Urology Department

Partial removal of the kidney

What is the evidence base for this information?
This leaflet includes advice from consensus panels, the British Association of Urological Surgeons, the Department of Health and evidence based sources; it is, therefore, a reflection of best practice in the UK. It is intended to supplement any advice you may already have been given by your urologist or nurse specialist as well as the surgical team at Addenbrookes. Alternative treatments are outlined below and can be discussed in more detail with your urologist or specialist nurse.

What does the procedure involve?
This involves removal of part of the kidney with surrounding fat with or without the adrenal gland or suspected cancer of the kidney, using an incision either in the side or abdomen.

What are the alternatives to this procedure?
Observation, total nephrectomy by open or laparoscopic (telescopic or minimally invasive) approach, partial nephrectomy by laparoscopic (telescopic or minimally invasive) approach, radiofrequency ablation.

What should I expect before the procedure?
You will usually be admitted the day of your surgery. You will normally undergo pre assessment on the day of your clinic or an appointment for pre assessment will be made from clinic, to assess your general fitness, to screen for the carriage of MRSA and to perform some baseline investigations. After admission, you will be seen by members of the surgical team which may include the consultant, junior urology doctors and your named nurse.

You will be asked not to eat or drink for six hours before surgery and, immediately before the operation, you may be given a pre-medication by the anaesthetist which will make you dry-mouthed and pleasantly sleepy.
You will be given an injection under the skin of a drug (Dalteparin) that, along with the help of elasticated stockings provided by the ward, will help prevent thrombosis (clots) in the veins.

Please be sure to inform your urologist in advance of 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 prescription for Warfarin, Aspirin, Rivaroxaban, Dabigatran, Apixaban, Edoxaban or Clopidogrel, Ticagrelor or blood thinning medication
- a previous or current MRSA infection
- high risk of variant CJD (if you have received a corneal transplant, a neurosurgical dural transplant or previous injections of human derived growth hormone)

**What happens during the procedure?**

Normally, a full general anaesthetic will be used and you will be asleep throughout the procedure. In some patients, the anaesthetist may also use an epidural anaesthetic which improves or minimises pain post operatively.

You will usually be given injectable antibiotics before the procedure, after checking for any allergies.

The kidney is usually accessed through an incision in your loin although, on occasions, the incision is made in the front of the abdomen or extended into the chest area. A bladder catheter is normally inserted post operatively, to monitor urine output, and a drainage tube is usually placed through the skin to sit beside the cut kidney surface. Occasionally, a small tube (or stent) is placed internally from the collecting system of the kidney to the bladder to help with healing. If placed, this will need to be removed by a second procedure, usually performed telescopically via the bladder under local anaesthetic a few weeks after surgery.

Occasionally, it may be necessary to insert a stomach tube through your nose to prevent distension of your stomach and bowel with air.

**What happens immediately after the procedure?**

You will be given fluids to drink from an early stage after the operation and you will start a light diet within one to two days. You will be encouraged to mobilise early to prevent blood clots in the veins of your legs.

The wound drain will need to stay in place for a few days in case urine leaks from the cut kidney surface. In some patients, the drain needs to stay in place longer and you will then go home with the drain and catheter still in place to allow the kidney to heal fully.
We would expect your hospital stay to be three to four days but some patients go home sooner.

**Are there any side effects?**
Most procedures have a potential for side effects. You should be reassured that, although all these complications are well recognised, the majority of patients do not suffer any problems after a urological procedure.

Please use the check boxes to tick off individual items when you are happy that they have been discussed to your satisfaction:

**Common (greater than one in 10)**
- Temporary insertion of a bladder catheter and wound drain
- Urinary leak from kidney edge requiring further treatment or a stent
- Bulging of the wound due to damage to the nerves serving the abdominal wall muscles

**Occasional (between one in 10 and one in 50)**
- Bleeding requiring further surgery or transfusions
- Total nephrectomy will be performed if partial is thought not possible.
- Entry into the lung cavity requiring insertion of a temporary drainage tube
- Need of further therapy for cancer control
- Infection, pain or bulging of the incision site requiring further treatment

**Rare (less than one in 50)**
- Anaesthetic or cardiovascular problems possibly requiring intensive care admission (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death)
- Involvement or injury to nearby local structures (blood vessels, spleen, liver, lung, pancreas and bowel) requiring more extensive surgery
- The histological abnormality in the kidney may subsequently be shown not to be cancer
- Need for further treatment if histology suggests incomplete removal

**What should I expect when I get home?**
When you leave hospital, you will be given a discharge summary of your admission. This holds important information about your inpatient stay and your operation. If, in the first few weeks after your discharge, you need to call your GP for any reason or to attend another hospital, please take this summary with you to allow the doctors to see details of your treatment. This is particularly important if you need to consult another doctor within a few days of your discharge.

It will be at least 14 days before healing of the skin wound occurs but it may take up to six weeks before you feel fully recovered from the surgery. You may return to work when you are comfortable enough and your GP is satisfied with your progress.

It is advisable that you continue to wear your elasticated stockings for 14 days after you are discharged from hospital.
Many patients have persistent twinges of discomfort in the loin wound which can go on for several months. It is usual for there to be bulging of the wound when an incision in the loin is used, due to the nerves supplying the abdominal muscles being weakened.

If a ureteric stent has been inserted, you may notice that you pass urine more frequently with pain in the bladder region or at the tip of the penis after passing urine.

**What else should I look out for?**

If you develop a temperature, increased redness, throbbing or drainage at the site of the operation, please contact your GP.

Any other post operative problems should also be reported to your GP, especially if they involve chest symptoms.

After surgery through the loin, the wall of the abdomen around the scar will bulge due to nerve damage. This is not a hernia but can be helped by strengthening up the muscles of the abdominal wall by exercises.

**Are there any other important points?**

It will be at least 14 to 21 days before the pathology results on your kidney are available. It is normal practice for the results of all biopsies to be 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.

An outpatient appointment will be made for you four to six weeks after the operation when we will be able to inform you of the pathology results and give you a plan for follow up.

Once the results have been discussed, it may be necessary for further treatment but this will be discussed with you by your consultant or specialist nurse.

If a ureteric stent has been inserted, arrangements will be made for its removal approximately six weeks after discharge from hospital. If you have not heard from us within six weeks about removing your stent, please contact us immediately.

Some patients who have a ureteric stent inserted need to go home with their catheter still in place to allow the kidney to heal completely.

**Driving after surgery**

It is your responsibility to ensure that you are fit to drive following your surgery.

You do not normally need to notify the DVLA 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 provide you with advice on request.

**Privacy & Dignity**

Same sex bays and bathrooms are offered in all wards except critical care and theatre recovery areas where the use of high tech equipment and/or specialist one to one care is required.
Hair removal before an operation
For most operations, you do not need to have the hair around the site of the operation removed. However, sometimes the healthcare team need to see or reach your skin and if this is necessary they will use an electric hair clipper with a single-use disposable head, on the day of the surgery. Please do not shave the hair yourself or use a razor to remove hair, as this can increase the risk of infection. Your healthcare team will be happy to discuss this with you.

References
NICE clinical guideline No 74: Surgical site infection (October 2008); Department of Health: High Impact Intervention No 4: Care bundle to preventing surgical site infection (August 2007)

Is there any research being carried out in this field at Addenbrooke’s Hospital?
Yes. As part of your operation, various specimens of tissue will be sent to the Pathology department so that we can find out details of the disease and whether it has affected other areas. This information sheet has already described to you what tissue will be removed.

We would also like your agreement to carry out research on that tissue which will be left over when the pathologist has finished making a full diagnosis. Normally, this tissue is disposed of or simply stored. What we would like to do is to store samples of the tissue, both frozen and after it has been processed. Please note that we are not asking you to provide any tissue apart from that which would normally be removed during the operation.

We are carrying out a series of research projects which involve studying the genes and proteins produced by normal and diseased tissues. The reason for doing this is to try to discover differences between diseased and normal tissue to help develop new tests or treatments that might benefit future generations. This research is being carried out here in Cambridge but we sometimes work with other universities or with industry to move our research forwards more quickly than it would if we did everything here.

The consent form you will sign from the hospital allows you to indicate whether you are prepared to provide this tissue. If you would like any further information, please ask the ward to contact your consultant.

Who can I contact for more help or information?

Oncology nurses
Uro-oncology nurse specialist
01223 586748

Bladder cancer nurse practitioner (haematuria, chemotherapy and BCG)
01223 274608

Prostate cancer nurse practitioner
01223 274608 or 216897 or bleep 154-548
Surgical care practitioner
01223 348590 or 256157 or bleep 154-351

Non-oncology nurses
Urology nurse practitioner (incontinence, urodynamics, catheter patients)
01223 274608 or 586748 or bleep 157-237

Urology nurse practitioner (stoma care)
01223 349800

Urology nurse practitioner (stone disease)
01223 349800 or bleep 152-879

Patient Advice and Liaison Centre (PALS)
Telephone: +44 (0)1223 216756 or 257257
+44 (0)1223 274432 or 274431
PatientLine: *801 (from patient bedside telephones only)
E mail: pals@addenbrookes.nhs.uk
Mail: PALS, Box No 53
Addenbrooke's Hospital
Hills Road, Cambridge, CB2 2QQ

Chaplaincy and multi faith community
Telephone: +44 (0)1223 217769
E mail: chaplaincy@addenbrookes.nhs.uk
Mail: The Chaplaincy, Box No 105
Addenbrooke's Hospital
Hills Road, Cambridge, CB2 2QQ

MINICOM System ("type" system for the hard of hearing)
Telephone: +44 (0)1223 217589

Access office (travel, parking and security information)
Telephone: +44 (0)1223 596060

What should I do with this leaflet?
Thank you for taking the trouble to read this patient information leaflet. If you wish to sign it and retain a copy for your own records, please do so below.

If you would like a copy of this leaflet to be filed in your hospital records for future reference, please let your urologist or specialist nurse know. If you do, however, decide to proceed with the scheduled procedure, you will be asked to sign a separate consent form which will be filed in your hospital notes and you will, in addition, be provided with a copy of the form if you wish.

I have read this patient information leaflet and I accept the information it provides.

Signature..................................................Date........................................
We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

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