

## **17. GLOSSARY**

**ABBI** Advanced Breast Biopsy Instrument

**Adjuvant chemotherapy/hormone therapy** The use of either chemotherapy or hormone therapy after initial treatment either by surgery or radiotherapy. The aim of adjuvant therapy is to destroy any cancer that has spread.

**Alopecia** Loss of hair. A common complication of chemotherapy. May be partial or complete but full recovery always takes place.

**ANDI** Abberations of Normal Development and Involution. Normal changes which occur in the breast in relation to breast growth and regression, eg fibrous tissue formation "nodularity", "lumpiness", cysts, fibroadenomas, numerous benign pathologies.

**Anti-oncogene** See **tumour suppressor gene**.

**ANZBCTG** Australian and New Zealand Breast Cancer Trials Group. It is a trans-Tasman clinical trials group which conducts research on new treatments for breast cancer.

**Aspiration biopsy** suction of cells in fluid from a cyst or from a solid mass through a fine needle for microscopic examination and diagnosis. ([See FNA](#))

**Atypia** Abnormal changes in cells. See also dysplasia.

**Axilla** the armpit; axillary, the adjective, as in the axillary lymph nodes.

**Axillary dissection** Surgery to remove fat and lymph nodes from the armpit. It can be done either at the same time as a mastectomy or as a separate operation. It can be partial or complete.

**Benign lesion** a non-malignant growth which does not spread to other parts of the body.

**Biopsy** removal of material for microscopic diagnosis. Can be aspiration by a needle to remove cells, can be removal of a tissue sample by a "core" needle, or surgical removal of part or all of the lesion. (See also [Localisation Biopsy](#) and ABBI.)

**Body image** A person's conception of and feelings about his or her body - its form, size, shape and the way it fits society's norms. Self-esteem and sexuality are linked with body image.

**Bone scan** A test to see whether the cancer has spread to any bones.

**Boost** An extra dose of radiation given to a smaller area, usually the site where the tumour was removed, after the rest of the breast has been irradiated.

**BRCA1** Breast cancer gene 1. A gene which is defective in about 2% of women with breast

cancer. See also **familial breast cancer**.

**BRCA1, 2** Technical term for two genes involved in familial breast cancer.

**Breast conservation** The treatment of breast cancer by tumour excision and radiotherapy in which the breast is retained (conserved) in contrast to its removal (mastectomy). Rarely, radiation therapy is omitted.

**Breast conserving surgery** Surgery where the cancer is removed, together with a margin of normal breast tissue. The whole breast is not removed.

**Breast reconstruction** The formation of a breast shape after a total mastectomy.

**Breast sharing** A method of reconstruction in which some of the opposite breast is used to reconstruct the missing breast.

**Calcification** The deposition of calcium salts in body tissues. In the breast, it can be associated with either normal or cancerous tissue.

**Cancer** a general term for more than 100 diseases characterised by abnormal and uncontrolled division of cells. Cancer cells can invade and destroy surrounding normal tissue, and spread within the body by blood or body fluids to start secondary tumours in other parts of the body. (These are called "metastases").

**Carcinoma** A malignant tumour arising from epithelial cells, which are cells lining the external or internal surfaces of the body. Carcinomas spread to nearby tissues. They may also spread to distant sites such as lung, liver, lymph nodes and bone. See also [metastasis](#)

**Carcinoma NOS** Invasive ductal carcinoma not otherwise specified. Comprises 70 per cent of all breast cancers

[Carcinoma-in-situ \(DCIS\)](#) cancer which has not spread from its place of origin in a breast lobe (LCIS) or duct (DCIS).

**Cathepsin D** A protein secreted by breast cancer cells. It may be a marker of poor prognosis.

**Centigray** A measure of radiation. 1 centigray = 1 rad.

**Chemotherapy** The use of medications (drugs) that are toxic to cancer cells. These drugs kill the cells, or prevent or slow their growth.

**Chemotherapy cycle** Chemotherapy is administered at regular intervals. The interval which

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includes time for treatment and time for recovery is a cycle – usually 3-4 weeks.

**Chromosome** A body in the cell nucleus carrying genes. See gene.

**CLE** See **complete local excision**.

**Clinical trial** Research conducted with the patient's permission which usually involves a comparison of two or more treatments or diagnostic methods. The aim is to gain better understanding of the underlying disease process and/or methods to treat it.

**CMF** A common combination of three drugs used in the treatment of breast cancer. Cyclophosphamide, Methotrexate and 5-fluoro-uracil.

**Combined modality treatment** The integration of two or more forms of treatment to combat the cancer. For example radiation and surgery; radiation and chemotherapy; surgery, radiation and chemotherapy.

**Comedo carcinoma in situ** An aggressive type of breast carcinoma.

**Complete local excision** The complete removal of a tumour with a surrounding margin of normal breast tissue. Also known as CLE and breast conserving surgery.

**Conservation treatment** See Breast Conservation

**Conservative surgery** Surgery in which the breast is not removed. Also known as breast conserving surgery.

**Coping strategies** Strategies or behaviours used to reduce psychological stress. Coping strategies may be influenced by personality style and the specific situation, and may change over time.

**Core biopsy** The sampling of breast tissue with a needle to give a tiny cylinder of tissue for examination by a pathologist.

**Cosmesis** The appearance of the breast following treatment.

**Cribriform** See **Non-comedo carcinoma**.

**Cycle** Chemotherapy is usually administered at regular intervals. A cycle is a course of chemotherapy followed by a period in which the body recovers.

**Cyst** fluid-filled mass. They can be left alone or the fluid can be removed by aspiration with a fine

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needle to be examined by a pathologist. These are not solid lumps and are usually benign. Small cysts are a common finding in ultrasound – see **ANDI**.

**Cytology** An examination by a pathologist of the cellular structure of a tissue.

**DCIS** Ductal carcinoma in situ. A form of breast cancer which requires special consideration. It spreads along the ducts of the breast, rather than forming a lump.

**Denial** Inability to acknowledge something apparent to others. It can be an involuntary coping strategy.

**Depression** A pervasive and sustained lowering of mood. Other features include tearfulness, guilt, irritability, loss of interest in life, loss of energy, poor concentration, poor sleep and loss of appetite.

**Desquamation** Shedding of the skin as a reaction to radiotherapy. In its mildest form it is "dry" when the skin flakes in a powdery form. In a more severe form ("wet") the deeper layers of the skin are exposed. This form is particularly likely to occur where the skin is naturally moist and/or subject to friction i.e. in the axilla or under the breast during radiotherapy treatment.

**Differentiation** The degree to which a tumour resembles normal tissue. In general, the closer the resemblance, the better the prognosis. Well differentiated tumours closely resemble normal tissue.

**Disease-free survival** The time from the primary treatment of the breast cancer to the first evidence of cancer recurrence.

**Dissection** A careful operation which removes some structures but preserves others, eg in breast cancer removal of the axillary lymph nodes = axillary dissection.

**Dry desquamation** A reaction to radiotherapy involving the shedding of dry skin

**Ductal carcinoma in situ** See **DCIS**.

**Ducts** channels within the breast which pass milk from the lobules, where it is made, to the nipple.

**Dysplasia** An abnormal growth of cells which look something like cancer cells, but do not have all the features of cancer. See also **atypia**.

**ECOG** Eastern Cooperative Oncology Group. A group of American oncologists which conducts trials on cancer treatments.

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**ECOG performance status** A five point scale developed by the Eastern Cooperative Oncology Group.

- 0 - No symptoms of cancer
- 1 - Presence of cancer-related symptoms
- 2 - Spends less than 50% of daylight hours in bed
- 3 - Spends more than 50%, but less than 100% of daylight hours in bed
- 4 - Totally confined to bed

**EGF-R** Epidermal growth factor receptor. A protein on some cancer cells. Cancers with plenty of EGF-R are likely to be aggressive. See also **erbB-2**.

**Electron** A form of radiation distinct from x-rays. Commonly used as part (boost) of breast conservation radiotherapy to give a higher dose to where the tumour started.

**Electron** The smallest particle of negative electricity.

**Endocrine therapy (hormonal therapy)** treating breast cancer by changing the hormonal balance of the body.

**EORTC** European Organisation for Research and Treatment of Cancer. A group which carries out clinical trials on cancer therapies.

**EORTC core quality of life questionnaire (QLQ)** A questionnaire designed to determine the impact on quality of life of different treatments.

**Epidermal growth factor receptor** See EGF-R.

**ER** Oestrogen receptor. A protein on breast cancer cells that binds oestrogens. It indicates that the tumour may respond to hormonal therapies. Tumours with plenty of ER have a better prognosis than those which do not.

**erbB-2** Also known as HER2/neu. A protein similar to EGF-R. Tumours with plenty of erbB-2 are usually aggressive.

**Erythema** Redness of the skin, the earliest and mildest reaction of the skin to radiation.

**Familial breast cancer** Breast cancer affecting two or more close relatives, especially in premenopausal women. It implies an inherited disposition.

**Fibrocystic Disease** Not a 'disease', occasionally associated with larger cysts. Same condition as ANDI (see [ANDI](#)).

Related Topics

**Fine needle biopsy (FNB)** The sampling of cells from breast tissue for examination by a pathologist.

**Fraction** Radiotherapy is usually given over several weeks. The dose delivered each day is known as a fraction.

**Free flap reconstruction** Breast reconstruction using microsurgery.

**Frozen section** A rapid method of obtaining a pathological examination of tissue during an operation. This is not routinely used in breast cancer.

**G-CSF** Granulocyte cell stimulating factor. A natural substance which promotes the growth of white cells. It can be used after chemotherapy.

**Gene** The functional unit of heredity. Each gene sits on a chromosome within the cell nucleus.

**Grade** The degree of similarity of the cancer cells to normal cells. This is assessed by a pathologist. A grade 1 carcinoma is well differentiated and is associated with a good prognosis. A grade 2 carcinoma is moderately differentiated and is associated with an intermediate prognosis. A grade 3 carcinoma is poorly differentiated and is associated with a poor prognosis. Grade is assessed by a pathologist.

**Gray** The modern unit of radiation dosage. Doses used in treatment for early breast cancer range from 45 and 65 Gray. See also **rad**.

**Gynaecologist** a doctor who specialises in treating diseases of women's reproductive organs.

**Haematoma** An area of clotted blood, a bruise.

**Halsted mastectomy** See **radical mastectomy**.

**HER2/neu** See **erbB-2**.

**Histology** An examination of the structure of a cell by a pathologist.

**Hookwire** wire placed in the breast by a radiologist to guide the surgeon to an area which cannot be felt.

**Hormone receptors** Proteins in a cell which bind to specific hormones. This binding stimulates the cell to act in a certain way.

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**Hormone therapy** The use of drugs or hormones which specifically inhibit the growth of hormone responsive cancer cells.

**Hormones** chemical produced by glands in the body which circulate in the blood stream and control actions of cells and organs. Oestrogens are an example.

**Hyperplasia** Increased numbers of epithelial cells. If excessive, there is a slightly increased risk of developing subsequent breast carcinoma.

**Immediate reconstruction** The reconstruction of the breast at the time of mastectomy.

**In situ carcinoma** See **carcinoma in situ**.

**Increment** See **fraction**.

**International Breast Cancer Study Group** An international cooperative group which includes many Australian clinical researchers. The group is carrying out multicentre trials, especially in the area of chemotherapy.

**Iridium (wire)** A radioactive wire often used to deliver the boost to the operative site in breast conserving techniques.

**Iridium Wire** Radioactive wire which can be implanted temporarily in the breast as a boost dose. Now seldom used.

**Large cell in situ carcinoma** See [comedo carcinoma](#).

**Latissimus dorsi flap** A method of reconstruction using skin from the back, which is carried on the latissimus dorsi muscle.

**LCIS** Lobular carcinoma in situ. It is a misnomer which describes a benign process in the breast. It is not a carcinoma. It is usually detected by chance in the course of a breast biopsy for another lesion.

**Lesion** A definite abnormality either seen on mammography or ultrasound. It may or may not be felt.

**Limited axillary dissection** Surgery to the armpit in which not all lymph nodes are removed.

**Linear accelerator** Standard radiation therapy apparatus.

**Lobule** a part of a breast lobe (a woman's breast has 15 to 20 lobes where milk is produced).

Related Topics

**Local recurrence** Return of the cancer in the affected breast.

**Localisation Biopsy** Using mammography or ultrasound a wire is guided to the lesion which usually cannot be felt and has been seen on a previous imaging. This area can then be removed for microscopic diagnosis.

**Lumpectomy** a surgical procedure to remove a lump in the breast with a margin (or rim) of normal tissue. See **Wide Local Excision**.

**Lymph node** A small collection of tissue along the lymphatic system which acts as a filter. White cells and cancer cells, in particular, collect in lymph nodes. They are found in the neck, the armpit, the groin and many other places. Lymph nodes are also known as glands.

**Lymphatic system** A system of vessels which drains fluid out of the head, neck and limbs and returns it to the general circulation.

**Lymphoedema** Chronic swelling of the arm, which may be prominent in about 5% of patients after treatment of the axilla by surgery or radiotherapy.

**Magnetic resonance imaging (MRI)** a technology which uses magnetic fields rather than x-rays to produce images of the body structure.

**Malignant** a growth of cells which have the ability to invade and destroy body tissues. The opposite of benign.

**Mammogram** A soft tissue x-ray of the breast which may be used to evaluate a lump or which may be used as a screening test in women with no signs or symptoms of breast cancer.

**Mammography** The process of taking a mammogram

**Margins of resection** The edge of the tissue removed. See complete local excision

**Mastectomy** Surgical removal of the breast. May be total (all of the breast) or partial. See also **radical (Halsted) mastectomy**.

**Medical oncologist** A doctor who specialises in the use of chemotherapy and hormone therapy.

**Megavoltage** High energy x-rays which are used in modern curative radiotherapy.

**Meta-analysis** A statistical technique used to examine all research on a particular issue.

**Metastasis** The spread of a cancer from the primary site to somewhere else via the bloodstream or the lymphatic system.

Related Topics

**Metastasise** See metastasis (above).

**Metastatic cancer** Cancer which has spread to a site distant from the original site.

**Micrometastases** Small undetectable deposits of cancer which grow later.

**Micropapillary** See **non-comedo carcinoma**.

**Mitosis** The process of cell division.

**Modified radical mastectomy** Total mastectomy with removal of lymph nodes in the armpit, but without removal of the muscles of the chest.

**Moist desquamation** A response to radiotherapy in which skin peels off. It is made worse by friction and sweat.

**Nadir** The lowest measured value. In cancer treatments, it usually refers to the lowest white blood cell and platelet count.

**Nausea** Feeling sick or wanting to be sick. If it is caused by chemotherapy, it can last for anywhere between a few hours and a week.

**Necrosis** The death of an individual cell or groups of cells in living tissue. Sometimes seen in carcinomas.

**Neutropenia (febrile)** A decreased number of white cells in the blood, which greatly increases the risk of infection. It usually occurs as a result of chemotherapy.

**Nodal status** The presence or absence of cancer in the lymph nodes of the armpit. A woman with cancer in one or more nodes is node positive, or node +ve. A woman with no cancer in her nodes is node negative, or node-ve.

**Non-comedo carcinoma in situ** A low grade type of carcinoma.

**Occult metastasis** A metastasis that has not yet shown up.

**Oestrogen** a female hormone, produced by the ovaries, adrenal glands and in fat. A relationship exists between oestrogens and breast cancer.

**Oestrogen dependent** applied to a cancer which needs this female hormone in order to grow.

Related Topics

**Oestrogen independent** a cancer which can grow without this hormone.

**Oestrogen receptor** See **ER**.

**Oestrogen receptor assay (ER)** a test to see if a breast cancer retains the normal hormone responding mechanism.

**Oncogene** A gene which, functioning abnormally, encourages normal cells to turn cancerous.

**Oncology** the study of cancer. An "oncologist" is a clinician who specialises in cancer treatment. A "surgical" oncologist is a specialist in treating cancer by surgery; a "medical" oncologist treats cancer using chemo-or endocrine therapy; a "radiation" oncologist treats cancer with high-dose x-rays and radioactive isotopes.

**Oncology nurse** A registered nurse who is educated in the care of people with cancer.

**Oophorectomy** Surgical removal of the ovaries, occasionally used in the adjuvant treatment of breast cancer.

**Open biopsy** Surgery performed under local or general anaesthetic in which a sample of breast tissue is removed so it can be examined by a pathologist.

**Orthovoltage** X-rays delivered from generators operating at less than 500,000 volts.

**Overall survival** The time from the primary treatment of the breast cancer to death.

**p53** A protein which, when the gene for it is damaged, leads to an increased risk of breast cancer.

**Palliation** The alleviation of symptoms due to the underlying cancer, without prospect of cure.

**Palpation** examining with the hands. A "palpable" breast lump is one that can be felt by pressing on the surface of the breast.

**Parasthaesia** 'pins and needles' which can occur after an axillary dissection.

**Partial or segmental mastectomy** a surgical procedure in which only a portion of the breast is removed see **Lumpectomy**, **Wide Local Excision**.

**Patey's operation** An operation in which the breast and lymph nodes of the armpit are removed, but not the pectoralis major muscle. See also **modified radical mastectomy**.

Related Topics

**Pathologist** a doctor who identifies or diagnoses diseases such as breast cancer by examining cells and their surrounding tissue under a microscope.

**Plastic surgeon** a doctor who specialises in rehabilitative surgery – including breast reconstruction.

**Postmenopausal** After menopause.

**PR** Progesterone receptor. A receptor inside the cell which binds progesterone. Tumours with plenty of PR are less aggressive and more responsive to hormone therapy than those without.

**Predictive factor** Something which helps predict what may happen. For example, the oestrogen receptor is a predictive factor for a good response to hormone therapy.

**Premenopausal** Before menopause

**Primary breast cancer** Breast cancer arising in the breast.

**Primary breast tumour** Tumour arising in the breast.

**Progesterone** a female hormone, produced by the ovaries only during a specific time of a woman's menstrual cycle.

**Progesterone receptor** See **PR**.

**Progesterone receptor (PR) assay** a test in addition to the ER assay.

**Prognosis** An estimate of what is likely to happen in the future.

**Prognostic factors** Factors which are associated with a better or worse outcome of the disease. They are not the same as causes.

**Prognostic indicators (also called "markers")** characteristics of breast cancer used to predict the likelihood of recurrence or spread.

**Progression** The continuing growth of the cancer.

**Prosthesis** An artificial part designed and fitted to overcome a defect in the body. A breast prosthesis is padding that fits within the bra to give the shape of breast tissue.

**Prosthetic breast reconstruction** Creation of a breast shape using an artificial breast.

**Protocol** A detailed program of treatment.

Related Topics

**pS2** A protein which may reflect ER status. People with plenty of pS2 usually have a good prognosis.

**QLQ** See **EORTC Core Quality of Life Questionnaire (QLQ)**.

**Quadrantectomy** removal of a sector of the breast (see Wide Local Excision).

**Quality of life** The individual's overall appraisal of their situation and subjective sense of well-being. Quality of life encompasses symptoms of disease, side-effects of treatment, relationships, how well you get on at work and play and how you cope with daily life.

**Rad** An old unit of radiation dose now superseded by the Gray. 1 Gray = 100 rads.

**Radiation oncologist** A doctor who specialises in treating cancer with radiation. Also known as a radiotherapist.

**Radiation therapy** uses high energy x-rays to kill any cancer cells left behind (adjuvant radiotherapy) after surgery. It can treat cancer without the routine use of surgery (definitive radiotherapy).

**Radical (Halsted or standard) mastectomy** an obsolete surgical procedure in which the entire breast, the chest muscles underneath and the lymph nodes in the axilla were removed.

**Radiographer** A technician who gives radiotherapy prescribed by a radiation oncologist.

**Radiologist** a doctor who specialises in identifying abnormalities and diseases – including breast cancer using X-rays.

**Radiotherapy** The use of radiation, usually x-rays or gamma rays, to kill tumour cells.

**Reconstructive mammoplasty** a surgical procedure (plastic surgery) to recreate the contours of a lost breast by means of an artificial implant placed under the skin or by transplanting a woman's own tissue from another part of her body.

**Rectus flap reconstruction** Breast reconstruction using skin and fat from the abdomen carried on the rectus abdominis muscle, which runs down the middle of your abdomen. Also known as TRAM - transverse rectus abdominis myocutaneous flap.

**Recurrence** return of cancer growth either at the original site (a "local" recurrence) or as metastases (secondaries) in other parts of the body.

**Relapse** Recurrence of disease after an initial response to treatment.

Related Topics

**Remission** A reduction or disappearance of the symptoms of cancer. It can be partial or complete.

**Response to therapy - complete response** The disappearance of all detectable cancer for a minimum of one month. Also known as remission.

**Response to therapy - disease progression** Continued growth of the cancer.

**Response to therapy - partial response (partial remission)** A reduction in size of the cancer of 50% or more.

**Response to therapy - stable disease.** No change in the cancer.

**Scan** The imaging of an organ or part of the body using tracer amounts of radioactive chemicals e.g. Bone scan, ultrasound or liver scan.

**Scleroderma** A disease involving tightening of the skin and of the lining of the oesophagus.

**Secondary reconstruction** Reconstruction of the breast carried out some time after the original mastectomy.

**Secondary tumour** A deposit of breast cancer away from the breast (such as in the lung, bone or lymph node). **See metastasis.**

**Segmental resection (local excision, wide excision, lumpectomy)** surgical removal of a cancer along with some surrounding normal tissue.

**Segmentectomy** The excision of an entire segment of the breast.

**Simulator** A machine which closely resembles a linear accelerator which allows the necessary calculations to be made before starting treatment.

**Simulator** A machine which allows a radiation oncologist to calculate the correct dose and position of the radiotherapy.

**Small cell carcinoma** See [non-comedo carcinoma](#).

**Soft tissue reconstruction** A method of breast reconstruction using the patient's own tissue, transferred from another part of the body.

**Sonographer** A technician trained in performing ultrasounds.

**Specimen X-ray** An X-ray of a surgically removed specimen to confirm that a mammographically

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detected cancer has been removed.

**Staging** Refers to the allocation of categories (0, I, II, III, IV) to groupings of tumours defined by internationally-agreed criteria. Staging helps determine treatment and prognosis.

**Subcutaneous mastectomy** An operation in which the tissue of the breast is removed but the skin and nipple are not.

**Support group** A group of people you can turn to for emotional support. The group may also provide practical help, information, guidance and feedback about your stressful experiences and ways of coping.

**Surgical oncologist** A surgeon who specialises in the care of people with cancer.

**Tamoxifen** an antiestrogenic drug which blocks the growth of breast cancer tumours whose cells depend on oestrogen to divide.

**Telangiectasia** Small dilated blood vessels which appear in areas which have been heavily irradiated.

**Tissue expansion** Creation of a breast shape using an inflatable envelope placed under the skin and muscle. It is gradually expanded over several weeks by repeated injections of salt water.

**Total (or simple) mastectomy** Surgery to remove the entire breast, including the nipple and areola but not the axillary lymph nodes or chest muscles.

**Toxicity** Side-effects which are due to treatment.

**Transverse rectus abdominis myocutaneous flap (TRAM)** See rectus flap reconstruction.

**Treatment failure** The inability of the treatment to halt the growth or spread of the cancer.

**Tubular carcinoma** A very well differentiated carcinoma seen increasingly as a result of mammographic screening.

**Tumour** An abnormal growth of tissue. It may be localised (benign) or invade nearby tissues (malignant) or distant tissues (metastatic).

**Tumour suppressor gene** A gene which usually prevents cancers growing. When it is not functioning normally, tumours can grow. Examples include p53 in breast cancer, RB protein in retinoblastoma and possibly BRCA1 in breast cancer. Also known as an anti- oncogene.

Related Topics

**Ultrasonography (ultrasound)** a technique using high-frequency sound waves for imaging the contents of the breast or other parts of the body. Echoes are converted to photo images that can be seen on a TV monitor or film as a "sonogram".

**Vascular infiltration** Invasion by cancer cells of lymphatics or veins. It is a sign that the tumour is likely to spread.

**Wide Local Excision** This is a more appropriate term for the removal of breast cancer with a surrounding rim of normal tissue see **Lumpectomy**. Other terms, CLE (Complete Local Excision); Quadrantectomy, Partial Mastectomy, Tylectomy, are essentially the same thing.

**X-rays** low energy radiation which is used, at very low doses, to detect abnormalities and cancer (e.g. mammography) in radiation therapy, high energy radiations destroy cancer cells.

Related Topics