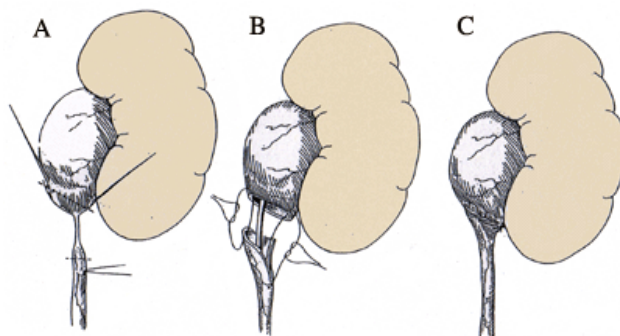


Robotic Assisted Laparoscopic Pyeloplasty

This leaflet is designed to give you information on why this procedure may be suitable for you, and what to expect from it. It outlines the advantages and possible risks. It will hopefully answer the common questions usually raised. More detailed information is available from your consultant if you wish.

What is a pyeloplasty?

A pyeloplasty is an operation to repair or refashioning the junction of the ureter and the kidney, which is narrowed and does not allow the kidney to function properly by affecting its ability to drain.



A. Narrowing in the ureter; B. Obstruction surgically removed; C. Refashioned Ureter

What is robotic assisted laparoscopic pyeloplasty?

It is a pyeloplasty carried out using key-hole surgical techniques but the surgeon is assisted by robotic arms to do the surgery.

What is an open pyeloplasty?

Open pyeloplasty is whereby a surgeon uses an incision of approximately 12-18cm in length to carry out reconstruction of your kidneys drainage system to improve kidney function.

What is robotic assisted surgery?

This is a technique whereby a robotic console is placed beside you. Attached to the console are 3 robotic arms; two for instrument attachments and the other arm for a high magnification 3D camera to allow the surgeon to see within your abdomen (tummy). The two robotic arms have the ability to hold various instruments attached to them to allow the surgeon to carry out your operation. The instruments are approximately 7mm in length.

The instruments have a greater range of movement than a human hand does; and because of their size and the ability to view the operation in 3 dimensions; this allows the surgeon to carry out surgery in a small space.

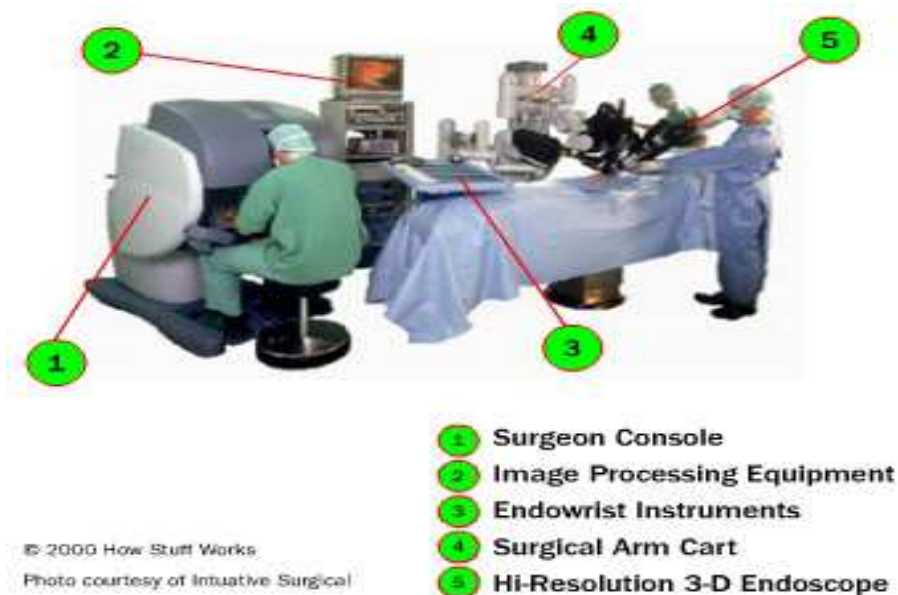
Previous surgeons made larger incisions to be able to perform most operations. With robotic surgery the instruments are placed onto the robotic arms through small port holes into your abdomen; the surgeon is sat in the same room but away from the patient and is able to carry out more controlled and precise movements using robotic assistance

What is the Availability in the UK?

The da Vinci® system has been used extensively throughout the U.S. and Europe; it is being used currently in many different areas of surgery. For example cardiac surgery Mitral Valve Repair, coronary bypass grafts; in gastric and Oesophageal surgery, Nissen Fundoplication for the treatment of gastric reflux and Gastric Bypass surgery for obesity. Other surgery includes Radical Prostatectomy (*da Vinci*® Prostatectomy) for the removal of the prostate in prostate cancer patients.

At present there are two da Vinci® robotic systems available in the U.K.

Guys Hospital is the only U.K trust that offers robotic assisted laparoscopic surgery for urological procedures.



The laparoscopic technique

Laparoscopy is also called "key-hole surgery" and is a form of minimal access surgery. It involves performing operations that are traditionally done by the "open" method, using "key holes". A number of urological operations are now being performed by this method. In recent years it has been shown to be safe and effective and for some urological operations, is the method of choice.

Laparoscopic procedures in urology are performed under general anaesthesia. They involve the use of a number of "ports" which allow access to the diseased organ. Sometimes a special "port" that facilitates introduction of the surgeon's hand may also be used. The length of time taken to perform the surgery varies between procedures but recovery afterwards is usually quicker than in open surgery. Your fitness for such an operation will be assessed and discussed by your urologist.

Advantages:

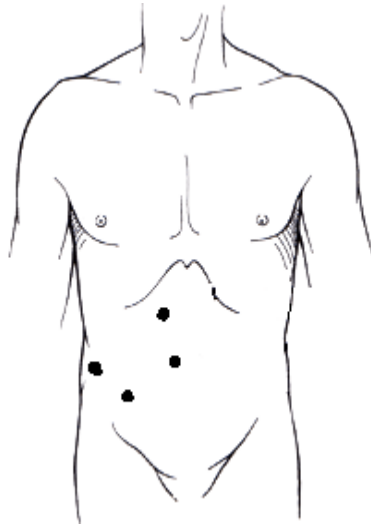
1. Avoids open surgery and the resulting scar but smaller scars from the ports will be visible
2. Shorter hospital stays.
3. Less pain after operation.
4. Quicker full recovery and earlier return to work
5. Considerably less bleeding

What are the risks of the procedure?

As in any surgery there are a few risks of which the common ones are:

- During port placement: bleeding, damage to structures inside abdomen (tummy)-this is minimised by placing ports under vision. This means that the camera port is inserted first and following ports are watched on a monitor to see the ports entering the abdomen. The leakage of carbon dioxide gas (used during surgery) into tissues.
- During the operation: bleeding, conversion to open surgery, irregular heart beat, reduced urine volume, injury to structures in abdomen
- Absorption of carbon dioxide ("embolus") during surgery, this is minimised by the inflation of a balloon inside the abdominal wall to prevent this occurring.
- During exit from abdomen: bleeding
- After operation: bleeding, infection, hernia at port site, nerve compression may become evident, blood clots in legs which can migrate, shoulder tip pain

- The risk of dying from laparoscopic urologic surgery is roughly between 0.03-0.08%
- Leakage of urine at the kidney joining to the ureter, this generally settles by itself.



Port sites for a robotic assisted laparoscopic pyeloplasty
5mm-12mm in length



Preparation before your surgery

Your consultant should discuss the details of the procedure with you in outpatients outlining the procedure as part of your consent.

You must also be aware that there is a chance that your procedure may have to be converted to an open procedure. For this reason if you do not want to have open surgery we are unable to proceed with this robotic assisted laparoscopic procedure.

What should I expect during my stay in hospital?

On arrival to the ward your admitting nurse will orientate you to the ward and your surrounding environment, they will also fill in any further ward documentation required and attend to any further tests required by your consultants' team.

We encourage you to walk around the ward; this will help you familiarise yourself to your new surroundings.

The evening before or morning of your procedure the anaesthetic team will visit and review you to ensure they have no concerns about anaesthetising you. You may ask them questions at this time about concerns or issues you may have in regard to being anaesthetised.

Prior to your surgery you will need to sign a consent form. This consent gives the consultant permission to operate on you. Before you sign this, please ensure that you fully understand the procedure you are about to undergo. If you do have any questions or concerns, please ask your consulting team to clarify them for you.

You may eat and drink, as you desire the evening prior to surgery

A minimum of 8 hours prior to your surgery you will need to be Nil By Mouth (NBM), which is to have nothing at all by mouth prior to surgery.

This is essential, as anaesthetic may make you nauseous, which may lead you to vomit and the possibility of stomach contents going into you lung, this is very dangerous and is why we insist that when you are made NBM, you **DO NOT EAT OR DRINK**.

The nurses will instruct you as to when you should commence NBM.

The morning of your surgery you will be required to have a shower and put yourself in to a clean gown.

You will need to wear anti-thrombus stockings; these help prevent clots forming in you legs during surgery.

You may take them off to shower but they must remain on to help reduce the risk of clots, they may be removed when you are discharge from hospital.

You need to be ready at least one hour prior to theatre.

When you are due to go to the operating theatre the nurses will checklist you for theatre, and escort you to theatre. You will enter the anaesthetic room where you will once again be check listed by theatre staff and the anaesthetist.

Post Operative robotic assisted laparoscopic pyeloplasty.

Once your procedure is completed you will be taken to the recovery department to be monitored by the staff before transfer back to the ward.

When you wake up you will have a urinary catheter into your bladder to help it drain, you will have a fluid drip until you can tolerate food and fluids.

Although you cannot see it you will have a renal stent (Double J Stent). This is a small plastic tube that travels from your kidney to your bladder. This helps the kidney drain and recovery from the operation. Stents can sometimes irritate the floor of your bladder and may give you some discomfort.

It is very important that whilst in the recovery room if you feel pain or become nauseous that you let the staff know, as they will be able administer appropriate medication.

Once anesthetic staff, surgeons, and nursing staff have reviewed you as being stable then you will be transferred back to the ward.

We do ask that while immobile and bed bound post operatively that you move your feet, wiggle your toes to help promote circulation in your legs.

Your drip will remain in until nurses are satisfied that you are taking enough oral fluid to maintain your own hydration and that you are not feeling sick.

Your catheter will remain in for 24-48 hours and the stent will stay until the consulting team are satisfied that your new fashioned ureter is able to work on its own with out help from the stent (about four weeks).

A small wound drain from your abdomen (tummy) will also be needed but will be removed soon after your catheter.

Your average length of stay for this procedure is 2-4days.

You will be discharged when you have had you bowels open, you are mobilising safely as you did prior to your admission, you are passing urine well, and your pain is well controlled on appropriate oral analgesics.

You will need to return to our outpatients department in a few weeks for a follow up to see how you're progressing and also to have your stent removed.

Please do not leave the department without a follow up appointment.

What can I expect after getting home?

You should not forget that although you may feel well and have no large scar, you still have had major surgery.

You will need a period of time to recover fully before returning to normal activities. You should be active within your home and build up to returning to your usual tasks.

You may have some pain associated with the surgery and also occasional bouts of lethargy are not uncommon after major surgery.

What are the disadvantages of me having laparoscopic pyeloplasty as opposed to open pyeloplasty?

The operation needs specialised training, as the surgeon is unable to “feel” your tissues or organs unlike open surgery.

What is Mr Dasguptas' experience?

- The technique is an advanced technique for those well-versed in laparoscopic procedures. Mr Dasgupta has been performing laparoscopic surgery since 2000
- He has completed an advanced laparoscopic urology preceptorship funded by the British Urological Foundation at The Cleveland Clinic with Dr Gill, an international expert
- Mr Dasgupta and his team have received intensive training in urological robotics at the Vattikuti Institute, Henry Ford Hospital, Detroit, USA with Dr Menon the world leader in this field and also intense training in Paris.
- Mr Dasgupta already uses the AESOP robot for camera control during laparoscopic procedures.

Some Commonly asked questions?

Does the robot do the surgery?

No, the surgeon does the operation. The robot is an instrument that allows the surgeon to operate in small spaces in the body. It essentially makes the surgeon's hands two seven-millimeter instruments. The robot is controlled by the surgeon and does not work on its own.

How much pain will I be in?

Since the surgery is done through a small incision, most patients experience much less post procedure pain than with open surgery. Patients tend to need much less pain medication. After one week, most are feeling no pain at all. Also, there is a decreased risk of post-operative hernias.

When can I exercise?

Light walking is encouraged right after the procedure. After 2 weeks, jogging and aerobic exercise is permitted. After four weeks, heavy lifting can resume.

Can I shower or bath?

Yes, the stitches in your tummy are dissolvable; we just asked that you rinse thoroughly the soap from your body as this may irritate the wounds and that you pat yourself completely dry.

When can I drive?

When you are comfortable to do so and when able to make an emergency stop. Please also check with your insurance company before returning to drive.

When can I resume sexual activity?

This will depend on when both you and your partner feel comfortable.

When can I return to work?

Please allow a couple of weeks' recuperation before returning to work, if your work entails lifting please speak to your consultant prior to leaving hospital.

If you have any further questions that you wish to ask please do not hesitate to speak to the nursing or medical staff.

If you feel there are some questions that should be placed on this information leaflet please let us know or fill in a comment sheet prior to your being discharged.