University College Hospital at Westmoreland Street

Robotic assisted laparoscopic radical prostatectomy

Urology Directorate
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1 Introduction

The aim of the information in this booklet is to help answer some of the questions that you may have about having a robotic assisted laparoscopic prostatectomy. It explains the benefits, risks and alternatives of the procedure as well as what you can expect when you come into hospital. If you do have any questions and concerns, please do not hesitate to speak to your doctor or named nurse.

2 What is the evidence base for this information?

This leaflet was developed using advice from consensus panels, the British Association of Urological Surgeons, the Department of Health and other 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 GP or other healthcare professionals.

Alternative treatments are outlined below, these and any questions you have regarding prostate cancer or its treatment can be discussed in more detail with your urologist or clinical nurse specialist.

3 What and where is my prostate?

Your prostate is a small walnut sized gland that is situated at the base of your bladder. Its main function is to produce liquid, which is added to your ejaculate (semen).
4 What is a robotic assisted laparoscopic prostatectomy?

Keyhole (or minimal access) surgery using robotic assistance is used to remove the prostate, seminal vesicles (tube-like glands which make semen) and occasionally lymph nodes. This involves performing operations that were traditionally done by an “open” method (i.e. via an incision or cut on your abdomen) but using “keyhole” sized incisions instead. More and more surgical procedures are now being performed by this method. The method of doing a prostatectomy by means of keyhole surgery at UCLH is with robotic assistance (the da Vinci® machine). In recent years, it has been shown to be safe and effective for many operations and it is now the method of choice in many cancer centres throughout the country.
Robotic assisted laparoscopic prostatectomy is performed under general anaesthetic. It involves the use of a number of “ports” which allow access to the diseased organ. The length of time taken to perform the surgery varies between procedures and patients but recovery is usually quicker than in open surgery. Your fitness for such an operation will be assessed and discussed by your Urologist.

You should be aware that there is a small chance (about 0.5 per cent or one in 200) that your procedure may need to be converted to an open operation. In other words once the operation begins the surgeon may find that it is not possible to proceed using the robot and so may decide that he needs to make an incision in your abdomen to successfully remove the prostate. For this reason, if you are insistent that you would not agree to an open operation under any circumstances, we would be unable to proceed with the robotic operation.

Be assured that the decision about which operation to have is one that you will not make alone and no one will mind which operation you have.

5 Why do I need robotic assisted laparoscopic Prostatectomy?

A prostatectomy (removal of the prostate gland) is an operation carried out to remove the prostate gland in patients who have prostate cancer. The prostate, seminal vesicles and some surrounding tissues are removed to provide the best possible chance of removing all the cancer.
You will have had a discussion with your Urologist and oncology nurse about prostate cancer. Please remember that early prostate cancer can be effectively treated. Most men with early prostate cancer will remain alive and healthy for many years to come. The main advantage of a radical prostatectomy is to remove the cancer and the prostate completely.

6 What are the benefits?
Robotic surgery has been shown to have the following advantages:

- **Small scars**: six small incisions in the tummy as opposed to one large one.
- **Less pain**: usually managed by oral tablets and rarely lasting more than three days.
- **Less blood loss**: this reduces the risk of needing a blood transfusion
- **Short length of stay**: most patients go home 24 hours after surgery.
- **Enhanced surgical 3-D vision and dexterity of instruments** gives the surgeons high levels of control within the abdomen minimising risk and contributing to cancer clearance.
- **Rapid return to normal**: most patients can return to work after four to six weeks
Are there any risks associated with robotic Assisted laparoscopic prostatectomy?

Most surgical procedures have a potential for side effects these are listed below:

Common (greater than one in 10)

- Temporary insertion of a bladder catheter (all patients will have a catheter for a minimum of seven days after the operation)
- Temporary difficulties with urinary control
- Impairment of erections even if the nerves can be preserved (20 to 50 per cent of men with good pre-operative sexual function)
- Inability to ejaculate or father children because the structures which produce seminal fluid have been removed (occurs in 100 per cent of patients)
- Temporary shoulder tip pain or abdominal bloating

Occasional (between one in 10 and one in 50)

- Scarring at the bladder exit resulting in weakening of the urinary stream and requiring further surgery (2 to 5 per cent)
- Severe urinary incontinence (temporary or permanent) requiring pads or further surgery (2 to 5 per cent)
- Blood loss requiring transfusion or repeat surgery or conversion to open surgery
• Further cancer treatment at a later date, such as radiotherapy or hormone treatment
• Lymph collection in the pelvis if lymph node sampling is performed
• Some degree of constipation can occur; we will give you medication for this but, If you have a history of piles, you need to be especially careful to avoid constipation
• Apparent shortening of the penis; this is due to removal of the prostate gland causing upward displacement of the urethra to allow it to be re-joined to the bladder neck. The reduction in blood flow to penis also effects length.
• Discovery that cancer cells have already spread outside the prostate, which may lead to consideration of further treatment.
• Development of a hernia in the groin area at least six months after the operation
• Scrotal swelling, inflammation or bruising (short term)

**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)
• Pain, infection or hernia at incision sites
• Rectal injury requiring a temporary colostomy
• Hospital-acquired infection
• Conversion to open surgery or standard laparoscopic surgery
• Compartment syndrome – swelling of tissues in leg requiring urgent decompression surgery
• Recognised injury to other organs or blood vessels requiring conversion to open surgery
• Colonisation with MRSA (0.9 per cent, one in 110)
• Clostridium difficile bowel infection (0.2 per cent; one in 500)
• MRSA bloodstream infection (0.08 per cent; 1 in 1,250)

8 What are the complications specific to having this surgery?

Your surgeon will endeavour to perform a nerve-sparing operation, if the site and stage of your tumour enables us to do so. This means trying to avoid removing the nerves, which affect your ability to have an erection and those to the base of the bladder, which keep you continent.

Erectile problems
Depending on your erectile function before the operation and whether it was possible or appropriate to save these nerves, problems with erection after the operation can occur. The risk of this problem varies:
• Very high (more than 80 per cent; eight out of 10 men), if the erections were not good beforehand or the characteristics of the tumour mean that it was not advisable to preserve the nerves.

• Moderately high (60 per cent; six out of 10) if only one nerve could be saved

• Moderate (20 to 30 per cent; two to three out of 10) if both nerve bundles were saved

Erection problems can be helped by treatments ranging from tablets to injections. It is highly unlikely that you will lose your sex drive (libido) as a result of the operation. If a nerve-sparing procedure has been performed and it is appropriate to do so, we will offer you medication such as Viagra or Cialis when you return for your results four weeks after surgery. We would recommend that you take this as prescribed in order to help improve the blood flow into the penis for rehabilitation of your erections. However, please note that sensation remains intact and sexual stimulation is still pleasurable.

We would not expect this to result in erections immediately and, in fact, some patients may take as long as 18 to 24 months to recover erectile function. Additionally, vacuum devices may be used either alone or in conjunction with the above. If oral medication proves to be unsuccessful, we can then arrange for you to be seen by a specialist to discuss other alternative treatments.
Continence problems

It is common to experience some temporary loss of control over the passage of urine. This tends to settle within three to six months but, during this period, you may need to wear absorbent pads. As discussed before your operation, a small minority of patients will experience severe urinary incontinence after the procedure.

9 What will happen if I choose not to have robotic assisted laparoscopic prostatectomy?

The aim of Robotic assisted laparoscopic prostatectomy is to remove your prostate gland, seminal vesicles and surrounding tissues while the cancer is contained within the prostate gland therefore providing the best possible chance of removing all the cancer.

Please remember that early prostate cancer can be effectively treated. Most men with early prostate cancer will remain alive and healthy for many years to come. The main advantage of surgery is that the cancer can be removed completely.

If you choose not to have this procedure there are many other alternative treatments (see below). The Specialist Multi-Disciplinary Team (SMDT) will have given you a risk category. This refers to the chance of your cancer getting worse and your long-term survival.
Low risk

Low risk localised prostate cancer within your prostate gland is very unlikely to grow or develop for many years. This is because your prostate cancer may be so slow growing that it never causes any symptoms. Treatments for prostate cancer can cause long-term side effects, so doctors try to avoid giving treatments if they can safely do that. If the cancer changes its’ characterisation whilst you are having active monitoring, your doctor will offer you treatment.

Intermediate risk

In men with intermediate risk prostate cancer, the cancer may start to grow or spread within a few years and so you are likely to be offered treatment earlier.

High risk

High-risk prostate cancer may start to grow or spread within a year. If the cancer has broken through the capsule surrounding the prostate gland, this is called locally advanced prostate cancer.

For high-risk prostate cancer, surgery to remove the prostate gland or external radiotherapy to the prostate may be combined with a course of hormone treatment. You may have hormone therapy before surgery or radiotherapy, or afterwards for up to three years. Men who cannot have surgery or radiotherapy because they are not fit enough may have a course of hormone therapy as a treatment on its own.
10 Are there any alternatives to Robotic Assisted Laparoscopic Prostatectomy?

Your surgeon will have discussed all the suitable alternatives with you when you were deciding on which course of treatment to opt for. The full list of alternative treatments is given below:

- Active monitoring
- Open radical prostatectomy
- HIFU (high intensity focused ultrasound)
- External beam radiotherapy
- Brachytherapy (implantation of radioactive seeds)
- Cryotherapy (freezing)
- Hormonal therapy

Not all of these may have been suitable alternatives in your particular case. Your doctor will present you with the suitable options in the clinic and arrange for you to be seen by the relevant specialist team. Please ask for the relevant patient information leaflets.

11 What do I need to do to prepare for robotic assisted laparoscopic prostatectomy?

You will usually be admitted on the day of your surgery. You will normally receive an appointment to attend the pre-assessment
clinic, approximately seven days before your admission, to assess your general fitness, to screen for the carriage of MRSA and to perform some baseline investigations. It is beneficial to you to have a shower on the morning of surgery prior to leaving home. You do not need to shave any areas of your body. If this is required it will be done in the anaesthetic room once you are asleep. After admission, members of the medical team, which may include the Consultant, Specialist Registrar, House Officer or your named nurse, will see you. Before your procedure, the anaesthetic team will visit you to ensure that they have no concerns about anaesthetising you. You are encouraged to ask them questions at this stage about any concerns or issues you have concerning the anaesthetic.

It is important that you are aware that you will be helped to mobilise (i.e. get out of bed and start to walk about) immediately after the operation. This will help in your recovery. You should practice your pelvic floor muscle exercises at least three times per day, as you will have been shown in clinic. These are helpful to improve urinary control afterwards. If you have not been shown how to perform these or are unsure how to perform these exercises please ask your named nurse. Alternatively the Prostate Cancer website has some helpful leaflets.

You will be asked not to eat for six hours before surgery, you will be fitted with together with elasticated stockings provided by the ward, will help prevent thrombosis (clots) in the veins of your legs.

Please try to empty your bowels the morning of surgery. You may need to have a small suppository prior to surgery to help
you empty your bowels. You will be asked to change into a surgical gown.

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 or clopidogrel (plavix®)
- 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)

12 Asking for your consent

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead, by law we must ask you to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. Staff will explain all the risks, benefits and alternatives again before they ask you to
sign a consent form. If you are unsure about any aspect of your proposed treatment, please do not hesitate to speak with a senior member of your urology team again.

13 What happens during the Robotic Assisted Laparoscopic Prostatectomy?

A full general anaesthetic will be used and you will be asleep throughout the entire procedure. Your doctors will put a drip into your arm to allow them access to 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 to help prevent infection. If you have any allergies, be sure to let the anaesthetist know. You will be carefully positioned in a head down position on the operating table; this allows us access to your pelvis for the surgery.

The robot assisted laparoscopic prostatectomy is an operation to remove the prostate using laparoscopic techniques but with smaller finer instruments and advanced 3-D imaging to help the surgeon remove the gland. A robotic surgical console is placed beside you in the operating theatre. Attached to the console are four robotic arms, three for instruments and one for a high-magnification 3-D camera to allow the surgeon to see inside your abdomen.

The three robotic arms have the ability to hold various instruments attached to them and allow the surgeon to carry out your operation. The instruments are approximately seven millimeters in width. The instruments have a greater range of
movement than the human hand and, because of their size they allow the surgeon to carry out the operation in a small space within the body. With robotic surgery, the instruments are placed on to the robotic arms through small portholes into your abdomen. The operating surgeon sits in the same room but away from the patient at an operating console and is able to carry out more controlled & precise movements using robotic assistance. However, the robotic instruments are controlled by the surgeon (who does the operation) and the robot cannot work without the surgeon. There will be a surgical assistant by your side throughout the procedure who helps the surgeon with aspects of the surgery.

Once your surgery is complete, you will be taken to the recovery area. You will wake up with an oxygen mask on your face, a catheter in your bladder (to drain urine) and possibly a wound drain from your abdomen and six small incisions where the robotic port sites have been closed. We find that nursing our patients in a sitting position immediately after surgery gives us the best results. If you find this uncomfortable please let the staff know and we can alter your position.

You will be given clear fluids to drink and can start to eat four hours after your surgery when you are back on the ward. Once the anaesthetic staff, surgeons and nursing staff has agreed that your condition is stable, you will be transferred back to the ward. You will be encouraged to sit out of bed in a chair as early as possible and begin gentle mobilisation as soon as possible.
14 Will I feel any pain?

Although you have had minimally invasive surgery, it is still possible that you may have some pain and painkillers will be given accordingly. It is very important that, whilst you are in the recovery/ward area, you let the staff know if you feel any pain or become nauseous so that they can give you the appropriate medication.

Your abdomen is filled with gas throughout the procedure to give us the space to operate in. This can cause the abdomen to feel stretched and bloated afterwards. All the gas is let out at the end of the operation but some people complain of pain in their shoulders – this is due to the diaphragm being stretched by the gas.

The wounds themselves are very small (five to ten millimeters) apart from the one by the umbilicus (belly button) as this is extended to remove the prostate at the end of the surgery. The size of this wound is determined by the size of your prostate. Local anaesthetic is injected into the wounds and your anaesthetist will inject you with a large dose of painkillers prior to waking you. We try to change your painkillers to oral tablets rather than continue to use injections. This helps speed up your recovery and aids you getting out of bed and mobilising. Taking regular painkillers will help you will remain pain free and be able to go home quicker. Since the surgery is performed through small incisions, most patients experience much less pain than with open surgery. Patients tend to need less pain medication and, after three days, most men do not take any painkillers at
all. We will give you pain killers to go home with and it is advisable to ensure that you have a supply of paracetamol at home prior to admission.

Some patients have a slight swelling of the face and eyes when they first wake up after the anaesthetic. This reduces quickly when they are nursed sitting upright. We would ask you not to rub your eyes at this time as this can cause pain while they are swollen and the recovery nurses will remind you about this.

Occasionally people complain of a sore throat after surgery, this is due to the anaesthetic tube that helps you breathe during the operation, this will soon settle.

Very rarely patients suffer from numbness over the knee or in the fingers but this should settle after two weeks.

It is not unusual to experience bruising across the abdomen and in the scrotum. The scrotum can become swollen and occasionally dark purple in colour, this is due to bruising only. However, if you experience pain or scrotum feels excessively hot or tender please contact your GP, as this may be due to an infection.

15 What happens after the procedure?

We will encourage you to get out of bed very quickly following your surgery. You will be encouraged to do this anytime from four hours post-surgery onwards. You begin by sitting in your chair for short periods and slowly progress to moving around...
your bed, going for a wash and being able to walk the length of
the ward area. The day after surgery we will review your drain
and remove if appropriate to do so, change your urinary
drainage bag to a smaller leg bag, ask you to get dressed with
the aim being to discharge you mid to late afternoon. Patients
travelling long distances to the hospital may be required to stay
slightly longer.

You will be discharged once you have had your bowels open,
are eating and drinking, are mobilising safely (i.e. as well as you
did before your admission), are able to care for your
catheter/leg bags and your pain is well-controlled on oral
tablets.

Occasionally your surgeon may make a decision to keep you in
hospital a little longer on medical grounds. This is nothing to
worry about and the decision is made with your best interests in
mind. It is important that someone is available to help you get
home when you are discharged (e.g. to help carry your bag
etc.). It is also important that there is someone to help look after
you at home on discharge from hospital.

16 What happens when I am discharged home?

You will go home with your catheter in place. You will be given
an appointment to come back to clinic to have the catheter
removed seven to fourteen days after surgery. Please ensure
you have your appointment booked before you leave hospital.
You will be taught how to look after your catheter prior to discharge.

When your catheter is removed you may experience some degree of incontinence. It is common to experience some temporary loss of control over the passage of urine. This tends to settle within three to six months but, during this period, you may need to continue to wear absorbent pads. To be prepared for your catheter removal and any potential temporary urine leakage, you should ensure that you have a supply of absorbent pads (e.g. those specially designed for male underwear) at home prior to attending outpatients for the removal. You may wish to bring pads with you to your appointment; however, you will be issued pads at this appointment. You will need to bring underwear with you; we suggest briefs as opposed to boxers as the pads will need a sturdy surface to stick too.

These pads can be obtained from various sources (your nurse will be able to advise you). Do not buy too many until you know what your needs are. As discussed before your operation, a small minority of patients will experience severe incontinence after the procedure, if this is the case, additional support and follow-up can be arranged. To improve urinary control, pelvic floor exercises are helpful. These exercises will need to be continued after the catheter has been removed for up to a year, but not while your catheter is in place.

Your wounds are sealed with a surgical glue and do not need any special care or dressings. The glue will wear off over a period of 10 to 15 days. You may shower and bathe as normal.
It is important to stay active after your surgery as this minimises the risk of complications such as chest infection and deep vein thrombosis. A little gentle exercise each day is recommended—walking is ideal. After two weeks gentle jogging and aerobic exercise is permitted. After four weeks, you may resume light lifting e.g. small bag of shopping.

You can start to drive again when you are comfortable to do so (usually about two weeks post-surgery) and when you feel able to make an emergency stop. You should, however, check with your insurance company before returning to driving.

Please allow at least two weeks prior to returning to work. Everyone recovers at a different rate and some people may require longer but most people are able to return to work after six weeks.

17 When should I expect to have a follow-up appointment?

Your first appointment will be seven to fourteen days after surgery to remove the catheter (unless stated otherwise by your operating consultant). Following your surgery the results of the histology (i.e. the results of the examination of the tissue that was removed) will be reviewed by the Specialist Multi-Disciplinary Team (SMDT) made up of Surgeons, Radiotherapists, Oncologists and Specialist Nurses and a clinic outpatients appointment at UCLH will be made at four weeks to discuss the results and what the care pathway is going to be for you. Your PSA will be checked at three monthly intervals for the
first year and six monthly for a year, following review by your Urologist you may then be seen yearly. Once the surgical team are happy with your recovery you will be discharged back to the care of your referring hospital, where you will have your subsequent follow up appointments. Please note that relatives are welcome to attend all your appointments here at UCLH, we appreciate that you need support during this stressful period.

18: Financial Assistance

A cancer diagnosis can change your financial situation. It may mean you need to stop working, or work less. It can also mean spending more money on things like hospital parking. These are just a few examples, which impact on your finances. But depending on your individual circumstance, you may be able to get benefits or other financial assistance.

There is a free booklet available, entitled “Help with the cost of cancer in England, Scotland and Wales”. This booklet can be attained at any Macmillan Cancer Support centre or online.

19: UCLH Audit Data


Total: Pad Free – 85.4% and Social Continence – 89.2%
Where can I find more information?

**NHS Direct**
Telephone: 0845 4647
Website: www.nhsdirect.nhs.uk

**The Prostate Cancer Charity**
Address: 3 Angel Walk
London, W6 9HX
Helpline: 0845 300 8383
Website: www.prostate-cancer.org.uk

**Macmillan Cancer Support**
Freephone: 0808 808 0000
Monday to Friday 09:00 to 20:00
Website: www.macmillan.org.uk

**NHS 24**
Telephone: 08454 242424
Website: www.nhs24.com

**Cancer Research UK**
Website: www.cancerhelp.org.uk

**Your Pelvic Floor**
Information on pelvic floor exercises
Website: www.yourpelvicfloor.co.uk

Please also see our UCLH Surgery video information by going to: www.uclh.nhs.uk/PandV/Pages/HavingsurgeryatUCLH-vids.aspx
21 Contact information

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22 Acknowledgements

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23 How to find us: