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UROLOGY SYDNEY

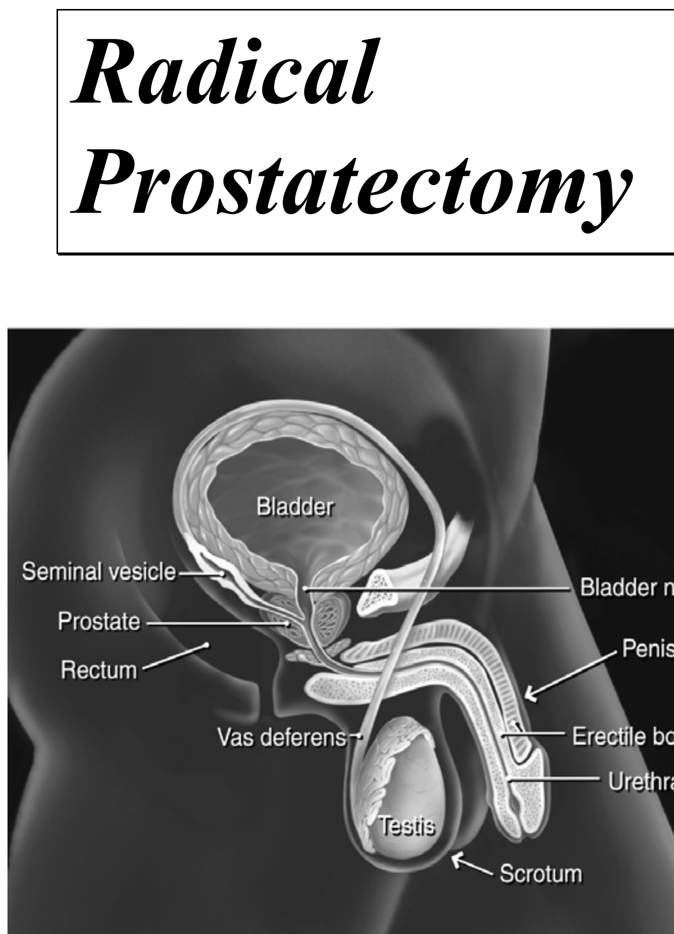
For the Patient

Radical Prostatectomy

The operation to remove prostate cancer is called a "radical" prostatectomy, or, more properly, a total prostatectomy. This brochure is written to provide you with answers to the questions many patients and their families ask about the operation. Please take it with you and keep it for future reference. The answers we are presenting are the best we have today, but our understanding of prostate cancer and its treatment is constantly improving.

Radical prostatectomy means removal of the entire prostate and seminal vesicles (the pouches attached to the prostate that store the seminal fluid) and the tissue immediately surrounding them. Because prostate cancer is scattered throughout the prostate gland in an unpredictable way, removal of any part of the prostate would leave cancer cells behind. The pelvic lymph nodes that filter the lymphatic fluid from the prostate are usually the first site of any spread of the cancer beyond the prostate gland. Normally, these lymph nodes are also removed during the operation. Fortunately, you have many other lymph nodes, so your body will not miss these few.

Normal Male Pelvis ►



MSKCC Medical Graphics

Preparations

● ***Blood Donation***. Donation of your own blood is not essential. Only about 1 in 10 patients will need a blood transfusion with this operation. If you want to donate your own blood, talk to your doctor and we will help with the arrangements.

● ***Medications.*** You should *stop taking* aspirin and other anti-inflammatory drugs like Naprosyn 2 weeks before the operation. These medicines are mild blood thinners and slow the clotting of your blood.

Continued on next page

Preparations cont'd

● ***Anaesthetists review.*** You may come here for the pre-admission clinic before the operation. Normally, we will obtain routine blood and urine tests, a chest x-ray, and ECG. A stress test is often performed for men over 60 years of age. Bring the results from your doctor if these same tests were performed recently.

● ***Diet and Exercise***. Maintain a regular diet and exercise program until the day before the operation. Take nothing by mouth after midnight the night before.

● ***Anesthesia.*** Come to the hospital the day of the operation (we will give you exact instructions). Pain control for a day or two after the operation is with a PCA (patient controlled analgesia) machine, which allows a constant level of pain control with the ability to deliver an extra dose as required for activity and so forth. You will be able to deliver an extra dose simply by pushing the button. More instructions on this machine will be given prior to surgery.

● ***Family.*** Your family and friends can stay with you until you are moved to the operating theatre. They will then be directed to the waiting area. When the operation is completed, I will talk with your family about the operation and answer their questions. They can visit you once you are awake.

The Operation

Although the operation takes about 2-3 hours, you will be in the operating theatre for 1-2 hours longer because of the anesthesia and preoperative measures. The primary purpose of the operation is to cure the cancer by removing it completely, while preserving your normal bodily functions as much as possible.

The operation is performed through a 15cm, up-and-down incision made from your belly button to your pubic bone. First, we will remove the lymph nodes in the pelvis that are usually the first site of spread of the cancer. Unless there is extensive cancer in these nodes, we will proceed with removal of the prostate itself. Relying on all the information obtained before the operation and the look and feel of the tissues during the operation, we decide how much tissue must be removed around the prostate to completely excise the cancer while preserving normal sexual and urinary functions as much possible.

Once the prostate and seminal vesicles are removed, the nerves responsible from erections are inspected. If one or both nerves have to be resected, they may be replaced by a nerve graft taken from your foot or from a nerve within the open pelvis. Finally, the urinary track is sutured back together over a specially coated catheter. One or two additional suction drains are left beside the bladder deep in the cavity to drain any fluid that accumulates. The drains decrease the risk of infection and pressure from any fluid that might accumulate in the operative bed.

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Recovery

THE CATHETER

When you leave the hospital, you may still have the urinary catheter in place. Prior to discharge, you will be told how to care for the catheter when you are home. Generally, the catheter, which is held in place by a water-filled balloon on its tip, is left in about 1-2 weeks after the operation, but a few days more or less will not matter. This gives the *anastomosis*, or union between the bladder and the urethra (the urinary channel), time to heal completely. We are now trying to remove the catheter in some patients prior to discharge from hospital. An x-ray will be performed prior to removal of the catheter if you are suitable.

You can wear a urinary leg bag during the day, but at night a larger bedside bag is better. It will not overfill and allow the urine to back up into the bladder while you are asleep. Some leakage of urine or blood-stained fluid around the catheter is not unusual. It is also not unusual to notice a pink or red tinge to the urine after you have been walking or after you have had a bowel movement. Avoid being alarmed, simply increase your fluid intake and rest until the urine becomes clear again. You may also experience "bladder spasms," a sudden and, at times, intense cramping pain in the lower abdomen and penis with an urgent need to urinate.

These spasms usually lessen with time, but if they are bothersome, they can be treated with a bladder relaxant medication such as Ditropan pills. These pills often cause a dry mouth. In excess, they can make it difficult to focus your vision, but these symptoms disappear when you lower the dose or stop the medication.

You may develop some swelling of the scrotum and penis after surgery, which will resolve in time. You can hasten reduction of the swelling by elevating the scrotum on a rolled towel while sitting down and by wearing jockey shorts, as opposed to boxer shorts, while walking.

THE INCISION AND YOUR ACTIVITY

The plastic tubes on either side of your incision are drains, designed to remove all the wound fluid that accumulates beside the bladder after the operation. Normally, the drains are removed 2-3 days after the operation, but they may be left in longer, depending on the amount of drainage. Therefore, you may leave the hospital with one or both drains still in place.

Clean the incision itself with soap and water. You may shower at any time. Usually, the main incision and the small drain sites on each side are dry and require no dressing. It takes 4-6 weeks for the abdominal incision to heal completely, so you should avoid heavy lifting (over 10 kilos) or straining during that time. Daily exercises such as walking, climbing stairs, or swimming will help you recover faster, but wait 4-6 weeks before beginning heavy exercise such as jogging, weight lifting, or golf with a full swing. Your perineum (the area between the scrotum and anus) may be tender for several weeks or months, so avoid sitting on anything hard or pointed like a bicycle seat, and do not ride a motorcycle or a horse until the tenderness is gone. Some men feel fullness or tenderness in the rectum, as though they have to have a bowel movement. The prostate gland lies just above the rectum, so this sensation is to be expected and usually will go away with time.

You may return home in a car or aeroplane, but you should not drive as long as you have any pain or you are taking pain medications stronger than paracetamol, aspirin or panadeine. *Avoid sitting* with your feet on the floor for more than 15 minutes at a time. Get up and walk, stretch your legs, or keep your feet propped on a stool as much as possible. If you return home by plane, walk in the cabin area every half hour. *Avoid standing still* for more than a few minutes at a time. Sitting and standing still slow the circulation in your legs and predispose you to a blood clot. *Notify* your doctor or our office ***immediately*** if you notice swelling in your feet or ankles or tenderness in your calves or thighs or if you become short of breath or cough up blood.

Generally, you can return to work about 3-6 weeks after the operation. If your work requires heavy physical activity, you may need a longer period of recovery until all the soreness disappears from the incision and the urinary control is satisfactory. You should be comfortable with desk or office work within 3 weeks — once the catheter is out and you feel confident with the urinary pads. After your return home, do not plan any long trips for 6 weeks after the operation to avoid prolonged sitting.

DIET AND INTESTINAL FUNCTION

After the operation, you can have ice chips and water as soon as you are fully awake, progressing to a clear liquid diet that evening or the next morning. You can try solid food 24-36 hours after the operation, when your intestinal activity begins to recover. Most people do not pass flatus (intestinal gas) for 1-2 days and do not have a bowel movement for 4-5 days.

When you return home, you may resume your normal diet. Since you will be a bit anaemic after the operation, it is a good idea to eat a lot of red meat, spinach, and other foods rich in iron for the first month or two. Iron pills are usually not necessary and may cause troublesome constipation, but they are

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sometimes necessary if the anaemia is severe. Avoid constipation by taking a stool softener, such as Senokot or Lactulose, twice a day. Drink plenty of fluids. Metamucil is an excellent natural stool softener as well. Use a gentle laxative, such as milk of magnesia, 2 tablespoons at bedtime, if you begin to feel constipated.

A major operation can predispose you to heartburn and indigestion from excess stomach acid. Let me know before the operation if you have a tendency to these problems and do not hesitate to take a medicine to control heartburn such as Zantac or Tagamet or to use an antacid such as Mylanta if you have these symptoms.

URINARY CONTROL

Most men will have some urinary leakage for a few weeks after the catheter is removed. You should bring adult urinary pads with you the day the catheter is removed. Some men regain control immediately, but the average man takes about 2 months to regain satisfactory urinary control. Sometimes it helps to wear a small absorbent pad inside a larger pad and change the small pad frequently. Try to keep your skin dry. Use a heat lamp or hair dryer twice a day to thoroughly dry the genital area if a rash appears.

You will notice that during the night, when you are lying down and the effect of gravity on the urine in your bladder is less, your control will be better than when you are up and about during the day. You will likely have more leakage with straining, coughing, or reaching down to lift something (***stress incontinence***). The leakage will gradually decrease over time and almost always stops. By 2 months, half of all men will have regained urinary control, by 6 months 8 of 10 will be essentially normal, and by 1 year nearly 95% will have good control. Only about 1 in 100 men will have a serious problem with urinary leakage after 1 year and another 4 or 5 will still need to wear 1 or 2 small pads a day. The chance of recovering urinary control depends on your age, whether the nerves were preserved, and whether you develop a rare stricture (or narrowing) at the anastomosis (where the bladder is sewn to the urethra).

Some men notice frequent urination for the first few months after the operation. The bladder takes time to fill out again after it has been kept empty by the catheter for 2 weeks. As the bladder is able to hold more urine at lower pressure, your control will improve. Sometimes a prescribed medicine helps the bladder relax and hold more urine.

Some men continue to have mild leakage (stress incontinence) when they exercise vigorously even several years after the operation, especially if the bladder is full, or they become tired, or they drink alcohol. You may need to wear a small pad in these situations. Rarely, urinary control will not become satisfactory even after a year. If so, ***something can be done***. Although rarely needed, placement of an *artificial urinary sphincter* will almost always restore satisfactory control. Some success has also been achieved with injections of collagen beneath the sphincter.

Pelvic Floor (Kegel) Exercises. The operation removed your prostate and bladder neck, the main (internal) sphincter muscle responsible for holding in the urine. Now the secondary (or *external*) sphincter muscle has to take over the job. You might help this muscle by *performing pelvic floor exercises*. Try to identify and control the muscle you tighten to stop the urinary stream and then relax to let the urine flow again. Exercise this muscle over and over again. If you have a problem identifying the right muscle, ask for instructions from our nurses, who may refer you for biofeedback training to aid you with these exercises. Develop a pattern, as you would for any other type of exercise, working this muscle regularly throughout the day. These exercises alone will not bring about urinary control, but they may lessen the amount of leakage and hasten the day when your control returns to normal. Younger men tend to regain control earlier than older men, but everyone is different. Be patient and don't get discouraged!

SEXUAL FUNCTION

The operation will affect sexual function in several ways, but it does not prevent you from enjoying a rich sex life when you recover. Sexual function in men has three components: erection, ejaculation, and climax (orgasm). Although these three normally occur together, they are separate and independent functions.

Seminal fluid expelled during ejaculation is made and stored in the prostate and seminal vesicles, therefore, removal of these organs means that a climax will be accompanied by a sensation of ejaculation but no fluid will come out (dry ejaculation). The vas, which transports the sperm, is now divided so you will not be able to father children. Some men notice a small amount of fluid from the glands within the urethra (urinary channel), and occasionally, more fluid is released from the bladder with ejaculation. If this is troublesome, a condom can afford protection.

Erection of the penis occurs because of the stimulation through the *cavernous nerves*, which send signals to dilate the blood vessels in the penis allowing it to fill with blood and become rigid. The two nerve bundles responsible for erection run along either side of the

prostate, only a few millimeters away from the area where prostate cancer most commonly arises. Unfortunately, cancer cells tend to migrate toward the main cavernous nerves along the branches that penetrate the prostate. Although preserving these nerves at the time of surgery is always possible, it is not always wise. The less tissue removed around the prostate, the greater the chance cancer cells will remain. Since the primary goal of the operation is to remove all of the cancer, one or both of these nerves may have to be resected in some patients. Unless both nerves are resected, the chance of recovering erections definitely exists, but recovery may be slow. The average time until recovery of erections sufficient for intercourse is 4-9 months, but in some men it takes longer. Erections usually improve with time, for as long as 2-3 years after the operation, because nerve fibers grow slowly. Of course, the operation will not make your erections better than they were before surgery, even if both nerves are spared! Even with full recovery, most men find the erections a bit less firm and durable than before. Younger men recover sooner than older men; those with stronger erections before the operation have a better chance of recovery than if the erections were weak.

Nerve Grafts. The chance of recovering workable erections also depends on the amount of nerve tissue preserved. If part or all of one nerve has to be removed, recovery will be slowed and full recovery less likely than with complete preservation of both nerves. Consequently, we are studying the advantages and disadvantages of using a nerve graft to replace any nerves resected during the operation. Although nerve grafts have been shown to restore erections when both nerves are resected and replaced, debate continues about the value of replacing a single resected nerve with a graft. Some men will recover satisfactory erections without a graft as long one nerve is preserved. The decision to use a nerve graft should only be made after careful consideration of all the pros and cons.

You may try sexual activity as soon as the catheter is out and your urinary control is satisfactory. Do not be afraid to experiment. Sometimes different approaches work better after the operation than before. For example, erections may now respond better to physical stimulation than to mental arousal. You cannot hurt anything by trying. Remember, cancer is not contagious and presents no danger to your partner.

Treatment for Erectile Dysfunction. Several practical methods are available for assisting erections; the most popular and widely known is the pill, Viagra® (sildenafil). I urge you to begin using one of these methods as soon after your operation as you are comfortable. By stimulating erections in the early weeks after the operation, you are more likely to recover better erections sooner than if you simply wait for erections to return on their own. Healthy functioning of the penis seems to require regular, frequent erections, which may be why men normally have erections off and on during sleep. In addition to sildenafel, effective measures to aid erections include the MUSE (alprostadil) system of urethral inserts, the injection of medications such as Caverject (alprostadil) or a mixture of drugs that dilate the blood vessels (Trimix), and the vacuum erection device (VED).
Generally, Viagra® will not give you a full erection until you begin to have some fullness of the penis or partial erections on your own. However, injections work in most patients regardless of any spontaneous partial erections you are having. Sometimes, the MUSE insert, which is not very powerful, works well in combination with Viagra®. If none of these prove satisfactory, you can also try the vacuum erection device (VED), which can be ordered directly from the company. If none of these conservative options prove satisfactory after a year, a penile prosthesis can eventually be used to restore erectile function.

Future Checkups and Further Treatment

Arrangements will be made prior to you leaving the hospital for removal of the catheter. If this has not occurred, please call my office at 9587 4888 to make arrangements to have the catheter removed about 10 days after the operation. I will send full details about your treatment to your GP or urologist.

A program of regular checkups will be necessary *for the rest of your life*. When your catheter is removed, or shortly thereafter, you should have a blood sample drawn for a PSA test. I expect the PSA level to be undetectable or “less than 0.1 ng/ml” if the cancer has been completely removed. Please plan to have your PSA measured and to return here 6-8 weeks after the operation so we can discuss the final pathology report, review your PSA result, evaluate any problems with your recovery, and determine whether further therapy should be considered.

You should have a checkup every 3-4 months for the first year after the operation, every 6 months until 5 years have gone by, then once a year *indefinitely*. If performed here, these checkups will include a physical examination and a PSA test. A urinalysis and urinary flow test will be done from time to time if you are having difficulty urinating. Other tests for prostate cancer are rarely helpful unless the PSA level becomes detectable or you develop new symptoms, such as difficulty urinating or persistent, worsening bone pain.

If your checkups will be performed by your own doctor, please ask that the PSA results and any other important information be sent to our office so I can keep your records up to date. If possible, we would like you to return here each year for a checkup. If not, my office will contact you each year for a progress report.

Please let me know if things are not going well. The best way to reach me during the day is through my office at 9587 4888. At other times, please call me through the hospital operator (9350 1111) or request the urology registrar at that same number.

WEBSITES

1) American Cancer Society: http://www.cancer.org/
2) National Cancer Institute: http://www.nci.nih.gov/
3) CaP CURE: http://www.capcure.org
4) US TOO (Support group for prostate cancer patients): http://www.ustoo.org
5) Prostate Cancer Treatment Guidelines for Patients: http://www.nccn.org
6) American Foundation for Urological Disease (AFUD)/Prostate Cancer Resource Guide: Kathy Rogers (410-468-1803); http://www.afud.org/advocacy/resource.html

For Further Information

Several good sources of reliable information about prostate cancer are available. I suggest the following for starters:

Martin, William: My Prostate and Me. NY: Cadell & Davies, 1994. [Available on the internet at Amazon.com.]

Straight Talk on Prostate Health with Peter T. Scardino. Santa Monica, CA: HB Pictures, 1995. Video and audio cassettes and companion booklet available from HB Pictures, 1-800-344-7773, *or check with your local library.*

Patrick C. Walsh, MD and Janet Farrar Worthington. The Prostate. A Guide for Men and the Women Who Love Them. A John Hopkins Health Book. The Johns Hopkins University Press, Baltimore, MD, 1995

Eastham JA, Scardino PT. Radical prostatectomy for clinical stage T1 and T2 prostate cancer (book chapter), in Comprehensive Textbook of Genitourinary Oncology, 2nd ed, Vogelzang NJ, Scardino PT, Shipley WU, Coffey DS. Philadelphia: Lippincott Williams & Wilkins, 2000, pp 722-738

Scardino PT. Prostate cancer: Detection, treatment, and prevention. (Special Advertising Section) Newsweek, November 1, 1999, pp. 11-12

Support Groups

In many cities, support groups are available for prostate cancer patients. These organizations, initiated and operated by patients for patients and their families, can be very helpful before and after your treatment. I encourage you to participate. US TOO (see Websites) and most other support groups interact through the Prostate Cancer Coalition. The National Cancer Institute and US TOO are now a partnership in educating men at risk for prostate cancer. The US TOO meetings are open to patients, spouses, and significant others, in addition to interested medical personnel. There are many support groups in Australia also.

Research: The Road to a Future without Prostate Cancer

The only way we will learn to prevent or cure prostate cancer is through research. St George Hospital and the University of New South Wales is initiating a program of research focused on finding better ways to prevent, detect, and treat prostate cancer. We are investigating the molecular changes in these cancers that may one day indicate how dangerous the cancers are. Our surgeons have developed better techniques for removing the cancer completely and restoring normal function after the operation. We are investigating newer strategies for treatment including gene therapy and oncolytic viral therapy. Continuing these research programs requires your support.

Prostate cancer remains the commonest cancer in men and the second commonest cause of male cancer death in Australia. Many of our patients have made contributions to our research program. We welcome

your support as well. Better diagnosis and treatment for this disease depends upon a vigorous and sustained program of scientific research by the best minds available.

We would be glad to discuss the opportunities of supporting research at this institution with you. Detailed information can also be obtained from my office at 9587 4888.

Urology Sydney at St George Private Hospital and our current and future patients appreciate your support.

Best wishes for a speedy recovery,

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