

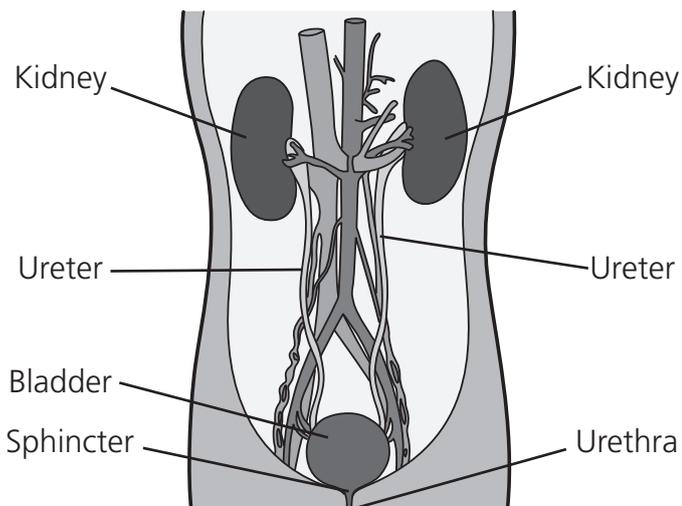
# Kidney Cancer

## The kidneys and cancer

The kidneys are two fist sized organs located on either side of the body, just underneath the ribcage. Their main role is to filter out waste products and excess water from the blood, producing urine.

Kidney cancer most frequently affects people over 50 years of age and is more common among men. Only one of the kidneys is usually affected by cancer. Most patients with kidney cancer will be cured with approximately 70 per cent surviving long term.

**Front View of Urinary Tract**



## Types of kidney cancer

The two most common types of kidney cancer are renal cell cancer (RCC) and transitional cell cancer (TCC). The distinction between these two types is important because their prognosis and treatment are different. There are also some rare cancers affecting the kidneys and some benign, non-cancerous tumours, which can look very similar. Sometimes further tests such as a biopsy or a telescope examination (ureteroscopy) are recommended to find out the exact type of cancer so we can plan treatment.

## Treating kidney cancer

The earlier kidney cancer is diagnosed, the easier it is to treat. How it is treated will depend on the size and whether there is any spread of the cancer. Surgery to remove the cancerous cells is usually the first course of action. If the cancer is very small, then minimally invasive treatments such as Microwave Ablation (MWA) may be used and in some patients no treatment at all is required. In these cases we will arrange regular scans to monitor the cancer.

For patients with more advanced cancers, when the cancer has spread beyond the kidney, non-surgical treatments, such as radiotherapy or targeted therapies are appropriate.

## Your treatment plan

You can expect to be cared for by a multidisciplinary team, often comprising an urologist, an oncologist (who specialises in radiotherapy and chemotherapy), a radiologist, a nephrologist (a kidney specialist) and a specialist nurse.

You will be given a key worker, usually the specialist nurse, who will be responsible for coordinating your care. Your team will recommend what they think is the best treatment option, but the final decision will be yours.

When deciding what treatment is best for you, your doctors will consider: the stage and grade of your cancer (how big it is and how far it's spread) and your age and general health.

If the cancer hasn't spread out of your kidney (T1 or T2 kidney cancer), it can usually be cured by removing part of or the entire kidney.

If the cancer has spread out of your kidney (T3 or T4 kidney cancer), a complete cure may not be possible. However, it should be possible to slow the cancer's progression and treat any symptoms.

# Treatment for Localised kidney cancer

The main treatments for localised kidney cancer include:

- Nephrectomy and partial nephrectomy
- Microwave ablation (MWA)
- Cryotherapy

## Nephrectomy and partial nephrectomy

A nephrectomy is an operation to remove a kidney. If the tumour is less than 4cm (1.5 inches) in diameter, it may only be necessary to remove some of your kidney. This is known as a partial nephrectomy. If the tumour is more than 4cm in diameter or if the tumour is located in the centre of the kidney, then usually your entire kidney will need to be removed, but a partial nephrectomy may be recommended if your remaining kidney is in poor health.

Even if the cancer has spread beyond your kidney, you may still benefit from having your kidney removed. Removing the kidney can help resolve the pain, and make other types of non-surgical treatment more effective. It is possible to live a normal life with only one kidney, because the other kidney will be able to compensate.

During a nephrectomy, the surgeon may also remove nearby lymph nodes to make sure the cancer hasn't spread beyond the kidney.

There are two ways that both a partial and open nephrectomy can be performed:

- Open Nephrectomy – where the kidney is removed through a large incision in your abdomen (stomach).
- Laparoscopic or keyhole Nephrectomy – where a series of smaller incisions are made in your abdomen, and the kidney is removed using small surgical instruments.

Both techniques have advantages and disadvantages. A laparoscopic nephrectomy has a considerably quicker recovery time than an open nephrectomy, but this may not be possible, usually if the cancer is very large. One of the main disadvantages of an open nephrectomy

is that it's a major surgical procedure that can place a considerable strain on the body. This means it may not be suitable for people who are particularly frail or unwell.

You should discuss the pros and cons of both procedures with your surgical team. In Exeter we are using a machine called the "Da-Vinci" robot for partial nephrectomy, in suitable cases, so the operation is called 'Robotically assisted Partial Nephrectomy or RAPN'.

## Microwave ablation

Microwave ablation (MWA) uses heat generated by radio waves to kill cancer cells. This is a percutaneous treatment, meaning no incision is needed. It is mainly used if you're not strong enough for surgery or your kidney cancer is very small. MWA can't be used if the cancer is too close to other organs, such as the major blood vessels or the bowel. This treatment is available in Exeter and is performed in the special procedure area of the X-ray (radiology) department.

## Cryotherapy

Cryotherapy involves killing cancer cells by freezing them. Cryotherapy is not available in Exeter at the moment, as it is very similar to RFA. However, if cryotherapy is right for you, then we can refer you to Bristol, if this treatment is required.

Before surgery you will be required to attend a pre-operative assessment clinic appointment and further tests might be recommended.

## Non-surgical treatments for advanced kidney cancer

The main treatments for advanced kidney cancer include:

- Targeted therapies
- Immunotherapy
- Radiotherapy
- Embolisation

These are non-surgical treatments that can slow the spread of the cancer and help control its symptoms.

## Targeted therapies

A number of new medicines have been developed for the treatment of kidney cancer. These medicines are sometimes referred to as “targeted therapies”. At present, only Sunitinib, Pazopanib, Axitinib and Cabozantinib are available on the NHS for people who are still relatively healthy and have advanced kidney cancer, or kidney cancer that’s spread to other parts of their body.

## Immunotherapy

Immunotherapy is also called biologic therapy. This is a type of cancer treatment that boosts the body’s natural defences to fight the cancer. It uses substances made by the body or in a laboratory to improve or restore immune system function.

## Radiotherapy

Radiotherapy cannot usually cure kidney cancer, but it can help with managing pain from any spread of your cancer. You should only need a few minutes of radiotherapy every day, for a number of days.

## Embolisation

Embolisation is a procedure to block the blood supply to your kidney. By blocking blood supply to the kidney, any tumours that are present will become starved of oxygen and nutrients, causing them to shrink. Embolisation is rarely used, but can help if you have a lot of symptoms from the cancer and are unable to have surgery.

## Pain control

If you are having pain, ask your GP or hospital team for advice. Most people with pain due to kidney cancer can have their pain relieved by simple painkillers like paracetamol, ibuprofen or codeine. You can get a prescription, if necessary, from your GP or hospital doctor. If these are not effective, stronger painkillers will be provided. If pain is a problem you can be referred to the local Palliative Care team.

## Psychological, Practical and Social support

Being diagnosed with cancer can be very distressing, particularly if it’s incurable. When you are diagnosed you will be offered an appointment at the FORCE cancer centre in the ‘Health and Wellbeing Clinic’. We will also offer you a ‘Holistic Needs Assessment’. Both of these give an overview of your general health and wellbeing and will help us and you deal with any worries and concerns you may have.

The news can often be difficult to take in and comprehend. You may also have concerns about the effect on your family or practical concerns about how you will cope.

Your Cancer Nurse Specialist (CNS) can advise and help with this. You can contact your Cancer Nurse Specialist on , alternatively your GP can advise. The FORCE cancer charity based on the Royal Devon and Exeter Hospital site will provide counselling, support and advice for you and your family also.

## Sexual issues and fertility

Fertility is not usually affected by kidney cancer, but if you are planning to have a baby you should discuss this with your doctors and nurses. Having cancer can affect your sex life and, if you have concerns about this you can contact Moira Anderson on .

## Self-management and care

Many people with cancer feel they are not in control – this is normal. We will always involve you in any decisions about your treatment options.

There are things you can do to help your treatment including a healthy diet, taking regular exercise, reducing alcohol consumption and stopping smoking. Please see our leaflet on Living with and Beyond Cancer

## Local NHS service and care/ treatment options

The Royal Devon and Exeter Hospital is an NHS Cancer Centre providing specialist treatments. We provide a full range of kidney cancer treatments with a few exceptions for rare situations, when we may have to refer you to another hospital for treatment. Many patients are referred into Exeter for specialist treatments for kidney cancer from other hospitals in the South West region.

## Contact Details

Urology: Consultants: Mr M Crundwell, Mr T Dutton, Mr M Moody, and Mr M Stott,

Cancer Nurse Specialist: Moira Anderson

Oncology: Consultants: Dr V Ford, Dr R Srinivasan and Dr D Sheehan

We provide 365 days a year urology and oncology cover for emergencies. This can be accessed via NHS , your GP surgery or your local Emergency Department. If you have recently had surgery you may contact the Urology ward directly on . For non-urgent problems you can contact your Cancer Nurse Specialist on and we will call you back in working hours. In an acute situation you can contact the Emergency Services on .

## Further tests

The following tests are commonly used in patients with kidney cancer:

### Ultrasound scan

An ultrasound scan uses high-frequency sound waves to create an image of an organ in the body. It can often detect changes in the shape of the kidney that might be caused by a cancerous tumour.

## Computerised tomography (CT) scan

During a CT scan, a series of detailed images of the inside of your body are taken and put together by a computer. If you have a CT scan, you may be given a special dye to drink, or it may be injected. The dye makes the results of the CT scan clearer.

### Image-guided biopsy

In some cases of kidney cancer, an image-guided biopsy is carried out. It is a minor surgical procedure performed under local anaesthetic. This means you'll be awake during the procedure, but the area surrounding the affected kidney will be numbed, so that you don't feel anything.

During an image-guided biopsy, a radiologist or surgeon will use an ultrasound or CT scan to guide a needle through your skin and into your kidney. A tissue sample will be removed from your kidney and examined under a microscope.

## Magnetic resonance imaging (MRI) scan

You may also need to have a magnetic resonance imaging (MRI) scan, which can be used to produce detailed images of your kidneys. The images can help identify a tumour and determine its size.

## Staging and grading

If kidney cancer is confirmed, it is usually possible to determine its grade and stage.

The stage describes how far the cancer has spread, and the grade describes how aggressive the cancer is and how quickly it's likely to spread.

Both the stage and grade of your kidney cancer will help determine your recommended treatment and the likelihood of achieving a cure.

Healthcare professionals use the TNM system to stage kidney cancer:

- T – indicates how large the cancer has grown.

- N – indicates whether nearby lymph nodes are affected (lymph nodes are small, oval-shaped glands found throughout the body, which help protect against infection).
- M – indicates whether the cancer has spread to another part of the body (M stands for metastases, which is the medical term for cancer that has spread).

The stages of kidney cancer are:

- T1 and 2 – where the tumour is less than 7cm (2.8 inches) in diameter and has not spread out of the kidney.
- T3 and 4 – where the tumour is larger than 7cm or has spread outside the kidney.
- N0 – no lymph nodes have been affected.
- N1 – there are cancer cells in lymph nodes.
- M0 – cancer has not spread.
- M1 – cancer has spread to another part of the body.

Kidney cancer is graded using a scale of one to four. The higher the grade, then the cancer is more likely to be aggressive.

## Further reading

All of these organisations provide patient information on kidney cancer.

British Association of Urological:

Cancer Research UK:

Kidney Cancer UK:

Macmillan Cancer Support:

National Institute of Clinical Excellence:

NHS Choices:

## Next steps

You will have the opportunity to discuss your condition, results of tests and treatment options with your specialists before any treatment is planned. Sometimes further tests such as a CT scan or a biopsy are required before we can make a definite plan. We expect to be able to provide treatment for your kidney cancer quickly. We are required to meet the following standards for all urology cancer patients:

- 31 day wait from diagnosis to first treatment.
- 31 day wait to subsequent treatment.
- 62 day wait from urgent GP referral or consultant upgrade to first treatment.

Before surgery you will be required to attend a pre-operative assessment clinic appointment and further tests might be recommended.

## Follow up

If you have had surgery then you will meet with your surgeon usually between 6-8 weeks after your operation to be given your final results. They will discuss with you the surveillance plan which involves a repeat CT scan in 3 - 6 months and thereafter annual scans for at least 5 years. These can alternate between ultrasound scans and CT scans to reduce the amount of radiation you are exposed to.

If you are having targeted therapy you will be reviewed more closely with your Oncologist usually ever 4 weeks and a repeat CT scan usually at 3 months.

# My Kidney Cancer Care Plan

You can ask your consultant or specialist nurse to help you complete this care plan if you wish.

Patient name:

Consultant:

Cancer Nurse Specialist:

Diagnosis:

Stage and Grade of Cancer:

Investigations planned:

Date of investigations:

Treatment options:

Preferred treatment:

Date for Pre-operative assessment:

Date for Surgery:

Follow up investigations:

The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by RD&E staff undertaking procedures at the RD&E hospitals.

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