Chapter 5. Surgery Options

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Radical Prostatectomy

A radical prostatectomy is the surgical removal of the prostate, seminal vesicles and pelvic lymph nodes**.** When the cancer is confined to the prostate, the cure rate after surgery is approximately 80 percent. Once the tumor grows through the capsule surrounding the prostate or into the surgical margin, the likelihood of cure falls to about 50 percent (without other treatment).

The Surgical Procedure

The surgery is performed under general anesthesia, and usually takes about three hours. An incision is made from below the umbilicus (belly-button) to the pubic bone. A pelvic lymph node sampling may be performed if the probability of the lymph nodes being involved warrants it. A frozen section of a suspicious lymph node may be obtained. This allows the pathologist to examine the lymph nodes immediately to determine whether there has been any spread of cancer.

If a significant amount of cancer has spread to the lymph nodes, surgery will not likely result in a cure. In such cases, the surgery is generally discontinued at this point and consideration is given to other treatment options. If no tumor is identified in the nodes, the prostate and seminal vesicles are removed, and the bladder is reconnected directly to the urethra.

After Surgery

Most patients get out of bed later the same day and are walking by the following morning. The amount of pain after surgery is usually not great and can be well controlled with non-narcotic pain medications and/or with a PCA (patient-controlled analgesia), a device that allows the patient to control his own level of pain relief.

The average hospital stay is two to three days. Prior to leaving the hospital, a small drain, placed to remove any leaking urine from the area where the bladder was reconnected to the urethra, will be removed from the surgical area.

After You Leave the Hospital

After you leave the hospital, you will continue to wear a urinary catheter attached to a plastic bag on your leg for an additional 10 days. This catheter allows the bladder to rest, and it facilitates healing. You may shower right away. You will be encouraged to walk outdoors every day but should do no heavy exercise for six to eight weeks after surgery. You should not drive a car for two weeks.

Laparoscopic Radical Prostatectomy

Recently, **robotic laparoscopic radical prostatectomy** has been receiving much attention in the press. The procedure was pioneered in France, where it has been performed routinely. However, it is still evolving in the United States. The prostate and seminal vesicles are removed using cameras and instruments inserted through small incisions made in the abdomen. **The surgery itself is technically more difficult** than the standard open operation.

The reported advantages are typically less postoperative pain, smaller scars and shorter hospital stays. The main benefits of a laparoscopic procedure are the ability to return to work in a shorter period of time and a shorter time using the catheter. Long-term cancer control rates are still being investigated but short-term cancer control rates are comparable to open radical prostatectomy. Potency and continence rates also appear quite similar in some reported series.

The main disadvantage to the laparoscopic approach is longer surgical time, often four to six hours. As the technique evolves, it is expected that operative time will become shorter. Patients interested in robotic radical prostatectomy are encouraged to discuss the procedure with their urologist to determine if they are a good candidate for the surgery.

<u>Risks of Surgery</u>

Bleeding is the most common complication of prostate surgery. The prostate is surrounded by a rich network of veins, so a patient may lose one to two pints of blood during the operation. On occasion, blood loss can be considerably greater. A cell-saver system may be used, enabling your surgeon to give you back blood lost during surgery. With the use of the cell-saver, the likelihood of requiring additional blood from the blood bank is approximately 10 percent. Some patients choose to donate two pints of their own blood in advance in case additional transfusion is needed during surgery.

Erectile dysfunction (impotence) was once a virtual certainty after radical prostatectomy. However, with anatomic studies, the nerves responsible for erections have been identified (with one nerve bundle on either side of the prostate), and techniques have been developed to spare these nerves. If both nerve bundles are preserved, the ability to have unassisted erections can be retained in about 50 to 60 percent of patients.

Please keep in mind the ability to spare these nerves is dependent on the grade, stage and volume of cancer within the prostate. In some patients, particularly those with extensive high-grade disease, nerve sparing is not performed as doing so may compromise the ability to remove all the prostate cancer cells. It is also important to understand that the likelihood of retaining sexual function after surgery depends not only on the status of the nerves but also on the age of the patient and the pre-treatment level of erectile function.

Whether or not natural erections return, men can generally still attain an orgasm, although no semen will flow. If erections do not return, a number of treatment options are available, including oral medications (such as Viagra, Levitra and Cialis), medicated urethral suppositories placed directly into the urethra, penile injections, vacuum erection devices, or surgical placement of a penile prosthesis.

Urinary incontinence is usually a temporary inconvenience after surgery, and the majority of men regain urinary control within two or three months. Some men will continue to lose small amounts of urine with sneezing, coughing or exertion. Approximately two percent of men will remain

significantly incontinent; many elect to have further surgery to try to regain urinary control. Such procedures include surgical placement of an artificial urinary sphincter or outpatient collagen injections.

Bladder neck contracture, or the internal scarring at the bladder outlet that restricts the flow of urine, occurs in about 5 percent of patients. If the restriction is severe enough, the stricture can be dilated or cut.

Uncommon complications include lymphocele (internal leakage of lymphatic fluid that may require drainage as an outpatient), or in rare cases, injury to adjacent structures such as the rectum, ureters (tubes that carry the urine from the kidney to the bladder) or nerves. Infection is rare, but is always a possibility with surgery. The risk of death associated with surgery is less than 0.5 percent, but this varies with age and overall health.

Follow-Up Care

After your prostatectomy, you will be seen for a follow-up appointment seven to 14 days after surgery to remove the urinary catheter. You will have a PSA blood test at six to 12 weeks after surgery, and then on a regular basis thereafter.