

Robotic Assisted Laparoscopic Prostatectomy

Eastern Connecticut Urology

Prostate cancer is the second most common cancer in men, after skin cancer, in the United States. Guillonneau and Vallancien in 1999, from France, popularized the laparoscopic approach by describing their modifications to the original technique. However, the technical demands of the surgery prevented its widespread use by the average urologist.

The next significant advance in the surgical treatment of localized prostate cancer was the development of the da Vinci robot. This is a system consisting of a 4-armed robot connected to a remote surgeon console. The surgeon operates the system while seated at the console. A 3-dimensional display provides a unique depiction of the surgical field not previously incorporated in other systems. The first reported robot-assisted laparoscopic prostatectomy using the da Vinci system was described in 2001. This technique is gaining widespread acceptance both in the United States and Europe. It encompasses the advantages of other minimally invasive techniques.

Benefits of the robotic and laparoscopic procedure compared to the standard open radical prostatectomy

- Shorter hospital stay
- Less pain
- Less risk of infection
- Less blood loss and blood transfusion
- Less scarring
- Faster recovery
- Quicker return to normal activity

The robotic techniques have several advantages over the laparoscopic technique for performing radical prostatectomy.

- Because the display system of the da Vinci projects the image in the direction of the surgeon's hands, the hand-eye coordination is restored.
- 3-dimensional stereoscopic vision to the surgeon, hence providing depth perception lacking in laparoscopy.
- The movements of the robotic system are intuitive as opposed to the counterintuitive movements in laparoscopy
- The robotic system provides increased precision by filtering hand tremors and providing magnification (10-15X).
- The robotic instruments have articulated tips, which permit 7° of freedom in movements (they mimic human wrist movements, including rotation)

What to Expect: Before, During and After Robotic-Assisted Laparoscopic Prostatectomy

Before Surgery

The preparation for a laparoscopic prostatectomy is the same as it is for any type of traditional surgery.

During Surgery

You will be given general anesthesia during the surgery.

There is always a risk of bleeding, infection, or injury to adjacent tissue. However, one of the major benefits of minimally invasive/laparoscopic surgery is that it tends to greatly reduce these risks.

The special side effects associated with prostatectomy, post-surgical incontinence (inability to control the urge to urinate) and impotence (inability to have an erection), also apply to laparoscopic/robotic prostatectomy.

After Surgery

You will be taken to the recovery room after surgery, then you will be transferred back to your hospital room when you're fully awake and your vital signs are stable.

Any post-operative pain you experience will be controlled by traditional pain medications. Robotic prostatectomy does result in less post-operative pain than traditional prostatectomy.

You may also feel nauseous for several hours after the surgery, which is a possible side effect of the anesthesia. Medication can also control this. You may have bladder spasms – a moderate cramping sensation in the lower abdomen or bladder – a side effect of a prostatectomy. They will decrease over time and can be treated by medication if needed.

During the surgery, a Foley catheter will be inserted into your penis to drain your bladder. The catheter is generally removed a week after surgery. Generally, robotic prostatectomy enables patients to have the catheter removed sooner than traditional surgery. Your nurse will teach you on how to care for the catheter before discharge. You will be shown how to attach it to your legs to allow you to walk without difficulty.

You will also have a pelvic drain placed during surgery. It drains the pelvic space around the bladder and is usually removed before discharge.

Other post-operative conditions are similar to those for any major surgery. You'll have an intravenous (IV) line (a small tube put into a vein, through which you can be given fluids and medicines). At first you will be placed on a clear liquid diet and later advanced to regular foods. You may feel tired for several weeks. Some patients notice their penis length is somewhat shorter after the surgery. Also you will have a dry ejaculate (no semen) after the surgery.

Prior to your discharge, you will be given necessary prescriptions and instructions, including when to follow up with your doctor.

BOWEL PREPARATION FOR ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY

As you prepare for your upcoming urologic surgical procedure, we ask that you alter your diet. This sheet contains information regarding the protocol for cleaning out your bowels prior to surgery.

- 1) We ask that you begin a liquid diet 24 hours prior to the date of your surgery. (For example, if surgery is scheduled for a Thursday, then begin a liquid diet on Wednesday morning.) Any types of fluids are fine to eat during this period. Also, Jello and Ice Cream are appropriate to eat.
- 2) On the day that you start your liquid diet, we ask that you drink 1 bottle of Magnesium Citrate. This will cause you to have liquid bowel movements and remove solid material. The Magnesium Citrate can be purchased without a prescription in any pharmacy.
- 3) On the evening prior to surgery, we ask that you do a Fleet's Enema to complete the bowel preparation. This type of enema can be obtained at any pharmacy.
- 4) You should **stop** taking these medications 7 days before your procedure: Aspirin, Coumadin, Plavix, Motrin, Ibuprofen, Aleve.
- 5) Finally, we ask that you NOT eat or drink anything after midnight the night before your surgery.