

Having an open partial nephrectomy

This leaflet will answer some of the questions you may have about having part of your kidney removed using conventional open surgery – this is called an open partial nephrectomy. It explains the benefits, risks and alternatives of the procedure as well as what you can expect when you come to hospital. If you have any questions or concerns, please do not hesitate to speak to a doctor or a nurse caring for you.

What is a partial nephrectomy?

A partial nephrectomy is an operation to remove part of the kidney. Usually the operation is done to remove a small tumour, but sometimes to remove a complex cyst (pouch of fluid) or other abnormality. It involves removing just the affected part of the kidney and not all of it. This surgery may be suitable for people who have tumours in one or both kidneys, including people who only have one kidney.

The procedure is performed under a general anaesthetic (a chemical that puts you to sleep during a procedure so you do not feel pain). The general anaesthetic is injected into a vein in the back of your hand. Our leaflet **Having an anaesthetic** offers more information – please tell us if you do not have a copy.

During a partial nephrectomy the kidney tumour is removed along with a small amount of surrounding healthy kidney tissue. The healthy tissue is removed to help ensure that all the cancer cells are cut away.

Partial nephrectomies are usually performed through a cut of about 10–15cm (about six inches) made to the abdomen on the side of the affected kidney.

Can a partial nephrectomy be done as a keyhole procedure?

Yes, most partial nephrectomy operations are performed using a keyhole procedure. This is when the surgeon performs the operation through a very small cut in the skin. An open partial nephrectomy is when the surgeon performs the operation through a much larger cut in the skin. This is recommended when keyhole surgery is too risky, too difficult or not possible.

Your surgeon will discuss with you whether keyhole surgery is appropriate for you.

What are the alternatives?

A partial nephrectomy is the only way we can treat and remove part of your kidney. You and your surgeon should decide together whether this procedure is more suitable for you than removing one of your kidneys completely. Radiofrequency ablation (which uses heat made by radio waves to kill cancer cells) is an alternative for some people with very small tumours in very specific circumstances. The kidney cancer team will discuss the suitability of this alternative with you.

What are the possible risks?

Your surgeon will discuss the risks below with you in more detail, but please ask questions if you are uncertain.

- **Bleeding after the operation:** Approximately one out of every 50 patients will experience bleeding after having a partial nephrectomy. If this happens, you may need to have emergency surgery and a blood transfusion.
- **Urine leak:** Rarely, urine can leak from the cut surface of the kidney. This will generally stop naturally without the need for a further operation. A drain (small plastic tube) is inserted during the operation to drain any fluid from around the kidney. If there are signs of a urine leak, the tube may be left in until it has stopped.
- **Need for dialysis:** Dialysis means that a machine filters the blood and removes any waste products that are normally removed in your urine. Patients with two kidneys rarely need dialysis after the operation. Very occasionally (in less than one out of every 20 cases) patients having a tumour removed from their only kidney may need to have dialysis after the operation. The risk of needing dialysis is also increased if you have poor kidney function before the operation and especially if you have poor kidney function and only one kidney.
The need for dialysis may be just for a few days after the operation. However, for a very small number of patients, dialysis may be required for a longer period of time while kidney function recovers. If your surgeon feels that there may be a need for dialysis, they will discuss this with you and refer you to the renal (kidney) doctors.
- **Complete nephrectomy:** In a small number of patients the surgeon may need to remove the whole kidney. This is rare, affecting fewer than one in 50 patients.
- **Problems relating to the anaesthetic:** Although rare, it is possible to experience complications as a result of the anaesthetic. Please see our leaflet **Having an anaesthetic** for more information.
- **Problems relating to surgery:** These are rare, but include **deep vein thrombosis (DVT;** blood clot in the leg) and **pulmonary embolism** (blood clot on in the lung).
- **Infection or hernia:** As with all procedures there is a small risk of developing an infection or a hernia at the wound site. A hernia is when an internal part of the body, such as an organ, pushes through a weakness in the muscle or surrounding tissue wall.
- **Death:** The risk of death is rare, but approximately one in 200 patients having this operation dies from complications.
- **Delay in leaving the hospital:** This is most commonly due to a haematoma (collection of blood). A haematoma is managed by bed rest and possibly a blood transfusion. A urine leak (explained above in the section on risks) may also mean that you are delayed in leaving hospital.

It is important to note that as this operation is to treat kidney cancer you may need further treatment after your operation. If we find that the cancer has spread outside of your kidney you will be referred to an oncologist (specialist cancer doctor) who will discuss further treatment options with you.

Consent – asking for your consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead with the operation, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves. If you would like more information about our consent process, please speak to a member of staff caring for you.

Preparing for surgery

Your pre-assessment clinic appointment

You will attend a pre-assessment clinic before your surgery. It is very important that you come to this appointment, as this is when we will assess your suitability and fitness for surgery and anaesthetic. **If you do not attend this appointment, we may have to cancel your surgery.**

We will carry out a number of tests to make sure that your heart, lungs and kidneys are working properly. You may have a chest X-ray, ECG or electrocardiogram (to record the electrical activity of your heart) and some blood tests. Your doctor will explain any further tests you may need.

Please bring all of the medicines that you currently take or use with you to your pre-assessment clinic appointment, including:

- anything that you get from your doctor on prescription
- medicines that you have bought yourself over the counter
- any alternative medicines, such as herbal remedies.

Further information about medicines

If you are taking any medication, these may need to be temporarily stopped or adjusted around the time of your surgery or treatment, you will be given information on how to do this at your pre-assessment appointment. Do not make any changes to your usual medicines and continue to take them unless you have been advised to do so. Please remember to bring them into hospital with you.

If you are taking any medicines that thin your blood, such as antiplatelet medicines (for example aspirin or clopidogrel) or anticoagulant medicines (for examples warfarin or rivaroxaban), please tell your doctor or the nurse as you may need to stop them temporarily before your surgery. Also tell your doctor or nurse if you have diabetes as you may need to alter the dose of your diabetes medicines, as you will need to fast before the procedure. Further information on stopping any medicines will be given to you when you come for pre-assessment. Please ask us if you have any questions.

Please let us know if you are taking any regular medicines (including anything you buy yourself over the counter or any herbal or homeopathic medicines) and if you have any allergies to any medicines.

Smokers

If you smoke, you should try to stop smoking as this increases the risk of developing a chest infection or DVT, explained in the risks section. Smoking can also delay wound healing. For help giving up smoking, please speak to your nurse, or call the Trust stop smoking service, **t: 020 7188 0995**, or the NHS Smoking Helpline, **t: 0800 169 0169**.

Absence from work

You will need time off work to recover from your operation. Typically, patients need up to four weeks rest before returning to work. We suggest you discuss this matter with your employer before your surgery. If you do work requiring heavy lifting, you may need further time off to recover fully.

Driving

We advise you not to drive after your operation for approximately four weeks after your operation. You will also need to check with your insurance company to make sure you are covered to start driving again.

What to do before coming into hospital for your operation

You should receive the pack **Welcome – information about your stay** which gives more information about what to expect during your stay. If you do not receive this, please ask for one from a member of staff caring for you.

You will be admitted to hospital on the day of your surgery. The admissions coordinator will let you know which ward to come to. Please note, you may wish to bring some reading material whilst you wait for your appointment.

Coming into hospital for your operation

You will not be able to eat or drink anything for six hours before your surgery. This is because you should not have food or drink in your stomach when you are given the anaesthetic. If you do, you are more likely to be sick while you are unconscious, which can lead to complications. At your pre- assessment clinic appointment we will tell you when you will need to stop eating and drinking.

On the morning of your surgery, please have a shower or bath.

When you arrive in hospital in the surgical admissions department, you will be seen by a nurse who will take some of your details and ask you to put on a clean gown and special surgical stockings. These stockings will help to prevent a blood clot forming in your leg (DVT) during or after your surgery.

Your surgeon will see you to obtain your consent for the operation. They will write down all the possible complications of the procedure and discuss these with you before asking you to sign a consent form.

The anaesthetist (a doctor who has specialised in anaesthetics) will see you on the morning of your surgery to discuss the anaesthetic. Your nurse specialist will also be on hand to address any further questions or concerns.

If there is a possibility that you may need dialysis after your operation, you may be seen by the kidney doctors (nephrologists) or the nurse specialists to discuss this further.

You will need to be ready for surgery at least one hour beforehand. If you are admitted via the surgical admissions lounge, when the surgeons are ready for you, you will walk to the anaesthetic room accompanied by a nurse. If you have been admitted on to a ward before your surgery, you will be taken on your bed to the anaesthetic room, where you will be seen by the anaesthetic nurse and doctors. They may put a drip into your arm or neck. Once anaesthetised, you will be taken through to the operating theatre.

In some cases, the surgeon may place a long tube from your kidney to the bladder called a stent. This is done to protect the tube (that carries your urine) during the healing process after surgery.

The operation usually takes 2-3 hours.

What to expect after surgery?

After the surgery, you will be taken to the recovery room or to the high dependency area (Guy's Critical Care Unit) for the first night after your operation so that they can monitor you closely. If your kidney is working properly you will return to the ward the following day.

Equipment attached to you when you wake up

When you wake up you are likely to have the following equipment attached to you:

- **A catheter:** This is a hollow tube inserted into the bladder, which will collect your urine so you will not need to leave your bed to pass urine. It also allows nurses to carefully monitor your urine output. This will stay in place for one to two days.
- **Dressings:** A dressing will be placed over the wound site. This will be checked by your nurse for signs of bleeding and will be changed as needed.
- **Wound:** The incision is closed with either sutures (stitches) or surgical clips. These are normally removed 10 days after your operation.
- **Drains:** You will have a small tube placed around the wound site to drain any remaining fluid. A small bag will be attached to it, which the nurses will empty as needed. The drain will be removed one to two days after your operation or when there is minimal fluid in the bag.
- **A drip:** This delivers fluids into one of your arm veins or a larger neck vein to prevent you getting dehydrated. It is usually removed one to two days after your surgery when you are able to drink freely.
- **Nasogastric tube:** During the operation, we will insert a fine plastic tube from your nose into your stomach to stop you from feeling sick.
- **An oxygen mask or nasal prongs:** These give you extra oxygen in the first day or two after your operation, if required.
- **A pain control device:** To reduce any pain after your operation. The anaesthetist will have discussed two options with you before your surgery:
 - a device that releases painkillers into your blood stream via a drip (patient controlled analgesia or PCA)
 - an epidural, which allows painkillers and local anaesthetic to be given directly into your spinal nerve system. This involves inserting a very fine plastic tube into your back.

Either of the devices will be attached during surgery. After two to three days, you should not usually need this level of pain relief. The device will be removed and the ward staff will give you tablets or injections instead.

Please tell the staff looking after you if you feel that the pain relief you are receiving is not controlling your pain. They may be able to offer alternative painkillers.

Eating and drinking after the operation

You will be able to drink clear fluids immediately after your operation. Your bowel often becomes quite sluggish after a big operation. You should be able to start eating a very light diet the following day as your bowel starts to function normally. We will encourage you to move around as soon as possible and to start eating a light diet, for example, soup or yoghurt, and drinking water or squash as soon as you are able.

Special surgical stockings

You may take your special surgical stockings off to shower during your hospital stay. But you must keep them on at all other times to help to reduce the risk of blood clots in your legs. You will be able to remove them when you leave hospital.

When you can go home?

The average hospital stay is five to six nights. For very complex operations, the hospital stay can be up to two weeks, or longer if complications develop.

You will be discharged from hospital when:

- you have opened your bowels
- you can move around freely
- your pain is well controlled with painkillers taken by mouth (orally).

What you can expect when you get home?

The most common complaint after surgery is tiredness. It is important to remember that you have had major surgery and that you need to rest at home. It may take up to eight weeks before you start to regain your normal energy levels.

You may feel bloated and your clothes may feel tighter than usual. It can be uncomfortable if you have not had a bowel movement for a few days. Wear loose clothing and try to walk around the house as this may help you to pass wind. Exercise, such as walking, can help to get your bowels moving again after the operation. If this continues to be a problem, talk to your nurse or doctor for advice.

At home, you will need to:

- Eat a light diet until your bowel movements are back to normal.
- Take it easy – do not lift anything heavy or do anything too energetic (for example, shopping, vacuuming, mowing the lawn, lifting weights or running) for at least two to four weeks after your surgery. Doing these things may put too much strain on your stitches and increase your recovery time.
- Give yourself up to four weeks rest since surgery before returning to work. If your work involves heavy lifting or exercise, please speak to your consultant for advice.
- Avoid driving for approximately four weeks. Check with your insurance company to make sure you are covered to start driving again.

You may begin sexual activity again two weeks after your operation, as long as you feel comfortable.

If you have any concerns, please contact us – see the 'Contact us' box at the end of this leaflet.

Will I have a follow-up appointment?

Your stitches or clips will be removed 10 days after the operation. This may be done by the nurse at your GP surgery or by a district nurse.

You will be seen by your surgeon or a member of their team two weeks after your surgery to check the outcome of your operation.

If you have had a stent inserted during your surgery, it will be removed at this appointment.

If you have not received an appointment, please let us know – see the 'Contact us' box at the end of this leaflet.

Your follow-up after this will depend on your cancer type. This will be explained to you when you attend your first follow-up appointment.

Useful sources of information and support

Macmillan Cancer Support provides information and support to anyone affected by cancer.

t: 0808 800 1234 **w:** www.macmillan.org.uk

Cancer Research UK has a patient information website with information on all types of cancer and treatment options, as well as a book list for further information.

w: www.cancerresearchuk.org/about-cancer/

Contact us

If you have any questions or concerns about your operation, please contact Linda Gomm or Lesley Cooper, **t:** 020 7188 7823 (Monday to Friday, 9am-5pm).

Alternatively, call the hospital switchboard, **t:** 020 7188 7188 and ask for the bleep desk. Ask for bleep 2841 and wait for a response. This will connect you directly to Linda or Lesley.

Out of hours, please contact **Florence Ward**, **t:** 020 7188 8818 or **Aston Key Ward**, **t:** 020 7188 8860, or call your GP for advice.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit **w:** www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline. **t:** 020 7188 8748, Monday to Friday, 9am-5pm

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

Leaflet number: 2382/VER6

Date published: August 2019

Review date: August 2022

© 2019 Guy's and St Thomas' NHS Foundation Trust

A list of sources is available on request