



VANCOUVER
PROSTATE CENTRE
A UBC & VGH Centre of Excellence



Department of
UROLOGIC SCIENCES
UBC

Information for Men Newly Diagnosed with Prostate Cancer

Urologists at the Vancouver Prostate Centre

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Personal Record

Medical Record Number: _____

Age at Diagnosis: _____

PSA at Diagnosis: _____

Urologic Symptom Score: _____ / 35 _____

Sexual Function Score/SHIMM Score: _____ / 25 _____

Date of Prostate Biopsy: _____ Prostate Volume _____

Biopsy Results

	Left Apex Medial		Right Apex Medial
	Left Apex Lateral		Right Apex Lateral
	Left Mid Medial		Right Mid Medial
	Left Mid Lateral		Right Mid Lateral
	Left Base Medial		Right Base Medial
	Left Base Lateral		Right Base Lateral

Number of cores sampled: _____

Number of cores with cancer: _____

Gleason Score: _____

Clinical Stage: _____

Risk Assessment by attending Urologist: (for spread outside the prostate gland and lymph node involvement)

Low _____

Intermediate _____

High _____

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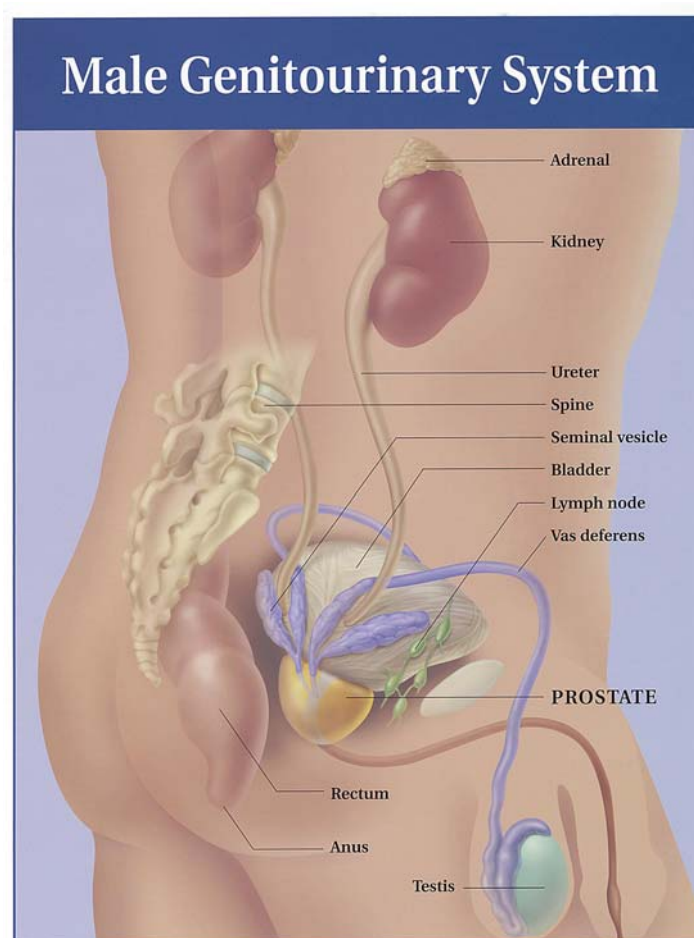
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Prostate Cancer

2.1 Basic Anatomy of the Prostate

The prostate is one of the male sex glands. The other major sex glands in men are the testicles and the seminal vesicles. Together, these glands store and secrete the fluids that make up semen.

The prostate, about the size of a walnut, lies just below the bladder and surrounds the upper part of the urethra. The urethra is the tube that carries urine from the bladder and semen from the sex glands out through the penis. As one of the sex glands, the prostate is affected by male sex hormones. These hormones stimulate the activity of the prostate and the replacement of prostate cells as they wear out. The chief male hormone is testosterone, which is produced almost entirely by the testicles or testes.



(Figure courtesy of Astra Zeneca)

3.0 What You Should Know About Prostate Cancer

Prostate cancer is the most common malignancy diagnosed in North American men (other than skin cancer). One out of every 6 to 7 men will develop the disease during his lifetime. The exact cause of prostate cancer is still unknown. However, a combination of genetic, nutritional and environmental factors appear to play a role in its development. Typically, prostate cancer begins in the outer part of the gland. When confined within the prostate, it is called localized prostate cancer. Prostate cancer may behave in many different ways in different men. It may be relatively slow growing, but it may also be more aggressive in its behavior with a tendency to metastasize or spread to the lymph nodes, bones, or other parts of the body. It is this latter form of prostate cancer that is life threatening.

4.0 Screening and Diagnosis for Prostate Cancer

The best way to diagnose prostate cancer involves a digital rectal exam and a prostate specific antigen (PSA) blood test. Patients with localized cancer rarely have any symptoms. New markers for the early detection of prostate cancer are under development and study.

4.1 Digital Rectal Exam

The digital rectal examination (DRE) may detect a cancer and judge whether it is confined to the prostate. Because it lies in front of the rectum, the doctor can feel the prostate by inserting a gloved, lubricated finger into the rectum. The DRE is not always accurate as many prostate cancers are situated deeper in the gland or are too small for detection, and not all 'lumps' on the prostate are cancerous. Once a cancer can be felt as a lump, it is considered to be at a more advanced stage than when it is detected only by a PSA blood test

4.2 PSA

Prostate-specific antigen (PSA) is a protein produced by both normal and cancerous prostate cells. When prostate cancer grows or when other prostate diseases are present, the amount of PSA in the blood may increase.

- A PSA test is generally said to be in the normal range when it is reported to be between 0 and 2.5 nanograms per milliliter (sometimes abbreviated as ng/mL on the lab report) and *not* increasing over time. PSA may be elevated because of a non-cancerous condition, such as enlargement or inflammation of the prostate.
- If the results are in the high range (or have increased since a prior test), your physician will suggest a biopsy, which is the only test to actually diagnose prostate cancer.

4.3 Percent-Free PSA Ratio

Percent-free PSA ratio is a blood test that measures how much PSA circulates by itself (unbound) in the blood and how much is bound together with other blood proteins. If PSA results are elevated and percent-free PSA ratio is low (10% or less), then prostate cancer is more likely to be present. If this is the case, a biopsy may be needed.

4.4 Ultrasound

Transrectal ultrasonography (TRUS) is the most direct way to see the prostate gland. Ultrasound provides an image that can be used to measure the size of the prostate and sometimes can detect suspicious tissue. TRUS is almost always done in combination with a biopsy. When a needle biopsy of the prostate is performed, it is always done under ultrasound guidance.

4.5 Biopsy and the Gleason System

A prostate biopsy removes small amounts of tissue to examine under a microscope to determine whether cancer is present. Typically between 6 and 12 biopsies are taken from the prostate using a core biopsy needle. By examining tissue samples under a microscope, the diagnosis of cancer can be established. When a tumor is discovered, it is classified, under the microscope, into a category called tumor 'grade'. A pathologist named Gleason described the grading system for prostate cancer. The Gleason grade

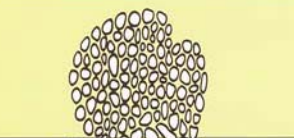
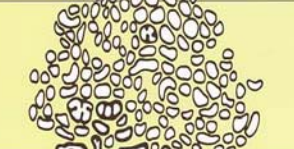



reflects how aggressively the prostate cancer is likely to behave.

The pathologist will look at the biopsied prostate tissue under a microscope to compare the cancerous tissue to normal prostate tissue.

- If the cancerous cells appear to resemble the normal prostate tissue, they are said to be very well differentiated and considered to be Gleason grade 1 to 3. This means that the tumor is not expected to be fast growing. On the other hand, if the cells in question look fairly irregular and different from the normal prostate cells, then they are poorly differentiated and are assigned a Gleason grade of 4 to 5. (It is rare to see a Gleason grade 1 or 2 cancer.)
- Because prostate cancer tissue is often made up of areas that have different grades, the pathologist will closely examine the areas that make up the largest portion of the tissue. **Gleason grades are given to the two most commonly occurring patterns of cells.** They will describe and rate the cancer cells in 2 ways: (1) how the cancer cells look and (2) how they are arranged together.

Once the two grades have been assigned, a Gleason score is determined. This is done by adding together the two Gleason grades. The resulting Gleason score will be a number from 2 to 10. (i.e., $3 + 4 = 7/10$)

The biopsy also can give important information about whether the cancer involves small nerves within the gland (perineural invasion) and an indication of how extensive the cancer might be within the gland (number of cores positive).

Gleason Grading System	
The Gleason Grading System is used to evaluate or "grade" prostate cancer cells obtained by needle biopsy. The cells are assigned a number between 1 and 5 — nearly normal cells are Grade 1 and the most abnormal are Grade 5. Then the scores of the two most common cell patterns are added together. Gleason scores range from 2 to 10. The higher the grade, the more aggressive the cancer.	
	1 Simple round glands, closely packed in rounded masses with well-defined edges.
	2 Simple round glands, loosely packed in vague, rounded masses with loosely defined edges.
	3A Medium-sized single glands of irregular shape and irregular spacing with ill-defined infiltrating edges. 3B Very similar to 3A, but small to very small glands which must not form significant chains or cords. 3C Papillary and cribriform epithelium in smooth, rounded cylinders and masses; no necrosis.
	4A Small, medium, or large glands fused into cords, chains, or ragged, infiltrating masses. 4B Very similar to 4A, but with many large clear cells, sometimes resembling "hypernephroma."
	5A No glandular differentiation, solid sheets, cords, single cells, or solid nests of tumor with central necrosis. 5B Anaplastic adenocarcinoma in ragged sheets.

(Chart courtesy of AstraZeneca. Used with permission)

Staging

Stage refers to the amount of cancer in the prostate and whether the cancer has spread outside the gland. There are several tests that may be useful in determining tumor stage, but for most men no such tests are required. This is because the chance of finding cancer elsewhere in the body is so low for most men with early cancers of the prostate that such tests are not warranted.

5.1 CT Scan

Computed tomographic scan (CT scan) is an x-ray procedure that gives cross-sectional images of the body. The CT scan may help detect lymph nodes in the pelvis that are enlarged because of cancer. Generally, a CT scan is done only if the cancer is high risk (high PSA, high Gleason score, or abnormal findings on DRE).

5.2 Magnetic Resonance Imaging

Magnetic resonance imaging (MRI) is similar to a CT scan except that it uses magnetic fields instead of x-rays to create internal pictures of your body. MRI is better than CT at imaging the prostate but has limited usefulness for distinguishing benign from cancerous areas. Standard MRI, therefore, has limited usefulness for determining the extent of disease. Research is being carried out to determine whether MRI techniques can “see” cancer better. Currently, there is no established role for MRI in prostate cancer.

5.3 Bone Scan

A test called a bone scan is performed to see if the cancer cells have spread to the skeleton. For this test, a radiology technician injects a small amount of radioactive material into the patient's bloodstream and the patient returns 3 hours later for the scan. The radioactive material collects in the area where there are bone-activating cells. A scanner then pinpoints the areas where the radioactive material collects, so these areas can be evaluated for possible sites of bone metastasis. This study is limited to those with high risk disease (high PSA, high Gleason score, or abnormal findings on DRE).

5.4 Lymph Node Dissection

The lymph nodes are often the first location where prostate cancer spreads. The physician can usually estimate the likelihood that cancer has spread to the lymph nodes based on the rectal examination, PSA, and biopsy results; and by using a published nomogram. If there is a high likelihood that the cancer has spread to the lymph nodes, the physician may elect to surgically sample, remove and examine the lymph nodes under a microscope. This is often done at the time of radical prostatectomy in intermediate and high risk cases. Special imaging techniques are being developed to study lymph nodes without having to surgically remove them.

5.5 Clinical Stage

Clinical tumor stage refers to whether or not the tumor can be palpated or felt on exam and whether it may have spread to lymph nodes or other organs. Clinical stage is based on all information available prior to any treatment and designated by the TNM system (described below).

TNM	EXPLANATION	TNM	EXPLANATION
T1a	Unsuspected cancer found incidentally during prostate scraping for benign enlargement (occupying less than 5% of prostate)	N0	No cancer detected in the lymph nodes
T1b	Unsuspected cancer found incidentally during prostate scraping for benign enlargement (occupying more than 5% of prostate)	N1 (N+)	Cancer spread to one or more lymph nodes measuring less than 2 cm
T1c	Cancer that is detected only because of elevated PSA (normal exam)	N2 (N+)	Cancer spread to one or more lymph nodes measuring 2–5 cm
T2a	Cancer that is felt and occupies 50% or less of one side	N3 (N+)	Cancer spread to one or more lymph nodes measuring more than 5 cm
T2b	Cancer that is felt and occupies more than 50% of one side	M0	Cancer that is confined to the prostate, surrounding tissues and pelvic lymph nodes
T2c	Cancer that is felt and occupies both sides of the prostate	M1 (M+)	Cancer that has spread beyond the pelvic area to bones, lungs, etc.
T3a	Cancer occupying one side and growing outside of the capsule		
T3b	Cancer occupying both sides and growing outside of the capsule		
T3c	Cancer that has invaded the seminal vesicles		

T4a	Cancer that involves the bladder neck and/or rectum and/or external sphincter		
T4b	Cancer that involves other areas near the prostate		

5.6 Predictive Models

There are a number of models which allow doctors to assist patients in predicting the risk of prostate cancer recurrence following therapy. These nomograms (mathematical models) are used to predict the risk of PSA failure after treatment and may help to educate men and their families to the risk of suffering PSA failure after surgery or radiation therapy. PSA failure refers to a rising PSA after treatment.

It should be remembered that these models have accuracy rates somewhere in the 75% range. While these models are useful during discussions about treatments of prostate cancer, models should be placed into perspective by the patient and physician with regard to the individual patient's overall health status and personal preferences for treatment.

Discussing cancer treatment options are perplexing. Patient's anxieties can be relieved by understanding the high chances of overall success from either radiation therapy or surgical treatment options. Urologists and radiation treatment specialists have been early pioneers in the use of mathematical models for educating patients. Any questions that patients may have about the use of these models should be brought up during their discussion with their doctors.

6.0 How is Prostate Cancer Treated?

Prostate cancer treatment depends upon the type of cancer, the absence or presence of metastasis, the patient's age, the patient's general health status, life expectancy and any prior prostate treatments the patient may have undergone.

The three standard therapies for men with organ-confined prostate cancer are active surveillance, surgery (prostatectomy) and radiation therapy. To date, no study has directly compared these three options. This fact makes it difficult to compare outcomes in men treated with either surgery or radiation.

In the next sections each of the treatment modalities will be described.

6.1 Active Surveillance (expectant management, watchful waiting)

For some patients with prostate cancer, the best choice may be active surveillance. Active surveillance is considered a treatment option if a cancer is not causing any symptoms and is expected to grow slowly. In the past this approach was mainly suggested to elderly men, or men with serious health problems. However, younger men have started to consider this treatment option. Since prostate cancer often spreads very slowly, many men who have the disease may never require treatment. In many men, it is a means of delaying or deferring therapy and potential quality of life changes associated with current treatment options. Typically, patients on an active surveillance program undergo regular PSA measurements and periodic prostate biopsies to ensure that the cancer is not becoming more aggressive. If there is a change in the prostate cancer then the patient can make a decision to undergo active treatment with either surgery or radiation. Approximately 30% of cancers will progress within 5 years. The intent of active surveillance is curative.

6.2 Prostatectomy

Surgical treatment for prostate cancer involves removing the entire prostate and seminal vesicles. When the cancer is confined within the tissues, surgery alone can usually cure localized prostate cancer. The PSA level in the blood should fall to undetectable levels after prostatectomy.

There are two main types of prostatectomy – retropubic prostatectomy (RP) and robotic assisted laparoscopic prostatectomy (RALP).

Retropubic Prostatectomy (RP). In the retropubic operation, the surgeon makes a skin incision in the lower abdomen (4 finger breadths below the umbilicus to just above the pubic area). If indicated, a pelvic lymph node dissection (PLND) is performed prior to removal of the prostate. The lymph node dissection is a staging procedure performed to more accurately determine if prostate cancer is

present in the lymph nodes.

Following the PLND, the prostate is removed from between the bladder and the urethra. When it is possible, the surgeon carefully spares the small bundles of nerves located on either side of the prostate gland that are needed for erections ('nerve sparing surgery'). With the prostate removed, the bladder opening is sewn to the urethra. A catheter is placed through the penis and remains in place while the tissues heal. Patients undergoing surgery can expect a hospital stay of 1 to 2 days. The catheter and staples are removed in the clinic approximately 7 to 10 days later.

Robotic Assisted Laparoscopic Prostatectomy (RALP) is a minimally invasive technique used to remove the prostate in patients with prostate cancer. The surgeon performs the procedure through six small incisions spread in a fan shape across the upper abdomen. Surgical fields are viewed with the use of a laparoscope (a camera inserted through one of the incisions). Surgeons performing LRP at Vancouver General Hospital use a robotic surgical assist device called the "da Vinci® Surgical Robot".

There are two main components to the robotic system. A surgeon's console, where the operating surgeon sits and controls the instruments (Fig.1), and the robotic arms (Fig. 2), which are at the patient's side and hold the camera and instruments used during the operation. The da Vinci® robot allows surgeons to perform surgical procedures with greater ease and precision (Fig. 3).



Figure 1



Figure 2



Figure 3

Patients considering surgical treatment for their prostate cancer have common concerns: cure, recovery, urinary continence, and sexual function.

While the LRP is as effective in treating patients with prostate cancer as open surgery, patients who undergo an LRP can expect a quicker return to daily activities and less

surgical blood loss. Patients undergoing LRP can expect a hospital stay of 1 to 2 days. Return of urinary continence and sexual function following both the open and LRP are similar (see below).

6.3 Anesthesia

The decision as to which type of anesthesia to employ during surgery is made between the patient and the anesthesiologist. Typically, patients and their families meet with the anesthesia service in the days prior to surgery to discuss their general medical health, previous anesthetic experiences and specific anesthetic related concerns.

Three general categories of anesthesia are used for RP: general, regional or combination (general and regional). Multiple factors go into the decision as to which technique to use: patient preference, patient anatomy, medical history and postoperative pain control needs. These issues are addressed with each patient during the pre-operative anesthesia visit. The vast majority of patients at VGH undergo general anesthesia.

6.4 Side Effects

The surgical risks associated with all radical prostatectomy techniques (RP and RALP) are similar to those of any major surgery. The level of risk depends in large part on the patient's overall health and age. Rare risks include cardiac or pulmonary events, blood clots or injuries to structures surrounding the prostate. The primary side effects unique to a radical prostatectomy are incontinence and impotence.

6.4.1 Urinary Control

Following surgery, significant bladder control often returns within 12 weeks and continues to improve over 12 to 24 months. Return of function is often dependent on pre-operative urine control and patient weight. For example, men with larger abdomens (that press down on bladder) may have more problems with return of continence. Approximately 1 to 2 percent of patients will have persistent, severe postoperative incontinence. This group of patients will wear pads, take medication or undergo further

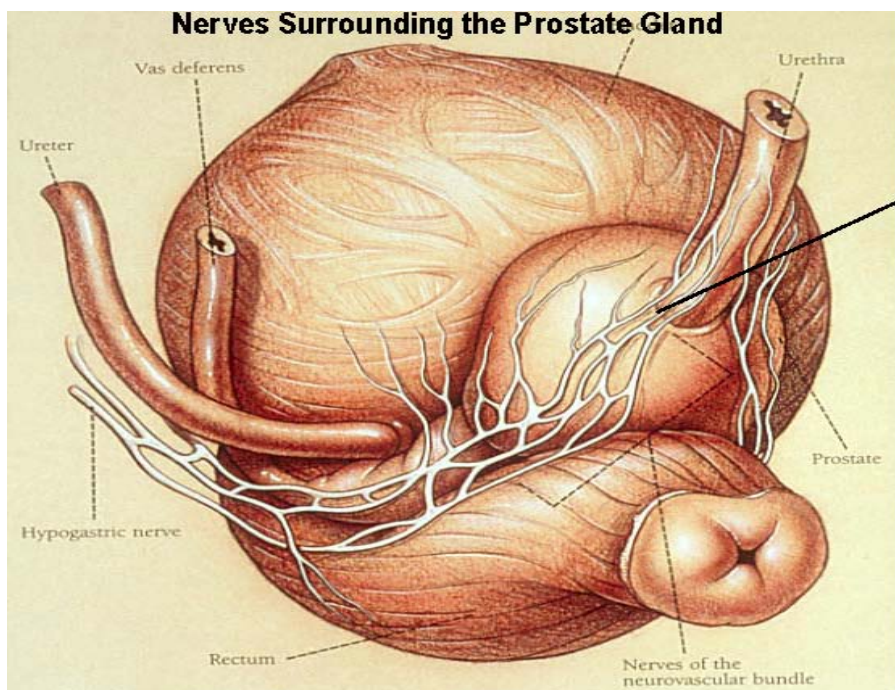
procedures to treat this side effect. Mild stress incontinence, which is passing a small amount of urine when coughing, laughing or sneezing, does occur following surgery. Some men may choose to wear pads to protect themselves from unexpected leakage. However, the majority of men do not consider this to be a major issue.

Of patients who undergo prostatectomies, over 90 percent have excellent urinary control and require no pads or other means of protection.

6.4.2 Sexual Function

Sexual dysfunction is a common problem in both men and women. Sexual problems become progressively more common with aging, heart disease, high cholesterol and diabetes. Prostate cancer and the treatment of prostate cancer can have a significant impact on sexual function. At diagnosis, we assess baseline sexual function. We provide counseling to the patient and his partner about anticipated changes in sexual function and try to predict the likelihood of preserving and recovering sexual function after prostate cancer treatment.

Nerve-sparing prostatectomy is performed if there is no indication of tumor extension close to the nerves surrounding the prostate, called the neurovascular bundle. A unilateral nerve-sparing procedure will save the nerves on one side of the prostate. A bilateral nerve-sparing procedure saves the entire neurovascular bundle or the nerves on both sides of the prostate. Patients with locally advanced tumors are not offered nerve-sparing surgery because of concerns about leaving cancer at the margins of the prostate capsule. Occasionally there are technical issues (eg. scarring, unusual blood vessel anatomy, large prostates) that make nerve sparing difficult or impossible. The surgeon cannot predict these factors prior to operating. Men who are younger than age 60 and those who have the highest levels of pre-operative sexual function usually have the best outcomes in terms of potency.



The nerves responsible for achieving erections are located on either side of the prostate coursing toward the urethra. The nerves travel outside of the gland and around the penis.

6.5 Potency Recovery

Several studies have shown that even with bilateral nerve-sparing surgery, it may take up to 18 to 24 months before a patient recovers reasonable erections. However, major gains are usually made between 6 to 18 months. There are several potential explanations for this time delay: transient nerve injury, postoperative psychological issues and a history of infrequent and nonrigid erections, which affect the flow of oxygen to and the subsequent health of penile tissues. We have found that the delay in the return of potency can be improved by several approaches. First, by employing a careful surgical technique, one is able to minimize potential trauma to the nerves. Second, by providing a comprehensive preoperative counseling program for the patient and his partner, one is able to address postoperative concerns and minimize the psychological impacts of surgery. Finally, by providing early, pharmacologic erections with the drugs listed below, one can avoid long-term penile tissue damage, thus expediting the return of spontaneous erectile function.

We recommend that, within the first 2 weeks after catheter removal, all patients who have undergone an RP should begin self stimulation to enhance eventual recovery of potency. Oral agents (Viagra®, Levitra® or Cialis®) are prescribed to enhance the flow of oxygen to penile tissue. The most common side effects are headache (20 percent), flushing (8 percent), visual disturbance (6 percent) and nasal congestion (6 percent). We ask patients to attempt to have at least 2 to 3 erections per week in the months after

surgery in order to maximize post-operative recovery.

The successful recovery of erectile function is highly dependent on the patient and his partner's education about treatment-related sexual problems. Open sexual communication between partners is essential. Other issues, such as loss of sexual desire, difficulty reaching orgasm, ejaculatory problems or sexual pain also should be addressed. Finally, reproductive health, fertility issues and sperm banking counseling are an integral part of our sexual health rehabilitation program.

6.6 Commonly Asked Questions for a Radical Prostatectomy

When you talk to a clinician at the preadmission clinic, they will direct you as to any specific instructions from your surgeon and anesthesiologist. The following is provided as a general guideline.

6.6.1 Pre-operative Evaluation

When should I stop aspirin prior to surgery?

7 days. It is okay to take Tylenol.

When should I stop taking NSAIDS (Ibuprofen, Aleve, Naprosyn, Celebrex) prior to surgery?

7 to 10 days

Do I need to stop taking any over the counter supplements prior to surgery?

Do not take any vitamins, supplements, or over-the-counter medications 10 days prior to surgery, unless approved by your surgeon's office. Some of these supplements may have anticoagulant effects and result in bleeding during surgery.

I take coumadin (warfarin, plavix), should I stop taking it prior to surgery?

You must stop coumadin prior to surgery. The scheduling of holding the coumadin is an individualized decision that your primary care physician will make with you. Typically, patients are asked to stop taking coumadin 5 days prior to surgery. Please consult your primary physician to determine the exact timing of holding the coumadin in your circumstance.

Which of my other medications will I take prior to surgery and when should I stop them?

You will meet with our anesthesia service in the days preceding your surgery. They will

instruct you in the management of your additional medications.

Should I donate my own blood prior to surgery?

Less than 5% of patients require blood transfusions. The risk of acquiring a transmittable disease after a transfusion is less than 1 / 300,000 and your surgeon would prefer that you not begin the surgery in an anemic state. Therefore, it is not standard procedure at VGH to bank your own blood prior to surgery.

6.6.2 24 Hours Prior to Surgery

What should my diet be prior to surgery?

The day before surgery, you will be asked to stop solid foods after breakfast.

Is there a bowel preparation I need to take prior to surgery?

Depending on the type of surgery and your previous medical history a bowel preparation will be used. You will receive either 2 Fleets enemas (to be taken the evening prior to surgery) or 1–2 bottles of Magnesium Citrate (to be taken in the afternoon prior to surgery). Your surgeon will tell you which of the preparations you will need.

In the morning of surgery, you may only have a sip of water to swallow any medications you are told to take, otherwise nothing to drink for 6 hours prior to arriving in the hospital.

When will I know my surgery time?

If your surgery is at Vancouver General Hospital:

For surgeries on Monday or following a holiday, please call the VGH Admitting Department (604.875.4937) between 11:00 a.m. and 2:00 p.m. on Sunday or statutory holiday to find out when you should come to the hospital.

For all other days, please call your surgeon's office after 2 pm the day before your surgery and they will tell you what time to come to the Jim Pattison Pavilion Admitting Department on the morning of your surgery. If you can not get in touch with your surgeon's office by 3 pm on the day before your surgery, please call the VGH Admitting Department (604.875.4300) between 3:00 p.m. and 4:00 p.m.

If your surgery is at University of British Columbia Hospital:

If your surgery is on a Monday or following a statutory holiday, please call the surgeon's office on Friday after 2:00 p.m. For all other days (Tuesday to Friday), you should call your surgeon's office after 2:00 p.m. the day before your surgery. The surgeon's office will confirm the date of your surgery and tell you what time to report to the UBCH Koerner Pavillion Admitting Department on the morning of your surgery.

If you cannot get in touch with your surgeon's office please call the UBCH Admitting Department at (604.822.7033) between 4:00 p.m. and 10:00p.m..

6.6.3 Day of Surgery

What should I bring with me on the day of surgery?

Please bring all the medications that you take at home (in the original containers), comfortable clothing and toiletries, and your BC Care Card or other proof of medical insurance. Leave all valuables at home including wedding rings and watches. Bring reading glasses if you wear them. Do not wear contact lenses.

6.6.4 In the Hospital

How long will I be in the hospital?

The majority of patients are discharged home 1 to 2 days after surgery.

6.6.5 After Discharge

The pain medication seems to make me constipated, what should I do?

Constipation is a common side effect of pain medications. It may be several days after surgery before you have a normal bowel movement. Keep your fluid intake up as water helps to keep your stools soft. You may take prunes, mineral oil, warm prune juice or milk of magnesia for relief. Do not take any rectal suppositories or enemas.

What should I eat once I am at home?

Until you have a normal bowel movement, we recommend that you take primarily liquids. Gradually increase your diet from fluids to soft foods and finally regular food.

How do I arrange my follow-up appointment?

You should call your physician's office after arriving home. Your surgeon will make arrangements for the catheter removal and further follow-up according to his individual pattern of practice.

***Please bring briefs and some type of incontinence pad (e.g.: 'Depends, 'Poise', or store brand name) to your 1st post-op visit. Incontinence pads for MALES are available at local drug and grocery stores.**

6.6.6 Catheter

Who teaches me to take care of my catheter?

Prior to discharge, your nurse will show you and family how to take appropriate care of the catheter.

How do I manage my Foley Catheter?

When out in public, remember to use the leg bag and fasten it comfortably under loose fitting pants such as sweat pants or loose running pants. Prevent rubbing of the catheter against the opening of your penis by securing the leg bag on your lower leg in a way that the tubing doesn't catch or move with each step. You should remember to drink lots of fluid while your catheter is in place. Also, it is normal for your catheter to leak when having bowel movements. There may be small amounts of blood around the catheter at times.

What does it mean when I see blood in my urine?

The balloon on the tip of the catheter can irritate the bladder causing some bleeding. Usually, the bleeding will resolve with hydration and rest. If the color of the urine looks like tomato juice, or if the urine stops flowing out of the catheter, you should call your surgeon's office immediately.

Are any particular fluids better to drink than others?

Any fluid is acceptable to drink. Water is usually best.

Will I use a leg bag or the larger Foley catheter bag at home?

You will use both. The nurse will show you how to use a leg bag when you are walking about, and the larger "bedside bag" when you are ready to go to sleep. Make sure to hook the bedside bag on to something (i.e. a chair or the drawer of a bedside table) so

that it doesn't pull on your catheter. You will learn how to change from one bag to another.

6.6.7 Exercise

Is exercise important after surgery?

Yes! No matter how active and fit you were prior to surgery, you will experience reduced strength and be limited in your level of activity following your prostate removal. To return to normal activity, you will need to follow a sensible exercise program, adapted to your level of health and fitness. Realistically it will be 6–8 weeks before you are back to your pre-surgical stamina and strength. However, you will be surprised that by employing a basic exercise program, how good you will feel in just a few weeks.

When do I start exercising after prostate surgery?

You should begin almost immediately. By the late afternoon or early evening following surgery, the nursing staff will assist you in getting up at the side of your bed or into a chair. This is the first form of exercise that you will perform on the road to recovery so your understanding and participation is important.

You will be asked to stand and walk very soon following surgery. To stand, you will need someone to support you under your arm. With a nurse's help, stand and walk to a chair. When comfortable you may begin to walk in the hallway. During your hospital stay, you should plan on walking a short distance several times a day.

How will I know if I have pushed myself too far?

Weakness, dizziness, fatigue, nausea and feeling flushed are some feelings associated with doing too much. There may also be pain in the incision. You will notice that you will tire sooner with less exercise than before. You may also feel some discomfort, warmth, or stretch down in the pelvic area. When you exercise you should try to stop and rest before these symptoms become too severe. Push yourself but be sensible. It is better to do several shorter periods of exercise rather than a few longer ones. You may also see blood in your urine if you overdo it.

What about pain medication and exercise?

Whether it is in the hospital or home, you will need pain medication to allow you to move around easily for the first week or so. Anticipate when you will be doing something active and pre-medicate yourself. Oral pain medications take about 20–30

minutes to take effect. Slowly work yourself off the narcotic pain medication and use Tylenol instead.

What can I do once I get home?

When you get home, continue your program of rehab and recovery by developing a plan of exercising and keep to it. The foundation for this program should be frequent short periods of walking. As you feel comfortable or as you need to get out of the house, move your walks outdoors, at first to the back yard. Then walk the block. In time you will be walking a block then two then a mile and so forth.

When can I drive?

You may drive after the catheter has been removed as long as you have stopped taking narcotic pain medications.

When can I return to work?

You may return to work without restrictions 6 weeks after surgery.

May I stretch or perform Yoga?

Stretching can also be started almost immediately, even while in the hospital. Again it is important to start very gently and sensibly by listening to your body. If you feel pulling or it hurts, STOP.

What other activities can I do and when?

Walking- The day after surgery

Treadmill- Level treadmill is OK (walking pace)

Walking up stairs- You may walk up stairs in your home to get to your destination, do not do so for exercise for 6 weeks.

Golf- Putting only for 6 weeks

Bicycle Riding/ Motorcycle riding- 3 months following surgery

Lifting >10 pounds- 6 weeks

6.6.8 Post-Operative General

How can I avoid post-operative constipation?

Minimize the use of narcotic pain medicines (Vicodin, Codeine, Percocet, Tylenol #3), drink lots of water, and take stool softeners. If needed, prune juice or a teaspoon of mineral oil can help as well. Until you have a normal bowel movement, which often does

not occur until 4–5 days after surgery, you should plan on eating primarily liquids.

Urine is leaking around my catheter, what should I do?

This is usually related to bladder spasms. This is an inconvenience, but not a long-term problem. If the leakage around the catheter becomes bothersome, call your doctor's office to consider taking an anti-spasmodic agent (Ditropan or Detrol). Leaking may also occur when having bowel movements.

How long will I need to wear a pad?

This period of time varies. A few people never require a pad; most will use pads for 3–4 months, others for longer periods of time. Your use of pads depends on the volume and duration of leakage.

6.6.9 Sexual Function Recovery

How often should I use Viagra, Levitra or Cialis after surgery?

Each surgeon has slightly different approaches or 'formulas' for postoperative penile rehabilitation. Your surgeon may suggest that you begin using one of the above three agents within the first few days after your catheter has been removed. You do not need to attempt intercourse (masturbation is acceptable). You should discuss the use of these medications with your surgeon.

When can I have intercourse?

You may have intercourse as soon as you are comfortable to do so. Remember that you may not lift anything heavier than a laptop computer for 6 weeks following surgery. Intercourse, therefore, should be appropriately tailored.

If I am having erections without Viagra, Levitra or Cialis, do I have to take the medication?

No.

How soon will I recover my erections?

Your post-operative recovery of sexual function has many variables including: your pre-operative level of function, your age, whether you underwent a nerve sparing procedure. You should ask your physician how soon and to what degree you should expect recovery.

Will my erection be shorter after surgery (what fills the space where the prostate used to be)?

The bladder fills the space where your prostate used to reside. Your penis may be approximately 1 cm shorter following surgery. Some men may also develop a curvature of the penis known as Peyronie's disease.

6.6.10 Continence Recovery

When will my catheter be removed?

The catheter is removed approximately 7–10 days after either a radical retropubic prostatectomy or the laparoscopic (Robotic) radical prostatectomy.

Who will remove my catheter?

It may be removed by your family physician, or during your follow-up appointment by your urologist or clinic nurse. It may also be removed in the xray department after a test called a cystogram shows total healing.

Can I do exercises to enhance my urinary control?

You will receive instructions on Kegel exercises, designed to strengthen the external continence muscle and control of urinary flow.

How long until my urinary control returns?

Most patients note significant resolution of urinary incontinence by 12 weeks following surgery. Improvement will continue for a full year after surgery.

What should I wear to clinic when my catheter is removed?

Comfortable clothes with jockey shorts (not boxers).

Will I know when I need to urinate?

Yes, your bladder will begin to feel full and you will have the sensation of needing to urinate.

Radiation Therapy

Radiation therapy is a non-surgical alternative for the treatment of prostate cancer that has been shown to be effective for many patients. Radiation can be used following surgery when prostatectomy does not appear to have completely removed all of the cancer. Radiation therapy also is used to help shrink tumors and relieve pain in men with advanced disease. The type of radiation therapy available varies with the facility. Each patient receives a customized treatment plan depending on the nature of the cancer and the patient's unique symptoms and overall health.

7.0

Brachytherapy

Information for the following section on brachytherapy was taken from the British Columbia Cancer Agency (BCCA) Prostate Brachytherapy Program (June, 2009).

Prostate brachytherapy is the implantation of radioactive "seeds" into the prostate. The radioactive seeds deliver high doses of radiation to a very confined region, making it possible to deliver a high dose of radiation to tumor cells within the prostate while sparing the adjacent non-cancerous tissues including the bladder and rectum.

7.1 Patient Eligibility in BC

1. **Low-risk disease** [clinical stage $\leq T2a$, PSA ≤ 10.0 ng/ml⁻¹ and Gleason Score (GS) ≤ 6]
2. **Intermediate risk patients** [$\leq T2c$ and PSA 10–20 ng/ml⁻¹ with GS ≤ 7]

Patients with $\geq 50\%$ positive cores and/or 2 or 3 risk factors (T2c, GS = 7 and PSA 15–20) may receive 3 months of hormone therapy before and after brachytherapy.

Prostate brachytherapy use in high risk disease is currently restricted to patients enrolled in a BCCA lead multi-centre randomized trial (ASCENDE-RT). For more information on this study please ask your radiation oncologist.

7.2 Consultation with a Radiation Oncologist

- Referrals to the BCCA are usually made by a patient's urologist or family physician.
- During the consultation, the radiation oncologist will determine the patient's eligibility and suitability for brachytherapy.

7.3 Implant procedure

- The implant is a surgical day-care procedure taking about 45 minutes. Patients are discharged home 2–3 hours after the procedure.
- Most implants are done with the patient under a general anaesthetic, or occasionally under spinal or local anaesthesia.
- The radiation oncologist places the radioactive seeds into the prostate through the skin of the perineum (space between anus and scrotum). Approximately 90–150 seeds are inserted throughout the prostate gland. The seeds contain I¹²⁵ (Iodine ¹²⁵) radioactive gas. The seeds remain in the prostate gland permanently.

7.4 Side Effects of Brachytherapy

Although well tolerated overall, most patients experience temporary side effects from prostate brachytherapy. Serious complications can occur, but fortunately they are uncommon.

7.4.1 Urinary side effects:

- Most men will experience some urinary symptoms after the procedure; about 50% will have moderate obstructive and/or irritative urinary symptoms lasting several months. By 12 months, 90% of the patients' urinary symptoms will return to baseline.
- At 7 years after brachytherapy, the majority (92.5%) of patients will have very little or no urinary symptoms.
- Patients with larger prostate volume, worse baseline urinary function and those given hormone therapy, are more likely to have more irritative and obstructive urinary symptoms after brachytherapy.
- 5–10% of patients will require a Foley catheter for urinary obstruction (most for <1 week, 3% of all patients for several weeks or months), again this is more often seen

in patients with worse baseline urinary function and those with larger prostate size before implant.

7.4.2 Sexual function

- After 3 years, 63% of patients who were previously potent pre-treatment remain so. Younger patients and those with better pre-treatment erectile function are likely to do better after the treatment. Many patients will have improvement in their function with oral erectile aid medications.
- Some men will experience painful ejaculation following prostate brachytherapy. This can be a short-lived problem or a persistent one. The cause is not known, but is probably caused by radiation irritation of the urethra.

7.4.3 Rectal side effects

- Mild self-limiting rectal irritation affects approximately 20% of patients. 1–5% of patients will have rectal bleeding requiring a laser photocoagulation procedure. Serious rectal injury is rare.

7.5 Radiation safety

Men who undergo prostate brachytherapy will emit minute amounts of radiation from their bodies. The amount decreases exponentially with time such that it is virtually zero by 2 years following the implant. Half of the radiation is gone in 2 months and about 80% at 6 months. Nevertheless this has certain consequences:

- In the first year or so following brachytherapy, men may trigger the new ultra-sensitive radiation detectors at airports that have been recently installed. As a result, men are issued with a wallet card to present to airport officials. To our knowledge no one from BC has been detained or significantly delayed as a result of setting off an airport alarm.
- If a man, who has undergone brachytherapy, dies for any reason within 24 months of the procedure, his body must not be cremated, because the high temperature will cause the radioactive iodine to be released from the seeds (sealed titanium and gold containers) and into the atmosphere, where it could represent a risk to workers at the cremation facility.

- It is important that men who have undergone prostate brachytherapy **refrain from prolonged close contact with pregnant women and young infants for 4–6 months brachytherapy (placing the infants on your lap for several hours)**. The radiation to reach other people is in fact very small, for example: the total dose of radiation that would be received by a man's sleeping partner (assuming an average separation of 1 meter for a average of 8 hours per day), is about the same dose that would be received from cosmic radiation exposure during a single round-trip plane ride, from New York to Japan. So, casual contact with pregnant women and young infants, such as sitting at the same dinner table, taking a car ride or giving a child brief cuddle, does not represent a risk.

8.0 External Beam Radiation Therapy

The following section was written by Dr. W. James Morris and approved by the BC Cancer Agency Radiation Oncologists. It was last updated – August, 2007

In this form of curative treatment the prostate cancer is bombarded with high energy X-rays generated by a machine called a linear accelerator. Patients undergo individualized treatment planning with a Radiation Oncologist followed by a series of daily treatments for a few minutes per day, five days per week, for 7 to 8 weeks. Unlike surgery and brachytherapy, external beam radiation therapy can be successfully utilized for men with disease that has clearly penetrated the prostate capsule or invaded adjacent organs. However, cure rates for such patients would be much lower.

8.1 Side Effects of External Beam Radiation Therapy

Side effects are most commonly related to the radiation's effects on organs adjacent to the prostate, specifically the rectum and bladder. Although well tolerated, most patients will develop side effects during and for a few weeks following treatment.

- Typically these involve the rectum, large bowel and urinary bladder, and consist of irritative symptoms like urgency to urinate, urinary frequency, diarrhea, or the passage of small amounts of blood or mucus from the rectum or the bladder. These side effects are rarely so severe that treatment needs to be interrupted or even discontinued.
- In about 90% of patients these side effects will clear up within 6 weeks of completing the XRT, but the remaining 10% will have more long lasting or even

permanent side effects from the treatment. Of this 10% of patients with chronic changes following XRT, the vast majority of problems are relatively minor, but a few patients may experience significant injury from external beam radiation therapy for prostate cancer.

- Permanent and severe urinary incontinence affects less than 1% of men treated with external beam radiation therapy.
- Like brachytherapy, about 50% of men who have normal erections prior to radiation therapy will lose their ability to have erections within five years. Younger men tend to retain their erectile function better following radiation therapy compared to older men.
- Following radiation therapy the cancer slowly shrinks and the PSA level in the blood slowly declines. It usually takes from 12 to 36 months for the rectal exam to become normal (in cases of palpable tumor) and the PSA to reach its nadir (lowest) level.
- A rising PSA that reaches a level of 2.0 ng ml^{-1} (PSA failure) is usually associated with eventual cancer recurrence. Elevated PSA after the treatment may precede clinical signs of disease by several years. Patients who have local relapse (cancer recurrence in the prostate) following radiation therapy may be considered for a salvage radical prostatectomy, others may be offered immediate hormone therapy (HT) or may be followed carefully for signs of clinical relapse at which point HT is initiated. Clinical trials are also available for this group of patients.
- At BCCA, it is the policy to recommend combined HT and radiation therapy for those patients with high risk cancer, and some other patients with one or more adverse prognostic features (E.G. PSA > 20, Gleason sum ≥ 8 , T3 or T4 tumors). Most often, HT is given for 3 to 8 months prior to the start of radiation therapy and continued during radiation therapy. The minimum recommended total duration of HT is 1 year in these circumstances; some patients will be asked to stay on HT for up to 3 years.
- Common long term HT (Hormone Therapy) side effects include loss of sexual function, osteoporosis (thinning out of the bones) and bone fracture (occurs with longer use), low red blood cells counts with fatigue, loss of muscle mass (with possibly weakness), changes in mood, weight gain and (possibly) reductions in cognitive function (the ability to think clearly). In addition, some studies have linked HT to an increased risk of heart disease and diabetes. The net effect of these changes may be a less vigorous and active life.

In summary external beam radiation is well tolerated and can be used with curative intent for men regardless of their prognostic factors. However, as in the case of surgery

and brachytherapy, the chance of cure is better for patients with small tumors, low Gleason scores and low pre-treatment PSAs. There is emerging evidence that brachytherapy and surgery provide a better chance of cure than external beam radiation therapy for patients with favorable prognostic features. However, for many patients, such as those with high-risk disease and those unsuitable for anesthetic, external beam radiation therapy is the only option that can be given with curative intent. In patients with unfavorable disease, external beam radiation therapy should be combined with HT.

9.0 Hormonal Therapy and Radiation Therapy

For patients with intermediate or high-risk prostate cancer, a combination of hormonal therapy and radiation therapy is recommended because the addition of hormones (Lupron®, Zoladex®, Casodex®, Eligard®, and Suprefact®) improves the effectiveness of radiation therapy. Hormonal therapy is generally initiated 2 to 6 months before the start of radiation and may be continued for as long as 2 years.

10.0 Hormone Therapy

Prostate cancer is sensitive to hormonal manipulation. For this reason, when a patient's source of testosterone is removed or blocked, the vast majority of prostate cancer cells will slow significantly in their growth. This is best accomplished by either medications that alter the way hormones work or with surgery to remove the testicles.

Hormonal therapy is often recommended for patients during treatments such as radiation therapy or as the only treatment in patients whose prostate cancer has spread to other parts of the body. Hormonal therapy by itself is unlikely to cure prostate cancer but can treat symptoms, slow down the growth of prostate cancer, and postpone the time until prostate cancer causes symptoms.

10.1 Terms

- Orchiectomy refers to an operation which removes the testicles. Orchiectomy removes the source of testosterone. The advantage is that the method is permanent

and therefore injections are not necessary. However, since hormonal therapy doesn't last indefinitely, additional treatments may still be necessary.

- Luteinizing hormone releasing hormone (LHRH) analogs: (Zoladex®, Lupron®, Eligard®, or Suprefact®). These medications decrease testosterone production by inhibiting the release of testosterone by the testes. The injectable medications (Zoladex®, Lupron®, Eligard®, and Suprefact®) are given every 1, 3, or 4 months. The primary benefit of these medications is that therapy is reversible.

Side Effects of both orchiectomy and LHRH are similar and include hot flashes, loss of libido, impotence, fatigue, weight gain, memory and mood changes, breast enlargement or tenderness. Long term side effects include decreased bone density which may lead to osteoporosis and low red blood cell count (anemia). Hot flashes may decrease with time. There are medications which your doctor may suggest.

10.2 Anti-androgens (Casodex® or Flutamide)

Even after orchiectomy or during treatment with LHRH analogs, a small amount of androgen is still produced by the adrenal glands. Anti-androgens block the body's ability to use androgens. Drugs of this type are taken as pills, once or three times a day. Anti-androgens are often used in combination with orchiectomy or LHRH analogs. This combination is called total or combined androgen blockade. A doctor may give an anti-androgen to block the temporary increase in testosterone "flare" with LHRH analogs.

10.3 Side Effects

Side effects of anti-androgens in patients already treated by orchiectomy or with LHRH agonists include diarrhea, loss of energy, and nausea. Anti-androgens can cause inflammation of the liver. Physicians need to know what medicines their patients are taking with anti-androgens and will check liver function tests.

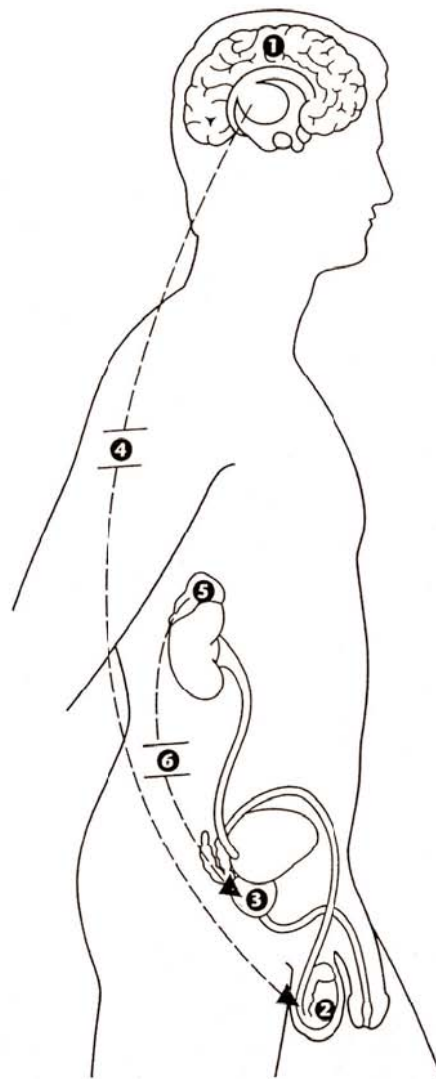
10.4 Intermittent Hormonal Therapy

All prostate cancer treated with hormonal therapy eventually becomes resistant to this treatment over a period of months or years. Some physicians believe that constant exposure to hormonal drugs might promote resistance, and recommend intermittent treatment with these drugs. There is currently a clinical research study to evaluate which method is more effective. With intermittent therapy, hormonal agents are discontinued when a man's PSA drops to a low level and remains stable. If the PSA begins to rise, the drugs are restarted. One advantage of intermittent treatment is that the cost and side effects of hormonal therapy are potentially minimized.

A closer look at how hormonal therapy works...

Hormone-dependent prostate cancer cells use the male hormone testosterone to multiply and grow. The goal of hormonal therapy is to block testosterone from reaching cancer cells.

- 1 BRAIN**
Brain sends chemical signals to the testes.
- 2 TESTES**
Testes receive signals from brain and are stimulated to make testosterone.
- 3 PROSTATE**
Hormone-dependent prostate cancer cells use testosterone to grow and multiply.
- 4 LHRH ANALOGS**
One type of hormonal therapy uses medicines called LHRH (luteinizing hormone-releasing hormone) analogs to block the signals being sent from the brain to the testes. As a result, the testes no longer make testosterone.
- 5 ADRENAL GLANDS**
Adrenal glands, which sit above the kidneys, make another male hormone, androgen, which the body converts to testosterone.
- 6 ANTIANDROGENS**
Another type of hormonal therapy, antiandrogens, blocks the production of androgens by the adrenal glands.



What are the possible side effects of hormonal therapy for prostate cancer?

Side effects of hormonal therapy depend upon the type of hormonal therapy used. As with any treatment for prostate cancer, it is important to talk with your doctor about the side effects you may experience.

LHRH analogs may cause:

- Hot flashes and sweating
- Decreased or absent sexual desire (libido)
- Impotence

LHRH analogs cause a temporary increase in testosterone production and therefore may cause a temporary increase in tumor size for 1 to 2 weeks before testosterone falls to very low levels.

Antiandrogens may cause:

- Nausea
- Vomiting
- Diarrhea
- Breast enlargement

(Figure courtesy of Tap Pharmaceuticals. Used with permission.)

Chemotherapy

Chemotherapy for prostate cancer has evolved over the past 20 years with prostate cancer now considered a “chemo-sensitive” disease. This means that prostate cancer joins other malignancies such as colon and breast cancers where chemotherapy may allow patients to live longer. There are two approved agents, mitoxantrone (combined with prednisone) and a new drug, docetaxel. Mitoxantrone was approved because it proved to decrease bone pain in patients who suffered from metastatic prostate cancer. Docetaxel was approved based on two large randomized trials in which half of patients received mitoxantrone and half received docetaxel (otherwise known as Taxotere). The trial resulted in an almost 25% reduction in death when treated with the new drug docetaxel compared to mitoxantrone. In addition to this, measurements of PSA demonstrated declining values and imaging studies, including bone scans and CT scans, showed decreased cancer growth. In this study, all patients had cancer spread elsewhere and were no longer responsive to hormonal therapies.

With the demonstrated survival advantage with chemotherapy for advanced prostate cancer, there may be an increased role for such therapy in earlier disease stages. Patients are encouraged to consider enrolling in clinical trials to further evaluate the role for such promising treatment.

New medicines such as immunotherapy and novel targeted agents that aim to block blood vessel growth can be combined with chemotherapy to increase effectiveness and decrease the side effects of chemotherapy. The side effects of chemotherapy can still be significant but with many new medicines now available to treat and prevent side effects, most patients can tolerate treatment and maintain a good quality of life.

Food and nutrition intake are important components of optimizing treatments for prostate cancer. An overall healthy diet will benefit all patients. Some diet changes can help minimize side effects of treatments as well as delay the growth of tumors.

12.1 Active Surveillance/Prostate-healthy Diet

Studies of population groups and clinical studies on both people and animals are shedding light on various diets and nutrients that are associated with lower incidence of prostate cancer and slower growth and spread of prostate cancer cells. The recommended diet is low in saturated fat, high in fiber, contains 5 to 9 servings of fruits and vegetables daily, some soy protein, fish, tomatoes and tea. Olive oil is preferred for added fat in cooking or salad dressing. Foods to avoid or minimize include high fat meats (ribs, bacon, sausage) and dairy products (cheese, butter, cream cheese, ice cream). Vegetables, fruits, soy products, some herbs and seasonings contain phytochemicals with cancer-fighting properties. Lycopene, an antioxidant, is recommended in particular for prostate patients. Foods high in lycopene include tomatoes (including tomato products such as tomato sauce, tomato juice and tomato soup) and watermelon. Cruciferous vegetables such as broccoli, cauliflower, brussel sprouts and cabbage are recommended as well as berries and colorful fruits such as melons, oranges and papaya. This diet also promotes lower cholesterol levels, which reduces the risk of disease of the arteries.

12.2 Diarrhea

Some men experience diarrhea associated with radiation treatments. Reducing the intake of high-fiber foods and fatty, especially fried, foods can help minimize this occurrence. In addition, temporarily switching to soft fruits like applesauce, bananas and canned fruits, and avoiding fruits with skins and seeds may be helpful. We also recommend eating cereals and breads that do not have a high bran content. Adding rice, bread, potatoes and oatmeal in the diet also may help alleviate diarrhea, as well as soft-cooked vegetables like green beans, carrots, mushrooms and peas. Avoid high-fat foods like French fries, potato chips, ice cream, and fried meats or fish. Eat baked or broiled lean poultry, fish and meat. Be sure to drink water or other liquids. When

symptoms have subsided, gradually increase the variety of high-fiber foods in the diet.

12.3 Fatigue and Reduced Appetite

For some men, having surgery can reduce their appetite and cause increased fatigue. During this time, patients should monitor their food intake. Many men like the idea that they may lose some weight. However, a good nutritional intake is important for recovery and a sense of strength and well-being. If eating very small meals, consider adding some snacks or protein drinks to supplement food intake. Products such as Carnation Instant Breakfast, Ensure or Boost are popular choices.

12.4 Vitamins and Other Supplements

If patients eat the prostate-healthy diet described above, they will be obtaining good sources of vitamins and antioxidants from food. Vitamin E and selenium have been studied in a large clinical trial, called the SELECT trial, and no benefits to prevent prostate cancer were found. Large doses above the recommended amounts can sometimes cause imbalances or actually interfere with treatments. Large amounts of Vitamin E can thin the blood and are not recommended during surgery or radiation treatments. Vitamin supplements (even concentrated ground vegetable varieties) do not contain all the nutrients that are in the whole food. Lycopene supplements are not regarded as an effective replacement for foods containing lycopene. Generally, a multivitamin supplement containing 100 percent of recommended daily intake is considered acceptable in addition to food intake.

13.0 Oncology Social Work Services

The Vancouver Prostate Centre recognizes that dealing with cancer causes distress and, at times, difficulty coping. Oncology social workers are available to help patients and their loved ones solve problems associated with cancer treatment. These services are available through the Patient & Family Counseling Services at the BC Cancer Agency. There is no additional cost to you as the services are considered part of the medical treatment. Services may include supportive counseling, education, assistance with problem solving and referrals to community agencies and support groups. Please feel free to contact the service directly at 604-877-6000 (2194) or 1-800-663-3333 (2194).

14.0

Internet Resources

Prostate Cancer

The Vancouver Prostate Centre
<http://www.prostatecentre.com/>

604-875-5006

BC Cancer Agency <http://www.bccancer.bc.ca>

604-877-6000

The Canadian Prostate Cancer Network Internet Resource Centre
<http://www.cpcn.org> (listing of prostate support groups on this site)

1-866-810-2726

Medline Plus

<http://www.nlm.nih.gov/medlineplus/prostatecancer.html>

The Prostate Cancer Foundation
<http://www.prostatecancerfoundation.org/>

1-800-757-2873

The Prostate Cancer Research Foundation of Canada
<http://www.prostatecancer.ca>

1-888-255-0333

University of Toronto's Prostate Centre
<http://www.prostatecentre.ca/>

416-946-2100

General Cancer

BC Cancer Agency <http://www.bccancer.bc.ca>

604-877-6000

The Canadian Cancer Society <http://www.bc.cancer.ca>

1-888-939-3333

The National Cancer Institute <http://www.cancer.gov/>

1-800-422-6237

Complementary Medicine

BC Cancer Agency
<http://www.bccancer.bc.ca/PPI/unconventionaltherapies/default.htm>

604-877-6000

The Office of Cancer Complementary and Alternative Medicine (OCCAM)
<http://www3.cancer.gov/occam>

1-888-644-6226

Complementary Medicine Education and Outcomes Program (CAMEO)
<http://www.bccancer.bc.ca/cameo>

604-707-5960

Cancer and Nutrition Sites

'Nutrition Guide for Men with Prostate Cancer' from the BC Cancer Agency.

<http://www.bccancer.bc.ca/PPI/copingwithcancer/specificresources/Nutrition.htm>

Department of Urologic Sciences, UBC

<http://urology.ubc.ca/patient-information/prostate-care>

The American Institute for Cancer Research

<http://www.aicr.org/site/PageServer>

1-800-843-8114

Robert Benjamin Ablin Foundation for Cancer Research

<http://www.prostatefoundation.org/>

The Vancouver Prostate Centre at Vancouver General Hospital

<http://www.prostatecentre.com/>

604-875-5006

Seattle Cancer Care Alliance

(206) 288-7222

<http://www.seattlecca.org/patientsandfamilies/adultCare/clinicalProgs/prostate/Nutrition/>

University of Michigan Comprehensive Cancer Center

http://www.cancer.med.umich.edu/support/patient_support.shtml

734-936-6000.

General Nutrition

American Dietetic Association

<http://www.eatright.org>

1-800/877-1600

The Canadian Council of Food and Nutrition

<http://www.ccfm.ca/>

905-625-5746

The Canadian Nutrient File (CNF)

http://www.hc-sc.gc.ca/food-aliment/ns-sc/nr-rn/surveillance/cnf-fcen/e_index.html

Dial-a-Dietitian

<http://www.dialdietitian.org/>

604-732-9191 or 1-800-667-3438

Dietitians of Canada

<http://www.dietitians.ca>

Health Canada

http://www.hc-sc.gc.ca/fn-an/index_e.html

Linus Pauling Institute's Micronutrient Information Center

<http://lpi.oregonstate.edu/infocenter/>

541-737-5075

Nutrition.gov

<http://www.nutrition.gov/>

15.0 Library Services

There are several books available at the Patient Education Library at the Vancouver Prostate Centre that can be signed out. There is also a library at the BC Cancer Agency that all patients have access to.

17.0 Opportunities to Support Prostate Cancer Research and Education at the Vancouver Prostate Centre

- Vancouver General Hospital Foundation Donations (please specify that the funds are for the Vancouver Prostate Centre).
- Harry's Rosen's Spring Run-Off is a 8k run or walk to fight Prostate Cancer
- Annual Vancouver General Hospital 'Tournament for the Cure Golf Tournament'
- Hadassah-WIZO Golf Tournament
- Family and Friends Golf Tournament
- Motorcycle Ride to Live
- Hadassah-WIZO Golf Tournament
- Other special events as advertised

The information in this booklet (second edition) has been adapted from the 'Comprehensive Prostate Cancer Clinic' patient booklet from Virginia Mason Medical Center in Seattle, WA. We thank Dr. John Corman and his team for their generosity and collaboration. The information in this booklet is relevant to current practice at the Vancouver Prostate Centre and was last updated January, 2010.