

Glossary

Alphabetical Listing of Cancer-related terms and definitions

- A -

abdomen: (ab-do-men): the part of the body between the chest and the pelvis; it contains the stomach (with the lower part of the esophagus), small and large intestines, liver, gallbladder, spleen, pancreas, and bladder.

ablative therapy:(ab-lay-tive): treatment that removes or destroys the function of an organ, for example, removing the ovaries or testicles or having some types of treatment or chemotherapy that cause them to stop working.

adenocarcinoma: (add-en-o car-sin-o-muh): cancer that starts in the glandular tissue, such as in the ducts or lobules of the breast.

adenomatous polyps or adenoma: (add-uh-no-ma-tous): a benign growth starting in the glandular tissue.

adjuvant therapy: (add-joo-vunt): treatment used in addition to the main treatment. It usually refers to hormonal therapy, chemotherapy, radiation therapy, or immunotherapy added after surgery to increase the chances of curing the disease or keeping it in check.

adrenal gland: (a-dree-nul): One adrenal gland is found near each kidney. The main function of the adrenal glands is to produce hormones that control metabolism, fluid balance, and blood pressure. In addition, they produce small amounts of "male" hormones (androgens) and "female" hormones (estrogens and progesterone).

advanced cancer: a general term describing stages of cancer in which the disease has spread from the primary site to other parts of the body. When the cancer has spread only to the surrounding areas, it is called locally advanced. If it has spread further by traveling through the bloodstream, it is called metastatic.

AJCC Staging System: American Joint Committee on Cancer staging system (also called the TNM system), which describes the extent of a cancer's spread in Roman numerals from 0 through IV. See also staging.

allogeneic bone marrow transplant: uses marrow from a donor whose tissue type closely matches the patient's. For leukemia, the patient usually as an allogenic transplant.

alopecia: (al-o-pee-shuh): hair loss. This often occurs as a result of chemotherapy or from radiation therapy to the head. In most cases, the hair grows back after treatment ends.

alpha blocker: a drug that relaxes smooth muscle tissue. Alpha blockers are sometimes used to help men who have difficulty urinating due to benign prostatic hyperplasia or other causes.

alternative therapy: use of an unproven therapy instead of standard (proven) therapy. Some alternative therapies have dangerous or even life-threatening side effects. With others, the main danger is that the patient may lose the opportunity to benefit from standard therapy. The American Cancer Society recommends that patients considering the use of any alternative or complementary therapy discuss this with their health care team. See also complementary therapy.

alveoli: (al-vee-o-lie): air cells of the lungs.

analog: a synthetic version of a naturally occurring substance.

anastomosis: (a-nas-to-mo-sis): the site where two structures are surgically joined together, as the bladder neck and the urethra after removal of the prostate.

androgen: (an-dro-jen): any male sex hormone. The major androgen is testosterone.

androgen blockade: use of drugs to disrupt the actions of male hormones.

androgen dependent: prostate cells, benign or malignant, that are stimulated to grow and multiply by male hormones and are suppressed by drugs that disrupt the action of male hormones.

anemia: (uh-neem-ee-uh): low red blood cell count which can cause a person to feel fatigued and have shortness of breath.

anesthesia: (an-es-the-zuh): the loss of feeling or sensation as a result of drugs or gases. General anesthesia causes loss of consciousness ("puts you to sleep"). Local or regional anesthesia numbs only a certain area.

anesthesiologist: (an-es-the-zee-ol-o-jist): a doctor who specializes in giving medicines or other agents that prevent or relieve pain, especially during surgery.

aneuploid: (an-u-ploid): see ploidy.

angiogenesis: (an-gee-o-JEN-uh-sis): the formation of new blood vessels. Some cancer treatments work by blocking angiogenesis, thus preventing blood from reaching the tumor.

antibiotic: drugs used to kill organisms that cause disease. Antibiotics may be made by living organisms or they may be created in the lab. Since some cancer treatments can reduce the body's ability to fight off infection, antibiotics may be used to treat or prevent these infections.

antibody: a protein produced by immune system cells and released into the blood. Antibodies defend against foreign agents, such as bacteria. These agents contain certain substances called antigens. Each antibody works against a specific antigen. (See also antigen.)

antiemetic: (an-ti-eh-MEH-tik): a drug that prevents or relieves nausea and vomiting, common side effects of chemotherapy.

antiestrogen: a substance (for example, the drug tamoxifen) that blocks the effects of estrogen on tumors. Antiestrogens are used to treat breast cancers that depend on estrogen for growth.

antigen: (an-tuh-jen): a substance that causes the body's immune system to react. This reaction often involves production of antibodies. For example, the immune system's response to antigens that are part of bacteria and viruses helps people resist infections. Cancer cells have certain antigens that can be found by laboratory tests. They are important in cancer diagnosis and in watching response to treatment. Other cancer cell antigens play a role in immune reactions that may help the body's resistance against cancer.

antimetabolites: (an-tie-meh-TAB-o-lites): substances that interfere with the body's chemical processes, such as those creating proteins, DNA, and other chemicals needed for cell growth and reproduction. In treating cancer, antimetabolite drugs disrupt DNA production, which in turn prevents cell division and growth of tumors. See also, DNA.

antioxidants: (an-ti-OX-uh-dents): compounds that hold back chemical reactions with oxygen (oxidation) and are thought to reduce the risk of some cancers. Examples are vitamins C and E and beta-carotene.

apoptosis: (a-pop-toe-sis): programmed cell death. Apoptosis is controlled by genes that cause a cell to die at a specific time, e.g., when DNA is damaged. This type of cell death is different from the process of cell death by decay. Apoptosis can be brought about by some drugs used to treat cancer.

aspiration: (as-pir-A-shun): to draw out by suction. See also, fine needle aspiration.

asymptomatic: (a-simp-to-MAT-ik): not having any symptoms of a disease. Many cancers can develop and grow without producing symptoms, especially in the early stages. Screening tests such as mammograms help to find these early cancers, when the chances for cure are usually highest. (See also screening.)

atypical: (a-tip-uh-kul): not usual; abnormal. Often refers to the appearance of cancerous or precancerous cells. See also hyperplasia.

autologous bone marrow transplant: the patient's own bone marrow is used. autologous bone marrow transplantation: (aw-tahl-uh-gus trans-plan-tay-shun): See bone marrow transplantation.

axilla: (ax-il-la): the armpit.

axillary dissection: (ax-il-lair-ee): removal of the lymph nodes in the armpit (axillary nodes). They are examined for the presence of cancer.

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- B -

B-lymphocytes or B-cells: (limf-o-sites): white blood cells that are involved in making antibodies.

barium enema: a method used to help diagnose colorectal cancer. Barium sulfate, a chalky substance, is used to partially fill and open up the colon. When the colon is about half-full of barium, air is inserted to cause the colon to expand. This allows good x-ray films to be taken. Also called a double contrast barium enema.

basal cell carcinoma: the most common non-melanoma skin cancer. It begins in the lowest layer of the epidermis, called the basal cell layer. It usually develops on sun-exposed areas, especially the head and neck. Basal cell cancer is slow-growing and is not likely to spread to distant parts of the body.

basic science: laboratory studies that are not aimed at specific problems, but that provide the necessary knowledge and background for later applied research.

behavioral research: research into what motivates people to act as they do. The results of such research can be used to help convince people to adopt healthy lifestyles and to follow life-saving screening and treatment guidelines.

benign:(be-nine): not cancer; not malignant.

benign prostatic hyperplasia: (be-nine pros-tah-tick hy-per-PLAY-zuh): non-cancerous enlargement of the prostate that may cause problems with urination such as trouble starting and stopping the flow. Also referred to as BPH.

benign tumor: an abnormal growth that is not cancer and does not spread to other areas of the body.

benign tumors: benign tumors do not grow and spread the way cancer does. They are usually not a threat to life.

beta-carotene: an early form of vitamin A that is found mainly in yellow and orange vegetables and fruits. It functions as an antioxidant and may play a role in cancer prevention.

bilateral: (bi-lat-er-ul): on both sides of the body; for example, bilateral breast cancer is cancer in both breasts.

biologic response modifiers: substances that boost the body's immune system to fight against cancer; interferon is one example. Also called biologic therapy.

biomarkers: See tumor markers.

biopsy: (buy-op-see): the removal of a sample of tissue to see whether cancer cells are present. There are several kinds of biopsies. In some, a very thin needle is used to draw fluid and cells from a lump. In a core biopsy, a larger needle is used to remove more tissue.

blood count: a count of the number of red blood cells and white blood cells in a given sample of blood.

bone marrow aspiration and biopsy: a procedure in which a needle is placed into the cavity of a bone, usually the hip or breast bone, to remove a small amount of bone marrow for examination under a microscope.

bone marrow transplant: A complex and sometimes risky treatment that may be used when cancer is advanced or has recurred, or as the main treatment in some types of leukemia or lymphoma. A portion of the patient's or donor's bone marrow is withdrawn, cleansed, treated, and stored. The patient is given high doses of chemotherapy to kill the cancer cells. The drugs also destroy the remaining bone marrow, thus robbing the body of its natural ability to fight infection. The cleansed marrow is given by transfusion (transplanted) to rescue the patient's immune defenses. The best place to have a bone marrow transplant is at a comprehensive cancer center or other facility that has the technical skill and experience to perform it safely.

bone scan: an imaging method that gives important information about the bones, including the location of cancer that may have spread to the bones. It can be done on an outpatient basis and is painless, except for the needle stick when a low-dose radioactive substance is injected into a vein. Pictures are taken to see where the radioactivity collects, pointing to an abnormality.

bone survey (skeletal): an x-ray of all the bones of the body; often done when looking for metastasis to the bones.

BPH: see benign prostatic hyperplasia.

brachytherapy: (break-ee-ther-uh-pee): internal radiation treatment given by placing radioactive material directly into the tumor or close to it. Also called interstitial radiation therapy or seed implantation.

brain scan: an imaging method used to find anything not normal in the brain, including brain cancer and cancer that has spread to the brain from other places in the body. This scan can be done in an outpatient clinic. It is painless, except for the needle stick when a radioactive substance is injected into a vein. The pictures taken will show where radioactivity collects, indicating an abnormality.

BRCA1: a gene which, when damaged (mutated), places a woman at greater risk of developing breast and/or ovarian cancer, compared with women who do not have the mutation. In a woman with a BRCA1 mutation, the estimated lifetime risk of developing breast cancer is about 50% compared with 12% in the general population. A person who has this mutated gene has a 50% chance of passing on the gene to each of her children. There is a genetic test for this gene, but it is recommended only for women who are known to be at risk because several women in their family have had breast or ovarian cancer at an early age (before menopause). The American Cancer Society recommends that any women tested also receive genetic counseling.

BRCA2: a gene which, when damaged or mutated, puts the woman at a much higher risk for developing breast cancer and/or ovarian cancer than the general population. In a woman with a BRCA2 mutation, the estimated lifetime risk of developing breast cancer is 50% - 60%. BRCA2 and BRCA1 together account for about 80% of the breast cancer that occurs in women with strong family histories of the disease. BRCA2 is also thought to raise the risk for

breast cancer in men. There is a genetic test for BRCA2 but it is only recommended for those with strong family histories of breast or ovarian cancer. The ACS recommends that anyone tested also receive genetic counseling.

breast cancer: cancer that starts in the breast. The main types of breast cancer are ductal carcinoma in situ, invasive ductal carcinoma, lobular carcinoma in situ, invasive lobular carcinoma, medullary carcinoma, and Paget's disease of the nipple (see definitions under these headings). Some breast specialists believe that lobular carcinoma in situ is not a true cancer.

breast conservation therapy: surgery to remove a breast cancer and a small area of normal tissue around the cancer without removing any other part of the breast. The lymph nodes under the arm may be removed, and radiation therapy is also often given after the surgery. This method is also called lumpectomy, segmental excision, limited breast surgery, or tylectomy.

breast implant: a sac used to increase breast size or restore the contour of a breast after mastectomy. The sac is filled with silicone gel (a synthetic material) or sterile saltwater (saline). Because of concern about possible (but as yet unproven) side effects of silicone, these implants are now available only to women who agree to take part in a study (clinical trial) in which side effects are carefully followed.

breast reconstruction: surgery that rebuilds the breast contour after mastectomy. A breast implant or the woman's own tissue is used. If desired, the nipple and areola may also be re-created. Reconstruction can be done at the time of mastectomy or any time later.

breast self-exam (BSE): a method of checking one's own breasts for lumps or suspicious changes. BSE is recommended for all women over age 20, to be done once a month, usually at a time other than the days before, during, or immediately after her menstrual period.

bronchi: (bron-ki): in the lungs, the two main air passages leading from the windpipe (trachea). The bronchi provide a passage for air to move in and out of the lungs.

bronchiole: (brong-key-ol): one of the smaller sub-divisions of the bronchi.

bronchoscopy: (bron-kos-ko-pee): examination of the bronchi using a flexible, lighted tube called a bronchoscope.

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- C -

calcifications: tiny calcium deposits within the breast, singly or in clusters, often found by mammography. These are also called microcalcifications. They are a sign of changes within the breast that may need to be followed by more mammograms, or by a biopsy. They may be caused by breast cancer or by benign breast conditions.

cancer: Cancer develops when cells in the body begin to grow out of control. Normal cells grow, divide, and die. Instead of dying, cancer cells continue to grow and form new abnormal cells. Cancer cells often travel to other body parts where they grow and replace normal tissue. This process, called metastasis, occurs as the cancer cells get into the bloodstream or lymph vessels. Cancer cells develop because of damage to DNA. DNA is in every cell and directs all its activities. When DNA becomes damaged the body is able to repair it. In cancer cells, the damage is not repaired. People can inherit damaged DNA, which accounts for inherited cancers. Many times, DNA becomes damaged by exposure to something in the environment, like smoking.

cancer care team: the group of health care professionals who work together to find, treat, and care for people with cancer. The cancer care team may include any or all of the following and others: primary care physician, pathologist, oncology specialists (medical oncologist, radiation oncologist), surgeons (including surgical specialists such as urologists, gynecologists, neurosurgeons, etc.), nurses, oncology nurse specialists, oncology social workers. Whether the team is linked formally or informally, there is usually one person who takes the job of coordinating the team.

cancer cell: a cell that divides and reproduces abnormally and has the potential to spread throughout the body, crowding out normal cells and tissue.

cancer susceptibility genes: genes (the basic unit of heredity) inherited from one's parents that greatly increase the risk of a person's developing cancer. About 5%-15% of all cancers are caused by these genes.

cancer vaccine: a vaccine used in the treatment (not prevention) of some cancers. It is made from pieces of tumors and works by causing the immune system to recognize and attack cancer cells.

cancer-related checkup: a routine health examination for cancer in persons without obvious signs or symptoms of cancer. The goal of the cancer-related checkup is to find the disease, if it exists, at an early stage, when chances for cure are greatest. Depending on the person's sex and age, this checkup may include a digital rectal examination, clinical breast examinations, Pap smears, PSA blood test, and skin examinations. See also detection.

carcinoembryonic antigen: (car-sin-o-em-bre-ON-ic an-tuh-jin): a substance normally found in fetal tissue. If found in an adult, it may suggest that a cancer, especially one starting in the digestive system, may be present. Tests for this substance may help in finding out if a colorectal cancer has recurred after treatment.

carcinogen: (car-sin-o-gin): any agent - chemical, physical or viral - that causes cancer. Examples include tobacco smoke and asbestos.

carcinoma: (car-sin-o-ma): a malignant tumor that begins in the lining layer (epithelial cells) of organs. At least 80% of all cancers are carcinomas.

carcinoma in situ: (car-sin-o-ma in sigh-too): an early stage of cancer in which the tumor is confined to the organ where it first developed. The disease has not invaded other parts of the organ or spread to distant parts of the body. Most in situ carcinomas are highly curable.

case manager: the member of a cancer care team, usually a nurse or oncology nurse specialist, who coordinates the patient's care throughout diagnosis, treatment, and recovery. The case manager is a new concept that provides a guide through the complex system of health care by helping cut through red tape, getting responses to questions, managing crises, and connecting the patient and family to needed resources.

catheter: (cath-eh-tur): a thin, flexible tube through which fluids enter or leave the body; e.g., a tube to drain urine.

CEA: see carcinoembryonic antigen.

cell: the basic unit of which all living things are made. Cells replace themselves by splitting and forming new cells (mitosis). The processes that control the formation of new cells and the death of old cells are disrupted in cancer.

cell cycle: the series of steps that a cell must go through to divide; some chemotherapy drugs act by interfering with the cell cycle.

cervix: (ser-vix): the neck of the womb (uterus).

chemoprevention: (key-mo-pre-VEN-shun): prevention or reversal of disease using drugs, chemicals, vitamins, or minerals. While this idea is not ready for widespread use, it is a very promising area of study. The Breast Cancer Prevention Trial has shown that the drug tamoxifen can prevent some cases of breast cancer among women with high risk of the disease. But the drug may have some serious side effects.

chemotherapy: (key-mo-THER-uh-pee): treatment with drugs to destroy cancer cells. Chemotherapy is often used with surgery or radiation to treat cancer when the cancer has spread, when it has come back (recurred), or when there is a strong chance that it could recur.

chromosome: (krom-o-some): chromosomes carry the genes, the basic units of heredity. Humans have 23 pairs of chromosomes, one member of each pair from the mother, the other from the father. Each chromosome can contain hundreds or thousands of individual genes.

clinical breast examination: an examination of the breasts done by a health professional such as a doctor or nurse.

clinical trials: Research studies test new drugs or treatments and compare them to current, standard treatments. Before a new treatment is used on people, it is studied in the lab. If lab studies suggest the treatment works, it is tested for patients. These human studies are called clinical trials. Questions the researchers want to answer are: Does this treatment work? Does it work better than the one we use now? What side effects does it cause? Do the benefits outweigh the risks? Your doctor may suggest a clinical trial. This doesn't mean that you are a human guinea pig or that things are hopeless. There are risks. No one knows if the treatment will work or what side effects may occur. Remember, standard treatments, too, can have side effects.

colectomy: surgical removal of all (total) or part (partial colectomy or hemicolectomy, for example) of the colon.

colon: the large intestine, part of the digestive tract. The colon is a muscular tube about 5 feet long.

colonoscope: (co-lan-uh-scope): a slender, flexible, hollow lighted tube about the thickness of a finger. It is inserted through the rectum up into the colon. A colonoscope is much longer than a sigmoidoscope, and allows the doctor to see much more of the colon's lining. The colonoscope is connected to a video camera and video display monitor so the doctor can look closely at the inside of your colon.

colonoscopy: (co-lun-AH-skuh-pee): examination of the colon with a long, flexible, lighted tube called a colonoscope. The doctor can look for polyps during the exam and even remove them using a wire loop passed through the colonoscope.

colony stimulating factors (CSF): types of growth factors that promote growth and division of blood-producing cells in the bone marrow. CSFs are naturally produced in the body. But extra amounts may be given as a treatment to reduce or prevent certain side effects of chemotherapy due to not having enough blood cells.

colostomy: (co-loss-tuh-me): an opening in the abdomen for getting rid of body waste (stool). A colostomy is sometimes needed after surgery for cancer of the rectum.

combined modality therapy: two or more types of treatment used alternately or together to get the best results. For example, surgery for cancer is often followed by chemotherapy to destroy any cancer cells that may have spread from the original site.

complementary therapy: therapies used in addition to standard therapy. Some complementary therapies may help relieve certain symptoms of cancer, relieve side effects of standard cancer therapy, or improve a patient's sense of well-being. The American Cancer Society recommends that patients considering use of any alternative or complementary therapy discuss this with their health care team. See also, alternative therapy.

computed tomography: (tom-og-ruh-fee): an imaging test in which many x-rays are taken from different angles of a part of the body. These images are combined by a computer to produce cross-sectional pictures of internal organs. Except for the injection of a dye (needed in some but not all cases), this is a painless procedure that can be done in an outpatient clinic. It is often referred to as a "CT" or "CAT" scan.

Crohn's disease: a type of chronic inflammatory bowel disease. In this condition, the small bowel and, less often, the colon is inflamed over a long period of time. This increases a person's risk of developing colon cancer, so starting colorectal cancer screening earlier and doing these tests more often is recommended.

cryoablation: (cry-o-ab-lay-shun): use of extreme cold to freeze and destroy cancer cells.

cryosurgery: see cryoablation.

CT scan: see computed tomography.

cyst: (sist): a fluid-filled mass that is usually benign. The fluid can be removed for analysis. (See needle aspiration.)

cystoscopy: (sis-tahs-co-pee): examination of the bladder with an instrument called a cystoscope.

cytokine: (sight-o-kine): a product of cells of the immune system that may stimulate immunity and cause the regression of some cancers.

cytology: (cy-tahl-uh-gee): the branch of science that deals with the structure and function of cells. Also refers to tests to diagnose cancer and other diseases by examination of cells under the microscope.

cytometry: (cy-tahm-uh-tree): the counting and measuring of cells using a machine called a flow cytometer.

cytotoxic: (sight-o-tox-ic): toxic to cells; cell-killing.

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- D -

D & C: dilation and curettage: (die-lay-shun and cure-uh-tazh): a test in which the cervix is opened slightly so that a sample of tissue from the lining of the uterus can be removed and studied.

deoxyribonucleic acid: (dee-ok-see-ri-bo-new-CLAY-ic): DNA holds genetic information on cell growth, division, and function.

dermatologist: a doctor who specializes in skin diseases.

DES: see diethylstilbestrol

detection: finding disease. Early detection means that the disease is found at an early stage, before it has grown large or spread to other sites. Note: many forms of cancer can reach an advanced stage without causing symptoms. Mammography can help to find breast cancer early, and the PSA blood test is useful in finding prostate cancer.

diagnosis: identifying a disease by its signs or symptoms, and by using imaging procedures and laboratory findings. The earlier a diagnosis of cancer is made, the better the chance for long-term survival.

diethylstilbestrol: (die-eth-l-steh-BES-ter-ol): a synthetic form of estrogen.

dietitian/registered dietitian/nutritionist: an expert in the area of food and diet; a registered dietitian (RD) has at least a bachelor's degree and has passed a national competency exam. The term nutritionist is also used, but there are no educational requirements associated with this title.

differentiation: (dif-er-en-she-A-shun): the normal process through which cells mature so they can carry out the jobs they were meant to do. Cancer cells are less differentiated than normal cells. Grading is done to evaluate and report the degree of a cancer's differentiation.

digital mammography: a method of storing an x-ray image of the breast as a computer image rather than on the usual x-ray film. Digital mammography can be combined with computer-assisted diagnosis (CAD), a process in which the radiologist uses the computer to help interpret the mammogram.

digital rectal exam: (also referred to as DRE) the doctor inserts a gloved finger into the rectum to feel for anything not normal. Some tumors of the rectum and prostate gland can be felt during a DRE.

dissection: surgery to divide, separate, or remove tissues. (See also axillary dissection.)

DNA: see deoxyribonucleic acid.

DNA repair: the process of correcting the genetic mistakes that are made each time a cell divides. If the repair process does not go right, it can increase the chances of a person having some forms of cancer.

dosimetrist: (do-sim-uh-trist): a person who plans and calculates the proper radiation dose for cancer treatment.

double contrast barium enema: (DBCE) also called barium enema with air contrast. A method used to help diagnose colorectal cancer. Barium sulfate, a chalky substance, is used to partially fill and open up the colon. When the colon is about half-full of barium, air is inserted to cause the colon to expand. This allows x-ray films to show abnormalities of the colon.

doubling time: the time it takes for a cell to divide and double itself. Cancers vary in doubling time from 8 to 600 days, averaging 100 to 120 days. Thus, a cancer may be present for many years before it can be felt.

DRE: see digital rectal exam.

drug resistance: refers to the ability of cancer cells to become resistant to the effects of the chemotherapy drugs used to treat cancer.

duct ectasia: (ek-ta-zuh): widening of the ducts of the breast, often related to breast inflammation called periductal mastitis. Duct ectasia is a benign (not cancerous) condition. Symptoms of this condition are a nipple discharge, swelling, retraction of the nipple, or a lump that can be felt.

ductal carcinoma in situ or DCIS: (ductal car-sin-o-ma in sigh-too): cancer cells that start in the milk passages (ducts) but have not penetrated the duct walls into the surrounding tissue. This is a highly curable form of breast cancer that is treated with surgery, or surgery plus radiation therapy. Also called intraductal carcinoma.

dysphagia: (dis-fay-je-uh): having trouble swallowing or eating.

dysplasia: (dis-play-zuh): abnormal development of tissue.

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- E -

electrofulguration: (e-lek-tro-ful-ger-A-shun): a type of treatment that destroys cancer cells by burning with an electrical current.

embolization: (em-bowl-uh-zay-shun): a type of treatment that reduces the blood supply to the cancer by the injection of materials to plug up the artery that supplies blood to the tumor.

emesis: (em-eh-sis): vomiting.

endocrine glands: (en-do-krin glands): glands that release hormones into the bloodstream. The ovaries are one type of endocrine gland.

endocrine therapy: manipulation of hormones in order to treat a disease or condition. (See also hormone therapy.)

endocrinologist: (en-do-krin-ol-o-jist): a doctor who specializes in diseases related to the glands of the endocrine system, e.g., the thyroid, pancreas, and adrenal glands.

endometrium: (en-do-mee-tree-um): the lining of the womb (uterus).

endoscopy: (en-dos-ko-pee): inspection of body organs or cavities using a flexible, lighted tube called an endoscope.

enterostomal therapist: (en-ter-es-STO-mal ther-uh-pist): a health professional, often a nurse, who teaches people how to care for ostomies (surgically created openings such as a colostomy) and other wounds.

enzyme: (en-zime): proteins that increase the rate of chemical reactions in living cells.

epidemiology: (ep-uh-deem-ee-AHL-uh-gee): the study of diseases in populations by collecting and analyzing statistical data. In the field of cancer, epidemiologists look at how many people have cancer; who gets specific types of cancer; and what factors (such as environment, job hazards, family patterns, and personal habits, such as smoking and diet) play a part in the development of cancer.

esophageal speech: (eh-sof-eh-JEE-uhl): a special type of speech used by some people after surgery for cancer of the voice box (larynx). Air is swallowed and a "belching" type of speech can be produced. New devices, improved surgery, and the use of chemotherapy and radiation therapy instead of surgery, have reduced the need for learning esophageal speech.

estrogen: a female sex hormone produced primarily by the ovaries, and in smaller amounts by the adrenal cortex. In women, levels of estrogen fluctuate on nature's carefully orchestrated schedule, regulating the development of secondary sex characteristics, including breasts; regulating the monthly cycle of menstruation; and preparing the body for fertilization and reproduction. In breast cancer, estrogen may promote the growth of cancer cells. See estrogen receptor assay, estrogen replacement therapy.

estrogen receptor assay: the estrogen receptor assay is a laboratory test done on a sample of the cancer in order to see whether estrogen receptors are present. The growth of normal breast cells and some breast cancers is stimulated by estrogen. Estrogen receptors are molecules that function as cells' "welcome mat" for estrogen circulating in the blood. Breast cancer cells without these receptors (called estrogen receptor negative or ER negative) are unlikely to respond to hormonal therapy. ER positive cancers are more likely to respond to hormonal therapy.

etiology: (ee-tee-ahl-eh-jee): the cause of a disease. In cancer, there are probably many causes, although research is showing that both genetics and lifestyle are major factors in many cancers.

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- F -

false negative: test result implying a condition does not exist when in fact it does.

false positive: test result implying a condition exists when in fact it does not.

familial adenomatous polyposis: (fa-mil-e-uhl ad-ehn-NO-mah-tus poly-po-sis): an hereditary condition that is a risk factor for colorectal cancer. People with this syndrome develop polyps in the colon and rectum. Often these polyps become cancerous. Abbreviated FAP.

fascia: (fash-uh): a sheet or thin band of fibrous tissue that covers muscles and some organs of the body.

fecal occult blood test: (FOBT) a test for hidden blood in the stool. The presence of such blood could be a sign of cancer.

fibrocystic changes: (fi-bro-sis-tick changes): a term that describes certain benign changes in the breast. Symptoms of this condition are breast swelling or pain. The doctor or nurse will also look for the presence of nodules, lumpiness, or a discharge from the nipples. Because these symptoms or other signs can mimic breast cancer, a mammogram or a biopsy of breast tissue may be needed to show that there is no cancer.

fibrosis: formation of scar-like (fibrous) tissue. This can occur anywhere in the body.

fine needle aspiration: in this procedure, a thin needle is used to draw up (aspirate) samples for examination under a microscope. Also called FNA. See also, biopsy.

first degree relative: a first degree relative is defined as a parent, sibling, or child.

fistula: (fist-u-luh): an abnormal passage, opening or connection between 2 internal organs or from an internal organ to the surface of the body.

five-year survival rate: the percentage of people with a given cancer who are expected to survive five years or longer with the disease. Five year survival rates have some drawbacks. Although the rates are based on the most recent information available, they may include data from patients treated several years earlier. Advances in cancer treatment often occur quickly. Five-year survival rates, while statistically valid, may not reflect these advances. They should not be seen as a predictor in an individual case.

flexible sigmoidoscopy: a test to help find cancer or polyps on the inside of the rectum and part of the colon. A slender, hollow, lighted tube is placed into the rectum. The doctor is able to look for polyps or other abnormalities.

flow cytometry: (flow cy-tom-uh-tree): a test of tumor tissue to see how fast the tumor cells are reproducing and whether the tumor cells contain a normal or abnormal amount of DNA. This test is used to help predict how aggressive a cancer is likely to be. (See also ploidy, DNA, S-phase fraction.)

frozen section: a very thin slice of tissue that has been quick-frozen and then examined under a microscope. This method gives a quick diagnosis, sometimes while the surgeon is waiting to complete a procedure. The diagnosis is confirmed in a few days by a more detailed study called a permanent section.

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- G -

gamma rays: very powerful and penetrating, high-energy electromagnetic radiation of shorter wavelength than that of X-rays. They are emitted by a decaying nucleus, usually between 0.01 and 10 mev. They are also called nuclear X-rays.

gastroenterologist: (gas-tro-en-ter-ol-o-jist): a doctor who specializes in diseases of the digestive (gastrointestinal) tract.

gastrointestinal tract: the digestive tract. It consists of those organs and structures that process and prepare food to be used for energy; for example, the stomach, small intestine and large intestine.

gene: a segment of DNA that contains information on hereditary characteristics such as hair color, eye color, and height, as well as susceptibility to certain diseases.

gene therapy: a new type of treatment in which defective genes are replaced with normal ones. The new genes are delivered into the cells by viruses or proteins.

genetic counselor: a specially trained health professional who helps people as they consider genetic testing, as they adjust to the test results, and as they consider whatever screening and preventive measures are best for them.

genetic testing: tests performed to see if a person has certain gene changes known to increase cancer risk. Such testing is not recommended for everyone, rather for those with specific types of family history. Genetic counseling should be part of the process as well.

genome: (gee-nome): the total DNA in a single cell, representing all of the genetic information of the organism.

germ cell: the reproductive cells of the body, that is, ova (eggs) or sperm.

GI tract: see gastrointestinal tract.

glands: a cell or group of cells that produce and release substances used nearby or in another part of the body.

Gleason score: a method of grading prostate cancer cells on a scale of 2 to 10. The higher the number, the faster the cancer is likely to grow and the more likely it is to spread beyond the prostate.

grade: the grade of a cancer reflects how abnormal it looks under the microscope. There are several grading systems for different types of cancer, such as the Gleason grades for prostate cancer. Each grading system divides cancer into those with the greatest abnormality, the least abnormality, and those in between. Grading is done by the pathologist who examines the tissue from the biopsy. It is important because cancers with more abnormal-appearing cells tend to grow and spread more quickly and have a worse prognosis.

graft versus host disease (GVHD): the condition that results when the immune cells of a transplant (usually of bone marrow) from a donor attack the tissues of the person receiving the transplant.

growth factors: a naturally occurring protein that causes cells to grow and divide. Too much growth factor production by some cancer cells helps them grow quickly, and new treatments to block these growth factors are being tested in clinical trials. Other growth factors help normal cells recover from side effects of chemotherapy.

gynecologic oncologist: (guy-nuh-co-logic): a doctor who specializes in cancers of women's reproductive organs.

gynecologist: (guy-nuh-col-o-jist): a doctor who specializes in women's health.

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- H -

hematologist: (hem-uh-tahl-o-jist): a doctor who specializes in diseases of the blood and blood-forming tissues.

hematoma: (hem-uh-to-ma): a collection of blood outside a blood vessel caused by a leak or an injury.

HER2/neu gene: this oncoprotein is present in very small amounts on the outer surface of normal breast cells. About 25% - 30% of breast cancers have too much of this protein. HER stimulates cell growth, and breast cancers that produce too much of this protein tend to be more aggressive. A monoclonal antibody that attaches to the HER2 protein slows the growth of breast cancer cells and may also stimulate the immune system to more effectively attack the cancer. Some other types of cancer also have too much HER2/neu protein. Studies of monoclonal antibody therapy for these cancers are in progress.

hereditary cancer syndrome: conditions associated with cancers that occur in several family members because of an inherited, mutated gene.

hereditary nonpolyposis colon cancer (HNPCC): people with this condition tend to develop cancer at a young age without first having many polyps.

high risk: when the chance of developing cancer is greater than that normally seen in the general population. People may be at high risk from many factors, including heredity (such as a family history of breast cancer), personal habits (such as smoking), or the environment (such as overexposure to sunlight).

Hodgkin's disease: an often curable type of cancer that affects the lymphatic system. Named for the doctor who first identified it.

home health nurse: a nurse who give medications in the home, teaches patients how to care for themselves, and assesses their condition to see if further medical attention is needed.

hormone: a chemical substance released into the body by the endocrine glands such as the thyroid, adrenal, or ovaries. Hormones travel through the bloodstream and sets in motion various body functions. Testosterone and estrogen are examples of male and female hormones.

hormone receptor: a protein located on a cell's surface (or within the cell cytoplasm) that binds a hormone. Tumors can be tested for hormone receptors to see if they can be treated with hormones or anti-hormones. See also, hormone receptor assay.

hormone receptor assay: a test to see whether a breast tumor is likely to be affected by hormones or if it can be treated with hormones. (See also estrogen receptor assay, progesterone receptor assay.)

hormone replacement therapy: the use of estrogen and progesterone from an outside source after the body has stopped making its own supply because of natural or induced menopause. This type of hormone therapy is often given to relieve symptoms of menopause and has been shown to offer protection against thinning of the bones (osteoporosis) in women after menopause. Recent studies have found that combined hormone replacement therapy (estrogen plus progesterone) slightly increases breast cancer risk, as well as the risk of heart disease and blood clots.

hormone therapy: treatment with hormones, with drugs that interfere with hormone production or hormone action, or the surgical removal of hormone-producing glands. Hormone therapy may kill cancer cells or slow their growth.

hospice: a special kind of care for people in the final phase of illness, their families and caregivers. The care may take place in the patient's home or in a homelike facility.

hyperalimentation: (hy-per-al-eh-men-TAY-shun): giving nutrition other than as food, often intravenously.

hyperplasia: (hy-per-PLAY-zuh): too much growth of cells or tissue in a specific area, such as the lining of the prostate. See also, benign prostatic hyperplasia.

hyperthermia therapy: (hy-per-therm-ee-uh): treatment of disease by raising body temperature.

hypertrophy: (hy-per-tro-fee): the enlargement of an organ or part due to an increase in the size of its cells.

hysterectomy: (his-ter-EK-to-me): an operation to remove the uterus through an incision in the abdomen or through the vagina. Removal of the ovaries (oophorectomy) may be done at the same time.

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ileostomy: (ill-ee-oss-tuh-me): an operation in which the end of the small intestine, the ileum, is brought out through an opening in the abdomen. The contents of the intestine, unformed stool, are expelled through this opening into a bag called an appliance.

imaging studies: methods used to produce a picture of internal body structures. Some imaging methods used to detect cancer are x-rays, CT scans, magnetic resonance imaging (MRI), and ultrasound.

immune system: the complex system by which the body resists infection by microbes such as bacteria or viruses and rejects transplanted tissues or organs. The immune system may also help the body fight some cancers.

immunology: (im-mune-ahl-o-jee): study of how the body resists infection and certain other diseases. Knowledge gained in this field is important to those cancer treatments based on the principles of immunology.

immunosuppression: (im-mune-no-suh-PREH-shun): a state in which the ability of the body's immune system to respond is decreased. This condition may be present at birth, or it may be caused by certain infections (such as human immunodeficiency virus or HIV), or by certain cancer therapies, such as cancer-cell killing (cytotoxic) drugs, radiation, and bone marrow transplantation.

immunotherapy: (im-mune-no-THER-uh-pee): treatments that promote or support the body's immune system response to a disease such as cancer.

implant: a small amount of radioactive material placed in or near a cancer. Also, an artificial form used to restore the shape of an organ after surgery, for example, a breast implant.

impotence: (im-po-tense): not being able to have or keep an erection of the penis.

in situ: (in-sight-oo): in place; localized and confined to one area. A very early stage of cancer.

incidence: the number of new cases of a disease that occur in a population each year.

incontinence: (in-con-tuh-nence): partial or complete loss of urinary control.

inflammatory bowel disease: chronic inflammatory bowel disease (ulcerative colitis or Crohn's disease) is a condition in which the colon is inflamed over a long period of time and may have ulcers in its lining. This increases a person's risk of developing colon cancer, so starting colorectal cancer screening earlier and doing these tests more often is recommended.

informed consent: a legal document that explains a course of treatment, the risks, benefits, and possible alternatives; the process by which patients agree to treatment.

infraclavicular nodes: lymph nodes located beneath the collar bone (clavicle).

interferon: (in-ter-fear-on): a protein produced by cells. Interferon helps regulate the body's immune system, boosting activity when a threat, such as a virus, is found. Scientists have learned that interferon helps fight against cancer, so it is used to treat some types of cancer.

interleukins: (in-ter-loo-kins): See cytokine.

interstitial radiation therapy: (in-ter-stih-shul radiation therapy): a type of treatment in which a radioactive implant is placed directly into the tissue (not in a body cavity).

intravenous pyelogram: (in-tra-ven-us pie-eh-lo-gram): a special kind of x-ray procedure. A dye is injected into the bloodstream. It travels to the kidneys, ureters and bladder and helps to clearly outline these organs on the x-rays. Referred to as IVP.

invasive cancer: cancer that has spread beyond the layer of cells where it first developed to involve adjacent tissues.

invasive ductal carcinoma: a cancer that starts in the milk passages (ducts) of the breast and then breaks through the duct wall, where it invades the fatty tissue of the breast. When it reaches this point, it has the potential to spread (metastasize) elsewhere in the breast, as well as to other parts of the body through the bloodstream and lymphatic system. Invasive ductal carcinoma is the most common type of breast cancer, accounting for about 80% of breast malignancies. Also known as infiltrating ductal carcinoma.

invasive lobular carcinoma: a cancer that starts in the milk-producing glands (lobules) of the breast and then breaks through the lobule walls to involve the nearby fatty tissue. From there, it may spread elsewhere in the breast. About 15% of invasive breast cancers are invasive lobular carcinomas. It is often hard to detect by physical examination or even by mammography. Also called infiltrating lobular carcinoma.

IVP: see intravenous pyelogram.

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- L -

laryngectomy: (lair-en-jek-tuh-me): surgery to remove the voice box (larynx), usually because of cancer.

lesion: (lee-zhun): a change in body tissue; sometimes used as another word for tumor.

leukemia: (loo-key-me-uh): cancer of the blood or blood-forming organs. People with leukemia often have a noticeable increase in white blood cells (leukocytes).

leukocytosis: (loo-ko-sigh-toe-sis): having more than the usual number of white blood cells.

leukopenia: decrease in the white blood cell count, often a side effect of chemotherapy.

leukoplakia: (loo-ko-play-key-uh): formation of white patches on the tongue or cheek. These are often pre-malignant.

LHRH (leuteinizing hormone-releasing hormone): a hormone produced by the hypothalamus, a tiny gland in the brain.

LHRH analogs: man-made hormones, chemically similar to LHRH. They block the production of the male hormone testosterone and are sometimes used as a treatment for prostate cancer.

limited breast surgery: also called lumpectomy, segmental excision, and tylectomy. This surgery removes the breast cancer and a small amount of tissue around the cancer, but preserves most of the breast. It is almost always combined with axillary lymph node removal and is usually followed by radiation therapy.

linear accelerator: a machine used in radiation therapy to treat cancer. It gives off gamma rays and electron beams.

lobectomy: (lob-bek-to-me): surgery to remove a lobe of an organ--usually the lung.

lobular carcinoma in situ (LCIS): a very early type of breast cancer that develops within the milk-producing glands (lobules) of the breast and does not penetrate through the wall of the lobules. Researchers think that most cases of lobular carcinoma in situ do not progress to invasive lobular cancer. However, having this type of cancer places a woman at increased risk of developing an invasive breast cancer later in life. For this reason, it's important for women with lobular carcinoma in situ to have a physical examination three times a year and an annual mammogram.

lobules: the glands in a woman's breasts that produce milk.

localized cancer: a cancer that is confined to the place where it started; that is, it has not spread to distant parts of the body.

lump: any kind of mass in the breast or elsewhere in the body.

lumpectomy: (lum-peck-to-me): surgery to remove the breast tumor and a small amount of surrounding normal tissue. (See also breast conservation therapy, two-step procedure.)

lymph: (limf): clear fluid that flows through the lymphatic vessels and contains cells known as lymphocytes. These cells are important in fighting infections and may also have a role in fighting cancer.

lymph nodes: small bean-shaped collections of immune system tissue such as lymphocytes, found along lymphatic vessels. They remove cell waste and fluids from lymph. They help fight infections and also have a role in fighting cancer. Also called lymph glands.

lymphatic system: the tissues and organs (including lymph nodes, spleen, thymus, and bone marrow) that produce and store lymphocytes (cells that fight infection) and the channels that carry the lymph fluid. The entire lymphatic system is an important part of the body's immune system. Invasive cancers sometimes penetrate the lymphatic vessels (channels) and spread (metastasize) to lymph nodes.

lymphedema: (limf-uh-dee-muh): a complication that sometimes happens after breast cancer treatments. Swelling in the arm is caused by excess lymph fluid that collects after lymph nodes and vessels are removed by surgery or treated by radiation. This condition can be persistent but not painful.

lymphocytes: a type of white blood cell that helps the body fight infection.

lymphocytosis: (limf-o-sigh-toe-sis): having an excess of lymphocytes.

lymphokines: (limf-o-kines): See cytokine.

lymphoma: (lim-foam-uh): a cancer of the lymphatic system, a network of thin vessels and nodes throughout the body. Its function is to fight infection. Lymphoma involves a type of white blood cells called lymphocytes. The two main types of lymphoma are Hodgkin's disease and non-Hodgkin's lymphoma. The treatment methods for these two types of lymphomas are very different.

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- M -

macrophage: (mack-row-faj): a type of white blood cell that engulfs and destroys foreign materials.

magnetic resonance imaging: a method of taking pictures of the inside of the body. Instead of using x-rays, MRI uses a powerful magnet and transmits radio waves through the body; the images appear on a computer screen as well as on film. Like x-rays, the procedure is physically painless, but some people find it psychologically uncomfortable to be inside the MRI machine.

malignant tumor: (muh-lig-nant): a mass of cancer cells that may invade surrounding tissues or spread (metastasize) to distant areas of the body.

mammogram, mammography: an x-ray of the breast; the method of finding breast cancer that can't be felt. Mammograms are done with a special type of x-ray machine used only for this purpose. A mammogram can show a developing breast tumor before it is large enough to be felt by a woman or even by a highly skilled health care professional. Screening mammography is used to help find breast cancer early in women without any symptoms. Diagnostic mammography helps the doctor learn more about breast masses or the cause of other breast symptoms.

margin, surgical: edge of the tissue removed during surgery. A negative margin is a sign that no cancer was left behind. A positive margin indicates that cancer cells are found at the outer edge of tissue removed and is usually a sign that some cancer remains in the body.

mastectomy: (mas-tek-to-me): surgery to remove all or part of the breast and sometimes other tissue. Modified radical mastectomy removes the breast, skin, nipple, areola, and most of the axillary lymph nodes on the same side, leaving the chest muscles intact. Partial, or segmental, mastectomy removes less than the whole breast, taking only part of the breast in which the cancer occurs and a margin of healthy breast tissue surrounding the tumor. Prophylactic mastectomy is a mastectomy done before any evidence of cancer can be found, for the purpose of preventing cancer. Quadrantectomy is a partial mastectomy in which the quarter of the breast that contains a tumor is removed. Simple mastectomy or total mastectomy removes only the breast and areola.

mediastinoscopy: (me-dee-uh-stine-OS-ko-pee): examination of the chest cavity using a lighted tube inserted under the chest bone (sternum). This allows the doctor to see the lymph nodes in this area and remove samples to check for cancer.

medical oncologist: a doctor who is specially trained to diagnose and treat cancer with chemotherapy and other drugs.

melanoma: (mel-uh-no-muh): a cancerous (malignant) tumor that begins in the cells that produce the skin coloring (melanocytes). Melanoma is almost always curable in its early stages. However, it is likely to spread, and once it has spread to other parts of the body the chances for a cure are much less.

menarche: (men-ar-key): a woman's first menstrual period. Early menarche (before age 12) is a risk factor for breast cancer, possibly because the earlier a woman's periods begin, the longer her exposure to estrogen.

menopause: the time in a woman's life when monthly cycles of menstruation cease forever and the level of hormones produced by the ovaries decreases. Menopause usually occurs in the late 40s or early 50s, but it can also be brought about by surgical removal of both ovaries (oophorectomy), or by some chemotherapies that destroy ovarian function.

messenger RNA: the molecule that carries the information from the DNA genetic code to areas in the cytoplasm of the cell that make proteins.

metastasis: (meh-tas-teh-sis): the spread of cancer cells to distant areas of the body by way of the lymph system or bloodstream.

micrometastases: the spread of cancer cells in groups so small that they can only be seen under a microscope.

modified radical mastectomy: see mastectomy.

monoclonal antibodies: antibodies made in the laboratory and designed to target specific substances called antigens. Monoclonal antibodies which have been attached to chemotherapy drugs or radioactive substances are being studied to see if they can seek out antigens unique to cancer cells and deliver these treatments directly to the cancer, thus killing the cancer cells without harming healthy tissue. Monoclonal antibodies are also used in other ways, for example, to help find and classify cancer cells.

morbidity: a measure of the new cases of a disease in a population; the number of people who have a disease.

mortality: a measure of the rate of death from a disease within a given population.

MRI: see magnetic resonance imaging.

mucinous carcinoma: (mu-sin-us car-sin-o-ma): a type of carcinoma that is formed by mucus-producing cancer cells.

mucositis: (mu-co-site-us): inflammation of a mucous membrane such as the lining of the mouth.

multidrug resistance (MDR): resistance of tumor cells to several unrelated drugs after exposure to a single chemotherapy drug.

mutation: a change; a change in a gene.

myeloid leukemias: Several kinds of leukemia that include chronic myelogenous leukemia (CML) and acute myeloid leukemia (AML). There are eight subtypes of acute myeloid leukemia -- M0 (Undifferentiated AML), M1 (Myeloblastic leukemia with minimal maturation), M2 (Myeloblastic leukemia with maturation), M3 (Promyelocytic leukemia), M4 (Myelomonocytic leukemia), M5 (Monocytic leukemia), M6 (Erythroid leukemia), and M7 (Megakaryoblastic leukemia)

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needle aspiration: a type of needle biopsy. Removal of fluid from a cyst or cells from a tumor. In this procedure, a needle is used to reach the cyst or tumor, and with suction, draw up (aspirate) samples for examination under a microscope. If the needle is thin, the procedure is called a fine needle aspiration or FNA. (See also biopsy.)

needle biopsy: removal of fluid, cells, or tissue with a needle for examination under a microscope. There are two types: fine needle aspiration (FNA) and core biopsy. FNA uses a thin needle to draw up (aspirate) fluid or small tissue fragments from a cyst or tumor. A core needle biopsy uses a thicker needle to remove a cylindrical sample of tissue from a tumor.

needle localization: a procedure used to guide a surgical breast biopsy when the lump is hard to locate or when there are areas that look suspicious on the x-ray but there is not a distinct lump. A thin needle is placed into the breast. X-rays are taken and used to guide the needle to the suspicious area. The surgeon then uses the path of the needle as a guide to locate the abnormal area to be removed.

neoadjuvant therapy: (nee-o-ad-jew-vunt): systemic therapy, such as chemotherapy or hormone therapy, given before surgery. This type of therapy can shrink some tumors, so that they are easier to remove.

neonatologist: (nee-o-nay-tol-o-jist): a doctor who specializes in the care of the newborn (until about 6 weeks of age).

neoplasm: (nee-o-plas-um): an abnormal growth (tumor) that starts from a single altered cell; a neoplasm may be benign or malignant. Cancer is a malignant neoplasm.

nephrologist: (nef-rol-o-jist): a doctor who specializes in diseases of the kidneys.

neurosurgeon: (nur-o-sur-jun): a doctor specializing in operations to treat nervous system disorders.

neutrophils: (new-trow-fils): white blood cells that fight bacterial infection.

nipple discharge: any fluid coming from the nipple. It may be clear, milky, bloody, tan, gray, or green.

nodal status: indicates whether the cancer has spread (node-positive) or has not spread (node-negative) to lymph nodes.

node: See lymphatic system.

nodule: a small, solid lump that can be located by touch. Term is sometimes used to refer to a small tumor seen on x-ray.

non-Hodgkin's lymphoma: a cancer of the lymphatic system. The lymphatic system is a network of thin vessels and nodes throughout the body. Its function is to fight infection. What distinguishes non-Hodgkin's lymphoma from Hodgkin's lymphoma is the absence of a type of cell called the Reed-Sternberg cell. This cell is present only in Hodgkin's lymphoma. The treatment methods for Hodgkin's and non-Hodgkin's lymphomas are very different.

non-myeloid cancers: All cancers other than myeloid leukemias. These non-myeloid cancers include all types of carcinoma, all types of sarcoma, melanoma, lymphomas, lymphocytic leukemias (ALL, CLL), and multiple myeloma.

nuclear medicine scan: a method for localizing diseases of internal organs such as the brain, liver, or bone. Small amounts of a radioactive substance (isotope) are injected into the bloodstream. The isotope collects in certain organs and a special camera called scintillation camera is used to produce an image of the organ and detect areas of disease.

nucleus: (new-clee-us): the center of a cell where the DNA is found and where it reproduces. Studying the size and shape of a cell's nucleus under the microscope can help pathologists tell cancer cells from benign cells.

nurse practitioner: a registered nurse with a master's or doctoral degree. Licensed nurse practitioners diagnose and manage illness and disease, usually working closely with a doctor. In many states, they may prescribe medications.

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- O -

occupational therapist: a specially trained therapist who works with people who have disabilities to help them relearn how to perform daily activities.

oncogenes: (on-ko-genes): genes that promote cell growth and multiplication. These genes are normally present in all cells. But oncogenes may undergo changes that activate them, causing cells to grow too quickly and form tumors.

oncologist: (on-call-o-jist): a doctor with special training in the diagnosis and treatment of cancer.

oncology: (on-call-o-jee): the branch of medicine concerned with the diagnosis and treatment of cancer.

oncology clinical nurse specialist: a registered nurse with a master's degree in oncology nursing who specializes in the care of cancer patients. Oncology nurse specialists may prepare and administer treatments, monitor patients, prescribe and provide supportive care, and teach and counsel patients and their families.

oncology social worker: a person with a master's degree in social work who is an expert in coordinating and providing non-medical care to patients. The oncology social worker provides counseling and assistance to people

with cancer and their families, especially in dealing with the non-medical issues that can result from cancer, such as financial problems, housing (when treatments must be taken at a facility away from home), and child care.

oophorectomy: (oof-eh-rek-to-me): surgery to remove the ovaries.

ophthalmologist: (of-thuh-mal-o-jist): a medical doctor who specializes in diseases of the eye.

oral and maxillofacial surgeon: a surgeon who specializes in surgery of the mouth, jaw, and face.

orchiectomy: (or-key-ek-to-me): surgery to remove the testicles; castration.

orthopedic surgeon: (or-tho-pe-dik): a surgeon who specializes in diseases and injuries of the bones.

ostomy: (os-to-me): a general term meaning an opening, especially one made by surgery. See also colostomy, ileostomy, urostomy, and tracheostomy.

otolaryngologist: (o-toe-lair-in-gol-o-jist): a doctor who specializes in diseases of the ear, nose, and throat. Also called a head and neck surgeon.

ovary: reproductive organ in the female pelvis. Normally a woman has two ovaries. They contain the eggs (ova) that, when joined with sperm, result in pregnancy. Ovaries are also the primary source of estrogen. (See also estrogen.)

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- P -

p53: a protein that is mutated in more than 50% of tumors. The normal (not mutated) form of p53 keeps the cell from entering the cell division cycle. It has also been found to bring about cell death (apoptosis) after DNA damage.

Paget's disease of the nipple: a rare form of breast cancer that begins in the milk passages (ducts) and spreads to the skin of the nipple and areola. This affected skin may appear crusted, scaly, red, or oozing. The prognosis is generally better if these nipple changes are the only sign of breast disease and no lump can be felt.

pain specialist: oncologists, neurologists, anesthesiologists, neurosurgeons, and other doctors, nurses, or pharmacists who are experts in pain. A team of health professionals may also be available to address issues of pain control.

palliative treatment: (pal-e-uh-tive): treatment that relieves symptoms, such as pain, but is not expected to cure the disease. The main purpose is to improve the patient's quality of life.

palpation: (pal-pay-shun): using the hands to examine. A palpable mass is one that can be felt.

pancolitis: ulcerative colitis may affect any part of the colon. If it involves the entire colon, it is termed pancolitis.

pancreatectomy: (pan-cree-uh-TEK-tuh-me): surgery to remove the pancreas.

Pap test: this test involves scraping some cells from a woman's cervix and looking at them under a microscope to see if abnormal cells are present. Also called a Pap smear.

papillary: (pap-il-lair-ee): having cancer cells arranged in tiny, finger-like projections. (Used to describe the appearance of some tumors of the ovaries, uterus, thyroid gland and other organs.)

pathologist: (path-all-o-jist): a doctor who specializes in diagnosis and classification of diseases by laboratory tests such as examination of tissue and cells under a microscope. The pathologist determines whether a tumor is benign or cancerous and, if cancerous, the exact cell type and grade.

pediatric oncologist: a doctor who specializes in cancers of children.

pediatrician: a doctor who specializes in the care of children.

pelvic examination: an examination of a woman's uterus and other pelvic organs. It is used to help find cancers of the reproductive organs. The doctor will visually examine external structures and palpate (feel) the internal organs such as the ovaries and cervix.

pelvic exenteration: (ex-en-ter-A-shun): surgery to remove the organs found in the pelvis.

permanent section: a method of preparation of tissue for microscopic examination. The tissue is soaked in formaldehyde, processed in various chemicals, surrounded by a block of wax, sliced very thin, attached to a microscope slide and stained. This usually takes 1-2 days. It provides a clear view of the sample so that the presence or absence of cancer can be determined.

PET scan: See positron emission tomography.

photodynamic therapy (PDT): (fo-toe-die-NAM-ick): a treatment sometimes used for cancers of the skin, esophagus, lung, or bladder. PDT begins with the injection of a nontoxic chemical into the blood. This chemical is allowed to collect in the tumor for a few days. A special type of laser light is then focused on the cancer. This light causes the chemical to change so that it can kill cancer cells. The advantage of PDT is that it can kill cancer cells with very little harm to normal cells.

physical therapist: a health professional who uses exercises and other methods to restore or maintain the body's strength, mobility, and function.

placebo: (pluh-see-bow): an inert, inactive substance that may be used in studies (clinical trials) to compare the effects of a given treatment with no treatment. In common speech, a "sugar pill."

plastic and reconstructive surgeon: a surgeon specializing in restoring appearance or in the reconstruction of removed or injured body parts.

platelet: a part of the blood that plugs up holes in blood vessels after an injury. Chemotherapy can cause a drop in the platelet count, a condition called thrombocytopenia that carries a risk of excessive bleeding.

pleura: (pler-uh): the membrane around the lungs and lining of the chest cavity.

ploidy: (ploy-dee): a measure of the amount of DNA contained in a cell. Ploidy is a marker that helps predict how quickly a cancer is likely to spread. Cancers with the same amount of DNA as normal cells are called diploid and those with either more or less than that amount are aneuploid. About two-thirds of breast cancers are aneuploid.

pneumonectomy: (new-mo-NEK-to-me): surgery to remove a lung.

polyp: a growth from a mucous membrane commonly found in organs such as the rectum, the uterus, and the nose.

polypectomy: (poly-peck-tow-me): surgery to remove a polyp.

positron emission tomography (PET): (pahs-uh-trahn uh-mish-uhn tom-agh-ruh-fee): a PET scan creates an image of the body (or of biochemical events) after the injection of a very low dose of a radioactive form of a

substance such as glucose (sugar). The scan computes the rate at which the tumor is using the sugar. In general, high-grade tumors use more sugar than normal and low-grade tumors use less. PET scans are especially useful in taking images of the brain, although they are becoming more widely used to find the spread of cancer of the breast, colon, rectum, ovary, or lung. PET scans may also be used to see how well the tumor is responding to treatment.

pre-cancerous: see pre-malignant.

pre-malignant: changes in cells that may, but do not always, become cancer. Also called precancerous.

predisposition: susceptibility to a disease that can be triggered under certain conditions. For example, some women have a family history of breast cancer and are therefore more likely (but not necessarily destined) to develop breast cancer.

prevalence: a measure of the proportion of persons in the population with a certain disease at a given time.

prevention: the reduction of cancer risk by eliminating or reducing contact with carcinogenic agents. A change in lifestyle, such as quitting smoking, for example, reduces the risk of lung and other cancers.

primary care physician: the doctor a person would normally see first when a problem arises. A primary care doctor could be a general practitioner, a family practice doctor, a gynecologist, a pediatrician, or an internal medicine doctor (an internist).

primary site: the place where cancer begins. Primary cancer is usually named after the organ in which it starts. For example, cancer that starts in the breast is always breast cancer even if it spreads (metastasizes) to other organs such as bones or lungs.

progesterone: (pro-jest-er-own): a female sex hormone released by the ovaries during every menstrual cycle to prepare the uterus for pregnancy and the breasts for milk production (lactation).

progesterone receptor assay: a laboratory test done on a sample of the breast cancer that shows whether the cancer depends on progesterone for growth. Progesterone and estrogen receptor tests provide more complete information to help in deciding the best cancer treatment for the patient.

prognosis: (prog-no-sis): a prediction of the course of disease; the outlook for the cure of the patient.

progression: spreading or growing disease with or without treatment.

prophylactic mastectomy: (pro-feh-LAK-tik): see mastectomy.

prostate: (pros-tate): a gland found only in men. It is just below the bladder and in front of the rectum. The prostate makes a fluid that is part of semen. The tube that carries urine, the urethra, runs through the prostate.

prostate specific antigen: a gland protein made primarily by the prostate. Levels of PSA may be elevated for a number of benign reasons or prostate cancer. The PSA test is used to help find prostate cancer as well as to monitor the results of treatment.

prostatectomy: surgical removal of all or part of the prostate gland.

prostatitis: (pros-tuh-TIE-tus): inflammation of the prostate. Prostatitis is not cancer.

prosthesis: (pros-thee-sis): an artificial form to replace a part of the body, such as a breast prosthesis.

protein: a large molecule made up of a chain of smaller units called amino acids. Proteins serve many vital functions within and outside of the cell.

protocol: (pro-teh-call): a formal outline or plan, such as a description of what treatments a patient will receive and exactly when each should be given. See also regimen.

PSA: see prostate specific antigen.

psychiatrist: a medical doctor specializing in mental health and behavioral disorders. Psychiatrists provide counseling and can also prescribe medications.

psychologist: a health professional who assesses a person's mental and emotional status and provides counseling.

psychosocial: (si-ko-sew-shul): the psychological and/or social aspects of health, disease, treatment, and/or rehabilitation.

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- R -

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

radiation therapist: a person with special training to work the equipment that delivers radiation therapy.

radiation therapy: treatment with high-energy rays (such as x-rays) to kill or shrink cancer cells. The radiation may come from outside of the body (external radiation) or from radioactive materials placed directly in the tumor (internal or implant radiation). Radiation therapy may be used to reduce the size of a cancer before surgery, to destroy any remaining cancer cells after surgery, or, in some cases, as the main treatment

radical prostatectomy: surgery to remove the entire prostate gland, the seminal vesicles and nearby tissue.

radioactive implant: a source of high-dose radiation that is placed directly into or around a tumor to kill the cancer cells. See also, brachytherapy

radiofrequency ablation: a treatment technique that uses high-frequency alternating electrical current to destroy tissue cells by heating them.

radioisotope: a type of atom that is unstable and prone to break up (decay). Decay releases small fragments of atoms and energy. Exposure to certain radioisotopes can cause cancer. But radioisotopes are also used to find and treat cancer. In certain imaging procedures, for example, radioisotopes are injected into the body where they then collect in areas where the disease is active, showing up as highlighted areas on the images.

radiologic technologist: a health professional (not a doctor) trained to position patients for x-rays, take the images, and then develop and check the images for quality. The films taken by the technologist are sent to a radiologist to be read.

radiologist: a doctor with special training in diagnosing diseases by interpreting x-rays and other types of imaging studies, for example, CT scans and magnetic resonance imaging.

radionuclide bone scan: a study using a small amount of radioisotope to produce images of the bones.

recurrence: cancer that has come back after treatment. Local recurrence means that the cancer has come back at the same place as the original cancer. Regional recurrence means that the cancer has come back in the lymph nodes near the first site. Distant recurrence is when cancer metastasizes after treatment to organs or tissues (such as the lungs, liver, bone marrow, or brain) farther from the original site than the regional lymph nodes.

red blood cells: blood cells that contain hemoglobin, the substance that carries oxygen to other tissues of the body.

regimen: (rej-uh-men): a strict, regulated plan (such as diet, exercise, or other activity) designed to reach certain goals. In cancer treatment, a plan to treat cancer. See also, protocol.

regional involvement: the spread of cancer from its original site to nearby areas, but not to distant sites such as other organs.

rehabilitation: activities to help a person adjust, heal, and return to a full, productive life after injury or illness. This may involve physical restoration (such as the use of prostheses, exercises, and physical therapy), counseling, and emotional support.

relapse: reappearance of cancer after a disease-free period. See recurrence.

remission: complete or partial disappearance of the signs and symptoms of cancer in response to treatment; the period during which a disease is under control. A remission may not be a cure.

rescue treatment: procedures or treatments such as bone marrow transplantation that "rescue" a patient's immune system and blood-forming organs from the effects of high dose chemotherapy.

resection: surgery to remove part or all of an organ or other structure.

respiratory therapist: under the direction of a doctor, the respiratory therapist gives breathing treatments and helps manage patients on ventilators.

retinoids: vitamin A and synthetic compounds similar to vitamin A.

ribonucleic acid: (ri-bo-new-CLEE-ick acid): a nucleic acid found in all cells that transmits genetic messages between structures in the cell. Usually referred to as RNA.

risk factor: anything that increases a person's chance of getting a disease such as cancer. Different cancers have different risk factors. For example, unprotected exposure to strong sunlight is a risk factor for skin cancer and smoking is a risk factor for lung, mouth, larynx, and other cancers. Some risk factors, such as smoking, can be controlled. Others, like a person's age, can't be changed.

RNA: See ribonucleic acid.

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- S -

S-phase fraction: the percentage of cells that are replicating their DNA. DNA replication usually means that a cell is getting ready to split into two new cells. A low s-phase fraction is a sign that a tumor is slow-growing; a high s-phase fraction shows that the cells are dividing rapidly and the tumor is growing quickly.

sarcoma: (sar-co-muh): a malignant tumor growing from connective tissues, such as cartilage, fat, muscle, or bone.

scan: a study using either x-rays or radioactive isotopes to produce images of internal body organs.

scintillation camera: (sin-till-AY-shun): device used in nuclear medicine scans to detect radioactivity and produce images that help diagnose cancer and other diseases.

screening: the search for disease, such as cancer, in people without symptoms. For example, screening measures for prostate cancer include digital rectal examination and the PSA blood test; for breast cancer, mammography and clinical breast exams. Screening may refer to coordinated programs in large populations.

secondary tumor: a tumor that forms as a result of spread (metastasis) of cancer from the place where it started.

sentinel lymph node biopsy: a new procedure that might replace standard axillary lymph node dissection. Blue dye or a radioisotope tracer is injected into the tumor site at the time of surgery and the first (sentinel) node that picks up the dye is removed and biopsied. If the node is cancer-free, no more nodes are removed.

sexual therapist: a mental health professional with special training in counseling people about sexual changes, problems, and communication (for example, after treatment for cancer).

side effects: unwanted effects of treatment such as hair loss caused by chemotherapy, and fatigue caused by radiation therapy.

sigmoidoscope: (sig-moid-uh-scope): a slender, flexible, hollow, lighted tube about the thickness of a finger. It is inserted through the rectum up into the colon. This allows the doctor to look at the inside of the rectum and part of the colon for cancer or for polyps. The sigmoidoscope is connected to a video camera and video display monitor so the doctor can look closely at the inside of your colon. Polyps are small growths that can become cancerous. This test may be somewhat uncomfortable, but it should not be painful.

sigmoidoscopy: (sig-moid-AH-sko-pee): a test to help find cancer or polyps on the inside of the rectum and part of the colon. A slender, hollow, lighted tube is placed into the rectum. The doctor is able to look for polyps or other abnormalities.

social worker: a health professional who helps people find community resources and provides counseling and guidance to assist with issues such as insurance coverage and nursing home placement.

speech therapist: a person specially trained to work with people who have lost the ability to speak clearly. Speech therapists help re-establish communication skills and also make sure that patients can easily eat and drink.

spinal tap: a procedure in which a thin needle is placed in the spinal canal to withdraw a small amount of spinal fluid or to give medicine into the central nervous system through the spinal fluid.

sputum cytology: (spu-tum sigh-tahl-uh-gee): a study of phlegm cells under a microscope to see whether they are normal or not.

squamous cell carcinoma: (skwa-mus car-sin-o-mah): cancer that begins in the non-glandular cells, for example, the skin.

staging: the process of finding out whether cancer has spread and if so, how far. There is more than one system for staging. The TNM system, described below, is one used often. The TNM system for staging gives three key pieces of information: T refers to the size of the Tumor, N describes how far the cancer has spread to nearby Nodes, M shows whether the cancer has spread or Metastasized to other organs of the body. Letters or numbers after the T, N, and M give more details about each of these factors. To make this information somewhat clearer, the TNM descriptions can be grouped together into Stages, labeled with Roman numerals. In general, the lower the number, the less the cancer has spread. A higher number means a more serious cancer.

standard therapy: standard treatment: See therapy.

stem cell and stem cell transplant: a variation of bone marrow transplantation in which immature blood cells called stem cells are taken from the patient's blood and later, in the lab, stimulated with growth factors to produce more stem cells which are returned to the patient by transfusion.

stenosis: (steh-no-sis): a narrowing (stricture) of a duct or canal.

stereotactic needle biopsy: (ster-e-o-TACK-tik buy-op-see): a method of needle biopsy that is useful in some cases in which calcifications or a mass can be seen on mammogram but cannot be found by touch. A computer maps the location of the mass to guide the placement of the needle. (See also needle aspiration, needle biopsy.)

stereotactic radiosurgery: this new treatment method focuses high doses of radiation at a tumor while limiting the exposure that normal tissue receives. The treatment may be useful for tumors that are in places where regular surgery would harm essential tissue, for example, in the brain or spinal cord, or when the patient's condition does not permit regular surgery.

stoma: an opening, especially an opening made by surgery to allow elimination of body waste. (See also colostomy, ileostomy, urostomy.)

stomatitis: (sto-ma-ti-tis): inflammation or ulcers of mouth area. Stomatitis can be a side effect of some kinds of chemotherapy.

supraclavicular lymph nodes: (su-prah-clah-VIK-u-lar): lymph nodes that are found just above the collarbone (clavicle).

surgeon: a doctor who performs operations.

surgical biopsy: see biopsy

surgical oncologist: a doctor who specializes in using surgery to treat cancer.

survival rate: the percentage of survivors with no trace of disease within a certain period of time after diagnosis or treatment. For cancer, a 5-year survival rate is often given. This does not mean that people can't live more than five years, or that those who live for 5 years are necessarily permanently cured.

synchronous: (sin-chro-nus): at the same time; for example, cancer in both breasts at the same time is synchronous.

synergistic: (sin-er-jis-tik): acting together. A synergistic agent can act together with other agents to produce an effect greater than that of the sum of each one acting alone. Some chemotherapy drugs act synergistically.

systemic disease: (sis-tem-ick): in cancer, this term means that the tumor that originated in one place has spread to distant organs or structures.

systemic therapy: treatment that reaches and affects cells throughout the body; for example, chemotherapy.

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T-lymphocytes or T-cells: (limf-o-sites): white blood cells made in the thymus gland. They produce lymphokines and play a large role in the immune response against viruses, transplanted organs and tissues, and cancer cells.

tamoxifen: (Brand name: Nolvadex) This drug blocks the effects of estrogen on many organs, such as the breast. Estrogen promotes the growth of some breast cancers. Recent research suggests that tamoxifen may lower the risk of breast cancer in women with certain risk factors.

Taxol: a drug first made from the bark or needles of yew trees that can now be made in the laboratory. It is used in the treatment of breast, ovarian, and other types of cancer.

testicles: the male reproductive glands found in the scrotum. The testicles (or testes) produce sperm and the male hormone testosterone.

testosterone: (tes-toss-ter-own): the male hormone, made primarily in the testes. It stimulates blood flow, growth in certain tissues, and the secondary sexual characteristics. In men with prostate cancer, it can also encourage growth of the tumor.

therapy: any of the measures taken to treat a disease. See also alternative therapy, complementary therapy, and unproven therapy.

thoracic surgeon: a doctor who performs surgery to the chest cavity.

thrombocytopenia: (throm-bo-sigh-toe-PEEN-e-uh): a decrease in the number of platelets in the blood; can be a side effect of chemotherapy.

tissue: a collection of cells, united to perform a particular function.

TNM staging system: see staging.

total colon exam: total colon exam (TCE) includes either colonoscopy or double contrast barium enema.

trachea: (tray-key-uh): the "windpipe." The trachea connects the larynx (voice box) with the bronchi and serves as the main passage for air into the lungs.

tracheostomy: (tray-key-ah-sto-me): surgery to create an opening of the trachea through the neck.

transrectal ultrasound: (trans-rec-tal ultra sound): the use of sound waves to create a picture of the prostate on a screen to help detect tumors. Also called TRUS.

transverse rectus abdominus muscle flap procedure: (trans-verse rek-tus ab-dom-in-us): a method of breast reconstruction in which tissue from the lower abdominal wall which receives its blood supply from the rectus abdominus muscle is used. The tissue from this area is moved up to the chest to create a breast mound. An implant is usually not needed. Moving muscle and tissue from the lower abdomen to the chest results in flattening of the lower abdomen (a "tummy tuck"). Also called a TRAM flap or rectus abdominus flap procedure.

tumor: an abnormal lump or mass of tissue. Tumors can be benign (not cancerous) or malignant (cancerous).

tumor markers: substance produced by cancer cells and sometimes normal cells. They may accumulate in large amounts in the blood or urine of some people with cancer. Tumor markers include CA 125 (ovarian cancer), CEA (GI tract cancers), and PSA (prostate cancer).

tumor necrosis factor (TNF): (neck-row-sis): a substance given off by activated white blood cells that can cause the death of tumor cells.

tumor suppressor genes: genes that slow down cell division or cause cells to die at the appropriate time. Alterations of these genes can lead to too much cell growth and development of cancer.

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- U -

ulcerative colitis: A type of inflammatory bowel disease. In this condition, the colon is inflamed over a long period of time. This increases a person's risk of developing colon cancer, so starting colorectal cancer screening earlier and doing these tests more often is recommended.

ultrasound: an imaging method in which high-frequency sound waves are used to outline a part of the body. The sound wave echoes are picked up and displayed on a television screen. Also called ultrasonography.

umbilical cord blood transplant: the use of stem cells in blood removed from the umbilical cords of newborns (a very rich source) to replace the blood-forming cells in patients whose own blood-forming cells have been destroyed by radiation or chemotherapy.

unilateral: affecting one side of the body. For example, unilateral breast cancer occurs in one breast only. (See also bilateral).

unproven therapy: any therapy that has not been scientifically tested and approved.

urethra: (yoo-ree-thruh): the tube that carries urine from the bladder to the outside. In women, this tube is fairly short; in men it is longer, passing through the penis, and it also carries the semen.

urine cytology: (urine cy-tahl-uh-ge): urine is examined under a microscope to look for cancerous and precancerous cells. Cytology can also be done on bladder washings. Bladder washing samples are taken by placing a salt solution into the bladder through a tube (catheter) and then removing the solution for testing.

urologist: (yur-ol-o-jist): a doctor who specializes in treating problems of the urinary tract in men and women, and of the genital area in men.

urostomy: (yur-os-tuh-me): surgery to divert urine through a new passage and then through an opening in the abdomen. In a continent urostomy, the urine is stored inside the body and drained a few times a day through a tube placed into an opening called a stoma.

uterus: the womb. The pear-shaped organ in women that holds and nourishes the growing embryo and fetus. The uterus has three areas: the body or upper part; the isthmus or the narrowed central area; and the cervix, the lower portion.

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- V -

vaccine: the modified virus of a disease used to bring about resistance to that disease for a period of time, or even permanently. Development of a cancer vaccine is a subject of intense research.

vagina: the passage leading from the vulva to the uterus in women.

virus: very small organisms that cause infections. Viruses are too small to be seen with a regular microscope. They reproduce only in living cells.

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- W -

watchful waiting: instead of active treatment for prostate cancer, the doctor may suggest close monitoring. This may be a reasonable choice for older men with small tumors that might grow very slowly. If the situation changes, active treatment can be started.

white blood cells: there are several types of blood cells that help defend the body against infections. Certain cancer treatments such as chemotherapy can reduce the number of these cells and make a person more likely to get infections.

wire localization: a method used during a surgical breast biopsy when the lump is hard to find or when there is an area that looks suspicious on the x-ray. A thin, hollow needle is placed into the breast and x-rays are taken to guide the needle to the area in question. A fine wire is inserted through the center of the needle. A small hook at the end of the wire keeps it in place. The hollow needle is then removed, and the surgeon uses the path of the wire as a guide to find the abnormal area to be removed.

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- X -

x-rays: one form of radiation that can be used at low levels to produce an image of the body on film or at high levels to destroy cancer cells.

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Glossary courtesy of the American Cancer Society