A Patient's Guide to Robotic Assisted Laparoscopic Prostatectomy (RALP)

Department of Urology

Introduction

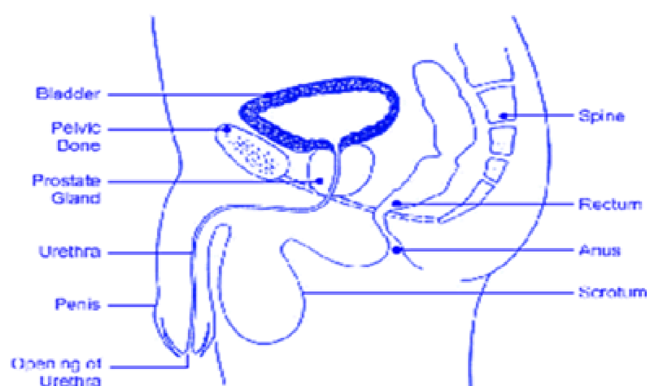
This leaflet contains evidence-based information about your proposed urological procedure. We have consulted specialist surgeons and patient groups during its preparation, so that it represents best practice in UK urology. You should use it in addition to any advice already given to you.

Key Points

- This procedure aims to remove the prostate and seminal vesicles (sperm sacs) completely whilst trying to preserve the structures required to maintain urinary continence
- The surgeons use very small, robotic instruments that allow precise surgery through tiny "keyhole" incisions
- The instruments are totally under the control of the surgeon and the robot simply mimics the surgeon's movements
- Erectile dysfunction (impotence), some leaking of urine and shortening of the penis can occur

Position of the prostate

The prostate is a small gland found only in men and lies just below the bladder. It surrounds the first part of the urethra, which is the tube that carries urine from the bladder down through the penis. The prostate's principal role is to produce the white fluid that mixes with the sperm. Over the age of 40, enlargement of the prostate gland may cause some men difficulties, including poor stream, getting up at night to pass urine, urgency and also frequency. This enlargement is often benign (non-cancerous) but approximately 47,000 men in the UK develop prostate cancer each year.



What does this procedure involve?

The procedure involves very precise removal of the whole prostate gland, seminal vesicles tying off the vasa deferentia (sperm-carrying tubes) and, if indicated, removal of surrounding lymph glands. It is performed through several small puncture (keyhole) incisions in the lower abdomen (tummy) using robotic instruments.

Our aims for men with cancer confined to the prostate gland are to:

- remove the cancer;
- achieve a clear margin away from the tumour;
- drop the PSA blood level (high sensitivity) below 0.02 ng per ml;
- reduce the possible need for any further treatment (e.g. radiotherapy or hormone treatment);
- preserve continence and,
- if possible and appropriate, preserve the erection nerves to the penis.

Robotic surgery uses sophisticated mini-instruments which are totally under the control of the surgeon. The robot only mimics and assists the surgeon's movements; it does not do the operation. This technique is now widely used because of its high degree of surgical accuracy, reduction of blood loss and because recovery is much faster than it is for open surgery.

Your surgeon will try everything to preserve the muscle fibres and nerves that control continence. If you still leak some urine after a year (as 1 in 20 to 1 in 33 patients do), this can be corrected by another procedure, such as an artificial urinary sphincter or a male sling.

The erection nerves are very close to the prostate, forming a cobweb of delicate strands over its surface. If your erections worked before the procedure, it is usually possible to preserve the nerves. This is called nerve-sparing prostatectomy. It can be very successful in maintaining your erections after the procedure although your erections may take some time to recover. We can only preserve these nerves if the cancer has not reached the layer where the nerve fibres lie.

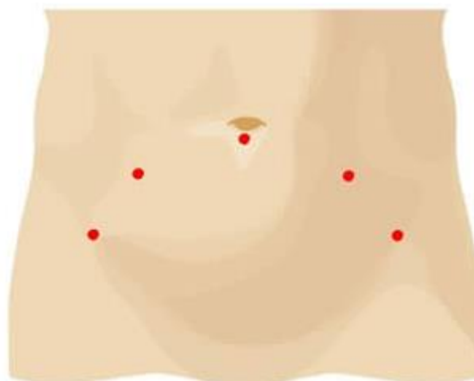
What happens on the day of the procedure?

Your urologist (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent. You will receive pre-operative drinks with instructions of the details of consumption but if you are diabetic you will not receive these drinks.

You will be seen by an anaesthetist who will discuss the options of a general anaesthetic or spinal anaesthetic. The anaesthetist will also discuss pain relief after the procedure with you.

You may be given a pair of anti-embolism stockings to wear, and a heparin injection to thin your blood. These help to prevent blood clots from developing and from passing into your lungs. You will need to continue these after you go home for a total of 28 days. If required we may give you a small enema the day before surgery to ensure that your bowel is clear.

Details of the procedure



- We will give you an injection of antibiotics into a vein before the procedure.
- Once you are anaesthetised, the surgeon will make five or six keyhole cuts in your tummy that allow the robotic instruments to be put in (as pictured here).
- These instruments allow the surgeon to free the prostate from the bladder and urethra (waterpipe) so it can be removed, whilst sparing the muscles and nerves that control continence and trying to preserve your erection nerves.
- We then re-join your urethra to your bladder using absorbable stitches.
- We use local anaesthetic to numb the keyhole incisions so to minimise your discomfort when you wake up.
- All the keyhole incisions are closed with metallic clips.
- We will put a catheter in your bladder to drain the urine while the new join heals.
- The procedure usually takes two to three hours to perform.

After the procedure

After the procedure, you often get some bruising and swelling around the keyhole incisions together with some swelling or puffiness in your scrotum. You will often get some facial puffiness and shoulder tip pain for a day or two (because you are positioned ‘head down’ during the surgery)**,** and some abdominal bloating until the bowel starts working again (normally after 24 hours). Most patients go home after a day or two.

IMPORTANT

If you experience any of the symptoms listed below, telephone Ward 7B at the Lister Hospital on **01438 285073** and explain that you have had a **Robotic Prostatectomy**:

- The catheter falls out – **Do not let anyone other than your consultant or his team attempt re-catheterisation**.
- There is poor or no drainage of urine from the catheter.
- Increased drainage/discharge, redness or swelling of wound.
- You experience chills/fever/shivers.
- You experience foul, smelly, cloudy urine or there is increased blood in urine. If this occurs immediately start to drink much more clear fluids.
- After the catheter is removed you experience any difficulty emptying your bladder and/or you notice your urine flow rate getting slower.

Additional contact telephone numbers

Consultant Urological Surgeons (RALP)

Mr J M Adshead	Secretary:	**01438 284987**
Mr N Vasdev	Secretary:	**01438 284042**
Mr T Lane	Secretary:	**01438 284689**

Macmillan Uro-Oncology Nurse Specialists

Anne Bradley
Helen Stoker
James Hemmings

Direct Line: 01438 285544
Mobile: 07887 637863

Urology Nurse Practitioners

Bev Aldwinckle
Jytte Bahn-Christensen
Lauren Dear

Direct Line: 01438 285112

Urology Research Nurse Specialist

Linda Fowler

Direct Line: 01438 284553

Ward Manager

Gill Larsen

Matron

Jo Barks

Are there any after-effects of having the surgery?

The possible after-effects and your risk of getting them are shown on the next page. Some are self-limiting or reversible, but others are not. We have not listed very rare after-effects individually (occurring in less than 1 in 250 patients). The impact of these after-effects can vary a lot from patient to patient; you should ask your surgeon's advice about the risks and their impact on you as an individual.

After-effect	Risk
No semen is produced during an orgasm, effectively making you infertile.	All patients
A high chance of erectile dysfunction (impotence) if a nerve-sparing operation is not possible or nerve damage is unavoidable, together with shortening of the penis.	Almost all patients
Urinary incontinence which may be temporary and require pads, or further surgery if lasts for more than one year.	Between 1 in 20 and 1 in 33 patients
Pathology tests that show cancer outside or at the margin of the prostate (positive margins) requiring observation and possible further treatment.	Between 1 in 10 and 1 in 50 patients
Further treatment with hormones, radiotherapy or chemotherapy may be needed at a later date if your PSA blood test still shows that cancer is present.	Between 1 in 10 and 1 in 50 patients
Leakage of urine from the new join between bladder and urethra, delaying discharge or needing longer catheter time.	Between 1 in 10 and 1 in 50 patients
Bleeding requiring transfusion or further surgery.	Between 1 in 10 and 1 in 50 patients
Pain, infection or hernia in any of the port incisions requiring further treatment.	Between 1 in 10 and 1 in 50 patients
Lymph fluid collection (if the pelvic lymph nodes were removed or biopsied during surgery).	Between 1 in 10 and 1 in 50 patients
Anaesthetic or cardiovascular problems possibly requiring intensive care admission (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, compartment syndrome, heart attack).	Between 1 in 50 and 1 in 250 patients (your anaesthetist can estimate your individual risk)
Need for conversion to open surgery due to operative difficulty or failure to progress.	1 in 100 patients (1%)
Rectal injury or fistula requiring temporary colostomy to allow healing.	Between 1 in 50 and 1 in 250 patients
Eye problems, or numbness and weakness due to nerve compression caused by your position during surgery.	Between 1 in 50 and 1 in 250 patients

What is my risk of getting a hospital-acquired infection?

Your risk of getting an infection in hospital is approximately 8 in 100 (8%); this includes getting MRSA or a *Clostridium difficile* bowel infection. This figure is increased if you are in a "high-risk" group of patients, such as patients who have had:

- long-term drainage tubes (e.g. catheters);
- bladder removal;
- long hospital stays;
- multiple hospital admissions.

What can I expect when I get home?

- You will get some swelling and bruising of the incisions which may last several days.
- It may be several days before you have your bowels open.
- You will be discharged with a catheter in your bladder - we will show you how to manage it at home. It is common to get bypassing around the catheter especially when opening your bowels.
- You will be given advice about your recovery at home.
- You will be given a copy of your discharge summary and a copy will also be sent to your GP.
- Any antibiotics or other tablets you may need will be arranged and dispensed from the hospital pharmacy.
- A follow-up appointment will be made for you to have your surgical clips and your catheter removed; normally 1-3 weeks post surgery.
- Once your catheter has been removed, you should start doing pelvic floor exercises.
- Do not worry if you leak some urine when your catheter comes out; almost everyone has a period of bladder recovery when they will need to wear protective pads.
- We will discuss the microscopic analysis of your prostate in a multi-disciplinary team (MDT) meeting.
- We will arrange for you to have your first PSA blood check six to eight weeks after the procedure.

Returning to work

You will need to get a signed doctor's certificate (a Fit Note) before you leave the hospital ward. Your Consultant will tell you when you can return to work. It is usually between six weeks and three months, depending on your job.

Sexual relationships

It is possible that you will be unable to produce an erection for some time after your operation. Sometimes a surgical technique called ‘nerve sparing’ is performed. In this case spontaneous erections may then return more quickly. In either case, impotence can be overcome using tablets, injections or a vacuum pump. Your consultant and nurse specialist will discuss these further with you. You should then be able to continue your sex life, although sensation of orgasm may be altered and may even be more intense. You will no longer ejaculate which means that you will be infertile.

Driving after surgery

It is your responsibility to make sure you are fit to drive after any surgical procedure. We recommend you refrain from driving for at least 4-6 weeks after your operation. You only need to contact the DVLA if your ability to drive is likely to be affected for more than three months. If it is, you should check with your insurance company before driving again.

Practical steps to help you regain bladder control

Pelvic Floor Exercises

Pelvic floor exercises can help many men regain control of their bladder. The exercise works by strengthening the muscles that control the passage of urine. Pelvic floor exercises are also known as Kegel exercises; they might also help sexual function.

Learning how to exercise the pelvic floor muscle

1. Sit, or lie down and relax your thigh, stomach and buttock muscles, tighten the ring of muscle around the back passage. You may find it easier to imagine that you are trying to stop yourself passing wind from the bowel. Lift and squeeze the muscle as if you really do have wind. You should be able to feel the muscle move; check this by placing your fingers over the bone at the front of your pelvis (pubic bone) and feel it rise.

2. Now imagine that you are standing by the toilet passing urine. Imagine that you are trying to stop the flow of urine in mid-stream. You should feel the same group of muscles working.

3. If you are struggling to identify the pelvic floor muscle next time you go to the toilet to pass urine, try the ‘stop test’ about half way through emptying your bladder. Once you have stopped the flow of urine, relax again and allow your bladder to empty completely. You may only have slowed down the flow of urine, but you will soon gain more control the longer you practice the exercises. Only do this test **once or twice** as long term it can affect your bladder function.

Practice brings results

It may take some time before you notice any difference – usually several weeks. You need to exercise your muscles for several months before they gain their full strength. Practice these exercises as often as you can **before** the operation, **not** when the catheter is in position and again restart **after** the catheter is removed.

1. Stand, sit or lie. Slowly tighten and pull the pelvic floor muscles as hard as you can. Hold for a count of five then relax for a count of five. Repeat 10 times (slow pull-ups).

2. Now pull the muscles up quickly and tightly, and then relax immediately. Repeat at least five times (fast pull-ups).

3. Try and do 10 slow and 10 fast exercises, 6-10 times a day.

4. As the muscles get stronger, try and hold for longer.

Bladder retraining

Stretching your bladder will help to control leakage. You can stretch your bladder by holding on before passing water. Although this may seem difficult at first, each time you succeed in holding on for longer will make it easier the next time. Keep at it and you will succeed.

To bring your bladder back where it belongs – under your control:

1. Over the next two or three days, keep a diary or record of how often you pass urine or get wet.

2. Now take a look at the pattern. For example, if you pass urine every 1½ hours, try to wait for at least two hours before you go again. If you go nine times a day, aim for eight the next day.

3. When you feel the urge to go, wait one minute, then five, then ten minutes.

4. Eventually you will pass urine every three to four hours (five to seven times each day) and be able to wait until it is convenient for you. It may take weeks or several months to control urgency (rushing to pass urine) and frequency (going very often). It is not always that easy and you must be prepared to persevere and not give up.

General information about surgical procedures

Before your procedure

Please tell a member of the medical team if you have any of the following:

- an implanted foreign body (stent, joint replacement, pacemaker, heart valve, blood vessel graft);
- a regular prescription for a blood thinning agent (warfarin, aspirin, clopidogrel, rivaroxaban or dabigatran);
- a present or previous MRSA infection;
- a high risk of variant-CJD (e.g. if you have had a corneal transplant, a neurosurgical dural transplant or human growth hormone treatment).

Smoking, drinking alcohol and surgery

Ideally, we would prefer you to stop smoking before any procedure. Smoking can worsen some urological conditions and makes complications more likely after surgery. For advice on stopping, you can:

- contact your GP
- access your local NHS Smoking Help online
- ring the free NHS Smoking Helpline on **0800 169 0169**

It is advisable that you refrain from alcohol intake a week before your operation date.

Before you go home

You will be given advice about what to look out for when you get home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.

You should be told how the procedure went and you should:

- make sure you understand what has been done;
- ask the surgeon if everything went as planned;
- let the staff know if you have any discomfort;
- ask what you can (and cannot) do at home;
- make sure you know what happens next;
- ask when you can return to normal activities.

Other useful telephone numbers

NHS 111 Service:	Dial 111
Patient Advice and Liaison Service (PALS):	01438 284678
Prostate Cancer UK:	0800 074 8383

References

This information leaflet has been produced utilising the British Association of Urological Surgeons patient information leaflet (co-authored by Mr Adshead), Urological Surgeons, Macmillan Uro-oncology Nurse Specialists, Research Nurse and Nurse Practitioners at East & North Herts NHS Trust.

Whilst we have made every effort to give accurate information, there may still be errors or omissions in this leaflet.

You can request this information in a different format or another language.

Date of publication: April 2017
Author: James Hemmings
Reference Number: 02
Review Date: April 2020
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