daVinci Robotic Prostate Surgery

WHAT IS A daVINCI ROBOTIC PROSTATECTOMY?
daVinci robotic prostatectomy is the removal of the prostate gland, seminal vesicles, and sometimes lymph nodes for the purpose of curing prostate cancer.

Instead of making one 5 inch cut through the muscle of the abdomen, the daVinci robotic approach uses 5 small ¼ inch cuts that do not cut any muscle. Through these cuts instruments are placed into the abdomen along with a camera that enlarges the view to 12 times magnification. The daVinci robot is a tool used to hold the laparoscopic instruments and camera improving the precision, vision, and skill with which the physician can perform the operation. The operation entails removal of the seminal vesicles and prostate while selectively preserving the muscles that help with urinary control, and the nerves that help with erectile function. The prostate sits between the bladder and penis, with a portion of the urethra running through it like a tunnel. So, after the prostate is removed the bladder is re-attached to the urethra with stitches, just as in open surgery but with the magnification and delicate precision of laparoscopic surgery and daVinci Robotics.

ADVANTAGES OF daVINCI ROBOTIC PROSTATECTOMY
• The published data from surgeons experienced with daVinci robotic prostate removal show that negative margin rates with daVinci surgery are equal to, and in some reports better than, that of traditional open surgery.
• There is less blood loss than traditional open surgery and rarely the need for blood transfusion
• There is less pain after daVinci surgery (many patients do not require any pain medication)
• Patients typically require a hospital stay of only 23 hours
• Patients are back to daily activities in a matter of days
• Urinary control often begins to return as soon as a week after surgery
• Gives patients an excellent opportunity to return to full erections when the nerves are spared
• The abdominal scar is minimized giving an improved cosmetic result

WHAT ARE THE COMPLICATIONS ASSOCIATED WITH DA VINCI ROBOTIC PROSTATE SURGERY?
• <1% chance of delayed return of bowel function
• <1% chance of bowel injury
• <1% chance of injury to bladder or ureters requiring additional surgery
• <1% chance of prolonged urinary leakage requiring extension of the hospital stay by a few days or continued catheter drainage for a slightly longer period
• <1% chance of bleeding resulting in hematoma or blood transfusion
• <1% chance of wound infection or hernia formation
• <3% chance of urethral stricture
• <5% of patients have incomplete return of urinary control 12 months after surgery.
HOW DOES THE ROBOT WORK?

The daVinci Surgical Robot allows the physician's hand movements to be scaled, filtered and translated into more precise movements of micro-instruments. A larger hand movement by the doctor is translated into a smaller robot movement, and smaller movements can then become micro-precise. By replicating and scaling movements in real time, the robot allows the doctor to more precisely perform the operation improving outcomes for patients. The robot cannot be programmed nor can it make decisions on its own. It is under the complete control of the doctor at all times. Use of the robot also significantly reduces surgeon fatigue by allowing them to remain seated in a natural, comfortable position while operating.

3-DIMENSIONAL OPTICS

Standard laparoscopic surgery uses one single camera and limits a surgeon's vision to a 2-D view similar to watching television. The daVinci robotic camera consists of two high resolution fiber optic cameras which, like your eyes, produce a true 3-dimensional color picture available to the surgeon seated at the daVinci console. Magnification of up to 12x can be achieved with these cameras which is precisely controlled by the doctor using a central robotic arm.

ROBOTIC MICRO-INSTRUMENTS

Although visually similar to standard laparoscopic instruments, the robotic instruments have the additional advantage of being articulated. This means the instruments not only open and close but also fully turn and twist, allowing 7 degrees of motion. Unlike standard open surgical instruments, these instruments are much smaller. Many of the jaws of the tools are shorter in length than your fingernail and about as thin as the edge of a half dollar. This allows very small and precise movements and surgical cuts to carefully dissect out the prostate.
MINIMIZING BLOOD LOSS
Similar to standard laparoscopic procedures, the lower abdomen is filled with carbon dioxide gas. The carefully regulated pressure of this gas acts like an invisible hand to reduce blood loss and gently sweeps bowel away from the site where the surgeon is operating. The gas is not harmful, does not affect cancer cells in any way, and is exhaled away after surgery. The enhanced visibility and magnification of the robotic cameras aids the surgeon in finding small blood vessels before they bleed, which translates into lower blood loss.

WHAT DO I NEED TO DO PRIOR TO THE OPERATION?
For 2 days prior to surgery you need to be on a clear liquid diet and drink one bottle of Magnesium Citrate each day. The evening prior to surgery and the morning of surgery (before you arrive at the hospital) a fleets enema needs to be given. This is done to empty the intestines of stool and reduce the risk of bowel related complications.

HOW LONG DOES THE SURGERY TAKE?
Operating time for averages less than 3 hours but it can be slightly longer depending on the difficulty of the case. The time you will be away from your loved ones is a few hours longer because of the prep time in the operating room and the recovery time at the end of the case.

HOW LONG WILL I BE IN THE HOSPITAL?
Hospital stay is usually less than 24 hours. This can vary, however, depending on how each individual recovers.

WHAT CAN I EXPECT WHEN I GO HOME?
Urinary Catheter - You will have a catheter in your penis for about 8 days. This diverts the flow of urine away from where we delicately sewed things back together and allows the urethra to heal. You will get an x-ray in the morning of your office appointment and the doctor will evaluate your x-ray to see if your body has healed up well enough to remove the catheter that day. Please bring a padded undergarment the day of your appointment. After catheter removal it will be very difficult for you to hold your urine. While your catheter is in it can cause irritation of the bladder which you may sense as urges to go to the bathroom, pain below your pubic bone, or leakage of urine around the catheter. This is normal and there are medications you can take to help reduce this occurrence (see “MEDICATIONS” section below for details).

Drainage Catheter - An additional drainage catheter will be placed in the left side of the abdomen. This catheter is typically removed before going home.

Pain - Most individuals after daVinci robotic prostatectomy have some “gas” like pain the night after surgery and feel like they did too many sit-ups. Patients report that a pain medication similar to Motrin is sufficient when they go home, however, the doctor will prescribe an additional stronger pain medication that some patients use as needed to further reduce what discomfort they may have. This should decrease day by day.

Activity - Although you will not be pain free, people feel very good after daVinci robotic surgery. Light activity can be resumed within 24 hours. Please remember that although you feel good on the outside, a lot of delicate work has been done on the inside and you need to wait 3-4 weeks before returning to full activity.

Medications – The doctor will prescribe an antibiotic for you to take every day until the catheter is removed and for 3 days following catheter removal. You will also be given a stool softener. After any surgery the bowels tend to take some time before returning to regular function. Take your stool softener twice a day for a full month after the surgery to help your body get back into a usual routine. You will also get a medication for bladder spasms. Should bladder spasms arise, take the medication as prescribed to reduce the frequency and severity of the spasm. A pain medication will also be prescribed to use as needed. If this is too strong Motrin, Advil, ibuprofen, or Tylenol may be used.
OUTCOMES

Urinary Control – Average pad usage 6 weeks after surgery is less than 2 pads/day and at 6 months is less than 1 pad per day.

Erectile Function – Recovery of erections varies based on patient age, whether or not one or both nerves were spared, and what sort of erections patients had before surgery. The magnification of the robotic camera and precision of the micro-instruments allows the doctor to easily identify and preserve the nerve tissue. In the section “The A.R.T. of daVinci Prostate Surgery” he will describe for you his extended nerve sparing technique.

Cancer Control Rates – Cure rates vary depending on Gleason score, PSA, and your final cancer stage. The published data from experienced daVinci surgeons shows equal, and in some cases, better negative margin rates when compared to open surgery.

SUMMARY

daVinci Robotic Prostatectomy is not experimental. It is the latest in cutting edge surgery for cancer of the prostate. The cure rates, urinary control rates, and post-operative erectile function all compare favorably to traditional open surgery. In addition, blood loss, need for blood transfusion, hospital stay, and return to full activity are all significantly better when compared to open retro-pubic surgery. daVinci Robotic Prostatectomy requires specialty training. The patient outcomes are often directly related to number of daVinci Prostatectomy’s performed by the physician.

daVinci Robotic Prostatectomy may not be appropriate for all patients. Risks and benefits vary from patient to patient, therefore your specific risks and benefits should be discussed with your physician prior to you deciding on this operative procedure.