Laparoscopic radical 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 the kidney for suspected cancer of the kidney through several keyhole incisions. It requires the placement of a telescope and operating instruments into your abdominal cavity using four to five small incisions. The adrenal gland may also be removed and one incision will need to be enlarged to remove the kidney.

What are the alternatives to this procedure?
Observation, embolisation, chemotherapy, immunotherapy, open surgery.

What is laparoscopic surgery?
Laparoscopy (otherwise known as “keyhole surgery”) is a form of minimal access surgery. This involves performing operations which are traditionally done by an “open” method but using “keyholes” instead. A number of urological procedures are now being performed by this method. It has been shown to be safe and effective for kidney surgery; for the removal of a kidney it is now the method of choice.
Your urologist will discuss the details of the procedure with you whilst you are an outpatient, outlining the procedure as part of your consent. You should be aware that there is a small chance (less than 1%) that your procedure may need to be converted to an open procedure. For this reason, if you are insistent that you would not agree to an open operation under any circumstances, we would not be able to proceed with the laparoscopic operation.

**What should I expect before the procedure?**

You will usually be admitted on the same day as your surgery. Unless done on the same day as your urology clinic appointment, 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.

One important thing that you must do is to prepare yourself to mobilise immediately after the operation. You should try to walk at least 10 lengths of the ward before your operation.

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 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 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?**

A full general anaesthetic will be used and you will be asleep throughout the procedure.

You will be transferred to the operating theatre on your bed and you will be taken first to the anaesthetic room. They may put a drip in to your arm to allow them to access your circulation during the operation. You will be anaesthetised and taken into the operating theatre. During the surgery you will be given antibiotics by injection; if you have any allergies, be sure to let the anaesthetist know.
The kidney is disconnected through several keyhole incisions and put into a bag which is then removed by extending one of the keyhole incisions. A bladder catheter is normally inserted during the operation to monitor urine output and rarely, a drainage tube may be placed through the skin into the bed of the kidney.

**What happens immediately after the procedure?**

It is fine, and in fact you will be encouraged, to eat and drink as soon as you feel able to after surgery. You will be encouraged to mobilise as soon as possible after surgery. This helps to prevent blood clots forming in your legs, chest infection from developing, and also decreases any disturbance to your bowel function. After your operation, you may 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. The catheter is normally removed on the morning after surgery.

The expected hospital stay is two to three days.

**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 shoulder tip pain
  - Temporary abdominal bloating
  - Temporary insertion of a bladder catheter

- **Occasional (between one in 10 and one in 50)**
  - Bleeding, infection, pain or hernia of the incision requiring further treatment

- **Rare (less than one in 50)**
  - Bleeding requiring conversion to open surgery or requiring blood transfusion
  - Entry into lung cavity requiring insertion of a temporary drain
  - The histological abnormality may eventually turn out not to be cancer
Recognised (or unrecognised) injury to organs/blood vessels requiring conversion to open surgery (or deferred open surgery)

- Involvement or injury to nearby local structures (blood vessels, spleen, liver, kidney, lung, pancreas, bowel) requiring 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)

- Dialysis may be required to stabilise your kidney function if your other kidney functions poorly

**Hospital-acquired infection (overall risk for Addenbrooke’s)**
- Colonisation with MRSA (0.01%, two in 15,500)
- Clostridium difficile bowel infection (0.02%; three in 15,500)
- MRSA bloodstream infection (0.00%; 0 in 15,000)

(These rates may be greater in high risk patients eg with long term drainage tubes, after removal of the bladder for cancer, after previous infections, after prolonged hospitalisation or after multiple admissions.)

**What should I expect when I get home?**

Before you leave hospital, the team will ensure you are safe to be discharged 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.

There may be some discomfort from the small 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.

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

If you develop a temperature, increased redness, throbbing or drainage at the site of the operation, increasing abdominal pain or dizziness, please contact your GP/ward M4 (01223 348537)/on-call urology specialist registrar (via hospital switchboard 01223 245151) immediately.

**Are there any other important points?**

A follow-up outpatient appointment will normally be arranged for you around weeks after the operation. At this time, we will be able to inform you of the results of pathology tests on the removed kidney.

It will be at least 14 to 21 days before the pathology results on the tissue removed 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.
If a cancerous growth is found in the removed kidney, you will be closely followed in clinic with blood tests every six months, and chest X rays and scans less frequently.

After removal of one kidney, there is no need for any dietary or fluid restrictions since your remaining kidney can handle fluids and waste products with no difficulty.

**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 may need to remove hair to allow them to see or reach your skin. If the healthcare team consider it is important to remove the hair, they will do this by using 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 for hair removal, as this can increase the risk of infection to the site of the operation. If you have any questions, please ask the healthcare team who 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.

All laparoscopic procedures are subject to continuous audit by the British Association of Urological Surgeons Section of Endourology. In addition, the National Institute of Health and Clinical Excellence (NICE) requires that we maintain a careful review of laparoscopic procedures.

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
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
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.

Help with this leaflet:
If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or patient.info@addenbrookes.nhs.uk

Document history
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