NHS
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# Robotic assisted laparoscopic radical prostatectomy (keyhole prostate removal): information and advice for patients on the enhanced recovery programme

**This leaflet explains what will happen when you come to the hospital for your operation. It is important that you understand what to expect and feel able to take an active role in your treatment. Your surgeon will have already discussed your treatment options with you, including the risks, benefits and any alternatives.**

**The usual length of stay in hospital for this sort of surgery is around 1-2 days. There will be many different health professionals involved in your care during your stay and there will be a clear plan for any after care when you are discharged from hospital. This leaflet answers some of the questions that you may have but if there is anything that you and your family are not sure about, then please ask.**

This leaflet contains information on:



## What and where is my prostate?

Your prostate (found only in men) is a small, walnut-sized gland that is situated at the base of your bladder. Its main function is to add liquid to your ejaculate (semen). Sometimes, a malignancy (tumour) may develop in the prostate.

## Why do I need this operation?

You will have had a discussion with your urologist and clinical nurse specialist 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.

## What is a radical prostatectomy?

It is an operation where the prostate, seminal vesicles (tube-like glands that make semen) and occasionally lymph nodes are removed to provide the best possible chance of removing all the cancer. The main advantage of a radical prostatectomy is to remove the cancer and the prostate completely.

## What is laparoscopic surgery?

Laparoscopy (otherwise known as "keyhole surgery") is a form of minimal access surgery – the prostate and other tissues are removed through a number of small openings across the abdomen (tummy). Laparoscopic procedures are normally performed under general anaesthetic (you are asleep).

## What is robotic assisted laparoscopic prostatectomy?

At this hospital, laparoscopic prostatectomies are carried out using robotic assistance (the da Vinci© machine). They involve the use of a number of "ports" which allow access to the diseased organ. Robotic assisted laparoscopic surgery 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. Your fitness for such an operation will be assessed and discussed by your urologist. The length of time taken to perform the surgery varies but recovery is usually quicker than in open surgery. The usual hospital stay for robotic prostatectomies is 1-2 days and your normal activity can be resumed within 2-3 weeks. You should be aware that there is a small chance (about 0.5%; 1 in 200) that your procedure may need to be converted to an open procedure. 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 (cut) in your tummy to successfully remove the prostate. For this reason, if you do not agree to an open operation under any circumstances, then we would be unable to proceed with the robotic operation.

## Is there an alternative treatment to robotic assisted laparoscopic surgery?

Your surgeon will have discussed all the suitable alternatives with you when you were deciding on which course of treatment to opt for. Alternative treatments include:

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

- Hormone therapy (prior to surgery/radiotherapy or for up to 3 years afterwards).
- Or you may choose not to have treatment, while recognising the risks of your condition.

Not all of these may have been suitable alternatives for your particular case. Your urologist should have given you a risk category, which refers to the chance of your cancer getting worse and your long-term survival.

- **Low risk** localised prostate cancer within your prostate glands is very unlikely to grow or develop for years and may cause no symptoms. You may just have active monitoring if this is the case.
- If the cancer starts to develop or you are diagnosed as having **Intermediate risk** prostate cancer, you are likely to be offered treatment earlier.
- If you have **High risk** prostate cancer, it means the cancer has spread outside the prostate gland and surgery, radiotherapy and hormone therapy will usually be offered.

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.

If you wish to discuss any of these treatment options further, please ask your urologist, the nurse specialists or ask for the relevant patient information leaflets.

## What are the benefits of robotic assisted laparoscopic surgery?

This type of surgery has been shown to have the following advantages:

- **Small scars**: Six small incisions in the tummy as opposed to one large scar that results from an open operation.
- **Less pain**: Usually only lasting around three days and managed by tablets.
- **Less blood loss:** This reduces the risk of needing a blood transfusion.
- **Short length of stay**: Most people leave hospital 24-48 hours after their surgery.
- **More accurate:** Enhanced surgical 3-D vision and dexterity of the instruments on the robotic machine gives the surgeons a high level of control within the abdomen, minimising risk and making it easier to see the cancer that needs removing.
- **Rapid return to normal:** Most patients can return to work after 4-6 weeks.

## What are the risks associated with robotic assisted laparoscopic prostatectomy?

**Common (greater than 1 in 10)**

- **Temporary insertion of a bladder catheter**: All patients will have a catheter for 10-14 days after surgery.
- **Temporary difficulties with urinary control.**
- **Impairment of erections:** Even if the nerves can be preserved, 20-50% (between 1 in 5 and 1 in 2) men who had good sexual function prior to surgery will have difficulties getting an erection after surgery.
- **Inability to ejaculate or father children**: Because the structures which produce seminal fluid and the tubes that carry sperm have been removed, this will apply to 100% patients.
- **Cancer spread**: The surgeons may discover that the cancer cells have already spread outside the prostate, requiring further treatment.

**Occasional (between 1 in 10 and 1 in 50)**

- **Scarring at the bladder exit:** The joint between the bladder and urethra (water pipe) is affected resulting in weakening of the urinary stream. It usually requires further surgery in 2-5% of people.
- **Severe urinary incontinence:** This may be temporary or permanent and may require you to wear continence pads or even further surgery (2-5% of people).
- **Blood loss:** Requiring blood transfusion or further surgery.
- **Further cancer treatment**: This may be radiotherapy or hormone treatment.
- **Lymph collection in the pelvis**: If your surgery involves removal of lymph nodes.
- **Constipation:** 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 and displacement of the urethra when it is rejoined to the neck of the bladder. The reduction in blood flow to the penis also affects the length.
- **Development of a hernia**: Affecting the area where the laparoscope and instruments entered your tummy.
- **Development of a hernia in the groin area:** Usually at least six months after the operation.
- **Scrotal swelling**: Swelling, inflammation or bruising (short term) of the scrotal sac.

**Rare (less than 1 in 50)**

- **Anaesthetic or cardiovascular problems**: Possibly requiring intensive care admission and including chest infection, pulmonary embolus (blood clot in the lung), stroke, deep vein thrombosis, heart attack and death.
- **Pain or infection at incision sites.**
- **Rectal injury:** Damage to the back passage that may require a temporary colostomy (bag).
- **Hospital acquired infection.**
- **MRSA colonisation**: MRSA germs living on the skin affecting 0.9% or 1 in 110.
- **Clostridium difficile (C diff) bowel infection**: Affecting 0.2% or 1 in 500.
- **MRSA bloodstream infection**: Affecting 0.08% or 1 in 1250.

## What are the complications specific to this type of surgery?

During the surgery your surgeon will aim to keep the nerves which affect your ability to have an erection and also those to the base of the bladder which keep you continent. However, this is not always possible, depending on the spread of the cancer.

**Erectile problems:** Depending on your erectile function before surgery and whether it was possible to save the nerves, problems with erections can occur following the operation. The risk of this problem varies:

- **Very high** (more than 80% or 1 in 10) – If the erections were not good beforehand or the type of tumour means that it was not advisable to preserve the nerve.
- **Moderately high** (60% or 6 in 10) if only one nerve could be saved.
- **Moderate** (30-40% or 3 or 4 in 10) if both nerve bundles could be 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 the nerves were saved and it is appropriate, we will offer you medication such as Viagra or Cialis when you return for your results four weeks after surgery. We recommend that you take this as prescribed in order to help improve the blood flow into the penis for rehabilitation of your erections. We would not expect this to result in erections immediately and, in fact, some patients may take as long as 18-24 months to recover erectile function. Additionally, vacuum devices may be used, either alone or in conjunction with medication. If oral medication does not work, we can then arrange for you to be seen by a specialist consultant 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 3-6 months, but during this time you may need to wear absorbent pads. As discussed before your operation, a small minority of patients (2-5% - 1 in 50 to 1 in 20) will experience severe incontinence after the operation. This can be improved by doing pelvic floor exercises.

## What do I need to do to prepare for my operation?

You will normally receive an appointment for pre-operative assessment a couple of weeks before your surgery date, but this can vary depending on availability. At this appointment you will be assessed for general fitness, screened for MRSA and some tests will be carried out. You will be reviewed by your consultant in clinic, where you will receive factual and complete information about what to expect during your stay in hospital.

**Please let your urologist know 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 (e.g. hip or knee).
- 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 injection of human derived growth hormone).

### Pelvic floor muscle exercises

You will also be given some pelvic floor muscle exercises. These should be practiced at least three times per day in order to improve urinary control after your surgery. The Bladder and Bowel Foundation website has some helpful information about pelvic floor exercises www.bladderandbowelfoundation.org .

Please shower or bathe prior to attending for your surgery. 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.
Please try to empty your bowels the morning of the surgery. We will give you an enema (bowel preparation) prior to your operation to assist the process.

## What can I eat and drink before the operation?

You will be asked not to eat for six hours before surgery. However, it is important for you to eat and drink up to the times instructed. Feel free to have a light supper prior to going to bed in addition to your dinner. As well as your evening meal you will be given four cartons of a lemon flavoured drink specially designed to give your body nourishment and help you recover. On the morning of your surgery you will be given a further two cartons to drink prior coming into hospital, and will also be encouraged to drink clear fluids up until two hours before your surgery. The nursing staff on the admission unit will be able to tell you when this will be.

## What will happen on the day of the operation?

You will usually be asked to attend the admission unit. You will be transferred to the ward after your operation. This will be confirmed in a letter, even if you have already been given a date by the surgeon.
We strongly advise you not to bring in any valuables. If this can't be helped, please hand in such items to the ward staff so they can be locked safely away.
On admission, a nurse will check all your information with you, including contact details for your next of kin. You will be given an identity bracelet to wear at all times while you are in hospital. A nurse will check your blood pressure, your weight and height and take blood and urine samples. You will be asked to change into a surgical gown.
You will be seen on the admission unit by members of the medical team, which may include the consultant, specialist registrar or a house officer (all doctors). A member of the anaesthetic team will also visit you to ensure there are no concerns about the anaesthetics. **If you have any allergies, please let the anaesthetist know.** They will explain to you the method of pain relief that will be used and will be able to answer any questions that you may have about the operation.
You will be given an injection under the skin of a drug to help prevent thrombosis (clots) in the veins in your legs. You might also be asked to give yourself injections of enoxaparin at home to prevent clots for 28 days following your operation, depending on your age and risk factors. If you need them, the injections and necessary teaching will be provided on discharge by the nurses looking after you.
It is important that you are aware that you will be encouraged and helped to mobilise – to get out of bed and walk about – soon after the operation. This normally happens first thing in the morning after your surgery and will help in your recovery.

## 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 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.

## How long will the operation take?

The operation itself does not usually take more than three hours, but you will also spend time in the anaesthetic room, when you will be connected up to the monitoring equipment, and you will also be in the recovery room afterwards, when you are waking up after your operation.

## What happens during the robotic assisted laparoscopic prostatectomy?

You will be escorted to the anaesthetic room by your nurse or a member of your theatre team, where you will have some monitoring equipment attached. The anaesthetist will ask you to sit on a trolley and will give an injection on your back to numb the lower half of your body (spinal anaesthetic). After this you will be given a general anaesthetic so you will be asleep throughout the entire procedure. Your doctors will put a cannula into your arm/hand to allow them to give you fluids/medication during the operation.

Once you are asleep, you will be taken into the operating theatre. During the surgery you will be given antibiotics to help prevent infection. You will be carefully positioned in a head down position on the operating table; this allows us access to your pelvis for the surgery.

## What will I feel like when I wake up?

Once your surgery is finished, 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), a wound drain from your tummy if needed and six small wounds where the robotic port sites have been closed. We find that nursing our patients in a sitting position immediately after surgery gives the best results. If you find this uncomfortable, please let the staff know and we can adjust your position.

You will be given clear fluids to drink and can start to eat as soon as you feel able to do so. You may feel sick or have some pain. It is important to tell the staff, who can provide medication to relieve these symptoms. When you are fully awake and your condition is stable you will be transferred to the ward.

You will be encouraged to sit out of bed in a chair and begin gentle mobilisation as soon as possible. You will also be encouraged to practice deep breathing.

You will be monitored quite closely during this period and you may need to be woken up during the night to have your blood pressure, urine output and leg movement checked frequently.

## What can I eat after my operation?

You will be able to eat and drink normally on your return to the ward and the drip will be removed from your arm once you are drinking properly. It is important to drink plenty of liquid and to start eating, as your body will need the nutrition to help with the repair process.

## Will I feel any pain?

Although you have had minimally-invasive surgery, you may have some pain and may need painkillers.

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 (under your lungs) being stretched by the gas.

The wounds themselves are very small (5-10mm), apart from the one by the umbilicus (belly button) as this is larger 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 to remain pain free so you will 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 extra painkillers to go home with if needed and it is advisable to ensure that you have a supply of paracetamol at home prior to admission, as this is not supplied by the hospital.

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. Please avoid rubbing your eyes at this time, as it can cause pain while they are swollen – your recovery nurses will remind you about this.

Occasionally, people complain of a sore throat after surgery and 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 – if you experience pain or your scrotum feels excessively hot, please contact your GP.

## 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 after surgery onwards. You begin by sitting in your chair for periods of time 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 (if you have one) and remove it if appropriate to do so, change your urinary drainage bag to a smaller leg bag, ask you to get dressed and aim 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 passed wind or opened your bowel (had a poo), 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, drive etc). It is also important that there is someone to help look after you at home on discharge from hospital.

## What happens when I am discharged home?

You will go home with your urinary catheter in place. You will be given an appointment to come back to our outpatients department (urology procedures), to have the catheter removed approximately 10 to 14 days after surgery – you will receive a letter or a text message with the date and time. You will be taught how to look after your catheter before you leave hospital.

When your catheter is removed you may experience some degree of incontinence (urinary leakage). 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 will need to bring two pads with you to your appointment. 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 should not be done while your catheter is in place.

Your wounds are closed using either surgical glue or clips. The glue will wear off over a period of 10 to 15 days. Clips are removed 10 days after surgery at your catheter removal appointment. You may shower and bathe as normal.

If required, we will give you 28 days' worth of injections of enoxaparin to inject yourself at home to help prevent clots, as well as a yellow sharps bin into which you dispose of the used syringes. You (or a relative) will be shown how to do these injections and there is a leaflet if you would like written instructions – just ask your nurse for a copy.

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. However, you should check with your insurance company before resuming to drive.

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.

**Important: If you notice your urine is more blood-stained, contains clots of blood or your catheter stops draining please call the ward for advice. If the wounds are red and feel hot to touch or are leaking fluid or very painful, please visit your GP or telephone your GP's**

**surgery and ask for your district nurse to do a home visit as these are signs of a wound infection and may need to be urgently treated with antibiotics.**

## Follow-up

Your first appointment will be 10 to 14 days after surgery to remove the catheter (and clips, if relevant) 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 nurse specialists. A telephone call or clinic outpatients appointment at the Royal Berkshire Hospital will be made at four to six weeks to discuss the results and what the care pathway is going to be suitable for you. You will then be contacted again at three months and six months for a telephone or clinic follow-up appointments. Your PSA will be checked at three monthly intervals for the first year, and then every six monthly for another year. Following a review by your urologist, you may then be seen every year.

## Who can I contact for more help or information?

If you have any questions or concerns about your procedure, the Urology Procedures Department can be contacted for advice on weekdays between 8.30am – 4.30pm via the Urology Clinical Admin Team (CAT 3a) on 0118 322 8629 or email rbb-tr.CAT3A@nhs.net. Telephone Hopkins Ward on 0118 322 7771 at other times.

The clinical nurse specialists can be contacted on 0118 322 7905.

## Further information and support

Macmillan Cancer Support
Tel: 0808 808 00 00
www.macmillan.org.uk

Bladder and Bowel Foundation
Helpline: 0845 3450165
www.bladderandbowelfoundation.org

British Association of Urological Surgeons
www.baus.org.uk

Your Pelvic Floor
http://yourpelvicfloor.co.uk/

To find out more about our Trust visit www.royalberkshire.nhs.uk

**Please ask if you need this information in another language or format.**

RBFT Urology, October 2023.
Next review due: October 2025