Laparoscopic Nephrectomy

What is kidney cancer?

Most tumours are named after the part of the body in which they first start. The kidneys are large bean shaped organs that filter the blood, removing waste products from the body. This waste is known as urine.

In the past most cases of kidney tumours are found when some sign or symptom appears. Increasingly kidney tumours are picked up at the time of ultrasound or CT scan for other problems. There are as yet no screening blood or urine tests to diagnose kidney cancer.

How is it diagnosed?

Blood in the urine (known as haematuria) is the most common sign of a kidney tumour, but blood in the urine can be caused by other non-cancerous conditions such as infection.

In addition to a physical examination your doctor will need to perform other tests to confirm the diagnosis. If he suspects that you may have cancer of the kidney, your doctor will refer you for an ultrasound scan which may be done in the hospital or community setting. If the ultrasound scan shows anything suspicious you will have a CT scan. This is a series of x-rays which builds up a three dimensional picture of the inside of the body. The scan will look at the pelvis, abdomen and chest. It is useful to help the doctors identify the exact site of the
tumour and to check for any spread of the disease.

There are CT scanners at the Yorkshire Clinic, Bradford Royal Infirmary, St Luke’s Hospital and Eccleshill Treatment Centre. Although we have two kidneys it is possible to live with less than even one complete kidney, however, you may need to have investigations to look at the function of the remaining kidney. This information can be obtained from blood samples, but sometimes Mr Puri may send you for a renogram, which is a special test to determine how well your kidneys function. This is performed at the Medical Physics Department at the Bradford Royal Infirmary but not every patient will need this test.

**Treatment**

Mr Puri will see you after you have been referred to the hospital by your GP. You may have already had an ultrasound scan and a CT scan before you see Mr Puri, but they will be arranged following this visit if not. Mr Puri will then discuss your care with his colleagues at the Multidisciplinary Team Meeting (MDT). Surgery is the main treatment for kidney cancers.

**Surgery**

A laparoscopic nephrectomy is the removal of the kidney without needing a major incision (wound site). This may be either a radical nephrectomy which is the removal of the kidney and sometimes the adrenal gland or a nephroureterectomy, which involves the removal of the kidney and the ureter (the tube that allows urine to pass into the bladder from the kidney). It is possible that you may only need to have part of your kidney removed but this will be discussed with you prior to surgery.

During the operation the surgeon uses a telescope which contains a camera so that he can see inside the body via a picture on a television monitor. The surgeon always has to use more than one entry site and you will end up with a few small wounds, each an inch or so long and a larger wound to remove the kidney. The surgeon can manipulate these and watch what he or she is doing on a television screen.

My personal preference is to use the "hand assisted" technique. This allows the surgeon to place one hand in the abdomen and using the other hand to manipulate various laparoscopic instruments. In a hand assisted operation a small incision is made just large enough for the surgeons hand; the kidney is then removed through this incision.

You will need to be given a general anaesthetic and the operation can last up to 4 hours

**What are the benefits associated with the operation?**
• Doctors hope that by taking away your kidney, they'll get rid of all the cancer. The main reason for completely removing the cancer is to stop it from spreading to other parts of your body

• To treat and also prevent pain or haematuria (blood in the urine)

**Compared to having “open” surgery, a laparoscopic operation can include the following benefits:**

• You are likely to be more comfortable and need less painkilling medication after your operation

• You can usually go home from hospital more quickly, usually between 3-5 days after the operation

• You usually recover from the operation more quickly

**What are the risks associated with the operation?**

Serious complications are unusual but are rapidly recognised and dealt with

Removal of kidney through any route can be associated with:

• Bleeding

• Damage to bowel, spleen or important blood vessels

• Urinary tract infection

As with any operation there is a small mortality associated with operation

**What happens before the operation?**

Once you and the surgeon have agreed to go ahead with the surgery you will be brought to the pre-admission clinic at St Luke’s Hospital in Bradford 2-4 weeks before your operation to ensure that you are fit for the operation. This will include blood tests and examinations such as a tracing of the heart rate (ECG).

**It is important to bring a list of all your medications to this appointment and be aware of any allergies that you may have.**

You will be admitted the day before your operation to Ward 1 at Yorkshire Clinic or Ward 14 at the Bradford Royal Infirmary where you will be welcomed and shown to your bed.

You will be seen by the Surgeon who will explain the operation again to you and ask you to sign the consent for surgery. The surgeon will mark which kidney he
will operate on. In any case your operation site is not marked please do not hesitate to point this out to the surgeon or nurse looking after you.

**The site of operation must be marked before you leave the ward.**

If you are unsure about any aspect of the operation, please ask for more details from the medical or nursing staff. You will be advised of the approximate time of your operation. You will be seen by an anaesthetist before your operation who will discuss the anaesthetic you will be given. They will be interested in chest troubles, dental treatment and any previous anaesthetics you have had. The anaesthetist will discuss with you the different methods of controlling pain after the operation. The most common method is a continuous slow infusion of painkiller via a tiny plastic tube in your back, called an ‘epidural’. The alternative is a special pump that delivers pain-killing medication when you press a button; this is known as ‘Patient Controlled Analgesia (PCA).

The nurses will advise you as to when you need to stop eating and drinking before surgery. This allows a period for your stomach to empty preventing vomiting during the operation. You will be asked to wear stockings to help prevent blood clots and aid circulation and a cotton gown. You will also be asked to remove or secure with tape all jewellery. You will be accompanied to theatre by a ward nurse. Your details will be checked several times before your anaesthetic begins.

**What happens after the operation?**

A team of anaesthetists and specialist nurses (known as the ‘Pain Team’) will see you to ensure that the pain is controlled with the epidural or PCA. This team will visit you daily in the first few days after your operation. You may also have a drain in your abdomen; the doctor will decide how long you will need to have this on a day to day basis.

You will be encouraged to get out of bed and start walking on the day after your operation. You will not do your wound any harm and it is important to start moving to avoid complications. You will not be allowed to eat on the operation day but you may be able to eat the following day.

You will need to remain in hospital until you can walk freely without pain, and can manage by yourself. We will also ensure that you are eating normally, and that your bowels are working, before you are discharged home.

**Wound**

You can shower or bathe at home, although for the first few weeks please do not keep your wounds under water in the bath for any length of time. Your wound will
be closed by a method that may be either external clips (staples) or with internal
stitches. A community nurse from your GP surgery will monitor your wound for
signs of infection such as redness or swelling. If this happens seek advice from
your GP or nurse.

**Clots in the leg (Deep Vein Thrombosis)**

There is a risk that blood clots may form in the veins of the calf during surgery
(known as “Deep Vein Thrombosis”). This may lead to a swollen, tender calf.
Although this is easily treated, it can lead to further problems if the clots break
away and move up to the lungs (Pulmonary Embolus). The stockings you are
given to wear prior to surgery should be kept on throughout your stay on the
ward. You may be required to wear them at home for a number of weeks. Please
ask the nurses on the ward and ensure that you obtain a spare pair so that they
may be washed. Your surgeon may also prescribe daily injections during your
hospital stay to thin the blood slightly and reduce the risk of forming these clots.

In the first six weeks after surgery blood clots are the most serious potential
complications. If you develop any of the symptoms such as chest pain, shortness
of breath, pain or swelling in your leg, then call your GP or contact your nearest
Accident and Emergency Department if you are away from home. You should
tell the doctor who sees you that you have had a **Laparoscopic Nephrectomy**, and are concerned about a possible blood clot.

**Discharge advice**

**Diet**

You can eat and drink whatever you wish. Try to avoid constipation by keeping to
a diet that contains plenty of fruit and fibre. If you do become constipated, then
ask your doctor or nurse for advice.

**Exercise**

After you go home, you should avoid heavy lifting and vigorous exercise for 6
weeks, to let the wounds heal. You should take light exercise regularly; you
should particularly exercise the calf muscles to reduce the risk of blood clot
formation. You can drive your car when you can operate the pedals without any
discomfort.

**Follow up after surgery**

You will be seen in clinic 4 to 6 weeks after your operation

**Useful addresses and telephone numbers:**

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