

Basic Cancer Definitions

Facing Cancer Together | Family Education & Support



A

acute: a rapidly developing condition. An acute medical condition comes on quickly and often causes severe symptoms, but lasts only a short time.

allogeneic transplantation: a procedure where cells, tissue, or organs are transplanted to a person from a compatible donor.

alopecia: a skin disease in which there is hair loss on the scalp and sometimes elsewhere on the body.

alternative therapy: any healing practices that are not part of mainstream medicine — that means any practice that is not widely taught in medical schools or frequently used by doctors or in hospitals. Alternative medicine is often used *instead of* conventional medical techniques.

anemia: a condition in which the body has a low number of red blood cells.

anesthesia: the use of medicine to prevent the feeling of pain or sensation during surgery or other procedures that might be painful.

anesthesiologist: a physician who specializes in giving and managing anesthetics, medications that numb an area of the body or help a person fall and stay asleep for surgical procedures or diagnostic tests. Anesthesiologists also help with the treatment and management of chronic pain.

angiogram: a type of X-ray, using a special dye, that helps show blood vessels and blood flow. It's also used to identify certain kinds of tumors.

apheresis: a procedure that involves removing blood, separating it into plasma, platelets, and leukocytes, and removing the blood part that is causing a particular disease or condition. The remaining blood parts are then re-transfused into the person.

astrocyte: a cell located in the brain.

astrocytoma: a tumor of the brain that originates from astrocytes.

B

benign: a term used to describe tumors that are slow-growing, noncancerous, and do not spread to surrounding tissue.

bilateral: found on both sides of the body; when referring to cancer, it means cancer found in paired organs (for example, in both kidneys).

biologic response modifiers: substances that help the immune system fight cancer, lessen side effects from cancer treatments, and fight infections and other diseases.

biologic therapy: see *immunotherapy*.

biopsy: the removal of a sample of tissue from the body for further examination. A biopsy gives doctors a closer look at what's going on inside to help make a diagnosis and choose the right treatment.

blast cell: an immature blood cell that grows into a red blood cell, white blood cell, or platelet.

blastoma: a type of cancer (specifically, a tumor) caused by blast cells.

blood: the naturally produced fluid in the body that is made up of red blood cells, which carry oxygen throughout the body; white blood cells, which fight infections; platelets, which help stop bleeding; and plasma, a yellowish liquid that carries nutrients, hormones, and proteins throughout the body.

blood banking: blood banks collect and store blood that healthy people donate. The bank keeps blood ready in case someone needs it because of an accident or surgery.

blood plasma: a yellowish liquid that carries nutrients, hormones, and proteins throughout the body.

bone marrow: a thick, spongy liquid inside the bones. Bone marrow makes all kinds of blood cells: red blood cells that carry oxygen, white blood cells that fight infections, and platelets that help blood clot.

bone marrow transplant (BMT): a procedure that involves replacing unhealthy bone marrow with healthy bone marrow cells from a donor.

breast cancer: a kind of tumor that develops in breast cells.

C

cancer: cancer is actually a group of many related diseases that all have to do with cells. Cancer happens when abnormal cells grow and spread very fast.

cancer care team: a group of different medical specialists and health care professionals who help a patient through the challenges of dealing with cancer.

cancer cells: cells that grow and divide uncontrollably, which may spread quickly throughout the body, making someone sick.

carcinogen: substances that can cause cancer, such as tobacco smoke.

CAT scan (also called *computed tomography scan* or *CT scan*): a type of X-ray in which a machine rotates around the patient and creates a picture of the inside of the body from different angles. Regular X-rays show bones and other areas of the body, but CAT scans show much more detail.

cells: the basic components or "building blocks" of the human body.

cerebrospinal fluid: a clear, colorless liquid that delivers nutrients to and "cushions" the brain and spinal cord (the central nervous system).

chemotherapy: the use of special medicines to treat cancer. Several chemotherapy drugs are often combined to attack the cancer cells in different ways.

chromosomes: structures found inside cells that carry an individual's genetic information.

chronic: an illness that someone has for a long time or one that goes away and keeps coming back. Diabetes and juvenile rheumatoid arthritis, for example, are chronic illnesses.

chronic myelogenous leukemia (CML): a relatively rare type of leukemia, or cancer of the blood and blood-forming tissue, in which too many white blood cells are created in the bone marrow.

clinical trial: a study that evaluates new drugs or procedures. After these new drugs or procedures are tested in laboratories, clinical trials are conducted with human patients under strictly controlled circumstances. Such trials usually last 2-4 years and go through several phases of research.

complementary therapy: the use of alternative treatments together with conventional therapies. Complementary medicine is used *in addition to* conventional medicine, not as a replacement.

complete blood count (CBC): a common blood test that evaluates the three major types of cells in the blood: red blood cells, white blood cells, and platelets.

computed tomography scan (also called *CT scan* or *CAT scan*): see CAT scan.

cord blood: blood taken from the umbilical cord after a baby is born. Cord blood can be collected and stored to supply the same kinds of blood-forming (hematopoietic) stem cells as a bone marrow donor.

core biopsy: a procedure in which a doctor uses a hollow needle to remove a small amount of tissue from a lymph node or other body tissue.

CT scan (also called *computed tomography scan* or *CAT scan*): see CAT scan.

curative treatment: treatment with the goal of completely destroying the cancer rather than just slowing its growth or reducing its size.

D

drug resistance: this refers to when cancer cells don't respond to medicine or treatment.

dysplasia: abnormal changes in the structure or organization of a group of cells.

dyspnea: difficulty breathing in which a person feels short of breath.

E

edema: swelling in areas such as the feet and legs and the area around the eyes that is caused by excess fluid buildup in the tissues.

eosinophil: a type of white blood cell classified as a granulocyte. Eosinophils tend to increase to fight allergic reactions.

excisional biopsy: a procedure in which the doctor opens the skin to remove an entire lump, tumor, or suspicious area for purposes of diagnosis.

G

gene: sections or segments of DNA that are carried on the chromosomes and determine specific human characteristics, such as height or hair color. Because each parent provides one chromosome in each pair, people have two of every gene (except for some genes on the X and Y chromosomes in boys because boys have only one of each).

gene therapy: a new and rapidly growing field of medicine that uses altered and engineered genes to correct specific disorders or genetic defects.

genetics: the study of the way physical traits and characteristics get passed down from one generation to the next. This is also called **heredity**. Genetics includes the study of genes, which have a special code called DNA that determines what you will look like and whether you are likely to have certain illnesses.

genetic counseling: involves studying family history, medical records, and genetics to evaluate and determine potential risk factors and disorders that might be inherited by a child. Genetic counseling can also provide clues as to how a disorder or disease can be prevented.

genetic testing: tests that determine whether someone carries genes for certain inherited disorders. Genetic tests are done by analyzing small samples of blood or body tissues.

grade: a grade for cancer that indicates how aggressive it is. The lower the grade, the less aggressive the cancer and the greater the chance for a cure. The higher the grade, the more aggressive the cancer and the harder it may be to cure.

granulocyte: a type of white blood cell that contains grain-like particles full of enzymes that allow it to fight bacteria and infections. Types of granulocytes are basophils, eosinophils, and neutrophils.

growth factor: a substance that effects how cells grow and divide. Growth factors are proteins produced naturally in the body, but some can be produced in a lab and used as part of immunotherapy.

H

hematologist: a doctor who specializes in blood disorders.

hematology: the study of blood and blood-forming tissues.

hematopoietic cell: a blood-forming cell (stem cell).

hemoglobin: a substance in red blood cells that carries oxygen through the blood to different parts of the body.

Hodgkin disease: a type of cancer called a lymphoma, which is a cancer of the lymphatic system.

hospice: a special type of care for people who are in the last phase of an illness. This type of care can be either inpatient or outpatient.

I

imaging studies: safe and painless tests that uses a magnetic field and radio waves to produce detailed pictures of the body's organs and structures. Imaging studies for cancer include X-rays, CAT scans, magnetic resonance imaging (MRI), and ultrasound.

immune system: This body system, which includes white blood cells and lymph nodes, helps protect the body from disease. The immune system has different parts, all of which work together to fight off outside invaders like germs.

immunosuppression: a condition that causes the body's immune system to decrease in effectiveness. Immunosuppression can be caused by disease or certain drugs (like chemotherapy).

immunotherapy a treatment that stimulates the body's own immune system to fight cancer cells.

implant: in this case, radioactive material that is placed in or near cancer cells or a tumor to directly deliver radiation therapy.

incisional biopsy: a procedure in which the doctor opens the skin to remove a sample of suspicious tissue for purposes of diagnosis.

internal radiation: radiation therapy that usually requires a stay in the hospital for several days for careful monitoring. The radioactive material may be placed in small tubes that are implanted into the cancerous tumor or a body cavity, or swallowed or injected into the bloodstream.

L

leukemia: cancer of the white blood cells, which are also referred to as leukocytes or WBCs.

leukocyte: another word for white blood cell. There are many types of white blood cells, including neutrophils, eosinophils, basophils, monocytes, and lymphocytes.

limb-salvage surgery: a procedure where a bone that has cancer is removed and the limb (usually an arm or leg) is saved from amputation by filling the gap with a bone graft or special metal rod.

locally invasive: a tumor that can spread to the tissues surrounding it.

lumbar puncture: a procedure in which a small amount of fluid surrounding the brain and spinal cord (the cerebrospinal fluid) is removed and examined. See also *spinal tap*.

lumpectomy: a breast cancer procedure that involves removing a part of the breast containing a tumor known or suspected to be cancerous.

lymph: a clear, watery fluid containing protein molecules, salts, glucose, urea, and other substances that flows through its own vessels branching throughout the body. Lymph contains white blood cells, which are the germ fighters of the immune system.

lymph nodes: lymph nodes — little round or bean-shaped bumps that can't be felt unless they become swollen — are like filters that remove germs. They contain lymphocytes, white blood cells that fight infection.

lymph vessels: vein-like structures that help carry lymph (a clear, watery fluid containing protein molecules, salts, glucose, urea, and other substances) throughout the body.

lymphangiogram (LAG): a medical test that uses injection of a dye and X-rays to examine the lymphatic system.

lymphatic system: the network of tissues and organs that carry lymph (a clear, watery fluid containing protein molecules, salts, glucose, urea, and other substances) throughout the body.

lymphocyte: a type of white blood cell found in lymph nodes. Lymphocytes make antibodies, special proteins that fight off germs and stop infections from spreading by trapping disease-causing germs and destroying them.

lymphocytic leukemia: a type of leukemia, or cancer of the blood and blood-forming tissue, that involves lymphocytes, white blood cells found in lymph nodes.

lymphoma: cancer that starts in the lymphatic system, which includes the lymph nodes, thymus, spleen, adenoids, tonsils, and bone marrow.

M

magnetic resonance imaging (MRI): a safe and painless test that uses a magnetic field and radio waves to produce detailed pictures of the body's organs and structures.

malignant: another word for cancerous.

mammogram: a special kind of X-ray of the breast that helps doctors see what's going on inside.

mastectomy: a breast cancer procedure that involves removing the whole breast. This surgery is done when cancer cells have spread through the breast or into other parts of the body

medical history: information about a person's past health, their family's health, and other issues.

melanocytes: skin cells that produce melanin, the pigment that gives skin its color.

melanoma: a type of cancer that begins in the melanocytes, which are skin cells that produce melanin, the pigment that gives skin its color.

metastasis: the spread of disease (in this case, cancer) from the original site to other parts of the body.

mutation: any change in a gene.

myelogram: a medical test that uses X-rays to examine the spine.

N

nephrologist: a doctor who diagnoses and treats kidney problems.

neurosurgeon: a surgeon who specializes in the brain and nervous system.

neutropenia: when the body has very low levels of certain white blood cells called neutrophils.

neutrophil: a type of white blood cell, the body's main defense against illness and infection.

non-Hodgkin lymphoma: a disease in which cancer cells form in the lymphatic system and start to grow uncontrollably.

O

oncogenes: genes that cause cells to grow and duplicate. Under certain circumstances, oncogenes can mutate and cause cells to grow abnormally, leading to cancer.

oncologist: a doctor who treats patients who have cancer; pediatric oncologists treat kids with cancer.

oncology: the diagnosis and treatment of cancer.

ophthalmologist: an ophthalmologist, or eye doctor, treats all kinds of eye problems and does surgery on the eye if needed.

P

pain management: treatment designed to ease chronic pain to enable a patient to have a better quality of life. Pain management can include medications, exercises, and relaxation techniques.

palliative care: a special type of care that concentrates on easing the pain and discomfort of a disease rather than providing a cure.

palliative care team: a group of experts, including doctors, nurses, social workers, nutritionists, therapists, pharmacists, and chaplains, who provide guidance and support to address a patient's physical, emotional, and spiritual needs.

pathologist: a physician who specializes in diagnosing and classifying diseases. Pathologists study cell and tissue samples to identify diseases and conditions.

physical therapist: a specialist who uses exercises, stretches, and other techniques to help patients improve mobility, decrease pain, and reduce any disability related to illness or injury.

plasma: a yellowish liquid that carries nutrients, hormones, and proteins throughout the body.

platelets: tiny cells in the blood that help blood clot.

port (or treatment port): a medical device inserted under the skin and attached to a vein that allows medications, blood products, and nutrients to be given intravenously. A port eliminates the need for repeated needle sticks to start an IV line or draw blood.

primary site: in this case, the organ or area in the body where cancer begins. Type of cancer is always identified by its primary site, even it metastasizes, or spreads. For instance, if cancer begins in the liver but spreads to other organs, it is still classified as liver cancer.

prognosis: an estimate of how well a person's treatment is working and how likely or unlikely it is that the cancer will come back.

prosthesis: an artificial limb.

protein: molecules that help the body function properly. The body uses protein from food to make specialized protein molecules that, for instance, make hemoglobin, the part of red blood cells that carries oxygen throughout the body. Other proteins maintain muscles, bones, blood, and body organs.

protocol: a method or plan; in this case, the medications and treatments a patient will receive to help fight cancer.

Q

quality of life: in this case, a person's mental and emotional wellbeing and ability to carry out everyday activities despite health problems or ongoing medical treatment.

R

radiation oncologist: a doctor who specializes in using radiation to kill cancer cells.

radiation therapist: a professional who is specially trained to operate equipment that delivers radiation therapy.

radiation therapy: also called radiotherapy, irradiation, or X-ray therapy, radiation is one of the most common forms of cancer treatment. In radiation therapy, high-energy radiation from X-rays, gamma rays, or other sources is used to kill cancer cells and shrink tumors. Radiation therapy prevents cells from growing or reproducing by destroying them.

radiologist: a doctor who specializes in reading and interpreting X-rays and scans.

red blood cells (also called erythrocytes or RBCs): cells that deliver oxygen to all parts of the body.

regimen: a treatment plan or system. For cancer treatment, a regimen can include things like diet and exercise.

relapse: the reappearance of cancer after it has been treated.

remission: when cancer symptoms disappear or are significantly reduced.

risk factor: in this case, anything that increases someone's chance of getting cancer (for example, smoking).

S

sarcoma: a tumor that grows in the body's connective tissue, like muscle, cartilage, or bone.

secondary tumor: tumors made up of cells that have spread (metastasized) from the primary site to somewhere else in the body.

side effects: unwanted reactions or effects to medication or therapy. In cancer treatment, common side effects include hair loss and fatigue.

spinal tap/lumbar puncture: a procedure in which a small amount of fluid surrounding the brain and spinal cord (the cerebrospinal fluid) is removed and examined.

staging: a way to categorize or classify patients according to how extensive the disease is at the time of diagnosis.

stem cells: primitive (early) cells found primarily in the bone marrow that are capable of developing into the three types of mature blood cells present in blood: red blood cells, white blood cells, and platelets.

stem cell transplant: a procedure that involves introducing stem cells (cells found primarily in the bone marrow from which all types of blood cells develop) into the body in the hopes that the new cells will rebuild the immune system.

T

testicular cancer: cancer that originates in the testicles. The most common cancer in males ages 15-35, testicular cancer is almost always curable if it is caught and treated early.

tumor: abnormal body cells grouped together in a mass or lump. Tumors are classified as benign (not cancerous) and malignant (cancerous).

U

ultrasound (also called sonography): ultrasound, or ultrasonography, is another way doctors can take a look inside the body. Instead of X-rays, sound waves are bounced off the kidneys, the heart, or other areas of the body.

unilateral: found on one side of the body; for example, cancer affecting only one kidney.

urologist: a physician who specializes in diseases, disorders, and conditions of the urinary tract.

W

white blood cells (also called leukocytes or WBCs): these cells, part of the germ-fighting immune system, attack invaders such as viruses and bacteria. Each type of WBC — including neutrophils, eosinophils, basophils, monocytes, and lymphocytes — has its own role in fighting different kinds of germs.

X

X-ray: X-rays are safe procedures that use radiation to take pictures of internal areas of the body. They're done by an X-ray technician in the radiology department of a hospital, a freestanding radiology center, or a health care provider's office.

Definitions referenced by KidsHealth.org