

- **Simple nephrectomy** removes the kidney only.
- **Partial nephrectomy** removes the cancer in the kidney along with some tissue around it. This procedure is used for patients with smaller tumours (less than 4 cm) or in those patients in which a radical nephrectomy might hurt the other kidney.

If surgery cannot remove your kidney cancer, your doctor may suggest another option to help control the tumour locally.

- **Radiofrequency ablation** uses high-energy radio waves to kill the tumour.
- **Arterial embolization** involves inserting material into an artery that leads to the kidney. This blocks blood flow to the tumour. This procedure may be done to help reduce bleeding from the tumour before surgery.

Chemotherapy

Chemotherapy uses anticancer drugs to shrink/kill cancer cells. The drugs enter the bloodstream and can affect cancer cells all over the body.

Targeted Cancer Therapy

Some people with kidney cancer that has spread receive targeted therapy. Targeted therapies are drugs or other substances that block the growth and spread of cancer by interfering with specific molecules involved in tumour growth and spread. They have proven to be effective in controlling kidney cancer.

Radiation Therapy

Radiation therapy (also called radiotherapy) uses high-energy rays to kill cancer cells. It affects cancer cells only in the treated area.

Immunotherapy for Kidney Cancer

This therapy uses your immune system to fight cancer by boosting, directing, or restoring your body's natural defences. Examples of biologic therapy used in the past for metastatic kidney cancer include interferon alpha or interleukin-2. There are currently approved new immunotherapies which have shown good activity and control in advanced kidney cancer.

Screening and Prevention

Because doctors do not know the causes of kidney cancer, it is not clear how to prevent the disease. However, certain factors are linked to kidney cancer, so you can take certain steps to lower your risk - quit smoking, maintain a healthy weight, manage your blood pressure, and avoid being exposed to harmful chemicals.

What Kind of Support is Available?

CanHOPE is a non-profit cancer counselling and support service provided by Parkway Cancer Centre, Singapore. CanHOPE consists of an experienced, knowledgeable and caring support team with access to comprehensive information on a wide range of topics in education and guidelines in cancer treatment.

CanHOPE provides:

- Up-to-date cancer information for patients including ways to prevent cancer, symptoms, risks, screening tests, diagnosis, current treatments and research available.
- Referrals to cancer-related services, such as screening and investigational facilities, treatment centres and appropriate specialist consultation.
- Cancer counselling and advice on strategies to manage side effects of treatments, coping with cancer, diet and nutrition.
- Emotional and psychosocial support to people with cancer and those who care for them.
- Support group activities, focusing on knowledge, skills and supportive activities to educate and create awareness for patients and caregivers.
- Resources for rehabilitative and supportive services
- Palliative care services to improve quality of life of patients with advanced cancer.

The CanHOPE team will journey with patients to provide support and personalised care, as they strive to share a little hope with every person encountered.



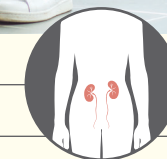
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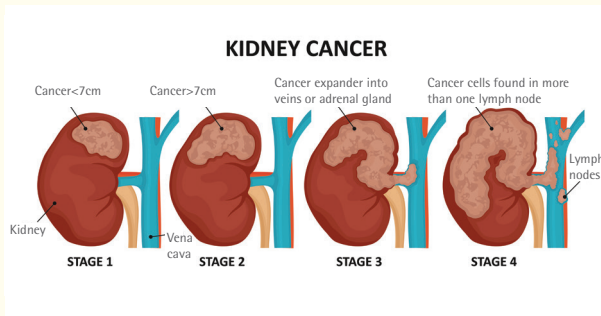


Kidney Cancer

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www.parkwaycancercentre.com



What is Kidney Cancer?

Kidney also called renal cancer is a disease in which kidney cells become malignant (cancerous) and grow out of control, forming a tumour. Almost all kidney cancers first appear in the lining of tiny tubes (tubules) in the kidney. This type of kidney cancer is called renal cell carcinoma. The good news is that most of kidney cancers are found before they spread (metastasize) to distant organs. And cancers caught early are easier to treat successfully. However, these tumours can grow to be quite large before they are detected.

The kidneys are two bean-shaped organs, each about the size of a fist. They lie in your lower abdomen on each side of your spine. Their main job is to clean your blood, removing waste products and making urine.

What causes Kidney Cancer?

The cause of kidney cancer remains unclear. But certain factors appear to increase the risk of getting kidney cancer. For example, kidney cancer occurs most often in people older than age 40. These are some other risk factors for kidney cancer:

- **Smoking** – if you smoke cigarettes, your risk for kidney cancer is twice that of non-smokers. Smoking cigars may also increase your risk.
- **Being male** – men are about twice as likely as women to get kidney cancer.
- **Being obese** – being overweight may cause changes to hormones that increase your risk.
- **Having advanced kidney disease or being on long-term dialysis**
- **Having certain genetic conditions** – such as Von Hippel-Lindau (VHL) disease or inherited papillary renal cell carcinoma.
- **Having a family history of kidney cancer** – the risk is especially high in siblings.
- **Being exposed to certain chemicals** – such as asbestos, cadmium, benzene, organic solvents, or certain herbicides.
- **Having high blood pressure.**

Having these risk factors do not mean you will get kidney cancer. It is also true that you can have none of them and still get the disease.

Symptoms

In many cases, people may have no early symptoms of kidney cancer. As the tumour grows larger, symptoms may appear. You may have one or more of these kidney cancer symptoms:

- Blood in your urine
- A lump in your side or abdomen
- A loss of appetite
- A pain in your side that does not go away
- Weight loss that occurs for no known reason
- Fever that lasts for weeks and is not caused by a cold or other infection
- Extreme fatigue
- Anaemia
- Swelling in your ankles or legs

Kidney cancer that spreads to other parts of your body may cause other symptoms, such as:

- Shortness of breath
- Coughing up blood
- Bone pain

Diagnosis

Maybe you have kidney cancer symptoms such as pain in your side, weight loss, or extreme fatigue. Or maybe your doctor has found a lump in your side during a routine exam or a sign of kidney cancer during a test for another disease. Regardless, to confirm a diagnosis of kidney cancer, you will need a thorough physical examination, health history, and tests.

Your doctor will feel your abdomen and side for lumps and check for fever and high blood pressure, amongst other things. You will also answer questions about your health habits, any past illnesses, and types of treatment. To make a diagnosis of kidney cancer, your doctor will also order one or more tests like these:

- **Urine tests** check for blood in your urine or other signs of problems.
- **Blood tests** show how well your kidneys are working.
- **Intravenous Pyelogram (IVP)** involves X-raying your kidneys after the doctor injects a dye that travels to your urinary tract, highlighting any tumours.
- **Ultrasound** uses sound waves to create a picture of your kidneys. It can help tell if a tumour is solid or fluid-filled.
- **A CT scan** uses X-rays and a computer to create a series of detailed pictures of your kidneys. This may also require an injection of dye. CT scans have virtually replaced pyelogram and ultrasound as a tool for diagnosing kidney cancer.

- **Magnetic Resonance Imaging (MRI)** uses strong magnets and radio waves to create detailed images of soft tissues in your body. You may need an injection of a contrast agent to create better pictures.
- **Renal Arteriogram.** This test is used to evaluate the blood supply to the tumour. It is not given often, but may help diagnose small tumours. It has other uses, as well.

Unlike many other cancers, your doctor may be pretty certain about a diagnosis of kidney cancer without a biopsy. Sometimes, a biopsy will be done to confirm the diagnosis. A doctor may use a needle biopsy to remove a sample of tissue, which is then examined under a microscope for cancer cells. The biopsy may also tell the grade of the cancer – how aggressive the cancer is likely to be. Often the surgeon will simply remove the entire tumour and then have a sample of tissue examined.

Once your doctor makes a diagnosis of kidney cancer, you may need other tests to tell if the cancer has spread within your kidney, to the other kidney, or to other parts of your body. When cancer spreads from the place where it first started, it has metastasized. You might need a CT scan or MRI. A chest X-ray can show whether the cancer has spread to your lungs. A bone scan can see if it is in your bones. These tests will help your doctor determine the stage of kidney cancer.

Staging

These are four stages of kidney cancer. The higher the stage, the more advanced the cancer.

Generally, when the cancer is localised, and not invading into surrounding tissue, surgery would offer the best chance of cure. In stage IV kidney cancer, where surrounding and distant spread are present, the treatment aim is more control and palliation, with systemic treatment options of targeted therapy, immunotherapy or chemotherapy.

Treatment

Surgery

Surgery involves the removal of tissues that contain the tumour and nearby tissues/lymph nodes. This may be done via laparoscopy or open surgery.

These are the main types of surgery for kidney cancer. Which type you require depends on how advanced your cancer is.

- **Radical nephrectomy** removes the kidney, adrenal gland, and surrounding tissue. It also often removes nearby lymph nodes. It is the most common surgery for kidney cancer and can now be done through a small incision with a laparoscope.