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Having a robotic partial nephrectomy

Department of Urology
Information for patients

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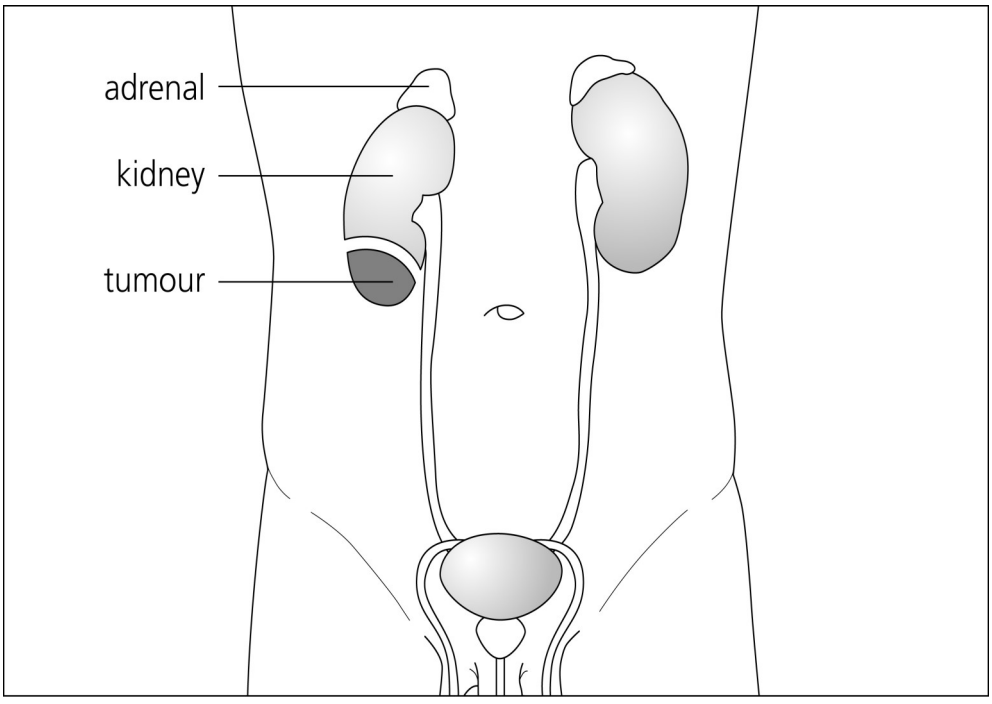
Introduction

You have recently been told that you need to have a tumour removed from your kidney. The standard operation to remove a section of the kidney containing a tumour is called an open partial nephrectomy. The surgeon carries out the operation through a large opening in the area of the kidney under general anaesthesia (whilst you are asleep). This leaflet is about an operation called a robotic partial nephrectomy.



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What is robotic partial nephrectomy?

This operation is also carried out under general anaesthesia and involves making small “keyhole” openings, either in the back or in the abdomen. Through these openings, a telescope-like instrument (endoscope) is inserted to look inside the abdomen, and specially designed surgical instruments are inserted to remove the section of kidney that contains the tumour. The robot moves the instruments inside you under the surgeon’s control. The surgeon may also use a special ultrasound probe to find the exact location of the tumour. In some cases, the surgeon may need to make a larger opening in the abdomen to help with the operation.

The procedure may not be suitable for some people with small tumours in the centre of the kidney that are difficult to reach. Some difficult cases may need open surgery, but most cases can be done successfully with robotic surgery.

What are the benefits?

These are summarised in the table below:

Advantages of robotic surgery	**Disadvantages of robotic surgery**
Shorter hospital stay Less pain Quicker return to normal Less postoperative complications Less blood loss	May not be suitable for all tumours

More details of the benefits of this operation

Shorter stay in hospital

Patients who have open surgery can expect to stay in hospital for five to six days on average. For the robotic operation studies suggest a shorter hospital stay of one to three days.

Faster recovery

Patients who have a robotic procedure recover faster than those who have the open procedure (an average of four weeks convalescence time compared to three months), and experience less pain.

Success of the operation

When a kidney tumour is removed, it will be sent to the laboratory to be looked at under a microscope. The surgeon will remove the tumour together with some of the surrounding tissue (the margin). If tumour cells are found in the margin, this means not all of the tumour has been removed but further surgery is rarely needed. Studies have shown little difference between the two procedures in terms of whether tumour cells were found in the margins.

Robotic surgery has advantages over normal keyhole surgery, in that more difficult cases can be treated with the robot and the length of time that the kidney remains without a blood supply is shorter with the robot.

Several studies have looked at whether the tumour returned after robotic surgery and have found that levels of recurrence are low and similar to open surgery.

What are the risks involved?

As with all operations, there are associated risks. These include:

- Urine leakage - from the remaining part of the kidney. Recent studies show that this occurs in around 1% of patients. Urine leakage may mean that the patient needs further surgery.

- Approximately one in twenty risk of having to perform open surgery if the kidney cannot be removed through the small cuts on your abdomen. Your doctor will discuss this with you.

- Bleeding either during or after the operation - which may mean you need a blood transfusion. Studies have shown that bleeding occurs in between 2% and 8% of patients. Most studies show lower blood loss with robotic surgery compared to open surgery. The kidney artery is clamped with the kidney warm during robotic surgery, whereas the kidney is clamped when it is cold for open surgery, although there does not seem to be any difference in terms of preserving kidney function.

- Hernia at the site of the operation - in less than one in 100 cases, a small weakness may remain in one or more of the cuts made in your abdomen. This could allow a hernia to develop, which may need to be repaired in an operation in the future.

- Rarer problems include damage to the bowel, blood vessels and ureter (the tube that carries urine from the kidney to the bladder) and urine infection.

  You will have time to discuss all these risks with the doctors and nursing staff before you consent to your operation.

What do I need to do before the operation?

- You will be seen in a pre-assessment clinic at some time before your operation.
- At this appointment the nurse will fill in your admission forms, and provide you with more information about your operation.
- This appointment is a good time to for you to ask any questions you may have.
- Depending on your general health and your age, you may have some tests carried out. These will be discussed with you as necessary and may include an ECG (heart tracing) and blood tests.

What happens when I arrive on the ward?

On arrival please report to the ward receptionist situated within the ward area. You will then be allocated to a nursing team.

How am I prepared for my operation?

Before you have your operation the anaesthetist may visit you and discuss your anaesthetic and the pain control you will require after your operation.

You will be asked to sign a consent form. Please ask your doctor or nurse any questions you may have about the operation and possible risks before you sign this form.

You will have been told when you should stop eating and drinking (this is usually nothing to eat for six hours before the operation and water only until two hours before your operation).

You will need to take a bath or shower before your operation. You will then be asked to dress in a clean theatre gown and surgical stockings.

Your nurse will then complete a checklist of questions before you leave the ward to go to the operating theatre.

On arrival at the operating department the theatre staff will take over looking after you and will go through the checklist again. You will then be taken into the anaesthetic room where you will be given your anaesthetic.

What happens after my operation?

From the operating theatre you will be taken into the recovery area where you will wake up. The time spent in theatre recovery varies with individual patients, but as soon as you are well enough a nurse from the ward will collect you, and take you back to the ward.

What happens when I return to the ward?

After returning from theatre and being settled into your bed, your blood pressure, temperature and pulse will be monitored regularly.

You will have:

A drip (an intravenous infusion)

This may be in your hand or arm. It replaces any fluids that you may have lost during surgery or by fasting. You may also need a blood transfusion. This may require a separate drip.

What happens when I return to the ward?

Pain relief

You will have some form of pain relief. How this will be given will be explained to you before your operation. If you need more information, please ask to speak to a member of the Pain Team.

Wound drain

You may also have a tube (wound drain) in your abdomen to drain away any blood. This will be removed when there is little or no fluid draining from it.

Urinary catheter

A tube that goes into your bladder and drains the urine out into a bag. The amount of urine you are passing will be monitored regularly.

What happens when I go home?

You will usually be in hospital for one or two days. We need to be sure that you are eating and drinking and that your bowels are working. We will give you a letter for your GP and you will be given a supply of any medication that you have been prescribed.

Exercise

You should go for short gentle walks, but avoid too much exercise. Expect to feel tired for a few weeks and take an afternoon rest if necessary.

Driving

Do not drive for four weeks.

Return to work

Your consultant will advise you about going back to work.

Sex

When you feel ready you can resume sexual activity. However, this is a very personal matter and will depend on the extent of your surgery. Please discuss any worries that you may have with your consultant or specialist nurse.

If you see any blood in your urine please contact the ward you were on or Urology Emergency Admissions for advice (telephone number on page (6)

Further treatment

The team of health professionals looking after you is known as the Multidisciplinary Team, or MDT. Your MDT will meet to discuss the most appropriate treatment for you. Your doctor will discuss your follow-up plan with you when you attend the out-patient clinic about six to eight weeks after your operation. You may want to bring a relative or friend to this appointment.

I have more questions, what can I do?

This booklet has been designed to answer many of your questions, but of course there may be others. If you have any questions you would like to ask before you come into hospital, you can contact the pre-assessment nurse or the ward directly. See details below.

For further information please contact:

Urology Oncology Nurse Specialists (Key workers)

Monday to Friday 9 am to 5 pm

Telephone: 0116 258 4637

Pre-Assessment Nurse

Monday to Friday 9 am to 5 pm

Telephone: 0116 258 4100

Outside these hours

Urology Emergency Admissions

Telephone: 0116 258 4247

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Previous reference:

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email equality@uhl-tr.nhs.uk

LEICESTER'S RESEARCH

Leicester's Hospitals is a research active trust so you may find research happening on your ward or in your clinic. To find out about the benefits of research and become involved yourself, speak to your clinician or nurse, call 0116 258 8351 or visit www.leicestersresearch.nhs.uk/patient-and-public-involvement