

Patient's Guide to da Vinci[®] robot-assisted Laparoscopic Prostatectomy

Mark A. Rosen, M.D.

Carlos G. Arcangeli, M.D.



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Table of Contents

Introduction.....	1
Our Experience with minimally-invasive prostate cancer surgery.....	1
Preparation for the Operation.....	1
What to Expect at the Hospital.....	2
The Operation and Recovery Room.....	2
Postoperative Care.....	3
Getting Ready for Discharge to Home.....	4
Post Operative Home Expectations.....	4
Post-Laparoscopic Radical Prostatectomy Instructions.....	5
Postoperative Rehabilitation of Sexual Function.....	7
Urinary Function after Laparoscopic Prostatectomy.....	9
Preoperative Bowel Preparation.....	10
Risks of Laparoscopic Radical Prostatectomy.....	11
Risks of surgery.....	11
Long-term Risks of Prostate Cancer Treatment.....	12

Introduction

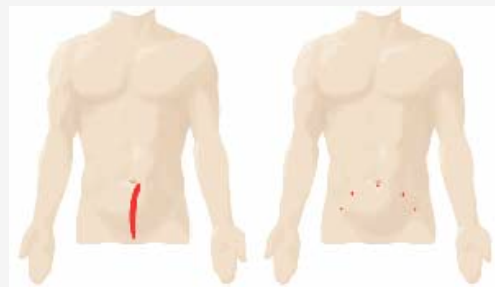
You and your doctor have decided to proceed with a da Vinci[®] robot-assisted prostatectomy for the treatment of your prostate cancer. da Vinci[®] robot-assisted prostatectomy is a less-invasive operation done using a telescope and long instruments placed through five small holes in the abdomen instead of the 6-8 inch long incision used for traditional open prostate surgery. da Vinci[®] robot-assisted prostatectomy results in less pain than open surgery, and the average blood loss is 1/6 of the blood loss during open surgery. Patients are able to leave the hospital sooner after surgery and return to normal activities much faster than after open surgery. Most men are able to leave the hospital the day after surgery, but everyone and every operation is different and some patients stay 2-3 days, if necessary.

This booklet will answer most of your questions about the surgery, the hospital stay, what to expect at home after surgery, and ways that you can assist in recovery of normal urinary and sexual function. Perhaps not every question will be answered, so feel free to call us if more information is needed.

Our Experience with minimally-invasive prostate cancer surgery

Our urologists have extensive training and experience in prostate cancer surgery, and performed close to 1000 traditional prostate cancer surgeries before we began to perform minimally-invasive surgery. In 2001 Dr. Rosen performed the first laparoscopic kidney surgery in Santa Cruz, and in January 2003 we began to perform robot-assisted laparoscopic prostatectomy. We were the first urologists on the Central Coast to use the state-of-the-art da Vinci Surgical System[®], and we now perform da Vinci[®] prostate cancer surgery at Dominican Santa Cruz Hospital.

The results that we obtain with minimally-invasive prostate cancer surgery are as good as those reported at major cancer centers around the country. The less invasive operation provides the same cancer cure rate as open surgery, and we believe that our patients recover normal urinary and sexual function faster than they did after open surgery. Our urologists are at the leading edge in their field, and more than 80% of prostate cancer surgeries in the U.S. are now performed using the da Vinci Surgical System[®].



da Vinci[®] surgery (right) is much less invasive than open surgery (left)

Preparation for the Operation

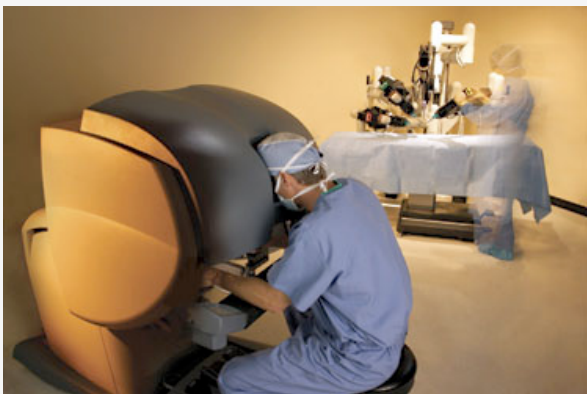
We perform laparoscopic radical prostatectomy at Dominican Santa Cruz Hospital. Unless there are some extraordinary circumstances, you will be admitted on the day of surgery. The following instructions contain important steps to prepare you for the surgery.

- You will need to see your surgeon for a preoperative visit, usually 5-7 days prior to surgery. At that visit any questions you have will be answered, your medical history and medications will be reviewed, and you will be asked to sign a consent for surgery. You will be given paperwork to take to the admitting office at the front of the hospital 2-3 days before surgery.
- You should follow the instructions for bowel preparation (page 10) so that your bowels are empty at the time of surgery.

- You may need blood tests, an electrocardiogram (EKG), and other tests done prior to your surgical date. Any tests will be ordered on the paperwork that you take to the admitting office of the hospital.
- It is very important that you refrain from eating or drinking anything for at least eight hours prior to your scheduled operation time. In most circumstances this means nothing should pass your lips after midnight before your surgical procedure except for medications.
- You should usually take all of your regular medications on the usual schedule, and you can take medications on the day of surgery with a small sip of water. You should NOT be taking any aspirin or aspirin products for 7-10 days before the surgery, but Tylenol is okay up to the day prior to surgery.

What to Expect at the Hospital

On the morning of your surgery you will be admitted to the hospital through the admitting office. You will then change into a hospital gown and placed into a bed in the pre-op area. An intravenous line may be started to replenish your body's fluids. The anesthesiologist will talk to you about the anesthesia and answer any questions about anesthesia and post-op pain



The surgeon sits at the operating console and controls the da Vinci® robot

relief. Laparoscopic radical prostatectomy is done with the patient completely asleep, a process called general anesthesia. While under general anesthesia you will have a breathing tube in your throat which will deliver oxygen and the anesthetic gases that keep you asleep. Because of this tube you may have a mild sore throat for 1-2 days after surgery. You will wake up in the operating room, but your first memories will most likely be in the recovery room after surgery.

The Operation and Recovery Room

You will be transported into the operating room when the nurses, surgeons and anesthesiologist are ready. Special inflatable stockings to prevent blood clots in the legs may be put on before you are asleep. Monitor electrodes for the EKG and a blood pressure cuff will also be put on. The anesthetic is then started and the surgery is started within 15-20 minutes. The actual surgery time averages 3 ½-4 hours. After the surgery is completed the anesthetic will be discontinued and you will be taken to a recovery room.

In the recovery room nurses will watch you very carefully until your anesthetic effects have worn off. The nurses will apply an oxygen tube or mask to your face and start checking your blood pressure and pulse frequently. Most patients have only a small amount of pain in the lower abdomen, but pain medication will be given to you as needed. You will note that the nurses are constantly watching the rubber tube, or catheter, that leads from your penis to a drainage bag on the side of the bed. This tube has been placed through your penis (or urethra to be more exact), into your bladder, and drains the urine during the healing process. The catheter is held in position by a small balloon at the end in the bladder which is inflated after it is placed. You do not have to worry about the catheter falling out. The catheter will drain urine from the bladder, and the urine may be bloody for several days after surgery.

Occasionally clots will form and the tube will stop draining. The nurses will then use a special syringe with water to hand irrigate the catheter to free it of clots. Hand irrigation might be somewhat uncomfortable, but necessary, to clear any plugging of the channel and allow the urine to flow. Once your anesthetic has worn off and the urine is draining satisfactorily, you will be transported to a hospital room.



The endowrist instruments move like the human hand, allowing precise surgery

During the surgery the table will be tilted with your feet up in the air and your head low to the ground. This causes the intestines to fall out of the pelvis and allows the surgeons to get to the prostate. You may have some facial swelling for the first 24 hours after surgery but it will go away on its own.

Postoperative Care

Once in your hospital room, the floor nurses will check your 'vital signs' (blood pressure, pulse and respiration) and set up your inflatable stockings, your urinary drainage bag, and your intravenous lines (IV). After this operation we use a pain medication called Toradol, which is given in your IV every 8 hours for the first 24 hours. You do not have to ask for Toradol, the nurses will give it according to a set schedule. If you are still in pain the first night after surgery you should tell the nurse, and they will give you a dose of narcotic into your IV as often as necessary. The next morning after surgery pain pills will be given as needed for pain.

You will not be able to eat a regular diet on the day of surgery, but you may be able to have sips of water that first evening. Usually the next morning you will be started on a light diet and by lunchtime of the first day after surgery most patients are able to eat a regular diet. Your will

most likely not have a bowel movement for 3-5 days after surgery, although most patients are passing gas sooner. Laxatives are not usually necessary, and your bowels will usually go back to normal within a week.

On the evening of the day of surgery the nurses will help you dangle your legs at the bedside, then help you up to a chair. We would like you to take a walk in the hall the first evening if you are able to. It is very

important that you are able to get up out of bed and walk in the halls starting the day after surgery, and don't be afraid to ask the nurses for pain medication if you are in pain. There is no risk of becoming addicted to the pain medications, and there is no extra credit for "toughing it out." You may be a little sore at first, but walking will help your bowel function return to normal, prevents blood clots from forming in the veins of your legs, and makes the pain go away faster.

The nurses on the floor will continue to observe your catheter drainage, and a leg bag will be placed on the first post-operative day. This bag can be worn under loose fitting pants, and will be used most of the time while you are home before the catheter is removed. The nurses will teach you how to care for the catheter and leg bag before discharge. Your regular medications will usually be restarted the day after surgery. Once the intravenous line is no longer needed and you are eating normally, you will be ready to go home, usually in the afternoon on the day after surgery.

You will also notice a plastic tube or drain that exits the abdomen to the side of the incision. This is to help remove the fluids that collect internally around the surgical site. It is not uncommon to

have some drainage around the tube, and the nurses will change the dressings if necessary. This tube and drain are usually removed on the day after surgery when the drainage is minimal.

There will be five small incisions that will be covered with waterproof bandages. Under the bandages the skin has been closed with absorbable sutures and special tape called “steri-strips.” The “steri-strips” will start to peel and fall off 7-10 days later and can be removed at that time.

There are no stitches that need to be removed after surgery. The incision above or below the belly button is the one that is used to remove the prostate, so it is a little larger than the rest and may be the most uncomfortable.

Getting Ready for Discharge to Home

We feel strongly that patients should go home as soon as they are ready for several reasons. Most patients rest better at home once they no longer need nursing care, and patients are usually more comfortable in their own surroundings. The most important reason, however, is that the longer you spend in the hospital the higher your chance of getting a wound or urinary tract infection. This is because hospitals are full of sick patients and many visitors and staff. The hospital is the best place for patients as long as they need to be there, but men are better off going home when they are ready. We will not send someone home before we believe they are ready to go home. You will be taught how to take care of your catheter and the various types of drainage bags. You will probably be discharged from the hospital with various medications, which may include pain pills, stool softeners, and antibiotics. The nurses will explain all instructions prior to discharge.

Post Operative Home Expectations

Most patients recover remarkably well after this surgery, and by 2 weeks are 80-90% back to

normal strength. Radical prostatectomy is a major surgery, however, and you may not feel 100% back to normal for 6-8 weeks. You may shower and walk immediately after getting home.

Most patients will have their first bowel movement 3-5 days after surgery. It is not usually painful, but there may be a small amount of drainage along the catheter after a bowel movement that is nothing to worry about.

The only restriction after surgery is no swimming or soaking in a bath until the catheter is removed. Otherwise we encourage you to resume normal activities as quickly as possible. After laparoscopic surgery you are not restricted with exercise or lifting as you would be after open surgery.

Some patients will experience bladder spasms after surgery, which may last until the catheter is removed. Bladder spasms are caused by the bladder squeezing on the catheter, and will cause a strong urge to urinate that lasts about one minute. At the same time a small amount of urine may leak around the catheter. If bladder spasms become frequent and bothersome you may start a medication to prevent them. You may be given a prescription for a medication at the time of discharge or when you return to the office one week post-op.

You will be seen one week after the surgery to have your catheter removed. The day before the catheter removal you should start antibiotic tablets to ensure that there is no urinary infection and also start a medication for bladder spasms if you have not yet started. You should bring an incontinence pad to that visit since most patients will have some urinary incontinence after the catheter is removed. A common brand is Depends Pads for men, but there are similar store brands that are less expensive.

Post-Laparoscopic Radical Prostatectomy Instructions

Catheter Care: Your catheter is very important to allow healing of the bladder and the urethra. You may use either leg bags or external bags. Drain before the bags get too full. The tip of the penis may get sore from the catheter rubbing. Use plain soap and water to wash this area daily or more often as needed. You may see some blood in the drainage tubing or bag on and off during the time that the catheter is in place. You may also have drainage of a small amount of bloody fluid along the catheter, especially after having a bowel movement. As long as the catheter is draining well, a little blood is normal and requires no treatment.

Abdominal drain: Most patients will have the abdominal drain removed before they go home from the hospital, but some patients will be sent home with the drain. If a drain is left in place you will be shown how to empty it at the hospital before discharge. Empty the drain whenever it is full and record the amount on a piece of paper, and bring this record to your followup appointment. The drain can get wet in the shower. A loose piece of cotton gauze should be placed over the tube site with a few pieces of tape. The dressing does not need to be water tight, simply cover the tube. The drain can be pinned to the inside of a shirt or pajamas or placed in a pocket so it is not dangling.

Bladder spasms or discomfort: You may experience a feeling that you need to urinate even when the catheter is in place. Your catheter drains all the time, so you should have very little urine in the bladder, but you may still have the feeling that you are passing urine. This is caused by a bladder spasm, which means that the bladder is squeezing on the catheter. You may pass a small amount of urine alongside the catheter when you have a bladder spasm. This is normal after bladder surgery, but you should let your doctor know if it is bothering you a lot, and a medication can be prescribed that will minimize the bladder discomfort.

Diet: You may return to your normal diet immediately. Because of the healing surfaces in your bladder and urethra you may feel the need to void despite the fact that the catheter is emptying the bladder. To keep your urine flowing freely, drink plenty of fluids during the day (8 - 10 glasses). The type of fluid (except alcohol) is not as important as the amount. Water is best, but juices, coffee, tea, soda are all acceptable.

Activity: Your physical activity should get back to normal as quickly as possible after surgery with the following restrictions:

- a. No swimming or soaking in a bath while the catheter is in place.
- b. You may drive when you feel that you can hit the brakes in an instant, if necessary. It is usually best to wait until the catheter is out before driving.

Bowels: Most patients will not have a bowel movement for 3-5 days after surgery. The first bowel movement may be a little uncomfortable, but after that bowel movements will be like normal. The rectum and the prostate are next to each other and large or hard stools can cause a small amount of bleeding around the catheter. It is nothing to worry about. You may be given stool softeners (usually) but these are not laxatives. Use a mild laxative if needed and call if you are having problems. (Milk of Magnesia 2-3 Tablespoons, or 2 Dulcolax tablets as an example)

Medication: You should resume your pre-surgery medications unless told not to. You will be discharged home with the following medications:

- **Pain pills:** Most patients will be given a prescription for hydrocodone (Vicodin or Norco) for pain. You should take one or two tablets every 4-6 hours if you have pain. Most patients will use pain pills for the first few days, but when the pain decreases you can take tylenol, ibuprofen, or another over-the-counter pain reliever.
- **Stool softener:** Some patients can have constipation after surgery and you should take a stool softener (docusate sodium, or Colace) for the first week after surgery.
- **Antibiotics:** You will be given antibiotics at the hospital. A prescription for oral antibiotics (Levaquin or Cipro) will be given at discharge. Start the antibiotics the day before you are scheduled to have the catheter removed and continue them until they are gone.
- **Bladder relaxing medication:** Many men will have bladder spasms after surgery. You will be given a prescription for a medication to relax the bladder (e.g. Detrol LA, Enablex, Vesicare, Sanctura). You should start the medication the day before the catheter will be removed, but you may start it sooner if you are having bladder spasms.

Hygiene: You may shower as soon as you get home. The dressing covering the small puncture wounds are “waterproof” and can get wet. These bandages will stick for 5-7 days but they can be removed if they start to come off.

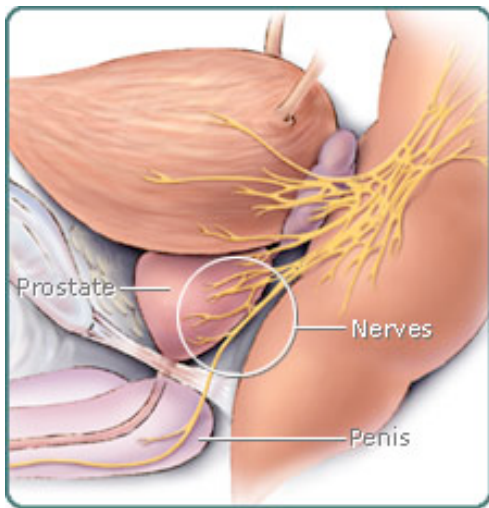
Problems you should report to us:

- a. Fever over 100.5 Fahrenheit
- b. Heavy bleeding, or clots in the urine.
- c. Drug reactions (Hives, rash, nausea, vomiting, diarrhea)
- d. Pain or swelling in your calf or thigh
- e. CALL IMMEDIATELY IF THE CATHETER FALLS OUT OR STOPS DRAINING

Follow-up: You will need a follow-up appointment to monitor your progress. Call for this appointment at the 831-475-6500 when you get home or from the phone in your hospital room before leaving. The first appointment will be 1 week after your surgery for catheter removal unless you go home with the pelvic drain, in which case you may be seen 3-4 days after surgery for drain removal. Come to the office on that day with an adult urinary incontinence pad (Attends or Depends are popular brands, but there are many other brands of incontinence pads) that can be purchased at any drug store.

Postoperative Rehabilitation of Sexual Function

Recovery of sexual function is right behind cure of the cancer when men list their priorities for successful prostate cancer treatment. The development of the nerve-sparing prostatectomy in the early 1980s provided hope for most men that the cancer can be cured and they could preserve a good quality of life and good sexual function. Our surgeons have continuously improved their surgical techniques in order to achieve the best possible results, and we believe that use of the da Vinci® Surgical System allows more precise and delicate dissection that provides men the best chance of regaining erections after surgery. We have also developed a program that we believe maximizes the chances for each man to regain good sexual function.



The nerves that cause erections run next to the prostate

The reason that prostate cancer treatments can affect sexual function is that the nerves that allow men to achieve an erection run directly along the side of the prostate. These nerves, and blood vessels that run with them, are covered by thin layers of tissue that is attached to the prostate. These “neurovascular bundles” must be carefully separated from the prostate during surgery in order to preserve sexual function.

The da Vinci® robot-assisted laparoscopic prostatectomy allows us to perform the most precise nerve-sparing surgery possible, but most patients will still have diminished sexual function after prostate cancer surgery due to trauma to these delicate nerves. It can take weeks to months for these nerves to recover, and most men will have only partial erections immediately after surgery.

A big concern is that the blood vessels in the penis that fill with blood during an erection may “atrophy” during the time that the erection nerves are recovering. If the blood vessels have been allowed to atrophy the chances for recovering good sexual function are diminished. In addition, atrophy of the blood vessels can lead to penile shortening after surgery that may be permanent.

We have developed the following program for men who undergo nerve sparing surgery and want to preserve sexual function. The goal is to preserve the health of the blood vessels in the penis during the recovery phase and to stimulate return of natural erections. These treatments also allow men to be sexually active while they are waiting for their own natural erections to recover.

Oral Medications

Medications like Cialis, Levitra, and Viagra can improve men’s erections that occur from sexual arousal. They also help to improve the erections that all men have when they enter the dream phase, or REM phase, of sleep. It has been shown that increased blood flow during the erections that occur when you are asleep helps to preserve the blood vessels in the penis and increases the chance for recovery of natural erections. Men may also notice that the medication improves their erections when they are awake, and we encourage men to try to be sexually active as soon as they feel ready after surgery.

There is some evidence that pretreatment with medication can improve the recovery of sexual function after surgery. For this reason we recommend that men start a low dose of an oral medication at bedtime beginning one week prior to surgery and continue it after surgery. Because Cialis stays in your system for 24-36 hours after each dose it can be taken at bedtime every other night. Alternatively, Levitra or Viagra can be taken nightly. When men are ready to try to have intercourse after surgery they can increase to a higher dose of oral medication if necessary.

MUSE®

MUSE® is a medication that is placed into the urethra with a thin plastic applicator in order to produce an erection. The medication is in the form of a small suppository that “melts” in the urethra and is absorbed into the penis. Some men will obtain an erection that is adequate for intercourse, but most men will get only a partial erection. The partial erection has been shown to increase penile blood flow and preserve the health of the blood vessels in the penis. Studies show that men who use MUSE® three times per week have an increased chance of recovering good sexual function. We recommend that men try MUSE® after surgery and we will try to obtain authorization from your insurance company.

Vacuum Erection Device (VED)

A vacuum erection device is a mechanical way of producing an erection, and men have used this type of device to treat impotence since the 1960s. The device consists of a plastic cylinder with a pump built into it. The plastic cylinder is placed over the penis and placed snugly against the skin at the base of the penis. When the pump is activated it creates a vacuum that draws blood into the penis. A constriction ring is placed at the base of the penis and the pump is removed, and the erection will last until the constriction ring is removed. If a man is not planning to have



Vacuum Erection Device

intercourse the constriction ring does not need to be placed at the base of the penis, but use of the ring allows a couple to have intercourse.

It has been shown that use of a vacuum erection device increases the chances of regaining good sexual function, and it can allow men to be sexually active during the recovery phase while they are waiting for their own erections to recover. We recommend that men use a vacuum erection device 5-7 times per week starting 2 weeks after surgery.

We have a relationship with the company that makes the highest quality vacuum erection device, Timm Medical, and a representative from the company will teach you how to use the vacuum erection device and help you to order one. The VED is covered by most insurances.

Penile Injection Therapy

Penile injection therapy (PIT) is a treatment for erectile dysfunction that has been used by many thousands of men since the early 1980s. PIT involves injection of medication directly into the erection body of the penis using a syringe and a small needle. The injection is virtually painless and 75% of men will achieve a normal erection that lasts for 30-45 minutes. Studies show that men who use PIT several times per week have an increased chance of recovering good sexual function. We recommend that men consider penile injection therapy if other treatments are not satisfactory.

Urinary Function after Laparoscopic Prostatectomy

Most patients will experience some changes in urinary function after surgery, but these changes are temporary in the vast majority of men. Understanding the possible urinary changes can help men to recover with less stress and increased confidence.

Stress incontinence: Most men will have urinary incontinence for some time after surgery, but 95% of our patients eventually regain normal urinary control. The most common type of incontinence is called stress incontinence, which means that men leak a small amount of urine if they cough, sneeze, lift a heavy object, or perform other activities that place pressure on their bladder. The amount of leakage is usually a few drops or a small “squirter”, but it is usually enough that men will need to wear a pad for protection for weeks to months after surgery.

The amount of urinary incontinence that most men have is minor, and most don’t consider it a major problem. Most patients will notice improvement in their urinary control by six weeks after surgery. However, a small percentage of patients can have more severe incontinence, and it can take up to one year for the incontinence to resolve in some men. It is not possible to determine before surgery which men will have more problems with incontinence after surgery.

Although each man recovers at his own rate, we believe that men can help the recovery process by performing pelvic muscle exercises. These exercises can be learned and practiced before surgery, and they can be performed on a daily basis during the recovery from surgery. Pelvic muscle exercises involve squeezing the pelvic floor muscles; these are the same muscles that you use to hold back a bowel movement or to stop the urine flow mid-stream. These muscles can be contracted and held for as long as

possible, which will only be a few seconds at first. Men should relax and then repeat the pelvic floor contraction. Sets of ten repetitions should be performed as many times per day as possible

Urge incontinence: Another cause of incontinence is overactive bladder, or urge incontinence. Urge incontinence occurs when the bladder contracts even though the patient is not ready to urinate. This will cause a sudden, urgent need to urinate, and a small amount of urine may leak out before a man can get to the bathroom. Urge incontinence is common in the first few weeks after surgery because the bladder is “irritated” by the healing process after surgery. Some men will have persistent urge incontinence for longer than a few weeks after surgery. Medication is usually very effective in stopping or minimizing urge incontinence.

Improved force of stream: Not all of the urinary changes after surgery are negative; most patients who have an enlarged prostate will experience improvement in their overall urinary symptoms after the prostate is removed. Most men will notice an improved force of the urinary stream, and many will have a less urgent need to void. Over time many men will notice decreased urinary frequency and fewer times up to void each night. Improvement in the urinary symptoms is an important benefit of surgery for most men with enlarged prostates.

Slow stream: Approximately 2% of men can develop scar tissue in the urinary tract after prostate cancer surgery. This can cause a persistent decreased force of the stream. Your doctor will ask you about the force of your stream at followup visits, and you should let your doctor know if the stream is slow so that investigation of the urinary tract can be performed.

Preoperative Bowel Preparation

Bowel preparation before the surgery makes the surgery easier, and lowers the chance of bothersome constipation after surgery. The risk of bowel injury during prostate cancer surgery is very small (<1%) but real, and bowel preparation lowers the risk of injury and increases the chances for a simple repair. The following bowel preparation will clean your bowels before surgery, and you probably will not have a bowel movement for 3-5 days after surgery.

Please purchase the oral laxative prescribed by your surgeon. We usually prescribe a laxative called Moviprep. This laxative is similar to laxatives used for colonoscopy, and only requires you to drink one liter at a time. If you are unable to purchase Moviprep you will drink a different laxative, so ask your surgeon about the instructions for bowel preparation. Please follow the instructions below, and call us if you have any questions.

7 days before surgery

Stop taking iron, aspirin, aspirin products or Pepto Bismol. You will also need to stop taking any other blood thinners such as Plavix or Coumadin (warfarin). Please discuss the timing of when to stop these medications with your doctor.

Please note that Tylenol (acetaminophen) does not interfere with the surgery. Please consult your physician if you have any questions about your medication, especially if you have been told not to stop taking these drugs suddenly without medical advice.

5 days before surgery

Stop taking non-steroidal anti-inflammatories (e.g. Motrin, Advil, ibuprofen, Feldene, Naprosyn, Celebrex and Vioxx). Tylenol (acetaminophen) is okay to take up to the day before surgery.

1 day before surgery

Consume clear liquids only. This includes water, tea, coffee, fruit juices without pulp (apple, pomegranate, cranberry juices), clear broth, popsicles, or jello. A glass of wine, one mixed drink, or one beer is also acceptable. Medicines should be taken on your regular schedule, except those already mentioned above.

Please drink the first dose of MoviPrep at 2 pm. Follow with at least 2 glasses (8 oz. each) of clear liquid within an hour of taking the MoviPrep. The laxative will stimulate several bowel movements, usually within 30 minutes after it is consumed. Please drink at least 8 oz of clear liquids every hour for the next few hours to prevent dehydration.

Please drink the second dose of MoviPrep at 6 pm. Follow with at least 2 glasses (8 oz. each) of clear liquid within an hour of taking the MoviPrep.

Day of surgery

Nothing to eat or drink after midnight.

Remember -- no Aspirin products 7 days before surgery!!!!!!

Risks of Laparoscopic Radical Prostatectomy

All surgery has risks, but fortunately the risks of da Vinci® robot-assisted laparoscopic prostatectomy are fairly minor. Patients and their loved ones should understand the risks of the surgery itself and the risks related to long-term recovery.

Risks of surgery

Bleeding: The risk of significant bleeding from this operation is minimal. Since we started performing laparoscopic prostatectomy in 2003 we have given a blood transfusion to only one patient, the risk is less than 1%. We will give a blood transfusion to any patient if their life was in danger but the risk is very small.

Pain: Most patients have a small amount of pain after surgery and are comfortable with oral pain pills. 95% of our patients have been comfortable going home the day after surgery. Most patients use pain pills for 7-14 days after surgery.

Infection: The risk of infection of the small incisions used for laparoscopic prostatectomy is less than 1%.

Injury to intra-abdominal organs: The risk of injury to the rectum is one in one thousand after prostate cancer surgery. Most of the time a small injury can be repaired at the time of surgery. In the worst case a temporary diverting colostomy may be necessary. This means that the colon is brought up to an opening on the abdominal wall and the stool goes into a bag instead of passing out the rectum like normal. This allows the injury to the rectum to heal without infection, and the colostomy is “closed” in three months so that the bowels are back to normal. Injury to other organs or blood vessels is even rarer than rectal injury.

Urine leak: The risk of urine leaking from the place where the bladder and urethra are sewn together is less than 5%. A small tube with holes is left in the pelvis after surgery so that any urine that leaks will be drained out of the body, and the leak in the urinary tract will heal in all cases. Some patients who have a urine leak can experience more abdominal pain than average.

Lymphocele: A lymphocele is a collection of lymph fluid that collects in the pelvis after surgery. It occurs in less than 1% of patients, and only in patients who require removal of pelvic lymph nodes. Patients may have pelvic pain, fever, unusual urinary symptoms, or leg swelling if a lymphocele is present. It is usually treated by drainage with a small tube for several weeks.

Deep vein thrombosis (DVT): DVT is a blood clot that forms in a vein in the leg or pelvis. DVT can occur after any major surgery in 2-5% of patients. It usually causes leg swelling or pain in the calf or thigh.

We use a sequential compression device to massage the legs during and after surgery to lower the risk of DVT. The best method to reduce the risk of DVT is for the patient to be out of bed and walking the same day or next day after surgery, and this is one of the advantages of laparoscopic prostatectomy compared to open surgery.

In fewer than 1% of patients a blood clot can break off and move through the heart to the lungs, a condition called a pulmonary embolus (PE). This can cause chest pain, shortness of breath or even death.

Patients with a DVT are placed on a blood thinner for 6 months to allow the body to dissolve the clot and to reduce the risk of a PE.

Urinary retention: 95% of patients are able to urinate well one week after surgery, but rare patients can have some swelling where the bladder and urethra join and require a catheter for longer than one week.

Risks of anesthesia: The risks of anesthesia are minimal for men in good health, and will be discussed with the anesthesiologist before surgery.

Numbness in hands: We have had a few patients who had temporary numbness in their hands for a short time after surgery. The cause is unclear, and the symptoms go away within a few weeks.

Inguinal hernia: In 5-10% of cases we will find an inguinal hernia at the time of surgery. We will not attempt to repair it during the prostate cancer surgery but the hernia should be repaired later after the patient has fully recovered.

Long-term Risks of Prostate Cancer Treatment

Incontinence: 95% of our patients have gained normal urinary control after prostate cancer surgery, but it can take as long as one year for a patient to become free of pads. Five percent of our patients have needed to use pads long-term, but for half of these men the amount of leakage is minor and not a serious problem. In 2-3% of men the amount of incontinence is enough of a problem that it affects their lifestyle, and causes them to not want to play sports, dance, have intercourse, or engage in other activities that are important to them. It is not possible to predict ahead of time who will have bothersome incontinence, and we have effective treatments for incontinence if necessary.

Impotence: All men will be unable to have good erections immediately after surgery, and the erections will return gradually over time. Most younger patients will have return of erections that are adequate for intercourse, although some of these men may need to take Viagra or another medication to improve their erections. Some patients can have return of erections adequate for intercourse within a few weeks or months of surgery, but some patients will require 12-24 months before the erections are adequate. We believe that men can improve their chances of recovering good sexual function by following a program to stimulate the blood vessels in the penis (see page 11).

The risk of impotence after prostate cancer surgery is related to the patient's age, sexual function prior to surgery, cardiovascular health, and the amount of cancer in the prostate. A healthy man in his early 50's with normal sexual function and a small amount of cancer has an 80% or greater chance of recovering good sexual function after surgery. Men who already notice that their sexual function is not the same as it was when they were younger have a lower chance. In some men with more extensive cancer we need to remove more tissue around the prostate in order to increase the chance of curing the cancer, and this will increase the risk of impotence after surgery. Men should discuss their specific case with their doctor to get a realistic idea about the chances for return of sexual function after surgery. We have a number of treatments for impotence that can allow any man to have a satisfying sexual relationship during the recovery phase or long-term if the erections do not recover.

Urethral stricture: Less than 2% of patients can develop scar tissue where the urethra and bladder are sewn together. This can cause a slow urinary stream and may require minor surgery to open the scar tissue.

Recurrence of cancer: The chance of cure following surgery is as high or higher than any other prostate cancer treatment. The risk of recurrent cancer after surgery depends on the amount of cancer in the prostate, the aggressiveness of the cancer (Gleason score), and the findings on surgical pathology. If cancer cells are found to extend to the edge of the prostate gland then a patient is said to have a “positive surgical margin.” Some of these patients have a higher chance of recurrence of the cancer and we may recommend post-operative radiation treatments to the area where the prostate was in the pelvis. Patients who have spread of cancer to the seminal vesicals (glands attached to the prostate that store semen) or to pelvic lymph nodes also have a higher chance of recurrence of the cancer and will be referred for post-operative radiation. Your doctor will discuss the surgical pathology results with you one week after surgery.

Abdominal hernia: The risk of developing a small hernia at the port site near the umbilicus is less than one percent. A hernia on the abdominal wall may require a small surgery to close the hernia.