

Glossary of Cancer Medical Terms

Abscess—An abscess is an area in the body's tissue that is filled with infection and surrounded by inflammation.

Absolute neutrophil count (ANC)—ANC refers to the percentage of the total white blood cell count that is made up of cells called neutrophils. Neutrophils are particularly important because they defend our bodies against infection.

Acute lymphocytic leukemia (ALL)—ALL is a disease in which large numbers of malfunctioning lymphocytic (infection-fighting) blood cells are made by the body. It is most often diagnosed in children. Signs of the disease include fever, pale skin, loss of appetite, fatigue, bone pain, and recurrent infection.

Acute myelogenous leukemia (AML)—AML is a disease in which the bone marrow produces white blood cells that cannot carry out normal function. Signs of the disease include bleeding gums, anemia, fatigue, fever, bone pain, and repeated infections.

Adenocarcinoma—Adenocarcinoma is a cancer that develops in the glandular tissue of the body.

Adjuvant chemotherapy—Adjuvant chemotherapy is chemotherapy given after surgery, when there is no visible cancer but there is a risk that there are still cancer cells left in the body.

Allogeneic bone marrow transplant—An infusion of bone marrow or stem cells from a donor.

Alopecia—Alopecia is hair loss. Chemotherapy and sometimes radiation may make patients lose some or all of their hair during treatments. The most common area involved is the head, although other body hair can also be affected.

Analgesic—A medication that relieves pain.

Anastomosis—A surgical joining of two body structures (e.g. blood vessels or intestines), which

allows flow from one to another.

Anemia—Anemia is a lower-than-normal number of red cells in the blood. Red blood cells are important because they carry oxygen from the lungs to all other cells in the body. Shortness of breath, fatigue, and weakness are signs of anemia.

Antibiotic—An antibiotic is a medication used to fight germs or bacteria that cause infection. Chemotherapy can make patients more at risk for infection. Antibiotics are given to treat an infection.

Antiemetic—An antiemetic is a medication used to stop or help prevent nausea and vomiting, common side effects of some chemotherapy.

Autologous bone marrow transplant—During an autologous bone marrow transplant, patients' own bone marrow or stem cells are given to them after they have received high-dose chemotherapy.

Axilla—The axilla is the area under the arm or the armpit.

Bilirubin—A substance that is formed when red blood cells break down. It becomes part of bile, which is produced by the liver. A buildup of bilirubin can cause jaundice. Bilirubin levels are often tested to monitor liver or bile duct function.

Biological therapy—A type of therapy that stimulates the immune system to help fight cancer. Biological therapy also may be used to lessen side effects of treatment. It may be referred to as *immunotherapy*.

Biopsy—Removal of cells from the body to see if they are cancerous. A doctor examines the cells under a microscope, comparing them to normal cells. Techniques to remove cells include:

- *Fine needle aspiration (FNA) biopsies* use a needle attached to a syringe to withdraw cells from a tumor. When a slightly larger needle is used, it is called a *needle core biopsy*.

Sometimes doctors use an ultrasound or a computed axial tomography, or CT, scan to view the tumor and assist them with needle placement.

- During an *excisional biopsy*, a surgeon removes an entire tumor. During an *incisional biopsy*, only a small amount of tumor is removed. Both of these procedures involve a surgeon cutting through the skin. Sometimes the surgery requires general anesthesia, and sometimes it can be done by simply numbing the area to be cut (local anesthesia).

Bone marrow aspiration—Removal of cells from the bone marrow. The doctor usually takes the sample from the hip bone after numbing the area. In a *bone marrow aspiration*, the doctor uses a small needle attached to a syringe to remove a few cells. In a *bone marrow biopsy*, the doctor uses a larger needle to remove a small amount of bone and marrow. Patients usually feel some pressure during either procedure and sometimes feel uncomfortable. It is helpful to try to remain as relaxed as possible during the procedure.

Bone scan—Bone scans use nuclear medicine imaging to spot cancer in the bone. A radioactive substance is injected into a vein and is attracted to areas of cancer, and then the radioactivity is recorded by a special camera as a picture. There is a phenomenon called "normal physiological uptake," which may vary from individual to individual. Also, previous trauma or fractures can elicit a positive signal as well.

Brachytherapy—Brachytherapy is radiation treatment inside the body, placed as close to the cancer as possible.

Bronchoscopy—A bronchoscopy uses a bendable fiber-optic camera to view the throat and lungs. In most cases, the patient is sedated and a local anesthetic is sprayed or swabbed over the mouth, tongue, and throat. Biopsies and secretions are collected during the procedure. Your throat may be sore after the procedure.

Carcinogen—A carcinogen is anything that causes cancer. Carcinogens can be physical, chemical, or viral, but many are not known.

Carcinoma in situ—A cancer that has not spread to other parts of the body or invaded nearby tissue. Carcinoma in situ, an early form of cancer, is highly curable.

Chemotherapy—The use of drugs to destroy cancer cells. A person on chemotherapy may take one drug or a combination of drugs. Most often these drugs are given by vein using intravenous (IV) infusion. Some can be taken by mouth or given in a shot.

Chronic lymphocytic leukemia (CLL)—CLL is a disease that makes immature lymphocytic cells. Unlike in acute lymphocytic leukemia (ALL), these cells can carry out some of their normal functions. As a result, chronic leukemia gets worse gradually.

Clinical trials—Tests of new and promising ways to treat cancer. The goal of all clinical trials is to find better treatments to fight cancer. Clinical trials can test new surgical procedures, radiation therapies, and drugs.

Phase 1 clinical trial—The stage of drug development when the investigational product is first researched in humans and when drug safety is determined. Usually a small number of healthy volunteers, but occasionally patients, participate in these studies.

Phase 2 clinical trial—The stage in which drug effectiveness is determined preliminarily in patients with the targeted medical condition. These studies are aimed at assessing short-term safety and therapeutic dose-range (minimum and maximum doses), and determining short-term side effects and risks associated with the investigational product. Usually a moderate number of patients (100-250) participate in these studies.

Phase 3 clinical trial—The stage in which large-scale safety and effectiveness are ascertained in a larger number of patients who ultimately will receive the investigational

product. These studies are aimed at demonstrating short- and long-term safety and efficacy, and assessing overall therapeutic value as well as determining the benefit/risk relationship of the investigational product.

Phase 4 clinical trial—These studies are performed after the investigational product is approved for a medical condition by the Food and Drug Administration (FDA) to gather additional data about the product.

Protocol—A set of strict rules or guidelines to follow during a clinical trial. These rules include the clinical trial start and finish dates, blood tests and x-rays required, and interviews and questionnaires to complete. A protocol has been called a "recipe" for how to conduct a clinical trial.

Study arm—Study arms are the options for treatment in a clinical trial. For example, one arm of a study may be those patients who take the research drug, while another arm of the study may be those who take the standard-of-care drug. A study may have multiple arms.

Blind studies—In a *single-blind* study, patients are assigned to a study group (either research drug, "standard-of-care" drug, or standard-of-care drug plus placebo) but do not know which group they are in. In a *double-blind* study, neither the patient nor the doctor knows which study group the patient is in. This reduces the effects of prejudgment by patients and doctors.

Colony-stimulating factors—Also called CSFs, colony-stimulating factors are drugs that promote the production of various blood cells. Examples of CSFs are [Neulasta[®] \(pegfilgrastim\)](#) and Aranesp[®] (darbepoetin alfa).

Combination chemotherapy—Using more than one anticancer medication together, with the goal of destroying more cancer cells.

Complete blood count (CBC)—The CBC is a test that determines the number of red blood cells, white blood cells, and platelets in the blood.

Complete remission—Complete remission, also known as a clinical complete remission, is when physician can no longer observe the tumor cells by simple examination, chest X-rays, and/or blood tests. This is opposed to a partial remission where some tumor cells are still detected by the tests.

Computed axial tomography (CT/CAT)—CT/CAT scans use x-rays to see the body in a three-dimensional way. Doctors use CT scanning to diagnose and stage cancer. Sometimes it is necessary to use a *contrast medium* for the images to show up on the computer. One type of contrast medium is injected into a vein and contains iodine. If you are allergic to iodine or shellfish (shellfish contain iodine), please let your technician know. Another type of contrast medium is used when the CT scan involves the gastrointestinal tract. Following the CT scan, you are encouraged to drink fluids to promote elimination of the dye.

Constipation—Constipation is difficulty passing stool. It can also refer to a decrease in the normal frequency of bowel movements. It may be accompanied by gas, pain, or pressure in the abdomen.

Creatinine—A compound excreted in the urine that is used to monitor kidney function. Creatinine levels are measured to determine if a patient has kidney problems or if a treatment is producing side effects related to the kidney.

Cultures—Laboratory tests that encourage the growth of microorganisms for the purpose of identifying and diagnosing an infection.

Cycle—Chemotherapy can be given in a variety of time arrangements, such as daily, weekly, or monthly. Chemotherapy is generally given in cycles. A cycle can last 1 or more days but usually

lasts 3 or 4 weeks.

Diagnosis—Identification of a condition or disease based on the signs and symptoms, laboratory tests, procedures, history, and physical examination of the patient.

Diarrhea—Bowel movements that occur more frequently and are more liquid in consistency than normal. Chemotherapy, medication, radiation, and infection may cause diarrhea. Diarrhea can also be caused by medications given to prevent nausea or by antibiotics given to treat or prevent infection.

Echocardiogram—A graphic record of the heart that provides information about its position, internal parts such as valves, and the motion of the heart walls. The procedure (*echocardiography*) involves ultrasonic waves directed over the chest.

Edema—An abnormal buildup of fluid in body tissue.

Electrocardiography (EKG)—An EKG records the electrical activity of the heart. "Leads" (wires) are placed on the chest and the extremities.

Endoscopy—Endoscopy uses either a bendable or a rigid tube with a camera and a fiber-optic light on the end to view areas inside the body. Doctors use endoscopy to perform biopsies and staging. Many different organs can be viewed by endoscopy. Each procedure has its own name:

Esophagus: esophagoscopy

Stomach: gastroscopy

Colon : colonoscopy or sigmoidoscopy

Bladder: cystoscopy

Trachea (windpipe), bronchi, and lungs: bronchoscopy

Cervix and vagina: colposcopy

Abdomen: laparoscopy

Lung: thoracoscopy or mediastinoscopy

Endoscopic ultrasound (EUS)—EUS combines ultrasound and endoscopy so that doctors can see the amount of cancer in nearby tissues.

Erythropoietin—A naturally occurring substance that stimulates the bone marrow to make more red blood cells. Red blood cells carry oxygen and carbon dioxide through the bloodstream to and from all cells in the body.

Fatigue—Fatigue means feeling tired, weak, sleepy, forgetful, or worn out, and having no energy to go about your daily routine. Fatigue is commonly caused by cancer treatments, but can also result from the disease itself. Fatigue is also often present in patients with anemia.

Food and Drug Administration (FDA)—The FDA is the federal agency responsible for ensuring that all prescription drugs and medical equipment are safe and effective. The FDA checks on all clinical trials while they are in progress.

Gene—Cells contain genes, which are pieces of DNA that contain information for making proteins. Genes contain information on hereditary characteristics such as hair color, eye color, and height, as well as whether one is at higher risk for developing certain diseases.

Grade—Grade is the measurement of a cancer, reflecting how abnormal the cells look under a microscope. There are several grading systems for cancer, but all divide cancers into those with:

Least abnormality (grade 1 or well differentiated)

Intermediate features (grade 2 or moderately differentiated)

Greatest abnormality (grade 3 or poorly differentiated)

A specialist called a *pathologist* performs the grading by examining the biopsy specimen.

Knowing the grade is important because higher-grade cancers tend to grow and spread more quickly and have a worse prognosis. A cancer's nuclear grade is based on features of the central

part of its cells, the nucleus. The histologic grade is based on features of individual cells as well as how the cells are arranged together.

Growth factors—A substance that is normally produced in the body that is involved in cell division, maturation, or survival. Growth factors may also be produced in a laboratory to mimic the growth factors naturally produced by the body. These synthetic growth factors may be used as biologic therapy to stimulate the immune system to fight cancer or lessen side effects of treatment.

Hematocrit (Hct)—A blood test that measures the number of red blood cells in the bloodstream. The lower the hematocrit, the lower the number of red blood cells in the blood. A person with a low hematocrit may have anemia.

Hematology—The study of the blood and disorders of the blood.

Hemoglobin (Hb or Hgb)—The part of the red blood cell that carries oxygen from the lungs to other organs in the body, such as the brain and the heart. A person with a low hemoglobin level may have anemia.

HER-2/neu (human epidermal growth factor receptor 2)—A protein that is involved in growth and replication of a cell. Some cancers have abnormal HER-2/neu proteins, which are believed to be involved in the unregulated multiplication of cancer cells.

Histology—The study or examination of tissues or cells under a microscope.

Hormones—Chemicals secreted by glands. Hormones circulate in the bloodstream and control certain cellular actions.

Hospice—An organization or agency that provides care for people with end-stage diseases, when no therapy can cure the cancer or put it into remission. Hospice services aim to provide comfort and support.

Immune system—The body's defense system against bacterial, viral, and fungal infections. The immune system includes white blood cells and protective barriers such as the skin and mucous membranes. The principal organs of the immune system are the bone marrow, spleen, and lymph system.

Immunotherapy—A type of therapy that stimulates the immune system to help fight cancer. Immunotherapy may also be used to lessen side effects of treatment. Immunotherapy is sometimes referred to as *biological therapy*.

Infection—An invasion of microorganisms that have the ability to multiply and produce disease.

Inflammation—The body's response to an infection, irritation, or injury.

Informed consent—A document that outlines an entire procedure or research study. It describes the procedure or study, including possible risks and benefits. Signing the informed consent means you understand and agree to the procedure or participation in the study.

Infusion—A process of delivering medications, fluids, or blood products into the body through the bloodstream. A needle is used to gain access through a vein, and a catheter with tubing is used to deliver the fluid.

Institutional review board (IRB)—An IRB is an outside panel of experts that checks and monitors any clinical trial research involving people. This committee represents the interests of the patients who participate in the clinical trial. The committee always includes people who are qualified to evaluate new and ongoing clinical trials on the basis of scientific, legal, and ethical merit. The federal regulations mandated by the Office of Human Research Protection require that an IRB includes at least five people from different backgrounds. Some committee members are doctors and scientists; others are nonmedical people like clergy and teachers. The most important functions of an IRB are to make sure that a clinical trial has scientific merit, minimizes patient

risk, and ensures that the privacy of all participants is protected.

Intravenous (IV)—Inside the veins. An intravenous medication is delivered into the body through a vein.

Jaundice—A yellowing of the skin caused by abnormal liver function.

Lesion—A wound, injury, or abnormal change in the body tissue such as a sore, rash, boil, or tumor.

Liver function tests—Tests that are performed to monitor the functioning of the liver. Levels of specific compounds that can be measured in the blood can help determine if a patient has a liver disorder and monitor side effects from treatment to the liver. Combinations of specific compounds (AST, ALT, albumin, etc.) are typically measured together to help provide a clearer indication of the disorder.

Living will—A living will is a legal document that describes a person's wishes or intentions regarding his or her medical care under certain conditions.

Lumbar puncture—Removal of a sample of the fluid that surrounds the spinal cord. Doctors numb the lower back area so patients do not feel pain. A thin needle attached to a syringe is inserted into the lower back. The fluid is removed and examined for cancer cells or for infection. Generally you will experience some pressure at the needle insertion site. It is best if you relax and lie still throughout the procedure and for a while afterward. To avoid a severe headache, you may be asked to lie flat on the exam table for a period of time following this procedure.

Lymph nodes—Lymph nodes are small, oval glands found throughout the body. They act as filters and fight infection. Cancer cells often spread to other parts of the body through the lymphatic system.

Lymphedema—A condition in which excess lymphatic fluid collects in tissues, causing swelling,

numbing, pain, or a limited range of motion in extremities. This often occurs when many lymph nodes are removed for the treatment or staging of cancer, or lymph nodes are treated with radiation therapy. Lymphedema most often occurs in the arms if lymph nodes under the arm are removed or radiated, or in the legs if lymph nodes in the groin are removed or radiated.

Malignant—Malignant means that a tissue has cancer cells present; it also refers to a cancerous disease.

Mastectomy—Surgical removal of breast tissue. There are several different types of mastectomies: modified radical mastectomy, partial mastectomy, simple mastectomy, and prophylactic mastectomy.

Melanoma—A cancer that starts in the skin cells. Melanoma is more serious than other cancers of the skin because it spreads easily to other cells in the body. Symptoms include changes in size, shape, or color of a mole; bleeding from a mole; or a mole that feels itchy, hard, lumpy, swollen, or tender to the touch. Melanoma can also appear on the body as a new mole.

Metastasis—The spread of cancer from one part of the body to another.

MRI—Magnetic resonance imaging, or MRI, creates three-dimensional sectional images similar to CT scanning. An MRI differs from a CT scan in that it does not use ionizing radiation, but instead uses a powerful magnet to transmit radio waves through the body. Images then appear on a computer screen. Doctors use MRI to diagnose and stage cancer. A contrast medium may be used in MRI imaging to enhance the picture.

Mucositis—Inflammation of the lining of the gastrointestinal tract. *Oral mucositis* refers to inflammation of the lining of the mouth. Mucositis may involve sores, swelling, pain, and redness.

MUGA scan—A multigated acquisition scan, MUGA scan, is a procedure that allows a

physician to examine the heart. Special pictures are taken of the heart following the introduction of a radioactive substance into a vein. Your doctor can then visualize the contraction and relaxation of the heart and blood supply to the heart.

Myelosuppression—Myelosuppression occurs when the bone marrow slows production of blood cells. This results in fewer red blood cells, white blood cells, or platelets available to perform their normal functions in the body. Chemotherapy can cause decreased bone marrow function. Most often, myelosuppression refers to the loss of white blood cells.

Nadir—Nadir is the lowest point to which blood counts drop after chemotherapy. When referring to the nadir, doctors are usually referring to the nadir of a patient's white blood cell count, which usually occurs about 7 to 10 days after receiving chemotherapy.

Neoplasm—An abnormal growth of tissues from a single cell. A neoplasm can be cancerous or noncancerous. Cancer is sometimes called a *malignant neoplasm*.

Neutropenia—Neutropenia occurs if there is a lower-than-normal number of neutrophils (infection-fighting white blood cells) in the blood. It is a common side effect of chemotherapy treatment. Neutrophils fight infection, so a person with a low neutrophil count will be more at risk for developing infection. Doctors check the number of neutrophils when they measure the white blood cell count; the result is often referred to as the ANC, or absolute neutrophil count.

Neutrophil—The most common type of white blood cell. Neutrophils help the body fight infection. Since the most common type of white blood cell is the neutrophil, a low white blood cell count usually indicates that the neutrophil count is low. It is easier to get an infection and harder to recover from an infection when the number of neutrophils in the bloodstream is low.

Oncogene—Oncogenes play a role in cell growth and are normally found in cells. When an oncogene is damaged, it causes cells to grow too quickly and form tumors.

Oncologist—A doctor who specializes in the treatment of cancer.

Oncology—The branch of medicine that focuses on the study and treatment of cancer.

Osteoporosis—A disease that causes bones to become weak and fragile.

Palliative care—Palliative care focuses on controlling symptoms and improving quality of life for patients who have incurable diseases.

Palmar-plantar erythrodysesthesia (PPE)—PPE is commonly called "hand and foot syndrome."

A side effect of some chemotherapy, PPE is characterized by peeling, itching, burning, and reddened skin on the palms of the hands and soles of the feet.

Partial remission—Partial remission is a significant decrease in the number of cancer cells, but not their complete disappearance, in response to the cancer therapy. This is in contrast to a clinical complete remission where the tumor cells are no longer observable by, for example simple examination, chest X-ray and/or blood tests.

Pathology—The study of the causes and characteristics of disease.

Peripheral neuropathy—A possible side effect of some chemotherapy, characterized by numbness, tingling, or burning in the hands and feet.

Peripheral stem cell transplant—During a peripheral stem cell transplant, peripheral stem cells are removed from a patient or donor and are processed and stored. The patient then receives high-dose chemotherapy to kill cancer cells. Afterward, the stem cells are given back to the patient to "rescue" the patient from the harmful effects of the chemotherapy. The stem cells find their way back to the patient's bone marrow and begin making healthy blood cells. This procedure makes it possible to treat cancer with higher doses of chemotherapy because it replaces the cells damaged during chemotherapy.

Placebo—A pill or infusion that has no active ingredients but looks just like a regular pill or

infusion.

Platelets—One of the three types of cells made in the bone marrow. The main function of platelets is to aid in clotting the blood following an injury.

Positron emission tomography (PET)—PET scans use whole-body imaging to allow doctors to view cellular activity of tissues inside the body. A sugar labeled with a radioactive isotope is injected into the patient's vein. The scanner takes measurements of the cells as they use the sugar. The measurements produce a picture.

Prognosis—A prediction of the likely outcome of a disease based on the current health of the patient and the usual course of the disease.

Prosthesis—An artificial replacement for something that is missing on the body, such as a breast or limb.

Radiation—The use of radioactive substances for the diagnosis or treatment of diseases.

Radiographs—Also known as x-ray studies, radiographs are used to examine bones and soft tissues of the body. A radiograph image shows all structures superimposed on one another. A doctor may request x-rays of many parts of the body.

Radiologist—A doctor who specializes in the practice of radiology.

Radiology—A branch of medicine that focuses on the use and study of radioactive substances to treat and diagnose disease.

Randomization—Randomized clinical trials assign patients, in no particular order, to different groups in a study (for example, one group receives the research drug and the other group receives the usual treatment). Randomization reduces the risk of favoritism in the patient selection process. To make it fair, a computer performs the randomization process; your doctor is not involved.

Randomized trial—A research study design in which patients are randomly assigned (in no particular order) to receive different treatment regimens.

Recurrence—The return of a primary cancer that previously showed no signs of activity.

Red blood cell—Red blood cells are made in the bone marrow and released into the blood. They circulate in the blood and carry oxygen and carbon dioxide to and from every cell in the body.

Refractory—When a disease is said to be refractory, it means that it is unaffected by treatment.

Regimen—A plan of treatment, including doses, scheduling, and duration of treatment.

Regression—The shrinkage of a cancer or a decrease in the signs and symptoms of the cancer in response to treatment.

Relapse—The recurrence of disease after an apparent recovery.

Remission—The disappearance of a cancer, as determined by clinical evaluation, resolution of symptoms, or both. Complete remission is the disappearance of all signs of cancer after treatment. Partial remission is a notable decrease in cancer cells, but not their complete disappearance, in response to therapy.

Research nurse—A nurse that specializes in clinical trial studies. He or she is generally responsible for talking to patients about the study, helping monitor patients in the study, and collecting and reporting study data.

Risk factor—Anything that increases the chance of getting a certain disease, such as cancer. Some risk factors can be controlled, such as smoking. Other risk factors, such as age and race, cannot be controlled.

Shingles—When a dormant (inactive) chicken pox virus is reactivated, the resulting illness is called shingles. This virus can lay dormant in the body for many years and can be reactivated at a later time for unknown reasons. Symptoms include blisters, rash, and pain.

Side effect—A change in a person's condition caused by taking a drug. For example, common side effects of chemotherapy include fatigue, nausea, vomiting, and loss of appetite.

Single agent—*Single-agent therapy* refers to the use of one chemotherapeutic medication for the treatment of cancer.

Spiral CT—Modified conventional computed tomography (CT) technique utilizing continuous scanning. For a spiral CT, the x-ray tube continuously revolves around the patient. This produces a three-dimensional reconstruction and helps doctors detect nodules that are too small to be seen on a conventional x-ray.

Squamous cell carcinoma—Cancer that arises from the epithelium of the body's tissue and is frequently found in the lungs and skin.

Stage—Staging is a method of determining the extent of the cancer, or how far the disease has spread. The stage is determined after performing a series of diagnostic tests, which may include x-rays, scans, and sometimes surgery. Knowing the stage of the cancer will help your doctor decide the best treatment course.

Stem cell—A special type of cell that is immature (not fully formed). A stem cell can become any of the three types of blood cells—a red blood cell, white blood cell, or platelet depending upon what the body needs. Most stem cells are found in the bone marrow, but a small number are found circulating throughout the body in the bloodstream. These are called *peripheral stem cells*.

Stem cell transplantation—The use of stem cells to restore blood cell levels following treatment. Stem cells can be collected from the bone marrow or peripheral blood of a patient prior to treatment, frozen, and then reinfused following treatment, which is referred to as an *autologous stem cell transplant*. Stem cells may also be collected from a donor and infused into the patient following treatment, which is referred to as an *allogeneic stem cell transplant*. Donor stem cells

also may be used to help fight cancer, since they can mount an immune response against the patient's cancer cells.

Subcutaneous injection—An injection that is made just beneath the skin with a very small needle.

Symptom—A sign or indicator of a disease or illness.

Thoracentesis—A thoracentesis, or *pleural tap*, involves putting a needle into the space between the lining of the lung and the lung itself to remove fluid or air. The procedure is relatively painless, but you must remain still. A chest x-ray may be done following the procedure.

Thrombocytopenia—A condition resulting from an abnormally low number of platelets (thrombocytes) circulating in the blood. Bleeding and/or bruising may occur if the platelet count is especially low (less than 20,000/mm³).

Toxicity—Toxicity refers to side effects that are related to the dose of a drug.

Transfusion—An intravenous (IV) infusion of blood or blood components.

Tumor—A collection of cells that appears as a lump, mass, or swelling.

Tumor markers—Chemicals in the blood that are associated with particular kinds of cancer.

These chemicals can be measured to help doctors diagnose cancer and evaluate the effectiveness of a cancer treatment. A rise in the level of a marker could mean the cancer is growing; a drop in the level could indicate the treatment regimen is effective.

Ultrasound—A test used for diagnosis and assessment. Ultrasound uses high-frequency sound waves to create a picture of the structures inside the body.

Vascular access device (VAD)—VADs are catheters, or "ports", that are surgically placed in a large vein near the heart and stay in place for long periods of time. When a VAD is used, smaller, more easily irritated veins in the arms do not have to be accessed for chemotherapy.

White blood cell—A white blood cell is one of the three main types of blood cells. White blood cells are responsible for fighting infection. There are several kinds of white blood cells, including monocytes, lymphocytes, neutrophils, eosinophils, and basophils.

X-ray—A test used for diagnosis and assessment. During an x-ray, a small amount of radiation passes through the body and leaves an image of the shape of the internal organs on film.