Guy's and St Thomas' Hospital NHS
NHS Trust

Robotic Assisted Laparoscopic Radical Prostatectomy

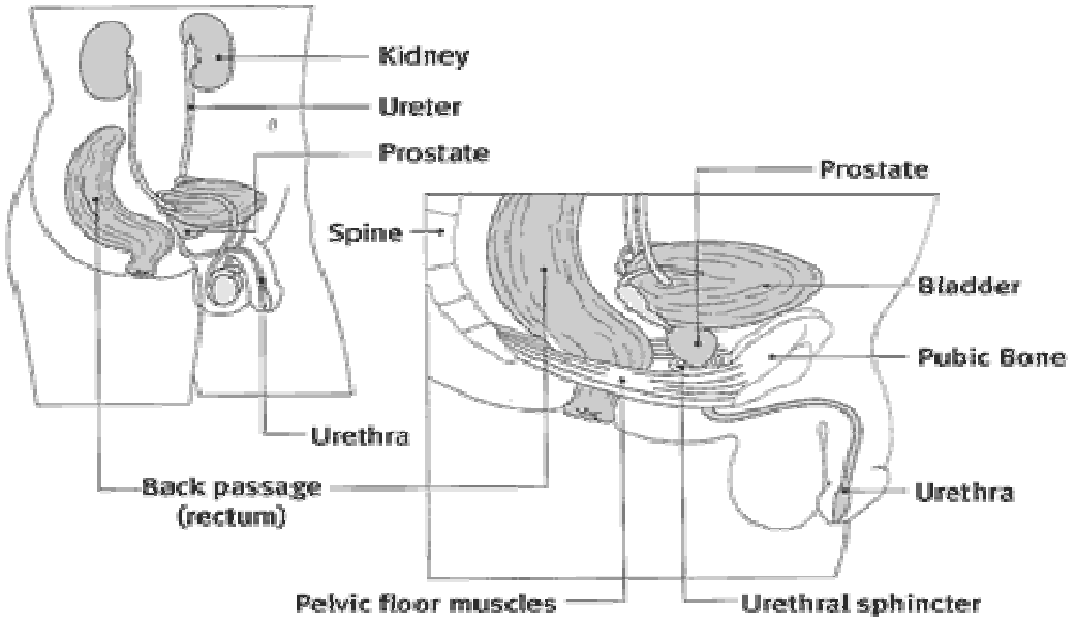
This leaflet is designed to give you information on why this procedure may be suitable for you, and what to expect from it. It outlines the advantages and possible risks. It will hopefully answer the common questions usually raised. More detailed information is available from your consultant if you wish.

What is a Radical Prostatectomy?

A radical prostatectomy is an operation that is carried out to remove the prostate for patients who have prostate cancer. The prostate, seminal vesicles and surrounding tissues are removed to provide the best possible chance of removing all the cancer.

What and where is my prostate?

Your prostate is a small walnut sized gland that is situated at the base of you bladder. Its main function is to add a thick liquid or volume to your ejaculate (sperm).



What is an open retropubic radical prostatectomy?

This is an operation to remove the prostate but via an incision of approximately 10-15cm in length.

What is robotic assisted laparoscopic radical prostatectomy?

This is an operation to remove the prostate but using robotic and laparoscopic techniques to achieve the operation by using smaller incisions to remove the gland.

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 you 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.

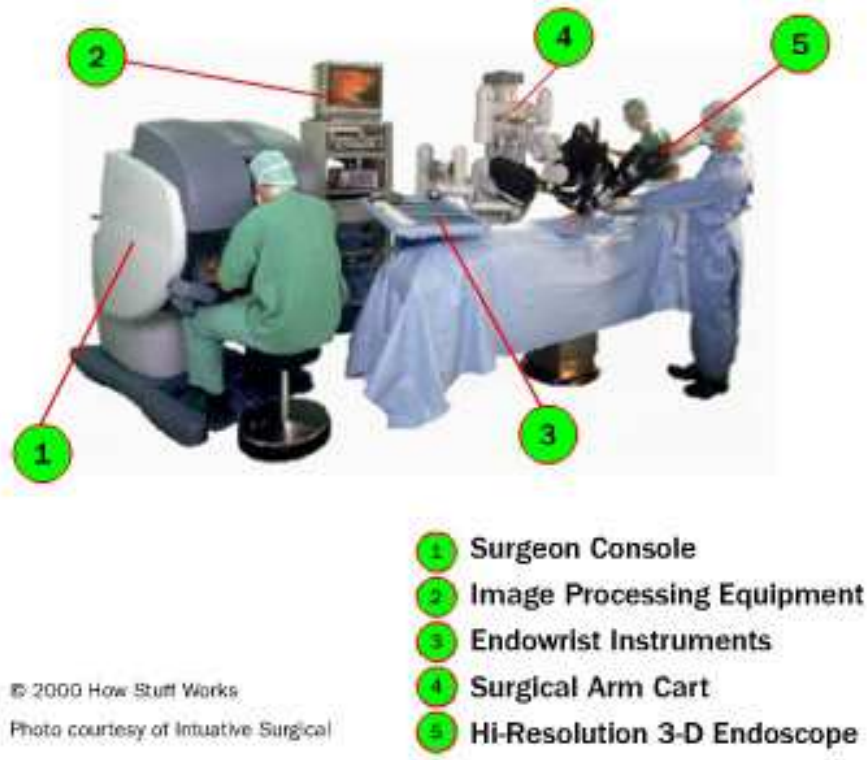
Previous surgeons made larger incisions to be able to perform most operations. With robotic surgery the instruments are placed onto the robotic arms through small port holes into your abdomen; the surgeon is sat in the same room but away from the patient and is able to carry out more controlled and precise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

What is the Availability in the UK?

The daVinci® 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 (*daVinci*® Prostatectomy) for the removal of the prostate in prostate cancer patients.

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

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



What is laparoscopic surgery?

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.

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Advantages of Robotic Laparoscopic surgery:

1) Avoids open surgery and the resulting scar but smaller scars from the ports will be visible.

2) Shorter hospital stays.

3) Blood loss is much less than in open surgery

4) Less pain after operation.

5) Quicker full recovery and earlier return to work

6) Better Visualisation of anatomy, and ability to possibly spare nerves to retain potency (erectile function).

Risks of the Procedure.

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

1. 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.

2. Leakage of carbon dioxide gas (used during surgery) into tissues, this is minimised by the inflation of a balloon inside the abdominal wall to prevent this occuring.

3. During the operation: bleeding, conversion to open surgery, irregular heart beat, reduced urine volume, injury to structures in abdomen

4. During exit from abdomen: bleeding

5. After the operation: bleeding, infection, hernia at port site, nerve compression may become evident, blood clots in legs which can migrate, shoulder tip pain.

6. The risk of dying from laparoscopic urologic surgery is roughly between 0.03-0.08%

7. This surgery can lead impotence but this is dependent on whether nerves around the prostate can be spared. They may have to be sacrificed in order to cure the cancer.

8. Incontinence is also a risk and you will be taught how to exercise your pelvic floor muscles, which will be the key in getting and keeping, you dry. This generally improves with time.

You may also be shown a video on laparoscopic surgery. Please ask any questions that you wish prior to consenting for your operation.

(Above) Port placement for robotic surgery.

Preparing for 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.

You should have attended a pre-assessment clinic prior to your admission to hospital to assess your suitability for this procedure and fitness to undergo general anaesthesia and surgery.

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 paperwork required and carries out 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, issues you may have about 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, concerns please ask your consulting team to clarify them for you.
You may eat and drink, as you desire the evening prior to surgery however 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 being NBM.

You may require a fluid drip over night; this is to ensure that you are not dehydrated prior to theatre.
You will need to have a small enema in the morning prior to surgery; this is to ensure your bowels are empty prior to surgery.
Once your bowels have been open 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 during your hospital stay 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 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.

The day of your surgery

You will be transferred to theatre on your bed, you will be taken to the anaesthetic room where you will be seen by the anaesthetic nurse and doctors. They may put another drip into your arm or neck to allow them access to your veins during your operation.

You will be anaesthetised and taken through to the operating theatre, you will not know that your operation is taking place.

What to expect after your Surgery?

Once your surgery is complete you will be taken to recovery. Although you have had minimally invasive surgery it is still possible that you may have some pain.

You will wake up with a catheter into your bladder, a wound drain from your tummy, and have 3-4 small wounds from where the robotic arm port sites have been made.
It is very important that whilst in recovery if you feel any 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 unable to move or bed bound initially after your operation that you move your feet, wiggle your toes to help promote circulation in your legs this will also lessen your risk of developing clots in the legs.

Your catheter will remain in for approximately 7-14 days this is to allow the new join (anastomosis) between your bladder and urethra to heal.
Your abdominal drain will also come out generally after 24hours.
Your average length of stay for this procedure is 2-4days.
Patient's doing exceptionally well, discharge from hospital maybe the same day as surgery.
You will be discharged when you have had you bowels open, you are mobilising safely as you did prior to your admission, you are able to care for your catheter and you leg bags and your pain is well controlled on appropriate tablets taken by mouth.

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.

Please take a light diet until your bowels are functioning normally.

It is essential you carry out twice-daily catheter care to help reduce your risk of infection.

You will need to attend an outpatient clinic run by nurse about one- two weeks after your surgery to have your catheter removed, ensure you have your appointment before you leave hospital. Please also take a leaflet on pelvic floor exercise.

What is the cancer outcome following robotic assisted laparoscopic radical prostatectomy surgery?

Data from Detroit where nearly 800 robotic assisted laparoscopic radical prostatectomies have been performed indicates that early cancer control is superior to open and laparoscopic surgery (without robot) prostatectomy.

Long term data is still awaited

What are the disadvantages of me having robotic assisted laparoscopic prostatectomy as opposed to open prostatectomy?

This 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 pain than with open surgery. Patients tend to need much less pain medication. After one week, most are feeling no pain at all.

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 the soap thoroughly from your body as this may irritate the areas. Also pat yourself completely dry to minimise infection risk.

When can I drive?

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

When can I resume sexual activity?

This will depend on if a nerve sparing procedure could be done. We ask that you take particular note of any erections or feelings you do have and report them on your follow up appointments to your consulting team.

When can I return to work?

Please allow a couple of weeks' recuperation before returning to work, if you 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.