

Every year in the UK over 50,000 men will be diagnosed with a male-specific cancer: prostate, testicular or penile.

This leaflet offers information on the three cancers – from signs and symptoms, risk factors and causes through to tests to determine a diagnosis and treatment options. A quick, simple visit to the GP to discuss worrying signs and symptoms can make a huge difference. The earlier the diagnosis and the sooner treatment can begin, the better the chance of survival.

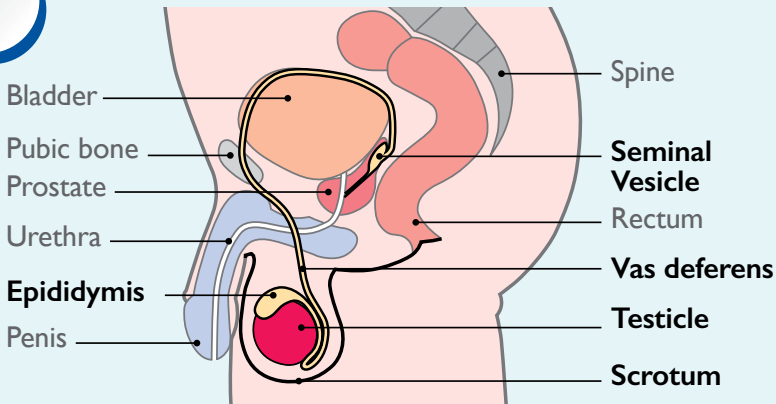
www.orchid-cancer.org.uk

ORCHID 
FIGHTING MALE CANCER

Testicular Cancer

Although rare, testicular cancer most commonly affects men between the ages of 15-45 with around 2,400 men being diagnosed each year in the UK.

Fortunately, testicular cancer is highly treatable and the majority of men will be cured. Research shows that 98% of men diagnosed with testicular cancer will be alive 10 years after treatment. For more information on testicular cancer please see our website yourprivates.org.uk



The testicles are located inside the scrotum; the loose bag of skin that hangs below the penis. From the start of puberty, each testicle produces sperm. The testicles also produce 90% of the male sex hormone testosterone.

What is testicular cancer?

Testicular cancer occurs when normal, healthy cells, which are carefully regulated in the body, begin to reproduce uncontrollably in the testicles. It usually occurs in one testicle but can occur in both.

What are the different types of testicular cancer?

Around 95% of testicular tumours arise from the cells which line the testicles, and are called germ cell tumours. The most common of these is called seminoma and is made up of a single type of cell which is slow growing and less likely to spread to other parts of the body. It is more common in men over the age of 30. The remaining types are often grouped together and known as non-seminoma.

Self-examination and possible signs of testicular cancer

It is important for men to be familiar with the general structure of the testicle (see diagram on page 6) and what is normal for them. One testicle may be slightly bigger than the other and one may hang down slightly lower but they should both be roughly the same size and shape and the surface free of any lumps. A simple, quick testicular self-examination can be performed on a regular basis, ideally after a warm bath or shower when the scrotum and the testicles are relaxed.

Men should be aware of any changes and in particular the following:

- ▶ lumps attached directly to the testicle(s) (usually painless)
- ▶ swelling or enlargement of a testicle
- ▶ an increase in firmness
- ▶ pain or discomfort in the testicle or scrotum
- ▶ a sudden collection of fluid in the scrotum
- ▶ a feeling of heaviness in the scrotum
- ▶ a dull ache in the lower part of the abdomen, the scrotum or groin
- ▶ rarely; pain in the back, not relieved by painkillers due to enlarged lymph glands (see next page)
- ▶ rarely; breast and nipple tenderness (gynaecomastia) associated with hormonal changes caused by some types of testicular cancer

If a man finds something that doesn't feel normal it is vital that he sees his GP to rule out testicular cancer. Around 96% of abnormalities found in the scrotum will not be testicular cancer and non-cancerous conditions can usually be easily identified. A pain in the testicle doesn't necessarily mean cancer; there can be many causes.

For more information on non-cancerous conditions please see yourprivates.org.uk

Testicular Self-Examination (TSE)

This is the easiest way to identify any potential testicular problems. It only takes a few minutes to perform and gives men a good excuse for feeling their balls. It's best performed monthly after a bath or shower when the scrotum will be warm, relaxed and easy to touch.

Men should:

1. Check each testicle separately using one or both hands (**Figure 1**)
2. Roll each testicle between the thumb and fingers to check that the surface is free of lumps or bumps
3. Get to know their balls; their size, texture and anatomy. Identify the epididymis or sperm collecting tube, often mistaken for an abnormal lump that runs behind each testicle (**Figure 2**)

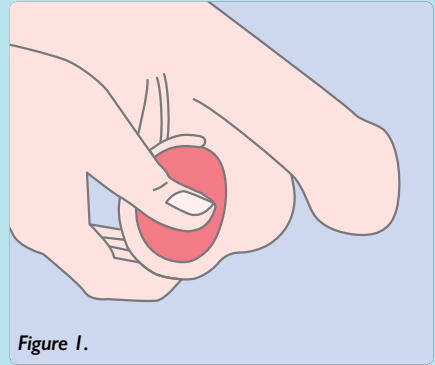


Figure 1.

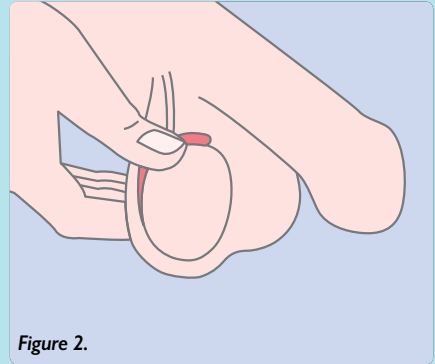


Figure 2.

What are the likely causes of testicular cancer?

There is no single known cause of testicular cancer. However, research studies have shown the following are risk factors:

- ▶ An undescended testicle (cryptorchidism). Around 10% of men diagnosed with testicular cancer will have had a history of this
- ▶ A brother or father who has had testicular cancer
- ▶ A previous history of testicular cancer

- ▶ Intratubular germ cell neoplasia (IGCN) are abnormal cells in the testicle. If left untreated, they may develop into cancer in about 50% of men
- ▶ Taller than average men
- ▶ Men whose testicles are not functioning normally (causing infertility, poor sperm production)
- ▶ Men with HIV are more likely to develop testicular cancer

Having a vasectomy, experiencing a single injury to the testicles or being sexually active does not cause testicular cancer.

How is testicular cancer diagnosed?

An ultrasound scan of the testicles is extremely accurate at identifying testicular abnormalities and if testicular cancer is suspected men will be referred to a hospital specialist called a urologist for assessment. Further investigations such as a CT scan and blood tests will be performed to check to see if other areas of the body have been affected.

Treatment will depend on whether testicular cancer is localised to the testicle or has spread to lymph nodes (see below) in the abdomen or chest.

What are lymph nodes?

The human body has a natural drainage system; the lymphatic system which is responsible for getting rid of unwanted substances such as bacteria or old blood cells.

Lymph nodes are filters situated along this system. Their job is to filter out and trap these unwanted substances, and to make sure they are safely eliminated from the body in a fluid called lymph.

Sometimes cancer cells can travel along the lymphatic system and reach other areas of the body.

Treatment options: what are they?

Removing the affected testicle by surgery (orchidectomy) is the standard treatment for testicular cancer. It will not adversely affect someone's sexual performance or fertility providing that the other testicle is healthy and a prosthetic - or false testicle - can be inserted in place of the removed one.

After surgery no further treatment may be needed, providing the cancer has not spread. However, to reduce any possibility of the cancer returning in the future it may be recommended that a short course of chemotherapy should be given.

If there is obvious evidence that the cancer has spread then a longer course of chemotherapy will be recommended.

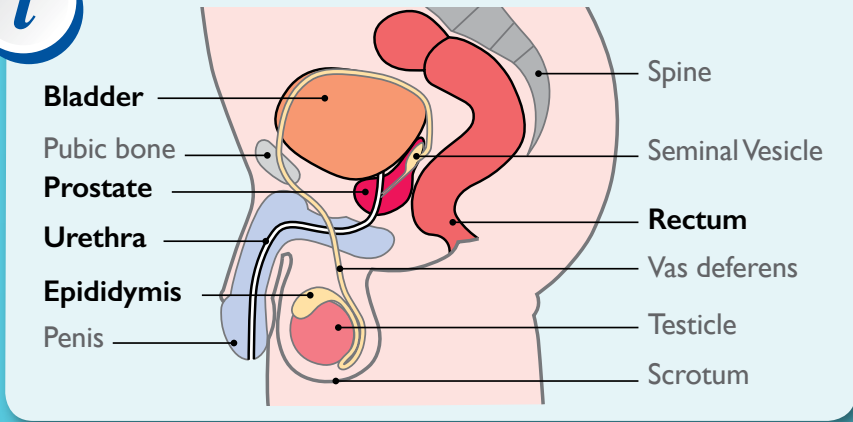
Once treatment has stopped, men will be monitored on a regular basis for at least five years.

Sex and treatment

Whether someone decides to remain sexually active during cancer treatment or not is entirely a personal choice and the type of treatment will affect men in different ways. Men will be able to talk to their healthcare team if they have any concerns.

Prostate Cancer

Every year over 47,000 men in the UK will be diagnosed with prostate cancer. It is the most common cancer in men and an estimated 1 in 8 men will develop the condition in the UK.



The prostate gland is located just below the bladder. It is only found in men and is responsible for helping to produce the fluid found in semen. The gland is tiny at birth but grows in size after puberty due to rising levels of the male hormone testosterone.

What is prostate cancer?

Prostate cancer occurs when normal, healthy cells, which are carefully regulated in the body, begin to reproduce uncontrollably in the prostate gland. In most cases, the growth is slow and the cancer can go undetected for many years because it causes very few symptoms. In rarer cases, however, prostate cancer grows quickly and may spread to other parts of the body, such as the lymph nodes or bones.

What are the symptoms?

There is no single symptom to indicate the presence of prostate cancer. In fact, many men with early prostate cancer have no symptoms at all.

Problems with the prostate are common. Because the prostate gland surrounds the tube known as the urethra, which passes urine from the bladder to the outside of the body, any prostate disease or growth (benign or malignant) may cause problems with urination.

Symptoms of prostate cancer may include the following:

- ▶ Slow or weak flow of urine
- ▶ Urinating more frequently or urgently than usual
- ▶ Difficulty starting to urinate
- ▶ Pain or burning sensation when urinating
- ▶ Unexplained urinary infection

These symptoms can also be caused by the prostate gland obstructing the bladder due to non-cancerous prostate enlargement which can in turn affect the nerves and muscles which control urination.

- ▶ Difficulty getting or maintaining an erection or pain during ejaculation
- ▶ Impotence

These symptoms can also be caused by age, diabetes, heart or cardiovascular disease.

- ▶ Constipation, altered bowel habit

This symptom can also be caused by age, low intake of fibre and lack of exercise.

Less common symptoms include the following:

- ▶ Blood in the urine or semen

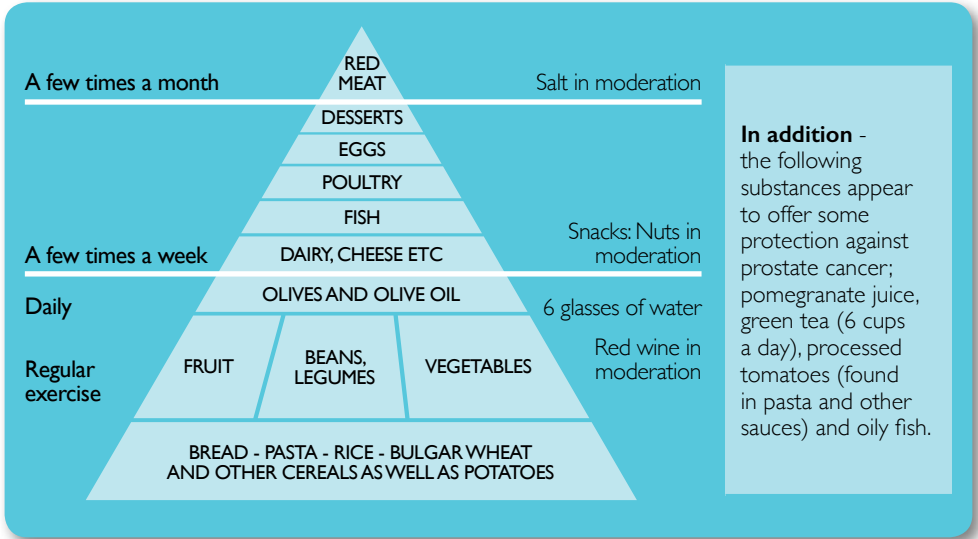
What are the likely causes of prostate cancer?

There are a number of risk factors:

- ▶ **Age.** Prostate cancer mainly affects men over the age of 50. It is rare in men under this age
- ▶ **Ethnicity.** Men of African Caribbean descent are more likely to develop prostate cancer
- ▶ **Family history of prostate cancer.** Having a brother or father with prostate cancer increases the risk compared to men with no family history of the disease. If a first degree relative was diagnosed with prostate cancer under the age of 60 the risk is higher
- ▶ **Family history of breast cancer.** The risk increases slightly in men who have a strong family history of female breast cancer and vice versa (National Cancer Institute). This is thought to be because two genes carried by both men and women (called BRCA1 and BRCA2) increase the risk of breast cancer in women and prostate cancer in men
- ▶ **Diet.** A poor diet high in saturated fats and red meat may increase the risk of developing several types of cancer including prostate cancer

Diet

A good all round diet such as the Mediterranean diet (illustrated below) combined with exercise appears to be generally beneficial to health.



How is prostate cancer diagnosed?

Two tests are commonly used for the initial investigation of prostate symptoms:

A digital rectal examination (DRE) is quick and simple to perform, and involves a GP inserting a gloved, lubricated finger into the rectum (back passage) to feel the prostate gland.

A PSA (Prostate Specific Antigen) blood test measures the level of a substance produced by the prostate which can be elevated in the presence of prostate cancer. The PSA test is not a specific

diagnostic test for prostate cancer as levels can be high in people who do not have the condition. Having a PSA test can be very reassuring if it is normal and, importantly, can help find some cancers at an early stage. Unfortunately, the PSA test does miss some prostate cancers and it can lead to unnecessary worry and further tests in people who do not have cancer. All men over the age of 50 are entitled to have a PSA blood test performed and a DRE of their prostate. If there is a strong family history or men are of direct African-Caribbean descent then they should think about consulting their GP around the age of 45.

Prostate cancer is diagnosed from samples of tissue removed from the prostate gland during a biopsy. It is now common to perform a special type of Magnetic Resonance Imaging scan (MRI) before taking biopsy samples from the prostate gland to identify and target potentially cancerous areas.

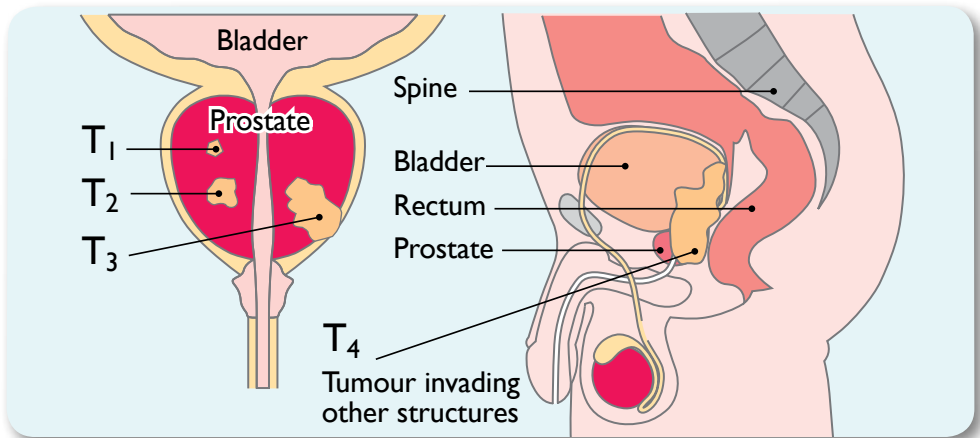
If a man is diagnosed with prostate cancer the specialist healthcare team may carry out additional investigations such as a bone scan.

The results of all these investigations and the biopsies will be used to give the cancer a stage (how far it has spread; see diagram below). This can be summarised as T stage where T stands for tumour:

Other terms such as lymph node involvement (see page 7), and spread of cancer to bones may be discussed and are referred to in letter form as N and M respectively.



- Q.** What is meant by the “grade” and “stage” of prostate cancer?
- A.** If a man is diagnosed with prostate cancer, a specialist healthcare team will need to identify the “grade” or aggressiveness of the cancer in order to determine the best course of treatment. The “grade” of cancer is determined by taking biopsies of the prostate gland and the system used to measure the grade is called the *Gleason* grading system. If the cancer is slow growing it will have a low “Gleason score”.



Treatment options: what are they?

There are a number of treatment options for prostate cancer:

- ▶ Active surveillance and “watchful waiting”
- ▶ Surgery (open, keyhole or robotic surgery)
- ▶ Radiotherapy
- ▶ Hormone therapy
- ▶ Chemotherapy

Treatment will depend on a number of factors, and every individual will be assessed carefully before any treatment decisions are made. A team of urologists, oncologists and other health professionals called a Multi Disciplinary Team (MDT) will discuss all of the available results and make a recommendation for a particular treatment(s) based on their knowledge and experience. This recommendation will then be discussed with the patient. The following tables contain a list of treatment options; when they are used and some potential side effects.

Treatment option	When it's used	Drawbacks
Active surveillance	Often used for men with low-risk or slow-growing cancers. It involves close monitoring with regular check-ups; PSA tests, DREs and usually further biopsies after a year or eighteen months. Curative treatment can be commenced if there is any sign of the cancer progressing or a patient were to change their mind and opt for treatment. Active surveillance prevents men rushing into treatment for their cancer which may cause unwanted side effects when the cancer may not progress or cause any problems for some time.	Can lead to anxiety while waiting to see if cancer will progress.
“Watchful waiting”	This is used for older men or men who may not be fit enough for a particular treatment and have no obvious symptoms.	
Surgery	Can be used when cancer remains localised. It will involve the removal of the whole prostate and seminal vesicles and occasionally lymph nodes (see page 7). There are several types of surgery including “open”, keyhole (laparoscopic) and robotic. No type of surgery has been proved to be better than the others with regard to possible side effects although recovery time will be quicker with laparoscopic or robotic surgery.	Can cause erection problems or urinary incontinence.

Treatment option	When it's used	Drawbacks
Radiotherapy	Used as an alternative to surgery. Can be either external (where an external beam is directed at the cancer) or internal (where radioactive seeds are placed into or near the cancer – this is known as “brachytherapy”). Brachytherapy is usually used if the cancer is confined to the prostate gland whereas external beam and a newer type of radiotherapy treatment Intensity Modulated Radiotherapy (IMRT) can be used to treat early spread of cancer beyond the prostate.	Can cause erection and urinary problems and occasionally minor bowel damage.
Hormone therapy	Used to slow cancer growth and reduce tumour size. Usually used when cancer has spread beyond the prostate to other organs or the bones. It works by removing or blocking the male hormone, testosterone, which encourages growth of prostate cancer. It is usually very effective at regressing and controlling prostate cancer but does not cure the disease. Also used before external beam radiotherapy for localised disease and sometimes for several years after radiotherapy if cancer has spread onto the surface of the prostate or into the seminal vesicles.	Can cause hot flushes, loss of sex drive and osteoporosis (thinning of the bones). Eventually, cells become immune and other treatments may be needed.
Chemotherapy new treatments and combination treatment.	Combinations of steroids, chemotherapy or new types of hormone therapy can be used when initial hormone therapy has failed.	Treatment will have side effects that may affect a man's quality of life.

New treatments

There are many new treatments for prostate cancer under development and these include:

New types of blood tests to identify specific substances in the body which may help identify men who are at greater risk of prostate cancer or may develop significant disease.

New types of hormone therapy and chemotherapy to treat men with more advanced prostate cancer.

Gene and immunotherapy

This treatment uses the individual's own immune system to fight cancer. Substances made by the body or made in a laboratory are used to boost, direct, or restore the body's natural defences against cancer.



Q. What are clinical trials?

A. Some people with cancer may be asked to take part in a clinical trial. These trials are an important part of the cancer research process. Individuals who take part in a clinical trial may receive the standard treatment for their cancer or be among the first to receive a new treatment. Many newer treatments are being developed to treat prostate cancer and men with more advanced disease may be asked to take part in trials to evaluate their effectiveness.

Treatment options: longer term

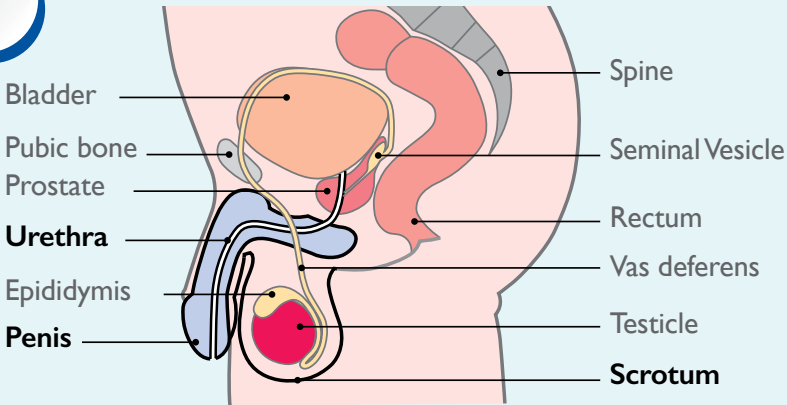
The treatment offered to each person will be regularly reviewed and may change over time. The specialist healthcare team will support people through this process.

Sex and treatment

Whether someone decides to remain sexually active during cancer treatment or not is entirely a personal choice and the type of treatment will affect men in different ways. Men may wish to talk to their specialist healthcare team if they have any concerns.

Penile Cancer

Penile cancer is a rare cancer affecting around 630 men each year. It is more common in men over the age of 50 years although younger men can be affected too.



The penis is the external male sexual organ. The main part of the penis is known as the shaft and the head of the penis is called the glans. At birth the glans is covered by a loose piece of skin, known as the foreskin which may be removed in infancy - this is known as circumcision. Inside the penis is the urethra, the tube through which urine and semen exit the body.

What is penile cancer?

Penile cancer occurs when normal, healthy cells, which are carefully regulated in the body, begin to reproduce uncontrollably. In most cases, this growth is slow.

Possible signs of penile cancer

Common signs include:

- ▶ White or red scaly patches
- ▶ Red moist patches of skin
- ▶ Change in the colour of the skin
- ▶ Skin thickening
- ▶ Growth, bump or sore

What are the likely causes of penile cancer?

There is no single known cause of penile cancer. However, research studies have shown that the following may play a role in penile cancer:

- ▶ The human papilloma virus (HPV). HPV is a very common type of virus spread by skin to skin contact and around 80% of the world's population will be exposed to it in their lifetime. Rarer types of HPV, types 16 and 18, (spread by intimate sexual contact) are linked with penile cancer; anal cancer; cervical cancer and some throat cancers. Like all viruses the body's immune system usually destroys HPV but sometimes it can lay dormant for many years before causing problems
- ▶ Penile cancer is less common in men who have had their foreskin removed (been circumcised) soon after birth

How is penile cancer diagnosed?

It can be very difficult to recognise the signs and symptoms of penile cancer. GPs may never see someone with the disease because of its rarity. Many symptoms can be mistaken for common, non-cancerous conditions.

If an initial course of treatment does not "clear up" or resolve symptoms or there is any doubt about a condition it is important that men are referred to a hospital specialist called a urologist who may request further investigations. This may include a sample of tissue (a biopsy) being taken from the penis. If penile cancer is found, men will be referred to a specialist centre or Supra-Network.



Q. What is a Supra-Network?

A. Supra-Network centres are designed to treat certain types of cancer. These centres have surgeons and nurses who are very skilled at treating penile cancer.

The specialist team will carry out various tests and investigations to determine the most effective treatment.

Treatment options: what are they?

There are three possible types of treatment available to men: surgery, radiotherapy and chemotherapy.

Surgery is the most common treatment option for penile cancer. Removing small, surface cancers that have not spread can be performed using minor surgery. Removal of part or all of the penis may be recommended if the cancer has spread to a wider area. Today it is much more common for specialist surgeons to preserve as much of the penis as possible and reconstructive surgery which may involve skin grafts can sometimes be used to restore the appearance of the penis.

Radiotherapy and chemotherapy can be used to treat more advanced penile cancer. However, chemotherapy cream may sometimes be used to treat very small, early cancers that are confined to the foreskin or end of the penis.

Photodynamic therapy (PDT) is a new type of treatment which is being tested for treating penile cancer. It uses laser, or other light sources combined with a light sensitive drug (sometimes called a photosensitising agent), to destroy abnormal cells. PDT is only available at specialist centres.



- Q.** Why might you be recommended or refused a specific treatment?
- A.** No two cases of cancer are the same. The type and extent of the cancer will vary, as will the medical history and general health of the person being treated. The specialist healthcare team (MDT) will consider all these factors before recommending a specific course of treatment. This treatment will then be discussed carefully with the individual concerned.

Specialist nurses at supra-networks can also provide support and information for patients.

Sex and treatment

The type of treatment will affect men in different ways. Access to specialist support from counsellors or therapists can be very helpful.

Resources

For further information and support on male cancer, please visit the Orchid website at www.orchid-cancer.org.uk or call **020 3745 7310** or contact the nurse helpline below.

Orchid has produced a series of leaflets and Factsheets on specific issues relating to male cancer. You may find the following helpful:

- ▶ **Testicular Cancer - all you need to know booklet**
- ▶ **Ball Basics - a quick guide to testicular health and testicular cancer**
- ▶ **Prostate Cancer and You - a quick guide to prostate cancer**
- ▶ **Penile Cancer Booklet and Information Leaflets**

Low-down, Orchid's newsletter, features the latest news and developments in male cancer including research, treatments, new services and events.

Other helpful websites include:

www.cancerhelp.org – which offers a broad range of information and support from Cancer Research UK for everyone affected by cancer:

www.macmillan.org.uk – offers information and support for everyone affected by cancer:

www.prostatecanceruk.org – Prostate Cancer UK provides support and information to people affected by prostate cancer:

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Orchid has a **Male Cancer Helpline** staffed by specialist nurses on **0808 802 0010** or email helpline@orchid-cancer.org.uk