**A to Z of Medical Terms Used in Relation to Prostate Cancer**

**Active monitoring.** This term can be used to describe both active surveillance and watchful waiting. See active surveillance and watchful waiting.

**Active surveillance**. A way of monitoring prostate cancer with regular tests, rather than treating it right away. The aim is to avoid or delay unnecessary treatment in men with less aggressive cancer. Tests include PSA tests, digital rectal examinations (DRE), MRIs and repeat biopsies. These tests check for any changes that suggest that the cancer may have grown, and treatment can then be offered at an earlier stage. See also watchful waiting.

**Adenocarcinoma.** A cancer that occurs in the cells of a gland, such as the prostate gland. The majority of prostate cancers are adenocarcinomas. See also carcinoma.

**Adjuvant therapy** Treatment given in addition to the main treatment to increase the likelihood of successfully controlling the cancer. For example, hormone therapy given at the same time as radiotherapy. See also neoadjuvant.

**Advanced prostate cancer**. Prostate cancer that has spread outside the prostate gland to other parts of the body, such as the bones or lymph nodes.

**Aggressive**. This word may be used to describe a cancer that is more likely to develop and spread quickly. See also Gleason score.

**Alpha-blockers**. Drugs that can be used to help treat benign prostatic enlargement (BPE). They relax the muscles around the neck of the bladder and in the prostate, making it easier to pass urine.

**Anesthetic**. Medicine which numbs an area of the body (local anesthetic) or puts you to sleep (general anesthetic) so that you can’t feel anything during treatment.

**Androgens**. Hormones that are responsible for male characteristics. The male sex hormone called testosterone is an androgen. See also hormones and testosterone.

**Anti-androgens**. Hormone therapy drugs that stop testosterone from reaching the prostate cancer cells. Without testosterone the cancer cells are not able to grow.

**Anus**. Opening at the end of the back passage (rectum) to the outside of the body.

**Atypical small acinar proliferation (ASAP)**. The term used when your prostate tissue shows signs of prostate cancer but there is not enough evidence to say for certain whether you have prostate cancer or not. It is found by looking at prostate tissue under the microscope. If you are told you have ASAP, you may need to have another biopsy so that the pathologist can take another look at the cells in your prostate.

**Benign** This word is used to describe a tumor that is not cancerous. See also tumor.

**Benign prostatic enlargement (BPE)**. A non-cancerous enlargement of the prostate. It is a common condition that mainly affects men over the age of 50. Also known as benign prostatic hyperplasia (BPH).

**Biopsy**. The removal of small samples of tissue to be looked at under a microscope to check for signs of cancer. A biopsy of the prostate gland may be used to help diagnose prostate cancer.

**Biopsy core**. A sample of tissue taken during a biopsy. See also biopsy.

**Bisphosphonates**. A group of drugs which may be taken by men with prostate cancer that has spread to the bones and is causing pain. They do not treat the cancer but may help with symptoms.

**Bladder**. A sac made of muscle which collects and stores urine before it is passed out of the body. See diagram on last page.

**Bladder neck incision**. A procedure to help improve the flow of urine and relieve urinary symptoms by making small cuts in the neck of the bladder.

**Bone marrow**. Soft tissue found inside the bones that makes red blood cells, white blood cells and platelets. Chemotherapy treatment for prostate cancer affects how well your bone marrow works.

**Bone scan.**  A scan of the body, similar to an X-ray, which uses a radioactive dye to highlight the bones and find any areas of damage. A bone scan may be used to find out whether prostate cancer has spread to the bones.

**Brachytherapy**. A type of internal radiotherapy for treating localized prostate cancer. This uses either radioactive seeds which are implanted permanently into the prostate gland where they give off a low dose of radiation, or a temporary source of high dose radiation.

**Cancer**. A condition where cells in the body grow in an abnormal or uncontrolled way to form a tumor. These cells may spread to surrounding tissue and other parts of the body. See also carcinoma and adenocarcinoma.

**Carcinoma**. Cancer which begins in the tissues that cover the outside and line the inside of an organ. Carcinomas are the most common type of cancer. See also adenocarcinoma.

**Catheter (urinary).** A thin tube that is used to drain urine from the bladder out of the body. This can be a tube through the penis (urethral catheter), or through the abdomen (suprapubic catheter).

**Cells.**  The basic building blocks which make up every part of the body. Cells normally multiply in a controlled way. Cancer occurs when cells start multiplying in an uncontrolled way, forming a tumor.

**Chemotherapy**. Chemotherapy uses anti-cancer drugs to kill cancer cells. It is used to treat prostate cancer that has spread outside the prostate gland and is no longer responding to hormone therapy. Chemotherapy is used to help control symptoms of prostate cancer and not to cure it.

**Clinical trial**. A medical research study involving people, who are always volunteers. Trials may investigate new drugs and combinations of drugs, as well as new technology and procedures.

**Combined androgen blockade**. A form of hormone therapy that uses both an LHRH agonist and an anti-androgen to treat prostate cancer. Also called maximal androgen blockade or complete androgen blockade. See also LHRH agonists and anti-androgens.

**Complementary therapy**. Therapy which can be used alongside medical care. Examples include acupuncture, massage and making changes to your lifestyle and diet. Some people find these therapies help them to cope with cancer symptoms and side effects such as tiredness.

**Computerized tomography (CT) scan**. A scan that uses a computer linked to an X-ray machine to take a series of images of the body. You may have a CT scan to find out whether the cancer has spread outside the prostate.

**Cryotherapy**. A treatment that uses freezing and thawing to kill the cancer cells in the prostate gland. It can be used to treat prostate cancer that has come back after treatment with radiotherapy or brachytherapy. It is also sometimes offered as a first treatment for prostate cancer. It may be available as part of a clinical trial. Also known as cryosurgery or cryoablation.

**Cystitis**. Inflammation of the bladder that causes a burning sensation when you pass urine, have difficulty passing urine, or the need to pass urine more often. Radiation cystitis can be a side effect of radiotherapy.

**Cytotoxic drugs.** Medicines used in chemotherapy to kill prostate cancer cells, wherever they are in the body. See also chemotherapy.

**Diagnosis.** Identification of a health problem or condition.

**Diarrhea**. Passing frequent, loose or watery stools (feces or poo) from the bowel. See also feces.

**Digital rectal examination (DRE)**. A physical examination in which a doctor or nurse feels the prostate gland for lumps with a gloved, lubricated finger through the back passage (rectum). The DRE is used to help diagnose prostate problems and prostate cancer.

**Dihydrotestosterone (DHT**). A potent androgen which is synthesized from testosterone in the prostate gland and allows for prostate cancer cells to grow faster. See also testosterone.

**Enlarged prostate**. See benign prostatic enlargement.

**Erectile dysfunction (ED)**. Difficulty getting or keeping an erection. Erectile dysfunction has many possible causes. It can be a side effect of some treatments for prostate cancer. Also known as impotence.

**Estrogen** A female sex hormone that may be used as a type of hormone therapy for men with advanced prostate cancer.

**External beam radiotherapy**. Radiotherapy using high energy X-ray beams directed at the prostate gland from outside the body. This type of treatment may be used to treat localized or locally advanced prostate cancer or to ease symptoms from prostate cancer that has spread to other parts of the body.

**Fecal incontinence**. Problems controlling bowel movements which lead to stools (feces or poo) leaking from the rectum. Also known as bowel incontinence. See also feces.

**Feces**. Waste matter that is passed out of the body from the rectum. Also known as stools or bowel movement.

**Fatigue**. Extreme tiredness or exhaustion which can interfere with everyday life. This can be a side effect of treatments for prostate cancer, particularly hormone therapy.

**Fistula**. An abnormal opening between two parts of the body that may be caused by injury or infection. This is an uncommon complication of some treatments for prostate cancer, where a hole forms between the rectum and the tube that carries urine through the penis (urethra).

**Flare**. When cancer grows more quickly for a short time after treatment is started because of a temporary rise in the level of testosterone. This can be caused by the first injection of an LHRH agonist. May also be called a tumor flare.

**Fraction**. A single session of a course of radiotherapy treatment. See also radiotherapy.

**Frequency**. The frequent need to pass urine. This can be a symptom of a prostate problem.

**General practitioner (GP)**. A doctor who deals with a range of medical problems in people of all ages. Also known as a family doctor.

**Genes**. The biological information that is inherited from your parents. Genes control how the body grows and works. See also genetics.

**Genetics**. A condition may be described as genetic if it is caused by a faulty gene being been passed on in a family. Researchers are looking into the role of genes in the development of prostate cancer. You are two and a half times more likely to develop prostate cancer if your father or brother has it. See also genes.

**Gleason grade**. A grading system which shows how aggressive prostate cancer is likely to be. Cancer patterns in a prostate biopsy sample are given a grade. Non-aggressive cells are grade 1 and the most aggressive are grade 5. However, today doctors usually only give a Gleason grade of 3 or more.

**Gleason score**. Your Gleason score is worked out by adding together the grades of the two most common patterns with the highest grade in the biopsy samples. The higher the Gleason score, the more aggressive the cancer and the more likely it is to spread. Gleason scores run from 2 to 10. However, today doctors usually only give a Gleason grade of 3 or more, so your Gleason score will normally be between 6 and 10. See also Gleason grade.

**Gonadotrophin-releasing hormone (GnRH) antagonist**. A type of hormone therapy that is given by injections in the abdomen. It blocks the message from the brain that tells the testicles to produce testosterone.

**Gynecomastia**. Swelling of the breast area. This can be a side effect of some types of hormone therapy.

**Hesitancy**. The need to wait a while before being able to pass urine, even when the bladder is full.

**High intensity focused ultrasound (HIFU**). A treatment that uses high frequency ultrasound waves to heat and destroy cancer cells. HIFU is a relatively new treatment for prostate cancer and you may be offered it as part of a clinical trial.

**Holmium laser enucleation of the prostate (HoLEP**). A type of surgery that may be used to treat benign prostatic enlargement (BPE). A laser is used to remove tissue from the prostate gland that is pressing on the urethra. Also known as laser prostatectomy. See also benign prostate enlargement (BPE).

**Hormone refractory / hormone resistant**. Prostate cancer that is no longer responding as well to treatment with any type of hormone therapy and has started to grow. You may also hear this called castrate resistant.

**Hormones**. Chemicals found in the body that help control some of the body’s functions. The male hormone called testosterone can cause prostate cancer to grow more quickly. See also androgens and testosterone.

**Hormone therapy**. Hormone therapy controls prostate cancer by stopping testosterone from reaching prostate cancer cells. There are different types of hormone therapy, which can be given by injection, implants, tablets or surgery. Hormone therapy can keep the cancer under control for many months or years before you may need to consider other treatment options. It can also be used with other treatments to help make them more effective.

**Hospice**. Hospices provide a range of services to men living with advanced prostate cancer and their families. Specialist doctors and nurses provide treatment to manage symptoms as well as emotional, spiritual and practical support. Hospices provide day services, a short stay to improve control of symptoms, and also a place of care at the end of life. Hospices may also have nurses who are able to visit you in your home. See also palliative care.

**Hot flushes**. A common side effect of hormone therapy. Hot flushes give a sudden feeling of warmth. They can affect each man differently, from feeling overheated for a few seconds to hours of sweating and discomfort.

**Image guided radiotherapy (IGRT)**. The term used to describe using images of the prostate to guide radiotherapy. This uses either regular computerized tomography (CT) scans, or seeds (known as fiducial markers) which are implanted into the gland and can be seen on X-rays and used as a marker. See also computerized tomography (CT) scan.

**Impotence**. See erectile dysfunction.

**Incontinence**. See fecal incontinence and urinary incontinence.

**Intensity-modulated radiotherapy (IMRT)**. A type of 3D conformal radiotherapy that gives different doses of radiation to different parts of the area being treated. This can help to reduce the dose given to healthy tissues surrounding the prostate gland and the risk of side effects. See also 3D conformal radiotherapy.

**Laparoscopic prostatectomy**. Surgery to remove the prostate gland through several small cuts in the abdomen. Also known as keyhole surgery. See also radical prostatectomy and robotic prostatectomy.

**LHRH agonists**. Luteinizing hormone-releasing hormone (LHRH) agonists are a type of hormone therapy which stops the body from producing testosterone. They are given by injection or implant. See also testosterone.

**Libido**. The desire to have sex. Hormone therapy can reduce your libido.

**Localized prostate cancer**. Prostate cancer that is contained within the prostate gland.

**Locally advanced prostate cancer**. Prostate cancer that has spread to the area just outside the prostate gland, but has not spread to other parts of the body.

**Lower urinary tract symptoms (LUTS)**. Problems passing urine, including leaking urine, needing to pass urine frequently or urgently, and needing to get up in the night to pass urine. LUTS are common in older men and have several possible causes. See also frequency, hesitancy, urgency, urinary incontinence and nocturia.

**Lymphatic system**. This is part of the body’s immune system which helps the body fight infection. The lymphatic system is made up of a network of vessels, which carry a fluid called lymph, and lymph nodes. See also lymph nodes.

**Lymph nodes**. These are small bean-shaped glands which are part of the lymphatic system. They are clustered in various sites around the body including the groin and pelvis. The lymph nodes in the groin and pelvic area are near the prostate gland and are a common place for prostate cancer to spread to. Lymph nodes are sometimes called lymph glands. See also lymphatic system.

**Lymphedema**. A swelling in part of the body resulting from the build-up of lymph fluid. Cancer-related lymphedema may be caused by a blockage of the lymphatic system. This blockage may be caused by either the cancer itself or some treatments for cancer, for example surgery or radiotherapy. See also lymphatic system.

**Magnetic resonance imaging (MRI) scan**. An imaging technique that uses magnets to create a detailed picture of the prostate and the surrounding tissues. An MRI scan may be used to find out whether the cancer has spread outside the prostate or to determine the size and location of any tumors.

**Malignant**. This word is used to describe a tumor that is cancerous and has the ability to spread. See also tumor.

**Maximal androgen blockade**. See combined androgen blockade.

**Metastasis**. Prostate cancer cells which have spread from the prostate gland and moved to other parts of the body. Cancers that have spread may be called metastases, or secondary cancers. A cancer that has spread is said to have metastasized.

**Metastatic spinal cord compression**. Pressure on the spinal cord. This is a rare complication in advanced prostate cancer where the cancer has spread to the spine (spinal metastases). The cancer presses on nerves in the spine causing symptoms.

**Morbidity**. Relating to disease or the side effects of a treatment.

**Mortality rate**. The number of people who die from a disease.

**Multi-disciplinary team (MDT)**. The team of health professionals or specialists involved in your care. The team may include a specialist nurse, a consultant oncologist and a consultant urologist. See also clinical nurse specialist, oncologist, and urologist.

**Neoadjuvant**. Treatment given before the main treatment to increase the likelihood of it being successful. For example, hormone therapy may be given before brachytherapy to shrink the prostate and make radiotherapy more successful. See also adjuvant therapy.

**Nerve-sparing**. Treatment that aims to avoid damaging nerves. For example, during surgery to remove the prostate, the surgeon may try to avoid damaging the nerves that help control erections.

**Nocturia**. The need to get up at night to pass urine. This can be a symptom of a prostate problem or a side effect of some of the treatments for prostate cancer.

**Oncologist**. A doctor who specializes in cancer treatments other than surgery, for example radiotherapy or chemotherapy. There will usually be an oncologist in your multi-disciplinary team. See also multi-disciplinary team (MDT).

**Oncology**. The specialty of the diagnosis and treatment of cancer.

**Orchidectomy**. A type of hormone therapy for prostate cancer which involves an operation to remove the testicles or the parts of the testicles that make testosterone.

**Osteoporosis**. A condition in which the bones become weaker. This can have many causes. In prostate cancer it is a possible side effect of some types of hormone therapy. Also called bone thinning.

**Palliative care**. The aim of palliative care is to control pain and other symptoms and to meet a person’s emotional, social and spiritual needs. Palliative care can be provided at any stage of advanced prostate cancer, and is not just for men in the final stages of life. Men with advanced prostate cancer may have palliative care for many months or years.

**Palliative radiotherapy**. Radiotherapy given to slow down the growth of cancer and control symptoms in men with advanced prostate cancer, rather than trying to get rid of the cancer.

**Pathologist**. A doctor who specializes in studying cells and tissues under the microscope to identify diseases. A pathologist will examine biopsy samples to diagnose prostate cancer cells.

**Pelvis**. The space surrounded by the hip bones where the bladder, lower part of the bowel and the prostate gland are located.

**Penile rehabilitation**. Treatment for erectile dysfunction which aims to improve sexual function after treatments for prostate cancer. Options include tablets, injections and vacuum pumps which can be started in the weeks and months after treatment. See erectile dysfunction.

**Perineum**. The area between the scrotum and the back passage (rectum). See diagram on last page.

**Proctitis** Inflammation of the lining of the bowel. This can be caused by radiotherapy for prostate cancer and may lead to symptoms such as bleeding from the back passage, difficulty emptying the bowels or a feeling of needing to go to the toilet to empty the bowels but finding you are unable to.

**Prognosis**. The expected outcome of a treatment. Often used to describe life expectancy.

**Prostatectomy**. See radical prostatectomy.

**Prostate gland**. Only men have a prostate gland. The prostate gland’s main job is to make most of the fluid that carries sperm, called semen. It lies underneath the bladder and surrounds the tube that men pass urine and semen through (urethra). See diagram on last page.

**Prostate specific antigen (PSA)**. A protein that is produced by the prostate gland. It is normal for all men to have a small amount of PSA in their blood. A raised PSA level can be due to a variety of reasons including age, infection, benign prostatic enlargement (BPE) and prostate cancer.

**Prostatic intraepithelial neoplasia (PIN)**. Changes in the cells that line the prostate gland. It is found by looking at prostate tissue under the microscope. PIN is not the same as prostate cancer and does not cause any symptoms. However, some research suggests that finding PIN in the prostate gland may mean that there is a greater chance of finding prostate cancer cells in the future.

**Prostatitis**. Inflammation or infection of the prostate gland.

**Proton Beam Radiation.** A type of external beam radiation, which does not pass through the body.

**PSA density**. Your PSA level in relation to the volume of your prostate gland. See also prostate specific antigen (PSA) and prostate gland.

**PSA doubling time**. The amount of time it takes for your PSA score to double. The shorter the doubling time, the more likely the cancer is growing at an accelerated rate.

**PSA test**. A test that measures the amount of PSA in the blood. It can be used alongside other tests to help diagnose prostate problems and to monitor prostate cancer growth and the effectiveness of treatment. See also prostate specific antigen (PSA).

**PSA velocity**. The rate at which your PSA level rises over time. This can give an indication of how quickly prostate cancer is likely to grow in the future.

**Radiation cystitis**. See cystitis.

**Radical prostatectomy**. Surgery to remove the whole prostate gland and seminal vesicles. See also laparoscopic prostatectomy and robotic prostatectomy.

**Radiographer**. Someone who takes images, for example with X-rays, to diagnose conditions (diagnostic radiographer), or provides radiotherapy to treat cancer (therapeutic radiographer). See also radiotherapy.

**Radiologist**. A doctor who specializes in diagnosing medical conditions using X-rays and scans.

**Radiotherapy**. The use of high energy radiation to destroy cancer cells. There are different types of radiotherapy, including external beam radiotherapy and brachytherapy.

**Rectum**. The last part of the bowel before the anus. See diagram on last page.

**Recurrent prostate cancer**. Prostate cancer that has returned after treatment.

**Remission**. Someone who has had cancer is said to be in remission when tests no longer show any signs of cancer.

**Risk factor**. Something that may make a person more likely to develop a disease. For example, the risk of getting prostate cancer increases with age, so age is a risk factor for prostate cancer.

**Robotic prostatectomy**. Laparoscopic prostatectomy (keyhole surgery) which is carried out with the help of a robot. See laparoscopic prostatectomy and radical prostatectomy.

**Salvage therapy/Second line treatment**. A treatment aimed at getting rid of the cancer if it has returned after the first treatment.

**Saturation biopsy**. A type of biopsy which involves taking many more tissue samples from different areas of the prostate gland than a normal biopsy. You may have a saturation biopsy if previous biopsy results are normal but cancer is still suspected. Also known as a template biopsy. See also biopsy.

**Screening**. Testing the general population to find out if people have a disease at an early stage, before symptoms develop.

**Scrotum**. The pouch of skin that contains the testicles. See diagram on last page.

**Secondary cancer**. See metastasis.

**Self-management**. Being actively involved in looking after your own health and well-being. Examples include changing your diet and taking regular exercise which may help manage the impact of prostate cancer and its treatment.

**Seminal vesicles**. The two glands situated behind the prostate gland and bladder which produce some of the fluid in semen. See diagram on last page.

**Spinal cord compression**. See metastatic spinal cord compression.

**Sphincter (urinary).** The circular muscle that surrounds the tube which urine is passed through (urethra) and controls the flow of urine from the bladder.

**Staging**. A way of describing how far cancer has spread. The most common method used in prostate cancer is the TNM (Tumor-Nodes-Metastases) system.

**Steroids**. Steroids are a type of drug which can be used as treatment for prostate cancer when hormone therapy is no longer working well. They can reduce swelling, inflammation and pain and may improve appetite. They are also used alongside other treatments such as chemotherapy. Steroids can be given as tablets or injections.

**Stricture**. A narrowing of a tube in the body. A stricture in the tube that carries urine from the bladder out of the body (urethra) can be caused by inflammation and some treatments for prostate cancer.

**Template biopsy**. See saturation biopsy.

**Testicles / testes**. Part of a man’s reproductive system. The testicles are contained in the scrotum and produce testosterone and sperm. See diagram on last page.

**Testosterone**. A male sex hormone. Testosterone can make prostate cancer cells grow faster. See also androgens and hormones.

**Tissue**. A group of cells that perform a specific job. For example, prostate tissue.

**Trans-rectal ultrasound (TRUS)**. A scan that uses sound waves to make an image of the prostate gland using a probe inserted into the rectum. TRUS can be used to guide a prostate biopsy.

**Trans-urethral resection of the prostate (TURP)**. Surgery to remove prostate tissue that is pressing on the tube which you pass urine through (urethra). TURP may be used to treat benign prostatic enlargement (BPE).

**Tumor** . Abnormal growth of cells. Tumors can be benign or malignant. See benign and malignant.

**Urethra (male)**. The tube that carries urine from the bladder, and semen from the reproductive system, through the penis and out of the body. The urethra passes right through the prostate gland. See diagram on last page.

**Urgency**. A sudden and immediate need to go to the toilet. This can be an urgency to pass urine which can be a symptom of prostate problems, or an urgency to open the bowels, which can be a side effect of radiotherapy.

**Urinary incontinence**. Problems controlling the passing of urine. This can range from leaking a few drops of urine when you cough or sneeze to being unable to control when you pass urine at all.

**Urodynamics**. A test to measure how well the bladder is working. This is sometimes used to help diagnose benign prostatic enlargement (BPE).

**Urologist**. A doctor who specializes in the urinary and reproductive systems. Urologists are also surgeons.

**Urology**. The study and treatment of diseases of the urinary system, which includes the prostate gland.

**Watchful waiting**. A way of monitoring prostate cancer with the aim of avoiding treatment unless symptoms develop. This is because prostate cancer is often so slow growing that it might not cause you any problems in your life time. If symptoms develop, treatment will be started with the aim of controlling the growth of the cancer rather than getting rid of it. Watchful waiting may be suitable for men with other health problems or who may be less able to cope with treatment. See also active surveillance.

**3D conformal radiotherapy**. A type of external beam radiotherapy that directs the radiotherapy beams to fit the size and shape of the prostate. This reduces the risk of side effects.

**5-alpha reductase inhibitors**. Drugs that are used to treat benign prostatic enlargement (BPE) by shrinking the prostate or stopping it from getting any bigger.

