunt**

A long, thin tube that is placed in a ventricle (fluid-filled space) of the brain to drain extra cerebrospinal fluid (CSF) that has built up around the brain or spinal cord. It may sometimes be placed in the fluid-filled space between the thin layers of tissue around the spinal cord. The shunt is then threaded under the skin to another part of the body, usually the abdomen, heart, or space between the chest wall and the lungs. The shunt carries extra CSF away from the brain or spinal cord so it may be absorbed elsewhere in the body. This decreases the fluid and pressure on the brain or spinal cord.

### **cerebrovascular accident**

In medicine, a loss of blood flow to part of the brain, which damages brain tissue. Cerebrovascular accidents are caused by blood clots and broken blood vessels in the brain. Symptoms include dizziness, numbness, weakness on one side of the body, and problems with talking, writing, or understanding language. The risk of cerebrovascular accident is increased by high blood pressure, older age, smoking, diabetes, high cholesterol, heart disease, atherosclerosis (a buildup of fatty material and plaque inside the coronary arteries), and a family history of cerebrovascular accident. Also called CVA and stroke.

### **cerebrum**

The largest part of the brain. It is divided into two hemispheres, or halves, called the cerebral hemispheres. Areas within the cerebrum control muscle functions and also control speech, thought, emotions, reading, writing, and learning.

### **ceremony**

A series of acts performed for a special occasion or to mark a rite of passage. Ceremonies can be casual or formal.

### **ceritinib**

A drug used to treat adults with non-small cell lung cancer that has spread and is ALK positive. It is also being studied in the treatment of other types of cancer. Ceritinib blocks certain proteins made by the ALK gene. Blocking these proteins may stop the growth and spread of cancer cells. Ceritinib is a type of tyrosine kinase inhibitor. Also called Zykadia.

### **cervical**

Relating to the neck, or to the neck of any organ or structure. Cervical lymph nodes are located in the neck. Cervical cancer refers to cancer of the uterine cervix, which is the lower, narrow end (the “neck”) of the uterus.

### **cervical adenocarcinoma**

A type of cervical cancer that begins in the glandular cells of the cervix. These cells make mucus and are found in tissue that lines the inner part of the cervix and the uterus. Cervical adenocarcinoma is less common than cervical squamous cell carcinoma.

### **cervical cancer**

Cancer that forms in tissues of the cervix (the organ connecting the uterus and vagina). It is usually a slow-growing cancer that may not have symptoms but can be found with regular Pap tests (a procedure in which cells are scraped from the cervix and looked at under a microscope). Cervical cancer is almost always caused by human papillomavirus (HPV) infection.

### **cervical dysplasia**

A term used to describe the presence of abnormal cells on the surface of the cervix. Cervical dysplasia is usually caused by certain types of human papillomavirus (HPV) and is found when a Pap test or cervical biopsy is done. It can be mild, moderate, or severe, depending on how abnormal the cells look under a microscope and how much of the cervical tissue is affected. Cervical dysplasia is not cancer but may become cancer and spread to nearby normal tissue. It is sometimes called squamous intraepithelial lesion (SIL) or cervical intraepithelial neoplasia (CIN).

### **cervical intraepithelial neoplasia**

A term used to describe abnormal cells that are found on the surface of the cervix when a biopsy is done. Cervical intraepithelial neoplasia is usually caused by infection with certain types of human papillomavirus (HPV). Cervical intraepithelial neoplasia is not cancer but may become cancer and spread to nearby normal tissue. It is graded on a scale of 1 to 3, based on how abnormal the cells look under a microscope and how much of the cervical tissue is affected. For example, CIN 1 has slightly abnormal cells and is less likely to become cancer than CIN 2 or CIN 3. Cervical intraepithelial neoplasia is sometimes called cervical dysplasia. Also called CIN.

### **cervical squamous cell carcinoma**

A type of cervical cancer that begins in squamous cells of the cervix. Cervical squamous cells are found in tissue that lines the outer part of the cervix. They are thin, flat cells that look like fish scales under a microscope. Most cervical cancers are squamous cell carcinomas.

### **cervical squamous intraepithelial neoplasia 1**

A cervical biopsy finding that means slightly abnormal cells were found on the surface of the cervix. Cervical squamous intraepithelial neoplasia 1 is usually caused by infection with certain types of human papillomavirus (HPV). Cervical squamous intraepithelial neoplasia 1 is not cancer and usually goes away on its own without treatment, but sometimes it can become cancer and spread to nearby normal tissue. Cervical squamous intraepithelial neoplasia 1 is sometimes called low-grade or mild dysplasia. Also called CIN 1.

### **cervical squamous intraepithelial neoplasia 2**

A cervical biopsy finding that means moderately abnormal cells were found on the surface of the cervix. Cervical squamous intraepithelial neoplasia 2 is usually caused by infection with certain types of human papillomavirus (HPV). Cervical squamous intraepithelial neoplasia 2 is not cancer but may become cancer and spread to nearby normal tissue if not treated. Treatment for cervical squamous intraepithelial neoplasia 2 may include cryotherapy, laser therapy, loop electrosurgical procedure (LEEP), or cone biopsy to remove or destroy the abnormal tissue. Cervical squamous intraepithelial neoplasia 2 is sometimes called high-grade or moderate dysplasia. Also called CIN 2.

### **cervical squamous intraepithelial neoplasia 2/3**

A cervical biopsy finding that means a mix of moderately abnormal and severely abnormal cells were found on the surface of the cervix. Cervical squamous intraepithelial neoplasia 2/3 has features of both CIN 2 and CIN 3. It is usually caused by infection with certain types of human papillomavirus (HPV). Cervical squamous intraepithelial neoplasia 2/3 is not cancer but may become cancer and spread to nearby normal tissue if not treated. Treatment for cervical squamous intraepithelial neoplasia 2/3 may include cryotherapy, laser therapy, loop electrosurgical procedure (LEEP), or cone biopsy to remove or destroy the abnormal tissue. Also called CIN 2/3.

### **cervical squamous intraepithelial neoplasia 3**

A cervical biopsy finding that means severely abnormal cells were found on the surface of the cervix. Cervical squamous intraepithelial neoplasia 3 is usually caused by infection with certain types of human papillomavirus (HPV). Cervical squamous intraepithelial neoplasia 3 is not cancer but may become cancer and spread to nearby normal tissue if not treated. Treatment for cervical squamous intraepithelial neoplasia 3 may include cryotherapy, laser therapy, loop

electrosurgical procedure (LEEP), or cone biopsy to remove or destroy the abnormal tissue. Cervical squamous intraepithelial neoplasia 3 is sometimes called high-grade or severe dysplasia. Also called CIN 3.

### **cervicectomy**

Surgery to remove the cervix. There are two types of cervicectomy: simple cervicectomy and radical cervicectomy. During a simple cervicectomy, only the cervix is removed. During a radical cervicectomy, the cervix, nearby tissue, and the upper part of the vagina are removed. Lymph nodes in the pelvis may also be removed. Because the uterus, fallopian tubes, and ovaries are not removed, a cervicectomy may be done to treat a person with early-stage cervical cancer who wants to become pregnant in the future. Also called trachelectomy.

### **cervix**

The lower, narrow end of the uterus (womb) that connects the uterus to the vagina (birth canal). The cervix allows fluids, such as menstrual blood, to pass from the uterus into the vagina. It also widens during the birth of a baby. The cervix has two main parts, the ectocervix and the endocervix. The ectocervix is the outer part of the cervix that can be seen during a pelvic exam. The endocervix is the inner part of the cervix that forms a canal that connects the vagina to the uterus. The area where the endocervix and ectocervix come together is called the squamocolumnar junction (also called the transformation zone). Most abnormal cell changes and cervical cancers begin in the squamous cells (thin, flat-looking cells under a microscope) of the squamocolumnar junction.

### **cesarean delivery**

The delivery of a baby through an incision (cut) made in a person's abdomen and uterus. After the baby is delivered, the umbilical cord is clamped and cut, the placenta is removed, and the cuts in the uterus and abdomen are closed with stitches. A cesarean delivery may be done if there are problems during labor or if the baby is in distress, is too big, or is in an abnormal position in the uterus. It may also be done if there is more than one baby being delivered, if there are problems with the placenta, or if the person has an infection or other health problem that would prevent having a vaginal delivery. Also called C-section and cesarean section.

### **cesarean section**

The delivery of a baby through an incision (cut) made in a person's abdomen and uterus. After the baby is delivered, the umbilical cord is clamped and cut, the placenta is removed, and the cuts in the uterus and abdomen are closed with stitches. A cesarean section may be done if there are problems during labor or if the baby is in distress, is too big, or is in an abnormal position in the uterus. It may also be done if there is more than one baby being delivered, if there are problems with the placenta, or if the person has an infection or other health problem that would prevent having a vaginal delivery. Also called C-section and cesarean delivery.

### **cetuximab**

A drug used alone or with other drugs to treat certain types of head and neck cancer and colorectal cancer. It is also being studied in the treatment of other types of cancer. Cetuximab binds to a protein called EGFR, which is found on some types of cancer cells. This may help keep cancer cells from growing. Cetuximab is a type of monoclonal antibody. Also called Erbitux.

### **cevimeline hydrochloride**

A drug used to treat certain disorders of the salivary gland. It is also being studied as a treatment for dry mouth caused by radiation therapy to the head and neck. It increases the amount of saliva and sweat made by saliva and sweat glands. Cevimeline hydrochloride is a type of cholinergic agonist. Also called Evoxac.

### **chamomile**

A family of plants with daisy-like flowers. Two types are German chamomile and Roman or English chamomile. These are used in teas to calm and relax, to improve sleep, and to help with stomach problems. The essential oil (scented liquid taken from plants) of chamomile is used in perfumes, shampoos, lotions, and aromatherapy.

### **chaplain**

A member of the clergy in charge of a chapel or who works with the military or with an institution, such as a hospital.

### **charged-particle radiation therapy**

A type of external radiation therapy that uses a special machine to make invisible, high-energy particles (protons or helium ions) that kill cancer cells. This type of radiation may cause less damage to nearby healthy tissue than radiation therapy with high-energy x-rays.

### **chaste tree berry**

An extract made from the fruit of the chaste tree (*Vitex agnus-castus*) found in parts of Asia and Europe. It is claimed to treat infertility and to lessen symptoms that may occur before or during a woman's menstrual period, such as headaches and irregular bleeding. Chaste tree berry may affect levels of reproductive hormones in the blood. It is a type of phytotherapy. Also called monk's pepper and Vitex.

### **cheekbone**

One of a pair of bones on each upper side of the face that forms the cheek and part of the eye socket. The cheekbones help give shape and structure to the face and are connected to the jaw and bones near the ears, forehead, and skull. They protect the nerves and blood vessels that run through the face and provide an attachment for muscles that help the jaw move. Also called zygomatic bone.

### **chelating agent**

A chemical compound that binds tightly to metal ions. In medicine, chelating agents are used to remove toxic metals from the body. They are also being studied in the treatment of cancer.

### **chemabrasion**

A procedure used to improve the way certain skin problems look. These problems include acne scars, wrinkles, or skin changes caused by long-term sun exposure. A chemical solution is put on the skin to dissolve the top layers of skin cells. Also called chemexfoliation and chemical peel.

### **chemexfoliation**

A procedure used to improve the way certain skin problems look. These problems include acne scars, wrinkles, or skin changes caused by long-term sun exposure. A chemical solution is put on the skin to dissolve the top layers of skin cells. Also called chemabrasion and chemical peel.

**chemical**

A substance made up of elements, such as hydrogen or sodium.

**chemical imbalance**

Too much or too little of any substance that helps the body work the way it should. A chemical imbalance may be caused by certain tumors and can cause changes in behavior or emotion.

**chemical peel**

A procedure used to improve the way certain skin problems look. These problems include acne scars, wrinkles, or skin changes caused by long-term sun exposure. A chemical solution is put on the skin to dissolve the top layers of skin cells. Also called chemabrasion and chemexfoliation.

**chemo brain**

A term commonly used to describe thinking and memory problems that a patient with cancer may have before, during, or after cancer treatment. Signs and symptoms of chemo brain include disorganized behavior or thinking, confusion, memory loss, and trouble concentrating, paying attention, learning, and making decisions. Chemo brain may be caused by the cancer itself (such as brain tumors) or by cancer treatment, such as chemotherapy and other anticancer drugs, radiation therapy, hormone therapy, and surgery. It may also be caused by conditions related to cancer treatment, such as anemia, fatigue, infection, pain, hormone changes, sleep problems, nutrition problems, stress, anxiety, and depression. Chemo brain may last for a short time or for many years.

**chemoembolization**

A procedure in which the blood supply to a tumor is blocked after anticancer drugs are given in blood vessels near the tumor. Sometimes, the anticancer drugs are attached to small beads that are injected into an artery that feeds the tumor. The beads block blood flow to the tumor as they release the drug. This allows a higher amount of drug to reach the tumor for a longer period of time, which may kill more cancer cells. It also causes fewer side effects because very little of the drug reaches other parts of the body. Chemoembolization is used to treat liver cancer. Also called TACE and transarterial chemoembolization.

**chemoimmunotherapy**

Chemotherapy combined with immunotherapy. Chemotherapy uses different drugs to kill or slow the growth of cancer cells; immunotherapy uses treatments to stimulate or restore the ability of the immune system to fight cancer.

**chemokine**

One of a large group of proteins that is made by certain immune cells and other cells in the body. Chemokines play an important role in the body's immune response. They stimulate the movement of certain types of white blood cells and attract them to areas of inflammation to help the body fight infections, inflammatory conditions, and other diseases. They also help keep the immune system working the way it should. A chemokine is a type of cytokine.

**chemoprevention**

The use of certain drugs or other substances to help lower a person's risk of developing cancer or keep it from coming back. For example, tamoxifen and raloxifene are drugs that may be used to prevent certain types of breast cancer in women who are at high risk of developing the disease.



**chemoprevention study**

In cancer prevention, a clinical trial that studies whether taking certain medicines, vitamins, minerals, or food supplements can prevent cancer. Also called agent study.

**chemoprotective agent**

A type of drug that helps protect healthy tissue from some of the side effects caused by certain anticancer drugs. For example, in patients receiving certain anticancer drugs, amifostine helps protect the kidneys, mesna helps protect the bladder, and dexrazoxane (Zinecard) helps reduce heart damage.

**chemoradiation**

Treatment that combines chemotherapy with radiation therapy. Also called chemoradiotherapy.

**chemoradiotherapy**

Treatment that combines chemotherapy with radiation therapy. Also called chemoradiation.

**chemoreduction**

Chemotherapy given to shrink a retinoblastoma tumor before treatment with radiation or surgery. It is a type of neoadjuvant therapy.

**chemosensitivity**

The susceptibility of tumor cells to the cell-killing effects of anticancer drugs.

**chemosensitivity assay**

A laboratory test that measures the number of tumor cells that are killed by a cancer drug. The test is done after the tumor cells are removed from the body. A chemosensitivity assay may help in choosing the best drug or drugs for the cancer being treated.

**chemosensitizer**

A drug that makes tumor cells more sensitive to the effects of chemotherapy.

**chemotherapeutic agent**

A drug used to treat cancer.

**chemotherapy**

Treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. Chemotherapy may be given by mouth, injection, or infusion, or on the skin, depending on the type and stage of the cancer being treated. It may be given alone or with other treatments, such as surgery, radiation therapy, or biologic therapy.

**chest wall**

The skin, fat, muscles, bones, and other tissues that form a protective structure around vital organs in the area between the neck and the abdomen, including the heart, major blood vessels, lungs, and liver. The bones in the chest wall include the ribs, sternum (breastbone), and spine. The chest wall also helps support breathing and movement of the upper arms and shoulders.

**chest x-ray**

An x-ray of the structures and organs inside the chest. An x-ray is a type of high-energy radiation that can pass through the body and onto film or a computer,

making pictures of areas inside the body. A chest x-ray may be used to help diagnose injuries or diseases that affect the chest.

### **chewing tobacco**

A type of smokeless tobacco made from cured tobacco leaves. It may be sweetened and flavored with licorice and other substances. It comes in the form of loose tobacco leaves, pellets or “bits” (leaf tobacco rolled into small pellets), plugs (leaf tobacco pressed and held together with some type of sweetener), or twists (leaf tobacco rolled into rope-like strands and twisted). It is placed in the mouth, usually between the cheek and lower lip, and may be chewed. Chewing tobacco contains nicotine and many harmful, cancer-causing chemicals. Using it can lead to nicotine addiction and can cause cancers of the mouth, throat, esophagus, and pancreas. Chewing tobacco use may also cause gum disease, heart disease, stroke, and other health problems. Also called spit tobacco.

### **chiasma**

An anatomy term for an X-shaped crossing (for example, of nerves or tendons).

### **chickenpox**

A highly contagious disease marked by an itchy, blister-like rash caused by the varicella-zoster virus (a type of herpesvirus). The virus is easily spread from person to person through contact with mucus, saliva, or fluid from the blisters of an infected person or through droplets released when an infected person coughs or sneezes. The rash usually appears first on the face, chest, and back and then spreads to the rest of the body. Other symptoms may include fever, headache, fatigue, and loss of appetite. Chickenpox can sometimes cause serious health problems, especially in infants, teenagers, adults, pregnant women, and those who have a weakened immune system. Widespread use of the chickenpox vaccine since the early 1990s has prevented most cases of chickenpox in the United States. Also called varicella.

### **child-life specialist**

A health care professional who is trained in the emotional and developmental needs of children. A child-life specialist helps children and their families understand medical issues and gives psychological and emotional support. Also called child-life worker.

### **child-life worker**

A health care professional who is trained in the emotional and developmental needs of children. A child-life worker helps children and their families understand medical issues and gives psychological and emotional support. Also called child-life specialist.

### **childhood acute lymphoblastic leukemia risk group system**

A way of grouping patients that is used to plan treatment for children with acute lymphoblastic leukemia. A risk group is based on the patient’s age and white blood cell count at diagnosis. Risk groups are described as either standard (low) risk or high risk. Other factors that affect the risk group include the type of leukemia cells, whether there are certain chromosome changes, and how quickly the leukemia responds to treatment.

### **childhood cancer**

A term used to describe cancers that occur between birth and 14 years of age. Childhood cancers are very rare and may differ from adult cancers in the way they grow and spread, how they are treated, and how they respond to treatment.

The most common types of childhood cancer are leukemia, brain and spinal cord tumors, lymphoma, neuroblastoma, Wilms tumor (a type of kidney cancer), retinoblastoma, and cancers of the bone and soft tissue. Also called pediatric cancer.

### **childhood cancer risk group**

A group of children with cancer that has been formed based on certain characteristics of the children and their disease. These may include age at diagnosis, stage of cancer, and cancer biology. Risk groups may also be based on the chance of being cured or the chance that the cancer will come back. Childhood cancer risk groups are used to plan treatment and follow-up care for certain types of cancer, such as neuroblastoma and rhabdomyosarcoma. Risk groups may be described as low risk, intermediate risk, or high risk.

### **chimeric**

Having parts of different origins. In medicine, refers to a person, organ, or tissue that contains cells with different genes than the rest of the person, organ, or tissue. This may happen because of a mutation (genetic change) that occurs during development, or as a result of a transplant of cells, organs, or tissues from another person or from a different species. In the laboratory, a chimeric protein can be made by combining two different genes. For example, a chimeric antibody is made by joining antibody genes from two different species, such as human and mouse.

### **chimeric antigen receptor**

A special receptor created in the laboratory that is designed to bind to certain proteins on cancer cells. The chimeric antigen receptor is then added to immune cells called T cells. This helps the T cells find and kill cancer cells that have the specific protein that the receptor is designed to bind. These changed T cells called chimeric antigen receptor T cells are then grown in large numbers in the laboratory and given to cancer patients. Chimeric antigen receptor T cells are being studied in the treatment of some types of cancer. Also called CAR.

### **chimeric antigen receptor T-cell therapy**

A type of treatment in which a patient's T cells (a type of immune system cell) are changed in the laboratory so they will attack cancer cells. T cells are taken from a patient's blood. Then the gene for a special receptor that binds to a certain protein on the patient's cancer cells is added to the T cells in the laboratory. The special receptor is called a chimeric antigen receptor (CAR). Large numbers of the CAR T cells are grown in the laboratory and given to the patient by infusion. Chimeric antigen receptor T-cell therapy is used to treat certain blood cancers, and it is being studied in the treatment of other types of cancer. Also called CAR T-cell therapy.

### **chimerism**

A condition in which some cells or tissues in a person's body contain at least two different sets of DNA. Chimerism can occur in different ways. One way it can occur is through an organ or stem cell transplant from another person (donor). After a stem cell transplant, the recipient has a mix of DNA from their own blood cells and DNA from the donor's transplanted cells. Another way chimerism can occur is through pregnancy, when some fetal cells are absorbed into the bloodstream of the pregnant person. The DNA from the fetal cells may remain in that person's body tissues for many years after childbirth. Chimerism can also occur during a twin pregnancy when cells and genetic material are exchanged between twins or during early development when one twin absorbs cells from

another twin who does not survive. Most people with chimerism rarely show visible signs and are unaware they have the condition. Chimerism is usually diagnosed through genetic testing.

### **chiropractic therapy**

A type of therapy in which the hands are used to manipulate the spine or other parts of the body. Sometimes, heat and ice, relaxation techniques, exercise, and other treatments are also used. Chiropractic therapy may be used to treat conditions such as back pain, neck pain, headache, and hand or foot problems, and to improve overall health. It is a type of complementary and alternative medicine (CAM).

### **chitin**

A type of polysaccharide (sugar molecule) that is made by some plants and animals. The hard outer shell of shrimp, lobsters, and many insects is made of chitin.

### **chlorambucil**

A drug used to treat chronic lymphocytic leukemia, Hodgkin lymphoma, and certain types of non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Chlorambucil damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Leukeran.

### **chlorambucil-prednisone**

A chemotherapy combination used to treat chronic lymphocytic leukemia (CLL). It includes the drugs chlorambucil hydrochloride and prednisone. Also called chlorambucil-prednisone regimen, CP, and CP regimen.

### **chlorambucil-prednisone regimen**

A chemotherapy combination used to treat chronic lymphocytic leukemia (CLL). It includes the drugs chlorambucil hydrochloride and prednisone. Also called chlorambucil-prednisone, CP, and CP regimen.

### **chlorine**

A chemical used in manufacturing, as a bleach, and to kill bacteria and other organisms in water.

### **chloroma**

A rare type of cancer that is made up of myeloblasts (a type of immature white blood cell) and forms outside the bone marrow and blood. The tumor cells may look green when viewed under a microscope. Chloromas can occur anywhere in the body. They most commonly occur in people with acute myeloid leukemia or a myeloproliferative disorder. Also called extramedullary myeloid tumor, granulocytic sarcoma, and myeloid sarcoma.

### **chloroquinoxaline sulfonamide**

A substance being studied in the treatment of cancer. It is a type of topoisomerase inhibitor. Also called CQS.

### **chlorotoxin**

A substance being studied in the diagnosis and treatment of glioma (a type of brain cancer) and other types of cancer. It binds to cancer cells in the brain and peripheral nervous system and may keep them from spreading. Chlorotoxin comes from the venom of a type of scorpion. A form of chlorotoxin made in the laboratory is called TM-601. Chlorotoxin is a type of neurotoxin.

### **cholangiocarcinoma**

A rare cancer that forms in the bile ducts. A bile duct is a tube that carries bile (fluid made by the liver) between the liver and gallbladder and the small intestine. Intrahepatic cholangiocarcinoma is found inside the liver. Extrahepatic cholangiocarcinoma is found outside the liver. Also called bile duct cancer.

### **cholangiosarcoma**

A tumor of the connective tissues of the bile ducts.

### **cholecalciferol**

A nutrient that the body needs in small amounts to function and stay healthy. Cholecalciferol helps the body use calcium and phosphorus to make strong bones and teeth. It is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, egg yolks, and dairy products. Skin exposed to sunshine can also make cholecalciferol. Not enough cholecalciferol can cause a bone disease called rickets. It is being studied in the prevention and treatment of some types of cancer. Also called vitamin D.

### **cholelith**

Solid material that forms in the gallbladder or common bile duct. Choleliths are made of cholesterol or other substances found in the gallbladder. They may occur as one large stone or as many small ones, and vary from the size of a golf ball to a grain of sand. Also called gallstone.

### **cholestasis**

Any condition in which the release of bile from the liver is blocked. The blockage can occur in the liver (intrahepatic cholestasis) or in the bile ducts (extrahepatic cholestasis).

### **cholesterol**

A waxy, fat-like substance made in the liver, and found in the blood and in all cells of the body. Cholesterol is important for good health and is needed for making cell walls, tissues, hormones, vitamin D, and bile acid. Cholesterol also comes from eating foods taken from animals such as egg yolks, meat, and whole-milk dairy products. Too much cholesterol in the blood may build up in blood vessel walls, block blood flow to tissues and organs, and increase the risk of developing heart disease and stroke.

### **choline**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Choline helps cells make membranes, make a neurotransmitter (a chemical that helps nerve cells communicate with other cells), and remove fat from the liver. It is found in whole milk, beef liver, eggs, soy foods, and peanuts. Choline is water-soluble (can dissolve in water) and must be taken in every day. Not enough choline can cause diseases of the heart and blood vessels and damage to the liver. A form of choline is being studied in the treatment of some types of cancer and to reduce pain and fever. Choline is also being studied together with vitamin B12 in the prevention and treatment of cancer.

### **choline magnesium trisalicylate**

A substance used to treat arthritis and relieve pain, inflammation, and fever. It is also being studied in the treatment of acute myeloid leukemia (AML). Choline magnesium trisalicylate blocks the action of a substance that sends a pain

message to the brain. It is a type of nonsteroidal anti-inflammatory drug (NSAID). Also called Trilisate.

### **chondrocyte**

Cartilage cell. Chondrocytes make the structural components of cartilage.

### **chondroitin sulfate**

The major glycosaminoglycan (a type of sugar molecule) in cartilage.

### **chondroma**

A rare, slow-growing tumor that is made up of cartilage and forms on or in bones or soft tissue. It is not cancer. The tumor usually occurs in the hands or feet, but it may also occur in the upper arm, thigh, collarbone, ribs, pelvis, spine, skull, and nasal sinuses. Most chondromas do not cause symptoms, but pain, swelling, and broken bones can occur. Chondromas usually don't spread to other parts of the body, but in rare cases they may become malignant (cancer). They can occur in both adults and children.

### **chondrosarcoma**

A type of cancer that forms in bone cartilage. It usually starts in the pelvis (between the hip bones), the shoulder, the ribs, or at the ends of the long bones of the arms and legs. A rare type of chondrosarcoma called extraskeletal chondrosarcoma does not form in bone cartilage. Instead, it forms in the soft tissues of the upper part of the arms and legs. Chondrosarcoma can occur at any age but is more common in people older than 40 years. It is a type of bone cancer.

### **chordoma**

A type of bone cancer that usually starts in the lower spinal column or at the base of the skull.

### **chorioadenoma destruens**

A type of cancer that grows into the muscular wall of the uterus. It is formed after conception (fertilization of an egg by a sperm). It may spread to other parts of the body, such as the vagina, vulva, and lung. Also called invasive hydatidiform mole.

### **chorioallantoic membrane**

The membrane in hens' eggs that helps chicken embryos get enough oxygen and calcium for development. The calcium comes from the egg shell.

### **chorioblastoma**

A malignant, fast-growing tumor that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta). Almost all chorioblastomas form in the uterus after fertilization of an egg by a sperm, but a small number form in a testis or an ovary. Chorioblastomas spread through the blood to other organs, especially the lungs. They are a type of gestational trophoblastic disease. Also called choriocarcinoma, chorioepithelioma, and chorionic carcinoma.

### **choriocarcinoma**

A malignant, fast-growing tumor that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta). Almost all choriocarcinomas form in the uterus after fertilization of an egg by a sperm, but a small number form in a testis or an ovary. Choriocarcinomas spread through the



blood to other organs, especially the lungs. They are a type of gestational trophoblastic disease. Also called chorioblastoma, chorioepithelioma, and chorionic carcinoma.

### **chorioepithelioma**

A malignant, fast-growing tumor that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta). Almost all chorioepitheliomas form in the uterus after fertilization of an egg by a sperm, but a small number form in a testis or an ovary. Chorioepitheliomas spread through the blood to other organs, especially the lungs. They are a type of gestational trophoblastic disease. Also called chorioblastoma, choriocarcinoma, and chorionic carcinoma.

### **chorionic carcinoma**

A malignant, fast-growing tumor that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta). Almost all chorionic carcinomas form in the uterus after fertilization of an egg by a sperm, but a small number form in a testis or an ovary. Chorionic carcinomas spread through the blood to other organs, especially the lungs. They are a type of gestational trophoblastic disease. Also called chorioblastoma, choriocarcinoma, and chorioepithelioma.

### **choroid**

A thin layer of tissue that is part of the middle layer of the wall of the eye, between the sclera (white outer layer of the eye) and the retina (the inner layer of nerve tissue at the back of the eye). The choroid is filled with blood vessels that bring oxygen and nutrients to the eye.

### **choroid plexus**

A network of blood vessels and cells in the ventricles (fluid-filled spaces) of the brain. The blood vessels are covered by a thin layer of cells that make cerebrospinal fluid.

### **choroid plexus tumor**

A rare tumor that forms in the choroid plexus (a network of blood vessels and cells in the fluid-filled spaces of the brain). These tumors are most common in children younger than 2 years. Choroid plexus tumors may be benign (not cancer) or malignant (cancer).

### **chromaffin cell**

A type of cell that makes neurohormones (chemicals that are made by nerve cells and used to send signals to other cells) and releases them into the blood. Chromaffin cells make epinephrine (adrenaline) and norepinephrine (noradrenaline). They are found in the adrenal glands or in groups of nerve cells called ganglia.

### **chromatin**

A highly organized condensed structure made up of DNA, RNA, and proteins that forms the chromosomes in the nucleus of a cell. Chromatin is formed when long strands of DNA molecules wrap around spool-like complexes of proteins called histones to form structures that resemble beads on a string called nucleosomes. The nucleosomes then fold tightly around each other to form a chromatin fiber that further condenses to form chromosomes. Chromatin allows the DNA to fit inside the cell's nucleus and allows many important cell processes to occur,

including DNA replication, transcription, DNA repair, genetic recombination, and cell division.

### **chromatography**

A laboratory technique used to separate different substances in a mixture. A gas or a liquid is used to pass the mixture through a column, paper, or special plate that contains absorbing materials. The substances in the mixture are separated based on how far they move through the material. The different substances may be visible to the eye or detected by a special machine.

### **chromogranin A**

A protein found inside neuroendocrine cells, which release chromogranin A and certain hormones into the blood. Chromogranin A may be found in higher than normal amounts in patients with certain neuroendocrine tumors, small cell lung cancer, prostate cancer, and other conditions. Measuring the amount of chromogranin A in the blood may help to diagnose cancer or other conditions or find out how well treatment is working or if cancer has come back. Chromogranin A is a type of tumor marker. Also called CgA.

### **chromosome**

Part of a cell that contains genetic information. Except for sperm and eggs, all human cells contain 46 chromosomes.

### **chromosome 17**

One of a pair of chromosomes that is part of the 46 chromosomes found in the nucleus of most human cells. Specific changes in chromosome 17 may be found in patients with certain genetic conditions and some types of cancer, including bladder cancer, brain cancer, and leukemia. Checking for these changes may help diagnose cancer or find out if cancer has come back. Chromosome 17 is a type of tumor marker.

### **chromosome 17p deletion**

The loss of all or part of the short arm (also called the p arm) of chromosome 17. The chromosome 17p deletion leads to the loss of the tumor suppressor gene TP53, which is linked to many genetic conditions and some types of cancer, such as leukemia, multiple myeloma, and myelodysplastic syndrome. Checking for the chromosome 17p deletion may help diagnose cancer, plan treatment, or make a prognosis. Also called 17p deletion and deletion 17p.

### **chromosome 3**

One of a pair of chromosomes that is part of the 46 chromosomes found in the nucleus of most human cells. Specific changes in chromosome 3 may be found in patients with certain genetic conditions or some types of cancer, including bladder cancer. Checking for these changes may help diagnose cancer or find out if cancer has come back. Chromosome 3 is a type of tumor marker.

### **chromosome 7**

One of a pair of chromosomes that is part of the 46 chromosomes found in the nucleus of most human cells. Specific changes in chromosome 7 may be found in patients with certain genetic conditions or some types of cancer, including bladder cancer, leukemia, and lymphoma. Checking for these changes may help diagnose cancer or find out if cancer has come back. Chromosome 7 is a type of tumor marker.

### **chronic bacterial prostatitis**

Inflammation of the prostate gland that is caused by a bacterial infection and that continues or gets worse over a long period of time. The infection may seem to go away but keeps coming back. Symptoms include body aches, pain in the lower back and genital area, a burning feeling during urination, and problems with emptying the bladder all the way.

### **chronic bronchitis**

A lung condition that develops over time in which the bronchi (large air passages that lead to the lungs) become inflamed and scarred. This causes the bronchi to make large amounts of mucus and can lead to a chronic cough and breathing problems. The most common cause of chronic bronchitis is cigarette smoking. It may also be caused by infection or by breathing in secondhand tobacco smoke, chemical fumes, or other forms of air pollution. Chronic bronchitis usually does not go away completely. It is a type of chronic obstructive pulmonary disease (COPD).

### **chronic cough**

A cough that lasts for 8 weeks or longer. It may occur with other symptoms, including a runny or stuffy nose, extra mucus in the back of the throat, wheezing, shortness of breath, or heartburn. A chronic cough may be caused by allergies, sinus infections, asthma, gastroesophageal reflux disease (GERD), or other conditions. It may also be caused by smoking tobacco or by breathing in secondhand tobacco smoke over a long period of time. It usually improves when the problem that caused the cough is treated. For example, a chronic cough may get better when a person quits smoking.

### **chronic disease**

A disease or condition that usually lasts for 3 months or longer and may get worse over time. Chronic diseases tend to occur in older adults and can usually be controlled but not cured. The most common types of chronic disease are cancer, heart disease, stroke, diabetes, and arthritis.

### **chronic eosinophilic leukemia**

A disease in which too many eosinophils (a type of white blood cell) are found in the bone marrow, blood, and other tissues. Chronic eosinophilic leukemia may stay the same for many years, or it may progress quickly to acute leukemia.

### **chronic fatigue syndrome**

A condition that lasts for more than 6 months in which a person feels tired most of the time. They may also have trouble concentrating and carrying out daily activities. Other symptoms include sore throat, fever, muscle weakness, headache, and joint pain. Also called CFS.

### **chronic granulocytic leukemia**

An indolent (slow-growing) cancer in which too many myeloblasts are found in the blood and bone marrow. Myeloblasts are a type of immature blood cell that makes white blood cells called myeloid cells. Chronic granulocytic leukemia may get worse over time as the number of myeloblasts increases in the blood and bone marrow. This may cause fever, fatigue, easy bleeding, anemia, infection, a swollen spleen, bone pain, or other signs and symptoms. Chronic granulocytic leukemia is usually marked by a chromosome change called the Philadelphia chromosome, in which a piece of chromosome 9 and a piece of chromosome 22 break off and trade places with each other. It usually occurs in older adults and

rarely occurs in children. Also called chronic myelogenous leukemia, chronic myeloid leukemia, and CML.

### **chronic heart failure**

A condition in which the heart has trouble pumping blood through the body. It may develop over a long period of time. Symptoms include shortness of breath, problems exercising, fatigue, and swelling of the feet, ankles, and abdomen. Chronic heart failure may be caused by coronary artery disease, a heart attack, or high blood pressure. It usually occurs in people aged 65 years or older. Also called CHF.

### **chronic idiopathic myelofibrosis**

A progressive, chronic disease in which the bone marrow is replaced by fibrous tissue and blood is made in organs such as the liver and the spleen, instead of in the bone marrow. This disease is marked by an enlarged spleen and progressive anemia. Also called agnogenic myeloid metaplasia, idiopathic myelofibrosis, myelosclerosis with myeloid metaplasia, and primary myelofibrosis.

### **chronic leukemia**

A slowly progressing cancer that starts in blood-forming tissues such as the bone marrow, and causes large numbers of white blood cells to be produced and enter the blood stream.

### **chronic lung disease**

A type of disorder that affects the lungs and other parts of the respiratory system. It usually develops slowly and may get worse over time. Chronic lung disease may be caused by smoking tobacco or by breathing in secondhand tobacco smoke, chemical fumes, dust, or other forms of air pollution. Types of chronic lung disease include asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, asbestosis, pneumonitis, and other lung conditions. Also called CLD.

### **chronic lymphocytic leukemia**

An indolent (slow-growing) cancer in which too many immature lymphocytes (white blood cells) are found mostly in the blood and bone marrow. Sometimes, in later stages of the disease, cancer cells are found in the lymph nodes and the disease is called small lymphocytic lymphoma. Also called CLL.

### **chronic lymphocytic leukemia/small lymphocytic lymphoma**

An indolent (slow-growing) cancer in which immature lymphocytes (white blood cells) are found in the blood and bone marrow and/or in the lymph nodes. Chronic lymphocytic leukemia (CLL) and small lymphocytic lymphoma (SLL) are the same disease, but in CLL cancer cells are found mostly in the blood and bone marrow. In SLL cancer cells are found mostly in the lymph nodes. Chronic lymphocytic leukemia/small lymphocytic lymphoma is a type of non-Hodgkin lymphoma. Also called CLL/SLL.

### **chronic myelogenous leukemia**

An indolent (slow-growing) cancer in which too many myeloblasts are found in the blood and bone marrow. Myeloblasts are a type of immature blood cell that makes white blood cells called myeloid cells. Chronic myelogenous leukemia may get worse over time as the number of myeloblasts increases in the blood and bone marrow. This may cause fever, fatigue, easy bleeding, anemia, infection, a swollen spleen, bone pain, or other signs and symptoms. Chronic myelogenous leukemia is usually marked by a chromosome change called the

Philadelphia chromosome, in which a piece of chromosome 9 and a piece of chromosome 22 break off and trade places with each other. It usually occurs in older adults and rarely occurs in children. Also called chronic granulocytic leukemia, chronic myeloid leukemia, and CML.

### **chronic myeloid leukemia**

An indolent (slow-growing) cancer in which too many myeloblasts are found in the blood and bone marrow. Myeloblasts are a type of immature blood cell that makes white blood cells called myeloid cells. Chronic myeloid leukemia may get worse over time as the number of myeloblasts increases in the blood and bone marrow. This may cause fever, fatigue, easy bleeding, anemia, infection, a swollen spleen, bone pain, or other signs and symptoms. Chronic myeloid leukemia is usually marked by a chromosome change called the Philadelphia chromosome, in which a piece of chromosome 9 and a piece of chromosome 22 break off and trade places with each other. It usually occurs in older adults and rarely occurs in children. Also called chronic granulocytic leukemia, chronic myelogenous leukemia, and CML.

### **chronic myelomonocytic leukemia**

A slowly progressing type of myelodysplastic/myeloproliferative disease in which too many myelomonocytes (a type of white blood cell) are in the bone marrow, crowding out other normal blood cells, such as other white blood cells, red blood cells, and platelets. Also called CMML.

### **chronic myeloproliferative neoplasm**

A type of disease in which the bone marrow makes too many red blood cells, platelets, or certain white blood cells. Chronic myeloproliferative neoplasms usually get worse over time as the number of extra cells build up in the blood and/or bone marrow. This may cause bleeding problems, anemia, infection, fatigue, or other signs and symptoms. Certain chronic myeloproliferative neoplasms may become acute myeloid leukemia (AML). Chronic myeloproliferative neoplasms include chronic myelogenous leukemia (CML), polycythemia vera, primary myelofibrosis, essential thrombocythemia, chronic neutrophilic leukemia, and chronic eosinophilic leukemia. Also called myeloproliferative neoplasm.

### **chronic neutrophilic leukemia**

A disease in which too many neutrophils (a type of white blood cell) are found in the blood. The extra neutrophils may cause the spleen and liver to become enlarged. Chronic neutrophilic leukemia may stay the same for many years or it may progress quickly to acute leukemia.

### **chronic obstructive pulmonary disease**

A type of lung disease marked by permanent damage to tissues in the lungs, making it hard to breathe. Chronic obstructive pulmonary disease includes chronic bronchitis, in which the bronchi (large air passages) are inflamed and scarred, and emphysema, in which the alveoli (tiny air sacs) are damaged. It develops over many years and is usually caused by cigarette smoking. Also called COPD.

### **chronic pain**

Pain that can range from mild to severe, and persists or progresses over a long period of time.

### **chronic phase**

Refers to the early stages of chronic myelogenous leukemia or chronic lymphocytic leukemia. The number of mature and immature abnormal white blood cells in the bone marrow and blood is higher than normal, but lower than in the accelerated or blast phase.

### **chronic phase chronic myelogenous leukemia**

A phase of chronic myelogenous leukemia in which fewer than 10% of the cells in the blood and bone marrow are blast cells (immature blood cells). This phase may last from several months to several years, and there may be no symptoms of leukemia.

### **chronic prostatitis/chronic pelvic pain syndrome**

A condition of the prostate gland that continues or gets worse over a long period of time. Symptoms include body aches, pain in the lower back and genital area, a burning feeling during urination, and problems with emptying the bladder all the way. Also called CP/CPPS.

### **chrysotherapy**

A procedure that uses gold salts (a salt form of the metal element gold) to treat diseases, such as rheumatoid arthritis. The gold salts stop cells from releasing chemicals that can harm tissues. Also called aurotherapy and gold therapy.

### **chyle**

A milky-white fluid that forms in the small intestine during digestion. It is made of lymph fluid and fats. Special lymph vessels carry chyle from the intestines to the blood.

### **cidofovir**

A drug used in the treatment of infections caused by viruses.

### **cigar**

A tube-shaped tobacco product that is made of tightly rolled, cured tobacco leaves in a tobacco leaf wrapper or a wrapper that contains tobacco. It may also have other ingredients, including substances to add different flavors. A cigar is lit on one end and smoked, but the smoke is usually not inhaled into the lungs. Cigars contain nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Smoking cigars can lead to nicotine addiction and can cause cancers of the mouth, larynx (voice box), esophagus, lung, and pancreas. Heavy cigar smoking can also increase the risk of heart disease and lung diseases, such as emphysema and chronic bronchitis.

### **cigarette**

A tube-shaped tobacco product that is made of finely cut, cured tobacco leaves wrapped in thin paper. It may also have other ingredients, including substances to add different flavors. A cigarette is lit on one end and smoked, and the smoke is usually inhaled into the lungs. Cigarettes contain nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Smoking cigarettes can lead to nicotine addiction and can cause many types of cancer, including cancers of the lung, larynx, mouth, esophagus, throat, kidney, bladder, pancreas, stomach, and cervix, and acute myeloid leukemia. Smoking cigarettes also causes other health problems, including heart disease, stroke, and lung diseases, such as emphysema and chronic bronchitis.



### **cilengitide**

A substance that is being studied as an anticancer and antiangiogenesis drug. Also called EMD 121974.

### **ciliary body**

A part of the middle layer of the wall of the eye. The ciliary body is found behind the iris and includes the ring-shaped muscle that changes the shape of the lens when the eye focuses. It also makes the clear fluid that fills the space between the cornea and the iris.

### **ciltacabtagene autoleucel**

A treatment used for adults with multiple myeloma that came back or did not get better after treatment with at least one line of anticancer therapy that included a proteasome inhibitor and an immunomodulating agent. It is used in patients whose cancer did not respond to treatment with lenalidomide. Ciltacabtagene autoleucel is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Ciltacabtagene autoleucel binds to a protein called BCMA, which is found on myeloma cells and some types of immune cells. This helps the body's immune system kill cancer cells. Ciltacabtagene autoleucel is a type of cellular immunotherapy called CAR T-cell therapy. Also called Carvykti.

### **cimetidine**

A drug usually used to treat stomach ulcers and heartburn. It is also commonly used in a regimen to prevent allergic reactions.

### **ciprofloxacin**

A drug that is used to treat infections caused by bacteria and is being studied in the treatment of bladder cancer. Ciprofloxacin is a type of fluoroquinolone. Also called Cipro.

### **circadian rhythm**

The natural cycle of physical, mental, and behavior changes that the body goes through in a 24-hour cycle. Circadian rhythms are mostly affected by light and darkness and are controlled by a small area in the middle of the brain. They can affect sleep, body temperature, hormones, appetite, and other body functions. Abnormal circadian rhythms may be linked to obesity, diabetes, depression, bipolar disorder, seasonal affective disorder, and sleep disorders such as insomnia. Circadian rhythm is sometimes called the "body's clock."

### **circulating tumor DNA**

Small pieces of DNA that are released into a person's blood by tumor cells as they die. A sample of blood can be used to look for and measure the amount of circulating tumor DNA and identify specific mutations (changes) in the DNA. Circulating tumor DNA is being used as a biomarker to help diagnose some types of cancer, to help plan treatment, or to find out how well treatment is working or if cancer has come back. Also called ctDNA.

### **circulating tumor cell**

A cancer cell that breaks away from the original (primary) tumor and enters the bloodstream. Circulating tumor cells can travel through the blood and form new tumors in other parts of the body. A sample of blood can be used to detect circulating tumor cells and learn more about the primary tumor. Circulating tumor

cells are being used as a biomarker in some types of cancer to help plan treatment or make a likely prognosis. Also called CTC.

### **circulating tumor marker**

A substance, such as a protein or fragment of DNA, that is released into a person's blood, urine, other body fluid, or stool by tumor cells or other cells of the body. Circulating tumor markers may be a sign of cancer or certain benign (noncancer) conditions. Measurements of circulating tumor marker levels in blood or other body fluid may be used along with results of other tests, such as biopsies and imaging, to help diagnose some types of cancer. Knowing the levels of circulating tumor markers may also help plan cancer treatment, make a likely prognosis, and find out how well treatment is working or if cancer has come back. Examples of circulating tumor markers include CA-125 (in ovarian cancer), calcitonin (in medullary thyroid cancer), EGFR mutations (in lung cancer), and beta-2-microglobulin (in multiple myeloma, chronic lymphocytic leukemia, and some lymphomas).

### **circulation**

In the body, the flow of blood through the heart and blood vessels, and the flow of lymph through the lymph vessels.

### **circulatory system**

The system that contains the heart and the blood vessels and moves blood throughout the body. This system helps tissues get enough oxygen and nutrients, and it helps them get rid of waste products. The lymph system, which connects with the blood system, is often considered part of the circulatory system.

### **circumcision**

Surgery to remove part or all of the foreskin (loose skin that covers the head of the penis).

### **cirrhosis**

A type of chronic, progressive liver disease in which liver cells are replaced by scar tissue.

### **cisplatin**

A drug used alone or with other drugs to treat certain types of bladder cancer, ovarian cancer, and testicular cancer. It is also being studied in the treatment of other types of cancer. Cisplatin damages the cell's DNA and may kill cancer cells. It is a type of platinum compound. The brand name Platinol has been taken off the market and is no longer available.

### **citalopram**

A drug used to treat depression. It belongs to the families of drugs called antidepressant agents and selective serotonin reuptake inhibitors (SSRIs). Also called Celexa.

### **citric acid/potassium-sodium citrate**

A drug used in the treatment of metabolic acidosis (a disorder in which the blood is too acidic).

### **citrovorum factor**

A form of folic acid used alone or with other drugs to treat certain types of colorectal cancer and anemia and to lessen the toxic effects of the anticancer drug methotrexate or other substances that block the action of folic acid.

Citrovorum factor is also being studied in the treatment of other conditions and types of cancer. It is a type of chemoprotective agent and a type of chemosensitizing agent. Also called folinic acid and leucovorin calcium.

### **cixutumumab**

A substance being studied in the treatment of some types of cancer. It is a monoclonal antibody that is made in the laboratory and can bind to substances in the body. Cixutumumab blocks the action of a protein needed for cell growth and may kill cancer cells. It is a type of insulin-like growth factor-1 receptor (IGF-1R) inhibitor. Also called IMC-A12.

### **cladribine**

A drug used to treat hairy cell leukemia. It is also being studied in the treatment of other types of cancer. Cladribine damages the cell's DNA and may kill cancer cells. It is a type of antimetabolite.

### **clarithromycin**

An antibiotic drug used in the treatment of infections. It belongs to the family of drugs called macrolides.

### **classic FAP**

An inherited disorder in which many polyps (usually hundreds to thousands) form on the inner walls of the colon and rectum. Polyps are abnormal growths that may become cancer if they are not removed. People with classic FAP have a very high risk of developing colorectal cancer at an early age and are also at risk of developing cancers of the stomach, small intestine, pancreas, bile duct, liver, adrenal gland, thyroid, and brain. They may also have dental and eye problems and benign (not cancer) tumors in the stomach, small intestine, bone, soft tissue, skin, and adrenal glands. Classic FAP is caused by mutations (changes) in a gene called APC that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called classic familial adenomatous polyposis, classic familial polyposis, familial adenomatous polyposis, and FAP.

### **classic Hodgkin lymphoma**

The most common type of Hodgkin lymphoma (a cancer of the immune system). Classic Hodgkin lymphoma is marked by the presence of a type of cell called the Reed-Sternberg cell.

### **classic familial adenomatous polyposis**

An inherited disorder in which many polyps (usually hundreds to thousands) form on the inner walls of the colon and rectum. Polyps are abnormal growths that may become cancer if they are not removed. People with classic familial adenomatous polyposis have a very high risk of developing colorectal cancer at an early age and are also at risk of developing cancers of the stomach, small intestine, pancreas, bile duct, liver, adrenal gland, thyroid, and brain. They may also have dental and eye problems and benign (not cancer) tumors in the stomach, small intestine, bone, soft tissue, skin, and adrenal glands. Classic familial adenomatous polyposis is caused by mutations (changes) in a gene called APC that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called classic familial polyposis, classic FAP, familial adenomatous polyposis, and FAP.

### **classic familial polyposis**

An inherited disorder in which many polyps (usually hundreds to thousands) form on the inner walls of the colon and rectum. Polyps are abnormal growths that

may become cancer if they are not removed. People with classic familial polyposis have a very high risk of developing colorectal cancer at an early age and are also at risk of developing cancers of the stomach, small intestine, pancreas, bile duct, liver, adrenal gland, thyroid, and brain. They may also have dental and eye problems and benign (not cancer) tumors in the stomach, small intestine, bone, soft tissue, skin, and adrenal glands. Classic familial polyposis is caused by mutations (changes) in a gene called APC that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called classic familial adenomatous polyposis, classic FAP, familial adenomatous polyposis, and FAP.

### **clavicle**

One of a pair of bones at the base of the front of the neck. The clavicles connect the breastbone to the shoulder blades. Also called collarbone.

### **clear cell**

A type of cell that looks clear inside when viewed under a microscope.

### **clear cell adenocarcinoma**

A rare type of cancer in which the cells look clear when viewed under a microscope. Clear cell adenocarcinoma occurs most often in the kidney and in the female reproductive organs. Also called clear cell carcinoma.

### **clear cell carcinoma**

A rare type of cancer in which the cells look clear when viewed under a microscope. Clear cell carcinoma occurs most often in the kidney and in the female reproductive organs. Also called clear cell adenocarcinoma.

### **clear cell renal cell cancer**

A type of kidney cancer in which the cells look clear or very pale when viewed under a microscope. Clear cell renal cell cancer begins in cells that line tiny tubes in the kidney. These tubes return filtered nutrients, fluids, and other substances that the body needs back to the blood. Clear cell renal cell cancer is the most common type of kidney cancer in adults. People with an inherited condition called von Hippel-Lindau syndrome are at an increased risk of developing clear cell renal cell cancer. Also called ccRCC, clear cell renal cell carcinoma, and conventional renal cell carcinoma.

### **clear cell renal cell carcinoma**

A type of kidney cancer in which the cells look clear or very pale when viewed under a microscope. Clear cell renal cell carcinoma begins in cells that line tiny tubes in the kidney. These tubes return filtered nutrients, fluids, and other substances that the body needs back to the blood. Clear cell renal cell carcinoma is the most common type of kidney cancer in adults. People with an inherited condition called von Hippel-Lindau syndrome are at an increased risk of developing clear cell renal cell carcinoma. Also called ccRCC, clear cell renal cell cancer, and conventional renal cell carcinoma.

### **clear cell sarcoma of soft tissue**

A soft tissue tumor that begins in a tendon (tough, cord-like tissue that connects muscle to bone or to another part of the body). Under the microscope, clear cell sarcoma of soft tissue may look a lot like melanoma (a type of skin cancer). Clear cell sarcoma of soft tissue usually occurs in the leg or arm and it often spreads to nearby lymph nodes. It is most common in young adults.

**clear cell sarcoma of the kidney**

A rare type of kidney cancer, in which the inside of the cells look clear when viewed under a microscope. Clear cell sarcoma can spread from the kidney to other organs, most commonly the bone, but also including the lungs, brain, and soft tissues of the body.

**clear liquid diet**

A diet that is made up of only liquids and foods that are clear liquids at room temperature. Clear liquids are easy to digest and include water, broth, gelatin, plain tea and coffee, popsicles and juices without pulp, sodas, and sports drinks. Clear liquid diets may be used before certain tests or procedures, such as a colonoscopy, or before or after certain types of surgery. They may also be used to help treat gastrointestinal problems, such as nausea, vomiting, or diarrhea. Clear liquid diets are normally used for only a few days because they do not have enough of the calories and nutrients the body needs.

**cleaved**

Having to do with the appearance of cells when viewed under a microscope. The nucleus of cleaved cells appears divided or segmented.

**clergy**

Ordained individuals who perform spiritual and/or religious functions.

**clinical**

Having to do with the examination and treatment of patients.

**clinical breast exam**

A physical exam of the breast performed by a health care provider to check for lumps or other changes. Also called CBE.

**clinical diagnosis**

The process of identifying a disease, condition, or injury based on the signs and symptoms a patient is having and the patient's health history and physical exam. Further testing, such as blood tests, imaging tests, and biopsies, may be done after a clinical diagnosis is made.

**clinical practice guidelines**

Guidelines developed to help health care professionals and patients make decisions about screening, prevention, or treatment of a specific health condition.

**clinical research**

Research in which people, or data or samples of tissue from people, are studied to understand health and disease. Clinical research helps find new and better ways to detect, diagnose, treat, and prevent disease. Types of clinical research include clinical trials, which test new treatments for a disease, and natural history studies, which collect health information to understand how a disease develops and progresses over time.

**clinical research costs**

The costs related to taking part in a treatment clinical trial. These costs may include the drug or other intervention being studied as well as any special tests or procedures that are done only for the purposes of the clinical trial. They could also include data analysis and other costs associated with running the clinical trial. Clinical research costs are usually not covered by health insurance, but they may be covered by the clinical trial sponsor, such as a drug company.

**clinical researcher**

A health professional who works directly with patients, or uses data from patients, to do research on health and disease and to develop new treatments. Clinical researchers may also do research on how health care practices affect health and disease.

**clinical resistance**

The failure of a cancer to shrink after treatment.

**clinical series**

A case series in which the patients receive treatment in a clinic or other medical facility.

**clinical stage**

The stage of cancer (amount or spread of cancer in the body) that is based on tests that are done before surgery. These include physical exams, imaging tests, laboratory tests (such as blood tests), and biopsies.

**clinical staging**

A method used to find out the stage of cancer (amount or spread of cancer in the body) using tests that are done before surgery. These include physical exams, imaging tests, laboratory tests (such as blood tests), and biopsies.

**clinical study**

A type of research study that tests how well new medical approaches work in people. These studies test new methods of screening, prevention, diagnosis, or treatment of a disease. Also called clinical trial.

**clinical trial**

A type of research study that tests how well new medical approaches work in people. These studies test new methods of screening, prevention, diagnosis, or treatment of a disease. Also called clinical study.

**clinical trial phase**

A part of the clinical research process that answers specific questions about whether treatments or other interventions that are being studied work and are safe. Phase I trials test the best way to give a new treatment and the best dose. Phase II trials test whether a new treatment has an effect on the disease. Phase III trials compare the results of people taking a new treatment with the results of people taking the standard treatment. Phase IV trials are done using thousands of people after a treatment has been approved and marketed, to check for side effects that were not seen in the phase III trial.

**clinical trial sponsor**

A person, company, institution, group, or organization that oversees or pays for a clinical trial and collects and analyzes the data. Also called trial sponsor.

**clinician**

A health professional who takes care of patients.

**clivus**

A bone at the base of the skull, near the spine. Tumors, such as chordomas and chondrosarcomas, may form on the clivus.



**clodronate**

A drug used in the treatment of hypercalcemia (abnormally high levels of calcium in the blood) and cancer that has spread to the bone (bone metastases). It may decrease pain, the risk of fractures, and the development of new bone metastases.

**clofarabine**

A drug used to treat children and young adults aged 1 to 21 years with acute lymphoblastic leukemia. It is used in patients whose cancer came back or did not get better after at least two other types of anticancer treatment. It is also being studied in the treatment of other types of cancer. Clofarabine stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called Clolar.

**clonidine hydrochloride**

A drug used to treat high blood pressure. It is also being studied in the treatment of certain types of cancer pain and as an aid to stop smoking. It blocks the release of chemicals from nerve endings that make blood vessels constrict (get narrower). Clonidine hydrochloride is a type of antihypertensive agent and a type of alpha-adrenergic agonist. Also called Catapres.

**clove cigarette**

A type of cigarette that is made in Indonesia. It is made using a mixture of tobacco, cloves, and other ingredients. Clove cigarettes contain nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Smoking clove cigarettes can lead to nicotine addiction and can cause lung cancer and other lung conditions. Also called kretek.

**cnicin**

A substance found in certain plants, including blessed thistle. It has been used in some cultures to treat certain medical problems. It may have anti-inflammatory and anticancer effects. Cnicin is a type of sesquiterpene lactone.

**co-culture**

A mixture of two or more different kinds of cells that are grown together.

**co-trimoxazole**

A drug used in the treatment of infections caused by bacteria and protozoa. It is a combination of two anti-infection drugs, sulfamethoxazole and trimethoprim.

**coactivated T cell**

A T cell that has been coated with monoclonal antibodies to enhance its ability to kill tumor cells.

**cobalamin**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Cobalamin helps make red blood cells, DNA, RNA, energy, and tissues, and keeps nerve cells healthy. It is found in liver, meat, eggs, poultry, shellfish, milk, and milk products. Cobalamin is water-soluble (can dissolve in water) and must be taken in every day. Not enough cobalamin can cause certain types of anemia (a condition in which the number of red blood cells is below normal) and neurologic disorders. It is being studied with folate in the prevention and treatment of some types of cancer. Also called cyanocobalamin and vitamin B12.

### **cobalt 60**

A radioactive form of the metal cobalt, which is used as a source of radiation to treat cancer.

### **cobimetinib fumarate**

A drug used alone to treat adults with a group of blood disorders called histiocytic neoplasms and with vemurafenib to treat adults with melanoma that has spread or cannot be removed by surgery and has a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Cobimetinib fumarate blocks proteins called MEK1 and MEK2, which may help keep tumor cells from growing. It is a type of kinase inhibitor. Also called Cotellic.

### **coccyx**

The small bone at the bottom of the spine. It is made up of 3-5 fused bones. Also called tailbone.

### **codeine phosphate**

A drug used to treat pain, cough, and diarrhea. It is made from opium or morphine and binds to opioid receptors in the central nervous system. Codeine phosphate is a type of opiate, a type of analgesic agent, a type of antitussive agent, and a type of antidiarrheal agent.

### **codon**

A sequence of three nucleotides in a strand of DNA or RNA. Each codon corresponds to a specific amino acid (a building block of a protein). A protein is made from a long chain of amino acids. A codon can instruct the cell to start creating a protein chain, to add a specific amino acid to the growing protein chain, or to end the protein chain. The full set of codons is called the genetic code.

### **coenzyme Q10**

A nutrient that the body needs in small amounts to function and stay healthy. Coenzyme Q10 helps mitochondria (small structures in the cell) make energy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). Coenzyme Q10 is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, beef, soybeans, peanuts, and spinach. It is being studied in the prevention and treatment of some types of cancer and heart disease and in the relief of side effects caused by some cancer treatments. Also called CoQ10, Q10, ubiquinone, and vitamin Q10.

### **coffee enema**

The injection of coffee through the anus into the colon (large intestine). Coffee enemas are being tested in the treatment of pancreatic cancer.

### **cognition**

The mental process of thinking, learning, remembering, being aware of surroundings, and using judgment.

### **cognitive behavior therapy**

A type of psychotherapy that helps patients change their behavior by changing the way they think and feel about certain things. It is used to treat mental, emotional, personality, and behavioral disorders. Also called CBT and cognitive therapy.

### **cognitive impairment**

Problems with a person's ability to think, learn, remember, use judgement, and make decisions. Signs of cognitive impairment include memory loss and trouble concentrating, completing tasks, understanding, remembering, following instructions, and solving problems. Other common signs may include changes in mood or behavior, loss of motivation, and being unaware of surroundings. Cognitive impairment may be mild or severe. There are many causes of cognitive impairment, including cancer and some cancer treatments.

### **cognitive therapy**

A type of psychotherapy that helps patients change their behavior by changing the way they think and feel about certain things. It is used to treat mental, emotional, personality, and behavioral disorders. Also called CBT and cognitive behavior therapy.

### **cohort**

A group of individuals who share a common trait, such as birth year. In medicine, a cohort is a group that is part of a clinical trial or study and is observed over a period of time.

### **cohort study**

A research study that compares a particular outcome (such as lung cancer) in groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke compared with those who do not smoke).

### **coinsurance**

The amount of money not covered by a patient's health insurance that the patient pays for each health care service. For example, if a plan covers 80% of the cost of a service, then the coinsurance that the patient pays will be the remaining 20% of the cost.

### **colchicine**

A drug used to treat gout (inflamed joints caused by a buildup of uric acid). It comes from the crocus plant *Colchicum autumnale*. Colchicine blocks cell division and the movement of certain immune cells to areas that are inflamed. It is a type of alkaloid and a type of mitotic inhibitor.

### **cold ischemia**

In surgery, the cooling of a tissue, organ, or body part after its blood supply has been reduced or cut off. This can occur while the organ is still in the body or after it is removed from the body if the organ is to be used for transplantation.

### **cold ischemia time**

In surgery, the time between the chilling of a tissue, organ, or body part after its blood supply has been reduced or cut off and the time it is warmed by having its blood supply restored. This can occur while the organ is still in the body or after it is removed from the body if the organ is to be used for transplantation.

### **cold knife cone biopsy**

A procedure in which a cone-shaped piece of abnormal tissue is removed from the cervix using a scalpel or laser knife. Some of the tissue is then checked under a microscope for signs of disease, such as cervical cancer. Cold knife cone biopsy may also be used to treat certain cervical conditions. Also called cold knife conization.

**cold knife conization**

A procedure in which a cone-shaped piece of abnormal tissue is removed from the cervix using a scalpel or laser knife. Some of the tissue is then checked under a microscope for signs of disease, such as cervical cancer. Cold knife conization may also be used to treat certain cervical conditions. Also called cold knife cone biopsy.

**cold nodule**

When radioactive material is used to examine the thyroid with a scanner, nodules that collect less radioactive material than the surrounding thyroid tissue are considered "cold." A nodule that is cold does not make thyroid hormone. Cold nodules may be benign (not cancer) or malignant (cancer). Cold nodules are sometimes called hypofunctioning nodules.

**cold tumor**

Describes a tumor that is not likely to trigger a strong immune response. Cold tumors tend to be surrounded by cells that are able to suppress the immune response and keep T cells (a type of immune cell) from attacking the tumor cells and killing them. Cold tumors usually do not respond to immunotherapy. Most cancers of the breast, ovary, prostate, pancreas, and brain (glioblastoma) are considered cold tumors.

**colectomy**

An operation to remove all or part of the colon. When only part of the colon is removed, it is called a partial colectomy. In an open colectomy, one long incision is made in the wall of the abdomen and doctors can see the colon directly. In a laparoscopic-assisted colectomy, several small incisions are made and a thin, lighted tube attached to a video camera is inserted through one opening to guide the surgery. Surgical instruments are inserted through the other openings to perform the surgery.

**colitis**

Inflammation of the colon.

**collagen**

A fibrous protein found in cartilage and other connective tissue.

**collagen disease**

A term previously used to describe chronic diseases of the connective tissue (e.g., rheumatoid arthritis, systemic lupus erythematosus, and systemic sclerosis), but now is thought to be more appropriate for diseases associated with defects in collagen, which is a component of the connective tissue.

**collagenase**

A type of enzyme that breaks down the protein collagen.

**collarbone**

One of a pair of bones at the base of the front of the neck. The collarbones connect the breastbone to the shoulder blades. Also called clavicle.

**collecting duct**

The last part of a long, twisting tube that collects urine from the nephrons (cellular structures in the kidney that filter blood and form urine) and moves it into the renal pelvis and ureters. Also called renal collecting tubule.

### **collective patient perspective**

An understanding of the disease experiences of many patients and the ability to describe this collective experience separately from a person's own disease experience. In cancer research, a collective patient perspective may help scientific researchers develop clinical trials that help meet the needs of more patients.

### **colloidal gold-bound tumor necrosis factor**

A substance being studied in the treatment of some types of cancer. Colloidal gold-bound tumor necrosis factor is made in the laboratory by binding a cancer-killing protein called tumor necrosis factor (TNF) to the surface of very tiny particles of gold. These TNF-gold particles may kill cancer cells without harming healthy tissue. Also called Aurimmune and TNF-bound colloidal gold.

### **colloidal oatmeal**

A special form of oatmeal that helps soothe, soften, and increase moisture in the skin. It may be used in a cream or lotion or as a powder that is added to a soaking bath to help treat rashes and burns, and dry, rough, scaly, or itchy skin. Colloidal oatmeal may also be used to help protect the skin against irritation or inflammation caused by certain skin conditions or skin damage.

### **coloanal anastomosis**

A surgical procedure in which the colon is attached to the anus after the rectum has been removed. Also called coloanal pull-through.

### **coloanal pull-through**

A surgical procedure in which the colon is attached to the anus after the rectum has been removed. Also called coloanal anastomosis.

### **colon**

The longest part of the large intestine (a tube-like organ connected to the small intestine at one end and the anus at the other). The colon removes water and some nutrients and electrolytes from partially digested food. The remaining material, solid waste called stool, moves through the colon, is stored in the rectum, and leaves the body through the anus. The colon is part of the digestive system.

### **colon cancer**

Cancer that forms in the tissues of the colon (the longest part of the large intestine). Most colon cancers are adenocarcinomas (cancers that begin in cells that make and release mucus and other fluids).

### **colon crypt**

Tube-like gland found in the lining of the colon and rectum. Colon crypt cells renew the lining of the intestine and make mucus. Also called gland of Lieberkuhn.

### **colon polyp**

An abnormal growth of tissue in the lining of the bowel. Polyps are a risk factor for colon cancer.

### **colonoscope**

A thin, tube-like instrument used to examine the inside of the colon. A colonoscope has a light and a lens for viewing and may have a tool to remove tissue.

### **colonoscopy**

Examination of the inside of the colon using a colonoscope, inserted into the rectum. A colonoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

### **colony-stimulating factor**

A substance that stimulates the production of blood cells. Colony-stimulating factors include granulocyte colony-stimulating factor (G-CSF), granulocyte-macrophage colony-stimulating factor (GM-CSF), and promegapoeitin.

### **colorectal**

Having to do with the colon or the rectum.

### **colorectal adenoma**

A common type of polyp (abnormal growth) that forms on the inner lining of the colon or rectum. Colorectal adenomas are made up of gland-like tissue, vary in size and shape, and have different growth patterns. There are different types of colorectal adenomas, based on how they look under a microscope. These include tubular, villous, tubulovillous, and serrated adenomas. Colorectal adenomas are not cancer, but they are more likely to become cancer than other types of polyps if they are not removed.

### **colorectal cancer**

Cancer that develops in the colon (the longest part of the large intestine) and/or the rectum (the last several inches of the large intestine before the anus).

### **colostomy**

An opening into the colon from the outside of the body. A colostomy provides a new path for waste material to leave the body after part of the colon has been removed.

### **colostomy irrigation**

A procedure in which a patient with a colostomy flushes the colon with water, using a tube that is inserted into the stoma (a surgically created opening in the body that connects an organ or area inside the body with the outside). This causes the colon to empty and pass stool through the stoma into a bag. The procedure should be done at the same time every day. It may allow colostomy patients to have better control over their bodies.

### **colposcope**

A lighted magnifying instrument used to check the cervix, vagina, and vulva for signs of disease.

### **colposcopy**

A procedure in which a lighted, magnifying instrument called a colposcope is used to examine the cervix, vagina, and vulva. During colposcopy, an instrument called a speculum is inserted into the vagina to widen it so that the cervix can be seen more easily. A vinegar solution may be used to make abnormal tissue easier to see with the colposcope. Tissue samples may be taken using a spoon-shaped instrument called a curette and checked under a microscope for signs of disease. Colposcopy may be used to check for cancers of the cervix, vagina, and vulva, and changes that may lead to cancer.



**coma**

A condition in which a patient is in a state of deep sleep and cannot be awakened. A coma may be caused by many things, including trauma, drugs, toxins, or certain diseases.

**combination antiretroviral therapy**

Treatment that uses a combination of three or more drugs to treat HIV infection. Combination antiretroviral therapy stops the virus from making copies of itself in the body. This may lessen the damage to the immune system caused by HIV and may slow down the development of AIDS. It may also help prevent transmission of HIV to others, including from mother to child during birth. Also called cART, HAART, and highly active antiretroviral therapy.

**combination chemotherapy**

Treatment using more than one anticancer drug.

**combination therapy**

Therapy that combines more than one method of treatment. Also called multimodality therapy and multimodality treatment.

**combined androgen blockade**

Treatment used to block androgen (male hormone) activity in the body. This may be done by giving an antiandrogen drug and removing the testicles (orchiectomy) or by giving an antiandrogen drug with a gonadotropin-releasing hormone (GnRH) agonist. Combined androgen blockade may stop the growth of cancer cells that need androgens to grow, and is used in the treatment of prostate cancer. Also called complete androgen blockade and total androgen blockade.

**combretastatin A4 phosphate**

A substance being studied in the treatment of cancer. It decreases the flow of blood to tumors and may kill cancer cells. Combretastatin A4 phosphate comes from the African bush willow. It is a type of tubulin-binding agent and a type of vascular targeting agent.

**comedo carcinoma**

A type of ductal carcinoma in situ (very early-stage breast cancer).

**comfort care**

Care given to people who are near the end of life and have stopped treatment to cure or control their disease. Comfort care includes physical, emotional, social, and spiritual support for patients and their families. The goal of comfort care is to control pain and other symptoms so the patient can be as comfortable as possible. Comfort care may include palliative care, supportive care, and hospice care. Also called end-of-life care.

**common bile duct**

A tube that carries bile from the liver and gallbladder, through the pancreas, and into the small intestine. The common bile duct starts where the ducts from the liver and gallbladder join and ends at the small intestine. It is part of the biliary system.

**common hepatic duct**

A tube that carries bile from the liver. The common hepatic duct starts where the right and left hepatic ducts join outside the liver and ends where a duct from the gallbladder joins it to form the common bile duct. It is part of the biliary system.

### **common iliac artery**

A set of two major blood vessels that carry blood to the lower part of the body, including the pelvis, reproductive organs, and legs. The common iliac artery branches off from the bottom part of the abdominal aorta (the largest blood vessel in the abdomen) into the right common iliac artery and left common iliac artery. Each common iliac artery further branches into an external iliac artery and an internal iliac artery, one on each side of the body. The external iliac arteries supply blood to the legs and feet. The internal iliac arteries supply blood to the tissues and organs in and around the pelvis, including the bladder, rectum, reproductive organs, groin, hips, and buttocks.

### **community immunity**

Protection from an infectious disease as a result of living in a community where a large number of people are vaccinated against that disease. When enough people are vaccinated against a disease, it is harder for the disease to spread. Community immunity helps protect those who have not been vaccinated, including newborns, pregnant women, and people with certain illnesses who cannot receive vaccines. Also called herd immunity.

### **comorbidity**

The condition of having two or more diseases at the same time.

### **companion diagnostic test**

A test used to help match a patient to a specific drug or therapy. For example, a companion diagnostic test may identify whether a patient's tumor has a specific gene change or biomarker that is targeted by the drug. This helps determine if the patient should receive the drug or not. Companion diagnostic tests can also be used to find out whether serious side effects may occur from treatment or how well treatment is working. Most drugs with a companion diagnostic test are cancer drugs that target specific tumor mutations.

### **comparative anatomy**

The comparison of the structure (anatomy) of one animal or plant with the structure of a different animal or plant.

### **compassionate use**

A way to provide an investigational therapy to a patient who is not eligible to receive that therapy in a clinical trial, but who has a serious or life-threatening illness for which other treatments are not available. Compassionate use allows patients to receive promising but not yet fully studied or approved cancer therapies when no other treatment option exists. Also called expanded access.

### **complement protein**

One of a group of about 20 proteins that is found in the blood and is important in fighting infections and other diseases.

### **complementary and alternative medicine**

A term used to describe a medical product or practice that is used together with (complementary) or instead of (alternative) standard medical care. Usually, less is known about most types of complementary and alternative medicine than about standard treatments, which go through a long and careful research process to prove they are safe and effective. Complementary and alternative medicine may include dietary supplements, megadose vitamins, herbal preparations, special teas, acupuncture, massage therapy, magnet therapy, spiritual healing, and meditation. Also called CAM.

### **complementary medicine**

Treatments that are used along with standard treatments, but are not considered standard. Standard treatments are based on the results of scientific research and are currently accepted and widely used. Less research has been done for most types of complementary medicine. Complementary medicine includes acupuncture, dietary supplements, massage therapy, hypnosis, and meditation. For example, acupuncture may be used with certain drugs to help lessen cancer pain or nausea and vomiting. Also called complementary therapy.

### **complementary therapy**

Treatment that is used along with standard treatment, but is not considered standard. Standard treatments are based on the results of scientific research and are currently accepted and widely used. Less research has been done for most types of complementary therapy. Complementary therapy includes acupuncture, dietary supplements, massage therapy, hypnosis, and meditation. For example, acupuncture may be used with certain drugs to help lessen cancer pain or nausea and vomiting. Also called complementary medicine.

### **complete androgen blockade**

Treatment used to block androgen (male hormone) activity in the body. This may be done by giving an antiandrogen drug and removing the testicles (orchiectomy) or by giving an antiandrogen drug with a gonadotropin-releasing hormone (GnRH) agonist. Complete androgen blockade may stop the growth of cancer cells that need androgens to grow, and is used in the treatment of prostate cancer. Also called combined androgen blockade and total androgen blockade.

### **complete blood count**

A measure of the number of red blood cells, white blood cells, and platelets in the blood. The amount of hemoglobin (substance in the blood that carries oxygen) and the hematocrit (the amount of whole blood that is made up of red blood cells) are also measured. A complete blood count is used to help diagnose and monitor many conditions. Also called blood cell count, CBC, and full blood count.

### **complete decongestive therapy**

A treatment program used to help manage the symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Complete decongestive therapy includes gentle massage and special compression bandaging to help move lymph through the body. It also includes exercises to help control swelling and improve mobility in the affected arm or leg and skin and nail care to prevent infection.

### **complete hysterectomy**

Surgery to remove the uterus and the cervix. The ovaries and fallopian tubes may also be removed. A complete hysterectomy may be done through the vagina (with no incisions in the abdomen) or through an incision (cut) in the abdomen. Also called simple hysterectomy and total hysterectomy.

### **complete metastasectomy**

Surgery to remove all metastases (tumors formed from cells that have spread from the primary tumor).

### **complete remission**

The disappearance of all signs of cancer in response to treatment. This does not always mean the cancer has been cured. Also called complete response.

### **complete response**

The disappearance of all signs of cancer in response to treatment. This does not always mean the cancer has been cured. Also called complete remission.

### **complex fibroadenoma**

A type of benign (not cancer) tumor that usually forms in the breast and is made up of fibrous (connective) and glandular tissue. In complex fibroadenomas, other abnormal tissue changes are also present. These changes may include cysts, calcifications, scar-like tissue, and hyperplasia (an increase in the number of cells in the breast ducts or lobes). Complex fibroadenomas are more common in older women and may slightly increase the risk of breast cancer.

### **complex sclerosing lesion**

A benign (not cancer) area of hardened tissue in the breast that looks like a scar when viewed under a microscope. Complex sclerosing lesions often occur in both breasts, and more than one lesion is usually present in each breast. They usually cannot be felt and do not cause symptoms but may look like breast cancer on a mammogram, especially if the lesions are large. A biopsy is usually needed to tell the difference between these lesions and breast cancer. Complex sclerosing lesions may slightly increase the risk of breast cancer. Also called radial scar.

### **compliance**

The act of following a medical regimen or schedule correctly and consistently, including taking medicines or following a diet.

### **complication**

In medicine, a medical problem that occurs during a disease, or after a procedure or treatment. The complication may be caused by the disease, procedure, or treatment or may be unrelated to them.

### **composite hemangioendothelioma**

A blood vessel tumor that is made up of different types of cells and has features that are both benign (not cancer) and malignant (cancer). Composite hemangioendotheliomas usually form on or under the skin on the arms or legs. They may also form on the head, neck, or chest. Composite hemangioendotheliomas may spread to nearby lymph nodes, but usually do not spread to other parts of the body. They may come back in the same place after treatment. They are most common in adults. Composite hemangioendotheliomas are a type of vascular tumor.

### **composite lymphoma**

A rare form of lymphoma (cancer that begins in cells of the immune system) in which different types of lymphoma cells occur at the same time. The different lymphoma cells may form in the same tissue or organ or in many different tissues or organs. The composite lymphoma may contain different types of non-Hodgkin lymphoma cells or both Hodgkin and non-Hodgkin lymphoma cells.

### **compound**

In science, a substance made from two or more different elements that have been chemically joined. Examples of compounds include water (H<sub>2</sub>O), which is made from the elements hydrogen and oxygen, and table salt (NaCl), which is made from the elements sodium and chloride.

**compound nevus**

A type of mole formed by groups of nevus cells found in the epidermis and dermis (the two main layers of tissue that make up the skin).

**comprehensive cancer center**

A cancer research center that gets support from the National Cancer Institute (NCI) to do cancer research and provide services directly to cancer patients. Scientists and doctors at these centers do basic laboratory research and clinical trials, and they study the patterns, causes, and control of cancer in groups of people. Also, they take part in multicenter clinical trials, which enroll patients from many parts of the country. Comprehensive Cancer Centers also give cancer information to health care professionals and the public. More information about the NCI Cancer Centers Program can be found on the NCI's Web site at <http://cancercenters.cancer.gov/>.

**comprehensive pediatric cancer center**

A cancer research center that gets support from the National Cancer Institute (NCI). Scientists and doctors at these centers do basic laboratory research and clinical trials on childhood cancers, and they study the patterns, causes, and control of cancer in groups of children. Also, they treat patients from many parts of the country and give cancer information to health care professionals and the public. More information about the NCI Cancer Centers Program can be found on the NCI's Web site at <https://cancercenters.cancer.gov/>.

**compression**

A pressing or squeezing together. In medicine, it can describe a structure, such as a tumor, that presses on another part of the body, such as a nerve. It can also describe the flattening of soft tissue, such as the breast, that occurs during a mammogram (x-ray of the breast).

**compression bandage**

A bandage designed to provide pressure to a particular area.

**compression fracture**

A type of break in a bone caused by pressure and in which the bone collapses. Compression fractures usually occur in the spine (backbone) and in bones made weak by cancer or by osteoporosis (a decrease in bone mass and density).

**compression garment**

A tight-fitting, elastic garment, such as a sleeve or stocking. Compression garments are used in the treatment of lymphedema (swelling caused by a buildup of lymph fluid in tissue). They are also used to improve blood flow.

**compression pump**

A machine used to keep blood and lymph flowing by pushing air through bands or sleeves that are placed on the arms or legs.

**compulsion**

An uncontrollable urge to say or do something without an obvious reason. A person may repeat a behavior, such as hand-washing, over and over.

**computational biology**

A field of science that uses computers, databases, math, and statistics to collect, store, organize, and analyze large amounts of biological, medical, and health information. Information may come from many sources, including genetic and

molecular research studies, patient statistics, tissue specimens, clinical trials, and scientific journals. Also called bioinformatics.

### **computed tomographic colonography**

A method to examine the inside of the colon by taking a series of x-rays. A computer is used to make 2-dimensional (2-D) and 3-D pictures of the colon from these x-rays. The pictures can be saved, changed to give better viewing angles, and reviewed after the procedure, even years later. Also called computed tomography colonography, CT colonography, and virtual colonoscopy.

### **computed tomography angiography**

A procedure that uses x-rays to create a series of detailed pictures of the blood vessels and blood flow inside the body. The pictures are taken from different angles and are created by a computer linked to an x-ray machine. A dye is injected into a vein to make the blood vessels and blood flow easier to see on the x-ray. Computed tomography angiography may be used to check for aneurysms (a bulge in the blood vessel wall), blockages in the arteries, blood clots, and other blood vessel problems. Also called CT angiography and CTA.

### **computed tomography colonography**

A method to examine the inside of the colon by taking a series of x-rays. A computer is used to make 2-dimensional (2-D) and 3-D pictures of the colon from these x-rays. The pictures can be saved, changed to give better viewing angles, and reviewed after the procedure, even years later. Also called computed tomographic colonography, CT colonography, and virtual colonoscopy.

### **computed tomography scan**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-dimensional (3-D) views of tissues and organs. A dye may be injected into a vein or swallowed to help the tissues and organs show up more clearly. A computed tomography scan may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Also called CAT scan, computerized axial tomography scan, computerized tomography, and CT scan.

### **computer-aided detection system**

A computer-based system that uses special software to help look for suspicious areas of tissue on an x-ray image. A computer-aided detection system highlights these areas on the image so they can be looked at more closely. A computer-aided detection system is used with certain types of imaging, such as mammography or chest x-ray, to help diagnose a disease, such as cancer. Also called CAD system.

### **computerized axial tomography scan**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-dimensional (3-D) views of tissues and organs. A dye may be injected into a vein or swallowed to help the tissues and organs show up more clearly. A computerized axial tomography scan may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Also called CAT scan, computed tomography scan, computerized tomography, and CT scan.



### **computerized tomography**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-dimensional (3-D) views of tissues and organs. A dye may be injected into a vein or swallowed to help the tissues and organs show up more clearly. A computerized tomography may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Also called CAT scan, computed tomography scan, computerized axial tomography scan, and CT scan.

### **concentration**

In science, the amount of a substance, such as a salt, that is in a certain amount of tissue or liquid, such as blood. A substance becomes more concentrated when less water is present. For example, the salt in urine may become more concentrated when a person doesn't drink enough water.

### **conception**

In biology, the beginning of pregnancy, marked by fertilization of an egg by a sperm.

### **concomitant**

Occurring or existing at the same time as something else. In medicine, it may refer to a condition a person has or a medication a person is taking that is not being studied in the clinical trial he or she is taking part in.

### **concordant finding**

In medicine, a term that describes two or more findings that agree with one another when doing a physical exam, imaging or lab test, or a biopsy. For example, feeling a suspicious breast lump on a physical exam, having an abnormal mammogram, and finding breast cancer on a tissue biopsy are considered concordant findings. Concordant findings help confirm a diagnosis.

### **concurrent therapy**

A treatment that is given at the same time as another.

### **condition**

In medicine, a term that refers to a person's state of health. For example, a patient's condition in the hospital may be described as good, stable, or serious. Condition may also refer to a normal state with regard to one's health, such as pregnancy, or to a disease, disorder, illness, or injury.

### **conditionally reprogrammed cell**

A type of cell grown in the laboratory from samples of normal cells or cancer cells from patient tissue. These cells can be kept alive for as long as needed and grown to large numbers. The cells are treated with substances that cause them to resemble stem cells (cells from which other types of cells develop) and grow rapidly. Under certain conditions, conditionally reprogrammed cells can be made to look and act like the original tissue or specific type of tumor from which they came. They are used to study how cancers and other diseases form, and to test new drugs and other types of treatment before they are given to people. Also called CRC.

### **conditioned response**

A type of learning in which repeated exposure to something may affect a person's behavior when they encounter an unrelated object, sound, or smell that

occurred at the same time as the initial exposure. For example, a patient who always feels sick after receiving chemotherapy in a clinic that smells a certain way may be conditioned to feel sick when smelling the same odor in a different place.

### **conditioned stimulus**

A situation in which one signal, or stimulus, is given just before another signal. After this happens several times, the first signal alone can cause the response that would usually need the second signal.

### **conditioning regimen**

The treatments used to prepare a patient for stem cell transplantation (a procedure in which a person receives blood stem cells, which make any type of blood cell). A conditioning regimen may include chemotherapy, monoclonal antibody therapy, and radiation to the entire body. It helps make room in the patient's bone marrow for new blood stem cells to grow, helps prevent the patient's body from rejecting the transplanted cells, and helps kill any cancer cells that are in the body.

### **condyloma acuminatum**

A raised growth on the surface of the genitals or in or around the anus caused by infection with certain types of human papillomavirus (HPV). HPV can spread by skin-to-skin contact, usually during oral, anal, or genital sex with an infected partner. These warts can also occur on the lips and tongue and in the mouth and throat. Condyloma acuminata often appear as small, skin-colored bumps that may be clumped together. They are usually painless and do not cause any symptoms, so a person may not know they have them. However, sometimes they can grow large and cause itching and bleeding. Condyloma acuminata do not become cancer, but they may come back after treatment. Also called genital wart.

### **cone biopsy**

A procedure in which a cone-shaped piece of abnormal tissue is removed from the cervix. A scalpel, a laser knife, or a thin wire loop heated by an electric current may be used to remove the tissue. The tissue is then checked under a microscope for signs of disease. Cone biopsy may be used to check for cervical cancer or to treat certain cervical conditions. Types of cone biopsy are LEEP (loop electrosurgical excision procedure) and cold knife conization (cold knife cone biopsy). Also called conization.

### **confirmatory clinical trial**

A study that confirms how well a new treatment works after it was shown in early-phase clinical trials that it might be beneficial for patients. New drugs that are given an accelerated approval by the U.S. Food and Drug Administration (FDA) to treat a serious or life-threatening disease, such as cancer, are required to be tested in a confirmatory clinical trial. This is done to verify that they really work when they are tested on many more people in a randomized study. The FDA may remove a drug from the market if a confirmatory clinical trial shows that the drug is not beneficial for patients.

### **confusion**

A mental state in which one is not thinking clearly.

## **congenital**

A condition or trait present at birth. It may be the result of genetic or non-genetic factors.

## **congenital fibrosarcoma**

A type of cancer that forms in fibrous (connective) tissue. Congenital fibrosarcoma usually occurs in infants and young children but it may also be found before birth by ultrasound. It can occur anywhere in the body. The tumor is often large and fast-growing, but it rarely spreads to other parts of the body. The cancer cells usually have a certain genetic change called a translocation (part of one chromosome switches places with part of another chromosome). Congenital fibrosarcoma is a type of soft tissue sarcoma. Also called infantile fibrosarcoma.

## **congenital hemangioma**

A benign (not cancer) blood vessel tumor that is fully formed at birth. Congenital hemangiomas usually form on the skin of the head and neck or arms and legs. They may also form in organs, such as the liver. Congenital hemangiomas may be raised or flat and usually appear as purple-red lesions on the skin. Some congenital hemangiomas go away on their own; others only partly go away or do not go away at all. Congenital hemangiomas are a type of vascular tumor.

## **congenital hypoplastic anemia**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with congenital hypoplastic anemia may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called Blackfan–Diamond anemia, congenital pure red cell aplasia, DBA, Diamond-Blackfan anemia, erythropoiesis imperfecta, and inherited erythroblastopenia.

## **congenital mesoblastic nephroma**

A type of kidney tumor that is usually found before birth by ultrasound or within the first 3 months of life. It contains fibroblastic cells (connective tissue cells), and may spread to the other kidney or to nearby tissue. Congenital mesoblastic nephroma is more common in males.

## **congenital neutropenia**

An inherited disorder in which there is a lower-than-normal number of neutrophils (a type of white blood cell that is important in fighting infections). Infants with the disorder get infections caused by bacteria, and are at an increased risk of acute myelogenous leukemia (AML) or myelodysplasia (a bone marrow disorder). Also called genetic infantile agranulocytosis, infantile genetic agranulocytosis, Kostmann disease, Kostmann neutropenia, and Kostmann syndrome.

## **congenital pure red cell aplasia**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with congenital pure red cell aplasia may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called Blackfan–Diamond anemia, congenital hypoplastic anemia, DBA, Diamond-Blackfan anemia, erythropoiesis imperfecta, and inherited erythroblastopenia.

### **congestive heart failure**

Weakness of the heart muscle that leads to a buildup of fluid in body tissues.

### **conization**

A procedure in which a cone-shaped piece of abnormal tissue is removed from the cervix. A scalpel, a laser knife, or a thin wire loop heated by an electric current may be used to remove the tissue. The tissue is then checked under a microscope for signs of disease. Conization may be used to check for cervical cancer or to treat certain cervical conditions. Types of conization are LEEP (loop electrosurgical excision procedure) and cold knife conization (cold knife cone biopsy). Also called cone biopsy.

### **conjugate**

A compound formed by chemically joining two or more different substances. For example, an antibody-drug conjugate is made up of a monoclonal antibody that is chemically linked to a drug. Some conjugates are used to treat cancer.

### **conjunctiva**

A membrane that lines the inner surface of the eyelid and also covers the front part of the eye. Conjunctivitis is inflammation of the conjunctiva.

### **conjunctivitis**

A condition in which the conjunctiva (membranes lining the eyelids and covering the white part of the eye) become inflamed or infected. Also called pinkeye.

### **connecting peptide**

A substance made by the pancreas. Connecting peptide and insulin are both part of a larger molecule that gets split apart before being released into the blood. Abnormal blood levels of connecting peptide may occur in certain diseases, such as diabetes or cancer. Also called C-peptide.

### **connective tissue**

Tissue that supports, protects, and gives structure to other tissues and organs in the body. Connective tissue also stores fat, helps move nutrients and other substances between tissues and organs, and helps repair damaged tissue. Connective tissue is made up of cells, fibers, and a gel-like substance. Types of connective tissue include bone, cartilage, fat, blood, and lymphatic tissue.

### **connexin gene**

One of a group of related genes called connexins. Connexin genes make proteins that form channels that connect cells that are next to each other. These channels allow substances (such as sodium and potassium) to move from one cell to another. This is important for cells to grow and work normally. Mutations in certain connexin genes may be found in some types of hearing, skin, and peripheral nervous system disorders. They may also be found in some types of cancer.

### **conscious sedation**

A level of sedation in which a person is asleep but wakes when spoken to or touched. Conscious sedation is caused by special drugs and is used to help relieve anxiety during certain medical or surgical procedures. Drugs that relieve pain may be given at the same time. Also called moderate sedation.

**consecutive case series**

A clinical study that includes all eligible patients identified by the researchers during the study registration period. The patients are treated in the order in which they are identified. This type of study usually does not have a control group.

**consent form**

A document with important information about a medical procedure or treatment, a clinical trial, or genetic testing. It also includes information on possible risks and benefits. If a person chooses to take part in the treatment, procedure, trial, or testing, he or she signs the form to give official consent.

**consent process**

A process in which patients are given important information, including possible risks and benefits, about a medical procedure or treatment, genetic testing, or a clinical trial. This is to help them decide if they want to be treated, tested, or take part in the trial. Patients are also given any new information that might affect their decision to continue. Also called informed consent.

**consolidation therapy**

Treatment that is given after cancer has disappeared following the initial therapy. Consolidation therapy is used to kill any cancer cells that may be left in the body. It may include radiation therapy, a stem cell transplant, or treatment with drugs that kill cancer cells. Also called intensification therapy and postremission therapy.

**constipation**

A condition in which stool becomes hard, dry, and difficult to pass, and bowel movements don't happen very often. Other symptoms may include painful bowel movements, and feeling bloated, uncomfortable, and sluggish.

**constitutional DNA**

The DNA in germ cells (egg and sperm cells that join to form an embryo). Constitutional DNA is the source of DNA for all other cells in the body. Also called germline DNA.

**constitutional acupuncture**

A type of acupuncture based on a form of Oriental medicine in which treatment is based on a person's constitution. According to this type of medicine, the constitution is the specific way a person's organs affect health and how he or she looks, thinks, behaves, and responds to treatment. Also called Korean acupuncture.

**consultand**

A person who is receiving genetic counseling.

**contiguous**

Touching or very close together.

**contiguous lymphoma**

Lymphoma in which the lymph nodes containing cancer are next to each other.

**continent reservoir**

A pouch formed from a piece of small intestine to hold urine after the bladder has been removed.

### **contingency management**

In medicine, a treatment plan that gives immediate rewards for desired changes in behavior. It is based on the principle that if a good behavior is rewarded, it is more likely to be repeated. This is often used in the treatment of drug and alcohol abuse, and is being studied as a smoking cessation method.

### **continuous hyperthermic peritoneal perfusion**

A treatment used during surgery in which a heated solution containing anticancer drugs is infused directly into the abdominal cavity through a thin tube. After removal of as much tumor tissue as possible with surgery, continuous hyperthermic peritoneal perfusion is given to kill any remaining tumor cells. It is most often used to treat cancers that have spread to the peritoneum (the lining of the abdominal cavity). Also called CHPP, HIPEC, and hyperthermic intraperitoneal chemotherapy.

### **continuous infusion**

The administration of a fluid into a blood vessel, usually over a prolonged period of time.

### **continuum of care**

In medicine, describes the delivery of health care over a period of time. In patients with a disease, this covers all phases of illness from diagnosis to the end of life.

### **contraception**

The use of drugs, devices, or surgery to prevent pregnancy. There are many different types of contraception. These include barrier methods to keep sperm from fertilizing the egg, hormone methods, intrauterine devices (IUDs), and surgery to close the fallopian tubes in women or close off the two tubes that carry sperm out of the testicles in men. Also called birth control.

### **contracture**

A permanent tightening of the muscles, tendons, skin, and nearby tissues that causes the joints to shorten and become very stiff. This prevents normal movement of a joint or other body part. Contractures may be caused by injury, scarring, and nerve damage, or by not using the muscles. It may also occur at some point in time after a stem cell transplant that caused chronic graft-versus-host disease.

### **contraindication**

Anything (including a symptom or medical condition) that is a reason for a person to not receive a particular treatment or procedure because it may be harmful. For example, having a bleeding disorder is a contraindication for taking aspirin because treatment with aspirin may cause excess bleeding.

### **contralateral**

Having to do with the opposite side of the body.

### **contralateral prophylactic mastectomy**

Surgery to remove the healthy breast in a person who is having or has had the other breast with cancer removed. Contralateral prophylactic mastectomy may be done to reduce the risk of a second breast cancer in people who are at very high risk. Also called CPM.



**contrast esophagram**

A series of x-ray pictures of the esophagus taken after a patient drinks a liquid containing barium sulfate (a form of the silver-white metallic element barium). The barium sulfate coats and outlines the inner wall of the esophagus so that it can be seen on the x-ray pictures. Also called esophagram.

**contrast material**

A dye or other substance that helps show abnormal areas inside the body. It is given by injection into a vein, by enema, or by mouth. Contrast material may be used with x-rays, CT scans, MRI, or other imaging tests.

**control animal**

An animal in a study that does not receive the treatment being tested. Comparing the health of control animals with the health of treated animals allows researchers to evaluate the effects of a treatment more accurately.

**control group**

In a clinical trial, the group that does not receive the new treatment being studied. This group is compared to the group that receives the new treatment, to see if the new treatment works.

**controlled clinical trial**

A clinical study that includes a comparison (control) group. The comparison group receives a placebo, another treatment, or no treatment at all.

**controlled study**

An experiment or clinical trial that includes a comparison (control) group.

**controlled substance**

A drug or other substance that is tightly controlled by the government because it may be abused or cause addiction. The control applies to the way the substance is made, used, handled, stored, and distributed. Controlled substances include opioids, stimulants, depressants, hallucinogens, and anabolic steroids. Controlled substances with known medical use, such as morphine, Valium, and Ritalin, are available only by prescription from a licensed medical professional. Other controlled substances, such as heroin and LSD, have no known medical use and are illegal in the United States.

**conventional mammography**

A procedure that uses x-rays to take pictures of the inside of the breast and stores the images on x-ray film. Conventional mammography may be used to check for breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). Also called film mammography.

**conventional medicine**

A system in which medical doctors and other health care professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called allopathic medicine, biomedicine, mainstream medicine, orthodox medicine, and Western medicine.

**conventional renal cell carcinoma**

A type of kidney cancer in which the cells look clear or very pale when viewed under a microscope. Conventional renal cell carcinoma begins in cells that line tiny tubes in the kidney. These tubes return filtered nutrients, fluids, and other substances that the body needs back to the blood. Conventional renal cell

carcinoma is the most common type of kidney cancer in adults. People with an inherited condition called von Hippel-Lindau syndrome are at an increased risk of developing conventional renal cell carcinoma. Also called ccRCC, clear cell renal cell cancer, and clear cell renal cell carcinoma.

### **conventional therapy**

Treatment that is widely accepted and used by most health care professionals. It is different from alternative or complementary therapies, which are not as widely used. Examples of conventional therapy for cancer include chemotherapy, radiation therapy, and surgery. Also called conventional treatment.

### **conventional treatment**

Treatment that is widely accepted and used by most health care professionals. It is different from alternative or complementary therapies, which are not as widely used. Examples of conventional treatment for cancer include chemotherapy, radiation therapy, and surgery. Also called conventional therapy.

### **convulsion**

A condition in which muscles contract and relax quickly and cause uncontrolled shaking of the body. Head injuries, high fevers, some medical disorders, and certain drugs can cause convulsions. They may also occur during seizures caused by epilepsy.

### **copay**

The amount of money that a patient with health insurance pays for each health care service, such as a visit to the doctor, laboratory tests, prescription medicines, and hospital stays. The amount of the copay usually depends on the type of health care service. Also called copayment.

### **copayment**

The amount of money that a patient with health insurance pays for each health care service, such as a visit to the doctor, laboratory tests, prescription medicines, and hospital stays. The amount of the copayment usually depends on the type of health care service. Also called copay.

### **cope**

To adjust to new situations and overcome problems.

### **coping skills**

The methods a person uses to deal with stressful situations. These may help a person face a situation, take action, and be flexible and persistent in solving problems.

### **copolymer**

A molecule made up of two or more different kinds of small molecules called monomers. The monomers are joined together in a repeating pattern.

### **copper Cu 64-ATSM**

A substance being studied in PET imaging to detect certain types of tumors. Copper Cu 64 is a radioactive substance. It is linked to ATSM, which is taken up by tissues that have low levels of oxygen, such as some tumor tissues. A PET scanner is used to detect which cells in the body have taken up copper Cu 64-ATSM. It is a type of radioimaging agent.

**cordectomy**

An operation on the vocal cords or on the spinal cord.

**cordotomy**

A surgical procedure that is used to relieve pain by cutting certain nerves in the spinal cord that send pain signals. Cutting these nerves blocks feelings of pain and feelings of hot and cold. In cancer, a cordotomy is usually done for patients near the end of life to relieve severe pain that cannot be relieved by other treatments.

**cordycepin**

An anticancer drug that belongs to a family of drugs called antitumor antibiotics.

**core biopsy**

The removal of a tissue sample with a wide needle for examination under a microscope. Also called core needle biopsy.

**core needle biopsy**

The removal of a tissue sample with a wide needle for examination under a microscope. Also called core biopsy.

**cornea**

The transparent part of the eye that covers the iris and the pupil and allows light to enter the inside.

**coronary artery bypass grafting**

Surgery in which a healthy blood vessel taken from another part of the body is used to make a new path for blood around a blocked artery leading to the heart. This restores the flow of oxygen and nutrients to the heart. Also called aortocoronary bypass and CABG.

**coronary artery disease**

A disease in which there is a narrowing or blockage of the coronary arteries (blood vessels that carry blood and oxygen to the heart). Coronary artery disease is usually caused by atherosclerosis (a buildup of fatty material and plaque inside the coronary arteries). The disease may cause chest pain, shortness of breath during exercise, and heart attacks. The risk of coronary artery disease is increased by having a family history of coronary artery disease before age 50, older age, smoking tobacco, high blood pressure, high cholesterol, diabetes, lack of exercise, and obesity. Also called CAD and coronary heart disease.

**coronary heart disease**

A disease in which there is a narrowing or blockage of the coronary arteries (blood vessels that carry blood and oxygen to the heart). Coronary heart disease is usually caused by atherosclerosis (a buildup of fatty material and plaque inside the coronary arteries). The disease may cause chest pain, shortness of breath during exercise, and heart attacks. The risk of coronary heart disease is increased by having a family history of coronary heart disease before age 50, older age, smoking tobacco, high blood pressure, high cholesterol, diabetes, lack of exercise, and obesity. Also called CAD and coronary artery disease.

**coronavirus**

One of a large family of viruses that can infect people and some animals and cause a respiratory illness. There are many different coronaviruses. Some cause

mild diseases, such as the common cold, while others cause more serious respiratory illnesses, such as coronavirus disease 19 (COVID-19).

### **coronavirus disease 19**

A highly contagious respiratory disease caused by the SARS-CoV-2 virus. SARS-CoV-2 is thought to spread from person to person through droplets released when an infected person coughs, sneezes, or talks. It may also be spread by touching a surface with the virus on it and then touching one's mouth, nose, or eyes, but this is less common. The most common signs and symptoms of coronavirus disease 19 are fever, cough, and trouble breathing. Fatigue, muscle pain, chills, headache, sore throat, runny nose, nausea or vomiting, diarrhea, and a loss of taste or smell may also occur. The signs and symptoms may be mild or severe and usually appear 2 to 14 days after exposure to the SARS-CoV-2 virus. Some people may not have any symptoms but are still able to spread the virus. Most people with coronavirus disease 19 recover without needing special treatment. But other people are at higher risk of serious illness. Those at higher risk include older adults and people with serious medical problems, such as heart, lung, or kidney disease, diabetes, cancer, or a weak immune system. Serious illness may include life-threatening pneumonia and organ failure. Research is being done to treat coronavirus disease 19 and to prevent infection with SARS-CoV-2. Also called COVID-19.

### **corpus cavernosum**

One of two columns of spongy tissue that runs through the shaft (body) of the penis. The corpus cavernosum forms most of the penis and contains blood vessels that fill with blood to help make an erection.

### **corpus spongiosum**

A column of spongy tissue that runs through the shaft (body) and glans (head) of the penis. The corpus spongiosum surrounds the urethra (the tube through which urine and sperm pass from the body). It contains blood vessels that fill with blood to help make an erection and keep the urethra open during the erection.

### **corpus uteri**

The body of the uterus.

### **corticosteroid**

Any steroid hormone made in the adrenal cortex (the outer part of the adrenal gland). They are also made in the laboratory. Corticosteroids have many different effects in the body, and are used to treat many different conditions. They may be used as hormone replacement, to suppress the immune system, and to treat some side effects of cancer and its treatment. Corticosteroids are also used to treat certain lymphomas and lymphoid leukemias.

### **corticotropin**

A hormone made in the pituitary gland. Corticotropin acts on the outer part of the adrenal gland to control its release of corticosteroid hormones. More corticotropin is made during times of stress. Also called ACTH and adrenocorticotrophic hormone.

### **cortisol**

A hormone made by the adrenal cortex (the outer layer of the adrenal gland). It helps the body use glucose (a sugar), protein, and fats. Cortisol made in the laboratory is called hydrocortisone. It is used to treat many conditions, including

inflammation, allergies, and some cancers. Cortisol is a type of glucocorticoid hormone.

### **cortisone**

A natural steroid hormone produced in the adrenal gland. It can also be made in the laboratory. Cortisone reduces swelling and can suppress immune responses.

### **cost sharing**

A term used to describe the practice of dividing the cost of health care services between the patient and the insurance plan. For example, if a plan pays 80% of the cost of a service, then the patient pays the remaining 20% of the cost. The most common form of cost sharing is for deductibles, coinsurance, and copayments. Cost sharing usually does not include the payment of monthly health insurance premiums or the cost of noncovered health care services.

### **cotinine**

A chemical substance formed by the breakdown of nicotine in the body. Nicotine is an addictive, harmful chemical found in tobacco and tobacco products, including cigarettes and chewing tobacco. Exposure to nicotine can be measured by checking the amount of cotinine in the blood, urine, or saliva in smokers and in nonsmokers exposed to secondhand smoke. Cotinine stays in the body longer than nicotine and is used to help monitor tobacco use and the use of nicotine replacement therapy in people trying to stop smoking.

### **cottonseed meal toxin**

A substance being studied in the treatment of several types of cancer. It comes from the seed of the cotton plant (*Gossypium*). It blocks the growth of cells and may kill cancer cells. Cottonseed meal toxin may also act as a male contraceptive (a type of birth control).

### **coumarin**

A substance used to make drugs that prevent and treat blood clots in blood vessels and treat certain heart conditions. Coumarin is taken from certain plants and can also be made in the laboratory. It is a type of anticoagulant.

### **coumestan**

An estrogen-like substance (phytoestrogen) made by some plants. Coumestans may have anticancer effects.

### **coumestrol**

A type of coumestan. Coumestans are estrogen-like substances (phytoestrogens) made by some plants. Coumestans may have anticancer effects.

### **counseling**

The process by which a professional counselor helps a person cope with mental or emotional distress, and understand and solve personal problems.

### **counselor**

A specialist who talks to patients and their families about emotional and personal matters, and can help them make decisions. Also called mental health counselor.

### **course of treatment**

A treatment plan made up of several cycles of treatment. For example, treatment given for one week followed by three weeks of rest (no treatment) is one

treatment cycle. When a treatment cycle is repeated multiple times on a regular schedule, it makes up a course of treatment. A course of treatment can last for several months. Also called treatment course.

### **cramp**

A sharp pain that occurs when a muscle suddenly contracts (tightens up). Cramps commonly occur in the abdomen and legs.

### **cranial nerve**

One of twelve pairs of nerves that pass from the brain, through openings in the skull, to different areas of the head, neck, chest, and abdomen. The cranial nerves send information between the brain and the sense organs (the eyes, ears, nose, and tongue). They also send information to the muscles in the face, head, neck, and other organs in the body, including the larynx (voice box), heart, lungs, stomach, and intestines. The cranial nerves are part of the peripheral nervous system.

### **craniopharyngioma**

A rare, benign (not cancer) brain tumor that usually forms near the pituitary gland and the hypothalamus. Craniopharyngiomas are slow-growing and do not spread to other parts of the brain or to other parts of the body. However, they may grow and press on nearby parts of the brain, including the pituitary gland, hypothalamus, optic chiasm, optic nerves, and fluid-filled spaces in the brain. This may cause problems with growth, vision, and making certain hormones. Craniopharyngiomas usually occur in children and young adults.

### **craniotomy**

An operation in which a small hole is made in the skull or a piece of bone from the skull is removed to show part of the brain. A craniotomy may be done to remove a brain tumor or a sample of brain tissue. It may also be done to remove blood or blood clots from the brain, relieve pressure in the brain after an injury or stroke, repair a skull fracture or brain aneurysm (a bulge in a blood vessel wall), or treat other brain conditions. The piece of bone that is removed from the skull is usually put back in place after the surgery has been done.

### **cranium**

The bones that form the head. The cranium is made up of cranial bones (bones that surround and protect the brain) and facial bones (bones that form the eye sockets, nose, cheeks, jaw, and other parts of the face). An opening at the base of the cranium is where the spinal cord connects to the brain. Also called skull.

### **craving**

A strong, urgent, or abnormal desire for a certain substance or activity. There are different types of cravings, such as food cravings or cravings for addictive substances, including alcohol, drugs, or nicotine. Nicotine cravings are common after a person quits smoking and may come and go over time.

### **creatine**

A substance that is made by the body and used to store energy. It is being studied in the treatment of weight loss related to cancer. It is derived from the amino acid arginine.

### **creatinine**

A compound that is excreted from the body in urine. Creatinine levels are measured to monitor kidney function.



**crib death**

A disorder marked by the sudden and unexpected death of a healthy child who is younger than one year old, usually during sleep. The cause of crib death is not known. Also called SIDS and sudden infant death syndrome.

**cribriform**

Pierced with small holes as in a sieve. Refers to the appearance of a tumor when viewed under a microscope. The tumor appears to have open spaces or small holes inside.

**crisis intervention**

Immediate, short-term counseling (talking with a professional counselor) to stop a critical emotional incident (e.g., attempted suicide or drug overdose) from getting worse. Crisis intervention is not meant to solve the problem that led up to the crisis.

**crisnatol mesylate**

An anticancer drug that interferes with the DNA in cancer cells.

**crizotinib**

A drug used to treat certain types of ALK-positive inflammatory myofibroblastic tumors in adults and children aged 1 year and older, ALK-positive systemic anaplastic large cell lymphoma in young adults and children aged 1 year and older, and ALK-positive or ROS1-positive non-small cell lung cancer. It is also being studied in the treatment of other types of cancer. Crizotinib blocks certain proteins made by the ALK and ROS1 genes, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Xalkori.

**cross-sectional study**

A type of research study in which a group of people is observed, or certain information is collected, at a single point in time or over a short period of time. For example, a survey may be done to collect information about the total number of people in a group who have or had a certain disease (such as cancer) or risk factor (such as smoking or obesity). In this example, the survey may be able to provide some information about whether there is an association between the smoking (risk factor) and the cancer (disease) but does not prove that they are linked. Results from a cross-sectional study may be used to plan other research studies. A cross-sectional study is a type of observational (epidemiologic) study.

**cross-talk**

Describes the process inside a cell that occurs when the same signal is shared by two or more signaling pathways. Usually, a signal caused by the binding of a substance to a molecule on or inside a cell is passed from one molecule to another in the same pathway.

**crossover study**

A type of clinical trial in which all participants receive the same two or more treatments, but the order in which they receive them depends on the group to which they are randomly assigned. For example, one group is randomly assigned to receive drug A followed by drug B. The other group receives drug B followed by drug A. There is usually a rest period between treatments.

**cruciferous vegetable**

A member of the family of vegetables that includes broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, kale, and turnips. These vegetables contain

substances that may protect against cancer. Also called Brassica vegetable.

### **cryoablation**

A procedure in which an extremely cold liquid or an instrument called a cryoprobe is used to freeze and destroy abnormal tissue. A cryoprobe is cooled with substances such as liquid nitrogen, liquid nitrous oxide, or compressed argon gas. Cryoablation may be used to treat certain types of cancer and some conditions that may become cancer. Also called cryosurgery and cryotherapy.

### **cryobanking**

The process of cooling and storing cells, tissues, or organs at very low or freezing temperatures to save them for future use. Also called cryopreservation.

### **cryopreservation**

The process of cooling and storing cells, tissues, or organs at very low or freezing temperatures to save them for future use. Also called cryobanking.

### **cryosurgery**

A procedure in which an extremely cold liquid or an instrument called a cryoprobe is used to freeze and destroy abnormal tissue. A cryoprobe is cooled with substances such as liquid nitrogen, liquid nitrous oxide, or compressed argon gas. Cryosurgery may be used to treat certain types of cancer and some conditions that may become cancer. Also called cryoablation and cryotherapy.

### **cryotherapy**

A procedure in which an extremely cold liquid or an instrument called a cryoprobe is used to freeze and destroy abnormal tissue. A cryoprobe is cooled with substances such as liquid nitrogen, liquid nitrous oxide, or compressed argon gas. Cryotherapy may be used to treat certain types of cancer and some conditions that may become cancer. Also called cryoablation and cryosurgery.

### **cryptorchidism**

A condition in which one or both testicles fail to move from the abdomen, where they develop before birth, into the scrotum. Cryptorchidism may increase the risk for development of testicular cancer. Also called undescended testicles.

### **ctDNA**

Small pieces of DNA that are released into a person's blood by tumor cells as they die. A sample of blood can be used to look for and measure the amount of ctDNA and identify specific mutations (changes) in the DNA. ctDNA is being used as a biomarker to help diagnose some types of cancer, to help plan treatment, or to find out how well treatment is working or if cancer has come back. Also called circulating tumor DNA.

### **cubic centimeter**

A measure of volume in the metric system. One thousand cubic centimeters equal one liter. Also called cc, milliliter, and mL.

### **cultural competency**

The ability to understand, interact, and work well with people of different cultures. In medicine, one goal of cultural competency is to help make sure that the quality of health care is equal among different cultural groups.

**culture**

The beliefs, values, and behaviors that are shared within a group, such as a religious group or a nation. Culture includes language, customs, and beliefs about roles and relationships. In medicine, culture also refers to the growth of microorganisms, such as bacteria and yeast, or human, plant, or animal cells or tissue in the laboratory.

**cultured cell**

A human, plant, or animal cell that has been adapted to grow in the laboratory. Cultured cells may be used to diagnose infections, to test new drugs, and in research.

**cultured cell line**

Cells of a single type (human, animal, or plant) that have been adapted to grow continuously in the laboratory and are used in research.

**cumulative dose**

In medicine, the total amount of a drug or radiation given to a patient over time; for example, the total dose of radiation given in a series of radiation treatments.

**cumulative exposure**

The total amount of a substance or radiation that a person is exposed to over time. Cumulative exposure to a harmful substance or radiation may increase the risk of certain diseases or conditions.

**cumulative risk**

A measure of the total risk that a certain event will happen during a given period of time. In cancer research, it is the likelihood that a person who is free of a certain type of cancer will develop that cancer by a specific age. For example, a woman with no known risk factors for breast cancer has a cumulative risk of getting breast cancer over a lifetime of 90 years of about 12-13%. This means one out of every eight women will get breast cancer by age 90 years.

**cupping**

A procedure in which a rounded glass cup is warmed and placed upside down over an area of the body, creating suction that holds the cup to the skin. Cupping increases the flow of blood. In traditional Chinese medicine, it is also thought to increase the flow of qi (vital energy).

**curative surgery**

Surgery to remove all malignant (cancerous) tissue, which is meant to cure the disease. This includes removing part or all of the cancerous organ or tissue and a small amount of healthy tissue around it. Nearby lymph nodes may also be removed. Curative surgery works best for localized cancer. Chemotherapy or radiation therapy may be given before surgery to shrink the tumor or after surgery to kill any cancer cells that remain.

**curative therapy**

Treatment that is meant to cure an illness or disease with the goal of a full recovery that includes an acceptable quality of life. For cancer, a curative therapy approach depends on the cancer type and stage.

**curcumin**

A natural substance that comes from the underground stem of an East Indian plant called turmeric, or *Curcuma longa*, and gives turmeric its yellow color. The

turmeric plant has been used for many years in traditional Asian medicine to treat certain conditions. Curcumin, which is found in turmeric, may have antioxidant and anti-inflammatory effects in the body. It is being studied in the prevention and treatment of some types of cancer.

#### **cure**

To heal or restore health; a treatment to restore health.

#### **curettage**

Removal of tissue with a curette (a spoon-shaped instrument with a sharp edge).

#### **curette**

A spoon-shaped instrument with a sharp edge.

#### **custirsen sodium**

A substance being studied in the treatment of cancer. It blocks the production of a protein called clusterin, which helps cells live longer. This may kill cancer cells that need clusterin to grow. It may also make cells more sensitive to anticancer drugs. It is a type of antisense oligonucleotide, and a type of chemosensitizing agent. Also called OGX-011.

#### **cut point**

In medicine, the test result values used to categorize certain types of laboratory findings as normal or abnormal. Values above or below the cut point may be used to help doctors determine the presence or risk of certain diseases or conditions, such as obesity, diabetes, or high cholesterol.

#### **cutaneous**

Having to do with the skin.

#### **cutaneous HPV**

A group of human papillomaviruses (HPV) that infect the cells on the surface of the skin and cause skin warts, usually on the hands and feet. These are considered common warts and are not transmitted sexually. Cutaneous HPV infections usually spread by casual skin-to-skin contact with an infected person or by sharing an item, such as a towel, with that person. Cutaneous HPV does not cause genital warts or cancer. Also called cutaneous human papillomavirus.

#### **cutaneous T-cell lymphoma**

A type of cancer that begins in T cells (a type of white blood cell) and affects the skin. There are several different types of cutaneous T-cell lymphomas. Most are marked by an itchy, scaly, red rash that can thicken or form tumors on the skin, or by skin redness all over the body. The lymph nodes may also be swollen. Cutaneous T-cell lymphomas usually grow slowly, but some may grow quickly and spread to the lymph nodes or to other organs, such as the spleen or liver. They usually occur in middle-aged or older men. The most common types of cutaneous T-cell lymphoma are mycosis fungoides and Sézary syndrome. Cutaneous T-cell lymphoma is a type of non-Hodgkin lymphoma.

#### **cutaneous breast cancer**

Cancer that has spread from the breast to the skin.

### **cutaneous human papillomavirus**

A group of human papillomaviruses (HPV) that infect the cells on the surface of the skin and cause skin warts, usually on the hands and feet. These are considered common warts and are not transmitted sexually. Cutaneous human papillomavirus infections usually spread by casual skin-to-skin contact with an infected person or by sharing an item, such as a towel, with that person. Cutaneous human papillomavirus does not cause genital warts or cancer. Also called cutaneous HPV.

### **cutaneous leiomyoma**

A benign (not cancer) tumor that forms in the muscle tissue around a hair follicle (the opening on the skin through which hair grows). Cutaneous leiomyomas appear as small bumps that may be the same color as, or darker than, the nearby skin. They usually occur on the arms, legs, chest, and abdomen. Cutaneous leiomyomas tend to increase in size and number over time and can be painful to the touch or in cold temperatures. They often occur in patients with an inherited condition called hereditary leiomyomatosis and renal cell cancer.

### **cutaneous lichen amyloidosis**

A chronic condition marked by the presence of itchy, reddish-brown, scaly, raised bumps on the skin. Over time, the bumps can form thick, hard patches on the skin. They usually occur on the shins but can also occur on the thighs, feet, neck, back, and lower part of the arm. These bumps are a result of a buildup of abnormal proteins in the skin. The cause of cutaneous lichen amyloidosis is usually not known. Sometimes it is found in people with a rare genetic condition called multiple endocrine neoplasia type 2A (MEN2A) and in people with mutations (changes) in certain genes. Cutaneous lichen amyloidosis most often occurs in middle adulthood and is more common in men and in people with darker skin.

### **cutaneous squamous cell carcinoma**

Cancer that begins in cells that form the epidermis (outer layer of the skin). It usually occurs on areas of the skin that have been exposed to natural sunlight or artificial sunlight (such as from tanning beds) over long periods of time. These areas include the face, ears, lower lip, neck, arms, or back of the hands. It may also occur on areas of the skin that have been burned or exposed to chemicals or radiation. Cutaneous squamous cell carcinoma may appear as a firm red bump, a scaly red patch, an open sore, or a wart that may crust or bleed easily. Cutaneous squamous cell carcinoma that has not spread can usually be cured. Also called squamous cell carcinoma of the skin and squamous cell skin cancer.

### **cyanocobalamin**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Cyanocobalamin helps make red blood cells, DNA, RNA, energy, and tissues, and keeps nerve cells healthy. It is found in liver, meat, eggs, poultry, shellfish, milk, and milk products. Cyanocobalamin is water-soluble (can dissolve in water) and must be taken in every day. Not enough cyanocobalamin can cause certain types of anemia (a condition in which the number of red blood cells is below normal) and neurologic disorders. It is being studied with folate in the prevention and treatment of some types of cancer. Also called cobalamin and vitamin B12.

### **cyanogenic glucoside**

A plant compound that contains sugar and produces cyanide.

## **cyanosis**

Blue-colored skin caused by too little oxygen in the blood.

## **cycle of treatment**

A period of treatment followed by a period of rest (no treatment) that is repeated on a regular schedule. For example, treatment given for one week followed by three weeks of rest is one cycle of treatment. When this cycle is repeated multiple times on a regular schedule, it makes up a course of treatment. Also called treatment cycle.

## **cyclic neutropenia**

A chronic condition that affects neutrophils (a type of white blood cell). In cyclic neutropenia, the number of neutrophils in the blood goes in cycles from normal to low and back to normal again. Symptoms include fever, inflamed mucous membranes in the mouth, and infections. Also called periodic neutropenia.

## **cyclin-D1**

A protein that helps control cell division. It is found in higher than normal amounts in several types of cancer cells. Measuring the amount of cyclin-D1 in blood cells may help to diagnose cancer or plan cancer treatment. Cyclin-D1 is a cell cycle protein and a type of tumor marker.

## **cyclooxygenase inhibitor**

COX inhibitor. A type of drug that is used to treat inflammation and pain, and is being studied in the prevention and treatment of cancer. Cyclo-oxygenase inhibitors belong to the family of drugs called nonsteroidal anti-inflammatory drugs (NSAIDs). Also called COX inhibitor.

## **cyclooxygenase-2**

An enzyme that speeds up the formation of substances that cause inflammation and pain. It may also cause tumor cells to grow. Some tumors have high levels of cyclooxygenase-2 and blocking its activity may reduce tumor growth. Also called COX-2 and prostaglandin-endoperoxide synthase 2.

## **cyclooxygenase-2 inhibitor**

A nonsteroidal anti-inflammatory drug used to relieve pain and inflammation. Cyclooxygenase-2 inhibitors are being studied in the prevention of colon polyps, and as anticancer drugs. Also called COX-2 inhibitor.

## **cyclophosphamide**

A drug used to treat many types of cancer and a certain type of kidney disease in children. Cyclophosphamide damages the cell's DNA and may kill cancer cells. It may also lower the body's immune response. Cyclophosphamide is a type of alkylating agent. Also called CTX.

## **cyclosporine**

A drug used to help reduce the risk of rejection of organ and bone marrow transplants by the body. It is also used in clinical trials to make cancer cells more sensitive to anticancer drugs.

## **cypheptadine**

A drug that is used to treat asthma, allergies, and colds, and to relieve itching caused by certain skin disorders. It has also been used to stimulate appetite and weight gain, and is being studied in the treatment of weight loss caused by



cancer and its treatment. Cyproheptadine belongs to the family of drugs called antihistamines.

### **cyproterone acetate**

A synthetic hormone being studied for treatment of hot flashes in men with prostate cancer who have had both testicles removed by surgery.

### **cyst**

A closed, sac-like pocket of tissue that can form anywhere in the body. It may be filled with fluid, air, pus, or other material. Most cysts are benign (not cancer).

### **cystectomy**

Surgery to remove all or part of the bladder (the organ that holds urine) or to remove a cyst (a sac or capsule in the body).

### **cystic duct**

A tube that carries bile from the gall bladder. It joins the common hepatic duct to form the common bile duct. It is part of the biliary duct system.

### **cystic fibrosis**

A common hereditary disease in which exocrine (secretory) glands produce abnormally thick mucus. This mucus can cause problems in digestion, breathing, and body cooling.

### **cystic nephroma**

A rare, benign (not cancer) kidney tumor made up of fluid-filled cysts. Cystic nephroma can occur in one or both kidneys. Signs and symptoms may include pain in the abdomen or back, a lump in the abdomen, blood in the urine, urinary tract infection, anemia, and fever. Cystic nephroma usually occurs in young children or middle-aged adults. Cystic nephroma may also be found in patients who have pleuropulmonary blastoma (a rare, fast-growing cancer that forms in the tissues of the lung and chest cavity). Some patients with cystic nephroma have a mutation (change) in a gene called DICER1.

### **cystitis**

Inflammation of the lining of the bladder. Symptoms include pain and a burning feeling while urinating, blood in the urine, dark or cloudy urine, feeling a need to urinate often or right away, being unable to control the flow of urine, and pain in the pelvis or lower back. Cystitis is most often caused by an infection, but it may also be caused by taking certain medicines (such as anticancer drugs), radiation therapy to the pelvis, being exposed to chemicals (such as perfumes or dyes), or having a catheter in the bladder for a long time. It may also be caused by other conditions, such as diabetes, kidney stones, an enlarged prostate, or a spinal cord injury.

### **cystoprostatectomy**

Surgery to remove the bladder and the prostate. The seminal vesicles and nearby lymph nodes may also be removed. The prostate and seminal vesicles are glands in the male reproductive system that help make semen. Also called prostatocystectomy.

### **cystosarcoma phyllodes of the breast**

A rare tumor that usually forms in the connective tissue of the breast. Cystosarcoma phyllodes of the breasts tend to grow quickly and get large, but they rarely spread to other parts of the body. Most are benign (not cancer), but

some may be malignant (cancer) or borderline (in between benign and malignant). Cystosarcoma phyllodes of the breasts are usually removed by surgery, but they can come back. They are most common in women between 40 and 50 years of age. Also called CSP and phyllodes tumor.

### **cystoscope**

A thin, tube-like instrument used to look inside the bladder and urethra. A cystoscope has a light and a lens for viewing and may have a tool to remove tissue.

### **cystoscopy**

Examination of the bladder and urethra using a cystoscope, inserted into the urethra. A cystoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

### **cystourethrectomy**

Surgery to remove the bladder (the organ that holds urine) and urethra (the tube through which urine leaves the body).

### **cytarabine**

A drug used with other drugs to treat adults and children with acute myeloid leukemia and to prevent and treat a type of leukemia that has spread to the meninges (the tissue that covers and protects the brain and spinal cord). It may also be used to treat acute lymphoblastic leukemia and blastic phase chronic myelogenous leukemia. It is also being studied in the treatment of other types of cancer. Cytarabine stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called ARA-C.

### **cytochlor**

A substance being studied in the treatment of cancer that has spread to the brain. It has also been studied in the treatment of other types of cancer. Cytochlor damages the DNA in cancer cells, which may make them easier to kill with radiation therapy. It is a type of radiosensitizing agent.

### **cytochrome P450 enzyme system**

A group of enzymes involved in drug metabolism and found in high levels in the liver. These enzymes change many drugs, including anticancer drugs, into less toxic forms that are easier for the body to excrete.

### **cytogenetic analysis**

The process of analyzing cells in a sample of tissue, blood, bone marrow, or amniotic fluid to look for changes in chromosomes, including broken, missing, rearranged, or extra chromosomes. Changes in certain chromosomes may be a sign of a genetic disease or condition or some types of cancer. Cytogenetic analysis may be used to help diagnose disease, plan treatment, or find out how well treatment is working.

### **cytogenetics**

The study of chromosomes, which are long strands of DNA and protein that contain most of the genetic information in a cell. Cytogenetics involves testing samples of tissue, blood, or bone marrow in a laboratory to look for changes in chromosomes, including broken, missing, rearranged, or extra chromosomes. Changes in certain chromosomes may be a sign of a genetic disease or

condition or some types of cancer. Cytogenetics may be used to help diagnose a disease or condition, plan treatment, or find out how well treatment is working.

### **cytokeratin**

A type of protein found on epithelial cells, which line the inside and outside surfaces of the body. Cytokeratins help form the tissues of the hair, nails, and the outer layer of the skin. They are also found on cells in the lining of organs, glands, and other parts of the body. Certain cytokeratins may be found in higher than normal amounts in patients with different types of epithelial cell cancers, including lung, breast, colorectal, bladder, and head and neck cancers. Measuring the amount of specific cytokeratins in the blood may help to plan cancer treatment or find out how well treatment is working or if cancer has come back. A cytokeratin is a type of tumor marker. Also called keratin.

### **cytokine**

A type of protein that is made by certain immune and non-immune cells and has an effect on the immune system. Some cytokines stimulate the immune system and others slow it down. They can also be made in the laboratory and used to help the body fight cancer, infections, and other diseases. Examples of cytokines are interleukins, interferons, and colony-stimulating factors (filgrastim, sargramostim).

### **cytokine release syndrome**

A condition that may occur after treatment with some types of immunotherapy, such as monoclonal antibodies and CAR-T cells. Cytokine release syndrome is caused by a large, rapid release of cytokines into the blood from immune cells affected by the immunotherapy. Cytokines are immune substances that have many different actions in the body. Signs and symptoms of cytokine release syndrome include fever, nausea, headache, rash, rapid heartbeat, low blood pressure, and trouble breathing. Most patients have a mild reaction, but sometimes, the reaction may be severe or life threatening.

### **cytokine storm**

A severe immune reaction in which the body releases too many cytokines into the blood too quickly. Cytokines play an important role in normal immune responses, but having a large amount of them released in the body all at once can be harmful. A cytokine storm can occur as a result of an infection, autoimmune condition, or other disease. It may also occur after treatment with some types of immunotherapy. Signs and symptoms include high fever, inflammation (redness and swelling), and severe fatigue and nausea. Sometimes, a cytokine storm may be severe or life threatening and lead to multiple organ failure. Also called hypercytokinemia.

### **cytokine therapy**

Treatment that uses cytokines (substances made by immune cells) to help the body fight cancer, infection, or other diseases. Cytokines play an important role in the body's immune response. They can also be made in the laboratory to use as treatment for different diseases. In cancer, cytokine therapy may help the immune system kill cancer cells or keep them from growing. The two main types of cytokines used to treat cancer are interleukins and interferons.

### **cytology**

The study of cells using a microscope.

**cytomegalovirus**

A virus that may be carried in an inactive state for life by healthy individuals. It is a cause of severe pneumonia in people with a suppressed immune system, such as those undergoing bone marrow transplantation or those with leukemia or lymphoma. Also called CMV.

**cytopenia**

A condition in which there is a lower-than-normal number of blood cells.

**cytoplasm**

The fluid inside a cell but outside the cell's nucleus. Most chemical reactions in a cell take place in the cytoplasm.

**cytosine**

A chemical compound that is used to make one of the building blocks of DNA and RNA. It is a type of pyrimidine.

**cytoskeleton**

The large network consisting of protein fibers and other molecules that gives shape and structure to cells in the body. The cytoskeleton helps organize structures within the cell called organelles and other substances found in the fluid inside the cell. It plays an important role in many cell functions, including cell movement, signaling, and division. Abnormal changes in the cytoskeleton may lead to the development of many different diseases, including cancer. The cytoskeleton can also affect how cancer cells grow and spread in the body. Also called intracellular matrix.

**cytostatic agent**

A substance that slows or stops the growth of cells, including cancer cells, without killing them. These agents may cause tumors to stop growing and spreading without causing them to shrink in size.

**cytotoxic T cell**

A type of immune cell that can kill certain cells, including foreign cells, cancer cells, and cells infected with a virus. Cytotoxic T cells can be separated from other blood cells, grown in the laboratory, and then given to a patient to kill cancer cells. A cytotoxic T cell is a type of white blood cell and a type of lymphocyte. Also called cytotoxic T lymphocyte and killer T cell.

**cytotoxic T lymphocyte**

A type of immune cell that can kill certain cells, including foreign cells, cancer cells, and cells infected with a virus. Cytotoxic T lymphocytes can be separated from other blood cells, grown in the laboratory, and then given to a patient to kill cancer cells. A cytotoxic T lymphocyte is a type of white blood cell and a type of lymphocyte. Also called cytotoxic T cell and killer T cell.

**cytotoxic agent**

A substance that kills cells, including cancer cells. These agents may stop cancer cells from dividing and growing and may cause tumors to shrink in size.

**cytotoxic chemotherapy**

Anticancer drugs that kill cells, especially cancer cells.

**cytotoxin**

A substance that can kill cells.

### **dMMR**

Describes cells that have mutations (changes) in certain genes that are involved in correcting mistakes made when DNA is copied in a cell. dMMR cells usually have many DNA mutations, which may lead to cancer. dMMR is most common in colorectal cancer, other types of gastrointestinal cancer, and endometrial cancer, but it may also be found in cancers of the breast, prostate, bladder, and thyroid and in an inherited disorder called Lynch syndrome. Knowing if a tumor is dMMR may help plan treatment or predict how well the tumor will respond to treatment. Also called deficient DNA mismatch repair, deficient mismatch repair, mismatch repair deficiency, and MMR deficiency.

### **da-huang**

The root of this plant has been used in some cultures to treat certain medical problems. It may have anti-inflammatory and anticancer effects. The scientific name is *Rheum palmatum* or *Rheum officinale*. Also called Chinese rhubarb, Indian rhubarb, rhubarb, and Turkish rhubarb.

### **dabrafenib mesylate**

A drug used alone or with trametinib to treat low-grade glioma (a type of brain tumor) in children aged 1 year and older and certain types of anaplastic thyroid cancer, non-small cell lung cancer, melanoma, and other solid tumors that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Dabrafenib mesylate blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called Tafinlar.

### **dacarbazine**

A drug used to treat Hodgkin lymphoma that did not get better with other anticancer drugs and melanoma that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Dacarbazine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent.

### **dacliximab**

A drug used to keep the body from rejecting kidney transplants. It is also being studied in the treatment of some types of cancer and other conditions. Dacliximab binds to receptors for a protein called interleukin-2, which are found on some types of immune cells and cancer cells. This may help suppress the body's immune response and it may help kill cancer cells. Dacliximab is a type of monoclonal antibody. Also called daclizumab and Zenapax.

### **daclizumab**

A drug used to keep the body from rejecting kidney transplants. It is also being studied in the treatment of some types of cancer and other conditions. Daclizumab binds to receptors for a protein called interleukin-2, which are found on some types of immune cells and cancer cells. This may help suppress the body's immune response and it may help kill cancer cells. Daclizumab is a type of monoclonal antibody. Also called dacliximab and Zenapax.

### **dacomitinib**

A drug used to treat non-small cell lung cancer that has spread, has not already been treated, and has certain mutations (changes) in the EGFR gene. It is also being studied in the treatment of other types of cancer. Dacomitinib blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called PF-00299804 and Vizimpro.

### **dactinomycin**

A drug that comes from the bacterium *Streptomyces parvulus* and is used alone or with other drugs to treat adults and children with Ewing sarcoma, gestational trophoblastic tumor, rhabdomyosarcoma, Wilms tumor, or certain types of testicular cancer and adults with certain types of solid tumors. It is also being studied in the treatment of other types of cancer. Dactinomycin damages the cell's DNA and may kill cancer cells. It is a type of antineoplastic antibiotic. Also called actinomycin D and Cosmegen.

### **daidzein**

An isoflavone found in soy products. Soy isoflavones are being studied in the prevention of cancer.

### **dalteparin sodium**

A drug used to prevent blood clots from forming or to treat blood clots that have formed in patients with cancer or other conditions. Dalteparin sodium is a type of anticoagulant. Also called Fragmin.

### **danazol**

A synthetic hormone that is a type of androgen and is used to treat endometriosis. It is being evaluated in the treatment of endometrial cancer.

### **dapsone**

A drug used to treat acne. It is also used to treat other types of skin diseases and certain bacterial infections, such as leprosy. It blocks bacteria from making a substance that they need to grow. Dapsone is a type of antibacterial agent and a type of anti-inflammatory agent.

### **daptomycin**

A drug used to treat certain bacterial skin and bloodstream infections in adults. Daptomycin is also being studied in the treatment of fever and neutropenia (an abnormal decrease in the number of neutrophils, a type of white blood cell) in patients with cancer. It is a type of antibiotic. Also called Cubicin.

### **daratumumab**

A drug used alone or with other drugs to treat adults with multiple myeloma. It is used in patients whose cancer is newly diagnosed and who can or cannot be treated with an autologous stem cell transplant. Daratumumab is also used in patients whose cancer came back or did not get better after treatment with one or more anticancer therapies. It is also being studied in the treatment of other types of cancer. Daratumumab binds to a protein called CD38, which is found on some types of immune cells and cancer cells, including myeloma cells. Daratumumab may block CD38 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Darzalex.

### **daratumumab and hyaluronidase**

A combination of two drugs used alone or with other drugs to treat adults with certain types of multiple myeloma or light chain amyloidosis. It is also being studied in the treatment of other types of cancer. Daratumumab binds to a protein called CD38, which is found on some types of immune cells and cancer cells, including myeloma cells. Daratumumab may block CD38 and help the immune system kill cancer cells. Hyaluronidase allows daratumumab to be given by injection under the skin. Daratumumab and hyaluronidase can be given in less time than daratumumab alone, which is given as an infusion. Also called Darzalex Faspro.



### **darbepoetin alfa**

A drug used to treat anemia caused by chronic kidney disease and some types of chemotherapy. Darbepoetin alfa is a form of erythropoietin (a substance naturally made by the kidneys) that is made in the laboratory. It helps the bone marrow make more red blood cells. Darbepoetin alfa is a type of antianemic and a type of erythropoiesis-stimulating agent. Also called Aranesp.

### **dark-field microscope**

A microscope (device used to magnify small objects) in which objects are lit at a very low angle from the side so that the background appears dark and the objects show up against this dark background.

### **darolutamide**

A drug used alone or with docetaxel to treat adults with certain types of prostate cancer. Darolutamide is used in patients whose cancer has spread to other parts of the body and responds to treatment that lowers testosterone levels or whose cancer has not spread to other parts of the body and no longer responds to treatment that lowers testosterone levels. It is also being studied in the treatment of other types of cancer. Darolutamide binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Darolutamide blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called Nubeqa.

### **dasatinib**

A drug used alone or with other drugs to treat adults and children aged 1 year and older with certain types of chronic myeloid leukemia or acute lymphoblastic leukemia that are Philadelphia chromosome positive. It is also being studied in the treatment of other types of cancer. Dasatinib blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called BMS-354825 and Sprycel.

### **daunomycin hydrochloride**

A drug that comes from the bacterium *Streptomyces coeruleorubidus* and is used with other drugs as remission induction therapy to treat adults with acute myeloid leukemia and adults and children with acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Daunomycin hydrochloride blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Daunorubicin is the active ingredient of daunorubicin hydrochloride. Also called daunorubicin hydrochloride.

### **daunorubicin hydrochloride**

A drug that comes from the bacterium *Streptomyces coeruleorubidus* and is used with other drugs as remission induction therapy to treat adults with acute myeloid leukemia and adults and children with acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Daunorubicin hydrochloride blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Daunorubicin is the active ingredient of daunorubicin hydrochloride. Also called daunomycin hydrochloride.

### **daunorubicin hydrochloride and cytarabine liposome**

A form of the anticancer drugs daunorubicin hydrochloride and cytarabine that is contained inside very tiny, fat-like particles and is used to treat adults with certain

types of newly diagnosed acute myeloid leukemia. Daunorubicin hydrochloride and cytarabine liposome may have fewer side effects and work better than other forms of these drugs. It is also being studied in the treatment of other types of cancer. Daunorubicin hydrochloride and cytarabine liposome is a type of anthracycline antibiotic, a type of topoisomerase inhibitor, and a type of antimetabolite. Also called Vyxeos.

### **de Gramont regimen**

A chemotherapy combination used to treat colorectal cancer. It is also used with radiation therapy to treat esophageal cancer and stomach cancer. It includes the drugs fluorouracil and leucovorin calcium.

### **de novo**

In cancer, the first occurrence of cancer in the body.

### **de novo mutation**

A term used to describe a change in the DNA sequence of a gene that is seen for the first time in a person and has not appeared in previous generations. A de novo mutation can explain how a person can have a genetic condition that did not occur in his or her parents. A de novo mutation can occur in an egg or sperm cell of a parent, in the fertilized egg soon after the egg and sperm unite, or in another type of cell during embryo development. A person who has a de novo mutation may pass the mutation to his or her child. Some de novo mutations may lead to cancer or other diseases. Also called de novo variant, new mutation, and new variant.

### **de novo variant**

A term used to describe a change in the DNA sequence of a gene that is seen for the first time in a person and has not appeared in previous generations. A de novo variant can explain how a person can have a genetic condition that did not occur in his or her parents. A de novo variant can occur in an egg or sperm cell of a parent, in the fertilized egg soon after the egg and sperm unite, or in another type of cell during embryo development. A person who has a de novo variant may pass the mutation to his or her child. Some de novo variants may lead to cancer or other diseases. Also called de novo mutation, new mutation, and new variant.

### **de qi sensation**

Tingling, numbness, heaviness, and other feelings that occur after an acupuncture needle has been properly placed in the body. The needle may be twirled, moved up and down at different speeds and depths, heated, or charged with a small electric current until the de qi sensation occurs.

### **death cap**

A type of poisonous mushroom that has harmful effects on the kidneys and liver. It is responsible for most fatal cases of mushroom poisoning. Also called Amanita phalloides.

### **death rattle**

A gurgling sound that comes from the back of the throat of a dying person. It is caused by the build-up of saliva and mucus in the throat and upper airways when the person is too weak to cough.

**death receptor 4**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of death receptor 4 on cancer cells may kill more cells. Also called DR4, TRAIL receptor 1, TRAIL-R1, and tumor necrosis factor receptor superfamily member 10A.

**death receptor 5**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of death receptor 5 on cancer cells may kill more cells. Also called DR5, TRAIL receptor 2, TRAIL-R2, and tumor necrosis factor receptor superfamily member 10B.

**debulking**

Surgical removal of as much of a tumor as possible. Debulking may increase the chance that chemotherapy or radiation therapy will kill all the tumor cells. It may also be done to relieve symptoms or help the patient live longer. Also called tumor debulking.

**deceased**

Dead.

**decitabine**

A drug used to treat adults with myelodysplastic syndromes, including chronic myelomonocytic leukemia. It is also being studied in the treatment of other types of cancer. Decitabine stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called Dacogen.

**decitabine and cedazuridine**

A combination of two drugs used to treat adults with myelodysplastic syndromes, including chronic myelomonocytic leukemia. It is also being studied in the treatment of other types of cancer. Decitabine stops cells from making DNA, which may help keep cancer cells from growing and may kill them. Cedazuridine prevents the breakdown of decitabine in the body, which may allow more cancer cells to be killed. Decitabine and cedazuridine is a type of antimetabolite and a type of cytidine deaminase inhibitor. Also called Inqovi.

**decortication**

Removal of part or all of the external surface of an organ.

**decubitus ulcer**

Damage to an area of the skin caused by constant pressure on the area for a long time. This pressure can lessen blood flow to the affected area, which may lead to tissue damage and tissue death. Decubitus ulcers often form on the skin covering bony areas of the body, such as the back, tailbone, hips, buttocks, elbows, heels, and ankles. Patients who are not able to get out of bed or change their position, or who always use a wheelchair have an increased risk of decubitus ulcers. Signs and symptoms include changes in skin color and swelling, warmth, tenderness, and pain in the affected area. If untreated, the skin may crack, blister, or break open and form a sore or ulcer, which may have pus-like drainage. Decubitus ulcers often heal slowly and if not treated can damage tissues deep under the skin, including fat, muscle, and bone. Also called bedsore, pressure sore, and pressure ulcer.

**deductible**

The amount of money that a patient with health insurance pays for health care services before the health insurance plan begins to pay. Health care services may include visits to the doctor, laboratory tests, prescription medicines, and hospital stays. Not all health care plans require a deductible. Usually, plans with higher deductibles have lower monthly premiums (payments).

**deep breathing**

A relaxation technique in which a person focuses on taking slow, deep breaths. Deep breathing involves breathing in slowly through the nose and then out through the mouth using the diaphragm (the thin muscle that separates the chest from the abdomen) and abdominal muscles. This helps boost the amount of oxygen in the blood, lowers blood pressure and heart rate, and reduces muscle tension. Deep breathing may be used to help relieve stress, pain, and anxiety. Also called abdominal breathing and diaphragmatic breathing.

**deep sedation**

A level of sedation in which a person is in a deep sleep, loses feeling, and is hard to wake up. Deep sedation is caused by special drugs and is used to help relieve anxiety during certain medical or surgical procedures. Oxygen may also be given to help the patient breathe and drugs that relieve pain may be given at the same time. The patient usually does not remember the procedure.

**deep vein thrombosis**

The formation of a blood clot in a deep vein of the leg or lower pelvis. Symptoms may include pain, swelling, warmth, and redness in the affected area. Also called DVT.

**defecation**

Movement of feces (undigested food, bacteria, mucus, and cells from the lining of the intestines) through the bowel and out the anus. Also called bowel movement.

**deferasirox**

A drug used to treat too much iron in the blood caused by blood transfusions. It is being studied in the treatment of myelodysplastic syndromes (a group of diseases in which the bone marrow does not make enough healthy blood cells) and other conditions. Deferasirox binds to extra iron in the blood. The drug and the iron are passed from the body in urine. It is a type of chelating agent. Also called Exjade.

**deferoxamine**

An iron-chelating agent that removes iron from tumors by inhibiting DNA synthesis and causing cancer cell death. It is used in conjunction with other anticancer agents in pediatric neuroblastoma therapy.

**deferred therapy**

Closely watching a patient's condition but not giving treatment unless symptoms appear or change, or there are changes in test results. Deferred therapy avoids problems that may be caused by treatments such as radiation or surgery. It is used to find early signs that the condition is getting worse. During deferred therapy, patients may be given certain exams and tests. It is sometimes used in prostate cancer. Also called expectant management.

**defibrotide sodium**

A drug used to treat hepatic veno-occlusive disease (a condition in which small veins in the liver are blocked) in adults and children who also have kidney or lung problems after receiving a stem cell transplant. Defibrotide sodium may affect the cells that line the inside of blood vessels and may help improve blood flow inside the liver. Also called Defitelio.

**deficiency**

In medicine, a shortage of a substance (such as a vitamin or mineral) needed by the body.

**deficient DNA mismatch repair**

Describes cells that have mutations (changes) in certain genes that are involved in correcting mistakes made when DNA is copied in a cell. DNA mismatch repair (MMR) deficient cells usually have many DNA mutations, which may lead to cancer. DNA MMR deficiency is most common in colorectal cancer, other types of gastrointestinal cancer, and endometrial cancer, but it may also be found in cancers of the breast, prostate, bladder, and thyroid and in an inherited disorder called Lynch syndrome. Knowing if a tumor is DNA MMR deficient may help plan treatment or predict how well the tumor will respond to treatment. Also called deficient mismatch repair, dMMR, mismatch repair deficiency, and MMR deficiency.

**deficient mismatch repair**

Describes cells that have mutations (changes) in certain genes that are involved in correcting mistakes made when DNA is copied in a cell. Mismatch repair (MMR) deficient cells usually have many DNA mutations, which may lead to cancer. MMR deficiency is most common in colorectal cancer, other types of gastrointestinal cancer, and endometrial cancer, but it may also be found in cancers of the breast, prostate, bladder, and thyroid and in an inherited disorder called Lynch syndrome. Knowing if a tumor is MMR deficient may help plan treatment or predict how well the tumor will respond to treatment. Also called deficient DNA mismatch repair, dMMR, mismatch repair deficiency, and MMR deficiency.

**definitive diagnosis**

A final diagnosis that is made after getting the results of tests, such as blood tests and biopsies, that are done to find out if a certain disease or condition is present.

**definitive treatment**

The treatment plan for a disease or disorder that has been chosen as the best one for a patient after all other choices have been considered.

**degarelix acetate**

A drug used to treat advanced prostate cancer. Degarelix acetate binds to gonadotropin-releasing hormone (GnRH) receptors in the pituitary gland. This causes the testicles to stop making testosterone. Degarelix acetate may stop the growth of cancer cells that need testosterone to grow. It is a type of GnRH antagonist. Also called Firmagon.

**degenerative disease**

A disease in which the function or structure of the affected tissues or organs changes for the worse over time. Osteoarthritis, osteoporosis, and Alzheimer disease are examples.

### **dehydration**

A condition that occurs when the body loses too much water and other fluids that it needs to work normally. Dehydration is usually caused by severe diarrhea and vomiting, but it may also be caused by not drinking enough water or other fluids, sweating too much, fever, urinating too much, or taking certain medicines. Signs and symptoms include thirst, dry mouth, headache, fatigue, dark-colored urine, urinating less than normal, sunken eyes or cheeks, dry and cool skin, dizziness, fainting, muscle cramps, rapid heartbeat, and rapid breathing. Dehydration can be severe, especially in young children and older adults.

### **dehydroepiandrosterone**

A substance being studied in the prevention of cancer. It is a type of steroid. Also called DHEA.

### **delayed-type hypersensitivity response**

An inflammatory response that develops 24 to 72 hours after exposure to an antigen that the immune system recognizes as foreign. This type of immune response involves mainly T cells rather than antibodies (which are made by B cells). Also called DTH.

### **deleterious mutation**

A change in the DNA sequence of a gene that causes a person to have or be at risk of developing a certain genetic disorder or disease, such as cancer. Deleterious mutations can be inherited from a parent or occur during a person's lifetime. Knowing if a person has a deleterious mutation may help prevent, diagnose, and treat diseases, such as cancer. Not everyone who has a deleterious mutation will develop the disease. Also called disease-causing mutation, pathogenic variant, predisposing mutation, and susceptibility gene mutation.

### **deletion 17p**

The loss of all or part of the short arm (also called the p arm) of chromosome 17. The deletion 17p leads to the loss of the tumor suppressor gene TP53, which is linked to many genetic conditions and some types of cancer, such as leukemia, multiple myeloma, and myelodysplastic syndrome. Checking for the deletion 17p may help diagnose cancer, plan treatment, or make a prognosis. Also called 17p deletion and chromosome 17p deletion.

### **delirium**

A mental state in which a person is confused and has reduced awareness of their surroundings. The person may also be anxious, agitated, or have less energy than usual and be tired or depressed. Delirium can also cause hallucinations and changes in attention span, mood or behavior, judgement, muscle control, and sleeping patterns. The symptoms of delirium usually occur suddenly, last a short time, and may come and go. It may be caused by infection, dehydration, abnormal levels of some electrolytes, organ failure, medicines, or serious illness, such as advanced cancer.

### **demeclocycline hydrochloride**

A substance being studied as a way to detect bone growth in patients receiving bisphosphonates (a type of drug used to treat bone pain caused by some types of cancer) for breast cancer. It binds to newly formed bone. A biopsy is done and bone growth is measured using a special microscope. Demeclocycline hydrochloride also blocks the uptake of water by the kidney and can bind calcium



in bones. It is a type of tetracycline antibiotic and a type of bone-labeling agent. Also called Declomycin.

### **dementia**

A condition in which a person loses the ability to think, remember, learn, make decisions, and solve problems. Symptoms may also include personality changes and emotional problems. There are many causes of dementia, including Alzheimer disease, brain cancer, and brain injury. Dementia usually gets worse over time.

### **dendritic cell**

A special type of immune cell that is found in tissues, such as the skin, and boosts immune responses by showing antigens on its surface to other cells of the immune system. A dendritic cell is a type of phagocyte and a type of antigen-presenting cell (APC).

### **dendritic cell vaccine**

A vaccine made of antigens and dendritic antigen-presenting cells (APCs).

### **denial**

In psychiatry, a state in which a person is unable or unwilling to see the truth or reality about an issue or situation.

### **denileukin diftitox**

A drug used to treat adults with stage I, stage II, or stage III cutaneous T-cell lymphoma that came back or did not get better after treatment with at least one other systemic therapy. It is also being studied in the treatment of other types of cancer. Denileukin diftitox is made by combining interleukin-2 (IL-2) with a bacterial toxin. The IL-2 part of the drug attaches to the cancer cells and the toxin kills them. Denileukin diftitox is a type of immunotoxin and a type of recombinant fusion protein. Also called Lymphir.

### **denomination**

In religion, describes a group whose members are organized under a common name and set of rules and have common beliefs and practices.

### **denosumab**

A drug used to prevent or treat certain bone problems. Denosumab is used under the brand name Xgeva to prevent bone problems caused by multiple myeloma or by solid tumors that have spread to the bone. It is also used in certain patients to treat giant cell tumor of the bone that cannot be removed by surgery, and to treat hypercalcemia that is caused by cancer and did not get better after treatment with bisphosphonates. Denosumab is also used under the brand name Prolia to increase bone mass in certain patients with breast cancer or prostate cancer who have a high risk of breaking bones. It is also used to treat osteoporosis in certain patients who have a high risk of breaking bones. Denosumab is also being studied in the treatment of other conditions and types of cancer. It binds to a protein called RANKL, which keeps RANKL from binding to another protein called RANK on the surface of certain bone cells, including bone cancer cells. This may help keep bone from breaking down and cancer cells from growing. Denosumab may also prevent the loss of calcium from the bones. It is a type of monoclonal antibody. Also called AMG 162.

**dense breast**

A term used to describe breast tissue that has more fibrous and glandular tissue than fatty tissue. Dense breast tissue can only be seen on a mammogram. Having dense breast tissue may make it harder to see breast cancer or other changes in the breast on a mammogram. Women with dense breast tissue have a higher risk of breast cancer than those with mostly fatty or less dense breast tissue. Having dense breast tissue is common, especially in younger women and in women taking hormone therapy for menopause.

**dense connective tissue**

A type of tissue that is mostly made up of tough protein fibers called collagen and cells called fibroblasts. Dense connective tissue supports, protects, and holds bones, muscles, and other tissues and organs in place. Ligaments, tendons, the inner layer of the skin, and the sclera (the white outer layer of the eye) are all types of dense connective tissue. Also called fibrous connective tissue.

**dental implant**

A metal device that is surgically placed in the jawbone. It acts as an anchor for an artificial tooth or teeth.

**dentist**

A health professional who has special training in caring for the teeth, gums, and other tissues in the mouth.

**deoxycytidine**

A drug that protects healthy tissues from the toxic effects of anticancer drugs.

**deoxyribonucleic acid**

The molecule inside cells that contains the genetic information needed for a person and most other organisms to develop and grow and is passed from one generation to the next. Deoxyribonucleic acid is made up of two strands that twist into the shape of a spiral ladder called a double helix. Each strand has a backbone that is made up of sugar and phosphate molecules that attach to one of four bases: adenine (A), thymine (T), guanine (G), and cytosine (C). The bases pair up with one another (A with T, and G with C) to form chemical bonds, which act like rungs on a ladder. This holds the two strands of deoxyribonucleic acid together. Also called DNA.

**depression**

A mental condition marked by ongoing feelings of sadness, despair, loss of energy, and difficulty dealing with normal daily life. Other symptoms of depression include feelings of worthlessness and hopelessness, loss of pleasure in activities, changes in eating or sleeping habits, and thoughts of death or suicide. Depression can affect anyone, and can be successfully treated. Depression affects 15-25% of cancer patients.

**depsipeptide**

A substance that is made naturally by some bacteria, fungi, and other organisms, and can also be made in the laboratory. Depsipeptides are being studied in the treatment of cancer.

**derivative**

In chemistry, a compound produced from or related to another.

### **dermabrasion**

A type of surgery used to make the skin smooth and to improve the way deep scars, pits, and wrinkles look. After numbing the skin, a doctor removes the top layer of skin using sandpaper or a brush or burr (small file) that spins at a high speed.

### **dermatitis**

Inflammation of the skin.

### **dermatofibrosarcoma protuberans**

A type of tumor that begins as a hard nodule and grows slowly. These tumors are usually found in the dermis (the inner layer of the two main layers of tissue that make up the skin) of the limbs or trunk of the body. They can grow into surrounding tissue but do not spread to other parts of the body. These tumors are related to giant cell fibroblastomas.

### **dermatologist**

A doctor who has special training to diagnose and treat skin problems.

### **dermatomyositis**

A disease that causes inflammation of the skin and muscles. Signs and symptoms include a red or bluish-purple patchy rash on the face, eyelids, knuckles, elbows, knees, toes, chest, or back. The rash may cause swelling, itching, and pain. Dermatomyositis can also cause muscle weakness in the upper body, hips, and thighs; trouble swallowing; breathing problems; and calcium deposits, which look like hard bumps under the skin or in the muscle. People with dermatomyositis may have an increased risk of certain heart, lung, or connective tissue diseases and certain types of cancer, including cancers of the cervix, lungs, pancreas, breast, ovaries, and gastrointestinal tract. Dermatomyositis can occur in both children and adults.

### **dermatoscope**

A small, handheld device used to examine the skin, nails, scalp, and hair. A dermatoscope has a light and a special magnifying lens that can show skin lesions or other suspicious areas on the skin more clearly than the eye alone. Sometimes a thin layer of alcohol, gel, or oil is placed on the skin lesion to make it easier to see. Some dermatoscopes can also take pictures or videos of the area being examined. A dermatoscope may be used to help diagnose skin cancer or other skin-related conditions, such as vitiligo, scabies, and hair loss.

### **dermis**

The inner layer of the two main layers of the skin. The dermis has connective tissue, blood vessels, oil and sweat glands, nerves, hair follicles, and other structures. It is made up of a thin upper layer called the papillary dermis, and a thick lower layer called the reticular dermis.

### **dermoid cyst**

A type of tumor that contains a cyst filled with tissues that are normally found in the outer layers of the skin, including sweat and oil glands. These may also contain elements of hair and teeth. Dermoid cysts can form anywhere in the body, but they usually form in the ovary, testes, the skin of the head, neck, face, or lower back, or in the central nervous system. Dermoid cysts are benign (not cancer) and tend to grow slowly. They are present at birth but may not be found until later in life. Dermoid cysts are a type of germ cell tumor called a mature teratoma.

**deslorelin**

A substance being studied in the treatment of cancer as a way to block sex hormones made by the ovaries or testicles. It is a type of gonadotropin-releasing hormone analog.

**desmoid tumor**

A type of soft tissue tumor that forms in fibrous (connective) tissue, usually in the arms, legs, or abdomen. It may also occur in the head and neck. Desmoid tumors are usually benign (not cancer). They often recur (come back) after treatment and spread to nearby tissue, but they rarely spread to other parts of the body. They may occur in adults or children. Also called aggressive fibromatosis and desmoid-type fibromatosis.

**desmoid-type fibromatosis**

A type of soft tissue tumor that forms in fibrous (connective) tissue, usually in the arms, legs, or abdomen. It may also occur in the head and neck. Desmoid-type fibromatoses are usually benign (not cancer). They often recur (come back) after treatment and spread to nearby tissue, but they rarely spread to other parts of the body. They may occur in adults or children. Also called aggressive fibromatosis and desmoid tumor.

**desmoplastic**

Causing or forming adhesions or fibrous connective tissue within a tumor.

**desmoplastic melanoma**

A rare form of malignant melanoma marked by nonpigmented lesions on sun-exposed areas of the body, most commonly on the head and neck.

**desmoplastic small round cell tumor**

A rare, aggressive cancer that usually affects young males and usually is located in the abdomen.

**detoxify**

To make something less poisonous or harmful. It may refer to the process of removing toxins, poisons, or other harmful substances from the body.

**developmental stage**

The physical, mental, and emotional stages a child goes through as he or she grows and matures.

**deviant**

Different from what is normal or standard, especially in terms of behavior.

**device**

An object that has a specific use. In medicine, wheelchairs, pumps, and artificial limbs are examples of devices.

**dexamethasone**

A drug used to reduce inflammation and lower the body's immune response. It is used with other drugs to treat leukemia, lymphoma, mycosis fungoides (a type of skin lymphoma), and multiple myeloma. Dexamethasone is also used alone or with other drugs to prevent or treat many other diseases and conditions. These include conditions related to cancer and its treatment, such as anemia (a low level of red blood cells), allergic reactions, swelling in the brain, and high levels of calcium in the blood. Dexamethasone is a type of corticosteroid.

### **dexmethylphenidate**

A substance being studied in the treatment of fatigue and nervous system side effects caused by chemotherapy. It is a type of central nervous system stimulant.

### **dexrazoxane hydrochloride**

A drug used to treat severe side effects caused by certain types of anticancer drugs. It is used under the brand names Totect and Zinecard to reduce heart damage in women who are receiving doxorubicin for breast cancer that has spread to other parts of the body. It is also used under the brand name Totect to treat the toxic effects of an anticancer drug that leaks from a vein into surrounding tissue and causes tissue damage. Dexrazoxane hydrochloride is also being studied in the treatment of some types of cancer. It is a type of cardioprotective agent, a type of chemoprotective agent, and a type of topoisomerase inhibitor. Dexrazoxane is the active ingredient of dexrazoxane hydrochloride.

### **dextroamphetamine-amphetamine**

A combination of drugs used as a treatment for attention deficit hyperactivity disorder (ADHD) and narcolepsy (a sleep disorder). It is a type of stimulant. Also called Adderall.

### **dextromethorphan acetic acid**

An anticancer drug that is a type of angiogenesis inhibitor.

### **di-dgA-RFB4**

An anticancer drug that is a combination of a monoclonal antibody (RFB4) and an immunotoxin (dgA).

### **diabetes**

Any of several diseases in which the kidneys make a large amount of urine. Diabetes usually refers to diabetes mellitus in which there is also a high level of glucose (a type of sugar) in the blood because the body does not make enough insulin or use it the way it should.

### **diabetes insipidus**

A condition in which a person is very thirsty and makes large amounts of urine. The most common types of diabetes insipidus are central diabetes insipidus (a pituitary disorder) and nephrogenic diabetes insipidus (kidney failure). Diabetes insipidus is not related to diabetes mellitus, which is more common.

### **diabetes mellitus**

A disease in which the body does not control the amount of glucose (a type of sugar) in the blood and the kidneys make a large amount of urine. This disease occurs when the body does not make enough insulin or does not use it the way it should.

### **diacetylmorphine hydrochloride**

A substance made from morphine. Diacetylmorphine hydrochloride is very addictive, and it is illegal to use or sell it in the United States. It may be used outside the United States to treat severe pain. Diacetylmorphine hydrochloride binds to opioid receptors in the central nervous system. It is a type of analgesic agent and a type of opiate. Also called diamorphine hydrochloride and heroin.

**diagnosis**

The process of identifying a disease, condition, or injury from its signs and symptoms. A health history, physical exam, and tests, such as blood tests, imaging tests, and biopsies, may be used to help make a diagnosis.

**diagnostic mammogram**

An x-ray picture of the breast used to check for breast cancer after a lump or other sign or symptom of the disease has been found. It is also used to follow up on a suspicious change found during a screening mammogram. A diagnostic mammogram usually involves taking more detailed x-ray pictures of the breast from different angles to check the suspicious area more closely.

**diagnostic procedure**

A test used to help figure out what disease or condition a person has based on their signs and symptoms. Diagnostic procedures may also be used to help plan treatment, find out how well treatment is working, and make a prognosis. There are many different types of diagnostic procedures. Examples include laboratory tests (such as blood and urine tests), imaging tests (such as mammography and CT scan), endoscopy (such as colonoscopy and bronchoscopy), and biopsy. Also called diagnostic test.

**diagnostic technique**

A type of method or test used to help diagnose a disease or condition. Imaging tests and tests to measure blood pressure, pulse, and temperature are examples of diagnostic techniques.

**diagnostic test**

A test used to help figure out what disease or condition a person has based on their signs and symptoms. Diagnostic tests may also be used to help plan treatment, find out how well treatment is working, and make a prognosis. There are many different types of diagnostic tests. Examples include laboratory tests (such as blood and urine tests), imaging tests (such as mammography and CT scan), endoscopy (such as colonoscopy and bronchoscopy), and biopsy. Also called diagnostic procedure.

**diagnostic trial**

A research study that evaluates methods of detecting disease.

**dialysis**

The process of filtering the blood when the kidneys are not able to cleanse it.

**diameter**

The length of a straight line that extends from one edge of a tumor or other object, through its center and to the opposite edge. It is usually used to measure the size of round or spherical shapes.

**diamorphine hydrochloride**

A substance made from morphine. Diamorphine hydrochloride is very addictive, and it is illegal to use or sell it in the United States. It may be used outside the United States to treat severe pain. Diamorphine hydrochloride binds to opioid receptors in the central nervous system. It is a type of analgesic agent and a type of opiate. Also called diacetylmorphine hydrochloride and heroin.



**diaphragm**

The thin muscle below the lungs and heart that separates the chest from the abdomen.

**diaphragmatic breathing**

A relaxation technique in which a person focuses on taking slow, deep breaths. Diaphragmatic breathing involves breathing in slowly through the nose and then out through the mouth using the diaphragm (the thin muscle that separates the chest from the abdomen) and abdominal muscles. This helps boost the amount of oxygen in the blood, lowers blood pressure and heart rate, and reduces muscle tension. Diaphragmatic breathing may be used to help relieve stress, pain, and anxiety. Also called abdominal breathing and deep breathing.

**diarrhea**

Frequent and watery bowel movements.

**diathermy**

A procedure in which tissue is heated to destroy abnormal cells. The heat may come from electric currents, microwaves, radio waves, or ultrasound. Diathermy is a type of hyperthermia therapy. Also called electrodiathermy.

**diazepam**

A drug used to treat mild to moderate anxiety and tension and to relax muscles. It is a type of benzodiazepine. Also called Valium.

**diaziquone**

An anticancer drug that is able to cross the blood-brain barrier and kill cancer cells in the central nervous system. Also called AZQ.

**diclofenac**

The active ingredient in a drug that is used to treat the symptoms of rheumatoid arthritis and is being studied in the prevention and treatment of some types of skin cancer. It blocks substances that cause inflammation and pain. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of cyclooxygenase inhibitor, a type of nonsteroidal anti-inflammatory drug (NSAID), and a type of antiangiogenesis agent.

**diclofenac sodium**

A drug that is used to treat the symptoms of rheumatoid arthritis and is being studied in the prevention and treatment of some types of skin cancer. It blocks substances that cause inflammation and pain. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of cyclooxygenase inhibitor, a type of nonsteroidal anti-inflammatory drug (NSAID), and a type of antiangiogenesis agent. Also called Voltaren.

**diclofenac sodium gel**

The gel form of a drug that is used to treat the symptoms of rheumatoid arthritis and is being studied in the prevention and treatment of some types of skin cancer. It blocks substances that cause inflammation and pain. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of cyclooxygenase inhibitor, a type of nonsteroidal anti-inflammatory drug (NSAID), and a type of antiangiogenesis agent. Also called Voltaren gel.

**didanosine**

A drug used in the treatment of infections caused by viruses.

## **diet**

The things a person eats and drinks.

## **dietary counseling**

A process by which a health professional with special training in nutrition helps people make healthy food choices and form healthy eating habits. In cancer treatment, the goal of dietary counseling is to help patients stay healthy during and after treatment and to stay strong enough to fight infections and the recurrence of disease. Also called nutritional counseling.

## **dietary protocol**

A detailed diet plan that states what, how, and when a person will eat and drink. It may be used to test how a specific diet affects a health outcome, such as lower cholesterol.

## **dietary supplement**

A product that is added to the diet. A dietary supplement is taken by mouth and usually contains one or more dietary ingredients. Examples of dietary ingredients include vitamins, minerals, herbs, amino acids, and enzymes. A person should talk with their health care provider before taking dietary supplements, as some may have side effects or interact with other dietary supplements and medicines. Also called nutritional supplement.

## **diethylstilbestrol**

A synthetic form of the hormone estrogen that was prescribed to pregnant women between about 1940 and 1971 because it was thought to prevent miscarriages. Diethylstilbestrol may increase the risk of uterine, ovarian, or breast cancer in women who took it. It also has been linked to an increased risk of clear cell carcinoma of the vagina or cervix in daughters exposed to diethylstilbestrol before birth. Also called DES.

## **dietitian**

A health professional who has special training in diet and nutrition. Dietitians offer advice on nutrition and healthy eating habits to help people improve their health and well-being. Dietitians also help people who are recovering from illness or surgery or who have medical conditions, such as food allergies, eating disorders, swallowing problems, diabetes, heart or kidney disease, or cancer, meet their nutritional needs. Dietitians may provide nutritional counseling, meal planning, medical nutrition therapy (such as a special diet, dietary supplements, or intravenous or tube feedings), and nutrition education programs. Also called registered dietitian.

## **differentiated thyroid cancer**

A type of thyroid cancer in which the cancer cells look similar to normal thyroid cells when viewed under a microscope. Most differentiated thyroid cancers form in the follicular cells of the thyroid gland. They tend to grow slowly, can be treated, and can usually be cured. The most common types of differentiated thyroid cancer are papillary thyroid cancer and follicular thyroid cancer.

## **differentiating agent**

A substance that causes a cell to change from an immature form to a mature form. In cancer, a differentiating agent may help cancer cells to become more like normal cells and to grow and spread more slowly. Some differentiating agents are being studied in the prevention and treatment of cancer.

## **differentiation**

In biology, describes the processes by which immature cells become mature cells with specific functions. In cancer, this describes how much or how little tumor tissue looks like the normal tissue it came from. Well-differentiated cancer cells look more like normal cells and tend to grow and spread more slowly than poorly differentiated or undifferentiated cancer cells. Differentiation is used in tumor grading systems, which are different for each type of cancer.

## **differentiation syndrome**

A serious side effect that may occur in patients with acute promyelocytic leukemia or other types of acute myeloid leukemia who have been treated with certain types of anticancer drugs. Differentiation syndrome usually occurs within 1 to 2 weeks after starting treatment, but it can occur later. It is caused by a large, rapid release of cytokines (immune substances) from leukemia cells that are affected by the anticancer drugs. Signs and symptoms of differentiation syndrome include fever; cough; trouble breathing; weight gain; swelling of the arms, legs, and neck; build-up of excess fluid around the heart and lungs; low blood pressure; and kidney failure. Differentiation syndrome can be life-threatening if not treated early.

## **diffuse**

Widely spread; not localized or confined.

## **diffuse hyperplastic perilobar nephroblastomatosis**

A childhood condition in which abnormal tissue grows on the outer part of one or both kidneys. Diffuse hyperplastic perilobar nephroblastomatosis usually develops into Wilms tumor (a type of childhood kidney cancer) if not treated. Also called DHPLN.

## **diffuse intrinsic pontine glioma**

A rare, fast-growing tumor that forms in cells called glial cells in a part of the brain stem called the pons. Diffuse intrinsic pontine gliomas tend to spread to nearby tissue and other parts of the brain stem, are hard to treat, and have a poor prognosis (outcome). They usually occur in children. Also called DIPG.

## **diffuse large B-cell lymphoma**

A term used to describe a group of fast-growing B-cell non-Hodgkin lymphomas (NHL) in which the cancer cells look large when viewed under a microscope. Diffuse large B-cell lymphomas are the most common type of NHL and are marked by rapidly growing tumors in the lymph nodes, spleen, liver, bone marrow, or other tissues and organs. Signs and symptoms may include swollen lymph nodes, fever, drenching night sweats, fatigue, and weight loss. Diffuse large B-cell lymphomas can occur at any age but are more common in older adults. They may sometimes be called by the more general term, large B-cell lymphoma.

## **diffuse optical imaging**

A procedure that uses light waves to create 2-dimensional (2-D) or 3-dimensional (3-D) pictures of tissues inside the body. Diffuse optical imaging may be used to look at blood flow to the tissues and to measure changes in the amount of oxygen in them. This may help show the difference between normal and abnormal tissue. Diffuse optical imaging may be especially useful for looking at soft tissue, such as breast and brain tissue. It is being studied as an imaging test to help diagnose early-stage breast cancer and other conditions. Also called DOI.

### **diffuse optical tomography**

A procedure that uses light waves to create 3-dimensional (3-D) pictures of tissues inside the body. The pictures are created by a computer linked to the light source. Diffuse optical tomography may be used to look at blood flow to the tissues and to measure changes in the amount of oxygen in them. This may help show the difference between normal and abnormal tissue. Diffuse optical tomography may be especially useful for looking at soft tissue, such as breast and brain tissue. It is being studied as an imaging test to help diagnose early-stage breast cancer and other conditions. Also called DOT.

### **difluoromethylornithine**

A substance being studied in the treatment of cancer. Also called DFMO.

### **digestion**

The process of breaking down food into substances the body can use for energy, tissue growth, and repair.

### **digestive system**

The organs that take in food and liquids and break them down into substances that the body can use for energy, growth, and tissue repair. Waste products the body cannot use leave the body through bowel movements. The digestive system includes the mouth, pharynx (throat), esophagus, stomach, small intestine, large intestine, rectum, and anus. It also includes the salivary glands, liver, gallbladder, and pancreas, which make digestive juices and enzymes that help the body digest food and liquids. Also called gastrointestinal system.

### **digestive tract**

The organs that food and liquids travel through when they are swallowed, digested, absorbed, and leave the body as feces. These organs include the mouth, pharynx (throat), esophagus, stomach, small intestine, large intestine, rectum, and anus. The digestive tract is part of the digestive system. Also called alimentary tract and gastrointestinal tract.

### **digital breast tomosynthesis**

A procedure that uses x-rays to take a series of pictures of the inside of the breast from many different angles. A computer is used to make 3-D pictures of the breast from these x-rays. Digital breast tomosynthesis is used to check for breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). It may allow doctors to see breast tissue, including dense breast tissue, more clearly than with 2-D mammography. This may make breast tumors or other changes in the breast easier to find. Also called 3-D mammography and 3-dimensional mammography.

### **digital image analysis**

A method in which an image or other type of data is changed into a series of dots or numbers so that it can be viewed and studied on a computer. In medicine, this type of image analysis is being used to study organs or tissues, and in the diagnosis and treatment of disease.

### **digital mammography**

The use of a computer, rather than x-ray film, to create a picture of the breast.

### **digital photography**

A type of photography in which images can be viewed on a computer screen.

### **digital rectal examination**

An examination in which a doctor inserts a lubricated, gloved finger into the rectum to feel for abnormalities. Also called DRE.

### **digitalis**

A substance used to make drugs that are used to treat several heart conditions, including congestive heart failure. Digitalis is made from the dried leaves of *Digitalis purpurea* (common foxglove) plants. It is a type of cardiac glycoside.

### **digoxin**

A drug used to treat irregular heartbeat and some types of heart failure. It is also being studied in the treatment of some types of cancer. Digoxin helps the heart work normally by controlling the amount of calcium that goes into the heart muscle. It also may kill cancer cells and make them more sensitive to anticancer drugs. It is a type of cardiac glycoside. Also called Lanoxin.

### **dihematoporphyrin ether**

Used in photodynamic therapy, a drug that is absorbed by tumor cells; when exposed to light, it becomes active and kills the cancer cells.

### **dihydrofolate reductase inhibitor**

A substance that can build up in cancer cells and block them from using folate. Folate is a nutrient that rapidly dividing cells need to make DNA. Blocking folate use helps keep cancer cells from growing and may kill them. Some dihydrofolate reductase inhibitors are used to treat cancer. A dihydrofolate reductase inhibitor is a type of antifolate. Also called DHFR inhibitor.

### **dihydrotestosterone**

A hormone made from testosterone in the prostate, testes, and certain other tissues. It is needed to develop and maintain male sex characteristics, such as facial hair, deep voice, and muscle growth. High amounts of dihydrotestosterone may increase the growth of prostate cancer and make it harder to treat. Also called androstanolone and DHT.

### **diindolylmethane**

A substance being studied in the treatment of prostate cancer and in the prevention of cervical cancer. Diindolylmethane is found in cruciferous vegetables like broccoli, brussels sprouts, cauliflower, cabbage, and kale. It is a type of plant indole. Also called DIM.

### **dilatation and curettage**

A procedure to scrape and remove tissue from the inner lining of the uterus. The cervix is dilated (made larger) and a curette (spoon-shaped instrument) is inserted into the uterus to remove tissue. A tissue sample may then be checked under a microscope for signs of disease, such as infection or cancer. A dilatation and curettage may also be done after a miscarriage or to treat certain conditions, such as abnormal bleeding. Also called D&C and dilation and curettage.

### **dilate**

To widen or enlarge an opening or hollow structure beyond its usual size, such as the pupil of the eye or a blood vessel.

### **dilation and curettage**

A procedure to scrape and remove tissue from the inner lining of the uterus. The cervix is dilated (made larger) and a curette (spoon-shaped instrument) is

inserted into the uterus to remove tissue. A tissue sample may then be checked under a microscope for signs of disease, such as infection or cancer. A dilation and curettage may also be done after a miscarriage or to treat certain conditions, such as abnormal bleeding. Also called D&C and dilatation and curettage.

**dilator**

A device used to stretch or enlarge an opening.

**dilute**

To make something thinner, weaker, less concentrated, or less pure by adding something to it.

**dimesna**

A drug that belongs to the family of drugs called chemoprotective agents.

**dimethyl sulfoxide**

A colorless liquid that readily dissolves many chemicals and penetrates animal and plant tissues. It is used in human medicine, veterinary medicine, and pharmaceuticals.

**dimethylxanthenone acetic acid**

An anticancer drug that is a type of angiogenesis inhibitor.

**dinaciclib**

A substance being studied in the treatment of advanced melanoma (a type of skin cancer) and other types of cancer. It blocks cell division and may cause cancer cells to die. It is a type of cyclin-dependent kinase inhibitor. Also called CDK inhibitor SCH 727965.

**dinutuximab**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF), aldesleukin (IL-2), and 13-cis-retinoic acid to treat children with high-risk neuroblastoma. It is used in patients whose disease has gotten better with other anticancer treatment. Dinutuximab binds to a substance called GD2, which is found on some types of cancer cells. Dinutuximab may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Ch14.18, MOAB Ch14.18, monoclonal antibody Ch14.18, and Unituxin.

**diphenhydramine**

A drug used to treat allergies and relieve cough and itching caused by insect bites, sunburn, and poison oak or ivy. It is also used to treat mild Parkinson disease, to prevent and treat motion sickness, to relieve cough and cold symptoms, and as a sleep aid. It is a type of antihistamine.

**diphosphonate**

A drug or substance used to treat hypercalcemia (abnormally high blood calcium) and bone pain caused by some types of cancer. Forms of diphosphonates are also used to treat osteoporosis and for bone imaging. Diphosphonates inhibit a type of bone cell that breaks down bone. Also called bisphosphonate.

**diploid**

A term that describes a cell or organism with two complete sets of chromosomes. Most human cells, except for egg and sperm cells, are diploid and contain 23 pairs of chromosomes, for a total of 46 chromosomes in each cell.



**dipyridamole**

A drug that prevents blood cell clumping and enhances the effectiveness of fluorouracil and other chemotherapeutic agents.

**direct ophthalmoscopy**

An exam of the inside of the back of the eye using an ophthalmoscope (a flashlight-sized instrument with a light source and a set of rotating lenses).

**disability insurance**

An insurance plan that pays some of a person's income when he or she is disabled from an illness or injury and cannot work. The two main types of disability insurance are short-term disability (STD) and long-term disability (LTD). STD may last for up to 2 years. LTD usually begins after STD ends and may last for a person's lifetime.

**discharge**

In medicine, a fluid that comes out of the body. Discharge can be normal or a sign of disease. Discharge also means release of a patient from care.

**disease**

An abnormal condition that affects the structure or function of part or all of the body and is usually associated with specific signs and symptoms.

**disease progression**

Cancer that continues to grow or spread.

**disease-causing mutation**

A change in the DNA sequence of a gene that causes a person to have or be at risk of developing a certain genetic disorder or disease, such as cancer. Disease-causing mutations can be inherited from a parent or occur during a person's lifetime. Knowing if a person has a disease-causing mutation may help prevent, diagnose, and treat diseases, such as cancer. Not everyone who has a disease-causing mutation will develop the disease. Also called deleterious mutation, pathogenic variant, predisposing mutation, and susceptibility gene mutation.

**disease-free survival**

In cancer, the length of time after primary treatment for a cancer ends that the patient survives without any signs or symptoms of that cancer. In a clinical trial, measuring the disease-free survival is one way to see how well a new treatment works. Also called DFS, relapse-free survival, and RFS.

**disease-specific survival rate**

The percentage of people in a study or treatment group who have not died from a specific disease in a defined period of time. The time period usually begins at the time of diagnosis or at the start of treatment and ends at the time of death. Patients who died from causes other than the disease being studied are not counted in this measurement.

**disinfectant**

Any substance or process that is used primarily on non-living objects to kill germs, such as viruses, bacteria, and other microorganisms that can cause infection and disease. Most disinfectants are harsh chemicals but sometimes heat or radiation may be used.

**disorder**

In medicine, an abnormal condition that affects the body's function but may or may not have specific signs and symptoms. A disorder may indicate that a specific disease is present, but there is usually not enough evidence to make a diagnosis. There are many different types of disorders, including physical, mental, emotional, behavioral, genetic, and functional disorders.

**disorientation**

A mental state marked by confusion about time, place, or who one is.

**disseminate**

In medicine, disseminate means to scatter or spread widely throughout the body's tissues or organs. For example, cancer cells can break away from the original (primary) tumor, travel through the blood or lymph system, and disseminate to other organs or tissues in the body.

**distal**

In medicine, refers to a part of the body that is farther away from the center of the body than another part. For example, the fingers are distal to the shoulder. The opposite is proximal.

**distal bile duct cancer**

Cancer that forms in the area where the ducts from the liver and gallbladder join to form the common bile duct, which passes through the pancreas into the small intestine. Bile ducts carry bile from the liver and gallbladder to the small intestine. Distal bile duct cancer is a type of extrahepatic bile duct cancer.

**distal colon**

The last part of the colon. The distal colon includes the descending colon (the left side of the colon) and the sigmoid colon (the S-shaped section of the colon that connects to the rectum).

**distal pancreatectomy**

Surgery to remove the body and the tail of the pancreas. The spleen may also be removed. A distal pancreatectomy is usually done to remove benign (not cancer) or malignant (cancer) pancreatic tumors found in the body or tail of the pancreas, but it may also be done to treat chronic pancreatitis and injuries to the pancreas.

**distal urethra**

The part of the urethra closest to the outside of the body. The urethra is the tube through which urine leaves the body. In women, the distal urethra is approximately the last ½ inch, and in men it is the part of the urethra in the penis.

**distal urethral cancer**

A rare cancer that forms in the part of the urethra that is closest to the outside of the body. The cancer often has not spread deeply into the tissue.

**distant cancer**

Refers to cancer that has spread from the original (primary) tumor to distant organs or distant lymph nodes. Also called distant metastasis.

**distant metastasis**

Refers to cancer that has spread from the original (primary) tumor to distant organs or distant lymph nodes. Also called distant cancer.

**distant recurrence**

Cancer that has recurred (come back) in another part of the body that is far away from where the original (primary) tumor first formed. For example, if breast cancer recurs in the liver, the cancer cells in the liver are breast cancer cells, not liver cancer cells.

**distraction**

In medicine, a pain relief method that takes the patient's attention away from the pain.

**distress**

Emotional, social, spiritual, or physical pain or suffering that may cause a person to feel sad, afraid, depressed, anxious, or lonely. People in distress may also feel that they are not able to manage or cope with changes caused by normal life activities or by having a disease, such as cancer. Cancer patients may have trouble coping with their diagnosis, physical symptoms, or treatment.

**disulfiram**

A drug that slows the metabolism of retinoids, allowing them to act over a longer period of time.

**diuresis**

An increase in the amount of urine made by the kidney and passed from the body.

**diuretic**

A type of drug that causes the kidneys to make more urine. Diuretics help the body get rid of extra fluid and salt. They are used to treat high blood pressure, edema (extra fluid in the tissues), and other conditions. There are many different types of diuretics. They are sometimes called water pills.

**diversity**

Having people with different physical, social, and personal traits or characteristics in a group or organization. These characteristics may include race, ethnicity, age, gender, sexual identity, religion, physical and mental ability, language, income, and education. Diversity may also include different life experiences, cultural backgrounds, beliefs, and interests in a group. In cancer research, there are efforts being made to increase the diversity of people enrolled in clinical trials so that the trial results represent a wider group of people who would most likely benefit from the treatment or intervention being studied.

**diverticulitis**

Inflammation of one or more pouches or sacs that bulge out from the wall of a hollow organ, such as the colon. Symptoms include muscle spasms and cramps in the abdomen.

**diverticulosis**

A condition marked by small sacs or pouches in the walls of a hollow organ, such as the colon. These sacs can become inflamed and cause a condition called diverticulitis.

**diverticulum**

A small pouch or sac that bulges out from the wall of a hollow organ, such as the colon.

### **do not resuscitate order**

A legal document in which a person or their proxy (such as a spouse, relative, friend, or lawyer) states that health care providers should not use cardiopulmonary resuscitation (CPR) if that person's heart or breathing stops. CPR is a life-saving procedure used to try to restart the heart and breathing after one or both have stopped. A do not resuscitate order is a decision only about CPR. It does not affect other treatments that may be used to help keep a person alive, such as medicine, food, or fluids. A do not resuscitate order may be included as part of an advance directive, such as a living will. Also called DNR order.

### **docetaxel**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, gastroesophageal junction cancer, non-small cell lung cancer, prostate cancer, and squamous cell carcinoma of the head and neck. It is also being studied in the treatment of other types of cancer. Docetaxel stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called Taxotere.

### **docetaxel-cisplatin-fluorouracil**

A chemotherapy combination used to treat certain types of head and neck cancer and stomach cancer. It includes the drugs docetaxel (Taxotere), cisplatin (Platinol), and fluorouracil. Also called DCF, Taxotere-Platinol-fluorouracil, TPF, and TPF regimen.

### **dock**

A plant that has been used in some cultures to treat certain medical problems. It may have anticancer effects. The scientific name is *Rumex acetosella*. Also called sheep sorrel and sorrel.

### **dolasetron mesylate**

A drug used to prevent nausea and vomiting caused by chemotherapy. Dolasetron mesylate blocks the action of the chemical serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Dolasetron mesylate is a type of serotonin receptor antagonist and a type of antiemetic.

### **dolastatin 10**

A substance being studied in the treatment of cancer. It binds to a protein that cells need to divide and it may kill cancer cells. Dolastatin 10 comes from a marine organism. It is a type of mitotic inhibitor.

### **donepezil**

A drug that is used to treat Alzheimer disease and is being studied in the treatment of side effects caused by radiation therapy to the brain. It is a type of cholinesterase inhibitor.

### **dong quai**

An herb native to China. A substance taken from the roots has been used in traditional Chinese medicine to treat menstrual and menopausal problems. Dong quai may increase the effect of the drug warfarin (a blood-thinner). The scientific name is *Angelica sinensis*.

**donor**

In medicine, a person who gives blood, cells, tissue, or an organ for use in another person, such as in a blood transfusion or an organ transplant.

**donor lymphocyte infusion**

A type of therapy in which lymphocytes from the blood of a donor are given to a patient who has already received a stem cell transplant from the same donor. The donor lymphocytes may kill remaining cancer cells. Donor lymphocyte infusion is used to treat chronic myelogenous leukemia (CML) that has come back and myeloma. It is being studied in the treatment of other types of cancer.

**dornase alfa inhalation solution**

A drug given in an aerosol mist to decrease the thickness of mucus in the lungs of patients with cystic fibrosis. It is also being studied as a treatment to reduce the thickness of saliva in patients being treated for head and neck cancer. Dornase alfa inhalation solution contains an enzyme that breaks the DNA in mucus into small pieces and makes the mucus thinner. Also called Pulmozyme.

**dose**

The amount of medicine taken, or radiation given, at one time.

**dose-adjusted EPOCH-R**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), and rituximab. During each treatment cycle, the doses of some of the drugs may be increased or decreased to allow the patient to receive the dose that works the best with the fewest side effects. Also called DA-EPOCH-R, DA-EPOCH-R regimen, and dose-adjusted EPOCH-R regimen.

**dose-adjusted EPOCH-R regimen**

An abbreviation for a chemotherapy combination used to treat certain types of non-Hodgkin lymphoma. It includes the drugs etoposide phosphate, prednisone, vincristine sulfate (Oncovin), cyclophosphamide, doxorubicin hydrochloride (hydroxydaunorubicin), and rituximab. During each treatment cycle, the doses of some of the drugs may be increased or decreased to allow the patient to receive the dose that works the best with the fewest side effects. Also called DA-EPOCH-R, DA-EPOCH-R regimen, and dose-adjusted EPOCH-R.

**dose-dense chemotherapy**

A chemotherapy treatment plan in which drugs are given with less time between treatments than in a standard chemotherapy treatment plan.

**dose-dependent**

Refers to the effects of treatment with a drug. If the effects change when the dose of the drug is changed, the effects are said to be dose-dependent.

**dose-escalation study**

A study that determines the best dose of a new drug or treatment. In a dose-escalation study, the dose of the test drug is increased a little at a time in different groups of people until the highest dose that does not cause harmful side effects is found. A dose-escalation study may also measure ways that the drug is used by the body and is often done as part of a phase I clinical trial. These trials usually include a small number of patients and may include healthy volunteers.

**dose-limiting**

Describes side effects of a drug or other treatment that are serious enough to prevent an increase in dose or level of that treatment.

**dose-rate**

The strength of a treatment given over a period of time.

**dosimetrist**

A person who determines the proper radiation dose for treatment.

**dosimetry**

Measurement of radiation exposure from x-rays, gamma rays, or other types of radiation used in the treatment or detection of diseases, including cancer.

**dostarlimab**

A drug used alone or with other drugs to treat adults with certain types of endometrial cancer or other solid tumors that have come back or are advanced. These include cancers that have certain mutations (changes) in genes involved in DNA repair. It is also being studied in the treatment of other types of cancer. Dostarlimab binds to a protein called PD-1, which is found on T cells (a type of immune cell). Dostarlimab may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Jemperli.

**double autologous transplant**

A type of transplant in which a patient receives two courses of high-dose chemotherapy, each course followed by an infusion of their own healthy blood-forming stem cells. The stem cells are collected and stored before the first high-dose chemotherapy treatment. The treatments are given weeks or months apart but are usually completed within a 6-month period. A double autologous transplant is used to treat certain types of cancer, such as neuroblastoma and multiple myeloma. Also called tandem transplant.

**double balloon endoscopy**

A procedure used to look at the inside of the small intestine. A special instrument made up of two tubes (one inside the other) is inserted through the mouth or rectum and into the small intestine. The inside tube, which is an endoscope with a light and lens for viewing, is moved through part of the small intestine, and a balloon at the end of it is inflated to keep the endoscope in place. Next, the outer tube is moved through the small intestine to reach the end of the endoscope, and a balloon at the end of the outer tube is inflated to keep it in place. Then, the balloon at the end of the endoscope is deflated, and the endoscope is moved through the next part of the small intestine. These steps are repeated many times as the tubes move through the whole small intestine. This allows the doctor to see all of the small intestine. Tissue samples may be removed so they can be checked under a microscope for signs of disease. Also called DBE and double balloon enteroscopy.

**double balloon enteroscopy**

A procedure used to look at the inside of the small intestine. A special instrument made up of two tubes (one inside the other) is inserted through the mouth or rectum and into the small intestine. The inside tube, which is an endoscope with a light and lens for viewing, is moved through part of the small intestine, and a balloon at the end of it is inflated to keep the endoscope in place. Next, the outer tube is moved through the small intestine to reach the end of the endoscope, and



a balloon at the end of the outer tube is inflated to keep it in place. Then, the balloon at the end of the endoscope is deflated, and the endoscope is moved through the next part of the small intestine. These steps are repeated many times as the tubes move through the whole small intestine. This allows the doctor to see all of the small intestine. Tissue samples may be removed so they can be checked under a microscope for signs of disease. Also called DBE and double balloon endoscopy.

### **double-blind study**

A type of clinical trial in which neither the participants nor the researcher knows which treatment or intervention participants are receiving until the clinical trial is over. This makes results of the study less likely to be biased. This means that the results are less likely to be affected by factors that are not related to the treatment or intervention being tested.

### **double-contrast barium enema**

A procedure in which x-rays of the colon and rectum are taken after a liquid containing barium is put into the rectum. Barium is a silver-white metallic compound that outlines the colon and rectum on an x-ray and helps show abnormalities. Air is put into the rectum and colon to further enhance the x-ray.

### **double-hit lymphoma**

A rare, aggressive (fast-growing) type of B-cell non-Hodgkin lymphoma caused by changes in the DNA that affect a gene called the MYC gene and either the BCL2 gene or the BCL6 gene. Double-hit lymphoma may be hard to treat and has a poor prognosis. It is a type of diffuse large B-cell lymphoma. Also called DHL.

### **doubling time**

In biology, the amount of time it takes for one cell to divide or for a group of cells (such as a tumor) to double in size. The doubling time is different for different kinds of cancer cells or tumors.

### **douche**

A procedure in which the vagina is washed with water or a cleansing solution. Most cleansing solutions contain water mixed with vinegar, baking soda, or iodine. Regular douching can wash away some of the bacteria that normally live in the vagina. This may allow yeast or harmful types of bacteria to grow and cause infection. Douching may also cause other health problems, such as pelvic inflammatory disease (PID) and problems during pregnancy. Most doctors do not recommend douching.

### **downstaging**

In cancer, changing the stage used to describe the extent of cancer in the body from a higher stage (indicating more extensive disease) to a lower stage (indicating less extensive disease). Staging is usually based on the size of the tumor and whether the cancer has spread. Downstaging may occur as a result of treatment that shrinks a tumor so it can be removed by surgery that otherwise could not have been done.

### **doxazosin mesylate**

A drug used to treat high blood pressure and urinary problems caused by an enlarged prostate. It relaxes muscle tissue in blood vessels and in the prostate. Doxazosin mesylate is a type of alpha blocker. Also called Cardura.

### **doxercalciferol**

A substance being studied in the prevention of recurrent prostate cancer. It is a type of vitamin D analog.

### **doxorubicin hydrochloride**

A drug that comes from the bacterium *Streptomyces peucetius* and is used alone or with other drugs to treat many types of cancer, including leukemia, lymphoma, neuroblastoma, sarcoma, Wilms tumor, and certain cancers of the lung, breast, stomach, ovary, thyroid, and bladder. It is also being studied in the treatment of other types of cancer. Doxorubicin hydrochloride damages the cell's DNA and may kill cancer cells. It also blocks a certain enzyme needed for cell division and DNA repair. Doxorubicin hydrochloride is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Doxorubicin is the active ingredient of doxorubicin hydrochloride. Also called Adriamycin and hydroxydaunorubicin.

### **doxorubicin hydrochloride liposome**

A form of the anticancer drug doxorubicin that is contained inside very tiny, fat-like particles and is used alone or with other drugs to treat certain types of ovarian cancer, AIDS-related Kaposi sarcoma, and multiple myeloma. Doxorubicin hydrochloride liposome may have fewer side effects and work better than other forms of doxorubicin hydrochloride. It is also being studied in the treatment of other types of cancer. Doxorubicin hydrochloride liposome is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called Doxil and liposomal doxorubicin hydrochloride.

### **doxycycline hyclate**

A drug used to treat many types of bacterial infections. It stops the growth of bacteria by keeping them from making proteins. It is a type of antibiotic.

### **drain**

In medicine, to remove fluid as it collects; or, a tube or wick-like device used to remove fluid from a body cavity, wound, or infected area.

### **drenching night sweats**

Episodes of excessive sweating that occur during sleep and soak a person's bedclothes and bed sheets, which may cause the person to wake up. Drenching night sweats that do not go away and occur with other signs and symptoms, such as fever, weight loss, and fatigue, may be a symptom of some types of cancer, including leukemia and lymphoma. Not all people who have drenching night sweats have cancer.

### **driver mutation**

A term used to describe changes in the DNA sequence of genes that cause cells to become cancer cells and grow and spread in the body. Checking tumor tissue for driver mutations may help plan treatment to stop cancer cells from growing, including drugs that target a specific mutation.

### **dronabinol**

A synthetic pill form of delta-9-tetrahydrocannabinol (THC), an active ingredient in marijuana that is used to treat nausea and vomiting associated with cancer chemotherapy.

### **droperidol**

A drug used to prevent nausea and vomiting in patients who receive anesthesia before surgery. It is also used to treat anxiety. Droperidol is a type of antiemetic,

adjunct anesthesia, and antipsychotic.

### **drug**

Any substance (other than food) that is used to prevent, diagnose, treat, or relieve symptoms of a disease or abnormal condition. Drugs can also affect how the brain and the rest of the body work and cause changes in mood, awareness, thoughts, feelings, or behavior. Some types of drugs, such as opioids, may be abused or lead to addiction.

### **drug abuse**

The use of illegal drugs or the use of prescription or over-the-counter drugs for purposes other than those for which they are meant to be used, or in excessive amounts. Drug abuse may lead to social, physical, emotional, and job-related problems.

### **drug interaction**

A change in the way a drug acts in the body when taken with certain other drugs, herbals, or foods, or when taken with certain medical conditions. Drug interactions may cause the drug to be more or less effective, or cause effects on the body that are not expected.

### **drug product**

A dosage form that contains one or more active and/or inactive ingredients. Drug products come in many dosage forms, including tablets, capsules, liquids, creams, and patches. They can also be given in different ways, such as by mouth, by infusion into a vein, or by drops that are put into the ear or eye. The form with the active ingredient is used to prevent, diagnose, treat, or relieve symptoms of a disease or abnormal condition. A drug product that does not contain an active ingredient and is used in research studies is called a placebo. Also called medication.

### **drug resistance**

When cancer cells or microorganisms, such as bacteria or viruses, don't respond to a drug that is usually able to kill or weaken them. Drug resistance may be present before treatment is given or may occur during or after treatment with the drug. In cancer treatment, there are many things that may cause resistance to anticancer drugs. For example, DNA changes or other genetic changes may change the way the drug gets into the cancer cells or the way the drug is broken down within the cancer cells. Drug resistance can lead to cancer treatment not working or to the cancer coming back.

### **drug substance**

The main ingredient in a medicine that causes the desired effect of the medicine. Some medicines contain more than one drug substance that act in different ways in the body. Also called active pharmaceutical ingredient, API, and pharmacologic substance.

### **drug therapy**

Treatment with any substance, other than food, that is used to prevent, diagnose, treat, or relieve symptoms of a disease or abnormal condition.

### **drug tolerance**

A condition that occurs when the body gets used to a medicine so that either more medicine is needed or different medicine is needed.

## **dry orgasm**

Sexual climax without the release of semen from the penis.

## **dual energy x-ray absorptiometry**

A procedure that measures the amount of calcium and other minerals in a bone by passing x-rays with two different energy levels through the bone. A dual energy x-ray absorptiometry shows the strength and thickness of a bone and is usually done in the lower spine, hip, lower arm, wrist, fingers, and heel. It is used to diagnose osteoporosis (a condition of lower bone density), to see how well osteoporosis treatments are working, and to predict how likely the bones are to break. A dual energy x-ray absorptiometry also measures fat and muscle composition in specific parts of the body, such as the arms, legs, and pelvis. Also called BMD scan, bone densitometry, bone mineral density scan, DEXA scan, and DXA.

## **duct**

In medicine, a tube or vessel of the body through which fluids pass.

## **ductal carcinoma**

The most common type of breast cancer. It begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). Ductal carcinoma may be either ductal carcinoma in situ (DCIS) or invasive ductal carcinoma. DCIS is a noninvasive condition in which abnormal cells are found in the lining of a breast duct and have not spread outside the duct to other tissues in the breast. In some cases, DCIS may become invasive cancer. In invasive ductal carcinoma, cancer has spread outside the breast duct to surrounding normal tissue. It can also spread through the blood and lymph systems to other parts of the body.

## **ductal carcinoma in situ**

A condition in which abnormal cells are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. In some cases, ductal carcinoma in situ may become invasive breast cancer and spread to other tissues. At this time, there is no way to know which abnormal cells could become invasive. Also called DCIS and intraductal breast carcinoma.

## **ductal intraepithelial neoplasia**

A condition in which abnormal cells are found in the lining of a breast duct (milk duct). Having ductal intraepithelial neoplasia may increase the risk of breast cancer in which these abnormal cells become cancer and spread outside the duct to other tissues in the breast. Types of ductal intraepithelial neoplasia include atypical ductal hyperplasia and ductal carcinoma in situ (DCIS). Also called DIN.

## **ductal lavage**

A method used to collect cells from milk ducts in the breast. A hair-size catheter (tube) is inserted into the nipple, and a small amount of salt water is released into the duct. The water picks up breast cells, and is removed. The cells are checked under a microscope. Ductal lavage may be used in addition to clinical breast examination and mammography to detect breast cancer.

## **ductography**

A procedure that uses x-rays to create pictures of milk ducts in the breast. A very thin catheter (tube) is inserted into the nipple, and a small amount of dye is injected into the duct. This makes the duct easier to see on the x-ray.

Ductography is used in patients who have a bloody or clear discharge from one nipple. A small amount of the fluid may be collected to check for infection or cancer cells. Ductography may be used to help diagnose certain breast conditions, such as papillomas (wart-like growths) in a milk duct, fibrocystic breast changes, and breast cancer. Also called galactography.

### **duloxetine hydrochloride**

A drug used to treat depression and peripheral neuropathy (pain, numbness, tingling, burning, or weakness in the hands or feet) that can occur with diabetes. It is also being studied in the treatment of peripheral neuropathy caused by certain anticancer drugs. Duloxetine hydrochloride increases the amount of certain chemicals in the brain that help relieve depression and pain. It is a type of serotonin and norepinephrine reuptake inhibitor. Also called Cymbalta.

### **dumping syndrome**

A condition that occurs when food or liquid moves too fast into the small intestine. Symptoms include cramps, nausea, diarrhea, sweating, weakness, and dizziness. Dumping syndrome sometimes occurs in people who have had part or all of their stomach removed.

### **duodenitis**

Inflammation of the duodenum (the first part of the small intestine that connects to the stomach).

### **duodenum**

The first part of the small intestine. It connects to the stomach. The duodenum helps to further digest food coming from the stomach. It absorbs nutrients (vitamins, minerals, carbohydrates, fats, proteins) and water from food so they can be used by the body.

### **dura mater**

The tough outer layer of tissue that covers and protects the brain and spinal cord and is closest to the skull. The dura mater is one of the three layers that form the meninges.

### **durable power of attorney**

A legal document that gives one person (such as a spouse, relative, friend, or lawyer) the authority to make medical, legal, or financial decisions for another person. A durable power of attorney may go into effect right away or when the person who grants it is no longer able to make decisions for themselves, depending on how it is written. In most cases, a durable power of attorney remains in effect until the person who grants it dies or cancels it. It does not need to be renewed over time. Also called DPA.

### **durable power of attorney for health care**

A type of advance directive that gives a person (called a proxy) the authority to make medical decisions for another person if that person is not able to make their own decisions. A proxy is usually a spouse, relative, friend, or lawyer who knows the person's values, wishes, and treatment preferences. Also called health care proxy and medical power of attorney.

### **durvalumab**

A drug that binds to the protein PD-L1 to help immune cells kill cancer cells better and is used to treat different types of cancer. Durvalumab is used alone or with other drugs to treat adults with certain types of biliary tract cancer (including

bile duct cancer and gallbladder cancer), endometrial cancer, hepatocellular carcinoma (a type of liver cancer), non-small cell lung cancer, and small cell lung cancer. It is also being studied in the treatment of other types of cancer. Durvalumab may block PD-L1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Imfinzi.

### **dutasteride**

A drug used to treat symptoms of an enlarged prostate gland. It is being studied in the treatment of male hair loss and prostate cancer. Dutasteride blocks enzymes the body needs to make male sex hormones. It is a type of 5-alpha reductase inhibitor. Also called Avodart and GG745.

### **duvelisib**

A drug used to treat adults with chronic lymphocytic leukemia or small lymphocytic lymphoma that came back or did not get better after treatment with at least two other therapies. It is also being studied in the treatment of other types of cancer. Duvelisib blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of kinase inhibitor. Also called Copiktra.

### **dysautonomia**

A condition that affects the part of the nervous system called the autonomic nervous system (ANS). The ANS controls many important automatic body processes, such as blood pressure, heart rate, breathing, body temperature, digestion, sweating, urination, and sexual response. Dysautonomia can affect all or part of the ANS and can cause serious problems, such as heart and blood pressure problems, trouble breathing or swallowing, or impotence in males. There are many different types of dysautonomias. They may be inherited or caused by injury or by conditions such as diabetes, Parkinson disease, autoimmune disease, and alcoholism. Sometimes, the cause is not known. Also called autonomic nervous system disorder.

### **dyscrasia**

Disease. Usually refers to diseases of the blood.

### **dysesthesia**

A condition in which a sense, especially touch, is distorted. Dysesthesia can cause an ordinary stimulus to be unpleasant or painful. It can also cause insensitivity to a stimulus.

### **dysfunction**

A state of not functioning normally.

### **dysgerminoma**

A type of cancer that begins in germ cells in females. Germ cells are cells that form sperm in males or eggs in females. Dysgerminomas occur most often in the ovaries, but they may also occur in other areas of the body, including the central nervous system. Some dysgerminomas make a hormone called beta-human chorionic gonadotropin (beta-HCG) that may cause signs and symptoms of disease. Dysgerminomas tend to grow and spread slowly. They are the most common type of ovarian germ cell tumor. They usually occur in teenage girls or young women.



**dysgeusia**

A bad taste in the mouth. Also called parageusia.

**dyskeratosis congenita**

A rare, inherited disorder that can affect many parts of the body, especially the nails, skin, and mouth. It is marked by abnormally shaped fingernails and toenails that may grow poorly; changes in skin color, especially on the neck and chest; and white patches inside the mouth. Other problems may include hair loss or early graying of the hair, eye and dental problems, osteoporosis, joint problems, liver disease, and a narrowing of the urethra (tube that carries urine from the bladder to the outside of the body) in men. People with dyskeratosis congenita may develop serious conditions, such as bone marrow failure, myelodysplastic syndrome, pulmonary fibrosis, and certain types of cancer, especially leukemia and cancers of the head and neck, mouth, anus, and genitals. Dyskeratosis congenita may be caused by mutations (changes) in certain genes that affect the length of telomeres (the ends of chromosomes). Also called DKC.

**dyspepsia**

Upset stomach.

**dysphagia**

Difficulty swallowing.

**dysphonia**

Trouble with the voice when trying to talk, including hoarseness and change in pitch or quality of voice.

**dysplasia**

A term used to describe the presence of abnormal cells within a tissue or organ. Dysplasia is not cancer, but it may sometimes become cancer. Dysplasia can be mild, moderate, or severe, depending on how abnormal the cells look under a microscope and how much of the tissue or organ is affected.

**dysplastic nevus**

A specific type of nevus (mole) that looks different from a common mole. Dysplastic nevi are mostly flat and often larger than common moles and have borders that are irregular. A dysplastic nevus can contain different colors, which can range from pink to dark brown. Parts of the mole may be raised above the skin surface. A dysplastic nevus may develop into melanoma (a type of skin cancer), and the more dysplastic nevi a person has, the higher the risk of melanoma. A dysplastic nevus is sometimes called an atypical mole.

**dyspnea**

Difficult, painful breathing or shortness of breath.

**dystrophic epidermolysis bullosa**

A rare, inherited disorder in which blisters form on the skin and the moist inner lining of some organs and body cavities. The blisters usually appear at birth and may occur on certain parts of the body (such as the hands, feet, elbows, and knees) or all over the body (including the mouth, esophagus, and other parts of the gastrointestinal tract, the eyes, and the genitourinary tract). This can lead to scarring in the affected areas and thinning of the skin. Other signs and symptoms include small white bumps on the skin; deformities in the fingers, toes, nails, teeth, and joints; trouble chewing and swallowing; vision loss and other eye

problems; anemia; slow growth; and poor nutrition. Some people with dystrophic epidermolysis bullosa have a very high risk of developing squamous cell skin cancer at an early age. There are several types of dystrophic epidermolysis bullosa. It is caused by a mutation (change) in the COL7A1 gene. Also called DEB.

### **e-cigarette**

A device that has the shape of a cigarette, cigar, or pen and does not contain tobacco. It uses a battery and contains a solution of nicotine, flavorings, and other chemicals, some of which may be harmful. When e-cigarettes are used, the nicotine solution turns into a mist that can be inhaled into the lungs. The amount of nicotine in individual e-cigarettes can vary. It is not yet known whether e-cigarettes are safe or if they can be used to help smokers quit smoking. Also called electronic cigarette.

### **eHealth**

The use of digital technology, such as computers, mobile devices, and the Internet, to deliver and manage health care information and services. Examples of eHealth include electronic medical records, telemedicine, patient portals (secure websites), mobile health applications (apps), wearable health tracking and monitoring devices, and online health education resources. The use of eHealth technology may help promote communication among patients, family members, and the health care team. It also may help patients learn more about their health and take an active role in managing it. eHealth may also help improve access to health care services, reduce costs, and improve the quality of care.

### **ear acupuncture**

A type of acupuncture in which thin needles are inserted at specific points on the outer ear to control pain and other symptoms. It is thought that the outer ear contains a “map” of the whole body and that specific points on this map match up with certain parts of the body. Also called auricular acupuncture.

### **early diagnosis**

The identification of a disease or condition, such as cancer, as soon as the first signs and symptoms appear. When cancer is diagnosed early, it may be easier to treat or cure.

### **early menopause**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. There are two types of early menopause, primary and secondary. Primary early menopause means that the ovaries do not function normally. This may be because they have been removed by surgery, or it may be caused by some cancer treatments and certain diseases or genetic conditions. In secondary early menopause, the ovaries are normal but there is a problem getting hormone signals to them from the brain. This is usually caused by diseases of the pituitary gland or hypothalamus. Some women with early menopause sometimes have menstrual periods and may be able to have children. Also called ovarian failure, ovarian insufficiency, and premature menopause.

### **early-stage breast cancer**

Breast cancer that has not spread beyond the breast or the axillary lymph nodes. This includes ductal carcinoma in situ and stage I, stage IIA, stage IIB, and stage IIIA breast cancers.

### **early-stage cancer**

A term used to describe cancer that is early in its growth, and may not have spread to other parts of the body. What is called early stage may differ between cancer types.

### **ecchymosis**

A small bruise caused by blood leaking from broken blood vessels into the tissues of the skin or mucous membranes.

### **eccrine gland**

A type of simple sweat gland that is found in almost all regions of the skin. These glands produce sweat that reaches the surface of the skin by way of coiled ducts (tubes). The body is cooled as sweat evaporates from the skin.

### **echinacea**

An herb native to North America that has been used to prevent and treat the common cold and other respiratory infections. Echinacea may interfere with treatment that uses the immune system to fight cancer. The scientific names are *Echinacea purpurea* and *Echinacea angustifolia*. Also called purple coneflower.

### **echocardiogram**

A computer picture of the heart created by bouncing high-energy sound waves (ultrasound) off internal tissues or organs of the chest. Echocardiograms show the size, shape, and position of the heart. They also show the parts inside the heart, such as the valves, and the motion of the heart while it is beating. An echocardiogram may be used to help diagnose heart problems, such as abnormal heart valves and heart rhythms, damage to the heart muscle from a heart attack, and heart murmurs. Echocardiograms can also show an infection on or around the heart valves, blood clots or tumors inside the heart, and fluid buildup in the sac around the heart.

### **echocardiography**

A procedure that uses high-energy sound waves (ultrasound) to look at tissues and organs inside the chest. Echoes from the sound waves form a picture of the size, shape, and position of the heart on a computer screen (echocardiogram). The pictures can also show the parts of the inside of the heart, such as the valves, and the motion of the heart while it is beating. Echocardiography may be used to help diagnose heart problems, such as abnormal heart valves and heart rhythms, heart murmurs, and damage to the heart muscle from a heart attack. It may also be used to check for an infection on or around the heart valves, blood clots or tumors inside the heart, and fluid buildup in the sac around the heart.

### **ecologic study**

A study that compares large groups of people instead of individuals for differences in things such as cancer rates. The groups can differ by location (for example, city, county, or country). They can also differ by time (a few days, years, or decades). Groups can be immigrants (compared with people who are native to the country) or people with different types of jobs. The Surveillance, Epidemiology, and End Results (SEER) Program conducts ecologic studies to collect information on cancer rates over time in certain parts of the United States. Also called ecological study.

### **ecological study**

A study that compares large groups of people instead of individuals for differences in things such as cancer rates. The groups can differ by location (for

example, city, county, or country). They can also differ by time (a few days, years, or decades). Groups can be immigrants (compared with people who are native to the country) or people with different types of jobs. The Surveillance, Epidemiology, and End Results (SEER) Program conducts ecological studies to collect information on cancer rates over time in certain parts of the United States. Also called ecologic study.

### **economic burden**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Economic burden can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have economic burden than people without cancer. Also called economic hardship, financial burden, financial distress, financial hardship, financial stress, and financial toxicity.

### **economic hardship**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Economic hardship can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have economic hardship than people without cancer. Also called economic burden, financial burden, financial distress, financial hardship, financial stress, and financial toxicity.

### **ecteinascidin**

A drug used to treat liposarcoma and leiomyosarcoma (types of soft tissue sarcoma) that cannot be removed by surgery or have spread to other parts of the body. It is used in patients who have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Ecteinascidin may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called ET 743, trabectedin, and Yondelis.

### **ectocervix**

The outer part of the cervix that opens into the vagina. The ectocervix is lined with squamous cells (thin, flat-looking cells under a microscope). During a pelvic exam, cells may be scraped from the ectocervix so they can be checked under a microscope for infection, inflammation, cervical cancer, or changes that may become cervical cancer. Most cervical cancers begin in squamous cells. Also called exocervix.

### **ectomesenchymoma**

A rare, fast-growing tumor of the nervous system or soft tissue that occurs in children and young adults. Ectomesenchymomas may form in the head and neck, abdomen, perineum, scrotum, or limbs. Also called malignant ectomesenchymoma.

### **ectopic pregnancy**

A condition in which a fertilized egg grows outside of the uterus, usually in one of the fallopian tubes. Symptoms include sharp pain on one side of the abdomen

and bleeding from the vagina. Also called extrauterine pregnancy.

### **eculizumab**

A drug used to prevent red blood cells from being destroyed in patients with a rare red blood cell disorder called paroxysmal nocturnal hemoglobinuria (PNH). It is also used to treat another rare disorder called atypical hemolytic urea syndrome (aHUS), in which blood clots form in small blood vessels. Eculizumab binds to an immune system protein called C5. This helps keep red blood cells from breaking down and helps keep blood clots from forming. Eculizumab is a type of monoclonal antibody. Also called Soliris.

### **eczema**

A group of conditions in which the skin becomes inflamed, forms blisters, and becomes crusty, thick, and scaly. Eczema causes burning and itching, and may occur over a long period of time. Atopic dermatitis is the most common type of eczema.

### **edatrexate**

An anticancer drug that belongs to a family of drugs called antimetabolites.

### **edema**

Swelling caused by excess fluid in body tissues.

### **edetic acid**

A chemical that binds certain metal ions, such as calcium, magnesium, lead, and iron. It is used in medicine to prevent blood samples from clotting and to remove calcium and lead from the body. It is also used to keep bacteria from forming a biofilm (thin layer stuck to a surface). It is a type of chelating agent. Also called EDTA and ethylenediaminetetraacetic acid.

### **edotecarin**

A substance being studied in the treatment of cancer. It is a type of topoisomerase I inhibitor. Also called J-107088.

### **edrecolomab**

A type of monoclonal antibody used in cancer detection or therapy. Monoclonal antibodies are laboratory-produced substances that can locate and bind to cancer cells.

### **efaproxiral**

A substance being studied in the treatment of brain tumors and some other types of cancer. It increases the amount of oxygen in tumor tissues, which may make the tumor cells easier to kill with radiation therapy. Efaproxiral is a type of radiosensitizing agent. Also called RSR13.

### **efavirenz**

A drug used with other drugs to treat infection with the human immunodeficiency virus (HIV). It blocks HIV from making copies of itself. It is a type of non-nucleoside reverse transcriptase inhibitor and a type of antiviral agent. Also called Sustiva.

### **effective radiation dose**

An estimate of the overall risk of potential harm from exposure to ionizing radiation. Ionizing radiation can come from natural sources, such as radon and radiation from outer space, and from medical imaging tests, such as x-rays, CT

scans, or PET scans. The effective radiation dose is calculated based on certain factors, such as the type of radiation and its likelihood to cause harm, the amount of radiation absorbed by all organs of the body, and the sensitivity of different tissues and organs to radiation. The effective radiation dose is used to compare different levels of exposure to ionizing radiation in a population. It does not predict the risk of health effects from radiation exposure in individual people. Effective radiation dose may help in understanding the risk of potential long-term health effects from radiation exposure, such as the risk of developing cancer later in life. It is used to set radiation safety standards in health care and other industries. Sievert (Sv) is the unit of measurement for effective radiation dose.

### **effector cell**

A cell that performs a specific function in response to a stimulus; usually used to describe cells in the immune system.

### **efficacy**

Effectiveness. In medicine, the ability of an intervention (for example, a drug or surgery) to produce the desired beneficial effect.

### **effusion**

An abnormal collection of fluid in hollow spaces or between tissues of the body. For example, a pleural effusion is a collection of fluid between the two layers of membrane covering the lungs.

### **eflornithine hydrochloride**

A drug used to reduce the risk of relapse in adults and children with high-risk neuroblastoma that has gotten better after treatment with certain prior therapies. It is also being studied in the treatment of other conditions and types of cancer. Eflornithine hydrochloride blocks an enzyme called ornithine decarboxylase, which may help keep cancer cells from growing. It is a type of enzyme inhibitor. Also called l-wilfin.

### **egg banking**

The process of freezing one or more unfertilized eggs (eggs that have not been combined with sperm) to save them for future use. The eggs are thawed and fertilized in the laboratory to make embryos that can be placed in a woman's uterus. Egg banking is being studied as a type of fertility preservation. It may be useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called egg cryopreservation, egg freezing, and oocyte cryopreservation.

### **egg cryopreservation**

The process of freezing one or more unfertilized eggs (eggs that have not been combined with sperm) to save them for future use. The eggs are thawed and fertilized in the laboratory to make embryos that can be placed in a woman's uterus. Egg cryopreservation is being studied as a type of fertility preservation. It may be useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called egg banking, egg freezing, and oocyte cryopreservation.

### **egg freezing**

The process of freezing one or more unfertilized eggs (eggs that have not been combined with sperm) to save them for future use. The eggs are thawed and fertilized in the laboratory to make embryos that can be placed in a woman's uterus. Egg freezing is being studied as a type of fertility preservation. It may be



useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called egg banking, egg cryopreservation, and oocyte cryopreservation.

### **ejaculation**

The release of semen through the penis during orgasm.

### **elacestrant dihydrochloride**

A drug used to treat postmenopausal women and adult men with estrogen receptor-positive, HER2-negative breast cancer that has a mutation (change) in the ESR1 gene and is advanced or has spread to other parts of the body. It is used in patients whose disease got worse after treatment with at least one type of hormone therapy. Elacestrant dihydrochloride binds to proteins called estrogen receptors, which are found on some breast cancer cells. These proteins may cause cancer cells to grow. Elacestrant dihydrochloride blocks these proteins and may keep cancer cells from growing. It is a type of estrogen receptor antagonist. Also called Orserdu.

### **elacytarabine**

A drug used to treat advanced acute myeloid leukemia (AML). It is a form of the anticancer drug cytarabine that may work in patients with leukemia that is resistant to cytarabine. Elacytarabine blocks cell division and may kill cancer cells. It is a type of antimetabolite. Also called CP-4055 and Elacyt.

### **electroacupuncture**

A procedure in which pulses of weak electrical current are sent through acupuncture needles into acupuncture points in the skin. This procedure is being studied in the prevention of nausea and vomiting in patients undergoing chemotherapy.

### **electrocardiogram**

A line graph that shows changes in the electrical activity of the heart over time. It is made by an instrument called an electrocardiograph. The graph can show that there are abnormal conditions, such as blocked arteries, changes in electrolytes (particles with electrical charges), and changes in the way electrical currents pass through the heart tissue. Also called ECG and EKG.

### **electrocautery**

A procedure that uses heat from an electric current to destroy abnormal tissue, such as a tumor or other lesion. It may also be used to control bleeding during surgery or after an injury. The electric current passes through an electrode that is placed on or near the tissue. The tip of the electrode is heated by the electric current to burn or destroy the tissue. Electrocautery is a type of electrosurgery. Also called electrocoagulation, electrofulguration, and fulguration.

### **electrocoagulation**

A procedure that uses heat from an electric current to destroy abnormal tissue, such as a tumor or other lesion. It may also be used to control bleeding during surgery or after an injury. The electric current passes through an electrode that is placed on or near the tissue. The tip of the electrode is heated by the electric current to burn or destroy the tissue. Electrocoagulation is a type of electrosurgery. Also called electrocautery, electrofulguration, and fulguration.

### **electroconvulsive therapy**

A treatment for severe depression and certain mental disorders. A brief seizure is induced by giving electrical stimulation to the brain through electrodes placed on the scalp. Also called ECT and electroshock therapy.

### **electrode**

In medicine, a device such as a small metal plate or needle that carries electricity from an instrument to a patient for treatment or surgery. Electrodes can also carry electrical signals from muscles, brain, heart, skin, or other body parts to recording devices to help diagnose certain conditions.

### **electrodermal response**

A change in the heat and electricity passed through the skin by nerves and sweat. Electrodermal response increases in certain emotional states and during hot flashes that happen with menopause. Also called galvanic skin response and skin conduction.

### **electrodesiccation**

The drying of tissue by a high-frequency electric current applied with a needle-shaped electrode.

### **electrodiathermy**

A procedure in which tissue is heated to destroy abnormal cells. The heat may come from electric currents, microwaves, radio waves, or ultrasound. Electrodiathermy is a type of hyperthermia therapy. Also called diathermy.

### **electroencephalogram**

A recording of electrical activity in the brain. It is made by placing electrodes on the scalp (the skin covering the top of the head), and impulses are sent to a special machine. An EEG may be used to diagnose brain and sleep disorders. Also called EEG.

### **electrofulguration**

A procedure that uses heat from an electric current to destroy abnormal tissue, such as a tumor or other lesion. It may also be used to control bleeding during surgery or after an injury. The electric current passes through an electrode that is placed on or near the tissue. The tip of the electrode is heated by the electric current to burn or destroy the tissue. Electrofulguration is a type of electrosurgery. Also called electrocautery, electrocoagulation, and fulguration.

### **electrolarynx**

A battery-operated device that makes a humming sound. It is used to help a person talk after removal of the larynx (voice box).

### **electrolyte**

A substance that breaks up into ions (particles with electrical charges) when it is dissolved in water or body fluids. Some examples of ions are sodium, potassium, calcium, chloride, and phosphate. These ions help move nutrients into cells, help move waste out of cells, and help nerves, muscles, the heart, and the brain work the way they should.

### **electromagnetic field**

An area of electric and magnetic forces caused by electromagnetic radiation. Researchers are studying whether the electromagnetic fields from power lines,

electrical appliances, and wireless and cellular telephones can cause cancer or other harmful health effects. Also called EMF.

### **electromagnetic radiation**

Radiation that has both electric and magnetic fields and travels in waves. It comes from natural and man-made sources. Electromagnetic radiation can vary in strength from low energy to high energy. It includes radio waves, microwaves, infrared light, visible light, ultraviolet light, x-rays, and gamma rays. Also called EMR.

### **electromagnetic spectrum**

The complete range of all types of radiation that has both electric and magnetic fields and travels in waves. The electromagnetic spectrum ranges from low-energy, low-frequency radiation that travels in long waves (such as radio waves and microwaves) to high-energy, high-frequency radiation that travels in short waves (such as x-rays and gamma rays).

### **electron**

A small particle with a negative charge that is found in all atoms. Streams of electrons made by special equipment can be used for radiation treatment.

### **electron beam**

A stream of electrons (small negatively charged particles found in atoms) that can be used for radiation therapy.

### **electron microscope**

A microscope (device used to magnify small objects) that uses electrons (instead of light) to produce an enlarged image. An electron microscope shows tiny details better than any other type of microscope.

### **electronic cigarette**

A device that has the shape of a cigarette, cigar, or pen and does not contain tobacco. It uses a battery and contains a solution of nicotine, flavorings, and other chemicals, some of which may be harmful. When electronic cigarettes are used, the nicotine solution turns into a mist that can be inhaled into the lungs. The amount of nicotine in individual e-cigarettes can vary. It is not yet known whether electronic cigarettes are safe or if they can be used to help smokers quit smoking. Also called e-cigarette.

### **electronic health record**

An electronic (digital) collection of medical information about a person that is stored on a computer. An electronic health record includes information about a patient's health history, such as diagnoses, medicines, tests, allergies, immunizations, and treatment plans. Electronic health records can be seen by all health care providers who are taking care of a patient and can be used by them to help make recommendations about the patient's care. Also called EHR and electronic medical record.

### **electronic medical record**

An electronic (digital) collection of medical information about a person that is stored on a computer. An electronic medical record includes information about a patient's health history, such as diagnoses, medicines, tests, allergies, immunizations, and treatment plans. Electronic medical records can be seen by all health care providers who are taking care of a patient and can be used by

them to help make recommendations about the patient's care. Also called EHR and electronic health record.

### **electrophoresis**

A laboratory technique that uses an electric current to separate substances, such as proteins or nucleic acids. The size and electrical charge (either positive or negative) of a substance determines how far it moves with the current.

Electrophoresis may be used to help diagnosis certain diseases. There are many different types of electrophoresis.

### **electroporation therapy**

Treatment that generates electrical pulses through an electrode placed in a tumor to enhance the ability of anticancer drugs to enter tumor cells. Also called EPT.

### **electroshock therapy**

A treatment for severe depression and certain mental disorders. A brief seizure is induced by giving electrical stimulation to the brain through electrodes placed on the scalp. Also called ECT and electroconvulsive therapy.

### **electrosurgery**

A procedure that uses an electric current to cut, remove, or destroy tissue and control bleeding. The current is carried through an electrode that is placed on or near the tissue. Electrosurgery may be used to treat basal cell skin cancer or other types of skin problems, such as actinic keratoses, warts, and moles. It may also be used to remove abnormal cells from the cervix and to treat abnormal tissue of the vagina, vulva, penis, and anus that might become cancer. Examples of electrosurgery are electrodesiccation and fulguration.

### **element**

A basic part of a whole. In chemistry, refers to a simple substance that cannot be broken down into smaller parts or changed into another substance. The basic part of an element is an atom, which contains protons, neutrons, and electrons. All atoms of an element have the same number of protons. Examples of elements are hydrogen, carbon, oxygen, nitrogen, and calcium.

### **elesclomol sodium**

A drug used in the treatment of skin cancer that has spread. It is also being studied in the treatment of other types of cancer. It increases the amount of harmful oxygen molecules in cells and may kill cancer cells. It may also help other drugs kill cancer cells. It is a type of oxidative stress inducer.

### **eligibility criteria**

In clinical trials, requirements that must be met for a person to be included in a trial. These requirements help make sure that participants in a trial are like each other in terms of specific factors such as age, type and stage of cancer, general health, and previous treatment. When all participants meet the same eligibility criteria, it is more likely that results of the study are caused by the intervention being tested and not by other factors or by chance.

### **elotuzumab**

A drug used with dexamethasone and either lenalidomide or pomalidomide to treat adults with multiple myeloma. It is used in patients whose cancer was already treated with other anticancer therapies. Elotuzumab binds to a protein called CS1, which is found on myeloma cells and some types of immune cells.

Elotuzumab may block CS1 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Empliciti and HuLuc63.

### **elranatamab**

A drug used to treat adults with multiple myeloma that came back or did not get better after treatment with at least four other anticancer therapies. These therapies had to include an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Elranatamab binds to a protein called CD3, which is found on T cells (a type of white blood cell), and to a protein called BCMA, which is found on myeloma cells and some types of immune cells. This may help the immune system kill cancer cells. Elranatamab is a type of bispecific T-cell engager. Also called Elrexfio.

### **eltrombopag olamine**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults and children with chronic immune thrombocytopenic purpura that did not get better with other treatment. Eltrombopag olamine is also used to treat severe aplastic anemia. It is also being studied in the treatment of other conditions and types of cancer. Eltrombopag olamine binds to the thrombopoietin receptor, which causes the bone marrow to make more platelets. It is a type of thrombopoietin receptor agonist. Also called Promacta.

### **emapalumab**

A drug used to treat a rare immune system disorder called primary hemophagocytic lymphohistiocytosis (HLH). It is used in patients whose disease came back, got worse, did not get better, or cannot be treated with other therapy. It is also being studied in the treatment of other conditions. Emapalumab binds to an immune system protein called interferon gamma, which is found at higher than normal levels in patients with HLH. This may help lower the body's immune response and reduce inflammation. Emapalumab is a type of monoclonal antibody. Also called Gamifant.

### **embalmer**

A person who treats dead bodies with embalming fluid (a chemical like formaldehyde) to keep them from decaying.

### **embolism**

A block in an artery caused by blood clots or other substances, such as fat globules, infected tissue, or cancer cells.

### **embolization**

A procedure that uses particles, such as tiny gelatin sponges or beads, to block a blood vessel. Embolization may be used to stop bleeding or to block the flow of blood to a tumor or abnormal area of tissue. It may be used to treat some types of liver cancer, kidney cancer, and neuroendocrine tumors. It may also be used to treat uterine fibroids, aneurysms, and other conditions. Types of embolization are arterial embolization, chemoembolization, and radioembolization.

### **embryo**

Early stage in the development of humans and other animals or plants. In animals that have a backbone or spinal column, this stage lasts from shortly after fertilization until all major body parts appear. In particular, in humans, this stage lasts from about 2 weeks after fertilization until the end of the seventh or eighth week of pregnancy.

### **embryo banking**

The process of freezing one or more embryos to save them for future use. Embryo banking involves in vitro fertilization, a procedure in which eggs are removed from a woman's ovary and combined with sperm in the laboratory to form embryos. The embryos are frozen and can later be thawed and placed in a woman's uterus. Embryo banking is a type of fertility preservation. It may be useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called embryo cryopreservation and embryo freezing.

### **embryo cryopreservation**

The process of freezing one or more embryos to save them for future use. Embryo cryopreservation involves in vitro fertilization, a procedure in which eggs are removed from a woman's ovary and combined with sperm in the laboratory to form embryos. The embryos are frozen and can later be thawed and placed in a woman's uterus. Embryo cryopreservation is a type of fertility preservation. It may be useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called embryo banking and embryo freezing.

### **embryo freezing**

The process of freezing one or more embryos to save them for future use. Embryo freezing involves in vitro fertilization, a procedure in which eggs are removed from a woman's ovary and combined with sperm in the laboratory to form embryos. The embryos are frozen and can later be thawed and placed in a woman's uterus. Embryo freezing is a type of fertility preservation. It may be useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called embryo banking and embryo cryopreservation.

### **embryoma**

A mass of rapidly growing cells that begins in embryonic (fetal) tissue. Embryomas may be benign or malignant, and include neuroblastomas and Wilms tumors. Also called embryonal tumor.

### **embryonal rhabdomyosarcoma**

A soft tissue tumor that is most common in infants and young children. It begins in muscles, usually in the head, neck, or genitourinary tract. Also called ERMS.

### **embryonal tumor**

A mass of rapidly growing cells that begins in embryonic (fetal) tissue. Embryonal tumors may be benign or malignant, and include neuroblastomas and Wilms tumors. Also called embryoma.

### **embryonic**

Having to do with an embryo, which is an early stage in the development of a plant or animal.

### **emesis**

The forceful ejection of some or all of the contents of the stomach through the mouth. Emesis may be caused by many things, including certain smells, irritation to the stomach, infections, stress, pain, motion sickness, migraines, certain medicines, some diseases or conditions, and brain injury or concussion. It can also be a symptom of some cancers and a side effect of certain cancer treatments. Also called vomiting.



**emetic**

Describes a substance that causes vomiting. Also called emetogenic.

**emetogenic**

Describes a substance that causes vomiting. Also called emetic.

**emitefur**

An anticancer drug that belongs to the family of drugs called antimetabolites.

**emodin**

A substance found in certain plants, including rhubarb. It belongs to a family of compounds called anthraquinones, which have shown anti-inflammatory and anticancer effects.

**emollient**

A substance that helps soothe, soften, and increase moisture levels, especially in the skin. Emollients may be used in a lotion, cream, ointment, or gel to prevent or treat dry, rough, scaly, itchy skin and other skin problems, such as rashes or burns. They may also be used to help protect the skin against irritation. Emollients may also be given by mouth to prevent or treat constipation by moistening and softening the stool.

**emphysema**

A disorder affecting the alveoli (tiny air sacs) of the lungs. The transfer of oxygen and carbon dioxide in the lungs takes place in the walls of the alveoli. In emphysema, the alveoli become abnormally inflated, damaging their walls and making it harder to breathe. People who smoke or have chronic bronchitis have an increased risk of emphysema. Emphysema is a type of chronic obstructive pulmonary disease (COPD).

**enalapril**

An antihypertensive agent that can also be used to slow or prevent the progression of heart disease in people with childhood cancer treated with drugs that may be harmful to the heart.

**enasidenib mesylate**

A drug used to treat adults with acute myeloid leukemia that has come back or has not gotten better with other treatment. It is used in patients whose cancer has a mutation (change) in the IDH2 gene. It is also being studied in the treatment of other types of cancer. Enasidenib mesylate blocks the protein made by the mutated IDH2 gene. Blocking this protein may help keep cancer cells from growing. Enasidenib mesylate is a type of enzyme inhibitor. Also called Idhifa.

**encapsulated**

Confined to a specific, localized area and surrounded by a thin layer of tissue.

**encephalitis**

A rare condition in which the tissues in the brain become inflamed. Encephalitis is usually caused by a viral infection, but it may also be caused by bacterial or parasitic infections, cancer, or certain drugs or toxins. Signs and symptoms include fever, headache, joint or muscle aches, poor appetite, fatigue, weakness, confusion, changes in behavior, seizures, and problems with vision, speech, or movement. Infants and young children may have nausea, vomiting, body stiffness, feeding problems, and irritability. Most patients have mild symptoms, but sometimes symptoms may be severe or life threatening.

**encephalopathy**

A disorder of the brain that can be caused by disease, injury, drugs, or chemicals.

**enchondroma**

A benign (not cancer) growth of cartilage in bones or in other areas where cartilage is not normally found.

**enchondromatosis**

A rare disorder that causes benign (not cancer) growths of cartilage in the bones that may become cancer. These growths, called enchondromas, usually occur in the bones of the hands and feet, but they may also occur in the skull, ribs, and spine. They may cause bones to break, to be deformed, or to be shorter than usual. People with enchondromatosis have an increased risk of developing certain types of cancer, including chondrosarcoma (cancer that forms in bone cartilage) and cancers of the ovary or liver. Enchondromatosis is most common in children and young adults. Also called Ollier disease.

**encorafenib**

A drug used with cetuximab to treat certain types of colorectal cancer and with binimetinib to treat certain types of melanoma and non-small cell lung cancer. It is used in patients whose cancer has a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Encorafenib blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called Braftovi.

**end-of-life care**

Care given to people who are near the end of life and have stopped treatment to cure or control their disease. End-of-life care includes physical, emotional, social, and spiritual support for patients and their families. The goal of end-of-life care is to control pain and other symptoms so the patient can be as comfortable as possible. End-of-life care may include palliative care, supportive care, and hospice care. Also called comfort care.

**end-stage cancer**

Cancer that cannot be cured or controlled with treatment and leads to death. A person with end-stage cancer may receive treatment to help control pain and other symptoms so they can be as comfortable as possible and have a better quality of life. Also called terminal cancer.

**endemic**

In medicine, describes a disease that is constantly present in a certain geographic area or in a certain group of people. For example, endemic Burkitt lymphoma (a type of non-Hodgkin lymphoma) is seen at constant levels in certain parts of Africa.

**endocarditis**

A condition in which the tissues lining the inside of the heart and the heart valves become inflamed (red and swollen). Endocarditis may be caused by infection with microorganisms, such as bacteria or fungi.

**endocervical canal**

The inner part of the cervix that forms a canal that connects the vagina to the uterus. The endocervical canal is lined with glandular cells that make mucus.

During a pelvic exam, cells may be scraped from the endocervical canal so they can be checked under a microscope for infection, inflammation, cervical cancer, or changes that may become cervical cancer. A type of cervical cancer that begins in cells of the endocervical canal is called cervical adenocarcinoma. Also called endocervix.

### **endocervical curettage**

A procedure done after an abnormal Pap test result in which a sample of tissue is scraped from the lining of the cervical canal (the inner part of the cervix that connects the uterus to the vagina) using a spoon-shaped instrument called a curette. The tissue is then checked under a microscope for signs of disease. An endocervical curettage may be done at the same time as a colposcopy (a procedure that uses a lighted, magnifying instrument to examine the cervix, vagina, and vulva).

### **endocervix**

The inner part of the cervix that forms a canal that connects the vagina to the uterus. The endocervix is lined with glandular cells that make mucus. During a pelvic exam, cells may be scraped from the endocervix so they can be checked under a microscope for infection, inflammation, cervical cancer, or changes that may become cervical cancer. A type of cervical cancer that begins in cells of the endocervix is called cervical adenocarcinoma. Also called endocervical canal.

### **endocrine**

Refers to tissue that makes and releases hormones that travel in the bloodstream and control the actions of other cells or organs. Some examples of endocrine tissues are the pituitary, thyroid, and adrenal glands.

### **endocrine cancer**

Cancer that occurs in endocrine tissue, the tissue in the body that secretes hormones.

### **endocrine gland**

An organ that makes hormones that are released directly into the blood and travel to tissues and organs all over the body. Endocrine glands help control many body functions, including growth and development, metabolism, and fertility. Some examples of endocrine glands are the pituitary, thyroid, and adrenal glands.

### **endocrine pancreas cell**

A pancreatic cell that produces hormones (e.g., insulin and glucagon) that are secreted into the bloodstream. These hormones help control the level of glucose (sugar) in the blood. Also called islet cell and islet of Langerhans cell.

### **endocrine system**

The glands and organs that make hormones and release them directly into the blood so they can travel to tissues and organs all over the body. The hormones released by the endocrine system control many important functions in the body, including growth and development, metabolism, and reproduction. The endocrine system includes the hypothalamus, pineal gland, pituitary gland, thyroid gland, parathyroid glands, thymus, adrenal glands, and pancreas. It also includes the testes in males and the ovaries and placenta (during pregnancy) in females.

**endocrine therapy**

Treatment that adds, blocks, or removes hormones. For certain conditions (such as diabetes or menopause), hormones are given to adjust low hormone levels. Hormones can also cause certain cancers (such as prostate and breast cancer) to grow. To slow or stop the growth of cancer, synthetic hormones or other drugs may be given to block the body's natural hormones, or surgery is used to remove the gland that makes a certain hormone. Also called hormonal therapy, hormone therapy, and hormone treatment.

**endocrine-inactive tumor**

A tumor that is found in endocrine tissue but does not make extra hormones. Endocrine-inactive tumors usually do not cause symptoms until they grow large or spread to other parts of the body. Also called nonfunctioning tumor.

**endocrinologist**

A doctor who has special training in diagnosing and treating disorders of the endocrine system (the glands and organs that make hormones). These disorders include diabetes, infertility, and thyroid, adrenal, and pituitary gland problems.

**endocrinology**

A branch of medicine that specializes in diagnosing and treating disorders of the endocrine system, which includes the glands and organs that make hormones. These disorders include diabetes, infertility, and thyroid, adrenal, and pituitary gland problems.

**endodermal sinus tumor**

A rare type of cancer that begins in germ cells (cells that form sperm or eggs). Endodermal sinus tumors occur most often in the ovary or testicle, but they may also occur in other areas of the body, such as the chest, abdomen, or brain. They tend to grow quickly and spread to other parts of the body if not treated. Endodermal sinus tumors are the most common malignant germ cell tumor in children. Also called yolk sac tumor.

**endogenous**

Produced inside an organism or cell. The opposite is external (exogenous) production.

**endoluminal**

In medicine, refers to the area inside a tube, duct, or hollow organ in the body. Examples are a blood vessel, the stomach, or the intestines.

**endoluminal laser therapy**

A procedure in which an endoscope (a thin, lighted tube) with a laser attached is inserted into the body and used as a knife to cut out or destroy abnormal tissue, such as cancer tissue, or seal off blood or lymph vessels. Endoluminal laser therapy may be used to ease certain symptoms caused by advanced cancer. For example, it may be used to destroy tumor tissue that is blocking the windpipe, throat, stomach, or colon.

**endolymphatic sac**

A balloon-shaped structure filled with fluid in the inner ear. The fluid in the endolymphatic sac surrounds and protects the structures in the inner ear that affect hearing and balance. When pressure in the inner ear builds, the endolymphatic sac releases fluid to relieve the pressure. The endolymphatic sac

also removes extra fluid and waste products from the inner ear and is involved in the inner ear's immune response to foreign substances.

### **endometrial**

Having to do with the endometrium (the layer of tissue that lines the uterus).

### **endometrial biopsy**

A procedure in which a sample of tissue is taken from the endometrium (inner lining of the uterus) for examination under a microscope. A thin tube is inserted through the cervix into the uterus, and gentle scraping and suction are used to remove the sample.

### **endometrial cancer**

Cancer that forms in the tissue lining the uterus (the small, hollow, pear-shaped organ in a woman's pelvis in which a fetus develops). Most endometrial cancers are adenocarcinomas (cancers that begin in cells that make and release mucus and other fluids).

### **endometrial disorder**

Abnormal cell growth in the endometrium (the lining of the uterus).

### **endometrial hyperplasia**

An abnormal overgrowth of the endometrium (the layer of cells that lines the uterus). There are four types of endometrial hyperplasia: simple endometrial hyperplasia, complex endometrial hyperplasia, simple endometrial hyperplasia with atypia, and complex endometrial hyperplasia with atypia. These differ in terms of how abnormal the cells are and how likely it is that the condition will become cancer.

### **endometrial stromal sarcoma**

A rare type of cancer that forms in the connective tissue of the lining of the uterus. It may also form in the ovaries, cervix, and vagina, but this is very uncommon. Endometrial stromal sarcomas may be low grade or high grade, depending on how abnormal the cancer cells look under a microscope and how quickly the cancer cells are likely to grow and spread. They usually occur before menopause in women between 40 and 50 years of age. Also called ESS.

### **endometrioid adenocarcinoma**

A type of cancer that usually forms in the glandular tissue of the endometrium (the lining of the uterus) or ovary but may also form in the fallopian tube, cervix, and vagina. The cancer cells tend to look similar to normal gland cells when viewed under a microscope. Endometrioid adenocarcinoma usually grows and spreads slowly, can be treated, and has a good prognosis (chance of recovery). It is the most common type of endometrial cancer. Also called endometrioid cancer.

### **endometrioid cancer**

A type of cancer that usually forms in the glandular tissue of the endometrium (the lining of the uterus) or ovary but may also form in the fallopian tube, cervix, and vagina. The cancer cells tend to look similar to normal gland cells when viewed under a microscope. Endometrioid cancer usually grows and spreads slowly, can be treated, and has a good prognosis (chance of recovery). It is the most common type of endometrial cancer. Also called endometrioid adenocarcinoma.

### **endometriosis**

A benign condition in which tissue that looks like endometrial tissue grows in abnormal places in the abdomen.

### **endometrium**

The layer of tissue that lines the uterus.

### **endoplasmic reticulum**

A network of sac-like structures and tubes in the cytoplasm (gel-like fluid) of a cell. Proteins and other molecules move through the endoplasmic reticulum. The outer surface of the endoplasmic reticulum can be smooth or rough. The rough endoplasmic reticulum has many ribosomes on its outer surface and makes proteins the cell needs. The smooth endoplasmic reticulum makes other substances that the cell needs, such as lipids (fats) and carbohydrates (sugars). The endoplasmic reticulum is a cell organelle.

### **endorectal ultrasound**

A procedure in which a probe that sends out high-energy sound waves is inserted into the rectum. The sound waves are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissue called a sonogram. Endorectal ultrasound is used to look for abnormalities in the rectum and nearby structures, including the prostate. Also called ERUS, transrectal ultrasound, and TRUS.

### **endorphin**

One of several substances made in the body that can relieve pain and give a feeling of well-being. Endorphins are peptides (small proteins) that bind to opioid receptors in the central nervous system. An endorphin is a type of neurotransmitter.

### **endoscope**

A thin, tube-like instrument used to look at tissues inside the body. An endoscope has a light and a lens for viewing and may have a tool to remove tissue.

### **endoscopic mucosal resection**

A procedure that uses an endoscope to remove abnormal growths or tissue from the lining of the digestive tract without open surgery. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. The endoscope may be passed through the mouth into the esophagus, stomach, or upper part of the small intestine, or it may be passed through the anus into the colon. Special tools are then inserted through the endoscope to remove the abnormal tissue, which will be checked under a microscope for signs of disease. Sometimes suction is used to remove the abnormal tissue, or a solution is injected around the abnormal tissue to separate it from other tissue before it is removed. Endoscopic mucosal resection may be used to help diagnose and treat early-stage cancers of the esophagus, stomach, small intestine, colon, or rectum. It may also be used to treat Barrett esophagus or other precancerous conditions of the digestive tract.

### **endoscopic retrograde cholangiopancreatography**

A procedure that uses an endoscope to examine and x-ray the pancreatic duct, hepatic duct, common bile duct, duodenal papilla, and gallbladder. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. The endoscope is passed through the mouth and down into the first part of the small intestine (duodenum). A smaller tube (catheter) is then inserted through the endoscope



into the bile and pancreatic ducts. A dye is injected through the catheter into the ducts, and an x-ray is taken. Also called ERCP.

### **endoscopic ultrasound**

A procedure in which an endoscope is inserted into the body. An endoscope is a thin, tube-like instrument that has a light and a lens for viewing. A probe at the end of the endoscope is used to bounce high-energy sound waves (ultrasound) off internal organs to make a picture (sonogram). Also called endosonography and EUS.

### **endoscopic ultrasound-guided fine needle aspiration**

A procedure to take a sample of tissue for examination under a microscope. An endoscope with an ultrasound probe and a biopsy needle at the end is inserted through the mouth into the esophagus. An endoscope is a thin, tube-like instrument that has a light and a lens for viewing. The ultrasound probe is used to bounce high-energy sound waves off internal organs and tissues to make a picture on a monitor. This picture helps the doctor see where to place the biopsy needle. Also called EUS-FNA.

### **endoscopy**

A procedure that uses an endoscope to examine the inside of the body. An endoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

### **endosonography**

A procedure in which an endoscope is inserted into the body. An endoscope is a thin, tube-like instrument that has a light and a lens for viewing. A probe at the end of the endoscope is used to bounce high-energy sound waves (ultrasound) off internal organs to make a picture (sonogram). Also called endoscopic ultrasound and EUS.

### **endostatin**

A substance being studied in the treatment of cancer. Endostatin is made from a type of collagen (a protein found in cartilage and other connective tissue). It may prevent the growth of new blood vessels that tumors need to grow. Endostatin is a type of antiangiogenesis agent. Also called COL18A1.

### **endothelial cell**

The main type of cell found in the inside lining of blood vessels, lymph vessels, and the heart.

### **endothelin receptor antagonist**

A drug that blocks the hormone endothelin and may prevent prostate cancer from spreading to the bones. It may also prevent the growth and spread of other types of cancer, including colorectal cancer.

### **endothelin-1 protein receptor antagonist**

A substance that blocks the binding of the endothelin-1 protein to its receptor. Endothelin-1 is a small molecule that causes changes in blood vessels and helps regulate blood pressure. It can also stimulate the growth of some types of cells.

### **endpoint**

In clinical trials, an event or outcome that can be measured objectively to determine whether the intervention being studied is beneficial. The endpoints of

a clinical trial are usually included in the study objectives. Some examples of endpoints are survival, improvements in quality of life, relief of symptoms, and disappearance of the tumor.

### **enema**

The injection of a liquid through the anus into the large bowel.

### **energy balance**

In biology, the state at which the number of calories eaten equals the number of calories used. Energy balance is affected by physical activity, body size, amount of body fat and muscle, and genetics.

### **energy healing**

A form of complementary and alternative medicine based on the belief that a vital energy flows through the human body. The goal of energy healing is to balance the energy flow in the patient. It is used to reduce stress and anxiety and promote well-being. Energy healing is being studied in patients receiving cancer therapy, to find out if it can improve quality of life, boost the immune system, or reduce side effects. Also called energy therapy.

### **energy therapy**

A form of complementary and alternative medicine based on the belief that a vital energy flows through the human body. The goal of energy therapy is to balance the energy flow in the patient. It is used to reduce stress and anxiety and promote well-being. Energy therapy is being studied in patients receiving cancer therapy, to find out if it can improve quality of life, boost the immune system, or reduce side effects. Also called energy healing.

### **enfortumab vedotin**

A drug used alone or with pembrolizumab to treat adults with certain types of urothelial cancer (a type of cancer in the bladder or urinary tract) that have spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Enfortumab vedotin contains a monoclonal antibody that binds to a protein called nectin-4, which is found on some cancer cells. It also contains an anticancer drug, which may help kill cancer cells. Enfortumab vedotin may also help the immune system kill cancer cells. It is a type of antibody-drug conjugate. Also called Padcev.

### **eniluracil**

An anticancer drug that increases the effectiveness of fluorouracil. Also called ethynyluracil.

### **enlarged prostate**

A benign (not cancer) condition in which the prostate gland is larger than normal. As the prostate gets bigger, it may press against the bladder and urethra, which can slow or block the flow of urine from the bladder. This can cause urinary symptoms, such as feeling a need to urinate often or right away, waking up many times during the night to urinate, trouble urinating, leaking urine, pain during urination or after ejaculation (the release of semen through the penis during orgasm), and blood in the urine. An enlarged prostate does not increase a person's risk of developing prostate cancer. However, if not treated, it can lead to a weak bladder, urinary retention, urinary tract infections, bladder stones, or bladder or kidney damage. An enlarged prostate is most common in older men. Also called benign prostatic hyperplasia, benign prostatic hypertrophy, and BPH.

**enoxaparin**

A drug used to prevent blood clots. It belongs to the family of drugs called anticoagulants.

**enriched food**

A food that has nutrients added back that were lost during processing. Examples are bread, pasta, and other products made from white flour that have B vitamins added back.

**enteral nutrition**

A form of nutrition that is delivered into the digestive system as a liquid. Drinking nutrition beverages or formulas and tube feeding are forms of enteral nutrition. People who are unable to meet their needs with food and beverages alone, and who do not have vomiting or uncontrollable diarrhea may be given tube feedings. Tube feeding can be used to add to what a person is able to eat or can be the only source of nutrition. A small feeding tube may be placed through the nose into the stomach or the small intestine, or it may be surgically placed into the stomach or the intestinal tract through an opening made on the outside of the abdomen, depending on how long it will be used.

**enterostomal therapist**

A health professional trained in the care of persons with stomas, such as colostomies or urostomies.

**entinostat**

A substance being studied in the treatment of several types of cancer. It blocks enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase (HDAC) inhibitor. Also called HDAC inhibitor SNDX-275 and SNDX-275.

**entrectinib**

A drug used in adults to treat non-small cell lung cancer that has spread and is ROS1 positive and in adults and children aged 1 month and older to treat certain types of solid tumors that have an NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Entrectinib blocks certain proteins involved in cell signaling and cell growth. Blocking these proteins may help keep cancer cells from growing and may kill them. Entrectinib is a type of tyrosine kinase inhibitor. Also called Rozlytrek.

**enucleation**

In medicine, the removal of an organ or tumor in such a way that it comes out clean and whole, like a nut from its shell.

**enveloped virus**

A virus that has an outer wrapping or envelope. This envelope comes from the infected cell, or host, in a process called "budding off." During the budding process, newly formed virus particles become "enveloped" or wrapped in an outer coat that is made from a small piece of the cell's plasma membrane. The envelope may play a role in helping a virus survive and infect other cells.

**environmental exposure**

Having contact with chemical, biological, or physical substances found in air, water, food, or soil that may have a harmful effect on a person's health. Examples of environmental exposures include UV radiation from the sun and cigarette smoke, radon, or other forms of air pollution. A person may also be

exposed to harmful substances by swallowing food or water that is contaminated with bacteria or pesticides or by absorbing harmful chemicals through the skin. The amount of harm caused by an environmental exposure depends on the amount of the exposure, the way a person is exposed, and how long a person is exposed. Some types of environmental exposures may increase the risk of certain diseases, such as lung disease, heart disease, and cancer, and may also lead to birth defects.

### **environmental tobacco smoke**

Smoke that comes from the burning of a tobacco product and smoke that is exhaled by smokers. Inhaling environmental tobacco smoke is called involuntary or passive smoking. Also called ETS and secondhand smoke.

### **enzalutamide**

A drug used to treat certain types of prostate cancer. It is also being studied in the treatment of other types of cancer. Enzalutamide binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Enzalutamide blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called Xtandi.

### **enzastaurin hydrochloride**

A substance being studied in the treatment of certain types of cancer, including non-Hodgkin lymphoma, breast, colon, lung, ovarian, and prostate. Enzastaurin hydrochloride blocks certain cell signaling pathways, and may prevent the growth of new blood vessels that tumors need to grow. It is a type of serine threonine kinase inhibitor and a type of antiangiogenesis agent. Also called LY317615.

### **enzyme**

A protein that speeds up chemical reactions in the body.

### **enzyme inhibitor**

A substance that blocks the action of an enzyme. Enzymes help speed up chemical reactions in the body and take part in many cell functions, including cell signaling, growth, and division. In cancer treatment, enzyme inhibitors may be used to block certain enzymes that cancer cells need to grow.

### **enzyme-linked immunosorbent assay**

A laboratory technique that uses antibodies linked to enzymes to detect and measure the amount of a substance in a solution, such as serum. The test is done using a solid surface to which the antibodies and other molecules stick. In the final step, an enzyme reaction takes place that causes a color change that can be read using a special machine. There are many different ways that an enzyme-linked immunosorbent assay can be done. Enzyme-linked immunosorbent assays may be used to help diagnose certain diseases. Also called ELISA.

### **eosinophil**

A type of immune cell that has granules (small particles) with enzymes that are released during infections, allergic reactions, and asthma. An eosinophil is a type of white blood cell and a type of granulocyte.

### **eosinophilia**

A condition in which the number of eosinophils (a type of white blood cell) in the blood is greatly increased. Eosinophilia is often a response to infection or

allergens (substances that cause an allergic response).

### **epcoritamab**

A drug used to treat adults with certain types of diffuse large B-cell lymphoma, high-grade B-cell lymphoma, or follicular lymphoma that came back or did not get better after treatment with at least two other systemic therapies. It is also being studied in the treatment of other types of cancer. Epcoritamab binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called CD20, which is found on B cells (another type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Epcoritamab is a type of bispecific T-cell engager. Also called Epkinly.

### **ependyma**

A thin membrane that lines the fluid-filled spaces in the brain and spinal cord. It is made up of a type of glial cell called an ependymal cell.

### **ependymal cell**

A cell that forms the lining of the fluid-filled spaces in the brain and spinal cord. It is a type of glial cell.

### **ependymal tumor**

A type of glioma that begins in ependymal cells, which line the fluid-filled spaces in the brain and spinal cord and make cerebrospinal fluid. Ependymal tumors can form anywhere in the brain or spinal cord, but they usually form in the lower back part of the brain in children and in the spinal cord in adults. These tumors can occur at any age but are more common in young children. They can be low grade or high grade, determined by how abnormal the tumor cells look under a microscope and how quickly the tumor is likely to grow, spread, and come back after treatment. Most ependymal tumors are low grade, meaning they tend to grow and spread within the brain and spinal cord slowly. They rarely spread outside the brain and spinal cord. Childhood ependymal tumors often come back after treatment. Also called ependymoma.

### **ependymoma**

A type of glioma that begins in ependymal cells, which line the fluid-filled spaces in the brain and spinal cord and make cerebrospinal fluid. Ependymomas can form anywhere in the brain or spinal cord, but they usually form in the lower back part of the brain in children and in the spinal cord in adults. These tumors can occur at any age but are more common in young children. They can be low grade or high grade, determined by how abnormal the tumor cells look under a microscope and how quickly the tumor is likely to grow, spread, and come back after treatment. Most ependymomas are low grade, meaning they tend to grow and spread within the brain and spinal cord slowly. They rarely spread outside the brain and spinal cord. Childhood ependymomas often come back after treatment. Also called ependymal tumor.

### **ephedra**

A shrub native to China and India. The stems and roots are used in traditional medicine as a diuretic and for asthma, bronchitis, and cough. It has also been promoted as a decongestant, a weight loss aid, and as a supplement to increase energy. Ephedra may cause high blood pressure, increased heart rate, or death if used with certain drugs, and may reduce the effects of certain drugs used to treat cancer and other diseases. The U.S. Food and Drug Administration has

banned the sale of dietary supplements that contain ephedra. The scientific name is *Ephedra sinica*. Also called ma huang.

### **epidemiologist**

A scientist who studies the patterns, causes, and control of disease in groups of people.

### **epidemiology**

The study of the patterns, causes, and control of disease in groups of people.

### **epidermal growth factor**

A protein made by many cells in the body and by some types of tumors. It causes cells to grow and differentiate (become more specialized). It is a type of growth factor and a type of cytokine. Also called EGF.

### **epidermal growth factor receptor**

A protein found on certain types of cells that binds to a substance called epidermal growth factor. The epidermal growth factor receptor protein is involved in cell signaling pathways that control cell division and survival. Sometimes, mutations (changes) in the EGFR gene cause epidermal growth factor receptor proteins to be made in higher than normal amounts on some types of cancer cells. This causes cancer cells to divide more rapidly. Drugs that block epidermal growth factor receptor proteins are being used in the treatment of some types of cancer. Epidermal growth factor receptors are a type of receptor tyrosine kinase. Also called EGFR, ErbB1, and HER1.

### **epidermal growth factor receptor gene**

A gene that makes a protein that is involved in cell growth and cell survival. Mutated (changed) forms of the epidermal growth factor receptor gene and protein have been found in some types of cancer, including non-small cell lung cancer. These changes may cause cancer cells to grow and spread in the body. Checking for changes in the epidermal growth factor receptor gene in tumor tissue may help plan cancer treatment. Also called EGFR gene, ERBB1 gene, and HER1 gene.

### **epidermal growth factor receptor inhibitor**

A substance that blocks the activity of a protein called epidermal growth factor receptor (EGFR). EGFR is found on the surface of some normal cells and is involved in cell growth. It may also be found at high levels on some types of cancer cells, which causes these cells to grow and divide. Blocking EGFR may keep cancer cells from growing. Some epidermal growth factor receptor inhibitors are used to treat cancer. Also called EGFR inhibitor, EGFR tyrosine kinase inhibitor, and epidermal growth factor receptor tyrosine kinase inhibitor.

### **epidermal growth factor receptor tyrosine kinase inhibitor**

A substance that blocks the activity of a protein called epidermal growth factor receptor (EGFR). EGFR is found on the surface of some normal cells and is involved in cell growth. It may also be found at high levels on some types of cancer cells, which causes these cells to grow and divide. Blocking EGFR may keep cancer cells from growing. Some epidermal growth factor receptor tyrosine kinase inhibitors are used to treat cancer. Also called EGFR inhibitor, EGFR tyrosine kinase inhibitor, and epidermal growth factor receptor inhibitor.

### **epidermis**

The outer layer of the two main layers of the skin.



### **epidermodysplasia verruciformis**

A rare, inherited disorder that makes people susceptible to chronic infection with certain types of human papillomavirus (HPV). It causes wart-like lesions or reddish-brown scaly patches to form most often on the skin of the face, neck, hands, arms, legs, feet, and trunk. Epidermodysplasia verruciformis usually appears at an early age and can get worse over time. People with this disorder have a high risk of developing nonmelanoma skin cancer at an early age, especially squamous cell skin cancer. Epidermodysplasia verruciformis is caused by mutations (changes) in the EVER1/TMC6 or EVER2/TMC8 genes.

### **epidermoid carcinoma**

Cancer that begins in squamous cells. Squamous cells are thin, flat cells that look like fish scales, and are found in the tissue that forms the surface of the skin, the lining of the hollow organs of the body, and the lining of the respiratory and digestive tracts. Most cancers of the anus, cervix, head and neck, and vagina are epidermoid carcinomas. Also called squamous cell carcinoma.

### **epidermolysis bullosa**

A group of chronic skin disorders in which fluid-filled blisters form on the skin and mucosa (the moist, inner lining of some organs and body cavities). Epidermolysis bullosa is inherited and usually starts at birth. Patients with epidermolysis bullosa may be at increased risk of squamous cell cancer of the skin.

### **epidermolysis bullosa simplex, Dowling-Meara**

A rare, inherited disorder in which many clusters of blisters form all over the body, especially on the face, hands, feet, arms, legs, and trunk. Blisters may also form in the inner lining of the mouth and other parts of the gastrointestinal tract and the upper respiratory tract. Other signs and symptoms include scarring, changes in skin color, nail problems, and thickening of the skin on the palms of the hands and bottoms of the feet. The signs and symptoms usually appear at birth and tend to get better over time. However, infants with a severe form of the disease die within the first year of life. People with epidermolysis bullosa simplex, Dowling-Meara have a high risk of developing basal cell skin cancer by age 55 years. Epidermolysis bullosa simplex, Dowling-Meara is caused by mutations (changes) in the KRT5 or KRT14 genes. Also called EBS-DM.

### **epididymis**

A narrow, tightly-coiled tube that is attached to each of the testicles (the male sex glands that produce sperm). Sperm cells (male reproductive cells) move from the testicles into the epididymis, where they finish maturing and are stored.

### **epidural**

Having to do with the space between the wall of the spinal canal and the covering of the spinal cord. An epidural injection is given into this space.

### **epidural block**

An injection of an anesthetic drug into the space between the wall of the spinal canal and the covering of the spinal cord.

### **epigallocatechin-3-gallate**

A substance found in green tea. It is being studied in the prevention of cancer and some other diseases. It is a type of antioxidant. Also called EGCG.

### **epigastric**

Having to do with the upper middle area of the abdomen.

### **epigenetic alteration**

A change in the chemical structure of DNA that does not change the DNA coding sequence. Epigenetic alterations occur in the body when chemical groups called methyl groups are added to or removed from DNA or when changes are made to proteins called histones that bind to the DNA in chromosomes. These changes may occur with age and exposure to environmental factors, such as diet, exercise, drugs, and chemicals. They can affect a person's risk of disease and may be passed from parent to child. Also called epigenetic variant and epimutation.

### **epigenetic variant**

A change in the chemical structure of DNA that does not change the DNA coding sequence. Epigenetic variants occur in the body when chemical groups called methyl groups are added to or removed from DNA or when changes are made to proteins called histones that bind to the DNA in chromosomes. These changes may occur with age and exposure to environmental factors, such as diet, exercise, drugs, and chemicals. They can affect a person's risk of disease and may be passed from parent to child. Also called epigenetic alteration and epimutation.

### **epigenetics**

The study of how age and exposure to environmental factors, such as diet, exercise, drugs, and chemicals, may cause changes in the way genes are switched on and off without changing the actual DNA sequence. These changes can affect a person's risk of disease and may be passed from parents to their children.

### **epigenomics**

The study of all of the epigenetic changes in a cell. Epigenetic changes are changes in the way genes are switched on and off without changing the actual DNA sequence. They may be caused by age and exposure to environmental factors, such as diet, exercise, drugs, and chemicals. Epigenetic changes can affect a person's risk of disease and may be passed from parents to their children.

### **epiglottis**

The flap that covers the trachea during swallowing so that food does not enter the lungs.

### **epilepsy**

A group of disorders marked by problems in the normal functioning of the brain. These problems can produce seizures, unusual body movements, a loss of consciousness or changes in consciousness, as well as mental problems or problems with the senses.

### **epimutation**

A change in the chemical structure of DNA that does not change the DNA coding sequence. Epimutations occur in the body when chemical groups called methyl groups are added to or removed from DNA or when changes are made to proteins called histones that bind to the DNA in chromosomes. These changes may occur with age and exposure to environmental factors, such as diet, exercise, drugs, and chemicals. They can affect a person's risk of disease and may be passed from parent to child. Also called epigenetic alteration and epigenetic variant.

### **epinephrine**

A hormone and neurotransmitter. Also called adrenaline.

### **epipodophyllotoxin**

A substance being studied in the treatment of some types of cancer.

Epipodophyllotoxin is extracted from the mandrake root *Podophyllum peltatum*. It is a type of topoisomerase inhibitor.

### **epirubicin hydrochloride**

A drug used with other drugs to treat breast cancer that was removed by surgery and has spread to the lymph nodes under the arm. It is also being studied in the treatment of other types of cancer. Epirubicin hydrochloride blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Epirubicin is the active ingredient of epirubicin hydrochloride. Also called Ellence.

### **episcleritis**

A condition in which the thin layer of tissue that covers the sclera (the white part of the eye) becomes inflamed. The cause is usually not known, but it may occur with certain inflammatory conditions, such as lupus and rheumatoid arthritis. Signs and symptoms include redness, swelling, tenderness, mild pain in the eye, and sensitivity to light. Episcleritis usually does not affect vision and often goes away without treatment. Also called bulbar conjunctivitis.

### **episodic breathlessness**

A medical condition in which patients have periods of trouble breathing that are followed by periods with no trouble breathing. Episodic breathlessness is seen in patients with lung cancer or other lung diseases, and in some heart conditions.

### **epithelial**

Refers to the cells that line the internal and external surfaces of the body.

### **epithelial carcinoma**

Cancer that begins in the cells that line an organ.

### **epithelial ovarian cancer**

Cancer that forms in the tissue covering the ovary (one of a pair of female reproductive glands in which eggs are made). Most ovarian cancers are epithelial ovarian cancers. Fallopian tube cancer and primary peritoneal cancer are similar to epithelial ovarian cancer and are staged and treated the same way. Also called ovarian epithelial cancer.

### **epithelioid hemangioendothelioma**

A rare blood vessel tumor that usually forms in the liver, lung, or bone, but it can also form on or in the skin. Epithelioid hemangioendotheliomas may be slow growing or fast growing and, in some people, may spread to other parts of the body very quickly. Signs and symptoms depend on where the tumor is in the body. On the skin, the tumor may be raised with round or flat, red-brown patches that feel warm. In the lung, the tumor can cause chest pain, trouble breathing, spitting up blood, and anemia. In the bone, the tumor can cause breaks. Epithelioid hemangioendotheliomas usually occur in adults, but can sometimes occur in children. They are a type of vascular tumor and a type of soft tissue sarcoma.

### **epithelioid hemangioma**

A rare benign (not cancer) tumor of small blood vessels surrounded by lymphocytes and eosinophils (types of white blood cells). Epithelioid hemangioma usually forms on or in the skin, especially the skin of the head, but can occur in other areas of the body, such as in bone. On the skin, it may appear as firm pink to red bumps that may be itchy or painful. If the tumor is in bone, it may cause swelling and pain. Epithelioid hemangioma is sometimes caused by injury and often comes back after treatment. Epithelioid hemangioma is most common in young and middle-aged adults. It is a type of vascular tumor. Also called angiolymphoid hyperplasia with eosinophilia and histiocytoid hemangioma.

### **epithelioid sarcoma**

A rare type of cancer that usually begins as a slow-growing, firm lump in the deep soft tissue or skin of the arms, hands, or fingers. It may also occur in the legs, trunk (chest and abdomen), or head and neck. The lump is usually painless and there may be an ulcer in the skin covering the lump. Epithelioid sarcoma may spread to nearby tissue, lymph nodes, or other parts of the body. It often recurs (comes back) after treatment. Epithelioid sarcoma usually occurs in young adults. It is a type of soft tissue sarcoma.

### **epithelium**

A thin layer of tissue that covers organs, glands, and other structures within the body.

### **epitope**

A part of a molecule that an antibody will recognize and bind to.

### **epoetin alfa**

A drug used to treat anemia caused by chronic kidney disease, some types of chemotherapy, and an antiviral drug for HIV infection called zidovudine. It is also used to lower the number of donor blood transfusions needed during and after certain types of surgery. Epoetin alfa is a form of erythropoietin (a substance naturally made by the kidneys) that is made in the laboratory. It helps the bone marrow make more red blood cells. Epoetin alfa is a type of antianemic and a type of erythropoiesis-stimulating agent. Also called Epogen, Procrit, and Retacrit.

### **epoetin beta**

A substance that is made in the laboratory and stimulates the bone marrow to make red blood cells. It is a type of antianemic and a type of recombinant human erythropoietin.

### **epothilone**

A substance obtained from bacteria that interferes with cell division. Some epothilones are being studied as treatments for cancer.

### **epothilone B**

A substance being studied in the treatment of cancer. It is a type of epothilone. Also called EPO906.

### **epothilone D**

A substance being studied in the treatment of cancer. It is a type of mitotic inhibitor and epothilone. Also called KOS-862.

### **epothilone ZK219477**

A form of the substance epothilone that is made in the laboratory. It is being studied in the treatment of some types of cancer. Epothilone ZK2219477 stops the growth of tumor cells by blocking cell division. It is a type of antimetabolic agent.

### **epratuzumab**

A substance being studied in the treatment of certain types of non-Hodgkin lymphoma (NHL) and acute lymphoblastic leukemia (ALL). It is also being studied in the treatment of an autoimmune disease called systemic lupus erythematosus (SLE). Epratuzumab binds to a protein called CD22, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help suppress the body's immune response and it may help kill cancer cells. Epratuzumab is a type of monoclonal antibody.

### **erb-38 immunotoxin**

A toxic substance linked to an antibody that attaches to tumor cells and kills them.

### **erdafitinib**

A drug used to treat adults with urothelial cancer (a type of bladder or urinary tract cancer) that has spread and has an abnormal FGFR3 gene. It is used in patients whose cancer got worse during or after treatment with at least one type of systemic therapy. It is also being studied in the treatment of other types of cancer. Erdafitinib blocks a protein called FGFR, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Balversa.

### **erectile dysfunction**

An inability to have an erection of the penis adequate for sexual intercourse. Also called impotence.

### **erection**

In medicine, the swelling of the penis with blood, causing it to become firm.

### **ergocalciferol**

A form of vitamin D that helps the body use calcium and phosphorus to make strong bones and teeth. It is fat-soluble (can dissolve in fats and oils) and is found in plants and yeast. It can be made in the body from another form of vitamin D when the body is exposed to the sun. Ergocalciferol is also made in the laboratory. It is used to prevent and to treat vitamin D deficiency. It is a type of dietary supplement. Also called vitamin D2.

### **eribulin mesylate**

A drug used to treat certain types of breast cancer and liposarcoma (a type of soft tissue sarcoma) that have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Eribulin mesylate blocks cell growth by stopping cell division and may kill cancer cells. It is a type of antimicrotubule agent. Also called E7389 and Halaven.

### **erismodegib**

A drug used to treat locally advanced basal cell carcinoma (BCC) that has come back after surgery or radiation therapy. It is also used in patients who cannot be treated with surgery or radiation therapy. Erismodegib is also being studied in the treatment of other types of cancer. Erismodegib blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type

of hedgehog signaling pathway antagonist. Also called LDE225, Odomzo, and sonidegib phosphate.

### **erlotinib hydrochloride**

A drug used alone to treat certain types of non-small cell lung cancer and with gemcitabine hydrochloride to treat certain types of pancreatic cancer. It is also being studied in the treatment of other types of cancer. Erlotinib hydrochloride blocks a protein called EGFR, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called CP-358,774, OSI-774, and Tarceva.

### **eructation**

The release of air or gas from the stomach or esophagus through the mouth. Eructation is usually caused by a buildup of air in the esophagus or upper part of the stomach when too much air is swallowed. This can occur when eating or drinking too fast, talking while eating, drinking carbonated drinks, chewing gum, smoking, or having an anxiety attack. Eructation may also be a side effect of certain medicines or a symptom of some gastrointestinal conditions and digestive problems, such as gastroesophageal reflux disease, gastritis, and stomach ulcers or infections. Also called belching and burping.

### **erythema**

Redness of the skin.

### **erythrocyte**

A type of blood cell that is made in the bone marrow and found in the blood. Erythrocytes contain a protein called hemoglobin, which carries oxygen from the lungs to all parts of the body. Checking the number of erythrocytes in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as anemia, dehydration, malnutrition, and leukemia. Also called RBC and red blood cell.

### **erythrocyte sedimentation rate**

The distance red blood cells travel in one hour in a sample of blood as they settle to the bottom of a test tube. The sedimentation rate is increased in inflammation, infection, cancer, rheumatic diseases, and diseases of the blood and bone marrow. Also called ESR and sedimentation rate.

### **erythrodysplasia**

A condition in which immature red blood cells (erythroid cells) in the bone marrow are abnormal in size, shape, organization, and/or number. Erythrodysplasia may be caused by vitamin deficiency or chemotherapy, or it may be a sign of refractory anemia, which is a myelodysplastic syndrome. Also called erythroid dysplasia.

### **erythrogenesis imperfecta**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with erythrogenesis imperfecta may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called Blackfan–Diamond anemia, congenital hypoplastic anemia, congenital pure red cell aplasia, DBA, Diamond-Blackfan anemia, and inherited erythroblastopenia.



### **erythroid dysplasia**

A condition in which immature red blood cells (erythroid cells) in the bone marrow are abnormal in size, shape, organization, and/or number. Erythroid dysplasia may be caused by vitamin deficiency or chemotherapy, or it may be a sign of refractory anemia, which is a myelodysplastic syndrome. Also called erythrodysplasia.

### **erythroleukemia**

Cancer of the blood-forming tissues in which large numbers of immature, abnormal red blood cells are found in the blood and bone marrow.

### **erythroleukoplakia**

An abnormal patch of red and white tissue that forms on mucous membranes in the mouth and may become cancer. Tobacco (smoking and chewing) and alcohol may increase the risk of erythroleukoplakia.

### **erythroplakia**

An abnormal patch of red tissue that usually forms on the inside of the mouth, especially on the tongue, inside of the cheek, and under the tongue. The patch often bleeds easily if it is scraped. Erythroplakia is most commonly caused by smoking or chewing tobacco, but it may also be caused by heavy alcohol use or poorly fitting dentures that rub against the tissues in the mouth. Most erythroplakias are benign (not cancer), but some may be precancerous or a sign of cancer.

### **erythropoiesis**

The formation of red blood cells in blood-forming tissue. In the early development of a fetus, erythropoiesis takes place in the yolk sac, spleen, and liver. After birth, all erythropoiesis occurs in the bone marrow.

### **erythropoiesis-stimulating agent**

A substance that stimulates the bone marrow to make more red blood cells. Erythropoiesis-stimulating agents are used to treat anemia caused by chronic kidney failure, some anticancer drugs, and certain treatments for HIV. They may also be used to lower the number of blood transfusions needed during and after certain major surgeries. Examples of erythropoiesis-stimulating agents are epoetin alfa (Epogen, Procrit) and darbepoetin alfa (Aranesp). Also called ESA.

### **erythropoietin**

A substance that is naturally produced by the kidneys, and that stimulates the bone marrow to make red blood cells. When erythropoietin is made in the laboratory, it is called epoetin alfa or epoetin beta.

### **escitalopram**

A drug used to treat depression and certain anxiety disorders. It belongs to the family of drugs called selective serotonin reuptake inhibitors (SSRIs). Also called Lexapro.

### **esomeprazole magnesium**

A drug that blocks acid from being made in the stomach. It is used to treat acid reflux disease and to prevent certain types of gastrointestinal ulcers. Esomeprazole magnesium is being studied in the prevention of esophageal cancer and in the treatment of other conditions, including side effects of chemotherapy. It is a type of anti-ulcer agent. Also called Nexium.

## **esophageal**

Having to do with the esophagus, the muscular tube through which food passes from the throat to the stomach.

## **esophageal cancer**

Cancer that forms in tissues lining the esophagus (the muscular tube through which food passes from the throat to the stomach). Two types of esophageal cancer are squamous cell carcinoma (cancer that begins in flat cells lining the esophagus) and adenocarcinoma (cancer that begins in cells that make and release mucus and other fluids).

## **esophageal reflux**

The backward flow of stomach acid contents into the esophagus (the tube that connects the mouth to the stomach). Also called gastric reflux and gastroesophageal reflux.

## **esophageal speech**

Speech produced by trapping air in the esophagus and forcing it out again. It is used after removal of a person's larynx (voice box).

## **esophageal stent**

A tube placed in the esophagus to keep a blocked area open so the patient can swallow soft food and liquids. Esophageal stents are made of metal mesh, plastic, or silicone, and may be used in the treatment of esophageal cancer.

## **esophagectomy**

An operation to remove a portion of the esophagus.

## **esophagitis**

Inflammation of the esophagus (the tube that carries food from the mouth to the stomach).

## **esophagogastroduodenoscopy**

A procedure in which an endoscope is passed through the mouth and down the throat into esophagus, stomach, and duodenum (first part of the small intestine) to check for abnormal areas. An endoscope is a thin tube with a light and a video camera attached. It may also have a tool to remove a sample of cells, tissue, or fluid so it can be checked under a microscope for signs of disease. An esophagogastroduodenoscopy may be used to help diagnose cancer and other conditions, such as Barrett esophagus (a precancerous condition), ulcers, gastroesophageal reflux disease, and celiac disease. It may also be used to remove polyps or other types of growths, stop bleeding caused by ulcers or other conditions, widen a narrow esophagus, place a feeding tube or drainage tube, or remove foreign objects. Also called EGD, upper endoscopy, upper gastrointestinal endoscopy, and upper GI endoscopy.

## **esophagoscopy**

Examination of the esophagus using an esophagoscope. An esophagoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

## **esophagram**

A series of x-ray pictures of the esophagus taken after a patient drinks a liquid containing barium sulfate (a form of the silver-white metallic element barium).

The barium sulfate coats and outlines the inner wall of the esophagus so that it can be seen on the x-ray pictures. Also called contrast esophagram.

### **esophagus**

The muscular tube through which food passes from the throat to the stomach.

### **essential oil**

The scented liquid taken from certain plants using steam or pressure. Essential oils contain the natural chemicals that give the plant its “essence” (specific odor and flavor). Essential oils are used in perfumes, food flavorings, medicine, and aromatherapy.

### **essential thrombocythemia**

An increased number of thrombocytes (platelets) in the blood, without a known cause. Also called essential thrombocytosis.

### **essential thrombocytosis**

An increased number of thrombocytes (platelets) in the blood, without a known cause. Also called essential thrombocythemia.

### **ester**

A chemical substance made when an acid and an alcohol combine and water is removed. Esters are found in essential oils (scented oils that come from plants).

### **esterified estrogen**

A form of estrogen that may have fewer side effects than other forms. Esterified estrogens are used to treat some types of cancer, including prostate cancer. They are also used to treat the symptoms of menopause, (such as hot flashes, vaginal dryness, or heavy and painful bleeding) and osteoporosis (loss of bone mass). It is a type of drug called hormone therapy.

### **esthesioneuroblastoma**

A rare type of cancer that forms in the tissues of the upper part of the nasal cavity (space inside the nose). This area is near the bone that separates the nasal cavity from the brain. These tissues are involved in the sense of smell. Esthesioneuroblastoma may spread from the nasal cavity to the bone around the eyes, the sinuses, the front part of the brain, or the lymph nodes in the neck. It is the most common type of nasal cavity tumor in children, especially in teens. Also called olfactory neuroblastoma.

### **estradiol**

A form of the hormone estrogen.

### **estramustine**

A combination of the hormone estradiol (an estrogen) and nitrogen mustard (an anticancer drug). Used in the palliative therapy of prostate cancer.

### **estrogen**

A type of hormone made by the body that helps develop and maintain female sex characteristics and the growth of long bones. Estrogens can also be made in the laboratory. They may be used as a type of birth control and to treat symptoms of menopause, menstrual disorders, osteoporosis, and other conditions.

### **estrogen blocker**

A substance that keeps cells from making or using estrogen (a hormone that plays a role in female sex characteristics, the menstrual cycle, and pregnancy). Estrogen blockers may stop some cancer cells from growing and are used to prevent and treat breast cancer. They are also being studied in the treatment of other types of cancer. An estrogen blocker is a type of hormone antagonist. Also called antiestrogen.

### **estrogen cream**

A cream that contains the hormone estrogen. It is used to treat some symptoms of menopause, such as vaginal dryness and painful intercourse. It may also be used to treat certain types of urinary incontinence (inability to control the flow of urine from the bladder). Estrogen cream is usually applied to the vagina, vulva, or opening of the urethra. It may also be applied to the cervix in some women who have certain abnormal cell changes caused by low hormone levels. Treatment with estrogen cream usually helps make these abnormal cells go away.

### **estrogen receptor**

A protein found inside the cells of the female reproductive tissue, some other types of tissue, and some cancer cells. The hormone estrogen will bind to the receptors inside the cells and may cause the cells to grow. Also called ER.

### **estrogen receptor negative**

Describes cells that do not have a protein that binds to the hormone estrogen. Cancer cells that are estrogen receptor negative do not need estrogen to grow. This means that they will keep growing when estrogen is not present and do not stop growing when treated with substances that block estrogen from binding. Also called ER negative.

### **estrogen receptor positive**

Describes cells that have a protein that binds to the hormone estrogen. Cancer cells that are estrogen receptor positive may need estrogen to grow. These cells may stop growing or die when treated with substances that block the binding and actions of estrogen. Also called ER positive.

### **estrogen receptor test**

A lab test to find out if cancer cells have estrogen receptors (proteins to which estrogen will bind). If the cells have estrogen receptors, they may need estrogen to grow, and this may affect how the cancer is treated.

### **estrogen replacement therapy**

Treatment with the hormone estrogen to increase the amount of estrogen in the body. It is given to women who have gone through menopause or to women who have early menopause caused by cancer treatment or by having their ovaries removed by surgery. Estrogen replacement therapy may help relieve symptoms of menopause, such as hot flashes, night sweats, vaginal dryness, and sleep problems. It may also help protect against osteoporosis (thinning of the bones) and lower the risk of breast cancer in postmenopausal women. Also called ERT.

### **etanercept**

A drug that is commonly used to treat arthritis. It is also being studied in the treatment of cancer, and as a treatment for loss of appetite and weight loss in cancer patients. It belongs to the family of drugs called tumor necrosis factor (TNF) antagonists.

### **etaracizumab**

A substance being studied in the treatment of some types of cancer and other conditions. Etaracizumab binds to a protein on the surface of blood vessels and may prevent the growth of new blood vessels that tumors need to grow. It may also prevent the spread of cancer. It is a type of antiangiogenesis agent, a type of metastasis inhibitor, and a type of monoclonal antibody. Also called Abegrin, humanized monoclonal antibody MEDI-522, and MEDI-522.

### **ethanol ablation**

An injection of ethanol (alcohol) through the skin directly into a tumor to kill cancer cells. Ultrasound or a CT scan is used to guide the needle into the tumor. Also called alcohol ablation, PEI, and percutaneous ethanol injection.

### **ethylenediaminetetraacetic acid**

A chemical that binds certain metal ions, such as calcium, magnesium, lead, and iron. It is used in medicine to prevent blood samples from clotting and to remove calcium and lead from the body. It is also used to keep bacteria from forming a biofilm (thin layer stuck to a surface). It is a type of chelating agent. Also called edetic acid and EDTA.

### **ethical**

Having to do with beliefs about what is right and wrong in terms of how people behave. Also called moral.

### **ethical will**

A final personal message or document in which a person shares his or her thoughts, values, memories, life lessons, advice, and hopes for the future. The person may also ask for forgiveness and forgive others. An ethical will is not a legal document.

### **ethiodized oil**

A form of poppy seed oil that contains iodine. Ethiodized oil is given by injection and builds up in the blood and lymph vessels in tumors. It is used for imaging (taking pictures) of the salivary glands and the lymph system. It is also being studied in the imaging of other organs such as the liver, lung, stomach, and thyroid. It is a type of diagnostic imaging agent. Also called Ethiodol, iodized oil, and Lipiodol.

### **ethmoid sinus**

A type of paranasal sinus (a hollow space in the bones around the nose). Ethmoid sinuses are found in the spongy ethmoid bone in the upper part of the nose between the eyes. They are lined with cells that make mucus to keep the nose from drying out.

### **ethnic group**

A group of people who share a similar culture (beliefs, values, and behaviors), language, religion, ancestry, or other characteristic that is often handed down from one generation to the next. They may come from the same country or live together in the same area. Examples of ethnic groups include Hispanics and Han Chinese. Some diseases or genetic conditions may be more common in certain ethnic groups than in others.

### **ethnicity**

A term that refers to the social and cultural characteristics, backgrounds, or experiences shared by a group of people. These include language, religion,

beliefs, values, and behaviors that are often handed down from one generation to the next. Some conditions or diseases, such as cancer, may be more common in certain ethnic groups than in others.

### **ethylene oxide**

A chemical used to make antifreeze, to clean medical equipment, and as a pesticide. It is also found in tobacco smoke. Being exposed to ethylene oxide can cause lung damage, headache, nausea, vomiting, diarrhea, and shortness of breath. Being exposed over a long time may increase the risk of certain types of cancer.

### **ethynyluracil**

An anticancer drug that increases the effectiveness of fluorouracil. Also called eniluracil.

### **etidronate**

A drug that belongs to the family of drugs called bisphosphonates. Bisphosphonates are used as treatment for hypercalcemia (abnormally high levels of calcium in the blood) and for cancer that has spread to the bone (bone metastases).

### **etiology**

The cause or origin of disease.

### **etoposide**

The active ingredient in a drug used with other drugs to treat small cell lung cancer and certain types of testicular cancer. It is also being studied in the treatment of other types of cancer. Etoposide blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of podophyllotoxin derivative and a type of topoisomerase inhibitor. Also called VP-16.

### **etoposide phosphate**

A drug used with other drugs to treat small cell lung cancer and certain types of testicular cancer. It is also being studied in the treatment of other types of cancer. Etoposide phosphate blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of podophyllotoxin derivative and a type of topoisomerase inhibitor. Also called Etopophos.

### **eucalyptus**

A type of evergreen tree that is a member of the myrtle family. Oil from the leaves is used in very small amounts in mouthwash and in medicines and candy used to treat and soothe sore throats and coughs. It has also been used in some cultures to treat many other medical problems. The scientific name is *Eucalyptus globulus*.

### **euphoria**

A feeling of great happiness or well-being. Euphoria may be a side effect of certain drugs.

### **euthanasia**

An easy or painless death, or the intentional ending of the life of a person suffering from an incurable or painful disease at his or her request. Also called mercy killing.



**evaluable disease**

Disease that cannot be measured directly by the size of the tumor but can be evaluated by other methods specific to a particular clinical trial.

**evaluable patients**

Patients whose response to a treatment can be measured because enough information has been collected.

**event-free survival**

In cancer, the length of time after primary treatment for a cancer ends that the patient remains free of certain complications or events that the treatment was intended to prevent or delay. These events may include the return of the cancer or the onset of certain symptoms, such as bone pain from cancer that has spread to the bone. In a clinical trial, measuring the event-free survival is one way to see how well a new treatment works. Also called EFS.

**everolimus**

A drug used alone or with other drugs to treat certain types of breast cancer, kidney cancer, and pancreatic, lung, and gastrointestinal neuroendocrine tumors. It is used under the brand name Afinitor to treat these cancers and to treat a type of benign kidney tumor called renal angiomyolipoma and a type of benign brain tumor called subependymal giant cell astrocytoma in patients who have tuberous sclerosis. Everolimus is also used under the brand name Afinitor Disperz to treat subependymal giant cell astrocytoma and certain types of seizures in patients who have tuberous sclerosis. It is also used under the brand name Zortress to keep the body from rejecting a kidney or liver transplant. Everolimus is also being studied in the treatment of other conditions and types of cancer. It blocks a protein involved in cell division, which may help keep abnormal cells, including cancer cells, from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Everolimus also lowers the body's immune response. It is a type of kinase inhibitor, a type of angiogenesis inhibitor, and a type of immunosuppressant. Also called RAD001.

**evidence-based medicine**

A systematic approach to medicine in which doctors and other health care professionals use the best available scientific evidence from clinical research to help make decisions about the care of individual patients. A physician's clinical experience and the patient's values and preferences are also important in the process of using the evidence to make decisions. The use of evidence-based medicine may help plan the best treatment and improve quality of care and patient outcomes. Also called EBM.

**ex vivo**

Outside of the living body. Refers to a medical procedure in which an organ, cells, or tissue are taken from a living body for a treatment or procedure, and then returned to the living body.

**exatecan mesylate**

An anticancer drug that is a type of topoisomerase inhibitor. Also called DX-8951f.

**excisional biopsy**

A surgical procedure in which a cut is made through the skin to remove an entire lump or suspicious area so it can be checked under a microscope for signs of

disease. A small amount of healthy tissue around the abnormal area may also be removed.

### **excisional skin surgery**

A surgical procedure used to remove moles, cysts, skin cancer, and other skin growths using local anesthesia. To treat skin cancer, the doctor uses a scalpel to remove the entire tumor and some of the healthy tissue around it.

### **excrete**

To get rid of waste material from the blood, tissues, or organs by a normal discharge (such as sweat, urine, or stool).

### **exemestane**

A drug used to treat postmenopausal women with advanced breast cancer or early-stage breast cancer that is estrogen receptor positive (ER+). It is used in patients whose cancer has already been treated with tamoxifen. It is also being studied in the treatment of other types of cancer. Exemestane lowers the amount of estrogen made by the body. This may stop the growth of cancer cells that need estrogen to grow. Exemestane is a type of aromatase inhibitor. Also called Aromasin.

### **exenteration**

Surgery to remove organs within a body cavity.

### **existential therapy**

A type of psychotherapy that helps people think about the problems in their lives in the context of larger issues related to being human. Existential therapy focuses on helping people make healthy choices by taking responsibility for their own decisions, recognizing both their potential and their limitations, developing better ways of communicating, and searching for meaning and purpose in their lives. It may be used to help treat certain conditions, such as anxiety, depression, substance use disorders, and post-traumatic stress disorder.

### **exisulind**

A drug being studied in the treatment and prevention of cancer. It has been shown to cause apoptosis (cell death) in cells that are malignant (cancer) and in cells that may become cancer. It acts through a group of cellular enzymes called cGMP phosphodiesterases.

### **exocervix**

The outer part of the cervix that opens into the vagina. The exocervix is lined with squamous cells (thin, flat-looking cells under a microscope). During a pelvic exam, cells may be scraped from the exocervix so they can be checked under a microscope for infection, inflammation, cervical cancer, or changes that may become cervical cancer. Most cervical cancers begin in squamous cells. Also called ectocervix.

### **exocrine cancer**

A disease in which malignant (cancer) cells are found in the tissues of the pancreas. Also called pancreatic cancer.

### **exocrine gland**

A gland that makes substances such as sweat, tears, saliva, milk, and digestive juices, and releases them through a duct or opening to a body surface. Examples of exocrine glands include sweat glands, lacrimal glands, salivary

glands, mammary glands, and digestive glands in the stomach, pancreas, and intestines.

### **exocrine pancreas cell**

A pancreatic cell that produces enzymes that are secreted into the small intestine. These enzymes help digest food as it passes through the gastrointestinal tract.

### **exosome**

A tiny sac-like structure that is formed inside a cell and contains some of the cell's proteins, DNA, and RNA. Exosomes get released into the blood by many types of cells, including cancer cells, and travel through the blood to other parts of the body. They are able to transfer the proteins, DNA, and RNA they contain into other cells. Exosomes may play a role in the spread of cancer and may also keep immune cells from killing cancer cells. They are being studied in the laboratory to help develop new ways of diagnosing and treating cancer, including preventing the spread of cancer cells in the body.

### **expanded access**

A way to provide an investigational therapy to a patient who is not eligible to receive that therapy in a clinical trial, but who has a serious or life-threatening illness for which other treatments are not available. Expanded access allows patients to receive promising but not yet fully studied or approved cancer therapies when no other treatment option exists. Also called compassionate use.

### **expectant management**

Closely watching a patient's condition but not giving treatment unless symptoms appear or change, or there are changes in test results. Expectant management avoids problems that may be caused by treatments such as radiation or surgery. It is used to find early signs that the condition is getting worse. During expectant management, patients may be given certain exams and tests. It is sometimes used in prostate cancer. Also called deferred therapy.

### **experimental**

In clinical trials, refers to a drug (including a new drug, dose, combination, or route of administration) or procedure that has undergone basic laboratory testing and received approval from the U.S. Food and Drug Administration (FDA) to be tested in human subjects. A drug or procedure may be approved by the FDA for use in one disease or condition, but be considered experimental in other diseases or conditions. Also called investigational.

### **experimental drug**

A substance that has been tested in the laboratory and has been approved by the U.S. Food and Drug Administration (FDA) for testing in people. Clinical trials test how well experimental drugs work and whether they are safe to use. An experimental drug may be approved by the FDA for use in one disease or condition but still be considered investigational in other diseases or conditions. Also called IND, investigational agent, investigational drug, and investigational new drug.

### **experimental group**

The group in a clinical research study that receives the drug, vaccine, or other intervention being tested. Interventions may also include medical procedures (such as radiation therapy and surgery), medical devices, behavior changes

(such as diet and exercise), education programs, and counseling. Also called intervention group and investigational group.

### **explanation of benefits**

A summary of the costs of a medical treatment or other health care service that an insurance company may send to a patient after the patient has received the service. An explanation of benefits usually includes the date the patient received the service, how much the service cost, how much the health insurance plan paid, and how much the patient may need to pay the health care provider. Also called EOB.

### **exploratory surgery**

Surgery to look inside the body to help make a diagnosis.

### **extensive-stage small cell lung cancer**

Cancer has spread outside of the lung in which it began or to other parts of the body.

### **external radiation therapy**

A type of radiation therapy that uses a machine to aim high-energy rays at the cancer from outside of the body. Also called external-beam radiation therapy.

### **external right atrial catheter**

A thin, flexible tube that is inserted into a vein in the neck or below the collar bone and guided (threaded) into the right atrium of the heart. It is used to give intravenous fluids, blood transfusions, and chemotherapy and other drugs, and for taking blood samples. It avoids the need for repeated needle sticks. An external right atrial catheter is a type of central venous access device.

### **external-beam radiation therapy**

A type of radiation therapy that uses a machine to aim high-energy rays at the cancer from outside of the body. Also called external radiation therapy.

### **extracellular matrix**

A large network of proteins and other molecules that surround, support, and give structure to cells and tissues in the body. The extracellular matrix helps cells attach to, and communicate with, nearby cells, and plays an important role in cell growth, cell movement, and other cell functions. The extracellular matrix is also involved in repairing damaged tissue. Abnormal changes in the extracellular matrix may lead to the development of certain diseases, such as cancer. The extracellular matrix of cancer cells can affect how they grow and spread. Also called ECM.

### **extracorporeal photopheresis**

A procedure in which blood is removed from the body and treated with ultraviolet light and drugs that become active when exposed to light. The blood is then returned to the body. It is being studied in the treatment of some blood and bone marrow diseases and graft-vs-host disease (GVHD). Also called photopheresis.

### **extracranial**

Outside of the cranium (bones that surround the brain).

### **extracranial germ cell tumor**

A type of tumor that begins in germ cells (cells that form sperm or eggs) that are found in areas of the body other than the brain. These areas include the ovary,

testicle, chest, abdomen, and tailbone. Extracranial germ cell tumors may be benign (not cancer) or malignant (cancer). Extracranial germ cell tumors are most common in children and teenagers and can usually be cured.

### **extract**

In medicine, a preparation of a substance obtained from plants, animals, or bacteria and used as a drug or in drugs.

### **extragonadal**

An area of the body other than the ovaries or testes.

### **extragonadal extracranial germ cell tumor**

A rare type of tumor that begins in germ cells (cells that form sperm or eggs) found in areas of the body other than the testicle, ovary, or brain. Most extragonadal extracranial germ cell tumors form either in the sacrum (the large, triangle-shaped bone in the lower spine that forms part of the pelvis) and tailbone, or in the chest area and back of the abdomen. They may be benign (not cancer) or malignant (cancer) and occur most often in children and young adults.

### **extragonadal germ cell tumor**

A rare cancer that develops in germ cells that are found in areas of the body other than the ovary or testicle (such as the brain, chest, abdomen, or tailbone). Germ cells are reproductive cells that develop into sperm in males and eggs in females.

### **extrahepatic**

Located or occurring outside the liver.

### **extrahepatic bile duct**

A duct (tube) that is outside the liver and carries bile from the liver and gallbladder to the small intestine. The extrahepatic bile duct is made up of the perihilar region (the area that is closest to the liver and includes the common hepatic duct) and the distal region (the area that is farthest from the liver and includes the common bile duct). The extrahepatic bile duct is part of the biliary system.

### **extrahepatic bile duct cancer**

A rare cancer that forms in the bile ducts (tubes) outside the liver. Bile ducts carry bile from the liver and gallbladder to the small intestine. The two types of extrahepatic bile duct cancer are perihilar bile duct cancer (also called a Klatskin tumor) and distal bile duct cancer.

### **extramedullary myeloid tumor**

A rare type of cancer that is made up of myeloblasts (a type of immature white blood cell) and forms outside the bone marrow and blood. The tumor cells may look green when viewed under a microscope. Extramedullary myeloid tumors can occur anywhere in the body. They most commonly occur in people with acute myeloid leukemia or a myeloproliferative disorder. Also called chloroma, granulocytic sarcoma, and myeloid sarcoma.

### **extranodal**

Refers to an area or organ outside of the lymph nodes.

### **extraocular**

Located outside the eye.

**extraosseous**

Located or occurring outside of the bone. Also called extraskeletal.

**extraosseous Ewing tumor**

A rare type of Ewing sarcoma that forms in soft tissue instead of bone. It usually occurs in the chest, pelvis, thigh, foot, or spine. Extraosseous Ewing tumors usually occur in children and young adults. They belong to a group of cancers called Ewing sarcoma family of tumors. Also called extraskeletal Ewing sarcoma and extraskeletal Ewing tumor.

**extraosseous osteosarcoma**

A rare, fast-growing type of cancer that is made up of bone and cartilage cells, and forms in soft tissue near bones. It usually occurs in the thigh, buttock, shoulder, or trunk (chest and abdomen). It often recurs (comes back) after treatment and spreads to other parts of the body, including the lungs. Extraosseous osteosarcoma usually occurs in middle-aged or older adults, and is rare in children and adolescents. It is a type of soft tissue sarcoma. Also called extraskeletal osteosarcoma.

**extrapleural pneumonectomy**

Surgery to remove a diseased lung, part of the pericardium (membrane covering the heart), part of the diaphragm (muscle between the lungs and the abdomen), and part of the parietal pleura (membrane lining the chest). This type of surgery is used most often to treat malignant mesothelioma.

**extrarenal (extracranial) rhabdoid tumor**

A rare, fast-growing cancer that forms in the soft tissues of the liver, heart, peritoneum, or other areas of the body outside the kidney and brain. These tumors often have an abnormality of chromosome 22. They usually occur in infants and young children, but they can also occur in older children and adults.

**extraskeletal**

Located or occurring outside of the bone. Also called extraosseous.

**extraskeletal Ewing sarcoma**

A rare type of Ewing sarcoma that forms in soft tissue instead of bone. It usually occurs in the chest, pelvis, thigh, foot, or spine. Extraskeletal Ewing sarcomas usually occur in children and young adults. They belong to a group of cancers called Ewing sarcoma family of tumors. Also called extraosseous Ewing tumor and extraskeletal Ewing tumor.

**extraskeletal Ewing tumor**

A rare type of Ewing sarcoma that forms in soft tissue instead of bone. It usually occurs in the chest, pelvis, thigh, foot, or spine. Extraskeletal Ewing tumors usually occur in children and young adults. They belong to a group of cancers called Ewing sarcoma family of tumors. Also called extraosseous Ewing tumor and extraskeletal Ewing sarcoma.

**extraskeletal mesenchymal chondrosarcoma**

A rare type of cancer that forms in cartilage or other soft tissue but not in bone. It usually occurs in the head and neck. Most extraskeletal mesenchymal chondrosarcomas are fast-growing and may spread to other parts of the body. They may also recur (come back) many years after treatment. Extraskeletal mesenchymal chondrosarcoma usually occurs in young adults. It is a type of soft tissue sarcoma.



### **extraskkeletal myxoid chondrosarcoma**

A rare, slow-growing type of cancer that forms in soft tissues outside the bone and usually has certain changes in the NR4A3 gene that cause abnormal fusion proteins to be made. Extraskkeletal myxoid chondrosarcomas usually occur in the thigh but may also occur in the knee, buttock, or chest and abdomen. They may grow large and spread to nearby tissue or to other parts of the body, especially the lungs. They may also come back many years after treatment. Extraskkeletal myxoid chondrosarcomas usually occur in middle-aged or older adults and are rare in children and adolescents. They are a type of soft tissue sarcoma. Also called EMC.

### **extraskkeletal osteosarcoma**

A rare, fast-growing type of cancer that is made up of bone and cartilage cells, and forms in soft tissue near bones. It usually occurs in the thigh, buttock, shoulder, or trunk (chest and abdomen). It often recurs (comes back) after treatment and spreads to other parts of the body, including the lungs. Extraskkeletal osteosarcoma usually occurs in middle-aged or older adults, and is rare in children and adolescents. It is a type of soft tissue sarcoma. Also called extraosseous osteosarcoma.

### **extrauterine pregnancy**

A condition in which a fertilized egg grows outside of the uterus, usually in one of the fallopian tubes. Symptoms include sharp pain on one side of the abdomen and bleeding from the vagina. Also called ectopic pregnancy.

### **extravasation**

The leakage of blood, lymph, or other fluid, such as an anticancer drug, from a blood vessel or tube into the tissue around it. It is also used to describe the movement of cells out of a blood vessel into tissue during inflammation or metastasis (the spread of cancer).

### **extravasation injury**

Blistering and tissue damage caused by certain drugs when they leak out of a vein into the tissue around it. The damage is sometimes severe and can lead to tissue necrosis (tissue death).

### **extremely dense breast tissue**

A term used to describe breast tissue that is made up of almost all dense fibrous tissue and glandular tissue. On a mammogram, the dense areas of the breast make it harder to find tumors or other changes. Women who have extremely dense breast tissue have a higher risk of breast cancer than those who have little or no dense breast tissue. Extremely dense breast tissue is one of four categories used to describe a level of breast density seen on a mammogram. About 10% of women have this type of breast tissue.

### **extremely low frequency electromagnetic field**

A type of very low-energy radiation that travels in long waves. Although there have been health concerns, it is not known to cause harmful health effects, including cancer. The most common sources of extremely low frequency electromagnetic fields are power lines, electrical wiring, and electrical appliances, such as shavers, hair dryers, and electric blankets. Also called ELF-EMF.

### **extremity**

A limb of the body, such as the arm or leg.

**eye cancer**

Cancer that forms in tissues of and around the eye. Some of the cancers that may affect the eye include melanoma (a rare cancer that begins in cells that make the pigment melanin in the eye), carcinoma (cancer that begins in tissues that cover structures in the eye), lymphoma (cancer that begins in immune system cells), and retinoblastoma (cancer that begins in the retina and usually occurs in children younger than 5 years).

**eye socket**

The space within the skull that contains the eye, including its nerves and muscles. The eye socket also includes the eyelids and the glands that make tears. It is made up of seven bones that surround and protect the eye. Also called orbit.

**facial nerve**

A nerve that runs from the brainstem, through openings in the skull, to the face and tongue. The facial nerve sends information between the brain and the muscles used in facial expression (such as smiling and frowning), some muscles in the jaw, and the muscles of a small bone in the middle ear. It also sends information to the front part of the tongue for the sense of taste and to the outer parts of the ear. The facial nerve also stimulates the glands that make tears and saliva. It is a type of cranial nerve. There are two facial nerves, one on each side of the face. Also called seventh cranial nerve.

**falimarev**

A cancer vaccine made with a form of a chicken virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called recombinant fowlpox-CEA-MUC-1-TRICOM vaccine.

**fallopian tube**

One of two long, slender tubes that connect the ovaries to the uterus. Eggs pass from the ovaries, through the fallopian tubes, to the uterus. In the female reproductive tract, there is one ovary and one fallopian tube on each side of the uterus.

**fallopian tube cancer**

Cancer that forms in the tissue lining the fallopian tube (one of two long, slender tubes that connect the ovaries to the uterus). The cancer sometimes begins at the end of the fallopian tube near the ovary and spreads to the ovary. Fallopian tube cancer is similar to ovarian epithelial cancer and is staged and treated the same way.

**false-negative test result**

A test result that indicates that a person does not have a specific disease or condition when the person actually does have the disease or condition.

**false-positive test result**

A test result that indicates that a person has a specific disease or condition when the person actually does not have the disease or condition.

**fam-trastuzumab deruxtecan**

A drug used to treat adults with certain types of HER2-positive or HER2-low breast cancer, HER2-positive stomach cancer, gastroesophageal junction

cancer, or other solid tumor, or non-small cell lung cancer that has a certain mutation in the HER2 gene. It is also being studied in the treatment of other types of cancer. Fam-trastuzumab deruxtecan contains a monoclonal antibody called trastuzumab that binds to a protein called HER2, which is found on some cancer cells. It also contains an anticancer drug called deruxtecan, which may help kill cancer cells. Fam-trastuzumab deruxtecan is a type of antibody-drug conjugate. Also called Enhertu and trastuzumab deruxtecan.

### **familial adenomatous polyposis**

An inherited disorder in which many polyps (usually hundreds to thousands) form on the inner walls of the colon and rectum. Polyps are abnormal growths that may become cancer if they are not removed. People with familial adenomatous polyposis have a very high risk of developing colorectal cancer at an early age and are also at risk of developing cancers of the stomach, small intestine, pancreas, bile duct, liver, adrenal gland, thyroid, and brain. They may also have dental and eye problems and benign (not cancer) tumors in the stomach, small intestine, bone, soft tissue, skin, and adrenal glands. Familial adenomatous polyposis is caused by mutations (changes) in a gene called APC that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called classic familial adenomatous polyposis, classic familial polyposis, classic FAP, and FAP.

### **familial atypical multiple mole melanoma syndrome**

An inherited condition marked by the following: (1) one or more first- or second-degree relatives (parent, sibling, child, grandparent, grandchild, aunt, or uncle) with malignant melanoma; (2) many moles, some of which are atypical (asymmetrical, raised, and/or different shades of tan, brown, black, or red) and often of different sizes; and (3) moles that have specific features when examined under a microscope. Familial atypical multiple mole melanoma syndrome increases the risk of melanoma and may increase the risk of pancreatic cancer. Also called FAMMM syndrome.

### **familial cancer**

Cancer that occurs in families more often than would be expected by chance. These cancers often occur at an early age, and may indicate the presence of a gene mutation that increases the risk of cancer. They may also be a sign of shared environmental or lifestyle factors.

### **familial diffuse gastric cancer**

A rare, inherited disorder that increases the risk of developing a type of stomach cancer called diffuse gastric cancer. This cancer grows in the lining of the stomach, which causes the lining to become thick and hard. The cancer is also likely to spread to other parts of the body, such as the liver or bone. Women with familial diffuse gastric cancer also have an increased risk of developing a type of breast cancer that begins in the lobules (milk glands) of the breast. Familial diffuse gastric cancer is usually caused by mutations (changes) in the CDH1 gene that are inherited in an autosomal dominant manner. It is a type hereditary cancer syndrome. Also called HDGC and hereditary diffuse gastric cancer.

### **familial dysplastic nevi**

A condition that runs in certain families in which at least two members have dysplastic nevi (atypical moles) and have a tendency to develop melanoma.

**familial intestinal gastric cancer**

A rare, inherited disorder that increases the risk of developing a type of stomach cancer called intestinal gastric adenocarcinoma. This cancer begins in the mucus-producing cells in the innermost lining of the stomach and tends to grow and spread more slowly than other types of stomach cancer. Familial intestinal gastric cancer runs in families, but the gene involved in this disorder is not known. Also called FIGC.

**familial isolated hyperparathyroidism**

A rare inherited condition in which one or more tumors form in the parathyroid glands (four pea-sized organs found on the thyroid) and cause them to make too much parathyroid hormone. The increased parathyroid hormone causes a loss of calcium from the bones and too much calcium in the blood. Also called FIHP.

**familial medullary thyroid cancer**

An inherited form of medullary thyroid cancer (cancer that forms in the cells of the thyroid that make the hormone calcitonin).

**family cancer syndrome**

A type of inherited disorder in which there is a higher-than-normal risk of certain types of cancer. Family cancer syndromes are caused by mutations (changes) in certain genes passed from parents to children. In a family cancer syndrome, certain patterns of cancer may be seen within families. These patterns include having several close family members (such as a mother, daughter, and sister) with the same type of cancer, developing cancer at an early age, or having two or more types of cancer develop in the same person. Examples of family cancer syndromes are hereditary breast and ovarian cancer syndrome, Li-Fraumeni syndrome, Cowden syndrome, and Lynch syndrome. Also called hereditary cancer syndrome and inherited cancer syndrome.

**family history**

A record of the relationships among family members along with their medical histories. This includes current and past illnesses. A family history may show a pattern of certain diseases in a family. Also called family medical history.

**family medical history**

A record of the relationships among family members along with their medical histories. This includes current and past illnesses. A family medical history may show a pattern of certain diseases in a family. Also called family history.

**family therapy**

A type of therapy in which the whole family talks with a professional counselor to solve family problems.

**fast-neutron beam radiation**

A type of radiation therapy that uses tiny particles called neutrons made by a machine called a cyclotron.

**fat necrosis**

A benign condition in which fat tissue in the breast or other organs is damaged by injury, surgery, or radiation therapy. The fat tissue in the breast may be replaced by a cyst or by scar tissue, which may feel like a round, firm lump. The skin around the lump may look red, bruised or dimpled.

**fat-soluble vitamin**

A vitamin that can dissolve in fats and oils. Vitamins are nutrients that the body needs in small amounts to stay healthy and work the way it should. Fat-soluble vitamins are absorbed along with fats in the diet and are stored in the body's fatty tissue and in the liver. They are found in many plant and animal foods and in dietary supplements. Vitamins A, D, E, and K are fat-soluble.

**fatigue**

An extreme sense of tiredness and lack of energy that can interfere with a person's usual daily activities. A person with fatigue may feel weak, worn out, heavy, slow, or run down. They may also have trouble speaking or concentrating, short-term memory loss, and mood or emotional changes. There are many causes of fatigue, including anemia, poor nutrition, pain, anxiety, depression, sleep or thyroid disorders, and taking certain medicines. Fatigue may also be caused by cancer or cancer treatment. Certain types of fatigue, including cancer-related fatigue, may not be completely relieved by sleep and may last for a long time after treatment ends.

**fatty acid**

A major component of fats that is used by the body for energy and tissue development.

**fatty breast tissue**

A term used to describe breast tissue that is made up of almost all fatty tissue. Fatty breast tissue does not look dense on a mammogram, which may make it easier to find tumors or other changes in the breast. Fatty breast tissue is more common in older women than in younger women. Fatty breast tissue is one of four categories used to describe a level of breast density seen on a mammogram.

**fatty liver disease**

A common condition in which fat builds up in the liver. In most people, fatty liver disease does not cause any symptoms or serious liver problems. However, in some cases, it can cause liver inflammation and damage to the cells in the liver. The two main types of fatty liver disease are alcoholic fatty liver disease (AFLD) and nonalcoholic fatty liver disease (NAFLD). AFLD occurs in people who drink large amounts of alcohol. NAFLD occurs in people who drink little or no alcohol. It usually affects middle-aged and older adults but is becoming more common in children and teens. It is especially common in people who are overweight or who have obesity, diabetes, or high levels of cholesterol and triglycerides (a type of fat) in the blood. A severe form of NAFLD called nonalcoholic steatohepatitis can cause cirrhosis (scarring of the liver) that may lead to liver failure or liver cancer.

**fazarabine**

An anticancer drug that is a type of antimetabolite.

**febrile neutropenia**

A condition marked by fever and a lower-than-normal number of neutrophils in the blood. A neutrophil is a type of white blood cell that helps fight infection. Having too few neutrophils increases the risk of infection.

**fecal immunochemical test**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card for testing. The test uses an antibody that binds to a blood protein called hemoglobin to detect any blood.

Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called FIT, iFOBT, immunoassay fecal occult blood test, immunochemical fecal occult blood test, and immunologic fecal occult blood test.

### **fecal impaction**

A mass of dry, hard stool that cannot pass out of the colon or rectum. Fecal impaction may be caused by using laxatives too often, using certain types of pain medicines, little or no physical activity over a long period, diet changes, or constipation that is not treated. Signs and symptoms may include being unable to have a bowel movement, pain in the abdomen or back, problems urinating, and nausea and vomiting. Fecal impaction may also cause problems with circulation, the heart, or breathing.

### **fecal incontinence**

Inability to hold stool in the rectum.

### **fecal occult blood test**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card and sent to a doctor or laboratory for testing. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Guaiac fecal occult blood test and immunochemical fecal occult blood test are two types of fecal occult blood tests. Guaiac fecal occult blood test uses a chemical substance called guaiac to check for blood in the stool. Immunochemical fecal occult blood test uses an antibody to check for blood in the stool. Also called FOBT.

### **feces**

The material in a bowel movement. Feces is made up of undigested food, bacteria, mucus, and cells from the lining of the intestines. Also called stool.

### **fedratinib hydrochloride**

A drug used to treat adults with intermediate-risk or high-risk myelofibrosis (MF), including primary MF, post-polycythemia vera MF, and post-essential thrombocythemia MF. It is also being studied in the treatment of other conditions. Fedratinib hydrochloride blocks JAK2 and other proteins, which may help keep abnormal blood cells or cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Inrebic.

### **fenofibrate**

A drug used to treat high levels of cholesterol and triglycerides in the blood. Fenofibrate is being studied in the treatment of advanced cancers in young patients and in the treatment of other conditions. It is a type of antilipidemic agent. Also called Lofibra and TriCor.

### **fenretinide**

A substance being studied in the treatment and prevention of some types of cancer. Fenretinide may cause ceramide (a wax-like substance) to build up in tumor cells and kill them. It is a type of retinoid, which are substances related to vitamin A.

### **fenretinide LXS**

A powdered form of fenretinide that is being studied in the treatment of neuroblastoma. It may be used by the body more easily than the pill form. Fenretinide may cause ceramide (a wax-like substance) to build up in tumor cells



and kill them. It is a type of retinoid, which are substances related to vitamin A. Also called fenretinide Lym-X-Sorb.

### **fenretinide Lym-X-Sorb**

A powdered form of fenretinide that is being studied in the treatment of neuroblastoma. It may be used by the body more easily than the pill form. Fenretinide may cause ceramide (a wax-like substance) to build up in tumor cells and kill them. It is a type of retinoid, which are substances related to vitamin A. Also called fenretinide LXS.

### **fentanyl citrate**

A drug used to treat severe cancer pain that occurs even though the patient is already taking opioids. It is also used during anesthesia for surgery. Fentanyl citrate binds to opioid receptors in the central nervous system. It is a type of analgesic agent and a type of opioid.

### **fentanyl sublingual spray**

A form of the drug fentanyl that is sprayed under the tongue and then absorbed into the blood. It is being studied in the treatment of breakthrough pain (pain that occurs even when pain-control medication is already being used) in cancer patients. Fentanyl is a type of opioid analgesic.

### **ferritin**

A protein that binds to iron and stores it for use by the body. Ferritin is found in cells in the liver, spleen, bone marrow, and other tissues.

### **ferrous sulfate**

A form of the mineral iron that is used to treat anemia caused by low amounts of iron in the blood. Anemia is a condition in which the number of red blood cells is below normal. Ferrous sulfate is a type of hematinic and a type of dietary supplement.

### **fertile**

Able to produce children.

### **fertility**

The ability to produce children.

### **fertility preservation**

A type of procedure used to help keep a person's ability to have children. A fertility preservation procedure is done before a medical treatment that may cause infertility, such as radiation therapy or chemotherapy. Examples of fertility preservation procedures include sperm banking, egg freezing, in vitro fertilization with embryo freezing, and certain types of surgery for cervical and ovarian cancer.

### **fertility specialist**

A doctor who has special training in helping people who have trouble conceiving or carrying a pregnancy to term. Fertility specialists may use surgery, medications, or procedures, such as in vitro fertilization, to treat fertility-related conditions. They may also use procedures, such as sperm banking and egg freezing, to help preserve a person's ability to have children after receiving certain treatments for cancer. Some fertility specialists also perform procedures to help prevent pregnancy, such as tubal ligation or vasectomy.

### **ferumoxtran-10**

A substance being studied as a way of improving magnetic resonance imaging (MRI) in diagnosing cancer and finding lymph nodes to which cancer has spread. Ferumoxtran-10 is made of nanoparticles (ultrasmall pieces) of iron oxide coated with dextran (a type of sugar). It is injected into the blood of the patient and the particles collect in lymph nodes, liver, spleen, or brain tissue where they can be seen using MRI. Ferumoxtran-10 later breaks down and passes from the body in urine.

### **ferumoxytol**

A nanoparticle form of iron made in the laboratory that is being studied for use in iron replacement therapy, and as a contrast agent for magnetic resonance imaging. Contrast agents are substances that are injected into the body and taken up by certain tissues, making the tissues easier to see in imaging scans.

### **fetal**

Having to do with a fetus. A fetus is an unborn offspring that develops and grows inside the uterus (womb) of humans and other mammals. In humans, the fetal period begins at 9 weeks after fertilization of an egg by a sperm and ends at birth.

### **fetus**

An unborn offspring that develops and grows inside the uterus (womb) of humans and other mammals. In humans, the fetal period begins at 9 weeks after fertilization of an egg by a sperm and ends at the time of birth.

### **fever**

An increase in body temperature above normal (98.6 degrees F), usually caused by disease.

### **fexofenadine**

A drug used to treat certain allergy symptoms. It blocks a chemical released during an allergic response that causes itching, sneezing, runny nose, wheezing, and watery eyes. It is a type of antihistamine. Also called Allegra.

### **fiber**

In food, fiber is a type of carbohydrate found in plant foods that the body cannot digest. Fiber comes in two forms: soluble fiber and insoluble fiber. Soluble fiber dissolves in water and can help lower cholesterol and blood sugar levels. Soluble fiber is found in apples, bananas, oats, peas, black beans, lima beans, Brussels sprouts, and avocados. Insoluble fiber does not dissolve in water and helps move food through the digestive system, relieving or preventing constipation. Insoluble fiber is found in whole wheat flour, bran, nuts, seeds, and the skins of many fruits and vegetables. Eating foods rich in fiber may help with weight loss and reduce the risk of heart disease and some types of cancer. In body tissues, fiber refers to long thread-like cells, such as muscle fibers or nerve fibers.

### **fiberoptic**

Describes the use of a coated, thin, clear, glass or plastic fiber that can carry light and send information, including images. In medicine, flexible fiberoptic instruments are used to look inside the body. Fiberoptics are also used to deliver laser light to tumors injected with a type of drug that kills cancer cells when it is exposed to laser light.

## **fibrin**

A protein involved in forming blood clots in the body. It is made from the protein fibrinogen and helps stop bleeding and heal wounds. Sometimes fibrin-like substances may be found in higher than normal amounts in the blood and urine of patients with some types of cancer or other conditions. Measuring the amount of these substances may help to check how well cancer treatment is working or if the cancer has gotten worse. Fibrin is a type of tumor marker.

## **fibrin sealant**

A substance used during surgery to help heal wounds. It contains proteins found in human blood that cause blood to clot. When fibrin sealant is placed on a wound, a clot forms. Fibrin sealant is being studied as a way to improve healing after lymph node removal in patients with cancer. It is a type of surgical glue.

## **fibrinogen**

A protein involved in forming blood clots in the body. It is made in the liver and forms fibrin. Fibrin is the main protein in a blood clot that helps stop bleeding and heal wounds. Sometimes fibrin-like substances may be found in higher than normal amounts in the blood and urine of patients with some types of cancer or other conditions. Measuring the amount of these substances may help to check how well cancer treatment is working or if the cancer has gotten worse. Fibrinogen is a type of tumor marker.

## **fibroadenoma**

A benign (not cancer) tumor that most often forms in the breast and is made up of fibrous (connective) tissue and glandular tissue. A fibroadenoma is usually painless. It often feels like a hard, round lump with a smooth, well-defined border that moves easily under the skin of the breast. Fibroadenomas may go away on their own or may need to be removed. They often get smaller after menopause. Fibroadenomas are the most common type of benign breast tumor. They can occur at any age but are more common in younger women. Most fibroadenomas do not increase the risk of breast cancer.

## **fibroblast**

A connective tissue cell that makes and secretes collagen proteins.

## **fibroblast growth factor receptor 1 gene**

A gene that makes a protein involved in cell division, cell growth and maturation, formation of new blood vessels, wound healing, and the growth and development of many parts of the body. Mutations (changes) in the fibroblast growth factor receptor 1 gene may cause the FGFR1 protein to become overactive, which may cause cells to grow and divide too quickly or in an uncontrolled way. Fibroblast growth factor receptor 1 gene mutations have been found in certain genetic conditions and in some types of cancer. Also called FGFR1 gene.

## **fibroblast growth factor receptor 2 gene**

A gene that makes a protein that is involved in cell division, cell maturation, formation of new blood vessels, wound healing, and bone growth and development. A mutation (change) in the fibroblast growth factor receptor 2 gene may cause the FGFR2 protein to become overactive in certain bone disorders, genetic conditions, and cancers. Also called FGFR2 gene.

## **fibroblast growth factor receptor 3 gene**

A gene that makes a protein that is involved in cell division, cell maturation, formation of new blood vessels, wound healing, and bone growth, development,

and maintenance. A mutation (change) in the fibroblast growth factor receptor 3 gene may cause the FGFR3 protein to become overactive in certain bone disorders, genetic conditions, and cancers. Also called FGFR3 gene.

### **fibrocystic breast changes**

A common condition marked by benign (not cancer) changes in breast tissue. These changes may include irregular lumps or cysts, breast swelling or discomfort, sensitive nipples, and itching. These symptoms may change throughout the menstrual cycle and usually stop after menopause. Fibrocystic breast changes can occur at any age but are most common in younger women. This condition does not increase the risk of breast cancer. Also called fibrocystic breasts.

### **fibrocystic breasts**

A common condition marked by benign (not cancer) changes in breast tissue. These changes may include irregular lumps or cysts, breast swelling or discomfort, sensitive nipples, and itching. These symptoms may change throughout the menstrual cycle and usually stop after menopause. Fibrocystic breasts can occur at any age but are most common in younger women. This condition does not increase the risk of breast cancer. Also called fibrocystic breast changes.

### **fibrofolliculoma**

A rare, benign (not cancer) tumor that forms in a hair follicle (the opening on the skin through which hair grows). Fibrofolliculomas appear as small, raised, whitish bumps that usually occur on the face, ears, neck, and chest. They tend to grow slowly but can increase in size and number over time. Fibrofolliculomas often occur in patients with an inherited condition called Birt-Hogg-Dubé syndrome.

### **fibroglandular breast tissue**

A term used to describe breast tissue that is made up of fibrous connective tissue and glandular tissue (milk ducts and lobules). Fibroglandular breast tissue often appears dense on a mammogram, which may make it harder to find breast cancer or other changes in the breast.

### **fibroid**

A benign smooth-muscle tumor, usually in the uterus or gastrointestinal tract. Also called leiomyoma.

### **fibromatosis**

A condition in which multiple fibromas develop. Fibromas are tumors (usually benign) that affect connective tissue.

### **fibrosarcoma**

A type of soft tissue sarcoma that begins in fibrous tissue, which holds bones, muscles, and other organs in place.

### **fibrosis**

The growth of fibrous tissue.

### **fibrous**

Containing or resembling fibers.

**fibrous connective tissue**

A type of tissue that is mostly made up of tough protein fibers called collagen and cells called fibroblasts. Fibrous connective tissue supports, protects, and holds bones, muscles, and other tissues and organs in place. Ligaments, tendons, the inner layer of the skin, and the sclera (the white outer layer of the eye) are all types of fibrous connective tissue. Also called dense connective tissue.

**fiducial marker**

A medical device or small object placed in or on the body to mark an area for radiation treatment or surgery. For example, tiny gold seeds may be put into the prostate to mark a tumor before radiation therapy. This allows the doctor to give higher doses of radiation to the tumor with less harm to nearby healthy tissue.

**fifth cranial nerve**

The main sensory nerve of the head and face, and the motor nerve of the muscles used in chewing. Also called trigeminal nerve.

**fight-or-flight syndrome**

A group of changes that occur in the body to help a person fight or take flight in stressful or dangerous situations. This is the body's way of helping to protect itself from possible harm. During fight or flight, certain hormones, such as adrenaline and cortisol, are released into the blood. This causes an increase in blood pressure, heart rate, and breathing. Other changes include an increase in blood sugar, alertness, muscle tension, and sweating.

**filgrastim**

A drug used under the brand names Neupogen, Zarxio, and Nivestym to treat neutropenia (a lower-than-normal number of white blood cells), prevent infection, and prepare the blood for the collection of certain types of blood cells, and under the brand name Granix to treat neutropenia. Filgrastim is used in patients who have certain cancers and neutropenia caused by some types of chemotherapy and in patients who have severe chronic neutropenia that is not caused by cancer treatment. It is also used before an autologous stem cell transplant. Filgrastim helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor. Also called G-CSF and granulocyte colony-stimulating factor.

**filgrastim-SD/01**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Filgrastim-SD/01 helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called Fulphila, Neulasta, Nyvepria, pegfilgrastim, Udenyca, and Ziextenzo.

**filler**

An inactive substance used to make a product bigger or easier to handle. For example, fillers are often used to make pills or capsules because the amount of active drug is too small to be handled conveniently.

**film mammography**

A procedure that uses x-rays to take pictures of the inside of the breast and stores the images on x-ray film. Film mammography may be used to check for

breast cancer and other changes in the breast, such as abnormal lumps, cysts, or calcifications (calcium deposits). Also called conventional mammography.

### **filter**

A material or device that allows certain substances to pass through it, while keeping other substances out. Filters may be used in cigarettes to help trap tar and other harmful substances found in tobacco smoke. In medicine, filter also means to remove toxins, poisons, or other harmful substances from the blood. For example, the kidneys remove waste and extra water from the blood (as urine). The liver also removes harmful substances from the blood.

### **financial burden**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Financial burden can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have financial burden than people without cancer. Also called economic burden, economic hardship, financial distress, financial hardship, financial stress, and financial toxicity.

### **financial distress**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Financial distress can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have financial distress than people without cancer. Also called economic burden, economic hardship, financial burden, financial hardship, financial stress, and financial toxicity.

### **financial hardship**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Financial hardship can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have financial hardship than people without cancer. Also called economic burden, economic hardship, financial burden, financial distress, financial stress, and financial toxicity.

### **financial navigator**

A person who works with patients and their families to help them reduce stress or hardship related to the cost of treatment for a medical condition, such as cancer. Financial navigators help patients understand their out-of-pocket expenses and what their health insurance plans may cover. Financial navigators may also help patients set up payment plans, find cost-saving methods for treatments, and improve access to health care services that the patient needs.

### **financial stress**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical



care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Financial stress can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have financial stress than people without cancer. Also called economic burden, economic hardship, financial burden, financial distress, financial hardship, and financial toxicity.

### **financial toxicity**

In medicine, a term used to describe problems a patient has related to the cost of medical care. Not having health insurance or having a lot of costs for medical care not covered by health insurance can cause financial problems and may lead to debt and bankruptcy. Financial toxicity can also affect a patient's quality of life and access to medical care. For example, a patient may not take a prescription medicine or may avoid going to the doctor to save money. Cancer patients are more likely to have financial toxicity than people without cancer. Also called economic burden, economic hardship, financial burden, financial distress, financial hardship, and financial stress.

### **finasteride**

A drug used to reduce the amount of male hormone (testosterone) produced by the body.

### **fine-needle aspiration biopsy**

The removal of fluid, cells, or tissue with a thin needle for examination under a microscope. Also called FNA biopsy.

### **first-degree relative**

A way of describing how family members are related to each other when there are no other family members in the blood line between them. Examples of a first-degree relative are a parent, sibling, or child. Also called FDR.

### **first-in-human study**

A type of clinical trial in which a new drug, procedure, or treatment is tested in humans for the first time. First-in-human studies take place after the new treatment has been tested in laboratory and animal studies and are usually done as phase I clinical trials. Also called FIH study.

### **first-line therapy**

The first treatment given for a disease. It is often part of a standard set of treatments, such as surgery followed by chemotherapy and radiation. When used by itself, first-line therapy is the one accepted as the best treatment. If it doesn't cure the disease or it causes severe side effects, other treatment may be added or used instead. Also called induction therapy, primary therapy, and primary treatment.

### **fistula**

An abnormal opening or passage between two organs or between an organ and the surface of the body. Fistulas may be caused by injury, infection, or inflammation, or may be created during surgery.

### **five element acupuncture**

An ancient form of acupuncture based on the principle that there are five universal elements (wood, fire, earth, metal, and water) that affect a person's

emotions, personality, health, and response to treatment. Each person is affected by one element more than the others. Also called traditional acupuncture.

### **five-year survival rate**

The percentage of people in a study or treatment group who are alive five years after they were diagnosed with or started treatment for a disease, such as cancer. The disease may or may not have come back.

### **flavonoid**

A member of a group of substances found in many plants and plant-based foods. Flavonoids have shown antioxidant effects.

### **flavopiridol**

A substance being studied in the treatment of several types of cancer. It stops cells from dividing and may kill cancer cells. It is a type of cyclin-dependent kinase (CDK) inhibitor. Also called alvocidib and HMR 1275.

### **flaxseed**

The seed of the flax plant. It is a rich source of omega-3 fatty acid, fiber, and a compound called lignin. It is being studied in the prevention of several types of cancer. Also called linseed.

### **flecainide**

A drug used to treat abnormal heart rhythms. It may also relieve neuropathic pain, the burning, stabbing, or stinging pain that may arise from damage to nerves caused by some types of cancer or cancer treatment.

### **flow chart**

A diagram that shows the order of steps in a complex process. Also called flow sheet.

### **flow cytometry**

A laboratory method that measures the number of cells, the percentage of live cells, and certain characteristics of cells, such as size and shape, in a sample of blood, bone marrow, or other tissue. The presence of tumor markers, such as antigens, on the surface of the cells are also measured. The cells are stained with a light-sensitive dye, placed in a fluid, and then passed one at a time through a beam of light. The measurements are based on how the stained cells react to the beam of light. Flow cytometry is used in basic research and to help diagnose and manage certain diseases, including cancer.

### **flow sheet**

A diagram that shows the order of steps in a complex process. Also called flow chart.

### **floxuridine**

A drug used in the treatment of cancer. It is a type of antimetabolite.

### **flt3L**

A drug that increases the number of immune cells and may stimulate the immune system to kill cancer cells.

### **flu-like symptoms**

A group of symptoms that are similar to those caused by the influenza (flu) virus. These include fever, chills, headache, muscle or body aches, cough, sore throat,

runny nose, fatigue, nausea, vomiting, and diarrhea. Flu-like symptoms may be caused by viral infections or other illnesses that are not caused by the influenza virus. They may also occur as a side effect of certain types of anticancer therapy, especially biological therapies, such as interferon or interleukin. Also called flu-like syndrome.

### **flu-like syndrome**

A group of symptoms that are similar to those caused by the influenza (flu) virus. These include fever, chills, headache, muscle or body aches, cough, sore throat, runny nose, fatigue, nausea, vomiting, and diarrhea. Flu-like syndrome may be caused by viral infections or other illnesses that are not caused by the influenza virus. It may also occur as a side effect of certain types of anticancer therapy, especially biological therapies, such as interferon or interleukin. Also called flu-like symptoms.

### **fluconazole**

A drug that treats infections caused by fungi.

### **flucytosine**

A drug that treats infections caused by fungi.

### **fludarabine phosphate**

A drug used to treat adults with B-cell chronic lymphocytic leukemia that has not responded to treatment with other anticancer drugs or that has gotten worse. It is also being studied in the treatment of other types of cancer. Fludarabine phosphate stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite.

### **fludrocortisone**

A synthetic corticosteroid. It is used to replace steroid hormones normally produced by the adrenal gland.

### **fluid**

A substance that flows smoothly and takes the shape of its container. Liquids and gases are fluids.

### **fluid deprivation test**

A test to measure how much urine is made and how concentrated it becomes when no fluid is given to a patient for a certain amount of time. This test is used to see how well the kidneys work and to help diagnose diabetes insipidus (a condition in which a person is very thirsty and makes large amounts of urine). Also called water deprivation test.

### **fluid replacement therapy**

Treatment to replace fluids that are lost from the body because of surgery, injury, dehydration, disease, or other conditions.

### **fluorescein angiography**

A procedure that uses a special dye and camera to look at the blood vessels in the back of the eye. A yellow dye called fluorescein is injected into a vein and travels throughout the body, including the blood vessels in the eye. The dye causes the blood vessels to light up when a picture is taken with a special camera. Fluorescein angiography may be used to check for damaged, blocked, or leaking blood vessels in the eye, swelling in the retina, and other eye problems, including macular degeneration and a type of eye cancer called

intraocular melanoma. It may also be used to see how well certain eye treatments are working.

### **fluorescence in situ hybridization**

A laboratory method used to look at genes or chromosomes in cells and tissues. Pieces of DNA that contain a fluorescent dye are made in the laboratory and added to a cell or tissue sample. When these pieces of DNA bind to certain genes or areas on chromosomes in the sample, they light up when viewed under a microscope with a special light. FISH can be used to identify where a specific gene is located on a chromosome, how many copies of the gene are present, and any chromosomal abnormalities. It is used to help diagnose diseases, such as cancer, and help plan treatment. Also called FISH.

### **fluorescence microscopy**

The use of a special microscope to see objects that give off fluorescent light. For example, cells or tissue can be treated with a substance that contains a fluorescent dye. The dye lights up when viewed under a microscope with a special light.

### **fluorescence-guided surgery**

Surgery that uses a fluorescent substance and a special microscope to show tumor margins (edges) so that more of the tumor can be removed. The substance is given by mouth and is taken up by fast-growing cells. These cells light up when seen under a microscope with a special blue light. This may help doctors to remove as much tumor as possible without harming healthy tissue. Fluorescence-guided surgery is being studied in the treatment of certain types of brain tumors.

### **fluoride**

A form of the element fluorine that helps prevent tooth decay. Fluoride may be naturally present in drinking water or may be added to it. Fluoride may also be put directly on the teeth, as a gel, toothpaste, or a rinse.

### **fluorine F 18-16 alpha-fluoroestradiol**

A radiolabeled substance being studied as an imaging agent in breast cancer. Fluorine F 18-16 alpha-fluoroestradiol binds to estrogen receptors and gives off radiation that can be detected by a positron emission tomography (PET) scan. The PET scan forms an image that shows where cancer cells with estrogen receptors can be found in the body. Also called 18F-16 alpha-fluoroestradiol and 18F-FES.

### **fluorine F 18-EF5**

A radioactive substance being studied in positron emission tomography (PET) imaging to find cancer cells that have a low level of oxygen. This may help predict how well the cancer will respond to treatment. Also called 18F-EF5.

### **fluorine F 18-FEQA**

A radioactive substance being studied in positron emission tomography (PET) imaging to diagnose cancer and to find out how well some types of cancer respond to treatment. Fluorine F 18-FEQA binds to the epidermal growth factor receptor (EGFR), which is found on some cancer cells. The PET scan forms an image that shows where cancer cells with EGFR can be found in the body.

### **fluorine F 18-fludeoxyglucose**

A radioactive form of glucose used in positron emission tomography (PET) imaging. Fluorine F 18-fludeoxyglucose gets taken up by cells in the body, and a PET scanner is used to find which cells in the body have taken it up. Since more fluorine F 18-fludeoxyglucose is taken up by abnormal cells, including cancer cells, than by normal cells, it can be used to find cancer cells in the body and to diagnose cancer and other conditions. Also called 18F-fludeoxyglucose.

### **fluorine F 18-fluoromethylcholine**

A radioactive substance being studied in positron emission tomography (PET) imaging to find certain types of cancer. Fluorine F 18-fluoromethylcholine gets taken up by cells in the body and more of it is taken up by cancer cells than by normal cells. A PET scanner is used to find which cells in the body have taken up fluorine F 18-fluoromethylcholine. Also called 18F-choline, 18F-fluoromethylcholine, and 18F-FMCH.

### **fluorine F 18-fluoromisonidazole**

A radioactive substance being studied as an imaging agent in head and neck cancer and other types of cancer. It binds to large molecules in cancer cells that have a low level of oxygen. Radiation given off by fluorine F 18-fluoromisonidazole is detected by a positron emission tomography (PET) scan. Knowing the amount of fluorine F 18-fluoromisonidazole in the cancer cells may help plan the best treatment and help predict whether the cancer will come back after treatment. Also called 18F-fluoromisonidazole, 18F-MISO, and FMISO.

### **fluorine F 18-fluorothymidine**

A radioactive substance being studied in the diagnosis of cancer. Fluorine F 18-fluorothymidine is injected into the blood and builds up in cells that are dividing, including cancer cells. The radiation that it gives off as it decays (breaks down) helps make clear pictures of tumors during a positron emission tomography (PET) scan. Also called 18F-FLT, 18F-fluorothymidine, and 3'-deoxy-3'-(18F) fluorothymidine.

### **fluorine F 18-sodium fluoride PET**

A procedure used to find out if cancer has spread to the bone. A small amount of a radioactive substance called fluorine F 18-sodium fluoride is injected into a vein. A PET scan is then used to make detailed pictures of the bones. Bones with cancer in them take up more fluorine F 18-sodium fluoride than normal bones do. Also called 18F-NaF PET and 18F-sodium fluoride positron emission tomography.

### **fluoropyrimidine**

One of a group of substances used to treat cancer. A fluoropyrimidine is a type of antimetabolite. Examples are capecitabine, floxuridine, and fluorouracil (5-FU).

### **fluoroquinolone**

A type of drug used to prevent and treat infections.

### **fluoroscope**

An x-ray machine that makes it possible to see internal organs in motion.

### **fluoroscopy**

An x-ray procedure that makes it possible to see internal organs in motion.

### **fluorouracil**

A drug given as an injection to treat cancers of the breast, colon, rectum, stomach, and pancreas and as a cream to treat actinic keratosis (a skin condition that may become cancer) and certain types of basal cell skin cancer. It is used under the brand names Carac, Tolak, Efudex, and Fluoroplex to treat actinic keratosis. It is also used under the brand name Efudex to treat basal cell skin cancer. Fluorouracil is also being studied in the treatment of other conditions and types of cancer. It stops cells from making DNA and may kill cancer cells. Fluorouracil is a type of antimetabolite. Also called 5-fluorouracil and 5-FU.

### **fluoxetine**

A drug used to treat depression. It is a type of antidepressant.

### **fluphenazine hydrochloride**

A drug that is used to treat mental and emotional disorders and is being studied in the treatment of multiple myeloma. Fluphenazine hydrochloride may stop tumor growth by keeping myeloma cells from dividing and causing them to die. It is a type of antipsychotic.

### **flutamide**

A drug used with another drug to treat certain types of prostate cancer. Flutamide binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Flutamide blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen.

### **fluvoxamine**

A drug used to treat obsessive-compulsive disorder. It is a type of antidepressant agent and selective serotonin reuptake inhibitor (SSRI). Also called Luvox.

### **focal**

In terms of cancer, limited to a specific area.

### **folate**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Folate helps to make red blood cells. It is found in whole-grain breads and cereals, liver, green vegetables, orange juice, lentils, beans, and yeast. Folate is water-soluble (can dissolve in water) and must be taken in every day. Not enough folate can cause anemia (a condition in which the number of red blood cells is below normal), diseases of the heart and blood vessels, and defects in the brain and spinal cord in a fetus. Folate is being studied with vitamin B12 in the prevention and treatment of cancer. Also called folic acid.

### **folate antagonist**

A type of drug that stops cells from using folic acid to make DNA and may kill cancer cells. Certain folate antagonists are used to treat some types of cancer and inflammatory conditions, such as rheumatoid arthritis. Also called antifolate and folic acid antagonist.

### **folic acid**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Folic acid helps to make red blood cells. It is found in whole-grain breads and cereals, liver, green vegetables, orange juice, lentils, beans, and yeast. Folic acid is water-soluble (can dissolve in water) and must be



taken in every day. Not enough folic acid can cause anemia (a condition in which the number of red blood cells is below normal), diseases of the heart and blood vessels, and defects in the brain and spinal cord in a fetus. Folic acid is being studied with vitamin B12 in the prevention and treatment of cancer. Also called folate.

### **follic acid antagonist**

A type of drug that stops cells from using folic acid to make DNA and may kill cancer cells. Certain folic acid antagonists are used to treat some types of cancer and inflammatory conditions, such as rheumatoid arthritis. Also called antifolate and folate antagonist.

### **folinic acid**

A form of folic acid used alone or with other drugs to treat certain types of colorectal cancer and anemia and to lessen the toxic effects of the anticancer drug methotrexate or other substances that block the action of folic acid. Folinic acid is also being studied in the treatment of other conditions and types of cancer. It is a type of chemoprotective agent and a type of chemosensitizing agent. Also called citrovorum factor and leucovorin calcium.

### **follicle**

A sac or pouch-like cavity formed by a group of cells. In the ovaries, one follicle contains one egg. In the skin, one follicle contains one hair.

### **follicle-stimulating hormone**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make the follicles and eggs grow. In males, it acts on the testes to make sperm. Also called follitropin and FSH.

### **follicular large cell lymphoma**

A rare type of non-Hodgkin lymphoma (cancer that begins in the cells of the immune system) that is marked by enlarged lymph nodes and large cancer cells that may look cleaved (u-shaped) under the microscope. Follicular large cell lymphoma is treated as aggressive (fast-growing) lymphoma, but it sometimes recurs years later and acts like indolent (slow-growing) lymphoma.

### **follicular lymphoma**

A type of B-cell non-Hodgkin lymphoma (cancer of the immune system) that is usually indolent (slow-growing). The tumor cells grow as groups to form nodules. There are several subtypes of follicular lymphoma.

### **follicular mixed cell lymphoma**

An indolent (slow-growing) type of B-cell non-Hodgkin lymphoma (cancer of the lymphatic system) in which there are both small and large cancer cells.

### **follicular thyroid cancer**

Cancer that forms in follicular cells in the thyroid. It grows slowly and is highly treatable.

### **folliculin gene**

A gene that makes a protein that may help control cell growth and other important cell functions. Mutated (changed) forms of the folliculin gene may increase the growth of abnormal cells. The mutated folliculin gene has been found in an inherited condition called Birt-Hogg-Dube syndrome (BHDS). Patients with BHDS have an increased risk of kidney cancer and tumors of the

skin and lungs. The folliculin gene is a type of tumor suppressor gene. Also called FLCN gene.

### **folliculitis**

Inflammation of a follicle (a sac or pouch-like cavity), usually a hair follicle.

### **follitropin**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make the follicles and eggs grow. In males, it acts on the testes to make sperm. Also called follicle-stimulating hormone and FSH.

### **follow-up**

Monitoring a person's health over time after treatment. This includes keeping track of the health of people who participate in a clinical study or clinical trial for a period of time, both during the study and after the study ends.

### **follow-up care**

Care given to a patient over time after finishing treatment for a disease. Follow-up care involves regular medical checkups, which may include a physical exam, blood tests, and imaging tests. Follow-up care checks for health problems that may occur months or years after treatment ends, including the development of other types of cancer. Follow-up care is given after positive screening test results, such as a positive Pap test result. In cancer patients, one purpose of follow-up care is checking to see if the cancer has come back or has spread to other parts of the body.

### **follow-up care plan**

A detailed plan given to a patient after treatment ends, that contains a summary of the patient's treatment, along with recommendations for follow-up care. In cancer, the plan is based on the type of cancer and the treatment the patient received. A follow-up care plan may include schedules for physical exams and medical tests to see if the cancer has come back or spread to other parts of the body. Getting follow-up care also helps check for health problems that may occur months or years after treatment ends, including other types of cancer. A follow-up care plan may also include information to help meet the emotional, social, legal, and financial needs of the patient. It may include referrals to specialists and recommendations for a healthy lifestyle, such as changes in diet and exercise and quitting smoking. Also called survivorship care plan.

### **fondaparinux sodium**

A drug used to prevent blood clots from forming inside blood vessels in the leg. It is being studied in the prevention of blood clots in some cancer patients, including women having surgery for cancer of the reproductive tract. It is a type of anticoagulant. Also called Arixtra.

### **foreign**

In medicine, foreign describes something that comes from outside the body. A foreign substance in the body's tissues, such as a bacterium or virus, may be recognized by the immune system as not belonging to the body. This causes an immune response. Other foreign substances in the body, such as artificial joints, are designed to not cause an immune response.

### **foreskin**

The loose skin that covers the head of the penis.

**foretinib**

A substance being studied in the treatment of cancer. Foretinib blocks enzymes involved in the growth and spread of tumor cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called MET/VEGFR-2 inhibitor GSK1363089 and XL880.

**formaldehyde**

A chemical commonly used to kill germs and to preserve laboratory specimens and tissues. It is also used to make building materials (such as wood), glue, fabric, paint, fertilizers, pesticides, and other substances. Formaldehyde is also found in tobacco smoke and in the vapor made from burning fuel, such as the exhaust from cars or household stoves and heaters. It has a strong odor and catches fire easily. Formaldehyde is known to cause cancer. Being exposed to formaldehyde increases the risk of developing myeloid leukemia and cancers of the paranasal sinuses, nasal cavity, and nasopharynx.

**forodesine hydrochloride**

A substance being studied in the treatment of some types of leukemia and lymphoma. It is a type of purine nucleoside phosphorylase (PNP) inhibitor. Also called BCX-1777.

**fortified food**

A food that has extra nutrients added to it or has nutrients added that are not normally there. Examples are milk with vitamin D added and salt with iodine added.

**foscarnet sodium**

A drug used to treat infections with herpesviruses in people whose immune systems are weakened by AIDS. It blocks the viruses from making copies of themselves. It is a type of antiviral agent. Also called Foscavir and phosphonoformate trisodium.

**fostamatinib disodium**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults with chronic immune thrombocytopenia (ITP) that did not get better with other treatment. ITP is a condition in which platelets are destroyed by the immune system. Fostamatinib disodium is also being studied in the treatment of other conditions and types of cancer. It blocks an enzyme called Syk, which may help keep the immune system from destroying platelets. Fostamatinib disodium is a type of tyrosine kinase inhibitor. Also called R788 sodium, Syk kinase inhibitor R-935788, and Tavalisse.

**fotemustine**

A substance being studied in the treatment of advanced melanoma, glioblastoma (a type of brain tumor) that has come back, and certain types of lymphoma. Fotemustine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea.

**fractionation**

A way of dividing a total dose of radiation or chemotherapy into separate doses that are larger or smaller than usual.

**fragrance**

A pleasant, sweet odor.

### **frankincense tree**

A tree that belongs to the incense tree family. The tree's amber-colored resin is used in incense. The resin has anti-inflammatory effects and has been used to treat arthritis, asthma, and ulcerative colitis. It is also being studied in the treatment of brain tumors. Also called *Boswellia serrata*.

### **free PSA**

The amount of the protein prostate-specific antigen (PSA) in the blood that is not attached to other proteins. It is compared with the amount of PSA in the blood that is attached to other proteins. The amount of free PSA is higher in men with benign prostatic hyperplasia (BPH). The amount of PSA attached to other proteins is higher in men with prostate cancer.

### **free flap**

A type of surgery used to rebuild the shape of the breast after a mastectomy. A tissue flap, including blood vessels, skin, fat, and sometimes muscle, is removed from one area of the body, such as the back or abdomen. It is then reattached to the chest to form a new breast mound. The blood vessels from the tissue are reconnected to blood vessels under the arm or in the chest. A free flap is a type of breast reconstruction.

### **free radical**

A type of unstable molecule that is made during normal cell metabolism (chemical changes that take place in a cell). Free radicals can build up in cells and cause damage to other molecules, such as DNA, lipids, and proteins. This damage may increase the risk of cancer and other diseases.

### **free radical scavenger**

A substance, such as an antioxidant, that helps protect cells from the damage caused by free radicals. Free radicals are unstable molecules that are made during normal cell metabolism (chemical changes that take place in a cell). They can build up in cells and cause damage to other molecules. This damage may increase the risk of cancer and other diseases.

### **freeze-dried**

A method used to dry substances, such as food, to make them last longer. The substance is frozen and then dried in a vacuum.

### **fresolimumab**

A substance being studied in the treatment of breast cancer that has spread to other parts of the body. It is also being studied in the treatment of other cancers and conditions. Fresolimumab binds to a protein called transforming growth factor-beta (TGF-beta), which is found on some cancer cells. Fresolimumab may help keep cancer cells from growing and prevent the growth of new blood vessels that tumors need to grow. It is a type of monoclonal antibody and a type of antiangiogenesis agent. Also called anti-TGF-beta monoclonal antibody GC1008 and GC1008.

### **frontal sinus**

A type of paranasal sinus (a hollow space in the bones around the nose). There are two, large frontal sinuses in the frontal bone, which forms the lower part of the forehead and reaches over the eye sockets and eyebrows. The frontal sinuses are lined with cells that make mucus to keep the nose from drying out.

**fruit acid**

One of a group of substances that are found in several types of fruit and in milk. They are used in skin care products to reduce wrinkles and soften the skin. Examples of fruit acids are glycolic acid, lactic acid, and citric acid. Also called AHA and alpha hydroxyl acid.

**fruquintinib**

A drug used to treat adults with colorectal cancer that has spread to other parts of the body and has already been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Fruquintinib blocks a protein called VEGFR, which may prevent the growth of new blood vessels that tumors need to grow and may kill cancer cells. It is a type of antiangiogenesis agent and a type of kinase inhibitor. Also called Fruzaqla.

**fulguration**

A procedure that uses heat from an electric current to destroy abnormal tissue, such as a tumor or other lesion. It may also be used to control bleeding during surgery or after an injury. The electric current passes through an electrode that is placed on or near the tissue. The tip of the electrode is heated by the electric current to burn or destroy the tissue. Fulguration is a type of electrosurgery. Also called electrocautery, electrocoagulation, and electrofulguration.

**full blood count**

A measure of the number of red blood cells, white blood cells, and platelets in the blood. The amount of hemoglobin (substance in the blood that carries oxygen) and the hematocrit (the amount of whole blood that is made up of red blood cells) are also measured. A full blood count is used to help diagnose and monitor many conditions. Also called blood cell count, CBC, and complete blood count.

**fulvestrant**

A drug used to treat certain types of breast cancer. It is used alone or with ribociclib succinate in postmenopausal women who have not been treated with hormone therapy or whose disease got worse after treatment with hormone therapy. It is also used with palbociclib or abemaciclib in women whose disease got worse after treatment with hormone therapy. It is also being studied in the treatment of other types of cancer. Fulvestrant binds to proteins called estrogen receptors, which are found in some breast cancer cells. These proteins may cause cancer cells to grow. Fulvestrant blocks these proteins and may keep cancer cells from growing. It is a type of antiestrogen. Also called Faslodex and ICI 182780.

**fumarase**

An enzyme that helps cells in the body use oxygen and make energy. Mutations (changes) in the gene that makes fumarase may cause cells to lose the ability to use oxygen, which may increase the growth of some cells, including abnormal cells and cancer cells. Also called fumarate hydratase.

**fumarate hydratase**

An enzyme that helps cells in the body use oxygen and make energy. Mutations (changes) in the gene that makes fumarate hydratase may cause cells to lose the ability to use oxygen, which may increase the growth of some cells, including abnormal cells and cancer cells. Also called fumarase.

### **fumarate hydratase gene**

A gene that makes an enzyme that helps cells in the body use oxygen and make energy. Mutated (changed) forms of the fumarate hydratase gene may cause cells to lose the ability to use oxygen. This may increase the growth of some cells, including abnormal cells and cancer cells. The mutated fumarate hydratase gene has been found in an inherited condition called hereditary leiomyomatosis and renal cell cancer (HLRCC). Patients with HLRCC have an increased risk of kidney cancer and tumors in the skin and uterus. Also called FH gene.

### **functional magnetic resonance imaging**

A noninvasive tool used to observe functioning in the brain or other organs by detecting changes in chemical composition, blood flow, or both.

### **functioning tumor**

A tumor that is found in endocrine tissue and makes hormones (chemicals that travel in the bloodstream and control the actions of other cells or organs).

### **fundoscopy**

An exam that uses a magnifying lens and a light to check the fundus of the eye (back of the inside of the eye, including the retina and optic nerve). The pupils may be dilated (enlarged) with medicated eye drops so the doctor can see through the pupil to the back of the eye. Fundoscopy may be used to check for eye problems, such as glaucoma, macular degeneration, eye cancer, optic nerve problems, or eye injury. Also called funduscopy and ophthalmoscopy.

### **fundus**

The part of a hollow organ that is across from, or farthest away from, the organ's opening. Depending on the organ, the fundus may be at the top or bottom of the organ. For example, the fundus of the uterus is the top part of the uterus that is across from the cervix (the opening of the uterus). The fundus of the bladder is the back, bottom part of the bladder. Certain organs, including the bladder, gallbladder, stomach, uterus, and eye, have a fundus.

### **funduscopy**

An exam that uses a magnifying lens and a light to check the fundus of the eye (back of the inside of the eye, including the retina and optic nerve). The pupils may be dilated (enlarged) with medicated eye drops so the doctor can see through the pupil to the back of the eye. Funduscopy may be used to check for eye problems, such as glaucoma, macular degeneration, eye cancer, optic nerve problems, or eye injury. Also called fundoscopy and ophthalmoscopy.

### **fungating lesion**

A type of skin lesion that is marked by ulcerations (breaks on the skin or surface of an organ) and necrosis (death of living tissue) and that usually has a bad smell. This kind of lesion may occur in many types of cancer, including breast cancer, melanoma, and squamous cell carcinoma, and especially in advanced disease.

### **fungicide**

Any substance used to kill fungi (plant-like organisms that do not make chlorophyll), such as yeast and molds.

### **fungus**

A plant-like organism that does not make chlorophyll. Mushrooms, yeasts, and molds are examples. The plural is fungi.



### **furanocoumarin**

A substance that comes from certain plants and is found in citrus fruits, such as grapefruits, Seville oranges, pomelos, and limes. Although citrus fruits have health benefits, furanocoumarins can affect how certain enzymes in the liver and small intestine break down drugs. This may change the way certain drugs, such as anticancer drugs, work in the body.

### **fusion biopsy**

A biopsy procedure that combines the pictures from an MRI scan and an ultrasound to create a detailed 3-D image of the prostate. This procedure makes it easier to see an abnormal area of tissue in order to guide the biopsy needle into the abnormal area. A sample of tissue can then be removed and checked under a microscope for signs of cancer. A fusion biopsy may help find prostate cancer cells that may be missed with other types of biopsies. It may help find cancer at an early stage and plan cancer treatment. Also called MRI ultrasound fusion-guided biopsy.

### **fusion gene**

A gene made by joining parts of two different genes. Fusion genes, and the fusion proteins that come from them, may be made in the laboratory, or made naturally in the body when part of the DNA from one chromosome moves to another chromosome. Fusion proteins produced by this change may lead to the development of some types of cancer. For example, the BCR::ABL fusion gene and protein are found in some types of leukemia. Fusion genes and proteins may also be found in several other types of cancer, including soft tissue sarcoma, cancers of the prostate, breast, lung, bladder, colon, and rectum, and CNS tumors. Fusion genes and proteins are being studied in the diagnosis and treatment of cancer.

### **fusion protein**

A protein made from a fusion gene, which is created by joining parts of two different genes. Fusion genes may occur naturally in the body by transfer of DNA between chromosomes. For example, the BCR::ABL gene found in some types of leukemia is a fusion gene that makes the BCR::ABL fusion protein. Fusion genes and proteins can also be made in the laboratory by combining genes or parts of genes from the same or different organisms.

### **futibatinib**

A drug used to treat adults with intrahepatic cholangiocarcinoma (a type of cancer that forms in the bile ducts inside the liver) that has spread or cannot be removed by surgery and has an FGFR2 gene fusion or other change in the structure of the FGFR2 gene. It is used in patients whose cancer has already been treated. It is also being studied in the treatment of other types of cancer. Futibatinib blocks a protein called FGFR, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Lytgobi.

### **gFOBT**

A test that checks for occult (hidden) blood in the stool. Small samples of stool are placed on special cards coated with a chemical substance called guaiac and sent to a doctor or laboratory for testing. A testing solution is put on the cards and the guaiac causes the stool sample to change color. If there is blood in the stool, the color changes very quickly. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called guaiac fecal occult blood test, guaiac smear test, and stool guaiac test.

### **gabapentin**

A substance that is being studied as a treatment for relieving hot flashes in women with breast cancer. It belongs to the family of drugs called anticonvulsants.

### **gadobenate dimeglumine**

A drug used in MRI to help make clear pictures of blood vessels in the brain, spine, and nearby tissues. It is also being studied as a way to find abnormal areas in the liver and other organs and to help diagnose cancer. Gadobenate dimeglumine is a type of contrast agent. Also called MultiHance.

### **gadolinium**

A metal element that is used in magnetic resonance imaging (MRI) and other imaging methods. It is a contrast agent, which helps show abnormal tissue in the body during imaging with a special machine.

### **gadolinium texaphyrin**

A substance being studied in the treatment and diagnosis of some types of cancer. It builds up in some cancer cells, which may make them easier to kill with radiation therapy and chemotherapy. Gadolinium texaphyrin is also used in magnetic resonance imaging (MRI) to help find cancer cells in the body. It is a type of radiosensitizing agent, a type of chemosensitizing agent, and a type of contrast agent. Also called motexafin gadolinium.

### **gadopentetate dimeglumine**

A substance used in magnetic resonance imaging (MRI) to help make clear pictures of the brain, spine, heart, soft tissue of joints, and inside bones. Gadopentetate dimeglumine is being studied in the diagnosis of cancer. It is a type of contrast agent. Also called Gd-DTPA and Magnevist.

### **galactography**

A procedure that uses x-rays to create pictures of milk ducts in the breast. A very thin catheter (tube) is inserted into the nipple, and a small amount of dye is injected into the duct. This makes the duct easier to see on the x-ray. Galactography is used in patients who have a bloody or clear discharge from one nipple. A small amount of the fluid may be collected to check for infection or cancer cells. Galactography may be used to help diagnose certain breast conditions, such as papillomas (wart-like growths) in a milk duct, fibrocystic breast changes, and breast cancer. Also called ductography.

### **galiximab**

A substance being studied in the treatment of follicular non-Hodgkin lymphoma. It binds to the protein CD80, which is found on certain normal white blood cells and on white blood cells that are cancer. It is a type of monoclonal antibody.

### **gallbladder**

The pear-shaped organ found below the liver. Bile is concentrated and stored in the gallbladder.

### **gallbladder cancer**

Cancer that forms in tissues of the gallbladder. The gallbladder is a pear-shaped organ below the liver that collects and stores bile (a fluid made by the liver to digest fat). Gallbladder cancer begins in the innermost layer of tissue and spreads through the outer layers as it grows.

**gallium nitrate**

A drug that lowers blood calcium. Used as treatment for hypercalcemia (too much calcium in the blood) and for cancer that has spread to the bone (bone metastases).

**gallium scan**

A procedure to detect areas of the body where cells are dividing rapidly. It is used to locate cancer cells or areas of inflammation. A very small amount of radioactive gallium is injected into a vein and travels through the bloodstream. The gallium is taken up by rapidly dividing cells in the bones, tissues, and organs and is detected by a scanner.

**gallstone**

Solid material that forms in the gallbladder or common bile duct. Gallstones are made of cholesterol or other substances found in the gallbladder. They may occur as one large stone or as many small ones, and vary from the size of a golf ball to a grain of sand. Also called cholelith.

**galvanic skin response**

A change in the heat and electricity passed through the skin by nerves and sweat. Galvanic skin response increases in certain emotional states and during hot flashes that happen with menopause. Also called electrodermal response and skin conduction.

**gamete**

An egg cell in females or sperm cell in males. Each mature gamete contains 23 chromosomes. When an egg combines with sperm, the fertilized egg normally contains a total of 46 chromosomes. Also called reproductive cell and sex cell.

**gamma irradiation**

A type of radiation therapy that uses gamma radiation. Gamma radiation is a type of high-energy radiation that is different from x-rays.

**gamma ray**

A type of high-energy radiation that is different from an x-ray.

**gamma secretase**

A protein complex found in the cell membrane that has an enzyme that cuts proteins, such as Notch and APP, into smaller pieces called peptides. When gamma secretase cuts Notch and APP at the wrong site, abnormal activation of Notch and APP cell signaling pathways may occur. This may cause uncontrolled cell growth and division and damaged cells to survive. Abnormalities in gamma secretase may lead to diseases such cancer and Alzheimer disease.

**gamma secretase inhibitor**

A substance that blocks the enzyme activity of a protein complex called gamma secretase. Gamma secretase is involved in the activation of several cell signaling proteins, including a protein called Notch. The Notch protein may be found at high levels on some types of cancer cells, which causes these cells to grow. Blocking gamma secretase may prevent the activation of Notch, which may help keep cancer cells from growing and may kill them. Some gamma secretase inhibitors are being studied in the treatment of cancer and other diseases. They are a type of targeted therapy.

**ganciclovir**

An antiviral agent used to prevent or treat cytomegalovirus infections that may occur when the body's immune system is suppressed. In gene therapy, ganciclovir is used with an altered herpes simplex virus-1 gene to kill advanced melanoma cells and brain tumor cells.

**ganetespib**

A substance being studied in the treatment of some types of cancer. Ganetespib blocks the activity of a protein called HSP90. This prevents the breakdown of certain proteins inside cells. Blocking the activity of this protein in cancer cells may help keep the cells from dividing and cause them to die. It may also make cancer cells easier to kill with chemotherapy and radiation therapy. Ganetespib is a type of heat-shock protein inhibitor.

**ganglioside**

A complex molecule that contains both lipids (fats) and carbohydrates (sugars) and is found in the plasma (outer) membrane of many kinds of cells. Several different types of gangliosides have been identified.

**garden heliotrope**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden valerian, Indian valerian, Mexican valerian, Pacific valerian, valerian, *Valeriana officinalis*, and *Valerianae radix*.

**garden valerian**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, Indian valerian, Mexican valerian, Pacific valerian, valerian, *Valeriana officinalis*, and *Valerianae radix*.

**garlic**

A European plant that has a bulb used to flavor food. It has also been used in some cultures to treat certain medical conditions including high cholesterol, high blood pressure, infections, and cancer. The scientific name is *Allium sativum*.

**gastrectomy**

An operation to remove all or part of the stomach.

**gastric**

Having to do with the stomach.

**gastric acid**

Acid that is released into the stomach from glands in the stomach wall. It helps digest food. Gastric acid is made of hydrochloric acid.

**gastric acid secretion test**

A test used to measure the amount of gastric acid made by the stomach. The patient receives an injection of the hormone gastrin or insulin. A tube is put through the nose or throat into the stomach and samples are taken from the stomach and sent to a laboratory for testing. Also called stomach acid stimulation test and stomach acid test.

### **gastric adenocarcinoma and proximal polyposis of the stomach**

A rare, inherited disorder in which many polyps (usually hundreds) form in the lining of the upper part of the stomach. Polyps are abnormal growths that may become cancer if they are not removed. People with gastric adenocarcinoma and proximal polyposis of the stomach have an increased risk of developing a type of stomach cancer called intestinal gastric adenocarcinoma. This cancer begins in the mucus-producing cells in the innermost lining of the stomach. Gastric adenocarcinoma and proximal polyposis of the stomach is caused by certain mutations (changes) in a specific part of the APC gene. The age that people with one of these specific mutations in the APC gene develop gastric adenocarcinoma and proximal polyposis of the stomach varies. Also called GAPPS.

### **gastric atrophy**

A condition marked by thinning of the inner lining of the stomach wall and the loss of gland cells in the lining that release substances that help with digestion. It may be caused by infection with the bacterium *H. pylori* or by certain autoimmune conditions. Gastric atrophy may increase the risk of stomach cancer.

### **gastric cancer**

Cancer that forms in tissues lining the stomach. Also called stomach cancer.

### **gastric cardia cancer**

A type of stomach cancer that begins in the mucous-producing cells in the inner lining of the cardia (the part of the stomach that is closest to the esophagus). Food and liquids pass through the cardia to enter the stomach from the esophagus. Risk factors associated with gastric cardia cancer include obesity, smoking tobacco, and gastroesophageal reflux disease (GERD). Most gastric cardia cancers are adenocarcinomas.

### **gastric feeding tube**

A tube that is inserted through the nose, down the throat and esophagus, and into the stomach. It can be used to give drugs, liquids, and liquid food, or used to remove substances from the stomach. Giving food through a gastric feeding tube is a type of enteral nutrition. Also called nasogastric tube and NG tube.

### **gastric mucosal hypertrophy**

A condition marked by inflammation and ulcers (breaks on the skin or on the surface of an organ) of the mucosa (inner lining) of the stomach and by overgrowth of the cells that make up the mucosa. Symptoms include vomiting, diarrhea, and weight loss. Patients with gastric mucosal hypertrophy may be at a higher risk of stomach cancer. Also called giant hypertrophic gastritis and Ménétrier disease.

### **gastric reflux**

The backward flow of stomach acid contents into the esophagus (the tube that connects the mouth to the stomach). Also called esophageal reflux and gastroesophageal reflux.

### **gastric scirrhous carcinoma**

A rare type of stomach cancer that begins in the lining of the stomach and spreads to the muscles of the stomach wall. This causes the wall of the stomach to become thick, hard, and rubbery, which leads to trouble digesting food. Also called linitis plastica.

**gastrin**

A hormone released from special cells in the lining of the stomach after eating. Gastrin causes the stomach to release an acid that helps digest food.

**gastrinoma**

A tumor that causes overproduction of gastric acid. It usually begins in the duodenum (first part of the small intestine that connects to the stomach) or the islet cells of the pancreas. Rarely, it may also begin in other organs, including the stomach, liver, jejunum (the middle part of the small intestine), biliary tract (organs and ducts that make and store bile), mesentery, or heart. It is a type of neuroendocrine tumor, and it may metastasize (spread) to the liver and the lymph nodes.

**gastritis**

Inflammation of the lining of the stomach.

**gastroenteritis**

Inflammation of the lining of the stomach and the intestines. Symptoms may include nausea, vomiting, diarrhea, and abdominal cramps (dull or sharp pains). Gastroenteritis may be caused by infection with bacteria, parasites, or viruses. It may also be caused by food poisoning, allergic reactions, or reactions to certain medicines or foods.

**gastroenterologist**

A doctor who has special training in diagnosing and treating disorders of the digestive system.

**gastroenteropancreatic neuroendocrine tumor**

A rare type of tumor that can form in the pancreas or in other parts of the gastrointestinal tract, including the stomach, small intestine, colon, rectum, and appendix. Gastroenteropancreatic neuroendocrine tumors usually form in cells that secrete hormones. Some of these tumors make extra amounts of hormones and other substances that may cause signs and symptoms of disease, including a condition called carcinoid syndrome. Gastroenteropancreatic neuroendocrine tumors may be benign (not cancer) or malignant (cancer). They are sometimes called carcinoid tumors or islet cell tumors. Also called GEP-NET.

**gastroesophageal junction**

The place where the esophagus is connected to the stomach.

**gastroesophageal reflux**

The backward flow of stomach acid contents into the esophagus (the tube that connects the mouth to the stomach). Also called esophageal reflux and gastric reflux.

**gastrointestinal**

Having to do with the gastrointestinal (GI) tract or GI system. The GI tract includes the mouth, throat, esophagus, stomach, small intestine, large intestine, rectum, and anus. Food and liquids travel through the GI tract as they are swallowed, digested, absorbed, and leave the body as feces. The GI system includes these organs as well as the salivary glands, liver, gallbladder, and pancreas, which make digestive juices and enzymes that help the body digest food and liquids. Also called GI.



### **gastrointestinal carcinoid tumor**

A rare, slow-growing type of cancer that forms in the lining of the gastrointestinal (GI) tract, usually in the small intestine, rectum, or appendix. Sometimes more than one tumor may form. Gastrointestinal carcinoid tumors form in neuroendocrine cells that make hormones that help control digestive juices and the muscles used in moving food through the stomach and intestines. Signs and symptoms of gastrointestinal carcinoid tumors vary by where they are found in the GI tract. In some cases, the hormones made by these tumors may cause a condition called carcinoid syndrome. Symptoms of carcinoid syndrome include facial flushing, diarrhea, wheezing, and a rapid heartbeat. Also called gastrointestinal neuroendocrine tumor.

### **gastrointestinal neuroendocrine tumor**

A rare, slow-growing type of cancer that forms in the lining of the gastrointestinal (GI) tract, usually in the small intestine, rectum, or appendix. Sometimes more than one tumor may form. Gastrointestinal neuroendocrine tumors form in neuroendocrine cells that make hormones that help control digestive juices and the muscles used in moving food through the stomach and intestines. Signs and symptoms of gastrointestinal neuroendocrine tumors vary by where they are found in the GI tract. In some cases, the hormones made by these tumors may cause a condition called carcinoid syndrome. Symptoms of carcinoid syndrome include facial flushing, diarrhea, wheezing, and a rapid heartbeat. Also called gastrointestinal carcinoid tumor.

### **gastrointestinal stromal tumor**

A type of tumor that usually begins in cells in the wall of the gastrointestinal tract. Some gastrointestinal stromal tumors may grow slowly over time, while others can grow and spread very quickly. Also called GIST.

### **gastrointestinal system**

The organs that take in food and liquids and break them down into substances that the body can use for energy, growth, and tissue repair. Waste products the body cannot use leave the body through bowel movements. The gastrointestinal system includes the mouth, pharynx (throat), esophagus, stomach, small intestine, large intestine, rectum, and anus. It also includes the salivary glands, liver, gallbladder, and pancreas, which make digestive juices and enzymes that help the body digest food and liquids. Also called digestive system.

### **gastrointestinal tract**

The organs that food and liquids travel through when they are swallowed, digested, absorbed, and leave the body as feces. These organs include the mouth, pharynx (throat), esophagus, stomach, small intestine, large intestine, rectum, and anus. The gastrointestinal tract is part of the digestive system. Also called alimentary tract and digestive tract.

### **gastrojejunostomy**

A surgical procedure that connects part of the stomach to the jejunum (the middle part of the small intestine). This allows food and other stomach contents to pass directly from the stomach to the jejunum without passing through the first part of the small intestine called the duodenum. Gastrojejunostomy may be done during surgery to remove part of the stomach that has cancer blocking the opening into the small intestine. It may also be done as part of weight-loss surgery.

**gastroscope**

A thin, tube-like instrument used to examine the inside of the stomach. A gastroscope has a light and a lens for viewing and may have a tool to remove tissue.

**gastrostomy tube**

A tube inserted through the wall of the abdomen directly into the stomach. It allows air and fluid to leave the stomach and can be used to give drugs and liquids, including liquid food, to the patient. Giving food through a gastrostomy tube is a type of enteral nutrition. Also called PEG tube and percutaneous endoscopic tube.

**gavage**

A way of giving medicines and liquids, including liquid foods, through a small tube placed through the nose or mouth into the stomach or small intestine. Sometimes the tube is placed into the stomach or small intestine through an incision (cut) made on the outside of the abdomen. Gavage may be added to what a person is able to eat and drink, or it may be the only source of nutrition. It is a type of enteral nutrition. Also called tube feeding.

**gefitinib**

A drug used to treat non-small cell lung cancer that has spread to other parts of the body and has certain mutations (changes) in the EGFR gene. It is used in patients whose cancer has not already been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Gefitinib blocks certain proteins made by the EGFR gene, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Gefitinib is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Iressa and ZD1839.

**gel electrode**

A device that uses a gel to carry an electric current from the skin to a measuring instrument. A sticky patch may hold the gel electrode on the skin so that the electrical activity of the heart or brain can be measured.

**geldanamycin analog**

An antineoplastic antibiotic drug that belongs to the family of drugs called ansamycins.

**gemcitabine hydrochloride**

A drug used alone or with other drugs to treat certain types of breast, non-small cell lung, ovarian, and pancreatic cancers that are advanced or have spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Gemcitabine hydrochloride stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Gemcitabine is the active ingredient of gemcitabine hydrochloride. Also called Gemzar and Infugem.

**gemcitabine-Tarceva regimen**

A chemotherapy combination used for the treatment of locally advanced and metastatic pancreatic cancer. It includes the drugs gemcitabine hydrochloride and erlotinib hydrochloride. Also called gemcitabine-erlotinib regimen.

**gemcitabine-cisplatin**

A chemotherapy combination used to treat malignant mesothelioma, advanced non-small cell lung cancer, advanced bladder cancer, advanced cervical cancer,

pancreatic cancer, and epithelial ovarian cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs gemcitabine hydrochloride and cisplatin. Also called gemcitabine-cisplatin regimen.

### **gemcitabine-cisplatin regimen**

A chemotherapy combination used to treat malignant mesothelioma, advanced non-small cell lung cancer, advanced bladder cancer, advanced cervical cancer, pancreatic cancer, and epithelial ovarian cancer. It is also being studied in the treatment of other types of cancer. It includes the drugs gemcitabine hydrochloride and cisplatin. Also called gemcitabine-cisplatin.

### **gemcitabine-erlotinib regimen**

A chemotherapy combination used for the treatment of locally advanced and metastatic pancreatic cancer. It includes the drugs gemcitabine hydrochloride and erlotinib hydrochloride. Also called gemcitabine-Tarceva regimen.

### **gemcitabine-oxaliplatin**

A chemotherapy combination used to treat pancreatic cancer and some other types of cancer. It includes the drugs gemcitabine hydrochloride and oxaliplatin. Also called gemcitabine-oxaliplatin regimen and GEMOX.

### **gemcitabine-oxaliplatin regimen**

A chemotherapy combination used to treat pancreatic cancer and some other types of cancer. It includes the drugs gemcitabine hydrochloride and oxaliplatin. Also called gemcitabine-oxaliplatin and GEMOX.

### **gemtuzumab ozogamicin**

A drug used alone or with other drugs to treat acute myeloid leukemia that is CD33 positive (expresses the protein CD33). It is used in adults and in children aged 1 month and older whose disease is newly diagnosed. It is also used in adults and in children aged 2 years and older whose disease has come back or has not gotten better with other treatment. It is also being studied in the treatment of other types of cancer. Gemtuzumab ozogamicin contains a monoclonal antibody that binds to CD33, which is found on some leukemia cells. It also contains an anticancer drug, which may help kill cancer cells. Gemtuzumab ozogamicin is a type of antibody-drug conjugate. Also called Mylotarg.

### **gene**

The functional and physical unit of heredity passed from parent to offspring. Genes are pieces of DNA, and most genes contain the information for making a specific protein.

### **gene amplification**

An increase in the number of copies of a gene. There may also be an increase in the RNA and protein made from that gene. Gene amplification is common in cancer cells, and some amplified genes may cause cancer cells to grow or become resistant to anticancer drugs. Genes may also be amplified in the laboratory for research purposes.

### **gene deletion**

The loss of all or a part of a gene. There may also be a change in the RNA and protein made from that gene. Certain gene deletions are found in cancer and in other genetic diseases and abnormalities.

### **gene expression**

The process by which a gene gets turned on in a cell to make RNA and proteins. Gene expression may be measured by looking at the RNA, or the protein made from the RNA, or what the protein does in a cell.

### **gene expression profile**

Information about all of the genes in a cell or tissue that are making messenger RNA. Messenger RNA molecules carry the genetic information that a cell needs to make proteins. A gene expression profile may be used to help diagnose a disease or condition, such as cancer. It may also be used to help plan treatment, find out how well treatment is working, make a prognosis, or predict whether cancer will come back or spread to other parts of the body.

### **gene signature**

Information about the activity of a specific group of genes in a cell or tissue. In cancer, gene signatures can show how likely certain types of cancer are to grow and spread in the body or how likely they are to recur (come back). A gene signature may be used to help diagnose diseases, such as cancer, plan treatment, find out how well treatment is working, and make a prognosis.

### **gene therapy**

An experimental treatment that adds a new gene or replaces or repairs a mutated (changed) gene inside the body's cells to help prevent or treat certain diseases, such as cancer. Gene therapy may also be used to train the body's immune system to recognize and attack cancer cells or to protect healthy cells from the effects of cancer treatment. It is being studied in the treatment of some types of cancer.

### **gene transfer**

The insertion of genetic material into a cell.

### **gene-modified**

Cells that have been altered to contain different genetic material than they originally contained.

### **general anesthesia**

A temporary loss of feeling and a complete loss of awareness that feels like a very deep sleep. It is caused by special drugs or other substances called anesthetics. General anesthesia keeps patients from feeling pain during surgery or other procedures.

### **general surgery**

The branch of surgery that covers the main areas of surgical treatment. General surgeons treat diseases of the abdomen, breast, head and neck, blood vessels, and digestive tract. They also manage care of patients who have been injured or who have deformities or other conditions that need surgery.

### **generalized anxiety disorder**

A condition marked by excessive worry and feelings of fear, dread, and uneasiness that last six months or longer. Other symptoms of generalized anxiety disorder include being restless, being tired or irritable, muscle tension, not being able to concentrate or sleep well, shortness of breath, fast heartbeat, sweating, and dizziness. Also called GAD.

**generic**

Official nonbrand names by which medicines are known. Generic names usually refer to the chemical name of the drug.

**genetic**

Having to do with genes. Most genes are sequences of DNA that contain information for making specific RNA molecules or proteins that perform important functions in a cell. The information in genes is passed down from parent to child. Sometimes, certain changes in genes can affect a person's risk of disease, such as cancer. These changes may be inherited or they may occur with age or exposure to environmental factors, such as diet, exercise, drugs, and chemicals.

**genetic analysis**

The study of a sample of DNA to look for mutations (changes) that may increase risk of disease or affect the way a person responds to treatment.

**genetic counseling**

A communication process between a specially trained health professional and a person concerned about the genetic risk of disease. The person's family and personal medical history may be discussed, and counseling may lead to genetic testing.

**genetic counselor**

A health professional who has special training in medical genetics and counseling. Genetic counselors help patients and families who have, or who may be at risk of, a genetic condition. They help patients find out their chances of having a genetic condition or of having a child or other family member with a genetic condition. They also help patients understand their options for genetic testing, including its risks and benefits. After genetic testing is done, genetic counselors help patients understand their genetic test results, including how the results can affect other family members, and provide counseling and support.

**genetic heterogeneity**

A term that describes when different gene mutations (changes) cause the same disease or condition. Genetic heterogeneity occurs when a single gene has different mutations (allelic heterogeneity) or when there are mutations in different genes (locus heterogeneity), and in both cases the same disease or condition occurs. For example, tuberous sclerosis (an inherited disorder in which tumors form in the kidneys, brain, eyes, heart, lungs, and skin) is caused by having mutations in a gene on chromosome 9 or chromosome 16.

**genetic infantile agranulocytosis**

An inherited disorder in which there is a lower-than-normal number of neutrophils (a type of white blood cell that is important in fighting infections). Infants with the disorder get infections caused by bacteria, and are at an increased risk of acute myelogenous leukemia (AML) or myelodysplasia (a bone marrow disorder). Also called congenital neutropenia, infantile genetic agranulocytosis, Kostmann disease, Kostmann neutropenia, and Kostmann syndrome.

**genetic marker**

A specific sequence of DNA at a known location on a chromosome. There are many genetic markers on each chromosome. Genetic markers and genes that are close to each other on a chromosome are usually inherited (passed from parent to child) together. This may help researchers find a gene near a marker

that may cause a certain disease or trait within a family. Examples of genetic markers are single polymorphism nucleotides (SNPs) and microsatellites.

### **genetic marker of susceptibility**

A specific change in a person's DNA that makes the person more likely to develop certain diseases such as cancer.

### **genetic predisposition**

An inherited increase in the risk of developing a disease. Also called genetic susceptibility, hereditary predisposition, and inherited predisposition.

### **genetic profile**

Information about changes in specific genes, gene expression, or chromosomes in cells or tissue of a person. These changes may be a sign of a disease or condition, such as cancer. They may also be a sign that a person has an increased risk of developing a specific disease or condition or of having a child or other family member with the disease or condition. A genetic profile may be used to help diagnose disease, plan treatment, or find out how well treatment is working.

### **genetic susceptibility**

An inherited increase in the risk of developing a disease. Also called genetic predisposition, hereditary predisposition, and inherited predisposition.

### **genetic testing**

A laboratory method that looks for changes in genes, gene expression, or chromosomes in cells or tissue of a person. These changes may be a sign of a disease or condition, such as cancer. They may also be a sign that a person has an increased risk of developing a specific disease or condition or of having a child or other family member with the disease or condition. Genetic testing may also be done on tumor tissue to help diagnose cancer, plan treatment, or find out how well treatment is working.

### **geneticist**

A scientist who has special training in the study of genes and heredity (the passing of genetic information from parents to their children). A medical geneticist is a doctor who specializes in diagnosing and treating genetic disorders or conditions. Medical geneticists also counsel individuals and families at risk for certain genetic disorders or cancers.

### **genetics**

The study of genes and heredity. Heredity is the passing of genetic information and traits (such as eye color and an increased chance of getting a certain disease) from parents to offspring.

### **genistein**

An isoflavone found in soy products. Soy isoflavones are being studied to see if they help prevent cancer.

### **genital**

Refers to the genitalia (external and internal sex organs and glands).

### **genital wart**

A raised growth on the surface of the genitals or in or around the anus caused by infection with certain types of human papillomavirus (HPV). HPV can spread by



skin-to-skin contact, usually during oral, anal, or genital sex with an infected partner. These warts can also occur on the lips and tongue and in the mouth and throat. Genital warts often appear as small, skin-colored bumps that may be clumped together. They are usually painless and do not cause any symptoms, so a person may not know they have them. However, sometimes they can grow large and cause itching and bleeding. Genital warts do not become cancer, but they may come back after treatment. Also called condyloma acuminatum.

### **genitourinary system**

The parts of the body that play a role in reproduction, getting rid of waste products in the form of urine, or both.

### **genome**

The complete set of DNA (genetic material) in an organism. In people, almost every cell in the body contains a complete copy of the genome. The genome contains all of the information needed for a person to develop and grow. Studying the genome may help researchers understand how different types of cancer form and respond to treatment. This may lead to new ways to diagnose, treat, and prevent cancer.

### **genome-wide association study**

A study that compares DNA markers across the genome (the complete genetic material in a person) in people with a disease or trait to people without the disease or trait. These studies may uncover clues to help prevent, diagnose, and treat disease. Also called GWAS.

### **genomic characterization**

A laboratory method that uses a sample of tissue, blood, or other body fluid to learn about all the genes in a person or in a specific cell type, and the way those genes interact with each other and with the environment. Genomic characterization may be done to find out why some people get certain diseases while others do not. Genomic characterization may also be done on tumor tissue to look for mutations or other genetic changes in a tumor's DNA. This may help doctors understand how different types of cancer form and respond to treatment, which may lead to new ways to diagnose, treat, and prevent cancer. Also called genomic profiling.

### **genomic instability**

The increased tendency for DNA mutations (changes) and other genetic changes to occur during cell division. Genomic instability is caused by defects in certain processes that control the way cells divide. It occurs in many types of cancer. These defects may include mutations in certain genes involved in repairing damaged DNA or mistakes that don't get corrected when DNA is copied in a cell. They may also include defects such as broken, missing, rearranged, or extra chromosomes. Studying genomic instability may help researchers understand how certain diseases, such as cancer, form. This may lead to new ways to diagnose, treat, and prevent disease.

### **genomic profiling**

A laboratory method that uses a sample of tissue, blood, or other body fluid to learn about all the genes in a person or in a specific cell type, and the way those genes interact with each other and with the environment. Genomic profiling may be done to find out why some people get certain diseases while others do not. Genomic profiling may also be done on tumor tissue to look for mutations or other genetic changes in a tumor's DNA. This may help doctors understand how

different types of cancer form and respond to treatment, which may lead to new ways to diagnose, treat, and prevent cancer. Also called genomic characterization.

### **genomic sequencing**

A laboratory method that is used to determine the entire genetic makeup of a specific organism or cell type. This method can be used to find changes in areas of the genome. These changes may help scientists understand how specific diseases, such as cancer, form. Results of genomic sequencing may also be used to diagnose and treat disease.

### **genomics**

The study of the complete set of DNA (including all of its genes) in a person or other organism. Almost every cell in a person's body contains a complete copy of the genome. The genome contains all the information needed for a person to develop and grow. Studying the genome may help researchers understand how genes interact with each other and with the environment and how certain diseases, such as cancer, diabetes, and heart disease, form. This may lead to new ways to diagnose, treat, and prevent disease.

### **geranium**

A type of plant that is native to southern Africa and has white, pink, purple, or red flowers and 3- to 5-lobed leaves. An essential oil that smells like roses is taken from the leaves and used in perfume, in mosquito repellants, and in aromatherapy to treat skin problems and to reduce stress. The scientific name is *Pelargonium graveolens*. Also called pelargonium.

### **germ**

A bacterium, virus, or other microorganism that can cause infection and disease.

### **germ cell**

A cell that develops into a reproductive cell, which is an egg in females and a sperm in males.

### **germ cell tumor**

A type of tumor that begins in the cells that give rise to sperm or eggs. Germ cell tumors can occur almost anywhere in the body and can be either benign or malignant.

### **germfree**

Free of bacteria, viruses, and other microorganisms that can cause infection and disease.

### **germicide**

Any substance or process that kills germs (bacteria, viruses, and other microorganisms that can cause infection and disease). Also called microbicide.

### **germinoma**

A type of tumor that begins in germ cells (cells that form sperm or eggs). Germinomas can occur in the ovaries or testicles or other parts of the body, but they occur most often in the central nervous system (brain and spinal cord). This happens when a germ cell travels to the brain during fetal development and later becomes a germ cell tumor. Some germinomas make a hormone called beta-human chorionic gonadotropin (beta-HCG). Germinomas are usually malignant (cancer) but tend to grow and spread slowly and can usually be cured. They are

the most common type of central nervous system germ cell tumor. They usually occur in teenagers and young adults.

### **germline**

The cells that form eggs in females and sperm in males. Germline cells contain the genetic information that is passed down from one generation to the next.

### **germline DNA**

The DNA in germ cells (egg and sperm cells that join to form an embryo). Germline DNA is the source of DNA for all other cells in the body. Also called constitutional DNA.

### **germline mutation**

A gene change in a body's reproductive cell (egg or sperm) that becomes incorporated into the DNA of every cell in the body of the offspring. Germline mutations are passed on from parents to offspring. Also called germline variant.

### **germline variant**

A gene change in a body's reproductive cell (egg or sperm) that becomes incorporated into the DNA of every cell in the body of the offspring. Germline variants are passed on from parents to offspring. Also called germline mutation.

### **gestational carrier**

A woman who carries and gives birth to a baby for a person who is not able to have children. Eggs from an egg donor are fertilized in the laboratory with sperm from a sperm donor to make an embryo. The embryo is implanted in the uterus of the gestational carrier, who carries the baby until birth. The gestational carrier is not genetically related to the baby and is not the biological mother. Also called gestational surrogate.

### **gestational surrogate**

A woman who carries and gives birth to a baby for a person who is not able to have children. Eggs from an egg donor are fertilized in the laboratory with sperm from a sperm donor to make an embryo. The embryo is implanted in the uterus of the gestational surrogate, who carries the baby until birth. The gestational surrogate is not genetically related to the baby and is not the biological mother. Also called gestational carrier.

### **gestational trophoblastic disease**

A rare condition in which abnormal cells grow inside the uterus from tissue that forms after conception (the joining of sperm and egg). This tissue is made of trophoblastic cells, which normally surround the fertilized egg in the uterus and help connect the fertilized egg to the wall of the uterus. These cells also form part of the placenta (the organ that passes nutrients from the mother to the fetus). Most gestational trophoblastic diseases are benign (not cancer) and do not spread, but some types are malignant (cancer) and spread to nearby tissues or other parts of the body. The two main types of gestational trophoblastic diseases are hydatidiform mole and choriocarcinoma. Also called gestational trophoblastic tumor, GTD, and GTT.

### **gestational trophoblastic tumor**

A rare condition in which abnormal cells grow inside the uterus from tissue that forms after conception (the joining of sperm and egg). This tissue is made of trophoblastic cells, which normally surround the fertilized egg in the uterus and help connect the fertilized egg to the wall of the uterus. These cells also form

part of the placenta (the organ that passes nutrients from the mother to the fetus). Most gestational trophoblastic tumors are benign (not cancer) and do not spread, but some types are malignant (cancer) and spread to nearby tissues or other parts of the body. The two main types of gestational trophoblastic tumors are hydatidiform mole and choriocarcinoma. Also called gestational trophoblastic disease, GTD, and GTT.

### **giant cell fibroblastoma**

A rare type of soft tissue tumor marked by painless nodules in the dermis (the inner layer of the two main layers of tissue that make up the skin) and subcutaneous (beneath the skin) tissue. These tumors may come back after surgery, but they do not spread to other parts of the body. They occur mostly in boys and are related to dermatofibrosarcoma protuberans.

### **giant cell tumor**

A rare tumor that usually forms in bone, but may also form in cartilage, muscle, fat, blood vessels, or other supportive tissue in the body. Most giant cell tumors occur at the ends of the long bones of the arms and legs, near a joint (such as the knee, wrist, hip, or shoulder). Most are benign (not cancer) but some are malignant (cancer). Giant cell tumors usually occur in young and middle-aged adults. Also called GCT.

### **giant hypertrophic gastritis**

A condition marked by inflammation and ulcers (breaks on the skin or on the surface of an organ) of the mucosa (inner lining) of the stomach and by overgrowth of the cells that make up the mucosa. Symptoms include vomiting, diarrhea, and weight loss. Patients with giant hypertrophic gastritis may be at a higher risk of stomach cancer. Also called gastric mucosal hypertrophy and Ménétrier disease.

### **giant lymph node hyperplasia**

A rare disorder in which benign (not cancer) growths form in lymph node tissue. There are two main ways that giant lymph node hyperplasia occurs: localized (unicentric) and multicentric. Unicentric giant lymph node hyperplasia affects only one group of lymph nodes in one part of the body, usually in the chest or abdomen. It may not cause symptoms. Multicentric giant lymph node hyperplasia affects many groups of lymph nodes and lymphoid tissue all through the body. It can weaken the immune system and cause problems such as infection, fever, weight loss, fatigue, night sweats, nerve damage, and anemia. People with giant lymph node hyperplasia have an increased risk of lymphoma. Also called angiofollicular lymph node hyperplasia and Castleman disease.

### **gigantism**

A condition in which the whole body or any of its parts grow much larger than normal.

### **gilteritinib fumarate**

A drug used to treat adults with acute myeloid leukemia that came back or did not get better with other treatment and has a mutation (change) in the FLT3 gene. Gilteritinib fumarate blocks certain proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Xospata.

### **gimatecan**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called topoisomerase inhibitors. Also called ST1481.

### **ginger**

An herb with a root that has been used in cooking, and by some cultures to treat nausea, vomiting, and certain other medical conditions. It is being studied in the treatment of nausea and vomiting caused by cancer chemotherapy. The scientific name is *Zingiber officinale*.

### **gingiva**

The tissue of the upper and lower jaws that surrounds the base of the teeth. Also called gums.

### **ginkgo**

A tree native to China. Substances taken from the leaves and seeds have been used in some cultures to treat certain medical problems. Ginkgo has been studied in the prevention and treatment of Alzheimer disease, dementia, certain blood vessel diseases, and memory loss. It may cause bleeding or high blood pressure when used with certain drugs. Also called ginkgo biloba and maidenhair tree.

### **ginkgo biloba**

A tree native to China. Substances taken from the leaves and seeds have been used in some cultures to treat certain medical problems. Ginkgo biloba has been studied in the prevention and treatment of Alzheimer disease, dementia, certain blood vessel diseases, and memory loss. It may cause bleeding or high blood pressure when used with certain drugs. Also called ginkgo and maidenhair tree.

### **ginseng**

An herb with a root that has been used in some cultures to treat certain medical problems. It may have anticancer effects.

### **gland**

An organ that makes one or more substances, such as hormones, digestive juices, sweat, tears, saliva, or milk. Endocrine glands release the substances directly into the bloodstream. Exocrine glands release the substances into a duct or opening to the inside or outside of the body.

### **gland of Lieberkuhn**

Tube-like gland found in the lining of the colon and rectum. Glands of Lieberkuhn renew the lining of the intestine and make mucus. Also called colon crypt.

### **glandular cell of the cervix**

A type of cell that makes mucus and is found in tissue that lines the inner part of the cervix. Abnormal glandular cells may be found in Pap tests and may be a sign of cancer or other serious condition.

### **glandular epithelium**

A type of tissue that lines certain internal organs and makes and releases substances in the body, such as mucous, digestive juices, and other fluids. Glandular epithelium is commonly found in the breast, lung, stomach, colon, pancreas, prostate, uterus, and cervix. Also called glandular tissue.

### **glandular tissue**

A type of tissue that lines certain internal organs and makes and releases substances in the body, such as mucous, digestive juices, and other fluids. Glandular tissue is commonly found in the breast, lung, stomach, colon, pancreas, prostate, uterus, and cervix. Also called glandular epithelium.

## **glans penis**

The rounded, gland-like head of the penis.

## **glasdegib maleate**

A drug used with low-dose cytarabine to treat acute myeloid leukemia that is newly diagnosed. It is used in patients who are 75 years and older or in patients who cannot be treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Glasdegib maleate blocks a type of protein involved in cell growth and repair and may block the growth of cancer cells. It is a type of hedgehog signaling pathway antagonist. Also called Daurismo.

## **glaucoma**

A condition in which there is a build-up of fluid in the eye, which presses on the retina and the optic nerve. The retina is the layer of nerve tissue inside the eye that senses light and sends images along the optic nerve to the brain. Glaucoma can damage the optic nerve and cause loss of vision or blindness.

## **glial cell**

Any of the cells that hold nerve cells in place and help them work the way they should. The types of glial cells include oligodendrocytes, astrocytes, microglia, and ependymal cells. Also called neuroglia.

## **glial tumor**

A group of tumors that form in glial cells in the brain and spinal cord. Glial cells support and protect the nerve cells in the central nervous system and help them work the way they should. Glial tumors can form anywhere in the brain or spinal cord and may be benign (not cancer) or malignant (cancer). They can also be low grade or high grade, determined by how abnormal the tumor cells look under a microscope and how quickly the tumor is likely to grow, spread, and come back after treatment. The three main types of glial tumors are astrocytomas, oligodendrogliomas, and ependymomas. They can occur in both adults and children. Also called glioma.

## **glioblastoma**

A fast-growing type of central nervous system tumor that forms from glial (supportive) tissue of the brain and spinal cord and has cells that look very different from normal cells. Glioblastoma usually occurs in adults and affects the brain more often than the spinal cord. Also called GBM, glioblastoma multiforme, and grade IV astrocytoma.

## **glioblastoma multiforme**

A fast-growing type of central nervous system tumor that forms from glial (supportive) tissue of the brain and spinal cord and has cells that look very different from normal cells. Glioblastoma multiforme usually occurs in adults and affects the brain more often than the spinal cord. Also called GBM, glioblastoma, and grade IV astrocytoma.

## **glioma**

A group of tumors that form in glial cells in the brain and spinal cord. Glial cells support and protect the nerve cells in the central nervous system and help them work the way they should. Gliomas can form anywhere in the brain or spinal cord and may be benign (not cancer) or malignant (cancer). They can also be low grade or high grade, determined by how abnormal the tumor cells look under a microscope and how quickly the tumor is likely to grow, spread, and come back after treatment. The three main types of gliomas are astrocytomas,



oligodendrogliomas, and ependymomas. They can occur in both adults and children. Also called glial tumor.

### **glioneuronal tumor**

One of a group of rare tumors that contain a mixture of nerve cells and glial cells (supporting cells) of the brain or spinal cord. There are many different types of glioneuronal tumors, and they can occur anywhere in the brain or spinal cord. Most glioneuronal tumors are not cancer and tend to grow slowly. However, they can grow and press on nearby brain tissue, which can cause seizures, a buildup of fluid and increased pressure in the brain, and other problems. Glioneuronal tumors can occur at any age but are more common in children and young adults. Also called mixed neuronal-glial tumor.

### **gliosarcoma**

A type of glioma (cancer of the brain that comes from glial, or supportive, cells).

### **glofitamab**

A drug used to treat adults with certain types of diffuse large B-cell lymphoma or large B-cell lymphoma that came back or did not get better after treatment with at least two other systemic therapies. It is also being studied in the treatment of other types of cancer. Glofitamab binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called CD20, which is found on B cells (another type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Glofitamab is a type of bispecific monoclonal antibody. Also called Columvi.

### **glomerulonephritis**

A condition in which the tissues in the kidney become inflamed and have problems filtering waste from the blood. Glomerulonephritis may be caused by infection, inflammatory conditions (such as lupus), certain genetic conditions, and other diseases or conditions. It may also be caused by taking certain medicines or being exposed to certain chemicals. Signs and symptoms include blood and protein in the urine; high blood pressure; swelling of the face, hands, feet, and legs; fatigue; and anemia. If not treated or controlled, glomerulonephritis may lead to kidney damage and kidney failure. Also called nephritis.

### **glossectomy**

Surgical removal of all or part of the tongue.

### **glottis**

The middle part of the larynx; the area where the vocal cords are located.

### **glucagon**

A hormone produced by the pancreas that increases the level of glucose (sugar) in the blood.

### **glucagonoma**

A rare pancreatic tumor that produces a hormone called glucagon. Glucagonomas can produce symptoms similar to diabetes.

### **glucarpidase**

A drug used to treat toxic levels of the anticancer drug methotrexate in the blood of adults and children with kidney problems. Glucarpidase is a bacterial enzyme that helps break down and remove methotrexate from the body. It may also help

certain drugs kill cancer cells. Glucarpidase is a type of chemoprotective agent and a type of prodrug activator. Also called carboxypeptidase-G2 and Voraxaze.

### **glucocorticoid**

A compound that belongs to the family of compounds called corticosteroids (steroids). Glucocorticoids affect metabolism and have anti-inflammatory and immunosuppressive effects. They may be naturally produced (hormones) or synthetic (drugs).

### **gluconeogenesis**

The process of making glucose (sugar) from its own breakdown products or from the breakdown products of lipids (fats) or proteins. Gluconeogenesis occurs mainly in cells of the liver or kidney.

### **glucose**

A type of sugar; the chief source of energy for living organisms.

### **glucose-6-phosphate dehydrogenase deficiency**

An inherited disorder in which a person doesn't have enough of an enzyme called G6PD that helps red blood cells work the way they should. In glucose-6-phosphate dehydrogenase deficiency, the red blood cells break down when the body is exposed to infection, severe stress, or certain drugs, chemicals, or foods. This may lead to a condition called hemolytic anemia. This disorder is most common in African-American men and in men of Middle Eastern or Mediterranean descent. Also called G6PD deficiency.

### **glucuronic acid**

A form of a type of sugar called glucose that helps remove harmful substances from the body. Glucuronic acid and the harmful substance combine in the liver and then are passed in the urine. Glucuronic acid is also found in other substances in the body, such as cartilage and synovial fluid (fluid found in the joints).

### **glufosfamide**

An anticancer drug that belongs to the family of drugs called alkylating agents.

### **glutamic acid**

One of twenty amino acids (molecules that join together to form proteins). Glutamic acid may help nerve cells send and receive information from other cells. It is being studied for its ability to decrease or prevent nerve damage caused by anticancer drugs. Also called L-glutamic acid.

### **glutamine**

An amino acid used in nutrition therapy. It is also being studied for the treatment of diarrhea caused by radiation therapy to the pelvis.

### **glutathione**

A substance found in plant and animal tissues that has many functions in a cell. These include activating certain enzymes and destroying toxic compounds and chemicals that contain oxygen.

### **glutathione S-transferase**

A family of enzymes involved in metabolism and in making toxic compounds less harmful to the body.

## **glycan**

A large carbohydrate molecule. It contains many small sugar molecules that are joined chemically. Also called polysaccharide.

## **glycan analysis**

A study of the types of carbohydrate (sugar) molecules attached to proteins in cells. Proteins with carbohydrate molecules are called glycoproteins. Glycan analysis is being studied to find out if glycoproteins on cancer cells may be used as biomarkers for cancer.

## **glycemia**

Glucose (a type of sugar) found in the blood. Also called blood sugar.

## **glycemic index**

A measure of the increase in the level of blood glucose (a type of sugar) caused by eating a specific carbohydrate (food that contains sugar) compared with eating a standard amount of glucose. Foods with a high glycemic index release glucose quickly and cause a rapid rise in blood glucose. Foods with a low glycemic index release glucose slowly into the blood. A relationship between the glycemic index and recurrent colorectal cancer is being studied.

## **glycinamide ribonucleotide formyltransferase inhibitor**

A drug that blocks DNA synthesis and may prevent tumor growth. It is being studied as a treatment for cancer.

## **glycogen storage disease**

A type of inherited disorder in which there are problems with how a form of glucose (sugar) called glycogen is stored and used in the body. Certain enzymes that help make or break down glycogen are missing or do not work the way they should. This causes abnormal amounts or types of glycogen in the tissues, especially in the liver and in muscle tissue. There are many types of glycogen storage disease, which can cause problems in different parts of the body, including the liver, muscles, kidneys, and heart. Also called GSD.

## **glycolic acid**

A substance found in some fruits, sugar beets, and sugar cane. It is used in skin care products to reduce wrinkles and soften the skin. It is a type of alpha hydroxyl acid.

## **glycolysis**

A process in which glucose (sugar) is partially broken down by cells in enzyme reactions that do not need oxygen. Glycolysis is one method that cells use to produce energy. When glycolysis is linked with other enzyme reactions that use oxygen, more complete breakdown of glucose is possible and more energy is produced.

## **glycopeptide**

A short chain of amino acids (the building blocks of proteins) that has sugar molecules attached to it. Some glycopeptides have been studied for their ability to stimulate the immune system.

## **glycoprotein**

A protein that has sugar molecules attached to it.

**glycoprotein 100**

gp100. A tumor-specific antigen used in the development of cancer vaccines. Also called gp100.

**glycosaminoglycan**

A type of long, unbranched polysaccharide molecule. Glycosaminoglycans are major structural components of cartilage and are also found in the cornea of the eye.

**goiter**

An enlarged thyroid. It may be caused by too little iodine in the diet or by other conditions. Most goiters are not cancer.

**gold fiducial marker seeds**

Tiny, gold seeds, about the size of a grain of rice, that are put in and/or around a tumor to show exactly where it is in the body. Doctors are then able to target the tumor directly and give higher doses of radiation with less harm to nearby healthy tissue. Also called gold fiducial markers, gold seeds, and gold-seed fiducial markers.

**gold fiducial markers**

Tiny, gold seeds, about the size of a grain of rice, that are put in and/or around a tumor to show exactly where it is in the body. Doctors are then able to target the tumor directly and give higher doses of radiation with less harm to nearby healthy tissue. Also called gold fiducial marker seeds, gold seeds, and gold-seed fiducial markers.

**gold seeds**

Tiny, gold seeds, about the size of a grain of rice, that are put in and/or around a tumor to show exactly where it is in the body. Doctors are then able to target the tumor directly and give higher doses of radiation with less harm to nearby healthy tissue. Also called gold fiducial marker seeds, gold fiducial markers, and gold-seed fiducial markers.

**gold therapy**

A procedure that uses gold salts (a salt form of the metal element gold) to treat diseases, such as rheumatoid arthritis. The gold salts stop cells from releasing chemicals that can harm tissues. Also called aurotherapy and chrysotherapy.

**gold-seed fiducial markers**

Tiny, gold seeds, about the size of a grain of rice, that are put in and/or around a tumor to show exactly where it is in the body. Doctors are then able to target the tumor directly and give higher doses of radiation with less harm to nearby healthy tissue. Also called gold fiducial marker seeds, gold fiducial markers, and gold seeds.

**gonad**

The part of the reproductive system that produces and releases eggs (ovary) or sperm (testicle/testis).

**gonadal dysgenesis**

Abnormal development of a gonad (ovary or testicle). Men with gonadal dysgenesis have a greater risk of developing testicular cancer. Gonadal dysgenesis is usually part of a genetic syndrome.

### **gonadal shielding**

A procedure used to help keep a person fertile by preventing damage to reproductive organs during radiation therapy. A protective shield is placed on the outside of the body to cover the area of the gonads (the testicles or ovaries) and other parts of the reproductive system during radiation therapy. For males, this would also include the prostate and penis. For females, it would also include the fallopian tubes, uterus, cervix, and vagina. Gonadal shielding is a type of fertility preservation.

### **gonadoblastoma**

A rare tumor that is made up of more than one type of cell found in the gonads (testicles and ovaries), including germ cells, stromal cells, and granulosa cells. Gonadoblastomas are usually benign (not cancer), but they may sometimes become malignant (cancer) if not treated. Most patients with gonadoblastoma have certain chromosome abnormalities and abnormal gonads. Gonadoblastomas occur most often in children and young adults.

### **gonadotropin-releasing hormone**

A hormone made by a part of the brain called the hypothalamus. Gonadotropin-releasing hormone causes the pituitary gland in the brain to make and secrete the hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH). In men, these hormones cause the testicles to make testosterone. In women, they cause the ovaries to make estrogen and progesterone. Also called GnRH, LH-RH, LHRH, and luteinizing hormone-releasing hormone.

### **gonadotropin-releasing hormone agonist**

A substance that keeps the testicles and ovaries from making sex hormones by blocking other hormones that are needed to make them. In men, gonadotropin-releasing hormone agonists cause the testicles to stop making testosterone. In women, they cause the ovaries to stop making estrogen and progesterone. Some gonadotropin-releasing hormone agonists are used to treat prostate cancer. Also called GnRH agonist, GnRH<sub>a</sub>, LHRH agonist, and luteinizing hormone-releasing hormone agonist.

### **gonadotropin-releasing hormone antagonist**

A substance that blocks the pituitary gland from making hormones called follicle-stimulating hormone (FSH) and luteinizing hormone (LH). In men, this causes the testicles to stop making testosterone. In women, this causes the ovaries to stop making estrogen and progesterone. Some gonadotropin-releasing hormone antagonists are used to treat advanced prostate cancer. They are also used to treat certain gynecologic conditions and are being studied in the treatment of hormone-sensitive breast cancer. Also called GnRH antagonist, LHRH antagonist, and luteinizing hormone-releasing hormone antagonist.

### **gonioscopy**

A procedure in which a gonioscope (special lens) is used to look at the front part of the eye between the cornea (the clear layer) and the iris (the colored part of the eye). Gonioscopy checks for blockages in the area where fluid drains out of the eye.

### **goserelin acetate**

A drug used to treat prostate cancer, relieve the symptoms of advanced breast cancer, and treat problems with the endometrium (lining of the uterus). Goserelin acetate keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop

making testosterone (a male hormone) in men, and the ovaries to stop making estradiol (a form of the hormone estrogen) in women. Goserelin acetate may stop the growth of cancer cells that need testosterone or estrogen to grow. It is a type of LHRH agonist. Also called ZDX and Zoladex.

### **gossypol acetic acid**

A substance being studied in the treatment of several types of cancer. It is a form of a chemical taken from the seed of the cotton plant (*Gossypium*). It blocks the growth of cells and may kill cancer cells. Gossypol acetic acid may also act as a male contraceptive (form of birth control).

### **gout**

A condition marked by increased levels of uric acid in the blood, joints, and tissue. The buildup of uric acid in the joints and tissues causes arthritis and inflammation.

### **gp100**

A tumor-specific antigen used in the development of cancer vaccines. Also called glycoprotein 100.

### **gp209-2M**

A peptide (short piece of protein) made from the tumor-specific antigen gp100, and used to make vaccines being studied in the treatment of melanoma.

### **gp96 HSP-peptide complex**

A vaccine made from a patient's tumor cells that may help the body's immune system kill cancer cells. This vaccine is used to treat kidney cancer, a type of brain cancer called glioma, and metastatic melanoma (a type of skin cancer that has spread). It is also being studied in the treatment of other types of cancer. Also called gp96 heat shock protein-peptide complex vaccine, Oncophage, and vitespen.

### **gp96 heat shock protein-peptide complex vaccine**

A vaccine made from a patient's tumor cells that may help the body's immune system kill cancer cells. This vaccine is used to treat kidney cancer, a type of brain cancer called glioma, and metastatic melanoma (a type of skin cancer that has spread). It is also being studied in the treatment of other types of cancer. Also called gp96 HSP-peptide complex, Oncophage, and vitespen.

### **grade**

In cancer, a description of a tumor based on how abnormal the cancer cells and tissue look under a microscope and how quickly the cancer cells are likely to grow and spread. Low-grade cancer cells look more like normal cells and tend to grow and spread more slowly than high-grade cancer cells. Grading systems are different for each type of cancer. They are used to help plan treatment and determine prognosis. Also called histologic grade and tumor grade.

### **grade 1 follicular lymphoma**

An indolent (slow-growing) type of non-Hodgkin lymphoma marked by enlarged lymph nodes and small cells that have cleaved (u-shaped) nuclei.

### **grade 2 follicular lymphoma**

An indolent (slow-growing) type of non-Hodgkin lymphoma marked by enlarged lymph nodes and a mix of large cells and small cells that have cleaved (u-shaped) nuclei.



### **grade 3 follicular lymphoma**

A type of non-Hodgkin lymphoma marked by large cells and enlarged lymph nodes. Grade 3 follicular lymphoma is less common, and more aggressive than grades 1 or 2 follicular lymphoma.

### **grade I DCIS**

A condition in which cells that look mostly like normal cells under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Grade I DCIS tends to grow more slowly than grade II or grade III DCIS. It is also less likely to come back or become invasive breast cancer and spread to other tissues. Also called grade I ductal carcinoma in situ, low-grade DCIS, and low-grade ductal carcinoma in situ.

### **grade I ductal carcinoma in situ**

A condition in which cells that look mostly like normal cells under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Grade I ductal carcinoma in situ tends to grow more slowly than grade II or grade III ductal carcinoma in situ. It is also less likely to come back or become invasive breast cancer and spread to other tissues. Also called grade I DCIS, low-grade DCIS, and low-grade ductal carcinoma in situ.

### **grade II DCIS**

A condition in which cells that look somewhat abnormal under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Grade II DCIS tends to grow more quickly than grade I DCIS but not as quickly as grade III DCIS. It is also more likely than grade I DCIS to come back or become invasive breast cancer and spread to other tissues but not as likely as grade III DCIS. Also called grade II ductal carcinoma in situ, intermediate-grade DCIS, and intermediate-grade ductal carcinoma in situ.

### **grade II ductal carcinoma in situ**

A condition in which cells that look somewhat abnormal under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Grade II ductal carcinoma in situ tends to grow more quickly than grade I ductal carcinoma in situ but not as quickly as grade III ductal carcinoma in situ. It is also more likely than grade I ductal carcinoma in situ to come back or become invasive breast cancer and spread to other tissues but not as likely as grade III ductal carcinoma in situ. Also called grade II DCIS, intermediate-grade DCIS, and intermediate-grade ductal carcinoma in situ.

### **grade III DCIS**

A condition in which cells that look very different from normal cells under a microscope are found in the lining of a breast duct. There may also be areas of dead cells in the abnormal tissue. The abnormal cells have not spread outside the duct to other tissues in the breast. Grade III DCIS tends to grow more quickly than grade I or grade II DCIS and is more likely to come back or become invasive breast cancer and spread to other tissues. Also called grade III ductal carcinoma in situ, high-grade DCIS, and high-grade ductal carcinoma in situ.

### **grade III ductal carcinoma in situ**

A condition in which cells that look very different from normal cells under a microscope are found in the lining of a breast duct. There may also be areas of dead cells in the abnormal tissue. The abnormal cells have not spread outside the duct to other tissues in the breast. Grade III ductal carcinoma in situ tends to grow more quickly than grade I or grade II ductal carcinoma in situ and is more likely to come back or become invasive breast cancer and spread to other tissues. Also called grade III DCIS, high-grade DCIS, and high-grade ductal carcinoma in situ.

### **grade IV astrocytoma**

A fast-growing type of central nervous system tumor that forms from glial (supportive) tissue of the brain and spinal cord and has cells that look very different from normal cells. Grade IV astrocytoma usually occurs in adults and affects the brain more often than the spinal cord. Also called GBM, glioblastoma, and glioblastoma multiforme.

### **grading**

A system for classifying cancer cells in terms of how abnormal they appear when examined under a microscope. The objective of a grading system is to provide information about the probable growth rate of the tumor and its tendency to spread. The systems used to grade tumors vary with each type of cancer. Grading plays a role in treatment decisions.

### **graft**

Healthy skin, bone, or other tissue taken from one part of the body and used to replace diseased or injured tissue removed from another part of the body.

### **graft-versus-host disease**

A condition that occurs when donated stem cells or bone marrow (the graft) see the healthy tissues in the patient's body (the host) as foreign and attack them. It can also occur after an organ transplant. Graft-versus-host disease can cause damage to the host's tissues and organs, especially the skin, liver, intestines, eyes, mouth, hair, nails, joints, muscles, lungs, kidneys, and genitals. The signs and symptoms may be severe and life threatening. Graft-versus-host disease can occur within the first few months after transplant (acute) or much later (chronic). Also called GVHD.

### **graft-versus-tumor**

An immune response to a person's tumor cells by immune cells present in a donor's transplanted tissue, such as bone marrow or peripheral blood.

### **gram**

A unit of weight in the metric system. One gram is equal to one thousandth of a kilogram and is approximately 30-times less than an ounce.

### **granisetron**

A drug used alone or with other drugs in adults to prevent nausea and vomiting caused by chemotherapy. Granisetron blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Granisetron is a type of antiemetic and a type of serotonin receptor antagonist. Also called Sancuso and Sustol.

### **granisetron hydrochloride**

A drug used to prevent nausea and vomiting caused by chemotherapy and radiation therapy and to prevent and treat nausea and vomiting after surgery in adults. Granisetron hydrochloride blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Granisetron hydrochloride is a type of antiemetic and a type of serotonin receptor antagonist.

### **granular cell tumor**

A rare type of soft tissue tumor that usually begins in Schwann cells (cells that hold nerve cells in place). It can occur anywhere in the body, but it usually occurs in or under the skin of the head and neck (especially the mouth or tongue). It may also occur in the chest, breast, esophagus, stomach, or other internal organ. Most granular cell tumors are benign (not cancer), but some may be malignant (cancer) and spread quickly to nearby tissue. They usually occur in middle-aged adults. Also called Abrikossoff tumor.

### **granular leukocyte**

A type of immune cell that has granules (small particles) with enzymes that are released during infections, allergic reactions, and asthma. Neutrophils, eosinophils, and basophils are granular leukocytes. A granular leukocyte is a type of white blood cell. Also called granulocyte, PMN, and polymorphonuclear leukocyte.

### **granulocyte**

A type of immune cell that has granules (small particles) with enzymes that are released during infections, allergic reactions, and asthma. Neutrophils, eosinophils, and basophils are granulocytes. A granulocyte is a type of white blood cell. Also called granular leukocyte, PMN, and polymorphonuclear leukocyte.

### **granulocyte colony-stimulating factor**

A drug used under the brand names Neupogen, Zarxio, and Nivestym to treat neutropenia (a lower-than-normal number of white blood cells), prevent infection, and prepare the blood for the collection of certain types of blood cells, and under the brand name Granix to treat neutropenia. Granulocyte colony-stimulating factor is used in patients who have certain cancers and neutropenia caused by some types of chemotherapy and in patients who have severe chronic neutropenia that is not caused by cancer treatment. It is also used before an autologous stem cell transplant. Granulocyte colony-stimulating factor helps the bone marrow make more white blood cells. It is a type of colony-stimulating factor. Also called filgrastim and G-CSF.

### **granulocyte-macrophage colony-stimulating factor**

A substance that helps make more white blood cells, especially granulocytes, macrophages, and cells that become platelets. It is a cytokine that is a type of hematopoietic (blood-forming) agent. Also called GM-CSF and sargramostim.

### **granulocytic sarcoma**

A rare type of cancer that is made up of myeloblasts (a type of immature white blood cell) and forms outside the bone marrow and blood. The tumor cells may look green when viewed under a microscope. Granulocytic sarcomas can occur anywhere in the body. They most commonly occur in people with acute myeloid leukemia or a myeloproliferative disorder. Also called chloroma, extramedullary myeloid tumor, and myeloid sarcoma.

**granulocytopenia**

A condition in which there is a lower-than-normal number of granulocytes (a type of white blood cell).

**granulosa cell tumor**

A type of slow-growing, malignant tumor that usually affects the ovary.

**gray elm**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called Indian elm, red elm, slippery elm, sweet elm, *Ulmus fulva*, and *Ulmus rubra*.

**green tea extract**

A mixture that is prepared from the leaves of the *Camellia sinensis* plant. It contains substances called flavonoids and polyphenols, which are antioxidants. Antioxidants help protect cells from damage caused by certain chemicals that may increase the risk of cancer and other diseases. Green tea extract may be taken to treat certain conditions. It is also being studied in the prevention of cancer and other diseases.

**grief**

The normal response to a major loss, such as the death of a loved one. Grief may also be felt by a person with a serious, long-term illness or with a terminal illness. It may include feelings of great sadness, anger, guilt, and despair. Physical problems, such as not being able to sleep and changes in appetite, may also be part of grief.

**grief counseling**

The process by which a trained counselor or a support group helps a person work through normal feelings of sorrow after a loss, such as the death of a loved one.

**grief therapy**

Treatment that helps a person work through a greater than normal reaction to a loss, such as the death of a loved one. This reaction may include behavioral and physical problems, extreme mourning, and being unable to separate emotionally from the person who died. Grief therapy may be individual or group therapy.

**groin**

The area where the thigh meets the abdomen.

**gross description**

In medicine, a description of what tissue taken during a biopsy looks like without using a microscope. The gross description may include the size, shape, color, and weight of the tissue sample. It may also include the body site where the tissue was taken from and how many samples were taken. Gross descriptions are usually included in a pathology report, which may be used to help diagnose diseases, such as cancer, and plan treatment.

**growth and development milestones**

Goals for the expected sizes of infants and children and activities they should be able to do at specific ages, such as sit, stand, play, speak, think, and interact with others.

### **growth factor**

A substance made by the body that functions to regulate cell division and cell survival. Some growth factors are also produced in the laboratory and used in biological therapy.

### **growth hormone**

A protein made by the pituitary gland that helps control body growth and the use of glucose and fat in the body. Also called somatotropin.

### **guadecitabine**

A substance being studied in the treatment of some types of cancer. Guadecitabine may stop the growth of tumor cells by blocking some of the enzymes needed for cells to divide. It may also make cancer cells more sensitive to other anticancer drugs. Guadecitabine is a type of antimetabolite. Also called SGI-110.

### **guaiac**

A substance from a type of tree called Guaiacum that grows in the Caribbean. Guaiac is used in the fecal occult blood test (a test for blood in human stool samples).

### **guaiac fecal occult blood test**

A test that checks for occult (hidden) blood in the stool. Small samples of stool are placed on special cards coated with a chemical substance called guaiac and sent to a doctor or laboratory for testing. A testing solution is put on the cards and the guaiac causes the stool sample to change color. If there is blood in the stool, the color changes very quickly. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called gFOBT, guaiac smear test, and stool guaiac test.

### **guaiac smear test**

A test that checks for occult (hidden) blood in the stool. Small samples of stool are placed on special cards coated with a chemical substance called guaiac and sent to a doctor or laboratory for testing. A testing solution is put on the cards and the guaiac causes the stool sample to change color. If there is blood in the stool, the color changes very quickly. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called gFOBT, guaiac fecal occult blood test, and stool guaiac test.

### **guanine**

A chemical compound that is used to make one of the building blocks of DNA and RNA. It is a type of purine.

### **guided imagery**

A technique in which a person visualizes positive images or scenarios in their mind. During guided imagery, a person uses all their senses in their imagination to help relax the body and develop a sense of well-being. Guided imagery may be used to help relieve stress, pain, anxiety, and depression and to help with symptoms related to disease, such as cancer. Also called guided visualization and imagery therapy.

### **guided visualization**

A technique in which a person visualizes positive images or scenarios in their mind. During guided visualization, a person uses all their senses in their imagination to help relax the body and develop a sense of well-being. Guided

visualization may be used to help relieve stress, pain, anxiety, and depression and to help with symptoms related to disease, such as cancer. Also called guided imagery and imagery therapy.

### **gums**

The tissue of the upper and lower jaws that surrounds the base of the teeth. Also called gingiva.

### **gut flora**

Bacteria and other organisms that live inside the intestines. They help digest food. Vitamins such as biotin and vitamin K are made by gut flora. Also called gut microflora, intestinal flora, intestinal microflora, and microflora.

### **gut microflora**

Bacteria and other organisms that live inside the intestines. They help digest food. Vitamins such as biotin and vitamin K are made by gut microflora. Also called gut flora, intestinal flora, intestinal microflora, and microflora.

### **gutka**

A type of smokeless tobacco that is made in India and is widely used throughout Asia. It is a mixture of tobacco, crushed areca nut (also called betel nut), spices, and other ingredients. It is used like chewing tobacco and is placed in the mouth, usually between the gum and cheek. Gutka contains nicotine and many harmful, cancer-causing chemicals. Using it can lead to nicotine addiction and can cause cancers of the lip, mouth, tongue, throat, and esophagus. Also called betel quid with tobacco.

### **gynecologic**

Having to do with the female reproductive tract (including the cervix, endometrium, fallopian tubes, ovaries, uterus, and vagina).

### **gynecologic cancer**

Cancer of the female reproductive tract, including the cervix, endometrium, fallopian tubes, ovaries, uterus, and vagina.

### **gynecologic oncologist**

A doctor who has special training in diagnosing and treating cancers of the female reproductive organs.

### **gynecologist**

A doctor who has special training in diagnosing and treating diseases of the female reproductive organs.

### **gynecomastia**

The abnormal growth of breast gland tissue in males. Gynecomastia in infants and boys may be caused by an imbalance in certain hormones. It may also be caused by conditions that affect hormones, such as tumors; malnutrition; kidney, liver, or thyroid disease; or treatment with certain drugs. It can occur at any age.

### **hA20**

A substance being studied in the treatment of several types of lymphoma. It binds to the protein CD20, which is found on B cells (a type of immune system cell) and some types of lymphoma cells. This causes the immune system to kill the cancer cells. hA20 is a type of monoclonal antibody. Also called HCD20, IMMU-106, and veltuzumab.



**hCRF**

A substance being studied in the treatment of brain cancer. It is made naturally by the hypothalamus (a part of the brain) and can also be made in the laboratory. hCRF may help reduce symptoms caused by edema (swelling) of the brain. It is a type of neurohormone. Also called human corticotropin-releasing factor.

**hLL1**

A substance being studied in the treatment of multiple myeloma and several other types of cancer. It binds to CD74, a protein on the surface of myeloma cells and certain other types of cells. It may help kill cancer cells. hLL1 is a type of monoclonal antibody. Also called IMMU-110 and milatuzumab.

**hair follicle**

A shaft or opening on the surface of the skin through which hair grows.

**hairy cell leukemia**

A rare type of leukemia in which abnormal B-lymphocytes (a type of white blood cell) are present in the bone marrow, spleen, and peripheral blood. When viewed under a microscope, these cells appear to be covered with tiny hair-like projections.

**half-sibling**

A person's brother or sister who has one parent in common.

**hallucination**

A sight, sound, smell, taste, or touch that a person believes to be real but is not real. Hallucinations can be caused by nervous system disease, certain drugs, or mental disorders.

**halofuginone hydrobromide**

A substance that is being studied for its ability to slow the growth of connective tissue and to prevent the growth of new blood vessels that tumors need to grow. It is a type of quinazolinone alkaloid and a type of antiangiogenesis agent.

**haloperidol**

A drug used to treat certain mental and neurological disorders. It is also being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of antiemetic and a type of antipsychotic. Also called Haldol.

**hamartoma**

A benign (not cancer) growth made up of an abnormal mixture of cells and tissues normally found in the area of the body where the growth occurs.

**hand-foot syndrome**

A condition marked by pain, swelling, numbness, tingling, or redness of the hands or feet. It sometimes occurs as a side effect of certain anticancer drugs. Also called palmar-plantar erythrodysesthesia.

**haploidentical donor**

A term used to describe a tissue donor whose HLA tissue type partially matches (usually 50%) the HLA tissue type of a person receiving a stem cell or organ transplant. HLAs are a set of cell surface markers found on a person's cells and tissues that play an important role in the body's immune response to foreign substances. Before someone receives a transplant, their HLA tissue type will be

matched with that of a potential donor. A haploidentical donor, such as a parent, child, or sibling, may be used in a stem cell or organ transplant when a fully or closely matched donor is not available.

### **happy major**

A plant whose seeds and root have been used in some cultures to treat certain medical problems. It may have antioxidant effects. The scientific name is *Arctium lappa*. Also called burdock and lappa.

### **hard palate**

The front, bony part of the roof of the mouth.

### **hawthorn fruit**

The fruit of the hawthorn tree or bush. It has been used in some cultures to treat certain medical problems, including heart problems and gastrointestinal problems.

### **hazard ratio**

A measure of how often a particular event happens in one group compared to how often it happens in another group, over time. In cancer research, hazard ratios are often used in clinical trials to measure survival at any point in time in a group of patients who have been given a specific treatment compared to a control group given another treatment or a placebo. A hazard ratio of one means that there is no difference in survival between the two groups. A hazard ratio of greater than one or less than one means that survival was better in one of the groups.

### **head and neck cancer**

Cancer that forms in certain areas of the head and neck, including tissues in the nasal cavity (the hollow space inside the nose), sinuses, lips, mouth, salivary glands, throat, and larynx (voice box). Most head and neck cancers begin in squamous cells (thin, flat cells that line the moist surfaces of the head and neck). The most important factors that increase a person's risk of developing head and neck cancer are tobacco use, heavy alcohol use, and infection with certain types of high-risk human papillomavirus (HPV).

### **healing touch**

A form of complementary and alternative medicine based on the belief that vital energy flows through the human body. This energy is said to be balanced or made stronger by practitioners who pass their hands over, or gently touch, a patient's body. Healing touch is being studied in patients receiving cancer therapy, to find out if it can improve quality of life, boost the immune system, or reduce side effects. Healing touch is a type of energy therapy. Also called therapeutic touch.

### **health care provider**

A licensed person or organization that provides health care services. Examples of health care providers include doctors, nurses, therapists, pharmacists, laboratories, hospitals, clinics, and other health care centers.

### **health care proxy**

A type of advance directive that gives a person (called a proxy) the authority to make medical decisions for another person if that person is not able to make their own decisions. A proxy is usually a spouse, relative, friend, or lawyer who

knows the person's values, wishes, and treatment preferences. Also called durable power of attorney for health care and medical power of attorney.

### **health disparity**

A type of preventable health difference that is closely linked with social, political, economic, and environmental disadvantage. Health disparities may occur because of race, ethnicity, sex, gender identity, sexual orientation, age, religion, disability, education, income, where people live, or other characteristics. For example, certain race and ethnic groups may have higher rates of disease, disability, and death than those in other groups because they are more likely to have problems having access to good health care, healthy food, or the latest medical treatments. Research is being done to learn more about health disparities in certain groups of people and ways to reduce them.

### **health equity**

A situation in which all people are given the chance to live as healthy a life as possible regardless of their race, ethnicity, sex, gender identity, sexual orientation, disability, education, job, religion, language, where they live, or other factors. A lack of health equity can result in differences in health outcomes, such as rates and severity of disease, disability, death, and quality of life. There are efforts to promote health equity by looking at root causes and removing barriers to equal access to health care services.

### **health history**

A record of information about a person's health. A personal health history may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams and tests. It may also include information about medicines taken and health habits, such as diet and exercise. A family health history includes health information about a person's close family members (parents, grandparents, children, brothers, and sisters). This includes their current and past illnesses. A family health history may show a pattern of certain diseases in a family. Also called medical history.

### **health insurance premium**

The amount of money that a patient pays monthly to a health insurance company for health care coverage. Coverage may include visits to the doctor, laboratory tests, prescription medicines, and hospital stays.

### **healthy control**

In a clinical study, a person who does not have the disorder or disease being studied. Results from healthy controls are compared to results from the group being studied.

### **heart cancer**

A rare cancer that develops in tissues of the heart. Also called cardiac sarcoma.

### **heart disease**

A type of disease that affects the heart or blood vessels. The risk of certain heart diseases may be increased by smoking, high blood pressure, high cholesterol, unhealthy diet, lack of exercise, and obesity. The most common heart disease is coronary artery disease (narrow or blocked coronary arteries), which can lead to chest pain, heart attacks, or stroke. Other heart diseases include congestive heart failure, heart rhythm problems, congenital heart disease (heart disease at birth), and endocarditis (inflamed inner layer of the heart). Also called cardiovascular disease.

### **heart rate**

In medicine, the number of times the heart beats within a certain time period, usually a minute. The heart rate can be felt at the wrist, side of the neck, back of the knees, top of the foot, groin, and other places in the body where an artery is close to the skin. The resting heart rate is normally between 60 and 100 beats a minute in a healthy adult who is at rest. Measuring the heart rate gives important information about a person's health. Also called pulse.

### **heat-shock protein**

One of a group of proteins that help protect cells from stresses such as heat, cold, and low amounts of oxygen or glucose (sugar). Heat-shock proteins help other proteins function in normal cells and may be present at high levels in cancer cells. Blocking the activity of a heat-shock protein called HSP90 is being studied in the treatment of cancer. Other heat-shock proteins including HSP70 and gp96 are being studied in vaccines to treat cancer. Also called HSP and stress protein.

### **hedgehog signaling pathway**

Describes a group of proteins that work together in a cell to send signals from the cell membrane to the nucleus. The hedgehog signaling pathway is involved in cell growth and differentiation that occurs during the formation of tissues and organs in an embryo. It also plays an important role in the maintenance of stem cells (cells from which other types of cells develop) and in the repair and regeneration of adult tissues. Abnormalities in proteins that are part of the hedgehog signaling pathway may lead to birth defects or diseases such as cancer. Drugs that target this pathway are being used to treat some types of cancer. These drugs may help keep cancer cells from growing.

### **helical computed tomography**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The x-ray machine scans the body in a spiral path. This allows more images to be made in a shorter time than with older CT methods. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly on the x-ray. Helical computed tomography also creates more detailed pictures and may be better at finding small abnormal areas inside the body. It may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Also called spiral CT scan.

### **helical tomotherapy**

A type of therapy in which radiation is aimed at a tumor from many different directions. The patient lays on a table and is moved through a donut-shaped machine. The radiation source in the machine rotates around the patient in a spiral pattern. Before radiation, a 3-dimensional (3-D) image of the tumor is taken. This helps doctors find the highest dose of radiation that can be used to kill tumor cells while causing less damage to nearby tissue. Helical tomotherapy is a type of intensity-modulated radiation therapy (IMRT). Also called tomotherapy.

### **helper T cell**

A type of immune cell that stimulates killer T cells, macrophages, and B cells to make immune responses. A helper T cell is a type of white blood cell and a type of lymphocyte. Also called CD4-positive T lymphocyte.

**hemagglutinin-neuraminidase**

A protein found in the outer coat of paramyxoviruses. This protein helps virus particles bind to cells, making infection easier.

**hemangiopericytoma**

A type of cancer involving blood vessels and soft tissue.

**hemangiosarcoma**

A type of cancer that begins in the cells that line blood vessels.

**hematocrit**

The amount of whole blood that is made up of red blood cells. It depends on the number and size of red blood cells. A hematocrit test is usually part of a complete blood count (CBC). It may be used to check for conditions such as anemia, dehydration, malnutrition, and leukemia. Also called HCT.

**hematogenous**

Originating in the blood or spread through the bloodstream.

**hematologic cancer**

Cancer that begins in blood-forming tissue, such as the bone marrow, or in the cells of the immune system. Examples of hematologic cancer are leukemia, lymphoma, and multiple myeloma. Also called blood cancer.

**hematologist**

A doctor who has special training in diagnosing and treating blood disorders.

**hematoma**

A pool of mostly clotted blood that forms in an organ, tissue, or body space. A hematoma is usually caused by a broken blood vessel that was damaged by surgery or an injury. It can occur anywhere in the body, including the brain. Most hematomas are small and go away on their own, but some may need to be removed by surgery.

**hematopathology laboratory**

A laboratory that specializes in doing tests that help to diagnose and treat diseases of the blood, bone marrow, and lymph system.

**hematopoiesis**

The formation of new blood cells.

**hematopoietic growth factor**

A group of proteins that causes blood cells to grow and mature.

**hematopoietic stem cell**

An immature cell that can develop into all types of blood cells, including white blood cells, red blood cells, and platelets. Hematopoietic stem cells are found in the peripheral blood and the bone marrow. Also called blood stem cell.

**hematopoietic tissue**

Tissue in which new blood cells are formed.

**hematoporphyrin derivative**

A drug used in photodynamic therapy that is absorbed by tumor cells. When exposed to light, it becomes active and kills the cancer cells.

### hematoxylin and eosin staining

A common laboratory method that uses two dyes called hematoxylin and eosin that make it easier to see different parts of the cell under a microscope. Hematoxylin shows the ribosomes, chromatin (genetic material) within the nucleus, and other structures as a deep blue-purple color. Eosin shows the cytoplasm, collagen, connective tissue, and other structures that surround and support the cell as an orange-pink-red color. Hematoxylin and eosin staining helps identify different types of cells and tissues and provides important information about the pattern, shape, and structure of cells in a tissue sample. It is used to help diagnose diseases, such as cancer. Also called H and E staining.

### hematuria

Blood in the urine.

### heme

The part of certain molecules that contains iron. The heme part of hemoglobin is the substance inside red blood cells that binds to oxygen in the lungs and carries it to the tissues.

### hemihyperplasia

A condition in which one side of the body or a part of one side is larger than the other. Children with hemihyperplasia have an increased risk of developing certain types of cancer, including Wilms tumor (a childhood kidney cancer) and liver cancer. Also called hemihypertrophy.

### hemihypertrophy

A condition in which one side of the body or a part of one side is larger than the other. Children with hemihypertrophy have an increased risk of developing certain types of cancer, including Wilms tumor (a childhood kidney cancer) and liver cancer. Also called hemihyperplasia.

### hemilaryngectomy

An operation to remove one side of the larynx (voicebox).

### hemizygous

A term that describes a person who has only one copy of a gene rather than the usual two copies. Hemizyosity can occur under normal conditions. For example, because most males have one X chromosome and one Y chromosome, they are hemizygous for genes on those chromosomes. Hemizyosity can also occur under abnormal conditions, such as when two copies of a gene should be present but one is missing. For example, Turner syndrome occurs when a female inherits only one copy of the X chromosome instead of the usual two copies.

### hemochromatosis

A condition in which the body takes up and stores more iron than it needs. The extra iron is stored in the liver, heart, and pancreas, which may cause liver disease, heart problems, organ failure, and cancer. It may also cause bronze skin, diabetes, pain in the joints and abdomen, tiredness, and impotence. Hemochromatosis may be inherited, or it may be caused by blood transfusions. Also called iron overload.

### hemoglobin

A protein inside red blood cells that carries oxygen from the lungs to tissues and organs in the body and carries carbon dioxide back to the lungs. Testing for the



amount of hemoglobin in the blood is usually part of a complete blood cell (CBC) test.

### **hemolysis**

The breakdown of red blood cells. Some diseases, medicines, and toxins may cause red blood cells to break down more quickly than usual.

### **hemophagocytic lymphohistiocytosis**

A rare disorder in which histiocytes and lymphocytes (types of white blood cells) build up in organs including the skin, spleen, and liver, and destroy other blood cells. Hemophagocytic lymphohistiocytosis may be inherited or caused by certain conditions or diseases, including infections, immunodeficiency (inability of the body to fight infections), and cancer. Also called HLH.

### **hemophilia**

Group of hereditary disorders in which affected individuals fail to make enough of certain proteins needed to form blood clots.

### **hemoptysis**

Coughing or spitting up blood from the respiratory tract.

### **hemorrhage**

In medicine, loss of blood from damaged blood vessels. A hemorrhage may be internal or external, and usually involves a lot of bleeding in a short time.

### **hemorrhagic cerebrovascular accident**

A type of stroke that occurs when a blood vessel in the brain or on the surface of the brain leaks or breaks open, causing bleeding in or around the brain. This leads to swelling and pressure, which can damage cells and tissue in the brain. Hemorrhagic cerebrovascular accident is usually caused by high blood pressure, aneurysm, arteriovenous malformation, head injury, or a bleeding disorder. Also called hemorrhagic stroke.

### **hemorrhagic cystitis**

A condition in which the lining of the bladder becomes inflamed and starts to bleed. The blood can be seen in the urine. Symptoms include pain and a burning feeling while urinating, feeling a need to urinate often, and being unable to control the flow of urine. Hemorrhagic cystitis may be caused by anticancer drugs, radiation therapy, infection, or being exposed to chemicals, such as dyes or insecticides.

### **hemorrhagic stroke**

A type of stroke that occurs when a blood vessel in the brain or on the surface of the brain leaks or breaks open, causing bleeding in or around the brain. This leads to swelling and pressure, which can damage cells and tissue in the brain. Hemorrhagic stroke is usually caused by high blood pressure, aneurysm, arteriovenous malformation, head injury, or a bleeding disorder. Also called hemorrhagic cerebrovascular accident.

### **hemorrhoid**

An enlarged or swollen blood vessel, usually located near the anus or the rectum.

## **hemp**

An herb that comes from a variant of the Cannabis sativa plant and contains fiber, seeds, and oil used to make many different industrial and consumer products. These include textiles, building materials, paper, fabrics, soap, food, dietary supplements, and cosmetics. Hemp and marijuana come from the same species of Cannabis sativa, but the hemp variant contains very low levels of delta-9-THC (the main active chemical in marijuana that causes drug-like effects in the body). The hemp and marijuana variants of Cannabis sativa have their own chemical and genetic makeup and are regulated, grown, and used in different ways. Also called industrial hemp.

## **heparin**

A substance that slows the formation of blood clots. Heparin is made by the liver, lungs, and other tissues in the body and can also be made in the laboratory. Heparin may be injected into muscle or blood to prevent or break up blood clots. It is a type of anticoagulant.

## **hepatectomy**

Surgery to remove all or part of the liver.

## **hepatic**

Refers to the liver.

## **hepatic arterial infusion**

A procedure to deliver chemotherapy directly to the liver. Catheters are put into an artery in the groin that leads directly to the liver, and drugs are given through the catheters.

## **hepatic arterial occlusion**

A block in blood flow to the liver. It can happen while giving chemotherapy through a catheter in the hepatic artery. Sometimes doctors use drugs or other agents to cause hepatic arterial occlusion on purpose. This block of blood flow to the liver helps kill cancer cells growing in the liver.

## **hepatic artery**

The major blood vessel that carries blood to the liver.

## **hepatic portal vein**

A blood vessel that carries blood to the liver from the intestines, spleen, pancreas, and gallbladder. Also called portal vein.

## **hepatic veno-occlusive disease**

A condition in which some of the veins in the liver are blocked. This causes a decrease in blood flow inside the liver and may lead to liver damage. Signs and symptoms include weight gain, yellowing of the skin and whites of the eyes, dark-colored urine, and increased liver size. It may occur at some point in time after radiation therapy to the liver and bile ducts or after high-dose anticancer drugs were given before a stem cell transplant. Also called sinusoidal obstruction syndrome.

## **hepatitis**

Disease of the liver causing inflammation. Symptoms include an enlarged liver, fever, nausea, vomiting, abdominal pain, and dark urine.

### **hepatitis A vaccine**

A vaccine used to prevent infection with the hepatitis A virus, which causes a serious liver disease. The vaccine is made of a weakened form of the virus that cannot cause disease but causes the body's immune system to make antibodies that destroy the hepatitis A virus.

### **hepatitis A virus**

A virus that causes a serious liver disease. It is usually spread by contact with an infected person's stool by eating food he or she has handled after not washing hands, but it can be spread in other ways. Symptoms of infection include jaundice, dark urine, and fever and other flu-like symptoms.

### **hepatitis B virus**

A virus that causes hepatitis (inflammation of the liver). It is carried and passed to others through the blood and other body fluids. Different ways the virus is spread include sharing needles with an infected person and being stuck accidentally by a needle contaminated with the virus. Infants born to infected mothers may also become infected with the virus. Although many patients who are infected with hepatitis B virus may not have symptoms, long-term infection may lead to cirrhosis (scarring of the liver) and liver cancer. Also called HBV.

### **hepatitis C virus**

A virus that causes hepatitis (inflammation of the liver). It is carried and passed to others through the blood and other body fluids. Different ways the virus is spread include sharing needles with an infected person and being stuck accidentally by a needle contaminated with the virus. Infants born to infected mothers may also become infected with the virus. Although patients who are infected with hepatitis C virus may not have symptoms, long-term infection may lead to cirrhosis (scarring of the liver) and liver cancer. These patients may also have an increased risk for certain types of non-Hodgkin lymphoma. Also called HCV.

### **hepatitis D virus**

A type of hepatitis virus that may be present in the body at the same time as the hepatitis B virus. It makes the hepatitis (inflammation of the liver) caused by hepatitis B much worse. The hepatitis D virus and the hepatitis B virus are spread to others through blood or sexual contact. Infants born to infected mothers may also become infected with the virus. Also called hepatitis delta virus.

### **hepatitis E virus**

A virus that causes hepatitis (inflammation of the liver). It is usually spread through food that has been handled by an infected person, or through drinking water that is contaminated with human waste.

### **hepatitis G virus**

A virus that may be found in patients with hepatitis (inflammation of the liver). It is spread to others through blood or sexual contact. Infants born to infected mothers may also become infected with the virus.

### **hepatitis delta virus**

A type of hepatitis virus that may be present in the body at the same time as the hepatitis B virus. It makes the hepatitis (inflammation of the liver) caused by hepatitis B much worse. The hepatitis delta virus and the hepatitis B virus are

spread to others through blood or sexual contact. Infants born to infected mothers may also become infected with the virus. Also called hepatitis D virus.

### **hepatobiliary**

Having to do with the liver, bile ducts, and/or gallbladder.

### **hepatoblastoma**

A type of liver tumor that occurs in infants and children.

### **hepatocellular carcinoma**

A type of adenocarcinoma and the most common type of liver tumor.

### **hepatocyte**

A liver cell.

### **hepatolenticular degeneration**

A rare, inherited disorder in which too much copper builds up in the body. The extra copper is stored in the body's tissues and organs, especially in the liver, brain, and eyes. This can cause liver disease, central nervous system (brain and spinal cord) problems, and mental problems. Signs and symptoms of hepatolenticular degeneration include yellowing of the skin and the whites of the eyes, a gold or brown ring around the colored part of the eyes, swelling in the abdomen and legs, fatigue, loss of appetite, problems with speech and swallowing, uncontrolled movements or muscle stiffness, anxiety, depression, and mood swings. Hepatolenticular degeneration is caused by mutations (changes) in the ATP7B gene. It is a genetic disorder that is inherited in an autosomal recessive manner and is usually diagnosed in teens and young adults. It is a type of copper storage disease. Also called Wilson disease.

### **hepatoma**

A liver tumor.

### **hepatomegaly**

Enlarged liver.

### **herba *Scutellaria barbatae***

An herb used in traditional Chinese medicine to treat certain medical problems. It may have anticancer effects.

### **herbal**

Having to do with plants.

### **herbal cigarette**

A type of cigarette that contains a mixture of flowers, herbs, and other natural ingredients. Herbal cigarettes do not contain tobacco or nicotine. When they are smoked, they make many of the same harmful chemicals found in tobacco smoke, including tar and carbon monoxide.

### **herbal medicine**

A type of medicine that uses roots, stems, leaves, flowers, or seeds of plants to improve health, prevent disease, and treat illness.

### **herbal supplement**

A product made from a plant that is thought to be useful in treating disease or staying healthy. Herbal supplements are taken by mouth.

## **herbicide**

A chemical that kills plants.

## **herd immunity**

Protection from an infectious disease as a result of living in a community where a large number of people are vaccinated against that disease. When enough people are vaccinated against a disease, it is harder for the disease to spread. Herd immunity helps protect those who have not been vaccinated, including newborns, pregnant women, and people with certain illnesses who cannot receive vaccines. Also called community immunity.

## **hereditary**

In medicine, describes the passing of genetic information from parent to child through the genes in sperm and egg cells. Also called inherited.

## **hereditary breast and ovarian cancer syndrome**

An inherited disorder in which the risk of breast cancer (especially before the age of 50) and ovarian cancer is higher than normal. Most cases of hereditary breast and ovarian cancer syndrome are caused by certain mutations (changes) in the BRCA1 or the BRCA2 gene. People with hereditary breast and ovarian cancer syndrome may also have an increased risk of other types of cancer, including pancreatic cancer, prostate cancer, and melanoma. Also called HBOC syndrome.

## **hereditary cancer syndrome**

A type of inherited disorder in which there is a higher-than-normal risk of certain types of cancer. Hereditary cancer syndromes are caused by mutations (changes) in certain genes passed from parents to children. In a hereditary cancer syndrome, certain patterns of cancer may be seen within families. These patterns include having several close family members (such as a mother, daughter, and sister) with the same type of cancer, developing cancer at an early age, or having two or more types of cancer develop in the same person. Examples of hereditary cancer syndromes are hereditary breast and ovarian cancer syndrome, Li-Fraumeni syndrome, Cowden syndrome, and Lynch syndrome. Also called family cancer syndrome and inherited cancer syndrome.

## **hereditary diffuse gastric cancer**

A rare, inherited disorder that increases the risk of developing a type of stomach cancer called diffuse gastric cancer. This cancer grows in the lining of the stomach, which causes the lining to become thick and hard. The cancer is also likely to spread to other parts of the body, such as the liver or bone. Women with hereditary diffuse gastric cancer also have an increased risk of developing a type of breast cancer that begins in the lobules (milk glands) of the breast. Hereditary diffuse gastric cancer is usually caused by mutations (changes) in the CDH1 gene that are inherited in an autosomal dominant manner. It is a type hereditary cancer syndrome. Also called familial diffuse gastric cancer and HDGC.

## **hereditary hemochromatosis**

An inherited condition in which too much iron builds up in the body. The extra iron is stored in the body's tissues and organs, especially the liver, heart, pancreas, skin, and joints. This can cause liver disease, heart problems, diabetes, and organ failure. Symptoms include changes in skin color, pain in the joints and abdomen, fatigue, and loss of sex drive. Patients with hereditary hemochromatosis also have an increased risk of liver cancer. There are five types of hereditary hemochromatosis. Each type is caused by changes in different genes. Symptoms for each type typically begin at different ages. Type 1

hemochromatosis is one of the most common genetic disorders in the United States.

### **hereditary leiomyomatosis and renal cell cancer syndrome**

A rare, inherited disorder in which benign (not cancer) skin lesions called leiomyomas form in the smooth muscle tissue around the hair follicles. They usually form on the arms, legs, chest, and abdomen. Benign leiomyomas may also form as fibroids in the uterus in females. Patients with hereditary leiomyomatosis and renal cell cancer syndrome have an increased risk of kidney cancer. The signs and symptoms of hereditary leiomyomatosis and renal cell cancer syndrome usually do not appear until young adulthood. Hereditary leiomyomatosis and renal cell cancer syndrome is caused by a mutation in the FH gene. It is inherited in an autosomal dominant manner. Also called HLRCC.

### **hereditary nonpolyposis colorectal cancer**

An inherited disorder that increases the risk of developing colorectal cancer, endometrial cancer, ovarian cancer, and many other types of cancer, such as cancers of the stomach, small intestine, pancreas, bile duct, urinary tract, and brain, often before age 50. Hereditary nonpolyposis colorectal cancer is caused by mutations (changes) in genes that affect DNA mismatch repair, a process that fixes mistakes that occur when DNA is copied. These genes are MLH1, MSH2, MSH6, PMS2, and EPCAM. Also called HNPCC and Lynch syndrome.

### **hereditary papillary renal cancer**

A rare, inherited disorder that increases the risk of a type of kidney cancer called type 1 papillary kidney cancer. This cancer forms in cells that line the small tubes in the kidney that filter waste from the blood and make urine. Hereditary papillary renal cancer often affects both kidneys, and often there is more than one tumor in each kidney. It is caused by mutations (changes) in a gene called MET. Hereditary papillary renal cancer is a type of hereditary cancer syndrome. Also called hereditary papillary renal carcinoma and HPRC.

### **hereditary papillary renal carcinoma**

A rare, inherited disorder that increases the risk of a type of kidney cancer called type 1 papillary kidney cancer. This cancer forms in cells that line the small tubes in the kidney that filter waste from the blood and make urine. Hereditary papillary renal carcinoma often affects both kidneys, and often there is more than one tumor in each kidney. It is caused by mutations (changes) in a gene called MET. Hereditary papillary renal carcinoma is a type of hereditary cancer syndrome. Also called hereditary papillary renal cancer and HPRC.

### **hereditary paraganglioma-pheochromocytoma syndrome**

A rare, genetic disorder marked by tumors called paragangliomas, which are found in paraganglia. Paraganglia are groups of nerve-like cells found near the adrenal glands and near blood vessels or nerves in the head, neck, chest, abdomen, and pelvis. Paragangliomas that form in the adrenal glands are called pheochromocytomas. Paragangliomas are usually benign (not cancer), but sometimes become malignant (cancerous). People with hereditary paraganglioma-pheochromocytoma syndrome usually have more than one paraganglioma, and may have an increased risk of certain types of cancer, such as kidney cancer and thyroid cancer.

### **hereditary predisposition**

An inherited increase in the risk of developing a disease. Also called genetic predisposition, genetic susceptibility, and inherited predisposition.



### **hereditary syndrome**

A disorder caused by mutations (changes) in certain genes or chromosomes that are passed down from parent to child. Hereditary syndromes may be inherited from one or both parents, and several close family members (such as a mother, daughter, and sister) may have the same disorder. There are many different types of hereditary syndromes, including those in which family members have a higher-than-normal risk of developing certain types of cancer.

### **heritable**

In medicine, describes a characteristic or trait that can be passed from a parent to a child through the genes. Several types of cancer have heritable forms, in which the risk of developing a particular type of cancer is inherited from a parent. Some signs of heritable cancer are a family history of the cancer, mutations (changes) in certain genes passed from a parent to a child, or a mutation that occurs at the time of conception (fertilization of an egg by a sperm). Heritable forms of cancer often develop at an early age.

### **heritage**

Something handed down from the past, such as a tradition, birthright, or inherited traits.

### **hernia**

The bulging of an internal organ through a weak area or tear in the muscle or other tissue that holds it in place. Most hernias occur in the abdomen.

### **heroin**

A substance made from morphine. Heroin is very addictive, and it is illegal to use or sell it in the United States. It may be used outside the United States to treat severe pain. Heroin binds to opioid receptors in the central nervous system. It is a type of analgesic agent and a type of opiate. Also called diacetylmorphine hydrochloride and diamorphine hydrochloride.

### **herpes simplex virus**

A type of virus that causes herpes infections and has DNA as its genetic material. There are two types of herpes simplex viruses. Infections with type 1 viruses cause cold sores on the lips or nostrils. Infections with type 2 viruses cause sores on the genitals (external and internal sex organs and glands). Also called HHV, HSV, and human herpesvirus.

### **herpes zoster**

A common condition that occurs when the virus that causes chickenpox is reactivated in the body. After having chickenpox, the virus stays inactive in the body, usually in the nerves along the spinal cord or at the base of the skull. The virus can become active again many years later and cause herpes zoster. Herpes zoster is marked by a painful rash that usually appears as small clusters of blisters. The blisters often form a band across the skin on one side of the body, especially on the chest, back, waist, or face. The pain in the affected area can last for many weeks or months after the rash disappears. Other symptoms may include fever, chills, headache, fatigue, and upset stomach. Herpes zoster is most common in older adults and in those who have a weakened immune system. It cannot be passed from person to person, but those who have never had chickenpox or the chickenpox vaccine can develop chickenpox if they come in contact with a person who has herpes zoster. Vaccines are available to prevent herpes zoster. Also called shingles.

**herpesvirus**

A member of the herpes family of viruses.

**heterocyclic amine**

A chemical that is formed when meat, poultry, or fish is cooked at high temperatures, such as frying, broiling, and barbecuing. Heterocyclic amines are carcinogens (substances that may cause cancer). Also called HCA.

**heterogeneous**

Made up of elements or ingredients that are not alike.

**heterogeneously dense breast tissue**

A term used to describe breast tissue that has large areas of dense fibrous tissue and glandular tissue and also has some fatty tissue. The dense areas of the breast make it harder to find tumors or other changes on a mammogram.

Heterogeneously dense breast tissue is one of four categories used to describe a level of breast density seen on a mammogram. About 40% of women have this type of breast tissue.

**heterogenic**

Derived from a different source or species. Also called heterogenous.

**heterogenous**

Derived from a different source or species. Also called heterogenic.

**heterozygous genotype**

A term that describes having two different versions of the same gene (one inherited from the mother and one inherited from the father). In a heterozygous genotype, each gene may have a different mutation (change) or one of the genes may be mutated and the other one is normal. For example, familial hypercholesterolemia (very high levels of cholesterol in the blood) can occur when a person is heterozygous for the LDLR gene, inheriting a mutated gene from one parent and a normal gene from the other parent.

**hexyl 5-aminolevulinate**

A substance that is used to find and kill tumor cells. It enters tumor cells and becomes activated when exposed to a special type of light. A chemical reaction causes the cells to produce fluorescent light and die.

**high blood pressure**

A blood pressure of 140/90 or higher. High blood pressure usually has no symptoms. It can harm the arteries and cause an increase in the risk of stroke, heart attack, kidney failure, and blindness. Also called hypertension.

**high blood sugar**

Higher than normal amount of glucose (a type of sugar) in the blood. High blood sugar can be a sign of diabetes or other conditions. Also called hyperglycemia.

**high grade**

A term used to describe cells and tissue that look abnormal under a microscope. High-grade cancer cells tend to grow and spread more quickly than low-grade cancer cells. Cancer grade may be used to help plan treatment and determine prognosis. High-grade cancers usually have a worse prognosis than low-grade cancers and may need treatment right away or treatment that is more aggressive (intensive).

### **high-dose chemotherapy**

An intensive drug treatment to kill cancer cells, but that also destroys the bone marrow and can cause other severe side effects. High-dose chemotherapy is usually followed by bone marrow or stem cell transplantation to rebuild the bone marrow.

### **high-dose radiation**

An amount of radiation that is greater than that given in typical radiation therapy. High-dose radiation is precisely directed at the tumor to avoid damaging healthy tissue, and may kill more cancer cells in fewer treatments. Also called HDR.

### **high-dose-rate remote brachytherapy**

A type of internal radiation treatment in which the radioactive source is removed between treatments. Also called high-dose-rate remote radiation therapy and remote brachytherapy.

### **high-dose-rate remote radiation therapy**

A type of internal radiation treatment in which the radioactive source is removed between treatments. Also called high-dose-rate remote brachytherapy and remote brachytherapy.

### **high-energy photon therapy**

A type of radiation therapy that uses high-energy photons (units of light energy). High-energy photons penetrate deeply into tissues to reach tumors while giving less radiation to superficial tissues such as the skin.

### **high-grade DCIS**

A condition in which cells that look very different from normal cells under a microscope are found in the lining of a breast duct. There may also be areas of dead cells in the abnormal tissue. The abnormal cells have not spread outside the duct to other tissues in the breast. High-grade DCIS tends to grow more quickly than low-grade or intermediate-grade DCIS and is more likely to come back or become invasive breast cancer and spread to other tissues. Also called grade III DCIS, grade III ductal carcinoma in situ, and high-grade ductal carcinoma in situ.

### **high-grade ductal carcinoma in situ**

A condition in which cells that look very different from normal cells under a microscope are found in the lining of a breast duct. There may also be areas of dead cells in the abnormal tissue. The abnormal cells have not spread outside the duct to other tissues in the breast. High-grade ductal carcinoma in situ tends to grow more quickly than low-grade or intermediate-grade ductal carcinoma in situ and is more likely to come back or become invasive breast cancer and spread to other tissues. Also called grade III DCIS, grade III ductal carcinoma in situ, and high-grade DCIS.

### **high-grade lymphoma**

A type of lymphoma that grows and spreads quickly and has severe symptoms. Also called aggressive lymphoma and intermediate-grade lymphoma.

### **high-grade squamous intraepithelial lesion**

An area of abnormal cells that forms on the surface of certain organs, such as the cervix, vagina, vulva, anus, and esophagus. High-grade squamous intraepithelial lesions look somewhat to very abnormal when looked at under a microscope. They are usually caused by chronic infection with certain types of

human papillomavirus (HPV) and are found when a Pap test or biopsy is done. If not treated, these abnormal cells may become cancer and spread into nearby tissue. A high-grade squamous intraepithelial lesion is sometimes called moderate or severe dysplasia. Also called HSIL.

### **high-intensity focused ultrasound therapy**

A procedure in which high-energy sound waves are aimed directly at an area of abnormal cells or tissue in the body. The waves create heat that kills the cells. High-intensity focused ultrasound therapy is being studied in the treatment of prostate cancer and some other types of cancer and other diseases. Also called HIFU.

### **high-resolution micro-ultrasound**

A procedure that uses high-energy sound waves to create pictures of the prostate and surrounding tissue that are much more detailed than standard ultrasound. This makes it easier to see a suspicious or abnormal area of the prostate and determine if a biopsy is needed. High-resolution micro-ultrasound may also be used during a biopsy to help guide the removal of a sample of abnormal prostate tissue. It may be used to help diagnose prostate cancer, monitor prostate cancer growth over time, and plan treatment.

### **high-risk HPV**

A group of cancer-causing human papillomaviruses (HPV) that are transmitted sexually. These viruses infect the cells on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. A long-lasting infection with a high-risk HPV type can lead to cell changes that, if not treated, may become cancer. High-risk HPV can cause cancers of the cervix, anus, oropharynx, vagina, vulva, and penis. There are about 12 types of high-risk HPV, but HPV types 16 and 18 cause most HPV-related cancers. Also called high-risk human papillomavirus.

### **high-risk cancer**

Cancer that is likely to recur (come back), or spread.

### **high-risk human papillomavirus**

A group of cancer-causing human papillomaviruses (HPV) that are transmitted sexually. These viruses infect the cells on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. A long-lasting infection with a high-risk human papillomavirus type can lead to cell changes that, if not treated, may become cancer. High-risk human papillomavirus can cause cancers of the cervix, anus, oropharynx, vagina, vulva, and penis. There are about 12 types of high-risk human papillomavirus, but HPV types 16 and 18 cause most HPV-related cancers. Also called high-risk HPV.

### **high-selenium Brassica juncea**

Brassica juncea that has been grown in high levels of selenium. Brassica juncea is a plant of the cabbage family that has been used in some cultures to treat certain medical problems, including arthritis, colds, stomach disorders, and tumors. The plant stores minerals, including selenium which may stop tumor cells from growing. High-selenium Brassica juncea is being studied in the treatment of cancer. Brassica juncea is also known as Indian mustard.

### **highly active antiretroviral therapy**

Treatment that uses a combination of three or more drugs to treat HIV infection. Highly active antiretroviral therapy stops the virus from making copies of itself in the body. This may lessen the damage to the immune system caused by HIV and may slow down the development of AIDS. It may also help prevent transmission of HIV to others, including from mother to child during birth. Also called cART, combination antiretroviral therapy, and HAART.

### **hilar**

Refers to the area where nerves and blood vessels attach to an organ.

### **histamine**

A substance that has many effects in the body. It is released from some types of white blood cells during allergic reactions. It causes small blood vessels to dilate (widen) and become leaky, which can cause tissues to swell. It also causes smooth muscles to contract, gastric acid to be made, and the heart rate to increase. Histamine is used in tests for allergies, asthma, and gastric acid secretion. It is a type of neurotransmitter.

### **histamine dihydrochloride**

A substance being studied in the treatment of some types of cancer and other conditions. When used together with interleukin-2, histamine dihydrochloride may help some immune cells find and kill tumor cells. It is a type of biological response modifier. Also called Maxamine.

### **histiocytic neoplasm**

A group of rare disorders in which too many histiocytes (a type of white blood cell) build up in certain tissues and organs, including the skin, bones, spleen, liver, lungs, and lymph nodes. This can cause damage to tissue or tumors to form in one or more parts of the body. The tumor may be benign (not cancer) or malignant (cancer). There are different types of histiocytic neoplasms, including Langerhans cell histiocytosis (LCH), hemophagocytic lymphohistiocytosis (HLH), and malignant histiocytic disorders. Histiocytic neoplasms occur most often in children, but can occur at any age. Also called histiocytosis.

### **histiocytoid hemangioma**

A rare benign (not cancer) tumor of small blood vessels surrounded by lymphocytes and eosinophils (types of white blood cells). Histiocytoid hemangioma usually forms on or in the skin, especially the skin of the head, but can occur in other areas of the body, such as in bone. On the skin, it may appear as firm pink to red bumps that may be itchy or painful. If the tumor is in bone, it may cause swelling and pain. Histiocytoid hemangioma is sometimes caused by injury and often comes back after treatment. Histiocytoid hemangioma is most common in young and middle-aged adults. It is a type of vascular tumor. Also called angiolymphoid hyperplasia with eosinophilia and epithelioid hemangioma.

### **histiocytosis**

A group of rare disorders in which too many histiocytes (a type of white blood cell) build up in certain tissues and organs, including the skin, bones, spleen, liver, lungs, and lymph nodes. This can cause damage to tissue or tumors to form in one or more parts of the body. The tumor may be benign (not cancer) or malignant (cancer). There are different types of histiocytosis, including Langerhans cell histiocytosis (LCH), hemophagocytic lymphohistiocytosis (HLH), and malignant histiocytic disorders. Histiocytosis occurs most often in children, but can occur at any age. Also called histiocytic neoplasm.

### **histologic examination**

The examination of tissue specimens under a microscope.

### **histologic grade**

A description of a tumor based on how abnormal the cancer cells and tissue look under a microscope and how quickly the cancer cells are likely to grow and spread. Low-grade cancer cells look more like normal cells and tend to grow and spread more slowly than high-grade cancer cells. Grading systems are different for each type of cancer. They are used to help plan treatment and determine prognosis. Also called grade and tumor grade.

### **histology**

The study of tissues and cells under a microscope.

### **histone**

A type of protein found in chromosomes. Histones bind to DNA, help give chromosomes their shape, and help control the activity of genes.

### **histone deacetylase**

An enzyme that removes a small molecule called an acetyl group from histones (proteins found in chromosomes). This changes the way the histones bind to DNA and may affect its activity. Histone deacetylase inhibitors are being studied in the treatment of cancer. Also called HDAC.

### **histone deacetylase inhibitor**

A substance that causes a chemical change that stops tumor cells from dividing. Histone deacetylase inhibitors are being studied in the treatment of cancer. Also called HDAC inhibitor.

### **histone methyltransferase inhibitor**

A substance that blocks certain enzymes involved in gene expression and cell division. These enzymes may be found in a mutated (changed) form or at high levels in some types of cancer cells. Blocking them may help keep cancer cells from growing. Histone methyltransferase inhibitors are being studied in the treatment of some types of cancer. They are a type of targeted therapy. Also called HMT inhibitor.

### **histopathology**

The study of diseased cells and tissues using a microscope.

### **historic cohort study**

A research study in which the medical records of groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and those who do not smoke) are compared for a particular outcome (such as lung cancer). Also called retrospective cohort study.

### **historical control subject**

An individual treated in the past and used in a comparison group when researchers analyze the results of a clinical study that had no control group. The use of a control, or comparison, group helps researchers determine the effects of a new treatment more accurately.

### **histrelin acetate**

A drug used under the brand name Vantas as palliative therapy for advanced prostate cancer. Histrelin acetate keeps the testicles from making the male



hormone testosterone by blocking other hormones that are needed to make it. This may slow or stop the growth of cancer cells that need testosterone to grow. Histrelin acetate is also used under the brand name Supprelin LA to treat early puberty in males and females. It is a type of LHRH (or GnRH) agonist and a type of androgen deprivation therapy that is reversible.

### **hives**

Itchy, raised red areas on the skin. Hives are caused by a reaction to certain foods, drugs, infections, or emotional stress. Also called urticaria.

### **holy thistle**

A plant whose leaves, stems, and flowers have been used in some cultures to treat certain medical problems. Holy thistle may have anti-inflammatory and anticancer effects. The scientific name is *Cnicus benedictus*. Also called blessed thistle, cardin, spotted thistle, and St. Benedict's thistle.

### **homeopathic medicine**

An alternative approach to medicine based on the belief that natural substances, prepared in a special way and used most often in very small amounts, restore health. According to these beliefs, in order for a remedy to be effective, it must cause in a healthy person the same symptoms being treated in the patient. Also called homeopathy.

### **homeopathy**

An alternative approach to medicine based on the belief that natural substances, prepared in a special way and used most often in very small amounts, restore health. According to these beliefs, in order for a remedy to be effective, it must cause in a healthy person the same symptoms being treated in the patient. Also called homeopathic medicine.

### **homeostasis**

A state of balance among all the body systems needed for the body to survive and function correctly. In homeostasis, body levels of acid, blood pressure, blood sugar, electrolytes, energy, hormones, oxygen, proteins, and temperature are constantly adjusted to respond to changes inside and outside the body, to keep them at a normal level.

### **homeostatic**

Having to do with homeostasis, which is a state of balance among all the body systems, needed for the body to function correctly.

### **homoharringtonine**

A drug used to treat adults with certain types of chronic myelogenous leukemia that cannot be treated with tyrosine kinase inhibitors (a type of anticancer drug) or that have not gotten better after treatment with at least two tyrosine kinase inhibitors. It is also being studied in the treatment of other types of cancer. Homoharringtonine blocks certain proteins involved in cell growth and may kill cancer cells. It is a type of plant alkaloid and a type of protein synthesis inhibitor. Also called omacetaxine mepesuccinate and Synribo.

### **homologous recombination repair pathway**

Describes a process in a cell in which a group of proteins work together to repair DNA damage. Changes in the homologous recombination repair pathway that result in the inability to repair DNA may lead to diseases such as cancer. Drugs

that affect this pathway are being studied in the prevention and treatment of cancer and other diseases. Also called HRR pathway.

### **homozygous genotype**

A term that describes having two identical versions of the same gene (one inherited from the mother and one inherited from the father). In a homozygous genotype, either both genes are normal or both genes have the same mutation (change). For example, a person who inherits the same mutation in both copies of the LDLR gene is homozygous for that gene and will develop a severe form of familial hypercholesterolemia (very high levels of cholesterol in the blood).

### **hookah**

A device used to smoke a special type of tobacco that comes in different flavors. In a hookah, charcoal is used to heat the tobacco. The smoke from the heated tobacco is cooled by passing it through a water-filled bowl. It is then inhaled through a flexible tube with a mouthpiece. Hookah tobacco smoke contains nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Hookah smoking can lead to nicotine addiction and can cause many of the same health problems as cigarette smoking. Hookah smoking is not safer than cigarette smoking. Also called water pipe.

### **hormonal contraception**

A type of birth control that uses hormones to prevent pregnancy. Hormonal contraceptives contain estrogen and progesterone, or progesterone only. They prevent pregnancy by blocking the release of eggs from the ovaries, thinning the lining of the uterus, or thickening the mucus in the cervix to help keep sperm from reaching the egg. Hormonal contraceptives may be taken by mouth, injected or inserted under the skin, placed on the skin as a patch, or placed in the vagina or uterus.

### **hormonal therapy**

Treatment that adds, blocks, or removes hormones. For certain conditions (such as diabetes or menopause), hormones are given to adjust low hormone levels. Hormones can also cause certain cancers (such as prostate and breast cancer) to grow. To slow or stop the growth of cancer, synthetic hormones or other drugs may be given to block the body's natural hormones, or surgery is used to remove the gland that makes a certain hormone. Also called endocrine therapy, hormone therapy, and hormone treatment.

### **hormone**

One of many substances made by glands in the body. Hormones circulate in the bloodstream and control the actions of certain cells or organs. Some hormones can also be made in the laboratory.

### **hormone receptor**

A cell protein that binds a specific hormone. The hormone receptor may be on the surface of the cell or inside the cell. Many changes take place in a cell after a hormone binds to its receptor.

### **hormone receptor negative**

Describes cells that do not have a group of proteins that bind to a specific hormone. For example, some breast cancer cells do not have receptors for the hormones estrogen or progesterone. These cells are hormone receptor negative and they do not need estrogen or progesterone to grow. This can affect how the

cancer is treated. Knowing if the cancer is hormone receptor negative may help plan treatment.

### **hormone receptor positive**

Describes cells that have a group of proteins that bind to a specific hormone. For example, some breast cancer cells have receptors for the hormones estrogen or progesterone. These cells are hormone receptor positive and they need estrogen or progesterone to grow. This can affect how the cancer is treated. Knowing if the cancer is hormone receptor positive may help plan treatment.

### **hormone receptor status**

A term used to describe whether cells have proteins called hormone receptors that bind to a specific hormone. For example, breast cancer cells that have receptors for the hormone estrogen are called estrogen receptor positive and may need estrogen to grow. Knowing the hormone receptor status of the cancer may help plan treatment.

### **hormone receptor test**

A test to measure the amount of certain proteins, called hormone receptors, in cancer tissue. Hormones can attach to these proteins. A high level of hormone receptors may mean that hormones help the cancer grow.

### **hormone replacement therapy**

Treatment with hormones to replace natural hormones when the body does not make enough. For example, hormone replacement therapy may be given when the thyroid gland does not make enough thyroid hormone or when the pituitary gland does not make enough growth hormone. Or, it may be given to women after menopause to replace the hormones estrogen and progesterone that are no longer made by the body. Also called HRT.

### **hormone responsive**

In oncology, describes cancer that responds to hormone treatment.

### **hormone therapy**

Treatment that adds, blocks, or removes hormones. For certain conditions (such as diabetes or menopause), hormones are given to adjust low hormone levels. Hormones can also cause certain cancers (such as prostate and breast cancer) to grow. To slow or stop the growth of cancer, synthetic hormones or other drugs may be given to block the body's natural hormones, or surgery is used to remove the gland that makes a certain hormone. Also called endocrine therapy, hormonal therapy, and hormone treatment.

### **hormone treatment**

Treatment that adds, blocks, or removes hormones. For certain conditions (such as diabetes or menopause), hormones are given to adjust low hormone levels. Hormones can also cause certain cancers (such as prostate and breast cancer) to grow. To slow or stop the growth of cancer, synthetic hormones or other drugs may be given to block the body's natural hormones, or surgery is used to remove the gland that makes a certain hormone. Also called endocrine therapy, hormonal therapy, and hormone therapy.

### **hormone-refractory**

In medicine, describes a disease or condition that does not respond to treatment with hormones. Also called hormone-resistant.

**hormone-resistant**

In medicine, describes a disease or condition that does not respond to treatment with hormones. Also called hormone-refractory.

**hormone-sensitive prostate cancer**

Prostate cancer that needs androgens (male hormones) to grow and therefore stops growing when androgens are not present. Many early-stage prostate cancers are androgen-dependent, so reducing the amount of androgens in the body or blocking their action may be an effective type of therapy. Also called androgen-dependent prostate cancer, androgen-sensitive prostate cancer, castrate-sensitive prostate cancer, CSPC, and HSPC.

**hospice**

A program that gives special care to people who are near the end of life and have stopped treatment to cure or control their disease. Hospice offers physical, emotional, social, and spiritual support for patients and their families. The main goal of hospice care is to control pain and other symptoms of illness so patients can be as comfortable and alert as possible. It is usually given at home, but may also be given in a hospice center, hospital, or nursing home.

**hospice center**

A place that provides special care for people who are near the end of life and have stopped treatment to cure or control their disease. Hospice centers provide physical, emotional, social, and spiritual support for patients and their families. They provide care for patients whose pain and other symptoms cannot be managed safely and comfortably at home or who do not have a caregiver at home. Hospice centers may also provide respite care (short-term care for a patient so that the usual caregiver can have a break).

**hospitalist**

A medical doctor who manages and coordinates the daily medical care of patients while they are in the hospital. A hospitalist may also supervise and teach medical students, interns, and residents. A patient's personal doctor will work with a hospitalist to care for his or her patient while the patient is in the hospital.

**host cell**

A cell that is infected by a virus or another type of microorganism.

**hot flash**

A sudden, temporary onset of body warmth, flushing, and sweating (often associated with menopause).

**hot nodule**

When radioactive material is used to examine the thyroid with a scanner, nodules that collect more radioactive material than the surrounding thyroid tissue are considered "hot." Hot nodules are rarely malignant. Hot nodules are sometimes called hyperfunctioning nodules.

**hot tumor**

Describes a tumor that is likely to trigger a strong immune response. Hot tumors often have many molecules on their surface that allow T cells (a type of immune cell) to attack and kill the tumor cells. Hot tumors usually respond to immunotherapy. Melanoma, non-small cell lung cancer, and cancers of the bladder, head and neck, kidney, and liver are usually considered hot tumors.

## **hotspot**

In genetics, an area of DNA that is likely to mutate (change).

## **hu14.18-interleukin-2 fusion protein**

An anticancer drug in which hu14.18, a monoclonal antibody, is combined with interleukin-2. The monoclonal antibody binds to the cancer cells and delivers IL-2, which stimulates the immune system to destroy the cancer cells.

## **huC242-DM4**

A substance being studied in the treatment of some types of cancer. It is made by linking the monoclonal antibody huC242 to a toxic substance called maytansinoid DM4. The monoclonal antibody binds to the surfaces of cancer cells and the maytansinoid DM4 enters the cells and blocks their growth. It is a type of immunotoxin. Also called maytansinoid DM4-conjugated humanized monoclonal antibody huC242.

## **human EGF receptor 2**

A protein involved in normal cell growth. Human EGF receptor 2 may be made in larger than normal amounts by some types of cancer cells, including breast, ovarian, bladder, pancreatic, stomach, and esophageal cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. Checking the amount of human EGF receptor 2 on some types of cancer cells may help plan treatment. Also called c-erbB-2, HER2, HER2/neu, and human epidermal growth factor receptor 2.

## **human T-cell leukemia virus type 1**

A type of virus that infects T cells (a type of white blood cell) and can cause leukemia and lymphoma. Human T-cell leukemia virus type 1 is spread by sharing syringes or needles, through blood transfusions or sexual contact, and from mother to child during birth or breast-feeding. Also called HTLV-1 and human T-cell lymphotropic virus type 1.

## **human T-cell lymphotropic virus type 1**

A type of virus that infects T cells (a type of white blood cell) and can cause leukemia and lymphoma. Human T-cell lymphotropic virus type 1 is spread by sharing syringes or needles, through blood transfusions or sexual contact, and from mother to child during birth or breast-feeding. Also called HTLV-1 and human T-cell leukemia virus type 1.

## **human corticotropin-releasing factor**

A substance being studied in the treatment of brain cancer. It is made naturally by the hypothalamus (a part of the brain) and can also be made in the laboratory. Human corticotropin-releasing factor may help reduce symptoms caused by edema (swelling) of the brain. It is a type of neurohormone. Also called hCRF.

## **human epidermal growth factor receptor 2**

A protein involved in normal cell growth. Human epidermal growth factor receptor 2 may be made in larger than normal amounts by some types of cancer cells, including breast, ovarian, bladder, pancreatic, stomach, and esophageal cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. Checking the amount of human epidermal growth factor receptor 2 on some types of cancer cells may help plan treatment. Also called c-erbB-2, HER2, HER2/neu, and human EGF receptor 2.

### **human epidermal growth factor receptor 2 negative**

Describes cells that have a small amount or none of a protein called HER2 on their surface. In normal cells, HER2 helps control cell growth. Cancer cells that are human epidermal growth factor receptor 2 negative may grow more slowly and are less likely to recur (come back) or spread to other parts of the body than cancer cells that have a large amount of HER2 on their surface. Checking to see if a cancer is human epidermal growth factor receptor 2 negative may help plan treatment. Cancers that may be human epidermal growth factor receptor 2 negative include breast, bladder, ovarian, pancreatic, and stomach cancers. Also called HER2 negative.

### **human epidermal growth factor receptor 2 positive**

Describes cells that have a protein called HER2 on their surface. In normal cells, HER2 helps control cell growth. Cancer cells that make too much HER2 may grow more quickly and are more likely to spread to other parts of the body. Checking to see if a cancer is human epidermal growth factor receptor 2 positive may help plan treatment, which may include drugs that kill human epidermal growth factor receptor 2-positive cancer cells. Cancers that may be human epidermal growth factor receptor 2 positive include breast, bladder, pancreatic, ovarian, and stomach cancers. Also called c-erbB-2 positive and HER2 positive.

### **human epidermal growth factor receptor 2 test**

A laboratory test that measures the amount of HER2 protein on cancer cells or how many copies of the HER2 gene are in the DNA of cancer cells. The HER2 protein helps control normal cell growth. Larger than normal amounts of the HER2 protein or too many copies of the HER2 gene may be made by some types of cancer, including breast, ovarian, bladder, pancreatic, and stomach cancers. This may cause cancer cells to grow more quickly and spread to other parts of the body. A human epidermal growth factor receptor 2 test may be done to help plan treatment, which may include drugs that target the HER2 protein. It is a type of tumor marker test. Also called HER2 test and HER2/neu test.

### **human epididymis protein 4**

A protein found on cells that line the lungs and reproductive organs, such as the ovaries. Human epididymis protein 4 may be found in higher than normal amounts in patients with some types of cancer, including ovarian epithelial cancer. Measuring the amount of human epididymis protein 4 in the blood may help plan cancer treatment or find out if cancer is getting worse or has come back. It is a type of tumor marker. Also called HE4.

### **human herpesvirus**

A type of virus that causes herpes infections and has DNA as its genetic material. There are two types of human herpesviruses. Infections with type 1 viruses cause cold sores on the lips or nostrils. Infections with type 2 viruses cause sores on the genitals (external and internal sex organs and glands). Also called herpes simplex virus, HHV, and HSV.

### **human herpesvirus 8**

A type of virus that causes Kaposi sarcoma (a rare cancer in which lesions grow in the skin, lymph nodes, lining of the mouth, nose, and throat, and other tissues of the body). Human herpesvirus 8 also causes certain types of lymphoma (cancer that begins in cells of the immune system). Also called HHV8, Kaposi sarcoma-associated herpesvirus, and KSHV.



### **human immunodeficiency virus**

The cause of acquired immunodeficiency syndrome (AIDS). Also called HIV.

### **human leukocyte antigen**

A type of molecule found on the surface of most cells in the body. Human leukocyte antigens play an important part in the body's immune response to foreign substances. They make up a person's tissue type, which varies from person to person. Human leukocyte antigen tests are done before a donor stem cell or organ transplant, to find out if tissues match between the donor and the person receiving the transplant. Also called HLA and human lymphocyte antigen.

### **human leukocyte antigen matching**

A process in which blood or tissue samples are tested for human leukocyte antigens (HLAs). HLAs are molecules found on the surface of most cells in the body. They make up a person's tissue type, which varies from person to person. They play an important part in the body's immune response to foreign substances. Human leukocyte antigen matching is done before a donor stem cell or organ transplant to find out if tissues match between the donor and the person receiving the transplant. Also called HLA matching.

### **human lymphocyte antigen**

A type of molecule found on the surface of most cells in the body. Human lymphocyte antigens play an important part in the body's immune response to foreign substances. They make up a person's tissue type, which varies from person to person. Human lymphocyte antigen tests are done before a donor stem cell or organ transplant, to find out if tissues match between the donor and the person receiving the transplant. Also called HLA and human leukocyte antigen.

### **human papillomavirus**

A group of viruses that infect the cells on the surface of the skin or on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. Human papillomavirus infections can cause abnormal tissue growth, such as skin warts or genital warts, and other changes to cells, including cancer. Although most human papillomavirus infections go away on their own and do not cause cancer, infection with certain types of human papillomavirus can last for many years and, if not treated, may become cancer. Human papillomavirus-related cancers include cancers of the cervix, anus, oropharynx, vagina, vulva, and penis. Also called HPV.

### **human papillomavirus 16**

A type of HPV that is transmitted sexually and causes cancers of the cervix, anus, oropharynx (the middle part of the throat, behind the mouth), vagina, vulva, and penis. A long-lasting infection with human papillomavirus 16 can cause cell changes that, if not treated, may worsen over time and become cancer. Human papillomavirus 16 and HPV 18 are responsible for most HPV-related cancers. Also called HPV 16.

### **human papillomavirus 18**

A type of HPV that is transmitted sexually and causes cancers of the cervix, anus, oropharynx (the middle part of the throat, behind the mouth), vagina, vulva, and penis. A long-lasting infection with human papillomavirus 18 can cause cell changes that, if not treated, may worsen over time and become cancer. Human papillomavirus 18 and HPV 16 are responsible for most HPV-related cancers. Also called HPV 18.

### **human papillomavirus DNA test**

A laboratory test in which cells are scraped from the cervix to look for DNA of human papillomaviruses (HPV). HPV can cause abnormal tissue growth (for example, warts) and other changes to cells. Infection for a long time with certain types of HPV can cause cervical cancer. HPV can also play a role in other types of cancer, such as cancers of the anus, vagina, vulva, penis, and oropharynx. Also called HPV DNA test.

### **human papillomavirus RNA test**

A laboratory test in which cells are scraped from the cervix to look for RNA of the most common types of human papillomavirus (HPV). Certain types of HPV may cause abnormal tissue growth, such as warts, and other changes to cells. Infection for a long time with other types of HPV may cause cervical cancer. A human papillomavirus RNA test may be done with a Pap test to check for HPV infection and cervical cancer. HPV infection may also cause other types of cancer, such as cancers of the anus, vagina, vulva, penis, and oropharynx. Also called HPV RNA test.

### **human papillomavirus test**

A laboratory test in which cells are tested for DNA or RNA from certain types of human papillomavirus (HPV) that are known to cause cervical cancer. These high-risk types of HPV can also cause other types of cancer, including cancers of the anus, vagina, vulva, penis, and oropharynx. A human papillomavirus test may be used alone for cervical cancer screening (also called primary HPV testing), or it can be done at the same time as a Pap test (called cotesting). A human papillomavirus test may also be done after certain abnormal Pap test results. Also called HPV test.

### **human papillomavirus vaccine**

A vaccine that helps protect the body against infection with certain types of human papillomavirus (HPV). HPV infection can cause abnormal tissue growth, such as warts, and other changes to cells. Infection for a long time with certain types of HPV can cause cancers of the cervix, vagina, vulva, anus, penis, and oropharynx. Human papillomavirus vaccines are being used to prevent some of these cancers. They are also being used to prevent genital warts and abnormal lesions that may lead to some of these cancers. Also called HPV vaccine.

### **human participant protection regulations**

Laws set by the U.S. Department of Health and Human Services (DHHS) to protect a person from risks in research studies that any federal agency or department has a part in. Also called 45 CFR 46, 45 Code of Federal Regulations Part 46, and Protection of Human Subjects.

### **humanized monoclonal antibody**

A type of antibody made in the laboratory by combining a human antibody with a small part of a mouse or rat monoclonal antibody. The mouse or rat part of the antibody binds to the target antigen, and the human part makes it less likely to be destroyed by the body's immune system.

### **humanized monoclonal antibody MEDI-522**

A substance being studied in the treatment of some types of cancer and other conditions. Humanized monoclonal antibody MEDI-522 binds to a protein on the surface of blood vessels and may prevent the growth of new blood vessels that tumors need to grow. It may also prevent the spread of cancer. It is a type of

antiangiogenesis agent, a type of metastasis inhibitor, and a type of monoclonal antibody. Also called Abegrin, etaracizumab, and MEDI-522.

### **humidifier**

A machine that puts moisture in the air.

### **humor therapy**

A type of therapy that uses humor to help relieve pain and stress and improve a person's sense of well-being. It may be used to help people cope with a serious disease, such as cancer. Humor therapy may include laughter exercises, clowns, and comedy movies, books, games, and puzzles. It is a type of complementary therapy. Also called laughter therapy.

### **hyaluronidase**

An enzyme that breaks down a substance in the body called hyaluronic acid. Hyaluronic acid is found throughout the body in connective tissue, skin, and fluids in the joints and inside the eye. It causes fluids to have a jelly-like thickness, which can help moisten and protect tissues and joints. In medicine, hyaluronidase is made in the laboratory and given with other drugs by injection under the skin to treat certain conditions. Using hyaluronidase to break down hyaluronic acid helps make the fluids and connective tissue thinner so the drugs can move more easily into the tissues.

### **hydatidiform mole**

A slow-growing tumor that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta) after fertilization of an egg by a sperm. A hydatidiform mole contains many cysts (sacs of fluid). It is usually benign (not cancer) but it may spread to nearby tissues (invasive mole). It may also become a malignant tumor called choriocarcinoma. Hydatidiform mole is the most common type of gestational trophoblastic tumor. Also called molar pregnancy.

### **hydration**

The process of combining with water. In medicine, the process of giving fluids needed by the body.

### **hydrazine sulfate**

A substance that has been studied as a treatment for cancer and as a treatment for cachexia (body wasting) associated with advanced cancer.

### **hydrocarbon**

A substance made of only hydrogen and carbon. Examples of hydrocarbons are coal, petroleum, natural gas and tar. They are used as energy sources. Being exposed to hydrocarbons may increase the risk of certain types of cancer.

### **hydrocephalus**

The abnormal buildup of cerebrospinal fluid in the ventricles of the brain.

### **hydrocodone bitartrate**

A drug used to treat moderate to severe pain and cough. Hydrocodone bitartrate is made from codeine and binds to opioid receptors in the central nervous system. It is a type of analgesic agent, a type of antitussive, and a type of opiate.

**hydrocortisone**

A drug used to relieve the symptoms of certain hormone shortages and to suppress an immune response.

**hydrogen cyanide**

A liquid or gas form of cyanide. Cyanide is a poisonous chemical found in some foods and plants, tobacco smoke, and when certain substances are burned. It is used to make products, such as paper, fabric, and plastic, and is used as a pesticide. Cyanide keeps cells in the body from using oxygen, so they die. Exposure to cyanide may cause serious health problems, including death.

**hydrogen peroxide**

A chemical used in bleaches, dyes, cleansers, antiseptics, and disinfectants. In a concentrated form, it is toxic and irritating to tissues.

**hydrolysis**

A chemical reaction that uses water to break down a compound.

**hydromorphone hydrochloride**

A drug used to treat moderate to severe pain. It may also be used to treat certain types of cough. Hydromorphone hydrochloride is made from morphine and binds to opioid receptors in the central nervous system. It is a type of opioid and a type of analgesic agent. Also called Dilaudid, Exalgo, and Hydrostat IR.

**hydronephrosis**

Abnormal enlargement of a kidney, which may be caused by blockage of the ureter (such as by a kidney stone) or chronic kidney disease that prevents urine from draining into the bladder.

**hydroureter**

Abnormal enlargement of the ureter caused by any blockage that prevents urine from draining into the bladder.

**hydroxychloroquine**

A substance that decreases immune responses in the body. It is used to treat some autoimmune diseases, and is being studied as a treatment for graft-versus-host disease. Hydroxychloroquine belongs to the family of drugs called antiprotozoals.

**hydroxydaunorubicin**

A drug that comes from the bacterium *Streptomyces peucetius* and is used alone or with other drugs to treat many types of cancer, including leukemia, lymphoma, neuroblastoma, sarcoma, Wilms tumor, and certain cancers of the lung, breast, stomach, ovary, thyroid, and bladder. It is also being studied in the treatment of other types of cancer. Hydroxydaunorubicin damages the cell's DNA and may kill cancer cells. It also blocks a certain enzyme needed for cell division and DNA repair. Hydroxydaunorubicin is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called Adriamycin and doxorubicin hydrochloride.

**hydroxymethylglutaryl-coenzyme A reductase inhibitor**

A substance that blocks an enzyme needed by the body to make cholesterol and lowers the amount of cholesterol in the blood. Hydroxymethylglutaryl-coenzyme A reductase inhibitor drugs are called statins. Also called HMG-CoA reductase inhibitor.

## hydroxyurea

A drug used alone or with other anticancer drugs or radiation therapy under the brand name Hydrea to treat certain types of chronic myelogenous leukemia and head and neck cancer and under the brand name Droxia to treat certain patients with sickle cell anemia. It is also being studied in the treatment of other conditions and types of cancer. Hydroxyurea stops cells from making DNA and may kill cancer cells. It may also make cancer cells easier to kill with radiation therapy. Hydroxyurea may also help keep abnormal red blood cells from forming, which may reduce the number of painful sickle cell crises and the need for blood transfusions. Hydroxyurea is a type of antimetabolite.

## hygiene

The science of health, and the practice of cleanliness that promotes good health and well-being.

## hyper-CVAD

An abbreviation for a chemotherapy combination used to treat some types of acute lymphoblastic leukemia (ALL) and non-Hodgkin lymphoma (NHL). Hyper-CVAD includes the drugs cyclophosphamide, vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and dexamethasone. It also includes the drugs methotrexate and cytarabine. It is given as hyperfractionated therapy, in which the total dose of the drugs is divided into small doses and given more than once a day. Also called hyper-CVAD regimen.

## hyper-CVAD regimen

An abbreviation for a chemotherapy combination used to treat some types of acute lymphoblastic leukemia (ALL) and non-Hodgkin lymphoma (NHL). Hyper-CVAD regimen includes the drugs cyclophosphamide, vincristine sulfate, doxorubicin hydrochloride (Adriamycin), and dexamethasone. It also includes the drugs methotrexate and cytarabine. It is given as hyperfractionated therapy, in which the total dose of the drugs is divided into small doses and given more than once a day. Also called hyper-CVAD.

## hyperactivity

A higher than normal level of activity. Hyperactivity can be used to describe the increased action of a body function, such as hormone production, or behavior. A person who is hyperactive may seem to be always moving or fidgeting, impulsive, unable to concentrate, and talking too much.

## hyperalgesia

An increased sensitivity to feeling pain and an extreme response to pain. Hyperalgesia may occur when there is damage to the nerves or chemical changes to the nerve pathways involved in sensing pain. This may be caused by tissue injury or inflammation or by taking certain drugs, such as opioids, for chronic pain. People with hyperalgesia tend to feel extreme pain even though an injury or medical condition has not gotten worse. This pain may get worse over time, and it may extend to other areas of the body. It may also become a new or different type of pain than the original pain.

## hyperalimentation

A form of nutritional support that is given directly into the bloodstream through a catheter placed into a vein. Hyperalimentation bypasses the digestive system and may be given when a person is not able to eat or drink by mouth or has a disease or condition that affects their ability to absorb nutrients through the digestive system. There are two types of hyperalimentation: partial parenteral

nutrition (PPN) and total parenteral nutrition (TPN). PPN is supplemental nutrition that is given when a person cannot get enough calories or the right amount of nutrients that their body needs from the food they are eating. TPN is complete nutrition that provides all the calories, proteins, carbohydrates, fats, vitamins, and minerals that a person needs when they cannot digest food. Also called parenteral nutrition.

### **hyperbaric oxygen**

Oxygen that is given at a pressure that is higher than the pressure of the atmosphere at sea level. In medicine, breathing hyperbaric oxygen increases the amount of oxygen in the body. It is used in treating certain kinds of wounds, injuries, and infections. It is also used to treat carbon monoxide poisoning and other conditions in which the tissues are not getting enough oxygen. It is being studied in the treatment of some types of cancer. Hyperbaric oxygen may increase the amount of oxygen in cancer cells, which may make them easier to kill with radiation therapy and chemotherapy. It is a type of radiosensitizing agent and a type of chemosensitizing agent.

### **hyperbilirubinemia**

Higher-than-normal amount of bilirubin in the blood. Bilirubin is a substance formed when red blood cells break down.

### **hypercalcemia**

Higher than normal levels of calcium in the blood. Some types of cancer increase the risk of hypercalcemia.

### **hypercortisolism**

A condition in which there is too much cortisol (a hormone made by the outer layer of the adrenal gland) in the body. Hypercortisolism may be caused by taking too many steroid drugs or by certain types of tumors. Tumors that make adrenocorticotrophic hormone (ACTH) cause the adrenal gland to make too much cortisol. Symptoms of hypercortisolism include a round face, thin arms and legs, severe fatigue and muscle weakness, high blood pressure, high blood sugar, purple or pink stretch marks on the skin, and weight gain, especially in the abdomen. Also called Cushing syndrome.

### **hypercytokinemia**

A severe immune reaction in which the body releases too many cytokines into the blood too quickly. Cytokines play an important role in normal immune responses, but having a large amount of them released in the body all at once can be harmful. Hypercytokinemia can occur as a result of an infection, autoimmune condition, or other disease. It may also occur after treatment with some types of immunotherapy. Signs and symptoms include high fever, inflammation (redness and swelling), and severe fatigue and nausea. Sometimes, hypercytokinemia may be severe or life threatening and lead to multiple organ failure. Also called cytokine storm.

### **hyperdiploid**

A term used to describe cells that have a higher-than-normal amount of DNA, such as having more than the usual number of chromosomes. Most human cells, except for egg and sperm cells, normally contain 46 chromosomes (23 pairs) in each cell. Some types of cancer cells, such as neuroblastoma cells or leukemia cells, may be hyperdiploid. Knowing whether cancer cells are hyperdiploid may help plan treatment and estimate prognosis.



### **hyperfractionated radiation therapy**

Radiation treatment in which the total dose of radiation is divided into small doses and treatments are given more than once a day. Hyperfractionated radiation therapy is given over the same period of time (days or weeks) as standard radiation therapy. Also called superfractionated radiation therapy.

### **hyperfractionation**

A treatment schedule in which the total dose of radiation or chemotherapy is divided into small doses and treatments are given more than once a day.

### **hyperglycemia**

Higher than normal amount of glucose (a type of sugar) in the blood. Hyperglycemia can be a sign of diabetes or other conditions. Also called high blood sugar.

### **hyperkeratosis**

A condition marked by thickening of the outer layer of the skin, which is made of keratin (a tough, protective protein). It can result from normal use (corns, calluses), chronic inflammation (eczema), or genetic disorders (X-linked ichthyosis, ichthyosis vulgaris).

### **hypernephroma**

Cancer that begins in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. Hypernephroma is the most common type of kidney cancer in adults. Also called renal cell adenocarcinoma, renal cell cancer, and renal cell carcinoma.

### **hyperparathyroidism**

A condition in which the parathyroid gland (one of four pea-sized organs found on the thyroid) makes too much parathyroid hormone. This causes a loss of calcium from the bones and an increased level of calcium in the blood. Symptoms include bone pain and kidney problems.

### **hyperpigmentation**

A common, usually harmless condition in which patches of skin are darker than the surrounding skin. It occurs when special cells in the skin make too much of the pigment called melanin. Hyperpigmentation may appear as freckles, age spots, or larger areas of darkened skin. Hyperpigmentation may be caused by injury or inflammation of the skin, sun damage, abnormal skin growths, hormone changes, pregnancy, or other medical conditions. Certain medicines, including some anticancer drugs, can also cause hyperpigmentation.

### **hyperplasia**

An increase in the number of cells in an organ or tissue. These cells appear normal under a microscope. They are not cancer, but may become cancer.

### **hypersensitivity**

An exaggerated response by the immune system to a drug or other substance.

### **hypertension**

A blood pressure of 140/90 or higher. Hypertension usually has no symptoms. It can harm the arteries and cause an increase in the risk of stroke, heart attack, kidney failure, and blindness. Also called high blood pressure.

### **hyperthermia**

Abnormally high body temperature. This may be caused as part of treatment, by an infection, or by exposure to heat.

### **hyperthermia therapy**

A type of treatment in which body tissue is exposed to high temperatures to damage and kill cancer cells or to make cancer cells more sensitive to the effects of radiation and certain anticancer drugs.

### **hyperthermic intraperitoneal chemotherapy**

A treatment used during surgery in which a heated solution containing anticancer drugs is infused directly into the abdominal cavity through a thin tube. After removal of as much tumor tissue as possible with surgery, hyperthermic intraperitoneal chemotherapy is given to kill any remaining tumor cells. It is most often used to treat cancers that have spread to the peritoneum (the lining of the abdominal cavity). Also called CHPP, continuous hyperthermic peritoneal perfusion, and HIPEC.

### **hyperthermic perfusion**

A procedure in which a warmed solution containing anticancer drugs is used to bathe, or is passed through the blood vessels of, the tissue or organ containing the tumor.

### **hyperthyroidism**

A condition that occurs when the thyroid gland makes more thyroid hormones than the body needs. Thyroid hormones control the way the body uses energy and affect the body's metabolism. Hyperthyroidism may be caused by an autoimmune disorder called Graves' disease, benign lumps in the thyroid gland, and inflammation of the thyroid gland. It may also be caused by consuming too much iodine in the diet or by taking too much thyroid hormone medicine. Signs and symptoms include weight loss, fatigue, rapid or irregular heartbeat, sweating, diarrhea, nervousness, mood swings, shaky hands, trouble sleeping, trouble tolerating heat, muscle weakness, and a goiter (an enlarged thyroid gland that may cause the bottom of the neck to look swollen). Hyperthyroidism can usually be controlled with treatment. Also called overactive thyroid.

### **hyperuricemia**

A buildup of uric acid (a byproduct of metabolism) in the blood. Hyperuricemia is a side effect of some anticancer drugs.

### **hypervascular**

Having a large number of blood vessels.

### **hypnosis**

A trance-like state in which a person becomes more aware and focused on particular thoughts, feelings, images, sensations, or behaviors. While under hypnosis, a person may feel calm, relaxed, and more open to suggestion. Hypnosis is usually done with the help of a specially trained therapist. It may be used to help relieve stress, anxiety, and pain, and to help a person quit smoking or lose weight. Hypnosis is a type of complementary and alternative medicine (CAM).

### **hypofractionated radiation therapy**

Radiation treatment in which the total dose of radiation is divided into large doses and treatments are given once a day or less often. Hypofractionated

radiation therapy is given over a shorter period of time (fewer days or weeks) than standard radiation therapy.

### **hypofractionation**

A treatment schedule in which the total dose of radiation is divided into large doses and treatments are given once a day or less often.

### **hypogammaglobulinemia**

A condition in which the level of immunoglobulins (antibodies) in the blood is low and the risk of infection is high.

### **hypoglycemia**

Abnormally low blood sugar.

### **hypohidrosis**

A rare condition in which the sweat glands make little or no sweat. It can affect the whole body or a small part of the body. Hypohidrosis may be caused by severe burns, radiation, infection, inflammation, or other injuries to the skin. It may also be caused by certain medicines and some conditions that affect the skin, nerves, connective tissue, or sweat glands. It may be inherited as part of a genetic condition or develop later in life. Also called anhidrosis.

### **hypomagnesemia**

Lower-than-normal amount of magnesium in the blood.

### **hyponatremia**

Lower-than-normal amount of sodium in the blood.

### **hypopharyngeal cancer**

Cancer that forms in tissues of the hypopharynx (the bottom part of the throat). The most common type is squamous cell carcinoma (cancer that begins in flat cells lining the hypopharynx).

### **hypopharynx**

The bottom part of the throat. Cancer of the hypopharynx is also known as hypopharyngeal cancer.

### **hypophosphatemia**

Lower-than-normal amount of phosphorus in the blood.

### **hypopigmentation**

A condition in which the skin is lighter in color than normal. It occurs when special cells in the skin do not make enough of the pigment called melanin. Hypopigmentation can affect a small area of the skin or it can be widespread. It usually appears as lighter than normal colored patches on the skin or as areas on the skin that appear white. Hypopigmentation may be caused by injury, inflammation, or infection of the skin; some medical conditions; or certain medicines.

### **hypospadias**

A birth defect in which the opening of the urethra (the tube through which urine leaves the body) is not in its normal place. In males with hypospadias, the urethra opens on the underside of the penis or between the anus and the scrotum. In females with hypospadias, it opens into the vagina. Hypospadias is much more common in males than in females, and can be corrected by surgery.

Children with hypospadias have an increased risk of developing Wilms tumor (a type of kidney cancer).

### **hypotension**

Abnormally low blood pressure.

### **hypothalamus**

The area of the brain that controls body temperature, hunger, and thirst.

### **hypothesis**

A tentative proposal made to explain certain observations or facts that requires further investigation to be verified.

### **hypothyroidism**

Too little thyroid hormone. Symptoms include weight gain, constipation, dry skin, and sensitivity to the cold. Also called underactive thyroid.

### **hypotrichosis**

A rare condition in which there is little or no hair growth on the head, including the brows above the eyes and the edge of the eyelids, or other areas of the body where hair normally grows. Hair in the affected areas usually stays short and is dry and rough. It may also be tightly curled, lighter in color, and break easily. Hypotrichosis is usually congenital (present at birth) and is linked to several different genetic syndromes.

### **hypoxemia**

A condition in which there is not enough oxygen in the blood.

### **hypoxia**

A condition in which there is a decrease in the oxygen supply to a tissue. In cancer treatment, the level of hypoxia in a tumor may help predict the response of the tumor to the treatment.

### **hypoxia-inducible factor**

One of a group of proteins that play an important role in how cells respond to changing levels of oxygen. When oxygen levels in cells are low, hypoxia-inducible factors activate certain genes involved in cell growth and survival. This allows the cells to function and survive even in low oxygen conditions. Hypoxia-inducible factors may be made in larger than normal amounts by some types of cancer cells. This may cause cancer cells to grow and spread to other parts of the body. Also called HIF.

### **hypoxic**

Having too little oxygen.

### **hysterectomy**

Surgery to remove the uterus, and sometimes surrounding organs and tissues. There are several different types of hysterectomy. When only the uterus is removed, it is called a partial hysterectomy. When the uterus and cervix are removed, it is called a total hysterectomy. When the uterus, cervix, part of the vagina, and a wide area of ligaments and tissues around these organs are removed, it is called a radical hysterectomy. These procedures may be done through the vagina (with no incisions in the abdomen) or through an incision (cut) in the abdomen.

## **iFOBT**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card for testing. The test uses an antibody that binds to a blood protein called hemoglobin to detect any blood. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called fecal immunochemical test, FIT, immunoassay fecal occult blood test, immunochemical fecal occult blood test, and immunologic fecal occult blood test.

## **ibandronate**

A drug that is used to prevent and treat osteoporosis, and is being studied in the treatment of cancer that has spread to the bones. It belongs to the family of drugs called bisphosphonates.

## **ibritumomab tiuxetan**

A drug used to treat adults with certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Ibritumomab tiuxetan contains a monoclonal antibody that binds to a protein called CD20, which is found on B cells and some types of lymphoma cells. It also contains the compound tiuxetan, which allows certain radioactive substances to be attached to the monoclonal antibody. This may help kill cancer cells. Ibritumomab tiuxetan is a type of monoclonal antibody and a type of immunoconjugate. Also called Zevalin.

## **ibrutinib**

A drug used alone or with other drugs to treat adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, or Waldenstrom macroglobulinemia (a type of non-Hodgkin lymphoma). It is also used to treat adults and children aged 1 year and older with chronic graft versus host disease. It is also being studied in the treatment of other types of cancer. Ibrutinib blocks a protein called BTK, which may help keep cancer cells from growing. It may also lower the body's immune response. Ibrutinib is a type of tyrosine kinase inhibitor. Also called Imbruvica.

## **ibuprofen**

A drug used to treat fever, swelling, pain, and redness by preventing the body from making a substance that causes inflammation. It is a type of nonsteroidal anti-inflammatory drug (NSAID). Also called Advil and Motrin.

## **idarubicin hydrochloride**

A drug used with other drugs to treat adults with acute myeloid leukemia. It is also being studied in the treatment of other types of cancer. Idarubicin hydrochloride blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. It is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called 4-demethoxydaunorubicin and Idamycin PFS.

## **idecabtagene vicleucel**

A treatment used for adults with multiple myeloma that came back or did not get better after treatment with at least two lines of anticancer therapy that included an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Idecabtagene vicleucel is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given

to the patient by infusion. Idecabtagene vicleucel binds to a protein called BCMA, which is found on myeloma cells and some types of immune cells. This helps the body's immune system kill cancer cells. Idecabtagene vicleucel is a type of cellular immunotherapy called CAR T-cell therapy. Also called Abecma.

### **idelalisib**

A drug used with rituximab to treat chronic lymphocytic leukemia that has come back. It is also being studied in the treatment of other types of cancer. Idelalisib blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of kinase inhibitor. Also called Zydelig.

### **idiopathic**

Describes a disease of unknown cause.

### **idiopathic myelofibrosis**

A progressive, chronic disease in which the bone marrow is replaced by fibrous tissue and blood is made in organs such as the liver and the spleen, instead of in the bone marrow. This disease is marked by an enlarged spleen and progressive anemia. Also called agnogenic myeloid metaplasia, chronic idiopathic myelofibrosis, myelosclerosis with myeloid metaplasia, and primary myelofibrosis.

### **idiopathic pneumonia syndrome**

A set of pneumonia-like symptoms (such as fever, chills, coughing, and breathing problems) that occur with no sign of infection in the lung. Idiopathic pneumonia syndrome is a serious condition that can occur after a stem cell transplant.

### **idiopathic pulmonary fibrosis**

A disease in which the alveoli (tiny air sacs at the end of the bronchioles in the lungs) are overgrown with fibrous tissue. The cause of the disease is unknown and it gets worse over time. Symptoms include difficult, painful breathing and shortness of breath.

### **idiopathic thrombocytopenic purpura**

A condition in which platelets (blood cells that cause blood clots to form) are destroyed by the immune system. The low platelet count causes easy bruising and bleeding, which may be seen as purple areas in the skin, mucous membranes, and outer linings of organs. Also called immune thrombocytopenia, immune thrombocytopenic purpura, and ITP.

### **idoxifene**

A drug that blocks the effects of estrogen.

### **idoxuridine**

A drug that reduces the risk of cancer cell growth by interfering with the cells' DNA.

### **ifosfamide**

A drug used with other drugs to treat malignant testicular germ cell tumors that have already been treated with two other types of anticancer drugs. It is also being studied in the treatment of other types of cancer. Ifosfamide damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of antimetabolite. Also called Ifex.



### **ileostomy**

An opening into the ileum, part of the small intestine, from the outside of the body. An ileostomy provides a new path for waste material to leave the body after part of the intestine has been removed.

### **ileum**

The last part of the small intestine. It connects to the cecum (first part of the large intestine). The ileum helps to further digest food coming from the stomach and other parts of the small intestine. It absorbs nutrients (vitamins, minerals, carbohydrates, fats, proteins) and water from food so they can be used by the body.

### **ileus**

Blockage of the intestines

### **iloprost**

A substance that is being studied in the prevention of lung cancer. It belongs to the family of drugs called prostaglandin analogs.

### **image-defined risk factor**

A term used in the staging of neuroblastoma. It describes certain features of the tumor found on an imaging test, such as an MRI or CT scan, that affect how much of the tumor can be removed by surgery. For example, a tumor that surrounds major blood vessels, such as the aorta or vena cava, or involves two areas of the body, such as the neck and chest, is considered an image-defined risk factor. The presence of image-defined risk factors means that it may be more difficult to remove the tumor safely and is a factor in how the stage of disease is determined. Also called IDRF.

### **image-guided radiation therapy**

A procedure that uses a computer to create a picture of a tumor to help guide the radiation beam during radiation therapy. The pictures are made using CT, ultrasound, X-ray, or other imaging techniques. Image-guided radiation therapy makes radiation therapy more accurate and causes less damage to healthy tissue. Also called IGRT.

### **imagery therapy**

A technique in which a person visualizes positive images or scenarios in their mind. During imagery therapy, a person uses all their senses in their imagination to help relax the body and develop a sense of well-being. Imagery therapy may be used to help relieve stress, pain, anxiety, and depression and to help with symptoms related to disease, such as cancer. Also called guided imagery and guided visualization.

### **imaging**

In medicine, a process that makes pictures of areas inside the body. Imaging uses methods such as x-rays (high-energy radiation), ultrasound (high-energy sound waves), and radio waves.

### **imaging procedure**

A type of test that makes detailed pictures of areas inside the body. Imaging procedures use different forms of energy, such as x-rays (high-energy radiation), ultrasound (high-energy sound waves), radio waves, and radioactive substances. They may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Examples of imaging procedures are computed

tomography (CT), mammography, ultrasonography, magnetic resonance imaging (MRI), and nuclear medicine tests. Also called imaging test.

### **imaging test**

A type of test that makes detailed pictures of areas inside the body. Imaging tests use different forms of energy, such as x-rays (high-energy radiation), ultrasound (high-energy sound waves), radio waves, and radioactive substances. They may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Examples of imaging tests are computed tomography (CT), mammography, ultrasonography, magnetic resonance imaging (MRI), and nuclear medicine tests. Also called imaging procedure.

### **imatinib mesylate**

A drug used to treat certain types of leukemia and other blood cancers, gastrointestinal stromal tumors, skin tumors called dermatofibrosarcoma protuberans, and a rare condition called systemic mastocytosis. It is also being studied in the treatment of other conditions and types of cancer. Imatinib mesylate blocks certain proteins made by the BCR::ABL, PDGFR, or c-KIT oncogene, which may help keep cancer cells from growing and may kill them. Imatinib mesylate is a type of tyrosine kinase inhibitor. Also called Gleevec and STI571.

### **imetelstat sodium**

A drug used to treat low-risk or intermediate-1 risk myelodysplastic syndromes in adults with anemia. It is used in patients who need regular red blood cell transfusions and did not respond to or cannot be treated with an erythropoiesis-stimulating agent. It is also being studied in the treatment of other types of cancer. Imetelstat sodium binds to an enzyme called telomerase, which is found at high levels in certain types of cells, including cancer cells. Blocking the activity of this enzyme may help keep cancer cells from growing and dividing and cause them to die. Imetelstat sodium is a type of enzyme inhibitor. Also called Rytelo.

### **imexon**

A substance that is being studied in the treatment of some types of cancer, including pancreatic, lung, breast, prostate, melanoma, and multiple myeloma. It belongs to the family of drugs called cyanoaziridine derivatives. Also called Amplimexon.

### **imipenem**

An antibiotic drug used to treat severe or very resistant infection. It belongs to the family of drugs called carbapenems.

### **imiquimod**

A drug used to treat certain skin conditions. Imiquimod is used under the brand names Aldara and Zyclara to treat actinic keratosis (a skin condition that may become cancer) in adults who have a normal immune system and to treat genital warts or perianal warts in adults and in children aged 12 years or older. The Aldara brand of imiquimod is also used to treat superficial basal cell skin cancer in adults who have a normal immune system. Imiquimod is also being studied in the treatment of other conditions and types of cancer. It may help the immune system kill abnormal cells, including cancer cells. Imiquimod is a type of immunomodulating agent.

### **immature teratoma**

A type of germ cell tumor that is often made up of several different types of tissue, such as hair, muscle, and bone. Immature teratomas have cells that look very different from normal cells under a microscope. They are usually malignant (cancer) and may spread to other parts of the body. Some immature teratomas make enzymes or hormones that may cause signs and symptoms of disease. Immature teratomas usually occur in the sacrum or tailbone in newborns or in the ovaries of girls at the start of puberty.

### **immune adjuvant**

A drug that stimulates the immune system to respond to disease.

### **immune cell**

A cell that is part of the immune system and helps the body fight infections and other diseases. Immune cells develop from stem cells in the bone marrow and become different types of white blood cells. These include neutrophils, eosinophils, basophils, mast cells, monocytes, macrophages, dendritic cells, natural killer cells, and lymphocytes (B cells and T cells).

### **immune checkpoint inhibitor**

A type of drug that blocks proteins called checkpoints that are made by some types of immune system cells, such as T cells, and some cancer cells. These checkpoints help keep immune responses from being too strong and sometimes can keep T cells from killing cancer cells. When these checkpoints are blocked, T cells can kill cancer cells better. Examples of checkpoint proteins found on T cells or cancer cells include PD-1/PD-L1 and CTLA-4/B7-1/B7-2. Some immune checkpoint inhibitors are used to treat cancer.

### **immune checkpoint protein**

A type of protein found on some immune cells, such as T cells and antigen-presenting cells, and some cancer cells. These proteins help keep the body's immune response from being so strong that it harms healthy cells. Some immune checkpoint proteins on T cells bind with partner immune checkpoint proteins on cancer cells, which signals the T cells to stay in an inactive state, preventing them from killing the cancer cells. Drugs that block these proteins can help T cells find and kill cancer cells and are being used in the treatment of some types of cancer. Examples of immune checkpoint proteins are PD-1 and CTLA-4 on T cells and PD-L1 on some cancer cells.

### **immune complex hemolytic anemia**

A condition in which the body's immune system stops red blood cells from forming or causes them to clump together. Immune complex hemolytic anemia can occur in patients who have chronic lymphocytic leukemia (CLL). Also called autoimmune hemolytic anemia and immunohemolytic anemia.

### **immune function**

Production and action of cells that fight disease or infection.

### **immune response**

The way the body defends itself against substances it sees as harmful or foreign. In an immune response, the immune system recognizes the antigens (usually proteins) on the surface of substances or microorganisms, such as bacteria or viruses, and attacks and destroys, or tries to destroy, them. Cancer cells also have antigens on their surface. Sometimes, the immune system sees these

antigens as foreign and mounts an immune response against them. This helps the body fight cancer.

### **immune system**

A complex network of cells, tissues, organs, and the substances they make that helps the body fight infections and other diseases. The immune system includes white blood cells and organs and tissues of the lymph system, such as the thymus, spleen, tonsils, lymph nodes, lymph vessels, and bone marrow.

### **immune system disorder**

A condition that affects the immune system. The immune system is made up of cells, tissues, and organs that help the body fight infections and other diseases. There are many different types of immune system disorders, including immunodeficiency disease, autoimmune disorders, and allergic disorders.

Immunodeficiency disease occurs when a part of the immune system is missing or not working properly. Autoimmune disorders occur when the immune system recognizes its own tissues as foreign and attacks them. Allergic disorders occur when the immune system overreacts to substances that are usually not harmful, such as pollen, molds, and certain foods. Cancers of the immune system (such as leukemia and lymphoma) are also immune system disorders.

### **immune system modulator**

A substance that stimulates or suppresses the immune system and may help the body fight cancer, infection, or other diseases. Specific immune system modulators, such as monoclonal antibodies, cytokines, and vaccines, affect specific parts of the immune system. Nonspecific immune system modulators, such as BCG and levamisole, affect the immune system in a general way. Also called immunomodulating agent.

### **immune system tolerance**

The failure of the immune system to respond to an antigen that previously caused an immune response.

### **immune thrombocytopenia**

A condition in which platelets (blood cells that cause blood clots to form) are destroyed by the immune system. The low platelet count causes easy bruising and bleeding, which may be seen as purple areas in the skin, mucous membranes, and outer linings of organs. Also called idiopathic thrombocytopenic purpura, immune thrombocytopenic purpura, and ITP.

### **immune thrombocytopenic purpura**

A condition in which platelets (blood cells that cause blood clots to form) are destroyed by the immune system. The low platelet count causes easy bruising and bleeding, which may be seen as purple areas in the skin, mucous membranes, and outer linings of organs. Also called idiopathic thrombocytopenic purpura, immune thrombocytopenia, and ITP.

### **immunity**

In medicine, the immune system's way of protecting the body against an infectious disease. The three types of immunity are innate, adaptive, and passive. Innate immunity includes barriers, such as skin and mucous membranes, that keep harmful substances from entering the body. It is the first response of the body's immune system to a foreign substance. Adaptive immunity occurs in response to being infected with or vaccinated against a microorganism. The body makes an immune response, which can prevent future

infection with the microorganism. Adaptive immunity can last a person's entire life. Passive immunity occurs when a person receives antibodies to a disease rather than making them through his or her own immune system. Passive immunity provides immediate protection but only lasts a few weeks or months.

### **immunization**

A technique used to cause an immune response that results in resistance to a specific disease, especially an infectious disease.

### **immunoassay**

A test that uses the binding of antibodies to antigens to identify and measure certain substances. Immunoassays may be used to diagnose disease. Also, test results can provide information about a disease that may help in planning treatment (for example, when estrogen receptors are measured in breast cancer).

### **immunoassay fecal occult blood test**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card for testing. The test uses an antibody that binds to a blood protein called hemoglobin to detect any blood. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called fecal immunochemical test, FIT, iFOBT, immunochemical fecal occult blood test, and immunologic fecal occult blood test.

### **immunochemical fecal occult blood test**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card for testing. The test uses an antibody that binds to a blood protein called hemoglobin to detect any blood. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called fecal immunochemical test, FIT, iFOBT, immunoassay fecal occult blood test, and immunologic fecal occult blood test.

### **immunocompetence**

The ability to produce a normal immune response.

### **immunocompetent**

Having the ability to produce a normal immune response.

### **immunocompromised**

Having a weakened immune system. People who are immunocompromised have a reduced ability to fight infections and other diseases. This may be caused by certain diseases or conditions, such as AIDS, cancer, diabetes, malnutrition, and certain genetic disorders. It may also be caused by certain medicines or treatments, such as anticancer drugs, radiation therapy, and stem cell or organ transplant. Also called immunosuppressed.

### **immunoconjugate**

An agent made up of an immune substance, such as a monoclonal antibody, that is chemically linked to a cell-killing substance such as a toxin, a radioactive molecule, or a drug. The antibody part of the immunoconjugate targets cancer cells and the linked substance may kill the cells or make them visible in the body. Some immunoconjugates are used to treat cancer or to help find cancer cells in the body.

### **immunoconjugate therapy**

A type of treatment that uses an immune substance, such as a monoclonal antibody, that is chemically linked to a cell-killing substance such as a toxin, radioisotope, or drug. The immune substance targets certain types of cells and the linked substance kills the targeted cells without harming other cells. Immunoconjugates are used in the treatment of cancer. Examples include antibody-drug conjugates, immunotoxins, and some targeted therapy drugs.

### **immunocytochemistry**

A laboratory method that uses antibodies to check for certain antigens (markers) in a sample of cells. The antibodies are usually linked to an enzyme or a fluorescent dye. After the antibodies bind to the antigen in the cell sample, the enzyme or dye is activated, and the antigen can then be seen under a microscope. Immunocytochemistry is used to help diagnose diseases, such as cancer. It may also be used to help tell the difference between different types of cancer.

### **immunodeficiency**

The decreased ability of the body to fight infections and other diseases.

### **immunodeficiency syndrome**

The inability of the body to produce an immune response.

### **immunofluorescence**

A method used in the lab to detect certain antigens (markers) on a cell or in a tissue sample. Immunofluorescence uses antibodies that have a special dye attached to them to bind to the antigen in the sample. After binding, this dye allows cells or tissue that have the antigen to be seen under a microscope with a special light. Immunofluorescence may be used to help diagnose certain infections or diseases, such as cancer.

### **immunogenicity**

The ability of a substance that contains antigens to cause the body to make an immune response against that substance. The immune system recognizes antigens on the surface of substances it sees as foreign, such as vaccines, bacteria, viruses, or cancer cells, and makes an immune response against them. The strength of an immune response depends on how immunogenic a substance is.

### **immunoglobulin**

A protein that is made by B cells and plasma cells (types of white blood cells) and helps the body fight infection. Some immunoglobulins may be found in higher than normal amounts in patients with certain conditions or certain types of cancer, including multiple myeloma and Waldenstrom macroglobulinemia. Measuring the amount of specific immunoglobulins in the blood and urine may help diagnose cancer or find out how well treatment is working or if cancer has come back. Some immunoglobulins may be used as tumor markers. Also called Ig.

### **immunoheolytic anemia**

A condition in which the body's immune system stops red blood cells from forming or causes them to clump together. Immunoheolytic anemia can occur in patients who have chronic lymphocytic leukemia (CLL). Also called autoimmune hemolytic anemia and immune complex hemolytic anemia.



### **immunohistochemistry**

A laboratory method that uses antibodies to check for certain antigens (markers) in a sample of tissue. The antibodies are usually linked to an enzyme or a fluorescent dye. After the antibodies bind to the antigen in the tissue sample, the enzyme or dye is activated, and the antigen can then be seen under a microscope. Immunohistochemistry is used to help diagnose diseases, such as cancer. It may also be used to help tell the difference between different types of cancer.

### **immunologic fecal occult blood test**

A test that checks for occult (hidden) blood in the stool. A small sample of stool is placed in a special collection tube or on a special card for testing. The test uses an antibody that binds to a blood protein called hemoglobin to detect any blood. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called fecal immunochemical test, FIT, iFOBT, immunoassay fecal occult blood test, and immunochemical fecal occult blood test.

### **immunological adjuvant**

A substance used to help boost the immune response to a vaccine so that less vaccine is needed.

### **immunology**

The study of the body's immune system.

### **immunomodulating agent**

A substance that stimulates or suppresses the immune system and may help the body fight cancer, infection, or other diseases. Specific immunomodulating agents, such as monoclonal antibodies, cytokines, and vaccines, affect specific parts of the immune system. Nonspecific immunomodulating agents, such as BCG and levamisole, affect the immune system in a general way. Also called immune system modulator.

### **immunomodulation**

Change in the body's immune system, caused by agents that activate or suppress its function.

### **immunophenotyping**

A process that uses antibodies to identify cells based on the types of antigens or markers on the surface of the cells. This process is used in basic research and to help diagnose diseases, such as specific types of leukemia and lymphoma. Immunophenotyping may also be used to separate cells into different groups based on the markers they have on the surface.

### **immunoscintigraphy**

An imaging procedure in which antibodies labeled with radioactive substances are given to the person. A picture is taken of sites in the body where the antibody localizes.

### **immunosignature**

Information about the antibodies in a person's blood at a given point in time. Over time, the antibodies can change and immunosignatures might be used to help track a person's health and diagnose infections, cancer, or other medical conditions earlier.

**immunostimulant**

A substance that increases the ability of the immune system to fight infection and disease.

**immunosuppressed**

Having a weakened immune system. People who are immunosuppressed have a reduced ability to fight infections and other diseases. This may be caused by certain diseases or conditions, such as AIDS, cancer, diabetes, malnutrition, and certain genetic disorders. It may also be caused by certain medicines or treatments, such as anticancer drugs, radiation therapy, and stem cell or organ transplant. Also called immunocompromised.

**immunosuppression**

Suppression of the body's immune system and its ability to fight infections and other diseases. Immunosuppression may be deliberately induced with drugs, as in preparation for bone marrow or other organ transplantation, to prevent rejection of the donor tissue. It may also result from certain diseases such as AIDS or lymphoma or from anticancer drugs.

**immunosuppressive**

Describes the ability to decrease the body's immune system responses.

**immunosuppressive agent**

An agent that decreases the body's immune responses. It reduces the body's ability to fight infections and other diseases, such as cancer. Immunosuppressive agents may be used to keep a person from rejecting a bone marrow or organ transplant. They are also used in the treatment of conditions marked by overactive immune responses, such as autoimmune diseases and allergies.

**immunosuppressive therapy**

Treatment that lowers the activity of the body's immune system. This reduces its ability to fight infections and other diseases, such as cancer. Immunosuppressive therapy may be used to keep a person from rejecting a bone marrow or organ transplant. It may also be used to treat conditions in which the immune system is overactive, such as autoimmune diseases and allergies. Some types of immunosuppressive therapy may increase a person's risk of cancer by lowering the body's ability to kill cancer cells.

**immunotherapy**

A type of therapy that uses substances to stimulate or suppress the immune system to help the body fight cancer, infection, and other diseases. Some types of immunotherapy only target certain cells of the immune system. Others affect the immune system in a general way. Types of immunotherapy include cytokines, vaccines, bacillus Calmette-Guerin (BCG), and some monoclonal antibodies.

**immunotoxin**

An immune substance, such as a monoclonal antibody, cytokine, or immunoglobulin, chemically linked to a toxic substance. The immune substance binds to specific proteins or receptors found on some cancer cells. This allows the linked toxic substance to enter the cancer cells and kill them without harming nearby healthy cells.

**impairment**

A loss of part or all of a physical or mental ability, such as the ability to see, walk, or learn.

**implant**

A substance or object that is put in the body as a prosthesis, or for treatment or diagnosis.

**implant displacement views**

A procedure used to do a mammogram (x-ray of the breasts) in women with breast implants. The implant is pushed back against the chest wall and the breast tissue is pulled forward and around it so the tissue can be seen in the mammogram. Also called Eklund displacement views and Eklund views.

**implant radiation therapy**

A type of radiation therapy in which a radioactive substance is sealed inside materials that can be implanted, such as pellets, seeds, ribbons, wires, needles, or capsules, and placed inside the body, directly into or near a tumor or within a body cavity. The implant may be placed through a small flexible tube called a catheter or through an applicator device. It may be kept in place for a few minutes, for many days, or for the rest of a person's life. Implant radiation therapy is often used to treat cancers of the head and neck, breast, cervix, prostate, and eye. Also called brachytherapy, internal radiation therapy, and radiation brachytherapy.

**implantable cardioverter-defibrillator**

A small device used to correct a heartbeat that is abnormal (too fast, too slow, or irregular). The device is placed by surgery in the chest or abdomen. Wires are passed through a vein to connect the device to the heart. When it detects abnormal heartbeats, it sends an electrical shock to the heart to restore the heartbeat to normal. Also called ICD.

**implantable pump**

A small device installed under the skin to administer a steady dose of drugs.

**impotence**

In medicine, refers to the inability to have an erection of the penis adequate for sexual intercourse. Also called erectile dysfunction.

**impotent**

In medicine, describes the inability to have an erection of the penis adequate for sexual intercourse.

**in situ**

In its original place. For example, in carcinoma in situ, abnormal cells are found only in the place where they first formed. They have not spread.

**in vitro**

In the laboratory (outside the body). The opposite of in vivo (in the body).

**in vitro fertilization**

A procedure in which eggs are removed from a woman's ovary and combined with sperm outside the body to form embryos. The embryos are grown in the laboratory for several days and then either placed in a woman's uterus or cryopreserved (frozen) for future use. Also called IVF.

**in vivo**

In the body. The opposite of in vitro (outside the body or in the laboratory).

**in-transit metastasis**

A type of metastasis in which skin cancer spreads through a lymph vessel and begins to grow more than 2 centimeters away from the primary tumor but before it reaches the nearest lymph node.

**inalimarev**

A cancer vaccine made with a form of vaccinia virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins, including the tumor markers called CEA and MUC-1, that may help immune cells in the body kill tumor cells. Also called PANVAC-V and recombinant vaccinia-CEA-MUC-1-TRICOM vaccine.

**incidence**

The number of new cases of a disease diagnosed each year.

**incision**

A cut made in the body to perform surgery.

**incisional biopsy**

A surgical procedure in which a cut is made through the skin to remove a sample of abnormal tissue or part of a lump or suspicious area. The tissue is then checked under a microscope for signs of disease.

**inclusion**

Being part of something. Can also refer to creating an environment that encourages a person or group to feel like they belong and are supported, respected, and valued. Inclusion brings people with different racial, ethnic, cultural, and social backgrounds and experiences together in a safe, positive, and caring environment.

**incomplete Freund's adjuvant**

A mixture of oil and water that is combined with a specific antigen to boost the immune response to that antigen. It is being studied in immunotherapy and as a way to increase the immune response to cancer vaccines. It is a type of immune modulator. Also called IFA and Montanide ISA-51.

**incomplete colonoscopy**

A colonoscopy that was attempted but could not be completed. A colonoscopy is an examination of the inside of the colon using a thin, lighted, tube-like instrument called a colonoscope to look for polyps, cancer, or other abnormal areas in the colon. An incomplete colonoscopy occurs when the health care provider is not able to advance the colonoscope through the entire colon to the cecum (a pouch that connects the colon to the small intestine). An incomplete colonoscopy is more likely to occur if the colon is not completely clear of stool or if a person has a low body weight, is a young female, or is having pain due to the test. Other factors that may lead to an incomplete colonoscopy include the presence of scar tissue, diverticulosis (small sacs or pouches in the walls of the colon), or a twisted, looped, or abnormally long colon.

**incomplete penetrance**

A term that describes when some people with a disease-causing mutation (change) in a gene develop the disease while others don't. For example, certain gene mutations cause cancer, but because of incomplete penetrance, not everyone who has the mutation will develop cancer. Currently, there is no way to

know which people who have a cancer-causing gene mutation will develop cancer. Also called reduced penetrance.

### **incontinence**

Inability to control the flow of urine from the bladder (urinary incontinence) or the escape of stool from the rectum (fecal incontinence).

### **incubated**

Grown in the laboratory under controlled conditions. For example, white blood cells can be grown in special conditions so that they attack specific cancer cells when returned to the body.

### **indication**

In medicine, a sign, symptom, or medical condition that leads to the recommendation of a treatment, test, or procedure.

### **indinavir**

A drug that interferes with the ability of a virus to make copies of itself.

### **indirect ophthalmoscopy**

An exam of the inside of the back of the eye using a beam of light and a hand-held lens. Indirect ophthalmoscopy gives a wider view inside the eye than an exam using an ophthalmoscope does.

### **indium In 111-CHX-A DTPA trastuzumab**

A substance being studied in the imaging of breast cancer and some other types of cancer. It is made by attaching a radioactive substance called indium In 111 to the monoclonal antibody trastuzumab. Trastuzumab binds to the human growth factor receptor 2 (HER2/neu) on some breast cancer cells and on several other types of cancer cells. Indium In 111-CHX-A DTPA trastuzumab is a type of radioimmunoconjugate.

### **indium In 111-anti-CEA monoclonal antibody M5A**

A substance being studied in the imaging of some types of cancer. M5A is a monoclonal antibody that binds to a protein called CEA on the surface of some tumor cells. It is linked to a radioisotope called indium In 111. The combined substance is injected into the blood, and a machine is used to find cells in the body that bind to it. Indium In 111-anti-CEA monoclonal antibody M5A is a type of radioimmunoconjugate.

### **indium In 111-ibritumomab tiuxetan**

A radiolabeled monoclonal antibody used to find certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the diagnosis of other types of B-cell tumors. Indium In 111-ibritumomab tiuxetan is made up of the monoclonal antibody ibritumomab plus the radioisotope indium In 111. It binds to a protein called CD20, which is found on B cells. A machine is used to find which cells in the body have taken up indium In 111-ibritumomab tiuxetan. Indium In 111-ibritumomab tiuxetan is a type of radioimmunoconjugate. Also called 111In-ibritumomab tiuxetan and 111In-Zevalin.

### **indium In 111-pentetreotide**

A radioactive drug used to find certain types of neuroendocrine tumors (tumors that form from cells that release hormones). Indium In 111-pentetreotide binds to a protein called somatostatin receptor, which is found on some neuroendocrine tumor cells. Indium In 111-pentetreotide builds up in these cells and gives off

radiation that can be detected by a scanner to help show where the tumor cells are in the body.

### **individualized education plan**

An education plan for children with certain disabilities or health conditions, such as cancer. By law, these children must receive special education services and other support they need in school. An individualized education plan describes which special services the child needs and how those needs will be met. This may include special class placement, extra help with class assignments and tests, tutoring, and other services such as counseling, speech therapy, and physical therapy. Individualized education plans are covered in the U.S. law, Individuals with Disabilities Education Act. Also called IEP.

### **indole**

A type of chemical found in plants and in certain vegetables, such as broccoli, cabbage, and cauliflower. Indoles may promote good health and are being studied in the prevention of certain types of cancer, including breast cancer, prostate cancer, and colon cancer. An indole is a type of phytochemical.

### **indole-3-carbinol**

A substance that is being studied as a cancer prevention drug. It is found in cruciferous vegetables.

### **indolent**

A type of cancer that grows slowly.

### **indolent lymphoma**

A type of lymphoma that tends to grow and spread slowly, and has few symptoms. Also called low-grade lymphoma.

### **indomethacin**

A drug that reduces pain, fever, swelling, and redness. It is also being used to reduce tumor-induced suppression of the immune system and to increase the effectiveness of anticancer drugs. It is a type of nonsteroidal anti-inflammatory drug (NSAID).

### **induction therapy**

The first treatment given for a disease. It is often part of a standard set of treatments, such as surgery followed by chemotherapy and radiation. When used by itself, induction therapy is the one accepted as the best treatment. If it doesn't cure the disease or it causes severe side effects, other treatment may be added or used instead. Also called first-line therapy, primary therapy, and primary treatment.

### **industrial hemp**

An herb that comes from a variant of the Cannabis sativa plant and contains fiber, seeds, and oil used to make many different industrial and consumer products. These include textiles, building materials, paper, fabrics, soap, food, dietary supplements, and cosmetics. Industrial hemp and marijuana come from the same species of Cannabis sativa, but the industrial hemp variant contains very low levels of delta-9-THC (the main active chemical in marijuana that causes drug-like effects in the body). The industrial hemp and marijuana variants of Cannabis sativa have their own chemical and genetic makeup and are regulated, grown, and used in different ways. Also called hemp.



### **infantile fibrosarcoma**

A type of cancer that forms in fibrous (connective) tissue. Infantile fibrosarcoma usually occurs in infants and young children but it may also be found before birth by ultrasound. It can occur anywhere in the body. The tumor is often large and fast-growing, but it rarely spreads to other parts of the body. The cancer cells usually have a certain genetic change called a translocation (part of one chromosome switches places with part of another chromosome). Infantile fibrosarcoma is a type of soft tissue sarcoma. Also called congenital fibrosarcoma.

### **infantile genetic agranulocytosis**

An inherited disorder in which there is a lower-than-normal number of neutrophils (a type of white blood cell that is important in fighting infections). Infants with the disorder get infections caused by bacteria, and are at an increased risk of acute myelogenous leukemia (AML) or myelodysplasia (a bone marrow disorder). Also called congenital neutropenia, genetic infantile agranulocytosis, Kostmann disease, Kostmann neutropenia, and Kostmann syndrome.

### **infantile hemangioma**

A benign (not cancer) blood vessel tumor that forms on the skin, in the tissue below the skin, or in an organ. Infantile hemangiomas may be raised or flat and usually appear as bright red-blue lesions on the skin. They may sometimes be called a “strawberry mark”. They can occur anywhere on or in the body, but usually form on the skin of the head and neck. Infantile hemangiomas are not usually seen at birth but appear when the infant is 3 to 6 weeks old. They usually get bigger, then stop growing and slowly go away on their own. Infantile hemangiomas are the most common type of vascular tumor in children.

### **infantile hemangiopericytoma**

A rare type of soft tissue tumor that begins in cells that wrap around blood vessels. Infantile hemangiopericytomas may be benign (not cancer) or malignant (cancer). They usually occur in infants and young children but may also be found before birth by ultrasound. They can occur anywhere in the body, but usually occur in the arms, legs, pelvis, or head and neck. In children older than 1 year, infantile hemangiopericytomas are more likely to spread to other parts of the body, including the lymph nodes and lungs. Children younger than 1 year may have a better prognosis.

### **infantile myofibromatosis**

A rare condition in which one or more fibrous (connective tissue) tumors form in the skin, muscle, or bone. Sometimes, they also form in internal organs. The tumors are usually benign (not cancer) and do not spread to other parts of the body, but they can grow large and damage nearby organs. They may go away without treatment. Infantile myofibromatosis occurs most often in the first 2 years of life, or it may be present at birth. It is a type of soft tissue tumor.

### **infantile rickets**

A condition in children in which bones become soft and deformed because they don't have enough calcium and phosphorus. It is caused by not having enough vitamin D in the diet or by not getting enough sunlight. In adults, this condition is called osteomalacia. Also called juvenile rickets, rachitis, and rickets.

### **infection**

The invasion and growth of germs in the body. The germs may be bacteria, viruses, yeast, fungi, or other microorganisms. Infections can begin anywhere in

the body and may spread all through it. An infection can cause fever and other health problems, depending on where it occurs in the body. When the body's immune system is strong, it can often fight the germs and cure an infection. Some cancer treatments can weaken the immune system, which may lead to infection.

### **inferior vena cava**

A large vein that empties into the heart. It carries blood from the legs and feet and from organs in the abdomen and pelvis.

### **infertile**

Unable to produce children.

### **infertility**

The inability to produce children.

### **infiltrating breast cancer**

Cancer that has spread from where it began in the breast to surrounding normal tissue. The most common type of infiltrating breast cancer is infiltrating ductal carcinoma, which begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). Another type is infiltrating lobular carcinoma, which begins in the lobules (milk glands) of the breast. Infiltrating breast cancer can spread through the blood and lymph systems to other parts of the body. Also called invasive breast cancer.

### **infiltrating cancer**

Cancer that has spread beyond the layer of tissue in which it developed and is growing into surrounding, healthy tissues. Also called invasive cancer.

### **infiltrating ductal carcinoma**

The most common type of infiltrating breast cancer. It begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple) and spreads outside the ducts to surrounding normal tissue. Infiltrating ductal carcinoma can also spread through the blood and lymph systems to other parts of the body. Also called invasive ductal carcinoma.

### **infiltrating lobular carcinoma**

A type of invasive breast cancer that begins in the lobules (milk glands) of the breast and spreads to surrounding normal tissue. It can also spread through the blood and lymph systems to other parts of the body. Also called invasive lobular carcinoma.

### **inflammation**

A normal part of the body's response to injury or infection. Inflammation occurs when the body releases chemicals that trigger an immune response to fight off infection or heal damaged tissue. Once the injury or infection is healed, the inflammatory process ends. Chronic inflammation is an abnormal immune response in which the inflammatory process does not end when it should or may begin when there is no infection or injury. Over time, chronic inflammation can damage healthy cells, tissues, and organs. This can lead to diseases such as cancer, heart disease, diabetes, asthma, Alzheimer disease, and autoimmune conditions.

**inflammatory**

Having to do with inflammation (redness, swelling, pain, and a feeling of heat that helps protect tissues affected by injury or disease).

**inflammatory bowel disease**

A general term that refers to the inflammation of the colon and rectum. Inflammatory bowel disease includes ulcerative colitis and Crohn disease.

**inflammatory breast cancer**

A type of breast cancer in which the breast looks red and swollen and feels warm. The skin of the breast may also show the pitted appearance called peau d'orange (like the skin of an orange). The redness and warmth occur because the cancer cells block the lymph vessels in the skin.

**inflammatory myofibroblastic tumor**

A rare type of cancer that is made up of smooth muscle cells, connective tissue cells, and certain types of immune cells. It can occur anywhere in the body, but it usually occurs in the lung, abdomen, pelvis, or back of the abdomen. Inflammatory myofibroblastic tumors rarely spread to other parts of the body but they are likely to recur (come back) after treatment. The tumor cells may have a certain genetic change called a translocation (part of one chromosome switches places with part of another chromosome). Inflammatory myofibroblastic tumors usually occur in children and young adults. They are a type of soft tissue sarcoma.

**infiximab**

A monoclonal antibody that blocks the action of a cytokine called tumor necrosis factor alfa. It is being studied in the treatment and prevention of weight loss and loss of appetite in patients with advanced cancer. It belongs to the family of drugs called monoclonal antibodies.

**influenza A virus**

One of three types of virus that cause the illness called influenza (flu). The influenza A virus can infect people, birds, pigs, horses, and other animals. It is the main cause of most influenza epidemics.

**informed consent**

A process in which patients are given important information, including possible risks and benefits, about a medical procedure or treatment, genetic testing, or a clinical trial. This is to help them decide if they want to be treated, tested, or take part in the trial. Patients are also given any new information that might affect their decision to continue. Also called consent process.

**infrared coagulation**

A technique in which abnormal tissue is exposed to a burst of infrared light (a type of radiation). This causes blood in veins in the tissue to coagulate (harden) and the abnormal tissue to shrink. It is being studied in the prevention of anal cancer in some patients with HIV.

**infrared thermography**

In medicine, a procedure in which an infrared camera (one that senses heat) is used to measure temperature differences on the surface of the body. The camera makes pictures that show areas of possible abnormal cell growth because abnormal tissue gives off more heat than normal tissue does.

### **infratentorium**

The lower back part of the brain that contains the cerebellum and brain stem. Examples of tumors that form in the infratentorium are medulloblastomas and brain stem gliomas.

### **infusion**

A method of putting fluids, including drugs, into the bloodstream. Also called intravenous infusion.

### **ingenol mebutate gel**

A drug applied to the skin to treat actinic keratosis (thick, scaly growths on the skin that may become cancer). Ingenol mebutate gel may help kill abnormal cells. It is a type of cytotoxic agent. Also called Picato.

### **ingestion**

Taking into the body by mouth.

### **inguinal orchiectomy**

An operation in which the testicle is removed through an incision in the groin.

### **inhalation**

In medicine, refers to the act of taking a substance into the body by breathing.

### **inhaler**

A device for giving medicines in the form of a spray that is inhaled (breathed in) through the nose or mouth. Inhalers are used to treat certain medical problems, such as bronchitis, angina, emphysema, and asthma. They are also used to help relieve symptoms that occur when a person is trying to quit smoking.

### **inherited**

In medicine, describes the passing of genetic information from parent to child through the genes in sperm and egg cells. Also called hereditary.

### **inherited bone marrow failure syndrome**

A rare disorder in which a person's bone marrow is unable to make enough blood cells and there is a family history of the same disorder. There are several different types of inherited bone marrow failure syndrome, and patients with one of them are at high risk of forming acute leukemia or certain solid tumors. Also called IBMFS.

### **inherited cancer syndrome**

A type of inherited disorder in which there is a higher-than-normal risk of certain types of cancer. Inherited cancer syndromes are caused by mutations (changes) in certain genes passed from parents to children. In an inherited cancer syndrome, certain patterns of cancer may be seen within families. These patterns include having several close family members (such as a mother, daughter, and sister) with the same type of cancer, developing cancer at an early age, or having two or more types of cancer develop in the same person. Examples of inherited cancer syndromes are hereditary breast and ovarian cancer syndrome, Li-Fraumeni syndrome, Cowden syndrome, and Lynch syndrome. Also called family cancer syndrome and hereditary cancer syndrome.

### **inherited erythroblastopenia**

A very rare disorder in which the bone marrow doesn't make enough red blood cells. It is usually seen in the first year of life. Patients may have deformed

thumbs and other physical problems. They also have an increased risk of leukemia and sarcoma, especially osteosarcoma (bone cancer). Patients with inherited erythroblastopenia may have a mutation (change) in one of the genes that make proteins found in the cell's ribosomes. Also called Blackfan–Diamond anemia, congenital hypoplastic anemia, congenital pure red cell aplasia, DBA, Diamond-Blackfan anemia, and erythropoiesis imperfecta.

### **inherited predisposition**

An inherited increase in the risk of developing a disease. Also called genetic predisposition, genetic susceptibility, and hereditary predisposition.

### **iniparib**

A substance being studied in the treatment of some types of cancer. Iniparib may kill cancer cells. Also called BSI-201.

### **injection**

Use of a syringe and needle to push fluids or drugs into the body; often called a "shot."

### **innate immunity**

Immunity that is present at birth and lasts a person's entire life. Innate immunity is the first response of the body's immune system to a harmful foreign substance. When foreign substances, such as bacteria or viruses, enter the body, certain cells in the immune system can quickly respond and try to destroy them. Innate immunity also includes barriers, such as skin, mucous membranes, tears, and stomach acid, that help keep harmful substances from entering the body.

### **inoperable**

Describes a condition that cannot be treated by surgery.

### **inositol**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Inositol helps cells make membranes and respond to messages from their environment. It has the same chemical formula as glucose (the chief source of energy for living organisms) but has a different arrangement of atoms. It is found in beans, peas, brown rice, wheat bran and nuts. It is water-soluble (can dissolve in water) and must be taken in every day. Inositol is being studied in the prevention of cancer. Also called myoinositol.

### **inositol hexaphosphate**

A substance found in many foods that come from plants, including corn, wheat, rice, and soybeans, and in large amounts in cereals and legumes. It is being studied in the prevention of cancer. Also called IP6 and phytic acid.

### **inotuzumab ozogamicin**

A drug used to treat adults and children aged 1 year and older with B-cell acute lymphoblastic leukemia that is CD22 positive (expresses the protein CD22). It is used in patients whose cancer came back or did not get better with other treatment. It is also being studied in the treatment of other types of cancer. Inotuzumab ozogamicin contains a monoclonal antibody that binds to CD22, which is found on some leukemia cells. It also contains an anticancer drug, which may help kill cancer cells. Inotuzumab ozogamicin is a type of antibody-drug conjugate. Also called Besponsa.

**insomnia**

Difficulty in going to sleep or getting enough sleep.

**instillation**

In medicine, a method used to put a liquid into the body slowly or drop by drop.

**insulin**

A hormone made by the islet cells of the pancreas. Insulin controls the amount of sugar in the blood by moving it into the cells, where it can be used by the body for energy.

**insulin glargine**

A drug used to control the amount of sugar in the blood of patients with diabetes. It is a form of the hormone insulin that is made in the laboratory. Insulin glargine controls blood sugar longer than insulin does. It is a type of therapeutic insulin. Also called insulin glargine recombinant and Lantus.

**insulin glargine recombinant**

A drug used to control the amount of sugar in the blood of patients with diabetes. It is a form of the hormone insulin that is made in the laboratory. Insulin glargine recombinant controls blood sugar longer than insulin does. It is a type of therapeutic insulin. Also called insulin glargine and Lantus.

**insulin glulisine**

A drug used to control the amount of sugar in the blood of patients with diabetes mellitus. It is a form of the hormone insulin that is made in the laboratory. Insulin glulisine gets into the blood faster than insulin when it is injected under the skin before or shortly after a meal. It is a type of therapeutic insulin. Also called Apidra.

**insulin-like growth factor**

A protein made by the body that stimulates the growth of many types of cells. Insulin-like growth factor is similar to insulin (a hormone made in the pancreas). There are two forms of insulin-like growth factor called IGF-1 and IGF-2. Higher than normal levels of IGF-1 may increase the risk of several types of cancer. Insulin-like growth factor is a type of growth factor and a type of cytokine. Also called IGF and somatomedin.

**insulin-like growth factor receptor**

A protein found on the surface of some types of cells that binds to insulin-like growth factor (IGF). This causes the cells to grow and divide. Insulin-like growth factor receptor is found at high levels on the surface of several types of cancer cells, which causes these cells to grow rapidly in the presence of IGF. Also called IGF-R.

**insulinoma**

An abnormal mass that grows in the beta cells of the pancreas that make insulin. Insulinomas are usually benign (not cancer). They secrete insulin and are the most common cause of low blood sugar caused by having too much insulin in the body. Also called beta cell neoplasm, beta cell tumor of the pancreas, and pancreatic insulin-producing tumor.

**integrative medicine**

An approach to medical care that recognizes the benefit of combining conventional (standard) therapies (such as drugs and surgery) with



complementary therapies (such as acupuncture and yoga) that have been shown to be safe and effective. For example, acupuncture may be used with certain drugs to help lessen cancer pain or nausea and vomiting. Integrative medicine tries to address the physical, emotional, social, spiritual, and environmental factors that can affect a person's health and well-being.

### **integrin**

A type of protein found on the surface of cells that helps them attach to, and communicate with, nearby cells. Integrins also help cells attach to large molecules in the extracellular matrix, the substance that surrounds and gives structure to cells. Integrins help cells receive signals from other cells and from the surrounding environment, and they help control the activity of certain genes. They play an important role in cell growth, cell movement, and other cell functions. Integrins are involved in wound healing, blood vessel growth, and in the growth and spread of cancer cells. Drugs that target integrins are being studied in the treatment of some types of cancer.

### **intensification therapy**

Treatment that is given after cancer has disappeared following the initial therapy. Intensification therapy is used to kill any cancer cells that may be left in the body. It may include radiation therapy, a stem cell transplant, or treatment with drugs that kill cancer cells. Also called consolidation therapy and postremission therapy.

### **intensity-modulated radiation therapy**

A type of 3-dimensional radiation therapy that uses computer-generated images to show the size and shape of the tumor. Thin beams of radiation of different intensities are aimed at the tumor from many angles. This type of radiation therapy reduces the damage to healthy tissue near the tumor. Also called IMRT.

### **intensive chemotherapy**

Treatment that uses anticancer drugs given at high doses or over several months to try to cure cancer or cause a remission. Intensive chemotherapy is used to treat certain types of cancer, including leukemia and lymphoma, and may be given with other therapy before a bone marrow or stem cell transplant. It can lower the number of normal blood-forming cells in the bone marrow and can cause other severe side effects, so it is usually given in a hospital.

### **intercellular communication**

The transfer of information from one cell to another. Cells signal each other by direct contact with each other or by the release of a substance from one cell that is taken up by another cell. Intercellular communication is important for cells to grow and work normally. Cells that lose the ability to respond to signals from other cells may become cancer cells. Also called cell-cell signaling and cell-to-cell signaling.

### **interfering thought**

An unpleasant memory or idea that occurs often in a person's everyday thoughts and keeps him or her from thinking about other things. Interfering thoughts can make sleep difficult and make a person unable to carry out daily activities. Also called intrusive thought.

### **interferon**

A natural substance that helps the body's immune system fight infection and other diseases, such as cancer. Interferons are made in the body by white blood

cells and other cells, but they can also be made in the laboratory to use as treatments for different diseases. In cancer therapy, interferons may help keep cancer cells from growing and may help kill cancer cells. There are three main types of interferons: interferon-alfa, interferon-beta, and interferon-gamma. An interferon is a type of cytokine and type of immunomodulating agent.

### **interferon alfa-2b**

A drug used alone or with other drugs to treat adults with AIDS-related Kaposi sarcoma, hairy cell leukemia, certain types of follicular lymphoma or melanoma, genital warts or perianal warts, or chronic hepatitis B or C. It is also being studied in the treatment of other types of cancer and other conditions. Interferon alfa-2b is a form of interferon alfa (a substance normally made by cells in the immune system) that is made in the laboratory. It is a type of cytokine and a type of immunomodulating agent. Also called IFN alpha-2B, Intron A, and recombinant interferon alfa-2b.

### **interleukin**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukins regulate immune responses. Interleukins made in the laboratory are used as biological response modifiers to boost the immune system in cancer therapy. An interleukin is a type of cytokine. Also called IL.

### **interleukin-1**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-1 is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. There are two forms of interleukin-1, alpha and beta, which act the same. Interleukin-1 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-1 is a type of cytokine. Also called IL-1.

### **interleukin-1-alfa**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-1-alfa, one form of interleukin-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of interleukin-1, interleukin-1-beta, acts the same as interleukin-1-alfa. Interleukin-1-alfa made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-1-alfa is a type of cytokine. Also called IL-1-alfa, IL-1-alpha, and interleukin-1-alpha.

### **interleukin-1-alpha**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-1-alpha, one form of interleukin-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of interleukin-1, interleukin-1-beta, acts the same as interleukin-1-alpha. Interleukin-1-alpha made in the laboratory is used as a biological response modifier to boost the

immune system in cancer therapy. Interleukin-1-alpha is a type of cytokine. Also called IL-1-alfa, IL-1-alpha, and interleukin-1-alfa.

### **interleukin-1-beta**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-1-beta, one form of interleukin-1, is made mainly by one type of white blood cell, the macrophage, and helps another type of white blood cell, the lymphocyte, fight infections. It also helps leukocytes pass through blood vessel walls to sites of infection and causes fever by affecting areas of the brain that control body temperature. The other form of interleukin-1, interleukin-1-alpha, acts the same as interleukin-1-beta. Interleukin-1-beta made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-1-beta is a type of cytokine. Also called IL-1-beta and IL-1B.

### **interleukin-10**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-10 is made by activated macrophages and by some T lymphocytes. It reduces inflammation by blocking production of cytokines by immune cells. Interleukin-10 also increases antibody production by plasma cells and helps them live longer. Interleukin-10 made in the laboratory is used as a biological response modifier to boost the immune system. It is a type of cytokine. Also called IL-10.

### **interleukin-11**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-11 is made by support cells in the bone marrow. It causes the growth of several types of blood cells. Oprelvekin (interleukin-11 made in the laboratory) is used as a biological response modifier to increase the number of platelets, especially in patients receiving chemotherapy for cancer. Interleukin-11 is a type of cytokine. Also called IL-11.

### **interleukin-12**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-12 is made mainly by B lymphocytes and macrophages. It causes other immune cells to make cytokines and increases the growth of T lymphocytes. It may also block the growth of new blood vessels. Interleukin-12 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-12 is a type of cytokine. Also called IL-12.

### **interleukin-13**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-13 is made by a type of T lymphocyte. It reduces inflammation by blocking production of cytokines by macrophages. It also increases the number and activity of B lymphocytes. Interleukin-13 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. It is a type of cytokine. Also called IL-13.

### **interleukin-13 PE38QQR immunotoxin**

A substance being studied in the treatment of cancer. It is made by combining interleukin-13 with a toxin from Pseudomonas bacteria. It is a type of recombinant chimeric protein.

### **interleukin-2**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-2 is made by a type of T lymphocyte. It increases the growth and activity of other T lymphocytes and B lymphocytes, and affects the development of the immune system. Aldesleukin (interleukin-2 made in the laboratory) is being used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-2 is a type of cytokine. Also called IL-2.

### **interleukin-3**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-3 is made mainly by a type of T lymphocyte. It increases the number of blood cells made by the bone marrow. Interleukin-3 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-3 is a type of cytokine. Also called IL-3.

### **interleukin-4**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-4 is made by a type of T lymphocyte. It causes B lymphocytes to increase and to make antibodies and also increases the production of T lymphocytes. Interleukin-4 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-4 is a type of cytokine. Also called IL-4.

### **interleukin-4 PE38KDEL cytotoxin**

A substance being studied in the treatment of cancer. It is made by combining interleukin-4 with a bacterial toxin. Interleukin-4 PE38KDEL cytotoxin is a type of recombinant chimeric protein. Also called interleukin-4 PE38KDEL immunotoxin and NBI-3001.

### **interleukin-4 PE38KDEL immunotoxin**

A substance being studied in the treatment of cancer. It is made by combining interleukin-4 with a bacterial toxin. Interleukin-4 PE38KDEL immunotoxin is a type of recombinant chimeric protein. Also called interleukin-4 PE38KDEL cytotoxin and NBI-3001.

### **interleukin-5**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-5 is made mainly by some T lymphocytes. It causes B lymphocytes to make more antibodies and increases the number of eosinophils. Interleukin-5 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. It is a type of cytokine. Also called IL-5.

### **interleukin-6**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-6 is made mainly by some T lymphocytes. It causes B lymphocytes to make more antibodies and also causes fever by affecting areas of the brain that control body temperature. Interleukin-6 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-6 is a type of cytokine. Also called IL-6.

### **interleukin-7**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Interleukin-7 is made by cells that cover and support organs, glands, and other structures in the body. It causes the growth of T lymphocytes and B lymphocytes. Interleukin-7 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Interleukin-7 is a type of cytokine. Also called IL-7 and lymphopoietin-1.

### **intermediate grade**

A term used to describe how abnormal cancer cells look under a microscope. Intermediate-grade cancer cells look more abnormal than low-grade cancer cells but not as abnormal as high-grade cancer cells. They also tend to grow and spread more quickly than low-grade cancer cells but not as quickly as high-grade cancer cells. Cancer cell grade, along with cancer type and stage, may be used to help plan treatment and determine prognosis.

### **intermediate-grade DCIS**

A condition in which cells that look somewhat abnormal under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Intermediate-grade DCIS tends to grow more quickly than low-grade DCIS but not as quickly as high-grade DCIS. It is also more likely than low-grade DCIS to come back or become invasive breast cancer and spread to other tissues but not as likely as high-grade DCIS. Also called grade II DCIS, grade II ductal carcinoma in situ, and intermediate-grade ductal carcinoma in situ.

### **intermediate-grade ductal carcinoma in situ**

A condition in which cells that look somewhat abnormal under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Intermediate-grade ductal carcinoma in situ tends to grow more quickly than low-grade ductal carcinoma in situ but not as quickly as high-grade ductal carcinoma in situ. It is also more likely than low-grade ductal carcinoma in situ to come back or become invasive breast cancer and spread to other tissues but not as likely as high-grade ductal carcinoma in situ. Also called grade II DCIS, grade II ductal carcinoma in situ, and intermediate-grade DCIS.

### **intermediate-grade lymphoma**

A type of lymphoma that grows and spreads quickly and has severe symptoms. Also called aggressive lymphoma and high-grade lymphoma.

### **internal exam**

A physical exam of the vulva, vagina, cervix, uterus, fallopian tubes, ovaries, and rectum. First, the vulva is checked for redness, swelling, sores, or other abnormalities. A speculum is then inserted into the vagina to widen it so the vagina and cervix can be checked for signs of disease. Cell samples may be taken for a Pap test or HPV test to screen for cervical cancer. The health care provider then inserts one or two lubricated, gloved fingers of one hand into the vagina and presses on the lower abdomen with the other hand to feel for lumps and check the size, shape, and position of the uterus and ovaries. The rectum may also be checked for lumps or abnormal areas. Also called pelvic exam.

### **internal medicine**

A branch of medicine that specializes in preventing, diagnosing, and treating diseases in adults, without using surgery. An internal medicine doctor is often a

person's main health care provider and may coordinate treatment given by other specialists.

### **internal radiation therapy**

A type of radiation therapy in which a radioactive substance is sealed inside materials that can be implanted, such as pellets, seeds, ribbons, wires, needles, or capsules, and placed inside the body, directly into or near a tumor or within a body cavity. The implant may be placed through a small flexible tube called a catheter or through an applicator device. It may be kept in place for a few minutes, for many days, or for the rest of a person's life. Internal radiation therapy is often used to treat cancers of the head and neck, breast, cervix, prostate, and eye. Also called brachytherapy, implant radiation therapy, and radiation brachytherapy.

### **internal tandem duplication**

A type of genetic change in which a DNA sequence in a gene is copied and inserted right after the original DNA sequence. This changes the sequence of the gene, which can affect the function of the protein made from the gene. Internal tandem duplications are associated with certain types of cancer, such as acute myeloid leukemia. Also called ITD.

### **internist**

A doctor who has special training in internal medicine. An internist works with adult patients to prevent, diagnose, and treat diseases without using surgery.

### **interstitial cell-stimulating hormone**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make follicles release their eggs and to make hormones that get the uterus ready for a fertilized egg to be implanted. In males, it acts on the testes to cause cells to grow and make testosterone. Also called LH, luteinizing hormone, and lutropin.

### **interstitial fluid**

Fluid found in the spaces around cells. It comes from substances that leak out of blood capillaries (the smallest type of blood vessel). It helps bring oxygen and nutrients to cells and to remove waste products from them. As new interstitial fluid is made, it replaces older fluid, which drains towards lymph vessels. When it enters the lymph vessels, it is called lymph. Also called tissue fluid.

### **interstitial radiation therapy**

A type of internal radiation therapy in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into a tumor or body tissue.

### **interval breast cancer**

Breast cancer that is diagnosed during the time between a regular screening mammogram that appears normal and the next screening mammogram. A "true" interval breast cancer was not present when the last screening mammogram was done. A "missed" interval breast cancer was present but missed when the last screening mammogram was read. Interval breast cancers tend to be larger, grow and spread more quickly, and have a worse prognosis than those found on screening mammograms. Researchers are studying interval breast cancer to learn how to identify women who may need more frequent mammograms or other screening tests for breast cancer.



**intervention**

In medicine, a treatment, procedure, or other action taken to prevent or treat disease, or improve health in other ways.

**intervention group**

The group in a clinical research study that receives the drug, vaccine, or other intervention being tested. Interventions may also include medical procedures (such as radiation therapy and surgery), medical devices, behavior changes (such as diet and exercise), education programs, and counseling. Also called experimental group and investigational group.

**intestinal**

Having to do with the intestines.

**intestinal flora**

Bacteria and other organisms that live inside the intestines. They help digest food. Vitamins such as biotin and vitamin K are made by intestinal flora. Also called gut flora, gut microflora, intestinal microflora, and microflora.

**intestinal microflora**

Bacteria and other organisms that live inside the intestines. They help digest food. Vitamins such as biotin and vitamin K are made by intestinal microflora. Also called gut flora, gut microflora, intestinal flora, and microflora.

**intestinal obstruction**

A partial or complete block of the small or large intestine that keeps food, liquid, gas, and stool from moving through the intestines in a normal way. Intestinal obstructions may be caused by a twist in the intestines, hernias, inflammation, scar tissue from surgery, and certain types of cancer, such as cancers of the stomach, colon, and ovary. They may also be caused by conditions that affect the muscles of the intestine, such as paralysis. Signs and symptoms may include pain and swelling in the abdomen, constipation, diarrhea, vomiting, and problems passing gas. Most intestinal obstructions occur in the small intestine. Also called bowel obstruction.

**intestinal villi**

Tiny hair-like projections that line the inside of the small intestine. They contain blood vessels and help absorb nutrients.

**intestine**

The long, tube-shaped organ in the abdomen that completes the process of digestion. The intestine has two parts, the small intestine and the large intestine. Also called bowel.

**intoplicine**

A substance that has been studied in the treatment of some types of cancer. Intoplicine blocks certain enzymes needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor.

**intoxicating pepper**

An herb native to islands in the South Pacific. Substances taken from the root have been used in some cultures to relieve stress, anxiety, tension, sleeplessness, and problems of menopause. Intoxicating pepper may increase the effect of alcohol and of certain drugs used to treat anxiety and depression. The U.S. Food and Drug Administration advises users that intoxicating pepper

may cause severe liver damage. The scientific name is *Piper methysticum*. Also called kava kava, rauschpfeffer, tonga, and yangona.

**intra-arterial**

Within an artery (blood vessel that carries blood from the heart to tissues and organs in the body).

**intra-arterial brachytherapy**

A type of radiation therapy used to treat liver cancer or cancer that has spread to the liver. A thin, flexible tube is used to inject tiny beads that hold the radioactive substance yttrium Y 90 into the main blood vessel that carries blood to the liver. The beads collect in the tumor and in blood vessels near the tumor, and the yttrium Y 90 gives off radiation. This destroys the blood vessels that the tumor needs to grow and kills the cancer cells. Intra-arterial brachytherapy is a type of internal radiation therapy. Also called radioembolization.

**intracarotid infusion**

The introduction of fluids and drugs directly into the carotid artery, the main artery in the neck that carries blood from the heart to the brain.

**intracavitary**

Within a cavity or space, such as the abdomen, pelvis, or chest.

**intracavitary radiation therapy**

A type of internal radiation therapy in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into a body cavity such as the chest cavity or the vagina.

**intracellular**

Inside a cell.

**intracellular matrix**

The large network consisting of protein fibers and other molecules that gives shape and structure to cells in the body. The intracellular matrix helps organize structures within the cell called organelles and other substances found in the fluid inside the cell. It plays an important role in many cell functions, including cell movement, signaling, and division. Abnormal changes in the intracellular matrix may lead to the development of many different diseases, including cancer. The intracellular matrix can also affect how cancer cells grow and spread in the body. Also called cytoskeleton.

**intracolonic**

Within the colon.

**intracranial tumor**

A tumor that occurs in the brain.

**intracutaneous**

Within the skin. Also called intradermal.

**intradermal**

Within the skin. Also called intracutaneous.

### **intraductal breast carcinoma**

A condition in which abnormal cells are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. In some cases, intraductal breast carcinoma may become invasive breast cancer and spread to other tissues. At this time, there is no way to know which abnormal cells could become invasive. Also called DCIS and ductal carcinoma in situ.

### **intraductal breast papilloma**

A benign (not cancer), wart-like growth in a milk duct of the breast. It is usually found close to the nipple and may cause a discharge from the nipple. It may also cause pain and a lump in the breast that can be felt. It usually affects women aged 35-55 years. Having a single papilloma does not increase the risk of breast cancer. When there are multiple intraductal breast papillomas, they are usually found farther from the nipple. There may not be a nipple discharge and the papillomas may not be felt. Having multiple intraductal breast papillomas may increase the risk of breast cancer. Also called intraductal papilloma.

### **intraductal carcinoma of the prostate**

A type of cancer that usually begins in the glandular (secretory) tissue that lines the prostate and spreads to the ducts within the prostate. Intraductal carcinoma of the prostate tends to be large when it is found and tends to grow and spread quickly to other parts of the body. It usually has a poor prognosis (chance of recovery) and is likely to come back after treatment. Also called IDC-P and intraductal prostate carcinoma.

### **intraductal papilloma**

A benign (not cancer), wart-like growth in a milk duct of the breast. It is usually found close to the nipple and may cause a discharge from the nipple. It may also cause pain and a lump in the breast that can be felt. It usually affects women aged 35-55 years. Having a single papilloma does not increase the risk of breast cancer. When there are multiple intraductal papillomas, they are usually found farther from the nipple. There may not be a nipple discharge and the papillomas may not be felt. Having multiple intraductal papillomas may increase the risk of breast cancer. Also called intraductal breast papilloma.

### **intraductal prostate carcinoma**

A type of cancer that usually begins in the glandular (secretory) tissue that lines the prostate and spreads to the ducts within the prostate. Intraductal prostate carcinoma tends to be large when it is found and tends to grow and spread quickly to other parts of the body. It usually has a poor prognosis (chance of recovery) and is likely to come back after treatment. Also called IDC-P and intraductal carcinoma of the prostate.

### **intraepithelial**

Within the layer of cells that form the surface or lining of an organ.

### **intraepithelial neoplasia**

A term used to describe the presence of abnormal cells on the surface of or in the tissue that lines an organ, such as the cervix, breast, prostate, anus, vagina, vulva, penis, and mouth. The changes in the cells may be low grade or high grade, depending on how abnormal the cells look under a microscope and how much of the tissue is affected. Sometimes, the abnormal cells may become cancer and spread to nearby normal tissue. Also called IEN.

**intrahepatic**

Within the liver.

**intrahepatic bile duct**

A bile duct that passes through and drains bile from the liver.

**intrahepatic bile duct cancer**

A rare cancer that forms in the bile ducts inside the liver. A bile duct is a tube that carries bile (fluid made by the liver) between the liver and gallbladder and the small intestine. Only a small number of bile duct cancers are intrahepatic.

**intrahepatic infusion**

The delivery of anticancer drugs directly to the blood vessels of the liver.

**intralesional**

Within an area of cancer, for example, within a tumor in the skin.

**intraluminal intubation and dilation**

A procedure in which a plastic or metal tube is inserted through the mouth into the esophagus (the tube that carries food to the stomach) to keep it open. This procedure may be used during radiation therapy for esophageal cancer.

**intramuscular**

Within or into muscle. Also called IM.

**intramuscular injection**

Injection into muscle.

**intraocular**

Within the eyeball.

**intraocular melanoma**

A rare cancer that begins in the cells that make the dark-colored pigment, called melanin, in the uvea or uveal tract of the eye. The uvea is the middle layer of the wall of the eye and includes the iris, the ciliary body, and the choroid. Intraocular melanoma of the iris is usually a small tumor that grows slowly and rarely spreads to other parts of the body. Intraocular melanoma of the ciliary body and choroid are usually larger tumors and are more likely to spread to other parts of the body. Intraocular melanoma is the most common type of eye cancer in adults. Also called uveal melanoma.

**intraoperative radiation therapy**

Radiation treatment aimed directly at a tumor during surgery. Also called IORT.

**intraoperative ultrasound**

A procedure that uses ultrasound (high-energy sound waves that are bounced off internal tissues and organs) during surgery. Sonograms (pictures made by ultrasound) of the inside of the body are viewed on a computer to help a surgeon find tumors or other problems during the operation. Also called IOUS.

**intrapelvic**

Within the pelvis, the lower part of the abdomen between the hip bones.

**intrapericardial chemotherapy**

A type of treatment in which anticancer drugs are injected through a thin tube directly into the pericardium (the sac around the heart). Intrapericardial

chemotherapy may be used to treat a condition called malignant pericardial effusion, in which fluid collects in the pericardium. It is most often caused by lung cancer, breast cancer, melanoma, leukemia, and lymphoma.

### **intraperitoneal**

Within the peritoneal cavity (the area that contains the abdominal organs). Also called IP.

### **intraperitoneal chemotherapy**

Treatment in which anticancer drugs are put directly into the abdominal cavity through a thin tube.

### **intraperitoneal infusion**

A method of delivering fluids and drugs directly into the abdominal cavity through a thin tube. Also called peritoneal infusion.

### **intraperitoneal radiation therapy**

Treatment in which a radioactive liquid is put directly into the abdomen through a thin tube.

### **intrapleural**

Within the pleural cavity.

### **intraspinal**

Within the spine (backbone).

### **intrathecal**

Describes the fluid-filled space between the thin layers of tissue that cover the brain and spinal cord. Drugs can be injected into the fluid or a sample of the fluid can be removed for testing.

### **intrathecal chemotherapy**

Treatment in which anticancer drugs are injected into the fluid-filled space between the thin layers of tissue that cover the brain and spinal cord.

### **intratumoral**

Within a tumor.

### **intrauterine**

Inside the uterus (the small, hollow, pear-shaped organ in a woman's pelvis in which a fetus develops).

### **intrauterine device**

A small, plastic T-shaped device that is placed inside the uterus (the small, hollow, pear-shaped organ in a woman's pelvis in which a fetus develops) to prevent pregnancy. Intrauterine devices prevent sperm from fertilizing an egg, and prevent fertilized eggs from implanting in the uterus. The use of intrauterine devices is also being studied in the prevention and treatment of endometrial cancer and other conditions. Also called IUD.

### **intravaginal**

Having to do with the inside of the vagina (the birth canal).

### **intravasation**

The movement of a cell or a foreign substance through the wall of a blood or lymph vessel into the vessel itself. In cancer, this is how cancer cells pass

through a vessel wall and enter the blood or lymph systems. It is one way that cancer spreads in the body.

### **intravenous**

Into or within a vein. Intravenous usually refers to a way of giving a drug or other substance through a needle or tube inserted into a vein. Also called IV.

### **intravenous chemotherapy**

Treatment in which anticancer drugs are given through a needle or tube inserted into a vein. The anticancer drugs travel through the blood to kill cancer cells in the body.

### **intravenous immunoglobulin**

A substance made from antibodies that have been taken from the blood of many healthy donors. It is given to a patient through a needle or tube inserted into a vein. Intravenous immunoglobulins are used to treat certain types of immune disorders in which there are low amounts of antibodies in the blood. They are also used to treat many different autoimmune disorders, infections, or other conditions. They may also be used to help prevent infections in patients who have had a stem cell or organ transplant. Intravenous immunoglobulins are a type of immunotherapy. Also called IVIG.

### **intravenous infusion**

A method of putting fluids, including drugs, into the bloodstream. Also called infusion.

### **intravenous injection**

Injection into a vein.

### **intravenous pyelogram**

An x-ray image of the kidneys, ureters, and bladder, and prostate in men, that is taken after a contrast dye is injected into a vein. As the dye travels through the bloodstream, it collects in these organs, turning them bright white. This allows the health care provider to see blockages or other urinary tract problems on the x-ray pictures. An intravenous pyelogram may be used to help diagnose certain urinary tract conditions, such as kidney or bladder stones, kidney cysts, urinary tract tumors, and an enlarged prostate. Also called intravenous urogram, IVP, and IVU.

### **intravenous pyelography**

An x-ray exam of the kidneys, ureters, and bladder, and prostate in men, that uses a contrast dye injected into a vein. As the dye travels through the bloodstream, it collects in these organs, turning them bright white. This allows the health care provider to see blockages or other urinary tract problems on the x-ray pictures. Intravenous pyelography may be used to help diagnose certain urinary tract conditions, such as kidney or bladder stones, kidney cysts, urinary tract tumors, and an enlarged prostate. Also called intravenous urography.

### **intravenous urogram**

An x-ray image of the kidneys, ureters, and bladder, and prostate in men, that is taken after a contrast dye is injected into a vein. As the dye travels through the bloodstream, it collects in these organs, turning them bright white. This allows the health care provider to see blockages or other urinary tract problems on the x-ray pictures. An intravenous urogram may be used to help diagnose certain urinary tract conditions, such as kidney or bladder stones, kidney cysts, urinary



tract tumors, and an enlarged prostate. Also called intravenous pyelogram, IVP, and IVU.

### **intravenous urography**

An x-ray exam of the kidneys, ureters, and bladder, and prostate in men, that uses a contrast dye injected into a vein. As the dye travels through the bloodstream, it collects in these organs, turning them bright white. This allows the health care provider to see blockages or other urinary tract problems on the x-ray pictures. Intravenous urography may be used to help diagnose certain urinary tract conditions, such as kidney or bladder stones, kidney cysts, urinary tract tumors, and an enlarged prostate. Also called intravenous pyelography.

### **intraventricular infusion**

The delivery of a drug into a fluid-filled cavity within the heart or brain.

### **intravesical**

Within the bladder.

### **intravesical chemotherapy**

Treatment in which anticancer drugs are put directly into the bladder through a thin, flexible tube inserted into the urethra (the tube through which urine leaves the body from the bladder). Intravesical chemotherapy may be used to treat some types of early-stage bladder cancer.

### **intravitreal chemotherapy**

Treatment in which anticancer drugs are injected directly into the vitreous humor (gel-like fluid inside the eye). Intravitreal chemotherapy is used to treat retinoblastoma that has spread to the vitreous humor and has come back or has not gotten better after other treatment.

### **intrusive thought**

An unpleasant memory or idea that occurs often in a person's everyday thoughts and keeps him or her from thinking about other things. Interfering thoughts can make sleep difficult and make a person unable to carry out daily activities. Also called interfering thought.

### **intubation**

A procedure in which a tube is inserted through the mouth or nose into the trachea (windpipe) or into a hollow organ, such as the stomach. Intubation of the trachea is usually done to keep a person's airway open so oxygen can flow into the lungs and to help a person breathe when they cannot breathe on their own. It may also be done to give medicine directly into the lungs, to keep food or fluid from getting into the lungs, or to remove blockages from the airway. Intubation of the stomach is usually done to remove air or other substances from the stomach or to give drugs or liquid foods into the stomach or small intestine.

### **invasive breast cancer**

Cancer that has spread from where it began in the breast to surrounding normal tissue. The most common type of invasive breast cancer is invasive ductal carcinoma, which begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). Another type is invasive lobular carcinoma, which begins in the lobules (milk glands) of the breast. Invasive breast cancer can spread through the blood and lymph systems to other parts of the body. Also called infiltrating breast cancer.

**invasive cancer**

Cancer that has spread beyond the layer of tissue in which it developed and is growing into surrounding, healthy tissues. Also called infiltrating cancer.

**invasive cervical cancer**

Cancer that has spread from the surface of the cervix to tissue deeper in the cervix or to other parts of the body.

**invasive ductal carcinoma**

The most common type of invasive breast cancer. It begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple) and spreads outside the ducts to surrounding normal tissue. Invasive ductal carcinoma can also spread through the blood and lymph systems to other parts of the body. Also called infiltrating ductal carcinoma.

**invasive hydatidiform mole**

A type of cancer that grows into the muscular wall of the uterus. It is formed after conception (fertilization of an egg by a sperm). It may spread to other parts of the body, such as the vagina, vulva, and lung. Also called chorioadenoma destruens.

**invasive lobular carcinoma**

A type of invasive breast cancer that begins in the lobules (milk glands) of the breast and spreads to surrounding normal tissue. It can also spread through the blood and lymph systems to other parts of the body. Also called infiltrating lobular carcinoma.

**invasive procedure**

A medical procedure that invades (enters) the body, usually by cutting or puncturing the skin or by inserting instruments into the body.

**inverted nipple**

A nipple that turns inward into the breast or lies flat against the breast. An inverted nipple may be present at birth or may be caused by aging, breastfeeding, breast surgery, injury, infection, or certain breast conditions. It may also be a sign of breast cancer. Also called retracted nipple.

**inverted papilloma**

A type of tumor in which surface epithelial cells grow downward into the underlying supportive tissue. It may occur in the nose and/or sinuses or in the urinary tract (bladder, renal pelvis, ureter, urethra). When it occurs in the nose or sinuses, it may cause symptoms similar to those caused by sinusitis, such as nasal congestion. When it occurs in the urinary tract, it may cause blood in the urine.

**investigational**

In clinical trials, refers to a drug (including a new drug, dose, combination, or route of administration) or procedure that has undergone basic laboratory testing and received approval from the U.S. Food and Drug Administration (FDA) to be tested in human subjects. A drug or procedure may be approved by the FDA for use in one disease or condition, but be considered investigational in other diseases or conditions. Also called experimental.

**investigational agent**

A substance that has been tested in the laboratory and has been approved by the U.S. Food and Drug Administration (FDA) for testing in people. Clinical trials

test how well investigational agents work and whether they are safe to use. An investigational agent may be approved by the FDA for use in one disease or condition but still be considered investigational in other diseases or conditions. Also called experimental drug, IND, investigational drug, and investigational new drug.

### **investigational drug**

A substance that has been tested in the laboratory and has been approved by the U.S. Food and Drug Administration (FDA) for testing in people. Clinical trials test how well investigational drugs work and whether they are safe to use. An investigational drug may be approved by the FDA for use in one disease or condition but still be considered investigational in other diseases or conditions. Also called experimental drug, IND, investigational agent, and investigational new drug.

### **investigational group**

The group in a clinical research study that receives the drug, vaccine, or other intervention being tested. Interventions may also include medical procedures (such as radiation therapy and surgery), medical devices, behavior changes (such as diet and exercise), education programs, and counseling. Also called experimental group and intervention group.

### **investigational new drug**

A substance that has been tested in the laboratory and has been approved by the U.S. Food and Drug Administration (FDA) for testing in people. Clinical trials test how well investigational new drugs work and whether they are safe to use. An investigational new drug may be approved by the FDA for use in one disease or condition but still be considered investigational in other diseases or conditions. Also called experimental drug, IND, investigational agent, and investigational drug.

### **investigator**

In research, a person who is involved in running a clinical trial or research study. The investigator may help prepare and carry out the protocol (plan) for the study, monitor the safety of the study, collect and analyze the data, and report the results of the study. Investigators can include doctors, scientists, nurses, and other research staff. Some clinical trials or research studies may have more than one investigator. Usually one of the investigators is the principal investigator, who is in charge of the whole study.

### **inviabile**

Not able to survive.

### **involuntary**

An action that is not made by choice. In the body, involuntary actions (such as blushing) occur automatically, and cannot be controlled by choice.

### **involuntary nervous system**

The part of the nervous system that controls muscles of internal organs (such as the heart, blood vessels, lungs, stomach, and intestines) and glands (such as salivary glands and sweat glands). One part of the involuntary nervous system helps the body rest, relax, and digest food and another part helps a person fight or take flight in an emergency. Also called ANS and autonomic nervous system.

### **iobenguane I 123**

A drug containing a form of radioactive iodine called I 123 that is used to find certain types of tumors, including pheochromocytomas and neuroblastomas. Radiation from I 123 may help show where cancer cells are in the body. Iobenguane I 123 is a type of radioconjugate. Also called 123I-MIBG, AdreView, and iodine I 123-metaiodobenzylguanidine.

### **iobenguane I 131**

A drug that contains a form of radioactive iodine and is used to treat adults and children aged 12 years and older with certain types of malignant pheochromocytoma or paraganglioma that have spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Iobenguane I 131 builds up in tumor cells and gives off radiation that may kill them. It is a type of radiotherapeutic agent. Also called 131I-MIBG, Azedra, and iodine I 131-metaiodobenzylguanidine.

### **iobenguane scan**

A procedure used to find neuroendocrine tumors, such as neuroblastomas and pheochromocytomas. A small amount of a substance called radioactive iobenguane is injected into a vein and travels through the bloodstream. Neuroendocrine tumor cells take up the radioactive iobenguane and are detected by a scanner. Also called metaiodobenzylguanidine scan and MIBG scan.

### **iodine**

An element that is necessary for the body to make thyroid hormone. It is found in shellfish and iodized salt.

### **iodine I 123-metaiodobenzylguanidine**

A drug containing a form of radioactive iodine called I 123 that is used to find certain types of tumors, including pheochromocytomas and neuroblastomas. Radiation from I 123 may help show where cancer cells are in the body. Iodine I 123-metaiodobenzylguanidine is a type of radioconjugate. Also called 123I-MIBG, AdreView, and iobenguane I 123.

### **iodine I 131-Lipiodol**

A radioactive substance being studied in the treatment of liver cancer. It is a form of poppy seed oil that contains iodine, some of which is the radioactive substance iodine I 131. Iodine I 131-Lipiodol builds up in the blood and lymph vessels in the liver and may kill cancer cells. Also called iodine I 131-ethiodized oil.

### **iodine I 131-ethiodized oil**

A radioactive substance being studied in the treatment of liver cancer. It is a form of poppy seed oil that contains iodine, some of which is the radioactive substance iodine I 131. Iodine I 131-ethiodized oil builds up in the blood and lymph vessels in the liver and may kill cancer cells. Also called iodine I 131-Lipiodol.

### **iodine I 131-metaiodobenzylguanidine**

A drug that contains a form of radioactive iodine and is used to treat adults and children aged 12 years and older with certain types of malignant pheochromocytoma or paraganglioma that have spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Iodine I 131-metaiodobenzylguanidine builds up in tumor cells and gives off

radiation that may kill them. It is a type of radiotherapeutic agent. Also called <sup>131</sup>I-MIBG, Azedra, and iobenguane I 131.

### **iodine I 131-monoclonal antibody BC8**

A substance being studied in the treatment of some types of leukemia and lymphoma. BC8 is a monoclonal antibody that binds to a protein called CD45, which is found on most white blood cells and some types of leukemia and lymphoma cells. It is linked to a radioactive substance called iodine I 131, which may help kill cancer cells. Iodine I 131-monoclonal antibody BC8 is a type of radioimmunoconjugate.

### **iodine I 131-tositumomab**

A drug used with another drug to treat certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Iodine I 131-tositumomab is a form of the monoclonal antibody tositumomab that is linked to the radioactive substance iodine I 131. It is a type of radioimmunoconjugate.

### **iodized oil**

A form of poppy seed oil that contains iodine. Iodized oil is given by injection and builds up in the blood and lymph vessels in tumors. It is used for imaging (taking pictures) of the salivary glands and the lymph system. It is also being studied in the imaging of other organs such as the liver, lung, stomach, and thyroid. It is a type of diagnostic imaging agent. Also called ethiodized oil, Ethiodol, and Lipiodol.

### **iododoxorubicin**

A substance that is being studied as a treatment for cancer and for primary systemic amyloidosis (a disease in which proteins are deposited in specific organs). It is a type of anthracycline antitumor antibiotic.

### **ion**

An atom or a molecule that has a positive or negative electrical charge. Examples are sodium, potassium, calcium, chloride, and phosphate. These ions help move nutrients into cells, help move waste out of cells, and help nerves, muscles, the heart, and the brain work the way they should.

### **ionizing radiation**

A type of high-energy radiation that has enough energy to remove an electron (negative particle) from an atom or molecule, causing it to become ionized. Ionizing radiation can cause chemical changes in cells and damage DNA. This may increase the risk of developing certain health conditions, such as cancer. Ionizing radiation can come from natural sources, such as radon and cosmic rays (rays that enter the earth's atmosphere from outer space). It may also come from medical imaging equipment, such as x-ray, CT scan, or PET scan machines. Nuclear power plant accidents and atomic weapons also release high levels of ionizing radiation. Being exposed to very high doses of ionizing radiation can cause immediate damage to a person's body, including severe skin or tissue damage, acute radiation sickness, and death.

### **ionomycin**

An antibiotic drug used to treat infection.

### **ipilimumab**

A drug that binds to the protein CTLA-4 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that have certain mutations (changes) in genes involved in DNA repair. Ipilimumab is used alone or with other drugs to treat certain types of colorectal cancer, esophageal cancer, hepatocellular carcinoma (a type of liver cancer), malignant pleural mesothelioma, melanoma, non-small cell lung cancer, and renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. Ipilimumab may block CTLA-4 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called MDX-010 and Yervoy.

### **ipsilateral**

On the same side of the body as another structure or a given point.

### **iq'mik**

A type of smokeless tobacco that is made by mixing cured tobacco leaves with ashes from a certain type of fungus. It is used mainly in Alaska and is chewed. It contains nicotine and many harmful, cancer-causing chemicals. Using iq'mik can lead to nicotine addiction and can cause cancer of the mouth and other health problems.

### **irinotecan hydrochloride**

A drug used alone or with other drugs to treat colorectal cancer that has spread to other parts of the body. It is used in patients whose cancer has not already been treated or whose cancer has recurred (come back) or has gotten worse after treatment with anticancer drugs that included fluorouracil. It is also being studied in the treatment of other types of cancer. Irinotecan hydrochloride blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Irinotecan is the active ingredient of irinotecan hydrochloride. Also called Camptosar and CPT 11.

### **irinotecan sucrosfate**

A form of the anticancer drug irinotecan hydrochloride that is contained inside very tiny, fat-like particles and is used with other drugs to treat adults with pancreatic cancer that has spread to other parts of the body. It is used in patients whose cancer has not been treated with other anticancer therapy or has gotten worse after treatment with gemcitabine hydrochloride. It is also being studied in the treatment of other types of cancer. Irinotecan sucrosfate may have fewer side effects and work better than other forms of irinotecan hydrochloride. Irinotecan sucrosfate blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called Onivyde and PEP02.

### **iris**

The colored tissue at the front of the eye that contains the pupil in the center. The iris helps control the size of the pupil to let more or less light into the eye.

### **irofulven**

A substance being studied in the treatment of some types of cancer. Irofulven attaches to the cell's DNA and may block cancer cell growth. It is a type of alkylating agent. Also called 6-hydroxymethylacylfulvene.



## **iron**

An important mineral the body needs to make hemoglobin, a substance in the blood that carries oxygen from the lungs to tissues throughout the body. Iron is also an important part of many other proteins and enzymes needed by the body for normal growth and development. It is found in red meat, fish, poultry, lentils, beans, and foods with iron added, such as cereal.

## **iron overload**

A condition in which the body takes up and stores more iron than it needs. The extra iron is stored in the liver, heart, and pancreas, which may cause liver disease, heart problems, organ failure, and cancer. It may also cause bronze skin, diabetes, pain in the joints and abdomen, tiredness, and impotence. Iron overload may be inherited, or it may be caused by blood transfusions. Also called hemochromatosis.

## **irradiated**

Treated with radiation.

## **irradiation**

The use of high-energy radiation from x-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy or brachytherapy). Systemic irradiation uses a radioactive substance, such as a radiolabeled monoclonal antibody, that travels in the blood to tissues throughout the body. Also called radiation therapy and radiotherapy.

## **irreversible enzyme inhibitor**

A substance that permanently blocks the action of an enzyme. In cancer treatment, irreversible enzyme inhibitors may block certain enzymes that cancer cells need to grow and may kill cancer cells. They are being studied in the treatment of some types of cancer.

## **irreversible toxicity**

Side effects that are caused by toxic substances or something harmful to the body and do not go away.

## **irrigation**

In medicine, washing out an organ (such as the stomach or colon), a body cavity, or a wound by flushing it with a fluid. Also called lavage.

## **irritable bowel syndrome**

A disorder of the intestines commonly marked by abdominal pain, bloating, and changes in a person's bowel habits. This may include diarrhea or constipation, or both, with one occurring after the other. Also called IBS, irritable colon, mucus colitis, and spastic colon.

## **irritable colon**

A disorder of the intestines commonly marked by abdominal pain, bloating, and changes in a person's bowel habits. This may include diarrhea or constipation, or both, with one occurring after the other. Also called IBS, irritable bowel syndrome, mucus colitis, and spastic colon.

### **isatuximab**

A drug used with other drugs to treat adults with multiple myeloma. It is used in patients whose cancer has already been treated with at least two therapies that included lenalidomide and a proteasome inhibitor. It is also used in patients whose cancer relapsed (came back) or did not get better after treatment with one to three other therapies. It is also being studied in the treatment of other types of cancer. Isatuximab binds to a protein called CD38, which is found on some types of immune cells and cancer cells, including myeloma cells. Isatuximab may block CD38 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Sarclisa.

### **ischemia**

Lack of blood supply to a part of the body. Ischemia may cause tissue damage due to the lack of oxygen and nutrients.

### **ischemic necrosis**

A condition in which there is a loss of blood flow to bone tissue, which causes the bone to die. It is most common in the hips, knees, shoulders, and ankles. It may be caused by long-term use of steroid medicines, alcohol abuse, joint injuries, and certain diseases, such as cancer and arthritis. It may also occur at some point in time after cancer treatment that included methotrexate, bisphosphonates, or corticosteroids. Also called aseptic necrosis, avascular necrosis, and osteonecrosis.

### **iseganan hydrochloride**

A substance being studied in the treatment of oral mucositis (painful mouth sores) caused by cancer therapy and other conditions. Iseganan hydrochloride kills certain bacteria, fungi, and viruses by making holes in their outer membranes and causing them to burst. It is a type of synthetic antimicrobial peptide and a type of synthetic protegrin analog.

### **islet cell**

A pancreatic cell that produces hormones (e.g., insulin and glucagon) that are secreted into the bloodstream. These hormones help control the level of glucose (sugar) in the blood. Also called endocrine pancreas cell and islet of Langerhans cell.

### **islet cell carcinoma**

A rare cancer that forms in islet cells (hormone-making cells) of the pancreas. Islet cells make several different hormones that affect body functions, including controlling the amount of glucose (sugar) in the blood and helping digest food in the stomach. Functional islet cell carcinomas make extra amounts of these hormones, which can cause symptoms. Nonfunctional islet cell carcinomas do not make extra amounts of hormones, but they may cause symptoms as they grow and spread. Also called pancreatic endocrine cancer.

### **islet cell tumor**

A tumor that forms in islet cells (hormone-making cells) of the pancreas. Islet cell tumors may be benign (not cancer) or malignant (cancer). Islet cells make several different hormones that affect body functions, including controlling the amount of glucose (sugar) in the blood and helping digest food in the stomach. Functional islet cell tumors make extra amounts of these hormones, which can cause symptoms. Nonfunctional islet cell tumors do not make extra amounts of hormones, but they may cause symptoms as they grow and spread. Also called pancreatic endocrine tumor and pancreatic neuroendocrine tumor.

### **islet of Langerhans cell**

A pancreatic cell that produces hormones (e.g., insulin and glucagon) that are secreted into the bloodstream. These hormones help control the level of glucose (sugar) in the blood. Also called endocrine pancreas cell and islet cell.

### **isocitrate dehydrogenase-1 gene**

A gene that makes a protein that helps break down fats for energy and protect cells from harmful molecules. Mutations (changes) in the isocitrate dehydrogenase-1 gene have been found in several genetic conditions and in some types of cancer, including acute myelogenous leukemia, myelodysplastic syndromes, and brain cancer. These changes may cause abnormal cells, including cancer cells, to grow and spread in the body. Also called IDH1 gene.

### **isocitrate dehydrogenase-2 gene**

A gene that makes a protein that is found inside small structures in cells called mitochondria and that helps the mitochondria make energy for many cell functions. Mutations (changes) in the isocitrate dehydrogenase-2 gene have been found in certain genetic conditions and in some types of cancer, including acute myelogenous leukemia and brain cancer. These changes may cause abnormal cells, including cancer cells, to grow and spread in the body. Also called IDH2 gene.

### **isoflavone**

An estrogen-like substance made by some plants, including the soy plant. Soy isoflavones are being studied in the prevention of cancer, hot flashes that occur with menopause, and osteoporosis (loss of bone density).

### **isointense**

Having the same intensity as another object. Used to describe the results of imaging tests, such as x-rays, MRIs, or CT scans.

### **isolated hepatic perfusion**

A procedure in which a catheter is placed into the artery that provides blood to the liver. A second catheter is placed into the vein that takes blood away from the liver. This temporarily separates the liver's blood supply from blood circulating throughout the rest of the body and allows high doses of anticancer drugs to be directed to the liver only.

### **isolated limb infusion**

A procedure used to deliver anticancer drugs directly to an arm or leg but not to the rest of the body. The flow of blood to and from the limb is temporarily stopped with a tourniquet (a tight band around the limb). Catheters (small, flexible tubes) attached to a pump are put into an artery and a vein in the limb so that blood can be circulated through the pump into the limb. Anticancer drugs are injected into the catheters. Wrapping the limb in a heated blanket or warming the drugs or blood may help the drugs work better.

### **isolated limb perfusion**

A procedure that may be used to deliver anticancer drugs directly to an arm or leg. The flow of blood to and from the limb is temporarily stopped with a tourniquet (a tight band around the limb), and anticancer drugs are put directly into the blood of the limb. This allows the person to receive a high dose of drugs in the area where the cancer occurred. Also called limb perfusion.

### **isolated lung perfusion**

A surgical procedure during which the circulation of blood to the lungs is separated from the circulation of blood through the rest of the body, and a drug is delivered directly into the lung circulation. This allows a higher concentration of chemotherapy to reach tumors in the lungs.

### **isolation**

State of being separated from others. Isolation is sometimes used to prevent disease from spreading.

### **isomer**

One of two or more compounds that have the same chemical formula but different arrangements of the atoms within the molecules and that may have different physical/chemical properties.

### **isosulfan blue**

A dye made in the laboratory that helps identify the sentinel lymph node (the first lymph node that cancer spreads to from a primary tumor). Isosulfan blue is injected at the edge of a tumor and travels through the lymph fluid to lymph nodes near the tumor. The sentinel lymph node is identified by removing lymph nodes that are stained with the blue dye and looking for cancer cells under a microscope.

### **isotope**

A form of a chemical element in which the atoms have the same number of protons (part of the nucleus of an atom) but with a different number of neutrons (part of the nucleus of an atom). For example, carbon 12, carbon 13, and carbon 14 are isotopes of carbon. They all have six protons in the nucleus, but each has different number of neutrons. Isotopes may be used in certain medical tests and procedures.

### **isotretinoin**

A drug closely related to vitamin A that is used to treat severe acne and may also be used to treat other skin conditions and some types of cancer, including neuroblastoma. It is also being studied in the prevention and treatment of other types of cancer. Isotretinoin binds to and activates certain protein receptors in cells, including cancer cells. This may slow the growth of cancer cells and change how these cells look and act. Isotretinoin is a type of retinoid. Also called 13-cis retinoic acid.

### **ispinesib**

A substance being studied in the treatment of cancer. Ispinesib blocks a protein that tumor cells need to divide. It is a type of mitotic inhibitor. Also called SB-715992.

### **isthmus**

A narrow part inside the body that connects two larger structures.

### **itraconazole**

A drug used to prevent or treat fungal infections. It belongs to the family of drugs called antifungal agents.

### **ivosidenib**

A drug used alone or with other drugs to treat adults with certain types of acute myeloid leukemia, cholangiocarcinoma (a type of bile duct cancer), or

myelodysplastic syndromes that have a mutation (change) in the IDH1 gene. It is also being studied in the treatment of other types of cancer. Ivosidenib blocks the protein made by the mutated IDH1 gene, which may help keep cancer cells from growing. It is a type of enzyme inhibitor and a type of targeted therapy. Also called Tibsovo.

### **ixabepilone**

A drug used alone or with capecitabine to treat breast cancer that is locally advanced or has spread to other parts of the body and did not get better after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Ixabepilone blocks cell growth by stopping cell division and may kill cancer cells. It is a type of epothilone analog and a type of antimicrotubule agent. Also called BMS-247550 and Ixempra.

### **ixazomib citrate**

A drug used with lenalidomide and dexamethasone to treat multiple myeloma. It is used in patients who received at least one other anticancer treatment. It is also being studied in the treatment of other types of cancer. Ixazomib citrate blocks the action of enzymes called proteasomes, which may help keep cancer cells from growing and may kill them. It is a type of proteasome inhibitor. Also called Ninlaro.

### **jaundice**

A condition in which the skin and the whites of the eyes become yellow, urine darkens, and the color of stool becomes lighter than normal. Jaundice occurs when the liver is not working properly or when a bile duct is blocked.

### **jejunostomy**

Surgery to create an opening into the jejunum (part of the small intestine) from the outside of the body. A jejunostomy allows a feeding tube to be put into the small intestine.

### **jejunum**

The middle part of the small intestine. It is between the duodenum (first part of the small intestine) and the ileum (last part of the small intestine). The jejunum helps to further digest food coming from the stomach. It absorbs nutrients (vitamins, minerals, carbohydrates, fats, proteins) and water from food so they can be used by the body.

### **jiang huang**

An East Indian plant that is a member of the ginger family and is used as a spice and food color. It is a major ingredient found in curry powder. The underground stem of the jiang huang plant has been used for many years in traditional Asian medicine to treat certain conditions. The substance in jiang huang that gives it a yellow color is called curcumin, which may have antioxidant and anti-inflammatory effects in the body. Jiang huang can be made into a capsule, tablet, extract, powder, or tea and taken by mouth as a dietary supplement. It can also be made into a paste to treat skin conditions. Jiang huang is being studied in the prevention and treatment of some types of cancer. Its scientific name is *Curcuma longa*. Also called Indian saffron and turmeric.

### **johimbe**

A tree native to West Africa. The bark is used as a supplement for bodybuilding and to enhance male sexual performance. It contains the chemical yohimbine, which is being studied in the treatment of sexual dysfunction. It may interact with

certain drugs used to treat depression, high blood pressure, and high blood sugar. The scientific name is *Pausinystalia yohimbe*. Also called yohimbe.

## **joint**

In medicine, the place where two or more bones are connected. Examples include the shoulder, elbow, knee, and jaw.

## **junctional epidermolysis bullosa**

A rare, inherited disorder in which blisters form on the skin and the moist inner lining of some organs and body cavities. The blisters usually appear at birth and may occur on certain parts of the body (such as the hands, feet, elbows, and knees) or all over the body (including the mouth and other parts of the digestive tract, the eyes, the genitourinary tract, and the respiratory tract). This can lead to scarring and red, bumpy skin that bleeds easily in the affected areas. Other signs and symptoms include deformities in the fingers, toes, nails, and joints; thinning of the teeth; hair loss; trouble eating and digesting food; slow growth; and poor nutrition. Some infants with junctional epidermolysis bullosa have a severe form of the disease and may die within the first year of life. Other patients have a mild form and may have a normal life span. Some people with this disorder have an increased risk of developing squamous cell skin cancer at an early age. Junctional epidermolysis bullosa is caused by mutations (changes) in the COL17A1, ITGA6, ITGB4, LAMA3, LAMB3, or LAMC2 gene.

## **junctional nevus**

A type of nevus (mole) found at the junction (border) between the epidermis (outer) and the dermis (inner) layers of the skin. These moles may be colored and slightly raised.

## **juvenile myelomonocytic leukemia**

A rare form of childhood leukemia in which cancer cells often spread into tissues such as the skin, lung, and intestines. Also called JMML.

## **juvenile nasopharyngeal angiofibroma**

A benign (not cancer) tumor that is made up of blood vessels and fibrous (connective) tissue. Juvenile nasopharyngeal angiofibromas form in the back of the nose and may spread to the upper part of the throat, the sinuses around the nose, the bone around the eyes, and rarely, to the brain. Signs and symptoms may include runny nose, nosebleeds, problems breathing through the nose, hearing loss, and easy bruising. Juvenile nasopharyngeal angiofibromas are most common in young men. They are a type of vascular tumor.

## **juvenile pilocytic astrocytoma**

A slow-growing type of central nervous system tumor that forms from glial (supportive) tissue of the brain and spinal cord. Juvenile pilocytic astrocytoma usually occurs in children and young adults. It forms in the brain more often than the spinal cord.

## **juvenile polyposis syndrome**

A rare, inherited disorder in which multiple abnormal growths called juvenile polyps form in the gastrointestinal tract, usually before the age of 20 years. To be diagnosed with juvenile polyposis syndrome, a person must have one or more of the following: (1) more than five juvenile polyps in the colon or rectum; (2) juvenile polyps in other parts of the gastrointestinal tract, including the stomach or small intestine; (3) any number of juvenile polyps and a family history of juvenile polyposis syndrome. Other signs and symptoms include diarrhea,



gastrointestinal bleeding, abdominal pain, anemia, extra fingers and toes, and abnormalities of the heart, brain, roof of the mouth, intestines, urinary tract, and genitals. People with juvenile polyposis syndrome also have an increased risk of colorectal cancer, stomach cancer, small intestine cancer, and pancreatic cancer. Juvenile polyposis syndrome is caused by mutations (changes) in the SMAD4 or BMPR1A genes that are inherited in an autosomal dominant manner. It is a type of hereditary cancer syndrome. Also called JPS.

### **juvenile rickets**

A condition in children in which bones become soft and deformed because they don't have enough calcium and phosphorus. It is caused by not having enough vitamin D in the diet or by not getting enough sunlight. In adults, this condition is called osteomalacia. Also called infantile rickets, rachitis, and rickets.

### **kaposiform hemangioendothelioma**

A rare blood vessel tumor that usually forms on the skin of the arms and legs, but may also form in deeper tissues, such as muscle and bone. Kaposiform hemangioendotheliomas may sometimes form in the lymph nodes, chest, abdomen, or bones. They are fast growing and can spread to nearby tissue, but usually do not spread to other parts of the body. Signs and symptoms may include firm, painful areas of skin that look bruised; purple or brownish-red areas on the skin; easy bruising; anemia; and abnormal bleeding. Kaposiform hemangioendotheliomas are most common in infants and young children. They are a type of vascular tumor.

### **karenitecin**

A drug being studied in the treatment of cancer. It is a type of topoisomerase inhibitor. It is related to the anticancer drug camptothecin.

### **karyotyping**

A type of genetic test that analyzes the size, shape, and number of chromosomes in a sample of cells taken from blood, amniotic fluid, bone marrow, or other tissue. Changes in the number or structure of chromosomes may be a sign of a birth defect or genetic disease or condition, such as Down syndrome, Klinefelter syndrome, or Turner syndrome. Karyotyping may also be used to help diagnose certain types of cancer, such as leukemia, lymphoma, or myeloma, and/or help plan treatment.

### **kava kava**

An herb native to islands in the South Pacific. Substances taken from the root have been used in some cultures to relieve stress, anxiety, tension, sleeplessness, and problems of menopause. Kava kava may increase the effect of alcohol and of certain drugs used to treat anxiety and depression. The U.S. Food and Drug Administration advises users that kava kava may cause severe liver damage. The scientific name is *Piper methysticum*. Also called intoxicating pepper, rauschpfeffer, tonga, and yangona.

### **keloid**

A thick, irregular scar caused by excessive tissue growth at the site of an incision or wound.

### **kelp**

A type of seaweed. The stem-like parts of this plant have been used in some cultures to treat certain medical problems. It may have immunostimulatory and anticancer effects. The scientific name is *Laminaria digitata*.

### **keratan sulfate**

A glycosaminoglycan (a type of polysaccharide) found in cartilage and in the cornea of the eye.

### **keratin**

A type of protein found on epithelial cells, which line the inside and outside surfaces of the body. Keratins help form the tissues of the hair, nails, and the outer layer of the skin. They are also found on cells in the lining of organs, glands, and other parts of the body. Certain keratins may be found in higher than normal amounts in patients with different types of epithelial cell cancers, including lung, breast, colorectal, bladder, and head and neck cancers. Measuring the amount of specific keratins in the blood may help to plan cancer treatment or find out how well treatment is working or if cancer has come back. A keratin is a type of tumor marker. Also called cytokeratin.

### **keratinocyte carcinoma**

Cancer that forms in the tissues of the epidermis (the outer layer of the skin). The two main types of keratinocyte carcinoma are squamous cell carcinoma (SCC), which begins in thin, flat cells that form the top layer of the epidermis, and basal cell carcinoma (BCC), which begins in round cells that form the lower layer of the epidermis. SCC and BCC are the most common types of skin cancer. Keratinocyte carcinoma can occur anywhere on the body, but it is most common in areas of the skin often exposed to sunlight, such as the face, ears, lower lip, neck, arms, and top of the hands. Also called nonmelanoma skin cancer.

### **keratinocyte growth factor**

A natural substance that stimulates the growth of epithelial cells in the skin and in the lining of the mouth, stomach, and intestines. A form of keratinocyte growth factor made in the laboratory is called recombinant human keratinocyte growth factor. Also called KGF.

### **keratoacanthoma**

A fast-growing, dome-shaped skin tumor that usually occurs on sun-exposed areas of the body, especially the head, neck, arms, legs, and back of the hands. Keratoacanthomas often begin in a hair follicle. They may look like squamous cell skin cancer, but they are usually benign and rarely spread to other parts of the body. Keratoacanthomas are usually caused by sun exposure, but they may also be caused by a human papilloma virus infection, a weakened immune system, certain genetic conditions, exposure to some cancer-causing chemicals, and an injury to the skin. They usually go away on their own but can sometimes come back. They occur more often in older men.

### **ketamine hydrochloride**

A drug used to cause a loss of feeling and awareness and to induce sleep in patients having surgery. It is also being studied in the treatment of nerve pain caused by chemotherapy. Ketamine hydrochloride blocks pathways to the brain that are involved in sensing pain. It is a type of general anesthetic. Also called Ketalar.

### **ketoconazole**

A drug that treats infection caused by a fungus. It is also used as a treatment for prostate cancer because it can block the production of male sex hormones.

### **ketogenic diet**

A diet high in fat and low in carbohydrates (sugars) that causes the body to break down fat into molecules called ketones. Ketones circulate in the blood and become the main source of energy for many cells in the body. A ketogenic diet is used to treat some types of epilepsy and is being studied in the treatment of some types of cancer.

### **ketone**

A type of chemical substance used in perfumes, paints, solvents, and found in essential oils (scented liquid taken from plants). Ketones are also made by the body when there is not enough insulin.

### **ketoprofen**

A drug used to treat mild pain. It is also used to treat menstrual cramps, fever, and symptoms of arthritis, such as pain, tenderness, swelling, and stiffness. Ketoprofen stops the body from making substances that cause pain and inflammation. It is a type of nonsteroidal anti-inflammatory drug (NSAID).

### **ketorolac**

A drug that belongs to a family of drugs called nonsteroidal anti-inflammatory agents. It is being studied in cancer prevention.

### **keyhole limpet hemocyanin**

A substance taken from a marine organism that may be linked to a specific antigen to boost the immune response to that antigen. Keyhole limpet hemocyanin is being studied as a way to increase the immune response to cancer vaccines. It is a type of immune modulator. Also called KLH.

### **kidney**

One of a pair of organs in the abdomen. The kidneys remove waste and extra water from the blood (as urine) and help keep chemicals (such as sodium, potassium, and calcium) balanced in the body. The kidneys also make hormones that help control blood pressure and stimulate bone marrow to make red blood cells.

### **kidney cancer**

Cancer that forms in tissues of the kidneys. There are many different types of kidney cancer, including renal cell carcinoma (RCC), transitional cell cancer (TCC) of the renal pelvis, and Wilms tumor. RCC is the most common type of kidney cancer in adults. It forms in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. TCC of the renal pelvis is kidney cancer that forms in the center of the kidney where urine collects. Wilms tumor is a type of kidney cancer that usually develops in children.

### **kidney failure**

A condition in which the kidneys stop working and are not able to remove waste and extra water from the blood or keep body chemicals in balance. Acute or severe kidney failure happens suddenly (for example, after an injury) and may be treated and cured. Chronic kidney failure develops over many years, may be caused by conditions like high blood pressure or diabetes, and cannot be cured. Chronic kidney failure may lead to total and long-lasting kidney failure, called end-stage renal disease (ESRD). A person in ESRD needs dialysis (the process of cleaning the blood by passing it through a membrane or filter) or a kidney transplant. Also called renal failure.

### **kidney function**

A term used to describe how well the kidneys work. The kidneys remove waste and extra water from the blood (as urine) and help keep chemicals (such as sodium, potassium, and calcium) balanced in the body. They also make hormones that help control blood pressure and stimulate bone marrow to make red blood cells. Also called renal function.

### **kidney function test**

A test in which blood or urine samples are checked for the amounts of certain substances released by the kidneys. A higher- or lower-than-normal amount of a substance can be a sign that the kidneys are not working the way they should. Also called renal function test.

### **killer T cell**

A type of immune cell that can kill certain cells, including foreign cells, cancer cells, and cells infected with a virus. Killer T cells can be separated from other blood cells, grown in the laboratory, and then given to a patient to kill cancer cells. A killer T cell is a type of white blood cell and a type of lymphocyte. Also called cytotoxic T cell and cytotoxic T lymphocyte.

### **kilogram**

A measure of weight. A kilogram is equal to 2.2 pounds.

### **kinase**

A type of enzyme (a protein that speeds up chemical reactions in the body) that adds chemicals called phosphates to other molecules, such as sugars or proteins. This may cause other molecules in the cell to become either active or inactive. Kinases are a part of many cell processes. Some cancer treatments target certain kinases that are linked to cancer.

### **kinase inhibitor**

A substance that blocks a type of enzyme called a kinase. Human cells have many different kinases, and they help control important functions, such as cell signaling, metabolism, division, and survival. Certain kinases are more active in some types of cancer cells and blocking them may help keep the cancer cells from growing. Kinase inhibitors may also block the growth of new blood vessels that tumors need to grow. Some kinase inhibitors are used to treat cancer.

### **kit ligand**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. Kit ligand is a type of cytokine and a type of growth factor. Also called SCF and stem cell factor.

### **kretek**

A type of cigarette that is made in Indonesia. It is made using a mixture of tobacco, cloves, and other ingredients. Kreteks contain nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Smoking kreteks can lead to nicotine addiction and can cause lung cancer and other lung conditions. Also called clove cigarette.

### **kyphosis**

A condition marked by a humpback-like rounding or outward curve of the upper backbone. It may be present at birth or it may be caused by growth problems,

arthritis, osteoporosis, tumors, or certain other disorders. It may also occur at some point in time after radiation therapy to the backbone.

### **lab-on-a-chip**

An instrument that uses very small amounts of fluid on a microchip to do certain laboratory tests. A lab-on-a-chip may use body fluids or solutions containing cells or cell parts to diagnose diseases. Also called microfluidic device.

### **labial mucosa**

The inner lining of the lips.

### **laboratory study**

Research done in a laboratory. A laboratory study may use special equipment and cells or animals to find out if a drug, procedure, or treatment is likely to be useful in humans. It may also be a part of a clinical trial, such as when blood or other samples are collected. These may be used to measure the effect of a drug, procedure, or treatment on the body.

### **laboratory test**

A medical procedure that involves testing a sample of blood, urine, or other substance from the body. Laboratory tests can help determine a diagnosis, plan treatment, check to see if treatment is working, or monitor the disease over time.

### **lacrimal gland**

A gland that secretes tears. The lacrimal glands are found in the upper, outer part of each eye socket.

### **lactase**

An enzyme that breaks down lactose, a type of sugar found in milk and milk products.

### **lactate dehydrogenase**

One of a group of enzymes found in the blood and other body tissues and involved in energy production in cells. An increased amount of lactate dehydrogenase in the blood may be a sign of tissue damage and some types of cancer or other diseases. Also called lactic acid dehydrogenase and LDH.

### **lactation**

The process of making and secreting milk from the mammary glands in the breasts. Lactation usually begins during pregnancy when changes in certain hormones signal the mammary glands to make milk. After a person gives birth, the nipples release milk when a baby feeds from the breasts or when the person uses a breast pump. Lactation usually continues until milk is no longer being taken from the breasts. Lactation can sometimes be induced using certain hormone medicines in people who are not pregnant. Common factors that can affect lactation include hormone levels, certain medical conditions, breast surgery, injury to the breast or nipple, drug or alcohol use, and taking certain medicines.

### **lactic acid**

A substance made from sugars in milk, by the action of certain enzymes. It is used in skin care products to reduce wrinkles and soften the skin. It is also being studied in the treatment of hand-foot syndrome (a condition marked by pain, swelling, numbness, tingling, or redness of the hands or feet) in patients

receiving chemotherapy. Lactic acid is also made in muscles in the body and is used in many chemical processes in the body. It is a type of alpha hydroxyl acid.

### **lactic acid dehydrogenase**

One of a group of enzymes found in the blood and other body tissues, and involved in energy production in cells. An increased amount in the blood may be a sign of tissue damage and some types of cancer or other diseases. Also called lactate dehydrogenase and LDH.

### **lactobacillus**

A type of bacterium that makes lactic acid (a substance that is made from sugars found in milk and is also made in the body). Lactobacilli usually do not cause disease, but may cause tooth decay. They are normally found in the mouth, gastrointestinal tract, and vagina. They are being studied in the prevention of infections in patients having donor stem cell transplants and in other conditions.

### **lactoferrin**

A protein that is found in milk, tears, mucus, bile, and some white blood cells and is being studied in the treatment and prevention of cancer. It is involved in fighting against infection and inflammation and it acts as an antioxidant.

### **lactose**

A type of sugar found in milk and milk products.

### **lactose intolerance**

The inability to digest or absorb lactose, a type of sugar found in milk and other dairy products.

### **laetrile**

A purified form of amygdalin made in the laboratory. Amygdalin is a substance found in the pits of some fruits, such as apricots, and in raw nuts and plants. Laetrile has been used in some countries as a treatment for cancer, but it has not been shown to work in human clinical trials. It is not approved for use in the United States.

### **lamina propria**

A type of connective tissue found under the thin layer of tissues covering a mucous membrane.

### **lamivudine**

A drug used to treat infection caused by viruses.

### **lamotrigine**

A drug that is used to help control some types of seizures. It is being studied in the prevention of peripheral neuropathy caused by some chemotherapy drugs. It belongs to the family of drugs called anticonvulsants.

### **lanolin**

An oily substance taken from sheep's wool. Lanolin is used in moisturizing creams and lotions to treat dry, itchy skin.

### **lanreotide acetate**

A drug that is similar to somatostatin (a hormone made by the body) and is used to treat certain types of gastroenteropancreatic neuroendocrine tumors, carcinoid syndrome, and acromegaly (a condition in which the pituitary gland makes too



much growth hormone). Lanreotide acetate may help stop the body from making extra amounts of certain hormones, including growth hormone, insulin, glucagon, and hormones that affect digestion. It may also help keep certain types of tumor cells from growing. Lanreotide acetate is a type of somatostatin analog. Also called Somatuline Depot.

### **lansoprazole**

A drug that reduces the amount of acid made in the stomach. It is used to treat stomach ulcers, gastroesophageal reflux disease (a condition in which acid from the stomach causes heartburn), and conditions in which the stomach makes too much acid. Lansoprazole is a type of proton pump inhibitor (PPI). Also called Prevacid.

### **laparoscope**

A thin, tube-like instrument used to look at tissues and organs inside the abdomen. A laparoscope has a light and a lens for viewing and may have a tool to remove tissue.

### **laparoscopic surgery**

Surgery done with the aid of a laparoscope. A laparoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. Also called laparoscopic-assisted resection.

### **laparoscopic-assisted colectomy**

Surgery done with the aid of a laparoscope to remove all or part of the colon through several small incisions made in the wall of the abdomen. A laparoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. The laparoscope is inserted through one opening to guide the surgery. Surgical instruments are inserted through the other openings to perform the surgery. When only part of the colon is removed, it is called a partial colectomy.

### **laparoscopic-assisted resection**

Surgery done with the aid of a laparoscope. A laparoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. Also called laparoscopic surgery.

### **laparoscopy**

A procedure that uses a laparoscope, inserted through the abdominal wall, to examine the inside of the abdomen. A laparoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

### **laparotomy**

A surgical incision made in the wall of the abdomen.

### **lapatinib ditosylate**

A drug used with capecitabine or letrozole to treat certain types of HER2-positive breast cancer that are advanced or have spread. It is also being studied in the treatment of other types of cancer. Lapatinib ditosylate blocks EGFR and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Lapatinib is the active ingredient of lapatinib ditosylate. Also called GW572016 and Tykerb.

## **lappa**

A plant whose seeds and root have been used in some cultures to treat certain medical problems. It may have antioxidant effects. The scientific name is *Arctium lappa*. Also called burdock and happy major.

## **large cell carcinoma**

Lung cancer in which the cells are large and look abnormal when viewed under a microscope.

## **large granular lymphocyte**

A type of white blood cell that contains granules with enzymes that can kill tumor cells or microbial cells.

## **large intestine**

The long, tube-like organ that is connected to the small intestine at one end and the anus at the other. The large intestine has four parts: cecum, colon, rectum, and anal canal. Partly digested food moves through the cecum into the colon, where water and some nutrients and electrolytes are removed. The remaining material, solid waste called stool, moves through the colon, is stored in the rectum, and leaves the body through the anal canal and anus.

## **laromustine**

A drug used to treat acute myelogenous leukemia (AML). It is also being studied in the treatment of several other types of cancer. It blocks cell growth by damaging the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Cloretazine and Onrigin.

## **larotrectinib sulfate**

A drug used to treat adults and children with certain types of solid tumors that have spread or cannot be removed by surgery and have the NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Larotrectinib sulfate blocks the TRK protein, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called LOXO-101, Trk inhibitor LOXO-101, and Vitrakvi.

## **laryngeal**

Having to do with the larynx.

## **laryngeal cancer**

Cancer that forms in tissues of the larynx. The larynx is the area of the throat that contains the vocal cords and is used for breathing, swallowing, and talking. Most laryngeal cancers are squamous cell carcinomas (cancers that begin in thin, flat cells that look like fish scales under a microscope).

## **laryngectomy**

A person whose larynx (voice box) has been removed.

## **laryngectomy**

An operation to remove all or part of the larynx (voice box).

## **laryngitis**

Inflammation of the larynx.

**laryngopharyngectomy**

Surgery to remove all or part of the larynx (voice box) and pharynx (throat). Part of the esophagus and all or part of the thyroid may also be removed. A laryngopharyngectomy is usually done to treat cancer in the hypopharynx (bottom part of the throat).

**laryngoscope**

A thin, tube-like instrument used to examine the larynx (voice box). A laryngoscope has a light and a lens for viewing and may have a tool to remove tissue.

**laryngoscopy**

Examination of the larynx (voice box) with a mirror (indirect laryngoscopy) or with a laryngoscope (direct laryngoscopy).

**larynx**

The area of the throat containing the vocal cords and used for breathing, swallowing, and talking. Also called voice box.

**laser**

A device that forms light into intense, narrow beams that may be used to cut or destroy tissue, such as cancer tissue. It may also be used to reduce lymphedema (swelling caused by a buildup of lymph fluid in tissue) after breast cancer surgery. Lasers are used in microsurgery, photodynamic therapy, and many other procedures to diagnose and treat disease.

**laser acupuncture**

The use of a low-level laser beam instead of an acupuncture needle to stimulate an acupuncture point.

**laser interstitial thermal therapy**

A type of treatment that uses heat created by a laser beam to remove or destroy abnormal tissue, such as cancer tissue. During laser interstitial thermal therapy, an imaging test, such as MRI, is used to help guide a wire or catheter (thin tube) into the abnormal area of tissue. A laser inserted through the catheter creates heat, which destroys the abnormal tissue. Laser interstitial thermal therapy may be used to treat certain types of brain tumors, including tumors that have spread to the brain from other parts of the body, radiation necrosis (tissue death caused by radiation therapy), and some types of epilepsy. Also called LITT.

**laser surgery**

A surgical procedure that uses the cutting power of a laser beam to make bloodless cuts in tissue or to remove a surface lesion such as a tumor.

**laser therapy**

Treatment that uses intense, narrow beams of light to cut and destroy tissue, such as cancer tissue. Laser therapy may also be used to reduce lymphedema (swelling caused by a buildup of lymph fluid in tissue) after breast cancer surgery.

**lassitude**

A feeling of tiredness, weakness, and lack of interest in daily activities.

**late effect**

A health problem that occurs months or years after a disease is diagnosed or after treatment has ended. Late effects may be caused by cancer or cancer treatment. They may include physical, mental, and social problems and second cancers.

**late-stage cancer**

A term used to describe cancer that is far along in its growth, and has spread to the lymph nodes or other places in the body.

**latency period**

The time that passes between being exposed to something that can cause disease (such as radiation or a virus) and having symptoms.

**latent**

Describes a condition that is present but not active or causing symptoms.

**latissimus dorsi flap**

A type of surgery used to rebuild the shape of the breast after a mastectomy. A muscle in the back called the latissimus dorsi, along with skin, fat, and blood vessels, is moved from the back to the chest to form a new breast mound or to form a pocket for a breast implant. This is usually done by passing the muscle tissue and blood vessels through a tunnel under the skin to the chest. A latissimus dorsi flap is a type of breast reconstruction.

**laughter therapy**

A type of therapy that uses humor to help relieve pain and stress and improve a person's sense of well-being. It may be used to help people cope with a serious disease, such as cancer. Laughter therapy may include laughter exercises, clowns, and comedy movies, books, games, and puzzles. It is a type of complementary therapy. Also called humor therapy.

**lavage**

In medicine, washing out an organ (such as the stomach or colon), a body cavity, or a wound by flushing it with a fluid. Also called irrigation.

**lavender**

A plant with aromatic leaves and flowers that is a member of the mint family. Oil from the flowers has been used in some cultures to treat certain medical problems, to keep insects away, and to wash in. It is also used in aromatherapy. Perillyl alcohol, a substance found in lavender, is being studied in cancer prevention and treatment. The scientific name is *Lavandula angustifolia*. Also called English lavender and true lavender.

**laxative**

A substance that promotes bowel movements.

**lazertinib mesylate hydrate**

A drug used with amivantamab to treat adults with non-small cell lung cancer that has spread to other parts of the body or cannot be removed by surgery and has certain mutations (changes) in the EGFR gene. Lazertinib mesylate hydrate blocks certain proteins made by the mutated EGFR gene, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Lazcluze.

**lead compound**

In medicine, a chemical compound that shows promise as a treatment for a disease and may lead to the development of a new drug. Thousands of compounds are tested in the laboratory to find a lead (“leading”) compound that may act on specific genes or proteins involved in a disease. Once a lead compound has been found, the chemical structure is used as a starting point to make a drug that has the most benefits and the least harms. Finding a lead compound is the first step in making a new drug to treat a disease.

**lead shield**

In medicine, a protective shield that may be placed on the outside of the body during radiation therapy or certain imaging procedures, such as mammography. This helps protect organs, such as the thyroid or reproductive organs (including the ovaries, fallopian tubes, and uterus in females and the testicles, prostate, and penis in males), from damage caused by radiation.

**lectin**

A complex molecule that has both protein and sugars. Lectins are able to bind to the outside of a cell and cause biochemical changes in it. Lectins are made by both animals and plants.

**leflunomide**

An anticancer drug that works by inhibiting a cancer cell growth factor. Also called SU101.

**legal aid organization**

A group or agency that gives legal help to some people with low incomes. Health legal aid organizations help people with problems related to accessing health care services and obtaining health insurance coverage.

**leiomyoma**

A benign smooth muscle tumor, usually in the uterus or gastrointestinal tract. Also called fibroid.

**leiomyosarcoma**

A malignant (cancer) tumor of smooth muscle cells that can arise almost anywhere in the body, but is most common in the uterus, abdomen, or pelvis.

**lemon**

A small, yellow citrus fruit that is a source of citric acid and ascorbic acid (vitamin C). The juice is used to flavor food and drink and to prevent scurvy. Lemon oil (scented liquid taken from the peel) is used in aromatherapy. The scientific name of the lemon tree is *Citrus limon*.

**lenalidomide**

A drug that is similar to thalidomide and is used alone or with other drugs to treat adults with certain types of follicular lymphoma, marginal zone lymphoma, mantle cell lymphoma, multiple myeloma, or anemia caused by certain types of myelodysplastic syndromes. It is also being studied in the treatment of other conditions and types of cancer. Lenalidomide may help the immune system kill abnormal blood cells or cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. Lenalidomide is a type of antiangiogenesis agent and a type of immunomodulating agent. Also called CC-5013 and Revlimid.

## **lens**

A clear disk that focuses light, as in a camera or microscope. In the eye, the lens is a clear, curved structure at the front of the eye behind the pupil. It focuses light rays that enter the eye through the pupil, making an image on the retina (light-sensitive layers of nerve tissue at the back of the eye).

## **lentinan**

A beta-glucan (a type of polysaccharide) from the mushroom *Lentinus edodes* (shiitake mushroom). It has been studied in Japan as a treatment for cancer.

## **lenvatinib mesylate**

A drug used alone or with other drugs to treat certain types of endometrial cancer, renal cell carcinoma (a type of kidney cancer), hepatocellular carcinoma (a type of liver cancer), and thyroid cancer. It is also being studied in the treatment of other types of cancer. Lenvatinib mesylate blocks certain proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Lenvatinib mesylate is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Lenvima.

## **lepirudin**

A drug that inhibits blood clotting. It is being studied in cancer treatment.

## **leptin**

A hormone made by fat cells that helps control the feeling of hunger, the amount of fat stored in the body, and body weight.

## **leptomeningeal**

Having to do with the two innermost meninges (thin layers of tissue that cover and protect the brain and spinal cord).

## **leptomeningeal carcinoma**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and cerebrospinal fluid and pressure to build up in the brain. Leptomeningeal carcinoma can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called carcinomatous meningitis, leptomeningeal carcinomatosis, leptomeningeal metastasis, meningeal carcinomatosis, meningeal metastasis, and neoplastic meningitis.

## **leptomeningeal carcinomatosis**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and cerebrospinal fluid and pressure to build up in the brain. Leptomeningeal carcinomatosis can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called carcinomatous meningitis, leptomeningeal carcinoma, leptomeningeal metastasis, meningeal carcinomatosis, meningeal metastasis, and neoplastic meningitis.

## **leptomeningeal metastasis**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and



cerebrospinal fluid and pressure to build up in the brain. Leptomeningeal metastasis can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called carcinomatous meningitis, leptomeningeal carcinoma, leptomeningeal carcinomatosis, meningeal carcinomatosis, meningeal metastasis, and neoplastic meningitis.

### **leridistim**

A substance being studied for its ability to stimulate the production of blood cells during chemotherapy. It is a type of colony-stimulating factor. Also called SC-70935.

### **lesion**

An area of abnormal or damaged tissue caused by injury, infection, or disease. A lesion can occur anywhere in or on the body, such as the skin, blood vessels, brain, and other organs. Examples of lesions include wounds, ulcers, abscesses, sores, cysts, and tumors. A lesion may be benign (not cancer) or malignant (cancer).

### **lestaurtinib**

A drug being studied in the treatment of acute leukemias and some other types of cancer. It binds to a protein that is present on the surface of some types of cancer cells and stops them from dividing. Lestaurtinib is a type of receptor tyrosine kinase inhibitor and a type of indolocarbazole alkaloid. Also called CEP-701.

### **lethargy**

A condition marked by drowsiness and an unusual lack of energy and mental alertness. It can be caused by many things, including illness, injury, or drugs.

### **letrozole**

A drug used to treat certain types of breast cancer in postmenopausal women. It is also being studied in the treatment of other types of cancer. Letrozole lowers the amount of estrogen made by the body. This may stop the growth of cancer cells that need estrogen to grow. Letrozole is a type of aromatase inhibitor. Also called Femara.

### **leucovorin calcium**

A form of folic acid used alone or with other drugs to treat certain types of colorectal cancer and anemia and to lessen the toxic effects of the anticancer drug methotrexate or other substances that block the action of folic acid. Leucovorin calcium is also being studied in the treatment of other conditions and types of cancer. It is a type of chemoprotective agent and a type of chemosensitizing agent. Leucovorin is the active ingredient of leucovorin calcium. Also called citrovorum factor and folinic acid.

### **leukapheresis**

Removal of the blood to collect specific blood cells. The remaining blood is returned to the body.

### **leukemia**

Cancer that starts in blood-forming tissue, such as the bone marrow, and causes large numbers of abnormal blood cells to be produced and enter the bloodstream.

### **leukemia cell**

An abnormal type of white blood cell that builds up in the bone marrow and blood of patients with leukemia, causing there to be less room for healthy blood cells. This can cause infection, anemia, and easy bleeding. Leukemia cells may also collect in the lymph nodes, spleen, and liver and cause them to swell. They may also spread to the brain, spinal cord, and testicles.

### **leukemic leptomeningitis**

A serious problem that may occur in leukemia. In leukemic leptomeningitis, cancer cells have spread from the original (primary) tumor to the meninges (thin layers of tissue that cover and protect the brain and spinal cord). The cancer may cause the meninges to be inflamed. Also called leukemic meningitis and meningeal leukemia.

### **leukemic meningitis**

A serious problem that may occur in leukemia. In leukemic meningitis, cancer cells have spread from the original (primary) tumor to the meninges (thin layers of tissue that cover and protect the brain and spinal cord). The cancer may cause the meninges to be inflamed. Also called leukemic leptomeningitis and meningeal leukemia.

### **leukocyte**

A type of blood cell that is made in the bone marrow and found in the blood and lymph tissue. Leukocytes are part of the body's immune system. They help the body fight infection and other diseases. Types of leukocytes are granulocytes (neutrophils, eosinophils, and basophils), monocytes, and lymphocytes (T cells and B cells). Checking the number of leukocytes in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as infection, inflammation, allergies, and leukemia. Also called WBC and white blood cell.

### **leukopenia**

A condition in which there is a lower-than-normal number of leukocytes (white blood cells) in the blood.

### **leukoplakia**

An abnormal patch of white or gray tissue that usually forms on the inside of the mouth, especially on the gums, tongue, inside of the cheek, and under the tongue. The patch does not come off when scraped. Leukoplakia is most commonly caused by smoking or chewing tobacco, but may also be caused by heavy alcohol use, poorly fitting dentures, or jagged, broken, or sharp teeth that rub against the tissues in the mouth. Most leukoplakias are benign (not cancer), but some may be precancerous or an early sign of cancer.

### **leuprolide acetate**

A drug used to treat prostate cancer, problems with the endometrium (lining of the uterus), and uterine fibroids (noncancerous growths of the uterus). It is also being studied in the treatment of other conditions and types of cancer. Leuprolide acetate keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone (a male hormone) in men, and the ovaries to stop making estradiol (a form of the hormone estrogen) in women. Leuprolide acetate may stop the growth of cancer cells that need testosterone to grow and stop the growth of endometrial tissue and uterine fibroids. It is a type of gonadotropin-releasing hormone (GnRH) agonist. Also called Eligard and Lupron Depot.

### **leuprolide mesylate**

A drug used to treat adults with advanced prostate cancer. Leuprolide mesylate keeps the body from making the hormones luteinizing hormone-releasing hormone (LHRH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone (a male hormone). Leuprolide mesylate may stop the growth of cancer cells that need testosterone to grow. It is a type of gonadotropin-releasing hormone (GnRH) agonist. Also called Camcevi.

### **leuvectin**

An agent that delivers the gene for interleukin-2 (IL-2) into cells to increase production of IL-2 by the cells.

### **levamisole**

An antiparasitic drug that is also being studied in cancer therapy with fluorouracil.

### **levels of evidence**

A ranking system used to describe the strength of the results measured in a clinical trial or research study. The design of the study (such as a case report for an individual patient or a randomized double-blinded controlled clinical trial) and the endpoints measured (such as survival or quality of life) affect the strength of the evidence.

### **levetiracetam**

A drug used to treat seizures (involuntary muscle movements) caused by epilepsy (a group of brain disorders). Levetiracetam is being studied in the treatment of seizures in patients with cancer that has spread to the brain. It is a type of anticonvulsant. Also called Keppra.

### **levocarnitine**

A form of carnitine, which is a substance made in muscle and liver tissue and found in certain foods, such as meat, poultry, fish, and some dairy products. Levocarnitine is also a drug that is used to treat patients who do not make enough carnitine and is being studied as a way to prevent tissue damage caused by chemotherapy. Carnitine is a type of dietary supplement. Also called Carnitor and L-carnitine.

### **levofloxacin**

A substance used to treat bacterial infections. It belongs to the family of drugs called quinolone antibiotics.

### **levoleucovorin calcium**

A drug used to lessen the toxic effects of the anticancer drug methotrexate or other substances that block the action of folic acid. It is also used with fluorouracil as palliative therapy to treat advanced colorectal cancer. Levoleucovorin calcium is a form of folic acid. It is a type of chemoprotective agent and a type of chemosensitizing agent. Also called Fusilev.

### **levonorgestrel**

A form of the hormone progesterone that is made in the laboratory and used to prevent pregnancy. It is being studied in the prevention of ovarian and endometrial cancer, and in the treatment of other conditions. Levonorgestrel is a type of oral contraceptive. Also called L-norgestrel and Plan B.

**lexatumumab**

A substance being studied in the treatment of some types of cancer. It binds to a protein called TRAIL-R2 on the surface of some tumor cells, which may kill the tumor cells. Lexatumumab is a type of monoclonal antibody. Also called anti-TRAIL R2 mAb HGS-ETR2 and HGS-ETR2.

**liarozole**

An anticancer drug that promotes differentiation by increasing the levels of retinoic acid within the tumor.

**libido**

Sexual desire or the mental energy or emotion related to sex.

**licorice root extract**

A substance prepared from dried roots of the plant *Glycyrrhiza glabra*. It is used as a flavoring in medicines, drinks, and sweets, and it is being studied in the treatment of cancer. Licorice root extract contains several compounds that reduce inflammation, kill certain bacteria and viruses, act like estrogen and other hormones, and may cause cancer cells to die. It is a type of antioxidant.

**lidocaine**

A substance used to relieve pain by blocking signals at the nerve endings in skin. It can also be given intravenously to stop heart arrhythmias. It is a type of local anesthetic and antiarrhythmic.

**lifestyle risk factor**

Personal behaviors or choices that can increase a person's chance of developing a disease. Lifestyle risk factors can often be avoided, controlled, or changed to reduce the risk of certain diseases, such as cancer, diabetes, obesity, and heart disease. Some examples of lifestyle risk factors include cigarette smoking or other tobacco use, having an unhealthy diet, not getting enough exercise, and drinking too much alcohol.

**lifetime risk**

A measure of the risk that a certain event will happen during a person's lifetime. In cancer research, it is usually given as the likelihood that a person who is free of a certain type of cancer will develop or die from that type of cancer during his or her lifetime. For example, a woman with no known risk factors for breast cancer has a lifetime risk of developing breast cancer of about 12%. This means one out of every eight women will develop breast cancer during her lifetime.

**lifileucel**

A treatment used for adults with melanoma that has spread to other parts of the body or cannot be removed by surgery. It is used in patients whose cancer did not get better after treatment with an antibody that blocks PD-1 (and treatment with a BRAF inhibitor, for those with a BRAF mutation). It is also being studied in the treatment of other types of cancer. Lifileucel is made using tumor-infiltrating lymphocytes (a type of immune cell that can recognize and kill tumor cells) from a patient's tumor. These lymphocytes are tested in the laboratory to find out which ones best recognize the tumor cells. The selected lymphocytes are then grown in large numbers in the laboratory and given back to the patient to help the immune system kill the tumor cells. Lifileucel is a type of cellular immunotherapy called tumor-infiltrating lymphocyte therapy. Also called Amtagvi.

**ligation**

The process of tying off blood vessels so that blood cannot flow to a part of the body or to a tumor.

**light cigarette**

A type of cigarette that is claimed to give off less tobacco tar than a regular cigarette when smoked. Light cigarettes have been shown to be no safer than regular cigarettes, and smoking them does not lower the risk of cancer or other diseases. A person smoking a light cigarette can inhale the same amount of tobacco tar, nicotine, and harmful, cancer-causing chemicals as in a regular cigarette, depending on how the cigarette is smoked. Cigarettes are no longer allowed to be labeled or advertised as light cigarettes. Also called low tar cigarette.

**light microscope**

A microscope (device to magnify small objects) in which objects are lit directly by white light.

**light therapy**

The treatment of disease with certain types of light. Light therapy can use lasers, LED, fluorescent lamps, and ultraviolet or infrared radiation. Also called phototherapy.

**light-emitting diode therapy**

Treatment with drugs that become active and may kill cancer cells when exposed to light. Light-emitting diode therapy is type of photodynamic therapy which uses a special type of light to activate the drug. Also called LED therapy.

**lignan**

A member of a group of substances found in plants that have shown estrogenic and anticancer effects. Lignans have been used in some cultures to treat certain medical problems.

**limb perfusion**

A procedure that may be used to deliver anticancer drugs directly to an arm or leg. The flow of blood to and from the limb is temporarily stopped with a tourniquet (a tight band around the limb), and anticancer drugs are put directly into the blood of the limb. This allows the person to receive a high dose of drugs in the area where the cancer occurred. Also called isolated limb perfusion.

**limb-salvage surgery**

Surgery to remove a tumor in a limb (arm or leg) without removing the whole limb. The bone and tissue around the tumor may also be removed, and an implant may be used to replace the part of the limb removed. Limb-salvage surgery is done to help save the use and appearance of the limb. It is used to treat cancers of the bone and soft tissue. Also called limb-sparing surgery.

**limb-sparing surgery**

Surgery to remove a tumor in a limb (arm or leg) without removing the whole limb. The bone and tissue around the tumor may also be removed, and an implant may be used to replace the part of the limb removed. Limb-sparing surgery is done to help save the use and appearance of the limb. It is used to treat cancers of the bone and soft tissue. Also called limb-salvage surgery.

**limbic system**

A network of structures in the brain involved in memory and emotions.

**limited-stage small cell lung cancer**

Cancer is found in one lung, the tissues between the lungs, and nearby lymph nodes only.

**linac**

A machine that uses electricity to form a stream of fast-moving subatomic particles. This creates high-energy radiation that may be used to treat cancer. Also called linear accelerator, mega-voltage linear accelerator, and MeV linear accelerator.

**linear accelerator**

A machine that uses electricity to form a stream of fast-moving subatomic particles. This creates high-energy radiation that may be used to treat cancer. Also called linac, mega-voltage linear accelerator, and MeV linear accelerator.

**linitis plastica**

A rare type of stomach cancer that begins in the lining of the stomach and spreads to the muscles of the stomach wall. This causes the wall of the stomach to become thick, hard, and rubbery, which leads to trouble digesting food. Also called gastric scirrhus carcinoma.

**linseed**

The seed of the flax plant. It is a rich source of omega-3 fatty acid, fiber, and a compound called lignin. It is being studied in the prevention of several types of cancer. Also called flaxseed.

**lintuzumab**

A substance being studied in the treatment of myelodysplastic syndromes and some types of leukemia. It binds to CD33, a protein on the surface of certain normal blood stem cells and some abnormal blood cells. It causes the immune system to kill these cells. Lintuzumab is a type of monoclonal antibody. Also called MoAb HuM195 and monoclonal antibody HuM195.

**liothyronine sodium**

A drug that is used to treat certain thyroid (a gland located near the voice box) conditions. It is also being studied in the treatment of thyroid cancer. Liothyronine sodium is made in the laboratory and is a form of the thyroid hormone triiodothyronine (T3). Also called Cytomel and Triostat.

**lipid**

Fat.

**lipoma**

A benign (not cancer) tumor made of fat cells.

**lipophilic**

Able to dissolve, be dissolved in, or absorb lipids (fats).

**liposarcoma**

A rare type of cancer that begins in fat cells. It usually forms in the layer of fat just under the skin or in the deep soft tissues of the legs (especially in the thigh or back of the knee) or in the abdomen. It may also form in other parts of the



body. Most liposarcomas are painless and tend to grow slowly, but some may grow quickly and spread to nearby tissue or to other parts of the body. Liposarcomas usually occur in adults, and are rare in children and adolescents. They are a type of soft tissue sarcoma.

### **liposomal**

A drug preparation that contains the active drug inside very tiny, fat-like particles. This form is easier for the body to absorb and allows more drug to get to the target area of the body, such as a tumor. Liposomal drugs may have fewer side effects and work better than other forms of the drug.

### **liposomal SN-38**

A form of the anticancer drug irinotecan that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than irinotecan alone. Liposomal SN-38 is being studied in the treatment of advanced colorectal cancer and other types of cancer. Liposomal SN-38 blocks the ability of cells to divide and grow. It may stop the growth of tumor cells. It is a type of topoisomerase inhibitor and a type of irinotecan (CPT-11) derivative. Also called SN-38 liposome.

### **liposomal doxorubicin hydrochloride**

A form of the anticancer drug doxorubicin that is contained inside very tiny, fat-like particles and is used alone or with other drugs to treat certain types of ovarian cancer, AIDS-related Kaposi sarcoma, and multiple myeloma. Liposomal doxorubicin hydrochloride may have fewer side effects and work better than other forms of doxorubicin hydrochloride. It is also being studied in the treatment of other types of cancer. Liposomal doxorubicin hydrochloride is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called Doxil and doxorubicin hydrochloride liposome.

### **liposomal paclitaxel**

A form of the anticancer drug paclitaxel that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of several types of cancer. Liposomal paclitaxel blocks the ability of cells to divide and may kill cancer cells. It is a type of mitotic inhibitor and a type of antimicrotubule agent. Also called LEP-ETU, LipoTaxen, paclitaxel liposome, and PNU-93914.

### **liposome**

A very tiny, fat-like particle that is made in the laboratory. In medicine, liposomes containing drugs or other substances are used in the treatment of cancer and other diseases. Drugs given in liposomes may have fewer side effects and work better than the same drugs given alone.

### **liposuction**

A surgical procedure in which a vacuum device is used to remove extra fat from the body. Liposuction is usually done to smooth and reshape an area of the body to improve appearance. It may also be done to remove lipomas (fatty tumors that are not cancer) and to treat gynecomastia (the abnormal growth of breast tissue in males). It may also be done to relieve symptoms of lymphedema (a condition in which extra lymph fluid builds up in tissues and causes swelling) and as part of breast reduction surgery.

### **liquid biopsy**

A laboratory test done on a sample of blood, urine, or other body fluid to look for cancer cells from a tumor or small pieces of DNA, RNA, or other molecules released by tumor cells into a person's body fluids. Liquid biopsy allows multiple samples to be taken over time, which may help doctors understand what kind of genetic or molecular changes are taking place in a tumor. A liquid biopsy may be used to help find cancer at an early stage. It may also be used to help plan treatment or to find out how well treatment is working or if cancer has come back.

### **liquid chromatography–mass spectrometry**

A laboratory technique that combines two different processes to separate, identify, and measure the amount of different substances in a liquid sample. In the liquid chromatography (LC) part of the process, a liquid sample is passed through a column filled with a material that separates the different substances in the sample. In the mass spectrometry (MS) part of the process, the separated substances then pass through a special machine that reports the molecular weight, structure, identity, and number of different substances in the sample. Liquid chromatography–mass spectrometry has many uses, including screening for drugs, identifying toxins in the environment, and detecting certain metabolic disorders in infants. Also called LC-MS.

### **liquid-based Pap test**

A type of Pap test. A Pap test is a procedure in which cells are scraped from the cervix for examination under a microscope. It is used to detect cancer or changes that may lead to cancer. A Pap test can also show conditions that are not cancer, such as infection or inflammation. In a liquid-based Pap test, the cells are rinsed into a small container of liquid. The cells are then placed onto slides by a special machine and examined under a microscope to see if the cells are abnormal.

### **lisinopril**

A drug used to treat high blood pressure and certain heart conditions. It is also being studied in the prevention and treatment of side effects caused by some anticancer drugs. It blocks certain enzymes that cause blood vessels to constrict (narrow). It is a type of angiotensin-converting enzyme (ACE) inhibitor. Also called Prinivil and Zestril.

### **lisocabtagene maraleucel**

A treatment used for adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, follicular lymphoma, mantle cell lymphoma, or certain types of large B-cell lymphoma that relapsed (came back) or did not get better after treatment with at least one or two lines of systemic therapy. It is also being studied in the treatment of other types of cancer. Lisocabtagene maraleucel is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Lisocabtagene maraleucel binds to a protein called CD19, which is found on most B-cell lymphoma cells. This helps the body's immune system kill cancer cells. Lisocabtagene maraleucel is a type of cellular immunotherapy called CAR T-cell therapy. Also called Breyanzi.

### **lisofylline**

A drug that may protect healthy cells from chemotherapy and radiation without inhibiting the effects of these therapies on tumor cells.

## **liter**

A measure of volume for a liquid, using the metric system. One liter is equal to 1,000 cubic centimeters (cc), 1,000 milliliters (mL), or 1.0567 quarts (qt). Also called L.

## **lithium**

A soft metal. Lithium salts are used to treat certain mental disorders, especially bipolar (manic depressive) disorder. Lithium salts include lithium carbonate and lithium citrate.

## **live virus vaccine**

A vaccine made from a virus that has been weakened so it does not cause the disease the virus usually causes. A live virus vaccine helps the body's immune system recognize and fight infections caused by the non-weakened form of the virus. Examples of live virus vaccines are the chickenpox vaccine and the measles, mumps, and rubella (MMR) vaccine. It is not safe for pregnant women or people with weak immune systems to receive a live virus vaccine.

## **liver**

A large organ located in the upper abdomen. The liver cleanses the blood and aids in digestion by secreting bile.

## **liver X receptor alpha pathway**

Describes a group of proteins in a cell that work together to help control how certain genes are expressed and how cholesterol, lipids (fats), bile acids, and steroid hormones are made in the body. Changes in the liver X receptor alpha pathway may lead to diseases such as heart disease and cancer. Drugs or substances that affect this pathway are being studied in the prevention and treatment of cancer and other diseases. Also called LXR alpha pathway.

## **liver and bile duct cancer**

Primary liver cancer is cancer that forms in the tissues of the liver. The most common type of primary liver cancer is hepatocellular carcinoma, which occurs in the tissue of the liver. When cancer starts in other parts of the body and spreads to the liver, it is called liver metastasis. Bile duct cancer forms in the small ducts (tubes) that carry bile (fluid made by the liver that helps digest fat) between the liver and gallbladder and the intestine. Bile duct cancer is also called cholangiocarcinoma. Intrahepatic bile duct cancer is found inside the liver. Extrahepatic bile duct cancer is found outside the liver.

## **liver cancer**

Primary liver cancer is cancer that forms in the tissues of the liver. Secondary liver cancer is cancer that spreads to the liver from another part of the body.

## **liver function test**

A blood test to measure the blood levels of certain substances released by the liver. A high or low level of certain substances can be a sign of liver disease.

## **liver metastasis**

Cancer that has spread from the original (primary) tumor to the liver.

## **liver-spleen scan**

A procedure used to check for abnormal areas in the liver or spleen. A very small amount of a radioactive substance is injected into a vein and travels through the blood to the liver and spleen. It is detected by a scanner linked to a computer,

which forms an image of the areas where the radioactive substance collects. A liver-spleen scan may be used to help find cancer in the liver or spleen, cirrhosis, hepatitis, and other liver or spleen problems.

### **living will**

A type of advance directive that states the specific types of medical care that a person wishes to receive if that person is no longer able to make medical decisions because of a terminal illness or being permanently unconscious. A living will usually has instructions about whether to use certain treatments to help keep a person alive, such as the use of dialysis (kidney) machines, breathing tubes, feeding tubes, and CPR. In the United States, the laws for living wills may be different for each state, and not every state may allow them.

### **lobaplatin**

A substance that contains the metal platinum and may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent.

### **lobe**

A portion of an organ, such as the liver, lung, breast, thyroid, or brain.

### **lobectomy**

Surgery to remove a whole lobe (section) of an organ (such as the lungs, liver, brain, or thyroid gland).

### **lobeline**

A substance that comes from a plant known as Indian tobacco, which is different from the tobacco used to make smoking products. It has been studied as a way to help people stop smoking. It is a type of alkaloid.

### **lobradimil**

A substance that is being studied for its ability to help other drugs reach the brain. It belongs to the family of drugs called bradykinin agonists. Also called RMP-7.

### **lobular capillary hemangioma**

A benign (not cancer) blood vessel tumor that usually forms on the skin. It may also form on mucous membranes and inside capillaries (small blood vessels) or other places on the body. Lobular capillary hemangiomas usually appear as raised, bright red lesions that may grow quickly and bleed a lot. The lesions are sometimes caused by injury or use of certain medicines and often come back after treatment. They usually occur in older children and young adults but may occur at any age. Lobular capillary hemangiomas are a type of vascular tumor. Also called pyogenic granuloma.

### **lobular carcinoma**

Cancer that begins in the lobules (milk glands) of the breast. Lobular carcinoma may be either lobular carcinoma in situ (LCIS) or invasive lobular carcinoma. LCIS is a noninvasive condition in which abnormal cells are found in the lobules of the breast. LCIS rarely becomes invasive cancer, but having LCIS in one breast increases the risk of developing invasive cancer in either breast. In invasive lobular carcinoma, cancer has spread from the lobules to surrounding normal tissue. It can also spread through the blood and lymph systems to other parts of the body.

### **lobular carcinoma in situ**

A condition in which abnormal cells are found in the lobules of the breast. This condition seldom becomes invasive cancer. However, having lobular carcinoma in situ in one breast increases the risk of developing breast cancer in either breast. Also called LCIS.

### **lobular intraepithelial neoplasia**

A condition in which abnormal cells are found in the lobules (glands that make milk) of the breast. This condition rarely becomes cancer. However, having lobular intraepithelial neoplasia in one breast increases the risk of breast cancer in either breast. Types of lobular intraepithelial neoplasia include atypical lobular hyperplasia and lobular carcinoma in situ (LCIS). Also called LIN and lobular neoplasia.

### **lobular neoplasia**

A condition in which abnormal cells are found in the lobules (glands that make milk) of the breast. This condition rarely becomes cancer. However, having lobular neoplasia in one breast increases the risk of breast cancer in either breast. Types of lobular neoplasia include atypical lobular hyperplasia and lobular carcinoma in situ (LCIS). Also called LIN and lobular intraepithelial neoplasia.

### **lobule**

A small lobe or a subdivision of a lobe.

### **local anesthesia**

A temporary loss of feeling in one small area of the body caused by special drugs called anesthetics. The patient stays awake but has no feeling in the area of the body treated with the anesthetic. Local anesthetics may be injected or put on the skin to lessen pain during medical, surgical, or dental procedures. Some are available over-the-counter (without a doctor's order) and may help lessen local pain, irritation, and itching caused by conditions such as cold sores, sunburn, poison ivy, and minor cuts.

### **local therapy**

Treatment that is directed to a specific organ or limited area of the body, such as the breast or an abnormal growth on the skin. Examples of local therapy used in cancer are surgery, radiation therapy, cryotherapy, laser therapy, and topical therapy (medicine in a lotion or cream that is applied to the skin). Also called localized therapy.

### **localized**

In medicine, describes disease that is limited to a certain part of the body. For example, localized cancer is usually found only in the tissue or organ where it began, and has not spread to nearby lymph nodes or to other parts of the body. Some localized cancers can be completely removed by surgery.

### **localized cancer**

Describes cancer that is found only in the tissue or organ where it first began and that has not spread to nearby lymph nodes or to other parts of the body.

### **localized gallbladder cancer**

Cancer found only in the tissues that make up the wall of the gallbladder. Localized gallbladder cancer can be removed completely in an operation.

**localized therapy**

Treatment that is directed to a specific organ or limited area of the body, such as the breast or an abnormal growth on the skin. Examples of localized therapy used in cancer are surgery, radiation therapy, cryotherapy, laser therapy, and topical therapy (medicine in a lotion or cream that is applied to the skin). Also called local therapy.

**locally advanced cancer**

Cancer that has spread from where it started to nearby tissue or lymph nodes.

**locally recurrent cancer**

Cancer that has recurred (come back) at or near the same place as the original (primary) tumor, usually after a period of time during which the cancer could not be detected.

**locus**

Specific place where something is located or occurs. It may refer to a specific place on the body (such as an acupuncture point) or the place on a chromosome where a specific gene is found.

**locus heterogeneity**

A term that describes when mutations (changes) in different genes cause the same disease or condition. Each mutation by itself is enough to cause the disease or condition. For example, xeroderma pigmentosum (a rare, inherited disorder with a very high risk of developing skin cancer and other types of cancer) is caused by having a mutation in one of at least nine different genes involved in repairing damaged DNA.

**lometrexol**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called antifolates.

**lomustine**

A drug used to treat brain tumors that have already been treated with surgery or radiation therapy and Hodgkin lymphoma that got worse after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Lomustine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea. Also called CCNU and Gleostine.

**lonafarnib**

An anticancer drug that belongs to the family of drugs called enzyme inhibitors. Also called SCH 66336.

**loncastuximab tesirine**

A drug used to treat adults with certain types of B-cell non-Hodgkin lymphoma that relapsed (came back) or did not get better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Loncastuximab tesirine contains a monoclonal antibody that binds to a protein called CD19, which is found on some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. Loncastuximab tesirine is a type of antibody-drug conjugate. Also called Zynlonta.

**long-term side effect**

A problem that is caused by a disease or treatment of a disease and may continue for months or years. Long-term side effects of cancer treatment include



heart, lung, kidney, or gastrointestinal tract problems; pain, numbness, tingling, loss of feeling, or heat or cold sensitivity in the hands or feet; fatigue; hearing loss; cataracts; and dry eyes or dry mouth.

### **longitudinal cohort study**

A type of research study that follows large groups of people over a long time. The groups are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and those who do not smoke). A particular outcome (such as the development of lung cancer) is compared between the groups. The same people in each group are assessed many times throughout the study.

### **loop electrosurgical excision procedure**

A technique that uses electric current passed through a thin wire loop to remove abnormal tissue. Also called LEEP and loop excision.

### **loop excision**

A technique that uses electric current passed through a thin wire loop to remove abnormal tissue. Also called LEEP and loop electrosurgical excision procedure.

### **loperamide hydrochloride**

A drug used to treat diarrhea. Loperamide hydrochloride slows the movement of the muscles in the small intestine to allow more water to be taken out of the feces (waste matter) and more nutrients to be absorbed. Also called Imodium.

### **lopinavir**

A drug used with another drug, called ritonavir, to treat infection with HIV (the virus that causes AIDS). It is also being studied in the treatment of some types of cancer. Lopinavir blocks the ability of HIV to make copies of itself and may help some anticancer drugs work better. It is a type of anti-HIV agent and a type of protease inhibitor.

### **lopinavir/ritonavir**

A combination of the drugs ritonavir and lopinavir. It is used to treat infection with HIV (the virus that causes AIDS). It is also being studied in the treatment of some types of cancer. Lopinavir/ritonavir blocks the ability of HIV to make copies of itself and may help other anticancer drugs work better or may block the growth of cancer cells. Ritonavir blocks the breakdown of lopinavir. Lopinavir/ritonavir is a type of anti-HIV agent and a type of protease inhibitor. Also called Kaletra.

### **lorazepam**

A drug that is used to treat anxiety and certain seizure disorders (such as epilepsy), and to prevent nausea and vomiting caused by chemotherapy. It belongs to the families of drugs called antiemetics and benzodiazepines.

### **lorlatinib**

A drug used to treat adults with non-small cell lung cancer that has spread to other parts of the body and is ALK positive. It is also being studied in the treatment of other types of cancer. Lorlatinib blocks certain proteins made by the ALK gene. Blocking these proteins may stop the growth and spread of cancer cells. Lorlatinib is a type of tyrosine kinase inhibitor. Also called Lorbrena.

### **lorvotuzumab mertansine**

A substance being studied in the treatment of some types of cancer, including Wilms tumor, neuroblastoma, rhabdomyosarcoma, and other types of soft tissue

sarcoma. Lorvotuzumab mertansine contains a monoclonal antibody that binds to a protein called CD56 on some types of cancer cells. It also contains an anticancer drug called DM1, which may help kill cancer cells after lorvotuzumab mertansine binds to them. Lorvotuzumab mertansine is a type of antibody-drug conjugate. Also called BB-10901.

### **losartan potassium**

A drug used to treat high blood pressure. Losartan potassium blocks the action of chemicals that make blood vessels constrict (get narrower). It is a type of angiotensin II receptor antagonist. Also called Cozaar.

### **losoxantrone**

An anticancer drug that belongs to the family of drugs called antipyrazoles.

### **lovastatin**

A drug used to lower the amount of cholesterol in the blood. It is also being studied in the prevention and treatment of some types of cancer. Lovastatin is a type of HMG-CoA reductase inhibitor (statin). Also called Mevacor.

### **low birth weight**

A term used to describe an infant born weighing 5.5 pounds (2500 grams) or less. A low birth weight may occur when an infant is born too early (premature). These infants may have an increased risk of serious health problems. Smoking cigarettes, being exposed to secondhand tobacco smoke, drinking alcohol, and taking certain drugs during pregnancy can increase the risk of having an infant with a low birth weight.

### **low grade**

A term used to describe cells and tissue that look almost normal under a microscope. Low-grade cancer cells look more like normal cells and tend to grow and spread more slowly than high-grade cancer cells. Cancer grade may be used to help plan treatment and determine prognosis. Low-grade cancers usually have a better prognosis than high-grade cancers and may not need treatment right away.

### **low tar cigarette**

A type of cigarette that is claimed to give off less tobacco tar than a regular cigarette when smoked. Low tar cigarettes have been shown to be no safer than regular cigarettes, and smoking them does not lower the risk of cancer or other diseases. A person smoking a low tar cigarette can inhale the same amount of tobacco tar, nicotine, and harmful, cancer-causing chemicals as in a regular cigarette, depending on how the cigarette is smoked. Cigarettes are no longer allowed to be labeled or advertised as low tar cigarettes. Also called light cigarette.

### **low-dose CT scan**

A procedure that uses a computer linked to an x-ray machine that gives off a very low dose of radiation to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-D views of tissues and organs. Low-dose CT scan is recommended as a screening test for adults who have a high risk of developing lung cancer based on their age and smoking history. Also called LDCT and low-dose computed tomography.

### **low-dose chemotherapy**

Treatment in which low doses of anticancer drugs are given on a continuous or frequent, regular schedule (such as daily or weekly), usually over a long time. Low-dose chemotherapy causes less severe side effects than standard chemotherapy. Giving low doses of chemotherapy may stop the growth of new blood vessels that tumors need to grow. Also called metronomic chemotherapy.

### **low-dose computed tomography**

A procedure that uses a computer linked to an x-ray machine that gives off a very low dose of radiation to make a series of detailed pictures of areas inside the body. The pictures are taken from different angles and are used to create 3-D views of tissues and organs. Low-dose computed tomography is recommended as a screening test for adults who have a high risk of developing lung cancer based on their age and smoking history. Also called LDCT and low-dose CT scan.

### **low-dose radiation therapy**

Radiation treatment in which the total dose of radiation is less than that given in standard radiation therapy. In low-dose radiation therapy, the total dose may be given in fewer treatments or over a shorter period of time (fewer days or weeks) than standard radiation therapy. This may cause less damage to nearby healthy tissue.

### **low-grade DCIS**

A condition in which cells that look mostly like normal cells under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Low-grade DCIS tends to grow more slowly than intermediate-grade or high-grade DCIS. It is also less likely to come back or become invasive breast cancer and spread to other tissues. Also called grade I DCIS, grade I ductal carcinoma in situ, and low-grade ductal carcinoma in situ.

### **low-grade ductal carcinoma in situ**

A condition in which cells that look mostly like normal cells under a microscope are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Low-grade ductal carcinoma in situ tends to grow more slowly than intermediate-grade or high-grade ductal carcinoma in situ. It is also less likely to come back or become invasive breast cancer and spread to other tissues. Also called grade I DCIS, grade I ductal carcinoma in situ, and low-grade DCIS.

### **low-grade fibromyxoid sarcoma**

A rare, slow-growing type of cancer that usually forms in the deep soft tissues of the legs or trunk (chest and abdomen). The cancer may come back many years after treatment and spread to the lungs and the lining of the wall of the chest cavity. The cancer cells usually have a certain genetic change called a translocation (part of one chromosome switches places with part of another chromosome). Low-grade fibromyxoid sarcoma usually occurs in young and middle-aged adults. It is a type of soft tissue sarcoma.

### **low-grade lymphoma**

A type of lymphoma that tends to grow and spread slowly, and has few symptoms. Also called indolent lymphoma.

### **low-grade squamous intraepithelial lesion**

An area of abnormal cells that forms on the surface of certain organs, such as the cervix, vagina, vulva, anus, and esophagus. Low-grade squamous intraepithelial lesions look slightly abnormal when looked at under a microscope. They are usually caused by infection with certain types of human papillomavirus (HPV) and are found when a Pap test or biopsy is done. Low-grade squamous intraepithelial lesions usually go away on their own without treatment, but sometimes they can become cancer and spread into nearby tissue. Low-grade squamous intraepithelial lesion is sometimes called mild dysplasia. Also called LSIL.

### **low-risk HPV**

A group of sexually transmitted human papillomaviruses (HPV) that infect the cells on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. Low-risk HPV infections can cause warts on or around the genitals, anus, mouth, and throat. They can also cause warts on the larynx or other areas of the respiratory tract. Low-risk HPV infections rarely cause cancer, and most go away on their own without treatment. There are many types of low-risk HPV, but HPV types 6 and 11 cause almost all cases of genital warts. Also called low-risk human papillomavirus.

### **low-risk cancer**

Cancer that tends to grow slowly, usually does not spread to other parts of the body, and may have a good chance of being cured. Knowing whether a cancer is low risk may help plan treatment. Some low-risk cancers may not need treatment right away.

### **low-risk human papillomavirus**

A group of sexually transmitted human papillomaviruses (HPV) that infect the cells on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. Low-risk human papillomavirus infections can cause warts on or around the genitals, anus, mouth, and throat. They can also cause warts on the larynx or other areas of the respiratory tract. Low-risk human papillomavirus infections rarely cause cancer, and most go away on their own without treatment. There are many types of low-risk human papillomavirus, but HPV types 6 and 11 cause almost all cases of genital warts. Also called low-risk HPV.

### **lower GI series**

X-rays of the colon and rectum that are taken after a person is given a barium enema.

### **lower extremity**

The part of the body that includes the leg, ankle, and foot.

### **lower jaw bone**

The lower jaw bone is the largest and strongest bone in the face. It forms the lower part of the jaw and part of the mouth. The lower jaw bone is the only moveable bone of the skull and is attached to muscles involved in chewing and other mouth movements. It also holds the bottom teeth in place. Also called mandible.

### **lubricant**

An oily or slippery substance.

## **lumbar puncture**

A procedure in which a thin, hollow needle is inserted into the lower part of the spine to collect a sample of cerebrospinal fluid (CSF). This is done by placing the needle between two bones in the spine and into the subarachnoid space (the fluid-filled space between the thin layers of tissue around the spinal cord). After the CSF sample is removed, it is checked under a microscope for signs of infection, inflammation, or diseases, such as cancer or certain nervous system conditions. A lumbar puncture may also be done to measure or reduce CSF pressure around the spinal cord and brain, to inject drugs, such as chemotherapy or anesthesia drugs, directly into the CSF, or to inject contrast dye for certain imaging tests. Also called LP and spinal tap.

## **lumen**

The cavity or channel within a tube or tubular organ such as a blood vessel or the intestine.

## **luminal A breast cancer**

A subtype of hormone receptor-positive breast cancer. Luminal A breast cancer cells typically have estrogen receptor (ER) and progesterone receptor (PR) proteins inside them and a small amount or none of a protein called HER2 on their surface. Luminal A breast cancer cells also tend to have low levels of a protein called Ki-67, which is found only in cells that are dividing. Under a microscope, luminal A breast cancer cells look more like normal cells than other subtypes of breast cancer. They tend to grow slowly and have a good prognosis. Most breast cancers are luminal A.

## **luminal B breast cancer**

A subtype of hormone receptor-positive breast cancer. Luminal B breast cancer cells typically have estrogen receptor (ER) proteins but not progesterone receptor (PR) proteins inside them. The cancer cells may or may not have the HER2 protein on their surface. Luminal B breast cancer cells often have high levels of a protein called Ki-67, which is found only in cells that are dividing. Luminal B breast cancers tend to grow more quickly and have a slightly poorer prognosis than luminal A breast cancers.

## **lumpectomy**

Surgery to remove cancer or other abnormal tissue from the breast and some normal tissue around it, but not the breast itself. Some lymph nodes under the arm may be removed for biopsy. Part of the chest wall lining may also be removed if the cancer is near it. Also called breast-conserving surgery, breast-sparing surgery, partial mastectomy, quadrantectomy, and segmental mastectomy.

## **lung**

One of a pair of organs in the chest that supplies the body with oxygen, and removes carbon dioxide from the body.

## **lung biopsy**

The removal of a small piece of lung tissue to be checked by a pathologist for cancer or other diseases. The tissue may be removed using a bronchoscope (a thin, lighted, tube-like instrument that is inserted through the trachea and into the lung). It may also be removed using a fine needle inserted through the chest wall, by surgery guided by a video camera inserted through the chest wall, or by an open biopsy. In an open biopsy, a doctor makes an incision between the ribs, removes a sample of lung tissue, and closes the wound with stitches.

### **lung cancer**

Cancer that forms in tissues of the lung, usually in the cells lining air passages. The two main types are small cell lung cancer and non-small cell lung cancer. These types are diagnosed based on how the cells look under a microscope.

### **lung disorder**

A type of disease that affects the lungs and other parts of the respiratory system. Lung disorders may be caused by infection, by smoking tobacco, or by breathing in secondhand tobacco smoke, radon, asbestos, or other forms of air pollution. Lung disorders include asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, pneumonia, and lung cancer. Also called pulmonary disease and respiratory disease.

### **lung function**

A term used to describe how well the lungs work in helping a person breathe. During breathing, oxygen is taken into the lungs, where it passes into the blood and travels to the body's tissues. Carbon dioxide, a waste product made by the body's tissues, is carried to the lungs, where it is breathed out. There are different tests to measure lung function. Also called pulmonary function.

### **lung function test**

A test used to measure how well the lungs work. It measures how much air the lungs can hold and how quickly air is moved into and out of the lungs. It also measures how much oxygen is used and how much carbon dioxide is given off during breathing. A lung function test can be used to diagnose a lung disease and to see how well treatment for the disease is working. Also called PFT and pulmonary function test.

### **lung metastasis**

Cancer that has spread from the original (primary) tumor to the lung.

### **lupus**

A chronic, inflammatory, connective tissue disease that can affect the joints and many organs, including the skin, heart, lungs, kidneys, and nervous system. It can cause many different symptoms; however, not everyone with lupus has all of the symptoms. Also called SLE and systemic lupus erythematosus.

### **lurbinectedin**

A drug used to treat adults with small cell lung cancer that has spread to other parts of the body and got worse during or after treatment with platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Lurbinectedin may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called Zepzelca.

### **lurtotecan**

An anticancer drug that belongs to the family of drugs called topoisomerase inhibitors.

### **luspatercept**

A drug used to treat anemia in adults with certain types of myelodysplastic syndromes or myelodysplastic/myeloproliferative neoplasms who need regular red blood cell transfusions and whose anemia did not respond to or cannot be treated with an erythropoiesis-stimulating agent. Luspatercept is also used to treat anemia in adults with beta thalassemia (an inherited blood disorder) who need regular red blood cell transfusions. It is also being studied in the treatment



of other conditions. Luspatercept helps the bone marrow make more red blood cells. It is a type of antianemic and a type of recombinant fusion protein. Also called Reblozyl.

### **luteinizing hormone**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make follicles release their eggs and to make hormones that get the uterus ready for a fertilized egg to be implanted. In males, it acts on the testes to cause cells to grow and make testosterone. Also called interstitial cell-stimulating hormone, LH, and lutropin.

### **luteinizing hormone-releasing hormone**

A hormone made by a part of the brain called the hypothalamus. Luteinizing hormone-releasing hormone causes the pituitary gland in the brain to make and secrete the hormones luteinizing hormone (LH) and follicle-stimulating hormone (FSH). In men, these hormones cause the testicles to make testosterone. In women, they cause the ovaries to make estrogen and progesterone. Also called GnRH, gonadotropin-releasing hormone, LH-RH, and LHRH.

### **luteinizing hormone-releasing hormone agonist**

A substance that keeps the testicles and ovaries from making sex hormones by blocking other hormones that are needed to make them. In men, luteinizing hormone-releasing hormone agonists cause the testicles to stop making testosterone. In women, they cause the ovaries to stop making estrogen and progesterone. Some luteinizing hormone-releasing hormone agonists are used to treat prostate cancer. Also called GnRH agonist, GnRHa, gonadotropin-releasing hormone agonist, and LHRH agonist.

### **luteinizing hormone-releasing hormone antagonist**

A substance that blocks the pituitary gland from making hormones called follicle-stimulating hormone (FSH) and luteinizing hormone (LH). In men, this causes the testicles to stop making testosterone. In women, this causes the ovaries to stop making estrogen and progesterone. Some luteinizing hormone-releasing hormone antagonists are used to treat advanced prostate cancer. They are also used to treat certain gynecologic conditions and are being studied in the treatment of hormone-sensitive breast cancer. Also called GnRH antagonist, gonadotropin-releasing hormone antagonist, and LHRH antagonist.

### **lutetium Lu 177 vipivotide tetraxetan**

A radioactive drug used to treat adults with PSMA-positive prostate cancer that has spread to other parts of the body and has not responded to treatments that lower testosterone levels. It is used in patients whose cancer has been treated with an androgen receptor inhibitor and a type of anticancer drug called a taxane. Lutetium Lu 177 vipivotide tetraxetan binds to a protein called PSMA, which is found on some prostate cancer cells. It gives off radiation that may kill the cancer cells. Lutetium Lu 177 vipivotide tetraxetan is a type of radioconjugate. Also called Pluvicto.

### **lutetium Lu 177-dotatate**

A radioactive drug used to treat adults and children aged 12 years and older with gastroenteropancreatic neuroendocrine tumors that are somatostatin receptor positive. It is also being studied in the treatment of other types of cancer. Lutetium Lu 177-dotatate binds to a protein called somatostatin receptor, which is found on some neuroendocrine tumor cells. Lutetium Lu 177-dotatate builds

up in these cells and gives off radiation that may kill them. It is a type of radioconjugate and a type of somatostatin analog. Also called Lutathera.

### **lutetium texaphyrin**

A substance that is being studied in the treatment of cancer using photodynamic therapy. It belongs to the family of drugs called metallotexaphyrins. Also called motexafin lutetium.

### **lutropin**

A hormone made in the pituitary gland. In females, it acts on the ovaries to make follicles release their eggs and to make hormones that get the uterus ready for a fertilized egg to be implanted. In males, it acts on the testes to cause cells to grow and make testosterone. Also called interstitial cell-stimulating hormone, LH, and luteinizing hormone.

### **lycopene**

A red pigment found in tomatoes and some fruits. It is an antioxidant and may help prevent some types of cancer.

### **lymph**

Clear, watery fluid that comes from plasma (the liquid part of the blood) that has leaked through the blood capillary walls into the spaces around cells. Lymph carries white blood cells, nutrients, and other substances throughout the body in lymph vessels. As lymph flows through the lymph vessels, it collects extra fluids, cellular debris, and harmful substances from the tissues and is filtered by lymph nodes. The filtered lymph returns to the bloodstream to help maintain fluid balance in the body and immune health. Also called lymphatic fluid.

### **lymph gland**

A small bean-shaped structure that is part of the body's immune system. Lymph glands filter substances that travel through the lymphatic fluid, and they contain lymphocytes (white blood cells) that help the body fight infection and disease. There are hundreds of lymph glands found throughout the body. They are connected to one another by lymph vessels. Clusters of lymph glands are found in the neck, axilla (underarm), chest, abdomen, and groin. For example, there are about 20-40 lymph glands in the axilla. Also called lymph node.

### **lymph node**

A small bean-shaped structure that is part of the body's immune system. Lymph nodes filter substances that travel through the lymphatic fluid, and they contain lymphocytes (white blood cells) that help the body fight infection and disease. There are hundreds of lymph nodes found throughout the body. They are connected to one another by lymph vessels. Clusters of lymph nodes are found in the neck, axilla (underarm), chest, abdomen, and groin. For example, there are about 20-40 lymph nodes in the axilla. Also called lymph gland.

### **lymph node biopsy**

A procedure in which all or part of a lymph node is removed and checked under a microscope for signs of infection or disease, such as cancer. There are several types of lymph node biopsies, including excisional biopsy (removal of entire lymph node), incisional biopsy (removal of part of a lymph node), core needle biopsy (removal of tissue from a lymph node using a wide needle), and fine-needle aspiration biopsy (removal of tissue from a lymph node using a thin needle).

### **lymph node dissection**

A surgical procedure in which the lymph nodes are removed and a sample of tissue is checked under a microscope for signs of cancer. For a regional lymph node dissection, some of the lymph nodes in the tumor area are removed; for a radical lymph node dissection, most or all of the lymph nodes in the tumor area are removed. Also called lymphadenectomy.

### **lymph node drainage**

The flow of lymph from an area of tissue into a particular lymph node.

### **lymph node mapping**

The use of dyes and radioactive substances to identify lymph nodes that may contain tumor cells. Also called lymphatic mapping.

### **lymph system**

The tissues and organs that help the body fight infection and disease. The lymph system includes the lymph nodes, lymph vessels (thin tubes that carry lymph and white blood cells), bone marrow, spleen, thymus, tonsils and adenoids, and lymph tissue in the small intestine and other parts of the body. The lymph system is an important part of the body's immune system. It also plays an important role in maintaining healthy fluid levels in the body, removing cellular debris and harmful substances from the tissues, and helping the body absorb certain fats and other molecules. Also called lymphatic system.

### **lymph vessel**

A thin tube that collects lymph (clear watery fluid) from tissues in different parts of the body and returns it to the bloodstream. Lymph vessels branch, like blood vessels, throughout the body. They vary in size but are typically larger than blood capillaries and smaller than most veins. Also called lymphatic vessel.

### **lymphadenectomy**

A surgical procedure in which the lymph nodes are removed and a sample of tissue is checked under a microscope for signs of cancer. For a regional lymphadenectomy, some of the lymph nodes in the tumor area are removed; for a radical lymphadenectomy, most or all of the lymph nodes in the tumor area are removed. Also called lymph node dissection.

### **lymphadenopathy**

Disease or swelling of the lymph nodes.

### **lymphangiogram**

An x-ray or computer image of the lymphatic system. A dye is injected into the body to make the lymphatic vessels and lymph nodes easier to see in the image. A lymphangiogram may be used to check for blockages or leaks in the lymphatic system and to help diagnose certain conditions, such as lymphedema or lymphoma. It may also be used with a lymph node biopsy to find out whether cancer has spread.

### **lymphangiography**

A procedure that uses x-rays or magnetic resonance imaging (MRI) to make pictures of the lymphatic system. A dye is injected into the body to make the lymphatic vessels and lymph nodes easier to see in the pictures. Lymphangiography may be used to check for blockages or leaks in the lymphatic system and to help diagnose certain conditions, such as lymphedema or lymphoma, or find out whether cancer has spread. It may also be used to help

plan treatment or find out how well treatment is working. Lymphangiography is also sometimes used before surgery to learn more about the structure of a person's lymphatic system. Also called lymphography.

### **lymphangiosarcoma**

A type of cancer that begins in the cells that line lymph vessels.

### **lymphangitic carcinomatosis**

A serious condition in which cancer cells spread from the original (primary) tumor to the lymph vessels (the thin tubes that carry lymph and white blood cells through the body's lymph system). The cancer cells build up in the lymph vessels, which causes them to become blocked. Lymphangitic carcinomatosis usually occurs in the lungs. It can happen in many types of cancer, but it is most common in people with cancers of the breast, lung, colon, stomach, pancreas, or prostate. Also called carcinomatous lymphangitis.

### **lymphatic basin**

A group of lymph nodes that receives and filters lymph that flows from a certain area of the body. Special dyes may be used to stain and identify the lymphatic basin in the tissues around a tumor, so that lymph nodes that may contain cancer can be removed and checked by a pathologist.

### **lymphatic fluid**

Clear, watery fluid that comes from plasma (the liquid part of the blood) that has leaked through the blood capillary walls into the spaces around cells. Lymphatic fluid carries white blood cells, nutrients, and other substances throughout the body in lymph vessels. As lymphatic fluid flows through the lymph vessels, it collects extra fluids, cellular debris, and harmful substances from the tissues and is filtered by lymph nodes. The filtered lymphatic fluid returns to the bloodstream to help maintain fluid balance in the body and immune health. Also called lymph.

### **lymphatic mapping**

The use of dyes and radioactive substances to identify lymph nodes that may contain tumor cells. Also called lymph node mapping.

### **lymphatic system**

The tissues and organs that help the body fight infection and disease. The lymphatic system includes the lymph nodes, lymph vessels (thin tubes that carry lymph and white blood cells), bone marrow, spleen, thymus, tonsils and adenoids, and lymph tissue in the small intestine and other parts of the body. The lymphatic system is an important part of the body's immune system. It also plays an important role in maintaining healthy fluid levels in the body, removing cellular debris and harmful substances from the tissues, and helping the body absorb certain fats and other molecules. Also called lymph system.

### **lymphatic vessel**

A thin tube that collects lymph (clear watery fluid) from tissues in different parts of the body and returns it to the bloodstream. Lymphatic vessels branch, like blood vessels, throughout the body. They vary in size but are typically larger than blood capillaries and smaller than most veins. Also called lymph vessel.

### **lymphaticovenous anastomosis**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph vessels or nodes become damaged or blocked. During a lymphaticovenous anastomosis,

lymph vessels are rerouted to connect directly to nearby veins in the affected part of the body so that lymph can flow around the damaged or blocked area. This creates a new path for lymph to re-enter the bloodstream and travel through the body. Also called LVA, LVB, and lymphovenous bypass.

### **lymphedema**

A condition in which lymph builds up in tissues and causes swelling. Lymphedema usually affects an arm or leg, but it can also affect other parts of the body. Lymphedema can occur when lymph vessels or nodes become damaged or blocked, which affects the flow of lymph in the body. This is most commonly caused by cancer or cancer treatment, such as surgery or radiation therapy. It can also be caused by infection with certain parasites or by having certain inherited conditions in which the lymph nodes or lymph vessels are abnormal or absent. Lymphedema cannot be cured, but treatment can help relieve swelling, pain, and other symptoms.

### **lymphoblast**

A lymphocyte that has gotten larger after being stimulated by an antigen. Lymphoblast also refers to an immature cell that can develop into a mature lymphocyte.

### **lymphoblastic**

Refers to lymphoblasts (a type of immature white blood cell).

### **lymphoblastic lymphoma**

An aggressive (fast-growing) type of non-Hodgkin lymphoma in which too many lymphoblasts (immature white blood cells) are found in the lymph nodes and the thymus gland. These lymphoblasts may spread to other places in the body. It is most common in teenagers and young adults and affects more males than females. It may be a T or B cell type. Also called precursor lymphoblastic lymphoma.

### **lymphocyte**

A type of immune cell that is made in the bone marrow and is found in the blood and in lymph tissue. The two main types of lymphocytes are B lymphocytes and T lymphocytes. B lymphocytes make antibodies, and T lymphocytes help kill tumor cells and help control immune responses. A lymphocyte is a type of white blood cell.

### **lymphocyte-predominant Hodgkin lymphoma**

A rare type of Hodgkin lymphoma (a cancer of the immune system). It is marked by the presence of lymphocyte-predominant cells, which used to be called popcorn cells. These cells are different from the typical Reed-Sternberg cells found in classic Hodgkin lymphoma. Lymphocyte-predominant Hodgkin lymphoma may change into diffuse large B-cell lymphoma. Also called LPHL, NLPHL, and nodular lymphocyte-predominant Hodgkin lymphoma.

### **lymphocytic**

Refers to lymphocytes (a type of white blood cell).

### **lymphocytic leukemia**

A type of cancer in which the bone marrow makes too many lymphocytes (white blood cells).

### **lymphocytic leukopenia**

A condition in which there is a lower-than-normal number of lymphocytes (a type of white blood cell) in the blood. Also called lymphocytopenia and lymphopenia.

### **lymphocytopenia**

A condition in which there is a lower-than-normal number of lymphocytes (a type of white blood cell) in the blood. Also called lymphocytic leukopenia and lymphopenia.

### **lymphoepithelioma**

A type of cancer that begins in the tissues covering the nasopharynx (the upper part of the throat behind the nose).

### **lymphography**

A procedure that uses x-rays or magnetic resonance imaging (MRI) to make pictures of the lymphatic system. A dye is injected into the body to make the lymphatic vessels and lymph nodes easier to see in the pictures. Lymphography may be used to check for blockages or leaks in the lymphatic system and to help diagnose certain conditions, such as lymphedema or lymphoma, or find out whether cancer has spread. It may also be used to help plan treatment or find out how well treatment is working. Lymphography is also sometimes used before surgery to learn more about the structure of a person's lymphatic system. Also called lymphangiography.

### **lymphoid**

Referring to lymphocytes, a type of white blood cell. Also refers to tissue in which lymphocytes develop.

### **lymphokine-activated killer cell**

A white blood cell that is stimulated in a laboratory to kill tumor cells. Also called LAK cell.

### **lymphoma**

Cancer that begins in cells of the immune system. There are two basic categories of lymphomas. One kind is Hodgkin lymphoma, which is marked by the presence of a type of cell called the Reed-Sternberg cell. The other category is non-Hodgkin lymphomas, which includes a large, diverse group of cancers of immune system cells. Non-Hodgkin lymphomas can be further divided into cancers that have an indolent (slow-growing) course and those that have an aggressive (fast-growing) course. These subtypes behave and respond to treatment differently. Both Hodgkin and non-Hodgkin lymphomas can occur in children and adults, and prognosis and treatment depend on the stage and the type of cancer.

### **lymphomatoid granulomatosis**

Destructive growth of lymph cells, usually involving the lungs, skin, kidneys, and central nervous system. Grades I and II are not considered cancer, but grade III is considered a lymphoma.

### **lymphomatous leptomeningitis**

A serious problem that may occur in lymphoma. In lymphomatous leptomeningitis, cancer cells have spread from the original (primary) tumor to the meninges (thin layers of tissue that cover and protect the brain and spinal cord). The cancer may cause the meninges to be inflamed. Also called lymphomatous meningitis.



### **lymphomatous meningitis**

A serious problem that may occur in lymphoma. In lymphomatous meningitis, cancer cells have spread from the original (primary) tumor to the meninges (thin layers of tissue that cover and protect the brain and spinal cord). The cancer may cause the meninges to be inflamed. Also called lymphomatous leptomeningitis.

### **lymphopenia**

A condition in which there is a lower-than-normal number of lymphocytes (a type of white blood cell) in the blood. Also called lymphocytic leukopenia and lymphocytopenia.

### **lymphoplasmacytic lymphoma**

An indolent (slow-growing) type of non-Hodgkin lymphoma marked by abnormal levels of IgM antibodies in the blood and an enlarged liver, spleen, or lymph nodes. Also called Waldenström macroglobulinemia.

### **lymphopoietin-1**

One of a group of related proteins made by leukocytes (white blood cells) and other cells in the body. Lymphopoietin-1 is made by cells that cover and support organs, glands, and other structures in the body. It causes the growth of T lymphocytes and B lymphocytes. Lymphopoietin-1 made in the laboratory is used as a biological response modifier to boost the immune system in cancer therapy. Lymphopoietin-1 is a type of cytokine. Also called IL-7 and interleukin-7.

### **lymphoproliferative disorder**

A disease in which cells of the lymphatic system grow excessively. Lymphoproliferative disorders are often treated like cancer.

### **lymphosarcoma**

An obsolete term for a malignant tumor of lymphatic tissue.

### **lymphoscintigraphy**

A method used to check the lymph system for disease. A radioactive substance that flows through the lymph ducts and can be taken up by lymph nodes is injected into the body. A scanner or probe is used to follow the movement of this substance on a computer screen. Lymphoscintigraphy is used to find the sentinel lymph node (the first node to receive lymph from a tumor), which may be removed and checked for tumor cells. Lymphoscintigraphy is also used to diagnose certain diseases or conditions, such as lymphoma or lymphedema.

### **lymphostatic elephantiasis**

A chronic condition marked by extreme swelling in an arm, leg, or other part of the body caused by a buildup of lymph in the tissues. The skin of the affected area usually feels hard and thick and may be darker in color. There may also be decreased mobility in the affected area. Lymphostatic elephantiasis can occur when lymph vessels or nodes become damaged or blocked, which affects the flow of lymph in the body. This is most commonly caused by cancer or cancer treatment, such as surgery or radiation therapy. Lymphostatic elephantiasis is considered the most advanced stage of lymphedema. Also called stage III lymphedema.

### **lymphovenous bypass**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph vessels or

nodes become damaged or blocked. During a lymphovenous bypass, lymph vessels are rerouted to connect directly to nearby veins in the affected part of the body so that lymph can flow around the damaged or blocked area. This creates a new path for lymph to re-enter the bloodstream and travel through the body. Also called LVA, LVB, and lymphaticovenous anastomosis.

### **lymphovenous transplant**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph nodes or vessels become damaged or blocked. During a lymphovenous transplant, healthy tissue containing lymph nodes and vessels is taken from one part of the body, such as the neck, abdomen, or groin, and moved to the area with the damaged lymph nodes, usually in a person's arm or leg. This may cause the lymph nodes and vessels in the healthy tissue to grow and help improve the flow of lymph in that area. Also called vascularized lymph node transfer and VLNT.

### **lysis**

In biology, lysis refers to the breakdown of a cell caused by damage to its plasma (outer) membrane. It can be caused by chemical or physical means (for example, strong detergents or high-energy sound waves) or by infection with a strain virus that can lyse cells.

### **lysosome**

A sac-like compartment inside a cell that has enzymes that can break down cellular components that need to be destroyed.

### **lytic**

Having to do with lysis. In biology, lysis refers to the disintegration of a cell by disruption of its plasma membrane. Lysis can be caused by chemical or physical means (e.g., high-energy sound waves) or by a virus infection.

### **lytic lesion**

Destruction of an area of bone due to a disease process, such as cancer.

### **mL**

A measure of volume in the metric system. One thousand mLs equal one liter. Also called cc, cubic centimeter, and milliliter.

### **mRNA**

A type of RNA found in cells. mRNA molecules carry the genetic information needed to make proteins. They carry the information from the DNA in the nucleus of the cell to the cytoplasm where the proteins are made. Also called messenger RNA.

### **mTOR**

A protein that helps control several cell functions, including cell division and survival, and binds to rapamycin and other drugs. mTOR may be more active in some types of cancer cells than it is in normal cells. Blocking mTOR may cause the cancer cells to die. It is a type of serine/threonine protein kinase. Also called mammalian target of rapamycin and mechanistic target of rapamycin.

### **mTOR inhibitor**

A substance that blocks a protein called mTOR, which helps control cell division. Blocking mTOR's action may keep cancer cells from growing and prevent the

growth of new blood vessels that tumors need to grow. Some mTOR inhibitors are used to treat cancer.

### **ma huang**

A shrub native to China and India. The stems and roots are used in traditional medicine as a diuretic and for asthma, bronchitis, and cough. It has also been promoted as a decongestant, a weight loss aid, and as a supplement to increase energy. Ma huang may cause high blood pressure, increased heart rate, or death if used with certain drugs, and may reduce the effects of certain drugs used to treat cancer and other diseases. The U.S. Food and Drug Administration has banned the sale of dietary supplements that contain ma huang. The scientific name is *Ephedra sinica*. Also called ephedra.

### **machine learning**

A field of computer science that develops the processes by which computers are taught how to learn and perform certain functions without being specifically programmed to perform those functions. Machine learning involves analyzing very large amounts of information to improve a computer's ability to make decisions or predictions. Machine learning is a part of artificial intelligence (AI). In medicine, the use of machine learning and AI may help improve cancer screening and diagnosis and plan treatment.

### **macrocalcification**

A small deposit of calcium in the breast that cannot be felt but can be seen on a mammogram. It is usually caused by aging, an old injury, or inflamed tissue and is usually not related to cancer.

### **macroglobulinemia**

A condition in which the blood contains high levels of large proteins and is too thick to flow through small blood vessels. One type is Waldenström macroglobulinemia, which is a type of cancer.

### **macrophage**

A type of white blood cell that surrounds and kills microorganisms, removes dead cells, and stimulates the action of other immune system cells.

### **macular degeneration**

A condition in which there is a slow breakdown of cells in the center of the retina (the light-sensitive layers of nerve tissue at the back of the eye). This blocks vision in the center of the eye and can cause problems with activities such as reading and driving. Macular degeneration is most often seen in people who are over the age of 50. Also called age-related macular degeneration, AMD, and ARMD.

### **mafosfamide**

A form of cyclophosphamide that can be administered as an intrathecal infusion. Mafosfamide is being studied as an anticancer drug. It belongs to the family of drugs called alkylating agents.

### **magnesium**

In medicine, a mineral used by the body to help maintain muscles, nerves, and bones. It is also used in energy metabolism and protein synthesis.

### **magnesium sulfate**

A drug used to treat pre-eclampsia and eclampsia (serious complications of pregnancy). Magnesium sulfate is also being studied for its ability to prevent the toxic side effects of certain drugs used to treat colorectal cancer. It is a type of anticonvulsant agent.

### **magnetic resonance angiography**

A procedure that uses radio waves and a powerful magnet linked to a computer to create detailed pictures of the blood vessels and blood flow inside the body. A dye may be injected into a vein to make the blood vessels and blood flow easier to see. Magnetic resonance angiography may be used to check for aneurysms (a bulge in the blood vessel wall), blockages in the arteries, blood clots, and other blood vessel problems. Also called MRA.

### **magnetic resonance imaging**

A procedure that uses radio waves, a powerful magnet, and a computer to make a series of detailed pictures of areas inside the body. A contrast agent, such as gadolinium, may be injected into a vein to help the tissues and organs show up more clearly in the picture. Magnetic resonance imaging may be used to help diagnose disease, plan treatment, or find out how well treatment is working. It is especially useful for imaging the brain and spinal cord, the heart and blood vessels, the bones, joints, and other soft tissues, the organs in the pelvis and abdomen, and the breast. Also called MRI, NMRI, and nuclear magnetic resonance imaging.

### **magnetic resonance lymphangiography**

A procedure that uses radio waves, a powerful magnet, and a computer to make a series of detailed pictures of the lymphatic system. A dye is injected into the body to make the lymphatic vessels and lymph nodes easier to see. Magnetic resonance lymphangiography may be used to check for blockages or leaks in the lymphatic system and to help diagnose certain conditions, such as lymphedema or lymphoma, or find out whether cancer has spread. It may also be used to help plan treatment or find out how well treatment is working. Magnetic resonance lymphangiography is sometimes used before surgery to learn more about the structure of a person's lymphatic system. Also called MRL.

### **magnetic resonance perfusion imaging**

A special type of magnetic resonance imaging (MRI) that uses an injected dye in order to see blood flow through tissues. Also called perfusion magnetic resonance imaging.

### **magnetic resonance spectroscopic imaging**

A noninvasive imaging method that provides information about cellular activity (metabolic information). It is used along with magnetic resonance imaging (MRI) which provides information about the shape and size of the tumor (spatial information). Also called <sup>1</sup>H-nuclear magnetic resonance spectroscopic imaging, MRSI, and proton magnetic resonance spectroscopic imaging.

### **magnetic-targeted carrier**

A tiny bead made from particles of iron and carbon that can be attached to an anticancer drug. A magnet applied from outside the body then can direct the drug to the tumor site. This can keep a larger dose of the drug at the tumor site for a longer period of time, and help protect healthy tissue from the side effects of chemotherapy.

**maidenhair tree**

A tree native to China. Substances taken from the leaves and seeds have been used in some cultures to treat certain medical problems. Maidenhair tree has been studied in the prevention and treatment of Alzheimer disease, dementia, certain blood vessel diseases, and memory loss. It may cause bleeding or high blood pressure when used with certain drugs. Also called ginkgo and ginkgo biloba.

**mainstream medicine**

A system in which medical doctors and other health care professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called allopathic medicine, biomedicine, conventional medicine, orthodox medicine, and Western medicine.

**mainstream smoke**

Tobacco smoke that is exhaled by smokers. Mainstream smoke can be a form of secondhand smoke. It contains nicotine and many harmful, cancer-causing chemicals. Inhaling mainstream smoke increases the risk of lung cancer and may increase the risk of other types of cancer. Inhaling it also increases the risk of other health problems, such as heart disease and lung disease.

**maintenance therapy**

Treatment that is given to help keep cancer from coming back after it has disappeared following the initial therapy. It may include treatment with drugs, vaccines, or antibodies that kill cancer cells, and it may be given for a long time.

**malabsorption syndrome**

A group of symptoms such as gas, bloating, abdominal pain, and diarrhea resulting from the body's inability to properly absorb nutrients.

**male breast cancer**

Cancer that forms in tissues of the breast in men. Most male breast cancer begins in cells lining the ducts. It is very rare and usually affects older men.

**malignancy**

A term for diseases in which abnormal cells divide without control and can invade nearby tissues. Malignant cells can also spread to other parts of the body through the blood and lymph systems. There are several main types of malignancy. Carcinoma is a malignancy that begins in the skin or in tissues that line or cover internal organs. Sarcoma is a malignancy that begins in bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue. Leukemia is a malignancy that begins in blood-forming tissue, such as the bone marrow, and causes too many abnormal blood cells to be made. Lymphoma and multiple myeloma are malignancies that begin in the cells of the immune system. Central nervous system cancers are malignancies that begin in the tissues of the brain and spinal cord. Also called cancer.

**malignant**

A term used to describe cancer. Malignant cells grow in an uncontrolled way and can invade nearby tissues and spread to other parts of the body through the blood and lymph system.

**malignant ascites**

A condition in which fluid containing cancer cells collects in the abdomen.

### **malignant ectomesenchymoma**

A rare, fast-growing tumor of the nervous system or soft tissue that occurs in children and young adults. Malignant ectomesenchymomas may form in the head and neck, abdomen, perineum, scrotum, or limbs. Also called ectomesenchymoma.

### **malignant fibrous cytoma**

A type of cancer that usually forms in the soft tissue, but it may also form in bone. It can occur anywhere in the body, but it usually occurs in the legs (especially the thighs), arms, or back of the abdomen. It may also occur in a part of the body where a patient received radiation therapy in the past. Malignant fibrous cytomas often grow quickly and spread to other parts of the body, including the lungs. They usually occur in older adults, and they may sometimes occur as a second cancer in patients who had retinoblastoma. Also called malignant fibrous histiocytoma and undifferentiated pleomorphic sarcoma.

### **malignant fibrous histiocytoma**

A type of cancer that usually forms in the soft tissue, but it may also form in bone. It can occur anywhere in the body, but it usually occurs in the legs (especially the thighs), arms, or back of the abdomen. It may also occur in a part of the body where a patient received radiation therapy in the past. Malignant fibrous histiocytomas often grow quickly and spread to other parts of the body, including the lungs. They usually occur in older adults, and they may sometimes occur as a second cancer in patients who had retinoblastoma. Also called malignant fibrous cytoma and undifferentiated pleomorphic sarcoma.

### **malignant meningioma**

A rare, fast-growing tumor that forms in one of the inner layers of the meninges (thin layers of tissue that cover and protect the brain and spinal cord). Malignant meningioma often spreads to other areas of the body.

### **malignant mesothelioma**

A rare type of cancer in which malignant cells are found in the lining of the chest or abdomen. Exposure to airborne asbestos particles increases one's risk of developing malignant mesothelioma.

### **malignant mixed Müllerian tumor**

A rare type of tumor that is a mixture of carcinoma and sarcoma cells. MMMT usually occurs in the uterus. Also called MMMT.

### **malignant pericardial effusion**

A condition in which cancer causes extra fluid to collect inside the sac around the heart. The extra fluid causes pressure on the heart, which keeps it from pumping blood normally. Lymph vessels may be blocked, which can cause infection. Malignant pericardial effusions are most often caused by lung cancer, breast cancer, melanoma, lymphoma, and leukemia.

### **malignant peripheral nerve sheath tumor**

A type of soft tissue sarcoma that develops in cells that form a protective sheath (covering) around peripheral nerves, which are nerves that are outside of the central nervous system (brain and spinal cord). Also called MPNST.

### **malignant peritoneal effusion**

A condition in which cancer causes extra fluid to collect between the thin layers of the peritoneum (tissue that lines the abdomen and covers most of the organs



in the abdomen). Signs and symptoms may include pain or swelling in the abdomen, trouble breathing, chest pain, weight gain, nausea, loss of appetite, and fatigue. Malignant peritoneal effusions are most often caused by cancers of the ovary, uterus, breast, colon, lung, pancreas, and liver.

### **malignant pleural effusion**

A condition in which cancer causes an abnormal amount of fluid to collect between the thin layers of tissue (pleura) lining the outside of the lung and the wall of the chest cavity. Lung cancer, breast cancer, lymphoma, and leukemia cause most malignant pleural effusions.

### **malignant triton tumor**

A very rare, fast-growing type of cancer that forms in the nerve sheath (a protective covering around nerves that are not part of the brain or spinal cord). The tumor is made up of Schwann cells (cells that hold nerve cells in place) and rhabdomyoblasts (a type of muscle cell). Malignant triton tumors occur most often in patients with neurofibromatosis type 1. A malignant triton tumor is a type of soft tissue sarcoma.

### **malnourished**

Describes a condition caused by not getting enough calories or the right amount of key nutrients needed for health. Key nutrients include vitamins and minerals.

### **malnutrition**

A condition caused by not getting enough calories or the right amount of key nutrients, such as vitamins and minerals, that are needed for health. Malnutrition may occur when there is a lack of nutrients in the diet or when the body cannot absorb nutrients from food. Cancer and cancer treatment may cause malnutrition.

### **malondialdehyde**

A byproduct of lipid (fat) metabolism in the body. It is also found in many foods and can be present in high amounts in rancid food.

### **mammalian target of rapamycin**

A protein that helps control several cell functions, including cell division and survival, and binds to rapamycin and other drugs. Mammalian target of rapamycin may be more active in some types of cancer cells than it is in normal cells. Blocking mammalian target of rapamycin may cause the cancer cells to die. It is a type of serine/threonine protein kinase. Also called mechanistic target of rapamycin and mTOR.

### **mammary**

Having to do with the breast.

### **mammary duct ectasia**

A benign (not cancer) condition in which a milk duct under the nipple widens and thickens. This can cause the milk duct to become blocked and fluid to build up inside it. There are usually no symptoms, but sometimes there may be a thick nipple discharge or redness or tenderness of the nipple and nearby breast tissue. Mammary duct ectasia is most common in women who are near menopause or have gone through it. Also called breast duct ectasia.

**mammary dysplasia**

A group of conditions marked by changes in breast tissue that are benign (not cancer). There are different types of mammary dysplasia, including some types caused by an increase in the number of cells or by the growth of abnormal cells in the breast ducts or lobes. Signs and symptoms of mammary dysplasia include irregular lumps or cysts, breast swelling or discomfort, skin redness or thickening, and nipple discharge. Most benign breast conditions do not increase the risk of breast cancer. Also called benign breast disease.

**mammary gland**

Glandular organ located on the chest. The mammary gland is made up of connective tissue, fat, and tissue that contains the glands that can make milk. Also called breast.

**mammogram**

An x-ray of the breast.

**mammography**

The use of film or a computer to create a picture of the breast.

**mandible**

The mandible is the largest and strongest bone in the face. It forms the lower part of the jaw and part of the mouth. The mandible is the only moveable bone of the skull and is attached to muscles involved in chewing and other mouth movements. It also holds the bottom teeth in place. Also called lower jaw bone.

**manipulative and body-based practice**

A type of therapy in which the therapist moves or manipulates one or more parts of the patient's body. It may be used to treat pain, stress, anxiety, and depression, and for general well-being. Examples include chiropractic treatments, physical therapy, and massage therapy. Also called manual healing and physical touch methods.

**mannitol**

A drug used to decrease swelling of the brain and to treat kidney failure. Mannitol can also be used to open the blood-brain barrier, which allows anticancer medicines to enter the brain and treat brain tumors.

**mantle cell lymphoma**

An aggressive (fast-growing) type of B-cell non-Hodgkin lymphoma that usually occurs in middle-aged or older adults. It is marked by small- to medium-size cancer cells that may be in the lymph nodes, spleen, bone marrow, blood, and gastrointestinal system.

**mantle field**

The area of the neck, chest, and lymph nodes in the armpit that are exposed to radiation.

**manual healing**

A type of therapy in which the therapist moves or manipulates one or more parts of the patient's body. It may be used to treat pain, stress, anxiety, and depression, and for general well-being. Examples include chiropractic treatments, physical therapy, and massage therapy. Also called manipulative and body-based practice and physical touch methods.

### **mapatumumab**

A substance being studied in the treatment of some types of cancer. It binds to a protein called TRAIL R1 on the surface of some tumor cells. This may kill the tumor cells. Mapatumumab is a type of monoclonal antibody. Also called anti-TRAIL R1-mAb and HGS-ETR1.

### **margetuximab**

A drug used with other drugs to treat adults with HER2-positive breast cancer that has spread to other parts of the body. It is used in patients who have already received at least two anti-HER2 treatments, including at least one for metastatic disease. It is also being studied in the treatment of other types of cancer. Margetuximab binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Margetuximab is a type of monoclonal antibody. Also called Margenza.

### **margin**

The edge or border of the tissue removed in cancer surgery. The margin is described as negative or clean when the pathologist finds no cancer cells at the edge of the tissue, suggesting that all of the cancer has been removed. The margin is described as positive or involved when the pathologist finds cancer cells at the edge of the tissue, suggesting that all of the cancer has not been removed.

### **marginal zone B-cell lymphoma**

An indolent (slow-growing) type of B-cell non-Hodgkin lymphoma that begins forming in certain areas (the marginal zones) of lymph tissue. There are three types based on whether it forms in the spleen, lymph nodes, or other lymphoid tissue that contains a lot of B cells (a type of white blood cell). Also called marginal zone lymphoma and MZL.

### **marginal zone lymphoma**

An indolent (slow-growing) type of B-cell non-Hodgkin lymphoma that begins forming in certain areas (the marginal zones) of lymph tissue. There are three types based on whether it forms in the spleen, lymph nodes, or other lymphoid tissue that contains a lot of B cells (a type of white blood cell). Also called marginal zone B-cell lymphoma and MZL.

### **maribavir**

A substance that blocks the ability of viruses to make new viruses and infect cells. It is being studied in the prevention of cytomegalovirus infection in cancer patients who have had a donor stem cell transplant. It is a type of antiviral agent.

### **marijuana**

The dried leaves and flowering tops of the Cannabis sativa or Cannabis indica plant. Marijuana contains active chemicals called cannabinoids that cause drug-like effects all through the body, including the central nervous system and the immune system. Marijuana may help treat the symptoms of cancer or the side effects of cancer treatment, such as nausea and vomiting, pain, and cachexia (loss of body weight and muscle mass). Also called Cannabis.

### **marimastat**

An anticancer drug that belongs to the family of drugs called angiogenesis inhibitors. Marimastat is a matrix metalloproteinase inhibitor.

**marker**

A diagnostic indication that disease may develop.

**masoprocol**

A drug put on the skin to treat growths caused by sun exposure. A form of masoprocol that is taken by mouth is being studied in the treatment of prostate cancer. Masoprocol is an antioxidant, and it may block certain enzymes needed for tumor growth. Also called Actinex, NDGA, and nordihydroguaiaretic acid.

**mass**

In medicine, a lump in the body. It may be caused by the abnormal growth of cells, a cyst, hormonal changes, or an immune reaction. A mass may be benign (not cancer) or malignant (cancer).

**massage therapy**

A treatment in which the soft tissues of the body are kneaded, rubbed, tapped, and stroked. Massage therapy may help people relax, relieve stress and pain, lower blood pressure, and improve circulation. It is being studied in the treatment of cancer symptoms such as lack of energy, pain, swelling, and depression.

**massively parallel sequencing**

A term that describes methods used in the lab to learn the order of building blocks (called nucleotides) for millions of DNA or RNA fragments at the same time. Computers are used to piece together the fragments in order to sequence a person or other organism's entire DNA, large segments of DNA or RNA, or the DNA in specific types of cells from a sample of tissue. Massively parallel sequencing can also identify changes in certain areas of the genome or in specific genes. There are many different types of massively parallel sequencing methods, including whole-genome sequencing, whole-exome sequencing, multigene panel testing, and transcriptome sequencing. Massively parallel sequencing may help researchers understand the cause of certain diseases, such as cancer. Also called next-generation sequencing and NGS.

**mast cell**

A type of white blood cell that is found in connective tissues all through the body, especially under the skin, near blood vessels and lymph vessels, in nerves, and in the lungs and intestines. Mast cells play an important role in how the immune system responds to certain bacteria and parasites and they help control other types of immune responses. They contain chemicals such as histamine, heparin, cytokines, and growth factors. They release these chemicals during allergic reactions and certain immune responses. These chemicals have many effects, including the widening of blood vessels and angiogenesis. During an allergic response, they can cause flushing (a hot, red face) and itching. In large amounts, they can also cause abdominal cramps, muscle pain, nausea, vomiting, diarrhea, low blood pressure, and shock. Mast cells are part of the body's immune system.

**mast cell leukemia**

A very rare, aggressive (fast-growing) type of systemic mastocytosis in which too many immature mast cells (a type of white blood cell) are found in the bone marrow and blood. It may develop in patients who have a buildup of mast cells caused by a condition called aggressive systemic mastocytosis. Mast cell leukemia is hard to treat and has a poor prognosis (outcome).

**mast cell tumor**

A growth or lump of mast cells (a type of white blood cell). Mast cell tumors can involve the skin, subcutaneous tissue, and muscle tissue. Also called mastocytoma.

**mastalgia**

Pain or discomfort in one or both breasts. The pain can be mild or severe and affect one area of the breast or the whole breast, including under the arm. It may also come from nearby muscles or joints outside the breast. Mastalgia in women is most often caused by hormone changes before and during the menstrual cycle. It may also be unrelated to the menstrual cycle, with causes that include pregnancy, breastfeeding, smoking, too much caffeine or fat in the diet, certain medicines, breast surgery, injury to the breast or chest wall, or certain breast conditions. It is rarely caused by breast cancer. Mastalgia can occur in both women and men. Also called breast pain.

**mastectomy**

Surgery to remove part or all of the breast. There are different types of mastectomy that differ in the amount of tissue and lymph nodes removed.

**mastitis**

A condition in which breast tissue is inflamed. It is usually caused by an infection and is most often seen in nursing mothers.

**mastocytoma**

A growth or lump of mast cells (a type of white blood cell). Mast cell tumors can involve the skin, subcutaneous tissue, and muscle tissue. Also called mast cell tumor.

**maternal**

Having to do with the mother, coming from the mother, or related through the mother.

**matrix metalloproteinase**

A member of a group of enzymes that can break down proteins, such as collagen, that are normally found in the spaces between cells in tissues (i.e., extracellular matrix proteins). Because these enzymes need zinc or calcium atoms to work properly, they are called metalloproteinases. Matrix metalloproteinases are involved in wound healing, angiogenesis, and tumor cell metastasis.

**matted lymph nodes**

A group of fused lymph nodes. Matted lymph nodes may be a sign of certain conditions, such as infection, sarcoidosis, or lymphoma. They also may be a sign of cancer that has spread to the lymph nodes.

**mature T-cell lymphoma**

One of a group of aggressive (fast-growing) non-Hodgkin lymphomas that begin in mature T lymphocytes (T cells that have matured in the thymus gland and gone to other lymphatic sites in the body, including lymph nodes, bone marrow, and spleen). Also called peripheral T-cell lymphoma.

**mature teratoma**

A type of germ cell tumor that is usually made up of several different types of tissue, such as hair, muscle, and bone. Mature teratomas have cells that look

almost like normal cells under a microscope. Some mature teratomas make enzymes or hormones that may cause signs and symptoms of disease. They are benign (not cancer) but may come back after being removed by surgery. Mature teratomas usually occur in the sacrum or tailbone in newborns or in the testicles or ovaries at the start of puberty. They are often called dermoid cysts.

### **maxilla**

The bones that form the upper part of the jaw, the roof of the mouth, and parts of the eye socket and nose. The maxilla holds the top teeth in place and supports muscles involved in chewing and facial expressions. It is a major bone in the face. Also called upper jaw.

### **maxillary sinus**

A type of paranasal sinus (a hollow space in the bones around the nose). There are two large maxillary sinuses, one in each of the maxillary bones, which are in the cheek area next to the nose. The maxillary sinuses are lined with cells that make mucus to keep the nose from drying out.

### **maximum inspiratory pressure test**

A test that measures the strength of the muscles used in breathing. A person inhales and exhales through a device called a manometer, and the pressures are recorded by a computer. Also called MIP test.

### **maximum tolerated dose**

The highest dose of a drug or treatment that does not cause unacceptable side effects. The maximum tolerated dose is determined in clinical trials by testing increasing doses on different groups of people until the highest dose with acceptable side effects is found. Also called MTD.

### **maytansinoid DM4-conjugated humanized monoclonal antibody huC242**

A substance being studied in the treatment of some types of cancer. It is made by linking the monoclonal antibody huC242 to a toxic substance called maytansinoid DM4. The monoclonal antibody binds to the surfaces of cancer cells and the maytansinoid DM4 enters the cells and blocks their growth. It is a type of immunotoxin. Also called huC242-DM4.

### **mean**

A statistics term. The average value in a set of measurements. The mean is the sum of a set of numbers divided by how many numbers are in the set.

### **mean survival**

The average length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, that patients diagnosed with the disease are still alive. In a clinical trial, measuring mean survival is one way to see how well a new treatment works.

### **measles virus**

The virus that causes measles (a highly contagious disease marked by fever, cough, and raised red spots on the skin). The measles virus usually affects children, and is spread by coughing or contact with fluid from the nose or mouth of someone who has been infected.

### **measurable disease**

A tumor that can be accurately measured in size. This information can be used to judge response to treatment.



### **measurable residual disease**

A term that is increasingly being used in place of the term minimal residual disease to describe a very small number of cancer cells that remain in the body during or after treatment. Measurable residual disease can be found only by highly sensitive laboratory methods that are able to find one cancer cell among one million normal cells. Checking to see if there is measurable residual disease may help plan treatment, find out how well treatment is working or if cancer has come back, or make a prognosis. Measurable residual disease testing is used mostly for blood cancers such as lymphoma and leukemia. Also called minimal residual disease and MRD.

### **mechanism of action**

In medicine, a term used to describe how a drug or other substance produces an effect in the body. For example, a drug's mechanism of action could be how it affects a specific target in a cell, such as an enzyme, or a cell function, such as cell growth. Knowing the mechanism of action of a drug may help provide information about the safety of the drug and how it affects the body. It may also help identify the right dose of a drug and which patients are most likely to respond to treatment. Also called MOA.

### **mechanistic target of rapamycin**

A protein that helps control several cell functions, including cell division and survival, and binds to rapamycin and other drugs. Mechanic target of rapamycin may be more active in some types of cancer cells than it is in normal cells. Blocking mechanistic target of rapamycin may cause the cancer cells to die. It is a type of serine/threonine protein kinase. Also called mammalian target of rapamycin and mTOR.

### **mechlorethamine hydrochloride**

A drug used on the skin to treat stage I mycosis fungoides (a type of cutaneous T-cell lymphoma) in patients who have already been treated with other therapy. It is also being studied in the treatment of other types of cancer. Mechlorethamine hydrochloride damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called mustine and Valchlor.

### **medial supraclavicular lymph node**

A lymph node located above the collar bone and between the center of the body and a line drawn through the nipple to the shoulder.

### **median**

A statistics term. The middle value in a set of measurements.

### **median overall survival**

The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, that half of the patients in a group of patients diagnosed with the disease are still alive. In a clinical trial, measuring the median overall survival is one way to see how well a new treatment works. Also called median survival.

### **median survival**

The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, that half of the patients in a group of patients diagnosed with the disease are still alive. In a clinical trial, measuring the median survival is one way to see how well a new treatment works. Also called median overall survival.

**median umbilical ligament**

A fibrous cord that connects the urinary bladder to the umbilicus (navel). The median umbilical ligament is formed as the allantoic stalk during fetal development and lasts through life. Also called urachus.

**mediastinal pleura**

The thin membrane that lines the chest cavity in the area between the lungs.

**mediastinoscope**

A thin, tube-like instrument used to examine the tissues and lymph nodes in the area between the lungs. These tissues include the heart and its large blood vessels, trachea, esophagus, and bronchi. The mediastinoscope has a light and a lens for viewing and may also have a tool to remove tissue. It is inserted into the chest through a cut above the breastbone.

**mediastinoscopy**

A procedure in which a mediastinoscope is used to examine the organs in the area between the lungs and nearby lymph nodes. A mediastinoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. The mediastinoscope is inserted into the chest through an incision above the breastbone. This procedure is usually done to get a tissue sample from the lymph nodes on the right side of the chest.

**mediastinum**

The area between the lungs. The organs in this area include the heart and its large blood vessels, the trachea, the esophagus, the thymus, and lymph nodes but not the lungs.

**medical castration**

Refers to the use of drugs to suppress the function of the ovaries or testicles.

**medical device**

An instrument, tool, machine, test kit, or implant that is used to prevent, diagnose, or treat disease or other conditions. Medical devices range from tongue depressors to heart pacemakers and medical imaging equipment.

**medical history**

A record of information about a person's health. A personal medical history may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams and tests. It may also include information about medicines taken and health habits, such as diet and exercise. A family medical history includes health information about a person's close family members (parents, grandparents, children, brothers, and sisters). This includes their current and past illnesses. A family medical history may show a pattern of certain diseases in a family. Also called health history.

**medical nutrition therapy**

A nutrition-based treatment plan to help manage or treat certain health conditions. These include diabetes, heart disease, kidney disease, digestive system problems, overweight, obesity, malnutrition, and cancer. Medical nutrition therapy includes assessing a person's nutrition status, identifying their nutritional and dietary needs and goals, and developing a nutrition care plan. The nutrition care plan may involve changes in a person's diet, counseling to support

behavioral and lifestyle changes, or receiving nutrients through intravenous or tube feeding. Also called nutrition therapy.

### **medical oncologist**

A doctor who has special training in diagnosing and treating cancer in adults using chemotherapy, hormonal therapy, biological therapy, and targeted therapy. A medical oncologist often is the main health care provider for someone who has cancer. A medical oncologist also gives supportive care and may coordinate treatment given by other specialists.

### **medical power of attorney**

A type of advance directive that gives a person (called a proxy) the authority to make medical decisions for another person if that person is not able to make their own decisions. A proxy is usually a spouse, relative, friend, or lawyer who knows the person's values, wishes, and treatment preferences. Also called durable power of attorney for health care and health care proxy.

### **medicated urethral system for erection**

A method used to treat impotence (inability to have an erection). A suppository, in the form of a very small pellet, is inserted through the tip of the penis into the urethra. The suppository contains the drug alprostadil, which increases the flow of blood to the penis and causes an erection. Also called MUSE.

### **medication**

A dosage form that contains one or more active and/or inactive ingredients. Medications come in many dosage forms, including tablets, capsules, liquids, creams, and patches. They can also be given in different ways, such as by mouth, by infusion into a vein, or by drops that are put into the ear or eye. The form with the active ingredient is used to prevent, diagnose, treat, or relieve symptoms of a disease or abnormal condition. A medication that does not contain an active ingredient and is used in research studies is called a placebo. Also called drug product.

### **medicine**

Refers to the practices and procedures used for the prevention, treatment, or relief of symptoms of diseases or abnormal conditions. This term may also refer to a legal drug used for the same purpose.

### **meditation**

A mind-body practice in which a person focuses his or her attention on something, such as an object, word, phrase, or breathing, in order to minimize distracting or stressful thoughts or feelings. Meditation may help relax the body and mind and improve overall health and well-being. It may be used to help relieve stress, pain, anxiety, and depression and to help with symptoms related to disease, such as cancer and AIDS. It is a type of complementary and alternative medicine (CAM).

### **medroxyprogesterone acetate**

A drug used to prevent endometrial cancer. It is also used to treat menstrual disorders and as a form of birth control. It is a form of the female hormone progesterone and belongs to the family of drugs called progestins.

### **medullary breast carcinoma**

A rare type of breast cancer that often can be treated successfully. It is marked by lymphocytes (a type of white blood cell) in and around the tumor that can be

seen when viewed under a microscope.

### **medullary thyroid cancer**

Cancer that develops in C cells of the thyroid. The C cells make a hormone (calcitonin) that helps maintain a healthy level of calcium in the blood.

### **medulloblastoma**

A fast-growing type of cancer that forms in the cerebellum (the lower, back part of the brain). Medulloblastomas tend to spread through the cerebrospinal fluid to the spinal cord or to other parts of the brain. They may also spread to other parts of the body, but this is rare. Medulloblastomas are most common in children and young adults. They are a type of central nervous system embryonal tumor.

### **mega-voltage linear accelerator**

A machine that uses electricity to form a stream of fast-moving subatomic particles. This creates high-energy radiation that may be used to treat cancer. Also called linac, linear accelerator, and MeV linear accelerator.

### **megestrol acetate**

A drug used in tablet form to relieve the symptoms of advanced breast cancer and endometrial cancer. It is also being studied in the treatment of other conditions and types of cancer. Megestrol acetate blocks the effects of the hormone estrogen in the body, which may help keep some cancer cells from growing. It is a type of progestin.

### **meiosis**

A special form of cell division in which each daughter cell receives half the amount of DNA as the parent cell. Meiosis occurs during formation of egg and sperm cells in mammals.

### **melanin**

A pigment that gives color to skin and eyes and helps protect it from damage by ultraviolet light.

### **melanocortin 1 receptor**

A protein found in skin and eye cells that make melanin (a pigment that gives color to the skin and helps protect it from damage by ultraviolet light). People with certain changes in the gene for melanocortin 1 receptor have a higher risk of developing melanoma (skin cancer that begins in melanocytes). Also called MC1R and melanotropin receptor.

### **melanocyte**

A cell in the skin and eyes that produces and contains the pigment called melanin.

### **melanoma**

A form of cancer that begins in melanocytes (cells that make the pigment melanin). It may begin in a mole (skin melanoma), but can also begin in other pigmented tissues, such as in the eye or in the intestines.

### **melanoma and neural system tumor syndrome**

An extremely rare, inherited disorder in which affected people have an increased risk of developing melanoma and nervous system tumors, especially astrocytoma (a type of brain tumor). The tumors tend to develop at an early age, and one or both types of tumors may occur in the same person. Melanoma and

neural system tumor syndrome is caused by mutations (changes) in the CDKN2A gene. Also called melanoma-astrocytoma syndrome.

### **melanoma in situ**

Abnormal melanocytes (cells that make melanin, the pigment that gives skin its natural color) are found in the epidermis (outer layer of the skin). These abnormal melanocytes may become cancer and spread into nearby normal tissue. Also called stage 0 melanoma.

### **melanoma vaccine**

A cancer vaccine prepared from human melanoma cancer cells. It can be used alone or with other therapy in treating melanoma.

### **melanoma-astrocytoma syndrome**

An extremely rare, inherited disorder in which affected people have an increased risk of developing melanoma and nervous system tumors, especially astrocytoma (a type of brain tumor). The tumors tend to develop at an early age, and one or both types of tumors may occur in the same person. Melanoma-astrocytoma syndrome is caused by mutations (changes) in the CDKN2A gene. Also called melanoma and neural system tumor syndrome.

### **melanotropin receptor**

A protein found in skin and eye cells that make melanin (a pigment that gives color to the skin and helps protect it from damage by ultraviolet light). People with certain changes in the gene for melanotropin receptor have a higher risk of developing melanoma (skin cancer that begins in melanocytes). Also called MC1R and melanocortin 1 receptor.

### **melatonin**

A hormone made by the pineal gland (tiny organ near the center of the brain). Melatonin helps control the body's sleep cycle, and is an antioxidant. It is also made in the laboratory and sold as a supplement.

### **melphalan**

A drug used to treat multiple myeloma and ovarian epithelial cancer that cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Melphalan may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called Alkeran Tablets.

### **melphalan hydrochloride**

A drug used to treat certain types of multiple myeloma and uveal melanoma (a type of eye cancer). An infusion of one form of melphalan hydrochloride is used as palliative therapy to treat multiple myeloma in patients who cannot take melphalan by mouth. Other forms of melphalan hydrochloride are used under the brand name Evomela to prepare patients with multiple myeloma for a stem cell transplant and under the brand name Hepzato to treat adults with uveal melanoma that has spread to less than half of the liver and cannot be removed by surgery. Hepzato is given as an infusion directly into an artery that leads to the liver. Melphalan hydrochloride is also being studied in the treatment of other types of cancer. It may kill cancer cells by damaging their DNA and stopping them from dividing. Melphalan hydrochloride is a type of alkylating agent.

### **memantine hydrochloride**

A drug used to treat dementia caused by Alzheimer disease. It is also being studied in the treatment of side effects from whole-brain radiation therapy for

cancer and other conditions. Memantine hydrochloride blocks the uptake of calcium by certain brain cells and decreases their activity. It is a type of N-methyl-D-aspartate (NMDA) receptor antagonist. Also called Namenda.

### **membrane**

A very thin layer of tissue that covers a surface.

### **menin inhibitor**

A substance that binds to a protein called menin and keeps it from binding to another protein called MLL. This prevents the activation of other proteins that can cause leukemia cells to form and grow in the body. Some menin inhibitors are being studied in the treatment of certain types of leukemia. They are a type of targeted therapy.

### **meningeal**

Having to do with the meninges (three thin layers of tissue that cover and protect the brain and spinal cord).

### **meningeal carcinomatosis**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and cerebrospinal fluid and pressure to build up in the brain. Meningeal carcinomatosis can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called carcinomatous meningitis, leptomeningeal carcinoma, leptomeningeal carcinomatosis, leptomeningeal metastasis, meningeal metastasis, and neoplastic meningitis.

### **meningeal leukemia**

A serious problem that may occur in leukemia. In meningeal leukemia, cancer cells have spread from the original (primary) tumor to the meninges (thin layers of tissue that cover and protect the brain and spinal cord). The cancer may cause the meninges to be inflamed. Also called leukemic leptomeningitis and leukemic meningitis.

### **meningeal metastasis**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and cerebrospinal fluid and pressure to build up in the brain. Meningeal metastasis can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called carcinomatous meningitis, leptomeningeal carcinoma, leptomeningeal carcinomatosis, leptomeningeal metastasis, meningeal carcinomatosis, and neoplastic meningitis.

### **meningeal syndrome**

A condition marked by headache, fever, and a stiff neck, which is caused when the meninges (three thin layers of tissue that cover and protect the brain and spinal cord) become irritated. Meningeal syndrome may be caused by blood, cancer cells, or substances from the breakdown of cancer cells that get into the cerebrospinal fluid (CSF). It may also be caused by infection with a bacterium, virus, or fungus.

### **meninges**

The three thin layers of tissue that cover and protect the brain and spinal cord.



## meningioma

A type of slow-growing tumor that forms in the meninges (thin layers of tissue that cover and protect the brain and spinal cord). Meningiomas usually occur in adults.

## meningitis

Inflammation of the meninges (three thin layers of tissue that cover and protect the brain and spinal cord). Meningitis is usually caused by a bacterial or viral infection, but sometimes is caused by cancer, drug allergies, or inflammatory diseases.

## meningococcal disease

A serious disease caused by infection with bacteria called *Neisseria meningitidis*. The bacteria can invade the blood, the thin layers of tissue that cover and protect the brain and spinal cord called the meninges, and rarely, the lungs.

Meningococcal disease can be passed from one person to another through close contact with saliva, mucus, or other fluids from the nose, throat, or mouth. The signs and symptoms usually get worse very quickly. They include fever, headache, stiff neck, nausea, vomiting, confusion, sensitivity to light, a dark purple rash, fatigue, cold hands and feet, severe muscle or joint pain, rapid breathing, and diarrhea. Meningococcal disease is a life-threatening condition that can cause long-term problems, including brain or kidney damage, nervous system problems, hearing loss, and loss of arms, legs, fingers, or toes. It is more common in infants, teens, and young adults. Other people who are at increased risk of the disease include those with a weakened immune system, those who take certain medicines, college students who live in dorms, and those who travel to, work, or live in areas where the disease is more common.

## meningococcal vaccine

A vaccine that helps protect the body against infection with certain types of *Neisseria meningitidis* bacteria that cause meningococcal disease.

Meningococcal disease is a serious, life-threatening illness that affects the blood and the thin layers of tissue that cover and protect the brain and spinal cord.

There are five meningococcal vaccines approved in the United States. Three of the vaccines are meningococcal conjugate vaccines, which protect against four different strains of meningococcal bacteria. The other two vaccines are meningococcal recombinant protein vaccines, which protect against a fifth strain.

## menopausal hormone therapy

Treatment with the hormones estrogen and progesterone or with estrogen alone to help relieve symptoms of menopause. Symptoms may include hot flashes, night sweats, vaginal dryness, sleep problems, mood swings, and thinning of the bones. Menopausal hormone therapy is given to replace the natural hormones that are no longer made by the body. It is given to women who have gone through menopause or who have early menopause caused by cancer treatment or by having their ovaries removed by surgery. Also called MHT.

## menopause

The time of life when a woman's ovaries stop producing hormones and menstrual periods stop. Natural menopause usually occurs around age 50. A woman is said to be in menopause when she hasn't had a period for 12 months in a row. Symptoms of menopause include hot flashes, mood swings, night sweats, vaginal dryness, trouble concentrating, and infertility.

## **menorrhagia**

Abnormally heavy menstrual bleeding.

## **menses**

The normal monthly shedding of blood and tissue from the lining of the uterus (womb) when pregnancy does not occur. During menses, menstrual blood and tissue flow from the uterus through the cervix and pass out of the body through the vagina. Menses usually occurs about every 28 days (except during pregnancy) and lasts 3 to 5 days, but this can vary from person to person. It normally starts during puberty and ends at menopause. Also called menstrual period and menstruation.

## **menstrual cycle**

The monthly cycle of hormonal changes from the beginning of one menstrual period to the beginning of the next. During the monthly menstrual cycle, the lining of the uterus thickens to prepare for pregnancy. If pregnancy does not occur, estrogen and progesterone hormone levels begin falling. Very low levels of estrogen and progesterone tell the body to begin menstruation (the monthly shedding of blood and tissue from the lining of the uterus). The menstrual cycle usually lasts about 28 days, but this can vary from person to person. It normally starts during puberty and ends at menopause.

## **menstrual period**

The normal monthly shedding of blood and tissue from the lining of the uterus (womb) when pregnancy does not occur. During a menstrual period, menstrual blood and tissue flow from the uterus through the cervix and pass out of the body through the vagina. A menstrual period usually occurs about every 28 days (except during pregnancy) and lasts 3 to 5 days, but this can vary from person to person. It normally starts during puberty and ends at menopause. Also called menses and menstruation.

## **menstruation**

The normal monthly shedding of blood and tissue from the lining of the uterus (womb) when pregnancy does not occur. During menstruation, menstrual blood and tissue flow from the uterus through the cervix and pass out of the body through the vagina. Menstruation usually occurs about every 28 days (except during pregnancy) and lasts 3 to 5 days, but this can vary from person to person. It normally starts during puberty and ends at menopause. Also called menses and menstrual period.

## **mental health**

A person's overall psychological and emotional condition. Good mental health is a state of well-being in which a person is able to cope with everyday events, think clearly, be responsible, meet challenges, and have good relationships with others.

## **mental health counselor**

A specialist who talks to patients and their families about emotional and personal matters, and can help them make decisions. Also called counselor.

## **menthol**

A substance that comes from mint oils or is made in the laboratory. It is used to relieve itching and to treat problems in the upper respiratory tract. Menthol causes a cooling sensation when eaten or put on the skin and it acts as a mild

pain killer. It is found in nasal sprays, cough drops, inhalers, creams, and lotions. It is also used as a flavor in many food and oral hygiene products.

### **meperidine hydrochloride**

A drug used to treat moderate to severe pain. It binds to opioid receptors in the central nervous system. Meperidine hydrochloride is a type of analgesic agent and a type of opioid. Also called Demerol.

### **mercaptopurine**

A drug used with other drugs to treat adults and children with acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Mercaptopurine stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called Purinethol and Purixan.

### **mercury**

A silver-white, poisonous metal that is a liquid at ordinary temperatures. It is commonly used in thermometers and amalgams, and has been used as an ingredient in some homeopathic medicines and in very small amounts as a preservative in viral vaccines.

### **mercy killing**

An easy or painless death, or the intentional ending of the life of a person suffering from an incurable or painful disease at his or her request. Also called euthanasia.

### **meridian**

In traditional Chinese medicine, one of 20 channels that form a network through which qi (the body's vital energy) flows and that connect the body's acupuncture sites.

### **mesenchymal**

Refers to cells that develop into connective tissue, blood vessels, and lymphatic tissue.

### **mesenteric membrane**

The peritoneal membrane that attaches the intestines to the abdominal wall near the back.

### **mesna**

A drug used to prevent hemorrhagic cystitis (bleeding in the bladder) caused by the anticancer drug ifosfamide. Mesna helps protect healthy tissue from some of the side effects caused by certain anticancer drugs. It is a type of chemoprotective agent. Also called Mesnex.

### **mesothelin**

A protein found on the surface of certain types of normal cells and cancer cells. Mesothelin may help these cells stick together and send signals. A higher-than-normal amount of mesothelin is found on some cancer cells, including mesothelioma, pancreatic cancer, and ovarian cancer.

### **mesothelioma**

A benign (not cancer) or malignant (cancer) tumor affecting the lining of the chest or abdomen. Exposure to asbestos particles in the air increases the risk of developing malignant mesothelioma.

**messenger RNA**

A type of RNA found in cells. Messenger RNA molecules carry the genetic information needed to make proteins. They carry the information from the DNA in the nucleus of the cell to the cytoplasm where the proteins are made. Also called mRNA.

**meta-analysis**

A process that analyzes data from different studies done about the same subject. The results of a meta-analysis are usually stronger than the results of any study by itself.

**metabolic**

Having to do with metabolism (the total of all chemical changes that take place in a cell or an organism to produce energy and basic materials needed for important life processes).

**metabolic acidosis**

A condition in which the blood is too acidic. It may be caused by severe illness or sepsis (bacteria in the bloodstream).

**metabolic disorder**

A condition in which normal metabolic processes are disrupted, usually because of a missing enzyme.

**metabolic syndrome**

A condition marked by extra fat around the abdomen, high levels of blood glucose (sugar) when not eating, high levels of triglycerides (a type of fat) in the blood, low levels of high-density lipoproteins (a type of protein that carries fats) in the blood, and high blood pressure. People with metabolic syndrome are at increased risk of diabetes mellitus and diseases of the heart and blood vessels. Also called metabolic syndrome X.

**metabolic syndrome X**

A condition marked by extra fat around the abdomen, high levels of blood glucose (sugar) when not eating, high levels of triglycerides (a type of fat) in the blood, low levels of high-density lipoproteins (a type of protein that carries fats) in the blood, and high blood pressure. People with metabolic syndrome X are at increased risk of diabetes mellitus and diseases of the heart and blood vessels. Also called metabolic syndrome.

**metabolic therapy**

Treatment to correct changes in metabolism that can be caused by disease.

**metabolic type**

In alternative medicine, a theory that people fall into one of three groups (protein, carbohydrate, or mixed type) based on the main type of food that their bodies need to stay healthy.

**metabolism**

The chemical changes that take place in a cell or an organism. These changes make energy and the materials cells and organisms need to grow, reproduce, and stay healthy. Metabolism also helps get rid of toxic substances.

**metabolite**

A substance made or used when the body breaks down food, drugs or chemicals, or its own tissue (for example, fat or muscle tissue). This process, called metabolism, makes energy and the materials needed for growth, reproduction, and maintaining health. It also helps get rid of toxic substances.

**metabolomics**

The study of substances called metabolites in cells and tissues. Metabolites are small molecules that are made when the body breaks down food, drugs, chemicals, or its own tissue. They can be measured in blood, urine, and other body fluids. Disease and environmental factors, such as diet, drugs, and chemicals, can affect how metabolites are made and used in the body. Metabolomics may help find new ways to diagnose and treat diseases, such as cancer.

**metaiodobenzylguanidine scan**

A procedure used to find neuroendocrine tumors, such as neuroblastomas and pheochromocytomas. A small amount of a substance called radioactive metaiodobenzylguanidine is injected into a vein and travels through the bloodstream. Neuroendocrine tumor cells take up the radioactive metaiodobenzylguanidine and are detected by a scanner. Also called iobenguane scan and MIBG scan.

**metallic**

Having to do with metal. Some cancer treatments may change the sense of taste and cause foods to have a metallic taste.

**metallic endoprosthesis**

A device made of metal that is placed inside the body to replace a body part removed by surgery. An example is a thigh bone replaced during surgery for cancer.

**metaplasia**

A change of cells to a form that does not normally occur in the tissue in which it is found.

**metaplastic carcinoma**

A general term used to describe cancer that begins in cells that have changed into another cell type (for example, a squamous cell of the esophagus changing to resemble a cell of the stomach). In some cases, metaplastic changes alone may mean there is an increased chance of cancer developing at the site.

**metastasectomy**

Surgery to remove one or more metastases (tumors formed from cells that have spread from the primary tumor). When all metastases are removed, it is called a complete metastasectomy.

**metastasis**

The spread of cancer cells from the place where they first formed to another part of the body. In metastasis, cancer cells break away from the original (primary) tumor, travel through the blood or lymph system, and form a new tumor in other organs or tissues of the body. The new, metastatic tumor is the same type of cancer as the primary tumor. For example, if breast cancer spreads to the lung, the cancer cells in the lung are breast cancer cells, not lung cancer cells.

**metastasis-free survival**

The length of time from the start of treatment for cancer that a patient is still alive and the cancer has not spread to other parts of the body. In a clinical trial, measuring the metastasis-free survival is one way to see how well a new treatment works. Also called MFS.

**metastasize**

To spread from one part of the body to another. When cancer cells metastasize and form secondary tumors, the cells in the metastatic tumor are like those in the original (primary) tumor.

**metastatic**

Having to do with metastasis, which is the spread of cancer from the primary site (place where it started) to other places in the body.

**metasynchronous**

Occurring at nearly the same time.

**meteorism**

Swelling of the abdomen caused by gas in the intestines or peritoneal cavity. Also called tympanites.

**metformin hydrochloride**

A drug used to treat diabetes mellitus (a condition in which the body cannot control the level of sugar in the blood). It is also being studied in the treatment of cancer. Metformin hydrochloride decreases the amount of glucose (a type of sugar) released into the bloodstream from the liver and increases the body's use of the glucose. It is a type of antidiabetic agent. Metformin is the active ingredient of metformin hydrochloride. Also called Glucophage.

**methadone hydrochloride**

A drug used to treat moderate to severe pain that does not respond to other types of pain medicine. It is also used to help people who are addicted to opioid drugs such as heroin. Methadone hydrochloride binds to opioid receptors in the central nervous system. It is a type of analgesic agent and a type of opioid.

**methanol**

A type of alcohol used to make antifreeze, pesticides, windshield wiper fluid, paint thinner, certain types of fuel, and other substances. Methanol catches fire easily and is very poisonous. It is one of many harmful chemicals found in tobacco smoke. Also called methyl alcohol and wood alcohol.

**methemoglobin**

A form of hemoglobin found in the blood in small amounts. Unlike normal hemoglobin, methemoglobin cannot carry oxygen. Injury or certain drugs, chemicals, or foods may cause a higher-than-normal amount of methemoglobin to be made. This causes a condition called methemoglobinemia.

**methemoglobinemia**

A condition in which a higher-than-normal amount of methemoglobin is found in the blood. Methemoglobin is a form of hemoglobin that cannot carry oxygen. In methemoglobinemia, tissues cannot get enough oxygen. Symptoms may include headache, dizziness, fatigue, shortness of breath, nausea, vomiting, rapid heartbeat, loss of muscle coordination, and blue-colored skin.



Methemoglobinemia can be caused by injury or being exposed to certain drugs, chemicals, or foods. It can also be an inherited condition.

### **methicillin-resistant Staphylococcus aureus**

A type of bacteria that causes an infection that does not respond to common antibiotics, including methicillin, amoxicillin, and penicillin. Most methicillin-resistant Staphylococcus aureus infections occur on the skin and are mild. However, they can also be serious or life threatening and difficult to treat. Methicillin-resistant Staphylococcus aureus infections usually occur in people with weakened immune systems who are in hospitals, nursing homes, or other health care centers. They can also occur in healthy people who have skin-to-skin contact with others, such as childcare workers, team athletes, and people who live in crowded conditions. Also called MRSA.

### **methodology**

In medicine, the rules and procedures for doing research and evaluating results.

### **methotrexate sodium**

A drug used alone or with other drugs to treat many types of cancer, certain types of arthritis, and severe psoriasis (a type of skin condition). It is also being studied in the treatment of other conditions and types of cancer. Methotrexate sodium stops cells from using folic acid to make DNA and may kill cancer cells. It may also lower the body's immune response. Methotrexate sodium is a type of antimetabolite and a type of antifolate. Also called MTX, Trexall, and Xatmep.

### **methoxsalen**

A drug used together with UV light to treat psoriasis, vitiligo, and skin nodules of cutaneous T-cell lymphoma. It is also being studied in the treatment of graft-versus-host disease. It belongs to the family of drugs called psoralens and furocoumarins.

### **methoxyamine hydrochloride**

A substance being studied in the treatment of cancer. It blocks the ability of a cell to repair damage to its DNA and may kill cancer cells. It may also help some anticancer drugs work better. It is a type of antineoplastic agent.

### **methoxypolyethylene glycol epoetin beta**

A substance being studied in the treatment of anemia in patients who are receiving chemotherapy. It is a form of erythropoietin (a substance produced in the kidneys that stimulates the production of red blood cells) that has been changed in the laboratory. Also called Ro 50-3821.

### **methyl alcohol**

A type of alcohol used to make antifreeze, pesticides, windshield wiper fluid, paint thinner, certain types of fuel, and other substances. Methyl alcohol catches fire easily and is very poisonous. It is one of many harmful chemicals found in tobacco smoke. Also called methanol and wood alcohol.

### **methyl group**

A small molecule made of one carbon and three hydrogen atoms. Methyl groups are added or removed from proteins or nucleic acids and may change the way these molecules act in the body.

### **methyl-5-aminolevulinate**

A drug used in photodynamic therapy; it is absorbed by tumor cells and, when exposed to light, becomes active and kills the cancer cells.

### **methylation**

A chemical reaction in the body in which a small molecule called a methyl group gets added to DNA, proteins, or other molecules. The addition of methyl groups can affect how some molecules act in the body. For example, methylation of the DNA sequence of a gene may turn the gene off so it does not make a protein. Changes in the methylation patterns of genes or proteins can affect a person's risk of developing a disease, such as cancer.

### **methylnaltrexone bromide**

A drug used to relieve constipation caused by the use of opioids (pain killers that are like morphine). It is used in adults with pain caused by cancer or treatment for cancer or by other advanced disease. Methylnaltrexone bromide binds to opioid receptors outside the brain and may block the side effects of opioid drugs without affecting their ability to relieve pain. Methylnaltrexone bromide is a type of peripheral opioid receptor antagonist. Also called Relistor.

### **methylphenidate hydrochloride**

A drug used to treat certain behavior disorders, such as attention deficit hyperactivity disorder (ADHD). It is also being studied as a way to improve brain function in patients treated with anticancer drugs. Methylphenidate hydrochloride acts on certain parts of the brain. It is a type of central nervous system stimulant. Also called Concerta and Ritalin.

### **methylprednisolone**

A corticosteroid hormone replacement.

### **metoclopramide**

A drug that increases the motility (movements and contractions) of the stomach and upper intestine. It is used to treat certain stomach problems and nausea and vomiting caused by chemotherapy. It is a type of antiemetic and a type of motility agent. Also called Reglan.

### **metronidazole**

A drug that is used to treat infection and is being studied in the treatment of cancer. It is a type of antibacterial, antiprotozoal, and anthelmintic. Also called Flagyl.

### **metronomic chemotherapy**

Treatment in which low doses of anticancer drugs are given on a continuous or frequent, regular schedule (such as daily or weekly), usually over a long time. Metronomic chemotherapy causes less severe side effects than standard chemotherapy. Giving low doses of chemotherapy may stop the growth of new blood vessels that tumors need to grow. Also called low-dose chemotherapy.

### **mevalonate pathway**

Describes a series of reactions in which proteins work together to make molecules. These molecules are part of many processes, including making cholesterol. Changes in this pathway may lead to cancer cell growth. Drugs or substances that affect this pathway are used to treat high cholesterol, and are being studied in the prevention and treatment of cancer and other diseases.

**miRNA**

A type of RNA found in cells and in blood. miRNA are smaller than many other types of RNA and can bind to messenger RNAs (mRNAs) to block them from making proteins. miRNA are being studied in the diagnosis and treatment of cancer. Also called microRNA.

**micelle**

A tiny particle made of substances that are soluble in water and that come together to form a ball-like shape. These particles can carry other substances inside them. In medicine, micelles are made in the laboratory and are used to carry drugs to body tissues and cells.

**microRNA**

A type of RNA found in cells and in blood. MicroRNAs are smaller than many other types of RNA and can bind to messenger RNAs (mRNAs) to block them from making proteins. MicroRNAs are being studied in the diagnosis and treatment of cancer. Also called miRNA.

**microarray**

A laboratory tool used to analyze large numbers of genes or proteins at one time. In a microarray, biologic molecules such as DNA, RNA, or protein are placed in a pattern onto a surface such as a glass slide. Other substances are added to these slides to detect specific patterns of molecules. Microarrays are being used to help diagnose diseases, such as cancer, and to develop treatments for them.

**microbicide**

Any substance or process that kills germs (bacteria, viruses, and other microorganisms that can cause infection and disease). Also called germicide.

**microbiome**

The collection of all the microorganisms and viruses that live in a given environment, including the human body or part of the body, such as the digestive system. The human microbiome may play a role in a person's health. Studying the human microbiome may help prevent and treat disease in the future.

**microcalcification**

A tiny deposit of calcium in the breast that cannot be felt but can be detected on a mammogram. A cluster of these very small specks of calcium may indicate that cancer is present.

**microenvironment**

In biology, the cells, molecules, and structures (such as blood vessels) that surround and support other cells and tissues. Abnormal cells, such as cancer cells, can change their microenvironment. Changes in the microenvironment can affect how cancer cells grow and spread. Studying the microenvironment may help researchers understand how cancer cells form and find new ways to treat cancer.

**microflora**

Bacteria and other organisms that live inside the intestines. They help digest food. Vitamins such as biotin and vitamin K are made by microflora. Also called gut flora, gut microflora, intestinal flora, and intestinal microflora.

**microfluidic device**

An instrument that uses very small amounts of fluid on a microchip to do certain laboratory tests. A microfluidic device may use body fluids or solutions containing cells or cell parts to diagnose diseases. Also called lab-on-a-chip.

**microgram**

One millionth of a gram.

**microliter**

A measure of volume for a liquid, using the metric system. One microliter is equal to a millionth of a liter. Also called  $\mu\text{L}$ .

**micrometastasis**

Small numbers of cancer cells that have spread from the primary tumor to other parts of the body and are too few to be picked up in a screening or diagnostic test.

**micromolar**

A concentration of 1/1,000,000 (one millionth) molecular weight per liter (mol/L).

**micromole**

The amount of a substance equal to a millionth of a mole (a measure of the amount of a substance). Also called  $\mu\text{M}$ .

**micronutrient**

A substance the body needs in tiny amounts to grow and stay healthy. Examples are vitamins and minerals.

**microorganism**

An organism that can be seen only through a microscope. Microorganisms include bacteria, protozoa, algae, and fungi. Although viruses are not considered living organisms, they are sometimes classified as microorganisms.

**microsatellite**

A short sequence of DNA, usually 1 to 4 basepairs (a unit of DNA), that is repeated together in a row along the DNA molecule. There is variation from person to person in the number of repeats. There are hundreds of places in human DNA that contain microsatellites.

**microsatellite instability**

A change that occurs in certain cells (such as cancer cells) in which the number of repeated DNA bases in a microsatellite (a short, repeated sequence of DNA) is different from what it was when the microsatellite was inherited. Microsatellite instability may be caused by mistakes that don't get corrected when DNA is copied in a cell. It is found most often in colorectal cancer, gastric cancer, and endometrial cancer, but it may also be found in many other types of cancer. Knowing whether a cancer has microsatellite instability may help plan the best treatment. Also called MSI.

**microsatellite instability-high cancer**

Describes cancer cells that have a high number of mutations (changes) within microsatellites. For example, microsatellite testing that shows mutations in 30% or more microsatellites is called microsatellite instability-high. Microsatellites are short, repeated sequences of DNA. Microsatellite instability-high cancer cells may have a defect in the ability to correct mistakes that occur when DNA is

copied in the cell. Microsatellite instability is found most often in colorectal cancer, gastric cancer, and endometrial cancer, but it may also be found in many other types of cancer. Knowing whether cancer is microsatellite instability-high may help plan the best treatment. Also called MSI-H cancer.

### **microsatellite tumor**

A small group of tumor cells in an area beside or below, but separate from, the primary (original) melanoma. Microsatellite tumors can only be seen with a microscope. Having a microsatellite tumor is a sign that the melanoma has spread from where it first formed.

### **microscope**

An instrument that is used to look at cells and other small objects that cannot be seen with the eye alone.

### **microscopic**

Too small to be seen without a microscope.

### **microscopic description**

A description of what cells or a tissue sample taken during a biopsy look like when viewed under a microscope. The microscopic description may include the type and number of cells seen in the tissue sample and how they compare with normal cells. It may also include any special cell features and results from other laboratory tests done on the cell or tissue sample. Microscopic descriptions are usually included in a pathology report, which may be used to help diagnose diseases, such as cancer, and plan treatment.

### **microsphere**

A very tiny, hollow, round particle made from glass, ceramic, plastic, or other materials. Microspheres injected into blood vessels that feed a tumor may kill the tumor by blocking its blood supply. They can also be filled with a substance that may help kill more tumor cells.

### **microstaging**

A technique used to help determine the stage (extent) of melanoma and certain squamous cell cancers. A sample of skin that contains tumor tissue is examined under a microscope to find out how thick the tumor is and/or how deeply the tumor has grown into the skin or connective tissues.

### **microtubule**

A narrow, hollow tube-like structure found in the cytoplasm (the fluid inside a cell) of plant and animal cells. Microtubules help support the shape of a cell. They also help chromosomes move during cell division and help small structures called cell organelles to move inside the cell. Certain anticancer drugs keep microtubules from working the way they should. This may help keep cancer cells from dividing.

### **microwave acupuncture**

A type of acupuncture in which a microwave device is attached to an acupuncture needle to give microwave radiation at an acupuncture point.

### **microwave therapy**

A type of treatment in which body tissue is exposed to high temperatures to damage and kill cancer cells or to make cancer cells more sensitive to the effects of radiation and certain anticancer drugs. Also called microwave thermotherapy.

### **microwave thermotherapy**

A type of treatment in which body tissue is exposed to high temperatures to damage and kill cancer cells or to make cancer cells more sensitive to the effects of radiation and certain anticancer drugs. Also called microwave therapy.

### **midazolam hydrochloride**

A drug used to treat anxiety and tension and to relax muscles. Midazolam hydrochloride is also being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of benzodiazepine. Midazolam is the active ingredient of midazolam hydrochloride. Also called Versed.

### **midostaurin**

A drug used alone or with other anticancer drugs to treat adults with certain types of acute myeloid leukemia, mast cell leukemia, or systemic mastocytosis. It is also being studied in the treatment of other types of cancer. Midostaurin blocks certain proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Midostaurin is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called N-benzoyl-staurosporine, PKC412, and Rydapt.

### **mifamurtide**

A drug being studied in the treatment of young adults with bone cancer that has gotten worse or come back. Mifamurtide activates certain types of white blood cells and helps the immune system kill cancer cells. It is a type of immunostimulant. Also called L-MTP-PE, MEPACT, and muramyl tripeptide phosphatidylethanolamine.

### **mifepristone**

A drug used to end early pregnancies. It is also being studied in the treatment of some types of cancer and other conditions. Mifepristone blocks the action of progesterone, a hormone that helps some cancers grow. It is a type of antiprogesterone. Also called Mifeprex and RU 486.

### **milatuzumab**

A substance being studied in the treatment of multiple myeloma and several other types of cancer. It binds to CD74, a protein on the surface of myeloma cells and certain other types of cells. It may help kill cancer cells. Milatuzumab is a type of monoclonal antibody. Also called hLL1 and IMMU-110.

### **milk duct**

A thin tube in the breast that carries milk from the breast lobules to the nipple. Also called breast duct.

### **milk thistle**

A plant that has been used in some cultures to treat certain medical problems, including stomach, liver, and gallbladder disorders. The active extract of milk thistle seeds is called silymarin. It is being studied in the prevention of liver damage caused by some cancer treatments. Also called Silybum marianum.

### **milligram**

A measure of weight. A milligram is approximately 450,000 times smaller than a pound and 28,000 times smaller than an ounce.



**milliliter**

A measure of volume in the metric system. One thousand milliliters equal one liter. Also called cc, cubic centimeter, and mL.

**millimeter**

A measure of length in the metric system. A millimeter is one thousandth of a meter. There are 25 millimeters in an inch.

**millimole**

The amount of a substance equal to a thousandth of a mole (a measure of the amount of a substance). Also called mmol.

**mind-body exercise**

A form of exercise that combines body movement, mental focus, and controlled breathing to improve strength, balance, flexibility, and overall health. Examples of mind-body exercises are yoga, tai chi, and qigong.

**mind-body modality**

A health practice that combines mental focus, controlled breathing, and body movements to help relax the body and mind. It may be used to help control pain, stress, anxiety, and depression, and for overall health. Examples of mind-body modalities include meditation, hypnosis, guided imagery, yoga, and tai chi. A mind-body modality is a type of complementary and alternative medicine. Also called mind-body practice.

**mind-body practice**

A health practice that combines mental focus, controlled breathing, and body movements to help relax the body and mind. It may be used to help control pain, stress, anxiety, and depression, and for overall health. Examples of mind-body practices include meditation, hypnosis, guided imagery, yoga, and tai chi. A mind-body practice is a type of complementary and alternative medicine. Also called mind-body modality.

**mindfulness relaxation**

A type of meditation based on the concept of being “mindful,” or having increased awareness, of the present. It uses breathing methods, guided imagery, and other practices to relax the body and mind and help reduce stress.

**mineral**

In medicine, a mineral is a nutrient that is needed in small amounts to keep the body healthy. Mineral nutrients include the elements calcium, magnesium, and iron.

**mineral oil**

A type of oil that is made from petroleum (mixture of oily liquids found in the earth). Mineral oil is used in laxatives, lubricants, creams, and lotions.

**mini-transplant**

A type of donor stem cell transplant in which a patient receives lower doses of chemotherapy and/or radiation therapy than in a standard transplant. The lower doses of anticancer therapy do not kill all of the blood-forming stem cells or all of the cancer cells in the patient's bone marrow. However, the anticancer therapy is still strong enough to suppress the patient's immune system and prevent rejection of the donor stem cells. The patient's stem cells and those from the donor both live in the patient's body for a time after a mini-transplant. Once the

cells from the donor begin to grow and divide in the bone marrow, they replace the patient's own bone marrow cells and destroy the remaining cancer cells. A mini-transplant may be an option for certain people who are older or who are not healthy enough to receive a standard donor stem cell transplant with high-dose chemotherapy. Also called non-myeloablative transplant and reduced-intensity transplant.

### **minimal residual disease**

A term used to describe a very small number of cancer cells that remain in the body during or after treatment. Minimal residual disease can be found only by highly sensitive laboratory methods that are able to find one cancer cell among one million normal cells. Checking to see if there is minimal residual disease may help plan treatment, find out how well treatment is working or if cancer has come back, or make a prognosis. Minimal residual disease testing is used mostly for blood cancers such as lymphoma and leukemia. Also called measurable residual disease and MRD.

### **minimal sedation**

A level of sedation in which a person is very relaxed and may be awake. The person is able to answer questions and follow instructions. Minimal sedation is caused by special drugs and is used to help relieve anxiety during certain medical or surgical procedures. Also called anxiolysis.

### **minimally invasive surgery**

Surgery that is done using small incisions (cuts) and few stitches. During minimally invasive surgery, one or more small incisions may be made in the body. A laparoscope (thin, tube-like instrument with a light and a lens for viewing) is inserted through one opening to guide the surgery. Tiny surgical instruments are inserted through other openings to do the surgery. Minimally invasive surgery may cause less pain, scarring, and damage to healthy tissue, and the patient may have a faster recovery than with traditional surgery.

### **minocycline-EDTA**

A substance being studied in the prevention of bacterial infections that occur in catheters (thin tubes that carry fluids into or out of the body). It is a combination of minocycline, an antibiotic that blocks the growth of bacteria, and EDTA, a substance that keeps blood clots from forming. Minocycline-EDTA removes metals that bacteria use to form biofilms (thin layers stuck to surfaces). Also called M-EDTA.

### **mirtazapine**

A drug used to treat depression. Mirtazapine increases the levels of the chemicals serotonin and norepinephrine in the brain, which helps improve mood. It is a type of antidepressant. Also called Remeron.

### **mirvetuximab soravtansine**

A drug used to treat adults with folate receptor alpha-positive ovarian epithelial, fallopian tube, or primary peritoneal cancer that has not gotten better after treatment with platinum chemotherapy. It is used in patients whose cancer was treated with one to three other systemic therapies. It is also being studied in the treatment of other types of cancer. Mirvetuximab soravtansine contains a monoclonal antibody that binds to a protein called folate receptor alpha, which is found on some cancer cells. It also contains an anticancer drug, which may help kill cancer cells. Mirvetuximab soravtansine is a type of antibody-drug conjugate. Also called Elahere.

### **miscarriage**

An unexpected loss of pregnancy before the 20th week of pregnancy. Most miscarriages happen very early in pregnancy, often before a person even knows they are pregnant. Signs include vaginal spotting or bleeding, pain or cramping in the abdomen or lower back, and the passing of fluid or tissue from the vagina. Miscarriages often occur because of genetic problems in the fetus. Maternal factors or conditions that could contribute to having a miscarriage include problems with the uterus or cervix, infection, hormone problems, severe malnutrition, smoking, drinking alcohol, taking certain medicines, or exposure to radiation. Being older or having certain diseases, such as polycystic ovary syndrome, uncontrolled diabetes, congenital heart disease, thyroid or kidney disease, and immune system disorders, may also put a person at higher risk of having a miscarriage. Also called spontaneous abortion.

### **mismatch repair deficiency**

Describes cells that have mutations (changes) in certain genes that are involved in correcting mistakes made when DNA is copied in a cell. Mismatch repair (MMR) deficient cells usually have many DNA mutations, which may lead to cancer. MMR deficiency is most common in colorectal cancer, other types of gastrointestinal cancer, and endometrial cancer, but it may also be found in cancers of the breast, prostate, bladder, and thyroid and in an inherited disorder called Lynch syndrome. Knowing if a tumor is MMR deficient may help plan treatment or predict how well the tumor will respond to treatment. Also called deficient DNA mismatch repair, deficient mismatch repair, dMMR, and MMR deficiency.

### **misoprostol**

A radioprotective agent that belongs to the family of drugs called prostaglandins.

### **missense mutation**

A change in the DNA sequence of a gene that results in one amino acid (protein building block) being replaced with an amino acid that is different from the usual one at that position in the gene. Some missense mutations have little or no effect on the function of the protein, while others may change the function of the protein. Also called missense variant.

### **missense variant**

A change in the DNA sequence of a gene that results in one amino acid (protein building block) being replaced with an amino acid that is different from the usual one at that position in the gene. Some missense variants have little or no effect on the function of the protein, while others may change the function of the protein. Also called missense mutation.

### **mistletoe**

A semiparasitic plant that grows on some types of trees. Mistletoe extracts are being studied as treatments for cancer.

### **mistletoe lectin**

A substance that comes from the mistletoe plant and that is being studied as a treatment for cancer. A lectin is a complex molecule that has both protein and sugars. Lectins are able to bind to the outside of a cell and cause biochemical changes in it. Lectins are made by both animals and plants.

**mithramycin**

A drug used to treat some types of testicular cancer. It is also used to treat a higher-than-normal amounts of calcium in the blood or urine. Mithramycin binds to DNA and prevents cells from making RNA and proteins. It is a type of antineoplastic antibiotic. Also called Mithracin and plicamycin.

**mitigate**

To make milder or less painful.

**mitochondria**

Small structures in a cell that are found in the cytoplasm (fluid that surrounds the cell nucleus). Mitochondria make most of the energy for the cell and have their own genetic material that is different from the genetic material found in the nucleus. Many diseases are caused by mutations (changes) in the DNA of mitochondria. Mitochondria are cell organelles.

**mitoguazone dihydrochloride**

A substance being studied in the treatment of some leukemias and lymphomas. It blocks the growth of cells and may cause cancer cells to die. It is a type of polyamine synthesis inhibitor.

**mitolactol**

An anticancer drug that belongs to the family of drugs called alkylating agents.

**mitomycin**

A drug that comes from the bacterium *Streptomyces* and is used alone under the brand name Jelmyto to treat adults with a certain type of urothelial cancer and with other drugs to treat certain types of stomach cancer and pancreatic cancer. It is also being studied in the treatment of other types of cancer. Mitomycin damages the cell's DNA and may kill cancer cells. It is a type of antineoplastic antibiotic and a type of alkylating agent.

**mitosis**

The process by which a single parent cell divides to make two new daughter cells. Each daughter cell receives a complete set of chromosomes from the parent cell. This process allows the body to grow and replace cells.

**mitotane**

An anticancer drug used in treating adrenocortical cancer and ACTH-producing pituitary tumors (Cushing disease).

**mitotic activity**

Having to do with the presence of dividing (proliferating) cells. Cancer tissue generally has more mitotic activity than normal tissues.

**mitotic cycle**

The process a cell goes through each time it divides. The mitotic cycle consists of a series of steps during which the chromosomes and other cell material double to make two copies. The cell then divides into two daughter cells, each receiving one copy of the doubled material. The mitotic cycle is complete when each daughter cell is surrounded by its own outer membrane. Also called cell cycle.

**mitotic index**

In a population of cells, the ratio of the number of cells undergoing mitosis (cell division) to the number of cells not undergoing mitosis.

**mitotic inhibitor**

A type of drug that blocks cell growth by stopping mitosis (cell division). They are used to treat cancer. Also called antimitotic agent.

**mitotic rate**

A measure of how fast cancer cells are dividing and growing. To find the mitotic rate, the number of cells dividing in a certain amount of cancer tissue is counted. Mitotic rate is used to help find the stage of melanoma (a type of skin cancer) and other types of cancer. Higher mitotic rates are linked with lower survival rates. Also called MR.

**mitoxantrone hydrochloride**

A drug used with other drugs to treat acute myeloid leukemia in adults, advanced prostate cancer that did not get better with hormone therapy, and certain forms of multiple sclerosis. It is also being studied in the treatment of other types of cancer. Mitoxantrone hydrochloride damages the cell's DNA and may kill cancer cells. It also blocks a certain enzyme needed for cell division and DNA repair. Mitoxantrone hydrochloride may also stop certain immune cells from causing damage to the brain and spinal cord. It is a type of antineoplastic antibiotic and a type of topoisomerase inhibitor.

**mivobulin isethionate**

An anticancer drug that belongs to the family of drugs called mitotic inhibitors. Also called CI-980.

**mixed germ cell tumor**

A rare type of cancer that is made up of at least two different types of germ cell tumors (tumors that begin in cells that form sperm or eggs). These may include choriocarcinoma, embryonal carcinoma, yolk sac tumor, teratoma, and seminoma. Mixed germ cell tumors occur most often in the ovary or testicle, but they may also occur in the chest, abdomen, or brain.

**mixed glioma**

A brain tumor that forms from more than one type of brain cell, usually astrocytes and oligodendrocytes.

**mixed neuronal-glial tumor**

One of a group of rare tumors that contain a mixture of nerve cells and glial cells (supporting cells) of the brain or spinal cord. There are many different types of mixed neuronal-glial tumors, and they can occur anywhere in the brain or spinal cord. Most mixed neuronal-glial tumors are not cancer and tend to grow slowly. However, they can grow and press on nearby brain tissue, which can cause seizures, a buildup of fluid and increased pressure in the brain, and other problems. Mixed neuronal-glial tumors can occur at any age but are more common in children and young adults. Also called glioneuronal tumor.

**mmol**

The amount of a substance equal to a thousandth of a mole (a measure of the amount of a substance). Also called millimole.

**mocetinostat**

A substance being studied in the treatment of several types of cancer. It blocks enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase (HDAC) inhibitor. Also called MGCD0103.

**modafinil**

A drug that is being studied as a treatment for fatigue in patients with cancer. It belongs to the family of drugs called stimulants.

**modality**

A method of treatment. For example, surgery and chemotherapy are treatment modalities.

**moderate sedation**

A level of sedation in which a person is asleep but wakes when spoken to or touched. Moderate sedation is caused by special drugs and is used to help relieve anxiety during certain medical or surgical procedures. Drugs that relieve pain may be given at the same time. Also called conscious sedation.

**modified FOLFOX-6**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called modified FOLFOX-6 regimen.

**modified FOLFOX-6 regimen**

An abbreviation for a combination chemotherapy regimen that is used to treat colorectal cancer. It includes the drugs leucovorin calcium (folinic acid), fluorouracil, and oxaliplatin. There are several different FOLFOX regimens that differ in the doses and ways in which the three drugs are given. Also called modified FOLFOX-6.

**modified radical hysterectomy**

Surgery to remove the uterus, cervix, upper part of the vagina, and nearby ligaments and tissues. The ovaries, fallopian tubes, or nearby lymph nodes may also be removed. A modified radical hysterectomy removes fewer tissues and/or organs than a radical hysterectomy.

**modified radical mastectomy**

Surgery to remove the whole breast, which may include the nipple, areola (the dark-colored skin around the nipple), and skin over the breast. Most of the lymph nodes under the arm are also removed.

**modified radical vulvectomy**

Surgery to remove most, but not all, of the vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina). The clitoris may not be removed. Sometimes lymph nodes in the groin area are also removed. Also called partial radical vulvectomy.

**modulate**

To adjust, or change.



### **mogamulizumab**

A drug used to treat adults with mycosis fungoides or Sezary syndrome (types of cutaneous T-cell lymphoma) that came back or did not get better after treatment with at least one systemic therapy. It is also being studied in the treatment of other types of cancer. Mogamulizumab binds to a protein called CCR4, which is found on some T cells (a type of white blood cell) and some types of lymphoma cells. Mogamulizumab may block this protein and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Poteligeo.

### **moist reaction**

A skin problem caused by radiation therapy. The affected skin peels and becomes moist and painful. Sores or ulcers can also develop, which may lead to infection. A moist reaction usually occurs in areas where the skin folds, such as under the breasts, behind the ears, or on the buttocks. A moist reaction usually goes away 2 or 3 weeks after radiation therapy has ended.

### **molar pregnancy**

A slow-growing tumor that develops from trophoblastic cells (cells that help an embryo attach to the uterus and help form the placenta) after fertilization of an egg by a sperm. A molar pregnancy contains many cysts (sacs of fluid). It is usually benign (not cancer) but it may spread to nearby tissues (invasive mole). It may also become a malignant tumor called choriocarcinoma. Molar pregnancy is the most common type of gestational trophoblastic tumor. Also called hydatidiform mole.

### **mold**

A form of fungus. Some molds can cause disease in humans.

### **mole**

A benign (not cancer) growth on the skin that is formed by a cluster of melanocytes (cells that make a substance called melanin, which gives color to skin and eyes). A mole is usually dark and may be raised from the skin. Also called nevus.

### **molecular characterization**

A broad term that refers to using molecular markers, including DNA, RNA, and proteins, to determine the genetic characteristics of cells or tissues. In cancer, molecular characterization may provide information about the presence of certain biomarkers or genetic changes in tumor tissue, such as gene mutations, patterns of gene expression, and other changes in tumor DNA or RNA. Molecular characterization can play an important role in how diseases, such as cancer, are diagnosed and treated and how they respond to treatment. Genomic sequencing, molecular profiling, and liquid biopsy are all types of molecular characterization.

### **molecular diagnosis**

The process of identifying a disease by studying molecules, such as proteins, DNA, and RNA, in a tissue or fluid.

### **molecular diagnostics**

Laboratory methods that are used to help identify a disease or the risk of developing a disease, such as cancer, by studying molecules, such as DNA, RNA, and proteins, in a tissue or fluid sample. Molecular diagnostics may also be used to help plan treatment for a disease, look for recurrence of disease, or find out how well treatment is working. There are many types of molecular diagnostic

tests, such as biomarker tests, genetic tests, tumor sequencing tests, and liquid biopsies.

### **molecular marker**

A biological molecule found in blood, other body fluids, or tissues that is a sign of a normal or abnormal process, or of a condition or disease. A molecular marker may be used to see how well the body responds to a treatment for a disease or condition. Also called biomarker and signature molecule.

### **molecular mass**

The sum of the atomic masses of all atoms in a molecule, based on a scale in which the atomic masses of hydrogen, carbon, nitrogen, and oxygen are 1, 12, 14, and 16, respectively. For example, the molecular mass of water, which has two atoms of hydrogen and one atom of oxygen, is 18 (i.e.,  $2 + 16$ ). Also called molecular weight.

### **molecular medicine**

A branch of medicine that develops ways to diagnose and treat disease by understanding the way genes, proteins, and other cellular molecules work. Molecular medicine is based on research that shows how certain genes, molecules, and cellular functions may become abnormal in diseases such as cancer.

### **molecular pathway**

A series of actions among molecules in a cell that leads to a certain end point or cell function.

### **molecular profiling**

A laboratory method that uses a sample of tissue, blood, or other body fluid to check for certain genes, proteins, or other molecules that may be a sign of a disease or condition, such as cancer. Molecular profiling can also be used to check for certain changes in a gene or chromosome that may increase a person's risk of developing cancer or other diseases. Molecular profiling may be done with other procedures, such as biopsies, to help diagnose some types of cancer. It may also be used to help plan treatment, find out how well treatment is working, make a prognosis, or predict whether cancer will come back or spread to other parts of the body. Also called biomarker testing and molecular testing.

### **molecular radiation therapy**

A type of radiation therapy in which a radionuclide (a radioactive chemical) is linked to a cell-targeting molecule, such as a monoclonal antibody, and injected into the body. The cell-targeting molecule binds to a specific target found on some cancer cells. This may help kill the targeted cancer cells while limiting the harm to normal cells. Molecular radiation therapy is used to treat prostate cancer and some other types of cancer. Also called targeted radionuclide therapy.

### **molecular risk assessment**

A procedure in which biomarkers (for example, biological molecules or changes in tumor cell DNA) are used to estimate a person's risk for developing cancer. Specific biomarkers may be linked to particular types of cancer.

### **molecular subtype**

In cancer, a term used to describe the smaller groups that a type of cancer can be divided into, based on whether certain genetic changes or other biomarkers are present. For example, breast cancer can be broken down into several

molecular subtypes based on whether the cancer cells have estrogen receptors (ER), progesterone receptors (PR), or HER2 on their surface. Knowing the molecular subtype of a cancer may help plan treatment, find out how well treatment is working, or make a prognosis.

### **molecular target**

In cancer, a term used to describe certain genes, proteins, and other molecules that are involved in the growth, spread, and survival of cancer cells and may be used as targets for cancer treatment. Treatments that block molecular targets or the signals they send may kill cancer cells or keep cancer cells from growing or spreading.

### **molecular testing**

A laboratory method that uses a sample of tissue, blood, or other body fluid to check for certain genes, proteins, or other molecules that may be a sign of a disease or condition, such as cancer. Molecular testing can also be used to check for certain changes in a gene or chromosome that may increase a person's risk of developing cancer or other diseases. Molecular testing may be done with other procedures, such as biopsies, to help diagnose some types of cancer. It may also be used to help plan treatment, find out how well treatment is working, make a prognosis, or predict whether cancer will come back or spread to other parts of the body. Also called biomarker testing and molecular profiling.

### **molecular weight**

The sum of the atomic masses of all atoms in a molecule, based on a scale in which the atomic masses of hydrogen, carbon, nitrogen, and oxygen are 1, 12, 14, and 16, respectively. For example, the molecular weight of water, which has two atoms of hydrogen and one atom of oxygen, is 18 (i.e.,  $2 + 16$ ). Also called molecular mass.

### **molecularly targeted therapy**

A type of treatment that uses drugs or other substances to target specific molecules that cancer cells need to survive and spread. Molecularly targeted therapies work in different ways to treat cancer. Some stop cancer cells from growing by interrupting signals that cause them to grow and divide, stopping signals that help form blood vessels, delivering cell-killing substances to cancer cells, or starving cancer cells of hormones they need to grow. Other molecularly targeted therapies help the immune system kill cancer cells or directly cause cancer cell death. Most molecularly targeted therapies are either small-molecule drugs or monoclonal antibodies. Also called targeted therapy.

### **molecule**

The smallest particle of a substance that has all of the physical and chemical properties of that substance. Molecules are made up of one or more atoms. If they contain more than one atom, the atoms can be the same (an oxygen molecule has two oxygen atoms) or different (a water molecule has two hydrogen atoms and one oxygen atom). Biological molecules, such as proteins and DNA, can be made up of many thousands of atoms.

### **momelotinib dihydrochloride monohydrate**

A drug used to treat intermediate-risk or high-risk myelofibrosis (MF), including primary MF, post-polycythemia vera MF, and post-essential thrombocythemia MF, in adults with anemia. Momelotinib dihydrochloride monohydrate blocks JAK and other proteins, which may help keep abnormal blood cells or cancer cells from growing. It is a type of kinase inhibitor. Also called Ojjaara.

### **mometasone furoate**

A drug that is used in a cream to treat certain skin conditions and in a nasal spray to treat sinus problems caused by allergies. It is being studied as a way to treat inflammation of the skin caused by radiation therapy. Mometasone furoate is a type of corticosteroid. Also called Elocon and Nasonex.

### **monitor**

In medicine, to regularly watch and check a person or condition to see if there is any change. Also refers to a device that records and/or displays patient data, such as for an electrocardiogram (EKG).

### **monk's pepper**

An extract made from the fruit of the chaste tree (*Vitex agnus-castus*) found in parts of Asia and Europe. It is claimed to treat infertility and to lessen symptoms that may occur before or during a woman's menstrual period, such as headaches and irregular bleeding. Monk's pepper may affect levels of reproductive hormones in the blood. It is a type of phytomedicine. Also called chaste tree berry and Vitex.

### **monoamine oxidase inhibitor**

A type of drug used to treat depression. It stops the breakdown of certain chemicals in the brain that help improve a person's mood. A monoamine oxidase inhibitor is a type of antidepressant. Also called MAO inhibitor.

### **monoclonal B-cell lymphocytosis**

A condition in which a higher-than-normal number of identical B cells are found in the blood. People with monoclonal B-cell lymphocytosis may develop other B-cell diseases, such as chronic lymphocytic leukemia (CLL). Also called MBL.

### **monoclonal antibody**

A type of protein that is made in the laboratory and can bind to certain targets in the body, such as antigens on the surface of cancer cells. There are many kinds of monoclonal antibodies, and each monoclonal antibody is made so that it binds to only one antigen. Monoclonal antibodies are being used in the diagnosis and treatment of many diseases, including some types of cancer. They can be used alone or to carry drugs, toxins, or radioactive substances directly to cancer cells.

### **monoclonal antibody Ch14.18**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF), aldesleukin (IL-2), and 13-cis-retinoic acid to treat children with high-risk neuroblastoma. It is used in patients whose disease has gotten better with other anticancer treatment. Monoclonal antibody Ch14.18 binds to a substance called GD2, which is found on some types of cancer cells. Monoclonal antibody Ch14.18 may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Ch14.18, dinutuximab, MOAB Ch14.18, and Unituxin.

### **monoclonal antibody HuM195**

A substance being studied in the treatment of myelodysplastic syndromes and some types of leukemia. It binds to CD33, a protein on the surface of certain normal blood stem cells and some abnormal blood cells. It causes the immune system to kill these cells. Monoclonal antibody HuM195 is a type of monoclonal antibody. Also called lintuzumab and MoAb HuM195.

**monoclonal gammopathy of undetermined significance**

A benign condition in which there is a higher-than-normal level of a protein called M protein in the blood. Patients with monoclonal gammopathy of undetermined significance are at an increased risk of developing cancer. Also called MGUS.

**monoclonal protein**

An antibody found in unusually large amounts in the blood or urine of people with multiple myeloma and other types of plasma cell tumors. Also called M protein.

**monocyte**

A type of immune cell that is made in the bone marrow and travels through the blood to tissues in the body where it becomes a macrophage or a dendritic cell. Macrophages surround and kill microorganisms, ingest foreign material, remove dead cells, and boost immune responses. During inflammation, dendritic cells boost immune responses by showing antigens on their surface to other cells of the immune system. A monocyte is a type of white blood cell and a type of phagocyte.

**monogamous**

A term used to describe a type of personal relationship in which a person has only one partner at a time.

**monomer**

A molecule that can join with other identical monomers to form a larger structure called a polymer.

**monotherapy**

Therapy that uses one type of treatment, such as radiation therapy or surgery alone, to treat a certain disease or condition. In drug therapy, monotherapy refers to the use of a single drug to treat a disease or condition.

**montelukast sodium**

A drug used to treat symptoms of asthma, such as trouble breathing, tight chest, wheezing, coughing, and runny nose. Montelukast sodium blocks the action of a substance that causes airways in the lungs to narrow and causes other symptoms of asthma. It is a type of leukotriene receptor antagonist and a type of antiasthmatic agent. Also called Singulair.

**moral**

Having to do with beliefs about what is right and wrong in terms of how people behave. Also called ethical.

**morbidity**

Refers to having a disease or a symptom of disease, or to the amount of disease within a population. Morbidity also refers to medical problems caused by a treatment.

**morphine sulfate**

A drug used to treat moderate to severe pain. It binds to opioid receptors in the central nervous system and some other tissues. Morphine sulfate is made from opium. It is a type of opiate and a type of analgesic agent.

**morphology**

The science of the form and structure of organisms (plants, animals, and other forms of life).

## **mortality**

Refers to the state of being mortal (destined to die). In medicine, a term also used for death rate, or the number of deaths in a certain group of people in a certain period of time. Mortality may be reported for people who have a certain disease, live in one area of the country, or who are of a certain gender, age, or ethnic group.

## **mosunetuzumab**

A drug used to treat adults with follicular lymphoma that came back or did not get better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Mosunetuzumab binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called CD20, which is found on B cells (another type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Mosunetuzumab is a type of bispecific monoclonal antibody. Also called Lunsumio.

## **motexafin gadolinium**

A substance being studied in the treatment and diagnosis of some types of cancer. It builds up in some cancer cells, which may make them easier to kill with radiation therapy and chemotherapy. Motexafin gadolinium is also used in magnetic resonance imaging (MRI) to help find cancer cells in the body. It is a type of radiosensitizing agent, a type of chemosensitizing agent, and a type of contrast agent. Also called gadolinium texaphyrin.

## **motexafin lutetium**

A substance that is being studied in the treatment of cancer using photodynamic therapy. It belongs to the family of drugs called metallotexaphyrins. Also called lutetium texaphyrin.

## **motor**

In medicine, having to do with the movement of body parts.

## **motor neuron disease**

A type of disease in which the nerve cells in the brain that act on muscle cells break down and stop working. This affects basic activities such as speaking, walking, breathing, and swallowing. Symptoms include muscle weakness, wasting, twitching, trouble swallowing, and slowly becoming paralyzed. Motor neuron diseases are sometimes inherited. Amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease) is the most common type of motor neuron disease.

## **mouse model**

The use of special strains of mice to study a human disease or condition, and how to prevent and treat it.

## **moxetumomab pasudotox**

A drug used to treat adults with hairy cell leukemia that came back or did not get better with at least two other systemic therapies, including treatment with a purine nucleoside analog (a type of anticancer drug). Moxetumomab pasudotox contains a monoclonal antibody that binds to a protein called CD22, which is found on B cells (a type of white blood cell) and some types of leukemia cells. It also contains a bacterial toxin called PE38, which may help kill cancer cells. Moxetumomab pasudotox is a type of immunotoxin. Also called anti-CD22 immunotoxin CAT-8015, CAT-8015, and Lumoxiti.



**moxibustion**

In traditional Chinese medicine, a type of heat therapy in which an herb is burned on or above the skin to warm and stimulate an acupuncture point or affected area.

**moxifloxacin hydrochloride**

A drug used to treat bacterial infections. It is a type of fluoroquinolone. Also called Avelox.

**muJ591**

A type of monoclonal antibody used in cancer detection or therapy. Monoclonal antibodies are laboratory-produced substances that can locate and bind to cancer cells.

**mucin/peptide**

A protein/sugar compound made by some cancer cells.

**mucinous**

Containing or resembling mucin, the main compound in mucus.

**mucinous carcinoma**

A type of cancer that begins in cells that line certain internal organs and produce mucin (the main component of mucus).

**mucosa**

The moist, inner lining of some organs and body cavities (such as the nose, mouth, lungs, and stomach). Glands in the mucosa make mucus (a thick, slippery fluid). Also called mucous membrane.

**mucosa-associated lymphoid tissue lymphoma**

A type of cancer that arises in cells in mucosal tissue that are involved in antibody production. Also called MALT lymphoma.

**mucosal HPV**

A group of sexually transmitted human papillomaviruses (HPV) that infect the cells on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. Mucosal HPVs can be grouped into high-risk HPV and low-risk HPV types. Low-risk HPV infections can cause warts on or around the genitals, anus, mouth, throat, larynx, or other areas of the respiratory tract. They rarely cause cancer, and most go away on their own without treatment. A long-lasting infection with a high-risk HPV type can cause cancers of the cervix, anus, oropharynx, vagina, vulva, and penis. Also called mucosal human papillomavirus.

**mucosal human papillomavirus**

A group of sexually transmitted human papillomaviruses (HPV) that infect the cells on the moist surfaces or inner lining of some organs and body cavities, such as the cervix, vagina, vulva, penis, anus, mouth, and throat. Mucosal human papillomaviruses can be grouped into high-risk HPV and low-risk HPV types. Low-risk HPV infections can cause warts on or around the genitals, anus, mouth, throat, larynx, or other areas of the respiratory tract. They rarely cause cancer, and most go away on their own without treatment. A long-lasting infection with a high-risk HPV type can cause cancers of the cervix, anus, oropharynx, vagina, vulva, and penis. Also called mucosal HPV.

**mucosal neuroma**

A benign (not cancer) tumor that forms around the nerves in the lips, tongue, lining of the mouth, eyelids, and gastrointestinal tract. Mucosal neuromas are found in people with a rare, inherited condition called multiple endocrine neoplasia type 2B.

**mucositis**

A complication of some cancer therapies in which the lining of the digestive system becomes inflamed. Often seen as sores in the mouth.

**mucous membrane**

The moist, inner lining of some organs and body cavities (such as the nose, mouth, lungs, and stomach). Glands in the mucous membrane make mucus (a thick, slippery fluid). Also called mucosa.

**mucus**

A thick, slippery fluid made by the membranes that line certain organs and body cavities, such as the nose, mouth, throat, lungs, stomach, and vagina.

**mucus colitis**

A disorder of the intestines commonly marked by abdominal pain, bloating, and changes in a person's bowel habits. This may include diarrhea or constipation, or both, with one occurring after the other. Also called IBS, irritable bowel syndrome, irritable colon, and spastic colon.

**multi-cancer detection test**

A type of blood test that is being studied as a way to screen for many types of cancer at the same time. Multi-cancer detection tests work by measuring biomarkers, such as pieces of DNA, that cancer cells release into the blood as they die. These tests may help find cancer in parts of the body that are not easily accessible for physical exam or biopsy. Multi-cancer detection tests may be used with other screening tests to help find more cancers before they cause symptoms. Multi-cancer detection tests are a type of liquid biopsy. These tests are sometimes called multi-cancer early detection tests or MCED tests. Also called MCD test.

**multicenter study**

A clinical trial that is carried out at more than one medical institution.

**multicentric breast cancer**

Breast cancer in which there is more than one tumor, all of which have formed separately from one another. The tumors are likely to be in different quadrants (sections) of the breast. Multicentric breast cancers are rare.

**multidisciplinary**

In medicine, a term used to describe a treatment planning approach or team that includes a number of doctors and other health care professionals who are experts in different specialties (disciplines). In cancer treatment, the primary disciplines are medical oncology (treatment with drugs), surgical oncology (treatment with surgery), and radiation oncology (treatment with radiation).

**multidrug resistance**

Adaptation of tumor cells to anticancer drugs in ways that make the drugs less effective.

### **multidrug resistance inhibition**

Treatment used to make cancer cells less resistant to anticancer drugs.

### **multifocal breast cancer**

Breast cancer in which there is more than one tumor, all of which have arisen from one original tumor. The tumors are likely to be in the same quadrant (section) of the breast.

### **multigene panel test**

A laboratory test in which many genes are studied in a sample of tissue. Multigene panel tests help find mutations (changes) in certain genes that may increase a person's risk of a disease such as cancer. They may also look at the activity of certain genes in a sample of tissue. Multigene panel tests may be used to help plan treatment or help predict whether cancer will spread to other parts of the body or come back. Also called MGPT and multigene test.

### **multigene test**

A laboratory test in which many genes are studied in a sample of tissue. Multigene tests help find mutations (changes) in certain genes that may increase a person's risk of a disease such as cancer. They may also look at the activity of certain genes in a sample of tissue. Multigene tests may be used to help plan treatment or help predict whether cancer will spread to other parts of the body or come back. Also called MGPT and multigene panel test.

### **multimodality therapy**

Therapy that combines more than one method of treatment. Also called combination therapy and multimodality treatment.

### **multimodality treatment**

Therapy that combines more than one method of treatment. Also called combination therapy and multimodality therapy.

### **multiple endocrine adenomatosis**

A rare, inherited disorder that affects the endocrine glands and can cause tumors in the parathyroid and pituitary glands and the pancreas. These tumors are usually benign (not cancer). They cause the glands to secrete high levels of hormones, which can lead to other medical problems, such as kidney stones, fertility problems, and severe ulcers. In some cases, tumors inside the pancreas can become malignant (cancer). Also called MEN1 syndrome, multiple endocrine neoplasia type 1 syndrome, and Wermer syndrome.

### **multiple endocrine adenomatosis type 2**

A rare, genetic disorder that affects the endocrine glands and can cause tumors in the thyroid gland, parathyroid glands, and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. Multiple endocrine adenomatosis type 2 is caused by a mutation (change) in a gene called RET, and is divided into three subtypes (MEN2A, MEN2B, and FMTC). People with all subtypes of multiple endocrine adenomatosis type 2 have an increased risk of medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. Also called MEN2, MEN2 syndrome, and multiple endocrine neoplasia type 2 syndrome.

### **multiple endocrine adenomatosis type 2A**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the parathyroid glands and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. An itchy skin condition may also occur. Multiple endocrine adenomatosis type 2A is caused by a mutation (change) in a gene called RET. Also called MEN2A, MEN2A syndrome, multiple endocrine neoplasia type 2A syndrome, and Sipple syndrome.

### **multiple endocrine adenomatosis type 2B**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the adrenal glands and growths around the nerves in the lips, tongue, lining of the mouth, and eyelids. Gastrointestinal symptoms and trouble with the spine or bones in the feet and thighs may also occur. Multiple endocrine adenomatosis type 2B is caused by a mutation (change) in a gene called RET. Also called MEN2B, MEN2B syndrome, and multiple endocrine neoplasia type 2B syndrome.

### **multiple endocrine neoplasia syndrome**

An inherited condition that may result in the development of cancers of the endocrine system. There are several types of multiple endocrine neoplasia syndrome, and patients with each type may develop different types of cancer. The altered genes that cause each type can be detected with a blood test. Also called MEN syndrome.

### **multiple endocrine neoplasia type 1 syndrome**

A rare, inherited disorder that affects the endocrine glands and can cause tumors in the parathyroid and pituitary glands and the pancreas. These tumors are usually benign (not cancer). They cause the glands to secrete high levels of hormones, which can lead to other medical problems, such as kidney stones, fertility problems, and severe ulcers. In some cases, tumors inside the pancreas can become malignant (cancer). Also called MEN1 syndrome, multiple endocrine adenomatosis, and Wermer syndrome.

### **multiple endocrine neoplasia type 2 syndrome**

A rare, genetic disorder that affects the endocrine glands and can cause tumors in the thyroid gland, parathyroid glands, and adrenal glands. The affected endocrine glands may make high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. Multiple endocrine neoplasia type 2 syndrome is caused by a mutation (change) in a gene called RET, and is divided into three subtypes (MEN2A, MEN2B, and FMTC). People with all subtypes of multiple endocrine neoplasia type 2 syndrome have an increased risk of medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. Also called MEN2, MEN2 syndrome, and multiple endocrine adenomatosis type 2.

### **multiple endocrine neoplasia type 2A syndrome**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the parathyroid glands and adrenal glands. The affected endocrine glands may make

high levels of hormones, which can lead to other medical problems such as high blood pressure and kidney stones. An itchy skin condition may also occur. Multiple endocrine neoplasia type 2A syndrome is caused by a mutation (change) in a gene called RET. Also called MEN2A, MEN2A syndrome, multiple endocrine adenomatosis type 2A, and Sipple syndrome.

### **multiple endocrine neoplasia type 2B syndrome**

A rare, genetic disorder that affects the endocrine glands and causes a type of thyroid cancer called medullary thyroid cancer, pheochromocytoma, and parathyroid gland cancer. It may also cause benign (noncancerous) tumors in the adrenal glands and growths around the nerves in the lips, tongue, lining of the mouth, and eyelids. Gastrointestinal symptoms and trouble with the spine or bones in the feet and thighs may also occur. Multiple endocrine neoplasia type 2B syndrome is caused by a mutation (change) in a gene called RET. Also called MEN2B, MEN2B syndrome, and multiple endocrine adenomatosis type 2B.

### **multiple hamartoma syndrome**

A rare inherited disorder marked by the presence of many benign (not cancer) growths called hamartomas and an increased risk of cancer. Hamartomas form in different parts of the body, especially the skin, mouth, and gastrointestinal tract. Other benign tumors may also occur in the thyroid, breast, uterus, soft tissue, and brain. Other signs and symptoms include a larger-than-average head, abnormal skin changes, blood vessel problems, autism spectrum disorder, and learning and developmental delays. People with multiple hamartoma syndrome have an increased risk of developing certain types of cancer, including melanoma and cancers of the breast, thyroid, endometrium, kidney, colon, and rectum. Multiple hamartoma syndrome is usually caused by mutations (changes) in the PTEN gene. Also called Cowden disease and Cowden syndrome.

### **multiple myeloma**

A type of cancer that begins in plasma cells (white blood cells that produce antibodies). Also called Kahler disease, myelomatosis, and plasma cell myeloma.

### **multiple sclerosis**

A disorder of the central nervous system marked by weakness, numbness, a loss of muscle coordination, and problems with vision, speech, and bladder control. Multiple sclerosis is thought to be an autoimmune disease in which the body's immune system destroys myelin. Myelin is a substance that contains both protein and fat (lipid), serving as a nerve insulator and helping in the transmission of nerve signals.

### **multiple self-healing squamous epithelioma**

A rare, inherited disorder in which many fast-growing tumors that look like squamous cell skin cancer form on the nose, face, ears, arms, and legs. The tumors usually go away on their own, but often leave deep, pitted scars in the skin. The tumors on the arms and legs are often larger and leave flat scars. Multiple self-healing squamous epithelioma is caused by mutations (changes) in the TGFBR1 gene. Also called Ferguson-Smith syndrome and MSSE.

### **multiplicity**

A large number or variety.

### **multitargeted receptor tyrosine kinase inhibitor ABT-869**

A substance being studied in the treatment of several types of cancer. Multitargeted receptor tyrosine kinase inhibitor ABT-869 blocks the action of several growth factors. It may also block the growth of new blood vessels that tumors need to grow and may cause cancer cells to die. It is a type of receptor tyrosine kinase inhibitor and a type of angiogenesis inhibitor. Also called ABT-869.

### **mung bean**

A type of bean grown in warm climates, usually for its seed and for bean sprouts. Mung bean may have anticancer effects.

### **muramyl tripeptide phosphatidylethanolamine**

A drug being studied in the treatment of young adults with bone cancer that has gotten worse or come back. Muramyl tripeptide phosphatidylethanolamine activates certain types of white blood cells and helps the immune system kill cancer cells. It is a type of immunostimulant. Also called L-MTP-PE, MEPACT, and mifamurtide.

### **muromonab-CD3**

A type of monoclonal antibody used in cancer detection or therapy. Monoclonal antibodies are laboratory-produced substances that can locate and bind to cancer cells.

### **muscle relaxant**

A type of drug that is used to relax the muscles and reduce tension, stiffness, and pain caused by muscle spasms or muscle spasticity (stiff, rigid muscles). Muscle relaxants are also used to prevent muscle movement during surgery. There are many different types of muscle relaxants. Some work by blocking certain nerve receptors in the brain or spinal cord, while others act directly on the muscle fibers in the body to relax the muscles.

### **muscle wasting**

A weakening, shrinking, and loss of muscle caused by disease or lack of use. Muscle wasting decreases strength and the ability to move.

### **musculoskeletal**

Having to do with muscles, bones, tendons, ligaments, joints, and cartilage.

### **music therapy**

A type of therapy that uses music to help improve a person's overall health and well-being. It may include creating, singing, moving, listening, and/or relaxing to music. Music therapy may be used to help relieve stress, pain, anxiety, and depression caused by a disease, such as cancer, and its treatment. Music therapy is a type of complementary medicine.

### **mustine**

A drug used on the skin to treat stage I mycosis fungoides (a type of cutaneous T-cell lymphoma) in patients who have already been treated with other therapy. It is also being studied in the treatment of other types of cancer. Mustine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called mechlorethamine hydrochloride and Valchlor.

### **mutagen**

Anything that causes a mutation (a change in the DNA of a cell). DNA changes caused by mutagens may harm cells and cause certain diseases, such as



cancer. Examples of mutagens include radioactive substances, x-rays, ultraviolet radiation, and certain chemicals.

### **mutate**

To change the genetic material of a cell. The changes (mutations) can be harmful, beneficial, or have no effect.

### **mutation**

Any change in the DNA sequence of a cell. Mutations may be caused by mistakes during cell division, or they may be caused by exposure to DNA-damaging agents in the environment. Mutations can be harmful, beneficial, or have no effect. If they occur in cells that make eggs or sperm, they can be inherited; if mutations occur in other types of cells, they are not inherited. Certain mutations may lead to cancer or other diseases. A mutation is sometimes called a variant.

### **mutation carrier**

A person who has a mutated (changed) copy of a gene. This change may cause a disease in that person or in his or her children.

### **myalgia**

Pain in a muscle or group of muscles.

### **myasthenia gravis**

A disease in which antibodies made by a person's immune system prevent certain nerve-muscle interactions. It causes weakness in the arms and legs, vision problems, and drooping eyelids or head. It may also cause paralysis and problems with swallowing, talking, climbing stairs, lifting things, and getting up from a sitting position. The muscle weakness gets worse during activity, and improves after periods of rest.

### **mycophenolate mofetil**

A drug used to prevent graft-versus-host disease (GVHD) after organ transplants. It is also being studied in the prevention of GVHD after stem cell transplants for cancer, and in the treatment of some autoimmune disorders. Mycophenolate mofetil is a type of immunosuppressive agent. Also called CellCept.

### **mycosis fungoides**

A type of non-Hodgkin lymphoma that first appears on the skin and can spread to the lymph nodes or other organs such as the spleen, liver, or lungs.

### **mycosis fungoides patch**

A flat, thin, pink or red patchy rash that forms on the skin of patients with a type of skin lymphoma called mycosis fungoides. The patches may be dry, scaly, and itchy and may look like eczema or psoriasis. They can occur anywhere on the body, but they are most common on the lower abdomen, upper thighs, buttocks, and breasts. The patches may sometimes become plaques (hard, raised lesions) on the skin.

### **mycosis fungoides plaque**

A small, raised bump or thick, hard lesion that forms on the skin of patients with a type of skin lymphoma called mycosis fungoides. Plaques may be red, scaly, and itchy and may look like eczema or psoriasis. They can occur anywhere on the

body, but they are most common on the lower abdomen, upper thighs, buttocks, and breasts. Plaques may sometimes become tumors on the skin.

### **myelin**

The fatty substance that covers and protects nerves.

### **myeloablation**

A severe form of myelosuppression. Myelosuppression is a condition in which bone marrow activity is decreased, resulting in fewer red blood cells, white blood cells, and platelets. It is a side effect of some cancer treatments. Also called severe myelosuppression.

### **myeloablative chemotherapy**

High-dose chemotherapy that kills cells in the bone marrow, including cancer cells. It lowers the number of normal blood-forming cells in the bone marrow, and can cause severe side effects. Myeloablative chemotherapy is usually followed by a bone marrow or stem cell transplant to rebuild the bone marrow.

### **myeloblast**

A type of immature white blood cell that forms in the bone marrow. Myeloblasts become mature white blood cells called granulocytes (neutrophils, basophils, and eosinophils).

### **myeloblastic**

Refers to myeloblasts (a type of immature cell that forms in the bone marrow).

### **myelodysplasia**

Abnormal bone marrow cells that may lead to myelogenous leukemia.

### **myelodysplastic syndrome**

A type of cancer in which the bone marrow does not make enough healthy blood cells (white blood cells, red blood cells, and platelets) and there are abnormal cells in the blood and/or bone marrow. When there are fewer healthy blood cells, infection, anemia, or bleeding may occur. Sometimes, myelodysplastic syndrome becomes acute myeloid leukemia (AML). Also called MDS.

### **myelofibrosis**

A disorder in which the bone marrow is replaced by fibrous tissue.

### **myelogenous**

Having to do with, produced by, or resembling the bone marrow. Sometimes used as a synonym for myeloid; for example, acute myeloid leukemia and acute myelogenous leukemia are the same disease.

### **myelogram**

An x-ray of the spinal cord after an injection of dye into the space between the lining of the spinal cord and brain.

### **myeloid**

Having to do with or resembling the bone marrow. May also refer to certain types of hematopoietic (blood-forming) cells found in the bone marrow. Sometimes used as a synonym for myelogenous; for example, acute myeloid leukemia and acute myelogenous leukemia are the same disease.

### **myeloid sarcoma**

A rare type of cancer that is made up of myeloblasts (a type of immature white blood cell) and forms outside the bone marrow and blood. The tumor cells may look green when viewed under a microscope. Myeloid sarcomas can occur anywhere in the body. They most commonly occur in people with acute myeloid leukemia or a myeloproliferative disorder. Also called chloroma, extramedullary myeloid tumor, and granulocytic sarcoma.

### **myeloma**

Cancer that arises in plasma cells, a type of white blood cell.

### **myelomatosis**

A type of cancer that begins in plasma cells (white blood cells that produce antibodies). Also called Kahler disease, multiple myeloma, and plasma cell myeloma.

### **myelomonocyte**

An abnormal type of white blood cell that is found in chronic myelomonocytic leukemia. These cells are similar to both monocytes and myelocytes (immature cells that develop into different types of immune system cells).

### **myeloproliferative neoplasm**

A type of disease in which the bone marrow makes too many red blood cells, platelets, or certain white blood cells. Myeloproliferative neoplasms usually get worse over time as the number of extra cells build up in the blood and/or bone marrow. This may cause bleeding problems, anemia, infection, fatigue, or other signs and symptoms. Certain myeloproliferative neoplasms may become acute myeloid leukemia (AML). Myeloproliferative neoplasms include chronic myelogenous leukemia (CML), polycythemia vera, primary myelofibrosis, essential thrombocythemia, chronic neutrophilic leukemia, and chronic eosinophilic leukemia. Also called chronic myeloproliferative neoplasm.

### **myelosclerosis with myeloid metaplasia**

A progressive, chronic disease in which the bone marrow is replaced by fibrous tissue and blood is made in organs such as the liver and the spleen, instead of in the bone marrow. This disease is marked by an enlarged spleen and progressive anemia. Also called agnogenic myeloid metaplasia, chronic idiopathic myelofibrosis, idiopathic myelofibrosis, and primary myelofibrosis.

### **myelosuppression**

A condition in which bone marrow activity is decreased, resulting in fewer red blood cells, white blood cells, and platelets. Myelosuppression is a side effect of some cancer treatments. When myelosuppression is severe, it is called myeloablation.

### **myelosuppressive therapy**

Treatment that stops or slows the growth of blood-forming cells in the bone marrow. Myelosuppressive therapies, such as chemotherapy and radiation therapy, kill normal cells and cancer cells in the bone marrow. This lowers the number of normal red blood cells, white blood cells, and platelets in the blood and bone marrow. Myelosuppressive therapy may be given before a bone marrow or stem cell transplant. It may also be used to treat some blood conditions, such as polycythemia vera (a disease in which there are too many red blood cells in the bone marrow and blood).

### **myocarditis**

A rare condition in which the heart muscle becomes thick and inflamed and may also become weak. Myocarditis is usually caused by a viral infection, but it may also be caused by bacterial, parasitic, or fungal infections; autoimmune disorders; or being exposed to radiation or certain chemicals or drugs. Signs and symptoms include chest pain, fast or abnormal heartbeat, trouble breathing, fatigue, and swelling of the legs. Other signs and symptoms include fever, headache, body aches, sore throat, and diarrhea. Some patients have mild symptoms or no symptoms at all. Sometimes the symptoms may be severe or life threatening and may lead to heart failure, stroke, or heart attack.

### **myoclonic jerk**

A sudden, brief, strong contraction of a muscle or group of muscles that cannot be controlled.

### **myoinositol**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Myoinositol helps cells make membranes and respond to messages from their environment. It has the same chemical formula as glucose (the chief source of energy for living organisms) but has a different arrangement of atoms. It is found in beans, peas, brown rice, wheat bran and nuts. It is water-soluble (can dissolve in water) and must be taken in every day. Myoinositol is being studied in the prevention of cancer. Also called inositol.

### **myometrium**

The muscular outer layer of the uterus.

### **myopericytoma**

A rare, slow-growing soft tissue tumor that begins in cells that wrap around blood vessels. Most myopericytomas are benign (not cancer). They can occur anywhere in the body, but usually occur in the legs, trunk (chest and abdomen), or head and neck. They can occur in children, but are most common in middle-aged adults.

### **myristyl nicotinate cream**

A substance being studied in the prevention of skin cancer. Myristyl nicotinate cream is also being studied as a way to help lessen the side effects of retinoic acid (a form of vitamin A) when it is used to treat skin that has been damaged by the sun. Myristyl nicotinate cream contains a form of niacin (a member of the vitamin B complex). It is a type of chemopreventive agent.

### **myxofibrosarcoma**

A rare type of cancer that forms in fibrous (connective) tissue, usually in or just under the skin of the arms and legs. There may be more than one tumor, and it sometimes spreads to nearby tissue or to other parts of the body.

Myxofibrosarcoma may also recur (come back) after treatment. It may occur in children, but is most common in older adults. It is a type of soft tissue sarcoma.

### **myxoid liposarcoma**

A rare type of cancer that begins in fat cells. It usually occurs in the thigh, but it may also occur in the buttock, back of the abdomen, or trunk (chest and abdomen). Some myxoid liposarcoma cells have a certain genetic change called a translocation (part of one chromosome switches places with part of another chromosome). Myxoid liposarcoma usually occurs in adults, and is rare in children and adolescents. It is a type of soft tissue sarcoma.

## **nM**

The amount of a substance equal to a billionth of a mole (a measure of the amount of a substance). Also called nanomole.

## **nabilone**

A synthetic pill form of an active chemical in marijuana called delta-9-tetrahydrocannabinol (THC). Nabilone is used to treat nausea and vomiting caused by chemotherapy in patients who have not been helped by other therapy. It is a type of cannabinoid. Also called Cesamet.

## **nadofaragene firadenovec**

A drug used to treat adults with a certain type of high-risk bladder cancer that has not invaded the muscle layers of the bladder. It is used in patients whose cancer has not gotten better after treatment with Bacillus Calmette-Guérin (BCG). It is also being studied in the treatment of other types of cancer. Nadofaragene firadenovec is a weakened adenovirus that carries a copy of the gene for interferon alfa-2b into bladder cancer cells. This may help the body's immune system recognize the cancer cells and kill them. Nadofaragene firadenovec is given in a solution that is placed directly into the bladder using a thin tube called a catheter. It is a type of gene therapy. Also called Adstiladrin.

## **nail dystrophy**

Abnormal changes in the shape, color, texture, and growth of the fingernails or toenails. Nail dystrophy is often caused by infection or injury to the nail. It may also be caused by certain conditions, including psoriasis, eczema, warts, cysts, and some tumors. Changes in nails can also be a sign of chronic heart, lung, liver, or kidney disease. Treatment with certain drugs, including chemotherapy drugs, can also cause changes to the nails. Also called onychodystrophy.

## **naloxone**

A substance that is being studied as a treatment for constipation caused by narcotic medications. It belongs to the family of drugs called narcotic antagonists.

## **naltrexone hydrochloride**

A drug that blocks the action of opiates (drugs used to treat pain). It may be used in the treatment of intravenous opiate addiction or alcohol dependence. Naltrexone hydrochloride is also being studied in the treatment of breast cancer. It may block the effects of the hormone estrogen, which causes some breast cancer cells to grow, or block the blood flow to tumors. It is a type of opiate antagonist. Also called ReVia and Vivitrol.

## **nanogram**

A measure of weight. One nanogram weighs a billion times less than one gram, and almost a trillion-times less than a pound.

## **nanometer**

A measure of length in the metric system. A nanometer is one billionth of a meter. An average human hair is about 60,000 nanometers thick. Nanometers are used to measure wavelengths of light and distances between atoms in molecules.

## **nanomole**

The amount of a substance equal to a billionth of a mole (a measure of the amount of a substance). Also called nM.

### **nanoparticle**

A particle of that is smaller than 100 nanometers (one-billionth of a meter). In medicine, nanoparticles can be used to carry antibodies, drugs, imaging agents, or other substances to certain parts of the body. Nanoparticles are being studied in the detection, diagnosis, and treatment of cancer.

### **nanoparticle paclitaxel**

A form of the anticancer drug paclitaxel that is used alone or with other drugs to treat certain types of breast cancer, non-small cell lung cancer, and pancreatic cancer. Nanoparticle paclitaxel may have fewer side effects and work better than other forms of paclitaxel. It is also being studied in the treatment of other types of cancer. Nanoparticle paclitaxel stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called ABI-007, Abraxane, paclitaxel albumin-stabilized nanoparticle formulation, and protein-bound paclitaxel.

### **nanoprobe**

A device that uses x-rays instead of visible light to form images of very small structures, such as the insides of blood vessels and cells. It can be used to study processes such as angiogenesis (growth of blood vessels). The term nanoprobe is also used to describe very small particles that can be used in the detection, diagnosis, and treatment of cancer.

### **nanotechnology**

The field of research that deals with the engineering and creation of things from materials that are less than 100 nanometers (one-billionth of a meter) in size, especially single atoms or molecules. Nanotechnology is being studied in the detection, diagnosis, and treatment of cancer.

### **naproxen**

A drug used to treat mild pain and the symptoms of arthritis and several other conditions. It is also being studied in the treatment of bone pain in patients with cancer. Naproxen stops the body from making substances that cause pain and inflammation. It is a type of nonsteroidal anti-inflammatory drug (NSAID) and a type of cyclooxygenase inhibitor. Also called Naprosyn.

### **narcotic**

A substance used to treat moderate to severe pain. Narcotics are like opiates such as morphine and codeine, but are not made from opium. They bind to opioid receptors in the central nervous system. Narcotics are now called opioids.

### **nasal**

By or having to do with the nose.

### **nasal cavity**

The space inside the nose. The nasal cavity lies above the bone that forms the roof of the mouth and curves down at the back to join the throat. It is divided into two sections called nasal passages. Air moves through these passages during breathing. The nasal passages filter and warm the air, and make it moist before it goes into the lungs. They also contain special cells that are involved in the sense of smell.

### **nasal vestibule**

The area just inside the nostril (nose opening) that leads into the nasal cavity. The nasal vestibule is supported by the cartilage of the nose and is lined with



tissue that contains short, coarse hairs. These hairs help filter dust and other particles to keep them from entering the lungs.

### **nasogastric**

Describes the passage from the nose to the stomach. For example, a nasogastric tube is inserted through the nose, down the throat and esophagus, and into the stomach.

### **nasogastric tube**

A tube that is inserted through the nose, down the throat and esophagus, and into the stomach. It can be used to give drugs, liquids, and liquid food, or used to remove substances from the stomach. Giving food through a nasogastric tube is a type of enteral nutrition. Also called gastric feeding tube and NG tube.

### **nasopharyngeal cancer**

Cancer that forms in tissues of the nasopharynx (upper part of the throat behind the nose). Most nasopharyngeal cancers are squamous cell carcinomas (cancer that begins in flat cells lining the nasopharynx).

### **nasopharynx**

The upper part of the throat behind the nose. An opening on each side of the nasopharynx leads into the ear.

### **nasoscope**

A thin tube-like instrument used to examine the inside of the nose. A nasoscope has a light and a lens for viewing and may have a tool to remove tissue. Also called rhinoscope.

### **nasoscopy**

Examination of the inside of the nose using a nasoscope (or rhinoscope). A nasoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. Also called rhinoscopy.

### **natural history study**

A study that follows a group of people over time who have, or are at risk of developing, a specific medical condition or disease. A natural history study collects health information in order to understand how the medical condition or disease develops and how to treat it.

### **natural killer T cell**

A type of immune cell that plays an important role in the body's first immune response to invading microorganisms. Natural killer T cells are a type of T cell that also have certain features of natural killer (NK) cells. They can kill invading microorganisms, such as bacteria and viruses, by releasing cytokines. They can also kill certain cells, such as cancer cells, either directly or by causing other immune cells to kill them. If natural killer T cells become inactive, this may contribute to the development and progression of certain diseases, such as cancer. Also called NKT cell.

### **natural killer cell**

A type of immune cell that has granules (small particles) with enzymes that can kill tumor cells or cells infected with a virus. A natural killer cell is a type of white blood cell. Also called NK cell and NK-LGL.

### **natural killer-cell large granular lymphocyte leukemia**

A type of leukemia in which large natural killer (NK) cells (a type of white blood cell) that contain granules (small particles) are found in the blood. It is a chronic disease that may last for a long time and get worse. Also called NK-LGL leukemia and NK-LGLL.

### **naturopathy**

A system of disease prevention and treatment that avoids drugs and surgery. Naturopathy is based on the use of natural agents such as air, water, light, heat, and massage to help the body heal itself. It also uses herbal products, nutrition, acupuncture, and aromatherapy as forms of treatment.

### **nausea**

A feeling of sickness or discomfort in the stomach that may come with an urge to vomit. Nausea is a side effect of some types of cancer therapy.

### **navitoclax**

A substance being studied in the treatment of lymphomas and other types of cancer. It blocks some of the enzymes that keep cancer cells from dying. It is a type of Bcl-2 family inhibitor. Also called ABT-263.

### **naxitamab**

A drug used with granulocyte-macrophage colony-stimulating factor (GM-CSF) to treat children aged 1 year and older and adults with certain types of high-risk neuroblastoma in the bone or bone marrow that came back or did not get better with other treatment. It is also being studied in the treatment of other types of cancer. Naxitamab binds to a substance called GD2, which is found on some types of cancer cells. Naxitamab may block GD2 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Danyelza.

### **nebulizer**

A device used to turn liquid into a fine spray.

### **necitumumab**

A drug used with gemcitabine and cisplatin to treat squamous non-small cell lung cancer that has spread to other parts of the body. It is used in patients whose cancer has not been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Necitumumab binds to a protein called epidermal growth factor receptor (EGFR), which is found on some types of cancer cells. Blocking this protein may help keep cancer cells from growing. Necitumumab is a type of monoclonal antibody. Also called Portrazza.

### **neck dissection**

Surgery to remove lymph nodes and other tissues in the neck.

### **necrosis**

Refers to the death of living tissues.

### **needle biopsy**

The removal of tissue or fluid with a needle for examination under a microscope. When a wide needle is used, the procedure is called a core biopsy. When a thin needle is used, the procedure is called a fine-needle aspiration biopsy.

### **needle localization**

A procedure used to mark a small area of abnormal tissue so it can be removed by surgery. An imaging device is used to guide a thin wire with a hook at the end through a hollow needle to place the wire in or around the abnormal area. Once the wire is in the right place, the needle is removed and the wire is left in place so the doctor will know where the abnormal tissue is. The wire is removed when a biopsy is done. Also called needle/wire localization and wire localization.

### **needle-localized biopsy**

A procedure to mark and remove abnormal tissue when the doctor cannot feel a lump. An imaging device is used to guide a thin wire with a hook on the end through a hollow needle to place the wire in or around the abnormal area. Once the wire is in the right place, the needle is removed and the wire is left in so the doctor will know where the abnormal tissue is. The wire is removed at the time the biopsy is done.

### **needle/wire localization**

A procedure used to mark a small area of abnormal tissue so it can be removed by surgery. An imaging device is used to guide a thin wire with a hook at the end through a hollow needle to place the wire in or around the abnormal area. Once the wire is in the right place, the needle is removed and the wire is left in place so the doctor will know where the abnormal tissue is. The wire is removed when a biopsy is done. Also called needle localization and wire localization.

### **needling**

In acupuncture, the insertion of a thin needle into a specific place on the body to unlock qi (vital energy). The needle may be twirled, moved up and down at different speeds and depths, heated, or charged with a low electric current.

### **nefazodone**

A drug used to treat depression. It belongs to the family of drugs called antidepressant agents. Also called Serzone.

### **negative Pap test result**

A Pap test finding that means no cancer cells or other abnormal cells have been found on the surface of or in the tissue that lines the cervix. Cell changes that suggest inflammation or infection may be included in this finding. Also called negative for intraepithelial lesion or malignancy, NILM, and normal Pap test result.

### **negative axillary lymph node**

A lymph node in the armpit that is free of cancer.

### **negative for intraepithelial lesion or malignancy**

A Pap test finding that means no cancer cells or other abnormal cells have been found on the surface of or in the tissue that lines the cervix. Cell changes that suggest inflammation or infection may be included in this finding. Also called negative Pap test result, NILM, and normal Pap test result.

### **negative predictive value**

The likelihood that a person who has a negative test result indeed does not have the disease, condition, biomarker, or mutation (change) in the gene being tested. The negative predictive value is a way of measuring how accurate a specific test is. Also called NPV.

### **negative test result**

A test result that shows the substance or condition the test is supposed to find is not present at all or is present, but in normal amounts. In genetics, a negative test result usually means that a person does not have a mutation (change) in the gene, chromosome, or protein that is being tested. More testing may be needed to make sure a negative test result is correct.

### **nelarabine**

A drug used to treat adults and children aged 1 year and older with T-cell acute lymphoblastic leukemia and T-cell lymphoblastic lymphoma. It is used in patients whose cancer has not gotten better or has recurred (come back) after treatment with other anticancer drugs. Nelarabine stops cells from making DNA and may kill cancer cells. It is a type of antimetabolite. Also called 506U78 and Arranon.

### **nelfinavir mesylate**

A drug that interferes with the ability of a virus to make copies of itself.

### **neoadjuvant therapy**

Treatment given as a first step to shrink a tumor before the main treatment, which is usually surgery, is given. Examples of neoadjuvant therapy include chemotherapy, radiation therapy, and hormone therapy. It is a type of induction therapy.

### **neoantigen**

A new protein that forms on cancer cells when certain mutations occur in tumor DNA. Neoantigens may play an important role in helping the body make an immune response against cancer cells. Neoantigens used in vaccines and other types of immunotherapy are being studied in the treatment of many types of cancer.

### **neoplasia**

Abnormal and uncontrolled cell growth.

### **neoplasm**

An abnormal mass of tissue that forms when cells grow and divide more than they should or do not die when they should. Neoplasms may be benign (not cancer) or malignant (cancer). Benign neoplasms may grow large but do not spread into, or invade, nearby tissues or other parts of the body. Malignant neoplasms can spread into, or invade, nearby tissues. They can also spread to other parts of the body through the blood and lymph systems. Also called tumor.

### **neoplastic meningitis**

A serious condition in which cancer cells spread from the original (primary) tumor to the meninges (the thin layers of tissue that cover and protect the brain and spinal cord). This can cause the meninges to become inflamed and cerebrospinal fluid and pressure to build up in the brain. Neoplastic meningitis can happen in many types of cancer, but it is most common in people with breast cancer, lung cancer, or melanoma. Also called carcinomatous meningitis, leptomeningeal carcinoma, leptomeningeal carcinomatosis, leptomeningeal metastasis, meningeal carcinomatosis, and meningeal metastasis.

### **nephrectomy**

Surgery to remove a kidney or part of a kidney. In a partial nephrectomy, part of one kidney or a tumor is removed, but not an entire kidney. In a simple nephrectomy, one kidney is removed. In a radical nephrectomy, an entire kidney,

nearby adrenal gland and lymph nodes, and other surrounding tissue are removed. In a bilateral nephrectomy, both kidneys are removed.

### **nephritis**

A condition in which the tissues in the kidney become inflamed and have problems filtering waste from the blood. Nephritis may be caused by infection, inflammatory conditions (such as lupus), certain genetic conditions, and other diseases or conditions. It may also be caused by taking certain medicines or being exposed to certain chemicals. Signs and symptoms include blood and protein in the urine; high blood pressure; swelling of the face, hands, feet, and legs; fatigue; and anemia. If not treated or controlled, nephritis may lead to kidney damage and kidney failure. Also called glomerulonephritis.

### **nephrologist**

A doctor who has special training in diagnosing and treating kidney disease.

### **nephrostomy**

Surgery to make an opening from the outside of the body to the renal pelvis (part of the kidney that collects urine). This may be done to drain urine from a blocked kidney or blocked ureter into a bag outside the body. It may also be done to look at the kidney using an endoscope (thin, lighted tube attached to a camera), to place anticancer drugs directly into the kidney, or to remove kidney stones.

### **nephrotic syndrome**

A combination of symptoms caused by damage to the tiny blood vessels in the kidney that filter waste and extra fluid from the blood and send them to the bladder as urine. Signs and symptoms of nephrotic syndrome include higher-than-normal amounts of protein in the urine and fat and cholesterol in the blood. Swelling, especially in the legs, feet, or ankles, may occur. Nephrotic syndrome may be caused by certain diseases that affect only the kidneys or by infection, immune system disorders (such as lupus), certain genetic disorders, and other diseases or conditions, such as cancer, diabetes, and amyloidosis. It may also be caused by taking certain medicines. Nephrotic syndrome can occur in both children and adults.

### **nephrotomogram**

A series of x-rays of the kidneys. The x-rays are taken from different angles and show the kidneys clearly, without the shadows of the organs around them.

### **nephrotoxic**

Poisonous or damaging to the kidney.

### **nephroureterectomy**

Surgery to remove a kidney and its ureter. Also called ureteronephrectomy.

### **neratinib maleate**

A drug used alone or with capecitabine to treat adults with certain types of HER2-positive breast cancer that have already been treated. It is also being studied in the treatment of other types of cancer. Neratinib maleate blocks certain proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Nerlynx.

### **nerve**

A bundle of fibers that receives and sends messages between the body and the brain. The messages are sent by chemical and electrical changes in the cells

that make up the nerves.

### **nerve block**

A procedure in which medicine is injected directly into or around a nerve or into the spine to block pain.

### **nerve cell**

A type of cell that receives and sends messages from the body to the brain and back to the body. The messages are sent by a weak electrical current. Also called neuron.

### **nerve grafting**

Replacing a damaged nerve with a section of a healthy nerve that has been removed from another part of the body. This procedure is being studied in the prevention of erectile dysfunction in men having surgery for prostate cancer.

### **nerve growth factor**

A protein made by the body that causes certain nerve cells to grow and helps keep them alive.

### **nerve sheath**

The tissue that covers and protects the nerves that are outside the brain and spinal cord. The nerve sheath is made up of connective tissue and myelin (a substance that contains protein and fat).

### **nerve-sparing surgery**

A type of surgery that attempts to save the nerves near the tissues being removed.

### **nervous system**

The organized network of nerve tissue in the body. It includes the central nervous system (the brain and spinal cord), the peripheral nervous system (nerves that extend from the spinal cord to the rest of the body), and other nerve tissue.

### **netupitant and palonosetron hydrochloride**

A combination of two drugs used with dexamethasone in adults to prevent nausea and vomiting caused by chemotherapy. Netupitant and palonosetron hydrochloride blocks the action of certain chemicals in the central nervous system that may trigger nausea and vomiting. Blocking these chemicals may help lessen nausea and vomiting. Netupitant and palonosetron hydrochloride is a type of antiemetic. Also called Akynzeo.

### **neural**

Having to do with nerves or the nervous system, including the brain and the spinal cord.

### **neuro-oncologist**

A doctor who has special training in diagnosing and treating brain tumors and other tumors of the nervous system.

### **neurobehavioral**

Having to do with the way the brain affects emotion, behavior, and learning. Some cancers or their treatment may cause neurobehavioral problems.



**neuroblastoma**

A type of cancer that forms from immature nerve cells. It usually begins in the adrenal glands but may also begin in the abdomen, chest, or in nerve tissue near the spine. Neuroblastoma most often occurs in children younger than 5 years of age. It is thought to begin before birth. It is usually found when the tumor begins to grow and cause signs or symptoms.

**neurocognitive**

Having to do with the ability to think and reason. This includes the ability to concentrate, remember things, process information, learn, speak, and understand.

**neurodegenerative disorder**

A type of disease in which cells of the central nervous system stop working or die. Neurodegenerative disorders usually get worse over time and have no cure. They may be genetic or be caused by a tumor or stroke. Neurodegenerative disorders also occur in people who drink large amounts of alcohol or are exposed to certain viruses or toxins. Examples of neurodegenerative disorders include Alzheimer's disease and Parkinson's disease.

**neuroectodermal tumor**

A tumor of the central or peripheral nervous system.

**neuroendocrine**

Having to do with the interactions between the nervous system and the endocrine system. Neuroendocrine describes certain cells that release hormones into the blood in response to stimulation of the nervous system.

**neuroendocrine carcinoma of the skin**

A rare type of cancer that forms on or just beneath the skin, usually in parts of the body that have been exposed to the sun. It is most common in older people and in people with weakened immune systems. Also called Merkel cell cancer, Merkel cell carcinoma, and trabecular cancer.

**neuroendocrine tumor**

A tumor that forms from cells that release hormones into the blood in response to a signal from the nervous system. Neuroendocrine tumors may make higher-than-normal amounts of hormones, which can cause many different symptoms. These tumors may be benign (not cancer) or malignant (cancer). Some examples of neuroendocrine tumors are carcinoid tumors, islet cell tumors, medullary thyroid cancer, pheochromocytomas, neuroendocrine carcinoma of the skin (Merkel cell cancer), small cell lung cancer, and large cell neuroendocrine carcinoma (a rare type of lung cancer).

**neuroepithelial**

Having to do with tissue made up of sensory cells, such as tissue found in the ear, nose, and tongue.

**neurofeedback**

A treatment being studied to improve brain function in certain brain disorders and in patients treated with chemotherapy for breast cancer. Sensors are placed on a person's head, which allows brain activity to be shown as patterns on a computer screen. A beep or a tone may be used as a reward to a person for changing certain brain activities. Neurofeedback may help cancer patients deal with the stress and mental side effects of chemotherapy. Also called EEG biofeedback.

**neurofibroma**

A benign tumor that develops from the cells and tissues that cover nerves.

**neurofibromatosis type 1**

A rare genetic condition that causes brown spots and tumors on the skin, freckling in skin areas not exposed to the sun, tumors on the nerves, and developmental changes in the nervous system, muscles, bone, and skin. Also called NF1.

**neurofibromatosis type 1-like syndrome**

A rare genetic condition marked by flat brown spots on the skin. The number of brown spots on the skin tends to increase throughout childhood. Other signs and symptoms include an abnormally large head, unusual facial features, and freckling in the armpits and groin. People with this syndrome may have mild learning and developmental delays. Neurofibromatosis type 1-like syndrome is a type of disease called a RASopathy that is caused by mutations (changes) in the SPRED1 gene. This gene makes a protein involved in a cell signaling pathway that controls many important cell functions. Also called Legius syndrome.

**neurofibromatosis type 2**

A genetic condition in which tumors form on the nerves of the inner ear and cause loss of hearing and balance. Tumors may also occur in the brain and on nerves in the skull and spinal cord, and may cause loss of speech, eye movement, and the ability to swallow. Also called acoustic neurofibromatosis and NF2.

**neuroglia**

Any of the cells that hold nerve cells in place and help them work the way they should. The types of neuroglia include oligodendrocytes, astrocytes, microglia, and ependymal cells. Also called glial cell.

**neuroleptic agent**

A type of drug used to treat symptoms of psychosis. These include hallucinations (sights, sounds, smells, tastes, or touches that a person believes to be real but are not real), delusions (false beliefs), and dementia (loss of the ability to think, remember, learn, make decisions, and solve problems). Most neuroleptic agents block the action of certain chemicals in the nervous system. Also called antipsychotic and antipsychotic agent.

**neuroleptic malignant syndrome**

A life-threatening condition that may be caused by certain drugs used to treat mental illness, nausea, or vomiting. Symptoms include high fever, sweating, unstable blood pressure, confusion, and stiffness. Also called NMS.

**neurologic**

Having to do with nerves or the nervous system.

**neurological exam**

A series of questions and tests to check brain, spinal cord, and nerve function. The exam checks a person's mental status, coordination, ability to walk, and how well the muscles, sensory systems, and deep tendon reflexes work.

**neurologist**

A doctor who has special training in diagnosing and treating disorders of the nervous system.

**neuroma**

A tumor that arises in nerve cells.

**neuromuscular electrical stimulation**

A procedure in which small electric impulses are used to stimulate muscles that are weak or paralyzed. It helps to increase muscle strength, blood circulation, and range of motion and to lessen muscle spasms. Also called NES, NMES, and therapeutic (subthreshold) electrical stimulation.

**neuromyotonia**

A rare nerve disorder that causes constant muscle activity that cannot be controlled, even during sleep. It often affects the muscles in the arms and legs, but may affect the whole body. Symptoms include muscle twitching, weakness, stiffness, and cramping; increased skin temperature, sweating, and heart rate; and problems with chewing, swallowing, speech, and breathing. The disorder often gets worse over time. Neuromyotonia usually occurs in people aged 15 to 60 years. It may occur with certain types of cancer and is sometimes inherited. Also called Isaac syndrome.

**neuron**

A type of cell that receives and sends messages from the body to the brain and back to the body. The messages are sent by a weak electrical current. Also called nerve cell.

**neuronal tumor**

One of a group of rare tumors that begin in nerve cells of the brain or spinal cord. There are many different types of neuronal tumors, and they can occur in different parts of the brain or spinal cord. Most neuronal tumors are not cancer and tend to grow slowly. However, they can grow and press on nearby brain tissue, which can cause seizures, a buildup of fluid and increased pressure in the brain, and other problems. Neuronal tumors can occur at any age but are more common in children and young adults.

**neuropathologist**

A pathologist who has special training in diseases of the nervous system. A pathologist identifies disease by studying cells and tissues under a microscope.

**neuropathy**

A nerve problem that causes pain, numbness, tingling, swelling, or muscle weakness in different parts of the body. It usually begins in the hands or feet and gets worse over time. Neuropathy may be caused by cancer or cancer treatment, such as chemotherapy. It may also be caused by physical injury, infection, toxic substances, or conditions such as diabetes, kidney failure, or malnutrition. Also called peripheral neuropathy.

**neuropeptide**

A member of a class of protein-like molecules made in the brain. Neuropeptides consist of short chains of amino acids, with some functioning as neurotransmitters and some functioning as hormones.

**neuropsychologist**

A psychologist who diagnoses and treats behavioral and other problems related to the way the brain works. These may include problems with social interactions, ability to control emotions and behaviors, and cognitive abilities (thinking,

learning, remembering, and problem solving). These problems may be caused by brain disease, injury, or medical treatment, such as cancer treatment.

### **neuropsychology**

The study of how the brain and central nervous system are related to behavior.

### **neuroradiologist**

A doctor trained in radiology who specializes in creating and interpreting pictures of the nervous system. The pictures are produced using forms of radiation, such as x-rays, sound waves, or other types of energy.

### **neurosphere**

A small cluster of nerve stem cells that is grown in the laboratory. Neurospheres can be grown that are similar to normal human nerve tissue or to a specific type of tumor. They can be used to study how nerve tissue forms and how certain nervous system diseases, such as Parkinson disease or brain tumors, develop. Neurospheres may also be used to test new treatments before they are given to people.

### **neurosurgeon**

A doctor who has special training in surgery on the brain, spine, and other parts of the nervous system.

### **neurotoxicity**

The tendency of some treatments to cause damage to the nervous system.

### **neurotoxin**

A substance that is poisonous to nerve tissue.

### **neurotransmitter**

A chemical that is made by nerve cells and used to communicate with other cells, including other nerve cells and muscle cells.

### **neurotrophic tyrosine receptor kinase gene fusion**

A mutation (change) that occurs when a piece of the chromosome containing a gene called NTRK breaks off and joins with a gene on another chromosome. Neurotrophic tyrosine receptor kinase gene fusions lead to abnormal proteins called TRK fusion proteins, which may cause cancer cells to grow. Neurotrophic tyrosine receptor kinase gene fusions may be found in some types of cancer, including cancers of the brain, head and neck, thyroid, soft tissue, lung, and colon. Also called NTRK gene fusion.

### **neurotropism**

An ability to invade and live in neural tissue. This term is usually used to describe the ability of viruses to infect nerve tissue.

### **neutropenia**

A condition in which there is a lower-than-normal number of neutrophils (a type of white blood cell) in the blood.

### **neutrophil**

A type of white blood cell that is an important part of the immune system and helps the body fight infection. When microorganisms, such as bacteria or viruses, enter the body, neutrophils are one of the first immune cells to respond. They travel to the site of infection, where they destroy the microorganisms by

ingesting them and releasing enzymes that kill them. Neutrophils also boost the response of other immune cells. A neutrophil is a type of granulocyte and a type of phagocyte.

### **nevoid basal cell carcinoma syndrome**

A rare, inherited disorder that affects many organs and tissues in the body. People with this disorder have a very high risk of developing basal cell skin cancer during adolescence or early adulthood. They are also at risk of developing medulloblastoma (a type of brain cancer) and other types of cancer. Nevoid basal cell carcinoma syndrome may also cause benign (not cancer) tumors in the jaw, heart, or ovaries. Other signs and symptoms include a large head and unusual facial features; small pits in the skin on the hands and feet; abnormalities of the spine, ribs, or skull; eye problems; and developmental problems. Nevoid basal cell carcinoma syndrome is caused by a mutation (change) in the PTCH1 gene. Also called basal cell nevus syndrome, BCNS, Gorlin syndrome, and NBCCS.

### **nevus**

A benign (not cancer) growth on the skin that is formed by a cluster of melanocytes (cells that make a substance called melanin, which gives color to skin and eyes). A nevus is usually dark and may be raised from the skin. Also called mole.

### **nevus of Ota**

A condition marked by brown, blue, or gray patches, usually on the inside of the eye and on the skin near or around the eye. It may also affect the eyelid and mouth. It is caused by an increase in the number of cells called melanocytes in skin and eye tissue. Melanocytes make a substance called melanin, which gives color to skin and eyes. Having nevus of Ota may increase the risk of glaucoma and a type of eye cancer called intraocular melanoma. Also called oculodermal melanocytosis.

### **new mutation**

A term used to describe a change in the DNA sequence of a gene that is seen for the first time in a person and has not appeared in previous generations. A new mutation can explain how a person can have a genetic condition that did not occur in his or her parents. A new mutation can occur in an egg or sperm cell of a parent, in the fertilized egg soon after the egg and sperm unite, or in another type of cell during embryo development. A person who has a new mutation may pass the mutation to his or her child. Some new mutations may lead to cancer or other diseases. Also called de novo mutation, de novo variant, and new variant.

### **new variant**

A term used to describe a change in the DNA sequence of a gene that is seen for the first time in a person and has not appeared in previous generations. A new variant can explain how a person can have a genetic condition that did not occur in his or her parents. A new variant can occur in an egg or sperm cell of a parent, in the fertilized egg soon after the egg and sperm unite, or in another type of cell during embryo development. A person who has a new variant may pass the mutation to his or her child. Some new variants may lead to cancer or other diseases. Also called de novo mutation, de novo variant, and new mutation.

### **next-generation sequencing**

A term that describes methods used in the lab to learn the order of building blocks (called nucleotides) for millions of DNA or RNA fragments at the same

time. Computers are used to piece together the fragments in order to sequence a person or other organism's entire DNA, large segments of DNA or RNA, or the DNA in specific types of cells from a sample of tissue. Next-generation sequencing can also identify changes in certain areas of the genome or in specific genes. There are many different types of next-generation sequencing methods, including whole-genome sequencing, whole-exome sequencing, multigene panel testing, and transcriptome sequencing. Next-generation sequencing may help researchers understand the cause of certain diseases, such as cancer. Also called massively parallel sequencing and NGS.

### **niacin**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Niacin helps some enzymes work properly and helps skin, nerves, and the digestive tract stay healthy. Niacin is found in many plant and animal products. It is water-soluble (can dissolve in water) and must be taken in every day. Not enough niacin can cause a disease called pellagra (a condition marked by skin, nerve, and digestive disorders). A form of niacin is being studied in the prevention of skin and other types of cancer. Niacin may help to lower blood cholesterol. Also called nicotinic acid and vitamin B3.

### **niacinamide**

A form of niacin (vitamin B3) that the body needs in small amounts to function and stay healthy. Niacinamide is found in many plant and animal products and in dietary supplements. It is water-soluble (can dissolve in water) and must be taken in every day. Niacinamide may be used to treat diabetes and certain skin conditions and is being studied in the treatment of some types of cancer. It may increase blood flow to cancer cells and block certain enzymes they need to repair damage to their DNA. This may make cancer cells easier to kill with radiation therapy and chemotherapy. Niacinamide is a type of radiosensitizing agent and a type of chemosensitizing agent. Also called nicotinamide.

### **nicotinamide**

A form of niacin (vitamin B3) that the body needs in small amounts to function and stay healthy. Nicotinamide is found in many plant and animal products and in dietary supplements. It is water-soluble (can dissolve in water) and must be taken in every day. Nicotinamide may be used to treat diabetes and certain skin conditions and is being studied in the treatment of some types of cancer. It may increase blood flow to cancer cells and block certain enzymes they need to repair damage to their DNA. This may make cancer cells easier to kill with radiation therapy and chemotherapy. Nicotinamide is a type of radiosensitizing agent and a type of chemosensitizing agent. Also called niacinamide.

### **nicotine**

An addictive, poisonous chemical found in tobacco. It can also be made in the laboratory. When it enters the body, nicotine causes an increased heart rate and use of oxygen by the heart, and a sense of well-being and relaxation. It is also used as an insecticide.

### **nicotine gum**

A chewing gum that contains a small dose of nicotine, which enters the blood by being absorbed through the lining of the mouth. This helps stop nicotine cravings and relieves symptoms that occur when a person is trying to quit smoking. A prescription is not needed for nicotine gum.



### **nicotine inhaler**

A device used to inhale (breathe in) small doses of nicotine through the mouth. The nicotine is absorbed through the lining of the mouth and lungs and goes into the blood. This helps stop nicotine cravings and relieves symptoms that occur when a person is trying to quit smoking. A prescription is needed for nicotine inhalers.

### **nicotine lozenge**

A hard candy-like tablet that contains a small dose of nicotine. The nicotine is absorbed through the lining of the mouth and goes into the blood. This helps stop nicotine cravings and relieves symptoms that occur when a person is trying to quit smoking. A prescription is not needed for nicotine lozenges.

### **nicotine nasal spray**

A nose spray that contains a small dose of nicotine, which enters the blood by being absorbed through the lining of the nose. This helps stop nicotine cravings and relieves symptoms that occur when a person is trying to quit smoking. A prescription is needed for nicotine nasal spray.

### **nicotine patch**

A patch that sticks on the skin and contains a small dose of nicotine, which enters the blood by being absorbed through the skin. This helps stop nicotine cravings and relieves symptoms that occur when a person is trying to quit smoking. Nicotine patches are available with and without a prescription.

### **nicotine replacement therapy**

A type of treatment that uses special products to give small, steady doses of nicotine to help stop cravings and relieve symptoms that occur when a person is trying to quit smoking. These products include nicotine gum, nicotine inhaler, nicotine nasal spray, nicotine lozenges, and nicotine patch, and some are available without a prescription. They do not contain any of the other chemicals found in tobacco products.

### **nicotine vaccine**

A substance being studied to see if it can help people quit smoking or keep them from starting again. It may stimulate the body's immune system to make antibodies against nicotine. These antibodies may help keep nicotine from reaching the brain, which can help reduce a person's craving for nicotine.

### **nicotinic acid**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Nicotinic acid helps some enzymes work properly and helps skin, nerves, and the digestive tract stay healthy. Nicotinic acid is found in many plant and animal products. It is water-soluble (can dissolve in water) and must be taken in every day. Not enough nicotinic acid can cause a disease called pellagra (a condition marked by skin, nerve, and digestive disorders). A form of nicotinic acid is being studied in the prevention of skin and other types of cancer. Nicotinic acid may help to lower blood cholesterol. Also called niacin and vitamin B3.

### **night sweats**

Episodes of excessive sweating that occur during sleep. Night sweats can be severe and soak a person's bedclothes and bed sheets, which may cause the person to wake up. Night sweats are a common symptom of menopause. They may also be caused by illness or medical conditions, such as infection, cancer,

low blood sugar, hormone disorders, and neurologic conditions. They may also be a side effect of certain medicines, cancer treatment, too much caffeine or alcohol, or tobacco or drug use.

### **nilotinib**

A drug used to treat certain types of chronic myelogenous leukemia that are Philadelphia chromosome positive. It is also being studied in the treatment of other types of cancer. Nilotinib blocks BCR::ABL and other proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Tasigna.

### **nilutamide**

A drug used to treat prostate cancer that has spread to other parts of the body. It is used in patients who have had surgery to remove the testicles (orchiectomy). Nilutamide binds to proteins called androgen receptors, which are found in some prostate cancer cells. These proteins bind to androgens (male hormones) and may cause cancer cells to grow. Nilutamide blocks these proteins and may keep cancer cells from growing. It is a type of antiandrogen. Also called Nilandron.

### **nimodipine**

Belongs to a family of drugs called calcium channel blockers. It is being investigated for use with anticancer drugs to prevent or overcome drug resistance and improve response to chemotherapy.

### **nimotuzumab**

A substance being studied in the treatment of some types of cancer. Nimotuzumab binds to a protein called epidermal growth factor receptor (EGFR), which is found on some normal cells and some types of cancer cells. Blocking this protein may help keep cancer cells from growing. Nimotuzumab is a type of monoclonal antibody. Also called Theraloc.

### **nimustine**

A substance that has been studied in the treatment of some types of cancer. Nimustine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea.

### **nipple**

In anatomy, the small raised area in the center of the breast through which milk can flow to the outside.

### **nipple discharge**

Fluid that is not milk coming from the nipple.

### **niraparib tosylate monohydrate**

A drug used to treat adults with certain types of ovarian epithelial, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Niraparib tosylate monohydrate blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Niraparib tosylate monohydrate is a type of PARP inhibitor. Also called Zejula.

### **niraparib tosylate monohydrate and abiraterone acetate**

A combination of two drugs used with prednisone to treat adults with prostate cancer that has spread to other parts of the body and is castration resistant (has

not responded to treatments that lower testosterone levels). It is used in patients who have a certain type of abnormal BRCA gene. Niraparib tosylate monohydrate blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Abiraterone acetate lowers the amount of androgens (male hormones), such as testosterone, made by the body. This may stop the growth of cancer cells that need androgens to grow. The combination of niraparib tosylate monohydrate and abiraterone acetate may work better than either drug alone. Niraparib tosylate monohydrate and abiraterone acetate is a type of PARP inhibitor and a type of antiandrogen. Also called Akeega.

### **nirogacestat hydrobromide**

A drug used to treat adults with desmoid tumors (a type of soft tissue tumor) that have gotten worse and need systemic therapy. It is also being studied in the treatment of other types of cancer. Nirogacestat hydrobromide binds to a protein called gamma secretase, which blocks the activation of other proteins called Notch receptors. Blocking these proteins may help keep tumor cells from growing and may kill them. Nirogacestat hydrobromide is a type of gamma secretase inhibitor. Also called Ogsiveo.

### **nitric acid**

A toxic, corrosive, colorless liquid used to make fertilizers, dyes, explosives, and other chemicals.

### **nitric oxide-releasing acetylsalicylic acid derivative**

A substance being studied in the prevention of colorectal cancer. It is a form of aspirin that gives off nitric oxide gas and is less irritating to the lining of the stomach than plain aspirin. It is a type of nonsteroidal anti-inflammatory drug (NSAID). Also called NCX 4016.

### **nitroarginine**

A form of the amino acid arginine. An amino acid is a protein building block. Nitroarginine is being studied in the treatment of cancer and other conditions. In cancer, it may stop the growth of tumor cells by blocking certain proteins needed for tumor cells to grow and by blocking blood flow to the tumor. It is a type of nitric oxide synthase inhibitor and an antiangiogenesis agent. Also called NG-nitro-L-arginine.

### **nitrocamptothecin**

An alkaloid drug belonging to a class of anticancer agents called topoisomerase inhibitors.

### **nitroglycerin**

In medicine, a substance used as a drug to treat certain heart conditions and to widen the openings in blood vessels. Nitroglycerin is being studied as a way to help chemotherapy work better by making tumor cells more sensitive to the drugs. It is a type of vasodilator.

### **nitrosamine**

A type of chemical found in tobacco products and tobacco smoke. Nitrosamines are also found in many foods, including fish, beer, fried foods, and meats. Some nitrosamines cause cancer in laboratory animals and may increase the risk of certain types of cancer in humans.

### **nitrosourea**

An anticancer drug that can cross the blood-brain barrier. Carmustine and lomustine are nitrosoureas.

### **nivolumab**

A drug that binds to the protein PD-1 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that express the protein PD-L1 or that have certain mutations (changes) in genes involved in DNA repair. Nivolumab is used alone or with other drugs to treat certain types of classic Hodgkin lymphoma, colorectal cancer, esophageal cancer, gastroesophageal junction cancer, head and neck squamous cell carcinoma, hepatocellular carcinoma (a type of liver cancer), malignant pleural mesothelioma, melanoma, non-small cell lung cancer, renal cell carcinoma (a type of kidney cancer), stomach cancer, and urothelial carcinoma (a type of bladder or urinary tract cancer). It is also being studied in the treatment of other types of cancer. Nivolumab may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Opdivo.

### **nivolumab and relatlimab**

A combination of two drugs used to treat adults and children aged 12 years or older with melanoma that has spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Nivolumab and relatlimab binds to the proteins PD-1 and LAG-3, which are found on T cells (a type of immune cell). Blocking these proteins may help the immune system kill cancer cells. The combination of nivolumab and relatlimab may work better than either drug alone. Nivolumab and relatlimab is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Opdualag.

### **nocebo**

A harmless substance or treatment that may cause harmful side effects or worsening of symptoms because the patient thinks or believes they may occur or expects them to occur. For example, in a clinical trial, patients who are not given an active treatment but are told what side effects the active treatment may cause may have the same side effects as the patients who are given the active treatment just because they expect them to occur.

### **nocebo effect**

A situation in which a patient develops side effects or symptoms that can occur with a drug or other therapy just because the patient believes they may occur. For example, in a clinical trial, patients who are not given an active treatment, but are told what side effects the active treatment may cause, may have the same side effects as the patients who are given the active treatment, only because they expect them to occur.

### **node-negative**

Cancer that has not spread to the lymph nodes.

### **node-positive**

Cancer that has spread to the lymph nodes.

### **nodular lymphocyte-predominant Hodgkin lymphoma**

A rare type of Hodgkin lymphoma (a cancer of the immune system). It is marked by the presence of lymphocyte-predominant cells, which used to be called popcorn cells. These cells are different from the typical Reed-Sternberg cells

found in classic Hodgkin lymphoma. Nodular lymphocyte-predominant Hodgkin lymphoma may change into diffuse large B-cell lymphoma. Also called LPHL, lymphocyte-predominant Hodgkin lymphoma, and NLPHL.

### **nodular parenchyma**

A small mass of tissue within a gland or organ that carries out the specialized functions of the gland or organ.

### **nodule**

A growth or lump that may be malignant (cancer) or benign (not cancer).

### **nogapendekin alfa inbakicept**

A drug used with bacillus Calmette-Guérin (BCG) to treat adults with bladder cancer that has not invaded the muscle layers of the bladder and with carcinoma in situ. Patients may or may not have a papillary tumor (a tumor that looks like long, thin “finger-like” growths). Nogapendekin alfa inbakicept is used in patients whose cancer has not gotten better after treatment with BCG. It is given with BCG as a solution through a catheter (thin tube) that is placed into the bladder. It is also being studied in the treatment of other types of cancer. Nogapendekin alfa inbakicept binds to receptors for the protein interleukin-15 (IL-15), which is found on certain types of immune cells. This may help the immune cells kill cancer cells better than BCG alone. Nogapendekin alfa inbakicept is a type of IL-15 receptor agonist and a type of immunotherapy. Also called Anktiva.

### **notatrexed**

A substance that is being studied in the treatment of liver cancer. It belongs to the family of drugs called thymidylate synthase inhibitors. Also called AG337 and Thymitaq.

### **nomogram**

A mathematical device or model that shows relationships between things. For example, a nomogram of height and weight measurements can be used to find the surface area of a person, without doing the math, to determine the right dose of chemotherapy. Nomograms of patient and disease characteristics can help predict the outcome of some kinds of cancer.

### **non-AIDS-defining cancer**

A type of cancer that is more likely to occur in people who are infected with human immunodeficiency virus (HIV) than in people who are not infected. Non-AIDS-defining cancers include Hodgkin lymphoma and cancers of the mouth, throat, liver, lung, and anus. In addition to HIV infection, other factors, such as older age, infection with other viruses (such as HPV or hepatitis B or C virus), and heavy alcohol or tobacco use, may increase the risk of developing a non-AIDS-defining cancer. Also called NADC.

### **non-Hodgkin lymphoma**

Any of a large group of cancers of lymphocytes (white blood cells). Non-Hodgkin lymphomas can occur at any age and are often marked by lymph nodes that are larger than normal, fever, and weight loss. There are many different types of non-Hodgkin lymphoma. These types can be divided into aggressive (fast-growing) and indolent (slow-growing) types, and they can be formed from either B-cells or T-cells. B-cell non-Hodgkin lymphomas include Burkitt lymphoma, chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL), diffuse large B-cell lymphoma, follicular lymphoma, immunoblastic large cell lymphoma, precursor B-lymphoblastic lymphoma, and mantle cell lymphoma. T-cell non-

Hodgkin lymphomas include mycosis fungoides, anaplastic large cell lymphoma, and precursor T-lymphoblastic lymphoma. Lymphomas that occur after bone marrow or stem cell transplantation are usually B-cell non-Hodgkin lymphomas. Prognosis and treatment depend on the stage and type of disease. Also called NHL.

### **non-REM sleep**

The phase of sleep that is considered the quiet or restful phase. During the three stages of non-REM sleep, a person falls asleep and then moves from a light sleep into a deep sleep. This is when a person's brain activity, breathing, and heart rate slow down, body temperature drops, muscles relax, and eye movements stop. Non-REM sleep plays an important role in helping the body repair tissues, build bone and muscle, and strengthen its immune system. During normal sleep, a person goes through four to five sleep cycles that last about 90 minutes each and include both non-REM sleep and REM sleep. Also called non-rapid eye movement sleep and NREM sleep.

### **non-atrophic gastritis**

A condition marked by inflammation of the inner lining of the stomach. It is usually caused by an infection with the bacterium *H. pylori* that continues or worsens over a long period of time. Non-atrophic gastritis can lead to atrophic gastritis (thinning of the lining of the stomach caused by long-term inflammation) and certain types of stomach cancer.

### **non-cardia gastric cancer**

A type of stomach cancer that begins in the mucous-producing cells in the inner lining of the main part of the stomach. This includes the fundus, body, antrum, and pylorus. Risk factors associated with non-cardia gastric cancer include chronic infection with the bacterium *H. pylori*, smoking tobacco, and consuming too much salt in the diet. Most non-cardia gastric cancers are adenocarcinomas.

### **non-endometrioid cancer**

A term used to describe certain types of cancer that form in the non-glandular tissues of the endometrium (the lining of the uterus) or ovary. Examples of non-endometrioid cancer of the endometrium or ovary include serous, clear cell, mixed, and mucinous carcinomas. Non-endometrioid cancers tend to grow and spread quickly and have a poor prognosis (chance of recovery).

### **non-inferiority trial**

A study that tests whether a new treatment is not worse than an active treatment it is being compared to. Non-inferiority trials are sometimes done when a placebo (an inactive treatment) cannot be used. These trials may show that a new treatment (such as a drug) is not worse than the active treatment being compared, and it may be safer and easier to take or cause fewer side effects.

### **non-ionizing radiation**

A type of low-energy radiation that does not have enough energy to remove an electron (negative particle) from an atom or molecule. Non-ionizing radiation includes visible, infrared, and ultraviolet light; microwaves; radio waves; and radiofrequency energy from cell phones. Most types of non-ionizing radiation have not been found to cause cancer.

### **non-myeloablative transplant**

A type of donor stem cell transplant in which a patient receives lower doses of chemotherapy and/or radiation therapy than in a standard transplant. The lower



doses of anticancer therapy do not kill all of the blood-forming stem cells or all of the cancer cells in the patient's bone marrow. However, the anticancer therapy is still strong enough to suppress the patient's immune system and prevent rejection of the donor stem cells. The patient's stem cells and those from the donor both live in the patient's body for a time after a non-myeloablative transplant. Once the cells from the donor begin to grow and divide in the bone marrow, they replace the patient's own bone marrow cells and destroy the remaining cancer cells. A non-myeloablative transplant may be an option for certain people who are older or who are not healthy enough to receive a standard donor stem cell transplant with high-dose chemotherapy. Also called mini-transplant and reduced-intensity transplant.

### **non-rapid eye movement sleep**

The phase of sleep that is considered the quiet or restful phase. During the three stages of non-rapid eye movement sleep, a person falls asleep and then moves from a light sleep into a deep sleep. This is when a person's brain activity, breathing, and heart rate slow down, body temperature drops, muscles relax, and eye movements stop. Non-rapid eye movement sleep plays an important role in helping the body repair tissues, build bone and muscle, and strengthen its immune system. During normal sleep, a person goes through four to five sleep cycles that last about 90 minutes each and include both non-rapid eye movement sleep and REM sleep. Also called non-REM sleep and NREM sleep.

### **non-serous epithelial ovarian cancer**

A term that describes certain types of ovarian cancers that form in the tissue covering the ovary. The main types of non-serous epithelial ovarian cancer are clear cell carcinoma, endometrioid carcinoma, and mucinous carcinoma. Each type differs as to how the cancer cells look under a microscope, the tumor markers present, how quickly the cancer cells are likely to grow and spread, and their likely response to treatment. Non-serous epithelial ovarian cancers are much less common than serous epithelial ovarian cancer.

### **non-small cell lung cancer**

A group of lung cancers named for the kinds of cells found in the cancer and how the cells look under a microscope. The three main types of non-small cell lung cancer are adenocarcinoma (most common), squamous cell carcinoma, and large cell carcinoma. Non-small cell lung cancer is the most common of the two main types of lung cancer (non-small cell lung cancer and small cell lung cancer).

### **nonalcoholic fatty liver disease**

A common condition in which fat builds up in the liver of people who drink little or no alcohol. There are two types of nonalcoholic fatty liver disease, simple or nonalcoholic fatty liver (NAFL) and nonalcoholic steatohepatitis (NASH). NAFL causes little or no inflammation or damage in the liver and usually does not cause serious liver problems. NASH is the more serious type of nonalcoholic fatty liver disease. It can cause liver inflammation and damage to the cells in the liver. This may lead to cirrhosis (scarring of the liver), liver failure, or liver cancer. Nonalcoholic fatty liver disease usually affects middle-aged and older adults but is becoming more common in children and teens. It is especially common in people who are overweight or who have obesity, diabetes, or high levels of cholesterol and triglycerides (a type of fat) in the blood. Also called NAFLD.

**nonalcoholic steatohepatitis**

A type of liver disease in which fat builds up in the liver of people who drink little or no alcohol. This causes inflammation of the liver and damage to the cells in the liver, which may lead to cirrhosis (scarring of the liver) and liver failure. People with nonalcoholic steatohepatitis are at increased risk of developing liver cancer. It is more common in middle-aged adults, especially in those who are overweight or obese or who have diabetes or high levels of cholesterol and triglycerides (a type of fat) in the blood. Also called NASH.

**nonavalent vaccine**

A vaccine that works by stimulating an immune response against nine different antigens, such as nine different viruses or other microorganisms. For example, Gardasil 9 is a nonavalent vaccine that helps protect the body against infection with nine different types of human papillomaviruses (HPV).

**nonblinded**

Describes a clinical trial or other experiment in which the researchers know what treatments are being given to each study subject or experimental group. If human subjects are involved, they know what treatments they are receiving.

**noncarrier**

In genetics, a person who does not have a mutated (changed) disease-causing gene that has been previously identified in his or her family.

**nonconsecutive case series**

A clinical study that includes some, but not all, of the eligible patients identified by the researchers during the study registration period. This type of study does not usually have a control group.

**noncontiguous lymphoma**

Lymphoma in which the lymph nodes containing cancer are not next to each other, but are on the same side of the diaphragm (the thin muscle below the lungs that helps breathing and separates the chest from the abdomen).

**nonfunctioning tumor**

A tumor that is found in endocrine tissue but does not make extra hormones. Nonfunctioning tumors usually do not cause symptoms until they grow large or spread to other parts of the body. Also called endocrine-inactive tumor.

**nongerminoma**

A type of tumor that begins in germ cells (cells that form sperm or eggs). Nongerminomas can occur in the ovaries or testicles or other parts of the body, but they occur most often in the central nervous system (brain and spinal cord). This happens when a germ cell travels to the brain during fetal development and later becomes a germ cell tumor. There are several types of nongerminoma tumors, including embryonal carcinoma, yolk sac tumor, choriocarcinoma, teratoma, and mixed germ cell tumor. Most nongerminomas make hormones, such as alpha-fetoprotein (AFP) and beta-human chorionic gonadotropin (beta-hCG). Nongerminomas are usually malignant (cancer) and tend to grow and spread quickly. They usually occur in children.

**nonhematologic cancer**

Cancer that does not begin in the blood or bone marrow.

**nonheritable**

In medicine, describes a characteristic or trait that cannot be passed from a parent to a child through the genes. Nonheritable forms of cancer may occur when there is a mutation (change) in the DNA in any of the cells of the body, except the germ cells (sperm and egg). People who have a nonheritable form of cancer do not have a family history of that cancer or an inherited change in their DNA that would increase their risk for that cancer.

**noni**

*Morinda citrifolia*. A tropical shrub. An extract from the fruit is being studied as a treatment for cancer, and extracts from the fruit, leaves, or roots have been used in some cultures to treat other diseases. Also called *Morinda citrifolia*.

**noninvasive**

In medicine, it describes a procedure that does not require inserting an instrument through the skin or into a body opening. In cancer, it describes disease that has not spread outside the tissue in which it began.

**noninvasive papillary carcinoma**

A condition in which abnormal cells are found in the tissue lining the inside of the bladder, renal pelvis, or ureter. Noninvasive papillary carcinoma may look like long, thin, finger-like growths under a microscope and can be low grade or high grade, depending on how abnormal the cells look. These abnormal cells may become cancer and spread into nearby normal tissue. Noninvasive papillary carcinoma is also called stage 0a bladder cancer or stage 0a transitional cell cancer of the renal pelvis and ureter.

**nonlytic**

In biology, refers to viruses that do not kill infected cells by disrupting their plasma membranes.

**nonmalignant**

Not cancer. Nonmalignant tumors may grow larger but do not spread to other parts of the body. Also called benign.

**nonmalignant hematologic disorder**

A disorder of the blood. Some nonmalignant hematologic disorders may lead to leukemia.

**nonmelanoma skin cancer**

Cancer that forms in the tissues of the epidermis (the outer layer of the skin). The two main types of nonmelanoma skin cancer are squamous cell carcinoma (SCC), which begins in thin, flat cells that form the top layer of the epidermis, and basal cell carcinoma (BCC), which begins in round cells that form the lower layer of the epidermis. SCC and BCC are the most common types of skin cancer. Nonmelanoma skin cancer can occur anywhere on the body, but it is most common in areas of the skin often exposed to sunlight, such as the face, ears, lower lip, neck, arms, and top of the hands. Also called keratinocyte carcinoma.

**nonmelanoma skin carcinoma in situ on the eyelid**

Abnormal cells are found in the epidermis, usually in the basal cell layer. These abnormal cells may become cancer and spread into nearby normal tissue. Also called stage 0 nonmelanoma skin carcinoma in situ on the eyelid.

**nonmelanoma skin carcinoma in situ on the head and neck (not on the eyelid)**

Abnormal cells are found in the squamous cell or basal cell layer of the epidermis. These abnormal cells may become cancer and spread into nearby normal tissue. Also called stage 0 nonmelanoma skin carcinoma in situ on the head and neck (not on the eyelid).

**nonmelanomatous**

Having to do with skin cancer that forms in the lower part of the epidermis (the outer layer of the skin) or in squamous cells, but not in melanocytes (skin cells that make pigment).

**nonmetastatic**

Cancer that has not spread from the primary site (place where it started) to other places in the body.

**nonopioid**

A drug that is not an opioid. Examples include acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen.

**nonpenetrance**

A term that describes when a person has a disease-causing mutation (change) in a gene but never develops the disease. For example, a woman may have a certain BRCA1 gene mutation that increases her risk of breast cancer, but because the gene mutation is nonpenetrant, she never develops breast cancer. However, she can still pass the BRCA1 gene mutation to her children, who may develop cancer.

**nonprescription**

Refers to a medicine that can be bought without a prescription (doctor's order). Examples include analgesics (pain relievers), such as aspirin and acetaminophen. Also called OTC and over-the-counter.

**nonrandomized clinical trial**

A clinical trial in which the participants are not assigned by chance to different treatment groups. Participants may choose which group they want to be in, or they may be assigned to the groups by the researchers.

**nonseminoma**

A type of cancer that begins in cells that form sperm or eggs. There are several types of nonseminoma tumors, including embryonal carcinoma, malignant teratoma, choriocarcinoma, and yolk sac tumor. These tumors are usually made up of more than one type of cancer cell. Although nonseminomas occur most often in the testicles or ovaries, they can occur in other tissues, such as the brain, chest, or abdomen. This happens when cells that have the ability to form sperm or eggs are found in other parts of the body.

**nonsense mutation**

A change in the DNA sequence of a gene that signals the cell to stop making the protein before it is complete. This results in a shorter protein that may not function. Also called nonsense variant.

**nonsense variant**

A change in the DNA sequence of a gene that signals the cell to stop making the protein before it is complete. This results in a shorter protein that may not function. Also called nonsense mutation.

**nonspecific immune cell**

A cell (such as a phagocyte or a macrophage) that responds to many antigens, not just one antigen.

**nonspecific immune stimulation**

A type of cancer therapy that works by stimulating the immune system in a general way rather than by targeting cancer cells specifically. It may also help the body fight infection and other diseases. Agents used for nonspecific immune stimulation include BCG, interferon alpha, and certain types of interleukin.

**nonspecific immunomodulating agent**

A substance that stimulates or suppresses the immune system in a general way. A nonspecific immunomodulating agent may stimulate the immune system to help the body fight cancer, infection, or other conditions. Or it may suppress the immune system to help treat autoimmune diseases, such as lupus, or to help keep a person from rejecting a bone marrow or organ transplant.

**nonstarchy vegetable**

A member of the family of vegetables that does not contain starch (sugar molecules joined chemically). Nonstarchy vegetables are usually lower in sugar and higher in fiber than starchy vegetables. Examples are broccoli, carrots, celery, peppers, tomatoes, and zucchini.

**nonsteroidal anti-inflammatory drug**

A drug that works in a different way than a steroid to reduce pain, redness, swelling, and fever in the body. Some nonsteroidal anti-inflammatory drugs may also help keep blood clots from forming. The side effects of nonsteroidal anti-inflammatory drugs include bleeding and stomach, kidney, and heart problems. Examples of nonsteroidal anti-inflammatory drugs are aspirin, ibuprofen, ketoprofen, celecoxib, diclofenac, and ketorolac. Nonsteroidal anti-inflammatory drugs may also help prevent some types of cancer. Also called NSAID.

**nonsteroidal aromatase inhibitor**

A drug that decreases the production of sex hormones (estrogen or testosterone) and slows the growth of tumors that need sex hormones to grow.

**nontoxic**

Not harmful or destructive.

**noradrenaline**

A chemical made by some nerve cells and in the adrenal gland. It can act as both a neurotransmitter (a chemical messenger used by nerve cells) and a hormone (a chemical that travels in the blood and controls the actions of other cells or organs). Noradrenaline is released from the adrenal gland in response to stress and low blood pressure. Also called norepinephrine.

**nordihydroguaiaretic acid**

A drug put on the skin to treat growths caused by sun exposure. A form of nordihydroguaiaretic acid that is taken by mouth is being studied in the treatment of prostate cancer. Nordihydroguaiaretic acid is an antioxidant, and it may block certain enzymes needed for tumor growth. Also called Actinex, masoprocol, and NDGA.

### **norepinephrine**

A chemical made by some nerve cells and in the adrenal gland. It can act as both a neurotransmitter (a chemical messenger used by nerve cells) and a hormone (a chemical that travels in the blood and controls the actions of other cells or organs). Norepinephrine is released from the adrenal gland in response to stress and low blood pressure. Also called noradrenaline.

### **normal Pap test result**

A Pap test finding that means no cancer cells or other abnormal cells have been found on the surface of or in the tissue that lines the cervix. Cell changes that suggest inflammation or infection may be included in this finding. Also called negative for intraepithelial lesion or malignancy, negative Pap test result, and NILM.

### **normal range**

In medicine, a set of values that a doctor uses to interpret a patient's test results. The normal range for a given test is based on the results that are seen in 95% of the healthy population. Sometimes patients whose test results are outside of the normal range may be healthy, and some patients whose test results are within the normal range may have a health problem. The normal range for a test may be different for different groups of people (for example, men and women). Also called reference interval, reference range, and reference values.

### **nortriptyline**

A drug used to treat depression. It may also be used to treat panic or anxiety disorders and certain types of pain, and to help people quit smoking. Nortriptyline increases the levels of norepinephrine and other natural chemicals in the brain. This helps improve mood and may reduce a person's craving for nicotine. It is a type of tricyclic antidepressant. Also called Aventyl and Pamelor.

### **notary public**

A person who has a license that gives them the legal power to witness the signing of documents, to certify that documents are real, and to take statements made under oath.

### **novobiocin**

An antibiotic drug used to treat infection.

### **nuclear factor (erythroid-derived 2)-like 2**

A protein that controls how certain genes are expressed. These genes help protect the cell from damage caused by free radicals (unstable molecules made during normal cell metabolism). Free radicals may play a part in cancer, heart disease, stroke, and other diseases of aging. Also called NFE2L2 and Nrf2.

### **nuclear factor-kappa B**

A group of proteins that help control many functions in a cell, including cell growth and survival. These proteins also control the body's immune and inflammatory responses. Nuclear factor-kappa B may be overactive or found in higher than normal amounts in some types of cancer cells. This may lead to cancer cell growth. High levels or overactivity of nuclear factor-kappa B may also lead to inflammatory disorders, such as asthma and ulcerative colitis, and autoimmune disorders, such as rheumatoid arthritis. Also called NF-kappa B and NF-kB.



### **nuclear grade**

An evaluation of the size and shape of the nucleus in tumor cells and the percentage of tumor cells that are in the process of dividing or growing. Cancers with low nuclear grade grow and spread less quickly than cancers with high nuclear grade.

### **nuclear magnetic resonance imaging**

A procedure that uses radio waves, a powerful magnet, and a computer to make a series of detailed pictures of areas inside the body. A contrast agent, such as gadolinium, may be injected into a vein to help the tissues and organs show up more clearly in the picture. Nuclear magnetic resonance imaging may be used to help diagnose disease, plan treatment, or find out how well treatment is working. It is especially useful for imaging the brain and spinal cord, the heart and blood vessels, the bones, joints, and other soft tissues, the organs in the pelvis and abdomen, and the breast. Also called magnetic resonance imaging, MRI, and NMRI.

### **nuclear matrix protein 22**

A protein found inside the nucleus of a cell. It is involved in making DNA, RNA, and proteins. It also helps control how certain genes are expressed (turned on) in a cell. Nuclear matrix protein 22 may be found in higher than normal amounts in the urine of patients with some types of cancer, including bladder cancer. Measuring the amount of nuclear matrix protein 22 in the urine may help diagnose cancer or find out how well treatment is working. It is a type of tumor marker. Also called NMP22.

### **nuclear medicine**

A branch of medicine that uses small amounts of radioactive substances to make pictures of areas inside the body and to treat disease. In cancer, the radioactive substance may be used with a special machine (such as a PET scanner) to find the cancer, to see how far it has spread, or to see how well a treatment is working. Radioactive substances may also be used to treat certain types of cancer, such as thyroid cancer and lymphoma.

### **nuclear medicine scan**

A method that uses radioactive substances to make pictures of areas inside the body. The radioactive substance is injected into the body, and locates and binds to specific cells or tissues, including cancer cells. Images are made using a special machine that detects the radioactive substance. Also called radioimaging.

### **nucleolus**

An area inside the nucleus of a cell that is made up of RNA and proteins and is where ribosomes are made. Ribosomes help link amino acids together to form proteins. The nucleolus is a cell organelle.

### **nucleotide**

A building block for nucleic acids (the molecules inside cells that carry genetic information). Nucleotides are attached end-to-end to form the nucleic acids DNA and RNA.

### **nucleus**

In biology, the structure in a cell that contains the chromosomes. The nucleus has a membrane around it, and is where RNA is made from the DNA in the chromosomes.

**nurse**

A health professional trained to care for people who are ill or disabled.

**nurse case manager**

A registered nurse who has special training in how to plan, manage, and evaluate all aspects of patient care, especially for patients who get treatment over a long time. Also called case management nurse.

**nurse practitioner**

A registered nurse who has additional education and training in how to diagnose and treat disease. Nurse practitioners are licensed at the state level and certified by national nursing organizations. In cancer care, a nurse practitioner may manage the primary care of patients and their families, based on a practice agreement with a doctor. Also called advanced practice nurse, APN, and NP.

**nursing**

The act of feeding breast milk to an infant. Babies can be fed directly from the mother's breast, or breast milk can be pumped and then fed to the baby from a bottle. Breast milk contains calories, vitamins, minerals, and other important nutrients that help an infant grow and develop. It also contains antibodies, which help protect the infant against some infections. Nursing also helps protect the infant and mother against certain diseases or conditions. Also called breastfeeding.

**nursing home**

A place that gives care to people who have physical or mental disabilities and need help with activities of daily living (such as taking a bath, getting dressed, and going to the bathroom) but do not need to be in the hospital.

**nutraceutical**

A food or dietary supplement that is believed to provide health benefits.

**nutrient**

A chemical compound (such as protein, fat, carbohydrate, vitamin, or mineral) contained in foods. These compounds are used by the body to function and grow.

**nutrient-dense food**

Food that is high in nutrients but relatively low in calories. Nutrient-dense foods contain vitamins, minerals, complex carbohydrates, lean protein, and healthy fats. Examples of nutrient-dense foods include fruits and vegetables, whole grains, low-fat or fat-free milk products, seafood, lean meats, eggs, peas, beans, and nuts.

**nutrigenomics**

The study of how food affects a person's genes and how a person's genes affect the way the body responds to food. Nutrigenomics is used to learn more about how genes and diet together may affect a person's health and risk of developing diseases, such as cancer. It may also help find new ways to prevent and treat disease.

**nutrition**

The taking in and use of food and other nourishing material by the body. Nutrition is a 3-part process. First, food or drink is consumed. Second, the body breaks down the food or drink into nutrients. Third, the nutrients travel through the

bloodstream to different parts of the body where they are used as "fuel" and for many other purposes. To give the body proper nutrition, a person has to eat and drink enough of the foods that contain key nutrients.

### **nutrition therapy**

A nutrition-based treatment plan to help manage or treat certain health conditions. These include diabetes, heart disease, kidney disease, digestive system problems, overweight, obesity, malnutrition, and cancer. Nutrition therapy includes assessing a person's nutrition status, identifying their nutritional and dietary needs and goals, and developing a nutrition care plan. The nutrition care plan may involve changes in a person's diet, counseling to support behavioral and lifestyle changes, or receiving nutrients through intravenous or tube feeding. Also called medical nutrition therapy.

### **nutritional counseling**

A process by which a health professional with special training in nutrition helps people make healthy food choices and form healthy eating habits. In cancer treatment, the goal of nutritional counseling is to help patients stay healthy during and after treatment and to stay strong enough to fight infections and the recurrence of disease. Also called dietary counseling.

### **nutritional status**

The state of a person's health in terms of the nutrients in his or her diet.

### **nutritional supplement**

A product that is added to the diet. A nutritional supplement is taken by mouth and usually contains one or more dietary ingredients. Examples of dietary ingredients include vitamins, minerals, herbs, amino acids, and enzymes. A person should talk with their health care provider before taking nutritional supplements, as some may have side effects or interact with other nutritional supplements and medicines. Also called dietary supplement.

### **nutritionist**

A person who gives advice about healthy eating and lifestyle choices. Training and qualifications for nutritionists can vary, with some having formal education in nutrition, while others might not. Nutritionists may provide dietary counseling, meal planning, and nutrition education. A certified nutrition specialist is a nutrition expert with an advanced degree in nutrition or a related field who has passed a certification exam. Certified nutrition specialists are qualified to provide specialized nutrition advice to people who have certain medical conditions, such as obesity, high blood pressure, or diabetes, and medical nutrition therapy for managing and treating many health conditions.

### **nystatin**

The active ingredient in a drug used to treat infections caused by fungi (a type of microorganism). Nystatin is made by certain strains of bacteria and kills fungi by binding to their membranes. It is a type of antifungal agent.

### **oat cell cancer**

A fast-growing type of cancer that usually occurs in the lungs but may also occur in many other parts of the body, such as the cervix, ovary, bladder, prostate, liver, pancreas, and stomach. These cancer cells usually look like small, oval-shaped oats when viewed under a microscope. Oat cell cancer tends to spread quickly to other parts of the body and usually has a poor prognosis (chance of recovery). Also called small cell carcinoma.

## **ob/gyn**

A branch of medicine that specializes in the care of women during pregnancy and childbirth and in the diagnosis and treatment of diseases of the female reproductive organs. It also specializes in other women's health issues, such as menopause, hormone problems, contraception (birth control), and infertility. Also called obstetrics and gynecology.

## **obatoclox mesylate**

A substance being studied in the treatment of several types of cancer. It is a form of obatoclox, which blocks the activity of certain proteins needed for cells to live and may cause tumor cells to die. It is a type of apoptosis inducer.

## **obesity**

A common, chronic disease marked by an abnormally high, unhealthy amount of body fat. Having obesity can lead to many health problems, including heart disease, stroke, high blood pressure, diabetes, sleep apnea, arthritis, kidney disease, and certain types of cancer.

## **obinutuzumab**

A drug used with other drugs to treat certain types of follicular lymphoma and chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. Obinutuzumab binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of leukemia and lymphoma cells. Obinutuzumab may block CD20 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Gazyva.

## **objective improvement**

An improvement that can be measured by the health care provider (for example, when a tumor shrinks or there are fewer cancer cells in the blood).

## **objective response**

A measurable response.

## **objective response rate**

The percentage of people in a study or treatment group who have a partial response or complete response to the treatment within a certain period of time. A partial response is a decrease in the size of a tumor or in the amount of cancer in the body, and a complete response is the disappearance of all signs of cancer in the body. In a clinical trial, measuring the objective response rate is one way to see how well a new treatment works. Also called ORR.

## **oblimersen sodium**

A substance being studied in the treatment of cancer. It may kill cancer cells by blocking the production of a protein that makes cancer cells live longer and by making them more sensitive to anticancer drugs. It is a type of antisense oligodeoxyribonucleotide. Also called augmersen, bcl-2 antisense oligodeoxynucleotide G3139, and Genasense.

## **observation**

In medicine, watching a patient's condition but not giving treatment unless symptoms appear or change.

## **observational study**

A type of study in which individuals are observed or certain outcomes are measured. No attempt is made to affect the outcome (for example, no treatment

is given).

### **obsessive-compulsive disorder**

An anxiety disorder in which a person has intrusive ideas, thoughts, or images that occur repeatedly, and in which he or she feels driven to perform certain behaviors over and over again. For example, a person may worry all the time about germs and so will wash his or her hands over and over again. Having an obsessive-compulsive disorder may cause a person to have trouble carrying out daily activities.

### **obstetrician**

A doctor who specializes in caring for women during pregnancy and childbirth. Obstetricians also care for the fetus (unborn baby), treat problems with pregnancy, and deliver babies.

### **obstetrics and gynecology**

A branch of medicine that specializes in the care of women during pregnancy and childbirth and in the diagnosis and treatment of diseases of the female reproductive organs. It also specializes in other women's health issues, such as menopause, hormone problems, contraception (birth control), and infertility. Also called ob/gyn.

### **obstruction**

Blockage of a passageway.

### **obtundation**

A dulled or reduced level of alertness or consciousness.

### **occult primary tumor**

Cancer in which the site of the primary (original) tumor cannot be found. Most metastases from occult primary tumors are found in the head and neck.

### **occult stage non-small cell lung cancer**

Cancer cannot be seen by imaging or bronchoscopy. Cancer cells are found in sputum or bronchial washings (a sample of cells taken from inside the airways that lead to the lungs). Cancer may have spread to other parts of the body.

### **occupational therapist**

A health professional trained to help people who are ill or disabled learn to manage their daily activities.

### **octreotide**

A drug similar to the naturally occurring growth hormone inhibitor somatostatin. Octreotide is used to treat diarrhea and flushing associated with certain types of tumors.

### **octreotide scan**

A type of radionuclide scan used to find carcinoid and other types of tumors. Radioactive octreotide, a drug similar to somatostatin, is injected into a vein and travels through the bloodstream. The radioactive octreotide attaches to tumor cells that have receptors for somatostatin. A radiation-measuring device detects the radioactive octreotide, and makes pictures showing where the tumor cells are in the body. Also called somatostatin receptor scintigraphy and SRS.

### **oculocutaneous albinism**

A group of rare, inherited disorders in which the skin, hair, and eyes have little or no melanin (pigment). Most people with these disorders have very pale skin, white or light-colored hair, and light-colored eyes. People with oculocutaneous albinism can also have vision problems, including blurry vision, rapid eye movement, crossed eyes, and increased sensitivity to light. People with these disorders have a high risk of developing squamous cell skin cancer at a very early age. The seven types of oculocutaneous albinism are caused by mutations (changes) in the TYR, OCA2, TYRP1, SLC45A2, OCA5, SLC24A5, or C10orf11 gene. These genes are involved in making melanin. The amount of skin, hair, and eye pigment seen in each oculocutaneous albinism type depends on the gene and mutation involved. Also called OCA.

### **oculodermal melanocytosis**

A condition marked by brown, blue, or gray patches, usually on the inside of the eye and on the skin near or around the eye. It may also affect the eyelid and mouth. It is caused by an increase in the number of cells called melanocytes in skin and eye tissue. Melanocytes make a substance called melanin, which gives color to skin and eyes. Having oculodermal melanocytosis may increase the risk of glaucoma and a type of eye cancer called intraocular melanoma. Also called nevus of Ota.

### **odds ratio**

A measure of the odds of an event happening in one group compared to the odds of the same event happening in another group. In cancer research, odds ratios are most often used in case-control (backward looking) studies to find out if being exposed to a certain substance or other factor increases the risk of cancer. For example, researchers may study a group of individuals with cancer (cases) and another group without cancer (controls) to see how many people in each group were exposed to a certain substance or factor. They calculate the odds of exposure in both groups and then compare the odds. An odds ratio of one means that both groups had the same odds of exposure and, therefore, the exposure probably does not increase the risk of cancer. An odds ratio of greater than one means that the exposure may increase the risk of cancer, and an odds ratio of less than one means that the exposure may reduce the risk of cancer. Also called relative odds.

### **odor**

A smell.

### **odorant**

A substance that gives off a smell.

### **ofatumumab**

A drug used alone or with other drugs to treat certain types of chronic lymphocytic leukemia. It is also being studied in the treatment of other types of cancer. Ofatumumab binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of leukemia and lymphoma cells. Ofatumumab may block CD20 and help the immune system kill cancer cells. It is a type of monoclonal antibody. Also called Arzerra and HuMax-CD20.

### **off-label**

Describes the legal use of a prescription drug to treat a disease or condition for which the drug has not been approved by the U.S. Food and Drug Administration.



**off-target effect**

Describes the effects that can occur when a drug binds to targets (proteins or other molecules in the body) other than those for which the drug was meant to bind. This can lead to unexpected side effects that may be harmful. Learning about the off-target effects of drugs may help in drug development.

**ofloxacin**

An antibiotic drug used to treat infection. It belongs to the family of drugs called quinolone antibiotics.

**ointment**

A substance used on the skin to soothe or heal wounds, burns, rashes, scrapes, or other skin problems. Also called unguent.

**olanzapine**

A drug used to treat certain mental disorders. It is also being studied in the treatment of nausea and vomiting caused by some cancer treatments. It is a type of antipsychotic and a type of monoamine antagonist. Also called Zyprexa and Zyprexa Zydis.

**olaparib**

A drug used alone or with other drugs to treat adults with certain types of prostate cancer, pancreatic cancer, breast cancer, or ovarian, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Olaparib blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Olaparib is a type of PARP inhibitor. Also called AZD2281, Lynparza, and PARP inhibitor AZD2281.

**olfaction**

The sense of smell.

**olfactory**

Having to do with the sense of smell.

**olfactory bulb**

A rounded mass of tissue that contains several types of nerve cells that are involved in the sense of smell. There are two olfactory bulbs on the bottom side of the brain, one above each nasal cavity. The olfactory bulbs receive information about smells from the nose and send it to the brain by way of the olfactory tracts.

**olfactory neuroblastoma**

A rare type of cancer that forms in the tissues of the upper part of the nasal cavity (space inside the nose). This area is near the bone that separates the nasal cavity from the brain. These tissues are involved in the sense of smell. Olfactory neuroblastoma may spread from the nasal cavity to the bone around the eyes, the sinuses, the front part of the brain, or the lymph nodes in the neck. It is the most common type of nasal cavity tumor in children, especially in teens. Also called esthesioneuroblastoma.

**olfactory system**

The parts of the body involved in sensing smell, including the nose and many parts of the brain. Smell may affect emotion, behavior, memory, and thought.

**olfactory transduction**

A series of events in which cells in the nose bind to scent-bearing molecules and send electrical signals to the brain where they are perceived as smells.

**oligoastrocytoma**

A brain tumor that forms from both oligodendrocytes and astrocytes, which are types of glial cells (cells that cover and protect nerve cells in the brain and spinal cord and help them work the way they should). An oligoastrocytoma is a type of mixed glioma.

**oligodendrocyte**

A cell that forms the myelin sheath (a layer that covers and protects nerve cells) in the brain and spinal cord. An oligodendrocyte is a type of glial cell.

**oligodendroglial tumor**

A rare, slow-growing tumor that begins in oligodendrocytes (cells that cover and protect nerve cells in the brain and spinal cord). Also called oligodendroglioma.

**oligodendroglioma**

A rare, slow-growing tumor that begins in oligodendrocytes (cells that cover and protect nerve cells in the brain and spinal cord). Also called oligodendroglial tumor.

**oligofructose-enriched inulin**

A substance that is used to improve the health of the digestive system and bones and is being studied in the prevention of colon cancer. Oligofructose-enriched inulin is made by combining two substances that occur naturally in many plants, including chicory root, wheat, bananas, onion, and garlic. Oligofructose-enriched inulin helps healthy bacteria grow in the intestines and helps the body absorb calcium and magnesium. Also called Raftilose Synergy 1.

**oligometastasis**

A type of metastasis in which cancer cells from the original (primary) tumor travel through the body and form a small number of new tumors (metastatic tumors) in one or two other parts of the body. For example, cancer cells may spread from the breast to form one or two new tumors in the brain or spread from the colon to form new tumors in the liver. These types of tumors may be treatable.

**oligopolyposis**

The condition of having between 10 and 100 polyps (abnormal growths) on the inner walls of the colon and rectum. This occurs in people who have certain types of inherited colorectal cancer syndromes, such as AFAP.

**oltipraz**

A drug used in cancer prevention.

**olutasidenib**

A drug used to treat adults with acute myeloid leukemia that has come back or has not gotten better with other treatment and has a mutation (change) in the IDH1 gene. It is also being studied in the treatment of other types of cancer. Olutasidenib blocks the protein made by the mutated IDH1 gene. Blocking this protein may help keep cancer cells from growing. Olutasidenib is a type of enzyme inhibitor. Also called Rezlidhia.

**omacetaxine mepesuccinate**

A drug used to treat adults with certain types of chronic myelogenous leukemia that cannot be treated with tyrosine kinase inhibitors (a type of anticancer drug) or that have not gotten better after treatment with at least two tyrosine kinase inhibitors. It is also being studied in the treatment of other types of cancer. Omacetaxine mepesuccinate blocks certain proteins involved in cell growth and may kill cancer cells. It is a type of plant alkaloid and a type of protein synthesis inhibitor. Also called homoharringtonine and Synribo.

**omega-3 fatty acid**

A type of fat obtained in the diet and involved in immunity.

**omentectomy**

Surgery to remove part or all of the omentum.

**omentum**

A fold of the peritoneum (the thin tissue that lines the abdomen) that surrounds the stomach and other organs in the abdomen.

**omeprazole**

A drug that inhibits gastric acid secretion.

**onabotulinumtoxinA**

A drug used to treat certain medical conditions. These include severe underarm sweating and severe muscle spasms in the neck and shoulders. OnabotulinumtoxinA is also used to smooth wrinkles on the face. It is being studied in the treatment of pain in patients with skin leiomyomas (benign smooth muscle tumors) and other conditions. It is a form of a toxin made by the bacterium *Clostridium botulinum*.

**oncogene**

A mutated (changed) form of a type of gene called a proto-oncogene, which is involved in normal cell growth and division. When a proto-oncogene is changed so that too many copies are made or it becomes more active than normal, it is called an oncogene. Oncogenes may cause normal cells to become cancer cells and grow in the body. Mutations that lead to the conversion of proto-oncogenes to oncogenes usually occur during a person's lifetime and are not inherited from a parent.

**oncologist**

A doctor who has special training in diagnosing and treating cancer. Some oncologists specialize in a particular type of cancer treatment. For example, a radiation oncologist specializes in treating cancer with radiation.

**oncology**

A branch of medicine that specializes in the diagnosis and treatment of cancer. It includes medical oncology (the use of chemotherapy, hormone therapy, and other drugs to treat cancer), radiation oncology (the use of radiation therapy to treat cancer), and surgical oncology (the use of surgery and other procedures to treat cancer).

**oncology nurse**

A nurse who specializes in treating and caring for people who have cancer.

### **oncology pharmacy specialist**

A licensed pharmacist with special training in how to design, give, monitor, and change chemotherapy for cancer patients. Also called BCOP and board certified oncology pharmacy specialist.

### **oncolysate**

An extract made from cancer cells.

### **oncolysis**

The lysis (breakdown) of cancer cells. This can be caused by chemical or physical means (for example, strong detergents or high-energy sound waves) or by infection with a strain of virus that can lyse cells.

### **oncolytic virotherapy**

Treatment using an oncolytic virus (a virus that infects and breaks down cancer cells but not normal cells ). Oncolytic virotherapy may make it easier to kill tumor cells with chemotherapy and radiation therapy. It is a type of targeted therapy. Also called oncolytic virus therapy, viral therapy, and virotherapy.

### **oncolytic virus**

A type of virus that infects and lyses (breaks down) cancer cells but not normal cells. Oncolytic viruses can occur naturally or can be made in the laboratory by changing other viruses. Certain oncolytic viruses are being studied in the treatment of cancer. They may make it easier to kill tumor cells with chemotherapy and radiation therapy.

### **oncolytic virus therapy**

Treatment using an oncolytic virus (a virus that infects and breaks down cancer cells but not normal cells ). Oncolytic virus therapy may make it easier to kill tumor cells with chemotherapy and radiation therapy. It is a type of targeted therapy. Also called oncolytic virotherapy, viral therapy, and virotherapy.

### **ondansetron hydrochloride**

A drug used to prevent nausea and vomiting caused by chemotherapy and radiation therapy and nausea and vomiting after surgery. Ondansetron hydrochloride blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Ondansetron hydrochloride is a type of antiemetic and a type of serotonin receptor antagonist. Also called Zofran.

### **onset of action**

The length of time it takes for a medicine to start to work.

### **onychodystrophy**

Abnormal changes in the shape, color, texture, and growth of the fingernails or toenails. Onychodystrophy is often caused by infection or injury to the nail. It may also be caused by certain conditions, including psoriasis, eczema, warts, cysts, and some tumors. Changes in nails can also be a sign of chronic heart, lung, liver, or kidney disease. Treatment with certain drugs, including chemotherapy drugs, can also cause changes to the nails. Also called nail dystrophy.

### **oocyte cryopreservation**

The process of freezing one or more unfertilized eggs (eggs that have not been combined with sperm) to save them for future use. The eggs are thawed and fertilized in the laboratory to make embryos that can be placed in a woman's

uterus. Oocyte cryopreservation is being studied as a type of fertility preservation. It may be useful for women with cancer who want to have children after having radiation therapy, chemotherapy, or certain types of surgery, which can cause infertility. Also called egg banking, egg cryopreservation, and egg freezing.

### **oophorectomy**

Surgery to remove one or both ovaries.

### **oophoropexy**

A procedure used to help keep a woman fertile by preventing damage to the ovaries during radiation therapy. Before radiation therapy begins, one or both ovaries and fallopian tubes are separated from the uterus and attached to the wall of the abdomen away from where the radiation will be given. Oophoropexy may be useful for women who want to have children after having radiation therapy that can cause infertility. It is a type of fertility preservation. Also called ovarian transposition.

### **open biopsy**

A procedure in which a cut is made through the skin to remove abnormal tissue so it can be checked under a microscope for signs of disease. The two types of open biopsy are incisional biopsy, in which part of a lump or a sample of tissue is removed, and excisional biopsy, in which an entire lump or suspicious area is removed. Also called surgical biopsy.

### **open colectomy**

An operation to remove all or part of the colon through a long incision made in the wall of the abdomen. When only part of the colon is removed, it is called a partial colectomy.

### **open label study**

A type of study in which both the health providers and the patients are aware of the drug or treatment being given.

### **open radical prostatectomy**

Surgery to remove the entire prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). Nearby lymph nodes may also be removed. During an open radical prostatectomy, an incision (cut) is made in the wall of the lower abdomen or in the perineum (the area between the scrotum and anus). An attempt is made to protect the nerves that control penile erection and the bladder from damage.

### **open resection**

Surgery to remove part or all of an organ or a tumor and nearby lymph nodes. The incision is large enough to let the surgeon see into the body.

### **operable**

Describes a condition that can be treated by surgery.

### **operation**

A procedure to remove or repair a part of the body or to find out whether disease is present. Also called surgery.

### **ophthalmic**

Having to do with the eye.

**ophthalmic artery infusion**

A method of delivering anticancer drugs directly to a tumor in the eye. A catheter (a thin, flexible tube) is put into an artery that leads to the eye and the anticancer drug is given through the catheter. A small balloon may then be put into the artery to block it, which keeps the anticancer drug near the tumor. Ophthalmic artery infusion may be used to treat certain types of retinoblastoma.

**ophthalmologist**

A doctor who has special training in diagnosing and treating eye problems, including injury and disease.

**ophthalmoscope**

A lighted instrument used to examine the inside of the eye, including the retina and the optic nerve.

**ophthalmoscopy**

An exam that uses a magnifying lens and a light to check the fundus of the eye (back of the inside of the eye, including the retina and optic nerve). The pupils may be dilated (enlarged) with medicated eye drops so the doctor can see through the pupil to the back of the eye. Ophthalmoscopy may be used to check for eye problems, such as glaucoma, macular degeneration, eye cancer, optic nerve problems, or eye injury. Also called funduscopy and funduscopy.

**opiate**

A substance used to treat pain or cause sleep. Opiates are made from opium or have opium in them. Opiates bind to opioid receptors in the central nervous system. Examples of opiates are codeine, heroin, and morphine. An opiate is a type of analgesic agent.

**opioid**

A class of drug used to reduce moderate to severe pain. Opioids can be made from the opium poppy plant or in the laboratory. They block pain signals by binding to opioid receptors on nerve cells in the brain, spinal cord, gastrointestinal tract, and other organs in the body. Some opioids may also be used to treat cough and diarrhea. Opioids used for pain relief are usually safe when taken for a short time and as prescribed by a health care provider, but they can be highly addictive and as a result have often been misused or abused.

**opioid growth factor**

A substance that relieves pain and is being studied in the treatment of some types of cancer. Opioid growth factors bind to cells in the body, including tumor cells, which have opioid growth factor receptors on the surface. This may help stop the growth of the tumor cells. It may also prevent the growth of blood vessels that tumors need to grow. An opioid growth factor is a type of biological response modifier and a type of antiangiogenesis agent. Also called OGF.

**opportunistic infection**

An infection caused by an organism that does not normally cause disease. Opportunistic infections occur in people with weakened immune systems.

**oprelvekin**

A drug used to increase the number of blood cells, especially platelets, in some cancer patients receiving chemotherapy. Oprelvekin is a form of interleukin-11 (a cytokine normally made by support cells in the bone marrow) that is made in the



laboratory. It is a type of biological response modifier. Also called Neumega, recombinant human interleukin-11, and rhIL-11.

### **optic chiasm**

The place in the brain where some of the optic nerve fibers coming from one eye cross optic nerve fibers from the other eye. Also called optic chiasma.

### **optic chiasma**

The place in the brain where some of the optic nerve fibers coming from one eye cross optic nerve fibers from the other eye. Also called optic chiasm.

### **optic nerve**

The nerve that carries messages from the retina to the brain.

### **optic neuritis**

Inflammation of the optic nerve (the nerve that carries messages from the back of the eye to the brain). It may be caused by infection, drugs, toxins, and diseases of the immune system, such as multiple sclerosis. Symptoms include sudden changes in vision in one eye, including loss of vision and pain with eye movement. The symptoms often disappear within a few weeks.

### **optic pathway glioma**

A rare, slow-growing tumor that usually forms in the optic nerve, optic chiasm, or optic tract. These are parts of the nervous system that carry messages from the eye to the brain. Also called visual pathway glioma.

### **optic tract**

The nerves that travel from the optic chiasm (place in the brain where some of the optic nerve fibers cross) into certain parts of the brain involved in vision.

### **optical coherence tomography**

A procedure that uses infrared light waves to give three-dimensional (3-D) pictures of structures inside tissues and organs. The pictures are made by a computer linked to the light source. Also called OCT.

### **optical spectroscopy**

In medicine, a technique that uses low power light, fiberoptic instruments, and detectors to examine tissue. It is being studied as a way to identify differences between normal cells and cells that may become cancer, and as a way to identify cancer cells that remain in the edges of tumor tissue removed from a patient.

### **optimism**

The tendency to believe that there is good in everything and to have positive thoughts about most things that happen.

### **oral**

By or having to do with the mouth.

### **oral and maxillofacial surgeon**

A dentist who has special training in surgery of the mouth, face, and jaw.

### **oral cancer**

Cancer that forms in tissues of the oral cavity (the mouth) or the oropharynx (the part of the throat at the back of the mouth).

### **oral cavity**

Refers to the mouth. It includes the lips, the lining inside the cheeks and lips, the front two thirds of the tongue, the upper and lower gums, the floor of the mouth under the tongue, the bony roof of the mouth, and the small area behind the wisdom teeth.

### **oral cavity cancer**

Cancer that forms in tissues of the oral cavity (the mouth). The tissues of the oral cavity include the lips, the lining inside the cheeks and lips, the front two thirds of the tongue, the upper and lower gums, the floor of the mouth under the tongue, the bony roof of the mouth, and the small area behind the wisdom teeth.

### **oral chemotherapy**

Treatment with drugs given by mouth to kill cancer cells or stop them from dividing.

### **oral contraceptive pill**

A pill used to prevent pregnancy. It contains hormones that block the release of eggs from the ovaries. Most oral contraceptives include estrogen and progestin. Also called birth control pill.

### **oral dysplasia**

The presence of abnormal cells in the tissues of the mouth. These tissues include the lips, the lining of the inside of the cheeks, the gums, the front two thirds of the tongue, the bottom of the mouth under the tongue, the bony part of the roof of the mouth, and the small area behind the wisdom teeth. Oral dysplasia may be found in patches of tissue that look red, white, or a mixture of both colors but can only be diagnosed by looking at the cells under a microscope. It is most commonly caused by tobacco or alcohol use. It may also be caused by infection with certain types of human papillomavirus (HPV). Oral dysplasia is not cancer but may become cancer and spread to nearby normal tissue. It can be mild, moderate, or severe, depending on how abnormal the cells look under a microscope and how much of the tissues in the mouth are affected. Also called OED and oral epithelial dysplasia.

### **oral epithelial dysplasia**

The presence of abnormal cells in the tissues of the mouth. These tissues include the lips, the lining of the inside of the cheeks, the gums, the front two thirds of the tongue, the bottom of the mouth under the tongue, the bony part of the roof of the mouth, and the small area behind the wisdom teeth. Oral epithelial dysplasia may be found in patches of tissue that look red, white, or a mixture of both colors but can only be diagnosed by looking at the cells under a microscope. It is most commonly caused by tobacco or alcohol use. It may also be caused by infection with certain types of human papillomavirus (HPV). Oral epithelial dysplasia is not cancer but may become cancer and spread to nearby normal tissue. It can be mild, moderate, or severe, depending on how abnormal the cells look under a microscope and how much of the tissues in the mouth are affected. Also called OED and oral dysplasia.

### **oral papilloma**

A benign (not cancer), wart-like growth that occurs on the lips or in the mouth, including the tongue, gums, tonsils, and back of the throat. Oral papillomas often appear as pink or white bumps that may be different sizes. They are usually painless and do not cause symptoms. Oral papillomas may be caused by chronic infection with certain types of human papillomavirus (HPV). They may also be

found in people with a rare, inherited condition called Cowden syndrome. Oral papillomas most often occur in adults.

### **oral potentially malignant disorder**

A group of conditions in which there are abnormal tissue changes in the mouth that may become cancer. These changes may include a lump, thickening, or abnormal patch of red and/or white tissue that forms on the lips, gums, tongue, inner lining of the cheeks, or other areas in the mouth. There are many different types of oral potentially malignant disorders, but the most common types are leukoplakia and erythroplakia. Oral potentially malignant disorders may occur in people who have certain rare hereditary conditions, including dyskeratosis congenita, epidermolysis bullosa, xeroderma pigmentosum, and Plummer-Vinson syndrome. Having an oral potentially malignant disorder increases a person's risk of developing oral cancer. Also called OPMD.

### **oral surgeon**

A dentist with special training in surgery of the mouth and jaw.

### **orantinib**

A substance being studied in the treatment of cancer. Orantinib blocks proteins involved in the growth and spread of cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called SU006668 and SU6668.

### **orbit**

The space within the skull that contains the eye, including its nerves and muscles. The orbit also includes the eyelids and the glands that make tears. It is made up of seven bones that surround and protect the eye. Also called eye socket.

### **orchidectomy**

Surgery to remove one or both testicles. Also called orchiectomy.

### **orchiectomy**

Surgery to remove one or both testicles. Also called orchidectomy.

### **oregovomab**

A monoclonal antibody that is being studied in the treatment of ovarian cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. Oregovomab binds to the CA-125 antigen, which is found on most ovarian cancer cells. Also called OvaRex.

### **organ**

In medicine, a part of the body that is made up of cells and tissues that perform a specific function. Examples of organs include the heart, lungs, stomach, liver, kidney, skin, spleen, uterus, and ovary.

### **organelle**

A small structure in a cell that is surrounded by a membrane and has a specific function. Examples of organelles are the nucleus (a structure that contains the cell's chromosomes and is where RNA is made), mitochondria (structures that make energy for the cell), and lysosomes (sac-like containers filled with enzymes that digest and help recycle molecules in the cell).

### **organic food**

Food produced without the use of man-made fertilizer, drugs that increase growth, or drugs that kill insects, bacteria, or other living things. In the United States, the Department of Agriculture sets standards for growing, harvesting, processing, and labeling organic foods.

### **organism**

A living thing, such as an animal, a plant, a bacterium, or a fungus.

### **organism strain**

A group of organisms that belong to the same species but share certain genetic characteristics not found in other members of the species. Microorganisms, such as viruses, bacteria, and fungi, have many strains within a single species. Different strains of an organism may have different biological characteristics, such as the ability to cause more severe disease.

### **organoid**

A 3-dimensional, mini-organ-like structure made by growing a person's tumor cells or stem cells (cells from which other types of cells develop) in the laboratory. Organoids contain many types of cells and closely mimic the structure, organization, and some of the functions of human tissues and organs. Organoids made from a person's tumor cells have histologic, genomic, molecular, and other features that are similar to those found in the original tumor. Organoids are used in the laboratory to study how normal tissues or diseases, such as cancer, form and to test new drugs and other types of treatment before they are given to people.

### **orgasm**

The final part of the sex act, which involves contraction of sexual organs and a sudden release of endorphins, leading to a feeling of pleasure. In males, orgasm usually occurs with release of semen.

### **oropharyngeal cancer**

Cancer that forms in tissues of the oropharynx (the middle part of the throat, behind the mouth). The oropharynx includes the soft palate (the back muscular part of the roof of the mouth), the side and back walls of the throat, the tonsils, and the back one-third of the tongue. Most oropharyngeal cancers are squamous cell carcinomas (cancer that begins in the thin, flat cells lining the inside of the oropharynx).

### **oropharynx**

The middle part of the throat, behind the mouth. The oropharynx includes the soft palate (the back muscular part of the roof of the mouth), the side and back walls of the throat, the tonsils, and the back one-third of the tongue.

### **orphan drug**

A drug used to treat, prevent, or diagnose an orphan disease. An orphan disease is a rare disease or condition that affects fewer than 200,000 people in the United States. Orphan diseases are often serious or life threatening. In 1983, the U.S. government passed a law, called the Orphan Drug Act, to give drug companies certain financial benefits for developing orphan drugs that are safe and effective.

### **orphan drug designation**

A status given to certain drugs called orphan drugs, which show promise in the treatment, prevention, or diagnosis of orphan diseases. An orphan disease is a rare disease or condition that affects fewer than 200,000 people in the United States. Orphan diseases are often serious or life threatening. In 1983, the U.S. government passed a law, called the Orphan Drug Act, to give drug companies certain financial benefits for developing orphan drugs. This law is meant to help bring more drugs to patients with rare diseases.

### **orthodontist**

A dentist who has special training in preventing, diagnosing, and treating certain problems of the teeth and jaws, such as crooked or crowded teeth and bite problems. An orthodontist uses braces, aligners, retainers, headgear, and other devices to help straighten teeth, hold teeth in place, and improve bite. This can improve overall dental health, chewing, speech, and facial appearance.

### **orthodox medicine**

A system in which medical doctors and other health care professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called allopathic medicine, biomedicine, conventional medicine, mainstream medicine, and Western medicine.

### **orthopedic surgeon**

A surgeon who has special training in diagnosing and treating injuries and diseases of the musculoskeletal system. This includes the bones, joints, tendons, ligaments, and muscles.

### **orthotopic**

In medicine, refers to something that occurs in the normal or usual place in the body. It is often used to describe tissue or an organ that is transplanted into its normal place in the body.

### **oseltamivir phosphate**

A drug used to prevent and to treat influenza virus infections. It blocks the release of the virus from infected cells. It is a type of antiviral agent. Also called Tamiflu.

### **osimertinib mesylate**

A drug used alone or with other drugs to treat adults with certain types of non-small cell lung cancer that have an abnormal EGFR gene. It is also being studied in the treatment of other types of cancer. Osimertinib mesylate blocks certain proteins made by the mutated EGFR gene, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Tagrisso.

### **osmolality**

The concentration of particles dissolved in a fluid. The osmolality of serum can help diagnose several medical conditions such as dehydration, diabetes, and shock.

### **osmotic**

Having to do with osmosis (the passage of a liquid through a membrane from a less concentrated solution to a more concentrated one). This causes the more concentrated solution to become diluted, and makes the concentrations in both solutions more equal. Osmotic also refers to a type of laxative that increases the

amount of water in the large intestine, which softens the stool to help it pass more easily.

### **osseous tissue**

Tissue that gives strength and structure to bones. Bone is made up of compact tissue (the hard, outer layer) and cancellous tissue (the spongy, inner layer that contains red marrow). Osseous tissue is maintained by bone-forming cells called osteoblasts and cells that break down bone called osteoclasts. Bones also contain blood vessels, nerves, proteins, vitamins, and minerals. Also called bone tissue.

### **osteitis deformans**

A chronic condition in which both the breakdown and regrowth of bone are increased. Osteitis deformans occurs most frequently in the pelvic and leg bones, skull, and lower spine. It is most common in older individuals, and may lead to bone pain, deformities, and fractures. Also called Paget disease of bone.

### **osteochondroma**

A benign (not cancer) tumor that has both bone and cartilage in it. This type of tumor usually occurs at the ends of the long bones of the arms and legs or in the pelvis or shoulder. It may cause abnormal growth of the arms, hands, and legs; problems moving the joints; and pain, numbness, and tingling. There may be one or more tumors, and having multiple tumors runs in families. Osteochondromas may also occur at some point in time after cancer treatment, such as stem cell transplant.

### **osteogenic sarcoma**

A cancer of the bone that usually affects the large bones of the arm or leg. It occurs most commonly in young people and affects more males than females. Also called osteosarcoma.

### **osteolytic**

Causing the breakdown of bone.

### **osteomalacia**

A condition in adults in which bones become soft and deformed because they don't have enough calcium and phosphorus. It is usually caused by not having enough vitamin D in the diet, not getting enough sunlight, or a problem with the way the body uses vitamin D. Symptoms include bone pain and muscle weakness. When the condition occurs in children, it is called rickets. Also called adult rickets.

### **osteomyelitis**

Inflammation of the bone caused by an infection, which may spread to the bone marrow and tissues near the bone. Osteomyelitis can cause severe pain in the infected bone. If it is not treated, it can kill bone tissue.

### **osteonecrosis**

A condition in which there is a loss of blood flow to bone tissue, which causes the bone to die. It is most common in the hips, knees, shoulders, and ankles. It may be caused by long-term use of steroid medicines, alcohol abuse, joint injuries, and certain diseases, such as cancer and arthritis. It may also occur at some point in time after cancer treatment that included methotrexate, bisphosphonates, or corticosteroids. Also called aseptic necrosis, avascular necrosis, and ischemic necrosis.



**osteopenia**

A condition in which there is a lower-than-normal bone mass or bone mineral density (the amount of bone mineral contained in a certain amount of bone). Osteopenia is a less severe form of bone loss than osteoporosis.

**osteoporosis**

A condition in which there is a decrease in the amount and thickness of bone tissue. This causes the bones to become weak and break more easily. Osteoporosis may be caused by older age, hormone changes, taking certain medicines, and not eating enough foods with calcium and vitamin D. It may also be caused by certain types of cancer and cancer treatment. It is most common in white and Asian women.

**osteosarcoma**

A cancer of the bone that usually affects the large bones of the arm or leg. It occurs most commonly in young people and affects more males than females. Also called osteogenic sarcoma.

**ostomy**

An operation to create an opening (a stoma) from an area inside the body to the outside. Colostomy and urostomy are types of ostomies.

**otolaryngologist**

A doctor who has special training in diagnosing and treating diseases of the ear, nose, and throat. Also called ENT doctor.

**ounce**

A measure of weight (one-sixteenth pound) and volume (one-eighth cup).

**out-of-pocket cost**

In medicine, the amount of money a patient pays for medical expenses that are not covered by a health insurance plan. Out-of-pocket costs include deductibles, coinsurance, copayments, and costs for noncovered health care services.

**outcome**

A specific result or effect that can be measured. Examples of outcomes include decreased pain, reduced tumor size, and improvement of disease.

**outpatient**

A patient who visits a health care facility for diagnosis or treatment without spending the night. Sometimes called a day patient.

**ovarian**

Having to do with the ovaries, the female reproductive glands in which the ova (eggs) are formed. The ovaries are located in the pelvis, one on each side of the uterus.

**ovarian ablation**

Treatment that stops or lowers the amount of estrogen made by the ovaries. Types of ovarian ablation include surgery to remove both ovaries, radiation therapy, and the use of certain drugs. Ovarian ablation may be used to prevent and treat breast cancer. Also called ovarian suppression.

### **ovarian borderline malignant tumor**

A condition in which cells that may become cancer form in the thin layer of tissue that covers an ovary (female reproductive gland in which eggs are made). In this condition, tumor cells rarely spread outside of the ovary. Also called ovarian low malignant potential tumor.

### **ovarian cancer**

Cancer that forms in tissues of the ovary (one of a pair of female reproductive glands in which the ova, or eggs, are formed). Most ovarian cancers are either ovarian epithelial cancers (cancer that begins in the cells on the surface of the ovary) or malignant germ cell tumors (cancer that begins in egg cells). Fallopian tube cancer and primary peritoneal cancer are similar to ovarian epithelial cancer and are staged and treated the same way.

### **ovarian epithelial cancer**

Cancer that forms in the tissue covering the ovary (one of a pair of female reproductive glands in which eggs are made). Most ovarian cancers are ovarian epithelial cancers. Fallopian tube cancer and primary peritoneal cancer are similar to ovarian epithelial cancer and are staged and treated the same way. Also called epithelial ovarian cancer.

### **ovarian failure**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. There are two types of ovarian failure, primary and secondary. Primary ovarian failure means that the ovaries do not function normally. This may be because they have been removed by surgery, or it may be caused by some cancer treatments and certain diseases or genetic conditions. In secondary ovarian failure, the ovaries are normal but there is a problem getting hormone signals to them from the brain. This is usually caused by diseases of the pituitary gland or hypothalamus. Some women with ovarian failure sometimes have menstrual periods and may be able to have children. Also called early menopause, ovarian insufficiency, and premature menopause.

### **ovarian follicle**

A small, fluid-filled sac in the ovary that contains one immature egg. There are thousands of follicles in the ovaries. When an egg matures during a woman's menstrual cycle, the follicle breaks open and releases the egg from the ovary for possible fertilization (the process by which an egg combines with sperm to form an embryo). Ovarian follicles may sometimes be checked to help diagnose and treat infertility.

### **ovarian germ cell tumor**

An abnormal mass of tissue that forms in germ (egg) cells in the ovary (female reproductive gland in which the eggs are formed). These tumors usually occur in teenage girls or young women, usually affect just one ovary, and can be benign (not cancer) or malignant (cancer). The most common ovarian germ cell tumor is called dysgerminoma.

### **ovarian insufficiency**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. There are two types of ovarian insufficiency, primary and secondary. Primary ovarian insufficiency means that the ovaries do not function normally. This may be because they have been removed by surgery, or it may be caused by some

cancer treatments and certain diseases or genetic conditions. In secondary ovarian insufficiency, the ovaries are normal but there is a problem getting hormone signals to them from the brain. This is usually caused by diseases of the pituitary gland or hypothalamus. Some women with ovarian insufficiency sometimes have menstrual periods and may be able to have children. Also called early menopause, ovarian failure, and premature menopause.

### **ovarian low malignant potential tumor**

A condition in which cells that may become cancer form in the thin layer of tissue that covers an ovary (female reproductive gland in which eggs are made). In this condition, tumor cells rarely spread outside of the ovary. Also called ovarian borderline malignant tumor.

### **ovarian reserve**

The total number of healthy, immature eggs in the ovaries. The number of healthy eggs decreases as a woman ages, which can lower fertility (the ability to have children). Damage to the ovaries can also decrease ovarian reserve and fertility. This may be caused by smoking, certain anticancer treatments (such as chemotherapy or radiation therapy), surgery to the ovaries or other organs in the pelvis, and certain diseases or genetic conditions. Ovarian reserve is often checked in women who want to have children and are having problems getting pregnant.

### **ovarian shielding**

A procedure done during radiation therapy in which a protective cover is placed on the outside of the body, over the area of the ovaries and other parts of the female reproductive system (ovaries, fallopian tubes, uterus, cervix, and vagina). This may prevent damage from radiation therapy. Ovarian shielding is a type of fertility preservation.

### **ovarian suppression**

Treatment that stops or lowers the amount of estrogen made by the ovaries. Types of ovarian suppression include surgery to remove both ovaries, radiation therapy, and the use of certain drugs. Ovarian suppression may be used to prevent and treat breast cancer. Also called ovarian ablation.

### **ovarian tissue banking**

The process of freezing ovarian tissue to save for future infertility treatment. Part or all of an ovary is removed, and the tissue that contains the eggs is cut into thin slices and frozen. The tissue may later be thawed and placed back into the woman's body, usually on the remaining ovary. Ovarian tissue banking is a type of fertility preservation. It may be useful for women who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Also called ovarian tissue cryopreservation and ovarian tissue freezing.

### **ovarian tissue cryopreservation**

The process of freezing ovarian tissue to save for future infertility treatment. Part or all of an ovary is removed, and the tissue that contains the eggs is cut into thin slices and frozen. The tissue may later be thawed and placed back into the woman's body, usually on the remaining ovary. Ovarian tissue cryopreservation is a type of fertility preservation. It may be useful for women who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Also called ovarian tissue banking and ovarian tissue freezing.

### **ovarian tissue freezing**

The process of freezing ovarian tissue to save for future infertility treatment. Part or all of an ovary is removed, and the tissue that contains the eggs is cut into thin slices and frozen. The tissue may later be thawed and placed back into the woman's body, usually on the remaining ovary. Ovarian tissue freezing is a type of fertility preservation. It may be useful for women who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Also called ovarian tissue banking and ovarian tissue cryopreservation.

### **ovarian transposition**

A procedure used to help keep a woman fertile by preventing damage to the ovaries during radiation therapy. Before radiation therapy begins, one or both ovaries and fallopian tubes are separated from the uterus and attached to the wall of the abdomen away from where the radiation will be given. Ovarian transposition may be useful for women who want to have children after having radiation therapy that can cause infertility. It is a type of fertility preservation. Also called oophoropexy.

### **ovary**

One of a pair of female glands in which the eggs form and the female hormones estrogen and progesterone are made. These hormones play an important role in female traits, such as breast development, body shape, and body hair. They are also involved in the menstrual cycle, fertility, and pregnancy. There is one ovary on each side of the uterus.

### **over-the-counter**

Refers to a medicine that can be bought without a prescription (doctor's order). Examples include analgesics (pain relievers), such as aspirin and acetaminophen. Also called nonprescription and OTC.

### **overactive thyroid**

A condition that occurs when the thyroid gland makes more thyroid hormones than the body needs. Thyroid hormones control the way the body uses energy and affect the body's metabolism. Overactive thyroid may be caused by an autoimmune disorder called Graves' disease, benign lumps in the thyroid gland, and inflammation of the thyroid gland. It may also be caused by consuming too much iodine in the diet or by taking too much thyroid hormone medicine. Signs and symptoms include weight loss, fatigue, rapid or irregular heartbeat, sweating, diarrhea, nervousness, mood swings, shaky hands, trouble sleeping, trouble tolerating heat, muscle weakness, and a goiter (an enlarged thyroid gland that may cause the bottom of the neck to look swollen). Overactive thyroid can usually be controlled with treatment. Also called hyperthyroidism.

### **overall survival**

The length of time from either the date of diagnosis or the start of treatment for a disease, such as cancer, that patients diagnosed with the disease are still alive. In a clinical trial, measuring the overall survival is one way to see how well a new treatment works. Also called OS.

### **overall survival rate**

The percentage of people in a study or treatment group who are still alive for a certain period of time after they were diagnosed with or started treatment for a disease, such as cancer. The overall survival rate is often stated as a five-year survival rate, which is the percentage of people in a study or treatment group

who are alive five years after their diagnosis or the start of treatment. Also called survival rate.

### **overdiagnosis**

Finding cases of cancer with a screening test (such as a mammogram or PSA test) that will never cause any symptoms. These cancers may just stop growing or go away on their own. Some of the harms caused by overdiagnosis are anxiety and having treatments that are not needed.

### **overdose**

An amount of drug that is more than what should be taken at one time.

### **overexpress**

In biology, to make too many copies of a protein or other substance. Overexpression of certain proteins or other substances may play a role in cancer development.

### **overgrowth syndrome**

A group of genetic disorders in which there is an abnormal increase in the size of the body or a body part that is often noted at birth. Examples of overgrowth syndromes include neurofibromatosis, Sotos syndrome, Beckwith-Wiedemann syndrome, Simpson-Golabi-Behmel syndrome, Weaver syndrome, Proteus syndrome, Sturge-Weber syndrome, and fragile X syndrome. Many of these syndromes increase the risk of cancer.

### **overtreatment**

Unnecessary treatment for a condition that is not life-threatening or would never cause any symptoms. Overtreatment may lead to problems and harmful side effects. Overtreatment can be a result of overdiagnosis, which occurs when a cancer screening test finds a lesion that would have gone away on its own or not caused problems.

### **overweight**

A common condition marked by weighing more than what is thought to be healthy for one's height. Excess body weight can come from extra fat, muscle, and/or fluid in the tissues. Overweight is generally defined as having a body mass index (BMI) between 25 and 29. Factors that may increase a person's risk of having overweight include a poor diet, stress, not getting enough sleep or exercise, and taking certain medicines. A person's genetics and some health conditions, such as metabolic syndrome and polycystic ovarian syndrome, can also lead to having overweight. Having overweight can increase the risk of many health problems, including diabetes, high blood pressure, heart disease, stroke, sleep apnea, arthritis, and certain types of cancer.

### **ovulation**

The release of an egg from an ovary during the menstrual cycle.

### **oxaliplatin**

A drug used with other drugs to treat stage III colon cancer that was removed by surgery and colorectal cancer that is advanced. It is also being studied in the treatment of other types of cancer. Oxaliplatin damages the cell's DNA and may kill cancer cells. It is a type of platinum compound. Also called Eloxatin.

**oxandrolone**

A drug used to help patients gain weight after injury, chronic infection, or severe illness. It belongs to the family of drugs called anabolic steroids.

**oxidation**

A chemical reaction that takes place when a substance comes into contact with oxygen or another oxidizing substance. Examples of oxidation are rust and the brown color on a cut apple.

**oxidation-reduction**

A chemical reaction that takes place between an oxidizing substance and a reducing substance. The oxidizing substance loses electrons in the reaction, and the reducing substance gains electrons. For example, rust forms when there is an oxidation-reduction reaction between oxygen contained in water or moist air (an oxidizing substance) and iron (a reducing substance). Oxidation-reduction reactions also occur when glucose (a type of sugar) and fat are broken down in the body to make energy. Also called redox.

**oxidative metabolism**

A chemical process in which oxygen is used to make energy from carbohydrates (sugars). Also called aerobic metabolism, aerobic respiration, and cell respiration.

**oxidative stress**

A condition that may occur when there are too many unstable molecules called free radicals in the body and not enough antioxidants to get rid of them. This can lead to cell and tissue damage. There are many factors that may lead to oxidative stress, including obesity, poor diet, smoking, drinking alcohol, taking certain medicines, and exposure to environmental factors such as radiation, toxins, air pollution, pesticides, and sunlight. Long-term oxidative stress may play a role in aging and the development of chronic inflammation, cancer, and other diseases.

**oxide**

A type of chemical substance that is a combination of oxygen and another substance. Oxides are found in essential oils.

**oxidize**

To cause oxidation (a chemical reaction that takes place when a substance comes into contact with oxygen or another oxidizing substance).

**oxycodone hydrochloride**

A drug used to treat moderate to severe pain. It is made from morphine and binds to opioid receptors in the central nervous system. Oxycodone hydrochloride is a type of analgesic agent and a type of opiate.

**oxygen**

A colorless, odorless gas. It is needed for animal and plant life. Oxygen that is breathed in enters the blood from the lungs and travels to the tissues.

**oxygen radical**

A type of unstable molecule that contains oxygen and that easily reacts with other molecules in a cell. A build up of oxygen radicals in cells may cause damage to DNA, RNA, and proteins, and may cause cell death. An oxygen radical is a free radical. Also called reactive oxygen species.



### **oxygen saturation test**

A test that measures the amount of oxygen being carried by red blood cells. One method uses a device that shines light through a finger. The device measures the amount of oxygen in the blood based on the way red blood cells carrying oxygen absorb and reflect light. In another method blood is taken from an artery and the amount of oxygen is measured directly. An oxygen level that is lower than normal may be a sign of lung disease or other medical conditions.

### **oxygen therapy**

Treatment in which a storage tank of oxygen or a machine called a compressor is used to give oxygen to people with breathing problems. It may be given through a nose tube, a mask, or a tent. The extra oxygen is breathed in along with normal air. Also called supplemental oxygen therapy.

### **oxymorphone hydrochloride**

A drug used to treat moderate to severe pain. It is also used as a sedative before surgery, to help with anesthesia during surgery, during labor, and to treat anxiety caused by some medical conditions. It is made from morphine and binds to opioid receptors in the central nervous system. Oxymorphone hydrochloride is a type of opioid and a type of analgesic agent. Also called Numorphan and Opana.

### **p-glycoprotein**

A protein that pumps substances out of cells. Cancer cells that have too much p-glycoprotein may not be killed by anticancer drugs.

### **p-value**

A term in statistics. It helps show whether a difference found between groups that are being compared is due to chance. A small p-value usually means that the difference between groups is not due to chance alone, but is due to some other factor, such as a treatment one of the groups received. A large p-value usually means that the difference between groups is probably due to chance alone.

### **p53 gene**

A gene that makes a protein that is found inside the nucleus of cells and plays a key role in controlling cell division and cell death. Mutations (changes) in the p53 gene may cause cancer cells to grow and spread in the body. These changes have been found in a genetic condition called Li-Fraumeni syndrome and in many types of cancer. The p53 gene is a type of tumor suppressor gene. Also called TP53 gene and tumor protein p53 gene.

### **pH**

A measure of how acidic or basic a substance or solution is. pH is measured on a scale of 0 to 14. On this scale, a pH value of 7 is neutral, which means it is neither acidic nor basic. A pH value of less than 7 means it is more acidic, and a pH value of more than 7 means it is more basic. In medicine, having the right pH in the blood and other body fluids is important for the body to work the way it should.

### **pM-81**

A monoclonal antibody that is being studied in the detection and treatment of cancer. Monoclonal antibodies are produced in the laboratory and can locate and bind to cancer cells.

## **pPNET**

A type of cancer that forms in bone or soft tissue. Also called Ewing sarcoma and peripheral primitive neuroectodermal tumor.

## **pacemaker**

An electronic device that is implanted in the body to monitor heart rate and rhythm. It gives the heart electrical stimulation when it does not beat normally. It runs on batteries and has long, thin wires that connect it to the heart. Also called artificial pacemaker and cardiac pacemaker.

## **pack year**

A way to measure the amount a person has smoked over a long period of time. It is calculated by multiplying the number of packs of cigarettes smoked per day by the number of years the person has smoked. For example, 1 pack year is equal to smoking 1 pack per day for 1 year, or 2 packs per day for half a year, and so on.

## **paclitaxel**

A drug used alone or with other drugs to treat AIDS-related Kaposi sarcoma, advanced ovarian cancer, and certain types of breast cancer and non-small cell lung cancer. It is also being studied in the treatment of other types of cancer. Paclitaxel stops cancer cells from growing and dividing and may kill them. It is a type of taxane.

## **paclitaxel albumin-stabilized nanoparticle formulation**

A form of the anticancer drug paclitaxel that is used alone or with other drugs to treat certain types of breast cancer, non-small cell lung cancer, and pancreatic cancer. Paclitaxel albumin-stabilized nanoparticle formulation may have fewer side effects and work better than other forms of paclitaxel. It is also being studied in the treatment of other types of cancer. Paclitaxel albumin-stabilized nanoparticle formulation stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called ABI-007, Abraxane, nanoparticle paclitaxel, and protein-bound paclitaxel.

## **paclitaxel liposome**

A form of the anticancer drug paclitaxel that is contained in very tiny, fat-like particles. It may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of several types of cancer. Paclitaxel liposome blocks the ability of cells to divide and may kill cancer cells. It is a type of mitotic inhibitor and a type of antimicrotubule agent. Also called LEP-ETU, liposomal paclitaxel, LipoTaxen, and PNU-93914.

## **paclitaxel poliglumex**

A form of the anticancer drug paclitaxel combined with a protein called poliglumex that may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of breast cancer, ovarian cancer, lung cancer, and other types of cancer. It belongs to the family of drugs called mitotic inhibitors. Also called CT-2103, paclitaxel polyglutamate, and Xyotax.

## **paclitaxel polyglutamate**

A form of the anticancer drug paclitaxel combined with a protein called poliglumex that may have fewer side effects and work better than paclitaxel. It is being studied in the treatment of breast cancer, ovarian cancer, lung cancer, and other types of cancer. It belongs to the family of drugs called mitotic inhibitors. Also called CT-2103, paclitaxel poliglumex, and Xyotax.

### **paclitaxel-loaded polymeric micelle**

A form of the anticancer drug paclitaxel used to treat breast cancer, ovarian cancer, and AIDS-related Kaposi sarcoma. It is also used with another drug to treat non-small cell lung cancer. Paclitaxel is mixed with very tiny particles of a substance that makes it easier to dissolve in water. This allows higher doses of paclitaxel to be given. It is a type of antimitotic agent.

### **pacritinib citrate**

A drug used to treat adults with intermediate-risk or high-risk myelofibrosis (MF), including primary MF, post-polycythemia vera MF, and post-essential thrombocythemia MF. It is used in patients who have a very low blood platelet count. It is also being studied in the treatment of other conditions and some types of cancer. Pacritinib citrate blocks JAK2 and other proteins, which may help keep abnormal blood cells or cancer cells from growing. It is a type of kinase inhibitor. Also called Vonjo.

### **pain expression**

Refers to the way in which a person shows that he or she is in pain. People can express pain verbally or through changes in behavior, such as crying, moaning, groaning, facial grimacing, restlessness, agitation, or depression. Other examples of pain expression include trouble moving around (such as limping), guarding an area of pain on the body, flinching when touched, and trouble sleeping or eating. People may express pain in different ways depending on many external factors, including their family, social interactions, and culture.

### **pain flare**

A sudden increase in pain that may occur in patients who already have chronic pain from cancer, arthritis, fibromyalgia, or other conditions. A pain flare usually lasts for a short time. During a pain flare, the level of pain may be severe but the type of pain and where it is in the body are usually the same as the patient's chronic pain. Pain flares may occur with stress, illness, and certain activities, such as exercising or coughing, or when the dose of pain medicine that the patient is taking wears off. Pain flares are usually not a symptom of a new condition or a condition that has gotten worse. Also called breakthrough pain.

### **pain threshold**

The point at which a person becomes aware of pain.

### **palate**

The roof of the mouth. The front portion is bony (hard palate), and the back portion is muscular (soft palate).

### **palatine uvula**

The soft flap of tissue that hangs down at the back of the mouth (at the edge of the soft palate). Also called uvula.

### **palbociclib**

A drug used to treat women and men with certain types of hormone-receptor positive, HER2-negative breast cancer that is advanced or has spread. It is also being studied in the treatment of other types of cancer. Palbociclib blocks certain proteins, which may help keep cancer cells from growing. It is a type of cyclin-dependent kinase inhibitor. Also called Ibrance.

### **palifermin**

A drug used to prevent and treat severe oral mucositis (mouth sores). It is used in patients with blood cancer who are being treated with high-dose chemotherapy and radiation therapy followed by an autologous stem cell transplant. It is also being studied in the prevention and treatment of common side effects in other types of cancer. Palifermin is a form of human keratinocyte growth factor that is made in the laboratory. It binds to certain receptors on the surface of cells in the lining of the mouth, stomach, and intestines. This may help protect healthy tissue from some of the side effects caused by certain types of cancer treatment. Palifermin is a type of cytoprotective agent. Also called Kepivance.

### **palliation**

Relief of symptoms and suffering caused by cancer and other life-threatening diseases. Palliation helps a patient feel more comfortable and improves the quality of life, but does not cure the disease.

### **palliative care**

Care given to improve the quality of life and help reduce pain in people who have a serious or life-threatening disease, such as cancer. The goal of palliative care is to prevent or treat, as early as possible, the symptoms of the disease and the side effects caused by treatment of the disease. It also attends to the psychological, social, and spiritual problems caused by the disease or its treatment. For cancer, palliative care may include therapies, such as surgery, radiation therapy, or chemotherapy, to remove, shrink, or slow the growth of a tumor that is causing pain. It may also include family and caregiver support. Palliative care may be given with other treatments from the time of diagnosis until the end of life.

### **palliative care specialist**

A health care professional who has special training in providing care to people who have a serious or life-threatening disease, such as cancer. Palliative care specialists prevent or treat as early as possible the symptoms of a disease, side effects caused by treatment of a disease, and psychological, social, and spiritual problems related to a disease or its treatment. They also provide family and caregiver support and coordinate communication between other members of the health care team.

### **palliative sedation**

The use of special drugs called sedatives to relieve extreme suffering by making a patient calm, unaware, or unconscious. This may be done for patients who have symptoms that cannot be controlled with other treatment. Palliative sedation may be used in patients who are near the end of life to make them more comfortable. It is not meant to shorten life or cause death.

### **palliative therapy**

Treatment given to help relieve the symptoms and reduce the suffering caused by cancer or other life-threatening diseases. Palliative therapy may help a person feel more comfortable, but it does not treat or cure the disease. For example, surgery, radiation therapy, or chemotherapy may be given to remove, shrink, or slow the growth of a tumor that is causing pain. Palliative therapy may be given with other treatments from the time of diagnosis until the end of life.

**palmar pit**

A tiny dent in the skin on the palm of the hand. Palmar pits are usually pink or skin-colored and can often be seen more easily after soaking the hands in water. They are often found in people with a rare, inherited condition called basal cell nevus syndrome (BCNS). People with BCNS have a very high risk of developing basal cell skin cancer and are also at risk of developing other types of cancer, including medulloblastoma.

**palmar-plantar erythrodysesthesia**

A condition marked by pain, swelling, numbness, tingling, or redness of the hands or feet. It sometimes occurs as a side effect of certain anticancer drugs. Also called hand-foot syndrome.

**palonosetron hydrochloride**

A drug used in adults and children aged 1 month and older to prevent nausea and vomiting caused by chemotherapy and nausea and vomiting after surgery. Palonosetron hydrochloride blocks the action of a chemical called serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. Palonosetron hydrochloride is a type of antiemetic and a type of serotonin receptor antagonist. Also called Aloxi.

**palpable disease**

A term used to describe cancer that can be felt by touch, usually present in lymph nodes, skin, or other organs of the body such as the liver or colon.

**palpation**

Examination by pressing on the surface of the body to feel the organs or tissues underneath.

**palpitation**

A rapid or irregular heartbeat that a person can feel.

**pamidronate disodium**

A drug used to treat hypercalcemia (high blood levels of calcium) caused by cancer and bone damage caused by multiple myeloma or by breast cancer that has spread to the bone. It is also used to treat Paget disease of the bone. It is also being studied in the treatment of other types of cancer. Pamidronate disodium may help keep bone from breaking down and prevent the loss of calcium from the bones. It is a type of bisphosphonate. Also called Aredia.

**panacea**

A cure-all.

**pancreas**

A glandular organ located in the abdomen. It makes pancreatic juices, which contain enzymes that aid in digestion, and it produces several hormones, including insulin. The pancreas is surrounded by the stomach, intestines, and other organs.

**pancreatectomy**

Surgery to remove all or part of the pancreas. In a total pancreatectomy, part of the stomach, part of the small intestine, the common bile duct, gallbladder, spleen, and nearby lymph nodes also are removed.

## **pancreatic**

Having to do with the pancreas.

## **pancreatic cancer**

A disease in which malignant (cancer) cells are found in the tissues of the pancreas. Also called exocrine cancer.

## **pancreatic duct**

Part of a system of ducts in the pancreas. Pancreatic juices containing enzymes are released into these ducts and flow into the small intestine.

## **pancreatic endocrine cancer**

A rare cancer that forms in islet cells (hormone-making cells) of the pancreas. Islet cells make several different hormones that affect body functions, including controlling the amount of glucose (sugar) in the blood and helping digest food in the stomach. Functional pancreatic endocrine cancers make extra amounts of these hormones, which can cause symptoms. Nonfunctional pancreatic endocrine cancers do not make extra amounts of hormones, but they may cause symptoms as they grow and spread. Also called islet cell carcinoma.

## **pancreatic endocrine tumor**

A tumor that forms in islet cells (hormone-making cells) of the pancreas. Pancreatic endocrine tumors may be benign (not cancer) or malignant (cancer). Islet cells make several different hormones that affect body functions, including controlling the amount of glucose (sugar) in the blood and helping digest food in the stomach. Functional pancreatic endocrine tumors make extra amounts of these hormones, which can cause symptoms. Nonfunctional pancreatic endocrine tumors do not make extra amounts of hormones, but they may cause symptoms as they grow and spread. Also called islet cell tumor and pancreatic neuroendocrine tumor.

## **pancreatic enzyme**

A protein secreted by the pancreas that aids in the digestion of food.

## **pancreatic function test**

A test used to measure the ability of the pancreas to respond to a hormone called secretin. Secretin causes the pancreas, liver, and stomach to release substances that help digest food. During a pancreatic function test, a tube is inserted through the nose or throat into the stomach and small intestine. Secretin is given to the patient by injection into a vein. After a certain amount of time, samples of fluid are taken from the small intestine through the tube and sent to a lab to test for a response. A pancreatic function test may be used to help diagnose problems that affect the pancreas, such as pancreatitis, cystic fibrosis, and a type of pancreatic tumor called a gastrinoma. Also called secretin stimulation test.

## **pancreatic insulin-producing tumor**

An abnormal mass that grows in the beta cells of the pancreas that make insulin. Pancreatic insulin-producing tumors are usually benign (not cancer). They secrete insulin and are the most common cause of low blood sugar caused by having too much insulin in the body. Also called beta cell neoplasm, beta cell tumor of the pancreas, and insulinoma.



### **pancreatic juice**

Fluid made by the pancreas. Pancreatic juices contain proteins called enzymes that aid in digestion.

### **pancreatic neuroendocrine tumor**

A tumor that forms in islet cells (hormone-making cells) of the pancreas. Pancreatic neuroendocrine tumors may be benign (not cancer) or malignant (cancer). Islet cells make several different hormones that affect body functions, including controlling the amount of glucose (sugar) in the blood and helping digest food in the stomach. Functional pancreatic neuroendocrine tumors make extra amounts of these hormones, which can cause symptoms. Nonfunctional pancreatic neuroendocrine tumors do not make extra amounts of hormones, but they may cause symptoms as they grow and spread. Also called islet cell tumor and pancreatic endocrine tumor.

### **pancreatic polypeptide**

A small protein made by the pancreas that helps control the release of other substances made by the pancreas. The amount of pancreatic polypeptide in the blood increases after a person eats. It may also increase with age, and in certain diseases, such as diabetes and pancreatic cancer. Also called PP.

### **pancreatic tumor**

A tumor that forms in the cells of the pancreas. The two main types of pancreatic tumors are pancreatic exocrine tumors and pancreatic neuroendocrine tumors. Most pancreatic cancers are exocrine tumors, which form in cells that make enzymes to help the body digest food. Pancreatic neuroendocrine tumors form in neuroendocrine pancreas cells (such as islet cells). These cells make hormones that help control sugar levels in the blood. Pancreatic neuroendocrine tumors may be benign (not cancer) or malignant (cancer). They are much less common than pancreatic exocrine tumors and have a better prognosis.

### **pancreatitis**

Inflammation of the pancreas. Chronic pancreatitis may cause diabetes and problems with digestion. Pain is the primary symptom.

### **pancreatoduodenectomy**

A type of surgery used to treat pancreatic cancer. The head of the pancreas, the duodenum, a portion of the stomach, and other nearby tissues are removed. Also called Whipple procedure.

### **pancytopenia**

A condition in which there is a lower-than-normal number of red and white blood cells and platelets in the blood. Pancytopenia occurs when there is a problem with the blood-forming stem cells in the bone marrow. Signs and symptoms include fatigue, weakness, dizziness, trouble breathing, fast heartbeat, fever, pale skin, purple or red spots on the skin, rash, easy bruising, and abnormal bleeding. Pancytopenia may be caused by certain autoimmune, bone marrow, or genetic disorders. It may also be caused by infection, poor nutrition, pregnancy, cancer treatment (such as chemotherapy or radiation therapy), or exposure to certain toxins, chemicals, or medicines.

### **panhypopituitarism**

A rare condition in which the pituitary gland stops making most or all hormones. Pituitary hormones help control the way many parts of the body work. Symptoms of the condition depend on the hormones that are missing. They include growth

problems (in children), obesity (in adults), hair loss, slow heart rate, low blood sugar, low blood pressure, fatigue, and problems with reproduction. This condition may be caused by a tumor on or near the pituitary gland, infection, stroke, injury, surgery, or radiation therapy. It may also be inherited. Also called PHP.

### **panic**

Sudden extreme anxiety or fear that may cause irrational thoughts or actions. Panic may include rapid heart rate, flushing (a hot, red face), sweating, and trouble breathing.

### **panic disorder**

A type of anxiety disorder in which a person has repeated panic attacks when there is no actual danger. Panic attacks are sudden periods of intense anxiety or fear that may cause irrational thoughts or actions. During a panic attack, a person may experience chest pain, trouble breathing, a fast heartbeat, sweating, shaking, dizziness, and feelings of impending doom or being out of control. Panic attacks may last for several minutes or longer. People with a panic disorder often worry that the panic attacks will happen again and try to avoid places or situations in which they have occurred.

### **panitumumab**

A drug used alone or with other drugs to treat certain types of colorectal cancer that have spread to other parts of the body. It is used in patients whose cancer has not already been treated or whose cancer got worse after treatment with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Panitumumab binds to a protein called epidermal growth factor receptor (EGFR), which is found on some normal cells and some types of cancer cells. Blocking this protein may help keep cancer cells from growing. Panitumumab is a type of monoclonal antibody. Also called ABX-EGF and Vectibix.

### **pantothenic acid**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Pantothenic acid helps some enzymes use foods and make many substances used in the body and protects cells against damage from peroxides. It is found in almost all plant and animal foods. Pantothenic acid is water-soluble (can dissolve in water) and must be taken in every day. Also called vitamin B5.

### **papillary dermis**

The thin top layer of the dermis (the inner layer of the skin). The papillary dermis has connective tissue and blood vessels that give nutrients to the epidermis (the outer layer of the skin) and that help control the temperature of the skin.

### **papillary intralymphatic angioendothelioma**

A rare, slow-growing tumor of blood vessels that forms in or under the skin anywhere on the body. Papillary intralymphatic angioendotheliomas may appear as firm, raised, purplish bumps, which may be small or large. They usually do not spread to other parts of the body. Papillary intralymphatic angioendotheliomas can occur in children and adults. They are a type of vascular tumor. Also called Dabska tumor.

### **papillary kidney cancer**

A type of kidney cancer that forms in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove

extra fluid and waste as urine. Most papillary tumors look like long, thin finger-like growths under a microscope. There are two types of papillary kidney cancer: type 1 and type 2. Type 1 tends to grow slowly and spread to other parts of the body less often than type 2. Patients with a genetic disorder called hereditary papillary renal cancer have an increased risk of type 1 papillary kidney cancer. Patients with a genetic disorder called hereditary leiomyomatosis and renal cell cancer have an increased risk of type 2 papillary kidney cancer. Also called papillary renal cell carcinoma and PRCC.

#### **papillary renal cell carcinoma**

A type of kidney cancer that forms in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. Most papillary tumors look like long, thin finger-like growths under a microscope. There are two types of papillary renal cell carcinoma: type 1 and type 2. Type 1 tends to grow slowly and spread to other parts of the body less often than type 2. Patients with a genetic disorder called hereditary papillary renal cancer have an increased risk of type 1 papillary renal cell carcinoma. Patients with a genetic disorder called hereditary leiomyomatosis and renal cell cancer have an increased risk of type 2 papillary renal cell carcinoma. Also called papillary kidney cancer and PRCC.

#### **papillary serous carcinoma**

An aggressive cancer that usually affects the uterus/endometrium, peritoneum, or ovary.

#### **papillary thyroid cancer**

Cancer that forms in follicular cells in the thyroid and grows in small finger-like shapes. It grows slowly, is more common in women than in men, and often occurs before age 45. It is the most common type of thyroid cancer.

#### **papillary tumor**

A tumor that looks like long, thin “finger-like” growths. These tumors grow from tissue that lines the inside of an organ. Papillary tumors may be benign (not cancer) or malignant (cancer). Papillary tumors occur most often in the bladder, thyroid, and breast, but they may occur in other parts of the body as well.

#### **papillary-reticular dermal interface**

The layer of the skin between the papillary dermis (the thin top layer of the dermis) and the reticular dermis (the thick bottom layer of the dermis). The dermis is the layer of skin below the epidermis (the outer layer of the skin).

#### **papilledema**

Swelling around the optic disk, the area where the optic nerve (the nerve that carries messages from the eye to the brain) enters the eyeball. Papilledema occurs when increased brain pressure caused by tumors or other problems results in swelling of the optic nerve.

#### **papule**

A small, solid, raised bump on the skin that has a border with edges that are easy to see. Papules may be red, purple, brown, or pink.

#### **para-aminobenzoic acid**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Bacteria that live in the intestines need para-aminobenzoic acid to survive. Para-aminobenzoic acid is found in grains and

foods from animals. It is being studied as a radiosensitizer (a substance that makes tumor cells more sensitive to radiation therapy) and in the treatment of certain skin disorders. Also called aminobenzoic acid and PABA.

### **paracentesis**

A procedure in which a thin needle or tube is put into the abdomen to remove fluid from the peritoneal cavity (the space within the abdomen that contains the intestines, the stomach, and the liver).

### **paraganglia**

A collection of cells that came from embryonic nervous tissue, and are found near the adrenal glands and some blood vessels and nerves. Most paraganglia secrete epinephrine and norepinephrine.

### **paraganglioma**

A rare, usually benign tumor that develops from cells of the paraganglia. Paraganglia are a collection of cells that came from embryonic nervous tissue, and are found near the adrenal glands and some blood vessels and nerves. Paragangliomas that develop in the adrenal gland are called pheochromocytomas. Those that develop outside of the adrenal glands near blood vessels or nerves are called glomus tumors or chemodectomas.

### **parageusia**

A bad taste in the mouth. Also called dysgeusia.

### **paralysis**

Loss of ability to move all or part of the body.

### **paralytic ileus**

A condition in which the muscles of the intestines do not allow food to pass through, resulting in a blocked intestine. Paralytic ileus may be caused by surgery, inflammation, and certain drugs.

### **parametrium**

The fat and connective tissue that surrounds the uterus. The parametrium helps connect the uterus to other tissues in the pelvis.

### **paramyxovirus**

A type of virus that has hemagglutinin-neuraminidase proteins in the outer coat and RNA as the genetic material. Measles (rubeola) virus, mumps virus, and Newcastle disease virus are paramyxoviruses.

### **paranasal sinus**

One of many small hollow spaces in the bones around the nose. Paranasal sinuses are named after the bones that contain them: frontal (the lower forehead), maxillary (cheekbones), ethmoid (beside the upper nose), and sphenoid (behind the nose). The paranasal sinuses open into the nasal cavity (space inside the nose) and are lined with cells that make mucus to keep the nose from drying out during breathing.

### **paranasal sinus and nasal cavity cancer**

Cancer that forms in tissues of the paranasal sinuses (small hollow spaces in the bones around the nose) or nasal cavity (the inside of the nose). The most common type of paranasal sinus and nasal cavity cancer is squamous cell carcinoma (cancer that begins in flat cells lining these tissues and cavities).

**paraneoplastic syndrome**

A group of symptoms that may develop when substances released by some cancer cells disrupt the normal function of surrounding cells and tissue.

**paranoia**

A mental disorder in which a person has an extreme fear and distrust of others. A paranoid person may have delusions that people are trying to harm him or her.

**parapharyngeal space**

A triangular area near the pharynx (throat), between the base of the skull and the hyoid bone (the bone under the tongue). The parapharyngeal space is in the deep tissues of the neck and contains mostly fat, as well as blood vessels (including the carotid artery and jugular vein), nerves, lymph nodes, and parts of the salivary gland.

**parasite**

An animal or plant that gets nutrients by living on or in an organism of another species. A complete parasite gets all of its nutrients from the host organism, but a semi-parasite gets only some of its nutrients from the host.

**parasitic**

Having to do with or being a parasite (an animal or plant that gets nutrients by living on or in an organism of another species).

**parasomnia**

An abnormal disruption of sleep, such as sleep walking, sleep talking, nightmares, bedwetting, sleep apnea (problems with breathing that cause loud snoring), or nighttime seizures.

**parasympathetic nervous system**

The part of the nervous system that slows the heart, dilates blood vessels, decreases pupil size, increases digestive juices, and relaxes muscles in the gastrointestinal tract.

**parathormone**

A substance made by the parathyroid gland that helps the body store and use calcium. A higher-than-normal amount of parathormone causes high levels of calcium in the blood and may be a sign of disease. Also called parathyrin, parathyroid hormone, and PTH.

**parathyrin**

A substance made by the parathyroid gland that helps the body store and use calcium. A higher-than-normal amount of parathyrin causes high levels of calcium in the blood and may be a sign of disease. Also called parathormone, parathyroid hormone, and PTH.

**parathyroid cancer**

A rare cancer that forms in tissues of one or more of the parathyroid glands (four pea-sized glands in the neck that make parathyroid hormone, which helps the body store and use calcium).

**parathyroid gland**

One of four pea-sized glands found on the surface of the thyroid. The parathyroid hormone made by these glands increases the calcium level in the blood.

### **parathyroid hormone**

A substance made by the parathyroid gland that helps the body store and use calcium. A higher-than-normal amount of parathyroid hormone causes high levels of calcium in the blood and may be a sign of disease. Also called parathormone, parathyrin, and PTH.

### **parathyroid hyperplasia**

A condition in which the parathyroid glands (four pea-sized glands found in the neck) are larger than normal. This condition may cause the glands to make too much parathyroid hormone, which can lead to a loss of calcium from the bones, too much calcium in the blood, broken bones, and other health problems. Parathyroid hyperplasia may be caused by chronic kidney disease, low vitamin D levels, and other medical conditions. It may also occur in people who have certain inherited disorders, including multiple endocrine neoplasia (MEN) syndrome and familial isolated hyperparathyroidism.

### **parathyroidectomy**

Surgery to remove one or more parathyroid glands (four pea-sized organs found on the thyroid).

### **parenchyma**

The essential or functional elements of an organ.

### **parenteral nutrition**

A form of nutritional support that is given directly into the bloodstream through a catheter placed into a vein. Parenteral nutrition bypasses the digestive system and may be given when a person is not able to eat or drink by mouth or has a disease or condition that affects their ability to absorb nutrients through the digestive system. There are two types of parenteral nutrition: partial parenteral nutrition (PPN) and total parenteral nutrition (TPN). PPN is supplemental nutrition that is given when a person cannot get enough calories or the right amount of nutrients that their body needs from the food they are eating. TPN is complete nutrition that provides all the calories, proteins, carbohydrates, fats, vitamins, and minerals that a person needs when they cannot digest food. Also called hyperalimentation.

### **paresthesia**

An abnormal touch sensation, such as burning or prickling, that occurs without an outside stimulus.

### **paricalcitol**

A substance that is being used to treat overactive parathyroid glands in patients with kidney failure. It is also being studied in the treatment of cancer. Paricalcitol belongs to the family of drugs called vitamin D analogs.

### **parietal cell vagotomy**

Surgery to cut the parts of the vagus nerve that cause gastric acid to be made in the stomach. It is done to treat stomach ulcers or other conditions in which the stomach makes too much acid.

### **parietal pericardium**

The outer layer of the pericardium, which is a thin sac of tissue that surrounds the heart.



### **parietal peritoneum**

The layers of tissue that line the abdominal wall and the pelvic cavity.

### **parotid gland cancer**

Cancer that forms in a parotid gland, the largest of the salivary glands, which make saliva and release it into the mouth. There are 2 parotid glands, one in front of and just below each ear. Most salivary gland tumors begin in parotid glands.

### **parotidectomy**

Surgery to remove all or part of the parotid gland (a large salivary gland located in front of and just below the ear). In a radical parotidectomy, the entire gland is removed.

### **paroxetine hydrochloride**

A drug used to treat depression and anxiety disorders. It is a type of selective serotonin reuptake inhibitor (SSRI). Also called Paxil.

### **paroxysmal nocturnal hemoglobinuria**

A rare disorder in which red blood cells are easily destroyed by certain immune system proteins. Symptoms include blood clots, and red or brownish urine in the morning. Aplastic anemia (decreased production of blood cells) may lead to PNH, and people with PNH are at increased risk of acute myelogenous leukemia. Also called PNH.

### **partial cystectomy**

Surgery to remove part of the bladder (the organ that holds urine). Also called segmental cystectomy.

### **partial hysterectomy**

Surgery to remove the uterus, but not the cervix. Also called subtotal hysterectomy and supracervical hysterectomy.

### **partial laryngectomy**

An operation to remove part of the larynx (voice box).

### **partial mastectomy**

Surgery to remove cancer or other abnormal tissue from the breast and some normal tissue around it, but not the breast itself. Some lymph nodes under the arm may be removed for biopsy. Part of the chest wall lining may also be removed if the cancer is near it. Also called breast-conserving surgery, breast-sparing surgery, lumpectomy, quadrantectomy, and segmental mastectomy.

### **partial nephrectomy**

Surgery to remove part of one kidney or a kidney tumor, but not an entire kidney.

### **partial oophorectomy**

Surgery to remove part of one ovary or part of both ovaries.

### **partial parenteral nutrition**

A form of short-term nutritional support that is given directly into the bloodstream through a catheter placed into a vein. Partial parenteral nutrition bypasses the digestive system and may be given when a person has a disease or condition that affects their ability to absorb nutrients through the digestive system. Partial parenteral nutrition is supplemental nutrition that is given when a person cannot

get enough calories or the right amount of nutrients that their body needs from the food they are eating. Also called PPN.

### **partial radical vulvectomy**

Surgery to remove most, but not all, of the vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina). The clitoris may not be removed. Sometimes lymph nodes in the groin area are also removed. Also called modified radical vulvectomy.

### **partial remission**

A decrease in the size of a tumor, or in the extent of cancer in the body, in response to treatment. Also called partial response.

### **partial response**

A decrease in the size of a tumor, or in the extent of cancer in the body, in response to treatment. Also called partial remission.

### **partial vulvectomy**

Surgery to remove an affected area of the vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina) along with a small amount of surrounding normal tissue.

### **partial-breast irradiation**

A type of radiation therapy given only to the part of the breast that has cancer in it. Partial-breast irradiation gives a higher dose over a shorter time than is given in standard whole-breast radiation therapy. Partial-breast irradiation may be given using internal or external sources of radiation. Also called accelerated partial-breast irradiation.

### **passive antibody therapy**

Treatment with injections of antibodies made in another animal or in the laboratory.

### **passive immunity**

A type of immunity that occurs when a person is given antibodies rather than making them through his or her own immune system. For example, passive immunity occurs when a baby receives a mother's antibodies through the placenta or breast milk. It can also occur when a person receives an injection of antibodies to protect against the effects of a toxin such as snake venom. Passive immunity provides immediate protection but only lasts a few weeks or months.

### **pastoral counselor**

A person who is trained to give spiritual and mental health advice.

### **patchouli**

A bushy herb that is a member of the mint family. A strong-smelling oil taken from the leaves is used in perfumes, incense, detergents, and hair conditioners. It has been used in some cultures to prevent disease. The scientific name is *Pogostemon cablin*.

### **paternal**

Having to do with the father, coming from the father, or related through the father.

### **pathogenic variant**

A change in the DNA sequence of a gene that causes a person to have or be at risk of developing a certain genetic disorder or disease, such as cancer. Pathogenic variants can be inherited from a parent or occur during a person's lifetime. Knowing if a person has a pathogenic variant may help prevent, diagnose, and treat diseases, such as cancer. Not everyone who has a pathogenic variant will develop the disease. Also called deleterious mutation, disease-causing mutation, predisposing mutation, and susceptibility gene mutation.

### **pathognomonic**

Having to do with a sign or symptom that is specific to a certain disease.

### **pathologic complete remission**

The lack of all signs of cancer in tissue samples removed during surgery or biopsy after treatment with radiation or chemotherapy. To find out if there is a pathologic complete remission, a pathologist checks the tissue samples under a microscope to see if there are still cancer cells left after the anticancer treatment. Knowing if the cancer is in pathologic complete remission may help show how well treatment is working or if the cancer will come back. Also called pathologic complete response.

### **pathologic complete response**

The lack of all signs of cancer in tissue samples removed during surgery or biopsy after treatment with radiation or chemotherapy. To find out if there is a pathologic complete response, a pathologist checks the tissue samples under a microscope to see if there are still cancer cells left after the anticancer treatment. Knowing if the cancer is in pathologic complete response may help show how well treatment is working or if the cancer will come back. Also called pathologic complete remission.

### **pathologic diagnosis**

Identifying a disease or condition by examining cells and tissues under a microscope. In cancer, a pathologic diagnosis usually includes information about the cancer type, grade (how abnormal the cancer cells look under a microscope and how quickly the cancer cells are likely to grow and spread), and stage (the extent of cancer in the body). It may also include information about any special features of the cancer, such as the presence of hormone receptors or other tumor markers.

### **pathologic fracture**

A broken bone caused by disease, often by the spread of cancer to the bone.

### **pathological stage**

The stage of cancer (amount or spread of cancer in the body) that is based on how different from normal the cells in samples of tissue look under a microscope.

### **pathological staging**

A method used to find out the stage of cancer (amount or spread of cancer in the body) by removing tissue samples during surgery or a biopsy. The pathological stage is based on how different from normal the cells in the samples look under a microscope.

**pathologist**

A doctor who has special training in identifying diseases by studying cells and tissues under a microscope.

**pathology report**

The description of cells and tissues made by a pathologist based on microscopic evidence, and sometimes used to make a diagnosis of a disease.

**patient advocate**

A person who helps guide a patient through the health care system. This includes help going through the screening, diagnosis, treatment, and follow-up of a medical condition, such as cancer. A patient advocate helps patients communicate with their health care providers so they get the information they need to make decisions about their health care. Patient advocates may also help patients set up appointments for doctor visits and medical tests and get financial, legal, and social support. They may also work with insurance companies, employers, case managers, lawyers, and others who may have an effect on a patient's health care needs. Also called patient navigator.

**patient care costs**

The costs related to the treatment of a disease, such as cancer. These costs include doctor visits, hospital stays, laboratory tests, imaging tests, and standard treatments. Patient care costs may also include routine care given to a person participating in a clinical trial. These costs are often covered, at least in part, by health insurance.

**patient navigator**

A person who helps guide a patient through the health care system. This includes help going through the screening, diagnosis, treatment, and follow-up of a medical condition, such as cancer. A patient navigator helps patients communicate with their health care providers so they get the information they need to make decisions about their health care. Patient navigators may also help patients set up appointments for doctor visits and medical tests and get financial, legal, and social support. They may also work with insurance companies, employers, case managers, lawyers, and others who may have an effect on a patient's health care needs. Also called patient advocate.

**patient-controlled analgesia**

A method of pain relief in which the patient controls the amount of pain medicine that is used. When pain relief is needed, the person can receive a preset dose of pain medicine by pressing a button on a computerized pump that is connected to a small tube in the body. Also called PCA.

**patient-derived xenograft**

Tumor tissue that has been taken from a patient and implanted into mice for research purposes. Cancer drugs and other types of treatment may be tested on xenografts to see how well they work before they are given to the patient. Patient-derived xenografts may be used to help plan treatment and learn what the best treatment may be for a patient. They are also being used in the development of new cancer drugs. Also called PDX.

**patient-reported outcome**

Information about a patient's health that comes directly from the patient. Examples of patient-reported outcomes include a patient's description of their symptoms, their satisfaction with care, and how a disease or treatment affects

their physical, mental, emotional, spiritual, and social well-being. In clinical trials, patient-reported outcomes may provide information about the side effects of the new treatment being studied. The use of patient-reported outcomes may help plan the best treatment and improve quality of care. Also called PRO.

### **pazopanib hydrochloride**

A drug used to treat adults with advanced renal cell carcinoma (a type of kidney cancer) or advanced soft tissue sarcoma that has already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Pazopanib hydrochloride blocks certain proteins, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called GW786034 and Votrient.

### **peak exposure**

The largest amount of a substance or radiation that a person is exposed to at one time. Peak exposure to a harmful substance or radiation may increase the risk of certain diseases or conditions.

### **peau d'orange**

A dimpled condition of the skin of the breast, resembling the skin of an orange, sometimes found in inflammatory breast cancer.

### **pediatric**

Having to do with children.

### **pediatric cancer**

A term used to describe cancers that occur between birth and 14 years of age. Pediatric cancers are very rare and may differ from adult cancers in the way they grow and spread, how they are treated, and how they respond to treatment. The most common types of pediatric cancer are leukemia, brain and spinal cord tumors, lymphoma, neuroblastoma, Wilms tumor (a type of kidney cancer), retinoblastoma, and cancers of the bone and soft tissue. Also called childhood cancer.

### **pediatric gastroenterologist**

A doctor who has special training in diagnosing and treating disorders of the gastrointestinal (digestive) system in children. These disorders include problems in the stomach, intestines, liver, gallbladder, pancreas, rectum, and anus. Pediatric gastroenterologists also treat children with feeding, swallowing, and nutritional problems, such as malnutrition, failure to thrive, and obesity.

### **pediatric hematologist**

A doctor who has special training in diagnosing and treating blood disorders in children.

### **pediatric intensivist**

A doctor who has special training in diagnosing and treating children who are seriously ill or injured. Pediatric intensivists use special procedures, treatments, and medicines to care for children who are usually in a pediatric intensive care unit of a hospital. Pediatric intensivists coordinate the overall care of these children, including treatment given by other specialists.

**pediatric nurse specialist**

A registered nurse with an advanced degree in nursing who specializes in the care of children.

**pediatric oncologist**

A doctor who has special training in diagnosing and treating children with cancer.

**pediatric polymeric enteral nutrition formula**

A nutritional drink that helps children who cannot get everything they need in their diet from foods and other drinks. It may be given through a small tube that is inserted through the nose into the stomach or the small intestine. It may also be given through a tube that is put into the stomach or the intestinal tract through an opening made on the outside of the abdomen. Also called PediaSure.

**pediatric surgeon**

A surgeon who has special training in treating children. A surgeon removes or repairs a part of the body by operating on the patient.

**pediatrician**

A doctor who has special training in preventing, diagnosing, and treating diseases and injuries in children. Pediatricians also help manage other problems that affect children, such as developmental disorders and behavioral, emotional, and social problems.

**pedicle flap**

A type of surgery used to rebuild the shape of the breast after a mastectomy. Tissue, including skin, fat, and muscle, is moved from one area of the body, such as the back or abdomen, to the chest to form a new breast mound. The tissue flap, along with its blood vessels, stays connected to the body and is passed through a tunnel under the skin to the chest. A pedicle flap is a type of breast reconstruction.

**pedigree**

A diagram that shows relationships among family members. In medicine, a pedigree may also show the pattern of certain genes or diseases within a family.

**pedunculated**

In the body, a structure that has a peduncle (a stalk or stem) or is attached to another structure by a peduncle.

**peer review process**

The process by which original articles and grants written by researchers are evaluated for technical and scientific quality and correctness by other experts in the same field.

**peer-reviewed scientific journal**

A publication that contains original articles that have been written by scientists and evaluated for technical and scientific quality and correctness by other experts in the same field.

**pegaspargase**

A drug used with other drugs to treat adults and children with acute lymphoblastic leukemia. It is used in patients whose cancer has not already been treated or who cannot be treated with asparaginase. It is also being studied in the treatment of other types of cancer. Pegaspargase is made up of the enzyme



L-asparaginase that is linked to a substance called PEG, which makes the drug stay in the body longer. L-asparaginase comes from the bacterium *E. coli* and breaks down the amino acid asparagine. This may stop the growth of cancer cells that need asparagine to grow. Pegaspargase is a type of protein synthesis inhibitor. Also called Oncaspar and PEG-asparaginase.

### **pegfilgrastim**

A drug that is a form of filgrastim and is used to prevent infection in adults and children with neutropenia (a lower-than-normal number of white blood cells) caused by some types of chemotherapy. Pegfilgrastim helps the bone marrow make more white blood cells and is able to stay in the body longer than filgrastim, so it doesn't need to be given as often. It is a type of colony-stimulating factor. Also called filgrastim-SD/01, Fulphila, Neulasta, Nyvepria, Udenyca, and Ziextenzo.

### **peginterferon alfa-2a**

A drug used to treat hepatitis C infections. It is also being studied in the treatment and prevention of cancer. It is a cytokine that is modified in the laboratory. It is a type of biological response modifier. Also called Pegasys.

### **peginterferon alfa-2b**

A drug that is no longer available in the United States that was used under the brand name Sylatron to prevent melanoma from coming back after it has been removed by surgery and under the brand name PEG-Intron to treat chronic hepatitis C. Peginterferon alfa-2b is a form of interferon alfa (a substance normally made by cells in the immune system) that is made in the laboratory and linked to a substance called PEG, which makes the drug stay in the body longer. It is a type of cytokine and a type of immunomodulating agent.

### **pegylated arginine deiminase**

A substance being studied in the treatment of melanoma, liver cancer, and other types of cancer. It breaks down the amino acid arginine and may block the growth of cancer cells that need arginine to grow. It is a type of iminohydrolase. Also called ADI-PEG 20.

### **pelargonium**

A type of plant that is native to southern Africa and has white, pink, purple, or red flowers and 3- to 5-lobed leaves. An essential oil that smells like roses is taken from the leaves and used in perfume, in mosquito repellants, and in aromatherapy to treat skin problems and to reduce stress. The scientific name is *Pelargonium graveolens*. Also called geranium.

### **peldesine**

A substance that is being studied for the treatment of cancer.

### **pelitinib**

A substance being studied in the treatment of some types of cancer. It blocks the action of certain proteins that are part of the epidermal growth factor receptor (EGFR) family of proteins. These proteins may be found in increased amounts on the surface of some types of cancer cells. Blocking the action of these proteins may stop cancer cells from growing and may kill cancer cells. Pelitinib is a type of EGFR inhibitor. Also called EKB-569.

## **pelvic**

Having to do with the pelvis. The pelvis is the area of the body below the abdomen that is located between the hip bones and contains the bladder and rectum. In females, it also contains the vagina, cervix, uterus, fallopian tubes, and ovaries. In males, it also contains the prostate and seminal vesicles.

## **pelvic exam**

A physical exam of the vulva, vagina, cervix, uterus, fallopian tubes, ovaries, and rectum. First, the vulva is checked for redness, swelling, sores, or other abnormalities. A speculum is then inserted into the vagina to widen it so the vagina and cervix can be checked for signs of disease. Cell samples may be taken for a Pap test or HPV test to screen for cervical cancer. The health care provider then inserts one or two lubricated, gloved fingers of one hand into the vagina and presses on the lower abdomen with the other hand to feel for lumps and check the size, shape, and position of the uterus and ovaries. The rectum may also be checked for lumps or abnormal areas. Also called internal exam.

## **pelvic exenteration**

Surgery to remove the lower colon, rectum, and bladder, and create stomata (openings) through which urine and stool are passed out of the body. In women, the cervix, vagina, ovaries, and nearby lymph nodes are also removed.

## **pelvic inflammatory disease**

A condition in which the female reproductive organs are inflamed. It may affect the uterus, fallopian tubes, ovaries, and certain ligaments. Pelvic inflammatory disease is usually caused by a bacterial infection. It may cause infertility and an increased risk of an ectopic pregnancy (pregnancy in the fallopian tubes). Also called PID.

## **pelvic lymph node**

A lymph node in the pelvis. The pelvis is the area of the body below the abdomen that contains the hip bones, bladder, rectum, and male or female reproductive organs. Pelvic lymph nodes drain and filter lymph from the pelvis and nearby areas. In cancer, pelvic lymph nodes that are near a tumor may be removed by surgery to check for signs that cancer has spread.

## **pelvic lymphadenectomy**

Surgery to remove lymph nodes in the pelvis for examination under a microscope to see if they contain cancer.

## **pelvic wall**

The muscles and ligaments that line the part of the body between the hips.

## **pelvis**

The bones between the lower abdomen and upper thighs that connect the spine to the legs. The pelvis supports upper body weight, aids balance and walking, and protects the bladder, reproductive organs, colon, and rectum. The pelvis can also describe the pelvic region, or the area of the body below the abdomen that contains the hip bones, bladder, and rectum. In females, it also contains the vagina, cervix, uterus, fallopian tubes, and ovaries. In males, it also contains the prostate and seminal vesicles.

## **pembrolizumab**

A drug that binds to the protein PD-1 to help immune cells kill cancer cells better and is used to treat many different types of cancer. These include cancers that

express the protein PD-L1, that have certain mutations (changes) in genes involved in DNA repair, or that have a high number of tumor mutations. Pembrolizumab is used alone or with other drugs to treat certain types of biliary tract cancer (including bile duct cancer and gallbladder cancer), breast cancer, cervical cancer, classic Hodgkin lymphoma, colorectal cancer, endometrial cancer, esophageal cancer, gastroesophageal junction cancer, head and neck squamous cell carcinoma (SCC), hepatocellular carcinoma (a type of liver cancer), non-small cell lung cancer, primary mediastinal large B-cell lymphoma, renal cell carcinoma (a type of kidney cancer), skin cancer (SCC of the skin, Merkel cell carcinoma, and melanoma), stomach cancer, urothelial carcinoma (a type of bladder or urinary tract cancer), and other solid tumors. It is also being studied in the treatment of other types of cancer. Pembrolizumab may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Keytruda.

### **pemetrexed disodium**

A drug used alone or with other drugs to treat certain types of non-small cell lung cancer and malignant pleural mesothelioma. It is also being studied in the treatment of other types of cancer. Pemetrexed disodium stops cells from using folic acid to make DNA and may kill cancer cells. It is a type of antimetabolite and a type of antifolate. Also called Alimta, LY231514, and Pemfexy.

### **pemigatinib**

A drug used to treat adults with certain types of cholangiocarcinoma (bile duct cancer), myeloid cancer, or lymphoid cancer that have certain changes in the structure of the FGFR1 gene or FGFR2 gene. It is also being studied in the treatment of other types of cancer. Pemigatinib blocks a protein called FGFR, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Pemazyre.

### **penclomedine**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called alkylating agents.

### **penectomy**

Surgery to remove part or all of the penis (an external male reproductive organ).

### **penetrance**

Describes how likely it is that a person who has a certain disease-causing mutation (change) in a gene will show signs and symptoms of the disease. Not everyone who has the mutation will develop the disease. For example, some people who have a BRCA1 or BRCA2 gene mutation will develop cancer during their lifetime, but others will not. Currently, there is no way to know which people who have a cancer-causing mutation will develop cancer. Complete penetrance means that every person who has the mutation will show signs and symptoms of the disease.

### **penicillamine**

A drug that removes copper from the body and is used to treat diseases in which there is an excess of copper. It is also being studied as a possible angiogenesis inhibitor in the treatment of brain tumors.

### **penicillin**

A drug that is used to treat infection. It belongs to the family of drugs called antibiotics.

**penile cancer**

A rare cancer that forms in the penis (an external male reproductive organ). Most penile cancers are squamous cell carcinomas (cancer that begins in flat cells lining the penis).

**penile implant**

A firm rod or inflatable device that is placed in the penis (an external male reproductive organ) during a surgical procedure. The implant makes it possible to have and keep an erection. Penile implants are used to treat erectile dysfunction or impotence.

**penis**

An external male reproductive organ. It contains a tube called the urethra, which carries semen and urine to the outside of the body.

**pentamidine isethionate**

A drug used to treat infections caused by certain microorganisms. It is also being studied in the treatment of melanoma. It prevents DNA from being copied and may kill cancer cells. It is a type of antifungal agent, a type of antiprotozoal agent, and a type of PRL phosphatase inhibitor. Also called Pentam.

**pentetic acid calcium**

A drug that protects healthy tissues from the toxic effects of anticancer drugs.

**pentosan polysulfate**

A drug used to relieve pain or discomfort associated with chronic inflammation of the bladder. It is also being evaluated for its protective effects on the gastrointestinal tract in people undergoing radiation therapy.

**pentostatin**

The active ingredient in a drug that is used to treat hairy cell leukemia and is being studied in the treatment of other types of cancer. Pentostatin blocks a protein needed for cell growth and may kill cancer cells. It is made by a bacterium. It is a type of adenosine deaminase inhibitor. Also called Nipent.

**pentoxifylline**

A drug used to prevent blood clotting and as a treatment that may help decrease weight loss in people with cancer.

**pepsin**

An enzyme made in the stomach that breaks down proteins in food during digestion. Stomach acid changes a protein called pepsinogen into pepsin.

**pepsinogen**

A substance made by cells in the stomach. Acid in the stomach changes pepsinogen to pepsin, which breaks down proteins in food during digestion.

**peptic ulcer**

A break in the lining of the lower part of the esophagus, the stomach, or the upper part of the small intestine. Peptic ulcers form when cells on the surface of the lining become inflamed and die. They are usually caused by *Helicobacter pylori* bacteria and by certain medicines, such as aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs). Peptic ulcers may be linked to cancer and other diseases.

## **peptide**

A molecule that contains two or more amino acids (the molecules that join together to form proteins). Peptides that contain many amino acids are called polypeptides or proteins.

## **peptide 946**

A piece of a protein found only on melanoma (a type of skin cancer) cells. It is being used in vaccines to help the immune system kill melanoma cells.

## **peptide receptor radionuclide therapy**

A type of radiation therapy used to treat certain types of neuroendocrine tumors. A radioactive chemical is linked to a peptide (small protein) that targets cancer cells. When this radioactive peptide is injected into the body, it binds to a specific receptor found on some cancer cells. The radioactive peptide builds up in these cells and helps kill the cancer cells without harming normal cells. Peptide receptor radionuclide therapy is a type of targeted therapy. Also called PRRT.

## **percutaneous**

Passing through the skin, as an injection or a topical medicine.

## **percutaneous endoscopic tube**

A tube inserted through the wall of the abdomen directly into the stomach. It allows air and fluid to leave the stomach and can be used to give drugs and liquids, including liquid food, to the patient. Giving food through a percutaneous endoscopic tube is a type of enteral nutrition. Also called gastrostomy tube and PEG tube.

## **percutaneous epididymal sperm aspiration**

A procedure in which a sample of sperm cells is removed from the epididymis through a small needle attached to a syringe. The epididymis is a narrow, tightly-coiled tube that is attached to each of the testicles and is where sperm cells mature and are stored. The sperm is looked at under a microscope in a laboratory, where it may be used right away to fertilize eggs or frozen for future infertility treatment. Percutaneous epididymal sperm aspiration may be useful for men who have fertility problems caused by a blockage that keeps sperm from being ejaculated. This could be caused by previous vasectomy, certain genetic conditions, infection, or other conditions. It may also be useful for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Percutaneous epididymal sperm aspiration is a type of sperm retrieval method.

## **percutaneous ethanol injection**

An injection of ethanol (alcohol) through the skin directly into a tumor to kill cancer cells. Ultrasound or a CT scan is used to guide the needle into the tumor. Also called alcohol ablation, ethanol ablation, and PEI.

## **percutaneous transhepatic biliary drainage**

A procedure to drain bile to relieve pressure in the bile ducts caused by a blockage. An x-ray of the liver and bile ducts locates the blockage of bile flow. Images made by ultrasound guide placement of a stent (tube), which remains in the liver. Bile drains through the stent into the small intestine or into a collection bag outside the body. This procedure may relieve jaundice before surgery. Also called percutaneous transhepatic cholangiodrainage and PTCD.

### **percutaneous transhepatic cholangiodrainage**

A procedure to drain bile to relieve pressure in the bile ducts caused by a blockage. An x-ray of the liver and bile ducts locates the blockage of bile flow. Images made by ultrasound guide placement of a stent (tube), which remains in the liver. Bile drains through the stent into the small intestine or into a collection bag outside the body. This procedure may relieve jaundice before surgery. Also called percutaneous transhepatic biliary drainage and PTCD.

### **percutaneous transhepatic cholangiography**

A procedure to x-ray the hepatic and common bile ducts. A contrasting agent is injected through the skin into the liver or bile duct, and the ducts are then x-rayed to find the point of obstruction. Also called PTC.

### **performance status**

A measure of how well a patient is able to perform ordinary tasks and carry out daily activities.

### **perfusion**

Bathing an organ or tissue with a fluid. In regional perfusion, a specific area of the body (usually an arm or a leg) receives high doses of anticancer drugs through a blood vessel. Such a procedure is performed to treat cancer that has not spread.

### **perfusion magnetic resonance imaging**

A special type of magnetic resonance imaging (MRI) that uses an injected dye in order to see blood flow through tissues. Also called magnetic resonance perfusion imaging.

### **periampullary cancer**

A cancer that forms near the ampulla of Vater (an enlargement of the ducts from the liver and pancreas where they join and enter the small intestine).

### **pericardial effusion**

A condition in which extra fluid collects between the heart and the pericardium (the sac around the heart). The extra fluid causes pressure on the heart. This keeps it from pumping blood normally. Lymph vessels may also be blocked, which can cause infection. Pericardial effusions may be caused by cancer or cancer treatment, infection, injury, autoimmune disorders, thyroid or kidney problems, or other conditions.

### **pericardial tamponade**

A serious condition that occurs when extra fluid or blood builds up in the space between the heart and the pericardium (the sac around the heart). The extra fluid causes pressure on the heart, which keeps it from pumping enough blood to the rest of the body. Pericardial tamponade is life-threatening and can lead to shock and organ failure if not treated right away. It may be caused by cancer, infection, chest injury, heart surgery, radiation therapy to the chest, autoimmune disease, and heart, thyroid, or kidney problems. Also called cardiac tamponade.

### **pericarditis**

A condition in which the pericardium (the sac around the heart) becomes inflamed. Pericarditis is usually caused by an infection, but it may also be caused by an autoimmune disorder or by cancer or cancer treatment (such as chemotherapy and radiation therapy). It may also be caused by heart attack, heart surgery, injury to the chest, kidney failure, and certain medicines. The most



common symptom of pericarditis is chest pain. Other signs and symptoms may include fever, cough, fast or abnormal heartbeat, trouble breathing, anxiety, fatigue, and swelling of the ankles, feet, and legs. Pericarditis is most common in men aged 20 to 50 years.

### **pericardium**

The thin, fluid-filled sac that surrounds the heart, including the top of the heart that is connected to major blood vessels, such as the aorta and vena cava. The pericardium is made up of an outer layer of connective tissue that holds the heart in place within the chest, protects it from inflammation, and acts as a barrier against infection. It also keeps the heart from stretching out and filling up with too much blood. The pericardium is also made up of two thin, inner layers of tissue that have a small amount of fluid in between them. The fluid helps keep the tissues from rubbing against each other as the heart moves within the pericardium.

### **pericytic tumor**

A type of soft tissue tumor that begins in cells that wrap around blood vessels. Pericytic tumors may be benign (not cancer) or malignant (cancer). They can occur anywhere in the body. Pericytic tumors may occur in adults or children. Also called perivascular tumor.

### **perifosine**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called alkylphospholipids.

### **perihilar bile duct cancer**

Cancer that forms in the area where the left and right hepatic ducts join just outside the liver and form the common hepatic duct. Bile ducts carry bile from the liver and gallbladder to the small intestine. Perihilar bile duct cancer is a type of extrahepatic bile duct cancer. Also called Klatskin tumor and perihilar cholangiocarcinoma.

### **perihilar cholangiocarcinoma**

Cancer that forms in the area where the left and right hepatic ducts join just outside the liver and form the common hepatic duct. Bile ducts carry bile from the liver and gallbladder to the small intestine. Perihilar cholangiocarcinoma is a type of extrahepatic bile duct cancer. Also called Klatskin tumor and perihilar bile duct cancer.

### **perillyl alcohol**

A substance that is being studied in the prevention of cancer. It belongs to the family of plant drugs called monoterpenes.

### **perimenopausal**

Describes the time in a woman's life when menstrual periods become irregular as she approaches menopause. This is usually three to five years before menopause and is often marked by many of the symptoms of menopause, including hot flashes, mood swings, night sweats, vaginal dryness, trouble concentrating, and infertility.

### **perineal colostomy**

An opening made surgically to allow the colon to exit the body through the perineum (the area of the body between the anus and the vulva in females, and

between the anus and the scrotum in males). A colostomy provides a new path for waste material to leave the body after part of the colon has been removed.

### **perineum**

The area of the body between the anus and the vulva in females, and between the anus and the scrotum in males.

### **perineural**

Around a nerve or group of nerves.

### **periodic neutropenia**

A chronic condition that affects neutrophils (a type of white blood cell). In periodic neutropenia, the number of neutrophils in the blood goes in cycles from normal to low and back to normal again. Symptoms include fever, inflamed mucous membranes in the mouth, and infections. Also called cyclic neutropenia.

### **perioperative**

Around the time of surgery. This usually lasts from the time the patient goes into the hospital or doctor's office for surgery until the time the patient goes home.

### **peripheral T-cell lymphoma**

One of a group of aggressive (fast-growing) non-Hodgkin lymphomas that begin in mature T lymphocytes (T cells that have matured in the thymus gland and gone to other lymphatic sites in the body, including lymph nodes, bone marrow, and spleen). Also called mature T-cell lymphoma.

### **peripheral blood**

Blood circulating throughout the body.

### **peripheral blood lymphocyte therapy**

A treatment for Epstein-Barr virus infection or overgrowth of white blood cells (lymphocytes) after an organ or bone marrow transplant. Specific lymphocytes from a sibling donor are infused into the patient to try and reverse these conditions.

### **peripheral blood smear**

A procedure in which a sample of blood is viewed under a microscope to count different circulating blood cells (red blood cells, white blood cells, platelets, etc.) and see whether the cells look normal.

### **peripheral blood stem cell transplant**

A procedure in which a patient receives healthy blood-forming cells (stem cells) to replace their own stem cells that have been destroyed by disease or by the radiation or high doses of anticancer drugs that are given as part of the procedure. The healthy stem cells may come from the blood of the patient or a donor. A peripheral blood stem cell transplant may be autologous (using a patient's own stem cells that were collected and saved before treatment), allogeneic (using stem cells donated by someone who is not an identical twin), or syngeneic (using stem cells donated by an identical twin). Also called PBSCT and peripheral stem cell support.

### **peripheral neuropathy**

A nerve problem that causes pain, numbness, tingling, swelling, or muscle weakness in different parts of the body. It usually begins in the hands or feet and gets worse over time. Peripheral neuropathy may be caused by cancer or cancer

treatment, such as chemotherapy. It may also be caused by physical injury, infection, toxic substances, or conditions such as diabetes, kidney failure, or malnutrition. Also called neuropathy.

### **peripheral primitive neuroectodermal tumor**

A type of cancer that forms in bone or soft tissue. Also called Ewing sarcoma and pPNET.

### **peripheral stem cell**

An immature cell found circulating in the bloodstream. New blood cells develop from peripheral stem cells.

### **peripheral stem cell support**

A procedure in which a patient receives healthy blood-forming cells (stem cells) to replace their own stem cells that have been destroyed by disease or by the radiation or high doses of anticancer drugs that are given as part of the procedure. The healthy stem cells may come from the blood of the patient or a donor. A peripheral stem cell support may be autologous (using a patient's own stem cells that were collected and saved before treatment), allogeneic (using stem cells donated by someone who is not an identical twin), or syngeneic (using stem cells donated by an identical twin). Also called PBSCT and peripheral blood stem cell transplant.

### **peripheral venous catheter**

A device used to draw blood and give treatments, including intravenous fluids, drugs, or blood transfusions. A thin, flexible tube is inserted into a vein, usually in the back of the hand, the lower part of the arm, or the foot. A needle is inserted into a port to draw blood or give fluids.

### **peripherally inserted central catheter**

A device used to draw blood and give treatments, including intravenous fluids, drugs, or blood transfusions. A thin, flexible tube is inserted into a vein in the upper arm and guided (threaded) into a large vein above the right side of the heart called the superior vena cava. A needle is inserted into a port outside the body to draw blood or give fluids. A peripherally inserted central catheter may stay in place for weeks or months and helps avoid the need for repeated needle sticks. Also called PICC.

### **peristalsis**

The rippling motion of muscles in the intestine or other tubular organs characterized by the alternate contraction and relaxation of the muscles that propel the contents onward.

### **peritoneal**

Having to do with the parietal peritoneum (the tissue that lines the abdominal wall and pelvic cavity) and visceral peritoneum (the tissue that covers most of the organs in the abdomen, including the intestines).

### **peritoneal carcinomatosis**

A serious condition in which cancer, usually of the digestive tract or female reproductive organs, spreads and causes tumors to grow on the peritoneum. The peritoneum is the tissue that lines the abdominal wall and covers most of the organs in the abdomen. Peritoneal carcinomatosis can happen in many types of cancer, but it is most common in people with cancers of the ovary, colon, rectum, stomach, pancreas, or appendix.

**peritoneal cavity**

The space within the abdomen that contains the intestines, the stomach, and the liver. It is bound by thin membranes.

**peritoneal fluid**

A liquid that is made in the abdominal cavity to lubricate the surface of the tissue that lines the abdominal wall and pelvic cavity and covers most of the organs in the abdomen.

**peritoneal infusion**

A method of delivering fluids and drugs directly into the abdominal cavity through a thin tube. Also called intraperitoneal infusion.

**peritoneal perfusion**

A method of delivering fluids and drugs directly to tumors in the peritoneal cavity.

**peritoneal washing**

A procedure in which a salt-water solution is used to wash the peritoneal cavity and then is removed to check for cancer cells. The peritoneal cavity is the space in the abdomen that contains the intestines, stomach, and liver. Peritoneal washings are commonly done during surgery for cancer of the ovary and uterus, to see if cancer has spread to the peritoneal cavity.

**peritoneum**

The tissue that lines the abdominal wall and covers most of the organs in the abdomen.

**peritonitis**

Inflammation of the peritoneum (tissue that lines the abdominal wall and covers most of the organs in the abdomen). Peritonitis can result from infection, injury, or certain diseases. Symptoms may include swelling of the abdomen, severe pain, and weight loss.

**perivascular epithelioid cell tumor**

A family of rare tumors that form in the soft tissues of the stomach, intestines, lungs, female reproductive organs, and genitourinary organs. Most perivascular epithelioid cell tumors are benign (not cancer). They often occur in children with an inherited condition called tuberous sclerosis. Also called PEComa.

**perivascular tumor**

A type of soft tissue tumor that begins in cells that wrap around blood vessels. Perivascular tumors may be benign (not cancer) or malignant (cancer). They can occur anywhere in the body. Perivascular tumors may occur in adults or children. Also called pericytic tumor.

**pernicious anemia**

A condition in which the body is unable to properly absorb vitamin B12, leading to a lower-than-normal number of red blood cells in the body. Vitamin B12 binds to a protein in the stomach called intrinsic factor. This allows vitamin B12 to be absorbed in the small intestine and then released into the bloodstream.

Pernicious anemia occurs when there is too little intrinsic factor to bind enough vitamin B12 for it to be used by the body to make red blood cells. In most cases, this happens when the body's immune system attacks the intrinsic factor protein or the cells in the lining of the stomach that make it. It may also occur in people with atrophic gastritis, a condition marked by chronic inflammation and thinning

of the inner lining of the stomach. If not treated, pernicious anemia can lead to serious problems, including damage to the nervous system. People with pernicious anemia may have an increased risk of stomach cancer, gastrointestinal neuroendocrine tumors, or some other types of cancer.

### **peroxisome proliferator-activated receptor gamma pathway**

Describes a group of proteins in a cell that work together to help control how certain genes are expressed and the use of lipids (fats) and glucose (sugar) in the body. Changes in the peroxisome proliferator-activated receptor gamma pathway may lead to diseases such as heart disease, diabetes, and cancer. Drugs or substances that affect this pathway are being studied in the prevention and treatment of cancer and other diseases. Also called PPAR gamma pathway.

### **personal health record**

A collection of information about a person's health that allows the person to manage and track his or her own health information. A personal health record may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams, tests, and screenings. It may also include information about medicines taken and health habits, such as diet and exercise. Also called personal history, personal medical history, and PHR.

### **personal history**

A collection of information about a person's health that allows the person to manage and track his or her own health information. A personal history may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams, tests, and screenings. It may also include information about medicines taken and health habits, such as diet and exercise. Also called personal health record, personal medical history, and PHR.

### **personal medical history**

A collection of information about a person's health that allows the person to manage and track his or her own health information. A personal medical history may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams, tests, and screenings. It may also include information about medicines taken and health habits, such as diet and exercise. Also called personal health record, personal history, and PHR.

### **perturbation**

A disruption or disturbance.

### **pertussis**

A serious bacterial infection of the lungs and breathing tubes that spreads easily. Pertussis begins like a cold, but develops into severe coughing and gasping for air. Long spells of coughing may cause vomiting, and broken blood vessels in the eyes and on the skin. Also called whooping cough.

### **pertuzumab**

A drug used with other drugs to treat breast cancer that is HER2 positive. It is used in patients whose cancer has spread to other parts of the body and has not already been treated with other anticancer drugs. It is also used before surgery in patients with locally advanced, inflammatory, or early-stage breast cancer and after surgery in patients with early-stage breast cancer who have a high risk that their cancer will recur (come back). It is also being studied in the treatment of other types of cancer. Pertuzumab binds to a protein called HER2, which is

found on some cancer cells. Blocking this protein may help kill cancer cells. Pertuzumab is a type of monoclonal antibody. Also called Perjeta.

### **pertuzumab, trastuzumab, and hyaluronidase**

A combination of three drugs used with other drugs to treat adults with HER2-positive breast cancer. It is used before surgery in patients with locally advanced, inflammatory, or early-stage breast cancer and after surgery in patients with early-stage breast cancer who have a high risk that their cancer will recur (come back). It is also used to treat patients with breast cancer that has spread to other parts of the body and has not already been treated with anti-HER2 therapy or chemotherapy. Pertuzumab and trastuzumab bind to a protein called HER2, which is found on some breast cancer cells. Pertuzumab and trastuzumab may block HER2 and help the immune system kill cancer cells. Hyaluronidase allows pertuzumab and trastuzumab to be given by injection under the skin. Pertuzumab, trastuzumab, and hyaluronidase can be given in less time than pertuzumab or trastuzumab alone, which are given as infusions. Also called Phesgo.

### **pesticide**

Any substance that is used to kill insects and other pests.

### **pet-facilitated therapy**

A type of therapy that uses dogs or other pets to improve the physical and mental health of patients with certain acute or chronic diseases. It is being studied as a way to relieve distress in cancer patients undergoing treatment for pain. Also called animal-assisted therapy.

### **petechiae**

Pinpoint, unraised, round red spots under the skin caused by bleeding.

### **petrolatum**

A thick, greasy, substance with no odor or taste made from petroleum (mixture of oily liquids found in the earth). Petrolatum is used on the skin to prevent drying and to help heal scrapes and burns. It is also used as a base for some ointments. Also called petroleum jelly.

### **petroleum jelly**

A thick, greasy, substance with no odor or taste made from petroleum (mixture of oily liquids found in the earth). Petroleum jelly is used on the skin to prevent drying and to help heal scrapes and burns. It is also used as a base for some ointments. Also called petrolatum.

### **pevonedistat**

A substance being studied in the treatment of some types of cancer. Pevonedistat blocks an enzyme called NEDD8-activating enzyme (NAE), which is involved in cell division. Blocking this enzyme may help keep cancer cells from growing and may kill them. Pevonedistat is a type of NAE inhibitor and a type of targeted therapy.

### **pexidartinib hydrochloride**

A drug used to treat adults with tenosynovial giant cell tumor (a rare, usually benign tumor that affects the joints). It is used in patients who have a severe form of the disease that is not likely to get better with surgery. It is also being studied in the treatment of some types of cancer and other conditions. Pexidartinib hydrochloride blocks certain proteins, which may help keep tumor



cells from growing and spreading. It is a type of tyrosine kinase inhibitor. Also called Turalio.

### **phagocyte**

A type of immune cell that can surround and kill microorganisms, ingest foreign material, and remove dead cells. It can also boost immune responses. Monocytes, macrophages, and neutrophils are phagocytes. A phagocyte is a type of white blood cell.

### **phagocytosis**

The process by which a phagocyte (a type of white blood cell) surrounds and destroys foreign substances (such as bacteria) and removes dead cells.

### **phantom limb pain**

The sensation of pain or other unpleasant feelings in the place of a missing (phantom) limb.

### **pharmacist**

A health professional who has special training in preparing and dispensing (giving out) prescription drugs. Pharmacists have been taught how drugs work, how to use them, and their side effects.

### **pharmacogenetics**

The study of how a person's genes affect the way he or she responds to drugs. Pharmacogenetics is being used to learn ahead of time what the best drug or the best dose of a drug will be for a person. Also called pharmacogenomics.

### **pharmacogenomics**

The study of how a person's genes affect the way he or she responds to drugs. Pharmacogenomics is being used to learn ahead of time what the best drug or the best dose of a drug will be for a person. Also called pharmacogenetics.

### **pharmacokinetics**

The activity of drugs in the body over a period of time, including the processes by which drugs are absorbed, distributed in the body, localized in the tissues, and excreted.

### **pharmacologic substance**

The main ingredient in a medicine that causes the desired effect of the medicine. Some medicines contain more than one pharmacologic substance that act in different ways in the body. Also called active pharmaceutical ingredient, API, and drug substance.

### **pharmacology**

The study of the origin, chemistry, and uses of drugs and their effects on the body.

### **pharmacopoeia**

A book describing chemicals, drugs, and other substances and how they are used as medicines. It is prepared by a recognized authority.

### **pharmacovigilance**

The science and practice of continuously reviewing the safety of drugs as they are tested in clinical trials and marketed for use. As part of pharmacovigilance, data about the problems caused by treatment with a drug are collected and

analyzed. This process helps find ways to prevent adverse events and improve the safety of drugs. Also called PV.

### **pharyngeal cancer**

Cancer that forms in tissues of the pharynx. The pharynx is the hollow, muscular tube inside the neck that starts behind the nose and opens into the larynx and esophagus. Pharyngeal cancer includes cancer of the nasopharynx (the upper part of the pharynx behind the nose), the oropharynx (the middle part of the pharynx), and the hypopharynx (the bottom part of the pharynx). Most pharyngeal cancers are squamous cell carcinomas (cancers that begin in thin, flat cells that look like fish scales under a microscope).

### **pharyngectomy**

Surgery to remove all or part of the pharynx (throat). The pharynx is the hollow tube inside the neck that starts behind the nose and ends at the top of the trachea (windpipe) and esophagus (the tube that goes to the stomach). A pharyngectomy may be done to treat certain types of throat cancer.

### **pharynx**

The hollow, muscular tube inside the neck that starts behind the nose and opens into the larynx and esophagus. It includes the nasopharynx (the upper part of the pharynx behind the nose), the oropharynx (the middle part of the pharynx), and the hypopharynx (the bottom part of the pharynx). The pharynx acts as a passageway for air to enter the larynx and lungs and food and liquid to enter the esophagus. It also plays a role in speech. The pharynx is about 5 inches long, depending on body size.

### **phase 1 clinical trial**

The first step in testing a new treatment in humans. A phase 1 clinical trial tests the safety, side effects, best dose, and timing of a new treatment. It may also test the best way to give a new treatment (for example, by mouth, infusion into a vein, or injection) and how the treatment affects the body. The dose is usually increased a little at a time in order to find the highest dose that does not cause harmful side effects. Phase 1 clinical trials usually include only a small number of patients who have not been helped by other treatments. Sometimes they include healthy volunteers. Also called phase I clinical trial.

### **phase 1/phase 2 clinical trial**

A study that tests the safety, side effects, and best dose of a new treatment. Phase 1/phase 2 clinical trials also test how well a certain type of cancer or other disease responds to a new treatment. In the phase 2 part of the clinical trial, patients usually receive the highest dose of treatment that did not cause harmful side effects in the phase 1 part of the clinical trial. Combining phases 1 and 2 may allow research questions to be answered more quickly or with fewer patients. Also called phase I/II clinical trial.

### **phase 2 clinical trial**

A study that tests whether a new treatment works for a certain type of cancer or other disease (for example, whether it shrinks a tumor or improves blood test results). Phase 2 clinical trials may also provide more information about the safety of the new treatment and how the treatment affects the body. Also called phase II clinical trial.

### **phase 2/phase 3 clinical trial**

A study that tests how well a new treatment works for a certain type of cancer or other disease and compares the new treatment with a standard treatment. Phase 2/phase 3 clinical trials may also provide more information about the safety and side effects of the new treatment. Combining phases 2 and 3 may allow research questions to be answered more quickly or with fewer patients. Also called phase II/III clinical trial.

### **phase 3 clinical trial**

A study that tests the safety and how well a new treatment works compared with a standard treatment. For example, phase 3 clinical trials may compare which group of patients has better survival rates or fewer side effects. In most cases, treatments move into phase 3 clinical trials only after they meet the goals of phase 1 and phase 2 clinical trials. Phase 3 clinical trials may include hundreds of people. Also called phase III clinical trial.

### **phase 4 clinical trial**

A type of clinical trial that studies the side effects caused over time by a new treatment after it has been approved and is on the market. These trials look for side effects that were not seen in earlier trials and may also study how well a new treatment works over a long period of time. Phase 4 clinical trials may include thousands of people. Also called phase IV clinical trial and post-marketing surveillance trial.

### **phase I clinical trial**

The first step in testing a new treatment in humans. A phase I clinical trial tests the safety, side effects, best dose, and timing of a new treatment. It may also test the best way to give a new treatment (for example, by mouth, infusion into a vein, or injection) and how the treatment affects the body. The dose is usually increased a little at a time in order to find the highest dose that does not cause harmful side effects. Phase I clinical trials usually include only a small number of patients who have not been helped by other treatments. Sometimes they include healthy volunteers. Also called phase 1 clinical trial.

### **phase I detoxification**

A process in which the liver uses one of two major enzyme pathways to change a toxic substance, such as an anticancer drug, into a less toxic substance that is easier for the body to excrete.

### **phase I/II clinical trial**

A study that tests the safety, side effects, and best dose of a new treatment. Phase I/II clinical trials also test how well a certain type of cancer or other disease responds to a new treatment. In the phase II part of the clinical trial, patients usually receive the highest dose of treatment that did not cause harmful side effects in the phase I part of the clinical trial. Combining phases I and II may allow research questions to be answered more quickly or with fewer patients. Also called phase 1/phase 2 clinical trial.

### **phase II clinical trial**

A study that tests whether a new treatment works for a certain type of cancer or other disease (for example, whether it shrinks a tumor or improves blood test results). Phase II clinical trials may also provide more information about the safety of the new treatment and how the treatment affects the body. Also called phase 2 clinical trial.

### **phase II detoxification**

A process in which the liver uses one of two major enzyme pathways to change a toxic substance, such as an anticancer drug, into a less toxic substance that is easier for the body to excrete. In phase II detoxification, liver cells add a substance (such as cysteine, glycine, or a sulfur molecule) to a toxic chemical or drug, to make it less harmful.

### **phase II/III clinical trial**

A study that tests how well a new treatment works for a certain type of cancer or other disease and compares the new treatment with a standard treatment. Phase II/III clinical trials may also provide more information about the safety and side effects of the new treatment. Combining phases II and III may allow research questions to be answered more quickly or with fewer patients. Also called phase 2/phase 3 clinical trial.

### **phase III clinical trial**

A study that tests the safety and how well a new treatment works compared with a standard treatment. For example, phase III clinical trials may compare which group of patients has better survival rates or fewer side effects. In most cases, treatments move into phase III clinical trials only after they meet the goals of phase I and phase II clinical trials. Phase III clinical trials may include hundreds of people. Also called phase 3 clinical trial.

### **phase IV clinical trial**

A type of clinical trial that studies the side effects caused over time by a new treatment after it has been approved and is on the market. These trials look for side effects that were not seen in earlier trials and may also study how well a new treatment works over a long period of time. Phase IV clinical trials may include thousands of people. Also called phase 4 clinical trial and post-marketing surveillance trial.

### **phenethyl isothiocyanate**

A substance being studied in the prevention of cancer. It is a naturally occurring compound found in some cruciferous vegetables. Also called PEITC.

### **phenobarbital**

A drug that is used to treat seizures and as a sedative. It is being studied in the treatment of diarrhea and for its ability to increase the antitumor effect of other therapies. It belongs to the family of drugs called barbiturates.

### **phenol**

A very poisonous chemical substance made from tar and also found in some plants and essential oils (scented liquid taken from plants). Phenol is used to make plastics, nylon, epoxy, medicines, and to kill germs. Also called carbolic acid.

### **phenothiazine**

A type of drug that is used to treat severe mental and emotional disorders, severe nausea and vomiting, and certain other conditions. It belongs to the families of drugs called antipsychotics and antiemetics.

### **phenotype**

The physical, biochemical, and behavioral traits that can be observed in a person. Some examples of a person's phenotype are height, eye color, hair color, blood type, behavior, and the presence of certain diseases. A phenotype is

based on a person's genes and some environmental factors, such as diet, exercise, and smoking.

### **phenoxodiol**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called signal transduction inhibitors.

### **phenylacetate**

A substance that is being studied in the treatment of cancer.

### **phenylbutyrate**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called differentiating agents.

### **phenylketonuria**

An inherited disorder that causes a build-up of a substance called phenylalanine in the blood and other body fluids. Phenylalanine is an amino acid (a building block of proteins), so certain foods, such as meat, eggs, nuts, and milk, contain high levels. Some artificial sweeteners, such as aspartame, also contain high levels of phenylalanine. The signs and symptoms of phenylketonuria can be mild or severe and may include light skin and hair, skin rashes, seizures, developmental delays, and movement, behavioral, and mental or psychological problems. The breath, skin, or urine may also have a musty odor. If not treated, phenylketonuria can lead to permanent intellectual disability. All babies born in the United States and many other countries are screened for phenylketonuria using a simple blood test. There is no cure, but phenylketonuria can be managed with a diet low in phenylalanine. Also called PKU.

### **phenytoin sodium**

A drug used to treat or prevent seizures or convulsions that may be caused by epilepsy, brain surgery, or treatment for brain cancer. It is a type of anticonvulsant agent. Also called Dilantin.

### **pheochromocytoma**

Tumor that forms in the center of the adrenal gland (gland located above the kidney) that causes it to make too much adrenaline. Pheochromocytomas are usually benign (not cancer) but can cause high blood pressure, pounding headaches, heart palpitations, flushing of the face, nausea, and vomiting.

### **pheresis**

A process in which a machine removes blood stem cells or other parts of the blood from a person's bloodstream then returns the rest to the body. During pheresis, blood flows through a catheter inserted into a large vein in a person's arm or chest into a machine that separates and removes stem cells or other types of blood cells (such as platelets, white blood cells, or red blood cells), or plasma (the liquid part of the blood) from the blood. The rest of the blood is then returned to the body through the catheter. Pheresis may be done to collect blood stem cells before a stem cell transplant or to remove abnormal blood cells or proteins from the blood. It may be used to treat certain types of blood disorders, blood cancer, autoimmune disorders, or other conditions. Also called apheresis.

### **philosophical**

Having to do with the deeper questions of life and with a person's basic beliefs, ideas, and attitudes.

**phlebitis**

Inflammation (redness, swelling, pain, and heat) of a vein, usually in the legs. Phlebitis may be caused by infection, injury, or irritation.

**phlebotomy**

A procedure in which a needle is used to take blood from a vein, usually for laboratory testing. Phlebotomy may also be done to remove extra red blood cells from the blood, to treat certain blood disorders. Also called blood draw and venipuncture.

**phlegm**

A more than normal amount of thick mucus made by the cells lining the upper airways and lungs. A buildup of phlegm may be caused by infection, irritation, or chronic lung disease, and can cause discomfort in the chest and coughing.

**phobia**

An extreme, irrational, fear of something that may cause a person to panic. Examples of common phobias include fear of spiders, flying in an airplane, elevators, heights, enclosed rooms, crowded public places, and embarrassing oneself in front of other people.

**phosphate**

A form of phosphoric acid, which contains phosphorus. In the body, phosphates are found in the bones and teeth. Phosphates may be used to treat a high level of calcium in the blood. Adding or removing phosphate chemical groups may affect the way proteins act in the body.

**phosphatidylinositol-3 kinase**

A type of enzyme that transmits signals in cells and that helps control cell growth. Some tumors have higher-than-normal levels of phosphatidylinositol-3 kinase. Also called PI3 kinase and PI3K.

**phospholipid**

A lipid (fat) that contains phosphorus. Phospholipids are a major part of cell membranes.

**phospholipid complex**

A chemical or drug that is attached to a lipid (fat) that contains phosphorus.

**phosphonoformate trisodium**

A drug used to treat infections with herpesviruses in people whose immune systems are weakened by AIDS. It blocks the viruses from making copies of themselves. It is a type of antiviral agent. Also called foscarnet sodium and Foscavir.

**phosphoric**

Having to do with or containing the element phosphorus.

**phosphoric acid**

An acid that contains phosphorus and is used in medicine and dentistry. It is also used to remove rust. A dilute form of phosphoric acid is used to flavor soft drinks.

**phosphorus**

A nonmetallic element that is found in the blood, muscles, nerves, bones, and teeth and is a component of adenosine triphosphate (ATP; the primary energy



source for the body's cells).

### **phosphorus P 32**

A radioactive form of the element phosphorus. It is used in the laboratory to label DNA and proteins. It has also been used to treat a blood disorder called polycythemia vera and certain types of leukemia, but it is not commonly used anymore. Phosphorus P 32 gives off radiation that damages the DNA in a cell, which can cause the cell to die.

### **phosphorylation**

A process in which a phosphate group is added to a molecule, such as a sugar or a protein.

### **photoactivity**

The effect produced when certain substances are exposed to light. In cancer treatment, some drugs become active when exposed to light and are then able to kill tumor cells.

### **photocoagulation**

The use of an intense beam of light, such as a laser, to seal off blood vessels or destroy tissue. It is used to treat certain eye conditions, and may be used to destroy blood vessels that a tumor needs to grow.

### **photodynamic therapy**

Treatment with drugs that become active when exposed to light. These activated drugs may kill cancer cells.

### **photon beam radiation therapy**

A type of radiation therapy that uses x-rays or gamma rays that come from a special machine called a linear accelerator (linac). The radiation dose is delivered at the surface of the body and goes into the tumor and through the body. Photon beam radiation therapy is different from proton beam therapy.

### **photopheresis**

A procedure in which blood is removed from the body and treated with ultraviolet light and drugs that become active when exposed to light. The blood is then returned to the body. It is being studied in the treatment of some blood and bone marrow diseases and graft-vs-host disease (GVHD). Also called extracorporeal photopheresis.

### **photophobia**

A condition in which the eyes are more sensitive than normal to light.

### **photosensitivity**

A condition in which the skin becomes very sensitive to sunlight or other forms of ultraviolet light and may burn easily. Photosensitivity usually causes a rash or sunburn, especially on areas of the skin that are exposed to ultraviolet light. The affected areas may be painful and may itch, blister, or peel. Photosensitivity may be caused by certain medicines, such as antibiotics and anticancer drugs, radiation therapy, exposure to certain chemicals, and some medical conditions, such as lupus and xeroderma pigmentosum.

### **photosensitizer**

A drug used in photodynamic therapy. When absorbed by cancer cells and exposed to light, the drug becomes active and kills the cancer cells. Also called

photosensitizing agent.

### **photosensitizing agent**

A drug used in photodynamic therapy. When absorbed by cancer cells and exposed to light, the drug becomes active and kills the cancer cells. Also called photosensitizer.

### **photosynthesis**

A chemical process that occurs in plants, algae, and some types of bacteria, when they are exposed to sunlight. During photosynthesis, water and carbon dioxide combine to form carbohydrates (sugars) and give off oxygen. Photosynthesis is needed for animal and plant life.

### **phototesting**

Special tests used to measure the reaction of the skin to ultraviolet radiation. Phototesting is being used to see if drugs taken by mouth to treat cancer make the skin more sensitive to ultraviolet radiation.

### **phototherapy**

The treatment of disease with certain types of light. Phototherapy can use lasers, LED, fluorescent lamps, and ultraviolet or infrared radiation. Also called light therapy.

### **phototoxicity**

A condition in which the skin or eyes become very sensitive to sunlight or other forms of light. It can be caused by taking certain drugs, or rubbing certain essential oils (scented liquid taken from plants) or other topical agents into the skin. Phototoxicity causes sunburn, blisters, and other skin problems.

### **phrenic nerve**

A nerve that runs from the spinal cord to the diaphragm (the thin muscle below the lungs and heart that separates the chest from the abdomen). It causes the diaphragm to contract and relax, which helps control breathing.

### **phyllodes tumor**

A rare tumor that usually forms in the connective tissue of the breast. Phyllodes tumors tend to grow quickly and get large, but they rarely spread to other parts of the body. Most are benign (not cancer), but some may be malignant (cancer) or borderline (in between benign and malignant). Phyllodes tumors are usually removed by surgery, but they can come back. They are most common in women between 40 and 50 years of age. Also called CSP and cystosarcoma phyllodes of the breast.

### **physiatrist**

A doctor who has special training in physical medicine. Physical medicine is the prevention and treatment of disease or injury with physical methods, such as exercise and machines. Also called physical medicine specialist.

### **physical dependence**

A condition in which a person takes a drug over time, and unpleasant physical symptoms occur if the drug is suddenly stopped or taken in smaller doses.

### **physical examination**

An exam of the body to check for general signs of disease.

**physical medicine specialist**

A doctor who has special training in physical medicine. Physical medicine is the prevention and treatment of disease or injury with physical methods, such as exercise and machines. Also called physiatrist.

**physical therapist**

A health professional trained to evaluate and treat people who have conditions or injuries that limit their ability to move and do physical activities. Physical therapists use methods such as exercise, massage, hot packs, ice, and electrical stimulation to help strengthen muscles, relieve pain, and improve movement. They also teach exercises to help prevent injury and loss of motion.

**physical therapy**

The use of exercises and physical activities to help condition muscles and restore strength and movement. For example, physical therapy can be used to restore arm and shoulder movement and build back strength after breast cancer surgery.

**physical touch methods**

A type of therapy in which the therapist moves or manipulates one or more parts of the patient's body. It may be used to treat pain, stress, anxiety, and depression, and for general well-being. Examples include chiropractic treatments, physical therapy, and massage therapy. Also called manipulative and body-based practice and manual healing.

**physician**

A person who is trained and licensed to practice medicine. Physicians help prevent, diagnose, treat, and manage injuries, diseases, and other conditions. There are many different types of physicians, including internists, pediatricians, psychiatrists, and surgeons.

**physician assistant**

A health professional who is licensed to do certain medical procedures under the guidance of a doctor. A physician assistant may take medical histories, do physical exams, take blood and urine samples, care for wounds, and give injections and immunizations. Also called PA.

**physiologic**

Having to do with the functions of the body. When used in the phrase "physiologic age," it refers to an age assigned by general health, as opposed to calendar age.

**phytic acid**

A substance found in many foods that come from plants, including corn, wheat, rice, and soybeans, and in large amounts in cereals and legumes. It is being studied in the prevention of cancer. Also called inositol hexaphosphate and IP6.

**phytochemical**

A substance found in plants. Some phytochemicals may reduce the risk of cancer.

**phytoestrogen**

An estrogen-like substance found in some plants and plant products. Phytoestrogens may have anticancer effects.

**phytohemagglutinin**

A substance found in plants that causes red blood cells to clump together and certain white blood cells to divide.

**phytol**

A chemical substance that comes from plants and is used to make vitamins E and K. Phytol is also found in soaps, beauty care products, and household products.

**phytosterol**

A plant-based compound that can compete with dietary cholesterol to be absorbed by the intestines, resulting in lower blood cholesterol levels. Phytosterols may have some effect in cancer prevention. Also called plant sterol.

**pigment**

A substance that gives color to tissue. Pigments are responsible for the color of skin, eyes, and hair.

**pilocarpine**

A drug used to increase salivation in people who have dry mouth caused by opioids or radiation therapy. Pilocarpine belongs to the family of drugs called alkaloids.

**pilocytic**

Made up of cells that look like fibers when viewed under a microscope.

**pilot study**

The initial study examining a new method or treatment.

**pineal body**

A tiny organ in the cerebrum that produces melatonin. Also called pineal gland and pineal organ.

**pineal germinoma**

A type of germ cell tumor that is found in the pineal gland in the brain. Symptoms of pineal germinomas include headaches, changes in vision, nausea, and vomiting.

**pineal gland**

A tiny organ in the cerebrum that produces melatonin. Also called pineal body and pineal organ.

**pineal organ**

A tiny organ in the cerebrum that produces melatonin. Also called pineal body and pineal gland.

**pineal region tumor**

A type of brain tumor that forms in or around the pineal gland (a tiny organ near the center of the brain). Pineal region tumors may be benign (not cancer) or malignant (cancer). They include pineocytomas, pineoblastomas, and pineal germinomas. Also called pinealoma.

**pinealoma**

A type of brain tumor that forms in or around the pineal gland (a tiny organ near the center of the brain). Pinealomas may be benign (not cancer) or malignant

(cancer). They include pineocytomas, pineoblastomas, and pineal germinomas. Also called pineal region tumor.

### **pineoblastoma**

A fast growing type of brain tumor that occurs in or around the pineal gland, a tiny organ near the center of the brain.

### **pineocytoma**

A slow growing type of brain tumor that occurs in or around the pineal gland, a tiny organ near the center of the brain.

### **pinkeye**

A condition in which the conjunctiva (membranes lining the eyelids and covering the white part of the eye) become inflamed or infected. Also called conjunctivitis.

### **pioglitazone**

A drug that is used to treat type 2 diabetes and is being studied in the prevention of head and neck cancer. It may be able to stop leukoplakia (a condition affecting the mouth ) from developing into cancer. It is a type of thiazolidinedione. Also called Actos.

### **pipe**

As it relates to tobacco use, a device that has a mouthpiece at one end of a tube and a small bowl at the other end that is filled with tobacco, which is lit and smoked. The smoke from a pipe is usually not inhaled into the lungs. It contains nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Pipe smoking can lead to nicotine addiction and can cause cancers of the mouth, larynx (voice box), esophagus, lung, pancreas, and bladder. It can also cause heart disease, lung disease, and other health problems.

### **piperacillin-tazobactam**

A drug combination that is used to treat infection in people with cancer. Piperacillin is a synthetic penicillin; tazobactam enhances the effectiveness of piperacillin.

### **pirfenidone**

A substance that is being studied in the prevention and treatment of scar tissue caused by radiation therapy. It belongs to the family of drugs called anti-inflammatory agents.

### **pirtobrutinib**

A drug used to treat adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, or mantle cell lymphoma that was treated with at least two other types of therapy, including a BTK inhibitor. It is also being studied in the treatment of other types of cancer. Pirtobrutinib blocks a protein called BTK, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Jaypirca.

### **pituitary gland**

A pea-sized organ attached to the part of the brain called the hypothalamus. It lies at the base of the brain above the back of the nose. The hypothalamus sends signals to the pituitary gland, which then makes hormones that control other glands and many of the body's functions, including growth and fertility.

### **pituitary tumor**

A tumor that forms in the pituitary gland. The pituitary gland is a pea-sized organ at the base of the brain. It makes hormones that affect other glands and many of the body's functions, including growth. Symptoms depend on the hormones affected by the tumor. Most pituitary tumors are benign (not cancer) and many do not cause any symptoms.

### **pixantrone**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called antitumor antibiotics. Also called BBR 2778.

### **placebo**

An inactive substance or other intervention that looks the same as, and is given the same way as, an active drug or treatment being tested. The effects of the active drug or other intervention are compared to the effects of the placebo.

### **placebo therapy**

An inactive treatment that is designed to mimic as closely as possible the active treatment being studied in a clinical trial. For example, a placebo pill made of an inactive substance is given instead of the pill with the active drug.

### **placebo-controlled**

Refers to a clinical study in which the control patients receive a placebo.

### **placenta**

The organ that nourishes the developing fetus in the uterus.

### **placental blood transplantation**

The transfer of blood from a placenta to an individual whose own blood production system is suppressed. Placental blood contains high levels of stem cells needed to produce new blood cells. It is being studied in the treatment of cancer and severe blood disorders such as aplastic anemia.

### **plant sterol**

A plant-based compound that can compete with dietary cholesterol to be absorbed by the intestines, resulting in lower blood cholesterol levels. Plant sterols may have some effect in cancer prevention. Also called phytosterol.

### **plantar pit**

A tiny dent in the skin on the bottom (sole) of the foot. Plantar pits are usually pink or skin-colored and can often be seen more easily after soaking the feet in water. They are often found in people with a rare, inherited condition called basal cell nevus syndrome (BCNS). People with BCNS have a very high risk of developing basal cell skin cancer and are also at risk of developing other types of cancer, including medulloblastoma.

### **plaque**

In medicine, a small, abnormal patch of tissue on a body part or an organ. Plaques may also be a build-up of substances from a fluid, such as cholesterol in the blood vessels.

### **plaque radiotherapy**

A type of radiation therapy used to treat eye tumors. A thin piece of metal (usually gold) with radioactive seeds placed on one side is sewn onto the outside



wall of the eye with the seeds aimed at the tumor. It is removed at the end of treatment, which usually lasts for several days.

### **plasma**

The clear, yellowish, fluid part of the blood that carries the blood cells. The proteins that form blood clots are in plasma.

### **plasma cell**

A type of immune cell that makes large amounts of a specific antibody. Plasma cells develop from B cells that have been activated. A plasma cell is a type of white blood cell. Also called plasmacyte.

### **plasma cell myeloma**

A type of cancer that begins in plasma cells (white blood cells that produce antibodies). Also called Kahler disease, multiple myeloma, and myelomatosis.

### **plasma cell neoplasm**

A type of tumor that begins in plasma cells (white blood cells that make antibodies). Multiple myeloma, monoclonal gammopathy of undetermined significance (MGUS), and plasmacytoma are types of plasma cell neoplasms. Also called plasma cell tumor.

### **plasma cell tumor**

A type of tumor that begins in plasma cells (white blood cells that make antibodies). Multiple myeloma, monoclonal gammopathy of undetermined significance (MGUS), and plasmacytoma are types of plasma cell tumors. Also called plasma cell neoplasm.

### **plasma exchange**

A procedure in which a machine is used to separate the plasma (the liquid part of the blood) from the blood cells. After the plasma is separated from the blood cells, the blood cells are mixed with a liquid to replace the plasma and are returned to the body. Plasma exchange is often done to remove extra antibodies, abnormal proteins, or other harmful substances from the blood. It may be used to treat certain types of blood disorders, autoimmune disorders, nervous system disorders, or other conditions. Also called plasmapheresis.

### **plasma membrane**

The outer membrane of a cell.

### **plasmablastic lymphoma**

A very aggressive (fast-growing) type of large B-cell non-Hodgkin lymphoma (cancer that begins in the cells of the immune system). It is most common in patients with HIV infection, but may also occur in patients whose immune system is suppressed for other reasons.

### **plasmacyte**

A type of immune cell that makes large amounts of a specific antibody. Plasmacytes develop from B cells that have been activated. A plasmacyte is a type of white blood cell. Also called plasma cell.

### **plasmacytic**

Having to do with plasma cells (a type of white blood cells).

**plasmacytoma**

A type of cancer that begins in plasma cells (white blood cells that produce antibodies). A plasmacytoma may turn into multiple myeloma.

**plasmapheresis**

A procedure in which a machine is used to separate the plasma (the liquid part of the blood) from the blood cells. After the plasma is separated from the blood cells, the blood cells are mixed with a liquid to replace the plasma and are returned to the body. Plasmapheresis is often done to remove extra antibodies, abnormal proteins, or other harmful substances from the blood. It may be used to treat certain types of blood disorders, autoimmune disorders, nervous system disorders, or other conditions. Also called plasma exchange.

**plastic surgeon**

A surgeon who has special training in reducing scarring or disfigurement that may occur as a result of accidents, birth defects, or treatment for diseases.

**plastic surgery**

An operation that restores or improves the appearance of body structures.

**platelet**

A tiny, disc-shaped piece of cell that is found in the blood and spleen. Platelets are pieces of very large cells in the bone marrow called megakaryocytes. They help form blood clots to slow or stop bleeding and to help wounds heal. Having too many or too few platelets or having platelets that don't work as they should can cause problems. Checking the number of platelets in the blood may help diagnose certain diseases or conditions. Also called thrombocyte.

**platelet-derived growth factor**

A family of molecules released from platelets (tiny pieces of cells that are found in the blood and that help the blood clot). Forms of platelet-derived growth factor help to heal wounds and to repair damage to blood vessel walls. They also help blood vessels grow. Also called PDGF.

**platelet-derived growth factor receptor alpha gene**

A gene that makes a protein that is involved in cell division and cell survival. Mutated (changed) forms of the platelet-derived growth factor receptor alpha gene and protein have been found in some types of cancer, including gastrointestinal stromal tumors and chronic eosinophilic leukemia. These changes may increase the growth of cancer cells. Checking for changes in the platelet-derived growth factor receptor alpha gene in tumor tissue may help diagnose some types of cancer and plan treatment. Also called PDGFRA gene.

**platinum**

A metal that is an important component of some anticancer drugs, such as cisplatin and carboplatin.

**platinum refractory cancer**

Cancer that does not respond to treatment with anticancer drugs that contain the metal platinum, such as cisplatin and carboplatin.

**platinum resistant cancer**

Cancer that responds at first to treatment with drugs that contain the metal platinum, such as cisplatin and carboplatin, but then comes back within a certain period. For example, ovarian cancer that comes back within 6 months after

treatment is considered platinum resistant. Knowing whether cancer is platinum resistant may help plan further treatment.

### **platinum sensitive cancer**

Cancer that responds to treatment with anticancer drugs that contain the metal platinum, such as cisplatin and carboplatin. Some cancers that respond to treatment but then come back after a certain period may also be considered platinum sensitive. For example, ovarian cancer that comes back 6 or more months after platinum-based treatment is considered platinum sensitive. Knowing whether cancer is platinum sensitive may help plan further treatment.

### **pleomorphic**

Occurring in various distinct forms. In terms of cells, having variation in the size and shape of cells or their nuclei.

### **pleomorphic liposarcoma**

A rare, fast-growing type of cancer that begins in fat cells. It usually forms in the deep soft tissues of the arms or legs, but it may also form in the abdomen or chest. Pleomorphic liposarcoma often recurs (comes back) after treatment and spreads to other parts of the body, including the lungs. It usually occurs in older adults, and is rare in children and adolescents. Pleomorphic liposarcoma is a type of soft tissue sarcoma.

### **pleomorphic lobular carcinoma in situ**

A condition in which abnormal cells are found in the lobules (milk glands) of the breast. The cells tend to look larger and more abnormal under a microscope than cells from the more common classic lobular carcinoma in situ (LCIS).

Pleomorphic lobular carcinoma in situ is more likely to become invasive breast cancer and spread to other tissues in the breast than the more common form is. Pleomorphic lobular carcinoma in situ usually occurs in postmenopausal women. Also called PLCIS.

### **plerixafor**

A drug used with granulocyte colony-stimulating factor before an autologous stem cell transplant in patients with non-Hodgkin lymphoma or multiple myeloma. It is also being studied in the treatment of other types of cancer. Plerixafor helps move stem cells from the bone marrow to the blood so they can be collected, stored, and then given back to the patient. Plerixafor is a type of hematopoietic stem cell mobilizer. Also called AMD 3100 and Mozobil.

### **pleura**

A thin layer of tissue that covers the lungs and lines the interior wall of the chest cavity. It protects and cushions the lungs. This tissue secretes a small amount of fluid that acts as a lubricant, allowing the lungs to move smoothly in the chest cavity while breathing.

### **pleural cavity**

The space enclosed by the pleura, which is a thin layer of tissue that covers the lungs and lines the interior wall of the chest cavity.

### **pleural effusion**

An abnormal collection of fluid between the thin layers of tissue (pleura) lining the lung and the wall of the chest cavity.

### **pleurectomy**

Surgery to remove part of the pleura (a thin layer of tissue that covers the interior wall of the chest cavity).

### **pleurodesis**

A medical procedure that uses chemicals or drugs to cause inflammation and adhesion between the layers of the pleura (a thin layer of tissue that covers the lungs and lines the interior wall of the chest cavity). This prevents the buildup of fluid in the pleural cavity. It is used as a treatment for severe pleural effusion.

### **pleuropulmonary blastoma**

A rare, fast-growing cancer that forms in the tissues of the lung and pleura (the thin layer of tissue that covers the lungs and lines the inside of the chest). It may also form in the organs between the lungs, including the heart, aorta, and pulmonary artery, or in the diaphragm. Pleuropulmonary blastoma may sometimes spread to other parts of the body, especially to the brain. It usually occurs in infants and young children. Some patients with pleuropulmonary blastoma have mutations (changes) in a gene called DICER1.

### **pleuropulmonary blastoma familial cancer syndrome**

A rare, inherited disorder that increases the risk of pleuropulmonary blastoma (a rare, fast-growing cancer that forms in the tissues of the lung and chest cavity). Pleuropulmonary blastoma familial cancer syndrome may cause cysts in the kidney and lung, thyroid problems, and cancers of the ovary, testicle, kidney, and soft tissue. It may also cause other cancers and benign (not cancer) conditions. This syndrome may be caused by a mutation (change) in a gene called DICER1.

### **plexiform fibrohistiocytic tumor**

A rare tumor found mainly in children and young adults. It usually forms in the skin on the arms and legs. It is slow-growing and usually does not spread to other parts of the body. It is a type of soft tissue tumor.

### **plexiform neurofibroma**

A tumor that forms in the tissue that covers and protects the nerves. Plexiform neurofibromas can occur anywhere in the body outside of the brain and spinal cord. They can occur on the face (including around the eye), neck, arms, legs, back, chest, abdomen, and internal organs. Large tumors can cause a nerve to become thick and misshapen, which can affect the structure of nearby bone, skin, and muscle. Plexiform neurofibromas can cause severe pain, mobility problems, vision and hearing loss, high blood pressure, and other medical problems. Most plexiform neurofibromas are not cancer, but some may become cancer. They most commonly occur in children who have a rare genetic condition called neurofibromatosis type 1.

### **plexopathy**

A disorder affecting a network of nerves, blood vessels, or lymph vessels.

### **plicamycin**

A drug used to treat some types of testicular cancer. It is also used to treat a higher-than-normal amounts of calcium in the blood or urine. Plicamycin binds to DNA and prevents cells from making RNA and proteins. It is a type of antineoplastic antibiotic. Also called Mithracin and mithramycin.

**ploidy**

The number of sets of chromosomes in a cell or an organism. For example, haploid means one set and diploid means two sets.

**pluripotent**

Able to mature or develop in any of several ways.

**pluripotent stem cell**

A cell that is able to develop into many different types of cells or tissues in the body.

**pneumatic larynx**

A device that is used to help a person talk after a laryngectomy. It uses air to produce a humming sound, which is converted to speech by movement of the lips, tongue, or glottis.

**pneumonectomy**

Surgery to remove all of one lung. In a partial pneumonectomy, one or more lobes of a lung are removed.

**pneumonia**

A severe inflammation of the lungs in which the alveoli (tiny air sacs) are filled with fluid. This may cause a decrease in the amount of oxygen that blood can absorb from air breathed into the lung. Pneumonia is usually caused by infection but may also be caused by radiation therapy, allergy, or irritation of lung tissue by inhaled substances. It may involve part or all of the lungs.

**pneumonitis**

Inflammation of the lungs. This may be caused by disease, infection, radiation therapy, allergy, or irritation of lung tissue by inhaled substances.

**pneumothorax**

An abnormal collection of air in the space between the thin layer of tissue that covers the lungs and the chest cavity. This can cause all or part of the lung to collapse. A pneumothorax may be caused by a chest injury, certain medical procedures, lung disease, or other damage to lung tissue. Sometimes the cause of a pneumothorax is not known. The most common symptoms are sudden chest pain and trouble breathing. Some types of pneumothorax may go away on their own, but others may be life threatening.

**podiatrist**

A doctor who has special training in diagnosing and treating foot and ankle problems.

**poikiloderma congenitale**

A rare, inherited disorder that affects many parts of the body, especially the skin, eyes, bones, hair, and teeth. The main sign or symptom is a red blistering rash on the face that begins in early infancy. Over time, the rash can spread to the arms, legs, and buttocks and cause patchy skin coloring, areas of thin skin, and small clusters of blood vessels under the skin. Other signs and symptoms include slow growth and shorter-than-average height; little or no hair, including eyelashes and eyebrows; abnormalities of the nails, teeth, and bones; gastrointestinal problems; and blood problems. People with poikiloderma congenitale have an increased risk of developing cancer at an early age, especially osteosarcoma (a type of bone cancer), basal cell skin cancer, and

squamous cell skin cancer. Poikiloderma congenitale may be caused by a mutation (change) in the RECQL4 gene. Also called Rothmund-Thomson syndrome and RTS.

### **polatuzumab vedotin**

A drug used with other drugs to treat adults with certain types of diffuse large B-cell lymphoma. It is also being studied in the treatment of other types of cancer. Polatuzumab vedotin contains a monoclonal antibody that binds to a protein called CD79B, which is found on B cells (a type of white blood cell) and some lymphoma cells. It also contains an anticancer drug, which may help kill cancer cells. Polatuzumab vedotin is a type of antibody-drug conjugate. Also called Polivy.

### **polifeprosan 20 carmustine implant**

A drug used with surgery and radiation therapy to treat high-grade glioma that has not already been treated and with surgery to treat glioblastoma multiforme that has recurred (come back). Polifeprosan 20 carmustine implant is a form of carmustine contained in a wafer. The wafer has a coating that dissolves slowly and releases carmustine directly into the area where the brain tumor was removed. This form may have fewer side effects and work better than other forms of carmustine. Polifeprosan 20 carmustine implant is a type of alkylating agent and a type of nitrosourea. Also called carmustine implant and Gliadel Wafer.

### **poly (ADP-ribose) polymerase**

A type of enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. Inhibitors of one enzyme, poly (ADP-ribose) polymerase-1, are being studied in the treatment of cancer. Also called PARP.

### **poly (ADP-ribose) polymerase inhibitor**

A substance that blocks an enzyme in cells called PARP. PARP helps repair DNA when it becomes damaged. DNA damage may be caused by many things, including exposure to UV light, radiation, certain anticancer drugs, or other substances in the environment. In cancer treatment, blocking PARP may help keep cancer cells from repairing their damaged DNA, causing them to die. Poly (ADP-ribose) polymerase inhibitors are a type of targeted therapy. Also called PARP inhibitor.

### **poly (ADP-ribose) polymerase-1**

An enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. Inhibitors of poly (ADP-ribose) polymerase-1 are being studied in the treatment of cancer. Also called PARP-1.

### **poly-ICLC**

A substance that is being studied in the treatment of cancer and for its ability to stimulate the immune system. It is made in the laboratory by combining the nucleic acid RNA with the chemicals poly-L-lysine and carboxymethyl cellulose.

### **polychlorinated biphenyl**

One of a large group of man-made chemical compounds that were used to make many products, including electrical equipment, insulation, fluorescent lights,



paints, plastics, rubber, dyes, inks, adhesives, and pesticides. Being exposed to polychlorinated biphenyls can cause skin conditions, such as acne and rashes, and eye irritation. Long-term exposure to high levels of polychlorinated biphenyls can affect other body systems, and may also cause learning and developmental delays, low birth weight, and cancer. Polychlorinated biphenyls were banned in the United States in the 1970s, but they may still be found in contaminated soil, air, water, and food. Also called PCB.

### **polycyclic aromatic hydrocarbon**

A type of chemical formed when coal, oil, gas, garbage, tobacco, meat, and other substances are burned. These chemicals are also made for use in many products, including coal tar, creosote, roofing tar, pesticides, mothballs, dandruff shampoos, and some medicines. Being exposed to one of these chemicals over a long time may cause cancer. Also called PAH.

### **polycystic ovary syndrome**

A condition marked by infertility, enlarged ovaries, menstrual problems, high levels of male hormones, excess hair on the face and body, acne, and obesity. Women with polycystic ovary syndrome have an increased risk of diabetes, high blood pressure, heart disease, and endometrial cancer. Also called PCOS.

### **polycythemia vera**

A disease in which there are too many red blood cells in the bone marrow and blood, causing the blood to thicken. The number of white blood cells and platelets may also increase. The extra blood cells may collect in the spleen and cause it to become enlarged. They may also cause bleeding problems and make clots form in blood vessels.

### **polyethylene glycol**

A polymer made by joining molecules of ethylene oxide and water together in a repeating pattern. Polyethylene glycol can be a liquid or a waxy solid. In medicine, forms of polyethylene glycol can be used in ointments, in drugs or substances to make them stay in the body longer, or in laxatives. Also called PEG.

### **polyethylene glycosylated recombinant human megakaryocyte growth and development factor**

A form of megakaryocyte growth and development factor (MGDF) that is made in the laboratory. MGDF comes from the protein thrombopoietin, which is normally made in the body to help make platelets. Polyethylene glycosylated recombinant human megakaryocyte growth and development factor is being studied as a way to increase the number of platelets in patients receiving chemotherapy. Also called PEG-MGDF and PEG-rhMGDF.

### **polyglutamate camptothecin**

A form of the anticancer drug camptothecin that may have fewer side effects and work better than camptothecin. It is being studied in the treatment of cancer. It is a type of DNA topoisomerase inhibitor. Also called CT-2106.

### **polymer**

A molecule made up of small identical molecules called monomers. The monomers are joined together in a repeating pattern.

### **polymerase chain reaction**

A laboratory method used to make many copies of a specific piece of DNA from a sample that contains very tiny amounts of that DNA. Polymerase chain reaction allows these pieces of DNA to be amplified so they can be detected. Polymerase chain reaction may be used to look for certain changes in a gene or chromosome, which may help find and diagnose a genetic condition or a disease, such as cancer. It may also be used to look at pieces of the DNA of certain bacteria, viruses, or other microorganisms to help diagnose an infection. Also called PCR.

### **polymeric enteral nutrition formula**

A nutritional drink that may help people who cannot get everything they need in their diet from foods and other drinks. It may be taken by mouth or given through a small tube inserted through the nose into the stomach or the small intestine. It may also be given through a small tube that is put into the stomach or intestinal tract through an opening made on the outside of the abdomen. One example of a polymeric enteral nutrition formula is Ensure. Polymeric enteral nutrition formula is a type of dietary supplement.

### **polymorphism**

A common change in the genetic code in DNA. Polymorphisms can have a harmful effect, a good effect, or no effect. Some polymorphisms have been shown to increase the risk of certain types of cancer.

### **polymorphonuclear leukocyte**

A type of immune cell that has granules (small particles) with enzymes that are released during infections, allergic reactions, and asthma. Neutrophils, eosinophils, and basophils are polymorphonuclear leukocytes. A polymorphonuclear leukocyte is a type of white blood cell. Also called granular leukocyte, granulocyte, and PMN.

### **polymyositis**

An inflammatory disease of the muscles closest to the center of the body. It causes weakness, inability to stand, climb stairs, lift, or reach. It may also cause muscle pain and difficulty swallowing, and may affect the lungs and heart. Having polymyositis increases the risk of certain types of cancer.

### **polyneuritis**

Inflammation of several peripheral nerves at the same time.

### **polyp**

A growth that protrudes from a mucous membrane.

### **polypectomy**

Surgery to remove a polyp.

### **polypeptide**

A substance that contains many amino acids (the molecules that join together to form proteins).

### **polyphenol**

A substance that is found in many plants and gives some flowers, fruits, and vegetables their color. Polyphenols have antioxidant activity.

### **polyposis**

The development of numerous polyps (growths that protrude from a mucous membrane).

### **polysaccharide**

A large carbohydrate molecule. It contains many small sugar molecules that are joined chemically. Also called glycan.

### **polysomnogram**

A group of recordings taken during sleep that shows brain wave changes, eye movements, breathing rate, blood pressure, heart rate, and the electrical activity of the heart and other muscles. A polysomnogram may be used to help diagnose sleep disorders.

### **polyvinylpyrrolidone-sodium hyaluronate gel**

A gel used to lessen pain from mouth sores caused by chemotherapy or radiation therapy, oral surgery, braces, or disease. Polyvinylpyrrolidone-sodium hyaluronate gel is being studied in the treatment of pain caused by mouth sores in children receiving cancer treatment. It forms a thin layer over the surface of the mouth and throat to prevent irritation while eating, drinking, and talking. Also called Gelclair.

### **pomalidomide**

A drug that is similar to thalidomide and is used alone or with other drugs to treat adults with certain types of multiple myeloma or Kaposi sarcoma. It is also being studied in the treatment of other types of cancer. Pomalidomide may help the immune system kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. Pomalidomide is a type of immunomodulating agent and a type of antiangiogenesis agent. Also called CC-4047 and Pomalyst.

### **pomegranate**

A subtropical shrub or tree. Juice from the fruit may contain substances that decrease or slow the rise of prostate-specific antigen (PSA) levels. It is being studied for its ability to delay or prevent recurrent prostate cancer. The scientific name is *Punica granatum*.

### **ponatinib hydrochloride**

A drug used alone or with other drugs to treat adults with certain types of chronic myelogenous leukemia or Philadelphia chromosome–positive acute lymphoblastic leukemia. It is used in patients whose cancer is newly diagnosed, has the T315I mutation, or cannot be treated with other kinase inhibitors. It is also being studied in the treatment of other types of cancer. Ponatinib hydrochloride blocks BCR::ABL and other proteins, which may help keep cancer cells from growing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Ponatinib hydrochloride is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Iclusig.

### **pons**

Part of the central nervous system, located at the base of the brain, between the medulla oblongata and the midbrain. It is part of the brainstem.

### **pontine**

Having to do with the pons (part of the central nervous system, located at the base of the brain, between the medulla oblongata and the midbrain).

### **population study**

A study of a group of individuals taken from the general population who share a common characteristic, such as age, sex, or health condition. This group may be studied for different reasons, such as their response to a drug or risk of getting a disease.

### **porcine**

Having to do with or coming from pigs.

### **porfimer sodium**

A drug used to treat some types of cancer. When absorbed by cancer cells and exposed to light, porfimer sodium becomes active and kills the cancer cells. It is a type of photodynamic therapy agent. Also called Photofrin.

### **porfiromycin**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called anticancer antibiotics.

### **porphyria cutanea tarda**

A rare disorder that affects the skin and causes painful blisters on parts of the body that are exposed to the sun, usually the hands, arms, and face. The affected skin may be fragile, and it may blister or peel after a minor injury. Other signs and symptoms of porphyria cutanea tarda include changes in skin color, increased hair growth (especially on the face), and redness, swelling, itching, scarring, and thickening of the affected skin. Liver problems may occur, and patients with porphyria cutanea tarda may have an increased risk of liver cancer. In porphyria cutanea tarda, the body does not make enough of an enzyme called uroporphyrinogen decarboxylase. Porphyria cutanea tarda may be inherited, or it may be caused by too much iron in the body, certain infections (such as hepatitis C or HIV infection), smoking, drinking too much alcohol, taking the hormone estrogen, and certain genetic disorders. Porphyria cutanea tarda is usually diagnosed after the age of 30 years. Also called PCT.

### **port**

A device used to draw blood and give treatments, including intravenous fluids, blood transfusions, or drugs such as chemotherapy and antibiotics. The port is placed under the skin, usually in the right side of the chest. It is attached to a catheter (a thin, flexible tube) that is guided (threaded) into a large vein above the right side of the heart called the superior vena cava. A needle is inserted through the skin into the port to draw blood or give fluids and other treatments. A port may stay in place for many weeks, months, or years. Also called port-a-cath.

### **port-a-cath**

A device used to draw blood and give treatments, including intravenous fluids, blood transfusions, or drugs such as chemotherapy and antibiotics. The port is placed under the skin, usually in the right side of the chest. It is attached to a catheter (a thin, flexible tube) that is guided (threaded) into a large vein above the right side of the heart called the superior vena cava. A needle is inserted through the skin into the port to draw blood or give fluids and other treatments. A port-a-cath may stay in place for many weeks, months, or years. Also called port.

### **portal hypertension**

High blood pressure in the vein that carries blood to the liver from the stomach, small and large intestines, spleen, pancreas, and gallbladder. It is usually caused

by a block in the blood flow through the liver due to cirrhosis (scarring) of the liver.

### **portal vein**

A blood vessel that carries blood to the liver from the intestines, spleen, pancreas, and gallbladder. Also called hepatic portal vein.

### **positive axillary lymph node**

A lymph node in the area of the armpit (axilla) to which cancer has spread. This spread is determined by surgically removing some of the lymph nodes and examining them under a microscope to see whether cancer cells are present.

### **positive predictive value**

The likelihood that a person who has a positive test result does have the disease, condition, biomarker, or mutation (change) in the gene being tested. The positive predictive value is a way of measuring how accurate a specific test is. Also called PPV.

### **positive test result**

A test result that shows that a person has the disease, condition, or biomarker for which the test is being done. In genetics, a positive test result usually means that a person has a mutation (change) in the gene, chromosome, or protein that is being tested. More testing may be needed to make a diagnosis or to make sure a positive test result is correct.

### **positron emission tomography scan**

A procedure in which a small amount of radioactive glucose (sugar) is injected into a vein, and a scanner is used to make detailed, computerized pictures of areas inside the body where the glucose is taken up. Because cancer cells often take up more glucose than normal cells, the pictures can be used to find cancer cells in the body. Also called PET scan.

### **positron emission tomography-computed tomography scan**

A procedure that combines the pictures from a positron emission tomography (PET) scan and a computed tomography (CT) scan. The PET and CT scans are done at the same time with the same machine. The combined scans give more detailed pictures of areas inside the body than either scan gives by itself. A positron emission tomography-computed tomography scan may be used to help diagnose disease, such as cancer, plan treatment, or find out how well treatment is working. Also called PET-CT scan.

### **positron emission tomography-magnetic resonance imaging scan**

A procedure that combines the pictures from a positron emission tomography (PET) scan and a magnetic resonance imaging (MRI) scan. A PET scan uses a radioactive tracer to highlight abnormal areas in the body. An MRI scan uses radio waves and a powerful magnet to take detailed pictures of tissues in the body. For a positron emission tomography-magnetic resonance imaging scan, the scans are done at the same time with the same machine. The combined scans give more detailed pictures of areas inside the body than either scan gives by itself. The overall amount of radiation a person is exposed to is also reduced. A positron emission tomography-magnetic resonance imaging scan may be used to help diagnose disease, such as cancer, plan treatment, or find out how well treatment is working. Also called PET-MRI scan.

### **post-marketing surveillance trial**

A type of clinical trial that studies the side effects caused over time by a new treatment after it has been approved and is on the market. These trials look for side effects that were not seen in earlier trials and may also study how well a new treatment works over a long period of time. Post-marketing surveillance trials may include thousands of people. Also called phase 4 clinical trial and phase IV clinical trial.

### **post-transplant lymphoproliferative disorder**

A condition in which a group of B-cells grow out of control after an organ transplant in patients with weakened immune systems. This usually happens if the patient has also been infected with Epstein-Barr virus. Post-transplant lymphoproliferative disorder may progress to non-Hodgkin lymphoma. Also called PTLN.

### **post-traumatic stress disorder**

An anxiety disorder that develops in reaction to physical injury or severe mental or emotional distress, such as military combat, violent assault, natural disaster, or other life-threatening events. Having cancer may also lead to post-traumatic stress disorder. Symptoms interfere with day-to-day living and include reliving the event in nightmares or flashbacks; avoiding people, places, and things connected to the event; feeling alone and losing interest in daily activities; and having trouble concentrating and sleeping. Also called PTSD.

### **posterior**

In human anatomy, has to do with the back of a structure, or a structure found toward the back of the body.

### **posterior pelvic exenteration**

Surgery to remove the lower part of the bowel, rectum, uterus, cervix, ovaries, fallopian tubes, and vagina. Pelvic lymph nodes may also be removed.

### **posterior reversible encephalopathy syndrome**

A rare condition marked by headaches, vision problems, mental changes, seizures, and swelling in the brain. The symptoms of posterior reversible encephalopathy syndrome usually come on quickly and can be serious and life threatening. When treated, symptoms often go away within days or weeks. Posterior reversible encephalopathy syndrome may occur in patients with certain conditions, such as high blood pressure, eclampsia, severe infection, kidney disease, and certain autoimmune diseases. It may also occur in patients treated with certain anticancer drugs and immunosuppressive drugs. Also called PRES, reversible posterior leukoencephalopathy syndrome, and RPLS.

### **posterior urethral cancer**

A disease in which malignant (cancer) cells are found in the part of the urethra (the tube through which urine leaves the body) that connects to the bladder (the organ that stores urine).

### **postmenopausal**

Having to do with the time after menopause. Menopause ("change of life") is the time in a woman's life when menstrual periods stop permanently.

### **postmortem**

After death. Often used to describe an autopsy.



**postoperative**

After surgery.

**postpartum**

The time that begins right after a woman gives birth and lasts about 6 weeks.

**postprandial**

After a meal.

**postremission therapy**

Treatment that is given after cancer has disappeared following the initial therapy. Postremission therapy is used to kill any cancer cells that may be left in the body. It may include radiation therapy, a stem cell transplant, or treatment with drugs that kill cancer cells. Also called consolidation therapy and intensification therapy.

**potassium**

A metallic element that is important in body functions such as regulation of blood pressure and of water content in cells, transmission of nerve impulses, digestion, muscle contraction, and heartbeat.

**potassium hydroxide**

A toxic and highly corrosive chemical used to make soap, in bleaching, and as a paint remover. It is used in small amounts as a food additive and in the preparation of some drugs.

**potentiation**

In medicine, the effect of increasing the potency or effectiveness of a drug or other treatment.

**power of attorney**

A legal document that gives one person (such as a spouse, relative, friend, or lawyer) the authority to make legal, medical, or financial decisions for another person. A standard power of attorney may go into effect right away but becomes invalid when the person who grants it is no longer able to make decisions for themselves, dies, or cancels it. It may also need to be renewed over time.

**practitioner**

A person who works in a specific profession. For example, a doctor or nurse is a health care practitioner.

**pralatrexate**

A drug used to treat peripheral T-cell lymphoma (a fast-growing form of non-Hodgkin lymphoma) that recurred (came back) or did not get better with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Pralatrexate stops cells from using folic acid to make DNA. This may help keep cancer cells from growing and may kill them. Pralatrexate is a type of antimetabolite and a type of dihydrofolate reductase inhibitor. Also called Folutyn.

**pralsetinib**

A drug used to treat adults with non-small cell lung cancer that has a RET fusion gene and has spread to other parts of the body and adults and children aged 12 years and older with thyroid cancer that has a RET fusion gene, has spread, and needs treatment with systemic therapy. This includes patients whose thyroid cancer did not respond to radioactive iodine. It is also being studied in the treatment of other types of cancer. Pralsetinib blocks certain proteins made by

the RET fusion gene, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Gavreto.

### **pravastatin sodium**

A drug used to lower the amount of cholesterol in the blood and to prevent stroke and heart attack. It is also being studied in the treatment of cancer and other conditions. Pravastatin sodium blocks an enzyme that helps make cholesterol in the body. It may also make tumor cells more sensitive to anticancer drugs. It is a type of HMG-CoA reductase inhibitor, a type of statin, and a type of chemosensitizer. Pravastatin is the active ingredient of pravastatin sodium. Also called Pravachol.

### **precancerous**

A term used to describe a condition that may (or is likely to) become cancer. Also called premalignant.

### **precancerous dermatitis**

A skin disease marked by scaly or thickened patches on the skin and often caused by prolonged exposure to arsenic. The patches often occur on sun-exposed areas of the skin and in older white men. These patches may become malignant (cancer). Also called Bowen disease and precancerous dermatosis.

### **precancerous dermatosis**

A skin disease marked by scaly or thickened patches on the skin and often caused by prolonged exposure to arsenic. The patches often occur on sun-exposed areas of the skin and in older white men. These patches may become malignant (cancer). Also called Bowen disease and precancerous dermatitis.

### **precancerous polyps**

Growths that may become cancer that protrude from a mucous membrane.

### **precision medicine**

A form of medicine that uses information about a person's genes, proteins, environment, and lifestyle to prevent, diagnose, or treat disease. In cancer, precision medicine uses specific information about a person's tumor to help make a diagnosis, plan treatment, find out how well treatment is working, or make a prognosis. Precision medicine may also be used to help determine a person's risk of developing certain types of cancer. Examples of precision medicine include using targeted therapies to treat specific types of cancer, such as HER2-positive breast cancer, or using tumor marker testing to help diagnose cancer. Precision medicine is sometimes called personalized medicine.

### **preclinical study**

Research using animals to find out if a drug, procedure, or treatment is likely to be useful. Preclinical studies take place before any testing in humans is done.

### **precursor B-lymphoblastic leukemia**

An aggressive (fast-growing) type of leukemia (blood cancer) in which too many B-cell lymphoblasts (immature white blood cells) are found in the bone marrow and blood. It is the most common type of acute lymphoblastic leukemia (ALL). Also called B-cell acute lymphoblastic leukemia and B-cell acute lymphocytic leukemia.

### **precursor T-lymphoblastic leukemia**

An aggressive (fast-growing) type of leukemia (blood cancer) in which too many T-cell lymphoblasts (immature white blood cells) are found in the bone marrow and blood. Also called T-cell acute lymphoblastic leukemia and T-cell acute lymphocytic leukemia.

### **precursor T-lymphoblastic lymphoma**

A type of non-Hodgkin lymphoma in which too many T-cell lymphoblasts (immature white blood cells) are found in the lymph nodes and spleen. It is most common in young men. Also called T-lymphoblastic lymphoma.

### **precursor lymphoblastic lymphoma**

An aggressive (fast-growing) type of non-Hodgkin lymphoma in which too many lymphoblasts (immature white blood cells) are found in the lymph nodes and the thymus gland. These lymphoblasts may spread to other places in the body. It is most common in teenagers and young adults and affects more males than females. It may be a T or B cell type. Also called lymphoblastic lymphoma.

### **prediabetes**

A common condition in which glucose levels in the blood are higher than normal but not high enough to be diagnosed as type 2 diabetes. Having prediabetes increases the risk of developing type 2 diabetes, heart disease, and stroke. Prediabetes usually occurs when the body does not make enough insulin or use it the way it should. Most people with prediabetes do not have symptoms. There are many factors that may increase a person's risk of developing prediabetes. These include being overweight; being age 45 years or older; having a parent, brother, sister, or child with type 2 diabetes; and not getting enough exercise. Certain health conditions, such as obesity, high blood pressure, abnormal cholesterol levels, heart disease, stroke, and polycystic ovary syndrome, can also increase a person's risk of prediabetes. People who had diabetes during pregnancy, gave birth to a baby who weighed more than 9 pounds, or who are members of certain racial or ethnic groups also have an increased risk of prediabetes. Lifestyle changes, such as losing extra weight, eating a healthy diet, and getting regular exercise, can lower the risk of developing prediabetes or type 2 diabetes.

### **predictive factor**

A condition or finding that can be used to help predict whether a person's cancer will respond to a specific treatment. Predictive factor may also describe something that increases a person's risk of developing a condition or disease.

### **predisposing mutation**

A change in the DNA sequence of a gene that causes a person to have or be at risk of developing a certain genetic disorder or disease, such as cancer. Predisposing mutations can be inherited from a parent or occur during a person's lifetime. Knowing if a person has a predisposing mutation may help prevent, diagnose, and treat diseases, such as cancer. Not everyone who has a predisposing mutation will develop the disease. Also called deleterious mutation, disease-causing mutation, pathogenic variant, and susceptibility gene mutation.

### **prednisolone**

A drug that lessens inflammation and suppresses the body's immune response. It may also kill cancer cells. Prednisolone is used to treat disorders in many organ systems and to treat the symptoms of several types of leukemia and

lymphoma. It is also being studied in the treatment of other types of cancer. Prednisolone is a type of therapeutic glucocorticoid.

### **prednisone**

A drug used to reduce inflammation and lower the body's immune response. It is used with other drugs to treat leukemia, lymphoma, and mycosis fungoides (a type of skin lymphoma). It is also used alone or with other drugs to prevent or treat many other conditions. These include conditions related to cancer and its treatment, such as anemia (a low level of red blood cells) and allergic reactions. Prednisone is a type of therapeutic glucocorticoid.

### **pregabalin**

A drug used to treat nerve pain caused by diabetes or herpes zoster infection and certain types of seizures. It is being studied in the prevention and treatment of nerve pain in the hands and feet of cancer patients given chemotherapy. Pregabalin is a type of anticonvulsant. Also called Lyrica.

### **pregnancy**

The condition between conception (fertilization of an egg by a sperm) and birth, during which the fertilized egg develops in the uterus. In humans, pregnancy lasts about 288 days.

### **pre malignant**

A term used to describe a condition that may (or is likely to) become cancer. Also called precancerous.

### **premature birth**

The birth of a baby before 37 weeks of pregnancy. In humans, a normal pregnancy lasts about 40 weeks. The risk of premature birth may be increased by certain health problems in the mother, such as diabetes, heart disease, and kidney disease, or problems during pregnancy. Smoking cigarettes, being exposed to secondhand tobacco smoke, drinking alcohol, and taking certain drugs during pregnancy may also increase the risk of a premature birth. Also called preterm birth.

### **premature death**

Death that occurs before the average age of death in a certain population. In the United States, the average age of death is about 75 years. Smoking cigarettes and being exposed to secondhand tobacco smoke are leading causes of premature death in the United States. They can increase the risk of cancer, heart disease, stroke, lung disease, and many other health problems. Other causes of premature death are injuries and suicide.

### **premature menopause**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. There are two types of premature menopause, primary and secondary. Primary premature menopause means that the ovaries do not function normally. This may be because they have been removed by surgery, or it may be caused by some cancer treatments and certain diseases or genetic conditions. In secondary premature menopause, the ovaries are normal but there is a problem getting hormone signals to them from the brain. This is usually caused by diseases of the pituitary gland or hypothalamus. Some women with premature menopause sometimes have menstrual periods and may be able to have children. Also called early menopause, ovarian failure, and ovarian insufficiency.

**premature ovarian failure**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. Premature ovarian failure means the ovaries do not function normally. This may be because they have been removed by surgery, or it may be caused by some cancer treatments and certain diseases or genetic conditions. Some women with premature ovarian failure sometimes have menstrual periods and may be able to have children. Also called primary ovarian insufficiency.

**premenopausal**

Having to do with the time before menopause. Menopause ("change of life") is the time of life when a woman's menstrual periods stop permanently.

**premycotic phase**

A phase of mycosis fungoides in which a patient has areas of red, scaly, itchy skin on areas of the body that are usually not exposed to sun. This is early-phase mycosis fungoides, but it is hard to diagnose the rash as mycosis fungoides during this phase. The premycotic phase may last from months to decades.

**prenatal**

Having to do with the time a female is pregnant, before birth occurs. Also called antenatal.

**prescription**

A doctor's order for medicine or another intervention.

**pressure sore**

Damage to an area of the skin caused by constant pressure on the area for a long time. This pressure can lessen blood flow to the affected area, which may lead to tissue damage and tissue death. Pressure sores often form on the skin covering bony areas of the body, such as the back, tailbone, hips, buttocks, elbows, heels, and ankles. Patients who are not able to get out of bed or change their position, or who always use a wheelchair have an increased risk of pressure sores. Signs and symptoms include changes in skin color and swelling, warmth, tenderness, and pain in the affected area. If untreated, the skin may crack, blister, or break open and form a sore or ulcer, which may have pus-like drainage. Pressure sores often heal slowly and if not treated can damage tissues deep under the skin, including fat, muscle, and bone. Also called bedsore, decubitus ulcer, and pressure ulcer.

**pressure ulcer**

Damage to an area of the skin caused by constant pressure on the area for a long time. This pressure can lessen blood flow to the affected area, which may lead to tissue damage and tissue death. Pressure ulcers often form on the skin covering bony areas of the body, such as the back, tailbone, hips, buttocks, elbows, heels, and ankles. Patients who are not able to get out of bed or change their position, or who always use a wheelchair have an increased risk of pressure ulcers. Signs and symptoms include changes in skin color and swelling, warmth, tenderness, and pain in the affected area. If untreated, the skin may crack, blister, or break open and form a sore or ulcer, which may have pus-like drainage. Pressure ulcers often heal slowly and if not treated can damage tissues deep under the skin, including fat, muscle, and bone. Also called bedsore, decubitus ulcer, and pressure sore.

**preterm birth**

The birth of a baby before 37 weeks of pregnancy. In humans, a normal pregnancy lasts about 40 weeks. The risk of preterm birth may be increased by certain health problems in the mother, such as diabetes, heart disease, and kidney disease, or problems during pregnancy. Smoking cigarettes, being exposed to secondhand tobacco smoke, drinking alcohol, and taking certain drugs during pregnancy may also increase the risk of a preterm birth. Also called premature birth.

**pretracheal space**

The area in front of the trachea (windpipe).

**prevalence**

In medicine, a measure of the total number of people in a specific group who have (or had) a certain disease, condition, or risk factor (such as smoking or obesity) at a specific point in time or during a given period of time. For example, the prevalence of breast cancer may show how many women in the U.S. were diagnosed with breast cancer within the past 10 years, including those who are receiving treatment and those who are considered cured, and are still alive on a certain date.

**prevascular space**

The area in the front part of the chest between the lungs. Also called anterior mediastinum.

**prevention**

In medicine, action taken to decrease the chance of getting a disease or condition. For example, cancer prevention includes avoiding risk factors (such as smoking, obesity, lack of exercise, and radiation exposure) and increasing protective factors (such as getting regular physical activity, staying at a healthy weight, and having a healthy diet).

**preventive**

Used to prevent disease.

**preventive mastectomy**

Surgery to reduce the risk of breast cancer by removing one or both breasts before disease develops. Preventive mastectomy may be done in people who have a very high risk of developing breast cancer. Also called prophylactic mastectomy and risk-reducing mastectomy.

**primary CNS lymphoma**

Cancer that forms in the lymph tissue of the brain, spinal cord, meninges (outer covering of the brain), or eye (called ocular lymphoma). Also called PCNSL and primary central nervous system lymphoma.

**primary cancer**

A term used to describe the original, or first, tumor in the body. Cancer cells from a primary cancer may spread to other parts of the body and form new, or secondary, tumors. This is called metastasis. These secondary tumors are the same type of cancer as the primary cancer. Also called primary tumor.

**primary care**

Health services that meet most basic health care needs over time. Primary care includes physical exams, treatment of common medical conditions, and



preventive care such as immunizations and screenings. Primary care doctors are usually the first health professionals patients see for basic medical care. They may refer a patient to a specialist if needed.

### **primary care provider**

A doctor or other licensed medical professional, such as a nurse practitioner or physician assistant, who manages a person's health care over time. Primary care providers diagnose and treat a wide range of common medical conditions. They also provide preventive care, such as disease screenings and immunizations. A primary care provider may also refer a person to a specialist or coordinate care given by a specialist. Also called PCP.

### **primary central nervous system lymphoma**

Cancer that forms in the lymph tissue of the brain, spinal cord, meninges (outer covering of the brain), or eye (called ocular lymphoma). Also called PCNSL and primary CNS lymphoma.

### **primary effusion lymphoma**

A rare, aggressive (fast-growing) type of B-cell non-Hodgkin lymphoma marked by an abnormal build-up of fluids in a body cavity. It usually occurs together with a human herpesvirus or Epstein-Barr virus in people who have weakened immune systems, such as in patients with HIV disease.

### **primary endpoint**

The main result that is measured at the end of a study to see if a given treatment worked (e.g., the number of deaths or the difference in survival between the treatment group and the control group). What the primary endpoint will be is decided before the study begins.

### **primary mediastinal large B-cell lymphoma**

An aggressive (fast-growing) type of B-cell non-Hodgkin lymphoma (cancer of the immune system). Primary mediastinal large B-cell lymphoma develops from B cells in the mediastinum (the area behind the breastbone). It may spread to organs and tissues such as the lungs, pericardium (sac around the heart), liver, gastrointestinal tract, ovaries, adrenal glands, and central nervous system. Most patients with primary mediastinal large B-cell lymphoma are women who are age 30 to 40 years but it may also occur in older children. Also known as primary mediastinal B-cell lymphoma.

### **primary myelofibrosis**

A progressive, chronic disease in which the bone marrow is replaced by fibrous tissue and blood is made in organs such as the liver and the spleen, instead of in the bone marrow. This disease is marked by an enlarged spleen and progressive anemia. Also called agnogenic myeloid metaplasia, chronic idiopathic myelofibrosis, idiopathic myelofibrosis, and myelosclerosis with myeloid metaplasia.

### **primary ovarian insufficiency**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. Primary ovarian insufficiency means the ovaries do not function normally. This may be because they have been removed by surgery, or it may be caused by some cancer treatments and certain diseases or genetic conditions. Some women with primary ovarian insufficiency sometimes have menstrual periods and may be able to have children. Also called premature ovarian failure.

### **primary peritoneal cancer**

Cancer that forms in the peritoneum (the tissue that lines the abdominal wall and covers organs in the abdomen), and has not spread there from another part of the body. Primary peritoneal cancer sometimes spreads to the ovary. It is similar to ovarian epithelial cancer and is staged and treated the same way.

### **primary renal myoepithelial carcinoma**

A rare type of cancer that forms in the kidney. Primary renal myoepithelial carcinoma often grows quickly and spreads to other parts of the body, especially in children. The cancer cells may have a certain genetic change called a translocation (part of one chromosome switches places with part of another chromosome).

### **primary therapy**

The first treatment given for a disease. It is often part of a standard set of treatments, such as surgery followed by chemotherapy and radiation. When used by itself, primary therapy is the one accepted as the best treatment. If it doesn't cure the disease or it causes severe side effects, other treatment may be added or used instead. Also called first-line therapy, induction therapy, and primary treatment.

### **primary treatment**

The first treatment given for a disease. It is often part of a standard set of treatments, such as surgery followed by chemotherapy and radiation. When used by itself, primary treatment is the one accepted as the best treatment. If it doesn't cure the disease or it causes severe side effects, other treatment may be added or used instead. Also called first-line therapy, induction therapy, and primary therapy.

### **primary tumor**

A term used to describe the original, or first, tumor in the body. Cancer cells from a primary tumor may spread to other parts of the body and form new, or secondary, tumors. This is called metastasis. These secondary tumors are the same type of cancer as the primary tumor. Also called primary cancer.

### **primitive neuroectodermal tumor**

One of a group of cancers that develop from the same type of early cells, and share certain biochemical and genetic features. Some primitive neuroectodermal tumors develop in the brain and central nervous system (CNS-PNET), and others develop in sites outside of the brain such as the limbs, pelvis, and chest wall (peripheral PNET). Also called PNET.

### **principal investigator**

The person(s) in charge of a clinical trial or a scientific research grant. The principal investigator prepares and carries out the clinical trial protocol (plan for the study) or research paid for by the grant. The principal investigator also analyzes the data and reports the results of the trial or grant research. Also called PI.

### **prinomastat**

A substance that is being studied in the treatment of cancer. It is a matrix metalloproteinase inhibitor and belongs to the family of drugs called angiogenesis inhibitors. Also called AG3340.

**pro-oxidant**

A substance that can produce oxygen byproducts of metabolism that can cause damage to cells.

**proband**

The first person in a family to be identified as possibly having a genetic disorder and who may receive genetic counseling or testing. The person may have a condition that is thought to be inherited or may be concerned about the risk of developing a genetic condition or passing it to a child.

**probenecid**

A drug that is used to treat gout and is used together with some antibiotics to make them work better. It is being studied in the treatment of cancer. It belongs to the family of drugs called antibiotic therapy adjuncts.

**probiotic**

A live microorganism used as a dietary supplement to help with digestion and normal bowel function. It may also help keep the gastrointestinal (GI) tract healthy. A bacterium found in yogurt called *Lactobacillus acidophilus*, is the most common probiotic.

**procarbazine hydrochloride**

A drug used with other drugs to treat advanced Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Procarbazine hydrochloride damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Procarbazine is the active ingredient of procarbazine hydrochloride. Also called Matulane.

**prochlorperazine**

A drug used to prevent or reduce nausea and vomiting. It belongs to the family of drugs called antiemetics.

**proctitis**

Inflammation of the mucous membrane that lines the rectum (the last several inches of the large intestine closest to the anus). Also called rectitis.

**proctoscope**

A thin, tube-like instrument used to look inside the anus and rectum. A proctoscope has a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

**proctoscopy**

A procedure that uses a proctoscope to look inside the anus and rectum. A proctoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

**proctosigmoidoscopy**

Examination of the lower colon using a sigmoidoscope, inserted into the rectum. A sigmoidoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. Also called sigmoidoscopy.

**progeny**

Offspring; the product of reproduction or replication.

## **progesterone**

A type of hormone made by the body that plays a role in the menstrual cycle and pregnancy. Progesterone can also be made in the laboratory. It may be used as a type of birth control and to treat menstrual disorders, infertility, symptoms of menopause, and other conditions.

## **progesterone receptor**

A protein found inside the cells of the female reproductive tissue, some other types of tissue, and some cancer cells. The hormone progesterone will bind to the receptors inside the cells and may cause the cells to grow. Also called PR.

## **progesterone receptor negative**

Describes cells that do not have a protein that binds to the hormone progesterone. Cancer cells that are progesterone receptor negative do not need progesterone to grow. This means that they will keep growing when progesterone is not present and do not stop growing when treated with substances that block progesterone from binding. Also called PR negative.

## **progesterone receptor positive**

Describes cells that have a protein that binds to the hormone progesterone. Cancer cells that are progesterone receptor positive may need progesterone to grow. These cells may stop growing or die when treated with substances that block the binding and actions of progesterone. Also called PR positive.

## **progesterone receptor test**

A lab test to find out if cancer cells have progesterone receptors (proteins to which the hormone progesterone will bind). If the cells have progesterone receptors, they may need progesterone to grow, and this can affect how the cancer is treated.

## **progesterone**

Any natural or laboratory-made substance that has some or all of the biologic effects of progesterone, a female hormone.

## **prognosis**

The likely outcome or course of a disease; the chance of recovery or recurrence.

## **prognostic factor**

A situation or condition, or a characteristic of a patient, that can be used to estimate the chance of recovery from a disease or the chance of the disease recurring (coming back).

## **programmed cell death**

A type of cell death in which a series of molecular steps in a cell lead to its death. This is one method the body uses to get rid of unneeded or abnormal cells. The process of programmed cell death may be blocked in cancer cells. Also called apoptosis.

## **progression**

In medicine, the course of a disease, such as cancer, as it becomes worse or spreads in the body.

## **progression-free survival**

The length of time during and after the treatment of a disease, such as cancer, that a patient lives with the disease but it does not get worse. In a clinical trial,

measuring the progression-free survival is one way to see how well a new treatment works. Also called PFS.

### **progressive disease**

Cancer that is growing, spreading, or getting worse.

### **progressive familial intrahepatic cholestasis**

A rare, inherited disorder marked by a buildup in the liver of bile (fluid that helps digest fat). This can lead to liver disease and liver failure. It may also increase the risk of liver cancer. Progressive familial intrahepatic cholestasis is caused by mutations (changes) in certain genes that make proteins needed to help the liver work the way it should. It usually occurs in infants and children. Also called PFIC.

### **prolactin**

A hormone that is made by the pituitary gland (a pea-sized organ in the center of the brain). Prolactin causes a woman's breasts to make milk during and after pregnancy, and has many other effects in the body.

### **proliferating**

Multiplying or increasing in number. In biology, cell proliferation occurs by a process known as cell division.

### **proliferative index**

A measure of the number of cells in a tumor that are dividing (proliferating). May be used with the S-phase fraction to give a more complete understanding of how fast a tumor is growing.

### **prolymphocytic leukemia**

A type of chronic lymphocytic leukemia (CLL), in which too many immature white blood cells (prolymphocytes) are found in the blood and bone marrow. Prolymphocytic leukemia usually progresses more rapidly than classic CLL. Also called PLL.

### **promegapoietin**

A drug given during chemotherapy to increase blood cell regeneration. Promegapoietin is a colony-stimulating factor that stimulates the production of blood cells, especially platelets. It is a cytokine and belongs to the family of drugs called hematopoietic (blood-forming) agents.

### **promyelocytic leukemia**

An aggressive (fast-growing) type of acute myeloid leukemia in which there are too many immature blood-forming cells in the blood and bone marrow. It is usually marked by an exchange of parts of chromosomes 15 and 17. Also called acute promyelocytic leukemia and APL.

### **promyelocytic leukemia gene**

A gene that makes a protein that helps control cell growth and cell division. Mutations (changes) in the promyelocytic leukemia gene can occur when a piece of the chromosome containing the promyelocytic leukemia gene breaks off and joins with a gene called RARA on another chromosome. These changes may cause too many immature white blood cells to build up in the blood and bone marrow. This can lead to an aggressive (fast-growing) type of acute myeloid leukemia called acute promyelocytic leukemia. The promyelocytic leukemia gene is a type of tumor suppressor gene. Also called PML gene.

## **prophylactic**

In medicine, something that prevents or protects.

## **prophylactic cranial irradiation**

Radiation therapy to the head to reduce the risk that cancer will spread to the brain.

## **prophylactic mastectomy**

Surgery to reduce the risk of breast cancer by removing one or both breasts before disease develops. Prophylactic mastectomy may be done in people who have a very high risk of developing breast cancer. Also called preventive mastectomy and risk-reducing mastectomy.

## **prophylactic oophorectomy**

Surgery done to reduce the risk of ovarian cancer and breast cancer by removing the ovaries before disease develops. Removing the ovaries lowers the amount of estrogen in the body, which may slow the growth of some types of breast cancer. Prophylactic oophorectomy is usually done in women who have a high risk of developing breast cancer and/or ovarian cancer caused by certain genetic mutations. Also called risk-reducing oophorectomy.

## **prophylactic surgery**

Surgery to remove an organ or gland that shows no signs of cancer, in an attempt to prevent development of cancer of that organ or gland. Prophylactic surgery is sometimes chosen by people who know they are at high risk for developing cancer.

## **prophylaxis**

An attempt to prevent disease.

## **propranolol hydrochloride**

A drug used under the brand name Hemangeol to treat infants 5 weeks to 5 months of age with infantile hemangioma (a benign blood vessel tumor) and under other brand names to treat high blood pressure, including before surgery in patients with pheochromocytoma, and many other conditions. It is also being studied in the treatment of other conditions and some types of cancer.

Propranolol hydrochloride blocks certain receptors on nerve cells and causes blood vessels to relax and widen. This improves blood flow and lowers blood pressure and heart rate. Propranolol hydrochloride may also help shrink certain types of vascular tumors. It is a type of beta blocker.

## **prospective**

In medicine, a study or clinical trial in which participants are identified and then followed forward in time.

## **prospective cohort study**

A research study that follows over time groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and those who do not smoke) and compares them for a particular outcome (such as lung cancer).

## **prostaglandin**

One of several hormone-like substances made by the body. Different prostaglandins control blood pressure, contraction of smooth muscles, and other



processes within tissues where they are made. Certain prostaglandins are being studied as cancer biomarkers. Also called PG.

### **prostaglandin E1**

A drug that is used to treat impotence (inability to have an erection) and is being studied in the treatment of sexual problems in men who have had surgery for prostate cancer. It is a type of vasodilator. Also called alprostadil and PGE1.

### **prostaglandin-endoperoxide synthase 2**

An enzyme that speeds up the formation of substances that cause inflammation and pain. It may also cause tumor cells to grow. Some tumors have high levels of prostaglandin-endoperoxide synthase 2 and blocking its activity may reduce tumor growth. Also called COX-2 and cyclooxygenase-2.

### **prostate**

A gland in the male reproductive system. The prostate surrounds the part of the urethra (the tube that empties the bladder) just below the bladder, and produces a fluid that forms part of the semen.

### **prostate cancer**

Cancer that forms in the tissues of the prostate (a gland in the male reproductive system that lies just below the bladder and in front of the rectum). Prostate cancer usually occurs in older men.

### **prostate cancer antigen 3 mRNA test**

A laboratory test that measures the amount of genetic material called PCA3 mRNA and PSA mRNA in the first urine sample after a digital rectal examination. PCA3 mRNA and PSA mRNA are made by normal prostate cells and prostate cancer cells but are made in higher amounts by prostate cancer cells. The PCA3 score is based on the ratio of PCA3 mRNA to PSA mRNA in the urine. A high PCA3 score may be a sign of prostate cancer. The prostate cancer antigen 3 mRNA test may be done in men with a high PSA level whose biopsy of the prostate did not show cancer. The prostate cancer antigen 3 mRNA test is used to help decide if another prostate biopsy may be needed. Also called PCA3 mRNA test.

### **prostate-specific antigen**

A protein made by the prostate gland and found in the blood. Prostate-specific antigen blood levels may be higher than normal in men who have prostate cancer, benign prostatic hyperplasia (BPH), or infection or inflammation of the prostate gland. Also called PSA.

### **prostate-specific antigen test**

A laboratory test that measures the amount of prostate-specific antigen (PSA) found in the blood. PSA is a protein made by the prostate gland. The amount of PSA may be higher in men who have prostate cancer, benign prostatic hyperplasia (BPH), or infection or inflammation of the prostate. Also called PSA test.

### **prostate-specific membrane antigen**

A protein that is usually found on the surface of normal prostate cells but is found in higher amounts on prostate cancer cells. Prostate-specific membrane antigen may be used as a target in imaging to help find prostate cancer cells, especially those that may have come back or spread to other parts of the body. Research is

being done to learn more about prostate-specific membrane antigen and how it may also be used as a target for certain anticancer drugs. Also called PSMA.

### **prostate-specific membrane antigen PET scan**

An imaging procedure that is used to help find prostate cancer cells in the body. For this procedure, a cell-targeting molecule linked to a radioactive substance is injected into the body and travels through the blood. It attaches to a protein called prostate-specific membrane antigen (PSMA) that is found on the surface of prostate cancer cells. A PET scanner detects high concentrations of the radioactive molecule and shows where the prostate cancer cells are in the body. A prostate-specific membrane antigen PET scan may be used to help diagnose prostate cancer that may have come back or spread to other parts of the body. It may also be used to help plan treatment. Also called PSMA PET scan.

### **prostatectomy**

Surgery to remove part or all of the prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). Nearby lymph nodes may also be removed. A prostatectomy may be done through an incision (cut) made in the wall of the lower abdomen or in the perineum (the area between the scrotum and anus). It may also be done using a laparoscope (a thin, tube-like instrument with a light and lens for viewing) or a special robotic system. An attempt is made to protect the nerves that control penile erection and the bladder from damage.

### **prostatic acid phosphatase**

An enzyme produced by the prostate. It may be found in increased amounts in men who have prostate cancer. Also called PAP.

### **prostatic intraepithelial neoplasia**

Noncancerous growth of the cells lining the internal and external surfaces of the prostate gland. Having high-grade prostatic intraepithelial neoplasia may increase the risk of developing prostate cancer. Also called PIN.

### **prostatitis**

Inflammation of the prostate gland.

### **prostatocystectomy**

Surgery to remove the bladder and the prostate. The seminal vesicles and nearby lymph nodes may also be removed. The prostate and seminal vesicles are glands in the male reproductive system that help make semen. Also called cystoprostatectomy.

### **prosthesis**

A device, such as an artificial leg, that replaces a part of the body.

### **prosthetist**

A person who has special training in making and fitting artificial body parts, such as arms or legs.

### **prosthodontist**

A dentist who has special training in replacing missing teeth or other structures of the mouth to restore an individual's appearance, comfort, or health.

**prostration**

A condition in which a person is so tired or weak that he or she is unable to do anything.

**protease inhibitor**

A compound that interferes with the ability of certain enzymes to break down proteins. Some protease inhibitors can keep a virus from making copies of itself (for example, AIDS virus protease inhibitors), and some can prevent cancer cells from spreading.

**proteasome inhibitor**

A drug that blocks the action of proteasomes. A proteasome is a large protein complex that helps destroy other cellular proteins when they are no longer needed. Proteasome inhibitors are being studied in the treatment of cancer.

**protective factor**

Something that may decrease the chance of getting a certain disease. Some examples of protective factors for cancer are getting regular physical activity, staying at a healthy weight, and having a healthy diet.

**protegrin**

One of a family of small proteins found in white blood cells in pigs. Protegrins kill certain bacteria, fungi, and viruses by making holes in their outer membranes and causing them to burst. A protegrin is a type of antimicrobial peptide.

**protein**

A molecule made up of amino acids. Proteins are needed for the body to function properly. They are the basis of body structures, such as skin and hair, and of other substances such as enzymes, cytokines, and antibodies.

**protein expression**

Refers to the production of proteins by cells. The study of protein expression in cancer cells may give information about a specific type of cancer, the best treatment to use, and how well a treatment works.

**protein expression profile**

Information about all proteins that are made in blood, other body fluids, or tissues, at certain times. A protein expression profile may be used to find and diagnose a disease or condition and to see how well the body responds to treatment. Also called protein signature and proteomic profile.

**protein kinase B**

A group of enzymes involved in several processes related to cell growth and survival. Protein kinase B enzymes help to transfer signals inside cells. A protein kinase B enzyme is a type of serine/threonine protein kinase. Also called Akt.

**protein kinase C**

An enzyme found throughout the body's tissues and organs. Several forms of protein kinase C are involved in many cellular functions. Protein kinase C is being studied in the treatment of cancer. Also called PKC.

**protein kinase inhibitor**

A substance that blocks the action of enzymes called protein kinases. There are many different types of protein kinases and they take part in many cell functions. These include cell signaling, growth, and division. Blocking certain protein

kinases may help keep cancer cells from growing. Some protein kinase inhibitors, such as imatinib, vemurafenib, and gefitinib, are used to treat cancer.

### **protein signature**

Information about all proteins that are made in blood, other body fluids, or tissues, at certain times. A protein signature may be used to find and diagnose a disease or condition and to see how well the body responds to treatment. Also called protein expression profile and proteomic profile.

### **protein-bound paclitaxel**

A form of the anticancer drug paclitaxel that is used alone or with other drugs to treat certain types of breast cancer, non-small cell lung cancer, and pancreatic cancer. Protein-bound paclitaxel may have fewer side effects and work better than other forms of paclitaxel. It is also being studied in the treatment of other types of cancer. Protein-bound paclitaxel stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called ABI-007, Abraxane, nanoparticle paclitaxel, and paclitaxel albumin-stabilized nanoparticle formulation.

### **proteinuria**

Higher-than-normal amount of protein in the urine.

### **proteogenomics**

The study of how information about the DNA in a cell or organism relates to the proteins made by that cell or organism. This includes understanding how genes control when proteins get made and what changes occur to proteins after they are made that may switch them on and off. Proteogenomics may help researchers learn more about which proteins are involved in certain diseases, such as cancer, and may also be used to help develop new drugs that block these proteins.

### **proteoglycan**

A molecule that contains both protein and glycosaminoglycans, which are a type of polysaccharide. Proteoglycans are found in cartilage and other connective tissues.

### **proteome**

The complete set of proteins made by an organism. Proteins are made in different amounts and at different times, depending on how they work, when they are needed, and how they interact with other proteins inside cells. Information about a proteome may be used to help find which proteins are involved in diseases, such as cancer. It may also be used to help develop drugs that block these proteins.

### **proteomic profile**

Information about all proteins that are made in blood, other body fluids, or tissues, at certain times. A proteomic profile may be used to find and diagnose a disease or condition and to see how well the body responds to treatment. Also called protein expression profile and protein signature.

### **proteomics**

The study of the structure and function of proteins, including the way they work and interact with each other inside cells.

**proto-oncogene**

A gene involved in normal cell growth. Mutations (changes) in a proto-oncogene may cause it to become an oncogene, which can cause the growth of cancer cells.

**protocol**

A detailed plan of a scientific or medical experiment, treatment, or procedure. In clinical trials, it states what the study will do, how it will be done, and why it is being done. It explains how many people will be in the study, who is eligible to take part in it, what study drugs or other interventions will be given, what tests will be done and how often, and what information will be collected.

**proton**

A small, positively charged particle of matter found in the atoms of all elements. Streams of protons generated by special equipment can be used for radiation treatment.

**proton beam radiation therapy**

A type of radiation therapy that uses streams of protons (tiny particles with a positive charge) to kill tumor cells. This type of treatment can reduce the amount of radiation damage to healthy tissue near a tumor. It is used to treat cancers of the head and neck and organs such as the brain, eye, lung, spine, and prostate. Proton beam radiation is different from x-ray radiation.

**proton magnetic resonance spectroscopic imaging**

A noninvasive imaging method that provides information about cellular activity (metabolic information). It is used along with magnetic resonance imaging (MRI) which provides information about the shape and size of the tumor (spatial information). Also called <sup>1</sup>H-nuclear magnetic resonance spectroscopic imaging, magnetic resonance spectroscopic imaging, and MRSI.

**proton pump inhibitor**

A substance used to treat certain disorders of the stomach and intestines, such as heartburn and ulcers. Proton pump inhibitors block the actions of an enzyme in the stomach and reduce the amount of acid made in the stomach. Also called PPI.

**protozoal**

Having to do with the simplest organisms in the animal kingdom. Protozoa are single-cell organisms, such as ameba, and are different from bacteria, which are not members of the animal kingdom. Some protozoa can be seen without a microscope.

**proximal**

In medicine, refers to a part of the body that is closer to the center of the body than another part. For example, the knee is proximal to the toes. The opposite is distal.

**proximal colon**

The first and middle parts of the colon. The proximal colon includes the cecum (a pouch that connects the small intestine to the colon), the ascending colon (the right side of the colon), and the transverse colon (the part of the colon that goes across the body between the right and left sides of the colon).

### **proximal urethra**

The part of the urethra closest to the inside of the body. The urethra is the tube through which urine leaves the body. In women, the proximal urethra is the part near the bladder and in men it is the part that goes through the prostate gland.

### **proximal urethral cancer**

A rare cancer that forms in the part of the urethra closest to the inside of the body. The cancer often has spread deeply into the tissue.

### **pruritus**

Itching. Severe itching may be a side effect of some cancer treatments and a symptom of some types of cancers.

### **psammoma body**

A structure found in some benign (not cancer) or malignant (cancer) tumor cells. Psammoma bodies look like hardened concentric rings when viewed under a microscope. They can be a sign of chronic inflammation.

### **pseudomyogenic hemangioendothelioma**

A very rare blood vessel tumor that usually forms on or under the skin of the arms or legs, but it may also form in deeper tissues, such as muscle and bone. These tumors may spread to nearby tissue, but usually do not spread to other parts of the body. There is often more than one tumor, and the tumor may cause pain in the affected area. Pseudomyogenic hemangioendotheliomas may come back after treatment. They are most common in young adult males.

Pseudomyogenic hemangioendotheliomas are a type of vascular tumor.

### **pseudomyxoma peritonei**

A build-up of mucus in the peritoneal cavity. The mucus may come from ruptured ovarian cysts, from the appendix, or from other abdominal tissues. Mucus-secreting cells may attach to the peritoneal lining and continue to secrete mucus.

### **psilocybin**

A substance being studied in the treatment of anxiety or depression in patients with advanced cancer. It is taken from the mushroom *Psilocybe mexicana*. Psilocybin acts on the brain to cause hallucinations (sights, sounds, smells, tastes, or touches that a person believes to be real but are not real). Also called psilocybine.

### **psilocybine**

A substance being studied in the treatment of anxiety or depression in patients with advanced cancer. It is taken from the mushroom *Psilocybe mexicana*. Psilocybine acts on the brain to cause hallucinations (sights, sounds, smells, tastes, or touches that a person believes to be real but are not real). Also called psilocybin.

### **psoralen**

A substance from plants that is sensitive to light (or can be activated by light). Psoralens are used together with UV light to treat psoriasis, vitiligo, and skin nodules of cutaneous T-cell lymphoma. They are also being studied in the treatment of graft-versus-host disease. Psoralen is a type of furocoumarin. An example of a psoralen is methoxsalen.



**psoralen and ultraviolet A therapy**

A type of photodynamic therapy used to treat skin conditions such as psoriasis, vitiligo, and skin nodules of cutaneous T-cell lymphoma. The patient receives psoralen (a drug that becomes active when it is exposed to light) by mouth or applied to the skin, followed by ultraviolet A radiation. Psoralen and ultraviolet A therapy may increase the risk of getting skin cancer. Also called PUVA therapy.

**psoriasis**

A chronic disease of the skin marked by red patches covered with white scales.

**psychiatrist**

A medical doctor who has special training in preventing, diagnosing, and treating mental, emotional, and behavioral disorders.

**psychoactive substance**

A drug or other substance that affects how the brain works and causes changes in mood, awareness, thoughts, feelings, or behavior. Examples of psychoactive substances include alcohol, caffeine, nicotine, marijuana, and certain pain medicines. Many illegal drugs, such as heroin, LSD, cocaine, and amphetamines are also psychoactive substances. Also called psychotropic substance.

**psychological**

Having to do with how the mind works and how thoughts and feelings affect behavior.

**psychologist**

A specialist who can talk with patients and their families about emotional and personal matters, and can help them make decisions.

**psychology**

The study of how the mind works and how thoughts and feelings affect behavior.

**psychosis**

A severe mental disorder in which a person loses the ability to recognize reality or relate to others. The person is not able to cope with the demands of everyday life. Symptoms include being paranoid, having false ideas about what is taking place or who one is, and seeing, hearing, or feeling things that are not there.

**psychosocial**

In medicine, having to do with the mental, emotional, social, and spiritual effects of a disease, such as cancer. Some of the psychosocial effects of cancer are changes in how a patient thinks, their feelings, moods, beliefs, ways of coping, and relationships with family, friends, and co-workers. There are different kinds of psychosocial support that can help cancer patients, including counseling, education, group support, and spiritual support.

**psychosocial support**

In medicine, support given to help meet the mental, emotional, social, and spiritual needs of patients and their families. Diseases, such as cancer, can affect a patient's thoughts, feelings, moods, beliefs, ways of coping, and relationships with family, friends, and co-workers. There are different kinds of psychosocial support that can help cancer patients. These include counseling, education, group support, and spiritual support.

**psychostimulant**

A drug that causes a sense of well-being, decreases fatigue and depression, and increases the desire to eat. These drugs can also cause mood changes and trouble with sleeping.

**psychotherapy**

Treatment of mental, emotional, personality, and behavioral disorders using methods such as discussion, listening, and counseling. Also called talk therapy.

**psychotropic substance**

A drug or other substance that affects how the brain works and causes changes in mood, awareness, thoughts, feelings, or behavior. Examples of psychotropic substances include alcohol, caffeine, nicotine, marijuana, and certain pain medicines. Many illegal drugs, such as heroin, LSD, cocaine, and amphetamines are also psychotropic substances. Also called psychoactive substance.

**psyllium**

A plant with seeds that are used as a mild laxative. The outer layer of the seeds swells when wet. This increases the size of stool and helps it pass more easily through the intestines (lower part of the digestive tract). Psyllium is a type of bulk laxative.

**ptosis**

Drooping of the upper eyelid.

**puberty**

The time of life when a child experiences physical and hormonal changes that mark a transition into adulthood. The child develops secondary sexual characteristics and becomes able to have children. Secondary sexual characteristics include growth of pubic, armpit, and leg hair; breast enlargement; and increased hip width in girls. In boys, they include growth of pubic, face, chest and armpit hair; voice changes; penis and testicle growth, and increased shoulder width.

**public health insurance**

A program run by U.S. federal, state, or local governments in which people have some or all of their health care costs paid for by the government. The two main types of public health insurance are Medicare and Medicaid. Medicare is a federal health insurance program for people aged 65 years or older and people with certain disabilities. Medicaid is a public health insurance program for some individuals and families with a low income or disabilities.

**pulmonary**

Having to do with the lungs.

**pulmonary disease**

A type of disease that affects the lungs and other parts of the respiratory system. Pulmonary diseases may be caused by infection, by smoking tobacco, or by breathing in secondhand tobacco smoke, radon, asbestos, or other forms of air pollution. Pulmonary diseases include asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, pneumonia, and lung cancer. Also called lung disorder and respiratory disease.

### **pulmonary edema**

A buildup of fluid in the alveoli (air spaces) in the lungs. This keeps oxygen from getting into the blood. Pulmonary edema is usually caused by heart problems, but it can also be caused by high blood pressure, pneumonia, certain toxins and medicines, or living at a high altitude. Symptoms include coughing, shortness of breath, and trouble exercising.

### **pulmonary embolism**

A sudden blockage of an artery (blood vessel) in the lung. A pulmonary embolism usually occurs when a blood clot in a deep vein in the leg or pelvis breaks loose and travels through the blood to the lungs. It may not cause any signs or symptoms, or it may cause shortness of breath, chest pain, a bloody cough, or a fast or abnormal heartbeat. A pulmonary embolism can be life-threatening, especially if the blood clot is large or there are many clots. It may be caused by surgery and by certain medical conditions, such as cancer, heart disease, or lung disease. It can also be caused by taking medicines that contain hormones, pregnancy and childbirth, not moving for long periods of time, older age, smoking, obesity, and having a family history of blood clots or pulmonary embolism.

### **pulmonary function**

A term used to describe how well the lungs work in helping a person breathe. During breathing, oxygen is taken into the lungs, where it passes into the blood and travels to the body's tissues. Carbon dioxide, a waste product made by the body's tissues, is carried to the lungs, where it is breathed out. There are different tests to measure pulmonary function. Also called lung function.

### **pulmonary function test**

A test used to measure how well the lungs work. It measures how much air the lungs can hold and how quickly air is moved into and out of the lungs. It also measures how much oxygen is used and how much carbon dioxide is given off during breathing. A pulmonary function test can be used to diagnose a lung disease and to see how well treatment for the disease is working. Also called lung function test and PFT.

### **pulmonary rehabilitation education**

Education about behavior and lifestyle changes to help patients with chronic lung disease decrease breathing problems, return to daily activities, and improve quality of life. Education may include instruction about breathing exercises, nutrition, use of medicines, and ways for the patient to reduce stress and save energy.

### **pulmonary specialist**

A doctor who has special training in diagnosing and treating diseases of the lungs. Also called pulmonologist.

### **pulmonary sulcus tumor**

A type of lung cancer that begins in the upper part of a lung and spreads to nearby tissues such as the ribs and vertebrae. Most pulmonary sulcus tumors are non-small cell cancers. Also called Pancoast tumor.

### **pulmonologist**

A doctor who has special training in diagnosing and treating diseases of the lungs. Also called pulmonary specialist.

## **pulmonology**

A branch of medicine that specializes in diagnosing and treating diseases of the lungs and other parts of the respiratory system. These diseases include asthma, emphysema, tuberculosis, and pneumonia.

## **pulse**

In medicine, the number of times the heart beats within a certain time period, usually a minute. The pulse can be felt at the wrist, side of the neck, back of the knees, top of the foot, groin, and other places in the body where an artery is close to the skin. The resting pulse is normally between 60 and 100 beats a minute in a healthy adult who is at rest. Measuring the pulse gives important information about a person's health. Also called heart rate.

## **pump**

A device that is used to give a controlled amount of a liquid at a specific rate. For example, pumps are used to give drugs (such as chemotherapy or pain medicine) or nutrients.

## **punch biopsy**

A procedure in which a small round piece of tissue about the size of a pencil eraser is removed using a sharp, hollow, circular instrument. The tissue is then checked under a microscope for signs of disease. A punch biopsy may be used to check for certain types of cancer, including skin, vulvar, and cervical cancer. It may also be used to check for certain skin conditions and changes that may lead to cancer.

## **pupil**

The round opening in the center of the iris (the colored tissue that makes the "eye color" at the front of the eye). The pupil changes size to let light into the eye. It gets smaller in bright light and larger as the amount of light decreases.

## **pure red cell aplasia**

A rare disorder in which the bone marrow does not make enough red blood cells. Signs and symptoms include fatigue, pale skin, breathing problems, dizziness, and headaches. Pure red cell aplasia mainly affects adults and may be caused by infection, kidney failure, an autoimmune disease (such as lupus or rheumatoid arthritis), pregnancy, a thymoma (tumor of the thymus gland), and certain types of cancer, including leukemia. It may also be caused by taking certain medicines. Pure red cell aplasia may also be inherited and seen in the first year of life, but this is very rare. Also called PRCA.

## **purine**

One of two chemical compounds that cells use to make the building blocks of DNA and RNA. Examples of purines are adenine and guanine. Purines are also found in meat and meat products. They are broken down by the body to form uric acid, which is passed in the urine. High levels of uric acid in the body may cause gout.

## **purine nucleoside analog**

A type of anticancer drug that is similar to a natural chemical compound called purine. Cells use purine to make the chemical building blocks of DNA and RNA. Purine nucleoside analogs may kill cells, including cancer cells, by blocking important enzymes needed to make DNA and RNA and by damaging DNA. Some purine nucleoside analogs are used to treat certain types of leukemia and lymphoma. Also called PNA.

### **purple clover**

*Trifolium pratense*. A plant with flowers that has been used in some cultures to treat certain medical problems. It is being studied in the relief of menopausal symptoms and may have anticancer effects. Also called red clover, *Trifolium pratense*, and wild clover.

### **purple coneflower**

An herb native to North America that has been used to prevent and treat the common cold and other respiratory infections. Purple coneflower may interfere with treatment that uses the immune system to fight cancer. The scientific names are *Echinacea purpurea* and *Echinacea angustifolia*. Also called echinacea.

### **pylorus**

The part of the stomach that connects to the duodenum (first part of the small intestine). The pylorus is a valve that opens and closes during digestion. This allows partly digested food and other stomach contents to pass from the stomach to the small intestine.

### **pyogenic granuloma**

A benign (not cancer) blood vessel tumor that usually forms on the skin. It may also form on mucous membranes and inside capillaries (small blood vessels) or other places on the body. Pyogenic granulomas usually appear as raised, bright red lesions that may grow quickly and bleed a lot. The lesions are sometimes caused by injury or use of certain medicines and often come back after treatment. They usually occur in older children and young adults but may occur at any age. Pyogenic granulomas are a type of vascular tumor. Also called lobular capillary hemangioma.

### **pyrazine diazohydroxide**

A substance that is being studied in the treatment of cancer.

### **pyrazoloacridine**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called acridines.

### **pyridoxine**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Pyridoxine helps keep nerves and skin healthy, fight infections, keep blood sugar levels normal, produce red blood cells, and some enzymes work properly. Pyridoxine is a group of related compounds (pyridoxine, pyridoxal, and pyridoxamine) found in cereals, beans, peas, nuts, meat, poultry, fish, eggs, and bananas. It is water-soluble (can dissolve in water). Not enough pyridoxine can cause mouth and tongue sores and nervous disorders. Pyridoxine is being studied in the prevention of hand-foot syndrome (a disorder caused by certain anticancer drugs and marked by pain, swelling, numbness, tingling, or redness of the hands or feet). Also called vitamin B6.

### **pyrimidine**

One of two chemical compounds that cells use to make the building blocks of DNA and RNA. Examples of pyrimidines are cytosine, thymine, and uracil. Cytosine and thymine are used to make DNA and cytosine and uracil are used to make RNA.

**pyroxamide**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called histone deacetylase inhibitors.

**qi**

In traditional Chinese medicine, vital energy or life force that keeps a person's spiritual, emotional, mental, and physical health in balance.

**qigong**

A form of traditional Chinese mind/body exercise and meditation that uses slow and precise body movements with controlled breathing and mental focusing to improve balance, flexibility, muscle strength, and overall health.

**quadrantectomy**

Surgery to remove cancer or other abnormal tissue from the breast and some normal tissue around it, but not the breast itself. Some lymph nodes under the arm may be removed for biopsy. Part of the chest wall lining may also be removed if the cancer is near it. Also called breast-conserving surgery, breast-sparing surgery, lumpectomy, partial mastectomy, and segmental mastectomy.

**quadrivalent vaccine**

A vaccine that works by stimulating an immune response against four different antigens, such as four different viruses or other microorganisms. For example, Gardasil is a quadrivalent vaccine that helps protect the body against infection with four different types of human papillomaviruses (HPV).

**quadruple-negative breast cancer**

A type of breast cancer in which the tumor cells do not have estrogen receptors, progesterone receptors, androgen receptors, or large amounts of HER2/neu protein on their surface. Knowing whether breast cancer is quadruple negative is important in planning treatment. Also called QNBC.

**quality assurance**

A process that looks at activities or products on a regular basis to make sure they are being done at the required level of excellence. In clinical trials, quality assurance makes sure that all parts of the trial follow the law and the Good Clinical Practice guidelines. Also called QA.

**quality of life**

The overall enjoyment of life. Many clinical trials assess the effects of cancer and its treatment on the quality of life. These studies measure aspects of an individual's sense of well-being and ability to carry out activities of daily living.

**quinone oxidoreductase 1**

An enzyme inside cells that makes certain molecules less toxic. Also called quinone reductase.

**quinone reductase**

An enzyme inside cells that makes certain molecules less toxic. Also called quinone oxidoreductase 1.

**quizartinib dihydrochloride**

A drug used with certain chemotherapy drugs and then alone as maintenance therapy to treat adults with newly diagnosed acute myeloid leukemia that has a certain mutation in the FLT3 gene. It is also being studied in the treatment of



other types of cancer. Quizartinib dihydrochloride blocks FLT3 and other proteins, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Vanflyta.

### **r-metHuSCF**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. It is being studied in the treatment of myelodysplasia. r-metHuSCF is a type of recombinant stem cell growth factor. Also called ancestim, recombinant human methionyl stem cell factor, and Stemgen.

### **r-tPA**

A form of tissue plasminogen activator that is made in the laboratory. It helps dissolve blood clots and is used to treat heart attacks, strokes, and clots in the lungs. It is also being studied in the treatment of cancer. It is a type of systemic thrombolytic agent. Also called Activase, Alteplase, and recombinant tissue plasminogen activator.

### **rAd/p53**

A substance that has been studied in the treatment of some types of cancer. rAd/p53 is a weakened adenovirus that carries the p53 gene into tumor cells, causing them to die. It is a type of gene therapy. Also called ACN53, recombinant adenovirus-p53, and SCH-58500.

### **rF-TRICOM**

A cancer vaccine made with a form of a chicken virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called recombinant fowlpox-TRICOM vaccine.

### **rV-TRICOM**

A cancer vaccine made with a form of a vaccinia virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called recombinant vaccinia-TRICOM vaccine and vaccinia-TRICOM vaccine.

### **rabies**

A disease of the nervous system caused by the rabies virus. Rabies is marked by an increase in saliva production, abnormal behavior, and eventual paralysis and death.

### **race**

A concept used to describe a group of people who share physical characteristics, such as skin color and facial features. They may also share similar social or cultural identities and ancestral backgrounds. There are many racial groups, and a person may belong to or identify with more than one group. Some diseases, such as cancer, may be more common in certain races than in others.

### **rachitis**

A condition in children in which bones become soft and deformed because they don't have enough calcium and phosphorus. It is caused by not having enough

vitamin D in the diet or by not getting enough sunlight. In adults, this condition is called osteomalacia. Also called infantile rickets, juvenile rickets, and rickets.

### **racism**

The structures, policies, practices, beliefs, and behaviors in a society that create an unfair advantage for some people and unfair or harmful treatment of others based on their race or ethnic group. Racism affects the physical, social, and economic conditions of where people live, learn, work, and play, including access to health care services. It is a serious problem and can lead to poor health outcomes, such as higher rates of disease and death in certain racial and ethnic groups.

### **radial scar**

A benign (not cancer) area of hardened tissue in the breast that looks like a scar when viewed under a microscope. Radial scars often occur in both breasts, and more than one lesion is usually present in each breast. They usually cannot be felt and do not cause symptoms but may look like breast cancer on a mammogram, especially if the lesions are large. A biopsy is usually needed to tell the difference between these lesions and breast cancer. Radial scars may slightly increase the risk of breast cancer. Also called complex sclerosing lesion.

### **radiation**

Energy released in the form of particle or electromagnetic waves. Common sources of radiation include radon gas, cosmic rays from outer space, medical x-rays, and energy given off by a radioisotope (unstable form of a chemical element that releases radiation as it breaks down and becomes more stable). Radiation can damage cells. It is used to diagnose and treat some types of cancer.

### **radiation brachytherapy**

A type of radiation therapy in which a radioactive substance is sealed inside materials that can be implanted, such as pellets, seeds, ribbons, wires, needles, or capsules, and placed inside the body, directly into or near a tumor or within a body cavity. The implant may be placed through a small flexible tube called a catheter or through an applicator device. It may be kept in place for a few minutes, for many days, or for the rest of a person's life. Radiation brachytherapy is often used to treat cancers of the head and neck, breast, cervix, prostate, and eye. Also called brachytherapy, implant radiation therapy, and internal radiation therapy.

### **radiation cystitis**

Inflammation of the lining of the bladder caused by radiation therapy to the pelvis, including the bladder. Symptoms include pain and a burning feeling while urinating, blood in the urine, feeling a need to urinate often or right away, being unable to control the flow of urine, bladder spasms, and pain in the pelvis. Some symptoms of radiation cystitis may go away after radiation therapy has ended, but others may continue over time.

### **radiation dermatitis**

A skin condition that is a common side effect of radiation therapy. The affected skin becomes painful, red, itchy, and blistered.

### **radiation enteritis**

Inflammation of the small intestine caused by radiation therapy to the abdomen, pelvis, or rectum. Symptoms include nausea, vomiting, abdominal pain and

cramping, frequent bowel movements, watery or bloody diarrhea, fatty stools, and weight loss. Some of these symptoms may continue for a long time.

### **radiation fibrosis**

The formation of scar tissue as a result of radiation therapy.

### **radiation necrosis**

The death of healthy tissue caused by radiation therapy. Radiation necrosis is a side effect of radiation therapy given to kill cancer cells, and can occur after cancer treatment has ended.

### **radiation nurse**

A health professional who specializes in caring for people who are receiving radiation therapy.

### **radiation oncologist**

A doctor who has special training in using radiation to treat cancer.

### **radiation physicist**

A person who makes sure that the radiation machine delivers the right amount of radiation to the correct site in the body. The physicist works with the radiation oncologist to choose the treatment schedule and dose that has the best chance of killing the most cancer cells.

### **radiation poisoning**

Serious illness caused by being exposed to high doses of certain types of radiation, usually over a short period of time. Symptoms of radiation poisoning usually occur right after exposure but they may happen over time, and they may come and go. Symptoms include nausea and vomiting, diarrhea, headache, dizziness, weakness, fatigue, bleeding, hair loss, swelling, itching, and redness of the skin, and other skin problems. Very large doses of radiation may cause death. Also called acute radiation sickness, acute radiation syndrome, radiation sickness, and radiation sickness syndrome.

### **radiation recall**

An inflammatory reaction that can occur when certain anticancer drugs are given after radiation therapy. It usually affects the part of the body that received radiation, especially the skin. It can also affect the lungs, mouth, larynx, esophagus, other parts of the digestive tract, muscles, and the brain. On the skin, radiation recall may look like a severe sunburn and may blister, peel, and become red, swollen, and painful. If other areas of the body are affected, signs and symptoms will vary depending on the site of the radiation. Radiation recall can occur weeks, months, or years after radiation therapy has ended.

### **radiation sickness**

Serious illness caused by being exposed to high doses of certain types of radiation, usually over a short period of time. Symptoms of radiation sickness usually occur right after exposure but they may happen over time, and they may come and go. Symptoms include nausea and vomiting, diarrhea, headache, dizziness, weakness, fatigue, bleeding, hair loss, swelling, itching, and redness of the skin, and other skin problems. Very large doses of radiation may cause death. Also called acute radiation sickness, acute radiation syndrome, radiation poisoning, and radiation sickness syndrome.

### **radiation sickness syndrome**

Serious illness caused by being exposed to high doses of certain types of radiation, usually over a short period of time. Symptoms of radiation sickness syndrome usually occur right after exposure but they may happen over time, and they may come and go. Symptoms include nausea and vomiting, diarrhea, headache, dizziness, weakness, fatigue, bleeding, hair loss, swelling, itching, and redness of the skin, and other skin problems. Very large doses of radiation may cause death. Also called acute radiation sickness, acute radiation syndrome, radiation poisoning, and radiation sickness.

### **radiation surgery**

A type of external radiation therapy that uses special equipment to position the patient and precisely give a single large dose of radiation to a tumor. It is used to treat brain tumors and other brain disorders that cannot be treated by regular surgery. It is also being studied in the treatment of other types of cancer. Also called radiosurgery, stereotactic radiosurgery, and stereotaxic radiosurgery.

### **radiation therapist**

A health professional who gives radiation treatment.

### **radiation therapy**

The use of high-energy radiation from x-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy or brachytherapy). Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that travels in the blood to tissues throughout the body. Also called irradiation and radiotherapy.

### **radical cervicectomy**

Surgery to remove the cervix, nearby tissue, and the upper part of the vagina. Lymph nodes in the pelvis may also be removed. After the cervix is removed, the uterus is attached to the remaining part of the vagina. A special stitch or band is placed on the uterus to help keep the uterus closed during a pregnancy. Because the uterus, fallopian tubes, and ovaries are not removed, a radical cervicectomy may be done to treat a person with early-stage cervical cancer who wants to become pregnant in the future. Also called radical trachelectomy.

### **radical cystectomy**

Surgery to remove all of the bladder (the organ that holds urine) as well as nearby tissues and organs.

### **radical hysterectomy**

Surgery to remove the uterus, cervix, part of the vagina, and a wide area of ligaments and tissues around these organs. The ovaries, fallopian tubes, and nearby lymph nodes may also be removed. A radical hysterectomy is usually done through a large incision (cut) in the abdomen.

### **radical laparoscopic prostatectomy**

Surgery to remove all of the prostate with the aid of a laparoscope. A laparoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. During a radical laparoscopic prostatectomy, several small incisions (cuts) are made in the wall of the lower abdomen. The laparoscope is

inserted through one opening to guide the surgery. Surgical instruments are inserted through the other openings to remove the prostate. An attempt is made to protect the nerves that control penile erection and the bladder from damage.

### **radical local excision**

Surgery to remove a tumor and a large amount of normal tissue surrounding it. Nearby lymph nodes may also be removed.

### **radical lymph node dissection**

A surgical procedure to remove most or all of the lymph nodes that drain lymph from the area around a tumor. The lymph nodes are then examined under a microscope to see if cancer cells have spread to them.

### **radical mastectomy**

Surgery to remove the whole breast, all of the lymph nodes under the arm, and the chest wall muscles under the breast. For many years, radical mastectomy was the type of breast cancer surgery used most often, but it is rarely used now. It may be used only when breast cancer has spread to the chest wall muscles. Also called Halsted radical mastectomy.

### **radical nephrectomy**

Surgery to remove an entire kidney, nearby adrenal gland and lymph nodes, and other surrounding tissue.

### **radical perineal prostatectomy**

Surgery to remove the entire prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). During a radical perineal prostatectomy, an incision (cut) is made in the perineum (the area between the scrotum and anus). Nearby lymph nodes may also be removed through a separate incision in the wall of the abdomen.

### **radical prostatectomy**

Surgery to remove the entire prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). Nearby lymph nodes may also be removed. A radical prostatectomy may be done through an incision (cut) made in the wall of the lower abdomen or in the perineum (the area between the scrotum and anus). It may also be done using a laparoscope (a thin, tube-like instrument with a light and lens for viewing) or a special robotic system. An attempt is made to protect the nerves that control penile erection and the bladder from damage.

### **radical retropubic prostatectomy**

Surgery to remove the entire prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). Nearby lymph nodes may also be removed. During a radical retropubic prostatectomy, an incision (cut) is made in the wall of the lower abdomen, behind the pubic bone. An attempt is made to protect the nerves that control penile erection and the bladder from damage.

### **radical trachelectomy**

Surgery to remove the cervix, nearby tissue, and the upper part of the vagina. Lymph nodes in the pelvis may also be removed. After the cervix is removed, the uterus is attached to the remaining part of the vagina. A special stitch or band is placed on the uterus to help keep the uterus closed during a pregnancy. Because the uterus, fallopian tubes, and ovaries are not removed, a radical

trachelectomy may be done to treat a person with early-stage cervical cancer who wants to become pregnant in the future. Also called radical cervicectomy.

### **radical vulvectomy**

Surgery to remove the entire vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina) and nearby lymph nodes.

### **radio wave**

A type of wave made when an electric field and a magnetic field are combined. Radio waves are being studied in the treatment of several types of cancer and other conditions. The radio waves are sent through needles inserted into tumor tissue and may kill cancer cells. Radio waves are also used in MRI to create detailed images of areas inside the body.

### **radioactive**

Giving off radiation.

### **radioactive drug**

A drug that contains a radioactive substance and is used to diagnose or treat disease, including cancer. Also called radiopharmaceutical.

### **radioactive fallout**

Airborne radioactive particles that fall to the ground during and after an atomic bombing, nuclear weapons test, or nuclear plant accident.

### **radioactive glucose**

A radioactive form of glucose (sugar) often used during a positive emission tomography (PET) scan, a type of imaging test. In PET, a small amount of radioactive glucose is injected into a vein, and a scanner makes a picture of where the glucose is being used in the body. Cancer cells show up brighter in the picture because they are more active and take up more glucose than normal cells do. When used with PET, radioactive glucose helps find cancer cells in the body.

### **radioactive iodine**

A radioactive form of iodine, often used for imaging tests or to treat an overactive thyroid, thyroid cancer, and certain other cancers. For imaging tests, the patient takes a small dose of radioactive iodine that collects in thyroid cells and certain kinds of tumors and can be detected by a scanner. To treat thyroid cancer, the patient takes a large dose of radioactive iodine, which kills thyroid cells.

Radioactive iodine is also used in internal radiation therapy for prostate cancer, intraocular (eye) melanoma, and carcinoid tumors. Radioactive iodine is given by mouth as a liquid or in capsules, by infusion, or sealed in seeds, which are placed in or near the tumor to kill cancer cells.

### **radioactive palladium**

A radioactive form of palladium (a metallic element that resembles platinum). When used to treat prostate cancer, radioactive seeds (small pellets that contain radioactive palladium) are placed in the prostate. Cancer cells are killed by the energy given off as the radioactive material breaks down and becomes more stable.

### **radioactive seed**

A small, radioactive pellet that is placed in or near a tumor. Cancer cells are killed by the energy given off as the radioactive material breaks down and



becomes more stable.

### **radioembolization**

A type of radiation therapy used to treat liver cancer or cancer that has spread to the liver. A thin, flexible tube is used to inject tiny beads that hold the radioactive substance yttrium Y 90 into the main blood vessel that carries blood to the liver. The beads collect in the tumor and in blood vessels near the tumor, and the yttrium Y 90 gives off radiation. This destroys the blood vessels that the tumor needs to grow and kills the cancer cells. Radioembolization is a type of internal radiation therapy. Also called intra-arterial brachytherapy.

### **radiofrequency ablation**

A procedure that uses radio waves to heat and destroy abnormal cells. The radio waves travel through electrodes (small devices that carry electricity). Radiofrequency ablation may be used to treat cancer and other conditions.

### **radiofrequency radiation**

A type of low-energy radiation. The most common sources of radiofrequency radiation are wireless and cellular telephones, radios, televisions, radar, satellites, microwave ovens, computers, and wireless networks (Wi-Fi). Although there have been health concerns, most types of radiofrequency radiation have not been found to cause harmful health effects, including cancer. Radiofrequency radiation is a type of non-ionizing electromagnetic radiation.

### **radiography**

A procedure that uses a type of high-energy radiation called x-rays to take pictures of areas inside the body. X-rays pass through the body onto film or a computer, where the pictures are made. The tissues and organs usually appear in various shades of black and white because different tissues allow different amounts of the x-ray beams to pass through them. Radiography is used to help diagnose disease and plan treatment. Also called x-ray imaging.

### **radioimaging**

A method that uses radioactive substances to make pictures of areas inside the body. The radioactive substance is injected into the body, and locates and binds to specific cells or tissues, including cancer cells. Images are made using a special machine that detects the radioactive substance. Also called nuclear medicine scan.

### **radioimmunoconjugate**

A radioactive substance that carries radiation directly to cancer cells. A radioimmunoconjugate is made by attaching a radioactive molecule to an immune substance, such as a monoclonal antibody, that can bind to cancer cells. This may help kill cancer cells without harming normal cells. Radioimmunoconjugates may also be used with imaging to help find cancer cells in the body.

### **radioimmunodiagnostics**

The use of radiolabeled monoclonal antibodies to help diagnose diseases, including cancer. The radiolabeled monoclonal antibody locates and binds to substances in the body, including cancer cells. Images are made using a special machine that detects the radioactive monoclonal antibody.

**radioimmunoguided surgery**

A procedure that uses radioactive substances to locate tumors so that they can be removed by surgery.

**radioimmunotherapeutics**

The use of radiolabeled monoclonal antibodies to treat diseases, including cancer. The radiolabeled monoclonal antibody locates and binds to substances in the body, including cancer cells. Radiation given off by the radioisotope may help kill the cancer cells.

**radioimmunotherapy**

A type of radiation therapy in which a radioactive substance is linked to a monoclonal antibody and injected into the body. The monoclonal antibody can bind to substances in the body, including cancer cells. The radioactive substance gives off radiation, which may help kill cancer cells. Radioimmunotherapy is being used to treat some types of cancer, such as lymphoma.

**radioisotope**

An unstable form of a chemical element that releases radiation as it breaks down and becomes more stable. Radioisotopes may occur in nature or be made in a laboratory. In medicine, they are used in imaging tests and in treatment. Also called radionuclide.

**radiolabeled**

Any compound that has been joined with a radioactive substance.

**radiologic exam**

A test that uses radiation or other imaging procedures to find signs of cancer or other abnormalities.

**radiologist**

A doctor who has special training in creating and interpreting pictures of areas inside the body. The pictures are made with x-rays, sound waves, or other types of energy.

**radiology**

The use of radiation (such as x-rays) or other imaging technologies (such as ultrasound and magnetic resonance imaging) to diagnose or treat disease.

**radiology report**

A detailed report that describes the results of an imaging test. A radiology report includes information about the type of imaging test that was done and how it was done. It also includes a brief medical history of the person having the test, including any symptoms or known diseases and why the test was needed. The report also describes the findings seen in the areas of the body that were scanned and compares them with findings from a previous imaging test, if available. A summary of all the findings, which may be used to make a diagnosis of a disease, and any recommendations for further testing are also included in the report.

**radionuclide**

An unstable form of a chemical element that releases radiation as it breaks down and becomes more stable. Radionuclides may occur in nature or be made in a laboratory. In medicine, they are used in imaging tests and in treatment. Also called radioisotope.

### **radionuclide scanning**

A procedure that produces pictures (scans) of structures inside the body, including areas where there are cancer cells. Radionuclide scanning is used to diagnose, stage, and monitor disease. A small amount of a radioactive chemical (radionuclide) is injected into a vein or swallowed. Different radionuclides travel through the blood to different organs. A machine with a special camera moves over the person lying on a table and detects the type of radiation given off by the radionuclides. A computer forms an image of the areas where the radionuclide builds up. These areas may contain cancer cells. Also called scintigraphy.

### **radiopharmaceutical**

A drug that contains a radioactive substance and is used to diagnose or treat disease, including cancer. Also called radioactive drug.

### **radioprotective agent**

A type of drug that helps protect healthy tissue from some of the side effects caused by radiation therapy. For example, a drug called amifostine helps reduce dry mouth in patients receiving radiation therapy for head and neck cancer.

### **radiosensitization**

The use of a drug that makes tumor cells more sensitive to radiation therapy.

### **radiosensitizer**

Any substance that makes tumor cells easier to kill with radiation therapy. Some radiosensitizers are being studied in the treatment of cancer. Also called radiosensitizing agent.

### **radiosensitizing agent**

Any substance that makes tumor cells easier to kill with radiation therapy. Some radiosensitizing agents are being studied in the treatment of cancer. Also called radiosensitizer.

### **radiosurgery**

A type of external radiation therapy that uses special equipment to position the patient and precisely give a single large dose of radiation to a tumor. It is used to treat brain tumors and other brain disorders that cannot be treated by regular surgery. It is also being studied in the treatment of other types of cancer. Also called radiation surgery, stereotactic radiosurgery, and stereotaxic radiosurgery.

### **radiotherapy**

The use of high-energy radiation from x-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy or brachytherapy). Systemic radiotherapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that travels in the blood to tissues throughout the body. Also called irradiation and radiation therapy.

### **radium Ra 223-dichloride**

A radioactive drug used to treat prostate cancer that has spread to the bone and is causing symptoms but has not spread to other organs. It is used in patients whose cancer is castration resistant (has not responded to treatments that lower testosterone levels). It is also being studied in the treatment of other types of cancer. Radium Ra 223-dichloride contains a radioactive substance called radium Ra 223. It collects in bone and gives off radiation that may kill cancer

cells. Radium Ra 223-dichloride is a type of radiotherapeutic agent. Also called Xofigo.

### **radon**

A radioactive gas that is released by uranium, a substance found in soil and rock. Breathing in too much radon can damage lung cells and may lead to lung cancer.

### **raloxifene hydrochloride**

A drug used to reduce the risk of invasive breast cancer in postmenopausal women who are at high risk of developing the disease or who have osteoporosis and to prevent and treat osteoporosis in postmenopausal women. Raloxifene hydrochloride is also being studied in the treatment of other types of cancer. It blocks the effects of the hormone estrogen in breast tissue, which may help keep breast cancer cells from growing. Raloxifene hydrochloride may also help keep bone from breaking down. It is a type of selective estrogen receptor modulator (SERM). Raloxifene is the active ingredient of raloxifene hydrochloride. Also called Evista.

### **raltitrexed**

An anticancer drug that stops tumor cells from growing by blocking the ability of cells to make DNA. It belongs to the family of drugs called thymidylate synthase inhibitors. Also called ICI D1694.

### **ramucirumab**

A drug that binds to the protein vascular endothelial growth factor (VEGF) to help keep new blood vessels from forming and is used to treat different types of cancer. It is used alone or with other drugs to treat certain types of non-small cell lung cancer, hepatocellular carcinoma (a type of liver cancer), colorectal cancer, stomach cancer, and gastroesophageal junction cancer. It is also being studied in the treatment of other types of cancer. Ramucirumab may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent and a type of monoclonal antibody. Also called anti-VEGFR-2 fully human monoclonal antibody IMC-1121B, Cyramza, and IMC-1121B.

### **randomization**

In research, the process by which participants in clinical trials are assigned by chance to separate groups that are given different treatments or other interventions. Neither the researcher nor the participant chooses which treatment or intervention the participant will receive. Using chance to assign people to groups means that the effects of the treatment or intervention that participants receive can be compared more fairly.

### **randomized clinical trial**

A study in which the participants are divided by chance into separate groups that compare different treatments or other interventions. Using chance to divide people into groups means that the groups will be similar and that the effects of the treatments they receive can be compared more fairly. At the time of the trial, it is not known which treatment is best.

### **ranpirnase**

A substance being studied in the treatment of cancer. It is a type of ribonuclease enzyme. Also called Onconase.

### **rapamycin**

A drug used to keep the body from rejecting organ and bone marrow transplants. Rapamycin blocks certain white blood cells that can reject foreign tissues and organs. It also blocks a protein that is involved in cell division. It is a type of antibiotic, a type of immunosuppressant, and a type of serine/threonine kinase inhibitor. Rapamycin is now called sirolimus.

### **rapid eye movement sleep**

The phase of sleep in which most dreams occur. During rapid eye movement sleep, a person's brain activity, breathing, heart rate, and blood pressure increase, and the eyes move rapidly while closed. The muscles in the arms and legs become temporarily unable to move. Rapid eye movement sleep is thought to play an important role in memory and learning. During normal sleep, a person goes through four to five sleep cycles that last about 90 minutes each and include both rapid eye movement sleep and non-rapid eye movement sleep (light to deep sleep). Also called REM sleep.

### **rapid hormone cycling**

A procedure in which drugs that block the production of male hormones are alternated with male hormones and/or drugs that promote the production of male hormones. This procedure is being studied in the treatment of prostate cancer.

### **rapid-onset opioid**

A substance that acts quickly to treat moderate to severe pain. Opioids are like opiates, such as morphine and codeine, but are not made from opium. Opioids bind to opioid receptors in the central nervous system. A rapid-onset opioid is a type of alkaloid.

### **rare cancer**

As defined by the National Cancer Institute, cancer that occurs in fewer than 15 out of 100,000 people each year. Most types of cancer are considered rare, and they are often more difficult to prevent, diagnose, and treat than the more common cancers. Because there are fewer cases, research is difficult. Examples of rare cancers are anal, stomach, and laryngeal cancer.

### **rare disease**

A disease that affects fewer than 200,000 people in the United States. There are about 7,000 rare diseases. An estimated 25 million to 30 million Americans are living with a rare disease. The cause of many rare diseases is unknown, but they are often caused by changes in a person's genes or chromosomes. Rare diseases are often more difficult to diagnose and treat than the more common diseases. Also called rare disorder.

### **rare disorder**

A disease that affects fewer than 200,000 people in the United States. There are about 7,000 rare disorders. An estimated 25 million to 30 million Americans are living with a rare disorder. The cause of many rare disorders is unknown, but they are often caused by changes in a person's genes or chromosomes. Rare disorders are often more difficult to diagnose and treat than the more common diseases. Also called rare disease.

### **ras peptide**

A short piece of the ras protein, which is made by the ras gene. The ras gene has been found to cause cancer when it is mutated (changed).

### **rasburicase**

A drug used to treat high levels of uric acid in the blood of adults and children with leukemia, lymphoma, or other types of cancer who are receiving certain types of anticancer therapy. Uric acid is a natural substance that can build up in the blood as tumors break down. Rasburicase helps break down and remove uric acid from the body. It is a type of recombinant enzyme and a type of urate-lowering drug. Also called Elitek and recombinant urate oxidase.

### **rash**

An area of the skin that has changes in texture or color and may look inflamed or irritated. The skin may be red, warm, scaly, bumpy, dry, itchy, swollen, or painful. It may also crack or blister. A rash can occur in one area of the body or all over the body and may look very different depending on the cause. It may be a sign of a specific medical condition or a side effect of a medicine or treatment. Some causes of skin rashes include allergies, infection, heat, and immune system disorders.

### **rattlesnake root**

An eastern North American perennial herb. A substance obtained from the root of the plant has been used in some cultures to treat a number of medical problems. It is being studied in the treatment of hot flashes and other symptoms of menopause. The scientific name is *Cimicifuga racemosa*. Also called black cohosh, black snakeroot, bugbane, and bugwort.

### **rauschpfeffer**

An herb native to islands in the South Pacific. Substances taken from the root have been used in some cultures to relieve stress, anxiety, tension, sleeplessness, and problems of menopause. Rauschpfeffer may increase the effect of alcohol and of certain drugs used to treat anxiety and depression. The U.S. Food and Drug Administration advises users that rauschpfeffer may cause severe liver damage. The scientific name is *Piper methysticum*. Also called intoxicating pepper, kava kava, tonga, and yangona.

### **ravuconazole**

A substance that is being studied in the treatment of infections caused by fungi. It belongs to the family of drugs called antifungal agents.

### **ravulizumab**

A drug used to treat adults with paroxysmal nocturnal hemoglobinuria (a rare red blood cell disorder) and adults and children aged 1 month and older with atypical hemolytic uremic syndrome (a very rare disorder in which tiny blood clots form in small blood vessels). It is also being studied in the treatment of other conditions. Ravulizumab binds to an immune system protein called C5. This may help keep red blood cells from breaking down and blood clots from forming. Ravulizumab is a type of monoclonal antibody. Also called Ultomiris.

### **reactivate**

To make active again or make something work again. In medicine, an infection or a disease is described as reactivated when it comes back after a period with no signs of disease.

### **reactive oxygen species**

A type of unstable molecule that contains oxygen and that easily reacts with other molecules in a cell. A build up of reactive oxygen species in cells may



cause damage to DNA, RNA, and proteins, and may cause cell death. Reactive oxygen species are free radicals. Also called oxygen radical.

### **reagent**

A substance used to carry out a laboratory test. Reagents may be used in a chemical reaction to detect, measure, or make other substances.

### **rebeccamycin**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called antineoplastic antibiotics.

### **rebeccamycin analog**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called antitumor antibiotics and topoisomerase inhibitors. Also called NSC 655649.

### **recall bias**

A type of bias that occurs when participants in a research study or clinical trial do not accurately remember a past event or experience or leave out details when reporting about them. Recall bias is more likely to occur when the event happened a long time ago or when the study participant has a poor memory. Other factors that could affect recall bias are the participant's age, disease status, education, socioeconomic status, pre-existing beliefs, and how important the event being recalled is to the participant. Recall bias can lead to wrong conclusions about what the study showed. It can occur in studies that ask participants to provide information from memory, such as in case-control studies or retrospective cohort studies.

### **receptor**

A molecule inside or on the surface of a cell that binds to a specific substance and causes a specific effect in the cell.

### **receptor tyrosine kinase**

A member of a group of proteins called tyrosine kinases that are found on the surface of cells. Receptor tyrosine kinases play an important role in many cell functions, including cell-to-cell communication and cell division, maturation, movement, metabolism, and survival. Sometimes, the genes that make receptor tyrosine kinases have mutations (changes) that cause receptor tyrosine kinases to be overactive or be found in higher-than-normal amounts. This may cause cancer cells to grow. Drugs that block the mutant receptor tyrosine kinases are being used to treat some types of cancer. Also called RTK.

### **recipient**

In medicine, a person who receives blood, cells, tissue, or an organ from another person, such as in a blood transfusion or an organ transplant.

### **recombinant**

In genetics, describes DNA, proteins, cells, or organisms that are made by combining genetic material from two different sources. Recombinant substances are made in the laboratory and are being studied in the treatment of cancer and for many other uses.

### **recombinant adenovirus-p53**

A substance that has been studied in the treatment of some types of cancer. Recombinant adenovirus-p53 is a weakened adenovirus that carries the p53

gene into tumor cells, causing them to die. It is a type of gene therapy. Also called ACN53, rAd/p53, and SCH-58500.

#### **recombinant fowlpox-CEA-MUC-1-TRICOM vaccine**

A cancer vaccine made with a form of a chicken virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called falimarev.

#### **recombinant fowlpox-TRICOM vaccine**

A cancer vaccine made with a form of a chicken virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called rF-TRICOM.

#### **recombinant human interleukin-11**

A drug used to increase the number of blood cells, especially platelets, in some cancer patients receiving chemotherapy. Recombinant human interleukin-11 is a form of interleukin-11 (a cytokine normally made by support cells in the bone marrow) that is made in the laboratory. It is a type of biological response modifier. Also called Neumega, oprelvekin, and rhIL-11.

#### **recombinant human interleukin-2**

A drug used to treat adults with melanoma or renal cell carcinoma (a type of kidney cancer) that has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Recombinant human interleukin-2 is a form of interleukin-2 that is made in the laboratory. Recombinant human interleukin-2 increases the activity and growth of white blood cells called T lymphocytes and B lymphocytes, which may help the immune system kill cancer cells. Recombinant human interleukin-2 is a type of cytokine and a type of immunomodulating agent. Also called aldesleukin and Proleukin.

#### **recombinant human methionyl stem cell factor**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. It is being studied in the treatment of myelodysplasia. Recombinant human methionyl stem cell factor is a type of recombinant stem cell growth factor. Also called ancestim, r-metHuSCF, and Stemgen.

#### **recombinant human papillomavirus bivalent vaccine**

A vaccine that is no longer available in the United States but is still used in other countries to protect against infection with two types of human papillomavirus (HPV). Recombinant human papillomavirus bivalent vaccine is used in females aged 9 to 25 years to protect against high-risk HPV types 16 and 18, which most often cause cervical cancer and lesions that may become cervical cancer. Recombinant human papillomavirus bivalent vaccine may also prevent other HPV-related cancers. Also called Cervarix.

#### **recombinant human papillomavirus nonavalent vaccine**

A vaccine that is FDA-approved for use in females and males aged 9 to 45 years to protect against infection with nine types of human papillomavirus (HPV). Recombinant human papillomavirus nonavalent vaccine protects against low-risk HPV types 6 and 11, which cause most genital warts, and against high-risk HPV types 16, 18, 31, 33, 45, 52, and 58, which cause most precancerous lesions

and cancers of the cervix, vagina, vulva, anus, and head and neck, including the oropharynx. Recombinant human papillomavirus nonavalent vaccine may also prevent HPV-related cancer of the penis. Also called Gardasil 9.

#### **recombinant human papillomavirus quadrivalent vaccine**

A vaccine that is no longer available in the United States but is still used in other countries to protect against infection with four types of human papillomavirus (HPV). Recombinant human papillomavirus quadrivalent vaccine is used in females and males aged 9 to 26 years to protect against low-risk HPV types 6 and 11, which cause most genital warts, and against high-risk HPV types 16 and 18, which cause most precancerous lesions and cancers of the cervix, vagina, vulva, and anus. Recombinant human papillomavirus quadrivalent vaccine may also prevent HPV-related cancers of the penis and oropharynx. Also called Gardasil.

#### **recombinant interferon alfa-2b**

A drug used alone or with other drugs to treat adults with AIDS-related Kaposi sarcoma, hairy cell leukemia, certain types of follicular lymphoma or melanoma, genital warts or perianal warts, or chronic hepatitis B or C. It is also being studied in the treatment of other types of cancer and other conditions. Recombinant interferon alfa-2b is a form of interferon alfa (a substance normally made by cells in the immune system) that is made in the laboratory. It is a type of cytokine and a type of immunomodulating agent. Also called IFN alpha-2B, interferon alfa-2b, and Intron A.

#### **recombinant tissue plasminogen activator**

A form of tissue plasminogen activator that is made in the laboratory. It helps dissolve blood clots and is used to treat heart attacks, strokes, and clots in the lungs. It is also being studied in the treatment of cancer. It is a type of systemic thrombolytic agent. Also called Activase, Alteplase, and r-tPA.

#### **recombinant urate oxidase**

A drug used to treat high levels of uric acid in the blood of adults and children with leukemia, lymphoma, or other types of cancer who are receiving certain types of anticancer therapy. Uric acid is a natural substance that can build up in the blood as tumors break down. Recombinant urate oxidase helps break down and remove uric acid from the body. It is a type of recombinant enzyme and a type of urate-lowering drug. Also called Elitek and rasburicase.

#### **recombinant vaccinia-CEA-MUC-1-TRICOM vaccine**

A cancer vaccine made with a form of vaccinia virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins, including the tumor markers called CEA and MUC-1, that may help immune cells in the body kill tumor cells. Also called inalimarev and PANVAC-V.

#### **recombinant vaccinia-TRICOM vaccine**

A cancer vaccine made with a form of a vaccinia virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called rV-TRICOM and vaccinia-TRICOM vaccine.

**reconstructive surgeon**

A doctor who can surgically reshape or rebuild (reconstruct) a part of the body, such as a woman's breast after surgery for breast cancer.

**reconstructive surgery**

Surgery that is done to reshape or rebuild (reconstruct) a part of the body changed by previous surgery.

**recover**

To become well and healthy again.

**recreational therapy**

A type of therapy that uses activities to help meet the physical and emotional needs of patients with an illness or disability and help them develop skills for daily living. These activities include arts and crafts, music, spending time with animals, sports, and drama. Recreational therapy is being studied as a way to relieve distress in cancer patients who are being treated for pain.

**rectal**

By or having to do with the rectum. The rectum is the last several inches of the large intestine closest to the anus.

**rectal cancer**

Cancer that forms in the tissues of the rectum (the last several inches of the large intestine closest to the anus).

**rectal reconstruction**

Surgery to rebuild the rectum (the last several inches of the large intestine before the anus) using a section of the colon. This may be done when the rectum has been removed to treat cancer or other diseases.

**rectitis**

Inflammation of the mucous membrane that lines the rectum (the last several inches of the large intestine closest to the anus). Also called proctitis.

**rectovaginal exam**

A physical exam of the rectum and vagina. During a rectovaginal exam, a health care provider inserts one lubricated, gloved finger into the vagina and another finger of the same hand into the rectum, and presses on the lower abdomen with the other hand. This allows the health care provider to feel for lumps or other abnormal changes in the rectum and vagina and to check the size, shape, and position of the pelvic organs, including the ovaries, fallopian tubes, uterus, and the ligaments that hold the uterus in place. A small sample of stool may be collected to check for blood. A rectovaginal exam may be done as part of a pelvic exam.

**rectum**

The last several inches of the large intestine closest to the anus.

**recur**

To come back or to return.

**recurrence**

Cancer that has recurred (come back), usually after a period of time during which the cancer could not be detected. The cancer may come back to the same place

as the original (primary) tumor or to another place in the body. Also called recurrent cancer.

### **recurrent cancer**

Cancer that has recurred (come back), usually after a period of time during which the cancer could not be detected. The cancer may come back to the same place as the original (primary) tumor or to another place in the body. Also called recurrence.

### **recurrent respiratory papillomatosis**

A rare condition in which wart-like growths called papillomas grow in the respiratory tract (air passages leading from the nose and mouth into the lungs). The papillomas most often grow in the larynx (voice box) and vocal cords. They can grow quickly, and they often grow back after they have been removed by surgery. Signs and symptoms of recurrent respiratory papillomatosis include hoarseness, chronic cough, swallowing problems, and breathing problems, which may sometimes be life-threatening. Recurrent respiratory papillomatosis is caused by infection with certain types of human papillomavirus (HPV). It can occur in both children and adults. Also called RRP.

### **red blood cell**

A type of blood cell that is made in the bone marrow and found in the blood. Red blood cells contain a protein called hemoglobin, which carries oxygen from the lungs to all parts of the body. Checking the number of red blood cells in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as anemia, dehydration, malnutrition, and leukemia. Also called erythrocyte and RBC.

### **red cedar**

A type of evergreen tree with hard fragrant wood that is a member of the cypress family. The oil from the wood is used in soaps, shampoos, bath salts, perfumes, aromatherapy, and to keep insects away. The scientific name is *Juniperus virginiana*. Also called cedarwood and Eastern red cedar.

### **red clover**

*Trifolium pratense*. A plant with flowers that has been used in some cultures to treat certain medical problems. It is being studied in the relief of menopausal symptoms and may have anticancer effects. Also called purple clover, *Trifolium pratense*, and wild clover.

### **red date**

The fruit of the jujube plant. It has been used in some cultures to treat certain medical problems.

### **red elm**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called gray elm, Indian elm, slippery elm, sweet elm, *Ulmus fulva*, and *Ulmus rubra*.

### **redox**

A chemical reaction that takes place between an oxidizing substance and a reducing substance. The oxidizing substance loses electrons in the reaction, and the reducing substance gains electrons. For example, rust forms when there is a redox reaction between oxygen contained in water or moist air (an oxidizing substance) and iron (a reducing substance). Redox reactions also occur when

glucose (a type of sugar) and fat are broken down in the body to make energy. Also called oxidation-reduction.

### **reduced penetrance**

A term that describes when some people with a disease-causing mutation (change) in a gene develop the disease while others don't. For example, certain gene mutations cause cancer, but because of reduced penetrance, not everyone who has the mutation will develop cancer. Currently, there is no way to know which people who have a cancer-causing gene mutation will develop cancer. Also called incomplete penetrance.

### **reduced-intensity transplant**

A type of donor stem cell transplant in which a patient receives lower doses of chemotherapy and/or radiation therapy than in a standard transplant. The lower doses of anticancer therapy do not kill all of the blood-forming stem cells or all of the cancer cells in the patient's bone marrow. However, the anticancer therapy is still strong enough to suppress the patient's immune system and prevent rejection of the donor stem cells. The patient's stem cells and those from the donor both live in the patient's body for a time after a reduced-intensity transplant. Once the cells from the donor begin to grow and divide in the bone marrow, they replace the patient's own bone marrow cells and destroy the remaining cancer cells. A reduced-intensity transplant may be an option for certain people who are older or who are not healthy enough to receive a standard donor stem cell transplant with high-dose chemotherapy. Also called mini-transplant and non-myeloablative transplant.

### **reduction**

A chemical reaction that takes place when a substance comes into contact with hydrogen or another reducing substance.

### **reference interval**

In medicine, a set of values that a doctor uses to interpret a patient's test results. The reference interval for a given test is based on the results that are seen in 95% of the healthy population. Sometimes patients whose test results are outside of the reference interval may be healthy, and some patients whose test results are within the reference interval may have a health problem. The reference interval for a test may be different for different groups of people (for example, men and women). Also called normal range, reference range, and reference values.

### **reference range**

In medicine, a set of values that a doctor uses to interpret a patient's test results. The reference range for a given test is based on the results that are seen in 95% of the healthy population. Sometimes patients whose test results are outside of the reference range may be healthy, and some patients whose test results are within the reference range may have a health problem. The reference range for a test may be different for different groups of people (for example, men and women). Also called normal range, reference interval, and reference values.

### **reference values**

In medicine, a set of values that a doctor uses to interpret a patient's test results. The reference values for a given test are based on the results that are seen in 95% of the healthy population. Sometimes patients whose test results are outside of the reference values may be healthy, and some patients whose test results are within the reference values may have a health problem. The



reference values for a test may be different for different groups of people (for example, men and women). Also called normal range, reference interval, and reference range.

### **referral**

In medicine, the act of sending a patient from one health care provider to another for additional health care services. For example, a primary care doctor may refer a patient to a specialist for further diagnosis and treatment.

### **reflexology**

A type of massage in which different amounts of pressure are applied to specific points on the feet or hands. These points are believed to match up with certain other parts of the body. Reflexology is claimed to cause relaxation and healing in those parts of the body, but this has not been proven.

### **reflux**

The backward flow of liquid from the stomach into the esophagus.

### **refractory**

In medicine, describes a disease or condition that does not respond to treatment.

### **refractory cancer**

Cancer that does not respond to treatment. The cancer may be resistant at the beginning of treatment or it may become resistant during treatment. Also called resistant cancer.

### **regeneration**

In biology, regrowth of damaged or destroyed tissue or body part.

### **regimen**

A treatment plan that specifies the dosage, the schedule, and the duration of treatment.

### **regional**

In oncology, describes the body area right around a tumor.

### **regional anesthesia**

A temporary loss of feeling or awareness in a part of the body, such as an arm or a leg, caused by special drugs or other substances called anesthetics. The patient stays awake but has no feeling in the part of the body treated with the anesthetic.

### **regional cancer**

Refers to cancer that has grown beyond the original (primary) tumor to nearby lymph nodes or organs and tissues.

### **regional chemotherapy**

Treatment with anticancer drugs directed to a specific area of the body.

### **regional enteritis**

A condition in which the gastrointestinal tract is inflamed over a long period of time. Regional enteritis usually affects the small intestine and colon. Symptoms include fever, diarrhea, stomach cramps, vomiting, and weight loss. Regional enteritis increases the risk of colorectal cancer and small intestine cancer. It is a type of inflammatory bowel disease (IBD). Also called Crohn disease.

### **regional lymph node**

In oncology, a lymph node that drains lymph from the region around a tumor.

### **regional lymph node dissection**

A surgical procedure to remove some of the lymph nodes that drain lymph from the area around a tumor. The lymph nodes are then examined under a microscope to see if cancer cells have spread to them.

### **registered dietitian**

A health professional who has special training in diet and nutrition. Registered dietitians offer advice on nutrition and healthy eating habits to help people improve their health and well-being. Registered dietitians also help people who are recovering from illness or surgery or who have medical conditions, such as food allergies, eating disorders, swallowing problems, diabetes, heart or kidney disease, or cancer, meet their nutritional needs. Registered dietitians may provide nutritional counseling, meal planning, medical nutrition therapy (such as a special diet, dietary supplements, or intravenous or tube feedings), and nutrition education programs. Also called dietitian.

### **regorafenib**

A drug used to treat certain types of colorectal cancer, gastrointestinal stromal tumors, and hepatocellular carcinoma (a type of liver cancer). It is also being studied in the treatment of other types of cancer. Regorafenib blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Regorafenib is a type of kinase inhibitor and a type of antiangiogenesis agent. Also called Stivarga.

### **regression**

A decrease in the size of a tumor or in the extent of cancer in the body.

### **regulatory T cell**

A type of immune cell that blocks the actions of some other types of lymphocytes, to keep the immune system from becoming over-active. Regulatory T cells are being studied in the treatment of cancer. A regulatory T cell is a type of white blood cell and a type of lymphocyte. Also called suppressor T cell, T reg, and T-regulatory cell.

### **rehabilitation**

In medicine, a process to restore mental and/or physical abilities lost to injury or disease, in order to function in a normal or near-normal way.

### **rehabilitation services**

Special health care services that help a person regain physical, mental, and/or cognitive (thinking and learning) abilities that have been lost or impaired as a result of disease, injury, or treatment. Rehabilitation services help people return to daily life and live in a normal or near-normal way. These services may include physical therapy, occupational therapy, speech and language therapy, cognitive therapy, and mental health rehabilitation services.

### **rehabilitation specialist**

A health care professional who helps people recover from an illness or injury and return to daily life. Examples of rehabilitation specialists are physical therapists and occupational therapists.

## **relapse**

The return of a disease or the signs and symptoms of a disease after a period of improvement. Relapse also refers to returning to the use of an addictive substance or behavior, such as cigarette smoking.

## **relapse-free survival**

In cancer, the length of time after primary treatment for a cancer ends that the patient survives without any signs or symptoms of that cancer. In a clinical trial, measuring the relapse-free survival is one way to see how well a new treatment works. Also called DFS, disease-free survival, and RFS.

## **relative odds**

A measure of the odds of an event happening in one group compared to the odds of the same event happening in another group. In cancer research, relative odds are most often used in case-control (backward looking) studies to find out if being exposed to a certain substance or other factor increases the risk of cancer. For example, researchers may study a group of individuals with cancer (cases) and another group without cancer (controls) to see how many people in each group were exposed to a certain substance or factor. They calculate the odds of exposure in both groups and then compare the odds. A relative odds of one means that both groups had the same odds of exposure and, therefore, the exposure probably does not increase the risk of cancer. A relative odds of greater than one means that the exposure may increase the risk of cancer, and a relative odds of less than one means that the exposure may reduce the risk of cancer. Also called odds ratio.

## **relative risk**

A measure of the risk of a certain event happening in one group compared to the risk of the same event happening in another group. In cancer research, relative risk is used in prospective (forward looking) studies, such as cohort studies and clinical trials. A relative risk of one means there is no difference between two groups in terms of their risk of cancer, based on whether or not they were exposed to a certain substance or factor, or how they responded to two treatments being compared. A relative risk of greater than one or of less than one usually means that being exposed to a certain substance or factor either increases (relative risk greater than one) or decreases (relative risk less than one) the risk of cancer, or that the treatments being compared do not have the same effects. Also called risk ratio.

## **relative survival rate**

A way of comparing the survival of people who have a specific disease with those who don't, over a certain period of time. This is usually five years from the date of diagnosis or the start of treatment for those with the disease. It is calculated by dividing the percentage of patients with the disease who are still alive at the end of the period of time by the percentage of people in the general population of the same sex and age who are alive at the end of the same time period. The relative survival rate shows whether the disease shortens life.

## **relaxation technique**

A method used to help reduce muscle tension and stress, lower blood pressure, and control pain. Examples of relaxation techniques include tensing and relaxing muscles throughout the body, guided imagery (focusing the mind on positive images), meditation (focusing thoughts), and deep breathing exercises.

**relaxation therapy**

A type of therapy that helps reduce muscle tension and stress, lowers blood pressure, and controls pain. It may involve tensing and relaxing muscles throughout the body. It may be used with guided imagery (focusing the mind on positive images) and meditation (focusing thoughts).

**religion**

A set of beliefs and practices that center on questions about the meaning of life and may involve the worship of a supreme being.

**relugolix**

A drug used to treat adults with advanced prostate cancer. Relugolix binds to gonadotropin-releasing hormone (GnRH) receptors in the pituitary gland, which blocks the pituitary gland from making the hormones follicle-stimulating hormone (FSH) and luteinizing hormone (LH). This causes the testicles to stop making testosterone. Relugolix may stop the growth of cancer cells that need testosterone to grow. It is a type of GnRH antagonist. Also called Orgovyx.

**remission**

A decrease in or disappearance of signs and symptoms of cancer. In partial remission, some, but not all, signs and symptoms of cancer have disappeared. In complete remission, all signs and symptoms of cancer have disappeared, although cancer still may be in the body.

**remission induction therapy**

Initial treatment with anticancer drugs to decrease the signs or symptoms of cancer or make them disappear.

**remote brachytherapy**

A type of internal radiation treatment in which the radioactive source is removed between treatments. Also called high-dose-rate remote brachytherapy and high-dose-rate remote radiation therapy.

**renal artery**

The main blood vessel that supplies blood to a kidney and its nearby adrenal gland and ureter. There is a renal artery for each kidney.

**renal capsule**

The fibrous connective tissue that surrounds each kidney.

**renal cell adenocarcinoma**

Cancer that begins in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. Renal cell adenocarcinoma is the most common type of kidney cancer in adults. Also called hypernephroma, renal cell cancer, and renal cell carcinoma.

**renal cell cancer**

Cancer that begins in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. Renal cell cancer is the most common type of kidney cancer in adults. Also called hypernephroma, renal cell adenocarcinoma, and renal cell carcinoma.

### **renal cell carcinoma**

Cancer that begins in the lining of the tiny tubes in the kidney that return filtered substances that the body needs back to the blood and remove extra fluid and waste as urine. Renal cell carcinoma is the most common type of kidney cancer in adults. Also called hypernephroma, renal cell adenocarcinoma, and renal cell cancer.

### **renal collecting tubule**

The last part of a long, twisting tube that collects urine from the nephrons (cellular structures in the kidney that filter blood and form urine) and moves it into the renal pelvis and ureters. Also called collecting duct.

### **renal failure**

A condition in which the kidneys stop working and are not able to remove waste and extra water from the blood or keep body chemicals in balance. Acute or severe renal failure happens suddenly (for example, after an injury) and may be treated and cured. Chronic renal failure develops over many years, may be caused by conditions like high blood pressure or diabetes, and cannot be cured. Chronic renal failure may lead to total and long-lasting renal failure, called end-stage renal disease (ESRD). A person in ESRD needs dialysis (the process of cleaning the blood by passing it through a membrane or filter) or a kidney transplant. Also called kidney failure.

### **renal fascia**

A fibrous envelope of tissue that surrounds the kidney. Also called Gerota's capsule and Gerota's fascia.

### **renal function**

A term used to describe how well the kidneys work. The kidneys remove waste and extra water from the blood (as urine) and help keep chemicals (such as sodium, potassium, and calcium) balanced in the body. They also make hormones that help control blood pressure and stimulate bone marrow to make red blood cells. Also called kidney function.

### **renal function test**

A test in which blood or urine samples are checked for the amounts of certain substances released by the kidneys. A higher- or lower-than-normal amount of a substance can be a sign that the kidneys are not working the way they should. Also called kidney function test.

### **renal glomerulus**

A tiny, round cluster of blood vessels within the kidneys. It filters the blood to reabsorb useful materials and remove waste as urine.

### **renal pelvis**

The area at the center of the kidney. Urine collects here and is funneled into the ureter, the tube that connects the kidney to the bladder.

### **renal tubular acidosis**

A rare disorder in which structures in the kidney that filter the blood are impaired, producing urine that is more acid than normal.

### **renal tubule**

One of millions of tiny tubes in the kidneys that returns nutrients, fluids, and other substances that have been filtered from the blood, but the body needs, back to

the blood. The remaining fluid and waste in the renal tubules become urine.

### **renal vein**

The main blood vessel that carries blood from the kidney and ureter to the inferior vena cava (a large vein that carries blood to the heart from the lower part of the body). There is a renal vein for each kidney.

### **replicate**

To make a copy or duplicate of something.

### **replication cycle**

In biology, refers to the reproduction cycle of viruses. A replication cycle begins with the infection of a host cell and ends with the release of mature progeny virus particles.

### **repotrectinib**

A drug used to treat adults with non-small cell lung cancer that has spread and has an abnormal ROS1 gene and adults and children aged 12 years and older with certain types of solid tumors that have an NTRK gene fusion. It is also being studied in the treatment of other types of cancer. Repotrectinib blocks certain proteins involved in cell signaling and cell growth. Blocking these proteins may help keep cancer cells from growing. Repotrectinib is a type of kinase inhibitor. Also called Augtyro.

### **reproductive cell**

An egg cell in females or sperm cell in males. Each mature reproductive cell contains 23 chromosomes. When an egg combines with sperm, the fertilized egg normally contains a total of 46 chromosomes. Also called gamete and sex cell.

### **reproductive endocrinologist**

A doctor who has special training in the diagnosis and treatment of infertility. A reproductive endocrinologist may use surgery, medicine, or procedures, such as in vitro fertilization (IVF), to treat infertility. A reproductive endocrinologist may also use procedures, such as sperm banking and egg freezing, to help keep a person's ability to have children. This is called fertility preservation.

### **reproductive history**

A collection of information about a woman's health related to reproduction (childbearing). A reproductive history may include information about menstrual periods, the use of birth control, pregnancies, breastfeeding, and menopause. It may also include information about reproductive tract problems, fertility issues, and problems during childbirth.

### **reproductive hormone**

A type of hormone involved in puberty, fertility, and sexuality. Reproductive hormones are usually made in the ovaries (in females) and testes (in males). Female reproductive hormones include estrogen and progesterone. They help develop and maintain female sex characteristics and play an important role in fertility, pregnancy, and the menstrual cycle. Male reproductive hormones, such as testosterone, help develop and maintain male sex characteristics and help make sperm in the testes. Some reproductive hormones may also be made in the laboratory and used to treat certain medical conditions.



**reproductive medicine**

A branch of medicine that specializes in fertility preservation, diagnosing and treating infertility, and other reproductive problems. Reproductive medicine also deals with issues related to puberty, menopause, contraception (birth control), and certain sexual problems.

**reproductive system**

The tissues, glands, and organs involved in producing offspring (children). In women, the reproductive system includes the ovaries, the fallopian tubes, the uterus, the cervix, and the vagina. In men, it includes the prostate, the testes, and the penis.

**rescue transplant**

A method of replacing blood-forming stem cells that were destroyed by treatment with high doses of anticancer drugs or radiation therapy. The stem cells help the bone marrow recover and make healthy blood cells. A rescue transplant may allow more chemotherapy or radiation therapy to be given so that more cancer cells are killed. It is usually done using the patient's own stem cells that were saved before treatment. Also called stem cell rescue.

**research advocate**

A person who serves as a link between patients and scientific researchers. Research advocates help patients understand scientific information and research findings that may help them. They may also bring a patient perspective on research activities to scientific advisory boards and committees. For example, research advocates use their own experiences and the experiences of patients to work with researchers to help develop clinical trials that are safe and meet the needs of patients. They also help teach patients and their families about clinical trials and recruit patients to clinical trials.

**research base**

Refers to the institutions, clinical staff, and patients that can take part in a clinical trial.

**research study**

A scientific study of nature that sometimes includes processes involved in health and disease. For example, clinical trials are research studies that involve people. These studies may be related to new ways to screen, prevent, diagnose, and treat disease. They may also study certain outcomes and certain groups of people by looking at data collected in the past or future.

**resectable**

Able to be removed by surgery.

**resected**

Removed by surgery.

**resection**

Surgery to remove tissue or part or all of an organ.

**resectoscope**

A thin, tube-like instrument used to remove tissue from inside the body. A resectoscope has a light and a lens for viewing. It also has a tool that uses an electric current to cut, remove, or destroy tissue and control bleeding. In men, a resectoscope is inserted through the urethra into the bladder or prostate. In

women, it is inserted through the vagina and cervix into the uterus. It can be used to relieve symptoms of an enlarged prostate or to treat diseases of the bladder, prostate, and uterus.

### **residual disease**

Cancer cells that remain after attempts to remove the cancer have been made.

### **resin**

A thick substance that comes from plants or can be made in the laboratory from certain chemicals. Resins do not dissolve in water, and are used in plastics, varnishes, printing inks, medicine, and to make fabrics stiff.

### **resiquimod**

A substance being studied in the treatment of some types of skin cancer. When put on the skin, resiquimod causes some immune cells to make certain chemicals that may help them kill tumor cells. It is also being studied to find out if adding it to a tumor vaccine improves the antitumor immune response. It is a type of imidazoquinoline and a type of immunomodulator.

### **resistant cancer**

Cancer that does not respond to treatment. The cancer may be resistant at the beginning of treatment, or it may become resistant during treatment. Also called refractory cancer.

### **resorption**

A process in which a substance, such as tissue, is lost by being destroyed and then absorbed by the body.

### **respirator**

In medicine, a machine used to help a patient breathe. Also called ventilator.

### **respiratory disease**

A type of disease that affects the lungs and other parts of the respiratory system. Respiratory diseases may be caused by infection, by smoking tobacco, or by breathing in secondhand tobacco smoke, radon, asbestos, or other forms of air pollution. Respiratory diseases include asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, pneumonia, and lung cancer. Also called lung disorder and pulmonary disease.

### **respiratory syncytial virus**

A virus that causes respiratory infections with cold-like symptoms. Also called RSV.

### **respiratory system**

The organs that are involved in breathing. These include the nose, throat, larynx, trachea, bronchi, and lungs. Also called respiratory tract.

### **respiratory therapist**

A health professional trained to evaluate and treat people who have breathing problems or other lung disorders.

### **respiratory therapy**

Exercises and treatments that help improve or restore lung function.

**respiratory tract**

The organs that are involved in breathing. These include the nose, throat, larynx, trachea, bronchi, and lungs. Also called respiratory system.

**respite care**

Temporary care given to a person who is unable to care for himself or herself so that the usual caregivers can have a break. Respite care may include in-home care, adult daycare, or nursing home care.

**response**

In medicine, an improvement related to treatment.

**response rate**

The percentage of patients whose cancer shrinks or disappears after treatment.

**restaging**

A process used to find out the amount or spread of cancer in the body if it comes back or gets worse after treatment. Restaging may also be done to find out how the cancer responded to treatment. If restaging is done and a new stage is assigned, the new stage will be marked with an "r" in front of it to show that it's different from the original stage. Usually, the original stage stays the same, even if the cancer comes back or gets worse. The same tests that were done to diagnose the cancer are usually done again. Restaging helps doctors plan the best treatment for cancer that has come back or gotten worse.

**resting**

In biology, refers to a cell that is not dividing.

**restless legs syndrome**

A condition in which a person has a strong urge to move his or her legs in order to stop uncomfortable sensations. These include burning, itching, creeping, tugging, crawling, or pain. These feelings usually happen when a person is lying or sitting down, and are worse at night. They can also occur in other parts of the body. Also called RLS.

**resveratrol**

A substance found in the skins of grapes and in certain other plants, fruits, and seeds. It is made by various plants to help defend against invading fungi, stress, injury, infection, and too much sunlight. It is being studied in the prevention of cancer and heart disease. It is a type of antioxidant and a type of polyphenol.

**retch**

The action of the stomach and esophagus to try to vomit (eject some or all of the contents of the stomach). Retching that does not cause vomiting is called dry heaves.

**rete testis**

A network of small tubes in the testicle that helps move sperm cells (male reproductive cells) from the testicle to the epididymis. The epididymis is where the sperm mature and are stored.

**reticular dermis**

The thick bottom layer of the dermis (the inner layer of the skin). The reticular dermis has blood vessels and connective tissue that supports the skin. Hair

follicles, oil and sweat glands, and other structures are also found in the reticular dermis.

### **retifanlimab**

A drug used to treat adults with Merkel cell carcinoma (a type of skin cancer) that has come back or has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Retifanlimab binds to a protein called PD-1, which is found on T cells (a type of immune cell). Retifanlimab may block PD-1 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Zynyz.

### **retiform hemangioendothelioma**

A rare, slow-growing tumor that usually forms on or under the skin of the arms, legs, and trunk. The tumor has blood vessels that branch out like a tree. Retiform hemangioendotheliomas can spread to nearby tissue and often come back after treatment. They usually do not spread to other parts of the body. They occur in young adults and sometimes children. Retiform hemangioendotheliomas are a type of vascular tumor.

### **retina**

The light-sensitive layers of nerve tissue at the back of the eye that receive images and sends them as electric signals through the optic nerve to the brain.

### **retinoblastoma**

Cancer that forms in the tissues of the retina (the light-sensitive layers of nerve tissue at the back of the eye). Retinoblastoma usually occurs in children younger than 5 years. It may be hereditary or nonhereditary (sporadic).

### **retinoic acid**

A nutrient that the body needs in small amounts to function and stay healthy. Retinoic acid is made in the body from vitamin A and helps cells to grow and develop, especially in the embryo. A form of retinoic acid made in the laboratory is put on the skin to treat conditions such as acne and is taken by mouth to treat acute promyelocytic leukemia (a fast-growing cancer in which there are too many immature blood-forming cells in the blood and bone marrow). Retinoic acid is being studied in the prevention and treatment of other types of cancer. Also called all-trans retinoic acid, ATRA, tretinoin, and vitamin A acid.

### **retinoic acid receptor alpha gene**

A gene that makes a protein that controls the activity of certain genes that help white blood cells mature. Mutations (changes) in the retinoic acid receptor alpha gene can occur when a piece of the chromosome containing the retinoic acid receptor alpha gene breaks off and joins with a gene called PML on another chromosome. These changes may cause too many immature white blood cells to build up in the blood and bone marrow. This can lead to an aggressive (fast-growing) type of acute myeloid leukemia called acute promyelocytic leukemia. The protein made by the retinoic acid receptor alpha gene is a type of transcription factor. Also called RARA gene.

### **retinoid**

Vitamin A or a vitamin A-like compound.

### **retinol**

A nutrient that the body needs in small amounts to function and stay healthy. Retinol helps in vision, bone growth, reproduction, growth of epithelium (cells

that line the internal and external surfaces of the body), and fighting infections. It is fat-soluble (can dissolve in fats and oils). Retinol is found in liver, egg yolks, and whole milk dairy products from animals and in fish oils. It can also be made in the body from a substance found in some fruits and vegetables, such as cantaloupes, carrots, spinach, and sweet potatoes. Retinol is being studied in the prevention and treatment of some types of cancer. Also called vitamin A.

### **retinyl palmitate**

A drug that is being studied in the prevention of cancer. It belongs to the family of drugs called retinoids.

### **retracted nipple**

A nipple that turns inward into the breast or lies flat against the breast. A retracted nipple may be present at birth or may be caused by aging, breastfeeding, breast surgery, injury, infection, or certain breast conditions. It may also be a sign of breast cancer. Also called inverted nipple.

### **retromolar trigone**

The small area behind the wisdom teeth.

### **retroperitoneal**

Having to do with the area outside or behind the peritoneum (the tissue that lines the abdominal wall and covers most of the organs in the abdomen).

### **retroperitoneum**

The area in the back of the abdomen behind the peritoneum (the tissue that lines the abdominal wall and covers most of the organs in the abdomen). The organs in the retroperitoneum include the adrenal glands, aorta, kidneys, esophagus, ureters, pancreas, rectum, and parts of the stomach and colon.

### **retrospective**

Looking back at events that have already taken place.

### **retrospective cohort study**

A research study in which the medical records of groups of individuals who are alike in many ways but differ by a certain characteristic (for example, female nurses who smoke and those who do not smoke) are compared for a particular outcome (such as lung cancer). Also called historic cohort study.

### **retrospective study**

A study that compares two groups of people: those with the disease or condition under study (cases) and a very similar group of people who do not have the disease or condition (controls). Researchers study the medical and lifestyle histories of the people in each group to learn what factors may be associated with the disease or condition. For example, one group may have been exposed to a particular substance that the other was not. Also called case-control study.

### **retroviral vector**

RNA from a virus that is used to insert genetic material into cells.

### **retrovirus**

A type of virus that has RNA instead of DNA as its genetic material. It uses an enzyme called reverse transcriptase to become part of the host cells' DNA. This allows many copies of the virus to be made in the host cells. The virus that causes AIDS, the human immunodeficiency virus (HIV), is a type of retrovirus.

### **reverse transcription**

In biology, the process in cells by which an enzyme makes a copy of DNA from RNA. The enzyme that makes the DNA copy is called reverse transcriptase and is found in retroviruses, such as the human immunodeficiency virus (HIV). Reverse transcription can also be carried out in the laboratory.

### **reverse transcription-polymerase chain reaction**

A laboratory method used to make many copies of a specific genetic sequence for analysis. It uses an enzyme called reverse transcriptase to change a specific piece of RNA into a matching piece of DNA. This piece of DNA is then amplified (made in large numbers) by another enzyme called DNA polymerase. The amplified DNA copies help tell whether a specific mRNA molecule is being made by a gene. Reverse transcription-polymerase chain reaction may be used to look for certain changes in a gene or chromosome or for activation of certain genes, which may help diagnose a disease, such as cancer. It may also be used to study the RNA of certain viruses, such as the human immunodeficiency virus (HIV) and the hepatitis C virus, to help diagnose and monitor an infection. Also called RT-PCR.

### **reversible posterior leukoencephalopathy syndrome**

A rare condition marked by headaches, vision problems, mental changes, seizures, and swelling in the brain. The symptoms of reversible posterior leukoencephalopathy syndrome usually come on quickly and can be serious and life threatening. When treated, symptoms often go away within days or weeks. Reversible posterior leukoencephalopathy syndrome may occur in patients with certain conditions, such as high blood pressure, eclampsia, severe infection, kidney disease, and certain autoimmune diseases. It may also occur in patients treated with certain anticancer drugs and immunosuppressive drugs. Also called posterior reversible encephalopathy syndrome, PRES, and RPLS.

### **rhIL-11**

A drug used to increase the number of blood cells, especially platelets, in some cancer patients receiving chemotherapy. rhIL-11 is a form of interleukin-11 (a cytokine normally made by support cells in the bone marrow) that is made in the laboratory. It is a type of biological response modifier. Also called Neumega, oprelvekin, and recombinant human interleukin-11.

### **rhabdoid tumor**

A rare, fast-growing cancer that usually forms in the kidney or central nervous system (the brain and spinal cord) but can also form in soft tissues in other areas of the body. Rhabdoid tumors tend to spread quickly, are hard to treat, and have a poor prognosis. Most rhabdoid tumors are caused by mutations (changes) in the tumor suppressor gene SMARCB1, which makes a protein that helps control cell growth. Rhabdoid tumors usually occur in infants and young children.

### **rhabdomyosarcoma**

Cancer that forms in the soft tissues in a type of muscle called striated muscle. Rhabdomyosarcoma can occur anywhere in the body.

### **rheumatism**

A group of disorders marked by inflammation or pain in the connective tissue structures of the body. These structures include bone, cartilage, and fat.



### **rheumatoid arthritis**

An autoimmune disease that causes pain, swelling, and stiffness in the joints, and may cause severe joint damage, loss of function, and disability. The disease may last from months to a lifetime, and symptoms may improve and worsen over time.

### **rhinoscope**

A thin, tube-like instrument used to examine the inside of the nose. A rhinoscope has a light and a lens for viewing and may have a tool to remove tissue. Also called nasoscope.

### **rhinoscopy**

Examination of the inside of the nose using a rhinoscope. A rhinoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. Also called nasoscopy.

### **rhizoxin**

A substance that is being studied in the treatment of cancer. It comes from a fungus and is similar to vinca alkaloid drugs. It belongs to the family of drugs called antimetabolic agents.

### **rhubarb**

The root of this plant has been used in some cultures to treat certain medical problems. It may have anti-inflammatory and anticancer effects. The scientific name is *Rheum palmatum* or *Rheum officinale*. Also called Chinese rhubarb, da-huang, Indian rhubarb, and Turkish rhubarb.

### **ribavirin**

A drug used to treat respiratory syncytial virus (RSV) infection in the lungs.

### **ribociclib succinate**

A drug used to treat women with certain types of hormone-receptor positive, HER2-negative breast cancer that is advanced or has spread. It is also being studied in the treatment of other types of cancer. Ribociclib succinate blocks certain proteins, which may help keep cancer cells from growing. It is a type of cyclin-dependent kinase inhibitor. Also called Kisqali.

### **riboflavin**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Riboflavin helps make red blood cells, helps some enzymes work properly, and keeps skin, nails, and hair healthy. It is found in milk, eggs, malted barley, organ meats, yeast, and leafy vegetables. Riboflavin is water-soluble (can dissolve in water) and must be taken in every day. Not enough riboflavin can cause anemia (a low number of red blood cells), mouth sores, and skin problems. Amounts of riboflavin may be higher in the blood of patients with some types of cancer. Also called vitamin B2.

### **ribonucleic acid**

One of two types of nucleic acid made by cells. Ribonucleic acid contains information that has been copied from DNA (the other type of nucleic acid). Cells make several different forms of ribonucleic acid, and each form has a specific job in the cell. Many forms of ribonucleic acid have functions related to making proteins. Ribonucleic acid is also the genetic material of some viruses instead of

DNA. Ribonucleic acid can be made in the laboratory and used in research studies. Also called RNA.

### **ribonucleotide reductase inhibitor**

A family of anticancer drugs that interfere with the growth of tumor cells by blocking the formation of deoxyribonucleotides (building blocks of DNA).

### **ribosome**

In biology, a structure found inside cells that is involved in making proteins. Ribosomes help link amino acids together to form proteins.

### **rickets**

A condition in children in which bones become soft and deformed because they don't have enough calcium and phosphorus. It is caused by not having enough vitamin D in the diet or by not getting enough sunlight. In adults, this condition is called osteomalacia. Also called infantile rickets, juvenile rickets, and rachitis.

### **ridaforolimus**

A substance being studied in the treatment of soft tissue and bone cancers. It is also being studied in the treatment of other solid tumors and hematologic cancer. Ridaforolimus stops cells from dividing and may cause cancer cells to die. It is a type of mTOR inhibitor. Also called AP23573.

### **rifabutin**

A drug used to prevent the spread of a bacterium called in patients with advanced HIV (the virus that causes AIDS) infection. It blocks an enzyme that the bacteria need to grow. It is a type of antibiotic. Also called Mycobutin.

### **rifampin**

A drug used in the treatment of infections caused by bacteria. It belongs to the family of drugs called antibiotics.

### **riluzole**

A drug used to treat a nerve disease called amyotrophic lateral sclerosis (ALS). It is also being studied in the treatment of melanoma (a type of skin cancer). Riluzole blocks the release of a substance that melanoma cells need to grow. It is a type of glutamate release inhibitor. Also called Rilutek.

### **ripretinib**

A drug used to treat adults with advanced gastrointestinal stromal tumor. It is used in patients whose cancer was already treated with at least three other kinase inhibitors, including imatinib mesylate. It is also being studied in the treatment of other types of cancer. Ripretinib blocks certain proteins, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Qinlock.

### **risedronate**

A substance that is being studied in the prevention and treatment of osteoporosis. It belongs to the family of drugs called bone resorption inhibitors.

### **risk assessment**

A process used to estimate the risk that a certain event will happen. In medicine, this may include a person's risk of having a child with a certain condition or disease, such as cancer. It may also be used to estimate the risk of carrying a certain gene mutation (change), or of having an adverse event (unexpected

medical problem) in response to certain types of drugs or other substances. A risk assessment may be done by collecting information about a person's age, sex, personal and family medical history, ethnic background, lifestyle, and other factors and using statistics tools to calculate risk.

### **risk factor**

Something that increases the chance of developing a disease. Some examples of risk factors for cancer are age, a family history of certain cancers, use of tobacco products, being exposed to radiation or certain chemicals, infection with certain viruses or bacteria, and certain genetic changes.

### **risk group**

In medicine, risk groups are used to describe people who are alike in important ways. For example, patients with the same type of cancer may be divided into different risk groups that depend on certain aspects of their disease. These risk groups may be based on the patients' chance of being cured (good versus poor) or the chance that their disease will come back (high versus low). Treatment may be based on which risk group a patient falls into. Risk groups can also be used to describe people who share traits and behaviors that affect their chance of developing a disease. For example, people who do not smoke are in a lower risk group for lung cancer than people who smoke.

### **risk model**

In medicine, a tool used to estimate a person's risk of developing a certain condition or disease, such as cancer. Risk models may also be used to estimate a person's risk of carrying a certain gene change or of having a child with a certain condition. Risk models use computer programs and statistics to estimate risk based on information about a person that may include their age, sex, personal and family medical history, ethnic background, lifestyle, and other factors. There are many types of risk models, and each model looks at different factors that increase risk in different groups of people.

### **risk ratio**

A measure of the risk of a certain event happening in one group compared to the risk of the same event happening in another group. In cancer research, risk ratios are used in prospective (forward looking) studies, such as cohort studies and clinical trials. A risk ratio of one means there is no difference between two groups in terms of their risk of cancer, based on whether or not they were exposed to a certain substance or factor, or how they responded to two treatments being compared. A risk ratio of greater than one or of less than one usually means that being exposed to a certain substance or factor either increases (risk ratio greater than one) or decreases (risk ratio less than one) the risk of cancer, or that the treatments being compared do not have the same effects. Also called relative risk.

### **risk-reducing mastectomy**

Surgery to reduce the risk of breast cancer by removing one or both breasts before disease develops. Risk-reducing mastectomy may be done in people who have a very high risk of developing breast cancer. Also called preventive mastectomy and prophylactic mastectomy.

### **risk-reducing oophorectomy**

Surgery done to reduce the risk of ovarian cancer and breast cancer by removing the ovaries before disease develops. Removing the ovaries lowers the amount of estrogen in the body, which may slow the growth of some types of

breast cancer. Risk-reducing oophorectomy is usually done in women who have a high risk of developing breast cancer and/or ovarian cancer caused by certain genetic mutations. Also called prophylactic oophorectomy.

### **risperidone**

A drug used to treat certain mental disorders, such as schizophrenia and bipolar disease. It may also be used to treat certain behavior problems in children. Risperidone blocks the action of certain chemicals in the brain. It is a type of antipsychotic. Also called Risperdal.

### **ritonavir**

A drug used to treat infection with HIV (the virus that causes AIDS). It is also being studied in the treatment of some types of cancer. Ritonavir blocks the ability of HIV to make copies of itself and may block the growth of cancer cells. It is a type of anti-HIV agent and a type of protease inhibitor. Also called Norvir.

### **ritual**

An action or series of actions that is repeated, often in a religious or social setting. In medicine, it may describe a repeated action (such as hand washing) done to relieve feelings of fear, dread, and uneasiness in people who have an obsessive-compulsive disorder.

### **rituximab**

A drug used alone or with other drugs under the brand names Riabni, Rituxan, Ruxience, and Truxima to treat certain types of B-cell non-Hodgkin lymphoma, chronic lymphocytic leukemia, and B-cell acute leukemia that are CD20 positive. Rituximab is also being studied in the treatment of other conditions and types of cancer. Rituximab binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Rituximab is a type of monoclonal antibody.

### **rituximab and hyaluronidase**

A combination of two drugs used to treat adults with certain types of follicular lymphoma, diffuse large B-cell lymphoma, or chronic lymphocytic leukemia. Rituximab binds to a protein called CD20, which is found on B cells (a type of white blood cell) and some types of cancer cells. This may help the immune system kill cancer cells. Hyaluronidase allows rituximab to be given by injection under the skin. Rituximab and hyaluronidase can be given in less time than rituximab alone, which is given as an infusion. Also called Rituxan Hycela.

### **robot-assisted laparoscopic radical prostatectomy**

Surgery that uses a computer-assisted mechanical device (robot) to remove the entire prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). Nearby lymph nodes may also be removed. During robot-assisted laparoscopic radical prostatectomy, several small incisions (cuts) are made in the wall of the lower abdomen. The surgeon inserts an instrument with a camera through one of the openings and surgical instruments through the other openings using the robotic arms. The camera gives the surgeon a clear, 3-dimensional view of the prostate and surrounding structures. The surgeon then uses the robotic arms to remove the prostate. An attempt is made to protect the nerves that control penile erection and the bladder from damage. Also called robotic laparoscopic radical prostatectomy.

### **robotic laparoscopic radical prostatectomy**

Surgery that uses a computer-assisted mechanical device (robot) to remove the entire prostate and some of the tissue around it, including the seminal vesicles (a gland that helps make semen). Nearby lymph nodes may also be removed. During robotic laparoscopic radical prostatectomy, several small incisions (cuts) are made in the wall of the lower abdomen. The surgeon inserts an instrument with a camera through one of the openings and surgical instruments through the other openings using the robotic arms. The camera gives the surgeon a clear, 3-dimensional view of the prostate and surrounding structures. The surgeon then uses the robotic arms to remove the prostate. An attempt is made to protect the nerves that control penile erection and the bladder from damage. Also called robot-assisted laparoscopic radical prostatectomy.

### **rofecoxib**

A drug that was being used for pain relief and was being studied for its ability to prevent cancer and to prevent the growth of new blood vessels that tumors need to grow. It is a type of nonsteroidal anti-inflammatory drug and a type of antiangiogenesis agent. Rofecoxib was taken off the market in the U.S. because of safety concerns. Also called Vioxx.

### **rolapitant hydrochloride**

A drug used with other drugs in adults to prevent nausea and vomiting caused by chemotherapy. Rolapitant hydrochloride blocks the action of a certain chemical in the central nervous system that may trigger nausea and vomiting. Blocking this chemical may lessen nausea and vomiting. Rolapitant hydrochloride is a type of antiemetic and a type of substance P/neurokinin 1 receptor antagonist. Also called Varubi.

### **romidepsin**

A drug used to treat adults with cutaneous T-cell lymphoma that has already been treated with at least one other type of systemic therapy. It is also being studied in the treatment of other types of cancer. Romidepsin blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of depsipeptide and a type of histone deacetylase inhibitor. Also called FR901228 and Istodax.

### **romiplostim**

A drug used to treat thrombocytopenia (a low blood platelet count) in adults and in certain children with immune thrombocytopenic purpura that did not get better with other treatment. It is also being studied in the treatment of other conditions and types of cancer. Romiplostim binds to the thrombopoietin receptor, which causes the bone marrow to make more platelets. It is a type of thrombopoietin receptor agonist. Also called AMG 531 and Nplate.

### **ropeginterferon alfa-2b**

A drug used to treat adults with polycythemia vera (a disease in which too many red blood cells are made in the bone marrow). It is also being studied in the treatment of other conditions and some types of cancer. Rpeginterferon alfa-2b is a form of recombinant interferon alfa-2b that is made in the laboratory and linked to a substance called PEG, which makes the drug stay in the body longer. Rpeginterferon alfa-2b may lower the number of red blood cells made in the bone marrow. It is a type of cytokine and a type of immunomodulating agent. Also called Besremi.

### **ropivacaine hydrochloride**

A drug used to control pain and to cause a temporary loss of feeling in one part of the body, during and after surgery. It is also being studied for pain control after cancer surgery. It is a type of local anesthetic. Also called Naropin.

### **rosiglitazone maleate**

A drug that helps control the amount of glucose (sugar) in the blood and is being studied in the prevention and treatment of some types of cancer. Rosiglitazone maleate stops cells from growing and may prevent the growth of new blood vessels that tumors need to grow. It is a type of thiazolidinedione and a type of antiangiogenesis agent. Also called Avandia.

### **rosuvastatin calcium**

A drug used to lower the amount of cholesterol and other harmful substances, such as triglycerides, in the blood. It is also being studied in the prevention and treatment of some types of cancer and other conditions. Rosuvastatin calcium blocks an enzyme that helps make cholesterol in the body and it helps break down cholesterol. It also may cause cancer cells to die and may inhibit the growth of blood vessels that cancer cells need to grow. It is a type of HMG-CoA reductase inhibitor and a type of statin. Also called Crestor.

### **rotationplasty**

Surgery used to remove a tumor in or near the knee joint, often in young people who are still growing. The knee and part of the thigh are removed. The part of the leg that remains below the knee is then attached to the part of the leg above the knee, with the foot facing backward and the ankle joint acting as a new knee. The patient is then fitted with an artificial lower leg and foot.

### **rucaparib camsylate**

A drug used to treat adults with certain types of prostate cancer or ovarian epithelial, fallopian tube, or primary peritoneal cancer. It is also being studied in the treatment of other types of cancer. Rucaparib camsylate blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Rucaparib camsylate is a type of PARP inhibitor. Also called AG014699, PARP-1 inhibitor AG014699, and Rubraca.

### **ruxolitinib phosphate**

A drug used to treat adults with certain types of primary myelofibrosis (MF), post-polycythemia vera MF, post-essential thrombocythemia MF, or polycythemia vera, and adults and children aged 12 years and older with acute or chronic graft-versus-host disease. It is also being studied in the treatment of some types of cancer. Ruxolitinib phosphate blocks a protein called JAK, which may help keep abnormal blood cells or cancer cells from growing. It may also lower the body's immune response. Ruxolitinib phosphate is a type of tyrosine kinase inhibitor. Also called Jakafi.

### **sacituzumab govitecan**

A drug used to treat adults with certain types of breast cancer or urothelial cancer (a type of cancer in the bladder or urinary tract) that have already been treated with other therapy. It is also being studied in the treatment of other types of cancer. Sacituzumab govitecan contains a monoclonal antibody called sacituzumab that binds to a protein called TROP2, which is found on some cancer cells. It also contains an anticancer drug called SN-38, which may help



kill cancer cells. Sacituzumab govitecan is a type of antibody-drug conjugate. Also called Trodelvy.

### **sacrum**

The large, triangle-shaped bone in the lower spine that forms part of the pelvis. It is made of 5 fused bones of the spine.

### **safingol**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called protein kinase inhibitors. Also called L-threo-dihydrosphingosine.

### **saline**

A solution of salt and water.

### **saliva**

The clear, watery fluid in the mouth made by the salivary glands. Saliva moistens food to help with chewing and swallowing. It also contains enzymes that help digest food, minerals that strengthen teeth and prevent tooth decay, and antibodies that kill germs and help protect the mouth against infections.

### **salivary gland**

A gland in the mouth that produces saliva.

### **salivary gland cancer**

A rare cancer that forms in tissues of a salivary gland (gland in the mouth that makes saliva). Most salivary gland cancers occur in older people.

### **salpingo-oophorectomy**

Surgical removal of the fallopian tubes and ovaries.

### **salvage therapy**

Treatment that is given after the cancer has not responded to other treatments.

### **samarium Sm 153**

A radioactive substance used to treat bone cancer and other cancers that have spread to the bone. Samarium Sm 153 is a radioactive form of the element samarium. It collects in bone, where it releases radiation that may kill cancer cells.

### **samarium Sm 153-lexidronam pentasodium**

A drug used to treat bone pain caused by bone cancer and other cancers that have spread to the bone. It contains a radioactive substance called samarium Sm 153. Samarium Sm 153-lexidronam pentasodium collects in bone and gives off radiation that may kill cancer cells. Also called Quadramet.

### **saponin**

A substance found in soybeans and many other plants. Saponins may help lower cholesterol and may have anticancer effects.

### **saquinavir mesylate**

A drug that belongs to the family of drugs called protease inhibitors. It interferes with the ability of a virus to make copies of itself.

**sarCNU**

A substance being studied in the treatment of cancer. It is a type of alkylating agent. Also called sarcosinamide nitrosoarea.

**sarcoid**

An inflammatory disease marked by the formation of granulomas (small nodules of immune cells) in the lungs, lymph nodes, and other organs. Sarcoid may be acute and go away by itself, or it may be chronic and progressive. Also called sarcoidosis.

**sarcoidosis**

An inflammatory disease marked by the formation of granulomas (small nodules of immune cells) in the lungs, lymph nodes, and other organs. Sarcoidosis may be acute and go away by itself, or it may be chronic and progressive. Also called sarcoid.

**sarcoma**

A type of cancer that begins in bone or in the soft tissues of the body, including cartilage, fat, muscle, blood vessels, fibrous tissue, or other connective or supportive tissue. Different types of sarcoma are based on where the cancer forms. For example, osteosarcoma forms in bone, liposarcoma forms in fat, and rhabdomyosarcoma forms in muscle. Treatment and prognosis depend on the type and grade of the cancer (how abnormal the cancer cells look under a microscope and how quickly the cancer is likely to grow and spread). Sarcoma occurs in both adults and children.

**sarcomatoid carcinoma**

A type of cancer that looks like a mixture of carcinoma (cancer that begins in the skin or in tissues that line or cover internal organs in the body) and sarcoma (cancer of the bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue). The sarcoma-like cells are often spindle cells. Under a microscope, spindle cells look long and slender.

**sarcopenia**

A condition characterized by loss of muscle mass, strength, and function in older adults. Signs and symptoms include weakness, fatigue, loss of energy, balance problems, and trouble walking and standing. Muscle loss or weakness can lead to falls, broken bones, and other serious injuries and can affect a person's ability to care for oneself. Older age, getting little or no exercise, and poor nutrition may increase the risk of sarcopenia. Sarcopenia may also occur in people with cancer.

**sarcosinamide nitrosoarea**

A substance being studied in the treatment of cancer. It is a type of alkylating agent. Also called sarCNU.

**sargramostim**

A substance that helps make more white blood cells, especially granulocytes, macrophages, and cells that become platelets. It is a cytokine that is a type of hematopoietic (blood-forming) agent. Also called GM-CSF and granulocyte-macrophage colony-stimulating factor.

**satellite tumor**

A group of tumor cells in an area near the primary (original) tumor. In melanoma, satellite tumors occur within 2 centimeters of the primary tumor, on or under the

skin, and can be seen without a microscope. Satellite tumors may also be found in other types of cancer, including cancers of the breast, lung, liver, and brain. Having a satellite tumor is a sign that the cancer has spread from where it first formed.

### **satraplatin**

A substance being studied in the treatment of prostate and other types of cancer. It contains the metal platinum and may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called BMS-182751 and JM 216.

### **saturated fat**

A type of fat with certain chemical properties that is usually solid at room temperature. Most saturated fats come from animal food products, but some plant oils, such as palm and coconut oil, also contain high levels. Eating saturated fat increases the level of cholesterol in the blood and the risk of heart disease.

### **saw palmetto**

A shrub that is a member of the palm tree family. An extract made from the berries of this shrub has been studied in the treatment of certain urinary and prostate disorders. The scientific name is *Serenoa repens*.

### **scalpel**

A small, thin knife used for surgery.

### **scan**

A type of test that makes detailed pictures of areas inside the body. A scan may also refer to the picture that gets made during the test. Scans may be used to help diagnose disease, plan treatment, or find out how well treatment is working. There are many different types of scans, including computed tomography (CT) scans, magnetic resonance imaging (MRI) scans, and nuclear medicine scans (such as bone scans and liver scans). CT scans are done with an x-ray machine linked to a computer. MRI scans are done with radio waves and a powerful magnet linked to a computer. Nuclear medicine scans are done with small amounts of radioactive substances that are injected into the body and a special machine that detects the radioactive substance.

### **scanner**

In medicine, an instrument that takes pictures of the inside of the body.

### **scapula**

One of a pair of triangular bones at the back of the shoulder. The scapula connects the collarbone with the upper arm bone. Also called shoulder blade.

### **scar tissue**

Fibrous tissue that forms when normal tissue is destroyed by disease, injury, or surgery. For example, scar tissue forms when a wound heals after a cut, sore, burn, or other skin condition, or when an incision (cut) is made into the skin during surgery. It may also form inside the body when certain conditions, such as cirrhosis, cause normal tissue to become fibrous tissue.

### **scatter radiation**

Radiation that spreads out in different directions from a radiation beam when the beam interacts with a substance, such as body tissue. For example, during x-ray

mammography, very small amounts of radiation may be scattered to areas away from the breast, such as the head and neck, sternum, and thyroid gland. The energy of scatter radiation is usually much lower than that of the original radiation beam.

### **scattered fibroglandular breast tissue**

A term used to describe breast tissue that is made up of mostly fatty tissue and also has some dense fibrous tissue and glandular tissue. On a mammogram, the dense areas of the breast make it harder to find tumors or other changes. Scattered fibroglandular breast tissue is one of four categories used to describe a level of breast density seen on a mammogram. About 40% of women have this type of breast tissue.

### **schistosome**

A parasitic worm that can cause diseases of the liver, bladder, and gastrointestinal tract. One type of schistosome has been linked to bladder cancer. Schistosomes are found in Africa, the Middle East, East Asia, the Caribbean, and South America.

### **schizophrenia**

A group of severe mental disorders in which a person has trouble telling the difference between real and unreal experiences, thinking logically, having normal emotional responses to others, and behaving normally in social situations. Symptoms include seeing, hearing, feeling things that are not there, having false ideas about what is taking place or who one is, nonsense speech, unusual behavior, lack of emotion, and social withdrawal.

### **school liaison**

A person who helps a child return to school after a serious illness, such as cancer, or a long hospital stay. A school liaison may also arrange for education services in the child's home or at the hospital if the child is not able to return to school. School liaisons help parents, teachers, and other students understand special issues that the child may have in returning to the classroom as a result of the illness or its treatment. This may help in planning extra education services and support that the child may need.

### **schwannoma**

A tumor of the peripheral nervous system that arises in the nerve sheath (protective covering). It is almost always benign, but rare malignant schwannomas have been reported.

### **scientific review committee**

A group of doctors, scientists, and other experts that reviews the detailed plan of a clinical trial for scientific quality and correct study design. There is a scientific review committee at every health care facility that does clinical research. Most clinical trials are reviewed by the scientific review committee before they go to the facility's Institutional Review Board (IRB) for approval. Also called scientific review panel.

### **scientific review panel**

A group of doctors, scientists, and other experts that reviews the detailed plan of a clinical trial for scientific quality and correct study design. There is a scientific review panel at every health care facility that does clinical research. Most clinical trials are reviewed by the scientific review panel before they go to the facility's

Institutional Review Board (IRB) for approval. Also called scientific review committee.

### **scientist**

A person who has studied science, especially one who is active in a particular field of investigation.

### **scintigraphy**

A procedure that produces pictures (scans) of structures inside the body, including areas where there are cancer cells. Scintigraphy is used to diagnose, stage, and monitor disease. A small amount of a radioactive chemical (radionuclide) is injected into a vein or swallowed. Different radionuclides travel through the blood to different organs. A machine with a special camera moves over the person lying on a table and detects the type of radiation given off by the radionuclides. A computer forms an image of the areas where the radionuclide builds up. These areas may contain cancer cells. Also called radionuclide scanning.

### **scintimammography**

A type of breast imaging test that is used to detect cancer cells in the breasts of some women who have had abnormal mammograms, or who have dense breast tissue. It is not used for screening or in place of a mammogram. In this test, a woman receives an injection of a small amount of a radioactive substance called technetium 99, which is taken up by cancer cells, and a gamma camera is used to take pictures of the breasts. Also called Miraluma test and sestamibi breast imaging.

### **sclera**

The white layer of the eye that covers most of the outside of the eyeball.

### **scleroderma**

A chronic disorder marked by hardening and thickening of the skin. Scleroderma can be localized or it can affect the entire body (systemic).

### **sclerosing adenosis**

A benign (not cancerous) condition in which scar-like fibrous tissue is found in the breast lobules (the glands that make milk). In sclerosing adenosis, the lobules are larger than normal. This may result in a breast lump that may be large enough to feel. Sclerosing adenosis may also cause pain in the breast. A biopsy may be needed to tell the difference between sclerosing adenosis and breast cancer. Sclerosing adenosis may slightly increase the risk of breast cancer.

### **sclerosing epithelioid fibrosarcoma**

A rare, type of cancer that forms in fibrous (connective) tissue. Sclerosing epithelioid fibrosarcoma is a slow growing tumor, but may recur (come back) and spread to other parts of the body many years after treatment. It usually occurs in middle-aged or older adults, and is rare in children and adolescents. Sclerosing epithelioid fibrosarcoma is a type of soft tissue sarcoma.

### **sclerotherapy**

A treatment used to destroy abnormal blood vessels. A liquid is injected into a blood vessel, causing it to scar and break down. The blood flows through nearby healthy veins and the destroyed blood vessel is absorbed into normal tissue.

Sclerotherapy is used to treat certain types of vascular tumors. It is also used to treat varicose and spider veins, hemorrhoids, and other blood vessel problems.

### **scoliosis**

A condition marked by a side-to-side curve of the backbone. The curve is usually shaped like an S or a C. In most cases, the cause of scoliosis is not known. In some cases, scoliosis may be present at birth or it may be caused by muscle spasms, inflammation, tumors, or certain other disorders. It may also occur at some point in time after radiation therapy to the backbone.

### **screening**

Checking for disease when there are no symptoms. Since screening may find diseases at an early stage, there may be a better chance of curing the disease. Examples of cancer screening tests are the mammogram (for breast cancer), colonoscopy (for colon cancer), and the Pap test and HPV tests (for cervical cancer). Screening can also include doing a genetic test to check for a person's risk of developing an inherited disease.

### **screening mammogram**

X-rays of the breasts taken to check for breast cancer in the absence of signs or symptoms.

### **screening test**

A test that checks for a disease or condition before symptoms appear. Screening tests may help find diseases at an early stage, when they may be easier to treat or cure. Examples of cancer screening tests include mammography (for breast cancer), colonoscopy (for colorectal cancer), and Pap tests and HPV tests (for cervical cancer). Screening tests may also include genetic tests to look for changes in genes or chromosomes. These changes may be a sign that a person has or is at risk of developing a specific disease or condition.

### **scrotum**

In males, the external sac that contains the testicles.

### **sebaceoma**

A rare, benign (not cancer) tumor that forms in an oil gland in the skin. Most sebaceomas appear as yellow, orange, or skin-colored bumps that occur on the head or neck. They tend to grow slowly and are painless. Sebaceomas may be found in people with a rare, inherited condition called Muir-Torre syndrome (MTS). People with MTS have an increased risk of developing several types of cancer. Sebaceomas most often occur in older adults. Also called sebaceous epithelioma.

### **sebaceous epithelioma**

A rare, benign (not cancer) tumor that forms in an oil gland in the skin. Most sebaceous epitheliomas appear as yellow, orange, or skin-colored bumps that occur on the head or neck. They tend to grow slowly and are painless. Sebaceous epitheliomas may be found in people with a rare, inherited condition called Muir-Torre syndrome (MTS). People with MTS have an increased risk of developing several types of cancer. Sebaceous epitheliomas most often occur in older adults. Also called sebaceoma.

### **sebum**

An oily substance produced by certain glands in the skin.



### **second opinion**

In medicine, the opinion of a doctor other than the patient's current doctor. The second doctor reviews the patient's medical records and gives an opinion about the patient's health problem and how it should be treated. A second opinion may confirm or question the first doctor's diagnosis and treatment plan, give more information about the patient's disease or condition, and offer other treatment options.

### **second primary cancer**

A term used to describe a new primary cancer that occurs in a person who has had cancer in the past. Second primary cancers may occur months or years after the original (primary) cancer was diagnosed and treated. Certain types of cancer treatment, such as chemotherapy and radiation therapy, may increase the risk of a second primary cancer. Having certain inherited gene mutations (changes) and being exposed to certain cancer-causing substances, such as tobacco smoke, may also increase the risk of a second primary cancer.

### **second-degree relative**

A way of describing how family members are related to each other when there is one other family member in the blood line between them. Examples of a second-degree relative are an aunt, uncle, grandparent, grandchild, niece, nephew, or half-sibling. Also called SDR.

### **second-line therapy**

Treatment that is given when initial treatment (first-line therapy) doesn't work, or stops working.

### **second-look surgery**

Surgery performed after primary treatment to determine whether tumor cells remain.

### **secondary cancer**

A term used to describe cancer that has spread (metastasized) from the place where it first started to another part of the body. Secondary cancers are the same type of cancer as the original (primary) cancer. For example, cancer cells may spread from the breast (primary cancer) to form new tumors in the lung (secondary cancer). The cancer cells in the lung are just like the ones in the breast. Also called secondary tumor.

### **secondary ovarian failure**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. In secondary ovarian failure, the ovaries are normal but there is a problem getting hormone signals to them from the brain. This is usually caused by diseases of the pituitary gland or hypothalamus. Secondary ovarian failure may also be caused by certain medicines, too much exercise, or certain eating disorders. Some women with secondary ovarian failure sometimes have menstrual periods and may be able to have children. Also called secondary ovarian insufficiency.

### **secondary ovarian insufficiency**

A condition in which the ovaries stop working and menstrual periods stop before age 40. This can cause fertility problems and symptoms of menopause. In secondary ovarian insufficiency, the ovaries are normal but there is a problem getting hormone signals to them from the brain. This is usually caused by diseases of the pituitary gland or hypothalamus. Secondary ovarian insufficiency

may also be caused by certain medicines, too much exercise, or certain eating disorders. Some women with secondary ovarian insufficiency sometimes have menstrual periods and may be able to have children. Also called secondary ovarian failure.

### **secondary tumor**

A term used to describe cancer that has spread (metastasized) from the place where it first started to another part of the body. Secondary tumors are the same type of cancer as the original (primary) cancer. For example, cancer cells may spread from the breast (primary cancer) to form new tumors in the lung (secondary tumor). The cancer cells in the lung are just like the ones in the breast. Also called secondary cancer.

### **secondhand smoke**

Smoke that comes from the burning of a tobacco product and smoke that is exhaled by smokers. Inhaling secondhand smoke is called involuntary or passive smoking. Also called environmental tobacco smoke and ETS.

### **secrete**

To form and release a substance. In the body, cells secrete substances, such as sweat that cools the body or hormones that act in other parts of the body.

### **secretin**

A hormone released into the blood by cells in the inner layer of the small intestine. It is released when partly digested food moves from the stomach into the small intestine. Secretin causes the pancreas, liver, and stomach to release other substances that help digest food. Secretin may also be made in the laboratory.

### **secretin human**

A drug used to help diagnose gastrinomas (tumors that cause too much gastric acid to be made) and other problems with the pancreas. It is also used to increase secretions from the pancreas and to help identify a duct called the ampulla of Vater. Secretin human is a form of secretin that is made in the laboratory. Secretin causes the pancreas, liver, and stomach to release substances that help digest food. Also called ChiRhoStim and synthetic human secretin.

### **secretin stimulation test**

A test used to measure the ability of the pancreas to respond to a hormone called secretin. Secretin causes the pancreas, liver, and stomach to release substances that help digest food. During a secretin stimulation test, a tube is inserted through the nose or throat into the stomach and small intestine. Secretin is given to the patient by injection into a vein. After a certain amount of time, samples of fluid are taken from the small intestine through the tube and sent to a lab to test for a response. A secretin stimulation test may be used to help diagnose problems that affect the pancreas, such as pancreatitis, cystic fibrosis, and a type of pancreatic tumor called a gastrinoma. Also called pancreatic function test.

### **sedation**

A state of calmness, relaxation, or sleepiness caused by certain drugs. Sedation may be used to help relieve anxiety during medical or surgical procedures or to help cope with very stressful events. Drugs that relieve pain may be used at the same time.

**sedative**

A drug or substance used to calm a person down, relieve anxiety, or help a person sleep.

**sedimentation rate**

The distance red blood cells travel in one hour in a sample of blood as they settle to the bottom of a test tube. The sedimentation rate is increased in inflammation, infection, cancer, rheumatic diseases, and diseases of the blood and bone marrow. Also called erythrocyte sedimentation rate and ESR.

**sedoxantrone trihydrochloride**

A substance being studied in the treatment of some types of cancer. Sedoxantrone trihydrochloride binds to DNA and stops cells, including cancer cells, from repairing damage to DNA and from making more DNA, RNA, and protein. It is a type of DNA intercalator. Also called CI-958.

**segmental cystectomy**

Surgery to remove part of the bladder (the organ that holds urine). Also called partial cystectomy.

**segmental mastectomy**

Surgery to remove cancer or other abnormal tissue from the breast and some normal tissue around it, but not the breast itself. Some lymph nodes under the arm may be removed for biopsy. Part of the chest wall lining may also be removed if the cancer is near it. Also called breast-conserving surgery, breast-sparing surgery, lumpectomy, partial mastectomy, and quadrantectomy.

**segmental resection**

Surgery to remove part of an organ or gland. It may also be used to remove a tumor and normal tissue around it. In lung cancer surgery, segmental resection refers to removing a section of a lobe of the lung. Also called segmentectomy.

**segmentectomy**

Surgery to remove part of an organ or gland. It may also be used to remove a tumor and normal tissue around it. In lung cancer surgery, segmentectomy refers to removing a section of a lobe of the lung. Also called segmental resection.

**seizure**

Sudden, uncontrolled body movements and changes in behavior that occur because of abnormal electrical activity in the brain. Symptoms include loss of awareness, changes in emotion, loss of muscle control, and shaking. Seizures may be caused by drugs, high fevers, head injuries, and certain diseases, such as epilepsy.

**selection bias**

An error in choosing the individuals or groups to take part in a study. Ideally, the subjects in a study should be very similar to one another and to the larger population from which they are drawn (for example, all individuals with the same disease or condition). If there are important differences, the results of the study may not be valid.

**selective estrogen receptor degrader**

A drug that binds to and breaks down proteins called estrogen receptors (ERs), which are found inside the cells of female reproductive tissue, breast tissue, and other types of tissue, and some cancer cells. These drugs keep the hormone

estrogen from binding to the ERs inside the cells and block the effects of estrogen in the body. Some breast cancer cells and other types of cancer cells have ERs and may need estrogen to grow. Treatment with selective estrogen receptor degraders may keep these cancer cells from growing. Examples of selective estrogen receptor degraders that have been approved to treat some types of breast cancer are fulvestrant and elacestrant. Also called SERD.

### **selective estrogen receptor modulator**

A drug that acts like estrogen on some tissues but blocks the effect of estrogen on other tissues. Tamoxifen and raloxifene are selective estrogen receptor modulators. Also called SERM.

### **selective serotonin reuptake inhibitor**

A type of drug that is used to treat depression and some other conditions. Selective serotonin reuptake inhibitors stop or delay the body from reabsorbing a substance called serotonin, which leaves more of it available for the body to use. Raising serotonin levels can help regulate mood, appetite, digestion, sleep, and many other bodily functions. Selective serotonin reuptake inhibitors include drugs such as citalopram, escitalopram, fluoxetine, paroxetine, and sertraline. Also called SSRI.

### **selenium**

A mineral that is needed by the body to stay healthy. It is being studied in the prevention and treatment of some types of cancer. Selenium is a type of antioxidant.

### **self-esteem**

A feeling of self-worth, self-confidence, and self-respect.

### **selinexor**

A drug used alone or with other drugs to treat adults with certain types of diffuse large B-cell lymphoma or multiple myeloma. It is used in patients whose cancer has already been treated with other anticancer therapy. It is also being studied in the treatment of other types of cancer. Selinexor blocks a protein called CRM1, which may help keep cancer cells from growing and may kill them. It is a type of small molecule inhibitor. Also called Xpovio.

### **sella turcica**

A depression of the bone at the base of the skull where the pituitary gland is located.

### **selpercatinib**

A drug used to treat certain types of non-small cell lung cancer in adults and certain types of thyroid cancer or other solid tumor in adults and children aged 2 years and older. It is used in patients whose cancer has an abnormal RET gene. It is also being studied in the treatment of other types of cancer. Selpercatinib blocks certain proteins, including those made by the RET fusion gene or the mutated RET gene. Blocking these proteins may help keep cancer cells from growing. Selpercatinib is a type of tyrosine kinase inhibitor. Also called Retevmo.

### **selumetinib sulfate**

A drug used to treat children aged 2 years and older with a rare genetic condition called neurofibromatosis type 1. It is used in patients who have plexiform neurofibromas that are causing symptoms and cannot be removed by surgery. It is also being studied in the treatment of some types of cancer. Selumetinib

sulfate blocks proteins called MEK1 and MEK2, which may help keep abnormal cells or cancer cells from growing. It is a type of kinase inhibitor. Also called AZD6244, Koselugo, and MEK inhibitor AZD6244.

### **semaxanib**

A substance that has been studied in the treatment of cancer. It belongs to the families of drugs called angiogenesis inhibitors and tyrosine kinase inhibitors. Also called SU5416.

### **semen**

The fluid that is released through the penis during orgasm. Semen is made up of sperm from the testicles and fluid from the prostate and other sex glands.

### **seminal fluid**

Fluid from the prostate and other sex glands that helps transport sperm out of the man's body during orgasm. Seminal fluid contains sugar as an energy source for sperm.

### **seminal vesicle**

A gland that helps produce semen.

### **seminal vesicle biopsy**

The removal of fluid or tissue with a needle from the seminal vesicles for examination under a microscope. The seminal vesicles are glands in the male reproductive tract that produce a part of semen.

### **seminoma**

A type of cancer that begins in germ cells in males. Germ cells are cells that form sperm in males or eggs in females. Seminomas occur most often in the testicle, but they may also occur in other areas of the body, such as the brain, chest, or abdomen. Seminomas tend to grow and spread slowly. Some seminomas make a hormone called beta-human chorionic gonadotropin (beta-HCG) that may cause signs and symptoms of disease. Seminomas usually occur in young men.

### **semiparasitic**

In botany, a plant that gets food from a host but also contains chlorophyll and is capable of photosynthesis.

### **semustine**

A substance that has been studied in the treatment of some types of cancer. Semustine damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent and a type of nitrosourea.

### **senega root**

The root of an herb called Polygala senega. It has been used in some cultures to treat certain medical problems, including problems of the respiratory system.

### **senescence**

The process of growing old. In biology, senescence is a process by which a cell ages and permanently stops dividing but does not die. Over time, large numbers of old (or senescent) cells can build up in tissues throughout the body. These cells remain active and can release harmful substances that may cause inflammation and damage to nearby healthy cells. Senescence may play a role in the development of cancer and other diseases.

### **senile keratosis**

A thick, scaly patch of skin that may become cancer. It usually forms on areas exposed to the sun, such as the face, scalp, back of the hands, or chest. It is most common in people with fair skin. Also called actinic keratosis and solar keratosis.

### **senses**

In medicine, the ways in which the body receives signals from the environment. The five human senses are sight, hearing, smell, taste, and touch. The body receives signals through the sense organs (the eyes, ears, nose, tongue, and skin). These organs have special nerves that send signals to the brain. The brain processes these signals and then sends information back to the rest of the body to tell it how to respond to the signal. Aging, certain diseases or conditions, and some types of medicines or treatments can affect the senses.

### **sensitivity**

In medicine, sensitivity may describe how well a test can detect a specific disease or condition in people who actually have the disease or condition. No test has 100% sensitivity because some people who have the disease or condition will not be identified by the test (false-negative test result). Sensitivity may also refer to the way the body reacts to the environment or to drugs, chemicals, or other substances. For example, a person who is sensitive to the sun may have skin that burns easily or get a rash when exposed to the sun. A person who is sensitive to caffeine may need only small amounts of it to feel its effects.

### **sensor**

A device that responds to a stimulus, such as heat, light, or pressure, and generates a signal that can be measured or interpreted.

### **sensory**

Having to do with the senses.

### **sentinel lymph node**

The first lymph node to which cancer is likely to spread from the primary tumor. When cancer spreads, the cancer cells may appear first in the sentinel node before spreading to other lymph nodes.

### **sentinel lymph node biopsy**

Removal and examination of the sentinel node(s) (the first lymph node(s) to which cancer cells are likely to spread from a primary tumor). To identify the sentinel lymph node(s), the surgeon injects a radioactive substance, blue dye, or both near the tumor. The surgeon then uses a probe to find the sentinel lymph node(s) containing the radioactive substance or looks for the lymph node(s) stained with dye. The surgeon then removes the sentinel node(s) to check for the presence of cancer cells.

### **sentinel lymph node mapping**

The use of dyes and radioactive substances to identify the first lymph node to which cancer is likely to spread from the primary tumor. Cancer cells may appear first in the sentinel node before spreading to other lymph nodes and other places in the body.



### **seocalcitol**

A substance that is being studied as a treatment for cancer. It belongs to the family of drugs called vitamin D analogs.

### **sepsis**

An extreme immune response to infection that can lead to tissue damage, organ failure, or death if not treated right away. Sepsis occurs when chemicals released by the body into the bloodstream to fight an infection trigger inflammation, blood clots, and leaky blood vessels throughout the body. This reduces blood flow and the amount of oxygen and nutrients to the body's tissues and organs. Bacterial infections are the most common cause of sepsis, but it can also be caused by other types of infections. Signs and symptoms may include fever or very low body temperature, chills, fast heart rate, rapid or trouble breathing, warm or sweaty skin, confusion, and severe pain. Sepsis can occur in anyone with an infection, but is more common in older adults, infants, pregnant women, or people who are in the hospital or who have a weakened immune system, chronic medical condition, or severe injury or illness.

### **septate**

An organ or structure that is divided into compartments.

### **septicemia**

Disease caused by the spread of bacteria and their toxins in the bloodstream. Also called blood poisoning and toxemia.

### **sequential AC/Taxol-Trastuzumab regimen**

An abbreviation for a chemotherapy combination used to treat breast cancer. It includes the drugs doxorubicin hydrochloride (Adriamycin) and cyclophosphamide, followed by treatment with paclitaxel (Taxol) and trastuzumab (Herceptin). Also called AC-T-T, AC-T-T regimen, and AC-TH regimen.

### **sequential treatment**

One treatment after the other.

### **seroconversion**

The production of antibodies (proteins) in the blood of a person who did not have the antibodies before. It occurs after vaccination or exposure to a virus or other substance. Testing for seroconversion can be used to look for the presence of an infection or disease or to see how well the body's immune system responds to a vaccine.

### **serology**

The examination of antibodies and other substances in the serum (clear liquid part of the blood). Serology tests are used to look for the presence of antibodies in the blood that show whether a person has been exposed to a virus or other infectious agent.

### **serology test**

A laboratory test that checks for the presence of antibodies or other substances in a blood sample. Antibodies are proteins made by the body's immune system in response to a foreign substance or microorganism, such as a virus. Serology tests look for certain antibodies to see whether a person has been exposed to or infected with a virus or other infectious agent. Sometimes antibodies are made against the body's own tissues. In that case, serology tests are used to look for those antibodies and help diagnose certain immune system disorders, such as

autoimmune disorders and immunodeficiency disorders. Serology tests are also used to determine a person's blood or tissue type.

### **seroma**

A mass or lump caused by a buildup of clear fluid in a tissue, organ, or body cavity. It usually goes away on its own but may need to be drained with a needle. It often occurs after breast surgery.

### **seronegative**

Describes a laboratory test result that shows that a substance the test is supposed to find, such as an antibody, is not present at all or is present in very small amounts. Antibodies are proteins made by the body's immune system in response to a foreign substance or microorganism, such as a virus. A seronegative test result usually means that a person has not been exposed to or infected with a virus or other infectious agent and has not made antibodies against that agent. Sometimes antibodies are made against the body's own tissues. In that case, a seronegative test result means that a person does not have the antibodies or other markers for a certain disease, such as an autoimmune disease. More testing may be needed to make sure a seronegative test result is correct.

### **seropositive**

Describes a laboratory test result that shows the presence of a specific marker, usually an antibody, in the blood. Antibodies are proteins made by the body's immune system in response to a foreign substance or microorganism, such as a virus. A seropositive test result usually means that a person has been exposed to or infected with a virus or other infectious agent and has made antibodies against it. Sometimes antibodies are made against the body's own tissues. In that case, a seropositive test result means that a person has antibodies or other markers for a certain disease, such as an autoimmune disease. More testing may be needed to make a diagnosis or to make sure a seropositive test result is correct.

### **seroprevalence**

The percentage of people in a population who have proteins called antibodies in their blood that show they have been exposed to a virus or other infectious agent. For example, studying the seroprevalence of antibodies to a specific virus can show how many people have been infected with that virus.

### **serosa**

The outer lining of organs and body cavities of the abdomen and chest, including the stomach. Also called serous membrane.

### **serotonin**

A substance that is found mostly in the digestive tract, central nervous system (brain and spinal cord), and platelets. Serotonin acts both as a neurotransmitter (a substance that nerves use to send messages to one another) and a vasoconstrictor (a substance that causes blood vessels to narrow). A low level of serotonin in the brain is thought to be a cause of depression. Also called 5-hydroxytryptamine.

### **serotonin-norepinephrine reuptake inhibitor**

A type of drug that is used to treat depression and some other conditions. Serotonin-norepinephrine reuptake inhibitors stop or delay substances called serotonin and norepinephrine from being reabsorbed in the brain, which leaves

more of them available for the brain to use. Raising serotonin and norepinephrine levels can help regulate mood and relieve depression and chronic pain. Serotonin-norepinephrine reuptake inhibitors include drugs such as duloxetine and venlafaxine. Also called SNRI.

### **serotype**

Describes a way of grouping cells or microorganisms, such as bacteria or viruses, based on the antigens or other molecules found on their surfaces. For example, human papillomaviruses (HPVs) are a group of many related viruses, and each virus in the group has its own serotype. The serotypes can cause the viruses to behave differently when they infect people. For example, some HPV serotypes can cause benign (not cancer) tissue growth, such as warts, while others can cause certain types of cancer.

### **serous**

Having to do with serum, the clear liquid part of blood.

### **serous membrane**

The outer lining of organs and body cavities of the abdomen and chest, including the stomach. Also called serosa.

### **serrated polyp**

A type of polyp (abnormal growth) that usually forms on the inner lining of the colon or rectum but can also form in the appendix. Serrated polyps have a saw-tooth appearance when looked at under a microscope. There are three types of serrated polyps: hyperplastic polyps (HPs), sessile (flat) serrated polyps (SSPs, also known as sessile serrated adenomas or SSAs), and traditional serrated adenomas (TSAs). HPs are usually small and rarely become cancer. They are the most common type of serrated polyp. SSPs and TSAs are larger than HPs and are more likely to become cancer if they are not removed.

### **sertraline**

A drug used to treat depression. It is a type of selective serotonin reuptake inhibitor (SSRI). Also called Zoloft.

### **serum**

The clear liquid part of the blood that remains after blood cells and clotting proteins have been removed.

### **serum albumin**

The main protein in blood plasma. Low levels of serum albumin occur in people with malnutrition, inflammation, and serious liver and kidney disease.

### **serum glutamate pyruvate transaminase**

An enzyme found in the liver and other tissues. A high level of serum glutamate pyruvate transaminase released into the blood may be a sign of liver damage, cancer, or other diseases. Also called alanine transferase and SGPT.

### **serum glutamic-oxaloacetic transaminase**

An enzyme found in the liver, heart, and other tissues. A high level of serum glutamic-oxaloacetic transaminase released into the blood may be a sign of liver or heart damage, cancer, or other diseases. Also called aspartate transaminase and SGOT.

### **serum tumor marker test**

A blood test that measures the amount of substances called tumor markers (or biomarkers). Tumor markers are released into the blood by tumor cells or by other cells in response to tumor cells. A high level of a tumor marker may be a sign of cancer.

### **sesquiterpene lactone**

A substance found in some plants. Sesquiterpene lactones may have anti-inflammatory and anticancer effects. Plants containing sesquiterpene lactones have been used in some cultures to treat certain medical problems.

### **sestamibi breast imaging**

A type of breast imaging test that is used to detect cancer cells in the breasts of some women who have had abnormal mammograms, or who have dense breast tissue. It is not used for screening or in place of a mammogram. In this test, a woman receives an injection of a small amount of a radioactive substance called technetium 99, which is taken up by cancer cells, and a gamma camera is used to take pictures of the breasts. Also called Miraluma test and scintimammography.

### **sestamibi scan**

An imaging test used to find overactive parathyroid glands (four pea-sized glands found on the thyroid) and breast cancer cells, and to diagnose heart disease. The patient receives an injection of a small amount of a radioactive substance called technetium which is bound to another substance called sestamibi. This substance collects in overactive glands, cancer cells, heart muscle, or other tissues and a picture is taken by a gamma camera (a special camera that detects radioactivity).

### **seventh cranial nerve**

A nerve that runs from the brainstem, through openings in the skull, to the face and tongue. The seventh cranial nerve sends information between the brain and the muscles used in facial expression (such as smiling and frowning), some muscles in the jaw, and the muscles of a small bone in the middle ear. It also sends information to the front part of the tongue for the sense of taste and to the outer parts of the ear. The seventh cranial nerve also stimulates the glands that make tears and saliva. It is a type of cranial nerve. There are two facial nerves, one on each side of the face. Also called facial nerve.

### **severe acute respiratory syndrome coronavirus 2**

The virus that causes a respiratory disease called coronavirus disease 19 (COVID-19). Severe acute respiratory syndrome coronavirus 2 is a member of a large family of viruses called coronaviruses. These viruses can infect people and some animals. Severe acute respiratory syndrome coronavirus 2 was first known to infect people in 2019. The virus is thought to spread from person to person through droplets released when an infected person coughs, sneezes, or talks. It may also be spread by touching a surface with the virus on it and then touching one's mouth, nose, or eyes, but this is less common. Research is being done to treat COVID-19 and to prevent infection with severe acute respiratory syndrome coronavirus 2. Also called SARS-CoV-2.

### **severe combined immunodeficiency disease**

A rare, inherited disease that is marked by a lack of B lymphocytes (white blood cells that make antibodies and help fight infections) and a lack of T lymphocytes (white blood cells that attack virus-infected cells, foreign cells, and cancer cells).

Patients with this disease have a high risk of developing viral, bacterial, and fungal infections. Also called SCID.

### **severe myelosuppression**

A severe form of myelosuppression. Myelosuppression is a condition in which bone marrow activity is decreased, resulting in fewer red blood cells, white blood cells, and platelets. It is a side effect of some cancer treatments. Also called myeloablation.

### **sex cell**

An egg cell in females or sperm cell in males. Each mature sex cell contains 23 chromosomes. When an egg combines with sperm, the fertilized egg normally contains a total of 46 chromosomes. Also called gamete and reproductive cell.

### **sex cord tumor**

A rare type of cancer that forms in the tissues that support the ovaries or testes. These tumors may release sex hormones. Sex cord tumors include granulosa cell, Sertoli cell, and Leydig cell tumors. Also called sex cord-gonadal stromal tumor and sex cord-stromal tumor.

### **sex cord-gonadal stromal tumor**

A rare type of cancer that forms in the tissues that support the ovaries or testes. These tumors may release sex hormones. Sex cord-gonadal stromal tumors include granulosa cell, Sertoli cell, and Leydig cell tumors. Also called sex cord tumor and sex cord-stromal tumor.

### **sex cord-stromal tumor**

A rare type of cancer that forms in the tissues that support the ovaries or testes. These tumors may release sex hormones. Sex cord-stromal tumors include granulosa cell, Sertoli cell, and Leydig cell tumors. Also called sex cord tumor and sex cord-gonadal stromal tumor.

### **sex drive**

The need for sex. Also called sexual drive.

### **sexual drive**

The need for sex. Also called sex drive.

### **sexuality**

A person's behaviors, desires, and attitudes related to sex and physical intimacy with others.

### **sexually transmitted disease**

A disease caused by infection with certain bacteria, viruses, or other microorganisms that can be passed from one person to another through blood, semen, vaginal fluids, or other body fluids, during oral, anal, or genital sex with an infected partner. These diseases can also be spread through sharing needles, blood transfusions, breastfeeding, or from an infected mother to an infant during pregnancy and childbirth. Symptoms of sexually transmitted diseases may include sores, blisters, or bumps on the genitals or in the mouth or rectal area, pain or burning during urination or sex, unusual drainage or bleeding from the penis or vagina, itching and redness in the genital or anal area, pain in the lower abdomen, fever, and sore, swollen lymph nodes, especially in the groin. There are many types of sexually transmitted diseases, including human papillomavirus (HPV), HIV, genital herpes, chlamydia, gonorrhea, and syphilis. If not treated,

some sexually transmitted diseases can lead to long-term health problems. Also called sexually transmitted infection, STD, and STI.

### **sexually transmitted infection**

A disease caused by infection with certain bacteria, viruses, or other microorganisms that can be passed from one person to another through blood, semen, vaginal fluids, or other body fluids, during oral, anal, or genital sex with an infected partner. These diseases can also be spread through sharing needles, blood transfusions, breastfeeding, or from an infected mother to an infant during pregnancy and childbirth. Symptoms of sexually transmitted infections may include sores, blisters, or bumps on the genitals or in the mouth or rectal area, pain or burning during urination or sex, unusual drainage or bleeding from the penis or vagina, itching and redness in the genital or anal area, pain in the lower abdomen, fever, and sore, swollen lymph nodes, especially in the groin. There are many types of sexually transmitted infections, including human papillomavirus (HPV), HIV, genital herpes, chlamydia, gonorrhea, and syphilis. If not treated, some sexually transmitted infections can lead to long-term health problems. Also called sexually transmitted disease, STD, and STI.

### **sham therapy**

An inactive procedure that is designed to mimic as closely as possible the active procedure being studied in a clinical trial. For example, in sham acupuncture, needles that look and feel like the needles used in active acupuncture therapy are used except the needles are not actually inserted into the skin.

### **shared decision making**

In medicine, a process in which both the patient and health care professional work together to decide the best plan of care for the patient. When making a shared decision, the patient's values, goals, and concerns are considered. Shared decision making helps patients learn more about their health condition, the different testing and treatment options that may be available, and the possible risks and benefits of each option. It is often used when important medical decisions need to be made, such as about having a genetic test or cancer screening test, having major surgery, or taking a medicine over a long time.

### **shave biopsy**

A procedure in which a skin abnormality and a thin layer of surrounding skin are removed with a small blade for examination under a microscope. Stitches are not needed with this procedure.

### **sheep sorrel**

A plant that has been used in some cultures to treat certain medical problems. It may have anticancer effects. The scientific name is *Rumex acetosella*. Also called dock and sorrel.

### **shiitake mushroom**

A dark oriental mushroom widely used as a food. Several anticancer substances have been found in shiitake mushrooms, including lentinan, which has been studied in Japan as a treatment for stomach and colorectal cancer. The scientific name is *Lentinus edodes*.

### **shinbone**

The larger of two bones between the knee and ankle. Also called tibia.



## **shingles**

A common condition that occurs when the virus that causes chickenpox is reactivated in the body. After having chickenpox, the virus stays inactive in the body, usually in the nerves along the spinal cord or at the base of the skull. The virus can become active again many years later and cause shingles. Shingles is marked by a painful rash that usually appears as small clusters of blisters. The blisters often form a band across the skin on one side of the body, especially on the chest, back, waist, or face. The pain in the affected area can last for many weeks or months after the rash disappears. Other symptoms may include fever, chills, headache, fatigue, and upset stomach. Shingles is most common in older adults and in those who have a weakened immune system. It cannot be passed from person to person, but those who have never had chickenpox or the chickenpox vaccine can develop chickenpox if they come in contact with a person who has shingles. Vaccines are available to prevent shingles. Also called herpes zoster.

## **short-term side effect**

A problem that is caused by treatment of a disease but usually goes away after treatment ends. Short-term side effects of cancer treatment include nausea, vomiting, diarrhea, hair loss, fatigue, and mouth sores.

## **shoulder blade**

One of a pair of triangular bones at the back of the shoulder. The shoulder blade connects the collarbone with the upper arm bone. Also called scapula.

## **shunt**

In medicine, a passage that is made to allow blood or other fluid to move from one part of the body to another. For example, a surgeon may implant a tube to drain cerebrospinal fluid from the brain to the abdomen. A surgeon may also change normal blood flow by making a passage that leads from one blood vessel to another.

## **sialic acid**

Any of a group of simple sugar molecules.

## **sialyl Tn-KLH**

A vaccine composed of a substance that enhances immunity plus an antigen found on some tumors of the colon, breast, lung, ovary, pancreas, and stomach.

## **sibling**

A person's brother or sister who has the same parents.

## **sickle cell anemia**

An inherited disease in which the red blood cells have an abnormal crescent shape, block small blood vessels, and do not last as long as normal red blood cells. Sickle cell anemia is caused by a mutation (change) in one of the genes for hemoglobin (the substance inside red blood cells that binds to oxygen and carries it from the lungs to the tissues). It is most common in people of West and Central African descent. Also called sickle cell disease.

## **sickle cell disease**

An inherited disease in which the red blood cells have an abnormal crescent shape, block small blood vessels, and do not last as long as normal red blood cells. Sickle cell disease is caused by a mutation (change) in one of the genes for hemoglobin (the substance inside red blood cells that binds to oxygen and

carries it from the lungs to the tissues). It is most common in people of West and Central African descent. Also called sickle cell anemia.

### **side effect**

An effect of a drug or other type of treatment that is in addition to or beyond its desired effect. Side effects can be harmful or beneficial, and most go away on their own over time. Others may last past treatment or appear long after treatment has ended. Some common side effects of cancer treatment are nausea, vomiting, fatigue, pain, decreased blood cell counts, hair loss, and mouth sores.

### **side-to-end coloanal anastomosis**

A surgical procedure in which the side of the colon is attached to the anus after the rectum has been removed. A section of the colon about 2 inches long is formed into a mini-pouch in order to replace the function of the rectum and store stool until it can be eliminated. This procedure is similar to the J-pouch coloanal anastomosis but a much smaller pouch is formed.

### **sideropenic dysphagia**

A disorder marked by anemia caused by iron deficiency, and a web-like growth of membranes in the throat that makes swallowing difficult. Having sideropenic dysphagia may increase the risk of developing esophageal cancer. Also called Paterson-Kelly syndrome and Plummer-Vinson syndrome.

### **sidestream smoke**

Smoke that comes from the lighted end of a burning tobacco product, such as a cigarette, pipe, or cigar. Sidestream smoke can be a form of secondhand smoke. It contains nicotine and many harmful, cancer-causing chemicals. Inhaling sidestream smoke increases the risk of lung cancer and may increase the risk of other types of cancer. Inhaling it also increases the risk of other health problems, such as heart disease and lung disease.

### **sigmoid colon**

The S-shaped section of the colon that connects to the rectum.

### **sigmoidoscope**

A thin, tube-like instrument used to examine the inside of the colon. A sigmoidoscope has a light and a lens for viewing and may have a tool to remove tissue.

### **sigmoidoscopy**

Examination of the lower colon using a sigmoidoscope, inserted into the rectum. A sigmoidoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. Also called proctosigmoidoscopy.

### **sign**

In medicine, a sign is something found during a physical exam or as a result of a laboratory or imaging test that shows that a person may have a condition or disease. Signs can be observed by a health care provider or other person. Some examples of signs are fever, swelling, skin rash, high blood pressure, and high blood glucose.

### **signal transduction**

The process by which a cell responds to substances outside the cell through signaling molecules found on the surface of and inside the cell. Most molecules that lead to signal transduction are chemical substances, such as hormones, neurotransmitters, and growth factors, that bind to a specific protein receptor (signaling molecule) on or in a cell. The signals are then passed from one molecule to another inside the cell, which results in a specific cell response, such as cell division or cell death. Signal transduction is important for cells to grow and work normally. Cells that have abnormal signaling molecules may become cancer cells. Also called cell signaling.

### **signal transduction inhibitor**

A substance that blocks signals passed from one molecule to another inside a cell. Blocking these signals can affect many functions of the cell, including cell division and cell death, and may kill cancer cells. Certain signal transduction inhibitors are being studied in the treatment of cancer.

### **signaling pathway**

Describes a series of chemical reactions in which a group of molecules in a cell work together to control a cell function, such as cell division or cell death. A cell receives signals from its environment when a molecule, such as a hormone or growth factor, binds to a specific protein receptor on or in the cell. After the first molecule in the pathway receives a signal, it activates another molecule. This process is repeated through the entire signaling pathway until the last molecule is activated and the cell function is carried out. Abnormal activation of signaling pathways may lead to diseases, such as cancer. Drugs are being developed to target specific molecules involved in these pathways. These drugs may help keep cancer cells from growing.

### **signature molecule**

A biological molecule found in blood, other body fluids, or tissues that is a sign of a normal or abnormal process, or of a condition or disease. A signature molecule may be used to see how well the body responds to a treatment for a disease or condition. Also called biomarker and molecular marker.

### **signet ring cell carcinoma**

A highly malignant type of cancer typically found in glandular cells that line the digestive organs. The cells resemble signet rings when examined under a microscope.

### **significant**

In statistics, describes a mathematical measure of difference between groups. The difference is said to be significant if it is greater than what might be expected to happen by chance alone. Also called statistically significant.

### **sildenafil**

A drug used to treat erectile dysfunction. Sildenafil relaxes the smooth muscle of the penis to allow increased blood flow and erection. It is a type of phosphodiesterase inhibitor. Also called Viagra.

### **silicon phthalocyanine 4**

A substance being studied in the treatment of cancer. When absorbed by cancer cells and exposed to light, it becomes active and kills the cancer cells. It is a type of photodynamic therapy agent.

### **silicone**

A synthetic gel that is used as an outer coating on breast implants and as the inside filling of some implants.

### **siltuximab**

A drug used to treat a rare condition called multicentric Castleman disease in patients who do not have HIV or human herpesvirus 8. It is also being studied in the treatment of some types of cancer and other conditions. Siltuximab binds to a protein called interleukin-6 (IL-6), which is made by some white blood cells and other cells in the body. Siltuximab may help reduce inflammation and stop the growth of cancer cells or abnormal blood cells. It is a type of monoclonal antibody. Also called anti-IL-6 chimeric monoclonal antibody, cCLB8, CNTO 328, and Sylvant.

### **silymarin**

A substance obtained from milk thistle seeds that is being studied in the prevention of liver damage caused by certain cancer treatments.

### **simian virus 40**

A virus that infects some types of monkeys. It may also infect humans, and was found in some polio vaccines tested in the early 1960s. Although the virus has been shown to cause cancer in laboratory animals, there is no evidence that it causes cancer in people. Also called SV40.

### **simple fibroadenoma**

A type of benign (not cancer) tumor that usually forms in the breast and is made up of fibrous (connective) tissue and glandular tissue. When viewed under a microscope, all the cells in a simple fibroadenoma look the same and have clear, defined edges. Simple fibroadenomas are more common in younger women and do not increase the risk of breast cancer.

### **simple hysterectomy**

Surgery to remove the uterus and the cervix. The ovaries and fallopian tubes may also be removed. A simple hysterectomy may be done through the vagina (with no incisions in the abdomen) or through an incision (cut) in the abdomen. Also called complete hysterectomy and total hysterectomy.

### **simple mastectomy**

Surgery to remove the whole breast, which may include the nipple, areola (the dark-colored skin around the nipple), and skin over the breast. Some of the lymph nodes under the arm may also be removed to check for cancer. Also called total mastectomy.

### **simple nephrectomy**

Surgery to remove one kidney.

### **simple vulvectomy**

Surgery to remove the entire vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina).

### **simulation**

In cancer treatment, a process used to plan radiation therapy so that the target area is precisely located and marked.

### **simvastatin**

A drug used to lower the amount of cholesterol and other harmful substances in the blood, such as triglycerides. It is also being studied in the treatment of cancer and other conditions. Simvastatin blocks an enzyme that helps make cholesterol in the body. It is a type of HMG-CoA reductase inhibitor and a type of statin. Also called Zocor.

### **single nucleotide polymorphism**

The most common type of change in DNA (molecules inside cells that carry genetic information). Single nucleotide polymorphisms occur when a single nucleotide (building block of DNA) is replaced with another. These changes may cause disease, and may affect how a person reacts to bacteria, viruses, drugs, and other substances. Also called SNP.

### **single-blind study**

A type of clinical trial in which only the researcher doing the study knows which treatment or intervention the participant is receiving until the trial is over. A single-blind study makes results of the study less likely to be biased. This means that the results are less likely to be affected by factors that are not related to the treatment or intervention being tested.

### **single-photon emission computed tomography**

A special type of computed tomography (CT) scan in which a small amount of a radioactive drug is injected into a vein and a scanner is used to make detailed images of areas inside the body where the radioactive material is taken up by the cells. Single-photon emission computed tomography can give information about blood flow to tissues and chemical reactions (metabolism) in the body. Also called SPECT.

### **sinus**

A cavity, space, or channel in the body. Examples include hollow spaces in the bones at the front of the skull, and channels for blood and lymph. Sinuses may also be found in the heart, brain, kidney, and other organs.

### **sinusitis**

A condition in which the tissue lining the sinuses (small hollow spaces in the bones around the nose) becomes swollen or inflamed. The sinuses are lined with cells that make mucous. Sinusitis can occur when too much mucous builds up in the sinuses or their openings become blocked. It is usually caused by a viral, bacterial, or fungal infection. Signs and symptoms include headache, facial pain or pressure, stuffy or runny nose, sore throat, fever, cough, fatigue, bad breath, and reduced sense of smell and taste. Having certain conditions, such as allergies, nasal polyps (growths) or other nasal problems, a weak immune system, or certain medical conditions (such as cystic fibrosis), may increase the risk of developing sinusitis. Smoking or being exposed to secondhand smoke may also increase the risk of sinusitis.

### **sinusoidal obstruction syndrome**

A condition in which some of the veins in the liver are blocked. This causes a decrease in blood flow inside the liver and may lead to liver damage. Signs and symptoms include weight gain, yellowing of the skin and whites of the eyes, dark-colored urine, and increased liver size. It may occur at some point in time after radiation therapy to the liver and bile ducts or after high-dose anticancer drugs were given before a stem cell transplant. Also called hepatic veno-occlusive disease.

### **siplizumab**

A substance being studied in the treatment of certain types of T-cell lymphoma. It is also being studied in the prevention of organ or tissue rejection after a kidney and/or bone marrow transplant. Siplizumab binds to a protein called CD2, which is found on some types of immune cells and cancer cells. This may help suppress the body's immune response and it may help kill cancer cells. Siplizumab is a type of monoclonal antibody. Also called MEDI-507.

### **sipuleucel-T**

A vaccine used to treat prostate cancer that has spread to other parts of the body. It is used in patients who have few or no symptoms and whose cancer is castration resistant (has not responded to treatments that lower testosterone levels). Sipuleucel-T is made from a patient's immune cells that have been treated in the laboratory with GM-CSF (a type of growth factor) and a protein found on prostate cancer cells. Sipuleucel-T may help the immune system kill prostate cancer cells. It is a type of autologous cellular immunotherapy and a type of dendritic cell vaccine. Also called APC 8015 and Provenge.

### **sirolimus**

A drug used to keep the body from rejecting organ and bone marrow transplants. Sirolimus blocks certain white blood cells that can reject foreign tissues and organs. It also blocks a protein that is involved in cell division. It is a type of antibiotic, a type of immunosuppressant, and a type of serine/threonine kinase inhibitor. Sirolimus was previously called rapamycin. Also called Rapamune.

### **sirolimus protein-bound particles**

A form of the drug sirolimus that is used to treat adults with malignant perivascular epithelioid cell tumor that has spread or cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Sirolimus protein-bound particles may have fewer side effects and work better than other forms of sirolimus. It binds to a protein called mTOR, which may help keep tumor cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Sirolimus protein-bound particles is a type of kinase inhibitor, a type of angiogenesis inhibitor, and a type of immunosuppressant. Also called Fyarro.

### **skeletal**

Having to do with the skeleton (bones of the body).

### **skeleton**

The framework that supports the soft tissues of vertebrate animals and protects many of their internal organs. The skeletons of vertebrates are made of bone and/or cartilage.

### **skin cancer**

Cancer that forms in the tissues of the skin. There are several types of skin cancer. Skin cancer that forms in melanocytes (skin cells that make pigment) is called melanoma. Skin cancer that forms in the lower part of the epidermis (the outer layer of the skin) is called basal cell carcinoma. Skin cancer that forms in squamous cells (flat cells that form the surface of the skin) is called squamous cell carcinoma. Skin cancer that forms in neuroendocrine cells (cells that release hormones in response to signals from the nervous system) is called neuroendocrine carcinoma of the skin. Most skin cancers form in older people on parts of the body exposed to the sun or in people who have weakened immune systems.



**skin conduction**

A change in the heat and electricity passed through the skin by nerves and sweat. Skin conduction increases in certain emotional states and during hot flashes that happen with menopause. Also called electrodermal response and galvanic skin response.

**skin graft**

Skin that is moved from one part of the body to another.

**skin patch**

A bandage-like patch that releases medicine into the body through the skin. The medicine enters the blood slowly and steadily.

**skin stimulation**

The process of applying pressure, friction, temperature change, or chemical substances to the skin to lessen or block a feeling of pain.

**skin tag**

A common benign (not cancer) skin growth that appears as a small, raised, brown or skin-colored bump that may have a short, narrow stalk. Skin tags usually occur in areas where the skin folds, such as the neck, armpit, inner thigh, and eyelid. They are usually painless and do not grow or change but may become painful if rubbed or scratched. They most often occur in older adults and in people who are overweight or have diabetes. Also called acrochordon.

**skin test**

A test for an immune response to a compound by placing it on or under the skin.

**skin vesicle**

A fluid-filled sac in the outer layer of skin. It can be caused by rubbing, heat, or diseases of the skin. Also called blister.

**skinning vulvectomy**

Surgery to remove the top layer of skin of the vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina). A skin graft may be used to replace the skin that was removed.

**skull**

The bones that form the head. The skull is made up of cranial bones (bones that surround and protect the brain) and facial bones (bones that form the eye sockets, nose, cheeks, jaw, and other parts of the face). An opening at the base of the skull is where the spinal cord connects to the brain. Also called cranium.

**sleep apnea**

A sleep disorder that is marked by pauses in breathing of 10 seconds or more during sleep, and causes unrestful sleep. Symptoms include loud or abnormal snoring, daytime sleepiness, irritability, and depression.

**sleep disorder**

A disturbance of normal sleep patterns. There are a number of sleep disorders that range from trouble falling asleep, to nightmares, sleepwalking, and sleep apnea (problems with breathing that cause loud snoring). Poor sleep may also be caused by diseases such as heart disease, lung disease, or nerve disorders.

### **sleep stage**

One of four stages of the sleep cycle based on the type of brain activity that occurs during the stage. Stages one, two, and three occur during non-rapid eye movement (non-REM) sleep, which is when a person first falls asleep and then moves from a light sleep into a deep sleep. Stage four occurs during REM sleep, which is when the eyes move rapidly while closed and when most dreams occur. During normal sleep, a person goes through four to five sleep cycles that last about 90 minutes each and include both non-REM sleep and REM sleep.

### **sleeve lobectomy**

Surgery to remove a lung tumor in a lobe of the lung and a part of the main bronchus (airway). The ends of the bronchus are rejoined and any remaining lobes are reattached to the bronchus. This surgery is done to save part of the lung. Also called sleeve resection.

### **sleeve resection**

Surgery to remove a lung tumor in a lobe of the lung and a part of the main bronchus (airway). The ends of the bronchus are rejoined and any remaining lobes are reattached to the bronchus. This surgery is done to save part of the lung. Also called sleeve lobectomy.

### **slippery elm**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called gray elm, Indian elm, red elm, sweet elm, *Ulmus fulva*, and *Ulmus rubra*.

### **slit-lamp biomicroscopy**

An eye exam using an instrument that combines a low-power microscope with a light source that makes a narrow beam of light. The instrument may be used to examine the retina, optic nerve, and other parts of the eye. Also called slit-lamp eye exam.

### **slit-lamp eye exam**

An eye exam using an instrument that combines a low-power microscope with a light source that makes a narrow beam of light. The instrument may be used to examine the retina, optic nerve, and other parts of the eye. Also called slit-lamp biomicroscopy.

### **small cell carcinoma**

A fast-growing type of cancer that usually occurs in the lungs but may also occur in many other parts of the body, such as the cervix, ovary, bladder, prostate, liver, pancreas, and stomach. These cancer cells usually look like small, oval-shaped oats when viewed under a microscope. Small cell carcinoma tends to spread quickly to other parts of the body and usually has a poor prognosis (chance of recovery). Also called oat cell cancer.

### **small cell lung cancer**

An aggressive (fast-growing) cancer that forms in tissues of the lung and can spread to other parts of the body. The cancer cells look small and oval-shaped when looked at under a microscope.

### **small intestine**

A long tube-like organ that connects the stomach and the large intestine. It is about 20 feet long and folds many times to fit inside the abdomen. The small intestine has three parts: the duodenum, jejunum, and ileum. It helps to further

digest food coming from the stomach. It absorbs nutrients (vitamins, minerals, carbohydrates, fats, proteins) and water from food so they can be used by the body. The small intestine is part of the digestive system.

### **small intestine cancer**

A rare cancer that forms in tissues of the small intestine (a long tube-like organ that connects the stomach to the large intestine). The most common type of small intestine cancer is adenocarcinoma (cancer that begins in cells that make and release mucus and other fluids). Other types of small intestine cancer include leiomyosarcoma (cancer that begins in the smooth muscle cells of the small intestine), gastrointestinal (GI) neuroendocrine tumor (a slow-growing type of cancer that begins in the lining of the GI tract), GI stromal tumor (a type of tumor that usually begins in cells in the wall of the GI tract), and lymphoma (cancer that begins in immune system cells).

### **small lymphocytic lymphoma**

An indolent (slow-growing) type of lymphoma in which too many immature lymphocytes (white blood cells) are found mostly in the lymph nodes. This causes the lymph nodes to become larger than normal. Sometimes cancer cells are found in the blood and bone marrow, and the disease is called chronic lymphocytic leukemia. The disease is most often seen in people older than 50 years. Small lymphocytic lymphoma is a type of non-Hodgkin Lymphoma. Also called SLL and well-differentiated lymphocytic lymphoma.

### **small-molecule drug**

A drug that can enter cells easily because it has a low molecular weight. Once inside the cells, it can affect other molecules, such as proteins, and may cause cancer cells to die. This is different from drugs that have a large molecular weight, which keeps them from getting inside cells easily. Many targeted therapies are small-molecule drugs.

### **smokeless tobacco**

A type of tobacco that is not smoked or burned. It may be used as chewing tobacco or moist snuff, or inhaled through the nose as dry snuff. Smokeless tobacco contains nicotine and many harmful, cancer-causing chemicals. Using it can lead to nicotine addiction and can cause cancers of the mouth, esophagus, and pancreas. It may also cause heart disease, gum disease, and other health problems.

### **smoking cessation**

To quit smoking. Smoking cessation lowers the risk of cancer and other serious health problems. Counseling, behavior therapy, medicines, and nicotine-containing products, such as nicotine patches, gum, lozenges, inhalers, and nasal sprays, may be used to help a person quit smoking.

### **smoldering myeloma**

A very slow-growing type of myeloma in which abnormal plasma cells (a type of white blood cell) make too much of a single type of monoclonal antibody (a protein). This protein builds up in the blood or is passed in the urine. Patients with smoldering myeloma usually have no symptoms, but need to be checked often for signs of progression to fully developed multiple myeloma.

### **snuff tobacco**

A type of smokeless tobacco that is made of finely ground or shredded tobacco leaves. It may have different scents and flavors and may be moist or dry. Moist

snuff tobacco is placed in the mouth, usually between the cheek and gum or behind the upper or lower lip. Dry snuff tobacco is inhaled through the nose. Snuff tobacco contains nicotine and many harmful, cancer-causing chemicals. Using it can lead to nicotine addiction and can cause cancers of the mouth, esophagus, and pancreas. Snuff tobacco use may also cause gum disease, heart disease, stroke, and other health problems. Using snuff tobacco is also called “dipping.”

### **soblidotin**

A substance being studied in the treatment of cancer. It is a type of tubulin inhibitor. Also called TZT-1027.

### **social determinants of health**

The social, economic, and physical conditions in the places where people are born and where they live, learn, work, play, and get older that can affect their health, well-being, and quality of life. Social determinants of health include factors such as education level, income, employment, housing, transportation, and access to healthy food, clean air and water, and health care services. Social determinants of health have an important effect on health outcomes, especially in certain groups of people. For example, people who cannot afford healthy food or who do not live in a safe area for exercise are more likely to have a poor diet, be physically inactive, and have obesity. This can increase their risk of developing certain diseases, such as cancer. Also called SDOH.

### **social service**

A community resource that helps people in need. Services may include help getting to and from medical appointments, home delivery of medication and meals, in-home nursing care, help paying medical costs not covered by insurance, loaning medical equipment, and housekeeping help.

### **social support**

A network of family, friends, neighbors, and community members that is available in times of need to give psychological, physical, and financial help.

### **social worker**

A professional trained to talk with people and their families about emotional or physical needs, and to find them support services.

### **socioeconomic status**

A way of describing people based on their education, income, and type of job. Socioeconomic status is usually described as low, medium, and high. People with a lower socioeconomic status usually have less access to financial, educational, social, and health resources than those with a higher socioeconomic status. As a result, they are more likely to be in poor health and have chronic health conditions and disabilities. Also called SES.

### **sodium**

A mineral needed by the body to keep body fluids in balance. Sodium is found in table salt and in many processed foods. Too much sodium can cause the body to retain water.

### **sodium borocaptate**

A substance used in a type of radiation therapy called boron neutron capture therapy. Sodium borocaptate is injected into a vein and becomes concentrated in tumor cells. The patient then receives radiation treatment with atomic particles

called neutrons. The neutrons react with the boron in sodium borocaptate and make radioactive particles that kill the tumor cells without harming normal cells. Also called BSH.

### **sodium ferric gluconate**

A form of the mineral iron that is used to treat anemia caused by low amounts of iron in the blood. Anemia is a condition in which the number of red blood cells is below normal. Sodium ferric gluconate is a type of hematinic and a dietary supplement. Also called Ferrlecit.

### **sodium salicylate**

A drug that is a type of nonsteroidal anti-inflammatory drug. Sodium salicylate may be tolerated by people who are sensitive to aspirin.

### **sodium stibogluconate**

A substance being studied in the treatment of certain solid tumors, lymphoma, and myeloma. Sodium stibogluconate may block enzymes needed for cancer growth. It is a type of pentavalent antimonial. Also called SSG.

### **sodium sulfite**

A chemical used in photography, paper making, water treatment, and for other purposes.

### **sodium thiosulfate anhydrous**

A drug used to reduce the risk of hearing loss in children aged 1 month and older who are receiving cisplatin (a type of anticancer drug) for solid tumors that have not spread to other parts of the body. It is also being studied in the prevention and treatment of other conditions. Sodium thiosulfate anhydrous is a type of chemoprotective agent. Also called Pedmark.

### **soft diet**

A diet consisting of bland foods that are softened by cooking, mashing, pureeing, or blending.

### **soft palate**

The back, muscular (not bony) part of the roof of the mouth.

### **soft tissue**

Refers to muscle, fat, fibrous tissue, blood vessels, or other supporting tissue of the body.

### **soft tissue sarcoma**

A cancer that begins in the muscle, fat, fibrous tissue, blood vessels, or other supporting tissue of the body.

### **solar keratosis**

A thick, scaly patch of skin that may become cancer. It usually forms on areas exposed to the sun, such as the face, scalp, back of the hands, or chest. It is most common in people with fair skin. Also called actinic keratosis and senile keratosis.

### **solid tumor**

An abnormal mass of tissue that usually does not contain cysts or liquid areas. Solid tumors may be benign (not cancer), or malignant (cancer). Different types of solid tumors are named for the type of cells that form them. Examples of solid

tumors are sarcomas, carcinomas, and lymphomas. Leukemias (cancers of the blood) generally do not form solid tumors.

**soluble**

Able to be dissolved in a liquid.

**solvent**

A liquid that is able to dissolve a solid.

**somatic**

Having to do with the body.

**somatic cell**

Any of the body cells except the reproductive (germ) cells.

**somatic mutation**

An alteration in DNA that occurs after conception. Somatic mutations can occur in any of the cells of the body except the germ cells (sperm and egg) and therefore are not passed on to children. These alterations can (but do not always) cause cancer or other diseases. Also called somatic variant.

**somatic variant**

An alteration in DNA that occurs after conception. Somatic variants can occur in any of the cells of the body except the germ cells (sperm and egg) and therefore are not passed on to children. These alterations can (but do not always) cause cancer or other diseases. Also called somatic mutation.

**somatomedin**

A protein made by the body that stimulates the growth of many types of cells. Somatomedin is similar to insulin (a hormone made in the pancreas). There are two forms of somatomedin called IGF-1 and IGF-2. Higher than normal levels of IGF-1 may increase the risk of several types of cancer. Somatomedin is a type of growth factor and a type of cytokine. Also called IGF and insulin-like growth factor.

**somatostatin receptor**

A protein on the surface of cells that binds to a hormone called somatostatin, which helps control other hormones in the body. Somatostatin receptors are found on many different types of cells, and they may also be found in higher than normal amounts on some types of cancer cells. Knowing the amount of somatostatin receptor in tumor tissue may help diagnose cancer and plan treatment.

**somatostatin receptor scintigraphy**

A type of radionuclide scan used to find carcinoid and other types of tumors. Radioactive octreotide, a drug similar to somatostatin, is injected into a vein and travels through the bloodstream. The radioactive octreotide attaches to tumor cells that have receptors for somatostatin. A radiation-measuring device detects the radioactive octreotide, and makes pictures showing where the tumor cells are in the body. Also called octreotide scan and SRS.

**somatotropin**

A protein made by the pituitary gland that helps control body growth and the use of glucose and fat in the body. Also called growth hormone.



### **somnolence syndrome**

Periods of drowsiness, lethargy, loss of appetite, and irritability in children following radiation therapy treatments to the head.

### **sonidegib phosphate**

A drug used to treat locally advanced basal cell carcinoma (BCC) that has come back after surgery or radiation therapy. It is also used in patients who cannot be treated with surgery or radiation therapy. Sonidegib phosphate is also being studied in the treatment of other types of cancer. Sonidegib phosphate blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type of hedgehog signaling pathway antagonist. Also called erismodegib, LDE225, and Odomzo.

### **sonogram**

A computer picture of areas inside the body created by high-energy sound waves. The sound waves are bounced off internal tissues or organs and make echoes. The echoes form a picture of the body tissues on a computer screen. A sonogram may be used to help diagnose disease, such as cancer. It may also be used during pregnancy to check the fetus (unborn baby) and during medical procedures, such as biopsies. Also called ultrasonogram.

### **sorafenib tosylate**

A drug used to treat certain types of hepatocellular carcinoma (a type of liver cancer), renal cell carcinoma (a type of kidney cancer), and thyroid cancer. It is also being studied in the treatment of other types of cancer. Sorafenib tosylate blocks certain proteins, which may help keep cancer cells from growing and dividing and may kill them. It may also prevent the growth of new blood vessels that tumors need to grow. Sorafenib tosylate is a type of kinase inhibitor and a type of antiangiogenesis agent. Also called BAY 43-9006 and Nexavar.

### **sorivudine**

An antiviral drug that is being studied as a treatment for herpesvirus. It belongs to the family of drugs called nucleic acid synthesis inhibitors.

### **sorrel**

A plant that has been used in some cultures to treat certain medical problems. It may have anticancer effects. The scientific name is *Rumex acetosella*. Also called dock and sheep sorrel.

### **sotorasib**

A drug used to treat adults with non-small cell lung cancer that has spread and has a certain mutation (change) in the KRAS gene. It is used in patients who have already received at least one other systemic therapy. It is also being studied in the treatment of other types of cancer. Sotorasib blocks a protein (KRAS p.G12C) made by the mutated KRAS gene, which may help keep cancer cells from growing and may kill them. It is a type of targeted therapy. Also called Lumakras.

### **soy**

A product from a plant of Asian origin that produces beans used in many food products. Soy contains isoflavones (estrogen-like substances) that are being studied for the prevention of cancer, hot flashes that occur with menopause, and osteoporosis (loss of bone density). Soy in the diet may lower cholesterol levels and reduce the risk of heart disease. Also called Glycine max, soya, and soybean.

**soya**

A product from a plant of Asian origin that produces beans used in many food products. Soya contains isoflavones (estrogen-like substances) that are being studied for the prevention of cancer, hot flashes that occur with menopause, and osteoporosis (loss of bone density). Soya in the diet may lower cholesterol levels and reduce the risk of heart disease. Also called Glycine max, soy, and soybean.

**soybean**

A product from a plant of Asian origin that produces beans used in many food products. Soybean contains isoflavones (estrogen-like substances) that are being studied for the prevention of cancer, hot flashes that occur with menopause, and osteoporosis (loss of bone density). Soybean in the diet may lower cholesterol levels and reduce the risk of heart disease. Also called Glycine max, soy, and soya.

**spasm**

A sudden contraction of a muscle or group of muscles, such as a cramp.

**spastic colon**

A disorder of the intestines commonly marked by abdominal pain, bloating, and changes in a person's bowel habits. This may include diarrhea or constipation, or both, with one occurring after the other. Also called IBS, irritable bowel syndrome, irritable colon, and mucus colitis.

**specialist**

In medicine, a doctor or other health care professional who is trained and licensed in a special area of practice. Examples of medical specialists include oncologists (cancer specialists) and hematologists (blood specialists).

**specific immune cell**

An immune cell such as a T or B lymphocyte that responds to a single, specific antigen.

**specificity**

When referring to a medical test, specificity refers to the percentage of people who test negative for a specific disease among a group of people who do not have the disease. No test is 100% specific because some people who do not have the disease will test positive for it (false positive).

**spectroscopy**

The study of the amount of light that is taken up, given off, or scattered (reflected) by an object. Spectroscopy breaks down light and measures different wavelengths of visible and non-visible light. In medicine, different types of spectroscopy are being used to study tissues and to help make a diagnosis.

**speculum**

An instrument used to widen an opening of the body to make it easier to look inside.

**speech pathologist**

A specialist who evaluates and treats people with communication and swallowing problems. Also called speech therapist.

**speech therapist**

A specialist who evaluates and treats people with communication and swallowing problems. Also called speech pathologist.

**sperm**

The male reproductive cell, formed in the testicle. A sperm unites with an egg to form an embryo.

**sperm aspiration**

A procedure in which a sample of sperm cells is removed from the testicle or epididymis through a small needle attached to a syringe. The sperm is looked at under a microscope in the laboratory, where it may be used right away to fertilize eggs or frozen for future infertility treatment. Sperm aspiration may be useful for men who have fertility problems caused by a blockage that keeps sperm from being ejaculated. It may also be useful for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Sperm aspiration is a type of sperm retrieval method.

**sperm banking**

The process of freezing sperm and storing it for future use. Samples of semen are collected and checked under a microscope in the laboratory to count sperm cells and find out how healthy they are. The sperm cells are then frozen and stored. Sperm banking is often used for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Sperm banking is a type of fertility preservation. Also called sperm cryopreservation.

**sperm count**

A count of the number of sperm in a sample of semen. A sperm count may be used as a measure of fertility.

**sperm cryopreservation**

The process of freezing sperm and storing it for future use. Samples of semen are collected and checked under a microscope in the laboratory to count sperm cells and find out how healthy they are. The sperm cells are then frozen and stored. Sperm cryopreservation is often used for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Sperm cryopreservation is a type of fertility preservation. Also called sperm banking.

**sperm retrieval**

Removal of sperm from a man's testis or epididymis by a doctor using a fine needle or other instrument.

**spermatic cord**

A cord-like structure in the male reproductive system that contains nerves, blood and lymph vessels, and the vas deferens (a coiled tube that carries sperm out of the testicle). It runs from the abdomen to the testicle, and connects to the testicle in the scrotum (external sac). Also called testicular cord.

**spermicide**

A chemical substance that kills sperm and is used as a type of birth control. It is available over-the-counter (without a doctor's order) and comes in many different forms such as cream, gel, foam, and suppository. Spermicides can be used

alone or with another birth control method such as a condom or diaphragm. They do not protect against sexually transmitted diseases (STDs).

### **sphenoid bone**

A butterfly-shaped bone at the base of the skull, behind the nose. The sphenoid bone helps form the eye socket. It contains two large sinuses, which are hollow spaces lined with cells that make mucus to keep the inside of the nose from drying out.

### **sphenoid sinus**

A type of paranasal sinus (a hollow space in the bones around the nose). There are two large sphenoid sinuses in the sphenoid bone, which is behind the nose between the eyes. The sphenoid sinuses are lined with cells that make mucus to keep the nose from drying out.

### **sphincter**

A ring-shaped muscle that relaxes or tightens to open or close a passage or opening in the body. Examples are the anal sphincter (around the opening of the anus) and the pyloric sphincter (at the lower opening of the stomach).

### **spiculated mass**

A lump of tissue with spikes or points on the surface.

### **spinal anesthesia**

A temporary loss of feeling in the abdomen and/or the lower part of the body. Special drugs called anesthetics are injected into the fluid in the lower part of the spinal column to cause the loss of feeling. The patient stays awake during the procedure. It is a type of regional anesthesia. Also called SAB, spinal block, and subarachnoid block.

### **spinal block**

A temporary loss of feeling in the abdomen and/or the lower part of the body. Special drugs called anesthetics are injected into the fluid in the lower part of the spinal column to cause the loss of feeling. The patient stays awake during the procedure. It is a type of regional anesthesia. Also called SAB, spinal anesthesia, and subarachnoid block.

### **spinal canal**

The narrow, fluid-filled space in the spinal column (the bones, muscles, tendons, and other tissues that reach from the base of the skull to the tailbone). The spinal cord runs through the spinal canal.

### **spinal column**

The bones, muscles, tendons, and other tissues that reach from the base of the skull to the tailbone. The spinal column encloses the spinal cord and the fluid surrounding the spinal cord. Also called backbone, spine, and vertebral column.

### **spinal cord**

A column of nerve tissue that runs from the base of the skull down the center of the back. It is covered by three thin layers of protective tissue called membranes. The spinal cord and membranes are surrounded by the vertebrae (back bones). The spinal cord and the brain make up the central nervous system (CNS). Spinal cord nerves carry messages between the brain and the rest of the body.

### **spinal cord compression**

Pressure on the spinal cord that may be caused by a tumor, a spinal fracture, or other conditions. Spinal cord compression may cause pain, weakness, loss of feeling, paralysis, incontinence (inability to control urine or stool), or impotence (inability to have an erection of the penis).

### **spinal tap**

A procedure in which a thin, hollow needle is inserted into the lower part of the spine to collect a sample of cerebrospinal fluid (CSF). This is done by placing the needle between two bones in the spine and into the subarachnoid space (the fluid-filled space between the thin layers of tissue around the spinal cord). After the CSF sample is removed, it is checked under a microscope for signs of infection, inflammation, or diseases, such as cancer or certain nervous system conditions. A spinal tap may also be done to measure or reduce CSF pressure around the spinal cord and brain, to inject drugs, such as chemotherapy or anesthesia drugs, directly into the CSF, or to inject contrast dye for certain imaging tests. Also called LP and lumbar puncture.

### **spindle cell hemangioma**

A benign (not cancer) blood vessel tumor that forms on or under the skin. Spindle cell hemangiomas have cells called spindle cells that look long and slender under a microscope. These tumors are painful red-brown or bluish lesions that usually appear on the arms or legs. One or more lesions may form, and they can sometimes rupture (break open) and bleed. Spindle cell hemangiomas usually occur in young adults but can sometimes occur in children. They are a type of vascular tumor.

### **spindle cell sarcoma**

A type of sarcoma that contains spindle cells. Under a microscope, spindle cells look long and slender. Sarcomas are cancers that begin in muscle, fat, fibrous tissue, or other connective or supportive tissue in the body. Spindle cell sarcomas usually occur in adults.

### **spindle cell tumor**

A type of tumor that contains cells called spindle cells, based on their shape. Under a microscope, spindle cells look long and slender. Spindle cell tumors may be sarcomas or carcinomas.

### **spine**

The bones, muscles, tendons, and other tissues that reach from the base of the skull to the tailbone. The spine encloses the spinal cord and the fluid surrounding the spinal cord. Also called backbone, spinal column, and vertebral column.

### **spine cancer**

Cancer that begins in the spinal column (backbone) or spinal cord. The spinal column is made up of linked bones, called vertebrae. The spinal cord is a column of nerve tissue that runs from the base of the skull down the back. It is surrounded by three protective membranes, and is enclosed within the vertebrae. Many different types of cancer may form in the bones, tissues, fluid, or nerves of the spine.

### **spiral CT scan**

A procedure that uses a computer linked to an x-ray machine to make a series of detailed pictures of areas inside the body. The x-ray machine scans the body in a spiral path. This allows more images to be made in a shorter time than with older

CT methods. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly on the x-ray. Spiral CT scan also creates more detailed pictures and may be better at finding small abnormal areas inside the body. It may be used to help diagnose disease, plan treatment, or find out how well treatment is working. Also called helical computed tomography.

### **spirituality**

Having to do with deep, often religious, feelings and beliefs, including a person's sense of peace, purpose, connection to others, and beliefs about the meaning of life.

### **spit tobacco**

A type of smokeless tobacco made from cured tobacco leaves. It may be sweetened and flavored with licorice and other substances. It comes in the form of loose tobacco leaves, pellets or "bits" (leaf tobacco rolled into small pellets), plugs (leaf tobacco pressed and held together with some type of sweetener), or twists (leaf tobacco rolled into rope-like strands and twisted). It is placed in the mouth, usually between the cheek and lower lip, and may be chewed. Spit tobacco contains nicotine and many harmful, cancer-causing chemicals. Using it can lead to nicotine addiction and can cause cancers of the mouth, throat, esophagus, and pancreas. Spit tobacco use may also cause gum disease, heart disease, stroke, and other health problems. Also called chewing tobacco.

### **spleen**

An organ that is part of the lymphatic and blood systems. The spleen filters the blood to help destroy microorganisms and get rid of old or damaged red blood cells. It also makes lymphocytes (white blood cells) and stores blood cells. The spleen is located on the upper left side of the abdomen under the ribs and above the stomach.

### **splenectomy**

An operation to remove the spleen.

### **splenic**

Having to do with the spleen (an organ in the abdomen that makes immune cells, filters the blood, stores blood cells, and destroys old blood cells).

### **splenomegaly**

Enlarged spleen.

### **spontaneous abortion**

An unexpected loss of pregnancy before the 20th week of pregnancy. Most spontaneous abortions happen very early in pregnancy, often before a person even knows they are pregnant. Signs include vaginal spotting or bleeding, pain or cramping in the abdomen or lower back, and the passing of fluid or tissue from the vagina. Spontaneous abortions often occur because of genetic problems in the fetus. Maternal factors or conditions that could contribute to having a spontaneous abortion include problems with the uterus or cervix, infection, hormone problems, severe malnutrition, smoking, drinking alcohol, taking certain medicines, or exposure to radiation. Being older or having certain diseases, such as polycystic ovary syndrome, uncontrolled diabetes, congenital heart disease, thyroid or kidney disease, and immune system disorders, may also put a person at higher risk of having a spontaneous abortion. Also called miscarriage.



**sporadic cancer**

Cancer that occurs in people who do not have a family history of that cancer or an inherited change in their DNA that would increase their risk for that cancer.

**spotted thistle**

A plant whose leaves, stems, and flowers have been used in some cultures to treat certain medical problems. Spotted thistle may have anti-inflammatory and anticancer effects. The scientific name is *Cnicus benedictus*. Also called blessed thistle, cardin, holy thistle, and St. Benedict's thistle.

**sputum**

Mucus and other matter brought up from the lungs by coughing.

**sputum cytology**

Examination under a microscope of cells found in sputum (mucus and other matter brought up from the lungs by coughing). The test checks for abnormal cells, such as lung cancer cells.

**squalamine lactate**

A drug that belongs to the family of drugs called angiogenesis inhibitors. It prevents the growth of new blood vessels into a solid tumor.

**squamocolumnar junction**

The area around the opening of the cervix where the endocervix (inner part) and ectocervix (outer part) come together. This area contains both glandular cells (cells that make mucus) from the endocervix and squamous cells (thin, skin-like cells) from the ectocervix. Most abnormal cell changes and most cervical cancers begin in the squamous cells of the squamocolumnar junction. Also called transformation zone.

**squamous cell**

Flat cell that looks like a fish scale under a microscope. These cells are found in the tissues that form the surface of the skin, the passages of the respiratory and digestive tracts, and the lining of the hollow organs of the body (such as the bladder, kidney, and uterus, including the cervix).

**squamous cell carcinoma**

Cancer that begins in squamous cells. Squamous cells are thin, flat cells that look like fish scales, and are found in the tissue that forms the surface of the skin, the lining of the hollow organs of the body, and the lining of the respiratory and digestive tracts. Most cancers of the anus, cervix, head and neck, and vagina are squamous cell carcinomas. Also called epidermoid carcinoma.

**squamous cell carcinoma in situ**

A condition in which abnormal cells are found in the tissues that form the surface of the skin, the lining of the hollow organs of the body (such as the bladder and uterus), and the lining of the respiratory and digestive tracts. These abnormal cells may become cancer and spread into nearby normal tissue. Squamous cell carcinoma in situ occurs in the skin, anus, bladder, uterus, cervix, head and neck, lung, and vagina, and in other parts of the body. Also called stage 0 squamous cell carcinoma.

**squamous cell carcinoma of the head and neck**

Cancer of the head and neck that begins in squamous cells (thin, flat cells that form the surface of the skin, eyes, various internal organs, and the lining of

hollow organs and ducts of some glands). Squamous cell carcinoma of the head and neck includes cancers of the nasal cavity, sinuses, lips, mouth, salivary glands, throat, and larynx (voice box). Most head and neck cancers are squamous cell carcinomas.

### **squamous cell carcinoma of the skin**

Cancer that begins in cells that form the epidermis (outer layer of the skin). It usually occurs on areas of the skin that have been exposed to natural sunlight or artificial sunlight (such as from tanning beds) over long periods of time. These areas include the face, ears, lower lip, neck, arms, or back of the hands. It may also occur on areas of the skin that have been burned or exposed to chemicals or radiation. Squamous cell carcinoma of the skin may appear as a firm red bump, a scaly red patch, an open sore, or a wart that may crust or bleed easily. Squamous cell carcinoma of the skin that has not spread can usually be cured. Also called cutaneous squamous cell carcinoma and squamous cell skin cancer.

### **squamous cell skin cancer**

Cancer that begins in cells that form the epidermis (outer layer of the skin). It usually occurs on areas of the skin that have been exposed to natural sunlight or artificial sunlight (such as from tanning beds) over long periods of time. These areas include the face, ears, lower lip, neck, arms, or back of the hands. It may also occur on areas of the skin that have been burned or exposed to chemicals or radiation. Squamous cell skin cancer may appear as a firm red bump, a scaly red patch, an open sore, or a wart that may crust or bleed easily. Squamous cell skin cancer that has not spread can usually be cured. Also called cutaneous squamous cell carcinoma and squamous cell carcinoma of the skin.

### **squamous intraepithelial lesion**

An abnormal growth of squamous cells that forms on the surface of certain organs, such as the cervix, vagina, vulva, anus, penis, or back of the throat. Squamous cells are thin, flat cells that look like fish scales under a microscope. Squamous intraepithelial lesions may be low grade or high grade, depending on how abnormal the cells look under a microscope and how much of the tissue is affected. They are usually caused by chronic infection with certain types of human papillomavirus (HPV) and are found when a Pap test or biopsy is done. If not treated, some squamous intraepithelial lesions may become cancer and spread into nearby normal tissue. Also called SIL.

### **stable disease**

Cancer that is neither decreasing nor increasing in extent or severity.

### **stage**

The extent of a cancer in the body. Staging is usually based on the size of the tumor, whether lymph nodes contain cancer, and whether the cancer has spread from the original site to other parts of the body.

### **stage 0 HPV-negative oropharyngeal carcinoma in situ**

Abnormal cells are found in the lining of the oropharynx (throat). These abnormal cells may become cancer and spread into nearby normal tissue.

### **stage 0 Merkel cell carcinoma in situ**

Abnormal Merkel cells are found in the top layer of the skin. These abnormal cells may become cancer and spread into nearby normal tissue.

### **stage 0 anal HSIL**

Abnormal cells are found in the mucosa (innermost layer) of the anus. These abnormal cells may become cancer and spread into nearby normal tissue. Stage 0 is also called high-grade squamous intraepithelial lesion (HSIL).

### **stage 0 bladder cancer**

Stage 0 bladder cancer refers to noninvasive bladder cancer. This means that cancer cells are found in tissue lining the inside of the bladder but have not invaded the bladder wall. Stage 0 is divided into stages 0a and 0is, depending on the type of tumor. Stage 0a is also called noninvasive papillary carcinoma, which may look like long, thin growths extending into the bladder lumen (the space where urine collects). Stage 0is is also called carcinoma in situ, which is a flat tumor on the tissue lining the inside of the bladder.

### **stage 0 breast carcinoma in situ**

A condition in which abnormal cells are found in the tissues of the breast. There are 2 types of stage 0 breast carcinoma in situ: ductal carcinoma in situ (DCIS) and Paget disease of the nipple. DCIS is a condition in which the abnormal cells are found in the lining of a breast duct. The abnormal cells have not spread outside the duct to other tissues in the breast. Paget disease of the nipple is a condition in which abnormal cells are found in the skin cells of the nipple and may spread to the areola. Patients with Paget disease of the nipple may also have DCIS or invasive breast cancer in the same breast. Also called breast carcinoma in situ.

### **stage 0 chronic lymphocytic leukemia**

There are too many lymphocytes in the blood, but there are no other symptoms of leukemia. Stage 0 is indolent (slow-growing).

### **stage 0 colorectal carcinoma in situ**

Abnormal cells are found in the mucosa (innermost layer) of the colon and/or rectal wall. These abnormal cells may become cancer and spread into nearby normal tissue.

### **stage 0 disease**

A condition in which abnormal cells that look like cancer cells under a microscope are found only in the place where they first formed and haven't spread to nearby tissue. At some point, these cells may become cancerous and spread into nearby normal tissue. There are many different types of stage 0 disease depending on the type of tissue in which it began. These include adenocarcinoma in situ (of the cervix, lungs, and gastrointestinal tract), ductal carcinoma in situ (of the breast), and squamous cell carcinoma in situ (of the skin, mouth, and larynx). Also called carcinoma in situ.

### **stage 0 distal bile duct cancer (carcinoma in situ)**

Abnormal cells are found in the innermost layer of tissue lining the distal bile duct. These abnormal cells are not actually cancer but may become cancer and spread into nearby normal tissue. Stage 0 is also called high-grade dysplasia.

### **stage 0 esophageal carcinoma in situ**

Cancer has formed in the inner lining of the esophagus wall. Stage 0 is also called high-grade dysplasia.

**stage 0 gallbladder carcinoma in situ**

Abnormal cells are found in the mucosa (innermost layer) of the gallbladder wall. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 gastric cancer (carcinoma in situ)**

Abnormal cells are found in the mucosa (innermost layer) of the stomach wall. These abnormal cells are not actually cancer but may become cancer and spread into nearby normal tissue. Also called stage 0 stomach cancer (carcinoma in situ).

**stage 0 hypopharyngeal carcinoma in situ**

Abnormal cells are found in the lining of the hypopharynx. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 intrahepatic bile duct cancer (carcinoma in situ)**

Abnormal cells are found in the innermost layer of tissue lining the intrahepatic bile duct. These abnormal cells are not actually cancer but may become cancer and spread into nearby normal tissue.

**stage 0 laryngeal carcinoma in situ**

Abnormal cells are found in the lining of the larynx. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 lip and oral cavity carcinoma in situ**

Abnormal cells are found in the lining of the lips and oral cavity. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 maxillary sinus carcinoma in situ**

Abnormal cells are found in the mucous membranes lining the maxillary sinus. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 melanoma**

Abnormal melanocytes (cells that make melanin, the pigment that gives skin its natural color) are found in the epidermis (outer layer of the skin). These abnormal melanocytes may become cancer and spread into nearby normal tissue. Also called melanoma in situ.

**stage 0 nasal cavity and ethmoid sinus carcinoma in situ**

Abnormal cells are found in the mucous membranes lining the nasal cavity or ethmoid sinus. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 nasopharyngeal carcinoma in situ**

Abnormal cells are found in the lining of the nasopharynx. These abnormal cells may become cancer and spread into nearby normal tissue.

**stage 0 non-small cell lung carcinoma in situ**

Abnormal cells are found in the lining of the airways. These abnormal cells may become cancer and spread into nearby normal tissue. Stage 0 non-small cell lung carcinoma in situ may be adenocarcinoma in situ (AIS) or squamous cell carcinoma in situ (SCIS).

**stage 0 nonmelanoma skin carcinoma in situ on the eyelid**

Abnormal cells are found in the epidermis, usually in the basal cell layer. These abnormal cells may become cancer and spread into nearby normal tissue. Also

called nonmelanoma skin carcinoma in situ on the eyelid.

#### **stage 0 nonmelanoma skin carcinoma in situ on the head and neck (not on the eyelid)**

Abnormal cells are found in the squamous cell or basal cell layer of the epidermis. These abnormal cells may become cancer and spread into nearby normal tissue. Also called nonmelanoma skin carcinoma in situ on the head and neck (not on the eyelid).

#### **stage 0 pancreatic carcinoma in situ**

Abnormal cells are found in the lining of the pancreas. These abnormal cells may become cancer and spread into nearby normal tissue.

#### **stage 0 penile carcinoma in situ**

Stage 0 is divided into stages 0is and 0a. In stage 0is, abnormal cells are found on the surface of the skin of the penis. These abnormal cells form growths that may become cancer and spread into nearby normal tissue. Stage 0is is also called penile intraepithelial neoplasia. In stage 0a, squamous cell cancer that does not spread is found on the surface of the skin of the penis or on the underneath surface of the foreskin of the penis. Stage 0a is also called noninvasive localized squamous cell carcinoma.

#### **stage 0 perihilar bile duct cancer (carcinoma in situ)**

Abnormal cells are found in the innermost layer of tissue lining the perihilar bile duct. These abnormal cells are not actually cancer but may become cancer and spread into nearby normal tissue. Stage 0 is also called high-grade dysplasia.

#### **stage 0 salivary gland carcinoma in situ**

Abnormal cells are found in the lining of the salivary ducts or the small sacs that make up the salivary gland. These abnormal cells may become cancer and spread into nearby normal tissue.

#### **stage 0 squamous cell carcinoma**

A condition in which abnormal cells are found in the tissues that form the surface of the skin, the lining of the hollow organs of the body (such as the bladder and uterus), and the lining of the respiratory and digestive tracts. These abnormal cells may become cancer and spread into nearby normal tissue. Stage 0 squamous cell carcinoma occurs in the skin, anus, bladder, uterus, cervix, head and neck, lung, and vagina, and in other parts of the body. Also called squamous cell carcinoma in situ.

#### **stage 0 stomach cancer (carcinoma in situ)**

Abnormal cells are found in the mucosa (innermost layer) of the stomach wall. These abnormal cells are not actually cancer but may become cancer and spread into nearby normal tissue. Also called stage 0 gastric cancer (carcinoma in situ).

#### **stage 0 testicular carcinoma in situ**

Abnormal cells are found in the tiny tubules where the sperm cells begin to develop. These abnormal cells may become cancer and spread into nearby normal tissue. All tumor marker levels are normal. Also called testicular intraepithelial neoplasia and testicular intratubular germ cell neoplasia.

### **stage 0 transitional cell carcinoma in situ of the renal pelvis and ureter**

Abnormal cells are found in tissue lining the inside of the renal pelvis or ureter. These abnormal cells may become cancer and spread into nearby normal tissue. Stage 0 is divided into stages 0a and 0is, depending on the type of tumor. Stage 0a is also called noninvasive papillary carcinoma, which may look like long, thin growths that grow out from the tissue lining the inside of the renal pelvis or ureter. Stage 0is is also called carcinoma in situ, which is a flat tumor on the tissue lining the inside of the renal pelvis or ureter.

### **stage 1 neuroblastoma**

Cancer is in only one area and all of the cancer that can be seen is completely removed during surgery.

### **stage 2 neuroblastoma**

Stage 2 neuroblastoma is divided into stages 2A and 2B. In stage 2A, the cancer is in only one area and all of the cancer that can be seen is not completely removed during surgery. In stage 2B, the cancer is in only one area and all of the cancer that can be seen may or may not be completely removed during surgery. Cancer cells are found in the lymph nodes near the tumor.

### **stage 3 neuroblastoma**

In stage 3 neuroblastoma, one of the following is true: the cancer (1) cannot be completely removed during surgery and has spread from one side of the body to the other side and may also have spread to nearby lymph nodes; or (2) is on one side of the body and has spread to lymph nodes on the other side of the body; or (3) is in the middle of the body and has spread to tissues or lymph nodes on both sides of the body, and the cancer cannot be removed by surgery.

### **stage 4 neuroblastoma**

Stage 4 neuroblastoma is divided into stages 4 and 4S. In stage 4, the cancer has spread to distant lymph nodes or to other parts of the body. In stage 4S, the child is younger than 12 months, and (1) the cancer has spread to the skin, liver, and/or bone marrow; or (2) the cancer is in only one area and all of the cancer that can be seen may or may not be completely removed during surgery; or (3) cancer cells may be found in the lymph nodes near the tumor.

### **stage A esthesioneuroblastoma**

Cancer is found in the nasal cavity only.

### **stage B esthesioneuroblastoma**

Cancer has spread from the nasal cavity to the nasal sinuses.

### **stage C esthesioneuroblastoma**

Cancer has spread through the nasal sinuses to nearby tissue.

### **stage D esthesioneuroblastoma**

Cancer has spread to distant parts of the body, such as the lymph nodes in the neck, or to the brain, bone, liver, or lung.

### **stage I AIDS-related lymphoma**

Stage I is divided into stages I and IE. In stage I, cancer is found in one of the following places in the lymph system: (1) one or more lymph nodes in a group of lymph nodes; (2) Waldeyer's ring; (3) thymus; or (4) spleen. In stage IE, cancer is found in one area outside the lymph system.



### **stage I HPV-negative oropharyngeal cancer**

The tumor is 2 centimeters or smaller.

### **stage I HPV-positive oropharyngeal cancer**

One of the following is true: (1) one or more lymph nodes with cancer that is HPV p16-positive are found but the place where the cancer began is not known. The lymph nodes with cancer are 6 centimeters or smaller, on one side of the neck; or (2) cancer is found in the oropharynx (throat) and the tumor is 4 centimeters or smaller. Cancer may have spread to one or more lymph nodes that are 6 centimeters or smaller, on the same side of the neck as the primary tumor.

### **stage I Merkel cell carcinoma**

The tumor is 2 centimeters or smaller.

### **stage I Wilms tumor**

The tumor was completely removed by surgery and all of the following are true: (1) cancer was found only in the kidney and did not spread to blood vessels in the renal sinus (the part of the kidney where it joins the ureter) or to the lymph nodes; (2) no cancer cells were found at the edges of the area where the tumor was removed; (3) the outer layer of the kidney did not break open; (4) the tumor did not break open; and (5) a biopsy was not done before the tumor was removed.

### **stage I adenosarcoma of the uterus**

The tumor is found in the uterus only. Stage I is divided into stages IA, IB, and IC. In stage IA, the tumor is found in the endometrium or endocervix (the inner part of the cervix that forms a canal connecting the vagina to the uterus). In stage IB, the tumor has spread halfway or less into the myometrium (the muscular outer layer of the uterus). In stage IC, the tumor has spread more than halfway into the myometrium.

### **stage I adrenocortical cancer**

The tumor is 5 centimeters or smaller and is found in the adrenal gland only.

### **stage I adult Hodgkin lymphoma**

Stage I is divided into stages I and IE. In stage I, cancer is found in one of the following places in the lymph system: (1) one or more lymph nodes in a group of lymph nodes; (2) Waldeyer's ring; (3) thymus; or (4) spleen. In stage IE, cancer is found in one area outside the lymph system.

### **stage I adult non-Hodgkin lymphoma**

Stage I is divided into stages I and IE. In stage I, cancer is found in one of the following places in the lymph system: (1) one or more lymph nodes in a group of lymph nodes; (2) Waldeyer's ring; (3) thymus; or (4) spleen. In stage IE, cancer is found in one area outside the lymph system.

### **stage I adult soft tissue sarcoma of the retroperitoneum**

Stage I is divided into stages IA and IB. In stage IA, the tumor is 5 centimeters or smaller and is low grade or the grade is unknown. Low-grade cancer cells look more like normal cells under a microscope and grow and spread more slowly than mid-grade and high-grade cancer cells. In stage IB, the tumor is larger than 5 centimeters and is low grade or the grade is unknown.

### **stage I adult soft tissue sarcoma of the trunk, arms, and legs**

Stage I is divided into stages IA and IB. In stage IA, the tumor is 5 centimeters or smaller and is low grade or the grade is unknown. Low-grade cancer cells look more like normal cells under a microscope and grow and spread more slowly than mid-grade and high-grade cancer cells. In stage IB, the tumor is larger than 5 centimeters and is low grade or the grade is unknown.

### **stage I anal cancer**

The tumor is 2 centimeters or smaller.

### **stage I bladder cancer**

Cancer has spread into the connective tissue but has not reached the muscle layers of the bladder. Stage I bladder cancer may also be described as non-muscle-invasive bladder cancer.

### **stage I cervical cancer**

Cancer is found in the cervix only. Stage I is divided into stages IA and IB, based on the size of the tumor and the deepest point of tumor invasion. Stage IA is divided into stages IA1 and IA2, based on the deepest point of tumor invasion. In stage IA1, a very small amount of cancer that can only be seen with a microscope is found in the tissues of the cervix. The deepest point of tumor invasion is 3 millimeters or less. In stage IA2, a very small amount of cancer that can only be seen with a microscope is found in the tissues of the cervix. The deepest point of tumor invasion is more than 3 millimeters but not more than 5 millimeters. Stage IB is divided into stages IB1, IB2, and IB3, based on the size of the tumor and the deepest point of tumor invasion. In stage IB1, the tumor is 2 centimeters or smaller and the deepest point of tumor invasion is more than 5 millimeters. In stage IB2, the tumor is larger than 2 centimeters but not larger than 4 centimeters. In stage IB3, the tumor is larger than 4 centimeters.

### **stage I childhood Hodgkin lymphoma**

Stage I is divided into stages I and IE. In stage I, cancer is found in one of the following places in the lymph system: (1) one or more lymph nodes in one lymph node group; (2) Waldeyer's ring; (3) thymus; or (4) spleen. In stage IE, cancer is found outside the lymph system in one organ or area.

### **stage I childhood non-Hodgkin lymphoma**

Cancer is found (1) in one group of lymph nodes; or (2) in one area outside the lymph nodes. No cancer is found in the abdomen or mediastinum (area between the lungs).

### **stage I chronic lymphocytic leukemia**

There are too many lymphocytes in the blood and the lymph nodes are larger than normal.

### **stage I colorectal cancer**

Cancer has formed in the mucosa (innermost layer) of the colon and/or rectum wall and has spread to the submucosa (layer of tissue next to the mucosa) or to the muscle layer of the colon and/or rectum wall. Also called Dukes A colorectal cancer.

### **stage I distal bile duct cancer**

Cancer has spread fewer than 5 millimeters into the wall of the distal bile duct.

### **stage I endometrial cancer**

Cancer is found in the uterus only. Stage I is divided into stages IA and IB, based on how far the cancer has spread. In stage IA, cancer is in the endometrium only or less than halfway through the myometrium (muscle layer of the uterus). In stage IB, cancer has spread halfway or more into the myometrium.

### **stage I endometrial stromal sarcoma**

In stage I, the tumor is found in the uterus only. Stage I is divided into stages IA and IB. In stage IA, the tumor is 5 centimeters or smaller. In stage IB, the tumor is larger than 5 centimeters.

### **stage I esophageal adenocarcinoma**

Stage I is divided into stages IA, IB, and IC, depending on where the cancer has spread. In stage IA, cancer has spread into the mucosa layer or thin muscle layer of the esophagus wall. The cancer cells are grade 1 or the grade is not known. Grade 1 cancer cells look more like normal cells under a microscope and grow and spread more slowly than grade 2 and 3 cancer cells. In stage IB, cancer has spread (1) into the mucosa layer or thin muscle layer of the esophagus wall. The cancer cells are grade 2. Grade 2 cancer cells look more abnormal under a microscope and grow and spread more quickly than grade 1 cancer cells; or (2) into the submucosa layer of the esophagus wall. The cancer cells are grade 1 or 2 or the grade is not known. In stage IC, cancer has spread (1) into the mucosa layer, thin muscle layer, or submucosa layer of the esophagus wall. The cancer cells are grade 3. Grade 3 cancer cells look more abnormal under a microscope and grow and spread more quickly than grade 1 and 2 cancer cells; or (2) into the thick muscle layer of the esophagus wall. The cancer cells are grade 1 or 2.

### **stage I esophageal squamous cell carcinoma**

Stage I is divided into stages IA and IB, depending on where the cancer has spread. In stage IA, cancer has spread into the mucosa layer or thin muscle layer of the esophagus wall. The cancer cells are grade 1 or the grade is not known. Grade 1 cancer cells look more like normal cells under a microscope and grow and spread more slowly than grade 2 and 3 cancer cells. In stage IB, cancer has spread (1) into the mucosa layer, thin muscle layer, or submucosa layer of the esophagus wall. The cancer cells are any grade or the grade is not known; or (2) into the thick muscle layer of the esophagus wall. The cancer cells are grade 1.

### **stage I gallbladder cancer**

Cancer has formed in the mucosa (innermost layer) of the gallbladder wall and may have spread to the muscle layer of the gallbladder wall.

### **stage I gastric cancer**

Stage I is divided into stages IA and IB. In stage IA, cancer has formed in the mucosa (innermost layer) of the stomach wall and may have spread to the submucosa (layer of connective tissue between the mucosa and the muscle layer). In stage IB, cancer (1) has formed in the mucosa of the stomach wall and may have spread to the submucosa and has spread to 1 or 2 nearby lymph nodes; or (2) has formed in the mucosa of the stomach wall and has spread to the muscle layer. Also called stage I stomach cancer.

### **stage I gestational trophoblastic neoplasia**

The tumor is in the uterus only.

### **stage I hypopharyngeal cancer**

Cancer is found in only one area of the hypopharynx and/or the tumor is 2 centimeters or smaller.

### **stage I intrahepatic bile duct cancer**

Stage I intrahepatic bile duct cancer is divided into stages IA and IB. In stage IA, cancer has formed in an intrahepatic bile duct and the tumor is 5 centimeters or smaller. In stage IB, cancer has formed in an intrahepatic bile duct and the tumor is larger than 5 centimeters.

### **stage I intraocular melanoma of the ciliary body and choroid**

The tumor is size category 1 (not more than 12 millimeters wide and not more than 3 millimeters thick; or not more than 9 millimeters wide and 3.1 to 6 millimeters thick) and is in the choroid only.

### **stage I kidney cancer**

The tumor is 7 centimeters or smaller and is found in the kidney only. Also called stage I renal cell cancer.

### **stage I laryngeal cancer**

Cancer has formed in the supraglottis, glottis, or subglottis area of the larynx. Cancer (1) is in one area of the supraglottis and the vocal cords work normally; or (2) is in one or both vocal cords and the vocal cords work normally; or (3) is in the subglottis only.

### **stage I leiomyosarcoma of the uterus**

In stage I, the tumor is found in the uterus only. Stage I is divided into stages IA and IB. In stage IA, the tumor is 5 centimeters or smaller. In stage IB, the tumor is larger than 5 centimeters.

### **stage I lip and oral cavity cancer**

The tumor is 2 centimeters or smaller and the deepest point of tumor invasion is 5 millimeters or less.

### **stage I malignant pleural mesothelioma**

Stage I is divided into stages IA and IB. In stage IA, cancer is found in the inside lining of the chest wall on one side of the chest. On the same side of the chest, cancer may also be found in one or more of the following: the thin layer of tissue that covers the lung; the thin layer of tissue that covers the organs between the lungs; and/or the thin layer of tissue that covers the top of the diaphragm. In stage IB, cancer is found in the inside lining of the chest wall, and in each of the thin layers of tissue that cover the lung, the organs between the lungs, and the top of the diaphragm on one side of the chest. On the same side of the chest, cancer has also spread into one or more of the following: diaphragm; lung tissue; tissue between the ribs and the inside lining of the chest wall; fat in the area between the lungs; soft tissues of the chest wall; and/or sac around the heart.

### **stage I maxillary sinus cancer**

Cancer has formed in the mucous membranes of the maxillary sinus.

### **stage I medullary thyroid cancer**

Cancer is found in the thyroid only and the tumor is 2 centimeters or smaller.

### **stage I melanoma**

Stage I is divided into stages IA and IB. In stage IA, the tumor is not more than 1 millimeter thick, with or without ulceration (a break in the skin). In stage IB, the tumor is more than 1 but not more than 2 millimeters thick, without ulceration.

### **stage I multiple myeloma**

Relatively few cancer cells have spread throughout the body. There may be no symptoms of disease.

### **stage I mycosis fungoides**

Stage I is divided into stages IA and IB. In stage IA, patches, papules, and/or plaques cover less than 10% of the skin surface. In stage IB, patches, papules, and/or plaques cover 10% or more of the skin surface. In both stages, there may be a low number of Sezary cells in the blood.

### **stage I nasal cavity and ethmoid sinus cancer**

Cancer is found in only one area of either the nasal cavity or the ethmoid sinus and may have spread into bone.

### **stage I nasopharyngeal cancer**

Cancer (1) is found in the nasopharynx only; or (2) has spread from the nasopharynx to the oropharynx and/or to the nasal cavity.

### **stage I nonmelanoma skin cancer on the eyelid**

Stage I is divided into stages IA and IB. In stage IA, the tumor is 10 millimeters or smaller and may have spread to the edge of the eyelid where the lashes are, to the connective tissue in the eyelid, or to the full thickness of the eyelid. In stage IB, the tumor is larger than 10 millimeters but not larger than 20 millimeters and has not spread to the edge of the eyelid where the lashes are or to the connective tissue in the eyelid.

### **stage I nonmelanoma skin cancer on the head and neck (not on the eyelid)**

The tumor is 2 centimeters or smaller.

### **stage I ovarian epithelial and fallopian tube cancer**

Cancer is found in one or both ovaries or fallopian tubes. Stage I is divided into stages IA, IB, and IC. In stage IA, cancer is found inside a single ovary or fallopian tube. In stage IB, cancer is found inside both ovaries or fallopian tubes. In stage IC, cancer is found inside one or both ovaries or fallopian tubes and one of the following is true: (1) the tumor ruptured (broke open) during surgery; or (2) the capsule (outer covering) of the ovary ruptured before surgery, or there is cancer on the surface of the ovary or fallopian tube; or (3) cancer cells are found in the fluid of the peritoneal cavity (the body cavity that contains most of the organs in the abdomen) or in washings of the peritoneum (tissue lining the peritoneal cavity).

### **stage I ovarian germ cell tumor**

Cancer is found in one or both ovaries or fallopian tubes. Stage I is divided into stages IA, IB, and IC. In stage IA, cancer is found inside a single ovary or fallopian tube. In stage IB, cancer is found inside both ovaries or fallopian tubes. In stage IC, cancer is found inside one or both ovaries or fallopian tubes and one of the following is true: (1) the tumor ruptured (broke open) during surgery; or (2) the capsule (outer covering) of the ovary ruptured before surgery, or there is cancer on the surface of the ovary or fallopian tube; or (3) cancer cells are found in the fluid of the peritoneal cavity (the body cavity that contains most of the

organs in the abdomen) or in washings of the peritoneum (tissue lining the peritoneal cavity).

#### **stage I ovarian low malignant potential tumor**

The tumor is found in one or both ovaries or fallopian tubes. Stage I is divided into stages IA, IB, and IC. In stage IA, the tumor is found inside a single ovary or fallopian tube. In stage IB, the tumor is found inside both ovaries or fallopian tubes. In stage IC, the tumor is found inside one or both ovaries or fallopian tubes and one of the following is true: (1) tumor cells are found on the outside surface of one or both ovaries or fallopian tubes; or (2) the capsule (outer covering) of the ovary ruptured (broke open) before or during surgery; or (3) tumor cells are found in the fluid of the peritoneal cavity (the body cavity that contains most of the organs in the abdomen) or in washings of the peritoneum (tissue lining the peritoneal cavity).

#### **stage I pancreatic cancer**

Cancer is found in the pancreas only. Stage I is divided into stages IA and IB, depending on the size of the tumor. In stage IA, the tumor is 2 centimeters or smaller. In stage IB, the tumor is larger than 2 centimeters but not larger than 4 centimeters.

#### **stage I papillary and follicular thyroid cancer (55 years and older)**

Cancer is found in the thyroid only and the tumor is 4 centimeters or smaller.

#### **stage I papillary and follicular thyroid cancer (younger than 55 years)**

The tumor is any size and cancer may have spread to nearby tissues and lymph nodes. Cancer has not spread to other parts of the body.

#### **stage I penile cancer**

Cancer has spread to tissue just under the skin of the penis. Cancer has not spread to lymph vessels, blood vessels, or nerves. The cancer cells look more like normal cells under a microscope.

#### **stage I perihilar bile duct cancer**

Cancer has formed in the innermost layer of tissue lining the perihilar bile duct and has spread into the muscle layer or fibrous tissue layer of the perihilar bile duct wall.

#### **stage I prostate cancer**

Cancer is found in the prostate only. The cancer (1) is not felt during a digital rectal exam and is found by needle biopsy done for a high prostate-specific antigen (PSA) level or in a sample of tissue removed during surgery for other reasons (such as benign prostatic hyperplasia). The PSA level is lower than 10 and the Grade Group is 1 (Gleason score is 6 or less ); or (2) is felt during a digital rectal exam and is found in one-half or less of one side of the prostate. The PSA level is lower than 10 and the Grade Group is 1.

#### **stage I renal cell cancer**

The tumor is 7 centimeters or smaller and is found in the kidney only. Also called stage I kidney cancer.

#### **stage I salivary gland cancer**

The tumor is in the salivary gland only and is 2 centimeters or smaller.



### **stage I stomach cancer**

Stage I is divided into stages IA and IB. In stage IA, cancer has formed in the mucosa (innermost layer) of the stomach wall and may have spread to the submucosa (layer of connective tissue between the mucosa and the muscle layer). In stage IB, cancer (1) has formed in the mucosa of the stomach wall and may have spread to the submucosa and has spread to 1 or 2 nearby lymph nodes; or (2) has formed in the mucosa of the stomach wall and has spread to the muscle layer. Also called stage I gastric cancer.

### **stage I testicular cancer**

Stage I is divided into stages IA, IB, and IS. In stage IA, cancer is found in the testicle, including the rete testis, but has not spread to the blood vessels or lymph vessels in the testicle. All tumor marker levels are normal. In stage IB, cancer (1) is found in the testicle, including the rete testis, and has spread to the blood vessels or lymph vessels in the testicle; or (2) has spread into the hilar soft tissue (tissue made of fibers and fat with blood vessels and lymph vessels), the epididymis, or the outer membranes around the testicle; or (3) has spread to the spermatic cord; or (4) has spread to the scrotum. All tumor marker levels are normal. In stage IS, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Tumor marker levels range from slightly above normal to high.

### **stage I thymoma**

Cancer is found only within the thymus. All cancer cells are inside the capsule (sac) that surrounds the thymus.

### **stage I transitional cell cancer of the renal pelvis and ureter**

Cancer has spread from the tissue lining the inside of the renal pelvis or ureter to the connective tissue layer.

### **stage I vaginal cancer**

Cancer is found in the vaginal wall only.

### **stage I vulvar cancer**

The tumor is found only in the vulva. Stage I is divided into stages IA and IB. In stage IA, the tumor is 2 centimeters or smaller and has spread 1 millimeter or less into the tissue of the vulva. Cancer has not spread to the lymph nodes. In stage IB, the tumor is larger than 2 centimeters or has spread more than 1 millimeter into the tissue of the vulva. Cancer has not spread to the lymph nodes.

### **stage IA non-small cell lung cancer**

Stage I non-small cell lung cancer is divided into stages IA and IB. In stage IA, the tumor is in the lung only and is 3 centimeters or smaller. Cancer has not spread to the lymph nodes.

### **stage IB non-small cell lung cancer**

Stage I non-small cell lung cancer is divided into stages IA and IB. In stage IB, the tumor is larger than 3 centimeters but not larger than 4 centimeters. Cancer has not spread to the lymph nodes; OR the tumor is 4 centimeters or smaller and one or more of the following is found: (1) cancer has spread to the main bronchus, but has not spread to the carina; and/or (2) cancer has spread to the innermost layer of the membrane that covers the lung; and/or (3) part of the lung or the whole lung has collapsed or has developed pneumonitis. Cancer has not spread to the lymph nodes.

### **stage II AIDS-related lymphoma**

Stage II is divided into stages II and IIE. In stage II, cancer is found in two or more groups of lymph nodes that are either above the diaphragm or below the diaphragm. In stage IIE, cancer has spread from a group of lymph nodes to a nearby area that is outside the lymph system. Cancer may have spread to other lymph node groups on the same side of the diaphragm.

### **stage II HPV-negative oropharyngeal cancer**

The tumor is larger than 2 centimeters but not larger than 4 centimeters.

### **stage II HPV-positive oropharyngeal cancer**

One of the following is true: (1) one or more lymph nodes with cancer that is HPV p16-positive are found but the place where the cancer began is not known. The lymph nodes with cancer are 6 centimeters or smaller, on one or both sides of the neck; or (2) the tumor is 4 centimeters or smaller. Cancer has spread to lymph nodes that are 6 centimeters or smaller, on the opposite side of the neck as the primary tumor or on both sides of the neck; or (3) the tumor is larger than 4 centimeters or cancer has spread to the top of the epiglottis (the flap that covers the trachea during swallowing). Cancer may have spread to one or more lymph nodes that are 6 centimeters or smaller, anywhere in the neck.

### **stage II Merkel cell carcinoma**

Stage II Merkel cell carcinoma is divided into stages IIA and IIB. In stage IIA, the tumor is larger than 2 centimeters. In stage IIB, the tumor has spread to nearby connective tissue, muscle, cartilage, or bone.

### **stage II Wilms tumor**

The tumor was completely removed by surgery and no cancer cells were found at the edges of the area where the tumor was removed. Cancer has not spread to lymph nodes. Before the tumor was removed, one of the following was true: (1) cancer had spread to the renal sinus (the part of the kidney where it joins the ureter); or (2) cancer had spread to blood vessels outside the area of the kidney where urine is made, such as the renal sinus.

### **stage II adenosarcoma of the uterus**

The tumor has spread outside the uterus into the pelvis. Stage II is divided into stages IIA and IIB. In stage IIA, the tumor has spread to the ovary, fallopian tube, or connective tissues around the uterus. In stage IIB, the tumor has spread to other tissues in the pelvis.

### **stage II adrenocortical cancer**

The tumor is larger than 5 centimeters and is found in the adrenal gland only.

### **stage II adult Hodgkin lymphoma**

Stage II is divided into stages II and IIE. In stage II, cancer is found in two or more groups of lymph nodes that are either above the diaphragm or below the diaphragm. In stage IIE, cancer has spread from a group of lymph nodes to a nearby area that is outside the lymph system. Cancer may have spread to other lymph node groups on the same side of the diaphragm.

### **stage II adult non-Hodgkin lymphoma**

Stage II is divided into stages II and IIE. In stage II, cancer is found in two or more groups of lymph nodes that are either above the diaphragm or below the diaphragm. In stage IIE, cancer has spread from a group of lymph nodes to a

nearby area that is outside the lymph system. Cancer may have spread to other lymph node groups on the same side of the diaphragm.

### **stage II adult soft tissue sarcoma of the retroperitoneum**

The tumor is 5 centimeters or smaller and is mid grade or high grade. Mid-grade and high-grade cancer cells look more abnormal under a microscope and grow and spread more quickly than low-grade cancer cells.

### **stage II adult soft tissue sarcoma of the trunk, arms, and legs**

The tumor is 5 centimeters or smaller and is mid grade or high grade. Mid-grade and high-grade cancer cells look more abnormal under a microscope and grow and spread more quickly than low-grade cancer cells.

### **stage II anal cancer**

Stage II anal cancer is divided into stages IIA and IIB. In stage IIA, the tumor is larger than 2 centimeters but not larger than 5 centimeters. In stage IIB, the tumor is larger than 5 centimeters.

### **stage II bladder cancer**

Cancer has spread through the connective tissue into the muscle layers of the bladder. Stage II bladder cancer may also be described as muscle-invasive bladder cancer.

### **stage II cervical cancer**

Cancer has spread to the upper two-thirds of the vagina or to the tissue around the uterus. Stage II is divided into stages IIA and IIB, based on how far the cancer has spread. In stage IIA, cancer has spread from the cervix to the upper two-thirds of the vagina but has not spread to the tissue around the uterus. Stage IIA is divided into stages IIA1 and IIA2, based on the size of the tumor. In stage IIA1, the tumor is 4 centimeters or smaller. In stage IIA2, the tumor is larger than 4 centimeters. In stage IIB, cancer has spread from the cervix to the tissue around the uterus.

### **stage II childhood Hodgkin lymphoma**

Stage II is divided into stages II and IIE. In stage II, cancer is found in two or more lymph node groups either above or below the diaphragm (the thin muscle below the lungs that helps breathing and separates the chest from the abdomen). In stage IIE, cancer has spread from a group of lymph nodes to a nearby organ or area that is outside the lymph system. Cancer may have spread to other lymph node groups on the same side of the diaphragm.

### **stage II childhood non-Hodgkin lymphoma**

Cancer is found (1) in one area outside the lymph nodes and in nearby lymph nodes; or (2) in two or more areas above or below the diaphragm (the thin muscle below the lungs and heart that separates the chest from the abdomen), and may have spread to nearby lymph nodes; or (3) to have started in the stomach or intestines and can be completely removed by surgery. Cancer may have spread to certain nearby lymph nodes.

### **stage II chronic lymphocytic leukemia**

There are too many lymphocytes in the blood, the liver or spleen is larger than normal, and the lymph nodes may be larger than normal.

### **stage II colorectal cancer**

Stage II colorectal cancer is divided into stages IIA, IIB, and IIC. In stage IIA, cancer has spread through the muscle layer of the colon and/or rectum wall to the serosa (outermost layer) of the colon and/or rectum wall. In stage IIB, cancer has spread through the serosa of the colon and/or rectum wall to the tissue that lines the organs in the abdomen (visceral peritoneum). In stage IIC, cancer has spread through the serosa of the colon and/or rectum wall to nearby organs.

### **stage II distal bile duct cancer**

Stage II is divided into stages IIA and IIB. In stage IIA, cancer has spread (1) fewer than 5 millimeters into the wall of the distal bile duct and has spread to 1 to 3 nearby lymph nodes; or (2) 5 to 12 millimeters into the wall of the distal bile duct. In stage IIB, cancer has spread 5 millimeters or more into the wall of the distal bile duct. Cancer may have spread to 1 to 3 nearby lymph nodes.

### **stage II endometrial cancer**

Cancer has spread into connective tissue of the cervix, but has not spread outside the uterus.

### **stage II endometrial stromal sarcoma**

The tumor has spread beyond the uterus, but has not spread beyond the pelvis. Stage II is divided into stages IIA and IIB. In stage IIA, the tumor has spread to the ovary, fallopian tube, or connective tissues around the uterus. In stage IIB, the tumor has spread to other tissues in the pelvis.

### **stage II esophageal adenocarcinoma**

Stage II is divided into stages IIA and IIB, depending on where the cancer has spread. In stage IIA, cancer has spread into the thick muscle layer of the esophagus wall. The cancer cells are grade 3 or the grade is not known. Grade 3 cancer cells look more abnormal under a microscope and grow and spread more quickly than grade 1 and 2 cancer cells. In stage IIB, cancer has spread (1) into the connective tissue layer of the esophagus wall; or (2) into the mucosa layer, thin muscle layer, or submucosa layer of the esophagus wall. Cancer is found in 1 or 2 lymph nodes near the tumor.

### **stage II esophageal squamous cell carcinoma**

Stage II is divided into stages IIA and IIB, depending on where the cancer has spread. In stage IIA, cancer has spread (1) into the thick muscle layer of the esophagus wall. The cancer cells are grade 2 or 3 or the grade is not known. Grade 2 and 3 cancer cells look more abnormal under a microscope and grow and spread more quickly than grade 1 cancer cells; or (2) into the connective tissue layer of the esophagus wall. The tumor is in the lower esophagus; or (3) into the connective tissue layer of the esophagus wall. The cancer cells are grade 1. Grade 1 cancer cells look more like normal cells under a microscope and grow and spread more slowly than grade 2 and 3 cancer cells. The tumor is in either the upper or middle esophagus. In stage IIB, cancer has spread (1) into the connective tissue layer of the esophagus wall. The cancer cells are grade 2 or 3. The tumor is in either the upper or middle esophagus; or (2) into the connective tissue layer of the esophagus wall. The grade of the cancer cells is not known, or it is not known where the tumor has formed in the esophagus; or (3) into the mucosa layer, thin muscle layer, or submucosa layer of the esophagus wall. Cancer is found in 1 or 2 lymph nodes near the tumor.

### **stage II gallbladder cancer**

Stage II is divided into stages IIA and IIB, depending on where the cancer has spread in the gallbladder. In stage IIA, cancer has spread through the muscle layer to the connective tissue layer of the gallbladder wall on the side of the gallbladder that is not near the liver. In stage IIB, cancer has spread through the muscle layer to the connective tissue layer of the gallbladder wall on the same side as the liver. Cancer has not spread to the liver.

### **stage II gastric cancer**

Stage II is divided into stages IIA and IIB. In stage IIA, cancer (1) may have spread to the submucosa (layer of connective tissue between the mucosa and the muscle layer) of the stomach wall and has spread to 3 to 6 nearby lymph nodes; or (2) has spread to the muscle layer of the stomach wall and to 1 or 2 nearby lymph nodes; or (3) has spread to the subserosa (layer of connective tissue between the muscle layer and the outermost layer called the serosa) of the stomach wall. In stage IIB, cancer (1) may have spread to the submucosa of the stomach wall and has spread to 7 to 15 nearby lymph nodes; or (2) has spread to the muscle layer of the stomach wall and to 3 to 6 nearby lymph nodes; or (3) has spread to the subserosa of the stomach wall and to 1 or 2 nearby lymph nodes; or (4) has spread to the serosa of the stomach wall. Also called stage II stomach cancer.

### **stage II gestational trophoblastic neoplasia**

The tumor has spread beyond the uterus to the ovary, fallopian tube, vagina, and/or the connective tissues around the uterus.

### **stage II hypopharyngeal cancer**

The tumor is (1) found in more than one area of the hypopharynx or in a nearby area; or (2) larger than 2 centimeters but not larger than 4 centimeters and has not spread to the larynx (voice box).

### **stage II intrahepatic bile duct cancer**

Either of the following is found: (1) the tumor has spread through the wall of an intrahepatic bile duct and into a blood vessel; or (2) more than one tumor has formed in the intrahepatic bile duct and may have spread into a blood vessel.

### **stage II kidney cancer**

The tumor is larger than 7 centimeters and is found in the kidney only. Also called stage II renal cell cancer.

### **stage II laryngeal cancer**

Cancer has formed in the supraglottis, glottis, or subglottis area of the larynx. Cancer (1) is in more than one area of the supraglottis or has spread to the area at the base of the tongue or to tissues near the vocal cords. The vocal cords work normally; or (2) has spread from the glottis to the supraglottis, subglottis, or both, and/or the vocal cords do not work normally; or (3) has spread from the subglottis to one or both vocal cords and the vocal cords may not work normally.

### **stage II leiomyosarcoma of the uterus**

The tumor has spread beyond the uterus, but has not spread beyond the pelvis. Stage II is divided into stages IIA and IIB. In stage IIA, the tumor has spread to the ovary, fallopian tube, or connective tissues around the uterus. In stage IIB, the tumor has spread to other tissues in the pelvis.

### **stage II lip and oral cavity cancer**

The tumor (1) is 2 centimeters or smaller and the deepest point of tumor invasion is greater than 5 millimeters; or (2) is larger than 2 centimeters but not larger than 4 centimeters and the deepest point of tumor invasion is 10 millimeters or less.

### **stage II malignant pleural mesothelioma**

Cancer (1) is found in the inside lining of the chest wall on one side of the chest. On the same side of the chest, cancer may also be found in one or more of the following: the thin layer of tissue that covers the lung; the thin layer of tissue that covers the organs between the lungs; and/or the thin layer of tissue that covers the top of the diaphragm. Cancer has spread to lymph nodes along the center of the chest on the same side of the chest as the tumor; or (2) is found in the inside lining of the chest wall, and in each of the thin layers of tissue that cover the lung, the organs between the lungs, and the top of the diaphragm on one side of the chest. On the same side of the chest, cancer has also spread into the diaphragm and/or lung tissue. Cancer has spread to lymph nodes along the center of the chest on the same side of the chest as the tumor.

### **stage II maxillary sinus cancer**

Cancer has spread to bone around the maxillary sinus, including the roof of the mouth and the nose, but not to bone at the back of the maxillary sinus or the part of the sphenoid bone behind the upper jaw.

### **stage II medullary thyroid cancer**

One of the following is found: (1) cancer is found in the thyroid only and the tumor is larger than 2 centimeters; or (2) the tumor is any size and cancer has spread from the thyroid to nearby muscles in the neck.

### **stage II melanoma**

Stage II is divided into stages IIA, IIB, and IIC. In stage IIA, the tumor is either (1) more than 1 but not more than 2 millimeters thick, with ulceration (a break in the skin); or (2) more than 2 but not more than 4 millimeters thick, without ulceration. In stage IIB, the tumor is either (1) more than 2 but not more than 4 millimeters thick, with ulceration; or (2) more than 4 millimeters thick, without ulceration. In stage IIC, the tumor is more than 4 millimeters thick, with ulceration.

### **stage II multiple myeloma**

Cancer in which a moderate number of cancer cells have spread throughout the body.

### **stage II mycosis fungoides**

Stage II is divided into stages IIA and IIB. In stage IIA, patches, papules, and/or plaques cover any amount of the skin surface. Lymph nodes are abnormal, but they are not cancerous. In stage IIB, one or more tumors that are 1 centimeter or larger are found on the skin. Lymph nodes may be abnormal, but they are not cancerous. In both stages, there may be a low number of Sezary cells in the blood.

### **stage II nasal cavity and ethmoid sinus cancer**

Cancer is found in two areas of either the nasal cavity or the ethmoid sinus that are near each other, or cancer has spread to an area next to the sinuses. Cancer may have also spread into bone.



### **stage II nasopharyngeal cancer**

One of the following is true: (1) cancer has spread to one or more lymph nodes on one side of the neck and/or to one or more lymph nodes on one or both sides of the back of the throat. The affected lymph nodes are 6 centimeters or smaller. Cancer is found in the nasopharynx only, or has spread from the nasopharynx to the oropharynx and/or to the nasal cavity, or is found only in the lymph nodes in the neck. The cancer cells in the lymph nodes are infected with Epstein-Barr virus (a virus linked to nasopharyngeal cancer); or (2) cancer has spread to the parapharyngeal space (area near the pharynx, between the base of the skull and the lower jaw) and/or to nearby muscles. Cancer may have also spread to one or more lymph nodes on one side of the neck and/or to one or more lymph nodes on one or both sides of the back of the throat. The affected lymph nodes are 6 centimeters or smaller.

### **stage II nonmelanoma skin cancer on the eyelid**

Stage II is divided into stages IIA and IIB. In stage IIA, the tumor is (1) larger than 10 millimeters but not larger than 20 millimeters and has spread to the edge of the eyelid where the lashes are, to the connective tissue in the eyelid, or to the full thickness of the eyelid; or (2) larger than 20 millimeters but not larger than 30 millimeters and may have spread to the edge of the eyelid where the lashes are, to the connective tissue in the eyelid, or to the full thickness of the eyelid. In stage IIB, the tumor may be any size and has spread to the eye, eye socket, sinuses, tear ducts, or brain, or to the tissues that support the eye.

### **stage II nonmelanoma skin cancer on the head and neck (not on the eyelid)**

The tumor is larger than 2 centimeters but not larger than 4 centimeters.

### **stage II ovarian epithelial, fallopian tube, and primary peritoneal cancer**

Cancer is found in one or both ovaries or fallopian tubes and has spread into other areas of the pelvis, or primary peritoneal cancer is found within the pelvis. Stage II is divided into stages IIA and IIB. In stage IIA, cancer has spread from where it first formed to the uterus and/or the fallopian tubes and/or the ovaries. In stage IIB, cancer has spread from the ovary or fallopian tube to organs in the peritoneal cavity (the body cavity that contains most of the organs in the abdomen).

### **stage II ovarian germ cell tumor**

Cancer is found in one or both ovaries or fallopian tubes and has spread into other areas of the pelvis, or primary peritoneal cancer is found within the pelvis. Stage II is divided into stages IIA and IIB. In stage IIA, cancer has spread from where it first formed to the uterus and/or the fallopian tubes and/or the ovaries. In stage IIB, cancer has spread from the ovary or fallopian tube to organs in the peritoneal cavity (the body cavity that contains most of the organs in the abdomen).

### **stage II ovarian low malignant potential tumor**

The tumor is found in one or both ovaries or fallopian tubes and has spread into other areas of the pelvis, or primary peritoneal cancer is found within the pelvis. Stage II is divided into stages IIA and IIB. In stage IIA, the tumor has spread from where it first formed to the uterus and/or the fallopian tubes and/or the ovaries. In stage IIB, the tumor has spread from the ovary or fallopian tube to organs in the peritoneal cavity (the space that contains the abdominal organs).

### **stage II pancreatic cancer**

Stage II is divided into stages IIA and IIB, depending on the size of the tumor and where the cancer has spread. In stage IIA, the tumor is larger than 4 centimeters. In stage IIB, the tumor is any size and cancer has spread to 1 to 3 nearby lymph nodes.

### **stage II papillary and follicular thyroid cancer (55 years and older)**

One of the following is found: (1) cancer is found in the thyroid and the tumor is 4 centimeters or smaller; cancer has spread to nearby lymph nodes; or (2) cancer is found in the thyroid, the tumor is larger than 4 centimeters, and cancer may have spread to nearby lymph nodes; or (3) the tumor is any size and cancer has spread from the thyroid to nearby muscles in the neck and may have spread to nearby lymph nodes.

### **stage II papillary and follicular thyroid cancer (younger than 55 years)**

The tumor is any size and cancer may have spread to nearby tissues and lymph nodes. Cancer has spread from the thyroid to other parts of the body, such as the lungs or bones.

### **stage II penile cancer**

Stage II is divided into stages IIA and IIB. In stage IIA, cancer has spread (1) to tissue just under the skin of the penis. Cancer has spread to lymph vessels, blood vessels, and/or nerves; or (2) to tissue just under the skin of the penis. Under a microscope, the cancer cells look very abnormal or the cells are sarcomatoid; or (3) into the corpus spongiosum (spongy erectile tissue in the shaft and glans that fills with blood to make an erection). In stage IIB, cancer has spread through the layer of connective tissue that surrounds the corpus cavernosum and into the corpus cavernosum (spongy erectile tissue that runs along the shaft of the penis).

### **stage II perihilar bile duct cancer**

Cancer has spread through the wall of the perihilar bile duct to nearby fatty tissue or to liver tissue.

### **stage II prostate cancer**

Cancer is more advanced than in stage I, but has not spread outside the prostate. Stage II is divided into stages IIA, IIB, and IIC. In stage IIA, cancer (1) is found in one-half or less of one side of the prostate. The prostate-specific antigen (PSA) level is at least 10 but lower than 20 and the Grade Group is 1 (Gleason score is 6 or less); or (2) is found in more than one-half of one side of the prostate or in both sides of the prostate. The PSA level is lower than 20 and the Grade Group is 1. In stage IIB, cancer is found in one or both sides of the prostate. The PSA level is lower than 20 and the Grade Group is 2 (Gleason score is 7). In stage IIC, cancer is found in one or both sides of the prostate. The PSA level is lower than 20 and the Grade Group is 3 or 4 (Gleason score is 7 or 8).

### **stage II renal cell cancer**

The tumor is larger than 7 centimeters and is found in the kidney only. Also called stage II kidney cancer.

### **stage II salivary gland cancer**

The tumor is in the salivary gland only and is larger than 2 centimeters but not larger than 4 centimeters.

### **stage II stomach cancer**

Stage II is divided into stages IIA and IIB. In stage IIA, cancer (1) may have spread to the submucosa (layer of connective tissue between the mucosa and the muscle layer) of the stomach wall and has spread to 3 to 6 nearby lymph nodes; or (2) has spread to the muscle layer of the stomach wall and to 1 or 2 nearby lymph nodes; or (3) has spread to the subserosa (layer of connective tissue between the muscle layer and the outermost layer called the serosa) of the stomach wall. In stage IIB, cancer (1) may have spread to the submucosa of the stomach wall and has spread to 7 to 15 nearby lymph nodes; or (2) has spread to the muscle layer of the stomach wall and to 3 to 6 nearby lymph nodes; or (3) has spread to the subserosa of the stomach wall and to 1 or 2 nearby lymph nodes; or (4) has spread to the serosa of the stomach wall. Also called stage II gastric cancer.

### **stage II testicular cancer**

Stage II is divided into stages IIA, IIB, and IIC. In stage IIA, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer has spread to 1 to 5 nearby lymph nodes and the lymph nodes are 2 centimeters or smaller. All tumor marker levels are normal or slightly above normal. In stage IIB, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer has spread to (1) one nearby lymph node and the lymph node is larger than 2 centimeters but not larger than 5 centimeters; or (2) more than 5 nearby lymph nodes and the lymph nodes are not larger than 5 centimeters; or (3) a nearby lymph node and the cancer has spread outside the lymph node. All tumor marker levels are normal or slightly above normal. In stage IIC, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer has spread to a nearby lymph node and the lymph node is larger than 5 centimeters. All tumor marker levels are normal or slightly above normal.

### **stage II thymoma**

Cancer has spread through the capsule (sac) that surrounds the thymus and into the fat around the thymus or into the lining of the chest cavity.

### **stage II transitional cell cancer of the renal pelvis and ureter**

Cancer has spread to the muscle layer of the renal pelvis or ureter.

### **stage II vaginal cancer**

Cancer has spread through the wall of the vagina to the tissue around the vagina. Cancer has not spread to the wall of the pelvis.

### **stage II vulvar cancer**

The tumor is any size and has spread to the lower one-third of the urethra, the lower one-third of the vagina, or the lower one-third of the anus. Cancer has not spread to the lymph nodes.

### **stage IIA intraocular melanoma of the ciliary body and choroid**

Stage II is divided into stages IIA and IIB. In stage IIA, the tumor (1) is size category 1 (not more than 12 millimeters wide and not more than 3 millimeters thick; or not more than 9 millimeters wide and 3.1 to 6 millimeters thick) and has spread to the ciliary body; or (2) is size category 1 and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is not more than 5 millimeters thick. The tumor may have spread to the ciliary body; or (3) is size category 2 (12.1 to 18 millimeters wide and not more than 3 millimeters thick; or 9.1 to 15 millimeters wide and 3.1 to 6 millimeters thick; or

not more than 12 millimeters wide and 6.1 to 9 millimeters thick) and is in the choroid only.

#### **stage IIA non-small cell lung cancer**

Stage II non-small cell lung cancer is divided into stages IIA and IIB. In stage IIA, the tumor is larger than 4 centimeters but not larger than 5 centimeters. Cancer has not spread to the lymph nodes and one or more of the following may be found: (1) cancer has spread to the main bronchus, but has not spread to the carina; and/or (2) cancer has spread to the innermost layer of the membrane that covers the lung; and/or (3) part of the lung or the whole lung has collapsed or has developed pneumonitis.

#### **stage IIB intraocular melanoma of the ciliary body and choroid**

Stage II is divided into stages IIA and IIB. In stage IIB, the tumor (1) is size category 2 (12.1 to 18 millimeters wide and not more than 3 millimeters thick; or 9.1 to 15 millimeters wide and 3.1 to 6 millimeters thick; or not more than 12 millimeters wide and 6.1 to 9 millimeters thick) and has spread to the ciliary body; or (2) is size category 3 (15.1 to 18 millimeters wide and 3.1 to 6 millimeters thick; or 12.1 to 18 millimeters wide and 6.1 to 9 millimeters thick; or not more than 18 millimeters wide and 9.1 to 12 millimeters thick; or not more than 15 millimeters wide and 12.1 to 15 millimeters thick) and is in the choroid only.

#### **stage IIB non-small cell lung cancer**

Stage II non-small cell lung cancer is divided into stages IIA and IIB. In stage IIB, the tumor is 5 centimeters or smaller and cancer has spread to the lymph nodes on the same side of the chest as the primary tumor. The lymph nodes with cancer are in the lung or near the bronchus. Also, one or more of the following may be found: (1) cancer has spread to the main bronchus, but has not spread to the carina; and/or (2) cancer has spread to the innermost layer of the membrane that covers the lung; and/or (3) part of the lung or the whole lung has collapsed or has developed pneumonitis; OR cancer has not spread to lymph nodes and one or more of the following is found: (1) the tumor is larger than 5 centimeters but not larger than 7 centimeters; and/or (2) there are one or more separate tumors in the same lobe of the lung as the primary tumor; and/or (3) cancer has spread to any of the following: the membrane that lines the inside of the chest wall, the chest wall, the nerve that controls the diaphragm, and/or the outer layer of tissue of the sac around the heart.

#### **stage III AIDS-related lymphoma**

Cancer is found (1) in groups of lymph nodes both above and below the diaphragm; or (2) in lymph nodes above the diaphragm and in the spleen.

#### **stage III HPV-negative oropharyngeal cancer**

Cancer (1) is either larger than 4 centimeters or has spread to the top of the epiglottis (the flap that covers the trachea during swallowing); or (2) is any size. Cancer has spread to one lymph node that is 3 centimeters or smaller, on the same side of the neck as the primary tumor.

#### **stage III HPV-positive oropharyngeal cancer**

One of the following is true: (1) cancer has spread to the larynx (voice box), front part of the roof of the mouth, lower jaw, muscles that move the tongue, or to other parts of the head or neck. Cancer may have spread to lymph nodes in the neck; or (2) the tumor is any size and cancer may have spread to the larynx, front part of the roof of the mouth, lower jaw, muscles that move the tongue, or to

other parts of the head or neck. Cancer has spread to one or more lymph nodes that are larger than 6 centimeters, anywhere in the neck.

### **stage III Merkel cell carcinoma**

Stage III Merkel cell cancer is divided into stages IIIA and IIIB. In stage IIIA, (1) the tumor may be any size and may have spread to nearby connective tissue, muscle, cartilage, or bone. A lymph node cannot be felt during a physical exam but cancer is found in the lymph node by sentinel lymph node biopsy or after the lymph node is removed and checked under a microscope for signs of cancer; or (2) a swollen lymph node is felt during a physical exam and/or seen on an imaging test. When the lymph node is removed and checked under a microscope for signs of cancer, cancer is found in the lymph node. The place where the cancer began is not known. In stage IIIB, the tumor may be any size and (1) may have spread to nearby connective tissue, muscle, cartilage, or bone. A swollen lymph node is felt during a physical exam and/or seen on an imaging test. When the lymph node is removed and checked under a microscope for signs of cancer, cancer is found in the lymph node; or (2) cancer is in a lymph vessel between the primary tumor and lymph nodes that are near or far away. Cancer may have spread to lymph nodes.

### **stage III Wilms tumor**

Cancer remains in the abdomen after surgery and at least one of the following is true: (1) cancer has spread to lymph nodes in the abdomen or pelvis; (2) cancer has spread to or through the surface of the peritoneum (the tissue that lines the abdominal cavity and covers most organs in the abdomen); (3) a biopsy of the tumor was done before it was removed; (4) the tumor broke open before or during surgery to remove it; (5) the tumor was removed in more than one piece; (6) cancer cells are found at the edges of the area where the tumor was removed; and/or (7) the entire tumor could not be removed because important organs or tissues in the body would be damaged.

### **stage III adenosarcoma of the uterus**

The tumor has spread into tissues in the abdomen. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, the tumor has spread to one site in the abdomen. In stage IIIB, the tumor has spread to more than one site in the abdomen. In stage IIIC, the tumor has spread to lymph nodes in the pelvis and/or around the abdominal aorta (the largest blood vessel in the abdomen).

### **stage III adrenocortical cancer**

The tumor is any size and has spread to (1) nearby lymph nodes; or (2) nearby tissues, organs (kidney, diaphragm, pancreas, spleen, or liver), or large blood vessels (renal vein or vena cava) and may have spread to nearby lymph nodes.

### **stage III adult Hodgkin lymphoma**

Cancer is found (1) in groups of lymph nodes both above and below the diaphragm; or (2) in lymph nodes above the diaphragm and in the spleen.

### **stage III adult non-Hodgkin lymphoma**

Cancer is found (1) in groups of lymph nodes both above and below the diaphragm; or (2) in lymph nodes above the diaphragm and in the spleen.

### **stage III adult soft tissue sarcoma of the retroperitoneum**

Stage III is divided into stages IIIA and IIIB. In stage IIIA, the tumor is larger than 5 centimeters but not larger than 10 centimeters and is mid grade or high grade. Mid-grade and high-grade cancer cells look more abnormal under a microscope



and grow and spread more quickly than low-grade cancer cells. In stage IIIB, the tumor is (1) larger than 10 centimeters and is mid grade or high grade; or (2) any size, any grade, and has spread to nearby lymph nodes.

### **stage III adult soft tissue sarcoma of the trunk, arms, and legs**

Stage III is divided into stages IIIA and IIIB. In stage IIIA, the tumor is larger than 5 centimeters but not larger than 10 centimeters and is mid grade or high grade. Mid-grade and high-grade cancer cells look more abnormal under a microscope and grow and spread more quickly than low-grade cancer cells. In stage IIIB, the tumor is larger than 10 centimeters and is mid grade or high grade.

### **stage III anal cancer**

Stage III anal cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, the tumor is 5 centimeters or smaller and has spread to lymph nodes near the anus or groin. In stage IIIB, the tumor is any size and has spread to nearby organs, such as the vagina, urethra, or bladder. Cancer has not spread to lymph nodes. In stage IIIC, the tumor is any size and may have spread to nearby organs. Cancer has spread to lymph nodes near the anus or groin.

### **stage III bladder cancer**

Stage III is divided into stages IIIA and IIIB. In stage IIIA, cancer (1) has grown all the way through the bladder muscles and bladder wall into the layer of fat surrounding the bladder and may have spread to the reproductive organs (prostate, seminal vesicles, uterus, or vagina) but has not spread to lymph nodes; or (2) has spread to one lymph node in the pelvis that is not near the major arteries in the pelvis, called the common iliac arteries. In stage IIIB, cancer has spread to more than one lymph node in the pelvis that is not near the common iliac arteries or to at least one lymph node that is near the common iliac arteries.

### **stage III cervical cancer**

Cancer has spread to the lower third of the vagina, and/or to the pelvic wall, and/or has caused kidney problems, and/or involves lymph nodes. Stage III is divided into stages IIIA, IIIB, and IIIC, based on how far the cancer has spread. In stage IIIA, cancer has spread to the lower third of the vagina but has not spread to the pelvic wall. In stage IIIB, cancer has spread to the pelvic wall and/or the tumor has become large enough to block one or both ureters (tubes that connect the kidneys to the bladder) or has caused one or both kidneys to get bigger or stop working. Stage IIIC is divided into stages IIIC1 and IIIC2, based on the spread of cancer to the lymph nodes. In stage IIIC1, cancer has spread to lymph nodes in the pelvis. In stage IIIC2, cancer has spread to lymph nodes in the abdomen near the aorta.

### **stage III childhood Hodgkin lymphoma**

Cancer is found (1) in lymph node groups above and below the diaphragm (the thin muscle below the lungs that helps breathing and separates the chest from the abdomen); or (2) in lymph node groups above the diaphragm and in the spleen.

### **stage III childhood non-Hodgkin lymphoma**

Cancer is found (1) in at least one area above the diaphragm (the thin muscle below the lungs and heart that separates the chest from the abdomen) and in at least one area below the diaphragm; or (2) to have started in the chest; or (3) to have started in the abdomen and spread throughout the abdomen and cannot be completely removed by surgery; or (4) in the area around the spine.



### **stage III chronic lymphocytic leukemia**

There are too many lymphocytes in the blood and there are too few red blood cells. The lymph nodes, liver, or spleen may be larger than normal.

### **stage III distal bile duct cancer**

Stage III is divided into stages IIIA and IIIB. In stage IIIA, cancer has spread into the wall of the distal bile duct and to 4 or more nearby lymph nodes. In stage IIIB, cancer has spread to the large vessels that carry blood to the organs in the abdomen. Cancer may have spread to 1 or more nearby lymph nodes.

### **stage III endometrial cancer**

Cancer has spread beyond the uterus and cervix, but has not spread beyond the pelvis. Stage III is divided into stages IIIA, IIIB, and IIIC, based on how far the cancer has spread within the pelvis. In stage IIIA, cancer has spread to the outer layer of the uterus and/or to the fallopian tubes, ovaries, and ligaments of the uterus. In stage IIIB, cancer has spread to the vagina and/or to the parametrium (connective tissue and fat around the uterus). In stage IIIC, cancer has spread to lymph nodes in the pelvis and/or around the aorta (largest artery in the body, which carries blood away from the heart).

### **stage III endometrial stromal sarcoma**

The tumor has spread into tissues in the abdomen. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, the tumor has spread to one site in the abdomen. In stage IIIB, the tumor has spread to more than one site in the abdomen. In stage IIIC, the tumor has spread to lymph nodes in the pelvis and/or around the abdominal aorta (the largest blood vessel in the abdomen).

### **stage III esophageal adenocarcinoma**

Stage III is divided into stages IIIA and IIIB, depending on where the cancer has spread. In stage IIIA, cancer has spread (1) into the mucosa layer, thin muscle layer, or submucosa layer of the esophagus wall. Cancer is found in 3 to 6 lymph nodes near the tumor; or (2) into the thick muscle layer of the esophagus wall. Cancer is found in 1 or 2 lymph nodes near the tumor. In stage IIIB, cancer has spread (1) into the thick muscle layer of the esophagus wall. Cancer is found in 3 to 6 lymph nodes near the tumor; or (2) into the connective tissue layer of the esophagus wall. Cancer is found in 1 to 6 lymph nodes near the tumor; or (3) into the diaphragm, pleura, sac around the heart, azygos vein, or peritoneum. Cancer may be found in 0 to 2 lymph nodes near the tumor.

### **stage III esophageal squamous cell carcinoma**

Stage III is divided into stages IIIA and IIIB, depending on where the cancer has spread. In stage IIIA, cancer has spread (1) into the mucosa layer, thin muscle layer, or submucosa layer of the esophagus wall. Cancer is found in 3 to 6 lymph nodes near the tumor; or (2) into the thick muscle layer of the esophagus wall. Cancer is found in 1 or 2 lymph nodes near the tumor. In stage IIIB, cancer has spread (1) into the thick muscle layer or the connective tissue layer of the esophagus wall. Cancer is found in 1 to 6 lymph nodes near the tumor; or (2) into the diaphragm, pleura, sac around the heart, azygos vein, or peritoneum. Cancer may be found in 0 to 2 lymph nodes near the tumor.

### **stage III gallbladder cancer**

Stage III is divided into stages IIIA and IIIB, depending on where the cancer has spread. In stage IIIA, cancer has spread through the connective tissue layer of the gallbladder wall to (1) the serosa (layer of tissue that covers the gallbladder); and/or (2) the liver; and/or (3) one nearby organ or structure (such as the

stomach, small intestine, colon, pancreas, or the bile ducts outside the liver). In stage IIIB, cancer has formed in the mucosa (innermost layer) of the gallbladder wall and may have spread to the muscle, connective tissue, or serosa and may have also spread to the liver or to one nearby organ or structure (such as the stomach, small intestine, colon, pancreas, or the bile ducts outside the liver). Cancer has spread to one to three nearby lymph nodes.

### **stage III gastric cancer**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, cancer (1) has spread to the muscle layer of the stomach wall and to 7 to 15 nearby lymph nodes; or (2) has spread to the subserosa (layer of connective tissue between the muscle layer and the outermost layer called the serosa) of the stomach wall and to 3 to 6 nearby lymph nodes; or (3) has spread to the serosa of the stomach wall and to 1 to 6 nearby lymph nodes; or (4) has spread to nearby organs, such as the spleen, colon, liver, diaphragm, pancreas, abdomen wall, adrenal gland, kidney, or small intestine, or to the back of the abdomen. In stage IIIB, cancer (1) may have spread to the submucosa (layer of connective tissue between the mucosa and the muscle layer) or to the muscle layer of the stomach wall and has spread to 16 or more nearby lymph nodes; or (2) has spread to the subserosa or to the serosa of the stomach wall and to 7 to 15 nearby lymph nodes; or (3) has spread to nearby organs, such as the spleen, colon, liver, diaphragm, pancreas, abdomen wall, adrenal gland, kidney, or small intestine, or to the back of the abdomen. Cancer has also spread to 1 to 6 nearby lymph nodes. In stage IIIC, cancer (1) has spread to the subserosa or to the serosa of the stomach wall and to 16 or more nearby lymph nodes; or (2) has spread to nearby organs, such as the spleen, colon, liver, diaphragm, pancreas, abdomen wall, adrenal gland, kidney, or small intestine, or to the back of the abdomen. Cancer has also spread to 7 or more nearby lymph nodes. Also called stage III stomach cancer.

### **stage III gestational trophoblastic neoplasia**

The tumor has spread to the lung, with or without spread to the ovary, fallopian tube, vagina, and/or the connective tissues around the uterus.

### **stage III hypopharyngeal cancer**

The tumor (1) is larger than 4 centimeters or has spread to the larynx (voice box) or the mucosa (inner lining) of the esophagus. Cancer may have spread to one lymph node on the same side of the neck as the tumor. The affected lymph node is 3 centimeters or smaller; or (2) has spread to one lymph node on the same side of the neck as the tumor. The affected lymph node is 3 centimeters or smaller. Cancer is also found (a) in only one area of the hypopharynx and/or the tumor is 2 centimeters or smaller; or (b) in more than one area of the hypopharynx or in a nearby area, or the tumor is larger than 2 centimeters but not larger than 4 centimeters and has not spread to the larynx.

### **stage III intrahepatic bile duct cancer**

Stage III intrahepatic bile duct cancer is divided into stages IIIA and IIIB. In stage IIIA, the tumor has spread through the capsule (outer lining) of the liver. In stage IIIB, cancer has spread to organs or tissues near the liver, such as the duodenum, colon, stomach, common bile duct, abdominal wall, diaphragm, or the part of the vena cava behind the liver, or the cancer has spread to nearby lymph nodes.

### **stage III kidney cancer**

One of the following is found: (1) the cancer in the kidney is any size and cancer has spread to nearby lymph nodes; or (2) cancer has spread to blood vessels in or near the kidney (renal vein or vena cava), to the fat around the structures in the kidney that collect urine, or to the layer of fatty tissue around the kidney. Cancer may have spread to nearby lymph nodes. Also called stage III renal cell cancer.

### **stage III laryngeal cancer**

Cancer has formed in the supraglottis, glottis, or subglottis area of the larynx. In stage III cancer of the supraglottis, (1) cancer is in the larynx only and the vocal cords do not work, and/or cancer has spread near or through the inner part of the thyroid cartilage. Cancer may have also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (2) cancer is in one area of the supraglottis and the vocal cords work normally. Cancer has spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (3) cancer is in more than one area of the supraglottis or has spread to the area at the base of the tongue or to tissues near the vocal cords. The vocal cords work normally. Cancer has also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller. In stage III cancer of the glottis, (1) cancer is in the larynx only and the vocal cords do not work, and/or cancer has spread near or through the inner part of the thyroid cartilage. Cancer may have also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (2) cancer is in one or both vocal cords and the vocal cords work normally. Cancer has spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (3) cancer has spread to the supraglottis, subglottis, or both, and/or the vocal cords do not work normally. Cancer has also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller. In stage III cancer of the subglottis, (1) cancer is in the larynx only and the vocal cords do not work, and/or cancer has spread near or through the inner part of the thyroid cartilage. Cancer may have also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (2) cancer is in the subglottis only. Cancer has spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (3) cancer has spread to one or both vocal cords and the vocal cords may not work normally. Cancer has also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller.

### **stage III leiomyosarcoma of the uterus**

The tumor has spread into tissues in the abdomen. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, the tumor has spread to one site in the abdomen. In stage IIIB, the tumor has spread to more than one site in the abdomen. In stage IIIC, the tumor has spread to lymph nodes in the pelvis and/or around the abdominal aorta (the largest blood vessel in the abdomen).

### **stage III lip and oral cavity cancer**

The tumor (1) is larger than 2 centimeters but not larger than 4 centimeters and the deepest point of tumor invasion is greater than 10 millimeters; or (2) is larger than 4 centimeters and the deepest point of tumor invasion is 10 millimeters or

less; or (3) has spread to one lymph node that is 3 centimeters or smaller, on the same side of the neck as the primary tumor.

### **stage III lymphedema**

A chronic condition marked by extreme swelling in an arm, leg, or other part of the body caused by a buildup of lymph in the tissues. The skin of the affected area usually feels hard and thick and may be darker in color. There may also be decreased mobility in the affected area. Stage III lymphedema can occur when lymph vessels or nodes become damaged or blocked, which affects the flow of lymph in the body. This is most commonly caused by cancer or cancer treatment, such as surgery or radiation therapy. Stage III lymphedema is considered the most advanced stage of lymphedema. Also called lymphostatic elephantiasis.

### **stage III malignant pleural mesothelioma**

Stage III is divided into stages IIIA and IIIB. In stage IIIA, cancer is found in the inside lining of the chest wall, and in each of the thin layers of tissue that cover the lung, the organs between the lungs, and the top of the diaphragm on one side of the chest. On the same side of the chest, cancer has also spread into one or more of the following: tissue between the ribs and the inside lining of the chest wall; fat in the area between the lungs; soft tissues of the chest wall; and/or sac around the heart. Cancer has spread to lymph nodes along the center of the chest on the same side of the chest as the tumor. In stage IIIB, cancer (1) is found in the inside lining of the chest wall, and may also be found in the thin layers of tissue that cover the lung, the organs between the lungs, and/or the top of the diaphragm on one side of the chest. On the same side of the chest, cancer may have also spread into one or more of the following: diaphragm; lung tissue; tissue between the ribs and the inside lining of the chest wall; fat in the area between the lungs; soft tissues of the chest wall; and/or sac around the heart. Cancer has spread to lymph nodes above the collarbone on either side of the chest, or cancer has spread to lymph nodes along the center of the chest on the opposite side of the chest as the tumor; or (2) is found in the inside lining of the chest wall, and in each of the thin layers of tissue that cover the lung, the organs between the lungs, and the top of the diaphragm on one side of the chest. Cancer has also spread to one or more of the following: the chest wall and may be found in the rib; through the diaphragm into the peritoneum; the tissue lining the chest on the opposite side of the body as the tumor; the organs in the area between the lungs (esophagus, trachea, thymus, blood vessels); the spine; and/or through the sac around the heart or into the heart muscle. Cancer may have spread to lymph nodes.

### **stage III maxillary sinus cancer**

Cancer (1) has spread to any of the following: the bone at the back of the maxillary sinus, the tissues under the skin, the part of the eye socket near the nose or the bottom of the eye socket, the area behind the cheek bone, and/or the ethmoid sinus; or (2) is found in the maxillary sinus and may have spread to any of the following: the bones around the maxillary sinus (including the roof of the mouth and the nose), the tissues under the skin, the part of the eye socket near the nose or the bottom of the eye socket, the area behind the cheek bone, and/or the ethmoid sinus. Cancer has also spread to one lymph node on the same side of the neck as the cancer, and the lymph node is 3 centimeters or smaller.

### **stage III medullary thyroid cancer**

The tumor is any size and cancer may have spread from the thyroid to nearby muscles in the neck. Cancer has spread to lymph nodes on one or both sides of the trachea or larynx.

### **stage III multiple myeloma**

A relatively large number of cancer cells have spread throughout the body. There may be one or more of the following: 1) a decrease in the number of red blood cells, causing anemia; 2) the amount of calcium in the blood is very high, because the bones are being damaged; 3) more than three bone tumors (plasmacytomas) are found; or 4) high levels of M protein are found in the blood or urine.

### **stage III mycosis fungoides**

In stage III, 80% or more of the skin surface is reddened and may have patches, papules, plaques, or tumors. Lymph nodes may be abnormal, but they are not cancerous. There may be a low number of Sezary cells in the blood.

### **stage III nasal cavity and ethmoid sinus cancer**

Cancer (1) has spread to any of the following: the part of the eye socket near the nose or the bottom of the eye socket, the maxillary sinus, the roof of the mouth, and/or the bone between the eyes; or (2) is found in the nasal cavity or ethmoid sinus and may have spread to any of the following: the part of the eye socket near the nose or the bottom of the eye socket, the maxillary sinus, the roof of the mouth, and/or the bone between the eyes. Cancer has also spread to one lymph node on the same side of the neck as the cancer, and the lymph node is 3 centimeters or smaller.

### **stage III nasopharyngeal cancer**

One of the following is true: (1) cancer has spread to one or more lymph nodes on both sides of the neck. The affected lymph nodes are 6 centimeters or smaller. Cancer is found in the nasopharynx only, or has spread from the nasopharynx to the oropharynx and/or to the nasal cavity, or is found only in the lymph nodes in the neck. The cancer cells in the lymph nodes are infected with Epstein-Barr virus (a virus linked to nasopharyngeal cancer); or (2) cancer has spread to the parapharyngeal space (area near the pharynx, between the base of the skull and the lower jaw) and/or to nearby muscles. Cancer has also spread to one or more lymph nodes on both sides of the neck. The affected lymph nodes are 6 centimeters or smaller; or (3) cancer has spread to the bones at the bottom of the skull, the bones in the neck, the jaw muscles, and/or the sinuses around the nose and eyes. Cancer may have also spread to one or more lymph nodes on one or both sides of the neck and/or the back of the throat. The affected lymph nodes are 6 centimeters or smaller.

### **stage III nonmelanoma skin cancer on the eyelid**

Stage III is divided into stages IIIA and IIIB. In stage IIIA, the tumor may be any size and may have spread to the edge of the eyelid where the lashes are, to the connective tissue in the eyelid, or to the full thickness of the eyelid, or to the eye, eye socket, sinuses, tear ducts, or brain, or to the tissues that support the eye. Cancer has spread to one lymph node on the same side of the body as the tumor and the node is 3 centimeters or smaller. In stage IIIB, the tumor may be any size and may have spread to the edge of the eyelid where the lashes are, to the connective tissue in the eyelid, or to the full thickness of the eyelid, or to the eye, eye socket, sinuses, tear ducts, or brain, or to the tissues that support the eye. Cancer has spread to (1) one lymph node on the same side of the body as the tumor and the node is larger than 3 centimeters; or (2) more than one lymph node on the opposite side of the body as the tumor or on both sides of the body.



### **stage III nonmelanoma skin cancer on the head and neck (not on the eyelid)**

The tumor (1) is larger than 4 centimeters, or cancer has spread to tissue covering the nerves below the dermis, or has spread below the subcutaneous tissue, or has spread to the bone and the bone has minor damage. Cancer may have also spread to one lymph node on the same side of the body as the tumor and the node is 3 centimeters or smaller, and cancer has not spread through to the outside covering of the lymph node; or (2) is 4 centimeters or smaller. Cancer has spread to one lymph node on the same side of the body as the tumor and the node is 3 centimeters or smaller.

### **stage III ovarian epithelial, fallopian tube, and primary peritoneal cancer**

Cancer is found in one or both ovaries or fallopian tubes, or is primary peritoneal cancer, and has spread outside the pelvis to other parts of the abdomen and/or to nearby lymph nodes. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, one of the following is true: (1) cancer has spread to lymph nodes behind the peritoneum (tissue that lines the abdominal wall and covers organs in the abdomen) only; or (2) cancer cells that can be seen only with a microscope have spread to the surface of the peritoneum outside the pelvis, such as the omentum (a fold of the peritoneum that surrounds the stomach and other organs in the abdomen). Cancer may have spread to nearby lymph nodes. In stage IIIB, cancer has spread to the peritoneum outside the pelvis, such as the omentum, and the cancer in the peritoneum is 2 centimeters or smaller. Cancer may have spread to lymph nodes behind the peritoneum. In stage IIIC, cancer has spread to the peritoneum outside the pelvis, such as the omentum, and the cancer in the peritoneum is larger than 2 centimeters. Cancer may have spread to lymph nodes behind the peritoneum or to the surface of the liver or spleen.

### **stage III ovarian germ cell tumor**

Cancer is found in one or both ovaries or fallopian tubes, or is primary peritoneal cancer, and has spread outside the pelvis to other parts of the abdomen and/or to nearby lymph nodes. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, one of the following is true: (1) cancer has spread to lymph nodes behind the peritoneum (the tissue that lines the abdominal wall and covers most of the organs in the abdomen) only; or (2) cancer cells that can be seen only with a microscope have spread to the surface of the peritoneum outside the pelvis, such as the omentum (a fold of the peritoneum that surrounds the stomach and other organs in the abdomen). Cancer may have spread to nearby lymph nodes. In stage IIIB, cancer has spread to the peritoneum outside the pelvis, such as the omentum, and the cancer in the peritoneum is 2 centimeters or smaller. Cancer may have spread to lymph nodes behind the peritoneum. In stage IIIC, cancer has spread to the peritoneum outside the pelvis, such as the omentum, and the cancer in the peritoneum is larger than 2 centimeters. Cancer may have spread to lymph nodes behind the peritoneum or to the surface of the liver or spleen.

### **stage III ovarian low malignant potential tumor**

The tumor is found in one or both ovaries or fallopian tubes, or is primary peritoneal cancer, and has spread outside the pelvis to other parts of the abdomen and/or to nearby lymph nodes. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, one of the following is true: (1) the tumor has spread to lymph nodes in the area outside or behind the peritoneum only; or (2) tumor cells that can be seen only with a microscope have spread to the surface of the peritoneum outside the pelvis. The tumor may have spread to nearby lymph nodes. In stage IIIB, the tumor has spread to the peritoneum outside the pelvis and the tumor in the peritoneum is 2 centimeters or smaller. The tumor may have



spread to lymph nodes behind the peritoneum. In stage IIIC, the tumor has spread to the peritoneum outside the pelvis and the tumor in the peritoneum is larger than 2 centimeters. The tumor may have spread to lymph nodes behind the peritoneum or to the surface of the liver or spleen.

### **stage III pancreatic cancer**

The tumor is any size and cancer has spread to (1) four or more nearby lymph nodes; or (2) the major blood vessels near the pancreas.

### **stage III papillary and follicular thyroid cancer (55 years and older)**

The tumor is any size and cancer has spread from the thyroid to soft tissue under the skin, the esophagus, the trachea, the larynx, or the recurrent laryngeal nerve (a nerve that goes to the larynx). Cancer may have spread to lymph nodes.

### **stage III penile cancer**

Stage III penile cancer is divided into stages IIIA and IIIB. In stage IIIA, cancer is found in the penis and has spread to 1 or 2 lymph nodes on one side of the groin. In stage IIIB, cancer is found in the penis and has spread to 3 or more lymph nodes on one side of the groin or to lymph nodes on both sides of the groin.

### **stage III perihilar bile duct cancer**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, cancer has spread to branches on one side of the hepatic artery or of the portal vein. In stage IIIB, cancer has spread to one or more of the following: (1) the main part of the portal vein or its branches on both sides; (2) the common hepatic artery; (3) the right hepatic duct and the left branch of the hepatic artery or of the portal vein; and/or (4) the left hepatic duct and the right branch of the hepatic artery or of the portal vein. In stage IIIC, cancer has spread to 1 to 3 nearby lymph nodes.

### **stage III prostate cancer**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, cancer is found in one or both sides of the prostate. The prostate-specific antigen (PSA) level is at least 20 and the Grade Group is 1, 2, 3, or 4 (Gleason score is 8 or less). In stage IIIB, cancer has spread from the prostate to the seminal vesicles or to nearby tissue or organs, such as the rectum, bladder, or pelvic wall. The PSA can be any level and the Grade Group is 1, 2, 3, or 4. In stage IIIC, cancer is found in one or both sides of the prostate and may have spread to the seminal vesicles or to nearby tissue or organs, such as the rectum, bladder, or pelvic wall. The PSA can be any level and the Grade Group is 5 (Gleason score is 9 or 10).

### **stage III renal cell cancer**

One of the following is found: (1) the cancer in the kidney is any size and cancer has spread to nearby lymph nodes; or (2) cancer has spread to blood vessels in or near the kidney (renal vein or vena cava), to the fat around the structures in the kidney that collect urine, or to the layer of fatty tissue around the kidney. Cancer may have spread to nearby lymph nodes. Also called stage III kidney cancer.

### **stage III salivary gland cancer**

One of the following is true: (1) the tumor is larger than 4 centimeters and/or cancer has spread to soft tissue around the salivary gland; or (2) the tumor is any size and cancer may have spread to soft tissue around the salivary gland.

Cancer has spread to one lymph node on the same side of the head or neck as the tumor. The lymph node is 3 centimeters or smaller and cancer has not grown outside the lymph node.

### **stage III stomach cancer**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, cancer (1) has spread to the muscle layer of the stomach wall and to 7 to 15 nearby lymph nodes; or (2) has spread to the subserosa (layer of connective tissue between the muscle layer and the outermost layer called the serosa) of the stomach wall and to 3 to 6 nearby lymph nodes; or (3) has spread to the serosa of the stomach wall and to 1 to 6 nearby lymph nodes; or (4) has spread to nearby organs, such as the spleen, colon, liver, diaphragm, pancreas, abdomen wall, adrenal gland, kidney, or small intestine, or to the back of the abdomen. In stage IIIB, cancer (1) may have spread to the submucosa (layer of connective tissue between the mucosa and the muscle layer) or to the muscle layer of the stomach wall and has spread to 16 or more nearby lymph nodes; or (2) has spread to the subserosa or to the serosa of the stomach wall and to 7 to 15 nearby lymph nodes; or (3) has spread to nearby organs, such as the spleen, colon, liver, diaphragm, pancreas, abdomen wall, adrenal gland, kidney, or small intestine, or to the back of the abdomen. Cancer has also spread to 1 to 6 nearby lymph nodes. In stage IIIC, cancer (1) has spread to the subserosa or to the serosa of the stomach wall and to 16 or more nearby lymph nodes; or (2) has spread to nearby organs, such as the spleen, colon, liver, diaphragm, pancreas, abdomen wall, adrenal gland, kidney, or small intestine, or to the back of the abdomen. Cancer has also spread to 7 or more nearby lymph nodes. Also called stage III gastric cancer.

### **stage III testicular cancer**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer may have spread to one or more nearby lymph nodes. Cancer has spread to distant lymph nodes or to the lungs. All tumor marker levels are normal or slightly above normal. In stage IIIB, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer has spread (1) to one or more nearby lymph nodes and has not spread to other parts of the body; or (2) to one or more nearby lymph nodes. Cancer has spread to distant lymph nodes or to the lungs. The level of one or more tumor markers is moderately above normal. In stage IIIC, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer has spread (1) to one or more nearby lymph nodes and has not spread to other parts of the body; or (2) to one or more nearby lymph nodes. Cancer has spread to distant lymph nodes or to the lungs. The level of one or more tumor markers is high. OR, cancer is found anywhere in the testicle and may have spread into the spermatic cord or scrotum. Cancer has not spread to distant lymph nodes or the lung, but has spread to other parts of the body, such as the liver or bone. Tumor marker levels may range from normal to high.

### **stage III thymoma**

Cancer has spread to nearby organs in the chest, including the lung, the sac around the heart, or large blood vessels that carry blood to the heart.

### **stage III transitional cell cancer of the renal pelvis and ureter**

Cancer has spread (1) from the muscle layer of the renal pelvis to fat around the renal pelvis or to tissue in the kidney; or (2) from the muscle layer of the ureter to fat around the ureter.

### **stage III vaginal cancer**

Cancer has spread to the wall of the pelvis.

### **stage III vulvar cancer**

The tumor is any size and has spread to the upper two-thirds of the urethra, the upper two-thirds of the vagina, the inner lining of the bladder or rectum, or to any number of lymph nodes. Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, cancer is found in lymph nodes in the groin that are not larger than 5 millimeters. In stage IIIB, cancer is found in lymph nodes in the groin that are larger than 5 millimeters. In stage IIIC, cancer is found in lymph nodes in the groin and has extended through the outer covering of the lymph nodes.

### **stage IIIA colorectal cancer**

Stage III colorectal cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, (1) cancer has spread through the mucosa (innermost layer) of the colon and/or rectum wall to the submucosa (layer of tissue next to the mucosa) or to the muscle layer of the colon and/or rectum wall. Cancer has spread to one to three nearby lymph nodes or cancer cells have formed in tissue near the lymph nodes; or (2) cancer has spread through the mucosa of the colon and/or rectum wall to the submucosa. Cancer has spread to four to six nearby lymph nodes.

### **stage IIIA intraocular melanoma of the ciliary body and choroid**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, the tumor (1) is size category 2 (12.1 to 18 millimeters wide and not more than 3 millimeters thick; or 9.1 to 15 millimeters wide and 3.1 to 6 millimeters thick; or not more than 12 millimeters wide and 6.1 to 9 millimeters thick) and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is not more than 5 millimeters thick. The tumor may have spread to the ciliary body; or (2) is size category 3 (15.1 to 18 millimeters wide and 3.1 to 6 millimeters thick; or 12.1 to 18 millimeters wide and 6.1 to 9 millimeters thick; or not more than 18 millimeters wide and 9.1 to 12 millimeters thick; or not more than 15 millimeters wide and 12.1 to 15 millimeters thick) and has spread to the ciliary body; or (3) is size category 3 and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is not more than 5 millimeters thick. The tumor has not spread to the ciliary body; or (4) is size category 4 (more than 18 millimeters wide and may be any thickness; or 15.1 to 18 millimeters wide and more than 12 millimeters thick; or not more than 15 millimeters wide and more than 15 millimeters thick) and is in the choroid only.

### **stage IIIA melanoma**

Stage III is divided into stages IIIA, IIIB, IIIC, and IIID. In stage IIIA, the tumor is not more than 1 millimeter thick, with ulceration (a break in the skin), or not more than 2 millimeters thick, without ulceration. Cancer is found in one to three lymph nodes by sentinel lymph node biopsy.

### **stage IIIA non-small cell lung cancer**

Stage III non-small cell lung cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIA, the tumor is 5 centimeters or smaller and cancer has spread to lymph nodes on the same side of the chest as the primary tumor. The lymph nodes with cancer are around the trachea or aorta, or where the trachea divides into the bronchi. Also, one or more of the following may be found: (1) cancer has spread to the main bronchus, but has not spread to the carina; and/or (2) cancer has spread to the innermost layer of the membrane that covers the lung; and/or (3) part of the lung or the whole lung has collapsed or has developed pneumonitis; OR cancer has spread to lymph nodes on the same side of the chest as the

primary tumor. The lymph nodes with cancer are in the lung or near the bronchus. Also, one or more of the following is found: (1) the tumor is larger than 5 centimeters but not larger than 7 centimeters; and/or (2) there are one or more separate tumors in the same lobe of the lung as the primary tumor; and/or (3) cancer has spread to any of the following: the membrane that lines the inside of the chest wall, the chest wall, the nerve that controls the diaphragm, or the outer layer of tissue of the sac around the heart; OR cancer may have spread to lymph nodes on the same side of the chest as the primary tumor. The lymph nodes with cancer are in the lung or near the bronchus. Also, one or more of the following is found: (1) the tumor is larger than 7 centimeters; and/or (2) there are one or more separate tumors in a different lobe of the lung with the primary tumor; and/or (3) the tumor is any size and cancer has spread to any of the following: the trachea, carina, esophagus, breastbone or backbone, diaphragm, heart, major blood vessels that lead to or from the heart (aorta or vena cava), or the nerve that controls the larynx (voice box).

### **stage IIIB colorectal cancer**

Stage III colorectal cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIB, (1) cancer has spread through the muscle layer of the colon and/or rectum wall to the serosa (outermost layer) of the colon and/or rectum wall or has spread through the serosa to the tissue that lines the organs in the abdomen (visceral peritoneum). Cancer has spread to one to three nearby lymph nodes or cancer cells have formed in tissue near the lymph nodes; or (2) cancer has spread to the muscle layer or to the serosa of the colon and/or rectum wall. Cancer has spread to four to six nearby lymph nodes; or (3) cancer has spread through the mucosa (innermost layer) of the colon and/or rectum wall to the submucosa (layer of tissue next to the mucosa) or to the muscle layer of the colon and/or rectum wall. Cancer has spread to seven or more nearby lymph nodes.

### **stage IIIB intraocular melanoma of the ciliary body and choroid**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIB, the tumor (1) is size category 3 (15.1 to 18 millimeters wide and 3.1 to 6 millimeters thick; or 12.1 to 18 millimeters wide and 6.1 to 9 millimeters thick; or not more than 18 millimeters wide and 9.1 to 12 millimeters thick; or not more than 15 millimeters wide and 12.1 to 15 millimeters thick) and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is not more than 5 millimeters thick. The tumor has spread to the ciliary body; or (2) is size category 4 (more than 18 millimeters wide and may be any thickness; or 15.1 to 18 millimeters wide and more than 12 millimeters thick; or not more than 15 millimeters wide and more than 15 millimeters thick) and has spread to the ciliary body; or (3) is size category 4 and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is not more than 5 millimeters thick. The tumor has not spread to the ciliary body.

### **stage IIIB melanoma**

Stage III is divided into stages IIIA, IIIB, IIIC, and IIID. In stage IIIB, it is not known where the cancer began or the primary tumor can no longer be seen, and one of the following is true: (1) cancer is found in one lymph node by physical exam or imaging tests; or (2) there are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin; OR the tumor is not more than 1 millimeter thick, without ulceration (a break in the skin), or not more than 2 millimeters thick, without ulceration, and one of the following is true: (1) cancer is found in one to three lymph nodes by physical exam or imaging tests; or (2) there are microsatellite tumors, satellite tumors, and/or in-transit metastases on

or under the skin; OR the tumor is more than 1 but not more than 2 millimeters thick, with ulceration, or more than 2 but not more than 4 millimeters thick, without ulceration, and one of the following is true: (1) cancer is found in one to three lymph nodes; or (2) there are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin.

#### **stage IIIB non-small cell lung cancer**

Stage III non-small cell lung cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIB, the tumor is 5 centimeters or smaller and cancer has spread to lymph nodes above the collarbone on the same side of the chest as the primary tumor or to any lymph nodes on the opposite side of the chest as the primary tumor. Also, one or more of the following may be found: (1) cancer has spread to the main bronchus, but has not spread to the carina; and/or (2) cancer has spread to the innermost layer of the membrane that covers the lung; and/or (3) part of the lung or the whole lung has collapsed or has developed pneumonitis; OR the tumor may be any size and cancer has spread to lymph nodes on the same side of the chest as the primary tumor. The lymph nodes with cancer are around the trachea or aorta, or where the trachea divides into the bronchi. Also, one or more of the following is found: (1) there are one or more separate tumors in the same lobe or a different lobe of the lung with the primary tumor; and/or (2) cancer has spread to any of the following: the membrane that lines the inside of the chest wall, the chest wall, the nerve that controls the diaphragm, the outer layer of tissue of the sac around the heart, the trachea, carina, esophagus, breastbone or backbone, diaphragm, heart, major blood vessels that lead to or from the heart (aorta or vena cava), or the nerve that controls the larynx (voice box).

#### **stage IIIC colorectal cancer**

Stage III colorectal cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIC, cancer has spread (1) through the serosa (outermost layer) of the colon and/or rectum wall to the tissue that lines the organs in the abdomen (visceral peritoneum). Cancer has spread to 4 to 6 nearby lymph nodes; or (2) through the muscle layer of the colon and/or rectum wall to the serosa of the colon and/or rectum wall or has spread through the serosa to the visceral peritoneum. Cancer has spread to seven or more nearby lymph nodes; or (3) through the serosa of the colon and/or rectum wall to nearby organs. Cancer has spread to one or more nearby lymph nodes or cancer cells have formed in tissue near the lymph nodes.

#### **stage IIIC intraocular melanoma of the ciliary body and choroid**

Stage III is divided into stages IIIA, IIIB, and IIIC. In stage IIIC, the tumor (1) is size category 4 (more than 18 millimeters wide and may be any thickness; or 15.1 to 18 millimeters wide and more than 12 millimeters thick; or not more than 15 millimeters wide and more than 15 millimeters thick) and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is not more than 5 millimeters thick. The tumor has spread to the ciliary body; or (2) may be any size and has spread through the sclera to the outside of the eyeball. The part of the tumor outside the eyeball is more than 5 millimeters thick.

#### **stage IIIC melanoma**

Stage III is divided into stages IIIA, IIIB, IIIC, and IIID. In stage IIIC, it is not known where the cancer began or the primary tumor can no longer be seen. Cancer is found: (1) in two or three lymph nodes; or (2) in one lymph node and there are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin; or (3) in four or more lymph nodes, or in any number of lymph



nodes that are matted together; or (4) in two or more lymph nodes and/or in any number of lymph nodes that are matted together. There are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin; OR the tumor is not more than 2 millimeters thick, with or without ulceration (a break in the skin), or not more than 4 millimeters thick, without ulceration. Cancer is found: (1) in one lymph node and there are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin; or (2) in four or more lymph nodes, or in any number of lymph nodes that are matted together; or (3) in two or more lymph nodes and/or in any number of lymph nodes that are matted together. There are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin; OR the tumor is more than 2 but not more than 4 millimeters thick, with ulceration, or more than 4 millimeters thick, without ulceration. Cancer is found in one or more lymph nodes and/or in any number of lymph nodes that are matted together. There may be microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin; OR the tumor is more than 4 millimeters thick, with ulceration. Cancer is found in one or more lymph nodes and/or there are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin.

### **stage IIIC non-small cell lung cancer**

Stage III non-small cell lung cancer is divided into stages IIIA, IIIB, and IIIC. In stage IIIC, the tumor may be any size and cancer has spread to lymph nodes above the collarbone on the same side of the chest as the primary tumor or to any lymph nodes on the opposite side of the chest as the primary tumor. Also, one or more of the following is found: (1) there are one or more separate tumors in the same lobe or a different lobe of the lung with the primary tumor; and/or (2) cancer has spread to any of the following: the membrane that lines the inside of the chest wall, the chest wall, the nerve that controls the diaphragm, the outer layer of tissue of the sac around the heart, the trachea, carina, esophagus, breastbone or backbone, diaphragm, heart, major blood vessels that lead to or from the heart (aorta or vena cava), or the nerve that controls the larynx (voice box).

### **stage IIID melanoma**

Stage III is divided into stages IIIA, IIIB, IIIC, and IIID. In stage IIID, the tumor is more than 4 millimeters thick, with ulceration (a break in the skin). Cancer is found: (1) in four or more lymph nodes, or in any number of lymph nodes that are matted together; or (2) in two or more lymph nodes and/or in any number of lymph nodes that are matted together. There are microsatellite tumors, satellite tumors, and/or in-transit metastases on or under the skin.

### **stage IV AIDS-related lymphoma**

Cancer (1) has spread throughout one or more organs outside the lymph system; or (2) is found in two or more groups of lymph nodes that are either above the diaphragm or below the diaphragm and in one organ that is outside the lymph system and not near the affected lymph nodes; or (3) is found in groups of lymph nodes both above and below the diaphragm and in any organ that is outside the lymph system; or (4) is found in the liver, bone marrow, more than one place in the lung, or cerebrospinal fluid (CSF). The cancer has not spread directly into the liver, bone marrow, lung, or CSF from nearby lymph nodes.

### **stage IV HPV-negative oropharyngeal cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVA, cancer (1) has spread to the larynx (voice box), front part of the roof of the mouth, lower jaw, or muscles that move the tongue. Cancer may have spread to one lymph node that



is 3 centimeters or smaller, on the same side of the neck as the primary tumor; or (2) is any size and may have spread to the top of the epiglottis, larynx, front part of the roof of the mouth, lower jaw, or muscles that move the tongue. Cancer has spread to one of the following: (a) one lymph node that is larger than 3 centimeters but not larger than 6 centimeters, on the same side of the neck as the primary tumor; or (b) more than one lymph node that is 6 centimeters or smaller, anywhere in the neck. In stage IVB, cancer (1) has spread to the muscle that moves the lower jaw, the bone attached to the muscle that moves the lower jaw, the base of the skull, or to the area behind the nose or around the carotid artery. Cancer may have spread to lymph nodes in the neck; or (2) may be any size and may have spread to other parts of the head or neck. Cancer has spread to a lymph node that is larger than 6 centimeters or has spread through the outside covering of a lymph node into nearby connective tissue. In stage IVC, cancer has spread to other parts of the body, such as the lung, liver, or bone.

#### **stage IV HPV-positive oropharyngeal cancer**

Cancer has spread to other parts of the body, such as the lung or bone.

#### **stage IV Merkel cell carcinoma**

The tumor has spread to skin that is not close to the primary tumor or to other parts of the body, such as the liver, lung, bone, or brain.

#### **stage IV Wilms tumor**

Cancer has spread through the blood to organs such as the lungs, liver, bone, or brain, or to lymph nodes outside the abdomen and pelvis.

#### **stage IV adenosarcoma of the uterus**

Stage IV is divided into stages IVA and IVB. In stage IVA, the tumor has spread to the bladder and/or the rectum. In stage IVB, the tumor has spread to distant parts of the body.

#### **stage IV adrenocortical cancer**

The tumor is any size, may have spread to nearby lymph nodes, and has spread to other parts of the body, such as the lung, bone, or peritoneum.

#### **stage IV adult Hodgkin lymphoma**

Cancer (1) has spread throughout one or more organs outside the lymph system; or (2) is found in two or more groups of lymph nodes that are either above the diaphragm or below the diaphragm and in one organ that is outside the lymph system and not near the affected lymph nodes; or (3) is found in groups of lymph nodes both above and below the diaphragm and in any organ that is outside the lymph system; or (4) is found in the liver, bone marrow, more than one place in the lung, or cerebrospinal fluid (CSF). The cancer has not spread directly into the liver, bone marrow, lung, or CSF from nearby lymph nodes.

#### **stage IV adult non-Hodgkin lymphoma**

Cancer (1) has spread throughout one or more organs outside the lymph system; or (2) is found in two or more groups of lymph nodes that are either above the diaphragm or below the diaphragm and in one organ that is outside the lymph system and not near the affected lymph nodes; or (3) is found in groups of lymph nodes above and below the diaphragm and in any organ that is outside the lymph system; or (4) is found in the liver, bone marrow, more than one place in the lung, or cerebrospinal fluid (CSF). The cancer has not spread directly into the liver, bone marrow, lung, or CSF from nearby lymph nodes.

#### **stage IV adult soft tissue sarcoma of the retroperitoneum**

The tumor is any size, any grade, and may have spread to nearby lymph nodes. Cancer has spread to other parts of the body, such as the lung.

#### **stage IV adult soft tissue sarcoma of the trunk, arms, and legs**

The tumor is (1) any size, any grade, and has spread to nearby lymph nodes; or (2) any size, any grade, and may have spread to nearby lymph nodes. Cancer has spread to other parts of the body, such as the lung.

#### **stage IV anal cancer**

The tumor is any size. Cancer may have spread to lymph nodes or nearby organs and has spread to other parts of the body, such as the liver or lungs.

#### **stage IV bladder cancer**

Stage IV is divided into stages IVA and IVB. In stage IVA, cancer has spread (1) to the abdominal wall or pelvic wall; or (2) to lymph nodes that are above the major arteries in the pelvis, called the common iliac arteries. In stage IVB, cancer has spread to other parts of the body, such as the lung, bone, or liver.

#### **stage IV cervical cancer**

Cancer has spread beyond the pelvis, or has spread to the lining of the bladder or rectum, or has spread to other parts of the body. Stage IV is divided into stages IVA and IVB, based on where the cancer has spread. In stage IVA, cancer has spread to nearby pelvic organs, such as the bladder or rectum. In stage IVB, cancer has spread to other parts of the body, such as the liver, lungs, bones, or distant lymph nodes.

#### **stage IV childhood Hodgkin lymphoma**

Cancer (1) has spread throughout one or more organs outside the lymph system and may be in lymph nodes near those organs; or (2) is found in two or more groups of lymph nodes that are on the same side of the diaphragm and in an organ that is outside the lymph system and not near the affected lymph nodes; or (3) is found in groups of lymph nodes on both sides of the diaphragm and in any organ that is outside the lymph system; or (4) has spread to the lungs, liver, or bone marrow from areas far away.

#### **stage IV childhood non-Hodgkin lymphoma**

Cancer is found in the bone marrow, brain, or cerebrospinal fluid. Cancer may also be found in other parts of the body.

#### **stage IV chronic lymphocytic leukemia**

There are too many lymphocytes in the blood and too few platelets. The lymph nodes, liver, or spleen may be larger than normal and there may be too few red blood cells.

#### **stage IV colorectal cancer**

Stage IV colorectal cancer is divided into stages IVA, IVB, and IVC. In stage IVA, cancer has spread to one area or organ that is not near the colon and/or rectum, such as the liver, lung, ovary, or a distant lymph node. In stage IVB, cancer has spread to more than one area or organ that is not near the colon and/or rectum, such as the liver, lung, ovary, or a distant lymph node. In stage IVC, cancer has spread to the tissue that lines the wall of the abdomen and may have spread to other areas or organs.

#### **stage IV distal bile duct cancer**

Cancer has spread to other parts of the body, such as the liver, lungs, or tissue lining the wall of the abdomen and most organs in the abdomen.

#### **stage IV endometrial cancer**

Cancer has spread beyond the pelvis. Stage IV is divided into stages IVA and IVB, based on how far the cancer has spread. In stage IVA, cancer has spread to the bladder and/or bowel wall. In stage IVB, cancer has spread to other parts of the body beyond the pelvis, including the abdomen and/or lymph nodes in the groin.

#### **stage IV endometrial stromal sarcoma**

Stage IV is divided into stages IVA and IVB. In stage IVA, the tumor has spread to the bladder and/or the rectum. In stage IVB, the tumor has spread to distant parts of the body.

#### **stage IV esophageal adenocarcinoma**

Stage IV is divided into stages IVA and IVB, depending on where the cancer has spread. In stage IVA, cancer has spread (1) into the diaphragm, pleura, sac around the heart, azygos vein, or peritoneum. Cancer is found in 3 to 6 lymph nodes near the tumor; or (2) into nearby structures, such as the aorta, airway, or spine. Cancer may be found in 0 to 6 lymph nodes near the tumor; or (3) to 7 or more lymph nodes near the tumor. In stage IVB, cancer has spread to other parts of the body, such as the liver or lung.

#### **stage IV esophageal squamous cell carcinoma**

Stage IV is divided into stages IVA and IVB, depending on where the cancer has spread. In stage IVA, cancer has spread (1) into the diaphragm, pleura, sac around the heart, azygos vein, or peritoneum. Cancer is found in 3 to 6 lymph nodes near the tumor; or (2) into nearby structures, such as the aorta, airway, or spine. Cancer may be found in 0 to 6 lymph nodes near the tumor; or (3) to 7 or more lymph nodes near the tumor. In stage IVB, cancer has spread to other parts of the body, such as the liver or lung.

#### **stage IV gallbladder cancer**

Stage IV is divided into stages IVA and IVB. In stage IVA, cancer has spread to the portal vein or hepatic artery or to two or more organs or structures other than the liver. Cancer may have spread to one to three nearby lymph nodes. In stage IVB, cancer may have spread to nearby organs or structures. Cancer has spread to (1) four or more nearby lymph nodes; or (2) other parts of the body, such as the peritoneum and liver.

#### **stage IV gastric cancer**

Cancer has spread to other parts of the body, such as the lungs, liver, distant lymph nodes, and the tissue that lines the abdomen wall. Also called stage IV stomach cancer.

#### **stage IV gestational trophoblastic neoplasia**

The tumor has spread to distant parts of the body other than the lungs.

#### **stage IV intrahepatic bile duct cancer**

Cancer has spread to other parts of the body, such as the bone, lungs, distant lymph nodes, or tissue lining the wall of the abdomen and most organs in the abdomen.

#### **stage IV intraocular melanoma of the ciliary body and choroid**

The tumor may be any size and has spread (1) to one or more nearby lymph nodes or to the eye socket separate from the primary tumor; or (2) to other parts of the body, such as the liver, lung, bone, brain, or tissue under the skin.

#### **stage IV kidney cancer**

Cancer has spread (1) beyond the layer of fatty tissue around the kidney and may have spread into the adrenal gland above the kidney with cancer or to nearby lymph nodes; or (2) to other parts of the body, such as the bones, liver, lungs, brain, adrenal glands, or distant lymph nodes. Also called stage IV renal cell cancer.

#### **stage IV leiomyosarcoma of the uterus**

Stage IV is divided into stages IVA and IVB. In stage IVA, the tumor has spread to the bladder and/or the rectum. In stage IVB, the tumor has spread to distant parts of the body.

#### **stage IV malignant pleural mesothelioma**

Cancer has spread to tissue covering the lung or the lung on the opposite side of the chest, peritoneum, bones, liver, lymph nodes outside the chest, or to other parts of the body.

#### **stage IV medullary thyroid cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVA, the tumor is any size and (1) cancer has spread from the thyroid to soft tissue under the skin, the esophagus, the trachea, the larynx, or the recurrent laryngeal nerve (a nerve that goes to the larynx); cancer may have spread to lymph nodes on one or both sides of the neck; or (2) cancer may have spread from the thyroid to nearby muscles in the neck; cancer has spread to lymph nodes on one or both sides of the neck. In stage IVB, the tumor is any size and cancer has spread to tissue in front of the spine or to the spine or has surrounded the carotid artery or the blood vessels in the area between the lungs. Cancer may have spread to lymph nodes. In stage IVC, the tumor is any size and cancer has spread to other parts of the body, such as the lungs or liver. Cancer may have spread to lymph nodes.

#### **stage IV melanoma**

Cancer has spread to other parts of the body, such as the lung, liver, brain, spinal cord, bone, soft tissue (including muscle), gastrointestinal tract, and/or distant lymph nodes. Cancer may have spread to places in the skin far away from where it first started.

#### **stage IV mycosis fungoides/Sézary syndrome**

When there is a high number of Sézary cells in the blood, the disease is called Sézary syndrome. Stage IV is divided into stages IVA1, IVA2, and IVB. In stage IVA1, patches, papules, plaques, or tumors may cover any amount of the skin surface, and 80% or more of the skin surface may be reddened. The lymph nodes may be abnormal, but they are not cancerous. There is a high number of Sézary cells in the blood. In stage IVA2, patches, papules, plaques, or tumors may cover any amount of the skin surface, and 80% or more of the skin surface may be reddened. The lymph nodes are very abnormal, or cancer has formed in the lymph nodes. There may be a high number of Sézary cells in the blood. In stage IVB, cancer has spread to other organs in the body, such as the spleen or liver. Patches, papules, plaques, or tumors may cover any amount of the skin surface, and 80% or more of the skin surface may be reddened. The lymph

nodes may be abnormal or cancerous. There may be a high number of Sézary cells in the blood.

#### **stage IV nasopharyngeal cancer**

Stage IV nasopharyngeal cancer is divided into stages IVA and IVB. In stage IVA, (1) cancer has spread to the brain, the cranial nerves, the hypopharynx, the salivary gland in the front of the ear, the bone around the eye, and/or the soft tissues of the jaw. Cancer may have also spread to one or more lymph nodes on one or both sides of the neck and/or the back of the throat. The affected lymph nodes are 6 centimeters or smaller; or (2) cancer has spread to one or more lymph nodes on one or both sides of the neck. The affected lymph nodes are larger than 6 centimeters and/or are found in the lowest part of the neck. In stage IVB, cancer has spread beyond the lymph nodes in the neck to distant lymph nodes, such as those between the lungs, below the collarbone, or in the armpit or groin, or to other parts of the body, such as the lung, bone, or liver.

#### **stage IV non-small cell lung cancer**

Stage IV non-small cell lung cancer is divided into stages IVA and IVB. In stage IVA, the tumor may be any size and cancer may have spread to the lymph nodes. One or more of the following is found: (1) there are one or more tumors in the lung that does not have the primary tumor; and/or (2) cancer is found in the lining around the lungs or the sac around the heart; and/or (3) cancer is found in fluid around the lungs or the heart; and/or (4) cancer has spread to one place in an organ not near the lung, such as the brain, liver, adrenal gland, kidney, or bone, or to a lymph node that is not near the lung. In stage IVB, cancer has spread to multiple places in one or more organs that are not near the lung.

#### **stage IV nonmelanoma skin cancer on the eyelid**

The tumor has spread to other parts of the body, such as the lung or liver.

#### **stage IV nonmelanoma skin cancer on the head and neck (not on the eyelid)**

One of the following is found: (1) the tumor is any size and cancer may have spread to the bone and the bone has minor damage, or to tissue covering the nerves below the dermis, or below the subcutaneous tissue. Cancer has spread to the lymph nodes as follows: (a) one lymph node on the same side of the body as the tumor, the affected node is 3 centimeters or smaller, and cancer has spread through to the outside covering of the lymph node; or (b) one lymph node on the same side of the body as the tumor, the affected node is larger than 3 centimeters but not larger than 6 centimeters, and cancer has not spread through to the outside covering of the lymph node; or (c) more than one lymph node on the same side of the body as the tumor, the affected nodes are 6 centimeters or smaller, and cancer has not spread through to the outside covering of the lymph nodes; or (d) one or more lymph nodes on the opposite side of the body as the tumor or on both sides of the body, the affected nodes are 6 centimeters or smaller, and cancer has not spread through to the outside covering of the lymph nodes; OR (2) the tumor is any size and cancer may have spread to tissue covering the nerves below the dermis, or below the subcutaneous tissue, or to bone marrow or to bone, including the bottom of the skull, and one of the following is found: (a) cancer has spread to one lymph node that is larger than 6 centimeters and cancer has not spread through to the outside covering of the lymph node; or (b) cancer has spread to one lymph node on the same side of the body as the tumor, the affected node is larger than 3 centimeters, and cancer has spread through to the outside covering of the lymph node; or (c) cancer has spread to one lymph node on the opposite side of the body as the tumor, the affected node is any size, and cancer has spread through



to the outside covering of the lymph node; or (d) cancer has spread to more than one lymph node on one or both sides of the body and cancer has spread through to the outside covering of the lymph nodes; OR (3) the tumor is any size and cancer has spread to bone marrow or to bone, including the bottom of the skull, and the bone has been damaged. Cancer may have also spread to the lymph nodes; OR (4) cancer has spread to other parts of the body, such as the lung.

#### **stage IV ovarian epithelial, fallopian tube, and primary peritoneal cancer**

Cancer has spread beyond the abdomen to other parts of the body. Stage IV is divided into stages IVA and IVB. In stage IVA, cancer cells are found in extra fluid that builds up around the lungs. In stage IVB, cancer has spread to organs and tissues outside the abdomen, including lymph nodes in the groin.

#### **stage IV ovarian germ cell tumor**

Cancer has spread beyond the abdomen to other parts of the body. Stage IV is divided into stages IVA and IVB. In stage IVA, cancer cells are found in extra fluid that builds up around the lungs. In stage IVB, cancer has spread to organs and tissues outside the abdomen, including lymph nodes in the groin.

#### **stage IV ovarian low malignant potential tumor**

Tumor cells have spread beyond the abdomen to other parts of the body. Stage IV is divided into stages IVA and IVB. In stage IVA, tumor cells are found in extra fluid that builds up around the lungs. In stage IVB, the tumor has spread to organs and tissues outside the abdomen, including lymph nodes in the groin.

#### **stage IV pancreatic cancer**

The tumor is any size and cancer has spread to other parts of the body, such as the liver, lung, or peritoneal cavity (the body cavity that contains most of the organs in the abdomen).

#### **stage IV papillary and follicular thyroid cancer (55 years and older)**

Stage IV is divided into stages IVA and IVB. In stage IVA, the tumor is any size and cancer has spread to tissue in front of the spine or has surrounded the carotid artery or the blood vessels in the area between the lungs. Cancer may have spread to lymph nodes. In stage IVB, the tumor is any size and cancer has spread to other parts of the body, such as the lungs or bones. Cancer may have spread to lymph nodes.

#### **stage IV penile cancer**

Cancer has spread (1) to tissues near the penis, such as the scrotum, prostate, or pubic bone, and may have spread to lymph nodes in the groin or pelvis; or (2) to one or more lymph nodes in the pelvis, or cancer has spread through the outer covering of the lymph nodes to nearby tissue; or (3) to lymph nodes outside the pelvis or to other parts of the body, such as the lung, liver, or bone.

#### **stage IV perihilar bile duct cancer**

Stage IV is divided into stages IVA and IVB. In stage IVA, cancer has spread to 4 or more nearby lymph nodes. In stage IVB, cancer has spread to other parts of the body, such as the liver, lung, bone, brain, skin, distant lymph nodes, or tissue lining the wall of the abdomen and most organs in the abdomen.

#### **stage IV prostate cancer**

Stage IV is divided into stages IVA and IVB. In stage IVA, cancer is found in one or both sides of the prostate and may have spread to the seminal vesicles or to nearby tissue or organs, such as the rectum, bladder, or pelvic wall. Cancer has



spread to nearby lymph nodes. The prostate-specific antigen (PSA) can be any level and the Grade Group is 1, 2, 3, 4, or 5 (Gleason score is 10 or less). In stage IVB, cancer has spread to other parts of the body, such as the bones or distant lymph nodes.

#### **stage IV renal cell cancer**

Cancer has spread (1) beyond the layer of fatty tissue around the kidney and may have spread into the adrenal gland above the kidney with cancer or to nearby lymph nodes; or (2) to other parts of the body, such as the bones, liver, lungs, brain, adrenal glands, or distant lymph nodes. Also called stage IV kidney cancer.

#### **stage IV stomach cancer**

Cancer has spread to other parts of the body, such as the lungs, liver, distant lymph nodes, and the tissue that lines the abdomen wall. Also called stage IV gastric cancer.

#### **stage IV thymoma**

Stage IV is divided into stages IVA and IVB, depending on where the cancer has spread. In stage IVA, cancer has spread widely around the lungs and heart. In stage IVB, cancer has spread to the blood or lymph system.

#### **stage IV transitional cell cancer of the renal pelvis and ureter**

Cancer has spread to at least one of the following: (1) a nearby organ; (2) the layer of fat around the kidney; (3) lymph nodes; and/or (4) other parts of the body, such as the lung, liver, or bone.

#### **stage IV vaginal cancer**

Stage IV is divided into stages IVA and IVB. In stage IVA, cancer may have spread to one or more of the following areas: (1) the lining of the bladder; (2) the lining of the rectum; and/or (3) beyond the area of the pelvis that has the bladder, uterus, ovaries, and cervix. In stage IVB, cancer has spread to parts of the body that are not near the vagina, such as the lung or bone.

#### **stage IV vulvar cancer**

The tumor is any size and has become attached to the bone, or cancer has spread to lymph nodes that are not movable or have become ulcerated, or there is distant spread. Stage IV is divided into stages IVA and IVB. In stage IVA, the cancer is attached to the pelvic bone or has spread to lymph nodes in the groin that are not movable or have become ulcerated. In stage IVB, the cancer has spread beyond the pelvis to distant parts of the body.

#### **stage IVA anaplastic thyroid cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVA, cancer is found in the thyroid only and the tumor may be any size.

#### **stage IVA hypopharyngeal cancer**

Stage IV hypopharyngeal cancer is divided into stages IVA, IVB, and IVC. In stage IVA, the tumor (1) has spread to the thyroid cartilage, the bone above the thyroid cartilage, the thyroid gland, the cartilage around the trachea, the esophageal muscle, or the nearby muscles and fatty tissue in the neck. Cancer may have also spread to one lymph node on the same side of the neck as the tumor. The affected lymph node is 3 centimeters or smaller; or (2) is found in the hypopharynx and may have spread to the thyroid cartilage, the bone above the thyroid cartilage, the thyroid gland, the cartilage around the trachea, the

esophagus, or the nearby muscles and fatty tissue in the neck. Cancer has spread to one of the following: (a) one lymph node on the same side of the neck as the tumor. The affected lymph node is larger than 3 centimeters but not larger than 6 centimeters; or (b) more than one lymph node anywhere in the neck. The affected lymph nodes are 6 centimeters or smaller.

#### **stage IVA laryngeal cancer**

Stage IV laryngeal cancer is divided into stages IVA, IVB, and IVC. In stage IVA, (1) cancer has spread through the thyroid cartilage and/or has spread to tissues beyond the larynx, such as the neck, trachea, thyroid, or esophagus. Cancer may have also spread to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller; or (2) cancer may have spread from the supraglottis, glottis, or subglottis to tissues beyond the larynx, such as the neck, trachea, thyroid, or esophagus. The vocal cords may not work normally. Cancer has spread: (a) to one lymph node on the same side of the neck as the primary tumor and the lymph node is 3 centimeters or smaller. Cancer has spread through the outside covering of the lymph node; or (b) to one lymph node on the same side of the neck as the primary tumor and the lymph node is larger than 3 centimeters but not larger than 6 centimeters. Cancer has not spread through the outside covering of the lymph node; or (c) to more than one lymph node on the same side of the neck as the primary tumor and the lymph nodes are not larger than 6 centimeters. Cancer has not spread through the outside covering of the lymph nodes; or (d) to lymph nodes on both sides of the neck or on the side of the neck opposite the primary tumor and the lymph nodes are not larger than 6 centimeters. Cancer has not spread through the outside covering of the lymph nodes.

#### **stage IVA lip and oral cavity cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVA, the tumor (1) is larger than 4 centimeters and the deepest point of tumor invasion is greater than 10 millimeters; or cancer has spread to the outer surface of the upper or lower jawbone, into the maxillary sinus, or to the skin of the face. The cancer may have spread to one lymph node that is 3 centimeters or smaller, on the same side of the neck as the primary tumor; or (2) is any size or cancer has spread to the outer surface of the upper or lower jawbone, into the maxillary sinus, or to the skin of the face. Cancer has spread (a) to one lymph node that is 3 centimeters or smaller, on the same side of the neck as the primary tumor, and cancer has spread through the outside covering of the lymph node into nearby connective tissue; or (b) to one lymph node that is larger than 3 centimeters but not larger than 6 centimeters, on the same side of the neck as the primary tumor; or (c) to multiple lymph nodes that are not larger than 6 centimeters, on the same side of the neck as the primary tumor; or (d) to multiple lymph nodes that are not larger than 6 centimeters, on the opposite side of the neck as the primary tumor or on both sides of the neck.

#### **stage IVA maxillary sinus cancer**

Stage IV maxillary sinus cancer is divided into stages IVA, IVB, and IVC. In stage IVA, (1) cancer has spread to any of the following: the eye, the skin of the cheek, the part of the sphenoid bone behind the upper jaw, the area behind the upper jaw, the bone between the eyes, and/or the sphenoid or frontal sinuses. Cancer may have also spread to one lymph node on the same side of the neck as the cancer, and the lymph node is 3 centimeters or smaller; or (2) cancer is found in the maxillary sinus and may have spread to any of the following: the bones around the maxillary sinus (including the roof of the mouth and the nose), the

bone between the eyes, the tissues under the skin, the skin of the cheek, the eye, the part of the eye socket near the nose, or the bottom of the eye socket, the area behind the cheek bone, the part of the sphenoid bone behind the upper jaw, the area behind the upper jaw, and/or the ethmoid, sphenoid, or frontal sinuses. Cancer has also spread to one of the following: one lymph node on the same side of the neck as the cancer and the lymph node is larger than 3 centimeters but not larger than 6 centimeters; or more than one lymph node on the same side of the neck as the cancer and the lymph nodes are not larger than 6 centimeters; or lymph nodes on the opposite side of the neck as the cancer or on both sides of the neck, and the lymph nodes are not larger than 6 centimeters.

#### **stage IVA nasal cavity and ethmoid sinus cancer**

Stage IV nasal cavity and ethmoid sinus cancer is divided into stages IVA, IVB, and IVC. In stage IVA, (1) cancer has spread to any of the following: the eye, the skin of the nose or cheek, the front parts of the skull, the part of the sphenoid bone behind the upper jaw, and/or the sphenoid or frontal sinuses. Cancer may have also spread to one lymph node on the same side of the neck as the cancer, and the lymph node is 3 centimeters or smaller; or (2) cancer is found in the nasal cavity or ethmoid sinus and may have spread to any of the following: the eye, the part of the eye socket near the nose, or the bottom of the eye socket, the skin of the nose or cheek, the front parts of the skull, the part of the sphenoid bone behind the upper jaw, and/or the sphenoid or frontal sinuses. Cancer has also spread to one of the following: one lymph node on the same side of the neck as the cancer and the lymph node is larger than 3 centimeters but not larger than 6 centimeters; or more than one lymph node on the same side of the neck as the cancer and the lymph nodes are not larger than 6 centimeters; or lymph nodes on the opposite side of the neck as the cancer or on both sides of the neck, and the lymph nodes are not larger than 6 centimeters.

#### **stage IVA salivary gland cancer**

Stage IV salivary gland cancer is divided into stages IVA, IVB, and IVC. In stage IVA, (1) cancer has spread to the skin, jawbone, ear canal, and/or facial nerve. Cancer may have spread to one lymph node on the same side of the head or neck as the tumor. The lymph node is 3 centimeters or smaller and cancer has not grown outside the lymph node; OR (2) the tumor is any size and cancer may have spread to soft tissue around the salivary gland or to the skin, jawbone, ear canal, and/or facial nerve. Cancer has spread (a) to one lymph node on the same side of the head or neck as the tumor; the lymph node is 3 centimeters or smaller and cancer has grown outside the lymph node; or (b) to one lymph node on the same side of the head or neck as the tumor; the lymph node is larger than 3 centimeters but not larger than 6 centimeters and cancer has not grown outside the lymph node; or (c) to more than one lymph node on the same side of the head or neck as the tumor; the lymph nodes are 6 centimeters or smaller and cancer has not grown outside the lymph nodes; or (d) to lymph nodes on both sides of the head or neck or on the side opposite the primary tumor; the lymph nodes are 6 centimeters or smaller and cancer has not grown outside the lymph nodes.

#### **stage IVB anaplastic thyroid cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVB, one of the following is found: (1) cancer is found in the thyroid and the tumor may be any size; cancer has spread to nearby lymph nodes; or (2) the tumor is any size and cancer has spread from the thyroid to nearby muscles in the neck and may have

spread to nearby lymph nodes; or (3) the tumor is any size and cancer has spread from the thyroid to soft tissue under the skin, the esophagus, the trachea, the larynx, the recurrent laryngeal nerve (a nerve that goes to the larynx), or tissue in front of the spine, or cancer has surrounded the carotid artery or the blood vessels in the area between the lungs; cancer may have spread to lymph nodes.

#### **stage IVB hypopharyngeal cancer**

Stage IV hypopharyngeal cancer is divided into stages IVA, IVB, and IVC. In stage IVB, the tumor (1) may be any size and cancer may have spread to the thyroid cartilage, the bone above the thyroid cartilage, the thyroid gland, the cartilage around the trachea, the esophagus, or the nearby muscles and fatty tissue in the neck. Cancer has spread to a lymph node that is larger than 6 centimeters or has spread through the outside covering of a lymph node into nearby connective tissue; or (2) has spread to the connective tissue covering the muscles that support the spinal column, the area around the carotid artery, or the area between the lungs. Cancer may have also spread to lymph nodes in the neck.

#### **stage IVB laryngeal cancer**

Stage IV laryngeal cancer is divided into stages IVA, IVB, and IVC. In stage IVB, (1) cancer may have spread from the supraglottis, glottis, or subglottis to the space in front of the spine, the area around the carotid artery, or the area between the lungs. The vocal cords may not work normally. Cancer has spread: (a) to one lymph node that is larger than 6 centimeters. Cancer has not spread through the outside covering of the lymph node; or (b) to one lymph node on the same side of the neck as the primary tumor and the lymph node is larger than 3 centimeters. Cancer has spread through the outside covering of the lymph node; or (c) to more than one lymph node anywhere in the neck. Cancer has spread through the outside covering of the lymph nodes; or (d) to one lymph node of any size on the side of the neck opposite the primary tumor. Cancer has spread through the outside covering of the lymph node; OR (2) cancer has spread from the supraglottis, glottis, or subglottis to the space in front of the spine, the area around the carotid artery, or the area between the lungs. Cancer may have also spread to one or more lymph nodes anywhere in the neck and the lymph nodes may be any size.

#### **stage IVB lip and oral cavity cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVB, the tumor (1) has spread to one lymph node that is larger than 6 centimeters; or (2) has spread to one lymph node that is larger than 3 centimeters, on the same side of the neck as the primary tumor, and cancer has spread through the outside covering of the lymph node into nearby connective tissue; or (3) has spread to one lymph node of any size on the opposite side of the neck as the primary tumor, and cancer has spread through the outside covering of the lymph node into nearby connective tissue; or (4) has spread to multiple lymph nodes anywhere in the neck, and cancer has spread through the outside covering of any lymph node into nearby connective tissue; or (5) has spread further into the muscles or bones needed for chewing, or to the part of the sphenoid bone behind the upper jaw, and/or to the carotid artery near the base of the skull. Cancer may have also spread to one or more lymph nodes of any size, anywhere in the neck.

#### **stage IVB maxillary sinus cancer**

Stage IV maxillary sinus cancer is divided into stages IVA, IVB, and IVC. In stage IVB, (1) cancer has spread to any of the following: the area behind the eye, the

brain, the middle parts of the skull, the nerves that begin in the brain and go to the face, neck, and other parts of the brain (cranial nerves), the upper part of the throat behind the nose, and/or the base of the skull near the spinal cord. Cancer may have also spread to one or more lymph nodes of any size, anywhere in the neck; or (2) cancer may be found anywhere in or near the maxillary sinus. Cancer has spread to a lymph node that is larger than 6 centimeters or has spread through the outside covering of a lymph node into nearby connective tissue.

#### **stage IVB nasal cavity and ethmoid sinus cancer**

Stage IV nasal cavity and ethmoid sinus cancer is divided into stages IVA, IVB, and IVC. In stage IVB, (1) cancer has spread to any of the following: the area behind the eye, the brain, the middle parts of the skull, the nerves that begin in the brain and go to the face, neck, and other parts of the brain (cranial nerves), the upper part of the throat behind the nose, and/or the base of the skull near the spinal cord. Cancer may have also spread to one or more lymph nodes of any size, anywhere in the neck; or (2) cancer may be found anywhere in or near the nasal cavity or ethmoid sinus. Cancer has spread to a lymph node that is larger than 6 centimeters or has spread through the outside covering of a lymph node into nearby connective tissue.

#### **stage IVB salivary gland cancer**

Stage IV salivary gland cancer is divided into stages IVA, IVB, and IVC. In stage IVB, (1) the tumor is any size and cancer may have spread to soft tissue around the salivary gland or to the skin, jawbone, ear canal, and/or facial nerve. Cancer has spread (a) to one lymph node larger than 6 centimeters and cancer has not grown outside the lymph node; or (b) to one lymph node on the same side of the head or neck as the tumor; the lymph node is larger than 3 centimeters and cancer has grown outside the lymph node; or (c) to more than one lymph node on the same side of the head or neck as the tumor, on the side opposite the primary tumor, or on both sides of the head or neck; cancer has grown outside any of the lymph nodes; or (d) to one lymph node of any size on the side of the head or neck opposite the primary tumor; cancer has grown outside the lymph node; OR (2) cancer has spread to the bottom of the skull and/or surrounds the carotid artery. Cancer may have spread to one or more lymph nodes of any size on either or both sides of the head or neck and may have grown outside the lymph nodes.

#### **stage IVC anaplastic thyroid cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVC, the tumor is any size and cancer has spread to other parts of the body, such as the lungs or bones. Cancer may have spread to lymph nodes.

#### **stage IVC hypopharyngeal cancer**

Stage IV hypopharyngeal cancer is divided into stages IVA, IVB, and IVC. In stage IVC, cancer has spread to other parts of the body, such as the lung, liver, or bone.

#### **stage IVC laryngeal cancer**

Stage IV laryngeal cancer is divided into stages IVA, IVB, and IVC. In stage IVC, cancer has spread to other parts of the body, such as the lungs, liver, or bone.

#### **stage IVC lip and oral cavity cancer**

Stage IV is divided into stages IVA, IVB, and IVC. In stage IVC, the tumor has spread beyond the lip or oral cavity to other parts of the body, such as the lung,



liver, or bone.

#### **stage IVC maxillary sinus cancer**

Stage IV maxillary sinus cancer is divided into stages IVA, IVB, and IVC. In stage IVC, cancer may be found anywhere in or near the maxillary sinus, may have spread to lymph nodes, and has spread to organs far away from the maxillary sinus, such as the lungs.

#### **stage IVC nasal cavity and ethmoid sinus cancer**

Stage IV nasal cavity and ethmoid sinus cancer is divided into stages IVA, IVB, and IVC. In stage IVC, cancer may be found anywhere in or near the nasal cavity or ethmoid sinus, may have spread to lymph nodes, and has spread to organs far away from the nasal cavity and ethmoid sinus, such as the lungs.

#### **stage IVC salivary gland cancer**

Stage IV salivary gland cancer is divided into stages IVA, IVB, and IVC. In stage IVC, cancer has spread to other parts of the body, such as the lungs.

#### **stage V Wilms tumor**

Cancer cells are found in both kidneys when the cancer is first diagnosed. The cancer in each kidney is staged separately as stage I, II, III, or IV.

#### **staging**

Performing exams and tests to learn the extent of the cancer within the body, especially whether the disease has spread from where it first formed to other parts of the body. It is important to know the stage of the disease in order to plan the best treatment.

#### **staging system**

A system that is used to describe the extent of cancer in the body. Staging is usually based on the size of the tumor and whether the cancer has spread from where it started to nearby areas, lymph nodes, or other parts of the body.

#### **stamina**

The energy and strength to endure physical activity, stress, or illness over time.

#### **standard medical care**

Treatment that is accepted by medical experts as a proper treatment for a certain type of disease and that is widely used by health care professionals. Also called best practice, standard of care, and standard therapy.

#### **standard of care**

Treatment that is accepted by medical experts as a proper treatment for a certain type of disease and that is widely used by health care professionals. Also called best practice, standard medical care, and standard therapy.

#### **standard therapy**

Treatment that is accepted by medical experts as a proper treatment for a certain type of disease and that is widely used by health care professionals. Also called best practice, standard medical care, and standard of care.

#### **starch**

A substance found in plants. It contains sugar molecules joined chemically. It is found in high levels in foods such as potatoes, rice, corn, and wheat. It may be



used as a dusting powder, a skin softener, a filler in medicine tablets, and a clothes stiffener.

### **statin**

Any of a group of drugs that lower the amount of cholesterol and certain fats in the blood. Statins inhibit a key enzyme that helps make cholesterol. Statin drugs are being studied in the prevention and treatment of cancer.

### **statistically significant**

Describes a mathematical measure of difference between groups. The difference is said to be statistically significant if it is greater than what might be expected to happen by chance alone. Also called significant.

### **stature**

The height of a person while standing.

### **staurosporine**

A drug that belongs to the family of drugs called alkaloids. It is being studied in the treatment of cancer.

### **stavudine**

A drug that belongs to the family of drugs called nucleoside analogs. It is used to treat infection caused by viruses.

### **stellate**

Star shaped.

### **stem cell**

A cell from which other types of cells develop. For example, blood cells develop from blood-forming stem cells.

### **stem cell engraftment**

A process in which transplanted stem cells travel through the blood to the bone marrow, where they begin to make new white blood cells, red blood cells, and platelets. It usually happens within 2 to 4 weeks after a stem cell transplant. The transplanted stem cells may come from a donor or from the patient.

### **stem cell factor**

A substance that causes blood stem cells (cells from which other types of cells develop) to change into different types of blood cells and increases the number and actions of these cells in the blood. Stem cell factor is a type of cytokine and a type of growth factor. Also called kit ligand and SCF.

### **stem cell factor receptor**

A protein found on the surface of many different types of cells. It binds to a substance called stem cell factor (SCF), which causes certain types of blood cells to grow. Stem cell factor receptor may also be found in higher than normal amounts, or in a changed form, on some types of cancer cells, including gastrointestinal stromal tumors and melanoma. Measuring the amount of stem cell factor receptor in tumor tissue may help diagnose cancer and plan treatment. Stem cell factor receptor is a type of receptor tyrosine kinase and a type of tumor marker. Also called c-kit and CD117.

**stem cell mobilization**

A process in which certain drugs are used to cause the movement of stem cells from the bone marrow into the blood. The stem cells can be collected and stored. They may be used later to replace the bone marrow during a stem cell transplant.

**stem cell rescue**

A method of replacing blood-forming stem cells that were destroyed by treatment with high doses of anticancer drugs or radiation therapy. The stem cells help the bone marrow recover and make healthy blood cells. A stem cell rescue may allow more chemotherapy or radiation therapy to be given so that more cancer cells are killed. It is usually done using the patient's own stem cells that were saved before treatment. Also called rescue transplant.

**stem cell transplant**

A procedure in which a patient receives healthy stem cells (blood-forming cells) to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy. The healthy stem cells may come from the blood or bone marrow of the patient or from a related or unrelated donor. A stem cell transplant may be autologous (using a patient's own stem cells that were collected and saved before treatment), allogeneic (using stem cells from a related or unrelated donor), syngeneic (using stem cells donated by an identical twin), or cord blood (using umbilical cord blood donated after a baby is born).

**stent**

A device placed in a body structure (such as a blood vessel or the gastrointestinal tract) to keep the structure open.

**stereotactic ablative body radiation therapy**

A type of external radiation therapy that uses special equipment to position a patient and precisely deliver radiation to tumors in the body (except the brain). The total dose of radiation is divided into smaller doses given over several days. This type of radiation therapy helps spare normal tissue. Also called SABR, SBRT, and stereotactic body radiation therapy.

**stereotactic biopsy**

A biopsy procedure that uses a computer and a 3-dimensional scanning device to find a tumor site and guide the removal of tissue for examination under a microscope.

**stereotactic body radiation therapy**

A type of external radiation therapy that uses special equipment to position a patient and precisely deliver radiation to tumors in the body (except the brain). The total dose of radiation is divided into smaller doses given over several days. This type of radiation therapy helps spare normal tissue. Also called SABR, SBRT, and stereotactic ablative body radiation therapy.

**stereotactic core needle biopsy**

A procedure that uses x-ray images taken at different angles to find an abnormal area in the body. The images help guide the removal of a tissue sample from that area with a wide, hollow needle. The tissue sample is then checked under a microscope for signs of disease, such as cancer. A stereotactic core needle biopsy may be done when a lump or mass cannot be felt or when the abnormal area cannot be seen clearly on other imaging tests. It may be used to check for certain types of cancer, including cancers of the breast, lung, liver, and brain.

### **stereotactic external-beam radiation therapy**

A type of external radiation therapy that uses special equipment to position the patient and precisely deliver radiation to a tumor. The total dose of radiation is divided into several smaller doses given over several days. Stereotactic external-beam radiation therapy is used to treat brain tumors and other brain disorders. It is also being studied in the treatment of other types of cancer, such as lung cancer. Also called stereotactic radiation therapy and stereotaxic radiation therapy.

### **stereotactic injection**

A procedure in which a computer and a 3-dimensional scanning device are used to inject anticancer drugs directly into a tumor.

### **stereotactic procedure**

A procedure that uses special equipment and imaging techniques to find an abnormal area in the brain, breast, lung, or liver and help guide the removal of a tissue sample from that area. Stereotactic procedures are also used to treat some cancers, including cancers of the brain, breast, lung, and liver, by precisely delivering radiation directly to a tumor. Also called stereotaxic procedure.

### **stereotactic radiation therapy**

A type of external radiation therapy that uses special equipment to position the patient and precisely deliver radiation to a tumor. The total dose of radiation is divided into several smaller doses given over several days. Stereotactic radiation therapy is used to treat brain tumors and other brain disorders. It is also being studied in the treatment of other types of cancer, such as lung cancer. Also called stereotactic external-beam radiation therapy and stereotaxic radiation therapy.

### **stereotactic radiosurgery**

A type of external radiation therapy that uses special equipment to position the patient and precisely give a single large dose of radiation to a tumor. It is used to treat brain tumors and other brain disorders that cannot be treated by regular surgery. It is also being studied in the treatment of other types of cancer. Also called radiation surgery, radiosurgery, and stereotaxic radiosurgery.

### **stereotaxic procedure**

A procedure that uses special equipment and imaging techniques to find an abnormal area in the brain, breast, lung, or liver and help guide the removal of a tissue sample from that area. Stereotaxic procedures are also used to treat some cancers, including cancers of the brain, breast, lung, and liver, by precisely delivering radiation directly to a tumor. Also called stereotactic procedure.

### **stereotaxic radiation therapy**

A type of external radiation therapy that uses special equipment to position the patient and precisely deliver radiation to a tumor. The total dose of radiation is divided into several smaller doses given over several days. Stereotaxic radiation therapy is used to treat brain tumors and other brain disorders. It is also being studied in the treatment of other types of cancer, such as lung cancer. Also called stereotactic external-beam radiation therapy and stereotactic radiation therapy.

### **stereotaxic radiosurgery**

A type of external radiation therapy that uses special equipment to position the patient and precisely give a single large dose of radiation to a tumor. It is used to treat brain tumors and other brain disorders that cannot be treated by regular

surgery. It is also being studied in the treatment of other types of cancer. Also called radiation surgery, radiosurgery, and stereotactic radiosurgery.

### **sterile**

Unable to produce children. Also means free from germs.

### **sternum**

The long flat bone that forms the center front of the chest wall. The sternum is attached to the collarbone and the first seven ribs. Also called breastbone.

### **steroid**

Any of a group of lipids (fats) that have a certain chemical structure. Steroids occur naturally in plants and animals or they may be made in the laboratory. Examples of steroids include sex hormones, cholesterol, bile acids, and some drugs.

### **steroid cream**

A skin cream containing a type of drug that relieves swelling, itching, and inflammation.

### **steroid drug**

A type of drug used to relieve swelling and inflammation. Some steroid drugs may also have antitumor effects.

### **steroid metabolism gene**

A type of gene that helps the body build up or break down steroids. Steroids may be made by the body (such as hormones and cholesterol) or made in a laboratory (such as drugs). A steroid metabolism gene called CYP17 is being studied in breast, ovarian, and uterine cancers.

### **steroid therapy**

Treatment with corticosteroid drugs to reduce swelling, pain, and other symptoms of inflammation.

### **stoma**

A surgically created opening from an area inside the body to the outside.

### **stomach**

An organ that is part of the digestive system. The stomach helps digest food by mixing it with digestive juices and churning it into a thin liquid.

### **stomach acid stimulation test**

A test used to measure the amount of gastric acid made by the stomach. The patient receives an injection of the hormone gastrin or insulin. A tube is put through the nose or throat into the stomach and samples are taken from the stomach and sent to a laboratory for testing. Also called gastric acid secretion test and stomach acid test.

### **stomach acid test**

A test used to measure the amount of gastric acid made by the stomach. The patient receives an injection of the hormone gastrin or insulin. A tube is put through the nose or throat into the stomach and samples are taken from the stomach and sent to a laboratory for testing. Also called gastric acid secretion test and stomach acid stimulation test.

**stomach cancer**

Cancer that forms in tissues lining the stomach. Also called gastric cancer.

**stomatitis**

Inflammation or irritation of the mucous membranes in the mouth.

**stool**

The material in a bowel movement. Stool is made up of undigested food, bacteria, mucus, and cells from the lining of the intestines. Also called feces.

**stool guaiac test**

A test that checks for occult (hidden) blood in the stool. Small samples of stool are placed on special cards coated with a chemical substance called guaiac and sent to a doctor or laboratory for testing. A testing solution is put on the cards and the guaiac causes the stool sample to change color. If there is blood in the stool, the color changes very quickly. Blood in the stool may be a sign of colorectal cancer or other problems, such as polyps, ulcers, or hemorrhoids. Also called gFOBT, guaiac fecal occult blood test, and guaiac smear test.

**stool test**

A test to check for hidden blood in the bowel movement.

**straight colorectal anastomosis**

A surgical procedure in which the colon is attached directly to the remainder of the rectum after most of it has been removed during surgery for rectal cancer. This procedure is different from the J-pouch colorectal anastomosis because a pouch to store stool is not made from the colon before it is attached to the rectum.

**streptavidin**

A small bacterial protein that binds with high affinity to the vitamin biotin. This streptavidin-biotin combination can be used to link molecules such as radioisotopes and monoclonal antibodies together. These bound products have the property of being attracted to, and attaching to, cancer cells, rather than normal cells. The radiolabeled products are more easily removed from the body, thus decreasing their toxicity.

**streptozocin**

An anticancer drug that belongs to the family of drugs called alkylating agents.

**stress**

In medicine, the body's response to physical, mental, or emotional pressure. Stress causes chemical changes in the body that can raise blood pressure, heart rate, and blood sugar levels. It may also lead to feelings of frustration, anxiety, anger, or depression. Stress can be caused by normal life activities or by an event, such as trauma or illness. Long-term stress or high levels of stress may lead to mental and physical health problems.

**stress protein**

One of a group of proteins that help protect cells from stresses such as heat, cold, and low amounts of oxygen or glucose (sugar). Stress proteins help other proteins function in normal cells and may be present at high levels in cancer cells. Blocking the activity of a stress protein called HSP90 is being studied in the treatment of cancer. Other stress proteins including HSP70 and gp96 are being studied in vaccines to treat cancer. Also called heat-shock protein and HSP.

## **stroke**

In medicine, a loss of blood flow to part of the brain, which damages brain tissue. Strokes are caused by blood clots and broken blood vessels in the brain. Symptoms include dizziness, numbness, weakness on one side of the body, and problems with talking, writing, or understanding language. The risk of stroke is increased by high blood pressure, older age, smoking, diabetes, high cholesterol, heart disease, atherosclerosis (a buildup of fatty material and plaque inside the coronary arteries), and a family history of stroke. Also called cerebrovascular accident and CVA.

## **stroma**

The cells and tissues that support and give structure to organs, glands, or other tissues in the body. The stroma is mostly made up of connective tissue, blood vessels, lymphatic vessels, and nerves. It provides nutrients to the tissue or organ and removes waste and extra fluid. The stroma may also be involved in the body's immune response and in the growth and spread of cancer cells.

## **stromal cell**

A type of cell that makes up certain types of connective tissue (supporting tissue that surrounds other tissues and organs).

## **stromal tissue**

A type of tissue that is part of the stroma and that supports and gives structure to organs, glands, and other tissues in the body. The stroma provides nutrients to other tissues and organs, removes waste and extra fluid, and may be involved in the body's immune response.

## **stromal tumor**

A tumor that arises in the supporting connective tissue of an organ.

## **strontium**

A metal often used in a radioactive form for imaging tests and in the treatment of cancer.

## **strontium chloride Sr 89**

A salt form of the radioactive metal strontium-89 that is absorbed by a part of growing bone. It is being studied in the treatment of bone pain caused by cancer that has spread to the bone. Strontium Sr 89 is the active ingredient of strontium chloride Sr 89.

## **strontium ranelate**

A substance that is being studied in the treatment of osteoporosis in postmenopausal women. Strontium ranelate helps new bone tissue to grow and decreases bone loss. This lowers the risk of bone fractures.

## **structural racism**

A system of organizational and institutional policies created over time that support a continued unfair advantage for some people and unfair or harmful treatment of others based on their race or ethnic group. Structural racism comes from deep patterns of social, economic, and cultural differences that have developed over time between different groups of people. It affects the physical, social, and economic conditions of where people live, learn, work, and play. Structural racism is a serious problem and can lead to poor health outcomes, such as higher rates of disease and death in certain racial and ethnic groups.



**study agent**

A medicine, vitamin, mineral, food supplement, or a combination of them that is being tested in a clinical trial.

**subarachnoid block**

A temporary loss of feeling in the abdomen and/or the lower part of the body. Special drugs called anesthetics are injected into the fluid in the lower part of the spinal column to cause the loss of feeling. The patient stays awake during the procedure. It is a type of regional anesthesia. Also called SAB, spinal anesthesia, and spinal block.

**subcutaneous**

Beneath the skin.

**subcutaneous port**

A tube surgically placed into a blood vessel and attached to a disk placed under the skin. It is used for the administration of intravenous fluids and drugs; it can also be used to obtain blood samples.

**subependymal**

Describes the layer of cells just under the ependyma (the thin membrane that lines the fluid-filled spaces in the brain and spinal cord).

**subependymal giant cell astrocytoma**

A benign (not cancer), slow-growing tumor that usually forms in the walls of fluid-filled spaces in the brain. The tumors are made up of large, star-shaped cells called astrocytes. Subependymal giant cell astrocytomas are common in patients with tuberous sclerosis (an inherited disorder in which benign tumors form in the brain and other parts of the body). Also called SEGA.

**suberoylanilide hydroxamic acid**

A drug used to treat cutaneous T-cell lymphoma that came back, got worse, or did not get better during or after treatment with two systemic therapies. It is also being studied in the treatment of other types of cancer. Suberoylanilide hydroxamic acid blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase inhibitor. Also called SAHA, vorinostat, and Zolinza.

**subglottis**

The lowest part of the larynx; the area from just below the vocal cords down to the top of the trachea.

**subjective improvement**

In medicine, a term that describes an improvement in a patient's health or well-being based on what is reported by the patient and not what is measured or observed by a health care provider. An example of subjective improvement is when a patient says they feel better.

**submucosa**

The layer of tissue under the mucosa (inner lining of some organs and body cavities that makes mucus).

**subserosa**

The layer of tissue under the serosa (outer lining of some organs and body cavities).

**subset analysis**

In a clinical study, the evaluation of results for some but not all of the patients who participated. The selected patients have one or more characteristics in common, such as the same stage of disease or the same hormone receptor status.

**subspecialist**

In health care, a doctor or other provider who has additional training in a very specific area of medicine. Examples of subspecialists include pediatric oncologists (doctors who have special training in diagnosing and treating cancer in children) and neuroradiologists (doctors who have special training in creating and interpreting images of the nervous system).

**substance abuse**

The use of illegal drugs or the use of prescription or over-the-counter drugs or alcohol for purposes other than those for which they are meant to be used, or in excessive amounts. Substance abuse may lead to social, physical, emotional, and job-related problems.

**subtenon**

Used to describe injections through the membrane covering the muscles and nerves at the back of the eyeball.

**subtotal hysterectomy**

Surgery to remove the uterus, but not the cervix. Also called partial hysterectomy and supracervical hysterectomy.

**sucralfate**

A drug used to treat ulcers. It adheres to proteins at the ulcer site and forms a protective coating over the ulcer. Sucralfate is also used to treat mucositis.

**suction aspiration**

A surgical procedure in which the cervix is dilated (opened) and vacuum is used to remove tissue from the uterus. Also called suction evacuation and vacuum aspiration.

**suction evacuation**

A surgical procedure in which the cervix is dilated (opened) and vacuum is used to remove tissue from the uterus. Also called suction aspiration and vacuum aspiration.

**sudden infant death syndrome**

A disorder marked by the sudden and unexpected death of a healthy child who is younger than one year old, usually during sleep. The cause of sudden infant death syndrome is not known. Also called crib death and SIDS.

**suicide**

The act of taking one's own life on purpose.

**sulfa drug**

A type of antibiotic used to treat infection. Also called sulfonamide.

**sulfonamide**

A type of antibiotic used to treat infection. Also called sulfa drug.

**sulfuric acid**

A strong acid that, when concentrated, is extremely corrosive to the skin and mucous membranes. It is used in making fertilizers, dyes, electroplating, and industrial explosives.

**sulindac**

A nonsteroidal anti-inflammatory drug (NSAID) that is being studied as a treatment for cancer.

**sun protection factor**

A scale for rating the level of sunburn protection in sunscreen products. The higher the sun protection factor, the more sunburn protection it gives.

Sunscreens with a value of 2 through 11 give minimal protection against sunburns. Sunscreens with a value of 12 through 29 give moderate protection.

Sun protection factors of 30 or higher give high protection against sunburn. Also called SPF.

**sunitinib malate**

A drug used to treat adults with certain types of gastrointestinal stromal tumors, pancreatic neuroendocrine tumors, or renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer.

Sunitinib malate blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Sunitinib malate is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Sunitinib is the active ingredient of sunitinib malate. Also called SU011248, SU11248, and Sutent.

**sunscreen**

A substance that helps protect the skin from the sun's harmful rays. Sunscreens reflect, absorb, and scatter both ultraviolet A and B radiation to provide protection against both types of radiation. Using lotions, creams, or gels that contain sunscreens can help protect the skin from premature aging and damage that may lead to skin cancer.

**superficial**

Affecting cells on the surface. Not invasive.

**superfractionated radiation therapy**

Radiation treatment in which the total dose of radiation is divided into small doses and treatments are given more than once a day. Superfractionated radiation therapy is given over the same period of time (days or weeks) as standard radiation therapy. Also called hyperfractionated radiation therapy.

**superior vena cava**

The large vein that carries blood from the head, neck, arms, and chest to the heart.

**superior vena cava syndrome**

A condition in which a tumor presses against the superior vena cava (the large vein that carries blood from the head, neck, arms, and chest to the heart). This pressure blocks blood flow to the heart and may cause coughing, difficulty in breathing, and swelling of the face, neck, and upper arms.

### **supplemental health insurance**

An additional insurance plan that helps pay for health care costs that are not covered by a person's regular health insurance plan. These costs include copayments, coinsurance, and deductibles. There are many different types of supplemental health insurance, including vision, dental, hospital, accident, disability, long-term care, and Medicare supplemental plans. There are also supplemental health insurance plans for specific conditions, such as cancer, stroke, or kidney failure. Some types of supplemental health insurance may also be used to help pay for food, medicine, transportation, and other expenses related to an illness or injury.

### **supplemental nutrition**

A substance or product that is added to a person's diet to make sure they get all the nutrients they need. It may include vitamins, minerals, protein, or fat, and may be given by mouth, by tube feeding, or into a vein.

### **supplemental oxygen therapy**

Treatment in which a storage tank of oxygen or a machine called a compressor is used to give oxygen to people with breathing problems. It may be given through a nose tube, a mask, or a tent. The extra oxygen is breathed in along with normal air. Also called oxygen therapy.

### **supplementation**

Adding nutrients to the diet.

### **support group**

A group of people with similar disease or concerns who help each other cope by sharing experiences and information.

### **supportive care**

Care given to improve the quality of life of people who have an illness or disease by preventing or treating, as early as possible, the symptoms of the disease and the side effects caused by treatment of the disease. Supportive care includes physical, psychological, social, and spiritual support for patients and their families. There are many types of supportive care. Examples include pain management, nutritional support, counseling, exercise, music therapy, meditation, and palliative care. Supportive care may be given with other treatments from the time of diagnosis until the end of life.

### **suppository**

A form of medicine contained in a small piece of solid material, such as cocoa butter or glycerin, that melts at body temperature. A suppository is inserted into the rectum, vagina, or urethra and the medicine is absorbed into the bloodstream.

### **suppressor T cell**

A type of immune cell that blocks the actions of some other types of lymphocytes, to keep the immune system from becoming over-active. Suppressor T cells are being studied in the treatment of cancer. A suppressor T cell is a type of white blood cell and a type of lymphocyte. Also called regulatory T cell, T reg, and T-regulatory cell.

### **supracervical hysterectomy**

Surgery to remove the uterus, but not the cervix. Also called partial hysterectomy and subtotal hysterectomy.

**supraclavicular lymph node**

A lymph node located above the clavicle (collarbone).

**supraglottic laryngectomy**

An operation to remove the supraglottis, which is part of the larynx (voice box) above the vocal cords.

**supraglottis**

The upper part of the larynx (voice box), including the epiglottis; the area above the vocal cords.

**suprarenal gland**

A small gland that makes steroid hormones, adrenaline, and noradrenaline. These hormones help control heart rate, blood pressure, and other important body functions. There are two suprarenal glands, one on top of each kidney. Also called adrenal gland.

**supratentorium**

The upper part of the brain that contains the cerebrum, ventricles (fluid-filled spaces), choroid plexus, hypothalamus, pineal gland, pituitary gland, and optic nerve. Examples of tumors that form in the supratentorium are glioblastomas, pineal region tumors, and ependymomas.

**suramin**

A drug that is used to treat infections caused by parasites. It is also being studied in the treatment of cancer. It belongs to the families of drugs called antiprotozoals and anthelmintics.

**surface electrode**

A small device that is attached to the skin to measure or cause electrical activity in the tissue under it. Surface electrodes may be used to look for problems with muscles and nerves.

**surgeon**

A doctor who removes or repairs a part of the body by operating on the patient.

**surgery**

A procedure to remove or repair a part of the body or to find out whether disease is present. Also called operation.

**surgical biopsy**

A procedure in which a cut is made through the skin to remove abnormal tissue so it can be checked under a microscope for signs of disease. The two types of surgical biopsy are incisional biopsy, in which part of a lump or a sample of tissue is removed, and excisional biopsy, in which an entire lump or suspicious area is removed. Also called open biopsy.

**surgical castration**

Surgical removal of the testicles (orchiectomy) or ovaries (oophorectomy) to stop the production of sex hormones. Decreasing the levels of hormones may stop the growth of certain cancers.

**surgical excision**

The removal of tissue from the body using a scalpel (a sharp knife), laser, or other cutting tool. A surgical excision is usually done to remove a lump or other

suspicious growth. Some normal tissue around the lump is usually removed at the same time.

### **surgical menopause**

Describes a stop in a woman's menstrual periods that is caused by surgery to remove her ovaries. Symptoms of menopause include hot flashes, mood swings, night sweats, vaginal dryness, trouble concentrating, and infertility.

### **surgical oncologist**

A surgeon who has special training in performing biopsies and other surgical procedures in cancer patients.

### **surrogate endpoint**

In clinical trials, an indicator or sign used in place of another to tell if a treatment works. Surrogate endpoints include a shrinking tumor or lower biomarker levels. They may be used instead of stronger indicators, such as longer survival or improved quality of life, because the results of the trial can be measured sooner. The use of surrogate endpoints in clinical trials may allow earlier approval of new drugs to treat serious or life-threatening diseases, such as cancer. Surrogate endpoints are not always true indicators or signs of how well a treatment works.

### **surrogate pregnancy**

A type of pregnancy in which a woman carries and gives birth to a baby for a person who is not able to have children. In a surrogate pregnancy, eggs from the woman who will carry the baby or from an egg donor are fertilized with sperm from a sperm donor to make an embryo. The embryo is implanted in the uterus of the surrogate mother, who carries the baby until birth. Surrogate pregnancy may be an option for men or women who want to have children and have had certain anticancer treatments, such as chemotherapy or radiation therapy, that can cause infertility.

### **surveillance**

In medicine, closely watching a patient's condition but not treating it unless there are changes in test results. Surveillance is also used to find early signs that a disease has come back. It may also be used for a person who has an increased risk of a disease, such as cancer. During surveillance, certain exams and tests are done on a regular schedule. In public health, surveillance may also refer to the ongoing collection of information about a disease, such as cancer, in a certain group of people. The information collected may include where the disease occurs in a population and whether it affects people of a certain gender, age, or ethnic group.

### **survival rate**

The percentage of people in a study or treatment group who are still alive for a certain period of time after they were diagnosed with or started treatment for a disease, such as cancer. The survival rate is often stated as a five-year survival rate, which is the percentage of people in a study or treatment group who are alive five years after their diagnosis or the start of treatment. Also called overall survival rate.

### **survivor**

One who remains alive and continues to function during and after overcoming a serious hardship or life-threatening disease. In cancer, a person is considered to be a survivor from the time of diagnosis until the end of life.



## **survivorship**

In cancer, survivorship focuses on the health and well-being of a person with cancer from the time of diagnosis until the end of life. This includes the physical, mental, emotional, social, and financial effects of cancer that begin at diagnosis and continue through treatment and beyond. The survivorship experience also includes issues related to follow-up care (including regular health and wellness checkups), late effects of treatment, cancer recurrence, second cancers, and quality of life. Family members, friends, and caregivers are also considered part of the survivorship experience.

## **survivorship care plan**

A detailed plan given to a patient after treatment ends, that contains a summary of the patient's treatment, along with recommendations for follow-up care. In cancer, the plan is based on the type of cancer and the treatment the patient received. A survivorship care plan may include schedules for physical exams and medical tests to see if the cancer has come back or spread to other parts of the body. Getting follow-up care also helps check for health problems that may occur months or years after treatment ends, including other types of cancer. A survivorship care plan may also include information to help meet the emotional, social, legal, and financial needs of the patient. It may include referrals to specialists and recommendations for a healthy lifestyle, such as changes in diet and exercise and quitting smoking. Also called follow-up care plan.

## **susceptibility gene mutation**

A change in the DNA sequence of a gene that causes a person to have or be at risk of developing a certain genetic disorder or disease, such as cancer. Susceptibility gene mutations can be inherited from a parent or occur during a person's lifetime. Knowing if a person has a susceptibility gene mutation may help prevent, diagnose, and treat diseases, such as cancer. Not everyone who has a susceptibility gene mutation will develop the disease. Also called deleterious mutation, disease-causing mutation, pathogenic variant, and predisposing mutation.

## **sweet elm**

The inner bark of this plant has been used in some cultures to treat certain medical problems. It may have antioxidant effects. Also called gray elm, Indian elm, red elm, slippery elm, *Ulmus fulva*, and *Ulmus rubra*.

## **sympathetic nervous system**

The part of the nervous system that increases heart rate, blood pressure, breathing rate, and pupil size. It also causes blood vessels to narrow and decreases digestive juices.

## **symptom**

Something that a person feels or experiences that may indicate that they have a disease or condition. Symptoms can only be reported by the person experiencing them. They cannot be observed by a health care provider or other person and do not show up on medical tests. Some examples of symptoms are pain, nausea, fatigue, and anxiety.

## **symptom management**

Care given to help relieve the symptoms of a disease, such as cancer, and the side effects caused by treatment of the disease. Symptom management may help a person feel more comfortable, but it does not treat or cure the disease. It may involve taking certain medicines to relieve pain or nausea or using guided

imagery or deep breathing exercises to reduce stress or anxiety. Symptom management is one aspect of palliative care and supportive care.

### **symptomatic**

Having to do with symptoms, which are signs of a condition or disease.

### **synapse**

The space between the end of a nerve cell and another cell. Nerve impulses are usually carried to the neighboring cell by chemicals called neurotransmitters, which are released by the nerve cell and are taken up by another cell on the other side of the synapse. The neighboring cell may be another nerve cell, a muscle cell, or a gland cell.

### **syncytium**

A large cell-like structure formed by the joining together of two or more cells. The plural is syncytia.

### **syndrome**

A set of symptoms or conditions that occur together and suggest the presence of a certain disease or an increased chance of developing the disease.

### **synergistic**

In medicine, describes the interaction of two or more drugs when their combined effect is greater than the sum of the effects seen when each drug is given alone.

### **syngeneic**

Having to do with individuals or tissues that have identical genes. For example, identical twins and cells and tissues from them are syngeneic.

### **syngeneic bone marrow transplant**

A procedure in which a patient receives healthy stem cells (blood-forming cells) to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy. In a syngeneic bone marrow transplant, the healthy stem cells come from the bone marrow of the patient's healthy identical twin.

### **syngeneic stem cell transplantation**

A procedure in which a patient receives blood-forming stem cells (cells from which all blood cells develop) donated by his or her healthy identical twin.

### **synovial membrane**

A layer of connective tissue that lines the cavities of joints, tendon sheaths, and bursae (fluid-filled sacs between tendons and bones). The synovial membrane makes synovial fluid, which has a lubricating function.

### **synovial sarcoma**

A type of cancer that usually forms in the tissue around the joints in the arms or legs. It may also form in the trunk (chest and abdomen), or the head and neck and it may spread to the lungs, bones, and lymph nodes. Synovial sarcoma usually occurs in children and young adults. It is a type of soft tissue sarcoma.

### **synovitis**

Inflammation (swelling, pain, and warmth) of a synovial membrane, which is a layer of connective tissue that lines a joint, such as the hip, knee, ankle, or shoulder. Synovitis is caused by some types of arthritis and other diseases.

## **synthetic**

Having to do with substances that are man-made instead of taken from nature.

## **synthetic human secretin**

A drug used to help diagnose gastrinomas (tumors that cause too much gastric acid to be made) and other problems with the pancreas. It is also used to increase secretions from the pancreas and to help identify a duct called the ampulla of Vater. Synthetic human secretin is a form of secretin that is made in the laboratory. Secretin causes the pancreas, liver, and stomach to release substances that help digest food. Also called ChiRhoStim and secretin human.

## **synthetic lethality**

Describes a situation in which mutations (changes) in two genes together result in cell death, but a mutation in either gene alone does not. Cancer cells that only have one mutated gene in a specific pair of genes can depend on the normal partner gene for survival. Interfering with the function of the normal partner gene may cause cancer cells to die. Studying synthetic lethality may help researchers learn more about the function of genes and develop new drugs to treat cancer.

## **synthetic protegrin analog**

A form of a protegrin that is made in the laboratory. Protegrins kill certain bacteria, fungi, and viruses by making holes in their outer membranes and causing them to burst. Synthetic protegrin analogs, such as iseganan, are being studied in the treatment of oral mucositis (painful mouth sores) caused by radiation therapy. It is a type of synthetic antimicrobial peptide.

## **synthetic retinoid**

A substance related to vitamin A that is produced in a laboratory.

## **syringe**

A small hollow tube used for injecting or withdrawing liquids. It may be attached to a needle in order to withdraw fluid from the body or inject drugs into the body.

## **systematic biopsy**

A procedure in which many samples of tissue (usually 12) are removed via a long needle from different areas of the prostate to examine under a microscope. An ultrasound is used to guide the needle through the rectum into the prostate. This type of biopsy does not target specific areas of the prostate. Systematic biopsy is used to help diagnose prostate cancer.

## **systemic**

Affecting the entire body.

## **systemic chemotherapy**

Treatment with anticancer drugs that travel through the blood to cells all over the body.

## **systemic disease**

Disease that affects the whole body.

## **systemic inflammatory response syndrome**

A serious condition in which there is inflammation throughout the whole body. Systemic inflammatory response syndrome may be caused by an infection, trauma, surgery, ischemia (lack of blood supply to a part of the body), or certain conditions, such as an autoimmune disorder or pancreatitis. To be diagnosed

with systemic inflammatory response syndrome, a person must have two or more of the following: low or high body temperature, increased heart rate, increased breathing rate, and an abnormal white blood cell count. When systemic inflammatory response syndrome occurs as a result of a known infection, it may be called sepsis. Sepsis can be severe or life threatening and lead to multiple organ failure and shock. Also called SIRS.

### **systemic lupus erythematosus**

A chronic, inflammatory, connective tissue disease that can affect the joints and many organs, including the skin, heart, lungs, kidneys, and nervous system. It can cause many different symptoms; however, not everyone with systemic lupus erythematosus has all of the symptoms. Also called lupus and SLE.

### **systemic mastocytosis**

A rare disease in which too many mast cells (a type of immune system cell) are found in the skin, bones, joints, lymph nodes, liver, spleen, and gastrointestinal tract. Mast cells give off chemicals, such as histamine, that can cause flushing (a hot, red face), itching, abdominal cramps, muscle pain, nausea, vomiting, diarrhea, low blood pressure, and shock.

### **systemic mastocytosis with associated hematologic neoplasm**

A rare condition in which too many mast cells (a type of white blood cell) build up in certain tissues and organs in the body, including the bone marrow, lymph nodes, bone, liver, spleen, and small intestine, and may damage them. In systemic mastocytosis with associated hematologic neoplasm, this mast cell buildup occurs together with another blood disorder, usually a myelodysplastic syndrome, myeloproliferative disorder, or acute myeloid leukemia (AML). Systemic mastocytosis with associated hematologic neoplasm usually occurs in adults. Also called SM-AHN.

### **systemic radiation therapy**

A type of radiation therapy in which a radioactive substance, such as radioactive iodine or a radioactively labeled monoclonal antibody, is swallowed or injected into the body and travels through the blood, locating and killing tumor cells.

### **systemic scleroderma**

A disease that is marked by hardening and thickening of skin, connective tissue that surrounds other tissues and organs, and blood vessels. Also called systemic sclerosis.

### **systemic sclerosis**

A disease that is marked by hardening and thickening of skin, connective tissue that surrounds other tissues and organs, and blood vessels. Also called systemic scleroderma.

### **systemic therapy**

Treatment using substances that travel through the bloodstream, reaching and affecting cells all over the body.

### **t test**

A statistical test that is used to find out if there is a real difference between the means (averages) of two different groups. It is sometimes used to see if there is a significant difference in response to treatment between groups in a clinical trial.

**t-AML**

A type of acute myeloid leukemia (AML) that is caused by previous treatment with chemotherapy or radiation therapy. t-AML is an aggressive (fast-growing) cancer in which there are too many myeloblasts (immature white blood cells) in the blood or bone marrow. t-AML usually occurs within 7 years after treatment. It is more common in adults. Also called therapy-related acute myeloid leukemia.

**tPA**

An enzyme made in the body that helps dissolve blood clots. A form of this enzyme is made in the laboratory to treat heart attacks, strokes, and clots in the lungs. It is also being studied in the treatment of cancer. tPA is a type of systemic thrombolytic agent. Also called tissue plasminogen activator.

**tachycardia**

Rapid beating of the heart, usually defined as greater than 100 beats per minute.

**tachypnea**

Rapid breathing.

**tacrolimus**

A drug used to help reduce the risk of rejection by the body of organ and bone marrow transplants.

**tadalafil**

A drug used to treat erectile dysfunction. It is also being studied in the treatment of sexual problems in patients treated with radiation or surgery for prostate cancer. Tadalafil blocks the action of a certain enzyme, which can result in increased blood flow to the penis, causing an erection. It is a type of cGMP phosphodiesterase type 5 (PDE5) inhibitor. Also called Cialis.

**tafasitamab**

A drug used with lenalidomide to treat adults with certain types of diffuse large B-cell lymphoma that relapsed (came back) or did not get better after treatment with other anticancer therapy. It is used in patients who cannot be treated with an autologous stem cell transplant. It is also being studied in the treatment of other types of cancer. Tafasitamab binds to a protein called CD19, which is found on most B cells (a type of white blood cell) and some lymphoma cells. This may help the immune system kill cancer cells. Tafasitamab is a type of monoclonal antibody. Also called Monjuvi.

**tagraxofusp**

A drug used to treat adults and children aged 2 years and older with a rare blood cancer called blastic plasmacytoid dendritic cell neoplasm. It is also being studied in the treatment of other types of cancer. Tagraxofusp is made up of interleukin-3 (IL-3), which binds to an IL-3 receptor protein called CD123. CD123 may be found in higher than normal amounts on some types of cancer cells. Tagraxofusp is also made up of a diphtheria toxin, which may help kill cancer cells. Tagraxofusp is a type of cytotoxin. Also called Elzonris.

**tai chi**

A form of traditional Chinese mind/body exercise and meditation that uses slow sets of body movements and controlled breathing. Tai chi is done to improve balance, flexibility, muscle strength, and overall health.

**tailbone**

The small bone at the bottom of the spine. It is made up of 3-5 fused bones. Also called coccyx.

**tailored intervention**

The use of communication, drugs, or other types of treatments that are specific for an individual or a group to improve health or change behavior.

**talabostat mesylate**

A substance being studied in the treatment of cancer, including certain types of lung, pancreas, and brain cancer. Talabostat mesylate may help the immune system block the growth of cancer cells. It may also increase the growth of new blood cells. It is a type of enzyme inhibitor. Also called PT-100.

**talactoferrin**

A drug being studied in the treatment of kidney cancer that has spread. It is also being studied in the treatment of other types of cancer and other conditions. Talactoferrin increases the activity of dendritic cells (a type of immune cell) to help kill cancer cells. It is a form of human lactoferrin (a protein found in milk, tears, mucus, bile, and some white blood cells) that is made in the laboratory. Talactoferrin is a type of recombinant protein and a type of immunomodulatory protein. Also called talactoferrin alfa and TLF.

**talactoferrin alfa**

A drug being studied in the treatment of kidney cancer that has spread. It is also being studied in the treatment of other types of cancer and other conditions. Talactoferrin alfa increases the activity of dendritic cells (a type of immune cell) to help kill cancer cells. It is a form of human lactoferrin (a protein found in milk, tears, mucus, bile, and some white blood cells) that is made in the laboratory. Talactoferrin alfa is a type of recombinant protein and a type of immunomodulatory protein. Also called talactoferrin and TLF.

**talampanel**

A substance that is being studied in the treatment of brain tumors and other brain disorders, such as epilepsy and Parkinson disease. It is a type of AMPA receptor antagonist.

**talaporfin sodium**

A drug used in photodynamic therapy. When absorbed by cancer cells and exposed to light, the drug becomes active and kills the cancer cells.

**talazoparib tosylate**

A drug used alone to treat adults with HER2-negative breast cancer that has spread and has certain mutations (changes) in the BRCA1 or BRCA2 gene and with enzalutamide to treat adults with prostate cancer that has spread, has not responded to treatments that lower testosterone levels, and has a mutation in the HRR gene. It is also being studied in the treatment of other types of cancer. Talazoparib tosylate blocks an enzyme involved in many cell functions, including the repair of DNA damage. Blocking this enzyme may help keep cancer cells from repairing their damaged DNA, causing them to die. Talazoparib tosylate is a type of PARP inhibitor. Also called Talzenna.

**talc**

A mist or powdered form of the mineral magnesium silicate that is used to prevent malignant pleural effusions from coming back. Malignant pleural effusion



is a condition in which cancer causes an abnormal collection of fluid in the space between the lung and chest wall. When talc is given through a tube inserted into the pleural space, it causes the space to close up so fluid cannot collect there. Talc is a type of sclerosing agent. Also called Sclerosol Intrapleural Aerosol, Sterile Talc Powder, and Steritalc.

### **talimogene laherparepvec**

A drug used to treat melanoma that has recurred (come back) after surgery. It is used in patients whose cancer is in the skin and lymph nodes and cannot be removed by surgery. It is also being studied in the treatment of other types of cancer. Talimogene laherparepvec is made with a form of the herpesvirus that has been changed in the laboratory to infect and break down cancer cells without harming normal cells. It may also help the immune system kill cancer cells. Talimogene laherparepvec is injected directly into tumors in the skin and lymph nodes. It is a type of oncolytic virus therapy. Also called Imlygic and T-VEC.

### **talk therapy**

Treatment of mental, emotional, personality, and behavioral disorders using methods such as discussion, listening, and counseling. Also called psychotherapy.

### **talotrexin**

A substance that is being studied in the treatment of leukemia and some other types of cancer. It belongs to the family of drugs called antifolates.

### **talquetamab**

A drug used to treat adults with multiple myeloma that came back or did not get better after treatment with at least four other anticancer therapies. These therapies had to include an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Talquetamab binds to a protein called CD3, which is found on T cells (a type of white blood cell), and to a protein called GPRC5D, which is found on myeloma cells and some other types of cells. This may help the immune system kill cancer cells. Talquetamab is a type of bispecific T-cell engager. Also called Talvy.

### **tamoxifen citrate**

A drug used to treat certain types of breast cancer in women and men, to prevent invasive breast cancer in women who have had ductal carcinoma in situ (abnormal cells in the ducts of the breast), and to prevent breast cancer in women who are at a high risk of developing the disease. It is also being studied in the treatment of other types of cancer. Tamoxifen citrate blocks the effects of the hormone estrogen in breast tissue, which may help keep breast cancer cells from growing. It is a type of selective estrogen receptor modulator (SERM). Tamoxifen is the active ingredient of tamoxifen citrate. Also called Soltamox.

### **tamsulosin hydrochloride**

A drug used to treat urinary problems caused by an enlarged prostate. Tamsulosin hydrochloride relaxes the muscles of the prostate and bladder, which helps the flow of urine. It is a type of alpha blocker. Also called Flomax.

### **tandem transplant**

A type of transplant in which a patient receives two courses of high-dose chemotherapy, each course followed by an infusion of their own healthy blood-forming stem cells. The stem cells are collected and stored before the first high-dose chemotherapy treatment. The treatments are given weeks or months apart.

but are usually completed within a 6-month period. A tandem transplant is used to treat certain types of cancer, such as neuroblastoma and multiple myeloma. Also called double autologous transplant.

### **tandutinib**

A substance being studied in the treatment of some types of cancer. It may stop cancer cell growth by blocking certain enzymes. It may also prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called CT53518 and MLN518.

### **tanespimycin**

A substance being studied in the treatment of cancer. It is made from an antibiotic called geldanamycin. Tanespimycin helps cause the breakdown of certain proteins in the cell, and may kill cancer cells. It is a type of antineoplastic antibiotic and a type of HSP90 inhibitor. Also called 17-AAG and 17-N-allylamino-17-demethoxygeldanamycin.

### **tannic acid**

A type of chemical found in plants and in certain foods, such as fruits, vegetables, nuts, wine, and tea. Tannic acid has antioxidant properties and may promote good health. It is being studied in the prevention of cancer, heart disease, and other diseases. It is also used in certain medicines, fabrics, leather, and ink. Tannic acid is a type of polyphenol. Also called tannin.

### **tannin**

A type of chemical found in plants and in certain foods, such as fruits, vegetables, nuts, wine, and tea. Tannins have antioxidant properties and may promote good health. They are being studied in the prevention of cancer, heart disease, and other diseases. They are also used in certain medicines, fabrics, leather, and ink. A tannin is a type of polyphenol. Also called tannic acid.

### **tapentadol hydrochloride**

A drug used to treat moderate to severe pain. It binds to opioid receptors and other molecules in the central nervous system. Tapentadol hydrochloride is a type of opioid and a type of analgesic agent. Also called Nucynta.

### **targeted radionuclide therapy**

A type of radiation therapy in which a radionuclide (a radioactive chemical) is linked to a cell-targeting molecule, such as a monoclonal antibody, and injected into the body. The cell-targeting molecule binds to a specific target found on some cancer cells. This may help kill the targeted cancer cells while limiting the harm to normal cells. Targeted radionuclide therapy is used to treat prostate cancer and some other types of cancer. Also called molecular radiation therapy.

### **targeted therapy**

A type of treatment that uses drugs or other substances to target specific molecules that cancer cells need to survive and spread. Targeted therapies work in different ways to treat cancer. Some stop cancer cells from growing by interrupting signals that cause them to grow and divide, stopping signals that help form blood vessels, delivering cell-killing substances to cancer cells, or starving cancer cells of hormones they need to grow. Other targeted therapies help the immune system kill cancer cells or directly cause cancer cell death. Most targeted therapies are either small-molecule drugs or monoclonal antibodies. Also called molecularly targeted therapy.

### **tariquidar**

A substance that is being studied in the treatment of cancer. It may help tumor cells respond again to drugs they have become resistant (unable to respond) to. Tariquidar is a type of multidrug resistance inhibitor and a type of P-glycoprotein antagonist. Also called XR9576.

### **tarlatamab**

A drug used to treat adults with extensive-stage small cell lung cancer that got worse during or after treatment with platinum chemotherapy. It is also being studied in the treatment of other types of cancer. Tarlatamab binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called DLL3, which is found on some types of cancer cells. This may help the immune system kill cancer cells. Tarlatamab is a type of bispecific T-cell engager. Also called Imdelltra.

### **taurolidine**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called anti-infectives.

### **taxane**

A type of drug that blocks cell growth by stopping mitosis (cell division). Taxanes interfere with microtubules (cellular structures that help move chromosomes during mitosis). They are used to treat cancer. A taxane is a type of mitotic inhibitor and a type of antimicrotubule agent.

### **taxoid XRP6258**

A drug used with prednisone to treat prostate cancer that has spread to other parts of the body and is castration resistant (has not responded to treatments that lower testosterone levels). It is used in patients who have already been treated with anticancer drugs that included docetaxel. It is also being studied in the treatment of other types of cancer. Taxoid XRP6258 stops cancer cells from growing and dividing and may kill them. It is a type of taxane. Also called cabazitaxel and Jevtana.

### **tazarotene**

A drug used on the skin to treat several skin conditions. It is also being studied in the treatment of basal cell skin cancer and basal cell nevus syndrome. Tazarotene is related to vitamin A and is made in the laboratory. It turns on a gene that may help stop the growth of skin cancer cells. Tazarotene is a type of synthetic retinoid. Also called Avage and Tazorac.

### **tazemetostat hydrobromide**

A drug used to treat adults and children aged 16 years and older with a rare type of soft tissue sarcoma called epithelioid sarcoma and adults with certain types of follicular lymphoma. It is also being studied in the treatment of other types of cancer. Tazemetostat hydrobromide blocks certain enzymes involved in gene expression and cell division. Blocking these enzymes may help keep cancer cells from growing. Tazemetostat hydrobromide is a type of histone methyltransferase inhibitor. Also called Tazverik.

### **tea tree**

A tree that is a member of the myrtle family. Oil from the tea tree is used in shampoos and skin care products and to treat skin infections. It has been used in some cultures to treat other skin conditions, including acne, burns, and insect bites. The scientific name is *Melaleuca alternifolia*.

### **tebentafusp**

A drug used to treat adults with uveal melanoma (a type of eye cancer) that has spread or cannot be removed by surgery. It is used in patients who have the HLA-A\*02:01 antigen. It is also being studied in the treatment of other types of cancer. Tebentafusp binds to certain antigens found on the surfaces of uveal melanoma cells and T cells (a type of immune cell). This may help the immune system kill cancer cells. Tebentafusp is a type of bispecific fusion protein. Also called Kimmtrak.

### **technetium Tc 99m-demobesin-4**

A substance being studied as a way to find certain types of cancer in the body. It contains a radioactive substance called technetium linked to a substance called demobesin. Demobesin binds to the receptor for bombesin (a substance that is found at higher-than-normal levels on some types of cancer cells). Technetium Tc 99m-demobesin-4 collects in cancer cells and a machine is used to find where the cancer cells are in the body.

### **technetium Tc 99m-dextran**

A substance being studied as a way to find sentinel lymph nodes in some types of skin cancer and breast cancer. It contains a radioactive substance called technetium linked to a substance called dextran. Dextran helps technetium stay in blood and lymph vessels after it is injected. A machine or probe that detects radioactivity shows which lymph nodes near the tumor have technetium Tc 99m-dextran in them. Also called 99m-Tc-Dx and Tc-99m Dextran.

### **technetium Tc 99m-sulfur colloid**

A substance being studied as a way to find cancer in the body. It is also used to find sentinel lymph nodes in breast cancer. It contains a radioactive substance called technetium linked to a substance called sulfur colloid. Sulfur colloid is taken up by special cells in lymph tissue, and in the liver, spleen, and bone marrow after it is injected. A machine or probe that detects radioactivity is used to find where the technetium Tc 99m-sulfur colloid is in the body. Also called Tc 99m sulfur colloid and Tc-99m SC.

### **technician**

A person trained in the techniques (methods) and skills of a profession. For example, a mammogram technician is trained to perform mammograms.

### **teclistamab**

A drug used to treat adults with multiple myeloma that came back or did not get better after treatment with at least four other anticancer therapies, including an immunomodulating agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody. Teclistamab binds to a protein called CD3, which is found on T cells (a type of white blood cell). It also binds to a protein called BCMA, which is found on myeloma cells and some B cells (another type of white blood cell). This may help the immune system kill cancer cells. Teclistamab is a type of bispecific monoclonal antibody. Also called Tecvayli.

### **tegafur**

An anticancer drug that belongs to the family of drugs called antimetabolites.

### **tegafur-uracil**

A substance being studied in the treatment of some types of cancer. It is a combination of tegafur and uracil. The tegafur is taken up by the cancer cells and breaks down into 5-FU, a substance that kills tumor cells. The uracil causes

higher amounts of 5-FU to stay inside the cells and kill them. Tegafur-uracil is a type of antimetabolite. Also called Ftorafur and UFT.

### **teicoplanin**

A substance used to treat bacterial infections. It belongs to the family of drugs called antibiotics.

### **telangiectasia**

The permanent enlargement of blood vessels, causing redness in the skin or mucous membranes.

### **telehealth**

The delivery of health care from a distance using electronic information and technology, such as computers, cameras, videoconferencing, satellites, wireless communications, and the internet. Also called telemedicine.

### **telemedicine**

The delivery of health care from a distance using electronic information and technology, such as computers, cameras, videoconferencing, satellites, wireless communications, and the internet. Also called telehealth.

### **telomerase**

An enzyme in cells that helps keep them alive by adding DNA to telomeres (the ends of chromosomes). Each time a cell divides, the telomeres lose a small amount of DNA and become shorter. Over time, the chromosomes become damaged and the cells die. Telomerase helps keep this from happening. Cancer cells usually have more telomerase than most normal cells.

### **telomere**

The ends of a chromosome. Each time a cell divides, the telomeres lose a small amount of DNA and become shorter. Over time, the chromosomes become damaged and the cells die. In cancer cells the telomeres do not get shorter, and may become longer, as the cells divide.

### **temoporfin**

An anticancer drug that is also used in cancer prevention. It belongs to the family of drugs called photosensitizing agents.

### **temozolomide**

A drug used alone or with radiation therapy to treat adults with glioblastoma or anaplastic astrocytoma (types of brain tumors). It is used in patients whose cancer is newly diagnosed or did not get better with other treatment. It is also being studied in the treatment of other types of cancer. Temozolomide damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Temodar.

### **temsirolimus**

A drug used to treat advanced renal cell carcinoma (a type of kidney cancer). It is also being studied in the treatment of other types of cancer. Temsirolimus blocks a protein called mTOR, which helps control cell division. Blocking this protein may help keep cancer cells from growing. Temsirolimus is a type of kinase inhibitor. Also called CCI-779 and Torisel.

**tendon**

Tough, fibrous, cord-like tissue that connects muscle to bone or another structure, such as an eyeball. Tendons help the bone or structure to move.

**teniposide**

An anticancer drug that is a podophyllotoxin derivative and belongs to the family of drugs called mitotic inhibitors.

**tenosynovial giant cell tumor**

A type of rare tumor that forms in the synovium (tissue that lines the joints), the tendon sheath (tissue that covers the tendons), or the bursa (a fluid-filled sac between bones, tendons, and muscles). These tumors cause the affected synovium, tendon sheath, or bursa to thicken and overgrow. Tenosynovial giant cell tumors can occur in any joint. Although tenosynovial giant cell tumors are not cancer, they can grow and cause damage to surrounding tissues or structures. Symptoms may include reduced movement or pain in the affected joint and a locking or catching sensation when moving the joint. Tenosynovial giant cell tumors usually occur in young and middle-aged adults. Also called TGCT.

**tepotinib hydrochloride**

A drug used to treat adults with non-small cell lung cancer that has spread to other parts of the body and has a certain mutation (change) in the MET gene. It is also being studied in the treatment of other types of cancer. Tepotinib hydrochloride blocks a protein made by the MET gene, which may help keep cancer cells from growing and spreading and may kill them. It is a type of tyrosine kinase inhibitor. Also called Tepmetko.

**teratocarcinoma**

A type of germ cell cancer that usually forms in the testes (testicles).

**teratoma**

A type of germ cell tumor that may contain several different types of tissue, such as hair, muscle, and bone. Teratomas may be mature or immature, based on how normal the cells look under a microscope. Sometimes teratomas are a mix of mature and immature cells. Teratomas usually occur in the ovaries in women, the testicles in men, and the tailbone in children. They may also occur in the central nervous system (brain and spinal cord), chest, or abdomen. Teratomas may be benign (not cancer) or malignant (cancer).

**terazosin hydrochloride**

A drug used to treat urinary problems caused by an enlarged prostate. It is also used to treat high blood pressure and is being studied in the treatment of other conditions. Terazosin hydrochloride relaxes muscle tissue in blood vessels and in the prostate. It is a type of alpha blocker. Also called Hytrin.

**terminal cancer**

Cancer that cannot be cured or controlled with treatment and leads to death. A person with terminal cancer may receive treatment to help control pain and other symptoms so they can be as comfortable as possible and have a better quality of life. Also called end-stage cancer.

**terpene**

A type of strong-smelling chemical substance found in some plants, especially trees that have cones. Terpenes are found in essential oils (scented liquid taken from plants).



**testicle**

One of two egg-shaped glands inside the scrotum that produce sperm and male hormones. Also called testis.

**testicular cancer**

Cancer that forms in tissues of one or both testicles. Testicular cancer is most common in young or middle-aged men. Most testicular cancers begin in germ cells (cells that make sperm) and are called testicular germ cell tumors.

**testicular cord**

A cord-like structure in the male reproductive system that contains nerves, blood and lymph vessels, and the vas deferens (a coiled tube that carries sperm out of the testicle). It runs from the abdomen to the testicle, and connects to the testicle in the scrotum (external sac). Also called spermatic cord.

**testicular germ cell tumor**

A type of tumor that forms in a testicle from germ cells (cells that make sperm). Two main types of testicular germ cell tumors are seminomas and nonseminomas. Seminomas grow and spread slowly and are sensitive to radiation therapy. Nonseminomas grow and spread more quickly than seminomas. There are several different types of nonseminomas.

**testicular intraepithelial neoplasia**

Abnormal cells are found in the tiny tubules where the sperm cells begin to develop. These abnormal cells may become cancer and spread into nearby normal tissue. All tumor marker levels are normal. Also called stage 0 testicular carcinoma in situ and testicular intratubular germ cell neoplasia.

**testicular intratubular germ cell neoplasia**

Abnormal cells are found in the tiny tubules where the sperm cells begin to develop. These abnormal cells may become cancer and spread into nearby normal tissue. All tumor marker levels are normal. Also called stage 0 testicular carcinoma in situ and testicular intraepithelial neoplasia.

**testicular shielding**

A procedure used to help keep a man fertile by preventing damage to the testicles during radiation therapy. A protective shield is placed over the scrotum (the external sac that contains the testicles) during radiation to the pelvic area. Testicular shielding is a type of fertility preservation.

**testicular sperm aspiration**

A procedure in which a sample of sperm cells and tissue are removed from the testicle through a small needle attached to a syringe. The sperm is separated from the tissue and looked at under a microscope in the laboratory. It may then be used right away to fertilize eggs or frozen for future infertility treatment. Testicular sperm aspiration may be useful for men who have fertility problems caused by a blockage that keeps sperm from being ejaculated. This could be caused by previous vasectomy, certain genetic conditions, ejaculation problems, infection, or other conditions. It may also be useful for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Testicular sperm aspiration is a type of sperm retrieval method. Also called TESA.

### **testicular sperm extraction**

A procedure in which sperm cells are removed and either used right away to fertilize eggs or frozen for future infertility treatment. Tissue is removed from the testicle through a small incision (cut) and looked at under a microscope in the laboratory to find sperm cells. Testicular sperm extraction may be useful for men who want to have children after having treatment that may cause infertility, such as certain cancer treatments. Testicular sperm extraction is a type of sperm retrieval method. Also called TESE.

### **testicular tissue banking**

A process being developed to freeze testicular tissue from boys who have not gone through puberty, to save for future infertility treatment. Tissue that contains cells that make sperm is removed from the testicles through a small incision (cut). It is then frozen and stored. At a later date, the tissue can be thawed to retrieve sperm. Testicular tissue banking is being studied as a type of fertility preservation. It may be useful for young boys who are going to have treatments that may cause infertility, such as certain cancer treatments. Also called testicular tissue cryopreservation and testicular tissue freezing.

### **testicular tissue cryopreservation**

A process being developed to freeze testicular tissue from boys who have not gone through puberty, to save for future infertility treatment. Tissue that contains cells that make sperm is removed from the testicles through a small incision (cut). It is then frozen and stored. At a later date, the tissue can be thawed to retrieve sperm. Testicular tissue cryopreservation is being studied as a type of fertility preservation. It may be useful for young boys who are going to have treatments that may cause infertility, such as certain cancer treatments. Also called testicular tissue banking and testicular tissue freezing.

### **testicular tissue freezing**

A process being developed to freeze testicular tissue from boys who have not gone through puberty, to save for future infertility treatment. Tissue that contains cells that make sperm is removed from the testicles through a small incision (cut). It is then frozen and stored. At a later date, the tissue can be thawed to retrieve sperm. Testicular tissue freezing is being studied as a type of fertility preservation. It may be useful for young boys who are going to have treatments that may cause infertility, such as certain cancer treatments. Also called testicular tissue banking and testicular tissue cryopreservation.

### **testimonial**

Information provided by an individual who claims to have been helped or cured by a particular product. The information provided lacks the necessary elements to be evaluated in a rigorous and scientific manner and is not used in the scientific literature.

### **testis**

One of two egg-shaped glands inside the scrotum that produce sperm and male hormones. Also called testicle.

### **testosterone**

A hormone made mainly in the testes (part of the male reproductive system). It is needed to develop and maintain male sex characteristics, such as facial hair, deep voice, and muscle growth. Testosterone may also be made in the laboratory and is used to treat certain medical conditions.

### **testosterone flare**

A temporary increase in testosterone levels in the body caused by certain types of hormone therapy used to treat prostate cancer. A testosterone flare may occur in patients who are taking drugs called gonadotropin-releasing hormone (GnRH) agonists. When first given, these drugs cause the testicles to make more testosterone. This may cause symptoms, such as bone pain and urinary problems, to get worse, but they usually go away after the first few weeks of treatment.

### **tetanus toxoid**

A substance that is derived from the toxin released by the bacterium that causes the disease tetanus. It is used as a vaccine to prevent tetanus or to help boost the immune response to other vaccines.

### **tethered capsule endoscope**

A device used to look at tissues in the esophagus. It is a tiny capsule with a laser scanner inside and a very thin cord attached to it. The patient swallows the capsule and the thin cord helps keep the capsule in a specific area in the esophagus. The cord is also used to remove the capsule. Pictures are taken by the laser scanner and sent to a computer for viewing. A tethered capsule endoscope is used to find early cancers of the esophagus and other parts of the body. Also called TCE.

### **tetra-O-methyl NDGA**

A substance being studied in the treatment of cancer. It blocks proteins needed for cancer growth. It is a type of transcriptional inhibitor. Also called EM-1421 and tetra-O-methyl nordihydroguaiaretic acid.

### **tetra-O-methyl nordihydroguaiaretic acid**

A substance being studied in the treatment of cancer. It blocks proteins needed for cancer growth. It is a type of transcriptional inhibitor. Also called EM-1421 and tetra-O-methyl NDGA.

### **tetracycline**

A drug used to treat bacterial infections. It stops the growth of bacteria by keeping them from making proteins. Tetracycline also binds to new bone tissue and is being studied as a way to detect bone growth. Tetracycline is a type of antibiotic and a type of bone-labeling agent.

### **tetradecanoylphorbol acetate**

A substance being studied in the treatment of leukemias and lymphomas. It is also being studied in the treatment of other types of cancer. Tetradecanoylphorbol acetate affects many cell actions and may cause tumor cells to die. It is a type of phorbol ester. Also called 12-O-tetradecanoylphorbol-13-acetate.

### **tetrahydrouridine**

A substance being studied in the treatment of some types of cancer. It may help make cancer cells easier to kill with radiation therapy. Tetrahydrouridine is a type of radiosensitizing agent, a type of multidrug resistance modulator, and a type of cytidine deaminase inhibitor. Also called THU.

### **thalamus**

An area of the brain that helps process information from the senses and transmit it to other parts of the brain.

### **thalidomide**

A drug used with dexamethasone to treat multiple myeloma in patients who have been just diagnosed. It is also used to treat a painful skin disease related to leprosy. It is also being studied in the treatment of other types of cancer.

Thalidomide may help the immune system kill cancer cells. It may also prevent the growth of new blood vessels that tumors need to grow. Thalidomide is a type of antiangiogenesis agent and a type of immunomodulating agent. Also called Thalomid.

### **theaflavin**

A substance formed when green tea is fermented to make black tea. It is being studied in the treatment of cancer and other conditions, such as high cholesterol. It is a type of antioxidant.

### **thearubigin**

A substance formed when green tea is fermented to make black tea. It is being studied in the treatment of cancer and other conditions, such as high cholesterol. It is a type of antioxidant.

### **theobromine**

A substance that is closely related to caffeine and is found in cocoa beans, cola nuts, and tea. It may also be made in the laboratory. Theobromine is used to increase the amount of urine made by the kidneys, to stimulate the heart, and to widen blood vessels. It is a type of alkaloid.

### **theophylline**

A drug used to improve breathing in people who are short of breath. It belongs to the family of drugs called bronchodilators or respiratory smooth muscle relaxants.

### **therapeutic**

Having to do with treating disease and helping healing take place.

### **therapeutic (subthreshold) electrical stimulation**

A procedure in which small electric impulses are used to stimulate muscles that are weak or paralyzed. It helps to increase muscle strength, blood circulation, and range of motion and to lessen muscle spasms. Also called NES, neuromuscular electrical stimulation, and NMES.

### **therapeutic angiotensin-(1-7)**

A substance being studied in the treatment of several types of cancer. Therapeutic angiotensin-(1-7) is a hormone that is made in the laboratory, and helps control blood pressure. It may stop the growth of some types of cancer cells and may stop the growth of blood vessels needed by tumors to grow. It is a type of antiproliferative agent.

### **therapeutic medical play**

The use of games, toys, books, art, and role playing, sometimes with real or pretend medical equipment, to help children understand and become more comfortable with medical tests, procedures, treatments, and their illness. Therapeutic medical play gives children a way to express their feelings, fears, and anxieties and helps them learn ways to cope with things that may be stressful or upsetting.

**therapeutic touch**

A form of complementary and alternative medicine based on the belief that vital energy flows through the human body. This energy is said to be balanced or made stronger by practitioners who pass their hands over, or gently touch, a patient's body. Therapeutic touch is being studied in patients receiving cancer therapy, to find out if it can improve quality of life, boost the immune system, or reduce side effects. Therapeutic touch is a type of energy therapy. Also called healing touch.

**therapy**

Treatment.

**therapy-related acute myeloid leukemia**

A type of acute myeloid leukemia (AML) that is caused by previous treatment with chemotherapy or radiation therapy. Therapy-related acute myeloid leukemia is an aggressive (fast-growing) cancer in which there are too many myeloblasts (immature white blood cells) in the blood or bone marrow. Therapy-related acute myeloid leukemia usually occurs within 7 years after treatment. It is more common in adults. Also called t-AML.

**thermal ablation**

A procedure using heat to remove tissue or a part of the body, or destroy its function. For example, to remove the lining of the uterus, a catheter is inserted through the cervix into the uterus, a balloon at the end of the catheter is inflated, and fluid inside the balloon is heated to destroy the lining of the uterus.

**thermography**

In medicine, a procedure in which a heat-sensing infrared camera is used to record the surface heat produced by different parts of the body. Abnormal tissue growth can cause temperature changes, which may show up on the thermogram. Thermography may be used to diagnose breast cancer and other tumors.

**thermotherapy**

Treatment of disease using heat.

**thiamine**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Thiamine helps some enzymes work properly, helps break down sugars in the diet, and keeps nerves and the heart healthy. It is found in pork, organ meats, peas, beans, nuts, and whole grains. Thiamine is water-soluble (can dissolve in water) and must be taken in daily. Not enough thiamine can cause a disease called beriberi (a condition marked by heart, nerve, and digestive disorders). Too much thiamine may help cancer cells grow faster. Also called vitamin B1.

**thiazide diuretic**

A type of drug used to treat high blood pressure, edema (extra fluid in the tissues), and other conditions. Thiazide diuretics cause the kidneys to make more urine, which allows the body to get rid of extra fluid and salt.

**thiethylperazine**

A drug used to prevent or reduce nausea and vomiting. It belongs to the families of drugs called antiemetics and phenothiazines.

**thioguanine**

A drug used to treat acute myeloid leukemia. It is also being studied in the treatment of other types of cancer. Thioguanine stops cells from making DNA and RNA and may kill cancer cells. It is a type of antimetabolite. Also called Tabloid.

**thiotepa**

A drug used to treat certain types of bladder cancer, breast cancer, ovarian cancer, and malignant effusion (a condition in which cancer causes an abnormal amount of fluid to collect in hollow spaces or between tissues of the body). It is also being studied in the treatment of other types of cancer. Thiotepa damages the cell's DNA and may kill cancer cells. It is a type of alkylating agent. Also called Tepadina.

**third molar**

The last tooth to come in at the back of each side of the upper and lower jaws. Third molars usually come in between 17 and 23 years of age, but not everyone has them. Also called wisdom tooth.

**third-degree relative**

A way of describing how family members are related to each other when there are two other family members in the blood line between them. Examples of a third-degree relative are a first cousin, great-grandparent, great-aunt, great-uncle, great-niece, great-nephew, great-grandchild, half-aunt, or half-uncle. Also called TDR.

**third-line therapy**

Treatment that is given when both initial treatment (first-line therapy) and subsequent treatment (second-line therapy) don't work, or stop working.

**thoracalgia**

Chest pain. Also called thoracodynia.

**thoracentesis**

Removal of fluid from the pleural cavity through a needle inserted between the ribs.

**thoracic**

Having to do with the chest.

**thoracic surgeon**

A surgeon who has special training in operating on organs inside the chest, including the heart and lungs.

**thoracic surgical oncologist**

A surgeon who has special training in operating on tumors found inside the chest.

**thoracodynia**

Chest pain. Also called thoracalgia.

**thoracoscope**

A thin tube-like instrument used to examine the inside of the chest. A thoracoscope has a light and a lens for viewing and may have tool to remove tissue.



**thoracoscopy**

Examination of the inside of the chest, using a thoracoscope. A thoracoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease.

**thoracotomy**

An operation to open the chest.

**thorax**

The area of the body between the neck and the abdomen. The thorax contains vital organs, including the heart, major blood vessels, and lungs. It is supported by the ribs, breastbone, and spine. A thin muscle called the diaphragm separates the thorax from the abdomen.

**throat**

The hollow, muscular tube inside the neck that starts behind the nose and ends at the top of the trachea (windpipe) and esophagus (the tube that goes to the stomach). The throat acts as a passageway for air to enter the lungs and food and liquid to enter the esophagus. It contains many structures, including the tonsils, adenoids, pharynx, and larynx.

**throat cancer**

Cancer that forms in tissues of the pharynx or larynx. Most throat cancers are squamous cell carcinomas (cancers that begin in thin, flat cells that look like fish scales under a microscope).

**thrombectomy**

Surgery to remove a thrombus (blood clot) from a blood vessel.

**thrombocyte**

A tiny, disc-shaped piece of cell that is found in the blood and spleen. Thrombocytes are pieces of very large cells in the bone marrow called megakaryocytes. They help form blood clots to slow or stop bleeding and to help wounds heal. Having too many or too few thrombocytes or having platelets that don't work as they should can cause problems. Checking the number of thrombocytes in the blood may help diagnose certain diseases or conditions. Also called platelet.

**thrombocytopenia**

A condition in which there is a lower-than-normal number of platelets in the blood. It may result in easy bruising and excessive bleeding from wounds or bleeding in mucous membranes and other tissues.

**thrombohemorrhagic event**

A process that involves either a blood clot or bleeding, such as a heart attack or stroke.

**thrombolysis**

The process of breaking up a thrombus (blood clot) that is blocking blood flow. The blood clot may be dissolved using drugs delivered through a catheter (tube) into the clot.

**thrombophlebitis**

Inflammation of a vein that occurs when a blood clot forms.

**thrombopoietin**

A substance made by the body that helps make blood cells, especially platelets. A form of thrombopoietin made in the laboratory is called recombinant human thrombopoietin and rHu thrombopoietin. Thrombopoietin is being studied as a way to increase the number of platelets in cancer patients receiving chemotherapy. Also called TPO.

**thrombosis**

The formation or presence of a thrombus (blood clot) inside a blood vessel.

**thrombus**

A blood clot that forms on the wall of a blood vessel or in the heart when blood platelets, proteins, and cells stick together. A thrombus may block the flow of blood.

**thrush**

A condition in which *Candida albicans*, a type of yeast, grows out of control in moist skin areas of the body. It is usually a result of a weakened immune system, but can be a side effect of chemotherapy or treatment with antibiotics. Thrush usually affects the mouth (oral thrush); however, rarely, it spreads throughout the entire body. Also called candidiasis and candidosis.

**thymic carcinoma**

A rare type of thymus gland cancer. It usually spreads, has a high risk of recurrence, and has a poor survival rate. Thymic carcinoma is divided into subtypes, depending on the types of cells in which the cancer began. Also called type C thymoma.

**thymidine**

A chemical compound found in DNA. Also used as treatment for mucositis.

**thymidylate synthase**

A protein involved in making and repairing DNA (molecules inside cells that carry genetic information and pass it on from parent to child). High levels of thymidylate synthase may be involved in how certain types of cancer form and respond to treatment.

**thymidylate synthase inhibitor**

A drug that blocks DNA synthesis and may prevent tumor cell growth. It is being studied as a treatment for cancer.

**thymine**

A chemical compound that is used to make one of the building blocks of DNA. It is a type of pyrimidine.

**thymocyte**

A type of white blood cell. Thymocytes are part of the immune system and develop from stem cells in the bone marrow. They help protect the body from infection and may help fight cancer. Also called T cell and T lymphocyte.

**thymoma**

A tumor of the thymus, an organ that is part of the lymphatic system and is located in the chest, behind the breastbone.

## **thymus**

An organ that is part of the lymphatic system, in which T lymphocytes grow and multiply. The thymus is in the chest behind the breastbone.

## **thyroglobulin**

The form that thyroid hormone takes when stored in the cells of the thyroid. If the thyroid has been removed, thyroglobulin should not show up on a blood test. Doctors measure thyroglobulin level in blood to detect thyroid cancer cells that remain in the body after treatment.

## **thyroid**

A gland located beneath the larynx (voice box) that makes thyroid hormone and calcitonin. The thyroid helps regulate growth and metabolism. Also called thyroid gland.

## **thyroid cancer**

Cancer that forms in the thyroid gland (an organ at the base of the throat that makes hormones that help control heart rate, blood pressure, body temperature, and weight). Four main types of thyroid cancer are papillary, follicular, medullary, and anaplastic thyroid cancer. The four types are based on how the cancer cells look under a microscope.

## **thyroid cartilage**

The tough, flexible tissue that forms the front part of the larynx (voice box). It supports and protects the vocal cords and helps create the sound of a person's voice. The thyroid cartilage also forms the Adam's apple, which often appears as a lump on the front of the neck.

## **thyroid follicular cell**

A type of cell in the thyroid. Thyroid follicular cells make thyroid hormone.

## **thyroid gland**

A gland located beneath the larynx (voice box) that makes thyroid hormone and calcitonin. The thyroid gland helps regulate growth and metabolism. Also called thyroid.

## **thyroid hormone**

A hormone that affects heart rate, blood pressure, body temperature, and weight. Thyroid hormone is made by the thyroid gland and can also be made in the laboratory.

## **thyroid hormone treatment**

Treatment with thyroid hormone, which is a hormone that affects heart rate, blood pressure, body temperature, and weight.

## **thyroid-stimulating hormone**

A hormone produced by the pituitary gland. Thyroid-stimulating hormone stimulates the release of thyroid hormone from thyroglobulin. It also stimulates the growth of thyroid follicular cells. An abnormal thyroid-stimulating hormone level may mean that the thyroid hormonal regulation system is out of control, usually as a result of a benign condition (hyperthyroidism or hypothyroidism). Also called TSH.

## **thyroidectomy**

Surgery to remove part or all of the thyroid.

**thyroiditis**

Inflammation of the thyroid gland. Thyroiditis may be an autoimmune disease that affects the thyroid gland over time, causing hypothyroidism (too little thyroid hormone). A temporary form of thyroiditis may also occur after the birth of a baby, or when viral or bacterial infections spread to the thyroid.

**thyroidologist**

A medical doctor who has special training in diagnosing and treating thyroid diseases.

**thyrotropin alfa**

A form of thyroid-stimulating hormone (TSH) that is made in the laboratory. It is used to test for remaining or recurring cancer cells in patients who have been treated for thyroid cancer. Also called Thyrogen.

**thyroxin**

A hormone that is made by the thyroid gland and contains iodine. Thyroxin increases the rate of chemical reactions in cells and helps control growth and development. Thyroxin can also be made in the laboratory and is used to treat thyroid disorders. Also called L-3,5,5'-tetraiodothyronine, T4, and thyroxine.

**thyroxine**

A hormone that is made by the thyroid gland and contains iodine. Thyroxine increases the rate of chemical reactions in cells and helps control growth and development. Thyroxine can also be made in the laboratory and is used to treat thyroid disorders. Also called L-3,5,5'-tetraiodothyronine, T4, and thyroxin.

**tiacumicin B**

A substance being studied in the treatment of diarrhea caused by infection with *Clostridium difficile* (a type of bacteria that can grow without oxygen) in cancer patients. Tiacumicin B is a type of antibiotic. Also called OPT-80 and PAR-101.

**tiazofurin**

An anticancer drug being studied to stop cell growth.

**tibia**

The larger of two bones between the knee and ankle. Also called shinbone.

**time to progression**

The length of time from the date of diagnosis or the start of treatment for a disease until the disease starts to get worse or spread to other parts of the body. In a clinical trial, measuring the time to progression is one way to see how well a new treatment works. Also called TTP.

**tin ethyl etiopurpurin**

An anticancer drug that is also used in cancer prevention. It belongs to the family of drugs called photosensitizing agents. Also called SnET2.

**tinidazole**

A drug used to treat protozoal infections, such as amebiasis, giardiasis, and trichomoniasis. It belongs to a family of drugs called antiprotozoal agents. Tinidazole is also being evaluated in the treatment of *Helicobacter pylori* infections in people with low-grade gastric lymphoma.

**tinnitus**

A disorder in which a person hears noises such as buzzing, ringing, clicking, or the sound of a pulse, when no outside sound is causing them. Tinnitus may have many different causes, and may be a symptom of another disease or condition. It may be caused by certain tumors and anticancer drugs.

**tinzaparin sodium**

A drug that is used with another drug, warfarin, to treat blood clots that form deep in the veins and to prevent new blood clots from forming. It is a type of anticoagulant. Also called Innohep.

**tipifarnib**

A substance that is being studied in the treatment of acute myeloid leukemia (AML) and other types of cancer. It belongs to the family of drugs called farnesyltransferase inhibitors. Also called R115777 and Zarnestra.

**tipranavir sodium**

A drug used with another drug, ritonavir, to treat patients who are infected with HIV (the virus that causes AIDS) and have been treated with other anti-HIV drugs. Tipranavir sodium blocks the HIV virus from making copies of itself. It is a type of anti-HIV agent and a type of protease inhibitor. Also called Aptivus.

**tiragolumab**

A substance that binds to a protein called TIGIT, which is found on T cells and some other immune cells and helps keep the body's immune response from being too strong. TIGIT may also keep T cells from killing cancer cells. Tiragolumab blocks TIGIT, which may help the immune system kill cancer cells. It is being studied in the treatment of some types of cancer. Tiragolumab is a type of monoclonal antibody and a type of immune checkpoint inhibitor.

**tirapazamine**

A substance that has been studied in the treatment of some types of cancer. It may cause damage to the DNA in cells that have a low level of oxygen, including cancer cells. This may make the cells easier to kill with radiation therapy and chemotherapy. Tirapazamine is a type of radiosensitizing agent and a type of chemosensitizing agent.

**tisagenlecleucel**

A drug used to treat adults with certain types of B-cell non-Hodgkin lymphoma and people up to 25 years old with certain types of B-cell acute lymphoblastic leukemia. It is also being studied in the treatment of other types of cancer. Tisagenlecleucel is made using a patient's T cells (a type of immune system cell). A gene for a special receptor called chimeric antigen receptor (CAR) is added to the T cells in the laboratory. These changed T cells called CAR T cells are grown in large numbers in the laboratory and given to the patient by infusion. Tisagenlecleucel binds to a protein called CD19, which is found on some leukemia and lymphoma cells. This helps the body's immune system kill cancer cells. Tisagenlecleucel is a type of CAR T-cell therapy. Also called Kymriah.

**tislelizumab**

A drug used to treat adults with squamous cell carcinoma of the esophagus that cannot be removed by surgery or has spread to other parts of the body. It is used in patients whose cancer was treated with systemic therapy that did not include a PD-1 inhibitor or PD-L1 inhibitor. It is also being studied in the treatment of other types of cancer. Tislelizumab binds to a protein called PD-1, which is found on T

cells (a type of immune cell). Blocking this protein may help the immune system kill cancer cells. Tislelizumab is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Tevimbra.

### **tisotumab vedotin**

A drug used to treat adults with cervical cancer that has come back or has spread. It is used in patients whose cancer got worse during or after chemotherapy. It is also being studied in the treatment of other types of cancer. Tisotumab vedotin contains a monoclonal antibody that binds to a protein called tissue factor, which is found on some cancer cells. It also contains an anticancer drug, which may help kill cancer cells. Tisotumab vedotin may also prevent the growth of new blood vessels that tumors need to grow. It is a type of antibody-drug conjugate and a type of antiangiogenesis agent. Also called Tivdak.

### **tissue**

A group or layer of cells that work together to perform a specific function.

### **tissue flap reconstruction**

A type of breast reconstruction in which a flap of tissue is surgically moved from another area of the body to the chest, and formed into a new breast mound.

### **tissue fluid**

Fluid found in the spaces around cells. It comes from substances that leak out of blood capillaries (the smallest type of blood vessel). It helps bring oxygen and nutrients to cells and to remove waste products from them. As new tissue fluid is made, it replaces older fluid, which drains towards lymph vessels. When it enters the lymph vessels, it is called lymph. Also called interstitial fluid.

### **tissue plasminogen activator**

An enzyme made in the body that helps dissolve blood clots. A form of this enzyme is made in the laboratory to treat heart attacks, strokes, and clots in the lungs. It is also being studied in the treatment of cancer. Tissue plasminogen activator is a type of systemic thrombolytic agent. Also called tPA.

### **tissue-agnostic therapy**

A type of therapy that uses drugs or other substances to treat cancer based on the cancer's genetic and molecular features without regard to the cancer type or where the cancer started in the body. Tissue-agnostic therapy uses the same drug to treat all cancer types that have the genetic mutation (change) or biomarker that is targeted by the drug. It is a type of targeted therapy. Also called tumor-agnostic therapy.

### **tivozanib hydrochloride**

A drug used to treat adults with advanced renal cell carcinoma (a type of kidney cancer). It is used in patients whose cancer has relapsed (come back) or has not gotten better after treatment with at least two other types of systemic therapy. It is also being studied in the treatment of other types of cancer. Tivozanib hydrochloride blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Tivozanib hydrochloride is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Fotivda.

### **tobacco**

A plant with leaves that have high levels of the addictive chemical nicotine. After harvesting, tobacco leaves are cured, aged, and processed in various ways. The



resulting products may be smoked (in cigarettes, cigars, and pipes), applied to the gums (as dipping and chewing tobacco), or inhaled (as snuff). Cured tobacco leaves and the products made from them contain many cancer-causing chemicals, and tobacco use and exposure to secondhand tobacco smoke have been strongly linked to many types of cancer and other diseases. The scientific name of the most common tobacco plant is *Nicotiana tabacum*.

### **tobacco tar**

A chemical substance made when tobacco is burned. Tar contains most of the cancer-causing and other harmful chemicals found in tobacco smoke. When tobacco smoke is inhaled, the tar can form a sticky layer on the inside of the lungs. This damages the lungs and may lead to lung cancer, emphysema, or other lung problems. Cigarettes and other smoked tobacco products may produce different amounts of tar, depending on how they are made. Inhaling tobacco smoke also causes other types of cancer, including cancers of the mouth and throat.

### **tobacco-specific nitrosamine**

A type of harmful, cancer-causing chemical found in tobacco and tobacco smoke. Tobacco-specific nitrosamines are formed when tobacco leaves are grown, cured, aged, and processed. Tobacco products can contain different amounts of tobacco-specific nitrosamines, depending on how they are made. Also called TSNA.

### **tocilizumab**

A drug used to treat adults and children aged 2 years and older with severe or life-threatening cytokine release syndrome caused by a type of immunotherapy called chimeric antigen receptor (CAR) T-cell therapy. Tocilizumab is also used to treat certain types of arthritis and a condition that causes inflammation of the lining of the arteries. It is also being studied in the treatment of other conditions. Tocilizumab binds to receptors for a protein called interleukin-6 (IL-6), which is made by white blood cells and other cells in the body. This may help lower the body's immune response and reduce inflammation. Tocilizumab is a type of monoclonal antibody. Also called Actemra.

### **tocladesine**

A substance that has been studied as an anticancer drug. It is an analog of a substance that occurs naturally in the body (cyclic adenosine monophosphate).

### **toluene**

A strong-smelling, colorless liquid used to make gasoline and other types of fuel, paint, paint thinner, fingernail polish, glue, and rubber. Being exposed to toluene may cause headache, tiredness, confusion, weakness, memory loss, nausea, loss of appetite, hearing and color vision loss, dizziness, loss of consciousness, kidney damage, and death.

### **tomography**

A series of detailed pictures of areas inside the body. The pictures are created by a computer linked to an x-ray machine.

### **tomotherapy**

A type of therapy in which radiation is aimed at a tumor from many different directions. The patient lays on a table and is moved through a donut-shaped machine. The radiation source in the machine rotates around the patient in a spiral pattern. Before radiation, a 3-dimensional (3-D) image of the tumor is

taken. This helps doctors find the highest dose of radiation that can be used to kill tumor cells while causing less damage to nearby tissue. Tomotherapy is a type of intensity-modulated radiation therapy (IMRT). Also called helical tomotherapy.

### **tonga**

An herb native to islands in the South Pacific. Substances taken from the root have been used in some cultures to relieve stress, anxiety, tension, sleeplessness, and problems of menopause. Tonga may increase the effect of alcohol and of certain drugs used to treat anxiety and depression. The U.S. Food and Drug Administration advises users that tonga may cause severe liver damage. The scientific name is *Piper methysticum*. Also called intoxicating pepper, kava kava, rauschpfeffer, and yangona.

### **tongue cancer**

Cancer that begins in the tongue. When the cancer begins in the front two-thirds of the tongue, it is considered to be a type of oral cavity cancer; when the cancer begins in the back third of the tongue, it is considered to be a type of oropharyngeal or throat cancer.

### **tonsil**

One of two small masses of lymphoid tissue on either side of the throat.

### **topical**

On the surface of the body.

### **topical chemotherapy**

Treatment with anticancer drugs in a lotion or cream applied to the skin.

### **topoisomerase II inhibitor**

A substance that blocks the activity of the enzyme topoisomerase II, which cuts and repairs tangled strands of DNA. Topoisomerase II is involved in cell division and growth, so blocking activity of this enzyme may kill cancer cells. Some topoisomerase II inhibitors are being used to treat cancer.

### **topoisomerase II inhibitor RTA 744**

A substance being studied in the treatment of adult brain tumors. Topoisomerase II inhibitor RTA 744 crosses the blood-brain barrier and blocks an enzyme needed for cancer growth. It is a type of topoisomerase inhibitor. Also called RTA 744.

### **topoisomerase inhibitor**

A substance that blocks topoisomerases (enzymes that break and rejoin DNA strands and are needed for cells to divide and grow). Blocking these enzymes may kill cancer cells. Certain topoisomerase inhibitors are being studied in the treatment of cancer.

### **topotecan hydrochloride**

A drug used alone or with other drugs to treat certain types of ovarian cancer, small cell lung cancer, and cervical cancer. It is also being studied in the treatment of other types of cancer. Topotecan hydrochloride blocks a certain enzyme needed for cell division and DNA repair, and it may kill cancer cells. It is a type of topoisomerase inhibitor and a type of camptothecin analog. Also called Hycamtin.

**toremifene citrate**

A drug used to treat postmenopausal women with breast cancer that has spread to other parts of the body. It is used in patients whose cancer is estrogen receptor positive (ER+) or when it is not known if the cancer is ER+ or estrogen receptor negative (ER-). Toremifene citrate blocks the effects of the hormone estrogen in breast tissue, which may help keep breast cancer cells from growing. It is a type of selective estrogen receptor modulator (SERM). Also called Fareston.

**toripalimab**

A drug used alone or with other drugs to treat adults with certain types of nasopharyngeal cancer (a type of head and neck cancer). It is also being studied in the treatment of other types of cancer. Toripalimab binds to a protein called PD-1, which is found on T cells (a type of immune cell). Blocking this protein may help the immune system kill cancer cells. Toripalimab is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Loqtorzi.

**torso**

The main part of the body that contains the chest, abdomen, pelvis, and back. Most of the body's organs and the backbone are found in the torso. Also called trunk.

**tositumomab**

A drug used together with another drug to treat certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of cancer. Tositumomab binds to a protein called CD20, which is found on the surface of B cells, and may kill cancer cells. It is a type of monoclonal antibody.

**total PSA**

The total amount of prostate-specific antigen (PSA) in the blood. It includes the amount of free PSA and the amount of PSA attached to other proteins.

**total androgen blockade**

Treatment used to block androgen (male hormone) activity in the body. This may be done by giving an antiandrogen drug and removing the testicles (orchiectomy) or by giving an antiandrogen drug with a gonadotropin-releasing hormone (GnRH) agonist. Total androgen blockade may stop the growth of cancer cells that need androgens to grow, and is used in the treatment of prostate cancer. Also called combined androgen blockade and complete androgen blockade.

**total estrogen blockade**

Therapy used to eliminate estrogen in the body. This may be done with surgery, radiation therapy, chemotherapy, or a combination of these procedures.

**total hysterectomy**

Surgery to remove the uterus and the cervix. The ovaries and fallopian tubes may also be removed. A total hysterectomy may be done through the vagina (with no incisions in the abdomen) or through an incision (cut) in the abdomen. Also called complete hysterectomy and simple hysterectomy.

**total laryngectomy**

An operation to remove all of the larynx (voice box).

**total mastectomy**

Surgery to remove the whole breast, which may include the nipple, areola (the dark-colored skin around the nipple), and skin over the breast. Some of the lymph nodes under the arm may also be removed to check for cancer. Also called simple mastectomy.

**total nodal irradiation**

Radiation therapy to the mantle field, the spleen, the lymph nodes in the upper abdomen, and the lymph nodes in the pelvic area.

**total pancreatectomy**

Surgery to remove the entire pancreas. Part of the stomach, part of the small intestine, the common bile duct, gallbladder, spleen, and nearby lymph nodes are also removed.

**total parenteral nutrition**

A form of long-term nutritional support that is given directly into the bloodstream through a catheter placed into a vein. Total parenteral nutrition bypasses the digestive system and may be given when a person is not able to eat or drink by mouth or has a disease or condition that affects their ability to absorb nutrients through the digestive system. Total parenteral nutrition is complete nutrition that provides all the calories, proteins, carbohydrates, fats, vitamins, and minerals that a person needs when they cannot digest food. Also called TPN.

**total skin electron beam radiation therapy**

A type of radiation therapy using electrons that is directed at the entire surface of the body. This type of radiation goes into the outer layers of the skin, but does not go deeper into tissues and organs below the skin. Also called TSEB radiation therapy.

**total-body irradiation**

A type of radiation therapy that is given to the entire body. Total-body irradiation is often used with high-dose anticancer drugs to help prepare a patient for a stem cell transplant. It is done to kill any cancer cells that are left in the body and helps make room in the patient's bone marrow for new blood stem cells to grow. Total-body irradiation may also help prevent the body's immune system from rejecting the transplanted stem cells. Also called TBI.

**totipotent**

Having to do with cells that are able to develop into any type of cell found in the body.

**tourniquet**

A device, such as a strip of cloth or a band of rubber, that is wrapped tightly around a leg or an arm to prevent the flow of blood to the leg or the arm for a period of time. A tourniquet may be used when drawing blood or to stop bleeding after an injury.

**tovorafenib**

A drug used to treat children aged 6 months and older with low-grade glioma (a type of brain tumor) that has certain mutations (changes) in the BRAF gene. It is used in patients whose tumor came back or did not get better after treatment with other therapy. It is also being studied in the treatment of other types of cancer. Tovorafenib blocks certain proteins made by the mutated BRAF gene,

which may help keep tumor cells from growing. It is a type of kinase inhibitor. Also called Ojemda.

### **toxemia**

Disease caused by the spread of bacteria and their toxins in the bloodstream. Also called blood poisoning and septicemia.

### **toxic**

Having to do with poison or something harmful to the body. Toxic substances usually cause unwanted side effects.

### **toxicant**

A poison that is made by humans or that is put into the environment by human activities. Many pesticides are toxicants.

### **toxicity**

The extent to which something is poisonous or harmful.

### **toxicology**

The study of poisons, including the source, effect, and treatment of poisoning. It is a branch of pharmacology (the study of drugs).

### **toxin**

A poison made by certain bacteria, plants, or animals, including insects.

### **trabectedin**

A drug used to treat liposarcoma and leiomyosarcoma (types of soft tissue sarcoma) that cannot be removed by surgery or have spread to other parts of the body. It is used in patients who have already been treated with other anticancer drugs. It is also being studied in the treatment of other types of cancer. Trabectedin may kill cancer cells by damaging their DNA and stopping them from dividing. It is a type of alkylating agent. Also called ecteinascidin, ET 743, and Yondelis.

### **trabecular cancer**

A rare type of cancer that forms on or just beneath the skin, usually in parts of the body that have been exposed to the sun. It is most common in older people and in people with weakened immune systems. Also called Merkel cell cancer, Merkel cell carcinoma, and neuroendocrine carcinoma of the skin.

### **trace element**

An element found in very small amounts in a given substance. Organisms need certain trace elements to survive.

### **tracer**

A substance (such as a radioisotope) used in imaging procedures.

### **trach tube**

A 2-inch- to 3-inch-long curved metal or plastic tube placed in a surgically created opening (tracheostomy) in the windpipe to keep it open. Also called tracheostomy tube.

### **trachea**

The airway that leads from the larynx (voice box) to the bronchi (large airways that lead to the lungs). Also called windpipe.

**tracheal carina**

A ridge at the base of the trachea (windpipe) that separates the openings of the right and left main bronchi (the large air passages that lead from the trachea to the lungs). Also called carina of trachea.

**trachelectomy**

Surgery to remove the cervix. There are two types of trachelectomy: simple trachelectomy and radical trachelectomy. During a simple trachelectomy, only the cervix is removed. During a radical trachelectomy, the cervix, nearby tissue, and the upper part of the vagina are removed. Lymph nodes in the pelvis may also be removed. Because the uterus, fallopian tubes, and ovaries are not removed, a trachelectomy may be done to treat a person with early-stage cervical cancer who wants to become pregnant in the future. Also called cervicectomy.

**tracheobronchial tumor**

A tumor that begins in cells that line the trachea (windpipe) or bronchi (large airways of the lung). Tracheobronchial tumors are rare and can occur in both children and adults. They are usually benign (not cancer) in children and malignant (cancer) in adults. Signs and symptoms include dry cough, wheezing, trouble breathing, coughing or spitting up blood, frequent lung infections (such as pneumonia), feeling very tired, loss of appetite, weight loss, hoarseness, and trouble swallowing. The most common types of tracheobronchial tumors include squamous cell carcinoma, adenoid cystic carcinoma, carcinoid tumors, chondromas, hemangiomas, and papillomas.

**tracheoesophageal puncture**

A small opening made by a surgeon between the esophagus and the trachea. A valve keeps food out of the trachea but lets air into the esophagus for esophageal speech.

**tracheostomy**

Surgery to create an opening (stoma) into the windpipe. The opening itself may also be called a tracheostomy.

**tracheostomy button**

A 0.5-inch- to 1.5-inch-long plastic tube placed in a surgically created opening (tracheostomy) in the windpipe to keep it open.

**tracheostomy tube**

A 2-inch- to 3-inch-long curved metal or plastic tube placed in a surgically created opening (tracheostomy) in the windpipe to keep it open. Also called trach tube.

**tradition**

A belief or behavior that is passed from generation to generation in a family, a culture, or a religion.

**traditional acupuncture**

An ancient form of acupuncture based on the principle that there are five universal elements (wood, fire, earth, metal, and water) that affect a person's emotions, personality, health, and response to treatment. Each person is affected by one element more than the others. Also called five element acupuncture.



### **traditional surrogate**

A woman who carries and gives birth to a baby for a person who is not able to have children. The woman who is the traditional surrogate can either get pregnant by artificial insemination with sperm from a sperm donor, or her eggs can be fertilized in the laboratory with sperm from a sperm donor to make an embryo. The embryo is implanted in the uterus of the traditional surrogate, who carries the baby until birth. The traditional surrogate is genetically related to the baby and is the biological mother.

### **tramadol hydrochloride**

A drug used to treat moderate to severe pain in adults. It binds to opioid receptors in the central nervous system. Tramadol hydrochloride is a type of analgesic agent and a type of opioid. Also called Ultram.

### **trametinib dimethyl sulfoxide**

A drug used alone or with dabrafenib to treat low-grade glioma (a type of brain tumor) in children aged 1 year and older and certain types of anaplastic thyroid cancer, non-small cell lung cancer, melanoma, and other solid tumors that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Trametinib dimethyl sulfoxide blocks proteins called MEK1 and MEK2, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also called Mekinist.

### **tranquilizer**

A drug that calms and soothes, and reduces stress and tension. Tranquilizers are used to treat anxiety and insomnia.

### **trans fat**

A type of fat that has certain chemical properties and is usually found in processed foods such as baked goods, snack foods, fried foods, shortening, margarine, and certain vegetable oils. Eating trans fat increases blood cholesterol levels and the risk of heart disease.

### **transabdominal ultrasound**

A procedure used to examine the organs in the abdomen. An ultrasound transducer (probe) is pressed firmly against the skin of the abdomen. High-energy sound waves from the transducer bounce off tissues and create echoes. The echoes are sent to a computer, which makes a picture called a sonogram. Also called abdominal ultrasound.

### **transaminase**

A type of enzyme that causes the transfer of a chemical substance called an amino group from one molecule to another. Transaminases are involved in many processes in the body, such as making amino acids.

### **transarterial chemoembolization**

A procedure in which the blood supply to a tumor is blocked after anticancer drugs are given in blood vessels near the tumor. Sometimes, the anticancer drugs are attached to small beads that are injected into an artery that feeds the tumor. The beads block blood flow to the tumor as they release the drug. This allows a higher amount of drug to reach the tumor for a longer period of time, which may kill more cancer cells. It also causes fewer side effects because very little of the drug reaches other parts of the body. Transarterial chemoembolization is used to treat liver cancer. Also called chemoembolization and TACE.

### **transarterial embolization**

A procedure in which the blood supply to a tumor or an abnormal area of tissue is blocked. During transarterial embolization, a small incision (cut) is made in the inner thigh and a catheter (thin, flexible tube) is inserted and guided into an artery near the tumor or abnormal tissue. Once the catheter is in place, small particles made of tiny gelatin sponges or beads are injected. This blocks the artery and stops the flow of blood to the tumor or abnormal area of tissue.

Transarterial embolization is used to treat some types of liver cancer, kidney cancer, and neuroendocrine tumors. It may also be used to treat uterine fibroids, aneurysms, and other conditions. Also called arterial embolization and TAE.

### **transcription**

In biology, the process by which a cell makes an RNA copy of a piece of DNA. This RNA copy, called messenger RNA (mRNA), carries the genetic information needed to make proteins in a cell. It carries the information from the DNA in the nucleus of the cell to the cytoplasm, where proteins are made.

### **transcription factor**

One of a group of proteins that play an important role in controlling the activity of genes. Transcription factors help control when and how genes are turned on or off in a cell by binding to nearby DNA and to other DNA-associated proteins. This affects the production of RNA, which then affects the production of proteins and their many important cell functions. Mutations and other changes in transcription factor genes may cause abnormal transcription factor proteins to be made.

These abnormal proteins may be too active or found in higher-than-normal amounts on or in some types of cancer cells, which may cause the cancer cells to grow. Drugs that block transcription factor proteins and proteins associated with them are being studied in the treatment of some types of cancer.

### **transcriptomics**

The study of all RNA molecules in a cell. RNA is copied from pieces of DNA and contains information to make proteins and perform other important functions in the cell. Transcriptomics is used to learn more about how genes are turned on in different types of cells and how this may help cause certain diseases, such as cancer.

### **transcutaneous electrical nerve stimulation**

A procedure in which mild electric currents are applied to some areas of the skin. Also called TENS.

### **transdermal**

Absorbed through the unbroken skin.

### **transfer factor**

A substance made by some white blood cells. Transfer factor from one person's white blood cells may be able to cause a specific immune response when injected into the skin of another person.

### **transferrin-CRM107**

A substance being studied in the treatment of brain tumors. Transferrin-CRM107 is made by linking a diphtheria toxin to transferrin, a protein that binds to fast growing cells, such as tumor cells. The diphtheria toxin then kills the tumor cells. Transferrin-CRM107 is a type of immunotoxin.

**transformation**

In medicine, the change that a normal cell undergoes as it becomes malignant.

**transformation zone**

The area around the opening of the cervix where the endocervix (inner part) and ectocervix (outer part) come together. This area contains both glandular cells (cells that make mucus) from the endocervix and squamous cells (thin, skin-like cells) from the ectocervix. Most abnormal cell changes and most cervical cancers begin in the squamous cells of the transformation zone. Also called squamocolumnar junction.

**transfusion**

A procedure in which whole blood or parts of blood are put into a patient's bloodstream through a vein. The blood may be donated by another person or it may have been taken from the patient and stored until needed. Also called blood transfusion.

**transgender**

A term that describes a person whose gender identity is different from the sex they were assigned at birth. For example, a transgender person who was assigned female at birth may identify as male, a combination of male and female, or neither.

**transgenic mice**

Mice that have had DNA from another source put into their DNA. The foreign DNA is put into the nucleus of a fertilized mouse egg. The new DNA becomes part of every cell and tissue of the mouse. These mice are used in the laboratory to study diseases.

**transient abnormal myelopoiesis**

A bone marrow disorder that can occur in newborns who have Down syndrome. It is marked by abnormal, immature blood-forming cells in the blood and bone marrow (especially the cells involved in making platelets). The liver may also be larger than normal. Transient abnormal myelopoiesis is caused by mutations (changes) in a gene called GATA1. Transient abnormal myelopoiesis usually goes away on its own within the first 3 months of life. Sometimes transient abnormal myelopoiesis causes severe or life-threatening problems, such as bleeding problems, infection, heart, kidney, and liver failure, and abnormal build-up of fluid in the tissues that cover the organs in the body. Infants who have transient abnormal myelopoiesis have an increased risk of developing acute myeloid leukemia (AML) before the age of 3 years. Also called TAM, TMD, transient leukemia, and transient myeloproliferative disorder.

**transient leukemia**

A bone marrow disorder that can occur in newborns who have Down syndrome. It is marked by abnormal, immature blood-forming cells in the blood and bone marrow (especially the cells involved in making platelets). The liver may also be larger than normal. Transient leukemia is caused by mutations (changes) in a gene called GATA1. Transient leukemia usually goes away on its own within the first 3 months of life. Sometimes transient leukemia causes severe or life-threatening problems, such as bleeding problems, infection, heart, kidney, and liver failure, and abnormal build-up of fluid in the tissues that cover the organs in the body. Infants who have transient leukemia have an increased risk of developing acute myeloid leukemia (AML) before the age of 3 years. Also called

TAM, TMD, transient abnormal myelopoiesis, and transient myeloproliferative disorder.

### **transient myeloproliferative disorder**

A bone marrow disorder that can occur in newborns who have Down syndrome. It is marked by abnormal, immature blood-forming cells in the blood and bone marrow (especially the cells involved in making platelets). The liver may also be larger than normal. Transient myeloproliferative disorder is caused by mutations (changes) in a gene called GATA1. Transient myeloproliferative disorder usually goes away on its own within the first 3 months of life. Sometimes transient myeloproliferative disorder causes severe or life-threatening problems, such as bleeding problems, infection, heart, kidney, and liver failure, and abnormal build-up of fluid in the tissues that cover the organs in the body. Infants who have transient myeloproliferative disorder have an increased risk of developing acute myeloid leukemia (AML) before the age of 3 years. Also called TAM, TMD, transient abnormal myelopoiesis, and transient leukemia.

### **transient receptor potential cation channel, subfamily V, member 6**

A protein found in cell membranes that moves calcium into cells. Levels of transient receptor potential cation channel, subfamily V, member 6 are lower than normal in patients who don't have enough vitamin D. High levels of the protein may be found in breast cancer tissue. It is a type of calcium channel protein. Also called TRPV6.

### **transitional care**

Support given to patients when they move from one phase of disease or treatment to another, such as from hospital care to home care. It involves helping patients and families with medical, practical, and emotional needs as they adjust to different levels and goals of care.

### **transitional cell**

A cell that varies in shape depending on whether the tissue is being stretched. Transitional cells may be stretched without breaking apart. They line hollow organs such as the bladder.

### **transitional cell cancer**

Cancer that begins in cells called urothelial cells that line the urethra, bladder, ureters, renal pelvis, and some other organs. Urothelial cells are also called transitional cells. These cells can change shape and stretch without breaking apart. Also called urothelial cancer.

### **translation**

In biology, the process by which a cell makes proteins using the genetic information carried in messenger RNA (mRNA). The mRNA is made by copying DNA, and the information it carries tells the cell how to link amino acids together to form proteins.

### **translational research**

A term used to describe the process by which the results of research done in the laboratory are used to develop new ways to diagnose and treat disease.

### **translocation**

A genetic change in which a piece of one chromosome breaks off and attaches to another chromosome. Sometimes pieces from two different chromosomes will trade places with each other. Translocations may lead to medical problems such

as leukemia, breast cancer, schizophrenia, muscular dystrophy, and Down syndrome.

### **transoral robotic surgery**

Surgery in which a robot with arms is used to remove cancer from hard-to-reach areas of the mouth and throat. Cameras attached to the robot give a 3-dimensional (3D) image that a surgeon can see. The surgeon guides tools at the ends of the robot arms to remove the cancer. Also called TORS.

### **transperineal biopsy**

A procedure in which a sample of tissue is removed from the prostate for examination under a microscope. The sample is removed with a thin needle that is inserted through the skin between the scrotum and rectum and into the prostate.

### **transperineal template-guided prostate mapping biopsy**

A procedure being studied in the diagnosis of prostate cancer and in planning prostate cancer treatment. Ultrasound is used to create a map of the prostate so the whole prostate gland can be seen in three dimensions and divided into 24 areas. Needles are then inserted through a template into each of the 24 areas and tissue is removed to be checked under a microscope. Also called TTMB.

### **transplant surgeon**

A surgeon who has special training in transplantation surgery. The surgeon replaces a patient's organ with an organ from another person.

### **transplantation**

A surgical procedure in which tissue or an organ is transferred from one area of a person's body to another area, or from one person (the donor) to another person (the recipient).

### **transrectal biopsy**

A procedure in which a sample of tissue is removed from the prostate using a thin needle that is inserted through the rectum and into the prostate. Transrectal ultrasound (TRUS) is usually used to guide the needle. The sample is examined under a microscope to see if it contains cancer.

### **transrectal ultrasound**

A procedure in which a probe that sends out high-energy sound waves is inserted into the rectum. The sound waves are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissue called a sonogram. Transrectal ultrasound is used to look for abnormalities in the rectum and nearby structures, including the prostate. Also called endorectal ultrasound, ERUS, and TRUS.

### **transsphenoidal surgery**

A type of surgery in which instruments are inserted through the nose and sphenoid sinus (a hollow space in a bone in the nose) to remove tumors that are in or near the pituitary gland. The pituitary gland is a pea-sized organ that lies at the base of the brain above the back of the nose.

### **transurethral biopsy**

A procedure in which a sample of tissue is removed from the prostate for examination under a microscope. A thin, lighted tube is inserted through the

urethra into the prostate, and a small piece of tissue is removed with a cutting loop.

#### **transurethral electroevaporation of the prostate**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra into the prostate. A ball or special wire loop on the instrument heats the prostate tissue and turns it to vapor. This relieves pressure and improves urine flow. Also called transurethral electrovaporization of the prostate, TUEVAP, and TUVAP.

#### **transurethral electrovaporization of the prostate**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra into the prostate. A ball or special wire loop on the instrument heats the prostate tissue and turns it to vapor. This relieves pressure and improves urine flow. Also called transurethral electroevaporation of the prostate, TUEVAP, and TUVAP.

#### **transurethral incision of the prostate**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra and one or two small cuts are made in the bladder neck and prostate. This relieves pressure and improves urine flow. Also called TUIP.

#### **transurethral microwave thermotherapy**

A procedure used to treat benign prostatic hypertrophy (BPH). An instrument is inserted through the urethra into the bladder. A small microwave antenna on the instrument heats nearby prostate tissue and destroys it. This relieves pressure and improves urine flow. Also called TUMT.

#### **transurethral needle ablation**

A procedure that is used to treat benign prostatic hypertrophy (BPH). An instrument with a small probe that gives off low-level radiofrequency energy is inserted through the urethra into the prostate. The energy from the probe heats nearby prostate tissue and destroys it. This relieves pressure and improves urine flow. Also called transurethral radiofrequency ablation and TUNA.

#### **transurethral radiofrequency ablation**

A procedure that is used to treat benign prostatic hypertrophy (BPH). An instrument with a small probe that gives off low-level radiofrequency energy is inserted through the urethra into the prostate. The energy from the probe heats nearby prostate tissue and destroys it. This relieves pressure and improves urine flow. Also called transurethral needle ablation and TUNA.

#### **transurethral resection**

Surgery performed with a special instrument inserted through the urethra. Also called TUR.

#### **transurethral resection of the prostate**

Surgery to remove tissue from the prostate using an instrument inserted through the urethra. Also called TURP.

#### **transvaginal sonography**

A procedure used to examine the vagina, uterus, fallopian tubes, ovaries, and bladder. An instrument is inserted into the vagina that causes sound waves to bounce off organs inside the pelvis. These sound waves create echoes that are



sent to a computer, which creates a picture called a sonogram. Also called transvaginal ultrasound and TVS.

### **transvaginal ultrasound**

A procedure used to examine the vagina, uterus, fallopian tubes, ovaries, and bladder. An instrument is inserted into the vagina that causes sound waves to bounce off organs inside the pelvis. These sound waves create echoes that are sent to a computer, which creates a picture called a sonogram. Also called transvaginal sonography and TVS.

### **transverse rectus abdominis myocutaneous flap**

A type of surgery used to rebuild the shape of the breast after a mastectomy. A muscle in the lower abdomen called the rectus abdominis, along with skin, fat, and blood vessels, is moved from the lower abdomen to the chest. This is usually done by passing the muscle tissue and blood vessels through a tunnel under the skin to the chest. A transverse rectus abdominis myocutaneous flap forms a natural-looking breast, so the patient usually does not need a breast implant. It is a type of breast reconstruction. Also called TRAM flap.

### **trastuzumab**

A drug used alone or with other drugs to treat certain types of breast cancer, stomach cancer, and gastroesophageal junction cancer that are HER2 positive. It is also being studied in the treatment of other types of cancer. Trastuzumab binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Trastuzumab is a type of monoclonal antibody and a type of HER2 receptor antagonist. Also called Herceptin, Hercessi, Herzuma, Kanjinti, Ogivri, Ontruzant, and Trazimera.

### **trastuzumab and hyaluronidase**

A combination of two drugs used alone or with other drugs to treat adults with certain types of HER2-positive breast cancer. Trastuzumab binds to a protein called HER2, which is found on some cancer cells. This may help the immune system kill cancer cells. Hyaluronidase allows trastuzumab to be given by injection under the skin. Trastuzumab and hyaluronidase can be given in less time than trastuzumab alone, which is given as an infusion. Also called Herceptin Hylecta.

### **trastuzumab deruxtecan**

A drug used to treat adults with certain types of HER2-positive or HER2-low breast cancer, HER2-positive stomach cancer, gastroesophageal junction cancer, or other solid tumor, or non-small cell lung cancer that has a certain mutation in the HER2 gene. It is also being studied in the treatment of other types of cancer. Trastuzumab deruxtecan contains a monoclonal antibody called trastuzumab that binds to a protein called HER2, which is found on some cancer cells. It also contains an anticancer drug called deruxtecan, which may help kill cancer cells. Trastuzumab deruxtecan is a type of antibody-drug conjugate. Also called Enhertu and fam-trastuzumab deruxtecan.

### **trauma**

Injury to the body, or an event that causes long-lasting mental or emotional damage.

### **trazodone**

A drug used to treat depression. It may also be used to help relieve anxiety and insomnia (trouble sleeping) and to treat certain other disorders. Trazodone

increases the level of the chemical serotonin in the brain, which helps improve mood. It is a type of antidepressant. Also called Oleptro.

### **treatment course**

A treatment plan made up of several cycles of treatment. For example, treatment given for one week followed by three weeks of rest (no treatment) is one treatment cycle. When a treatment cycle is repeated multiple times on a regular schedule, it makes up a treatment course. A treatment course can last for several months. Also called course of treatment.

### **treatment cycle**

A period of treatment followed by a period of rest (no treatment) that is repeated on a regular schedule. For example, treatment given for one week followed by three weeks of rest is one treatment cycle. When this cycle is repeated multiple times on a regular schedule, it makes up a course of treatment. Also called cycle of treatment.

### **treatment field**

In radiation therapy, the place on the body where the radiation beam is aimed.

### **treatment plan**

A detailed plan with information about a patient's disease, the goal of treatment, the treatment options for the disease and possible side effects, and the expected length of treatment. A treatment plan may also include information about how much the treatment is likely to cost and about regular follow-up care after treatment ends.

### **treatment schedule**

A step-by-step plan of the treatment that a patient is going to receive. A treatment schedule includes the type of treatment that will be given (such as chemotherapy or radiation therapy), how it will be given (such as by mouth or by infusion into a vein), and how often it will be given (such as once a day or once a week). It also includes the amount of time between courses of treatment and the total length of time of treatment.

### **treatment summary**

A detailed summary of a patient's disease, the type of treatment the patient received, and any side effects or other problems caused by treatment. It usually includes results of laboratory tests (such as pathology reports and biomarker tests) and imaging tests (such as x-rays, CT scans, and MRIs), and whether a patient took part in a clinical trial. A treatment summary may be used to help plan follow-up care after treatment for a disease, such as cancer.

### **tremelimumab**

A drug that binds to the protein CTLA-4 to help immune cells kill cancer cells better and is used to treat different types of cancer. Tremelimumab is used with durvalumab to treat adults with hepatocellular carcinoma (a type of liver cancer) that cannot be removed by surgery. It is also used with durvalumab and platinum chemotherapy to treat adults with non-small cell lung cancer that has spread to other parts of the body and does not have an abnormal EGFR or ALK gene. It is also being studied in the treatment of other types of cancer. Tremelimumab may block CTLA-4 and help the immune system kill cancer cells. It is a type of monoclonal antibody and a type of immune checkpoint inhibitor. Also called Imjudo.

**treosulfan**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called alkylating agents.

**trephine**

A surgical tool used to cut out circular pieces of bone or other tissue.

**tretinoin**

A nutrient that the body needs in small amounts to function and stay healthy. Tretinoin is made in the body from vitamin A and helps cells to grow and develop, especially in the embryo. A form of tretinoin made in the laboratory is put on the skin to treat conditions such as acne and is taken by mouth to treat acute promyelocytic leukemia (a fast-growing cancer in which there are too many immature blood-forming cells in the blood and bone marrow). Tretinoin is being studied in the prevention and treatment of other types of cancer. Also called all-trans retinoic acid, ATRA, retinoic acid, and vitamin A acid.

**triacetyluridine**

A drug used in the emergency treatment of adults and children who receive too much fluorouracil or capecitabine or who have heart or central nervous system toxicity or other serious side effects that occur within 4 days of ending treatment with these drugs. Triacetyluridine may help protect healthy cells from some of the side effects caused by certain anticancer drugs. It is a type of chemoprotective agent and a type of pyrimidine analog. Also called PN401, uridine triacetate, and Vistogard.

**trial sponsor**

A person, company, institution, group, or organization that oversees or pays for a clinical trial and collects and analyzes the data. Also called clinical trial sponsor.

**triamcinolone**

A substance that is being studied for the prevention of nonmelanoma skin cancer. It is an anti-inflammatory drug that is applied to the skin to relieve irritation, rashes, and infections. It belongs to the family of drugs called topical corticosteroids.

**tributylin**

A triglyceride drug that may inhibit cell growth and induce cell differentiation. Differentiating agents may be effective in changing cancer cells back into normal cells.

**trichilemmoma**

A benign (not cancer) tumor that begins in the outer cells of a hair follicle and appears as a small, smooth, skin-colored, wart-like or dome-shaped lesion. Trichilemmomas usually occur on the face, ears, and neck but can also occur on the lower part of the arm and the hands. They tend to grow slowly over time and often occur with other skin lesions. Trichilemmomas may be found in people with a rare, inherited condition called Cowden syndrome.

**trichothiodystrophy**

A rare, inherited genetic disorder marked by short, dry hair that breaks easily and has a light- and dark-colored striped (tiger-tail) pattern when looked at under a microscope. There are many other signs and symptoms of trichothiodystrophy that begin in infancy and vary from person to person. About half of all people with trichothiodystrophy also have an extreme sensitivity to sunlight and may develop

a severe blistering sunburn after a short time in the sun. Other signs and symptoms may include learning and developmental delays, shorter-than-average height, recurrent infections, dry, scaly skin, and abnormalities of the nails, eyes, and bones. Trichothiodystrophy is associated with mutations (changes) in several genes and is inherited in an autosomal recessive manner.

### **tricyclic antidepressant**

A type of drug used to treat depression.

### **trifluridine and tipiracil hydrochloride**

A combination of two drugs used alone or with bevacizumab to treat adults with certain types of colorectal cancer, stomach cancer, or gastroesophageal junction cancer. It is used in patients whose cancer has spread to other parts of the body and has already been treated with other anticancer treatments. It is also being studied in the treatment of other types of cancer. Trifluridine and tipiracil hydrochloride stops cells from making DNA, which may help keep cancer cells from growing and may kill them. It is a type of antimetabolite and a type of thymidine phosphorylase inhibitor. Also called Lonsurf.

### **trigeminal nerve**

The main sensory nerve of the head and face, and the motor nerve of the muscles used in chewing. Also called fifth cranial nerve.

### **trigger**

In medicine, a specific event that starts a process or that causes a particular outcome. For example, chemotherapy, painful treatments, or the smells, sounds, and sights that go with them may trigger anxiety and fear in a patient who has cancer. In allergies, exposure to mold, pollen or dust may trigger sneezing, watery eyes, and coughing.

### **trigger point acupuncture**

Use of acupuncture to treat pain by inserting needles into trigger points on the body. Trigger points are places on the body where injury has occurred, but the pain has been sent along nerves and is felt in another place in the body.

### **triiodothyronine**

A thyroid hormone. Also called T-3.

### **trimethoprim-sulfamethoxazole**

An antibiotic drug used to treat infection and prevent pneumocystis carinii pneumonia.

### **trimetrexate glucuronate**

A drug that belongs to the family of drugs called antimetabolites. It is used in the treatment of pneumocystis carinii pneumonia and is being studied in the treatment of cancer.

### **triple-negative breast cancer**

A type of breast cancer in which the tumor cells do not have estrogen receptors, progesterone receptors, or large amounts of HER2/neu protein on their surface. Knowing whether breast cancer is triple negative is important in planning treatment. Also called ER-negative PR-negative HER2/neu-negative breast cancer and TNBC.

### **triple-positive breast cancer**

A type of breast cancer in which the tumor cells have estrogen receptors, progesterone receptors, and a larger than normal number of HER2 receptors on their surface. Knowing if breast cancer is triple positive may help plan the best treatment, which may include hormone therapy and drugs that target the HER2 receptor.

### **triptorelin**

A drug that is used to treat advanced prostate cancer, and is being studied in the treatment of breast cancer. It belongs to the family of hormonal drugs called gonadotropin-releasing hormone analogs. Also called Trelstar.

### **trisomy**

The presence of three copies of a specific chromosome in some or all of the body's cells instead of the usual two copies. For example, people with Down syndrome have an extra copy of chromosome 21.

### **trisomy 18**

A genetic disorder caused by having an extra chromosome 18 in some or all of the body's cells. Trisomy 18 is marked by a low birth weight and certain abnormal features. These include a small, abnormally shaped head; a small jaw and mouth; clenched fists with overlapping fingers; and heart, lung, kidney, intestine, and stomach defects. Many babies with trisomy 18 die before birth or within the first month of life, but some children live for several years. Having trisomy 18 increases the risk of certain types of cancer, such as hepatoblastoma (a type of liver cancer) and Wilms tumor (a type of kidney cancer). Also called Edwards syndrome.

### **trisomy 21**

A genetic condition caused by having an extra chromosome 21 in some or all of the body's cells. Trisomy 21 is marked by growth, developmental, and learning delays that vary from mild to severe. People with trisomy 21 often have certain distinct physical features, such as a shorter-than-normal height, a flat face with a short nose, eyes that are slanted and almond-shaped, small ears, a short neck, a tongue that tends to stick out of the mouth, small hands and feet, and a deep line that goes across the palm of the hand. People with trisomy 21 may also have muscle weakness, loose joints, heart defects, and other health problems. Having trisomy 21 increases the risk of developing Alzheimer disease at an early age, usually around the age of 50, and leukemia, especially in young children. Trisomy 21 is usually not inherited (passed from parent to child). Also called Down syndrome.

### **trophoblast**

A thin layer of cells that helps a developing embryo attach to the wall of the uterus, protects the embryo, and forms a part of the placenta.

### **tropisetron**

A drug used to prevent nausea and vomiting caused by cancer treatment. It is also used to prevent nausea and vomiting after surgery. Tropisetron blocks the action of the chemical serotonin, which binds to certain nerves and may trigger nausea and vomiting. Blocking serotonin may help lessen nausea and vomiting. It is a type of serotonin receptor antagonist and a type of antiemetic. It is not available in the United States.

### **tropomyosin receptor kinase protein family**

A family of proteins that are found on nerve cells. They are involved in cell signaling pathways that control cell growth, cell maturation, and cell survival. The genes that make the tropomyosin receptor kinase proteins may have mutations (changes) that cause abnormal tropomyosin receptor kinase proteins to be made. These abnormal proteins may be too active or found in higher than normal amounts on some types of cancer cells, which may cause cancer cells to grow. Drugs that block tropomyosin receptor kinase proteins are being used in the treatment of some types of cancer. Tropomyosin receptor kinase proteins are receptor tyrosine kinases. Also called TRK protein family.

### **troxacitabine**

A drug being studied for use as an anticancer agent.

### **true histiocytic lymphoma**

A rare, very aggressive (fast-growing) type of non-Hodgkin lymphoma (cancer that begins in the cells of the immune system). It is marked by large abnormal lymphoid cells that do not look like T cells or B cells.

### **true lavender**

A plant with aromatic leaves and flowers that is a member of the mint family. Oil from the flowers has been used in some cultures to treat certain medical problems, to keep insects away, and to wash in. It is also used in aromatherapy. Perillyl alcohol, a substance found in true lavender, is being studied in cancer prevention and treatment. The scientific name is *Lavandula angustifolia*. Also called English lavender and lavender.

### **trunk**

The main part of the body that contains the chest, abdomen, pelvis, and back. Most of the body's organs and the backbone are found in the trunk. Also called torso.

### **trust**

A legal document in which a person states what is to be done with his or her property after death. There are many types of trusts, and a trust may take the place of a will.

### **tubal ligation**

An operation to tie the fallopian tubes closed. This procedure prevents pregnancy by blocking the passage of eggs from the ovaries to the uterus.

### **tubefeeding**

A way of giving medicines and liquids, including liquid foods, through a small tube placed through the nose or mouth into the stomach or small intestine. Sometimes the tube is placed into the stomach or small intestine through an incision (cut) made on the outside of the abdomen. Tubefeeding may be added to what a person is able to eat and drink, or it may be the only source of nutrition. It is a type of enteral nutrition. Also called gavage.

### **tuberculosis**

A disease caused by a specific type of bacteria that spreads from one person to another through the air. Tuberculosis can affect many parts of the body, but most often affects the lungs. A person may not have symptoms of tuberculosis for years, but they may appear when the patient becomes ill with a serious condition.



like diabetes, AIDS, or cancer. Tuberculosis can usually be treated and cured with antibiotics. Also called TB.

### **tuberous sclerosis**

A genetic disorder in which tumors form in the kidneys, brain, eyes, heart, lungs, and skin. This disease can cause seizures, mental disabilities, and different types of skin lesions.

### **tubulin**

One of a group of proteins found in high levels in the cell cytoplasm (fluid inside a cell but outside the cell's nucleus). Tubulins are the building blocks of microtubules (narrow, hollow tubes inside a cell), which are involved in cell division and cell movement. Certain anticancer drugs bind to and block the formation or function of tubulins, which may block cell division.

### **tubulovillous adenoma**

A type of polyp that grows in the colon and other places in the gastrointestinal tract and sometimes in other parts of the body. These adenomas may become malignant (cancer).

### **tucatinib**

A drug used with other drugs to treat adults with certain types of HER2-positive breast cancer or certain types of HER2-positive colorectal cancer that do not have a mutation (change) in the RAS gene. It is also being studied in the treatment of other types of cancer. Tucatinib blocks a protein called HER2, which may help keep cancer cells from growing and may kill them. It is a type of tyrosine kinase inhibitor. Also called Tukysa.

### **tufted angioma**

A rare, benign (not cancer) blood vessel tumor that usually forms on the skin of the arms and legs, but may also form in deeper tissues, such as muscle and bone. Tufted angiomas grow slowly and can spread to nearby tissue. Signs and symptoms may include firm, painful areas of skin that look bruised; purple or brownish-red areas on the skin; easy bruising; anemia; and abnormal bleeding. Tufted angiomas are most common in infants and young children. They are a type of vascular tumor.

### **tui na**

Chinese massage that uses kneading, pressing, rolling, shaking, and stretching of the body. Tui na is thought to regulate qi (vital energy) and blood flow, and improve the function of tendons, bones, and joints.

### **tumescent mastectomy**

A type of surgery to remove the breast. The breast is injected with a liquid mixture of salts and small amounts of two drugs. These drugs are lidocaine, to numb the area, and epinephrine, to narrow blood vessels and reduce bleeding. Tumescent mastectomy is usually used to treat breast cancer in elderly patients.

### **tumor**

An abnormal mass of tissue that forms when cells grow and divide more than they should or do not die when they should. Tumors may be benign (not cancer) or malignant (cancer). Benign tumors may grow large but do not spread into, or invade, nearby tissues or other parts of the body. Malignant tumors can spread into, or invade, nearby tissues. They can also spread to other parts of the body through the blood and lymph systems. Also called neoplasm.

### **tumor DNA sequencing**

A laboratory method used to learn the exact order (sequence) of the chemical building blocks that make up tumor DNA. Errors in the sequence of the building blocks can cause cancer cells to grow and spread. Knowing the DNA sequence of a person's tumor may help plan treatment that targets the specific error in the tumor.

### **tumor antigen vaccine**

A vaccine made of cancer cells, parts of cancer cells, or pure tumor antigens (substances isolated from tumor cells). A tumor antigen vaccine may stimulate the body's immune system to find and kill cancer cells.

### **tumor board review**

A treatment planning process in which a group of cancer doctors and other health care specialists meet regularly to review and discuss new and complex cancer cases. The goal of a tumor board review is to decide as a group on the best treatment plan for a patient. These meetings can involve specialists from many areas of health care, including medical oncologists, radiation oncologists, surgeons, pathologists, radiologists, genetics experts, nurses, physical therapists, and social workers.

### **tumor burden**

Refers to the number of cancer cells, the size of a tumor, or the amount of cancer in the body. Also called tumor load.

### **tumor debulking**

Surgical removal of as much of a tumor as possible. Tumor debulking may increase the chance that chemotherapy or radiation therapy will kill all the tumor cells. It may also be done to relieve symptoms or help the patient live longer. Also called debulking.

### **tumor grade**

A description of a tumor based on how abnormal the cancer cells and tissue look under a microscope and how quickly the cancer cells are likely to grow and spread. Low-grade cancer cells look more like normal cells and tend to grow and spread more slowly than high-grade cancer cells. Grading systems are different for each type of cancer. They are used to help plan treatment and determine prognosis. Also called grade and histologic grade.

### **tumor heterogeneity**

A term that describes the differences between tumors of the same type in different patients, the differences between cancer cells within a single tumor, or the differences between a primary (original) tumor and a secondary tumor. These differences may involve the tumor's genes and proteins. For example, some cancer cells in a tumor may have genetic mutations (changes) that aren't present in other cancer cells in that tumor. Tumor heterogeneity can play an important role in how cancer is diagnosed and treated and how it responds to treatment.

### **tumor initiation**

A process in which normal cells are changed so that they are able to form tumors. Substances that cause cancer can be tumor initiators.

### **tumor load**

Refers to the number of cancer cells, the size of a tumor, or the amount of cancer in the body. Also called tumor burden.

### **tumor lysis syndrome**

A condition that can occur after treatment of a fast-growing cancer, especially certain leukemias and lymphomas (cancers of the blood). As tumor cells die, they break apart and release their contents into the blood. This causes a change in certain chemicals in the blood, which may cause damage to organs, including the kidneys, heart, and liver.

### **tumor marker**

A substance found in tissue, blood, bone marrow, or other body fluids that may be a sign of cancer or certain benign (noncancer) conditions. Many tumor markers are proteins made by both normal cells and cancer cells, but they are made in higher amounts by cancer cells. Genetic changes in tumor tissue, such as gene mutations, patterns of gene expression, and other changes in tumor DNA or RNA, are also being used as tumor markers. A tumor marker may be used with other tests to help diagnose cancer. It may also be used to help plan treatment, give a likely prognosis, and find out how well treatment is working or if cancer has come back. Examples of tumor markers include CA-125 (in ovarian cancer), estrogen receptor and progesterone receptor (in breast cancer), CEA (in colon cancer), PCA3 mRNA and PSA (in prostate cancer), and EGFR gene mutation (in non-small cell lung cancer).

### **tumor marker test**

A test that measures the amount of substances called tumor markers in tissue, blood, urine, or other body fluids. Most tumor markers are proteins made by both normal cells and cancer cells, but they are made in higher amounts by cancer cells. Genetic changes in tumor tissue, such as gene mutations, patterns of gene expression, and other changes in tumor DNA, are also being used as tumor markers. A tumor marker test is usually done with other tests, such as biopsies or imaging, to help diagnose some types of cancer. It may also be used to help plan treatment or find out how well treatment is working, give a likely prognosis, or find out if cancer has come back or spread to other parts of the body.

### **tumor microenvironment**

The normal cells, molecules, and blood vessels that surround and feed a tumor cell. A tumor can change its microenvironment, and the microenvironment can affect how a tumor grows and spreads.

### **tumor model**

Cells, tissues, or animals used to study the development and progression of cancer, and to test new treatments before they are given to humans. Animals with transplanted human tumors or other tissues are called xenograft models.

### **tumor mutational burden**

The total number of mutations (changes) found in the DNA of cancer cells. Knowing the tumor mutational burden may help plan the best treatment. For example, tumors that have a high number of mutations appear to be more likely to respond to certain types of immunotherapy. Tumor mutational burden is being used as a type of biomarker. Also called TMB.

### **tumor necrosis factor**

A protein made by white blood cells in response to an antigen (substance that causes the immune system to make a specific immune response) or infection. Tumor necrosis factor can also be made in the laboratory. It may boost a person's immune response, and also may cause necrosis (cell death) of some

types of tumor cells. Tumor necrosis factor is being studied in the treatment of some types of cancer. It is a type of cytokine. Also called TNF.

#### **tumor necrosis factor receptor superfamily member 10A**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of tumor necrosis factor receptor superfamily member 10A on cancer cells may kill more cells. Also called death receptor 4, DR4, TRAIL receptor 1, and TRAIL-R1.

#### **tumor necrosis factor receptor superfamily member 10B**

A protein on the surface of certain cells that binds another protein called TRAIL, which may kill some cancer cells. An increase in the amount or activity of tumor necrosis factor receptor superfamily member 10B on cancer cells may kill more cells. Also called death receptor 5, DR5, TRAIL receptor 2, and TRAIL-R2.

#### **tumor necrosis factor-related apoptosis-inducing ligand**

A cell protein that can attach to certain molecules in some cancer cells and may kill the cells. Tumor necrosis factor-related apoptosis-inducing ligand is being studied in the treatment of cancer. Also called Apo-2L, TNF-related apoptosis-inducing ligand, and TRAIL.

#### **tumor profiling**

A laboratory method that checks for the presence of certain genes, proteins, or other molecules in a sample of blood or tumor tissue. Tumor profiling may provide information about certain molecular or genetic changes in a tumor, such as gene mutations or other changes in tumor DNA. It may be used to help plan treatment or predict whether cancer will come back or spread to other parts of the body.

#### **tumor promotion**

A process in which existing tumors are stimulated to grow. Tumor promoters are not able to cause tumors to form.

#### **tumor protein p53 gene**

A gene that makes a protein that is found inside the nucleus of cells and plays a key role in controlling cell division and cell death. Mutations (changes) in the tumor protein p53 gene may cause cancer cells to grow and spread in the body. These changes have been found in a genetic condition called Li-Fraumeni syndrome and in many types of cancer. The tumor protein p53 gene is a type of tumor suppressor gene. Also called p53 gene and TP53 gene.

#### **tumor suppressor gene**

A type of gene that makes a protein called a tumor suppressor protein that helps control cell growth. Mutations (changes in DNA) in tumor suppressor genes may lead to cancer. Also called antioncogene.

#### **tumor vasculature-targeted tumor necrosis factor alpha**

A substance being studied in the treatment of cancer. It is made by linking tumor necrosis factor (TNF) to a peptide. The peptide binds to tumor blood vessels, and TNF damages them. It is a type of biological response modifier. Also called NGR-TNF.

#### **tumor volume**

The size of a cancer measured by the amount of space taken up by the tumor. For example, the tumor volume of prostate cancer is the percentage of the

prostate taken up by the tumor.

### **tumor-agnostic therapy**

A type of therapy that uses drugs or other substances to treat cancer based on the cancer's genetic and molecular features without regard to the cancer type or where the cancer started in the body. Tumor-agnostic therapy uses the same drug to treat all cancer types that have the genetic mutation (change) or biomarker that is targeted by the drug. It is a type of targeted therapy. Also called tissue-agnostic therapy.

### **tumor-derived**

Taken from an individual's own tumor tissue; may be used in the development of a vaccine that enhances the body's ability to build an immune response to the tumor.

### **tumor-infiltrating lymphocyte**

A type of immune cell that has moved from the blood into a tumor. Tumor-infiltrating lymphocytes can recognize and kill cancer cells. In cancer therapy, tumor-infiltrating lymphocytes are removed from a patient's tumor, grown in large numbers in a laboratory, and then given back to the patient to help the immune system kill the cancer cells. Also called TIL.

### **tumor-infiltrating lymphocyte therapy**

A type of treatment in which tumor-infiltrating lymphocytes (a type of immune cell that can recognize and kill cancer cells) are removed from a patient's tumor and grown in large numbers in a laboratory. These lymphocytes are then given back to the patient by infusion to help the immune system kill the cancer cells. Also called TIL therapy.

### **tumor-specific antigen**

A protein or other molecule that is found only on cancer cells and not on normal cells. Tumor-specific antigens can help the body make an immune response against cancer cells. They may be used as possible targets for targeted therapy or for immunotherapy to help boost the body's immune system to kill more cancer cells. Tumor-specific antigens may also be used in laboratory tests to help diagnose some types of cancer.

### **turmeric**

An East Indian plant that is a member of the ginger family and is used as a spice and food color. It is a major ingredient found in curry powder. The underground stem of the turmeric plant has been used for many years in traditional Asian medicine to treat certain conditions. The substance in turmeric that gives it a yellow color is called curcumin, which may have antioxidant and anti-inflammatory effects in the body. Turmeric can be made into a capsule, tablet, extract, powder, or tea and taken by mouth as a dietary supplement. It can also be made into a paste to treat skin conditions. Turmeric is being studied in the prevention and treatment of some types of cancer. Its scientific name is *Curcuma longa*. Also called Indian saffron and jiang huang.

### **twelve-step program**

A program to help people recover from substance abuse, emotional disorders, or addictions. The twelve steps come from an organization called Alcoholics Anonymous (AA) and are changed for each specific condition.

### **tympanites**

Swelling of the abdomen caused by gas in the intestines or peritoneal cavity. Also called meteorism.

### **type 2 diabetes mellitus**

A disease in which glucose levels in the blood are higher than normal because the body does not make enough insulin or use it the way it should. Type 2 diabetes is a chronic disease and usually develops slowly over time. Having type 2 diabetes increases the risk of developing many other health problems, such as heart disease, stroke, nerve damage, eye disease, kidney disease, foot problems, gum disease and other dental problems, and sexual and bladder problems. Certain health conditions, such as overweight, obesity, prediabetes, high blood pressure, abnormal cholesterol levels, and polycystic ovary syndrome, increase a person's risk of type 2 diabetes. People who had diabetes during pregnancy or birthed a baby who weighed more than 9 pounds are also at risk. Other risk factors include being 45 years or older, not getting enough exercise, being a member of certain racial and ethnic groups, and having a parent, brother, or sister with type 2 diabetes. There is no cure for type 2 diabetes, but certain medicines and behavioral changes, such as losing extra weight, eating a healthy diet, and getting regular exercise, can help control blood sugar levels and manage the disease.

### **type 3 serotonin receptor antagonist**

A type of drug used to treat certain types of irritable bowel syndrome and relieve nausea and vomiting. It is a type of antiemetic. Also called 5-HT<sub>3</sub> receptor antagonist and 5-hydroxytryptamine 3 receptor antagonist.

### **type C thymoma**

A rare type of thymus gland cancer. It usually spreads, has a high risk of recurrence, and has a poor survival rate. Thymic carcinoma is divided into subtypes, depending on the types of cells in which the cancer began. Also called thymic carcinoma.

### **tyrosinase peptide**

A protein that is made from tumor cells and is used in a vaccine against melanoma. A tyrosinase peptide vaccine may stimulate the body's immune system to find and kill melanoma cells.

### **tyrosine kinase inhibitor**

A substance that blocks the action of enzymes called tyrosine kinases. Tyrosine kinases are a part of many cell functions, including cell signaling, growth, and division. These enzymes may be too active or found at high levels in some types of cancer cells, and blocking them may help keep cancer cells from growing. Some tyrosine kinase inhibitors are used to treat cancer. They are a type of targeted therapy.

### **tyrosine kinase inhibitor BIBF 1120**

A substance being studied in the treatment of some types of cancer. Tyrosine kinase inhibitor BIBF 1120 blocks enzymes needed for cells to grow, and may prevent the growth of new blood vessels that tumors need to grow. It is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called BIBF 1120.



### **tyrosinemia**

A rare, inherited disorder marked by high blood levels of a protein building block called tyrosine. This can cause a harmful buildup of tyrosine and other substances in the body's tissues and organs, especially in the liver, kidney, and nervous system. This can lead to serious medical problems and may increase the risk of liver cancer. Tyrosinemia is caused by mutations (changes) in certain genes that make enzymes needed to break down tyrosine.

### **u-plasminogen activator**

An enzyme that is made in the kidney and found in the urine. A form of this enzyme is made in the laboratory and used to dissolve blood clots or to prevent them from forming. Also called uPA, urokinase, and urokinase-plasminogen activator.

### **uPA**

An enzyme that is made in the kidney and found in the urine. A form of this enzyme is made in the laboratory and used to dissolve blood clots or to prevent them from forming. Also called u-plasminogen activator, urokinase, and urokinase-plasminogen activator.

### **ubiquinone**

A nutrient that the body needs in small amounts to function and stay healthy. Ubiquinone helps mitochondria (small structures in the cell) make energy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). Ubiquinone is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, beef, soybeans, peanuts, and spinach. It is being studied in the prevention and treatment of some types of cancer and heart disease and in the relief of side effects caused by some cancer treatments. Also called coenzyme Q10, CoQ10, Q10, and vitamin Q10.

### **ulcer**

A break on the skin, in the lining of an organ, or on the surface of a tissue. An ulcer forms when the surface cells become inflamed, die, and are shed. Ulcers may be linked to cancer and other diseases.

### **ulceration**

The formation of a break on the skin or on the surface of an organ. An ulcer forms when the surface cells die and are cast off. Ulcers may be associated with cancer and other diseases.

### **ulcerative colitis**

Chronic inflammation of the colon that produces ulcers in its lining. This condition is marked by abdominal pain, cramps, and loose discharges of pus, blood, and mucus from the bowel.

### **ultra light cigarette**

A type of cigarette that is claimed to give off less tobacco tar than a regular or light ("low-tar") cigarette when smoked. Ultra light cigarettes have been shown to be no safer than regular cigarettes, and smoking them does not lower the risk of cancer or other diseases. A person smoking an ultra light cigarette can inhale the same amount of tobacco tar, nicotine, and harmful, cancer-causing chemicals as in a regular cigarette, depending on how the cigarette is smoked. Cigarettes are no longer allowed to be labeled or advertised as ultra light cigarettes.

### **ultrasonogram**

A computer picture of areas inside the body created by high-energy sound waves. The sound waves are bounced off internal tissues or organs and make echoes. The echoes form a picture of the body tissues on a computer screen. An ultrasonogram may be used to help diagnose disease, such as cancer. It may also be used during pregnancy to check the fetus (unborn baby) and during medical procedures, such as biopsies. Also called sonogram.

### **ultrasonography**

A procedure that uses high-energy sound waves to look at tissues and organs inside the body. The sound waves make echoes that form pictures of the tissues and organs on a computer screen (sonogram). Ultrasonography may be used to help diagnose diseases, such as cancer. It may also be used during pregnancy to check the fetus (unborn baby) and during medical procedures, such as biopsies. Also called ultrasound.

### **ultrasound**

A procedure that uses high-energy sound waves to look at tissues and organs inside the body. The sound waves make echoes that form pictures of the tissues and organs on a computer screen (sonogram). Ultrasound may be used to help diagnose diseases, such as cancer. It may also be used during pregnancy to check the fetus (unborn baby) and during medical procedures, such as biopsies. Also called ultrasonography.

### **ultrasound biomicroscopy**

A type of ultrasound eye exam that makes a more detailed image than regular ultrasound. High-energy sound waves are bounced off the inside of the eye and the echo patterns are shown on the screen of an ultrasound machine. This makes a picture called a sonogram.

### **ultrasound energy**

A form of therapy being studied as an anticancer treatment. Intensified ultrasound energy can be directed at cancer cells to heat them and kill them.

### **ultrasound transducer**

A device that produces sound waves that bounce off body tissues and make echoes. The transducer also receives the echoes and sends them to a computer that uses them to create a picture called a sonogram. Transducers (probes) come in different shapes and sizes for use in making pictures of different parts of the body. The transducer may be passed over the surface of the body or inserted into an opening such as the rectum or vagina.

### **ultrasound-guided biopsy**

A biopsy procedure that uses an ultrasound imaging device to find an abnormal area of tissue and guide its removal for examination under a microscope.

### **ultraviolet A radiation**

Invisible rays that are part of the energy that comes from the sun. Ultraviolet A radiation also comes from sun lamps and tanning beds. Ultraviolet A radiation may cause premature aging of the skin and skin cancer. It may also cause problems with the eyes and the immune system. Skin specialists recommend that people use sunscreens that protect the skin from ultraviolet radiation. In medicine, ultraviolet A radiation also comes from special lamps or a laser and is used to treat certain skin conditions such as psoriasis, vitiligo, and skin tumors of cutaneous T-cell lymphoma. Also called UVA radiation.

### **ultraviolet B radiation**

Invisible rays that are part of the energy that comes from the sun. Ultraviolet B radiation causes sunburn, darkening and thickening of the outer layer of the skin, and melanoma and other types of skin cancer. It may also cause problems with the eyes and the immune system. Skin specialists recommend that people use sunscreens that protect the skin from ultraviolet radiation. In medicine, ultraviolet B radiation also comes from special lamps or a laser and is used to treat certain skin conditions such as psoriasis, vitiligo, and skin tumors of cutaneous T-cell lymphoma. Also called UVB radiation.

### **ultraviolet C radiation**

Invisible rays that are part of the energy that comes from the sun. Most ultraviolet C radiation from the sun is blocked from the Earth's surface by the ozone layer. In medicine, ultraviolet C radiation may also come from special lamps or a laser and is used to kill germs or to help heal wounds. It is also used to treat certain skin conditions such as psoriasis, vitiligo, and skin nodules of cutaneous T-cell lymphoma. Also called UVC radiation.

### **ultraviolet radiation**

Invisible rays that are part of the energy that comes from the sun. Ultraviolet radiation that reaches the Earth's surface is made up of two types of rays, called UVA and UVB. Ultraviolet radiation also comes from sun lamps and tanning beds. It can cause skin damage, premature aging, melanoma, and other types of skin cancer. It can also cause problems with the eyes and the immune system. Skin specialists recommend that people use sunscreens that protect the skin from both kinds of ultraviolet radiation. In medicine, ultraviolet radiation also comes from special lamps or a laser and is used to treat certain skin conditions such as psoriasis, vitiligo, and skin tumors of cutaneous T-cell lymphoma. Also called UV radiation.

### **ultraviolet radiation therapy**

A form of radiation used in the treatment of cancer.

### **umbilical cord blood**

Blood from the umbilical cord of a newborn baby. This blood contains high concentrations of stem cells (cells from which all blood cells develop).

### **umbilical cord blood transplantation**

The injection of umbilical cord blood to restore an individual's own blood production system suppressed by anticancer drugs, radiation therapy, or both. It is being studied in the treatment of cancer and severe blood disorders such as aplastic anemia. Cord blood contains high concentrations of stem cells (cells from which all blood cells develop).

### **umbrella trial**

A type of clinical trial that tests how well new drugs or other substances work in patients who have the same type of cancer but different gene mutations (changes) or biomarkers. In umbrella trials, patients receive treatment based on the specific mutation or biomarker found in their cancer. The drugs being tested may change during the trial, as new targets and drugs are found. Umbrella trials may allow new drugs to be tested and approved more quickly than traditional clinical trials.

**unaffected individual**

In genetics, a term used to describe a person who does not have a certain genetic trait or disease.

**unclassified sarcoma**

A group of rare cancers that do not look like other types of sarcomas under a microscope and may be hard to diagnose. They usually form in the muscles that are attached to bones and that help the body move. Unclassified sarcomas tend to grow quickly and spread to other parts of the body. Some types of unclassified sarcomas may form in a part of the body where a patient had radiation therapy in the past. An unclassified sarcoma is a type of soft tissue sarcoma. Also called undifferentiated sarcoma.

**unclassified variant**

A change in a gene's DNA sequence that has an unknown effect on a person's health. There is usually not enough information about an unclassified variant to know whether it increases a person's risk of developing a disease, such as cancer. Also called variant of uncertain significance, variant of unknown significance, and VUS.

**uncontrolled study**

A clinical study that lacks a comparison (i.e., a control) group.

**unconventional cancer treatments**

Approaches that use substances or methods of treating cancer that have not been shown to be effective by accepted scientific methods, such as carefully designed clinical trials.

**underactive thyroid**

Too little thyroid hormone. Symptoms include weight gain, constipation, dry skin, and sensitivity to the cold. Also called hypothyroidism.

**undescended testicles**

A condition in which one or both testicles fail to move from the abdomen, where they develop before birth, into the scrotum. Undescended testicles may increase the risk for development of testicular cancer. Also called cryptorchidism.

**undifferentiated**

A term used to describe cells or tissues that do not have specialized ("mature") structures or functions. Undifferentiated cancer cells often grow and spread quickly.

**undifferentiated pleomorphic sarcoma**

A type of cancer that usually forms in the soft tissue, but it may also form in bone. It can occur anywhere in the body, but it usually occurs in the legs (especially the thighs), arms, or back of the abdomen. It may also occur in a part of the body where a patient received radiation therapy in the past. Undifferentiated pleomorphic sarcomas often grow quickly and spread to other parts of the body, including the lungs. They usually occur in older adults, and they may sometimes occur as a second cancer in patients who had retinoblastoma. Also called malignant fibrous cytoma and malignant fibrous histiocytoma.

**undifferentiated sarcoma**

A group of rare cancers that do not look like other types of sarcomas under a microscope and may be hard to diagnose. They usually form in the muscles that are attached to bones and that help the body move. Undifferentiated sarcomas tend to grow quickly and spread to other parts of the body. Some types of undifferentiated sarcomas may form in a part of the body where a patient had radiation therapy in the past. An undifferentiated sarcoma is a type of soft tissue sarcoma. Also called unclassified sarcoma.

**unguent**

A substance used on the skin to soothe or heal wounds, burns, rashes, scrapes, or other skin problems. Also called ointment.

**unilateral**

Having to do with one side of the body.

**unilateral salpingo-oophorectomy**

Surgery to remove the ovary and fallopian tube on one side of the body.

**unresectable**

Unable to be removed with surgery.

**unresectable gallbladder cancer**

Cancer that has spread to the tissues around the gallbladder (such as the liver, stomach, pancreas, intestine, or lymph nodes in the area) and cannot be surgically removed.

**unresected**

Describes an organ, tissue, or cancer that has not been either partly or completely removed by surgery.

**unsealed internal radiation therapy**

Radiation therapy given by injecting a radioactive substance into the bloodstream or a body cavity, or by swallowing it. This substance is not sealed in a container.

**upper GI endoscopy**

A procedure in which an endoscope is passed through the mouth and down the throat into esophagus, stomach, and duodenum (first part of the small intestine) to check for abnormal areas. An endoscope is a thin tube with a light and a video camera attached. It may also have a tool to remove a sample of cells, tissue, or fluid so it can be checked under a microscope for signs of disease. An upper GI endoscopy may be used to help diagnose cancer and other conditions, such as Barrett esophagus (a precancerous condition), ulcers, gastroesophageal reflux disease, and celiac disease. It may also be used to remove polyps or other types of growths, stop bleeding caused by ulcers or other conditions, widen a narrow esophagus, place a feeding tube or drainage tube, or remove foreign objects. Also called EGD, esophagogastroduodenoscopy, upper endoscopy, and upper gastrointestinal endoscopy.

**upper GI series**

A series of x-ray pictures of the upper gastrointestinal (GI) tract, including the throat, esophagus, stomach, and the first part of the small intestine (duodenum). The x-ray pictures are taken after the patient drinks a liquid that contains barium sulfate (a silver-white metallic compound). The barium sulfate coats and outlines

the inner walls of the upper GI tract so they can be seen on the x-ray pictures. Also called barium swallow and upper gastrointestinal series.

### **upper endoscopy**

A procedure in which an endoscope is passed through the mouth and down the throat into esophagus, stomach, and duodenum (first part of the small intestine) to check for abnormal areas. An endoscope is a thin tube with a light and a video camera attached. It may also have a tool to remove a sample of cells, tissue, or fluid so it can be checked under a microscope for signs of disease. An upper endoscopy may be used to help diagnose cancer and other conditions, such as Barrett esophagus (a precancerous condition), ulcers, gastroesophageal reflux disease, and celiac disease. It may also be used to remove polyps or other types of growths, stop bleeding caused by ulcers or other conditions, widen a narrow esophagus, place a feeding tube or drainage tube, or remove foreign objects. Also called EGD, esophagogastroduodenoscopy, upper gastrointestinal endoscopy, and upper GI endoscopy.

### **upper extremity**

The part of the body that includes the arm, wrist, and hand.

### **upper gastrointestinal endoscopy**

A procedure in which an endoscope is passed through the mouth and down the throat into esophagus, stomach, and duodenum (first part of the small intestine) to check for abnormal areas. An endoscope is a thin tube with a light and a video camera attached. It may also have a tool to remove a sample of cells, tissue, or fluid so it can be checked under a microscope for signs of disease. An upper gastrointestinal endoscopy may be used to help diagnose cancer and other conditions, such as Barrett esophagus (a precancerous condition), ulcers, gastroesophageal reflux disease, and celiac disease. It may also be used to remove polyps or other types of growths, stop bleeding caused by ulcers or other conditions, widen a narrow esophagus, place a feeding tube or drainage tube, or remove foreign objects. Also called EGD, esophagogastroduodenoscopy, upper endoscopy, and upper GI endoscopy.

### **upper gastrointestinal series**

A series of x-ray pictures of the upper gastrointestinal (GI) tract, including the throat, esophagus, stomach, and the first part of the small intestine (duodenum). The x-ray pictures are taken after the patient drinks a liquid that contains barium sulfate (a silver-white metallic compound). The barium sulfate coats and outlines the inner walls of the upper GI tract so they can be seen on the x-ray pictures. Also called barium swallow and upper GI series.

### **upper jaw**

The bones that form the upper part of the jaw, the roof of the mouth, and parts of the eye socket and nose. The upper jaw holds the top teeth in place and supports muscles involved in chewing and facial expressions. It is a major bone in the face. Also called maxilla.

### **upregulation**

In biology, the process by which a cell increases its response to a substance or signal from outside the cell to carry out a specific function. For example, a cell may increase the number or activity of protein receptors or other molecules on its surface to make it more sensitive to a hormone or drug.



### **upstaging**

In cancer, changing the stage used to describe a patient's cancer from a lower stage (less extensive) to a higher stage (more extensive). Upstaging is based on the results of additional staging tests. It is important to know the stage of the disease in order to plan the best treatment.

### **urachus**

A fibrous cord that connects the urinary bladder to the umbilicus (navel). The urachus is formed as the allantoic stalk during fetal development and lasts through life. Also called median umbilical ligament.

### **uracil**

A chemical compound that is used to make one of the building blocks of RNA. It is a type of pyrimidine.

### **urea**

A substance formed by the breakdown of protein in the liver. The kidneys filter urea out of the blood and into the urine. Urea can also be made in the laboratory. A topical form of urea is being studied in the treatment of hand-foot syndrome (pain, swelling, numbness, tingling, or redness of the hands or feet that may occur as a side effect of certain anticancer drugs). Also called carbamide.

### **urea nitrogen**

Nitrogen in the blood that comes from urea (a substance formed by the breakdown of protein in the liver). The kidneys filter urea out of the blood and into the urine. A high level of urea nitrogen in the blood may be a sign of a kidney problem. Also called blood urea nitrogen and BUN.

### **urea/lactic acid-based cream**

A substance being studied in the treatment of hand-foot syndrome (a condition caused by chemotherapy and marked by tingling, numbness, and red, peeling skin). Urea/lactic acid-based cream is a moisturizer that may help break down the hardened protein in dry, scaly skin and relieve these symptoms.

### **ureter**

The tube that carries urine from the kidney to the bladder.

### **ureteronephrectomy**

Surgery to remove a kidney and its ureter. Also called nephroureterectomy.

### **ureteroscopy**

A procedure that uses a ureteroscope to look inside the ureter (tube that connects the bladder to the kidney) and the renal pelvis (part of the kidney that collects urine and funnels it into the ureter). A ureteroscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease. The ureteroscope is inserted through the urethra into the bladder, ureter, and renal pelvis. Ureteroscopy may be used to check for cancer or other abnormal growths in the ureter and renal pelvis and to treat stones in the kidney or ureter.

### **urethra**

The tube through which urine leaves the body. It empties urine from the bladder.

### **urethral cancer**

A rare cancer that forms in tissues of the urethra (the tube through which urine empties the bladder and leaves the body). Types of urethral cancer include transitional cell carcinoma (cancer that begins in cells that can change shape and stretch without breaking apart), squamous cell carcinoma (cancer that begins in flat cells lining the urethra), and adenocarcinoma (cancer that begins in cells that make and release mucus and other fluids).

### **uric acid**

A waste product left over from normal chemical processes in the body and found in the urine and blood. Abnormal buildup of uric acid in the body may cause a condition called gout. Increased levels of uric acid in the blood and urine can be a side effect of chemotherapy or radiation therapy.

### **uridine triacetate**

A drug used in the emergency treatment of adults and children who receive too much fluorouracil or capecitabine or who have heart or central nervous system toxicity or other serious side effects that occur within 4 days of ending treatment with these drugs. Uridine triacetate may help protect healthy cells from some of the side effects caused by certain anticancer drugs. It is a type of chemoprotective agent and a type of pyrimidine analog. Also called PN401, triacetyluridine, and Vistogard.

### **urinalysis**

A test that determines the content of the urine.

### **urinary**

Having to do with urine or the organs of the body that produce and get rid of urine.

### **urinary diversion**

A surgical procedure to make a new way for urine to leave the body. It may involve redirecting urine into the colon, using catheters to drain the bladder, or making an opening in the abdomen and collecting urine in a bag outside the body.

### **urinary incontinence**

Inability to hold urine in the bladder.

### **urinary retention**

A condition in which urine cannot empty from the bladder. Urinary retention can be acute and develop very quickly, or it can be chronic and occur over a long time. Signs and symptoms include not being able to urinate, feeling a need to urinate right away, urinating often but in small amounts, leaking urine, and lower abdominal pain or swelling. Urinary retention is usually caused by a blockage or narrowing in the bladder or urethra (tube through which urine leaves the body). This may result from an enlarged prostate, a bulging or sagging bladder, kidney or bladder stones, tumor, infection, or inflammation. Urinary retention may also be caused by nerve problems, weak bladder muscles, surgery, and certain medicines.

### **urinary system**

The organs that make urine and remove it from the body. The urinary system is divided into two parts. The upper urinary system includes the kidneys and ureters. The lower urinary system includes the bladder and urethra. The kidneys

remove waste and extra fluid from the blood to make urine. The urine flows from the kidneys through the ureters to the bladder. It is stored in the bladder until it leaves the body through the urethra. Also called urinary tract.

### **urinary tract**

The organs that make urine and remove it from the body. The urinary tract is divided into two parts. The upper urinary tract includes the kidneys and ureters. The lower urinary tract includes the bladder and urethra. The kidneys remove waste and extra fluid from the blood to make urine. The urine flows from the kidneys through the ureters to the bladder. It is stored in the bladder until it leaves the body through the urethra. Also called urinary system.

### **urinary tract infection**

A condition in which bacteria invade and grow in the urinary tract (the kidneys, ureters, bladder, and urethra). Most urinary tract infections occur in the bladder or urethra. Signs and symptoms may include pain or burning during urination, cloudy or bad-smelling urine, blood in the urine, feeling a need to urinate often or right away, pain in the back or lower abdomen, fever, chills, and fatigue. Certain conditions, such as diabetes, hormone changes, kidney stones, an enlarged prostate, or a spinal cord injury, may increase the risk of a urinary tract infection. Other risk factors include radiation therapy or surgery to the pelvis, taking certain types of medicines (such as anticancer drugs), or using a catheter to empty the bladder. Urinary tract infections are common, especially in women. Also called UTI.

### **urine**

Fluid containing water and waste products. Urine is made by the kidneys, stored in the bladder, and leaves the body through the urethra.

### **urine culture**

A laboratory test to check for bacteria, yeast, or other microorganisms in the urine. Urine cultures can help identify the type of microorganism that is causing an infection. This helps determine the best treatment. They may be used to help diagnose urinary tract infections, such as bladder infections. They may also be done after treatment for a urinary tract infection to make sure the microorganism that caused the infection is gone.

### **urine cytology**

Tests performed on cells in urine to detect disease.

### **urokinase**

An enzyme that is made in the kidney and found in the urine. A form of this enzyme is made in the laboratory and used to dissolve blood clots or to prevent them from forming. Also called u-plasminogen activator, uPA, and urokinase-plasminogen activator.

### **urokinase plasminogen activator (uPA)-derived peptide A6**

A substance being studied in the treatment of cancer. Urokinase plasminogen activator (uPA)-derived peptide A6 is a small piece of a protein called urokinase (an enzyme that dissolves blood clots or prevents them from forming). It is a type of antiangiogenesis agent and a type of antimetastatic agent. Also called A6.

### **urokinase-plasminogen activator**

An enzyme that is made in the kidney and found in the urine. A form of this enzyme is made in the laboratory and used to dissolve blood clots or to prevent

them from forming. Also called u-plasminogen activator, uPA, and urokinase.

### **urologic oncologist**

A doctor who has special training in diagnosing and treating cancers of the male and female urinary tract and the male reproductive organs.

### **urologist**

A doctor who has special training in diagnosing and treating diseases of the urinary organs in females and the urinary and reproductive organs in males.

### **urostomy**

An operation to create an opening from inside the body to the outside, making a new way to pass urine.

### **urothelial cancer**

Cancer that begins in cells called urothelial cells that line the urethra, bladder, ureters, renal pelvis, and some other organs. Urothelial cells are also called transitional cells. These cells can change shape and stretch without breaking apart. Also called transitional cell cancer.

### **urothelium**

The lining of the urinary tract, including the renal pelvis, ureters, bladder, and urethra.

### **ursodiol**

A drug that is used to dissolve gallstones in people who can't have surgery to remove them. It is also being studied in the prevention of colorectal cancer. Ursodiol belongs to the family of drugs called anticholelithics.

### **urticaria**

Itchy, raised red areas on the skin. Urticaria are caused by a reaction to certain foods, drugs, infections, or emotional stress. Also called hives.

### **uterine cancer**

Cancer that forms in tissues of the uterus (the small, hollow, pear-shaped organ in a woman's pelvis in which a fetus develops). Two types of uterine cancer are endometrial cancer (cancer that begins in cells lining the uterus) and uterine sarcoma (a rare cancer that begins in muscle or other tissues in the uterus).

### **uterine sarcoma**

A rare type of uterine cancer that forms in muscle or other tissues of the uterus (the small, hollow, pear-shaped organ in a woman's pelvis in which a fetus develops). It usually occurs after menopause. The two main types are leiomyosarcoma (cancer that begins in smooth muscle cells) and endometrial stromal sarcoma (cancer that begins in connective tissue cells).

### **uterus**

The hollow, pear-shaped organ in a woman's pelvis. The uterus is where a fetus (unborn baby) develops and grows. Also called womb.

### **uvea**

The middle layer of the wall of the eye. The uvea has 3 main parts: (1) the choroid (the tissue layer filled with blood vessels); (2) the ciliary body (the ring of tissue that contains muscles that change the shape of the lens and makes the

clear fluid that fills the space between the cornea and the iris; and (3) the iris (the colored part of the eye). Also called uveal tract.

### **uveal melanoma**

A rare cancer that begins in the cells that make the dark-colored pigment, called melanin, in the uvea or uveal tract of the eye. The uvea is the middle layer of the wall of the eye and includes the iris, the ciliary body, and the choroid. Uveal melanoma of the iris is usually a small tumor that grows slowly and rarely spreads to other parts of the body. Uveal melanoma of the ciliary body and choroid are usually larger tumors and are more likely to spread to other parts of the body. Uveal melanoma is the most common type of eye cancer in adults. Also called intraocular melanoma.

### **uveal tract**

The middle layer of the wall of the eye. The uveal tract has 3 main parts: (1) the choroid (the tissue layer filled with blood vessels); (2) the ciliary body (the ring of tissue that contains muscles that change the shape of the lens and makes the clear fluid that fills the space between the cornea and the iris; and (3) the iris (the colored part of the eye). Also called uvea.

### **uveitis**

A rare condition in which all or part of the uvea (middle layer of the wall of the eye) becomes inflamed. The uvea includes the choroid, the ciliary body, and the iris. Uveitis may also affect the lens, retina, optic nerve, and vitreous humor (the gel-like fluid inside the eye). It may be caused by an injury, infection, a tumor in the eye, or an autoimmune or inflammatory condition. One or both eyes may be affected. The signs and symptoms may occur suddenly and get worse quickly. They include redness and pain in the eye, sensitivity to light, blurred vision, dark floating spots in the vision, and vision loss. If not treated, uveitis can lead to tissue scarring and blindness.

### **uvula**

The soft flap of tissue that hangs down at the back of the mouth (at the edge of the soft palate). Also called palatine uvula.

### **vaccinated**

Treated with a vaccine.

### **vaccination**

Treatment with a vaccine.

### **vaccine**

A substance or group of substances meant to cause the immune system to respond to a tumor or to microorganisms, such as bacteria or viruses. A vaccine can help the body recognize and destroy cancer cells or microorganisms.

### **vaccine adjuvant**

A substance added to a vaccine to improve the immune response so that less vaccine is needed.

### **vaccine therapy**

A type of treatment that uses a substance or group of substances to stimulate the immune system to destroy a tumor or infectious microorganisms such as bacteria or viruses.

### **vaccinia CEA vaccine**

A vaccine made by putting the gene for carcinoembryonic antigen (CEA) into the vaccinia virus. The vaccinia virus is related to the virus used to make the smallpox vaccine. CEA is a tumor marker. The vaccinia CEA vaccine may help the immune system recognize and kill cancer cells that make CEA.

### **vaccinia-TRICOM vaccine**

A cancer vaccine made with a form of a vaccinia virus that does not cause disease in humans. It is being studied in the treatment of some types of cancer. The virus is changed in the laboratory to make human proteins that may help immune cells in the body kill tumor cells. Also called recombinant vaccinia-TRICOM vaccine and rV-TRICOM.

### **vacuum aspiration**

A surgical procedure in which the cervix is dilated (opened) and vacuum is used to remove tissue from the uterus. Also called suction aspiration and suction evacuation.

### **vacuum-assisted biopsy**

A procedure in which a small sample of tissue is removed from the breast. An imaging device is used to guide a hollow probe connected to a vacuum device. The probe is inserted through a tiny cut made in numbed skin on the breast. The tissue sample is removed using gentle vacuum suction and a small rotating knife within the probe. Then the tissue sample is studied under a microscope to check for signs of disease. This procedure causes very little scarring and no stitches are needed. Also called VACB and vacuum-assisted core biopsy.

### **vacuum-assisted core biopsy**

A procedure in which a small sample of tissue is removed from the breast. An imaging device is used to guide a hollow probe connected to a vacuum device. The probe is inserted through a tiny cut made in numbed skin on the breast. The tissue sample is removed using gentle vacuum suction and a small rotating knife within the probe. Then the tissue sample is studied under a microscope to check for signs of disease. This procedure causes very little scarring and no stitches are needed. Also called VACB and vacuum-assisted biopsy.

### **vagina**

The muscular canal that goes from the uterus to the outside of the body. During birth, the baby passes through the vagina. Also called birth canal.

### **vaginal**

Having to do with the vagina (the birth canal).

### **vaginal atrophy**

A condition in which the tissues lining the inside of the vagina (birth canal) become thin, dry, and inflamed. This is caused by a decrease in the amount of estrogen (a female hormone) made by the body. Symptoms of vaginal atrophy include vaginal dryness, itching, and burning, and pain during sexual intercourse. Other symptoms include a burning feeling while urinating, feeling a need to urinate often or right away, and being unable to control the flow of urine. Vaginal atrophy most commonly occurs in women who have gone through menopause naturally or who have early menopause caused by certain types of cancer treatment (such as radiation therapy to the pelvis or chemotherapy) or by having their ovaries removed by surgery. Also called atrophic vaginitis.



**vaginal cancer**

Cancer that forms in the tissues of the vagina (birth canal). The vagina leads from the cervix (the opening of the uterus) to the outside of the body. The most common type of vaginal cancer is squamous cell carcinoma, which starts in the thin, flat cells lining the vagina. Another type of vaginal cancer is adenocarcinoma, cancer that begins in glandular cells in the lining of the vagina.

**vaginal dilation therapy**

A method used to prevent the closing of the vagina (the birth canal) after radiation therapy to the pelvis. The patient puts a dilator (tube-like device) coated with an oily or slippery substance into her vagina.

**vaginal intraepithelial neoplasia**

Abnormal cells are found in tissue lining the vagina (birth canal). These abnormal cells may become cancer and spread into the vaginal wall. Also called VAIN.

**vaginal stenosis**

A condition in which the vagina (birth canal) becomes narrower and shorter. The lining of the vagina may also be thinner and drier and contain scar tissue. This can cause pain during sexual intercourse or a pelvic exam. Vaginal stenosis is often caused by radiation therapy to the pelvis or some types of surgery.

**vaginectomy**

Surgery to remove part or all of the vagina (the birth canal).

**valacyclovir**

A substance that is being studied in the prevention of fungal, bacterial, and viral infections in patients undergoing donor stem cell transplantation with cells that are infected with cytomegalovirus. It belongs to the family of drugs called antivirals.

**valdecoxib**

A substance that is being studied as a treatment for pain and other side effects of cancer therapy. It belongs to the family of drugs called COX-2 inhibitors.

**valerian**

A plant whose roots are used as a sedative and to treat certain medical conditions. It is being studied as a way to improve sleep in cancer patients undergoing treatment. Also called garden heliotrope, garden valerian, Indian valerian, Mexican valerian, Pacific valerian, Valeriana officinalis, and Valerianae radix.

**valganciclovir**

An antiviral agent that is being studied as a treatment for AIDS-related cytomegalovirus. It is changed in the body to ganciclovir.

**valproic acid**

A drug used to treat epileptic seizures and bipolar disorder and to prevent migraine headaches. It is also being studied in the treatment of several types of cancer. It blocks an enzyme that cells need to grow and may cause cancer cells to die. It also blocks the growth of new blood vessels that tumors need to grow. It is a type of anticonvulsant, histone deacetylase (HDAC) inhibitor, antimaniacal, migraine headache prophylactic, and antiangiogenesis agent. Also called Depakene and Stavzor.

**valrubicin**

A drug used to treat bladder carcinoma in situ that did not get better after treatment with bacillus Calmette-Guerin (BCG). It is used in patients who cannot have surgery right away to remove all or part of the bladder. Valrubicin is given as a solution through a catheter that is placed into the bladder. It blocks a certain enzyme needed for cell division and DNA repair and may kill cancer cells. Valrubicin is a type of anthracycline antibiotic and a type of topoisomerase inhibitor. Also called AD 32 and Valstar.

**value-based pricing**

A system of setting the cost for a health care service in which health care providers are paid based on the quality of care they provide rather than the number of health care services they give or the number of patients they treat. Value-based pricing may give patients access to better treatments for lower costs. This may help reduce financial stress or hardship on patients receiving medical care.

**vancomycin**

An antibiotic drug used to fight resistant bacterial infections.

**vandetanib**

A drug used to treat medullary thyroid cancer that is locally advanced and cannot be removed by surgery or has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Vandetanib blocks certain proteins, which may help keep cancer cells from growing. It may also prevent the growth of new blood vessels that tumors need to grow. Vandetanib is a type of tyrosine kinase inhibitor and a type of antiangiogenesis agent. Also called Caprelsa and ZD6474.

**vaporized**

In chemistry, describes the change of a solid or liquid substance into a gas or vapor (mist). This usually occurs when the substance is heated above normal room temperature without burning it.

**vapreotide**

A substance that is being studied in the treatment of cancer. It belongs to the family of drugs called somatostatin analogs.

**varenicline tartrate**

A drug used to help people stop smoking by acting the same way nicotine acts in the brain. It is a type of nicotine receptor partial agonist. Also called Chantix.

**variable expressivity**

Refers to the difference in the way that signs and symptoms of a genetic condition can show up in individual patients who have that condition. For example, some patients with neurofibromatosis type 1 may have only mild symptoms, such as brown spots and freckling on the skin, and others may have more severe symptoms, such as brain tumors and tumors on the nerves.

**variant**

Any change in the DNA sequence of a cell. Variants may be caused by mistakes during cell division, or they may be caused by exposure to DNA-damaging agents in the environment. Variants can be harmful, beneficial, or have no effect. If they occur in cells that make eggs or sperm, they can be inherited; if variants

occur in other types of cells, they are not inherited. Certain variants may lead to cancer or other diseases. A variant is sometimes called a mutation.

### **variant of uncertain significance**

A change in a gene's DNA sequence that has an unknown effect on a person's health. There is usually not enough information about a variant of uncertain significance to know whether it increases a person's risk of developing a disease, such as cancer. Also called unclassified variant, variant of unknown significance, and VUS.

### **variant of unknown significance**

A change in a gene's DNA sequence that has an unknown effect on a person's health. There is usually not enough information about a variant of unknown significance to know whether it increases a person's risk of developing a disease, such as cancer. Also called unclassified variant, variant of uncertain significance, and VUS.

### **varicella**

A highly contagious disease marked by an itchy, blister-like rash caused by the varicella-zoster virus (a type of herpesvirus). The virus is easily spread from person to person through contact with mucus, saliva, or fluid from the blisters of an infected person or through droplets released when an infected person coughs or sneezes. The rash usually appears first on the face, chest, and back and then spreads to the rest of the body. Other symptoms may include fever, headache, fatigue, and loss of appetite. Varicella can sometimes cause serious health problems, especially in infants, teenagers, adults, pregnant women, and those who have a weakened immune system. Widespread use of the chickenpox vaccine since the early 1990s has prevented most cases of varicella in the United States. Also called chickenpox.

### **varicose vein**

A condition in which a vein, most often in the legs, becomes permanently enlarged, twisted, and painful. This may be caused by valves in the vein that don't work properly or by weakness in the vein walls.

### **vas deferens**

A coiled tube that carries the sperm out of the testes.

### **vascular endothelial growth factor**

A substance made by cells that stimulates new blood vessel formation. Also called VEGF.

### **vascular endothelial growth factor receptor tyrosine kinase inhibitor**

A substance that blocks an enzyme needed to form blood vessels. Also called VEGFR tyrosine kinase inhibitor.

### **vascular endothelial growth factor trap**

A drug used with other drugs to treat colorectal cancer that has spread to other parts of the body and has not gotten better with other chemotherapy. It is also being studied in the treatment of other types of cancer. Vascular endothelial growth factor trap blocks a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent. Also called VEGF Trap, Zaltrap, and ziv-aflibercept.

**vascular endothelial growth factor-antisense oligonucleotide**

A substance that has been studied in the treatment of cancer. It binds to the RNA for a protein called vascular endothelial growth factor (VEGF) that stimulates the growth of new blood vessels. Vascular endothelial growth factor-antisense oligonucleotide blocks the cell's ability to make VEGF, which may kill tumors that need new blood vessels to grow. It is a type of antisense oligonucleotide and a type of gene expression inhibitor. Also called VEGF-AS.

**vascular system**

A large network of blood vessels and lymph vessels that moves blood and lymph throughout the body. The blood vessels carry blood between the heart and the tissues and organs in the body. They also carry oxygen and other gases, nutrients, and hormones to the tissues and help them get rid of waste products. The lymph vessels carry lymph from tissues in different parts of the body to the bloodstream through a large vein near the heart. The vascular system helps control the amount of fluid in the body and helps protect it from infection and disease.

**vascular tumor**

A type of tumor that forms from cells that make blood vessels or lymph vessels. Vascular tumors may be benign (not cancer) or malignant (cancer) and can occur anywhere in the body. They may form on the skin, in the tissues below the skin, and/or in an organ. There are many types of vascular tumors. The most common type of vascular tumor is hemangioma, which is a benign tumor that usually occurs in infants and goes away on its own.

**vascularized autologous bone graft**

Bone tissue that contains blood vessels, taken from one part of the body and used to replace diseased or injured bone in another part of the body of the same person.

**vascularized lymph node transfer**

Surgery done to help relieve symptoms of lymphedema (swelling caused by a buildup of lymph in the tissues). Lymphedema can occur when lymph nodes or vessels become damaged or blocked. During a vascularized lymph node transfer, healthy tissue containing lymph nodes and vessels is taken from one part of the body, such as the neck, abdomen, or groin, and moved to the area with the damaged lymph nodes, usually in a person's arm or leg. This may cause the lymph nodes and vessels in the healthy tissue to grow and help improve the flow of lymph in that area. Also called lymphovenous transplant and VLNT.

**vasectomy**

An operation to cut or tie off the two tubes that carry sperm out of the testicles.

**vasoactive**

Describes something that causes the blood vessels to constrict (get narrower) or dilate (get wider).

**vasoactive intestinal peptide**

A hormone found in the pancreas, intestine, and central nervous system. It has many actions in the body, such as helping to control the secretion of water, salts, enzymes, and gastric acid during digestion. It also causes smooth muscles in the digestive tract, the heart, and the blood vessels to relax. It also has effects on the immune system and the central nervous system. Certain tumors in the pancreas make large amounts of vasoactive intestinal peptide. Also called VIP hormone.

**vasomotor**

Affecting the narrowing and widening of the blood vessels.

**vasopressin**

A hormone that helps blood vessels constrict and helps the kidneys control the amount of water and salt in the body. This helps control blood pressure and the amount of urine that is made. Vasopressin is made by a part of the brain called the hypothalamus and is secreted into the blood by the pituitary gland. Certain types of tumors may release high amounts of vasopressin, which can cause low levels of sodium in the blood and the body to retain water. Also called antidiuretic hormone and arginine vasopressin.

**vatalanib**

A substance that is being studied in the treatment of cancer. It belongs to the families of drugs called protein tyrosine kinase inhibitors and VEGF receptor kinase inhibitors. Also called PTK787/ZK 222584.

**vegan**

A person who does not eat any foods that come from animals, including meat, eggs, and dairy products. A vegan diet is being studied in the prevention and treatment of prostate cancer and other medical conditions.

**vein**

A blood vessel that carries blood to the heart from tissues and organs in the body.

**velafermin**

A substance that is being studied in the prevention and treatment of oral mucositis (sores in the mouth) in patients receiving high-dose chemotherapy. Velafermin belongs to the family of drugs called recombinant human fibroblast growth factors (rhFGF).

**veliparib**

A substance being studied in the treatment of breast cancers caused by mutations (changes) in the BRCA1 and BRCA2 genes. It is also being studied in the treatment of other types of cancer. It blocks an enzyme involved in many functions of the cell, including the repair of DNA damage. DNA damage may be caused by normal cell actions, UV light, some anticancer drugs, and radiation used to treat cancer. Veliparib may cause cancer cells to die. It is a type of poly(ADP-ribose) polymerase inhibitor. Also called ABT-888 and PARP-1 inhibitor ABT-888.

**veltuzumab**

A substance being studied in the treatment of several types of lymphoma. It binds to the protein CD20, which is found on B cells (a type of immune system cell) and some types of lymphoma cells. This causes the immune system to kill the cancer cells. Veltuzumab is a type of monoclonal antibody. Also called hA20, HCD20, and IMMU-106.

**vemurafenib**

A drug used to treat Erdheim-Chester disease (a very rare type of histiocytosis) and advanced melanoma that have a certain mutation (change) in the BRAF gene. It is also being studied in the treatment of other types of cancer. Vemurafenib blocks certain proteins made by the mutated BRAF gene, which may help keep cancer cells from growing. It is a type of kinase inhibitor. Also

called BRAF (V600E) kinase inhibitor RO5185426, PLX4032, RG7204, and Zelboraf.

### **vena cava**

A large vein that carries blood to the heart from other areas of the body. The vena cava has two parts: the superior vena cava and the inferior vena cava. The superior vena cava carries blood from the head, neck, arms, and chest. The inferior vena cava carries blood from the legs, feet, and organs in the abdomen and pelvis. The vena cava is the largest vein in the body.

### **venetoclax**

A drug used alone or with other drugs to treat certain adults with acute myeloid leukemia that is newly diagnosed and adults with chronic lymphocytic leukemia or small lymphocytic lymphoma. It is also being studied in the treatment of other types of cancer. Venetoclax binds to a protein called BCL2, which is found on some types of cancer cells. Blocking this protein may help kill cancer cells and may make them more sensitive to anticancer drugs. Venetoclax is a type of BCL2 inhibitor. Also called Venclexta.

### **venipuncture**

A procedure in which a needle is used to take blood from a vein, usually for laboratory testing. Venipuncture may also be done to remove extra red blood cells from the blood, to treat certain blood disorders. Also called blood draw and phlebotomy.

### **venlafaxine**

A drug used to treat depression and certain anxiety disorders. It may also be used to treat hot flashes in women who are in menopause or are being treated for breast cancer. Venlafaxine increases the levels of the chemicals serotonin and norepinephrine in the brain, which helps improve mood. It is a type of antidepressant and a type of serotonin-norepinephrine reuptake inhibitor. Also called Effexor.

### **venography**

A procedure in which an x-ray of the veins is taken after a special dye is injected into the bone marrow or veins.

### **venous catheter**

A thin, flexible tube that is inserted into a large vein, usually in the arm, chest, or leg. It is used to give intravenous fluids, blood transfusions, and chemotherapy and other drugs, and for taking blood samples. It avoids the need for repeated needle sticks.

### **venous sampling**

A procedure in which a sample of blood is taken from a certain vein and checked for specific substances released by nearby organs and tissues. A higher than normal amount of a substance can be a sign of disease in the organ or tissue that makes it.

### **ventilator**

In medicine, a machine used to help a patient breathe. Also called respirator.

### **ventricle**

A fluid-filled cavity in the heart or brain.



**vertebral column**

The bones, muscles, tendons, and other tissues that reach from the base of the skull to the tailbone. The vertebral column encloses the spinal cord and the fluid surrounding the spinal cord. Also called backbone, spinal column, and spine.

**vertebroplasty**

A procedure used to repair a bone in the spine that has a break caused by cancer, osteoporosis (a decrease in bone mass and density), or trauma. Bone cement is injected into the broken bone to make it stronger.

**verum acupuncture**

Refers to traditional acupuncture, which is the technique of inserting thin needles through the skin to certain depths and at certain points on the body to control pain and other symptoms. The term verum acupuncture may be used when comparing traditional acupuncture to sham (placebo) acupuncture. In sham acupuncture, needles do not go as deep and are not used at the same points on the body.

**vesicant extravasation**

The leakage of certain drugs called vesicants out of a vein into the tissue around it. Vesicants cause blistering and other tissue injury that may be severe and can lead to tissue necrosis (tissue death).

**vesicle**

A small sac formed by a membrane and filled with liquid. Vesicles inside cells move substances into or out of the cell. Vesicles made in the laboratory can be used to carry drugs to cells in the body.

**vestibular schwannoma**

A benign (not cancer) tumor that forms on the nerves in the inner ear and can affect hearing and balance. Vestibular schwannomas usually grow slowly and affect one side of the body. Common signs and symptoms include hearing loss or ringing in one ear, loss of balance, dizziness, and numbness and paralysis in the face. Sometimes these tumors may grow large and press against the facial nerve or other nearby nerves. Rarely, they may press against certain parts of the brain, which could be life threatening. Vestibular schwannomas that affect the nerves in both ears are often caused by a genetic disorder called neurofibromatosis type 2. Vestibular schwannomas usually occur in people aged 30 to 60 years. Also called acoustic neuroma.

**vibro-acoustography imaging**

A technique being studied in the diagnosis of breast cancer and other types of cancer. Vibro-acoustography imaging uses ultrasound (high-energy sound waves) to cause tissues to vibrate. The sound made by the vibrating tissues is picked up by a microphone and is used to make an image of the object on a computer. Cancer tissue can be seen because it is denser and vibrates at a different rate than normal tissue.

**video-assisted resection**

Surgery that is aided by the use of a video camera that projects and enlarges the image on a television screen. Also called video-assisted surgery.

**video-assisted surgery**

Surgery that is aided by the use of a video camera that projects and enlarges the image on a television screen. Also called video-assisted resection.

**villous adenoma**

A type of polyp that grows in the colon and other places in the gastrointestinal tract and sometimes in other parts of the body. These adenomas may become malignant (cancer).

**villus**

A tiny hair-like projection, often on the surface of mucous membranes. The plural is villi.

**vinblastine sulfate**

A drug used to treat certain types of breast cancer, choriocarcinoma (a type of gestational trophoblastic tumor), Hodgkin lymphoma, non-Hodgkin lymphoma, Kaposi sarcoma, mycosis fungoides (a type of cutaneous T-cell lymphoma), and testicular cancer. It is also being studied in the treatment of other types of cancer. Vinblastine sulfate stops cancer cells from growing and dividing and may kill them. It is a type of vinca alkaloid. The brand name Velban has been taken off the market and is no longer available.

**vinca alkaloid**

A type of drug that blocks cell growth by stopping mitosis (cell division). Vinca alkaloids interfere with microtubules (cellular structures that help move chromosomes during mitosis). They are used to treat cancer. A vinca alkaloid is a type of mitotic inhibitor and a type of antimicrotubule agent.

**vincristine sulfate**

A drug used to treat acute leukemia and is sometimes used with other drugs to treat Hodgkin lymphoma, non-Hodgkin lymphoma, rhabdomyosarcoma, neuroblastoma, and Wilms tumor. It is also being studied in the treatment of other types of cancer. Vincristine sulfate stops cancer cells from growing and dividing and may kill them. It is a type of vinca alkaloid. Vincristine is the active ingredient of vincristine sulfate. The brand name Oncovin has been taken off the market and is no longer available.

**vindesine**

An anticancer drug that belongs to the family of plant drugs called vinca alkaloids.

**vinflunine**

A substance being studied in the treatment of bladder cancer, lung cancer, and other types of cancer. Also called Javlor.

**vinorelbine tartrate**

A drug used alone or with cisplatin to treat non-small cell lung cancer that is locally advanced or has spread to other parts of the body. It is also being studied in the treatment of other types of cancer. Vinorelbine tartrate stops cancer cells from growing and dividing and may kill them. It is a type of vinca alkaloid.

**vinyl chloride**

A substance used to make plastics. Exposure to vinyl chloride may increase the risk of developing liver, brain, and lung cancers; lymphoma; and leukemia.

**viral**

Having to do with a virus.

### **viral oncolysate**

An extract made from cancer cells that are infected with a strain of virus that can lyse (break down) cancer cells. The extract contains both cancer cell proteins and virus proteins. Viral oncolysates are being studied as cancer vaccines.

### **viral therapy**

Treatment using a virus that has been changed in the laboratory to find and destroy cancer cells without harming healthy cells. It is a type of targeted therapy. Also called oncolytic virotherapy, oncolytic virus therapy, and virotherapy.

### **viral vector**

A form of a virus used to deliver genetic material into a cell. Before the virus is used in this way, it is changed in the laboratory so that it cannot cause disease in people. Viral vectors may be used to carry genes that can change cancer cells back to normal cells or to replace a gene that isn't working correctly with a working copy of the gene. In cancer vaccines, viral vectors can be used to deliver specific cancer-related antigens into the body. The antigens may stimulate the immune system to recognize and kill the cancer cells. Viral vectors may also be used in vaccines to help prevent certain types of viral infections. Examples of viral vectors are adenoviruses, adeno-associated viruses, retroviruses, lentiviruses, and herpes simplex viruses.

### **virotherapy**

Treatment using a virus that has been changed in the laboratory to find and destroy cancer cells without harming healthy cells. It is a type of targeted therapy. Also called oncolytic virotherapy, oncolytic virus therapy, and viral therapy.

### **virtual colonoscopy**

A method to examine the inside of the colon by taking a series of x-rays. A computer is used to make 2-dimensional (2-D) and 3-D pictures of the colon from these x-rays. The pictures can be saved, changed to give better viewing angles, and reviewed after the procedure, even years later. Also called computed tomographic colonography, computed tomography colonography, and CT colonography.

### **virulence**

The ability of a microorganism to cause damage to its host.

### **virulent**

Refers to the ability of a virus or a bacterium to cause damage to its host.

### **virus**

In medicine, a very simple microorganism that infects cells and may cause disease. Because viruses can multiply only inside infected cells, they are not considered to be alive.

### **virus replication cycle**

The reproduction cycle of viruses. A replication cycle begins with the infection of a host cell and ends with the release of mature progeny virus particles.

### **virus-like particle**

A small particle that contains certain proteins from the outer coat of a virus. Virus-like particles do not contain any genetic material from the virus and cannot

cause an infection. They are used to make vaccines that can help the body's immune system kill microorganisms and certain cancer cells. Virus-like particles were used to make vaccines that prevent cervical cancer caused by human papilloma viruses (HPV). They were also used to make vaccines that prevent liver cancer caused by infection with the hepatitis B virus.

### **virus-neutralizing antibody**

An antibody that binds to a virus and interferes with its ability to infect a cell.

### **viscera**

The soft internal organs of the body, including the lungs, the heart, and the organs of the digestive, excretory, and reproductive systems.

### **visceral**

Having to do with the viscera, which are the soft internal organs of the body, including the lungs, the heart, and the organs of the digestive, excretory, reproductive, and circulatory systems.

### **visceral peritoneum**

The layers of tissue that cover the outer surface of most organs in the abdomen, including the intestines.

### **viscotoxin**

A member of a group of small proteins produced by mistletoe plants that are able to kill cells and may stimulate the immune system.

### **visilizumab**

A substance being studied in the treatment of an immune system reaction called graft-versus-host disease (GVHD), which may occur after a donor stem cell transplant. It is also being studied in the treatment of some autoimmune diseases. Visilizumab binds to a protein called CD3, which is found on some T cells (a type of white blood cell). This may help suppress the body's immune response. Visilizumab is a type of monoclonal antibody.

### **vismodegib**

A drug used to treat advanced basal cell carcinoma that has spread to other parts of the body or has come back after surgery. It is also used in patients who cannot be treated with surgery or radiation therapy. It is also being studied in the treatment of other types of cancer. Vismodegib blocks a type of protein involved in tissue growth and repair and may block the growth of cancer cells. It is a type of Hedgehog signaling pathway antagonist. Also called Erivedge and GDC-0449.

### **visual analog scale**

A tool used to help a person rate the intensity of certain sensations and feelings, such as pain. The visual analog scale for pain is a straight line with one end meaning no pain and the other end meaning the worst pain imaginable. A patient marks a point on the line that matches the amount of pain he or she feels. It may be used to help choose the right dose of pain medicine. Also called VAS.

### **visual pathway glioma**

A rare, slow-growing tumor that usually forms in the optic nerve, optic chiasm, or optic tract. These are parts of the nervous system that carry messages from the eye to the brain. Also called optic pathway glioma.

## **vital**

Necessary to maintain life. Breathing is a vital function.

## **vitality**

A term used to describe a person's ability to live, grow, and develop. Vitality also refers to having energy and being vigorous and active. Being ill or being treated for a disease, such as cancer, may lessen a person's vitality.

## **vitamin**

A nutrient that the body needs in small amounts to function and stay healthy. Sources of vitamins are plant and animal food products and dietary supplements. Some vitamins are made in the human body from food products. Vitamins are either fat-soluble (can dissolve in fats and oils) or water-soluble (can dissolve in water). Excess fat-soluble vitamins are stored in the body's fatty tissue, but excess water-soluble vitamins are removed in the urine. Examples are vitamin A, vitamin C, and vitamin E.

## **vitamin A**

A nutrient that the body needs in small amounts to function and stay healthy. Vitamin A helps in vision, bone growth, reproduction, growth of epithelium (cells that line the internal and external surfaces of the body), and fighting infections. It is fat-soluble (can dissolve in fats and oils). Vitamin A is found in liver, egg yolks, and whole milk dairy products from animals and in fish oils. It can also be made in the body from a substance found in some fruits and vegetables, such as cantaloupes, carrots, spinach, and sweet potatoes. Vitamin A is being studied in the prevention and treatment of some types of cancer. Also called retinol.

## **vitamin A acid**

A nutrient that the body needs in small amounts to function and stay healthy. Vitamin A acid is made in the body from vitamin A and helps cells to grow and develop, especially in the embryo. A form of vitamin A acid made in the laboratory is put on the skin to treat conditions such as acne and is taken by mouth to treat acute promyelocytic leukemia (a fast-growing cancer in which there are too many immature blood-forming cells in the blood and bone marrow). Vitamin A acid is being studied in the prevention and treatment of other types of cancer. Also called all-trans retinoic acid, ATRA, retinoic acid, and tretinoin.

## **vitamin B complex**

A compound containing several or all of a group of vitamins and nutrients that the body needs in very small amounts to function and stay healthy. The B vitamins in the vitamin B complex include thiamine, riboflavin, niacin (nicotinic acid), niacinamide (nicotinamide), the vitamin B6 group (including pyridoxine, pyridoxal, pyridoxamine), biotin, pantothenic acid, folic acid, and vitamin B12. Aminobenzoic acid, inositol, and choline are sometimes included as part of the vitamin B complex. The vitamin B complex is water-soluble (can dissolve in water) and is found in yeast, seeds, eggs, liver, meat, and vegetables. Members of the vitamin B complex are being studied in the prevention and treatment of some types of cancer.

## **vitamin B1**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin B1 helps some enzymes work properly, helps break down sugars in the diet, and keeps nerves and the heart healthy. It is found in pork, organ meats, peas, beans, nuts, and whole grains. Vitamin B1 is water-soluble (can dissolve in water) and must be taken in daily. Not enough

vitamin B1 can cause a disease called beriberi (a condition marked by heart, nerve, and digestive disorders). Too much vitamin B1 may help cancer cells grow faster. Also called thiamine.

### **vitamin B12**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin B12 helps make red blood cells, DNA, RNA, energy, and tissues, and keeps nerve cells healthy. It is found in liver, meat, eggs, poultry, shellfish, milk, and milk products. Vitamin B12 is water-soluble (can dissolve in water) and must be taken in every day. Not enough vitamin B12 can cause certain types of anemia (a condition in which the number of red blood cells is below normal) and neurologic disorders. It is being studied with folate in the prevention and treatment of some types of cancer. Also called cobalamin and cyanocobalamin.

### **vitamin B2**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin B2 helps make red blood cells, helps some enzymes work properly, and keeps skin, nails, and hair healthy. It is found in milk, eggs, malted barley, organ meats, yeast, and leafy vegetables. Vitamin B2 is water-soluble (can dissolve in water) and must be taken in every day. Not enough vitamin B2 can cause anemia (a low number of red blood cells), mouth sores, and skin problems. Amounts of vitamin B2 may be higher in the blood of patients with some types of cancer. Also called riboflavin.

### **vitamin B3**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin B3 helps some enzymes work properly and helps skin, nerves, and the digestive tract stay healthy. Vitamin B3 is found in many plant and animal products. It is water-soluble (can dissolve in water) and must be taken in every day. Not enough vitamin B3 can cause a disease called pellagra (a condition marked by skin, nerve, and digestive disorders). A form of vitamin B3 is being studied in the prevention of skin and other types of cancer. Vitamin B3 may help to lower blood cholesterol. Also called niacin and nicotinic acid.

### **vitamin B5**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin B5 helps some enzymes use foods and make many substances used in the body and protects cells against damage from peroxides. It is found in almost all plant and animal foods. Vitamin B5 is water-soluble (can dissolve in water) and must be taken in every day. Also called pantothenic acid.

### **vitamin B6**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin B6 helps keep nerves and skin healthy, fight infections, keep blood sugar levels normal, produce red blood cells, and some enzymes work properly. Vitamin B6 is a group of related compounds (pyridoxine, pyridoxal, and pyridoxamine) found in cereals, beans, peas, nuts, meat, poultry, fish, eggs, and bananas. It is water-soluble (can dissolve in water). Not enough vitamin B6 can cause mouth and tongue sores and nervous disorders. Vitamin B6 is being studied in the prevention of hand-foot syndrome (a disorder caused by certain anticancer drugs and marked by pain, swelling, numbness, tingling, or redness of the hands or feet). Also called pyridoxine.



### **vitamin C**

A nutrient that the body needs in small amounts to function and stay healthy. Vitamin C helps fight infections, heal wounds, and keep tissues healthy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). Vitamin C is found in all fruits and vegetables, especially citrus fruits, strawberries, cantaloupe, green peppers, tomatoes, broccoli, leafy greens, and potatoes. It is water-soluble (can dissolve in water) and must be taken in every day. Vitamin C is being studied in the prevention and treatment of some types of cancer. Also called ascorbic acid.

### **vitamin D**

A nutrient that the body needs in small amounts to function and stay healthy. Vitamin D helps the body use calcium and phosphorus to make strong bones and teeth. It is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, egg yolks, and dairy products. Skin exposed to sunshine can also make vitamin D. Not enough vitamin D can cause a bone disease called rickets. It is being studied in the prevention and treatment of some types of cancer. Also called cholecalciferol.

### **vitamin D2**

A form of vitamin D that helps the body use calcium and phosphorus to make strong bones and teeth. It is fat-soluble (can dissolve in fats and oils) and is found in plants and yeast. It can be made in the body from another form of vitamin D when the body is exposed to the sun. Vitamin D2 is also made in the laboratory. It is used to prevent and to treat vitamin D deficiency. It is a type of dietary supplement. Also called ergocalciferol.

### **vitamin E**

A nutrient that the body needs in small amounts to stay healthy and work the way it should. It is fat-soluble (can dissolve in fats and oils) and is found in seeds, nuts, leafy green vegetables, and vegetable oils. Vitamin E boosts the immune system and helps keep blood clots from forming. It also helps prevent cell damage caused by free radicals (highly reactive chemicals). Vitamin E is being studied in the prevention and treatment of some types of cancer. It is a type of antioxidant. Also called alpha-tocopherol.

### **vitamin H**

A nutrient in the vitamin B complex that the body needs in small amounts to function and stay healthy. Vitamin H helps some enzymes break down substances in the body for energy and helps tissues develop. It is found in yeast, whole milk, egg yolks, and organ meats. Vitamin H is water-soluble (can dissolve in water) and must be taken in every day. Not enough vitamin H can cause skin, nerve, and eye disorders. Vitamin H is present in larger amounts in some cancer tissue than in normal tissue. Attaching vitamin H to substances used to treat some types of cancer helps them find cancer cells. Also called biotin.

### **vitamin K**

A nutrient that the body needs in small amounts to function and stay healthy. Vitamin K helps to form blood clots (a mass that forms when blood platelets, proteins, and cells stick together) and maintain strong bones. It is fat-soluble (can dissolve in fats and oils) and is found in green leafy vegetables, broccoli, liver, and vegetable oils. Vitamin K is also made by bacteria that live in the large intestine. Not enough vitamin K can lead to bleeding and bruising. It is a type of phyloquinone.

**vitamin Q10**

A nutrient that the body needs in small amounts to function and stay healthy. Vitamin Q10 helps mitochondria (small structures in the cell) make energy. It is an antioxidant that helps prevent cell damage caused by free radicals (highly reactive chemicals). Vitamin Q10 is fat-soluble (can dissolve in fats and oils) and is found in fatty fish, beef, soybeans, peanuts, and spinach. It is being studied in the prevention and treatment of some types of cancer and heart disease and in the relief of side effects caused by some cancer treatments. Also called coenzyme Q10, CoQ10, Q10, and ubiquinone.

**vitespen**

A vaccine made from a patient's tumor cells that may help the body's immune system kill cancer cells. This vaccine is used to treat kidney cancer, a type of brain cancer called glioma, and metastatic melanoma (a type of skin cancer that has spread). It is also being studied in the treatment of other types of cancer. Also called gp96 heat shock protein-peptide complex vaccine, gp96 HSP-peptide complex, and Oncophage.

**vitreous humor**

The clear jelly-like substance that fills the inside of the eyeball. As a person ages, the vitreous humor becomes more liquid.

**vocal cord**

One of two small bands of muscle within the larynx that vibrates to produce the voice.

**vocational rehabilitation counselor**

A person who has special training to help people with a disability find a job or career. A vocational rehabilitation counselor evaluates a person's education, training, skills, interests, and financial needs to help him or her make employment decisions. A vocational rehabilitation counselor also monitors job performance and provides counseling, education, and resources for job-related issues and access to special accommodations in the workplace. Also called vocational therapist.

**vocational therapist**

A person who has special training to help people with a disability find a job or career. A vocational therapist evaluates a person's education, training, skills, interests, and financial needs to help him or her make employment decisions. A vocational therapist also monitors job performance and provides counseling, education, and resources for job-related issues and access to special accommodations in the workplace. Also called vocational rehabilitation counselor.

**voice box**

The area of the throat containing the vocal cords and used for breathing, swallowing, and talking. Also called larynx.

**volociximab**

A monoclonal antibody that is being studied in the treatment of some types of cancer. Monoclonal antibodies are made in the laboratory and can locate and bind to substances in the body, including cancer cells. Volociximab binds to a protein that is found on cells that line some tumor blood vessels. It is a type of angiogenesis inhibitor. Also called M200.

## **vomiting**

The forceful ejection of some or all of the contents of the stomach through the mouth. Vomiting may be caused by many things, including certain smells, irritation to the stomach, infections, stress, pain, motion sickness, migraines, certain medicines, some diseases or conditions, and brain injury or concussion. It can also be a symptom of some cancers and a side effect of certain cancer treatments. Also called emesis.

## **von Hippel-Lindau disease**

A rare, inherited disorder that causes tumors and cysts to grow in certain parts of the body, including the brain, spinal cord, eyes, inner ear, adrenal glands, pancreas, kidney, and reproductive tract. The tumors are usually benign (not cancer), but some may be malignant (cancer). Patients with von Hippel-Lindau disease have an increased risk of certain types of cancer, especially kidney cancer and pancreatic cancer. The signs and symptoms of von Hippel-Lindau disease usually do not appear until young adulthood. It is caused by a mutation (change) in the VHL gene. Also called VHL disease, VHL syndrome, and von Hippel-Lindau syndrome.

## **von Hippel-Lindau gene**

A gene that makes a protein that helps control cell growth, cell division, and other important cell functions. Mutated (changed) forms of the von Hippel-Lindau gene may increase the growth of cells, including abnormal cells. This mutated gene has been found in nearly all patients with an inherited condition called VHL syndrome. VHL syndrome can cause kidney cancer and tumors of the brain, spinal cord, eye, ear, adrenal glands, pancreas, or other parts of the body. The von Hippel-Lindau gene is a type of tumor suppressor gene. Also called VHL gene.

## **von Hippel-Lindau syndrome**

A rare, inherited disorder that causes tumors and cysts to grow in certain parts of the body, including the brain, spinal cord, eyes, inner ear, adrenal glands, pancreas, kidney, and reproductive tract. The tumors are usually benign (not cancer), but some may be malignant (cancer). Patients with von Hippel-Lindau syndrome have an increased risk of certain types of cancer, especially kidney cancer and pancreatic cancer. The signs and symptoms of von Hippel-Lindau syndrome usually do not appear until young adulthood. It is caused by a mutation (change) in the VHL gene. Also called VHL disease, VHL syndrome, and von Hippel-Lindau disease.

## **vorasidenib citrate**

A drug used to treat adults and children aged 12 years and older with grade 2 astrocytoma or oligodendroglioma (types of brain tumors) that has an abnormal IDH1 or IDH2 gene. It is used in patients who had a biopsy or surgery to remove the tumor. It is also being studied in the treatment of other types of cancer. Vorasidenib citrate blocks the proteins made by the mutated IDH1 and IDH2 genes, which may help keep cancer cells from growing. It is a type of enzyme inhibitor and a type of targeted therapy. Also called Voranigo.

## **voriconazole**

A drug that treats infections caused by fungi.

## **vorinostat**

A drug used to treat cutaneous T-cell lymphoma that came back, got worse, or did not get better during or after treatment with two systemic therapies. It is also

being studied in the treatment of other types of cancer. Vorinostat blocks certain enzymes needed for cell division and may kill cancer cells. It is a type of histone deacetylase inhibitor. Also called SAHA, suberoylanilide hydroxamic acid, and Zolinza.

### **vorozole**

A hormone therapy drug used to decrease the production of estrogen.

### **vulva**

The external female genital organs. The vulva includes the inner and outer lips of the vagina, the clitoris, the opening of the vagina and its glands, the opening of the urethra, and the mons pubis (the rounded area in front of the pubic bones that becomes covered with hair at puberty).

### **vulvar cancer**

Cancer of the vulva (the external female genital organs, including the clitoris, vaginal lips, and the opening to the vagina).

### **vulvar carcinoma in situ**

Abnormal cells are found on the surface of the vulvar skin. These abnormal cells may become cancer and spread into nearby tissue. Also called VIN and vulvar intraepithelial neoplasia.

### **vulvar intraepithelial neoplasia**

Abnormal cells are found on the surface of the vulvar skin. These abnormal cells may become cancer and spread into nearby tissue. Also called VIN and vulvar carcinoma in situ.

### **warfarin**

A drug that prevents blood from clotting. It belongs to the family of drugs called anticoagulants (blood thinners).

### **warm ischemia**

In surgery, keeping a tissue, organ, or body part at body temperature after its blood supply has been reduced or cut off.

### **warm ischemia time**

In surgery, the time a tissue, organ, or body part remains at body temperature after its blood supply has been reduced or cut off but before it is cooled or reconnected to a blood supply.

### **wart**

A raised growth on the surface of the skin or other organ.

### **watchful waiting**

Closely watching a patient's condition but not giving any treatment unless signs or symptoms appear or change. Watchful waiting may be used when the risks of treatment or repeated tests, such as biopsies, are greater than the possible benefits. During watchful waiting, certain exams and tests may be done periodically to monitor the condition. Watchful waiting is sometimes used in certain types of prostate cancer. It is a type of expectant management.

### **water deprivation test**

A test to measure how much urine is made and how concentrated it becomes when no water is given to a patient for a certain amount of time. This test is used

to see how well the kidneys work and to help diagnose diabetes insipidus (a condition in which a person is very thirsty and makes large amounts of urine). Also called fluid deprivation test.

### **water pipe**

A device used to smoke a special type of tobacco that comes in different flavors. In a water pipe, charcoal is used to heat the tobacco. The smoke from the heated tobacco is cooled by passing it through a water-filled bowl. It is then inhaled through a flexible tube with a mouthpiece. Water pipe tobacco smoke contains nicotine and many cancer-causing chemicals that are harmful to both smokers and nonsmokers. Water pipe smoking can lead to nicotine addiction and can cause many of the same health problems as cigarette smoking. Water pipe smoking is not safer than cigarette smoking. Also called hookah.

### **water-soluble vitamin**

A vitamin that can dissolve in water. Vitamins are nutrients that the body needs in small amounts to stay healthy and work the way it should. Water-soluble vitamins are carried to the body's tissues but are not stored in the body. They are found in many plant and animal foods and in dietary supplements and must be taken in daily. Vitamin C and members of the vitamin B complex are water-soluble.

### **watercress**

Parts of the flowering plant have been used in some cultures to treat certain medical problems. It may have anticancer effects. The scientific name is *Nasturtium officinale*. Also called Indian cress.

### **wedge resection**

Surgery to remove a triangle-shaped slice of tissue. It may be used to remove a tumor and a small amount of normal tissue around it.

### **weight loss surgery**

Surgery done to help people who are obese lose weight. There are different types of weight loss surgery, and each type changes the way the digestive system works. Some types make the stomach smaller, which decreases the amount of food that it can hold so the person feels full sooner and eats less. Other types make changes to the stomach and the small intestine, which decreases the nutrients and calories that are absorbed from food. Weight loss surgery can improve many obesity-related health problems, such as diabetes, high blood pressure, unhealthy cholesterol levels, sleep apnea, and knee, hip, or other body pain. Having weight loss surgery may also decrease the risk of some cancers, including endometrial cancer. Also called bariatric surgery.

### **well-differentiated**

A term used to describe cells and tissue that have mature (specialized) structures and functions. In cancer, well-differentiated cancer cells look more like normal cells under a microscope and tend to grow and spread more slowly than poorly differentiated or undifferentiated cancer cells.

### **well-differentiated lymphocytic lymphoma**

An indolent (slow-growing) type of lymphoma in which too many immature lymphocytes (white blood cells) are found mostly in the lymph nodes. This causes the lymph nodes to become larger than normal. Sometimes cancer cells are found in the blood and bone marrow, and the disease is called chronic lymphocytic leukemia. The disease is most often seen in people older than 50

years. Well-differentiated lymphocytic lymphoma is a type of non-Hodgkin Lymphoma. Also called SLL and small lymphocytic lymphoma.

### **wheezing**

A high-pitched, whistling sound that can occur during breathing when the airways in the lungs become narrowed or blocked. Wheezing is a sign that a person may be having trouble breathing. There are many causes of wheezing, but the most common causes are asthma, chronic obstructive pulmonary disease, bronchitis, and pulmonary edema. Other causes include cystic fibrosis, pneumonia or other respiratory infections, breathing a foreign object into the lungs, congestive heart failure, vocal cord problems, acid reflux disease, allergies, severe allergic reactions, certain medicines, smoking, or a tumor in the lung or airway.

### **whey protein powder**

A powdered form of proteins taken from whey, which is the liquid left over when cheese is made from cow's milk. Whey protein powder is used to increase protein in the diet and is being studied for possible health benefits.

### **white blood cell**

A type of blood cell that is made in the bone marrow and found in the blood and lymph tissue. White blood cells are part of the body's immune system. They help the body fight infection and other diseases. Types of white blood cells are granulocytes (neutrophils, eosinophils, and basophils), monocytes, and lymphocytes (T cells and B cells). Checking the number of white blood cells in the blood is usually part of a complete blood cell (CBC) test. It may be used to look for conditions such as infection, inflammation, allergies, and leukemia. Also called leukocyte and WBC.

### **whole cell vaccine**

Vaccine made from whole tumor cells that have been changed in the laboratory.

### **whole exome sequencing**

A laboratory method that is used to learn the exact order of all the building blocks that make up the pieces of a person's DNA that contain information for making proteins. These pieces, called exons, are thought to make up about 1% of a person's genome (complete set of DNA). Whole exome sequencing is used to find mutations (changes) in genes that may cause diseases, such as cancer. Also called WES and WXS.

### **whole genome sequencing**

A laboratory method that is used to learn the exact order of all of the building blocks (nucleotides) that make up a person's genome (complete set of DNA). Whole genome sequencing is used to find changes that may cause diseases, such as cancer. Also called WGS.

### **whole-brain radiation therapy**

A type of external radiation therapy used to treat patients who have cancer in the brain. It is often used to treat patients whose cancer has spread to the brain, or who have more than one tumor or tumors that cannot be removed by surgery. Radiation is given to the whole brain over a period of many weeks. Also called WBRT and whole-brain radiotherapy.

### **whole-brain radiotherapy**

A type of external radiation therapy used to treat patients who have cancer in the brain. It is often used to treat patients whose cancer has spread to the brain, or



who have more than one tumor or tumors that cannot be removed by surgery. Radiation is given to the whole brain over a period of many weeks. Also called WBRT and whole-brain radiation therapy.

### **whooping cough**

A serious bacterial infection of the lungs and breathing tubes that spreads easily. Whooping cough begins like a cold, but develops into severe coughing and gasping for air. Long spells of coughing may cause vomiting, and broken blood vessels in the eyes and on the skin. Also called pertussis.

### **wide local excision**

A surgical procedure in which a scalpel (a sharp knife) is used to cut out a tumor or other abnormal lesion and some normal tissue around it. The amount of normal tissue removed depends on how deep or how large the tumor being removed is. A wide local excision is often done to remove some types of skin cancer or breast cancer.

### **wild clover**

*Trifolium pratense*. A plant with flowers that has been used in some cultures to treat certain medical problems. It is being studied in the relief of menopausal symptoms and may have anticancer effects. Also called purple clover, red clover, and *Trifolium pratense*.

### **wild-type KRAS gene**

A term used to describe a gene called KRAS when it is found in its natural, non-mutated (unchanged) form. The KRAS gene makes a protein that is involved in cell signaling pathways that control cell growth, cell maturation, and cell death. Mutated (changed) forms of the KRAS gene have been found in some types of cancer, including non-small cell lung cancer, colorectal cancer, and pancreatic cancer. Knowing whether a patient's tumor has a wild-type or mutated KRAS gene may help plan cancer treatment.

### **wild-type gene**

A term used to describe a gene when it is found in its natural, non-mutated (unchanged) form. Mutated (changed) forms of certain genes have been found in some types of cancer. Knowing whether a patient's tumor has a wild-type or mutated gene may help plan cancer treatment.

### **will**

A legal document in which a person states what is to be done with his or her property after death, who is to carry out the terms of the will, and who is to care for any minor children.

### **windpipe**

The airway that leads from the larynx (voice box) to the bronchi (large airways that lead to the lungs). Also called trachea.

### **wire localization**

A procedure used to mark a small area of abnormal tissue so it can be removed by surgery. An imaging device is used to guide a thin wire with a hook at the end through a hollow needle to place the wire in or around the abnormal area. Once the wire is in the right place, the needle is removed and the wire is left in place so the doctor will know where the abnormal tissue is. The wire is removed when a biopsy is done. Also called needle localization and needle/wire localization.

**wireless capsule endoscope**

A device used to look at the inside of the intestines and other parts of the digestive tract. It is a capsule that is about the size of a large pill, with a lens, a light, a camera, a radio transmitter, and a battery inside. The patient swallows the capsule and it takes pictures as it travels through the digestive tract. The pictures are sent to a small recorder that is worn on the patient's waist or shoulder. The pictures are then viewed on a computer by the doctor to check for signs of disease. The wireless capsule endoscope passes out of the body during a bowel movement. Also called capsule endoscope.

**wisdom tooth**

The last tooth to come in at the back of each side of the upper and lower jaws. These teeth usually come in between 17 and 23 years of age, but not everyone has them. Also called third molar.

**withdrawal**

A term used to describe the physical and mental symptoms that a person has when they suddenly stop or cut back the use of an addictive substance, such as opiates and opioids, nicotine products, or alcohol. The withdrawal symptoms that a person has depend on many factors, such as the substance that was used, how often it was used, and the length of time it was used.

**womb**

The hollow, pear-shaped organ in a woman's pelvis. The womb is where a fetus (unborn baby) develops and grows. Also called uterus.

**wood alcohol**

A type of alcohol used to make antifreeze, pesticides, windshield wiper fluid, paint thinner, certain types of fuel, and other substances. Wood alcohol catches fire easily and is very poisonous. It is one of many harmful chemicals found in tobacco smoke. Also called methanol and methyl alcohol.

**wound**

A break in the skin or other body tissues caused by injury or surgical incision (cut).

**wound, ostomy, and continence nurse**

A registered nurse who has additional education and training in how to care for people who have a wound, an ostomy (an opening made by surgery, from an area inside the body to the outside), or problems with continence (ability to control the flow of urine or the passage of stool). Also called WOC nurse.

**x-ray**

A type of radiation used in the diagnosis and treatment of cancer and other diseases. In low doses, x-rays are used to diagnose diseases by making pictures of the inside of the body. In high doses, x-rays are used to treat cancer.

**x-ray imaging**

A procedure that uses a type of high-energy radiation called x-rays to take pictures of areas inside the body. X-rays pass through the body onto film or a computer, where the pictures are made. The tissues and organs usually appear in various shades of black and white because different tissues allow different amounts of the x-ray beams to pass through them. X-ray imaging is used to help diagnose disease and plan treatment. Also called radiography.

**x-ray therapy**

A type of radiation therapy that uses high-energy radiation from x-rays to kill cancer cells and shrink tumors.

**xenograft**

The transplant of an organ, tissue, or cells to an individual of another species.

**xeroderma pigmentosum**

A rare inherited disorder marked by an extreme sensitivity to ultraviolet light, such as from the sun, and a high risk of developing cancer. The signs and symptoms of xeroderma pigmentosum are usually seen in children by age 2 years. Affected children may develop a severe blistering sunburn after a short time in the sun, freckling of the skin, dry skin, and changes in skin color in sun-exposed areas. They may also develop eye problems and problems with the nervous system. People with xeroderma pigmentosum have a very high risk of developing skin cancer, usually by age 10 years, and other types of cancer, including cancers of the eyes, brain, and, in smokers, the lungs. Xeroderma pigmentosum is caused by mutations (changes) in certain genes involved in repairing damaged DNA. Also called XP.

**xerogram**

A picture of the body recorded on paper rather than on film. Also called xeroradiograph.

**xeroradiograph**

A picture of the body recorded on paper rather than on film. Also called xerogram.

**xeroradiography**

A type of x-ray in which a picture of the body is recorded on paper rather than on film.

**xerostomia**

Dry mouth. It occurs when the body is not able to make enough saliva.

**yangona**

An herb native to islands in the South Pacific. Substances taken from the root have been used in some cultures to relieve stress, anxiety, tension, sleeplessness, and problems of menopause. Yangona may increase the effect of alcohol and of certain drugs used to treat anxiety and depression. The U.S. Food and Drug Administration advises users that yangona may cause severe liver damage. The scientific name is *Piper methysticum*. Also called intoxicating pepper, kava kava, rauschpfeffer, and tonga.

**yeast**

A type of microorganism that is found almost everywhere, including inside the body. There are many different types of yeast. Some types are used to make foods, such as bread, cheese, and alcoholic drinks. Small amounts of a certain type of yeast normally live on the skin and in some parts of the body, such as the mouth, throat, and vagina. Yeast are a type of fungus.

**yeast infection**

A condition in which too much yeast grows in certain areas of the body and causes symptoms and disease. Small amounts of yeast normally live on the skin and in other parts of the body, such as the mouth, throat, and vagina.

Sometimes, too much yeast can grow in these areas and cause infection. Yeast infections may also occur in the blood and spread throughout the body, but this is rare. Certain conditions, such as a weakened immune system, diabetes, pregnancy, hormone changes, and stress, and use of certain medicines may increase the risk of yeast infection.

### **yellow fever**

A disease caused by infection with the yellow fever virus, which is carried by mosquitos. Symptoms include body aches, chills, fever, severe headache, weakness, and a yellow skin color. Bleeding, vomiting, and failure of the liver and other organs may occur in late stages of the disease.

### **yin and yang**

In Chinese philosophy, yin and yang are opposite forces that form a whole. Everything contains both yin and yang in a balance that is always changing, such as hot and cold, day and night, and health and disease. In traditional Chinese medicine, disease is diagnosed and treated based on the balance of yin and yang.

### **yoga**

An ancient system of practices used to balance the mind and body through exercise, meditation (focusing thoughts), and control of breathing and emotions. Yoga is being studied as a way to relieve stress and treat sleep problems in cancer patients.

### **yohimbe**

A tree native to West Africa. The bark is used as a supplement for bodybuilding and to enhance male sexual performance. It contains the chemical yohimbine, which is being studied in the treatment of sexual dysfunction. It may interact with certain drugs used to treat depression, high blood pressure, and high blood sugar. The scientific name is *Pausinystalia yohimbe*. Also called johimbe.

### **yolk sac tumor**

A rare type of cancer that begins in germ cells (cells that form sperm or eggs). Yolk sac tumors occur most often in the ovary or testicle, but they may also occur in other areas of the body, such as the chest, abdomen, or brain. They tend to grow quickly and spread to other parts of the body if not treated. Yolk sac tumors are the most common malignant germ cell tumor in children. Also called endodermal sinus tumor.

### **yttrium**

A metal of the rare earth group of elements. A radioactive form of yttrium may be attached to a monoclonal antibody or other molecule that can locate and bind to cancer cells and be used to diagnose or treat some types of cancer.

### **yttrium Y 90**

A radioactive form of the rare metal yttrium that is used in radiation therapy to treat some types of tumors. Yttrium Y 90 can be linked to a molecule, such as a monoclonal antibody, to help it locate and bind to certain substances in the body, including cancer cells. The radiation may kill the cancer cells.

### **yttrium Y 90-DOTA anti-CEA monoclonal antibody M5A**

A substance being studied in the treatment of some types of cancer. M5A is a monoclonal antibody that binds to a protein called CEA, which is found on some cancer cells. It is linked to a radioactive substance called yttrium Y 90, which

may help kill cancer cells. Yttrium Y 90-DOTA anti-CEA monoclonal antibody M5A is a type of radioimmunoconjugate.

#### **yttrium Y 90-DOTA monoclonal antibody HuAFP31**

A substance being studied in the treatment of liver cancer. HuAFP31 is a monoclonal antibody that binds to a protein called alpha fetoprotein (AFP), which is found on some cancer cells. It is linked to a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-DOTA monoclonal antibody HuAFP31 is a type of radioimmunoconjugate.

#### **yttrium Y 90-DOTA monoclonal antibody HuPAM4**

A substance being studied in the treatment of advanced pancreatic cancer. Yttrium Y 90-DOTA monoclonal antibody HuPAM4 contains a monoclonal antibody that binds to a protein called MUC-1, which is found on some pancreatic cancer cells. It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-DOTA monoclonal antibody HuPAM4 is a type of radioimmunoconjugate. Also called yttrium Y 90-clivatuzumab tetraxetan.

#### **yttrium Y 90-DOTA-biotin**

A compound that contains the radioisotope yttrium Y 90 linked to the chemical biotin. Biotin is a molecule that binds strongly to the chemical streptavidin. Yttrium Y 90-DOTA-biotin will find tumor cells in the body that have been targeted by an antibody linked to streptavidin and kill them. It is being studied together with CC49-streptavidin in the treatment of cancer. Also called 90Y-DOTA-biotin.

#### **yttrium Y 90-DOTA-tyr3-octreotide**

A substance being studied in the treatment of some types of cancer. Yttrium Y 90-DOTA-tyr3-octreotide contains a molecule that binds to a protein found on certain types of neuroendocrine tumors (tumors that form from cells that release hormones). It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-DOTA-tyr3-octreotide is a type of radioconjugate. Also called yttrium Y 90-edotreotide and yttrium Y 90-SMT 487.

#### **yttrium Y 90-SMT 487**

A substance being studied in the treatment of some types of cancer. Yttrium Y 90-SMT 487 contains a molecule that binds to a protein found on certain types of neuroendocrine tumors (tumors that form from cells that release hormones). It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-SMT 487 is a type of radioconjugate. Also called yttrium Y 90-DOTA-tyr3-octreotide and yttrium Y 90-edotreotide.

#### **yttrium Y 90-clivatuzumab tetraxetan**

A substance being studied in the treatment of advanced pancreatic cancer. Yttrium Y 90-clivatuzumab tetraxetan contains a monoclonal antibody that binds to a protein called MUC-1, which is found on some pancreatic cancer cells. It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-clivatuzumab tetraxetan is a type of radioimmunoconjugate. Also called yttrium Y 90-DOTA monoclonal antibody HuPAM4.

#### **yttrium Y 90-edotreotide**

A substance being studied in the treatment of some types of cancer. Yttrium Y 90-edotreotide contains a molecule that binds to a protein found on certain types

of neuroendocrine tumors (tumors that form from cells that release hormones). It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-edotreotide is a type of radioconjugate. Also called yttrium Y 90-DOTA-tyr3-octreotide and yttrium Y 90-SMT 487.

#### **yttrium Y 90-epratuzumab tetraxetan**

A substance being studied in the treatment of certain types of B-cell cancer. Epratuzumab is a monoclonal antibody that binds to a protein called CD22, which is found on the surface of B cells. It is linked to a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-epratuzumab tetraxetan is a type of radioimmunoconjugate.

#### **yttrium Y 90-ibritumomab tiuxetan**

A drug used with the drug rituximab to treat certain types of B-cell non-Hodgkin lymphoma. It is also being studied in the treatment of other types of B-cell tumors. Yttrium Y 90-ibritumomab tiuxetan contains a monoclonal antibody that binds to a protein called CD20, which is found on B cells. It also contains a radioactive substance called yttrium Y 90, which may help kill cancer cells. Yttrium Y 90-ibritumomab tiuxetan is a type of radioimmunoconjugate. Also called 90Y-ibritumomab tiuxetan, 90Y-Zevalin, and IDEC-Y2B8.

#### **zafirlukast**

A drug used to prevent and treat symptoms of asthma. It blocks substances that cause inflammation in the lungs. It is a type of antiasthmatic agent and a leukotriene receptor antagonist. Also called Accolate.

#### **zanamivir**

A drug used to prevent and to treat influenza virus infections. It blocks the release of the virus from infected cells. It is a type of antiviral agent. Also called Relenza.

#### **zanubrutinib**

A drug used alone or with another drug to treat adults with chronic lymphocytic leukemia, small lymphocytic lymphoma, or certain types of non-Hodgkin lymphoma, including follicular lymphoma, mantle cell lymphoma, marginal zone lymphoma, and Waldenström's macroglobulinemia. It is also being studied in the treatment of other types of cancer. Zanubrutinib blocks a protein called BTK, which may help keep cancer cells from growing. It is a type of tyrosine kinase inhibitor. Also called Brukinsa.

#### **zibotentan**

A substance being studied in the treatment of some types of cancer. Zibotentan may block cancer cell growth. It is a type of endothelin-A receptor antagonist.

#### **ziconotide**

A drug used in the treatment of chronic pain. Also called Prialt and SNX 111.

#### **zidovudine**

A drug that inhibits the human immunodeficiency virus (HIV) that causes AIDS. It is a type of systemic antiviral. Also called AZT.

#### **zileuton**

A substance that is used to prevent asthma symptoms and that is being studied in the prevention of lung cancer. It belongs to the family of drugs called leukotriene blockers.



**zinc oxide**

A compound that may enhance immune function, especially when administered by inhalation.

**zinc sulfate**

A substance required for cell growth and tissue repair. It is being studied as a way to prevent or decrease mucositis caused by radiation therapy.

**ziv-aflibercept**

A drug used with other drugs to treat colorectal cancer that has spread to other parts of the body and has not gotten better with other chemotherapy. It is also being studied in the treatment of other types of cancer. Ziv-aflibercept blocks a protein called VEGF, which may prevent the growth of new blood vessels that tumors need to grow. It is a type of antiangiogenesis agent. Also called vascular endothelial growth factor trap, VEGF Trap, and Zaltrap.

**zoledronate**

A drug used alone to treat hypercalcemia (high blood levels of calcium) caused by cancer and with other anticancer drugs to treat multiple myeloma and cancers that have spread to the bone. It is also being studied in the treatment of other types of cancer. Zoledronate may help keep bone from breaking down and prevent the loss of calcium from the bones. It is a type of bisphosphonate. Also called zoledronic acid and Zometa.

**zoledronic acid**

A drug used alone to treat hypercalcemia (high blood levels of calcium) caused by cancer and with other anticancer drugs to treat multiple myeloma and cancers that have spread to the bone. It is also being studied in the treatment of other types of cancer. Zoledronic acid may help keep bone from breaking down and prevent the loss of calcium from the bones. It is a type of bisphosphonate. Also called zoledronate and Zometa.

**zolpidem**

A drug used to treat insomnia (inability to sleep), and anxiety. It is a type of imidazopyridine (sedative hypnotic). Also called Ambien.

**zosuquidar trihydrochloride**

A substance being studied in the treatment of cancer. Zosuquidar trihydrochloride may help kill cancer cells that are resistant to anticancer drugs. Also called LY335979.

**zygomatic bone**

One of a pair of bones on each upper side of the face that forms the cheek and part of the eye socket. The zygomatic bones help give shape and structure to the face and are connected to the jaw and bones near the ears, forehead, and skull. They protect the nerves and blood vessels that run through the face and provide an attachment for muscles that help the jaw move. Also called cheekbone.

**μL**

A measure of volume for a liquid, using the metric system. One μL is equal to a millionth of a liter. Also called microliter.

**μM**

The amount of a substance equal to a millionth of a mole (a measure of the amount of a substance). Also called micromole.