

Kidney cancer

The kidneys are part of the body's urinary system, which filters waste products out of the blood in the form of urine. About 500 Victorians are diagnosed with kidney cancer every year. Kidney cancer is more common in people over the age of 55 years and is more common in men than women.

Around 85 per cent of kidney cancers are renal cell carcinomas, which start in the lining of one or both kidneys. Other (less common) types of kidney cancer include transitional cell carcinoma, renal sarcoma and Wilm's tumour.

About the kidneys

The kidneys are two bean-shaped organs located on either side of the middle of the back, just under the ribs. As well as filtering blood, the kidneys make three important hormones:

- **Renin** – this hormone helps regulate your blood pressure.
- **Calcitol** – this hormone helps to control your body's calcium levels.
- **Erythropoietin** – this hormone stimulates your bone marrow to make red blood cells.

Risks and causes of kidney cancer

The causes of kidney cancer are unknown. However, there are several factors that may increase your risk including:

- **Cigarette smoking** – around one in three cases may be due to smoking.
- **Faulty genes** – some people inherit a faulty gene, which puts them at a higher risk of developing kidney cancer.
- **Mild pain-killing drugs** – such as overuse of painkillers containing phenacetin. This chemical is not used in modern painkillers. However, people who took painkillers containing phenacetin in large quantities before it was banned may still be affected.
- **Being overweight.**
- **Exposure to asbestos or cadmium** – this applies to some people who were exposed to these substances in their jobs.

Symptoms

In its early stages, when the cancer is very small, you may not have any symptoms. Sometimes the disease is found by accident, when your doctor is investigating another condition.

In its later stages, when the cancer is larger, symptoms can include:

- Blood in the urine (haematuria) – this is the most common symptom
- A pain or ache in the lower back or side
- A lump in the area of the kidney
- Tiredness
- Unexplained and sudden loss of appetite and weight loss
- Fever with sweating.

It is important to remember that most people who go to the doctor with blood in their urine do not have kidney cancer. It is more likely to be caused by an infection, kidney stones or an enlarged prostate (for men).

Different types

Around 85 per cent of kidney cancers are **renal cell carcinomas**. These cancers begin to grow in the lining of one or both kidneys. Without treatment, this type of cancer can spread to other parts of your body.

Other (less common) types of kidney cancer include:

- **Transitional cell carcinoma** – starts in the join between the kidney and its ureter (the tube that drains urine from the kidney into the bladder).
- **Renal sarcoma** – a rare type of kidney cancer.
- **Wilm's tumour** – a rare type of kidney cancer that affects children.

Diagnosis

The first tests you will have are blood and urine tests. If your doctor picks up blood in your urine, they may refer you to the hospital to have further tests including:

- **More urine and blood tests** – to check for abnormal levels and enzymes, which may indicate cancer.
- **Ultrasound scan** – sound waves create a picture of the inside of the body and can show any growths inside the kidney.
- **Intravenous pyelogram (IVP)** – an injected dye makes your kidneys more visible during an x-ray and can show any growths in the tubes inside or leading from the kidneys.
- **Cystoscopy** – a slender tube is inserted into the bladder via the urethra. The doctor can then look for the source of any bleeding.
- **Computed tomography (CT) scan** – a special x-ray that gives a three-dimensional picture of your internal organs.
- **Magnetic resonance imaging (MRI)** – similar to the CT scan, but radio waves and a strong magnetic field are used to give a three-dimensional picture.
- **Blood vessel tests (angiogram or venogram)** – to look at blood flow. This helps to plan surgery and find out if the tumour is near any major blood vessels in the kidneys.
- **Chest x-ray and bone scan** – these tests will check whether or not the cancer has spread to other parts of your body.
- **Radioisotope bone scan** – a radioactive dye is injected. Cancer activity in the bone cells is then detected using a special machine.

Test results can take a few days to come back. It is very natural to feel anxious while waiting to get your results. It can help to talk to a close friend or relative about how you are feeling or you could contact your local cancer information and support service.

Treatment

Treatment for kidney cancer will depend on the stage of the cancer. Treatment may include:

- **Surgery to remove the whole kidney (radical nephrectomy)** – other affected tissues, such as nearby lymph nodes, are also taken out. You can live with only one healthy kidney.
- **Surgery to remove part of your kidney (partial nephrectomy)** – this means that the surgeon will only take away the diseased part of the kidney. This is best for people who have renal cell carcinoma in both kidneys, have only one functioning kidney or for some patients with small cancers.

If it is not possible for you to have surgery to treat your kidney cancer due to other medical problems, your doctor may suggest another option. These may include:

- **Arterial embolisation** – this is a method of cutting the main blood supply to the cancer.
- **Radiotherapy** – radiation targets and kills cancer cells. This is not commonly used in people whose cancer is curable.
- **Biological therapy** – also known as immunotherapy. This is the use of substances that are naturally produced within the body to encourage the immune system to fight disease. Interferon and interleukin have been used to treat some kidney cancers. While they are 'natural' substances, they can sometimes cause severe side effects. Immunotherapy is not a standard treatment in Australia for kidney cancer, but is available in some centres.

If you do not have at least one working kidney, you would need to have dialysis for the rest of your life. Dialysis is a technique that removes extra water and waste products from your body, which is what your kidneys would normally do.

All treatments have side effects. These will vary depending on the type of treatment you are having. Many side effects are temporary but some may be permanent. Your doctor will explain all the possible side effects before your treatment begins.

Where to get help

- Your doctor
- The Cancer Council of Victoria Information and Support Line Tel. 13 11 20
- Multilingual Cancer Information Line, Victoria – see the Cancer Council Victoria website for contact details

Things to remember

- Kidney cancer is more common in people over the age of 55 years.
- Most kidney cancers are found when the doctor is checking for something else.
- A person is usually able to live quite normally with just one kidney.
- Surgery is the most common treatment for kidney cancer.

This page has been produced in consultation with, and approved by:

Cancer Council Victoria

This Better Health Channel fact sheet has passed through a rigorous approval process. The information provided was accurate at the time of publication and is not intended to take the place of medical advice. Please seek advice from a qualified health care professional.

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