

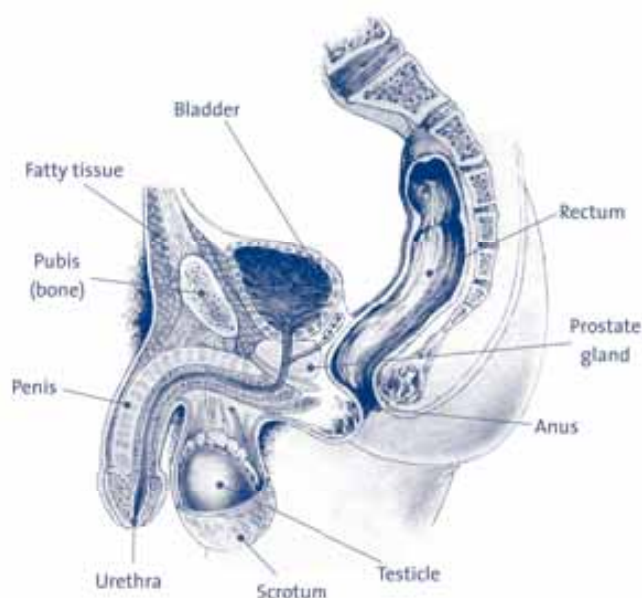


This Information Sheet has been written to provide you with information about prostate cancer. Prostate cancer is found only in men. The Sheet gives information about diagnosis, treatment, practical support and the emotional impact of cancer.

The words in **bold** are explained in the glossary at the end of this Information Sheet.

## The prostate

The prostate is a small gland, normally about 4 cm across, found only in men. It sits just below the bladder and surrounds the top part of the urethra – the tube that carries urine from the bladder and semen from the sex glands to the outside of the body via the penis. It is common for the prostate gland to get larger as men grow older.



This enlargement is called **benign** prostatic hyperplasia (BPH). This condition is the usual cause of the urinary symptoms that older men complain of, and prostate cancer is only occasionally responsible for these symptoms.

## What is prostate cancer?

Prostate cancer is a **malignant tumour** of the prostate gland. Early prostate cancers are contained within the prostate gland and are called localised cancers. Spread of the cancer to the surrounding tissues is known as extracapsular spread, and these tumours are described as being locally advanced.

## How common is prostate cancer?

Prostate cancer occurs mainly in men aged over 50 years and is the most common cancer among New Zealand men. Around 2500 men are diagnosed with prostate cancer in New Zealand each year.

## Causes of prostate cancer

The causes of prostate cancer are not yet fully understood, but the risk of developing prostate cancer increases with age. The risks are also higher if other family members have developed this cancer.

There is some evidence to support that a diet high in animal fat increases the chance of developing prostate cancer. While it is not possible to make clear recommendations about a particular diet, a lower fat, high fruit and vegetable diet is linked with a reduced risk of a number of chronic diseases, and is an overall recommendation for improving health.

## Symptoms

Prostate cancer that hasn't spread to other parts of the body usually causes no symptoms. Many men over 50 have urinary symptoms such as:

- passing urine more frequently
- difficulty passing urine – starting or stopping

- poor flow of urine
- getting up at night more frequently to urinate.

These symptoms are usually due to pressure on the urethra from an enlarged prostate (benign not cancerous).

It is important to have all symptoms checked by a doctor to exclude a cancer.

## Diagnosis

A number of tests will be performed to help determine if you have prostate cancer. You may have some or all of the following tests:

### Digital rectal examination (DRE)

The first test is usually an examination of the prostate gland through the back passage (rectum). This is called a digital rectal examination.

The doctor puts a gloved finger into your rectum and feels the prostate through the rectal wall. If your doctor finds anything unusual in the shape or texture of the prostate, a biopsy may be arranged.

### Blood test (PSA)

A blood test may be done to check for the presence of prostate-specific antigen (PSA). There are many causes for a high PSA, including benign enlargement of the prostate and inflammation or infection of the prostate gland (prostatitis). A high PSA can also be caused by prostate cancer. An elevated PSA test indicates your risk of having prostate cancer is higher compared with a person with a normal PSA.

### Ultrasound examination and biopsy

In a biopsy a sample of tissue is removed from the body. For a biopsy of the prostate, a small needle is directed into the prostate, guided by an ultrasound probe in the rectum (this is called transrectal ultrasound or TRUS). The probe is the size and shape of a middle finger and shows the shape and condition of the prostate.

Usually, several cores of prostate tissue are withdrawn from different parts of the prostate gland and sent to a pathologist for examination under a microscope. There will be discomfort associated with this procedure. Talk to your specialist about options for sedation. The biopsies are important to help you and your specialist make decisions about treatment.

## Understanding the biopsy

Tissue taken during the biopsy is looked at under a microscope. If there are malignant cells present, these are assessed for appearance to work out how fast or slow growing the cancer may be. This assessment is called grading and the most common way of grading prostate cancer is to give the cells a Gleason Score. Your specialist will use this information to help with decisions regarding treatment.

### GLEASON SCORES

**Gleason 2,3,4:** Most like normal cells, slow growing, low probability of **metastasis**, low grade.

**Gleason 5,6,7:** Can behave like normal cells or like aggressive cells, moderate probability of metastasis, moderate grade.

**Gleason 8,9,10:** Least like normal cells, high probability of metastasis, high grade.

## Staging the cancer

Staging is a process of assessing the extent of a cancer.

Cancer may:

- be confined to the prostate
- be locally advanced, which means it has spread beyond the prostate but not to distant parts of the body
- or be metastatic, which means it has spread to other parts of the body, also known as secondary cancer.

While the Gleason Score describes what the cancer looks like under the microscope, the stage of the cancer describes where the cancer is found.

Tests, such as a bone scan, or a CT scan (computerised tomography) may be used to check for metastatic cancers. You may also be offered a pelvic lymph node dissection.

## Treatment

Your doctor will use a range of **criteria** to help work out the type of treatment to recommend. They include the volume or size of the prostate, the Gleason Score, the pattern of growth, the PSA, and the area where the cancer is located. Treatment considerations vary from one man to another, depending on the age of the man, the stage of the cancer, the cancer grade, and the presence or absence of other serious medical conditions.

Options your doctor will consider include:

- watchful waiting (active surveillance)
- surgery
- radiation treatment
- hormone therapy
- chemotherapy
- a combination of the treatments listed above.

In general, treatment will be recommended to patients aged 70 years or younger who have no evidence of spread, and are otherwise in reasonable general health. Most patients aged 80 years or more don't need treatment, unless their cancer is a high grade one or it is causing symptoms. For patients aged 70 to 79 years, the side effects of treatment and the effect on their quality of life are important factors to think about. Some of these men may choose 'watchful waiting'.

## Management of localised prostate cancer

### Watchful waiting

Some older patients prefer to take a watchful waiting approach. These patients need to consider their general state of health, the stage of the cancer and its rate of growth. The possible risks in delaying treatment have to be compared with the impact of the treatment.

### Surgery

If the cancer has not spread beyond the prostate, the whole prostate gland can be surgically removed. This is called radical prostatectomy, and the operation is done to try to cure the cancer. Surgery is performed through an incision in the lower abdomen and the entire prostate is removed from the body, with the bladder being joined back on to the urethra. This operation requires a stay of five to seven days in hospital. It would be usual to go home with a **urinary catheter** in place for two to three weeks. You should be able to resume normal activities within six weeks.

Possible side effects of surgery:

- urinary incontinence
- problems with erections
- infertility.

Discuss these with your doctor and how likely these are to occur for you.

### Radiation treatment

Radiation treatment uses high-energy X-rays to destroy cancer cells and may be used as an alternative or additional treatment to surgery. This form of treatment works best when the cancer is confined to the prostate. The radiation can be precisely targeted to cancer sites. Treatment is carefully planned to do as little harm as possible to other parts of your body.

The treatment is usually given over several weeks. The length of treatment will depend on the size and type of the cancer and on your general health.

Radiation treatment may also be used to relieve pain caused by secondary cancers in the bones, or to shrink in your **lymphatic** or urinary systems. There are three types of radiation treatments for prostate cancer:

- **external beam radiation**—a beam of X-rays from a linear accelerator machine is focussed on the area affected by cancer. Treatment is usually given daily for five days each week, for a period of about seven weeks.
- **low-dose rate brachytherapy**—tiny radioactive seeds are inserted permanently into the prostate gland. This form of treatment may be successful for small tumours which are located within the prostate gland. This treatment may also be used with a shortened course of external beam radiation in patients with more advanced cancer. Low-dose rate brachytherapy is currently only available outside the public hospital system.
- **high-dose rate brachytherapy**—needles are placed in the prostate and radioactive sources can then be temporarily placed into the prostate down the hollow needles. High-dose rate brachytherapy is always used after a shortened course of external beam radiation.

Possible side effects of radiation treatment:

- tiredness
- bowel problems
- urinary problems
- problems with erections.

Discuss these with your doctor and how likely these are to occur for you.

## Hormone treatment combined with radiation treatment

Hormone treatment combined with radiation treatment may be offered. Clinical trials are running to work out the advantages of this treatment. Early results show this form of treatment reduces the number of cancer cells at the start of radiation treatment.

## Treatment for advanced prostate cancer

If the cancer has spread, your doctor will discuss various treatments for specific problems caused by the cancer.

### Hormone treatment

Hormone treatment combined with radiation treatment may be offered. Hormones are substances that occur naturally in the body. They control the growth and activity of cells and may be used to treat prostate cancer. Prostate cancer needs the male hormone testosterone for growth so it is possible to slow down or shrink the cancer by reducing the body's testosterone levels.

There are a number of different approaches:

#### Orchidectomy

Orchidectomy or (orchiectomy American spelling) is a procedure where the testicles are surgically removed through a cut in the scrotum. An orchidectomy permanently deprives the body of testosterone.

#### LHRH therapy

Luteinising hormone-releasing hormones (LHRH) lower the amount of testosterone in the body. LHRH therapy is usually given as a monthly or three-monthly injection.

#### Anti-androgen therapy

Anti-androgens block the action of testosterone in stimulating a cancer. The advantage of this type of therapy is that some men maintain their erections and sexual drive.

Possible side effects of hormone treatment:

- tiredness
- weight gain
- hot flushes
- mood changes
- problems with erections.

Discuss these with your doctor and how likely these are to occur for you.

## Making decisions about treatment

If you are offered a choice of treatments, including no treatment for now, you will need to weigh their advantages and disadvantages. If only one type of treatment is recommended, ask your doctor to explain why other treatment choices have not been advised. The risk of not having treatment needs to be weighed against the risk of side effects from treatment. You may want to ask your doctor questions like: “Can I expect to live longer if I have treatment?”, “If I have treatment, is there a risk that my quality of life could worsen because of the side effects?” and “Are there other treatment options for me?”

## Talking with others

Once you have discussed treatment options with your doctor, you may want to talk them over with someone else, such as family or friends, specialist nurses, your family doctor, the Cancer Society, the hospital social worker or chaplain, your own religious or spiritual adviser, or another person who has had an experience of prostate cancer. Talking it over can help you to sort out what course of action is right for you.

## After treatment

After the completion of your treatment, you may need to have regular check ups. Your doctor will decide how often you will need these check ups, as everyone is different. Check ups will gradually become less frequent if you have no further problems.

You may find the Cancer Society's booklet, *Prostate Cancer / Matepukupuku Repeure*, which has a much more full explanation of prostate cancer, useful to read.

You may also find the Cancer Society's booklet *Sexuality and Cancer / Hokakatanga me te Mate Pukupuku* useful to read for more information on this subject.

You can receive a copy of both booklets at your local Cancer Society, by ringing **0800 CANCER (226 237)** or by reading it on the Cancer Society's website: [www.cancernz.org.nz](http://www.cancernz.org.nz)

## Glossary

**Benign**—a tumour that is not malignant, not cancerous, and won't spread to another part of your body.

**Criteria**— a standard by which something can be decided.

**Malignant**—a tumour that is cancerous and likely to spread if it is not treated.

**Metastasis**—when cancer has spread from the original site to another part of the body. It can be called secondary cancer.

**Lymphatic or lymph**—the lymphatic system is part of the immune system, which protects the body against 'invaders', like bacteria and parasites. The lymphatic system is a network of small lymph nodes connected by very thin lymph vessels, which branch into every part of the body. Lymph fluid flows through this system and carries cells that help to fight disease and infection.

**Tumour**—a new or abnormal growth of tissue in or on the body which may be benign or malignant.

**Urinary catheter**—artificial tube inserted to drain urine from the bladder into a collecting bag.