This information leaflet is for men with prostate cancer who are considering a robot-assisted radical prostatectomy (RARP).

**Why do I need a RARP?**

You have been diagnosed with prostate cancer. This cancer is potentially curable by the removal of your prostate and surrounding tissues (the operation is called ‘radical prostatectomy’).

**What does ‘robot-assisted’ mean?**

Radical prostatectomy may be performed through a traditional route (termed ‘open’), using keyhole surgery (termed ‘laparoscopic’) or using robotic-assistance (RARP). RARP and laparoscopic surgery use small instruments introduced into your body using several small (1cm) cuts. In RARP, the surgeon uses 4 robotic arms to control the instruments. These arms allow precise surgical movements and give the surgeon a high quality 3D view of your prostate.

**What is the aim of RARP?**

The RARP will remove your prostate gland and some surrounding tissues. These may include lymph glands. The aim is to fully remove your cancer and cause as little other damage as possible. In particular, the surgical team will do their best to preserve your urinary control (continence) and sexual function (erections). However, this is not possible in all men and removing the cancer is the main priority. Hopefully, you will have minimal pain, no serious complications and will return to normal activities and work quickly.
What are the benefits of RARP?

When compared to open surgery, RARP leads to:

- less bleeding (blood transfusions are very rare)
- shorter hospital stays (typically 1 night compared to 2-3)
- less pain and less need for strong painkillers
- faster return to normal activities and work
- smaller scars and fewer complications
- lower rates of leaving cancer behind (‘positive margin’) and less need for further treatment after surgery
- lower risk of long term incontinence

What complications can happen during the operation?

- The commonest risk is bleeding. Usually this is minimal with RARP.
- Rarely (less than 1%), nearby organs are damaged. These would be repaired at the time of surgery. These include the rectum (back passage) and major blood vessels.
- Very occasionally, the robot can have mechanical problems during the case. These may not allow the operation to be continued using the robot. In this situation, the surgeon would either complete it ‘laparoscopically’ or convert to an open operation (depending on the surgeon's experience).
- If you have a Body Mass Index (BMI) greater than 35 then you are at higher risk of complications. These include both during and after the operation. During the operation you may have difficulty breathing under the anaesthetic. Occasionally, the operation may have to be stopped. Post operation, you are at higher risk of long term incontinence (10% of men still need pads at 12 months).
- If you have had previous major open surgery, particularly below the umbilicus (tummy button), then there is a risk that the operation cannot be completed robotically. This is usually due to scar tissue (adhesions).
What happens before my RARP?

- You will have an appointment at the pre-operative assessment clinic. Here, nursing staff will assess your fitness for the RARP and arrange any necessary tests. The nursing staff may ask you to see an anaesthetic doctor.
- You will be admitted to the Theatre Assessment Unit (TAU) at 7.00am or 10.30am on the morning of surgery depending whether you are first or second on the operating list. If your operation happens to be on a Saturday then you will be admitted at a similar time to ward H2 on H floor.
- You will be seen by the Consultant Anaesthetist, given some surgical stockings to wear and have a blood sample taken. If appropriate you will be given a questionnaire to complete about your erectile function. This is so we have some baseline information to compare to after your surgery.
- As an NHS hospital performing such cancer surgery we are obliged by the government to collect surgical data about your case. This is completely anonymous and is automatically entered into a national database (British Association of Urology Surgeons). The aim of the database is compare surgical outcomes for individual surgeons and hospitals, making sure standards of surgery meet certain defined standards. If you do not want your data to be part of the database please inform the surgeon on the morning of the surgery in TAU.

What can I do before my surgery?

- It is important to be as fit as possible at the time of surgery. Try to walk or swim for 1 hour a day. If possible, try to walk briskly, so your lungs and heart have to work faster. Do not do this if it causes pain. Please check with your GP if you have heart or lung problems before starting this.
• Try to stop smoking and reduce alcohol intake from now until your surgery.
• It is important to start pelvic floor exercises (PFE) before your surgery. This will reduce the risk of urinary incontinence after RARP, and speed your recovery. You will be given instructions on how to perform these exercises, for example, stop the flow of urine when you are emptying your bladder. We strongly advise you to start them immediately and perform several repeats every day.
• If you live alone, make plans to look after yourself, perhaps prepare some frozen meals or ensure the shopping has been done.

**What does a RARP operation involve?**

• You will have a general anaesthetic and be given antibiotics to minimise the risk of infection.
• The operation takes 2-4 hours and is performed through 6 small 1cm incisions (see below):
The prostate is removed by disconnecting it from the bladder and the water pipe (urethra). (See diagram below):

- If deemed appropriate, you will have the lymph glands surrounding the prostate removed (lymphadenectomy).
- The surgeon will have talked to you about preserving the erectile nerves that run close to the prostate. The number and amount of nerve preservation depends upon your cancer and prostate size.
- To complete the operation, the urethra is re-joined to the bladder neck using stitches (anastomosis).
- The prostate specimen is removed through the incision above your umbilicus (tummy button).
- At the end of the operation, you will have a catheter in your penis (to drain your bladder) and a drain through one of the small incisions.
- You will be transferred to the ward following the surgery.

**What will happen on the ward after my operation?**

- The nurses will check your pain is under control and that your catheter and drain are working.
- You will be allowed to eat and drink what you like. You will be encouraged to sit out in a chair or walk when comfortable.
• On the evening of your surgery you will be given another Dalteparin injection.
• The morning after your surgery you will be seen by the surgical team to ensure all is well. You will have blood tests and will need to walk around the ward.
• The drain will be removed if there is only a small amount of drainage.
• The nurses will teach you how to look after your catheter. This will stay in for 7-10 days to allow things to heal on the inside. You will need to look after the catheter yourself when you go home.

**When can I expect to go home?**

• Nearly all patients spend just one night in hospital and go home the day after surgery. Sometimes, if your operation is the second case of the day, you may spend 2 nights in hospital.
• You will be provided with painkillers and contact numbers if any problems arise.
• You will need the Dalteparin injections (anti-blood clot) for a total of 28 days after your surgery. The nurses will talk to you about this.
• Your first bowel movement may be slightly uncomfortable but it is not necessary for you to have done this before being discharged.

**What will happen after I am discharged?**

• You will be sent an appointment to come the Urology Outpatient department 7-10 days after your surgery to have your catheter removed. The surgeon will decide this date and whether you may need an x-ray (called a 'cystogram') beforehand. Expect to be in the department for up to 3-4 hours.
• You should have been given a blood form when leaving the ward for a prostate blood test (PSA) by your GP 6 weeks after RARP.
• You will receive an appointment to see your surgeon (or specialist nurse) 8 weeks after surgery. They will:
  – assess your recovery / wounds
  – discuss your continence recovery
  – tell you your PSA result
  – give you the result of the pathology tests
  – discuss any further treatment
  – arrange the next follow-up appointment
  – If appropriate, arrange a follow-up appointment in an andrology clinic to discuss your erections

Is there anything I should look out for when I go home?

• The commonest problems are with your catheter. This can block and urine can leak around the sides, or it may fall out. Accidentally pulling on the catheter can lead to some blood in the urine but this will usually settle. **If this happens please use one of the contact numbers provided by us to get our advice.**

• If your catheter blocks and stops draining urine please do not allow anybody other than a member of the Urology team at the Hallamshire Hospital to deal with the problem. Occasionally your catheter may need changing and this needs doing by an experienced person.

• After removal of your catheter, it is likely you will have a temporary loss of urinary control (incontinence).

• You may have to pass urine often, sometimes urgently and you may leak urine especially when you stand up, cough or laugh. This may seem severe at first.

• Doing pelvic floor exercises regularly will encourage and speed the recovery of your urinary control (see below).

• Rarely, upon removal of the catheter and when back at home, you may develop an inability to pass urine that will become painful.
This is an emergency and you need to contact the Urology department or ward so you can be admitted.

- Other problems include pain, collection of lymph fluid after lymph node removal (lymphocoele), blood clots (DVT), wound infections, hernias, slow return to regular bowel movements and eye problems (swelling).

Are there any longer term side effects of a RARP?

- **Incontinence:** This is one of the main side effects. This is due to weakness or injury to the muscles or nerves that kept you dry. It can seem quite severe in the first few weeks after your catheter is removed. The average time for a man to require pads for incontinence is 3-6 months. Some men can be drier more quickly than this, but some men need to wear pads for longer than 6 months. Being over the age of 70 and having a BMI of over 35 can increase the risk of long term incontinence. Less than 5% of men will have bothersome incontinence after 1 year and you will be referred for specialist treatment if this occurs. You will need a flexible camera inspection of your bladder (cystoscopy) and a bladder function test called Urodynamics.

- **Impotence:** Losing the ability to get a good enough erection for satisfying penetrative intercourse happens in over half (more than 50%) of patients. This risk is increased with age, erection difficulties before surgery and non-preservation of one or both nerve bundles. You may be prescribed medication to try and help at your first clinic appointment following surgery. If the problem persists, and is important to you, we will refer you to our Andrology clinic for assessment and management.

- **Cancer outcome:** You will have your PSA checked 6 weeks after surgery and it should be undetectable by this time (less than 0.01). If it is not, and we think it was not possible to completely remove all the prostate tissue, then you may be referred to Oncology at Weston Park to discuss radiotherapy. If it is undetectable at 6
weeks, your PSA will be checked 6 monthly to see if it remains undetectable long term. Overall, a quarter of men (25%) will have a rising PSA after surgery (‘PSA failure’) and whether you need additional treatment will be decided by the surgeon and/or oncology doctors.

- **Scarring:** There can be some scarring where the bladder is joined to the urethra (anastomosis) and this may lead to difficulties passing urine. You may need a simple corrective procedure to sort this out.

**Are there any alternative options to treat my prostate cancer?**

You will have been informed and provided with literature about the other options to treat your prostate cancer which include:

- Open and laparoscopic prostatectomy
- Radiotherapy
- Brachytherapy
- Active surveillance
- Focal therapy eg ultrasound (HIFU) or laser, but these treatments are still regarded as experimental

**How soon can I drive?**

You can drive when you feel safe to perform an emergency stop. This is usually possible 2-6 weeks after surgery, depending on your recovery.

**How soon can I go back to work?**

This depends on the nature of your job and your recovery. If all is well, you can return to work after 2-4 weeks if there is no lifting or strenuous activity required. If strenuous activity (e.g heavy lifting) is needed then you will have to wait 6-12 weeks before returning to work.
How soon can I fly?

We advise that you do not fly for at least 6 weeks after surgery. Please take advice from your airline about preventative measures e.g. flight stockings.

How soon can I start sexual activity?

Once your catheter is removed it is advised that you try and see if you can get an erection. Initial erections may not be good enough for penetrative intercourse but it is important to stimulate the penis (“use it or lose it”).

When can I return to manual activity, eg lifting?

You can gradually build up manual activity from 2 weeks but don’t do anything you would regard as ‘heavy’ lifting for a minimum of 6 weeks as it may worsen your incontinence.

Day Case RARP

Robotic surgery has improved outcomes from this operation significantly. One of the biggest advances has been in the early recovery. The procedure doesn’t tend to cause too much pain and there are very few problems, such as bleeding, during the surgery. For this reason, some patients are now able to go home on the same day. You will have been identified in clinic, at the time of listing for surgery, to be a suitable patient for a day case procedure. The consultant surgeon and clinical nurse specialist team will go through this with you in more detail. You will meet an anaesthetist in the pre-assessment department a few days later who will go through things from their perspective, eg pain management.
If all goes well and you are able to go home in the early evening, eg 6.00pm - 7.00pm, then there are a few things you need to be aware of. The ward nurses will also go through this with you before you are discharged.

What should I expect overnight?

Because you have had a general anaesthetic and a “keyhole” operation on your abdomen, there are a few things you may experience on the first night. These are the normal things to feel and don’t necessarily mean there is any problem to be worried about.

- **Bloating**: You will feel bloated because your abdomen was filled with gas to be able do the “keyhole” surgery.
- **Pain** which can be managed with your painkillers: As with all operations there will be some element of pain, but you should be able to keep it to an acceptable level with the painkillers given to you on discharge. The ward nurses will give you instructions before you leave.
- **Catheter**: You may feel some discomfort or sense of wanting to pass urine. This is normal and as long as the catheter is draining, this is something that should ease.
- **Nausea**: A lot of people feel a little sickly after a general anaesthetic.
- **Blood in urine**: This is normal during first few days and is not an issue unless your catheter becomes blocked.
- **Shoulder tip pain**: This is common and often unexpected. It is referred pain from your diaphragm which gets irritated by having your abdomen inflated with gas to do the operation. It is nothing to worry about and will settle over a few days. This is not to be confused with severe central chest pain or shortness of breath which may be something more serious and you would need to ring the contact numbers if you are worried.
• **Painful defaecation**: If you need to open your bowels or pass wind on the first night, this may feel strange and can be uncomfortable, but this will ease over the coming days. Don’t strain to pass faeces as this may cause a problem with your catheter.

• **Blurred vision or headache**: Because of the position you have been in for the operation (head down), you may experience this but it should not be severe and will ease in a few days.

**What should I ring the ward about?**

You can feel free to ring the ward at any time for any concern you may have. The more serious concerns, that may mean you need to be re-admitted to the ward, include:

- Catheter stops draining and lower part of abdomen becomes painful and tender
- Severe abdominal pain that is not controlled with your painkillers
- Persistent vomiting
- Catheter falls out
- Fever
- Shortness of breath or chest pain

You will be phoned the morning after your surgery by one of the robot surgical care practitioners who will have been assisting for your operation. They will go through a checklist of questions to make sure everything is OK and will arrange for you to come back to hospital for assessment if she is concerned.
Who should I contact if I have problems before or after the operation?

You will have been provided with contact numbers by one of our Oncology Nurse Specialists. Important numbers include:

- **Oncology Nurse Specialists**: 0114 271 1966  
  (If unavailable please leave a message and they will return your call as soon as possible or try the numbers below if more urgent)
- **Urology Assessment Unit (24 hour number)**: 0114 226 5149
- **Urology Ward H Floor**: 0114 271 2299
- **Urology Secretaries**: 0114 271 3757

As mentioned previously, you have had complex specialised surgery so if you have problems early after your surgery e.g. your catheter blocks and stops draining **please do not allow anybody other than a member of the Urology team at the Hallamshire to deal with the problem.**