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Radical Prostatectomy – A Patient's Guide

Introduction

You are not alone. According to the American Cancer Society, in 2013, approximately 240,000 people in the United States will be diagnosed with prostate cancer. Prostate cancer is the most common cancer to develop in men.

The **urinary system**, which includes the kidney, ureters, bladder, and urethra, helps to maintain stable chemical conditions in the body as well as stores and eliminates waste products. The **prostate** lies between the bladder and urethra, and is a walnut sized organ that contributes to the seminal fluid during ejaculation. The seminal vesicles are paired organs that also contribute to this fluid and lie below the bladder, but they also are attached to the prostate. The **bladder**, a muscular chamber located in the lower abdomen, acts as a reservoir to collect urine. Two narrow tubes called ureters carry urine from the kidneys to the bladder. From the bladder, urine passes through the prostate and is empted through another tube, the urethra, during urination.

The **urinary sphincter** is a muscle located between the prostate and urethra that can squeeze the urethra shut to stop urinary flow. It is critical for the control of urinary continence (the ability to keep you dry). During surgery the prostate is removed very close to the urinary sphincter. Although the majority of men regain their continence following surgery, there is often a period of time when men are incontinent during the recovery period. A very small number of men have some degree (usually minimal) of permanent incontinence.

The **neurovascular bundles** are paired veils of tissue that extend from the penis and lie alongside the urethra and prostate before reaching the sacral nerves and vessels. These are important for the ability to achieve and maintain an erection.

Depending on the individual, additional tests including a CT scan, MRI, or bone scan may be necessary and will be discussed with you during your office visit.

Before the Operation

The surgical procedure in which the prostate is removed is called a radical prostatectomy. Prostate cancer typically spreads first to the seminal vesicles and surrounding lymph nodes, and these tissues are removed as well. The extent of lymph nodes that are removed depends on the individual and the stage of their cancer. The goal of the surgery is to cure you of prostate cancer.

You will be admitted to the hospital the day of your operation. The anesthesiology team will discuss their portion of the surgery with you. Most of our patients stay in the hospital for 1 day, after either the open or robotic-assisted laparoscopic approach. On the day of surgery, your family can wait for you in the surgical waiting area on the first floor of the Ronald Reagan Hospital. It usually takes 2 to 3 hours to complete this operation.

On completion of the operation I will notify your family.

The rectum, which lies close below your prostate, has a potential risk of being injured during surgery and typically it can be immediately repaired. It is important that the rectum be cleansed before surgery using an enema. My office will provide specific bowel preparation instructions.

The Surgery

During removal of the prostate, we carefully preserve the urinary sphincter. After your prostate and seminal vesicles are removed, the bladder and urethra are sutured together to close the gap and restore the continuity of the urinary tract. This is performed over a catheter that drains the bladder to allow the new connection to heal. In almost everyone, there is a temporary leakage of urine following catheter removal that occurs when the urinary sphincter and the new connection begin to heal.

The prostate and seminal vesicles contribute to the semen during ejaculation. Following surgery, men will not ejaculate and will be infertile, although the ability to have an orgasm is not affected. Depending on the extent of your cancer, one or both of your neurovascular bundles may be spared. The ability to spare the neurovascular bundles depends on many factors including the extent of cancer and whether there is spread of cancer into the nerves. The final decision is usually made during surgery. In cases where the bundles are preserved, restoration of potency usually occurs within one year of surgery. However, even with the most skilled nerve-preserving surgery, many patients have varying degrees of erectile dysfunction. Alternative methods of achieving an erection can be used and will be discussed in more detail below.

Every patient with prostate cancer is different. Most patients can be treated using a robotic-assisted laparoscopic operation, where 5 small incisions are created to insert the laparoscopic ports. One incision is slightly extended to remove the prostate and lymph nodes. Advantages include less blood loss and an earlier return to normal activities. In the open operation, an approximately 8 to 10 centimeter incision is made between the muscles in the midline of the abdomen between the belly button and pubic bone. This allows the surgeon to access the prostate and surrounding lymph nodes.

Risks

In addition to the risks of urinary incontinence, impotence, injury to the rectum or surrounding organs, and the resulting lack of ejaculation and infertility, other risks include the need for blood transfusion, infection, and stress on your heart and lungs. Blood transfusions are usually not necessary and thus we generally do not request that you donate your own blood or have someone donate blood for you prior to surgery. You can request information regarding the pros and cons of storing your own blood. We routinely match your blood type before surgery to units in the blood bank should transfusion be necessary.

Infection at the wound or in the urine can occur, but we place you on antibiotics immediately before and after the surgery. In rare patients, scar tissue can form in the new connection between the bladder and urethra. This may be treated by an office procedure that dilates the scar, or occasional requires a minor surgery.

Surgery does place a stress on your body. Although we require your primary care physician to clear you for surgery, this stress can lead to events such as a heart attack, stroke, blood clots in the legs or lungs, and even death. Your primary physician and our anesthesiology team will work closely together with us to prepare you for surgery and monitor you during surgery. Some people may benefit from seeing a physician in our preoperative clinic. This allows one of the internal medicine physicians at UCLA to become familiar with you and be able to assist you during your hospital stay. However, most people tolerate the surgery well and resume basic activities within a few days.

After the Operation

After the operation, you will be taken to the recovery room until you are awake and stable which is generally within 1 or 2 hours after surgery. Any pain or discomfort will be relieved with medications. Most patients will receive a powerful medication called Toradol or narcotics as needed. Almost all patients will be transferred to a regular hospital room or a special surgical observation unit, as the length of hospital stay is 1 to 2 days.

You will be able to start drinking liquids the evening of your operation, and regular food the following day. Intravenous fluids will provide nutrition in the meantime. You may not have a bowel movement for several days after surgery until the intestines recover.

It is important to sit up and walk starting the evening of the surgery. This will help prevent serious complications such as pneumonia and blood clots from forming in the legs. Nurses and physical therapists will assist you as needed.

Drains

At the end of surgery, all patients will have a drain placed that exits from the abdominal wall and will be visible on the outside of your body. The drain is connected to a bulb to collect extra fluid after surgery, and it is normal to be blood tinged. This drain is usually removed before discharge, but will be left in place should it continue to accumulate significant amounts of fluid including urine or lymphatic fluid. If a urine leak occurs between the reconnection of the bladder and urethra, the drain will be left in place until the connection heals completely. If this is the case, some patients will be discharged with the drain and be taught to empty and record the amount of fluid that is collected. Once the amounts decline significantly, we will ask you to come back to the office for its removal.

All patients will have a catheter placed through the urethra into the bladder at the end of surgery. One end is secured in your bladder with an inflated balloon so it will not fall out, while one end will be secured to your thigh so it will not be accidentally pulled. The

catheter allows the urine to drain out into a collection bag and allows the new connection between the bladder and urethra to heal. The urine may be yellow or blood tinged. Typically, the catheter is left in place for 7 to 10 days and we will arrange for you to remove the catheter in the clinic.

Before you leave the hospital, the nursing staff will instruct you on how to care for the catheter. During the daytime, you will connect a drainage bag to your leg that can be worn underneath loose pants. At night, you may choose to use a larger drainage bag at your bedside to avoid getting up to empty the smaller leg bag.

It is normal to have some urine or blood drain around your catheter, especially with bowel movements. However, make sure that some urine is flowing through and the catheter is not clogged or dislodged. If nothing is draining, please call us immediately. If the catheter falls out, also call the office immediately. It may need to be replaced, and only should be done by a qualified urologist. It is also normal to see a little mucus that comes around the catheter. This is normal and you can cleanse it with mild soap and water. You may lubricate the catheter at the tip of the penis with an antibiotic ointment such as Neosporin to prevent irritation.

Dressings

We typically remove all dressings 2 days after surgery. Small strips of tape called steri-strips will be placed over the incision. These are to stay on until they fall off over time. If you are discharged the day following surgery, we will teach you how to remove the dressings.

Medications

When you go home, you will be prescribed medication for pain and for prevention of constipation. Prescription pain medication can slow down bowel function and lead to constipation. Therefore, if you are taking medication for pain, try to reduce the intake as you feel better. Some patients may be given antibiotics. Take these as directed.

You should resume all your usual medications when you go home, including aspirin, unless otherwise specified.

Depending on the specifics of you and your surgery, during your follow-up visit, you may be prescribed a medication to improve and maintain blood flow to the penis. Studies suggest that it may reduce fibrosis or scarring to the penis that occurs after surgery and may speed recovery of erectile function.

Diet

Specific diet recommendations will be given at the time of discharge. Most patients will be able to eat a regular diet at the time of discharge. We encourage you to drink more than 1 liter of fluids a day. You should try to eat ample protein to build your strength and foods rich in iron, such as meat, fish, and spinach, as tolerated. High fiber diets will help

your bowel movements return to normal. Long-term, there is evidence that a diet low in fat, high in omega 3 fatty acids from fish, and possibly soy protein can reduce the risk of recurrence and slow the growth of prostate cancer.

However, it is common for the intestines to slow down after this type of surgery, so we recommend eating smaller, more frequent meals, and drinking plenty of liquids, until your initial follow-up appointment. It may be several days before your first bowel movement and it may take a couple weeks before your bowel movements return to normal. Use over-the-counter laxatives as needed. If you experience nausea and vomiting or cannot tolerate fluids, please contact your doctor.

Physical Activity

It is critical to remain active even while you are recovering from surgery. Walking every day is important and will speed up the healing process, decrease depression, and increase muscle tone. It takes approximately 4 to 6 weeks for the surgical area to heal completely. Please do not do any heavy lifting, strenuous exercises, or excessive stair climbing during this time. Let your body tell you what you can and cannot do. You may drive a car once your catheter is removed provided you feel well and are not taking any more prescription pain medications.

You may shower and get the incision wet starting on the second day after surgery. Remove all dressings before showering, except the steri-strips. It is okay to gently wash the incision and penis with mild soap and water. Avoid bathing and soaking in water until the catheter is removed and the incision is completely healed.

Urinary Continence and Sexual Function

Our goal is to cure your cancer while maintaining your quality of life. A radical prostatectomy can affect your urinary and sexual function. We are here to help in your recovery to aid your urinary and sexual function.

Urinary Function

Following removal of the catheter, most men will have a variable amount of stress incontinence, leakage of urine when you perform activities such as coughing, laughing, bearing down, or standing up. Most will improve over the first 6 to 12 weeks after surgery, but will continue to improve up to 2 years after surgery. To aid in the recovery of your continence, it is important to diligently perform your **Kegel Exercises**, which strengthen the pelvic floor muscles to help regain control of your urine flow**.**

Kegel exercises are performed:

- While you are urinating, try to stop the flow of urine, then start and stop it as often as you can.
- By contract as if you were stopping your urine stream, but do it while you are not urinating. Hold for 10 seconds, then relax for 10 seconds. Repeat it 10 times.

- While sitting, standing, lying with your head elevated, tighten and release pelvic muscles in rapid succession, repeat this for 15 minutes.
- In the same position, tighten the pelvic muscles while you exhale. Hold the muscle for a count of 30. Repeat this exercise 10 times.
- Tighten your rectum as if trying to stop gas, but don't move your buttock muscles. Try to hold each Kegel to a count of 5.
- Lie on your back on the floor, bend your knees, with your hands by your sides. Tilt you pelvis up towards the ceiling. Lift your pelvis off the floor about 1 to 2 inches, and hold for 2 long breaths. Do 2 sets of 10, resting in between.

You probably will not be able to hold them for long at first, but keep practicing, and it will get easier as your pelvic floor strengthens. Do these exercises as often as you can, and tighten your pelvic floor before you sneeze, get up from a chair, cough, laugh, or lift objects to prevent urinary leakage.

Physical therapy can also complement your recovery using biofeedback and other pelvic floor exercises. These are both non-invasive forms for rehabilitation.

After 1 year, less than 5% of men will have any notable stress incontinence. In rare cases that continence does not return, there are several surgical procedures that can remedy the stress incontinence and can be discussed.

Sexual Function

There are many things you can do to help your recovery and assist your rehabilitation. We often start men on drugs such as Viagra, Cialis, or Levitra, following surgery once your catheter is removed. Erectile function can continue to improve up to 12 months after surgery. Other options are available during this recovery process to improve functionality, and these include vacuum devices, penile injection therapy, or intraurethral suppository therapy.

Return to Work

The length of time patients stay home from work depends on the amount of physical effort their work requires and how quickly they are healing. Most men return to work approximately 2 to 4 weeks after surgery. If your job requires significant physical exertion or lifting heavy objects, you may need 6 weeks to recover. This should be discussed with your surgeon. Traveling is fine, as long as you stand up and walk every couple of hours to avoid blood clots in the deep veins of your legs.

Pathology

It takes about 5 working days for the pathology to return. We will call you with the results or go over the results on your first return visit. Based on the pathology, we will discuss with you future follow-up or treatments that may be necessary.

Follow-Up Appointments

Call to make an appointment for your post-operative check. It should be scheduled 1 week after your discharge to remove the catheter. The inability to initially hold any urine is quite common, but this is usually temporary. We recommend purchasing incontinence pads or pull-ups for the first few weeks to months after the surgery, and bring them with you on your first follow up visit.

We will see you again at 3 months, at which time we will check your PSA. We will also discuss your urinary control and sexual function. Based on your pathology, we will provide a follow-up plan. For those patients that live far away or have a primary urologist, you can chose to obtain follow-up PSA and exams elsewhere; however, we request that you send us your PSA values so we can keep track of your care.

Please call your physician's office if:

- You notice any pain or swelling in your legs or sudden chest pain or shortness of breath
- Increasing redness, tenderness, warmth, or swelling at the incision
- You develop a fever
- You develop severe nausea or vomiting
- The catheter becomes completely plugged or falls out
- Thick blood or large blood clots that are visible in the urine

Please call the office at 310-206-6453 if you have any questions.