

ROBOT-ASSISTED SURGERY

Implications for Men's Health

The *da Vinci*® System allows Swedish Medical Center surgeons to operate with unsurpassed 3D HD visualization, dexterity, surgical precision, control and ergonomic comfort. The result is what potentially may be better surgery, with more patients that are now candidates for a minimally invasive approach.

Why is *da Vinci* Surgery important to men?

- Prostate cancer is the most common non-skin cancer in America, affecting 1 in 6 men. A non-smoking man is more likely to develop prostate cancer than he is to develop colon, bladder, melanoma, lymphoma and kidney cancers combined. In 2009, more than 192,000 men will be diagnosed with prostate cancer, and more than 27,000 men will die from the disease¹.
- While the causes of prostate cancer are largely unknown, it is clear that the chance of developing prostate cancer increases in men over 50. Close relatives of men who have had prostate cancer are also more likely to be affected.
- According to statistics collected in the early 1990s, approximately 30 percent of prostate cancer patients in the United States were treated with surgery, 30 percent were treated with radiation and 20 percent elected watchful waiting. Most of the remaining 20 percent were treated with a combination of therapies. Radical prostatectomy, or surgical removal of the prostate and surrounding cancerous tissues, is considered the “gold standard” or best way to eradicate prostate cancer.

Radical prostatectomy is a complex and delicate procedure due to many factors, including the location of the prostate gland deep inside the pelvis. In radical prostatectomy, the surgeon removes the entire prostate gland along with both seminal vesicles, both ampullae (the enlarged lower sections of the vas deferens), as well as additional surrounding tissues. The section of urethra that runs through the prostate is cut away; with it may also come some of the sphincter muscle that controls the flow of urine.

Three Approaches to Radical Prostatectomy:

Open, Laparoscopic and Robotic-Assisted Laparoscopic (*da Vinci*® Prostatectomy)

An open prostatectomy requires an 8-10 inch incision on the patient's abdomen for direct access to the operative site. Conventional laparoscopic and robotic-assisted laparoscopic approaches require several dime-sized incisions, which are used to introduce narrow-shafted instruments. The surgeon and assistants maneuver the instruments from outside the body, under vision provided by a surgical camera.

The potential advantages of laparoscopic and robotic-assisted laparoscopic prostatectomy over conventional open surgery include smaller incisions for less post-operative pain and improved cosmetics; reduced blood loss and less need for blood transfusions, as well as a faster return to normal activities.

Swedish's use of the *da Vinci* robot as a tool in a prostatectomy case incorporates state-of-the-art robotic technologies that provide natural depth of field and allow a surgeon's hand movements to be scaled, filtered and translated into precise micro-movements of tiny instruments at the operative site. The superior visualization, enhanced dexterity, precision and control enable the surgeon to perform complex procedures.

For most patients, the robot-assisted prostatectomy offers substantially less pain and a much shorter recovery than traditional prostate surgery. Other advantages may include reduced need for blood transfusions, less scarring and less risk of infection. In addition, recent studies suggest that robot-assisted prostatectomy may improve cancer control and a lower incidence of impotence and urinary incontinence. Due to its advantages, robot-assisted surgeries are the fastest growing treatment for prostate cancer in the United States. Over 80 percent of all radical prostatectomies were performed robotically in 2008.

¹ http://www.prostatecancerfoundation.org/site/c.itlWK2OSG/b.4983495/k.5C76/About_Prostate_Cancer.htm