



Patient Information for Robotic-Assisted Laparoscopic Radical Prostatectomy



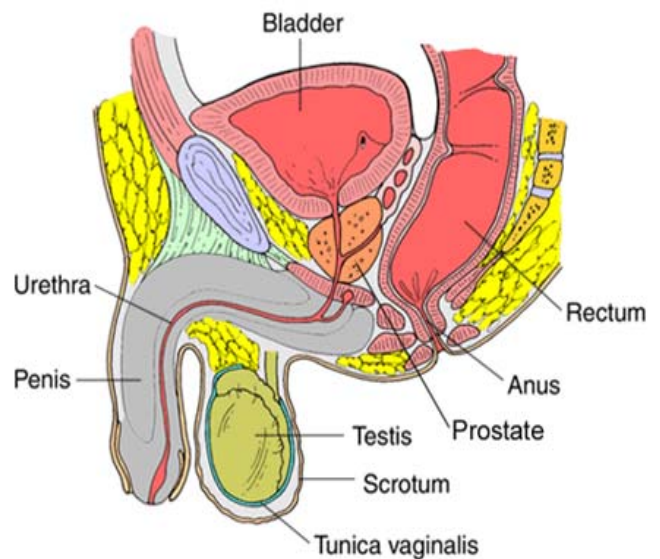
This information sheet has been written to answer many of the questions that are usually asked during the initial consultation visit.

The robotic-assisted laparoscopic radical prostatectomy was first reported in 2001. Since then, the robotic prostatectomy has become one of the preferred methods for radical or total removal of the cancerous prostate. Penn Presbyterian Medical Center is the most experienced center in the region to utilize the daVinci Surgical System.

Laparoscopy is performed by filling the belly with carbon dioxide gas so that a working space can be created. Small incisions are created through which instruments are passed. For prostate removal, six small incisions between a $\frac{1}{4}$ inch to $\frac{1}{2}$ inch are used. For the robotic prostatectomy, the robot holds three instruments and the camera. Once the surgeon properly sets the robot, he then sits down at the robotic console from where the robotic arms are controlled using hand and foot controls.



This diagram shows the normal anatomy of the male reproductive system. The prostate and seminal vesicles normally function to produce the fluid that is expelled during ejaculation. In order to remove the prostate entirely, the prostate must be separated from the bladder above and the urethra below. The seminal vesicles are removed along with the prostate. The bladder is then sewn to the urethra and a catheter is left in the bladder to aid in healing of the sewn area.



ROBOTIC VERSUS OPEN PROSTATECTOMY

The benefits of robotic prostatectomy over open surgery are several-fold. The average blood loss for robotic prostatectomy is 150 cc. Several series of open radical prostatectomy show average blood loss to be around 1 liter.

Hospital stay is overnight for the robotic procedure compared to 2 to 4 days for the open. Catheter time is reduced by 1 to 2 weeks. Most people can return to work in 2-3 weeks after the robotic procedure. After the open procedure, 6 to 8 weeks are usually required.

Table 85-9. ESTIMATED BLOOD LOSS IN PATIENTS UNDERGOING RADICAL RETROPUBIC PROSTATECTOMY

Series	No.	Mean Estimated Blood Loss (ml)	Range (ml)
Rainwater and Segura, 1990	316	1020	100-4320
Kavoussi et al, 1991	65*	1420	200-2500
	65†	1605	250-3500
Frazier et al, 1992	122‡	565	150-1850
	51	2000	600-10,000
Leandri et al, 1992	220	300	100-1500
Zincke et al, 1994	1728	600	—
Baylor (unpublished data)	954	800	150-5000

*With temporary internal iliac artery occlusion.

†Without temporary internal iliac artery occlusion.

‡Radical perineal prostatectomy.

from Campbell's Urology, 7th edition

WHAT TO EXPECT

The usual course experienced by patients undergoing robotic prostatectomy is as follows. The patient arrives in the hospital the day of the procedure. The procedure is then performed and typically takes between 2 and 3 hours. The actual working time with the robot is typically 80 minutes. The patient then spends the first night in the hospital and is given a regular diet and is encouraged to walk the night of the procedure. Discharge is planned for the next morning and instructions are given on general postoperative and catheter care.

The patient is sent home with a prescription for a light narcotic oral medication. Many patients do not require this and use only Tylenol. Patients should walk as much as possible immediately. Stair climbing is acceptable. Patients should refrain from lifting more than 10 pounds for 3 weeks. Some patients do experience some constipation which can be remedied by milk of magnesia.

The foley catheter is removed in the office in one week. Pathology results will then be discussed at the next visit. Patients are allowed to drive after catheter removal. The patient then may return to work within 2 to 3 weeks and then can go back to unrestricted activity in 3 to 4 weeks.

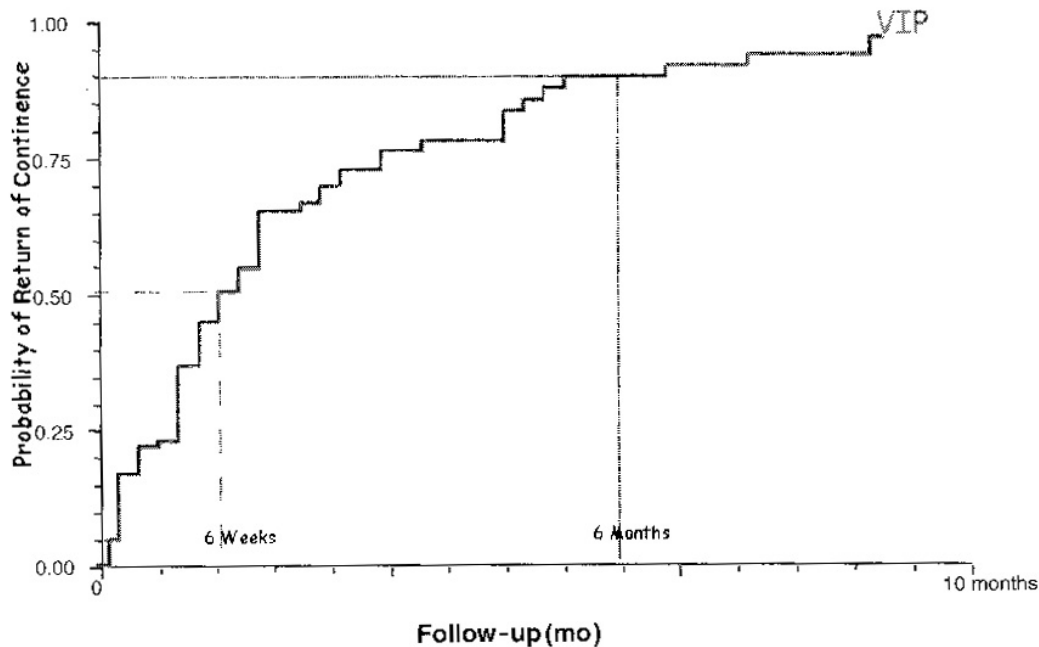
SIDE EFFECTS

The two dominant concerns that men have regarding radical prostatectomy are incontinence (leaking of urine), and impotence (loss of erections).

The typical incontinence that men experience early on after prostatectomy is called stress urinary incontinence. This type of leakage is typically experienced with coughing, sneezing, standing up from a sitting position, or with other vigorous activity.

Why are men incontinent after radical prostatectomy? It is likely the prostate plays a very important role in keeping men dry. Once prostate is removed, only the external sphincter or pelvic floor muscles are left for maintaining continence. Although this is the muscle that women rely upon solely for continence, in many men this is not well developed. As time goes on after surgery however, this external sphincter will continue to gain strength even up to one year after the surgery.

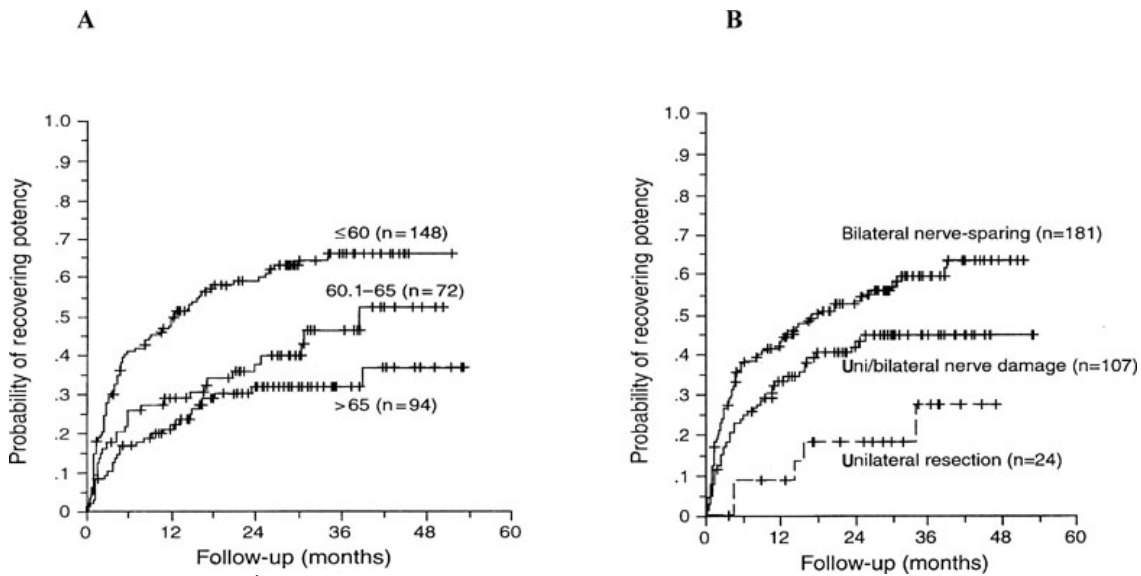
Early on most men will require pads to keep their garments dry. This graph demonstrates the percentage of men who require one pad or less as time goes on after robotic surgery. As you can see the long term results are excellent. No more than 5-10% of men will require pads at the one year point and less than 1% overall require extra surgical help to restore continence.



In our experience, 50-60% of men are out of pads at 3 months and 80% by 6 months. Ultimately by 12-15 months, 90% of men are done with the pads.

Regarding impotence, nearly every man after radical prostatectomy will completely lose their erections temporarily. After prostatectomy, men have normal sensation in the penis and can experience orgasm. However during orgasm no fluid will be expelled. The remaining question is whether the erections will return. With time, erections return typically over the following 6-18 months. Some men require 18 to 24 months before erections return. We have seen that men who are less than 55 years who have normal erections have an 85% chance of regaining erections by 18 months. Men who are older and have poor preoperative erections have decreasing chances.

During the operation, nerve sparing may be possible that will help with the return of erections. The nerves that help the penis to achieve erection lie on the back surface of the prostate. To spare or preserve these nerves aids in the long term recovery of erections. Nerve sparing can be performed if there is a small amount of disease seen on the biopsy result and if the prostate cancer has a low grade or low chance for spread.



from Campbell's Urology, 7th edition

Graph A depicts the percentage of men recovering erections over time depending on age. Similar data is available demonstrating that men with normal preoperative function do much better than men with poor function.

Graph B demonstrates the effectiveness of nerve sparing in preserving erections. Patients who have bilateral nerve sparing can achieve excellent results in long term recovery of erection.

RESOURCES

First of all, don't hesitate to call with any questions to our office.

Websites that can help you discover more about robotic surgery and prostate cancer:

The National Prostate Cancer Coalition: www.4npcc.org.

Medline: www.pubmed.com (search prostate cancer). Intuitive Surgical:

www.intuitivesurgical.com. The National Cancer Institute: www.nci.nih.gov. The

American Cancer Society: www.cancer.org.