Bwrdd Iechyd Prifysgol Aneurin Bevan University Health Board

Information Leaflet: Patient & Carer

ROBOTIC ASSISTED RADICAL PROSTATECTOMY

UROLOGY DEPARTMENT

You are due to come into hospital for an operation called Robotic assisted radical prostatectomy. This information leaflet aims to answer some of the questions you may have and give you an idea of what to expect.

What is a Robotic Radical Prostatectomy?

Robotic surgery uses sophisticated mini-instruments which are totally under the control of the surgeon. The robot 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, and because recovery is much faster than it is for open surgery.

The procedure involves very precise removal of the entire prostate gland, together with the seminal vesicles (sperm sacs) completely, whilst trying to preserve the structures required to maintain urinary incontinence and occasionally lymph nodes using robotic assisted techniques (The Da Vinci machine).

Your surgeon will try 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 lie very close to your prostate, forming a cobweb of delicate strands over its surface. If your erections were normal before the procedure, it is usually possible to preserve them (called nerve-sparing prostatectomy). It can be very successful in maintaining your erections after the procedure although they may take some time to recover. We can only preserve these nerves if the cancer has not reached the layer where they lie.

Your team will explain how you can enjoy a healthy sex life after surgery, even if the nerves do not recover or need to be removed.

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

- to remove the cancer
- to achieve a clear margin away from the tumour
- to drop the PSA blood level below 0.1 ng per ml
- to reduce the need for any further treatment (e.g. radiotherapy or hormone treatment)

- to preserve your continence
- if possible and appropriate, to preserve the erection nerves to your penis.

What and where is my prostate?

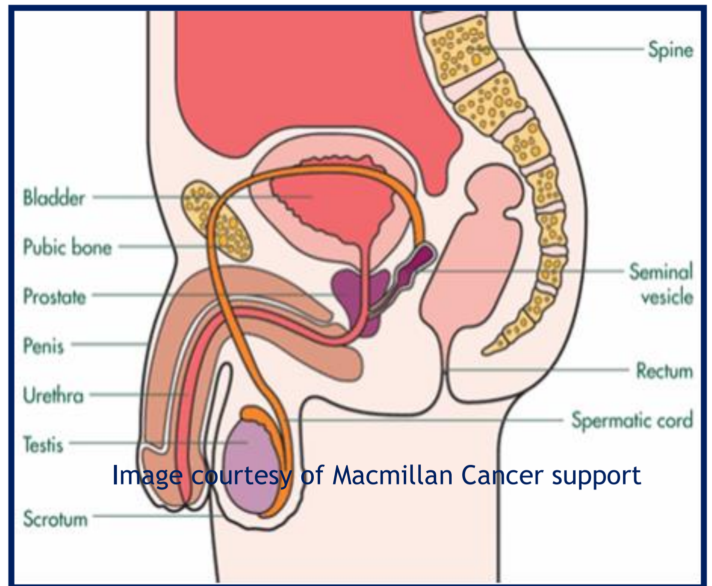


Image courtesy of Macmillan Cancer support

The prostate is a small gland found only in men. It's about the size of a walnut and gets a little bigger with age. It surrounds the first part of the tube (**urethra**) that carries urine from the bladder along the penis.
The prostate produces a thick, white fluid that mixes with the sperm produced by the testicles to make semen. It also produces a protein called **prostate-specific antigen (PSA)** that turns the semen into liquid. The prostate gland is surrounded by a sheet of muscle and a fibrous capsule. The back of the prostate gland is close to the rectum (back passage). Near the prostate are collections of lymph nodes.

What are the alternatives for organ-confine prostate cancer?

Alternatives to this procedure includes active surveillance, open radical prostatectomy, conventional laparoscopic (telescopic) radical prostatectomy, external beam radiotherapy, permanent seed brachy therapy, high intensity focused ultrasound (HIFU), Cryotherapy and hormonal therapy depending on your specific circumstances and cancer features. Some treatments are only available in few specialist centers.

You will already 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 & healthy for many years to come.

What are the benefits of robotic prostatectomy?

Robotic prostatectomy has been shown to have the following benefits:

- Shorter hospital-stay
- Less pain
- Less scaring
- Minimal blood loss
- Faster recovery and return back to normal activities such as driving
- Enhanced surgical 3-D vision and dexterity of instruments with the greater chance of sparing the nerves and blood vessels attached to the prostate, minimizing risk and contributing to cancer clearance.

Your urologist will discuss the details of the procedure with you whilst you are an outpatient, outlining the procedure as part of your consent. You should be aware that there is a small chance (less than 2%; 1 in 50) that your procedure may need to be converted to an open operation. Unfortunately, if you do not agree to open surgery under any circumstances, we would be unable to proceed with the robotic operation.
Please be assured that deciding which operation to have is not something you will do alone. If you would like further information, please contact the urology nurse specialist or the surgical care practitioner.

Are there any side-effects?

Most procedures have possible side-effects. Although the complications listed below are well-recognized, most patients do not suffer any problems.

Common side-effects (greater than 1 in 10):

- Temporary difficulties with urinary control which may persists for more than a year and require safety pads
- Temporary shoulder tip pain or abdominal bloating
- Impairment of erections even if the nerves can be preserved (20-50% of men with good pre-operative sexual function) together with some shortening of penis
- Inability to ejaculate or father children because the structures which produce seminal fluid have been removed (occurs in all patients).
- Discovery that cancer cells have already spread outside the prostate, needing further treatment

Occasional side-effects (between 1 in 10 and 1 in 50):

- Scarring at the bladder exit resulting in weakening of the urinary stream and needing further surgery (2-5%).
- Severe urinary incontinence (temporary or permanent) needing pads or further surgery (2-5%)
- Blood loss needing transfusion or repeat surgery

- Further treatment at a later date, including radiotherapy or hormone treatment
- Lymph fluid collection in the pelvis if lymph node sampling is performed
- Some degree of mild constipation can occur; you will be given medication for this but, if you have a history of piles, you need to be especially careful to avoid constipation
- Development of a hernia related to the site of the port insertion
- Development of a hernia in the groin area at least 6 months after the operation

Rare side-effects (less than 1 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 needing a temporary colostomy

Hospital acquired infection:

- Colonization with MRSA (0.9% - 1 in 110)
- MRSA bloodstream infection (0.02% - 1 in 5000)
- *Clostridium difficile* bowel infection (0.01% - 1 in 10,000)

What should I expect before the procedure?

You will normally receive an appointment for a pre-assessment check a week or so before your operation date. This is to assess your general fitness and suitability for surgery and anaesthetic, answer any questions you may have, complete the consent form and perform some important baseline tests including blood, urine and ECG and give some important information about the enhanced recovery, fasting instruction, medications and drinks which you will be taking in preparation to your surgery. It would be helpful if you bring someone with you for this appointment. You will also get an appointment from the continence nurse specialist clinic to learn about pelvic floor exercise.

You will have been given a prescription of the following medicines:

- *Glycerine suppositories*- 2 capsules to be self-administered i.e. put in to the

back passage at 8 pm the evening before your operation

- *Omeprazole Capsule (Antacid)*, 20mg, 1 capsule to be swallowed with water at 8 pm the evening before and 6 am the morning of your operation.

- *Inj.Fragmin 5000 units* for 28days following surgery to prevent deep vein thrombosis and pulmonary embolism

- *Laxido* (Constipation prevention) for 2 weeks following surgery.

- *Ciprofloxacin* (Antibiotic) for 5 days to start on the morning of urinary catheter removal i.e after 2 weeks of surgery

In addition to this, unless you have diabetes, you will be given high energy (Forti-juice) and carbohydrate rich (Pre-op nutricia) drinks to start two days before your surgery and to continue up until the morning of surgery. You will be given instructions on taking these drinks during your pre assessment clinic.

You will usually be admitted to **University hospital of Wales, Cardiff** on the same day as your surgery into the **Protected Elective Surgical Unit (PESU)** Upon admission you will be given elasticated stockings provided by the ward (to help prevent venous thrombosis i.e. clots in your legs). You will be seen by members of the medical team which may include the consultant, specialist registrar, surgical care practitioner and your named nurse. A second sample of blood will be taken in the morning. Make sure that you have ample opportunity to discuss any concerns and to ask any questions you may have. You will be seen by the anaesthetic team to ensure that they have no concerns anaesthetising you. You are encouraged to ask them questions at this stage about any concerns or issues you have concerning the anaesthetic. You should prepare yourself to mobilize immediately after the operation.

What happens during surgery?

A full general anaesthetic is normally used and you will be asleep throughout the procedure. You will usually be given an injection of antibiotics before the procedure, after you have been checked for any allergies. 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 for easier access of the pelvis.

The Da Vinci® prostatectomy removes the prostate gland and surrounding structures using 'keyhole' techniques with small skin incisions (pictured below). A robotic cart (pictured above left) is placed beside you in the operating theatre. Each cart has four robotic arms: three for instruments and one for a high- magnification 3-D camera. The robotic arms hold a variety of 8 mm instruments that are placed inside your abdomen through small incisions. These instruments are quite small, have a greater range of movement than the human hand and allow the surgeon to carry out this delicate operation in 3-D, within a small space in the body.

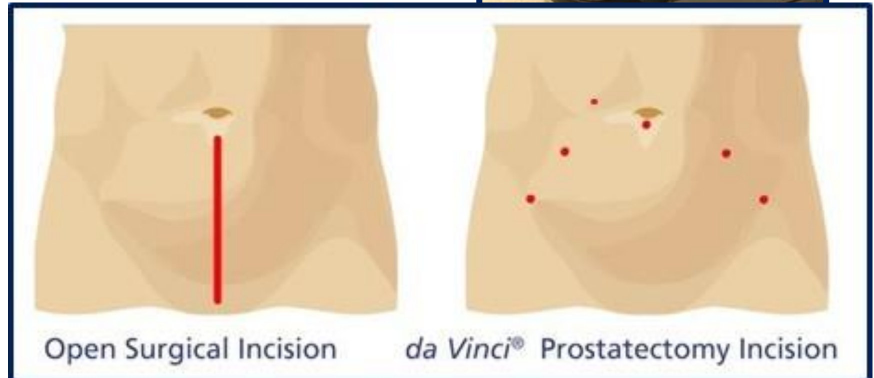
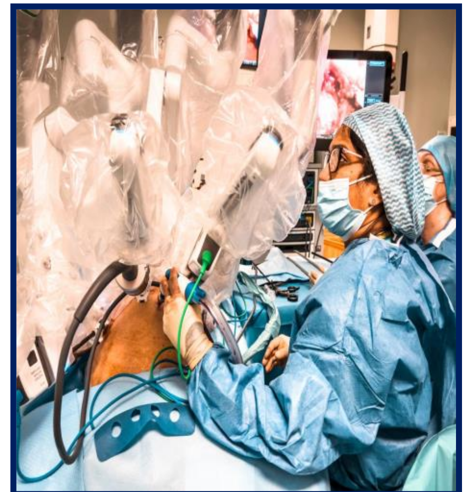


Image courtesy of PARKWAY



The operating surgeon sits in the same room but away from you whilst carrying out controlled & precise movements using robotic assistance to remove the prostate gland and re-join the bladder back to the water pipe (urethra). There will be a surgical assistant by your side who helps the surgeon with other aspects of the surgery. It is important to emphasise that **the robot does not do the operation**; the instruments are controlled by the surgeon because the robot cannot work on its own.

What should I expect immediately after my surgery?

You will be taken to the recovery area once your surgery is finished and remain there until the anaesthetic wears off. You will be given clear fluids to drink. Once the anaesthetist and nursing staff have agreed that your condition is stable; you will be transferred back to the ward. You can start to eat as soon as you feel able to do so. You will be encouraged to sit out of bed in a chair as early as possible and begin gentle mobilisation as soon as possible.
You would be discharged from the ward after approximately 12-24 hrs. If your surgery is performed in the morning, we would like you to go home by the end of the day i.e. within the next 12 hrs. But if it's done in the afternoon, you would be going the day after surgery. You will be given instructions with regards to the care for your catheter/ leg bags before you are discharged from the ward.

What should I expect when I am discharged home?

You will need some comfortable loose clothing as you may find that your abdomen is uncomfortable and swollen. You will need someone at home with you for the first few days after you are discharged. You will have a call from the surgical care practitioner and the district nurse (catheter maintenance care) within the next 2 days of your discharge.
Your wounds will be closed with absorbable sutures and the sutures dissolve within the next 10 – 14 days. You will have 6 small dressings on your wounds and this can be removed within the next 48-72 hrs. Extra dressing would be given when you are discharged from the ward. However, if the wound site looks dry and clean, they can be left to open air.
You may notice some blood staining in your urine and bypassing urine, this is normal and shouldn't cause you concern. However, if you notice large clots/debris in your catheter or if you feel that your catheter is blocking then please contact your nurse specialist, urology ward or the district nurses.

A 2-4 week convalescence period is usually necessary after surgery. This is less than that experienced after an open operation where patients may feel weak and tired for several months. 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.

You will go home on Fragmin injections for 28 days. Fragmin is a drug that helps to keep the blood thin and helps prevent clot formation. You should also wear TED stockings for 28 days to prevent blood clot formation in addition to your Fragmin injection. You would have been shown how to do this at your pre-assessment appointment. If you have any questions, ask the nurse discharging you.

How much pain will I experience?

Since the surgery is performed through a small incision most patients experience much less pain than with open surgery.
Patients tend to need less pain medication and after one week very few men feel any pain at all.

How do I control my pain?

You will probably experience a little discomfort after your surgery. Try to take some simple pain killers such as Paracetamol and Ibuprofen regularly at least for the initial few days after your surgery. Some men find they notice pain in the perineum (the area between the scrotum and the anus) due to bruising from the operation. Occasionally men feel pain in their shoulder region, this is due to the gas that was used during the operation irritating the diaphragm and sending referred pain to the shoulder. This usually settles after a few days. Due to your positioning during surgery, slight swelling and soreness can occur around the head and in the eyes. This latter problem is probably caused by inflammation of the cornea. Try to avoid rubbing your eyes and this discomfort will ease spontaneously within a day or two. It is not unusual to see some bruising on your abdomen or in the scrotum. Sometimes the scrotum can be swollen and purple in colour.

What if I see blood in my urine?

This is a common occurrence after radical prostatectomy when you are at home and becoming more mobile, the catheter can cause inflammation in the bladder and this may lead to blood staining in the urine. This is only of concern if you can see large clots or solid pieces of debris passing down the catheter. If this happens please contact your district nurse or clinical nurse specialist.

What if the catheter blocks?

This will become an emergency situation if not dealt with in a timely fashion. If you notice that urine has not been draining check that:

- The drainage bag is below the level of your bladder
- The catheter has no kinks or twists in it
- You cannot see pieces of debris or blood clots in the catheter tube

Contact your district nurse immediately, or get in touch with your clinical nurse specialist. Under no circumstances can the catheter be removed/replaced. It should be dealt in the Royal Gwent Hospital if there are any problems.

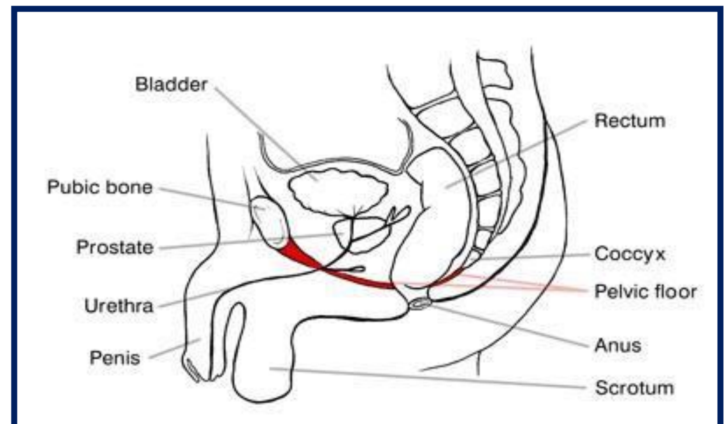
What if I feel something is wrong in the first few weeks of surgery?

If you feel unwell or are concerned about your health you should contact us straight away during office hours (numbers at the back). You should contact D2E,D2W or Urology assessment unit asking for the urology doctors on call.

How and when is the catheter removed?

After a robotic prostatectomy, the catheter needs to stay in place for 14 days for healing of the urethra to take place. Removal takes about 15 seconds and feels peculiar but it is not painful. After the catheter has been removed, remember that your bladder has not been filled for a while and that the outlet has been kept open artificially. The body tissues at the site of the surgery are affected by swelling and temporarily lose their elasticity. As a result, you will not have full control of urine and you will have some leakage for the first few days or weeks. Once the urethral catheter has been removed, please resume your pelvic floor exercise.

PELVIC FLOOR



The male pelvic floor is made up of deep supportive layers and superficial layers of muscle. One of its most important functions is to help with the storage of urine and faeces and keep the bladder and bowel in place. It aids the prevention of leakage from the bladder/ and or /bowel. After prostate surgery most men may leak urine and it has been proven that pelvic floor exercises may assist in the recovery of bladder control and thus aid in helping prevent leakage. Pelvic floor exercises have also been shown to help men who suffer with post – micturition dribble and erectile function.

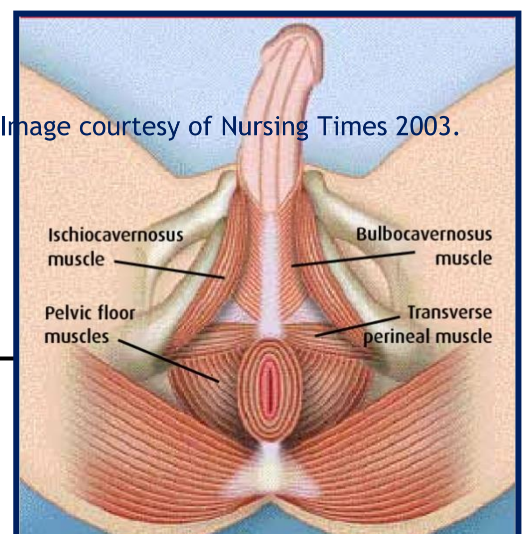


Image courtesy of Nursing Times 2003.

IDENTIFYING THE PELVIC FLOOR

There are 2 muscle groups within the pelvic floor, slow muscles and fast muscles. Both groups of these muscles must be exercised for maximum benefit.

- Imagine that you are trying to stop yourself passing wind. Tighten around the back passage and pull up towards the front passage. For visual confirmation stand in front of a full-length mirror and squeeze – you should notice a slight movement in the penis and lift in the scrotum if doing exercise correctly.
- Another way to identify the pelvic floor is to try and stop the flow of urine when you go to the toilet, but **don't** do as common practice.

Try to avoid holding your breath, pulling in your abdomen or tensing your buttocks.

Pelvic Floor Exercises comprises of 3 positions:

Sitting: sit on the edge of a chair/bed with your knees apart and feet facing forward
Standing: stand with feet apart and facing forward
Lying: Lie on your back with your knees bent and apart with your feet on the bed. We would advise you to choose 1 position for morning, 1 for lunchtime and 1 for evening) In each position there is a regime to follow which consists of slow and fast exercises.

REGIME BEFORE SURGERY

Slow Exercise: Pull in fully and hold for **10** seconds, relax always 4 seconds. Perform this 3 times.

Then do….

Fast Exercise: Pull in fully then relax x 10 maximum

REGIME AFTER SURGERY (after catheter removal)
Slow Exercise: Pull in fully and hold for **4** seconds (this is to be gradually increased when muscle capable), relax always 4 seconds. Perform this 3 times. Then do
Fast Exercise: Pull in fully then relax x 10 maximum). You will be reviewed with the Continence Specialist Nurse 2-3 weeks post removal urethral catheter

PLEASE NOTE THESE EXERCISES ARE FOR LIFE

When can I exercise?

Light walking is encouraged straight after the procedure. After two weeks, jogging and aerobic exercise is permitted.

Can I shower or bath?

Yes. The dressings on your abdomen are waterproof. We recommend that you rinse any soap thoroughly from your body as this may loosen the dressings.
You should gently pat yourself dry to minimise the risk of infection.

When can I drive?

When you feel comfortable to do so and when you feel able to make an emergency stop. Please check with your insurance company before attempting to drive.

When can I resume sexual activity?

This will depend on whether a nerve sparing procedure was possible at the time of surgery. We ask that you take note of any erections or feelings you may have and report them at your follow up appointment.

We will normally start you on a medication such as Cialis 5mg daily when you return for your catheter removal. This medication will help to improve the blood flow into the penis for rehabilitation of your erections.

We would not expect this to result in erections immediately and in some patients, it may take as long as 18 months to recover erectile function.

If oral medication proves to be unsuccessful, we can then arrange for you to be reviewed by a urology clinical nurse specialist to discuss other alternatives such as injection treatments.

How much should I drink?

You need to ensure that you drink at least 1.5 litres of fluid each day. Try to include plenty of water. If possible moderate your intake of tea/coffee/coke as these potentially can increase frequency and urgency.

What if I get bladder spasms?

Bladder spasms (which feel like abdominal cramps) are quite common when you have a catheter in your bladder. The bladder may try to squeeze out the balloon (which it sees as a foreign body) and this causes the spasm. Although this can be uncomfortable, it is not a cause for concern.

What happens if I leak around the catheter?

Urine leakage around the outside of the catheter is called by-passing. It is sometimes the results of bladder spasms or can take palace when you open your bowels. If it does happen, please check that urine is still draining into your leg-bag, if it is not you need to contact your district nurse, or contact your urology clinical nurse specialist (numbers at the end of this leaflet)

What about my bowel movements?

After the anaesthetic and as a result of the surgery and some of the drugs you will have been given, your bowels may take some time to return to normal. If you have been given laxatives whilst in hospital, it is equally important that you maintain soft bowel movements when you get home.

Laxido and lactulose, all suitable laxatives to take at home so that you do not have to strain to open your bowels. If you have haemorrhoids (piles), the operation may cause them to become inflamed so you will need to take particular care to keep your bowel regular.

When can I return to work?

Please allow a couple of week's recuperation before returning to work. If your work involves heavy lifting please speak to your consultant about this prior to leaving hospital.

If you develop a temperature, increased redness throbbing or drainage at the site of your operation, please contact your GP. If you have problems with your catheter (especially if it falls out), ask your GP to contact the on-call doctor as soon as possible (D2W-01633 234130,Urology Assessment Unit 01633234029).If you are unable to pass urine after your catheter has been removed you should contact the urology clinical nurse specialists (day time numbers on the reverse of leaflet), and out of hours the urology doctor on call.

Are there any other important points?

You will go home with a catheter in place. This is to splint the delicate joint between your water pipe and the bladder until it heals up- typically for 10-14 days.

Preparation for removal of catheter

You will attend the Urology Outpatients Department 14 days following your surgery for catheter removal. A supply of continence pads would have been ordered by the Continence Nurse when you attended you Pelvic Floor exercise appointment. They should have been delivered prior to your admission. If not phone the Continence Team on 01633 234976 and they will help you.

Will there be any out-patient follow up?

You will receive an appointment for a telephone consultation with the specialist nurse one week after the catheter has been removed. There will also be an appointment to return to the outpatient clinic about six weeks after surgery. This is to allow the consultant to find out how you are getting on with your recovery and to discuss with you the findings of the pathology report on your prostate specimen.

The purpose of the operation is to remove the prostate and all of the prostate cancer. Occasionally the prostate cancer has spread microscopically outside the specimen that was removed. In this case, your consultant will advise you about having further treatments (usually radiotherapy but, occasionally hormone therapy) to ensure the complete eradication of any remaining cancer cells. You will be required to have a PSA blood test prior to this visit to record your post-operative level.

After this appointment you will be followed up by the clinical nurse specialist at four monthly intervals for the first year. You will need to have a PSA blood test at your GP surgery about ten days before your appointment. If you have any queries about your clinical management, please talk to your clinical nurse specialist (numbers at the end of this leaflet).

HOW TO CONTACT US?

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Paulette Hussain - Nurse Practitioner (Pelvic Floor Exercise)01633234976

Where is your surgery taking place?

Protected Elective surgical Unit

Ground Floor

University Hospital of Wales (UHW)

Heath Park

Cardiff

CF14 4XW

Reception: 02920742640/02920744630

Reference:

British Association of Urological Surgeons (BAUS) 2020. *Robotic Assisted Laparoscopic Radical Prostatectomy*.

"This document is available in Welsh / Mae'r ddogfen hon ar gael yn Gymraeg"