

**Department of
Urology**

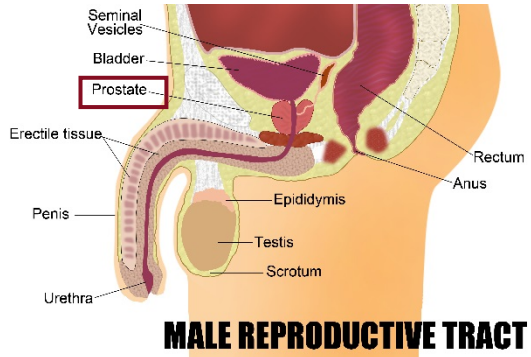
Robotic Prostatectomy – A Treatment for Prostate Cancer



Prostate Cancer

Prostate Cancer

Prostate cancer is a disease in which malignant (cancer) cells form in the tissues of the prostate.



What is the Prostate?

The prostate is a gland in the male reproductive system located just below the bladder and in front of the rectum. It is about the size of a walnut and surrounds the urethra (the tube that empties urine from the bladder). The prostate gland produces fluid that is one of the components of semen.

What are the Treatment Options and Outcomes?

With greater public awareness, early detection is on the rise and mortality rates are decreasing. If diagnosed while the cancer is localised or still contained in the gland, the 5-year survival rate approaches 100%. Additionally, new advances in medical technology enable cancer survivors to go on to live active and productive lives after their treatment. Treatment options may include close monitoring, surgery or radiation. However, surgery is the only treatment that actually removes the cancerous prostate from the body.

All prostate cancer treatments can affect urinary continence, as well as sexual potency and function. Patients should always consult with their doctor for advice on the treatment options available for their individual condition and what to expect before, during and after treatment.

Robotic Prostatectomy

Robotic Surgery – Robotic Prostatectomy

The *da Vinci*® Robotic Surgical System is designed to provide surgeons with enhanced capabilities, including high-definition 3D vision and a magnified view. Your doctor controls the *da Vinci*® Robotic System, which translates his or her hand movements into smaller, more precise movements using tiny instruments inside your body.

Though it is often called a “robot”, *da Vinci*® system cannot act on its own. Instead, the surgery is performed entirely by your doctor.

Together, *da Vinci*® technology allows your doctor to perform complex procedures through just a few tiny openings. As a result, you may be able to get back to your normal activities faster – without the long recovery that usually follows an open surgery.



The seated Surgeon controlling the robotic instruments during surgery.



Robotic instruments are introduced into the patient with the help of a surgical assistant.

Benefits of Robotic Surgery

The Potential Benefits of Robotic Prostatectomy

1. Effective Cancer Control

Studies have shown that experienced surgeons have achieved successful results in removing prostate cancer without leaving cancer cells behind.

2. Improved and Early Return of Continence

Some studies have shown that patients may have a rapid return of urinary continence.

3. Improved and Early Return of Sexual Function

Some studies have shown that patients may have a rapid return of sexual function.

4. Minimally Invasive Surgery

The *da Vinci*® System enables surgeons to perform even the most complex and delicate procedures through very small incisions with precision.

For patients who are suitable to undergo the procedure, Robotic Prostatectomy offers the following benefits over traditional open prostatectomy, including:

- Shorter hospital stay
- Significantly less pain
- Lower risk of infection
- Less scarring
- Less blood loss and fewer blood transfusions
- Shorter recovery time
- Faster return to normal daily activities

¹Barocas DA, Salem S, Kordan Y, Herrell SD, Chang SS, Clarke PE, Davis R, Baumgartner R, Phillips S, Cookson MS, Smith JA Jr. Robotic assisted laparoscopic prostatectomy versus radical retropubic prostatectomy for clinically localized prostate cancer: comparison of short term biochemical recurrence-free survival. *J Urol*, 2010 Mar;183(3):990-6. Epub 2010 Jan 18. ²Ficarra V, Novara G, Fracanzanza S, et al. A prospective, non-randomized trial comparing robot-assisted laparoscopic and retropubic radical prostatectomy in one European institution. *BJU Int*. Mar 5 2009;104(4):534-539. ³Rocco B, Matei DV, Melegari S, ospina JC, Mazzoleni F, Errico G, Mastropasqua M, Santoro L, Detti S, de Cobelli O. Robotic vs open prostatectomy in a laparoscopically naïve centre: a matched-pair analysis. *BJU International*. Published online: 5 May 2009. DOI 10.1111/j.1464-410X.2009.08532.x. ⁴Menon M, Tewari A, Baize B, Guillonneau B, Vallancien G. Prospective comparison of radical retropubic prostatectomy and robot-assisted anatomic prostatectomy: the vattikuti Urology Institute experience. *Urology* 2002 Nov;60(5):864-8.

General Risks of Surgery

Potential Disadvantages of Robotic Prostatectomy

While clinical studies support the use of the *da Vinci*® Surgical System as an effective tool for minimally invasive surgery, individual results may vary.

Robotic Prostatectomy remains a surgical procedure and therefore, carries inherent risks. Though data supports high rates of cancer control, maintaining sexual function and return to urinary continence, there is no guarantee of these benefits to every patient. Also, some individuals may not be suitable for a full nerve-sparing procedure due to the extent of their cancer. Results, as with the open operation, are surgeon-dependent and improve significantly with surgeon experience in this surgical procedure.

A non-exhaustive list of complications are outlined in Page 5. Some risks are far less common than others, so you are encouraged to speak to your urologist about them.

General Risks of Surgery

The table below outlines the risks of undergoing a prostate surgery:

The Risks	What Happens?	What can be Done?
Incontinence (loss of bladder control)	Poor bladder control with urine leakage can occur following RALP. This usually improves in a few weeks but is rarely permanent.	Will usually recover without intervention. A second operation is rarely necessary.
Erectile Dysfunction	One to 10 men find mild to moderate difficulty with getting an erection after the operation.	Professional counselling and medication are available.
Bleeding	Blood loss during the operation.	A blood transfusion may be required.
Not being able to pass urine (urinary retention)	Blood clots or swelling of the bladder neck stops the flow of urine following removal of the catheter.	The catheter may be replaced until problem is resolved.
Infection	Infection at the operation site or urinary tract.	Treatment with antibiotics.
Scarring of the bladder neck/ urethra	A stricture (scar) can develop in the urethra or the bladder neck. This can slow or block the urine flow.	The scar may need stretching or cutting to allow the urine to flow freely. This scar tissue can reform and need ongoing treatment.
Swelling and/or pain in the testicles or scrotum	Swelling and/or pain can occur due to inflammation or lymphatic fluid accumulation.	Treatment with rest and scrotal support. If there is an infection, antibiotics may be required.

Alternative Treatment Options

When prostate cancer is believed to be still localised within the prostate gland, there are essentially two other treatment options available to a patient:

1.Active surveillance

2.Radiation of the cancerous prostate (either external radiation or radioactive seed implants)

Patients should discuss the advantages and disadvantages of each treatment approach with their doctor.

For localised prostate cancer, radical prostatectomy (surgical removal of the prostate and surrounding cancerous tissues) has historically been considered the 'gold standard' or definitive way to remove the cancer.

Preparing for Your Surgery – Important Things to Note

1. Drugs Before Surgery

It is important to inform your doctor if you are taking any medications.

If you are taking any prescription, herbal, or over-the-counter drugs that are known to cause thinning of the blood, please let your doctor know as this can increase the risk of bleeding.



These drugs **should not** be taken before surgery, for a period as specified by your doctor. If these drugs have not been stopped in advance, it may be safer to postpone the operation to avoid increased risk of bleeding.

2. Before Your Surgery

After consultation with your surgeon, you will be given a date for the operation. You will also be given an appointment with the **Pre-Admission Clinical Evaluation (PACE) clinic** for an assessment to determine your fitness for operation.

The following will take place during your PACE appointment:

- You will be asked questions about your health
- A general body check-up
- Blood tests, chest X-ray and electro-cardiogram (ECG) may be done, if needed

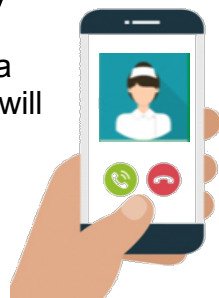
The purpose of these tests is to ensure that you are healthy and fit enough to proceed with the operation.

Preparing for Your Surgery – Important Things to Note

3. A Day Before Your Surgery

After consultation with your surgeon, you will be given a date for the operation. **A day before surgery**, a nurse will call you with further instructions regarding the following instructions:

- Time to fast
- Medications to stop
- Where to go on the day of your surgery



4. On the Day of Your Surgery

On the day of your operation, the nurse will go through a pre-operative checklist with you.

When the operating theatre is ready, you will be assisted onto a bed and brought to the operating theatre, accompanied by a nurse.

At the operating theatre, you will meet your anaesthetist and he/ she may ask you some questions and examine you.



5. During Surgery

Once in the theatre, a nurse will once again verify your identity and the procedure that you have agreed to undergo. Thereafter,

- A blood pressure cuff will be applied to your arm
- Three discs will be placed on your chest to monitor your heart rate
- A small clip will be placed on your finger to measure the amount of oxygen in your blood
- You will then be given anaesthesia and the operation will proceed

Recovery and Post-Surgery Care

Recovering From Your Surgery

Following your surgery, you will be moved to the Post Anaesthesia Care Unit (PACU) where a PACU nurse will monitor you closely until you

have recovered from the anaesthetic. If you feel nauseous or in pain, please inform the nurse so that medication can be given to relieve your discomfort.

Thereafter, you will then be moved to the general ward where you will recover until you can be discharged. Your stay in hospital will likely be about **two to three days**, if there are no further complications.

1. Diet

When you return from the operating theatre, you will have a drip in your arm. This will be removed once you are able to eat and drink normally.



Some diet tips to take note of:

- **Eat lightly for the first two to three days**
- Avoid eating too much (if you are not hungry)
- There is no particular food to avoid
- Avoid carbonated beverages (e.g. sodas) for the first week as they may cause gas pains

2. Driving

You should not drive for **at least one week**. After one week, if you are not taking pain killers, not having pain and are just as mobile as before the surgery, you should be fine to drive.

Recovery and Post-Surgery Care

3. Physical Activity



- Do not lift more than 7kg, or do any vigorous physical activity for the first four weeks (running, swimming, gym, golf, tennis, etc). Doing such activities too soon may cause internal bleeding or hernia formation.
- Try to increase your physical activity gradually each day.
- You may walk and climb stairs with no limitations.



Even after four weeks, you may not be comfortable doing strenuous exercise in a seated position (cycling, motorcycling). The seat hits very close to where your prostate used to be.

4. Surgical Wounds

Keep the wound clean and dry to prevent infection. If needed, the doctor may refer you to a polyclinic or General Practitioner (GP) for wound dressing.

For robotic surgery, there are six small incisions. They are closed with absorbable sutures or non-absorbable ones. You may shower from the third day after surgery. However, do not swim or bathe until the catheter is removed.

Swelling or bruising is normal around the incisions or the penis or scrotum. This should go off in 10 to 20 days.

Firmness or hardness under the incisions is normal and takes several months to go back to normal.

Recovery and Post-Surgery Care

5. Bladder and Urine

The urine is often bloody for about 24 hours after the operation. A flexible tube called a **urinary catheter** will be inserted into the bladder to drain urine. This tube is kept in place for seven to 10 days, and will be removed during the next follow-up appointment with your doctor in the outpatient clinic.

Catheter Care

- **Always** wash hands before and after catheter care with soap and warm water.
- **Maintain** good hygiene. Clean the skin around the catheter daily.
- **Keep** urine bag below bladder level (waist level) to prevent urine back flow.
- **Wear** underwear.
- **Drink** at least 8 glasses of fluids daily, unless otherwise advised by the doctor.
- **Do not** tug or pull the tubing to prevent bleeding.
- **Do not** remove the catheter until advised by the doctor.
- **Blood** in the urine is common and can be seen during the first six weeks after surgery. If you do see blood in the urine, make sure you drink plenty of fluids (to wash it out), and limit your physical activity until it clears up.
- **Leaking** around the catheter is not unusual. It commonly happens during a bowel movement or during bladder spasms. Bladder spasms cause a sudden sensation that you need to urinate, cramp pain, and a sudden flow of urine through and around the catheter. Bladder spasms are harmless, and typically do not happen so often.

Recovery and Post-Surgery Care

6. Bowels

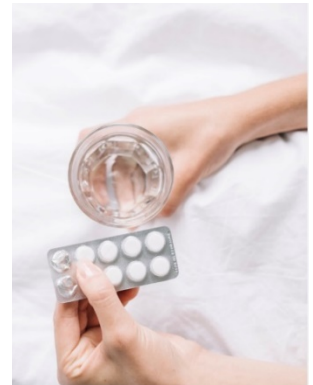
Most men will not have bowel movement until four to five days after the surgery. Continue taking the stool softeners until your bowels become regular. Pain, painkillers and inactivity all typically slow down bowel function.

7. Medication

It is normal to have a moderate amount of pain for the first two to three days after the surgery. After that, the discomfort should lessen rapidly.

Take pain medication when you first start feeling pain. You will not be addicted to painkillers when it is taken over a short period of time. Keeping your pain well managed allows you to get sufficient rest for recovery.

After surgery, you should immediately resume any medications that you take regularly. If you are taking aspirin or anti-inflammatories on a regular basis, please follow your doctor's instructions strictly.



Common Side Effects

Common Side Effects of Prostate Cancer Surgery

A. Incontinence

Incontinence is when you leak or pass urine when you do not want to. It is normal to be unable to control your urine after the removal of your catheter. You may not be able to control your urine for several days, weeks or even months. However, the control improves with time.

There are some products that are helpful to prevent soiled clothes and embarrassment. Continue to perform pelvic floor muscle exercises to improve urine control. Consult your doctor or nurse if you have problems with your urine control.

B. Impotence

This refers to the inability to achieve or sustain an erection and it can last up to a year or longer for some men. This dysfunction occurs because the nerves that are near the prostate may have been removed during the prostate surgery. There are medications and medical devices available to help overcome this. Consult your doctor if you and your partner have a concern with impotence.

Emergency

In cases of emergency, please make your way to TTSH Emergency Department.

Examples of emergency situations:

- Urinary Catheter slips out
- Severe urine leakage around the catheter or no urine flow to the drainage bag
- Grossly blood stained urine
- Blood clots found in urine
- Unable to pass urine after removal of urinary catheter
- High fever ($>38.5\text{ }^{\circ}\text{C}$)
- Severe pain, not relieved with pain medication
- Heavy bleeding, yellowish discharge, worsening redness or gaping of your operation wound

If you need other support, please contact:

Urology Clinical Coordinator:

9726 1802 (Monday to Friday: 9.00 am – 5.00 pm)

For patients seeking consultation at Urology Clinic 2A:

6889 4259 (Monday to Friday: 8.30 am – 5.00 pm;
Saturday: 8.30 am – 12.00 pm)

For patients seeking consultation at Urology Clinic 2B:

6889 4242 (Monday to Friday: 8.30 am – 5.00 pm;
Saturday: 8.30 am – 12.00 pm)

Clinics 2A and 2B
TTSH Medical Centre, Level 2

Contact:
6357 7000 (Central Hotline),
6256 6011 (General Enquiries)



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