

Prostate Introduction

What is Cancer? Cancer is a disease of the body's cells. When these cells act in an abnormal way, they grow into a lump called cancer. A malignant tumour is made up of cancer cells that can invade and destroy surrounding tissue. When these cells break away from the original (primary) cancer and spread to other organs they form a new tumour called a secondary cancer or metastasis.

What is the prostate?

The prostate is a small gland about the size of a walnut found only in men. It sits just below the bladder and surrounds the top part of the urethra (the tube that takes urine from the bladder to the penis). The prostate produces seminal fluid (that makes up semen). The growth and development of the prostate depends on the male sex hormone, testosterone produced by the testis.

It is common for the prostate to get larger as men grow older. This is called benign prostate hyperplasia (BPH). This is not cancer even though the symptoms can be similar to those of prostate cancer.

What is Prostate Cancer?

Prostate cancer is malignant tumour of the prostate gland. Early prostate cancers (also known as localised prostate cancers) are contained within the prostate. These early cancers often do not produce symptoms and may not become advanced cancer. Such cancers may not need treatment. However some prostate cancers grow and spread to the tissues around the prostate. This is called invasive prostate cancer.

There is a group of lymph nodes near the prostate which are parts of the lymphatic system. This is one of your body's natural defences against infection. Lymph nodes remove bacteria and other harmful agents. The major lymph nodes in your abdomen, pelvis, groin neck and armpit are connected via the blood to other parts of the body, such as the bones and lungs. Most types of cancer spread in this way, but treatment can often stop this happening.

How common in prostate cancer

Prostate cancer occurs mainly in men aged over 65 years. It is less common in men under 55. There are approximately *check figure* men diagnosed with prostate cancer in Malaysia every year.

What Causes Prostate Cancer?

The exact cause is unknown. However, the chances of getting prostate cancer increases:

- As you get older – more than half of all new cases are found in men over the age of 70
- If you have a father or brother who has prostate cancer at an early age. The risk becomes higher if more than one relative is affected.

Diagnosis

Early prostate cancer usually causes no symptoms.

Many men over 50 have urinary symptoms such as:

- A need to pass urine, especially at night
- Difficulty holding back the flow of urine

- Not able to urinate when you feel the need to
- Poor urine flows or flow that stops and starts

However, these symptoms are generally caused by benign prostatic hyperplasia and not by cancer. Benign enlargement cannot turn into prostate cancer.

Later stage prostate cancer may cause symptoms including

- Pain or burning when urinating
- Pain during ejaculation
- Blood in urine or semen
- Pain in the lower back, hips or upper thighs

Having these symptoms do not necessarily mean you have prostate cancer. However you should have your symptoms checked by a doctor.

What doctors and other health professionals will I see?

Your general practitioner will refer you for initial tests to confirm whether or not you have cancer. He or she may later refer you to a specialist who will advise you about treatment options.

You should be cared by a team of health professionals from the relevant major disciplines (e.g. surgery, medical oncology, radiotherapy and endocrinology).

Specialists and other health professionals who care for people with prostate cancer include:

- Urologists/urological surgeons who specialise in diseases of the urinary system
- Radiation oncologists: who are responsible for radiotherapy
- Dietitians: who will recommend the best diets to follow

How prostate cancer is diagnosed

If your doctor thinks you have prostate cancer, a number of tests can be done to find out for certain. These tests will also check the size of the cancer and find out if it has spread. You may have some or all of the following tests:

Blood Test (PSA)

A blood test may be done to check the level of prostate specific antigen (PSA). PSA is usually **found** in the blood in larger amounts when prostate cancer is present. A high level of PSA does not mean you have prostate cancer but you will have a **biopsy** to know for certain. It is very common for BPH to cause a high level of PSA.

Digital rectal examination

An examination of the prostate **through the** back passage (rectum) is called a digital **rectal** examination. The doctor places a gloved finger into your rectum and feels the prostate through the rectum wall. If your doctor feels anything suspicious, such as an enlarged prostate or an odd shape, a biopsy may be arranged.

Biopsy

In a biopsy, samples of tissue are removed from the body. For a biopsy of the prostate, a small needle is directed – by an ultrasound probe in the rectum – into the prostate (this is called transrectal ultrasound or TRUS). The probe is the size and shape of a middle finger. It shows the shape and condition of the prostate on a screen like a television. Six to eight

samples of tissue are taken from different parts of the prostate and sent for examination under a microscope.

The biopsy is important to help you and your doctor make a treatment decision. The doctor will take into consideration how many of the tissue samples, if any show cancer, and how the malignant cells appear under the microscope. This is graded by what is known as the Gleason score. A Gleason score between 1 and 4 probably indicates a very good outlook (prognosis). A score between 4 and 7 is moderate, and in general treatment is needed. A score from 8 to 10 means are more aggressive (quickly growing) cancer.

Bone scan

A bone scan may be used to see if the prostate cancer has spread to your bones.

A radioactive tracer (like a dye) is injected into a vein, usually in your arm. You will need to wait for the tracer to make its way through your body. You will be asked to undress and put on a gown, then lie on a table under the scanning machine. The machine will detect rays from the tracer and turn these into pictures, which can be seen on a computer. The tracer will show any "hot spots" in your bones, which may be cancer.

The test will take about one hour. It is painless and has no side effects.

X-ray

An x-ray of the chest may be done to find out whether or not the cancer has spread to the area

Intravenous pyelogram (IVP)

This is a special type of x-ray used to find blockages in the urinary system.

A dye is injected into a vein, usually in your arm. It moves through the blood stream to the kidneys, the ureters (the tubes that take the urine from the kidneys to the bladder) and the bladder. The doctor can watch the dye move around the body on an x-ray screen and see anything unusual.

The dye can make you feel hot and flushed for a few minutes, but this feeling goes away. You may feel some discomfort in your abdomen, but this will not last. You should be able to go home as soon as the test is over. It takes about an hour.

Computerised tomography (CT) scan

The CT scan is a special type of x-ray, which gives a three-dimensional picture of the organs and other structures (including any tumours) in your body. It usually takes about 30-40 minutes to complete this painless test.

To ensure that the pictures taken by the scanner are clear, you may drink or have injected a dye or 'contrast fluid'. This will mean that you do not eat or drink for about four hours before the scan. The dye injection can cause a burning sensation.

You will be asked to lie flat on a table while the CT scanner, which is large and round like a doughnut, rotates around you. Most people are able to go home as soon as their scan is over.

Magnetic resonance imaging (MRI)

This test is similar to a CT scan (see above), but it uses magnetism instead of x-rays to build up a series of very clear and detailed pictures of your body.

Like a CT scan, MRI is painless, and the magnetism is harmless. You will be asked to lie very still on a couch inside a metal cylinder, which is open at both ends. The whole test may take up to an hour to complete. The cylinder makes some people feel quite claustrophobic, but you can usually take someone into the room with you to keep you company.

This test will help your doctor decide whether the cancer has spread beyond the prostate, which will help you both decide which treatment will be best for you.

Staging the disease

The previous tests show whether you have cancer. They will also show where the primary cancer is and whether the cancer has spread to other parts of your body. This helps your doctor "stage" the disease so they can work out the best treatment for you.

The staging system used for prostate cancer is the 'TMN system', where T=tumour, N=nodes and M=metastases.

- T followed by a number between 1 and 4 shows whether and how far the cancer has spread. A higher number after the T (e.g. T3 or T4) means it has spread beyond the prostate into the tissues around the prostate, or to nearby organs (the bladder or rectum)
- N1 means the cancer has spread to a lymph node or nodes near the prostate. N0 means the cancer has not spread to any lymph nodes
- M followed by 1a, b or c shows that the cancer has spread to bones or other sites

Treatment

Sometimes, the best thing to do is 'watch and wait'. Regular check ups will tell you and your doctor if treatment is needed. Prostate cancer can be treated by surgery, radiotherapy or hormone therapy. Treatment will depend on where the cancer is, what type of cancer it is, its size and how far it has spread. Your specialist will also consider your age, general health and your preferences. You may see a number of different specialists at this stage to help decide the best treatment for your particular cancer.

Watchful waiting

Sometimes, for example, if you are over 70 years of age and the cancer is at a very early stage, your doctor will advise treatment is not needed. This may not be the case for some younger men. However, you will need to be examined regularly to check the cancer is not growing.

Surgery

If the cancer has not spread beyond the prostate, the whole prostate and some tissue around it may be removed. This is called a radical prostatectomy. It is done to cure the cancer.

You will need to stay in hospital for 5 to 7 days. You will be able to get back to normal activities within six weeks.

If it is not possible to remove the prostate, surgery may be used to remove the blockages in the urinary tract. This operation is called a transurethral resection of the prostate. This should relieve symptoms such as the need to pass urine more often than normal. A telescope like instrument is passed up the urethra through the penis. An instrument inside the telescope is then used to remove the blockage. This type of operation is also used to treat BPH.

Men with advanced prostate cancer may be advised to have an orchidectomy. This is surgery, which removes the testicles, to lower the level of testosterone and slow the growth of prostate cancer cells. Refer to 'hormone treatment', later in this section, for more information.

Side effects of surgery

A radical prostatectomy will cause some degree of urinary incontinence (loss of bladder control) in many men. This will be temporary in most men and less than 5% will have any significant permanent incontinence. Virtually all men will have a change in their sexual function and most men will have erectile dysfunction (also known as impotence). Some men will improve but more than 70% will have ongoing problems. Urethral operations will be necessary in some men to correct strictures (narrowing) in the urethra.

Radiotherapy

Radiotherapy treats cancer with high-energy rays that damage or destroy cancer cells. The treatment is planned carefully to ensure that the rays are targeted precisely onto the cancer, and do as little harm as possible to healthy tissues nearby. It may be used as an alternative or an additional treatment to surgery.

Radiotherapy can be given as external radiotherapy or internal radiotherapy.

External radiotherapy

In external radiotherapy, rays from a large machine are directed towards the part of the body where the cancer is located. You will need to go to the hospital or clinic for treatment.

To make sure that exactly the same area is being treated each time, the radiation therapist will make a number of marks on your skin. These marks consist of lines, crosses and dots applied with special inks. Sometimes they will be redone during the course of treatment.

External radiotherapy may be given five days a week for four to six weeks or more. This will depend on the size and type of cancer and on your general health. It takes a few minutes each time. Having radiotherapy in a number of small doses helps reduce the side effects.

Radiotherapy may also be used to relieve pain caused by secondary cancers in the bone, or to shrink obstructions in your lymphatic or urinary systems.

The treatment is not painful. You will not see, hear or feel the rays. External radiotherapy does not make you radioactive. It is quite safe for you to be with other people.

Side effects of external radiotherapy

External radiotherapy can cause a number of temporary side effects that will gradually disappear after the treatment has finished.

Short –term effects: You may experience tiredness, cystitis and diarrhoea. Less common side effects include a reddening or burning sensation of the skin or nausea.

Long-term effects: Radiotherapy for prostate cancer can cause erectile dysfunction (impotence), urinary incontinence, diarrhoea and bowel urgency. This can improve over time. Bowel problems may be experienced during or after treatment, resulting in diarrhoea with or without cramping. A small number of men will continue to experience bowel problems after treatment has ended. Bleeding from the bowel affects some men treated with radiotherapy.

It is estimated that for every man who has radiotherapy for prostate cancer, 40 to 80 will suffer erectile dysfunction and a small number will have urinary incontinence.

Brachytherapy (Internal radiotherapy)

Internal radiotherapy (also called implant therapy or brachytherapy) is a type of radiotherapy where the source is placed in an area being treated. Two types of brachytherapy are used to treat prostate cancer.

One is the use of tiny permanent radioactive 'seeds'. These seeds are put in the prostate, where they treat the cancer. The seeds lose their radioactivity over time. It usually requires an overnight stay in hospital. This type of brachytherapy is used instead of external radiotherapy. It is considered a good treatment for small tumours with a low Gleason score and with a low PSA.

The other type of brachytherapy is a temporary implant. In this case, hollow needles are placed inside the prostate. Radioactive sources can be placed in the hollow needles temporarily. After a few treatments, these temporary needles are removed. It usually requires an overnight stay in hospital. This type is used with external radiation, for men with higher PSA, higher Gleason score and large tumours.

Side effects of brachytherapy

There can be discomfort from inserting the needles or seeds. Otherwise the side effects of permanent and temporary brachytherapy are different.

With permanent seeds, painful urination, poor urine flow and bladder irritation are common side effects. These can start a month after treatment and last up to one year. Some men also have urinary incontinence. Erectile dysfunction (impotence) and rectal problems can also occur with brachytherapy. If you are resuming sexual intercourse, condoms should be used for the first two weeks after the seeds are implanted. This is in case a seed is accidentally moved or ejaculated in semen.

Temporary needles are usually used with external radiotherapy. The side effects from temporary needle are very similar to those of external radiation alone.

Hormone treatment

Prostate cancers need the male hormone, testosterone (produced by testes), for their growth. It is possible to slow down or shrink the cancers by reducing the body's testosterone levels. Hormone treatment can help with symptoms such as pain caused by the cancer spreading. It can also help symptoms such as urinary frequency. It is often given for some months before radiotherapy or surgery to increase the effectiveness of treatment.

The two main ways of reducing testosterone levels are by surgery or by injections.

Hormone treatment with surgery

Two operations can be done to reduce testosterone levels. The first removes the testes. This operation is known as an orchidectomy or orchiectomy. Inserting a plastic prosthesis into the scrotum to keep its shape and appearance may follow this. A smaller operation involves the removal of the inner part of the testes (a 'subcapsular orchidectomy'). In this case a prosthesis is not needed.

Hormone injections

Injections of luteinising hormone releasing hormone (LHRH) are used to control the production of testosterone. LHRH is given as a monthly or 3 monthly injection. Hormone injections will not cure the cancer but often slow down its growth for some years.

Side effects of hormone treatment

Hormone treatment for prostate cancer can cause loss of libido (sex drive), weight gain, erectile dysfunction (impotence), hot flushes, swelling of breast, fluid retention and progressive hardening of arteries.

Palliative treatment

If the cancer has spread and it is not possible to cure it, then your doctor will discuss various treatments for problems caused by the cancer.

Palliative treatment is treatment that relieves or soothes pain and other distressing symptoms of illness. Palliative care is available for all people who experience pain and distress associated with cancer, whatever their stage of cancer treatment. It is a particularly important type of treatment for people with advanced cancer, who cannot be cured but can expect to live without undue pain and distress.

Palliative care includes pain relief using painkilling drugs and other measures. Pain is usually well controlled with oral medication.

General practitioners, specialist and specialist palliative care teams in hospital all play important roles in palliative treatment for people with early and advanced cancer.

Prognosis

Prostate cancer can be treated best when the cancer is found early and is still confined to the prostate.

In many cases, the cancer does not go away after treatment but stops growing or shrinks in size. Men usually return to normal or near normal good health. This may last for months or years.

After your treatment is finished, your doctor may recommend regular check ups. If you have any new symptoms, you should see your doctor.

Making decisions about treatment

Sometimes it is difficult to make decisions about what is the right treatment for you. You may feel that everything is happening so fast that you do not have time to think things through. Some people find that waiting for test results and for treatment to begin is very difficult.

While some people feel they are overwhelmed with information, other may feel that they do not have enough. You need to make sure that you understand enough about your illness, the possible treatment and side effects to make your own decisions.

If you are offered a choice of treatments, you will need to weigh up the advantages and disadvantages of each treatment. If only one type of treatment is recommended, ask your doctor to explain why other treatment choices have not been advised.

Some people with more advanced cancer will always choose treatment, even if it only offers a small chance of cure. Others want to make sure that the benefits of treatment outweigh any side effects. Still others will choose the treatment they consider offer them the best quality of life. Some may choose not to have treatment but to have their symptoms managed as they arise in order to maintain the best possible quality of life.

Talking with doctors

You may want to see your doctor a few times before making a final decision on treatment. The first consultation when you are told you have cancer is usually stressful and you may not remember very much. It is often difficult to take everything in, and you may need to ask the same question more than once. You always have the right to find out what a suggested treatment means for you, and the right to accept or refuse it.

Before you see the doctor, it may help to write down your questions. There is a list of questions to ask your doctor at the end of this section which may assist you. Taking notes during the session can also help. Many people like to have a family member or friend to go with them, to take part in the discussion, take notes, or simply listen. Some people find it is helpful to tape-record the discussion.

Talking with others

Once you have discussed treatment options with your doctor, you may want to talk them over with family or friends, or your own religious or spiritual adviser. Talking it over can help to sort out what course of action is right for you.

A second opinion

You may want to ask for a second opinion from another specialist. This is understandable and can be a valuable part of your decision-making process. Your specialist or local doctor can refer you to another specialist and you can ask for your records to be sent to the second-opinion doctor. You can still ask for a second opinion even if you have already started treatment or still want to be treated by your first doctor.

Taking part in a clinical trial

Your doctor may suggest that you consider taking part in a clinical trial.

Clinical trials are a vital part of the search to find better treatments for cancer. Doctors conduct clinical trials to test new or modified treatments and see if they are better than existing treatments. Many people all over the world have taken part in clinical trials that have resulted in improvements to cancer treatment. However the decision to take part in a clinical trial is always yours.

If your doctor asks you to take part in a clinical trial, make sure that you fully understand the reasons for the trial and what it means for you. Before deciding whether or not to join the trial, you may wish to ask your doctor:

What treatments are being tested and why?

What tests are involved?

What are the possible risks or side effects?

How long would the trial last?

Will I need to go into hospital for treatment?

What will I do if any problems occur while I am in the trial?

If you decide to join a randomised clinical trial, you will be given either the best existing treatment or a promising new treatment. You will be chosen at random to receive one treatment or the other, but it will always be the best treatment available.

If you do join a clinical trial, you have the right to withdraw at any time. Doing so will not jeopardise your treatment for cancer.

It is always your decision to take part in a clinical trial. If you do not want to take part, your doctor will discuss the best current treatment choices with you.

Coping with side effects

The side effects of prostate cancer treatment include erectile dysfunction (impotence), changes in bowel habit, urinary incontinence and infertility. These can be hard to cope with. Below is some information that may be useful to you.

Erectile dysfunction (impotence)

Erectile dysfunction means not being able to get and maintain an erection firm enough for penetration. This can happen as men get older. It can also happen to men who have radiotherapy or surgery for prostate cancer, because these treatments can damage key nerves. Your doctor will try to avoid damaging these nerves, but sometimes, because the cancer can grow very close to them, it is not possible.

Erectile dysfunction can be treated by:

- Injections to the penis, that you can learn to do yourself, can help you have an erection. These injections can cause a dull pain for a little while in some men and scarring if used too often.
- Tablets can increase blood flow to the penis, helping you have an erection. These tablets can cause headaches and a hot flushing feeling
- Other methods include implants in the penis and pumps

Bowel habit changes

Some men have diarrhoea or bowel urgency after treatment. A small number of men have bleeding from bowel after radiotherapy. For most men, bowel problems improve over time

Urinary incontinence

Urinary incontinence is not being able to control the flow of urine. It is a common side effect of prostate cancer treatment, caused by damage to the nerves or other parts that control urination.

In some men it can be minor, just a few drops when they, for example, cough or sneeze. In others it can be more severe, so that men need to use incontinence pads several times a day. It usually gets worse straight after treatment and gets better within a year of treatment.

Men can be concerned about odour or 'having an accident' in public. It is important that you do not withdraw from your friends or social situations because of such fears. You can prevent or disguise odours and accidents.

Exercising the muscles of your pelvis can help. You may need to use pads. There are also clamps and other devices you may wish to try. If your incontinence does not improve with time, surgery may be an option.

Infertility

Most men become infertile after treatment, which means the sperm they produce are not able to penetrate an egg.

Seeking Support

When you are first diagnosed with cancer, you may feel a variety of emotions, such as fear, sadness, depression, anger or frustration. It may be helpful to talk about your feelings with your partner, family members or friends or with a hospital counsellor, social worker, psychologist or your religious or spiritual advisor.

Sometimes you may find that your friends and family do not know what to say to you: they may have difficulty with the feelings as well. Some people may feel so uncomfortable that they avoid you. They may expect you to 'lead the way' and tell them what you need. This can be very difficult to bear and can make you feel very lonely. You may feel able to approach your friends directly and tell them what you need. You may prefer to ask a close family member or a friend to talk with other people for you.

Diet

A balanced nutritious diet will help you to keep as well as possible and cope with the cancer and any side effects if treatment. Depending on the kind of treatment you have had, you may have special dietary needs. A dietician can help to plan the best foods for your particular situation – ones that you find tempting, easy to eat and nutritious.

The Resource and Wellness Centre has a resident dietitian. For an appointment please call 03 2698 7300 or email contact@cancer.org.my

Relaxation techniques

Some people find relaxation or meditation helps them to feel better. The Resource and Wellness Centre offers relaxation and meditation classes. Telephone 03 2698 7300 or email contact@cancer.org.my for further information.

Sexuality and cancer

We are all sexual beings and intimacy adds to the quality of our lives. Cancer treatment and the psychological effects of cancer may affect you and your partner in different ways.

Some people may withdraw through feelings of being unable to cope with the effects of chemotherapy and radiotherapy on themselves or their partner. Others may feel an increased need for sexual and intimate contact for reassurance.

Communication is essential in addressing any concerns or problems, which may arise. Talk about your feelings with your partner. Try different positions and practices to find out what feels right and is satisfactory for both of you. If you have difficulties in continuing with your usual sexual activities, discuss this with your doctor or with a trained counsellor so that you may obtain the best advice.

Cancer Support Groups

Cancer support groups offer mutual support and information to people with cancer and, often, to their families. It can help to talk with others who have gone through the same experience. Support groups can also offer many practical suggestions and ways of coping. Call the Resource and Wellness Centre for information on support groups. Telephone 03 2698 7300 or email contact@cancer.org.my

Caring for someone with cancer

Caring for someone with cancer can be very stressful, particularly when it is someone you care about very much. Look after yourself during this time. Give yourself some time out, and share your worries and concerns with someone outside.

You may have to make many decisions. You will probably have to attend many appointments with doctors, support services and hospitals. Many people have found it helpful to take with them another member of the family or a close friend. It also helps to write down questions beforehand, and to take notes during the appointment.

Cancer support group membership is generally open to patients and carers. A support group can offer the chance to share experiences and ways of coping.

Cancer Information and Support Service

The Resource and Wellness Centre is a service of the National Cancer Society of Malaysia. It is a telephone information and support service for people affected by cancer. It is a confidential service where you can talk about your concerns and needs with specially trained staff. The staff can send you written information and can put you in touch with appropriate services in your own area. Telephone 03 26987300 or e-mail contact@cancer.org.my

Information Checklist

You may find the following checklist helpful when thinking about the questions you may want to ask your doctor about illness and treatment.

1. What type of cancer do I have?
2. How extensive is my cancer? What is the Gleason score?
3. What treatment do you advise for my cancer and why?
4. Do I need treatment? Can I expect to live longer and be healthier if I have treatment?
5. Will a doctor who specialises in prostate cancer perform my treatment?
6. Are there other treatment choices for me? If not, why not?
7. What are the risks and possible side effects of each treatment? What are the chances for success?
8. What can be done about the possible side effects of treatment?
9. Will I have to stay in hospital, or will I be treated as an outpatient?
10. How long will the treatment take? How much will it affect what I can do?
11. How much will it cost?
12. Will I have a lot of pain with the operation? What will be done about this?
13. If I need further treatment, what will it be like and when will it begin?
14. Will the treatment affect my sexual relationships?

15. How frequent will my check-ups be and what will they involve?

16. Are there any problems I should watch out for?

17. I would like to have a second opinion. Can you refer me to someone else?

18. Is my cancer hereditary (one that runs in families)?

If there are answers you do not understand, feel comfortable to say 'can you explain that again' or 'I am not sure what you mean by...'

Glossary?