

Laparoscopic partial removal of the kidney

Department of Urology

What evidence is this information based on?

This booklet includes advice from consensus panels, the British Association of Urological Surgeons, the Department of Health and other sources. As such, it is a reflection of best urological practice in the UK. You should read this booklet with any advice your GP or other healthcare professional may already have given you. We have outlined alternative treatments below that you can discuss in more detail with your urologist or specialist nurse.

What does the procedure involve?

Removal of part of the kidney with its surrounding fat for suspected cancer of the kidney, using a telescope and three to five keyhole incisions; one incision will need to be enlarged to remove the kidney.

What are the alternatives to this procedure?

Alternatives to this procedure include observation, immunotherapy, removal of the whole kidney and open surgery.

What should I expect before the procedure?

You will usually be admitted to hospital on the same day as your surgery. You will normally receive an appointment for a 'pre-assessment' to assess your general fitness, to screen you for MRSA and to do some baseline investigations. Once you have been admitted, you will be seen by members of the medical team which may include the consultant, specialist registrar, house officer and your named nurse.

You will be asked not to eat and drink for six hours before surgery.

Immediately before the operation, the anaesthetist may give you a pre-medication which will make you dry-mouthed and pleasantly sleepy.

You will need to wear anti-thrombosis stockings during your hospital stay. These help prevent blood clots forming in the veins of your legs during and after surgery.

Please tell your surgeon (before your surgery) if you have any of the following:

- an artificial heart valve
- a coronary artery stent
- a heart pacemaker or defibrillator
- an artificial joint
- an artificial blood-vessel graft
- a neurosurgical shunt
- any other implanted foreign body
- a regular prescription for a blood thinning agent such as warfarin, aspirin, clopidogrel (Plavix®), rivaroxaban, prasugrel or dabigatran
- a previous or current MRSA infection
- a high risk of variant-CJD (if you have had a corneal transplant, a neurosurgical dural transplant or injections of human-derived growth hormone).

When you are admitted to hospital, you will be asked to sign the second part of your operation consent form giving permission for your operation to take place, showing you understand what is to be done and confirming that you want to go ahead. Make sure that you are given the opportunity to discuss any concerns and to ask any questions you may still have before signing the form.

What happens during the procedure?

A full general anaesthetic is normally used and you will be asleep throughout the procedure. You will usually be given an injection of antibiotics before the procedure, after you have been checked for any allergies. The anaesthetist may also use an epidural or spinal anaesthetic to reduce the level of pain afterwards.

The surgeon will free the chosen kidney through several keyhole incisions and remove the part that contains the tumour, together with its surrounding fat. This will be put into a bag which is then removed by enlarging one of the keyhole incisions. Local anaesthetic is usually injected into each keyhole incision to reduce the level of pain afterwards.

We normally put in a bladder catheter to monitor urine output and a drainage tube through the skin into the bed of the kidney. We also insert a ureteric catheter up to the kidney through the bladder.

What happens immediately after the procedure?

You should be told how the procedure went and you should:

- ask the surgeon if it went as planned;
- let the medical staff know if you are in any discomfort;
- ask what you can and cannot do;
- feel free to ask any questions or discuss any concerns with the ward staff and members of the surgical team; and
- make sure that you are clear about what has been done and what happens next.

You will be given drinks at an early stage after the operation and encouraged to mobilise as soon as you are comfortable, to prevent

blood clots from forming in your legs. The wound drain will need to remain in place for up to one week in case urine leaks from the cut surface of the kidney.

The average hospital stay is three days.

Are there any side-effects?

Most procedures have possible side-effects. But, although the complications listed below are well-recognised, most patients do not suffer any problems.

Common (greater than 1 in 10)

- Need for removal of the ureteric stent (usually under local anaesthetic).
- Temporary pain in the tip of your shoulder.
- Temporary bloating of your tummy.
- Urinary leak from the cut edge of the kidney needing further treatment or insertion of a ureteric stent.
- Bleeding needing blood transfusion or conversion to open surgery.

Occasional (between 1 in 10 and 1 in 50)

- Infection, pain or hernia of the incision needing further treatment.
- Total removal of the kidney may need to be performed if partial removal is not thought to be possible.

Rare (less than 1 in 50)

- Entry into lung cavity needing insertion of a temporary drain.
- The pathology may turn out not to be cancer.
- Recognised (or unrecognised) injury to organs/blood vessels needing conversion to open surgery (or deferred open surgery).

- Involvement or injury to nearby local structures (blood vessels, spleen, liver, kidney, lung, pancreas, bowel) needing more extensive surgery.
- Anaesthetic or cardiovascular problems possibly requiring intensive care admission (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death).

Hospital-acquired infection

- Colonisation with MRSA (0.9% - 1 in 110).
- MRSA bloodstream infection (0.02% - 1 in 5000).
- Clostridium difficile bowel infection (0.01% - 1 in 10,000).

Please note: The rates for hospital-acquired infection may be greater in 'high-risk' patients. This group includes, for example, patients with long-term drainage tubes, patients who have had their bladder removed due to cancer, patients who have had a long stay in hospital or patients who have been admitted to hospital many times.

What should I expect when I get home?

When you are discharged from hospital, you should:

- be given advice about your recovery at home;
- ask when you can begin normal activities again, such as work, exercise, driving, housework and sex;
- ask for a contact number if you have any concerns once you return home;
- ask when your follow-up will be and who will do this (the hospital or your GP); and
- be sure that you know when you get the results of any tests done on tissues or organs that have been removed.

When you leave hospital, you will be given a 'draft' discharge summary. This contains important information about your stay in hospital and your operation. If you need to call your GP or if you need to go to another hospital, please take this summary with you so the staff can see the details of your treatment. This is important if you need to consult another doctor within a few days of being discharged.

You may have some discomfort from the keyhole incisions in your abdomen but this can normally be controlled with simple painkillers. All the wounds are closed with absorbable stitches which do not require removal.

It will take 10 to 14 days to recover fully from the procedure and most people can return to normal activities after two to four weeks. If you have a ureteric stent in place, you may notice that you pass urine more frequently and you may get pain in your bladder area.

What else should I look out for?

If you develop a temperature, increased redness, throbbing or drainage at the site of the operation, you should contact your GP immediately. Any other post-operative problems should also be reported to your GP, especially if they involve chest symptoms.

Are there any other important points?

A follow-up outpatient appointment will normally be arranged for you at 6 to 12 weeks after the operation.

It will be 14 to 21 days before the biopsy results on the tissue removed are available. All biopsies are discussed in detail at a multi-

disciplinary meeting before any further treatment decisions are made. You and your GP will be informed of the results after this discussion.

If you have had a ureteric stent inserted, we will arrange to remove it six weeks after your operation.

Driving after surgery

It is your responsibility to make sure you are fit to drive following your surgery. You do not normally need to tell the DVLA that you have had surgery, unless you have a medical condition that will last for longer than three months after your surgery and may affect your ability to drive. You should, however, check with your insurance company before returning to driving. Your doctors will be happy to give you advice on this.

Is any research being carried out in this area?

Before your operation, your surgeon or specialist nurse will tell you about any relevant research studies taking place. In particular, they will tell you if any tissue that is removed during your surgery will be stored for future study. If you agree to this research, you will be asked to sign a special form giving your consent.

All surgical procedures, even those not currently undergoing research, are audited so that we can analyse our results and compare them with those of other surgeons. In this way, we learn how to improve our techniques and results; this means that our patients will then get the best treatment available.

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The information in this leaflet is for guidance purposes only and is in no way intended to replace professional clinical advice by a qualified practitioner.

Ref number: 776.1

Publication Date: December 2018

Review Date: December 2020

