

Your Guide to Prostate Cancer Treatment and Health

Michigan Urology Center

*At the University of Michigan
Comprehensive Cancer Center*

Introduction

Our goals...

Our ultimate goal is to partner with you in improving and maintaining your health, that's why we've produced this guidebook for you and your family. We hope it will prove to be a valuable resource as we embark on this journey together.

How this guide will work for you...

This guidebook is designed to provide answers to commonly asked questions, explain the various phases of treatment of prostate conditions, and provide helpful resources to support you and your loved ones.

Because your path to treatment will be unique, just as you are unique, this guidebook may not answer all of your questions. It should be used as a tool for helping you to generate questions to ask your physician or the nursing staff and meet your individual needs.

Please bring this guidebook with you to each of your visits and feel free to contact the Michigan Urology Center at any time if you have questions or concerns about the information provided.

How to ask for help...

The best way to reach an experienced oncology nurse during normal business hours is to call **1-800-865-1125**. If you need help after 5:00 P.M., Please dial 734-936-6267 and ask for the urology resident on call.

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Understanding Your Prostate and Prostate Conditions...

What It Is

The **prostate** is one of the male sex glands. When a man has sex, some fluid from the prostate mixes with the sperm made in the testes. Then, the fluid (called semen or ejaculate) gets squeezed out through the penis.

The prostate is thought to do one major thing: add enzymes to the ejaculate to help increase fertility.

Where It Is

Look at the picture on the next page. The prostate is a walnut-shaped gland in the male body that sits just below the bladder and in front of the rectum. (That is why the prostate gland can be felt through the wall of the rectum.) The prostate surrounds the upper part of the **urethra (u-REE-thra)**, the tube that carries urine and semen out of the penis.

What Can Happen to It

Normal Prostate: As you get older, the prostate commonly enlarges.

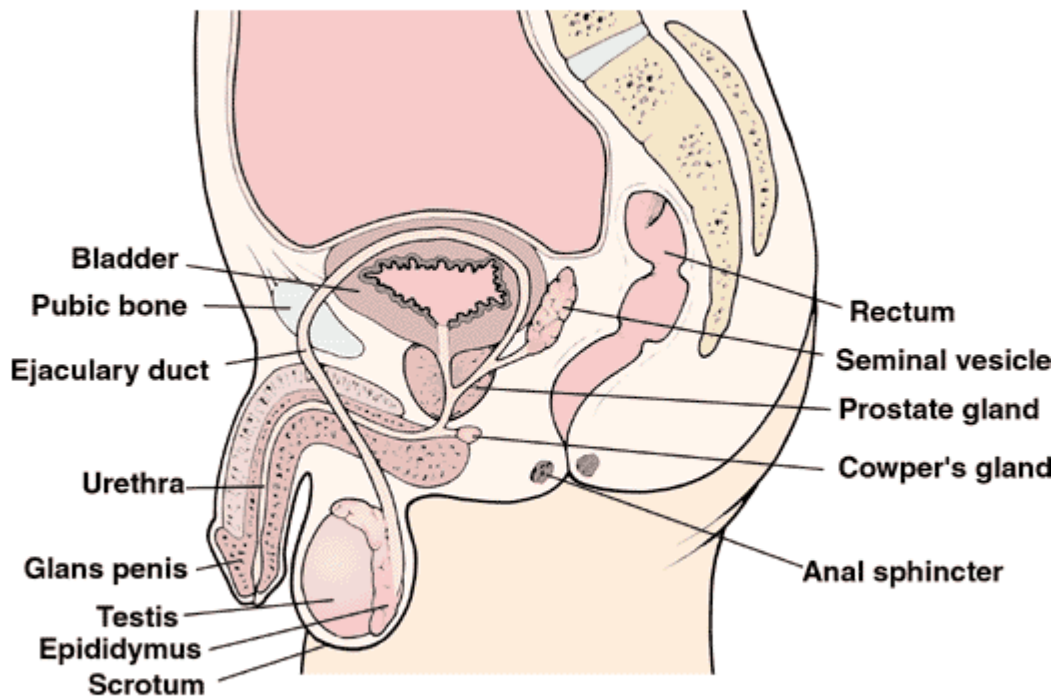
Enlarged Prostate (Benign Prostatic Hyperplasia or BPH) : If the prostate gets too large, it can make it hard for a man to pass urine (urinate) because it can press on the tube that carries urine and semen out of the penis.

Prostatitis (prah-stah-TI-tiss): The prostate can become inflamed, irritated, or infected.

Prostate Cancer: The prostate can also develop cancer. Prostate cancer is the uncontrolled growth of cells leading to a malignant tumor in the prostate gland. The cancer generally grows slowly within the gland, but sometimes the cancer cells penetrate the outer rim of the gland and spread to tissues and organs near the prostate (advanced prostate cancer). This includes **lymph nodes** and **seminal vesicles**.

Where the Prostate Is...

Male Pelvis: Cross Section



PSA, Gleason Grade and Biopsy...

If you have been told that you have prostate cancer, you have probably had a biopsy and possibly other tests that tell you about your condition. These tests give valuable information, but they are not perfect. Here's what the tests may mean to you.

PSA Test

The prostate makes an important substance called **Prostate Specific Antigen** or **PSA**. The **PSA Test** measures the amount of this substance (PSA) in the **bloodstream**. Small amounts of PSA are released into the blood normally, but this amount can be higher in men with cancer as well as other prostate conditions such as prostate enlargement (**BPH**) or **prostatitis**.

The American Urological Association and the American Cancer Society recommend that prostate screening, including a **Digital Rectal Exam (DRE)** and **PSA** blood test, should be given yearly after age 50. If you are African American or have a family history, this screening should begin at age 45.

If you have been diagnosed with Prostate Cancer, the PSA test can help tell you *how big your tumor probably is and if it may be spreading:*

- If your PSA was less than 10, the chances that treatment will work are **good** (this includes watchful waiting, surgery and radiation).
- If your PSA was between 10 and 20, there is some **cause to be concerned**.
- If your PSA was more than 20, the chances that curative treatment will work are **not so good**.

Biopsy

A **Prostate Specific Antigen** or **PSA** test and/or a **Digital Rectal Exam (DRE)** may indicate that a biopsy is necessary. During the **biopsy**, the doctor removes a sample of tissue which is looked at closely under a microscope by a pathologist. The pathologist prepares a report (pathology report) which will “grade” the tissue examined in order to understand how aggressive the condition may or may not be. The biopsy is usually performed as an office procedure using ultrasound guidance. While only 1 in 200 men may experience an infection following a biopsy, some blood in the urine or in bowel movements can be common for 2-3 days following the biopsy. Blood in the semen may last for up to 2-3 weeks.

Gleason Grade or Score

The grade of the cancer tells *how fast your cancer is likely to grow*. The grade may be called a **Gleason Grade or Score**, named for the man who invented the test.

To come up with a Gleason grade, a pathologist looks at the cancer tissue removed during your biopsy and assigns it two numbers between one and five (two numbers are given because prostate tumors from a single individual will usually show some variation). A total Gleason grade or score will be between two and ten, the higher numbers corresponding to more aggressive tumors. By giving your doctor an idea of how aggressive the cancer appears to be, the Gleason grade helps determine the most appropriate course of treatment.

What the scores indicate:

- If your Gleason Score was 2, 3, 4, or 5, the cancer is likely to ***grow very slowly***.
- If your Gleason Score was 6, the cancer is likely to grow at a ***slow rate***.
- If your Gleason Score was 7, the cancer is likely to grow at a ***medium rate***.
- If your Gleason Score was 8, 9, or 10, the cancer is likely to ***grow fast***.

The Stage of the Cancer

The *stage* tells you how big your tumor is and how far it has spread. Your physician may recommend getting a **bone scan**, **CT scan**, **MRI** or other tests to see if your cancer has spread to your body. There are two systems of letting you know what stage the cancer is in. The first system uses letters and numbers, for example T1, N0, M1. T is for **Tumor** size, N is **Lymph Nodes** involvement and M tells that the cancer has spread (or **Metastasized**). The second system uses letters from A through D. The following chart will help you understand what the stages mean.

The Stage	What the Doctors Call It		What It Means
	A-D System	TNM System	
Early Stage	Stage A	Stage T1	The tumor has probably not spread outside the prostate gland. The tumor cannot be felt.
	Stage B	Stage T2	The tumor is large enough to feel and has probably not spread outside the prostate gland.
Later Stage	Stage C	Stage T3/T4	The tumor has spread outside the prostate gland.
	Stage D	Stage N+/M+	The tumor has spread to other parts of the body as shown by CT or bone scans.

FREQUENTLY ASKED QUESTIONS

Q. What are the causes of prostate cancer?

There are several major risk factors associated with prostate cancer, which include: age, geographic location, race, family history, hormone levels, type of employment, and not getting screened on a regular basis. No one is exactly sure how or why men get prostate cancer.

Q. How can I lower my risks for prostate cancer?

Although you cannot control certain risk factors like age and race, you may have other methods of lowering your risks. Studies have shown that tumors grow faster in animals fed a high-fat diet. Testosterone levels are controlled not only by genes but also by diet - the amount of fat you eat changes the amount of circulating testosterone in your body. Avoiding a high fat diet and consuming foods associated with preventing cancer, such as soy and green tea, may decrease risk of prostate cancer. Also, while there is no conclusive evidence, a number of studies have suggested that men who drink heavily have a slight increase of getting prostate cancer.

Q. If I have a relative with prostate cancer, what are my chances of developing the disease?

An approximate rule of thumb is that if you have one relative with prostate cancer, your risk of developing it is doubled; if you have two relatives, your risk is quadrupled. This suggests that there is a gene, or combination of genes, involved in causing prostate cancer. These genes have not been identified yet, but are the source of much research.

Q. How does age increase or decrease my risk for prostate cancer?

The most direct risk factor for prostate cancer is age. As a man gets older, his risk of developing the disease increases. While very few men in their twenties and thirties are diagnosed with prostate cancer, by age fifty, almost one third of all American men have small prostate tumors. By age eighty, this number goes up to three-quarters, and by age ninety, about ninety percent. These tumors, however, will most likely not harm someone. Approximately 1 in 6 men will be diagnosed with prostate cancer in their lifetime.

FREQUENTLY ASKED QUESTIONS (Continued)

Q. How can I be screened for prostate cancer?

The American Urological Association and the American Cancer Society recommend that prostate screening, including a digital rectal exam (DRE) and prostate specific antigen (PSA) blood test, should be given yearly after age 50. If you are African American or have a family history, this screening should begin at age 45.

Q. What is PSA and how does it help detect of prostate cancer?

PSA is an enzyme that is made by the prostate in large quantities. Normally, it is part of the man's ejaculate and it helps the sperm fertilize the woman's egg. Small amounts of PSA are released into the blood normally, but this amount increases with cancer as well as with infections of the prostate and benign growth of the prostate [benign prostatic hyperplasia (BPH)]. The PSA test is a blood test that measures the amount of prostate specific antigen in the blood. Basically, the more PSA released by the prostate, the greater the chance of prostate cancer. If the PSA is greater than 4 ng/ml, a man should undergo biopsy and ultrasound. It has been suggested that if a man's PSA has increased by more than 0.75 ng/ml per year, this should also be grounds for biopsy and ultrasound, even if the PSA is less than 4 ng/ml. Another test, free PSA (fPSA) is also now being used by some physicians. PSA in the blood normally binds to proteins (70-95%). The free PSA measures the amount of PSA that is not attached to a protein. The ratio of both quantities is then evaluated. In the range of 2.5-15 ng/ml, the free/total PSA improves cancer detection. The higher the ratio, the less likely the patient has cancer.

Cancer risk = 55% if < 10% f PSA

Cancer risk = 5% if > 25% f PSA

PSA is most useful in gauging the success of prostate cancer treatment, rather than detecting localized cancer, but is quite a good compliment to the Digital Rectal Exam (DRE) for early detection, and should be part of the regular yearly checkup. If your PSA was less than 10, the chances that treatment will work are good (this includes watchful waiting, surgery and radiation). If your PSA was between 10 and 20, there is some cause to be concerned. If your PSA was more than 20, the chances that treatment will work are not so good.

FREQUENTLY ASKED QUESTIONS (Continued)

Q. What is the DRE?

The Digital Rectal Exam (DRE) is a relatively simple, painless procedure in which the physician inserts an index finger in the patient's rectum for a few seconds to feel for any hardness on the prostate. If the physician feels an abnormality, the next step is to have a prostate biopsy and ultrasound. The only drawback of this easy, cheap and effective test is that it misses some prostate cancers when used alone.

Q. I have been newly-diagnosed with prostate cancer. How can I find out the extent of the disease?

The work-up to diagnose the extent of prostate cancer after an abnormal screening exam has changed dramatically over the last few years. For example, we now know that a man with a PSA between 4-10 does not need either a bone or CT scan prior to treatment unless the Gleason grade - a measure of the aggressiveness of a tumor based on its physical characteristics - of the tumor biopsy is high. Pelvic lymphadenectomy - a way to sample the lymph nodes prior to surgery or radiation to ensure that the tumor has not escaped the gland - can be used selectively because PSA levels and Gleason grading can predict when the cancer has escaped the gland just as well or better.

Q. How can I detect prostate cancer early?

Approximately 200,000 men are diagnosed and 30,000 die annually from prostate cancer. Due to new screening tests, more prostate tumors are being detected early, when they are most curable. Every man age 50 and over should have a digital rectal examination as part of an annual physical checkup. Through this method, a doctor can feel the prostate gland for irregularities. In addition, men age 50 and over should have an annual blood test for prostate-specific antigen, or PSA. Elevated levels of PSA may indicate a need for additional follow-up. Men who are at a higher than average risk for prostate cancer, such as those who have a family history of the disease and African-American men, should have the PSA test starting at age 45.

FREQUENTLY ASKED QUESTIONS (Continued)

Q. How is race considered a risk factor for prostate cancer?

African Americans have the highest rates of prostate cancer in the world, and are about twice as likely to develop prostate cancer as members of any other race. Asian men have the lowest rates. It is not clear why race is such an important factor, but it may be related to where you live. Amount of sun exposure and geographic variation on diet may cause an increase in risk of developing prostate cancer.

Q. What does the future hold?

The treatment of prostate cancer is a rapidly evolving field. New advances in surgery, radiation therapy, chemoprevention, hormone therapy, and chemotherapy are being discovered almost daily. Many people are very excited by vaccine and gene therapy studies, especially in men with small amounts of cancer (e.g., men with a rising PSA after primary treatment). Another exciting area that has generated significant interest is that of angiogenesis inhibition. This refers to stopping the tumor from growing new blood vessels. There are over 30 angiogenesis inhibitors currently in clinical trials.

What is done today for the treatment of prostate cancer resembles very little of what was done even five years ago. What we do five years from now will be even better.

Your Options for Treatment in Early Stage Prostate Cancer...

After being diagnosed with prostate cancer, you should carefully weigh your options with your physician and your family or other people you trust. There are several concerns you should address, including other health problems that may shorten your life or the potential side effects of active treatment.

What They Are

There are **four major** treatment options for **localized or early stage prostate cancer**:

1. **Watchful Waiting**
2. **Surgery (Radical Prostatectomy)**
3. **Radiation Therapy: External Beam Radiation or Internal Seed Implant**
Radiation Therapy also called **Brachytherapy** (bray-kee-THER-a-pee)
4. **Newer Treatments:** such as **Cryosurgery**

What to Expect

1. **Watchful Waiting**

What happens...

Watchful Waiting does not mean that you and your doctor do nothing, but rather you closely monitor your cancer through **PSA testing, DRE's and ultrasounds**. Should the monitoring detect any negative changes, you might then go ahead with active treatment.

1. Watchful Waiting (Continued)

How it can help ...

- This treatment may be right for you if the following applies to you:
 - You have a small cancer confined to the **prostate gland** and it does not appear to be spreading or growing fast (such as, low **Gleason grade** tumors scoring 3-6).
 - You are older and/or have a lot of serious health problems.
- **Watchful Waiting** avoids the negative side effects that could come with active treatment like:
 - Trouble controlling your bladder or bowels
 - Trouble having an erection
- It is the least expensive treatment option.
- It gives you the most time to come to a decision -- you can always change your mind and begin active treatment.

How it may cause problems ...

- The cancer could spread and become harder to cure.
- If not carefully followed, the cancer may progress in the **prostate** area and cause you symptoms such as difficulty passing urine, bleeding, or pain.
- It can be stressful to go on with daily life not knowing what your cancer might do.
- When treatment is initiated, surgery or radiation may be more difficult.

2. Surgery (Radical Prostatectomy)

What happens...

- **Radical Prostatectomy** simply means removal of the entire **prostate** (and the cancer in it) along with the **seminal vesicles** (small glands attached to the **prostate** that store **semen**). Sometimes, the doctor will also remove **lymph glands (nodes)** next to the **prostate**.
- In the method used most commonly at the University of Michigan the doctor can get to the prostate through a small incision made in the lower **abdomen**. Another approach is through an incision between the legs near the **scrotum** and in front of the **rectum**. A third approach puts a lighted tube (called a **laparoscope**) through the **abdomen** (this is often referred to as robotic or laparoscopic surgery).
- In some cases, the doctor can perform “nerve-sparing” surgery. (This can reduce the chance that a man will have problems holding his urine or having sex after surgery.) If the cancer is too near the nerves, the doctor might have to cut out the nerves so no cancer is left behind.
- The surgery through an incision takes approximately 2 hours. Using the laparoscopic robotic technique, it takes 3-4 hours.
- You will be discharged from the hospital one or two days after the surgery.
- A tube (**catheter**) will be placed in your **bladder** to drain your urine. It will be left in for seven to ten days after you leave the hospital.
- **Radical Prostatectomy** is a major operation and necessitates a 2-4 week recovery period. When you return to work depends on if you have a sedentary job or a physically strenuous job.

2. Surgery (Radical Prostatectomy) (Continued)

How it can help ...

- A man can be free of **prostate cancer** for the rest of his life if the tumor has not spread and the doctor is able to remove all of the cancer.

How it may cause problems ...

- ▶ **The doctor may not get all the cancer out.**
- ▶ **You may have complications from the surgery:**
 - **There are risks associated with any major surgery:** bleeding, blood clots, infection, and the risk of death (less than 1 out of every 1,000 people have died as a result of surgery at the University of Michigan) .
 - **Problems holding urine:** After you recover from surgery, you may leak urine if you cough, sneeze, strain yourself, or change position suddenly.
 - Leaking may last several days to a few months and then stop without the need for special treatment. (This is the case for 91 out of every 100 men.)
 - Leaking may persist and continue to be a moderate or severe bother for about 4 out of 100 men and treatment may be sought for this. One case out of 100-200 men will have very poor control likely requiring surgical correction.

▶ **You may have complications from the surgery (Continued):**

- **Problems passing urine:** You can have scars inside the tube (**urethra**) that carries the urine out of the penis. (This is the case for between 5 and 15 out of every 100 men.)

- This can make it hard to pass urine.

- You can undergo a small procedure done through the penis to unblock the tube.

- **Problems having or keeping an erection (erectile dysfunction):**

You will very likely have trouble having or keeping an erection for a period of time after the surgery. But it is possible to have the sensation of an orgasm or climax although minimal or no fluid comes out after surgery.

More than 50 out of 100 men will have return of their sexual ability after surgery at UM, but recovery can take months to several years. Your doctor can help you treat **erectile dysfunction** with medicine or other special treatments.

- **The risk of problems with erections depends on a few things:**

- How good your erections were before the surgery

- The technique used by your surgeon

- Your age

- **The effects on your feelings:** After surgery, most men feel relieved,

but you may feel sadness or a change in your feelings about yourself and about sex. If these feelings are just too strong, ask your doctor to suggest help. Also, see a listing of Support Groups available in Tab 9.

3. Radiation Therapy

What happens ...

There are 2 types of Radiation Therapies to choose from:

▶ **External Beam Radiation**

- This method fights the **cancer** with **radiation** (high-energy x-rays and gamma rays) from outside the body.
- The medical team will direct a beam of **radiation** (using a machine) at your **prostate**.
- You do not check in to the hospital -- you are treated as an outpatient.
- You go to the hospital or clinic 5 days a week for 7 to 8 weeks.
- Each treatment lasts about 15 minutes.

▶ **Internal Seed Implant Radiation Therapy also called Brachytherapy**

- This method fights the **cancer** with **radiation** from inside the body.
- **Radiation seeds** (7 to 150 depending on the size of your prostate) are placed inside the **tumor** in the **prostate** through very thin needles and a computer controlled device.
- You do not check in to the hospital -- you are treated as an outpatient.
- Sometimes doctors use **External Beam Radiation** along with seeds.

▶ **If you choose radiation therapy, your doctor may also suggest that you take medicine to reduce your male hormones.**

- This may increase the chances that your radiation treatment is successful.
- Hormone therapy may last for several months or 2-3 years and may mean getting regular injections.
- Side effects may include: loss of sexual desire, hot flashes, and loss of energy.

3. Radiation Therapy

How it can help ...

- A man can be free of **prostate cancer** for the rest of his life if the radiation kills all of the cancer cells and the tumor has not spread.
- The problem with erections may be less likely than with surgery, but more likely than **Watchful Waiting**.
- There may be fewer problems with holding urine than with surgery.

How it may cause problems ...

▶ **Radiation may not kill all of the cancer cells.**

▶ **You may have some side effects with either type of therapy, but how often they may happen may be different:**

- **Problems holding urine:** You may not be able to control your urine for a few weeks.
 - This is rarely a problem for men receiving **External Beam Radiation**.
 - This is a permanent problem for about 2 to 4 men out of every 100 who receive **Internal Seed Implants**.
- **Problems passing urine:** It may be painful or difficult to pass urine and you may have to pass urine more often.
 - This is a permanent problem for about 3-4 of every 100 men receiving **External Beam Radiation** at the UM, and possibly more with **Internal Seed Implants** .
- **Loose bowel movements (diarrhea), pain or bleeding from the rectum:** For more than 90 men out of 100, this is temporary or does not occur. For both types of radiation, this is permanent for about 8 of 100 men.

▶ **You may have some side effects with either type of radiation therapy, but how often they may happen may be different (Continued):**

• **Problems having or keeping an erection (erectile dysfunction):**

You may have trouble having or keeping an erection. But it is possible to have the sensation of an orgasm or climax although minimal or no fluid comes out after surgery. More than 50 out of 100 men will experience a return of sexual ability. Your doctor can help you treat **erectile dysfunction** with medicine or other special treatments.

- **The effects on your feelings:** After radiation therapy, most men feel relieved, but you may feel sadness or a change in your feelings about yourself and about sex. If these feelings are just too strong, ask your doctor to suggest help.

▶ **If radiation does not cure your cancer, surgery is possible, but is more difficult because of scarring around the prostate from radiation and complications are more common.**

4. **Other Treatments:** such as **Cryosurgery**

What happens...

Cryotherapy or **Cryosurgery** is a procedure in which the **prostate** is frozen, thereby destroying the **cancer**.

- It is performed in only a few centers around the country and is no longer done at UM.
- It takes two or three hours, and you can usually go home the same day.
- During the procedure, several small punctures in the skin under the scrotum are made through which small metal probes are inserted into the **prostate**. These probes deliver liquid nitrogen into the **prostate** until it freezes.
- Afterward, the frozen cancerous area melts; as it thaws, the cancer cells break apart or burst.

4. **Other Treatments:** such as **Cryosurgery**

How it can help ...

- The best candidates for cryotherapy are older men with advanced prostate cancer, those who do not qualify for or want surgery or radiation therapy, and possibly those for whom radiation therapy was ineffective.
- It requires a hospital stay of one day.

How it may cause problems ...

- Because it is a relatively new procedure, little is known about its long-term effectiveness.
- About 90 of every 100 of men experience long-term difficulties having erections after **cryotherapy**.
- Most patients have trouble urinating for several weeks after the procedure.
- While not as expensive as **radiation** therapy, it still carries a hefty price tag - similar to surgery.
- Some insurance companies will not cover the cost.

FREQUENTLY ASKED QUESTIONS

Q. What is salvage radiation?

If a patient has had surgery and there is evidence of a rising PSA, then salvage radiation to where the prostate was may be an option and does successfully cure 30-50% of these patients. The lower the PSA is the greater the chance for cure with salvage radiation.

Q. What are the major side effects of primary treatments for prostate cancer?

The side effects of all of the primary therapies are remarkably similar. Patients may have a chance of impotence (inability to get an erection), urinary symptoms (e.g. leaking urine) and bowel symptoms.

Q. After treatment, what are my chances of experiencing sexual or erectile dysfunction?

After surgical removal of the prostate, almost all patients experience difficulty obtaining erections soon after surgery. If it is possible to preserve the small nerves which run along side the prostate that supply erections, there can be recovery of function. However, this recovery can be a slow process and can range anywhere from 1-3 years or more with gradual improvement. There are a variety of treatment options which can obviate the problems with erectile dysfunction but unquestionably there is a period of adjustment. It is important to realize that after surgery, a man is still able to have the sensation of orgasm or climax, although minimal or no fluid comes out. The difficulty with sexual function arises purely from the fact that the penis does not become firm enough. The younger the patient is and the smaller the cancer, the better the odds are that a minor procedure which preserves the nerve tissue can be done and allow recovery of erections.

Radiation therapy, either in the form of external or seed implant can also cause difficulty with erections. Usually this is not evident immediately after the treatment, but may develop months to years later. As with surgery, there is no interference in the ability to have a sensation of an orgasm.

FREQUENTLY ASKED QUESTIONS (Continued)

Q. What is incontinence and is it a side effect of treatment?

Incontinence is some degree of loss of urinary control. Fortunately, most patients after prostate cancer therapy have no incontinence, some have a bit and a very small percentage (less than 1%) have severe incontinence. Based on a survey done by the UM Urology Center, about 3-4% of men have some continuing bothersome urinary leakage, while 96-97% of men recover their urinary control so that there is minimal or no bother from any leakage. After extreme radiation treatments, the incidence of incontinence is even lower. However, there can be some irritation to the bladder and prostate such that there is more frequent urination and the urgent need to urinate in a small percentage of men. This is in general minimal or no bother. After seed implant therapy, incontinence is low, but other urinary symptoms are seen in 20-30% of men with a few experiencing permanent and continuing problems.

If You Choose Surgery

You are about to undergo a major operation performed by a Michigan Urology Center doctor at the University of Michigan Hospital. The healing process takes time and we would like for you to observe the following instructions during your initial recovery at home. Please review these materials prior to your surgery and prepare questions for your physician and nursing staff.

Your Pre-Operative Visit

At the pre-op visit (scheduled just before your surgery) the following will be completed:

- A physical assessment
- An appointment with the anesthesiologist
- Lab tests (blood draw, etc.)

Planning Ahead

- **Time off work** should start day of surgery or one day prior if bowel prep is needed. Anticipated time off work is four to six weeks for more strenuous type jobs...desk jobs can be returned to at about 2-4 weeks if the patient is able. Insurance forms can be submitted on the day of surgery or after to the doctor for completion. As of 2004, we do not know if the recovery with a laparoscopic or robotic approach will provide a shorter recovery than the traditional surgical approach.
- **The night before surgery** you may have nothing to eat or drink after midnight. You may have sips of water up to 3 hours before checking in to admitting. You may take Tylenol for general aches, headache or discomfort prior to surgery. You should stop taking aspirin and dietary supplements one week before surgery. Other types of medications that should be stopped one week before surgery include Vitamin E, NSAIDS such as Alleve, naprosyn, anaprox, ibuprofen, motrin, advil. If you are taking other prescribed medications, a physician at the time of your pre-op visit will discuss which can be taken and which should be avoided the day of surgery.

On the Day of Surgery

Where do I go?

- Before your surgery day, you will receive a call from the hospital with a suggested time for you to arrive (normally 1 ½ to 2 hours prior to the scheduled time of your surgery).
- The day of your surgery, park in one of the Taubman Center patient parking lots and proceed to the Admissions area on the 1st floor of the University Hospital.
- The Admissions area opens at 5:30 am, Monday-Friday and can best be located by searching for the blue column near the atrium at the valet parking entrance to the A. Alfred Taubman Center.

The Admissions/Pre-Op (pre-operation) Process

- Once you are checked in at admissions, you will wait until the staff is ready to take you into the pre-op area.
- At this time, only you (the patient) will be allowed into the pre-op area until you are undressed, gowned, given a bed and had an **IV** placed. Once you are ready, one person will be allowed back to wait with you until your surgery.
- Any other family members or friends will be escorted to the Family Waiting area down the hall, marked with a red column.
- In pre-op, the anesthesiologist will introduce him/herself and explain the anesthetic portion of the procedure. If you have questions or concerns that were not addressed during your pre-op evaluation, please be prepared to ask the anesthesiologist at this time.
- When it is time for your surgery, your guest will be sent back to the family waiting room and you will be anesthetized and taken into the operating room.
- Different types of anesthesia can be used for the operation. These include an epidural in which you will be numb from the waist down and heavily sedated during the procedure or a general anesthesia in which you are asleep during the entire operation.

On the Day of Surgery(Continued)

During and Immediately After Surgery

- The family members should stay in the waiting area as much as possible. If your family or guests decide to leave, they should notify the front desk in the waiting area.
- When the surgery is complete, your urologist will come into the family waiting area and request a private conference with any family members/guests. The urologist will explain the procedure and answer any questions you may have.
- After surgery, you will be moved to a Post Anesthesia Care Unit (PACU) near the operating rooms. You will stay in this area until you are ready to be moved to an inpatient room on the 5th floor of the University Hospital. (Surgery usually lasts 2-3 hours; recovery lasts an additional 2 to 3.)
- The Patient Controlled Analgesic device will be placed at this time to ensure you receive appropriate pain control.
- Your family or guests will be notified when you are ready to be transported to your room.

While you are in the hospital

- **Once you arrive to the floor**, your family will be able to visit with you.
- You will be asked to turn, cough, and take deep breaths every two hours.
- You may be able to start drinking clear liquids. Your regular diet will start the morning after surgery.
- The IV and IV pain medication are discontinued the morning after surgery and you are transitioned to oral pain medication.
- Wound dressing and the pelvic drain are usually removed before you are discharged from the hospital.
- Your Foley catheter care is reviewed and if doing well the patient is released late morning or early afternoon the day after surgery.
- You will have to pass gas prior to discharge but you may have not had a bowel movement.

On the Day of Surgery(Continued)

While you are in the hospital

- Pelvic Drains

- During surgery, the physician will place a pelvic drain (called a JP Bulb) in or around the surgical area that will exit through the abdominal wall.
- These are used for drainage of excess fluid from the surgical area itself.
- Most patients will have these removed the first day or two after surgery.
- Occasionally this pelvic drain may be left in for a week or two, in which case you would be instructed how to care for it at home.

- Pain Control

- The night after your operation (and occasionally through the following day or two) a **Patient Controlled Analgesic device**, referred to as a PCA, will be used to help control any post-surgical pain.
- This is a device that administers pain medication through your **IV**. If needed, you can push a button which will automatically release a prescribed dosage of the pain medication at preset intervals.
- The PCA will be discontinued the day after your surgery and you will start on oral medication for pain control.
- Most patients receive a drug called Toradol for 24 hours which is very helpful in relieving pain.

- Preventing Blood Clots in the Legs

- During the operation and through the night after surgery, you will wear self-inflating stockings which promote blood circulation in the legs.
- They help prevent blood clots from forming in the legs. Once you start walking the next day, they will be removed.

Preparing for Home

There is a visiting nurse arranged to stop by the home of all patients unless the patient declines. The nurse will monitor vital signs, foley drainage, incision and review catheter care. The frequency of visits will be determined by the patient and nurse at the first visit.

Your ride home: If you live hours away, plan on stopping every 1 to 1.5 hours to walk. You may want to sit in rear seat reclined with feet up. A pillow to rest on may be helpful.

If you live out of state, ideally you may want to make arrangements to stay at local hotel until 24 hours after catheter removal. If arrangements have already been made to have the catheter removed by your local urologist, you should plan on staying at a local hotel for a few days after discharge and then flying/driving home. You will need to get up and move around every 1 to 1.5 hours during the flight or ride home.

Recovering at Home

There are many things that you and your caretaker will need to do immediately following your release from the hospital. Please review these items carefully and make all the necessary arrangements to provide you with the greatest level of comfort and care at home.

Will I need anything special at home after I leave the hospital?

Although not completely necessary, we do have a few recommended items to increase comfort while at home and when you return to work.

- Depends on adult diapers for urine leakage following surgery
- A stool or seat for the shower, if standing is uncomfortable or tiresome
- Plastic or rubber sheeting for the bed, or disposable protective pads
- Bacitracin or other antibiotic ointment for catheter care
- Sterile alcohol swabs for catheter care
- A mild laxative (milk of magnesium, etc.)

Catheter Care

When you leave the hospital, you will have a **catheter** in place (most patients will have the **catheter** in place for 7 to 10 days following their surgery). The **catheter** (often referred to as a Foley catheter, named for its inventor) is a special tube used to drain the urine from your bladder. In men, this tube is inserted through the penis and connects with a urinary draining bag (this bag will be connected to your leg with a leg band for your trip home from the hospital). Many patients have questions about the **catheter**, so please read these instructions carefully.

Cleaning the urethral opening

To decrease the risk of infection from the **catheter** and later scarring, it is important to clean the **urethral opening** (the place the catheter tube leaves the penis). Using soap and water, wash around the **urethra** at the entry point of the **catheter** twice a day. Rinse well. Place a small amount of bacitracin ointment (antibiotic ointment) around the **meatus** (the outside opening of the penis).

Changing the position of the leg band

- Position leg bag around the thigh
- Stretch the leg band in place and fasten Velcro tab.
- Place the Foley catheter over the green tab. Leave an ample loop in the catheter above the leg band to avoid traction.
- With the catheter in the desired position, insert the narrow green Velcro tab over the catheter and through the square opening so that the Velcro tabs overlap.
- Pull Velcro tabs in opposite directions and secure in place. To readjust, simply raise either side of the tab, adjust, and refasten the tab.
- Reposition the band every 4-6 hours to prevent pressure on the leg from the elastic. This can be done by changing to the other leg or by lowering the leg band.
- The leg band can be washed if needed.

Catheter Care (Continued)

Caring for the Urinary Drainage Bag

- The nurse will help with the initial set up (including adjusting the tubing length) of your large Foley bag and a more portable leg bag.
- You can wear either the large bag or the leg bag anytime during the day, according to your comfort and/or convenience. Although the leg bag is convenient, it can at times drain the bladder less effectively than the large bag, **and needs to be emptied at least every 3 hours.**
- Put the buttons of the leg bag strap through slits at the top and bottom of the bag with the buttons facing out to prevent a pressure point on your leg.
- Position the bag with the soft backing against the skin. Adjust the straps until you are comfortable. The excess strap may be trimmed with scissors.
- Attach the urine bag to the end of the catheter by inserting the open end of the tubing from the bag snugly into the open end of the Foley catheter. Be very careful while connecting the leg bag tubing to the catheter to keep it clean.
- Ensure that the outlet valve at the bottom of the bag is firmly closed. Simply flip the valve of the bag drainage port upward toward the bag until it snaps firmly in place.
- To drain the bag, simply flip the clamp on the bag drainage port downwards. The flexible outlet tube can be directed to control the flow of urine. You do not have to disconnect the leg bag from the Foley to empty it. You can empty the bag directly into the commode.
- The connector should be washed with soap and water after each disconnection and covered with the gray cap that is provided. The gray cap can be soaked in soap and water when not being used. Rinse with warm water before placing on the connector.
- To keep the leg bag and large Foley drainage bag clean, rinse daily with equal parts water and vinegar to keep free of bacteria and reduce odor.
- **KEEP EITHER THE LEG BAG OR THE LARGE FOLEY BAG BELOW THE LEVEL OF THE BLADDER TO PROMOTE DRAINAGE AND COMFORT!**

Catheter Care (Continued)

When the Foley Catheter is Removed

- The **catheter** will be removed in the clinic 7 - 10 days following your surgery. On the day the **catheter** is removed, drink plenty of fluids before you come to the clinic.
- Problems with urinary control are common once the **catheter** is removed. It is normal to experience leaking at first. Do not become discouraged!
- **Urinary control may return in three phases:**
 - Phase I- You are dry when you lying down at night.
 - Phase II- You have periods of good urinary control in the early morning.
 - Phase III- Urinary control lasts for longer intervals and later into the afternoon and evening.
- Until urine control returns completely, it may be helpful to wear an incontinent pad. "Depends" makes a pad designed to adhere inside jockey-style briefs. These pads can be purchased at general retail store (e.g. Meijer, Target, etc.). **Please bring 2 or 3 such pads with you when you return for Foley removal.**
- After the Foley is removed, you may have some initial bleeding from the penis. It is recommended that you also bring a pair of jockey shorts with you to the clinic. The shorts will not only give you support but will also help to secure the incontinence pad.
- **You will be given a prescription for antibiotics to start the morning before the catheter is to be removed.** You will continue with the antibiotic for 3 days.
- **The process of removing the Foley catheter is simple.** There is a small balloon filled with water that keeps the Foley in place. The water is removed with a syringe and the Foley is taken out. When the Foley is taken out, you may experience minimal discomfort for a few seconds.

Other Important Care Issues

Showering/Bathing

You may begin showering or bathing 1 day after surgery. There will be white tape strips called "Steri-strips" on the incision which you should remove while showering 1 week after surgery.

Diet

Return to normal eating habits; although small meals are better tolerated at first. Allow your appetite to determine how much you eat; do not force food if you feel full or if your stomach is unsettled. In the first week after surgery, it may be best to avoid spicy or fatty foods. Also, **please continue to drink plenty of fluids** to promote recovery and normal urinary function.

Walking

Walking soon after surgery encourages early return of bowel function, promotes effective breathing, mobilizes secretions, improves circulation, prevents stiffness of joints, and relieves pressure. The morning after surgery, you will be instructed to be out of bed at least 6 times a day. This can be thought of as twice after breakfast, twice after lunch, and twice after dinner. Being out of bed more often is encouraged but must be at least 6 times a day. After you are discharged from the hospital it is very important to continue with the minimum of walking 6 times a day.

Activity Restrictions

It is expected that you will resume regular activity around your home when you are discharged from the hospital. However, you should **avoid lifting objects** heavier than 10 pounds and **avoid excessive bending or stretching** at the waist for 2 weeks. **Any exercise or exertion that would cause you to break out in a sweat should be avoided for 3 weeks.** Gradually increase the amount of walking you do each day, but the length of your walk should be less than ¼ mile until one week after your catheter removal.

Do not drive any motorized vehicle for two weeks. If traveling by car, be sure to stop every 1-2 hours. Get out of the car and walk around. **Do not sign legal documents while taking a narcotic pain medication.** The narcotic medication may cause alteration in visual perception and impair judgement.

Other Important Care Issues (Continued)

Scrotal Swelling

Scrotal swelling is common for up to a week, but is harmless and painless. If your scrotum is swollen, wear supportive briefs or an athletic support. When resting, elevate your scrotum on a towel (your nurse can assist in showing you this technique).

Bowel Function

It is common for your appetite and bowel movements to recover gradually in the first week after surgery. **Usually bowel movements may not resume until about 2-3 days after surgery.** Avoid straining to have a bowel movement. You will be given Colace, a medication to soften your stool. **If constipation becomes problematic** you can increase your roughage you take in your diet, drink prune juice or take an over the counter laxative such as mineral oil, milk of magnesium or magnesium citrate. It is recommended that you keep well hydrated by drinking 4-8 glasses of water a day to enhance the effectiveness of Colace.

Bladder Spasms

You may also experience some cramping feelings, called bladder spasms, until the Foley catheter is removed. Bladder spasms are a natural response of the healing bladder. These can be felt as urgency to urinate or brief pelvic or rectal pressure. Bladder spasms also commonly cause urine or blood to squirt out of the penis at the time of a bowel movement. Should bladder spasms become a problem, call your doctor. You will be given Motrin to reduce these spasms and to prevent other pain, but there are other medications that can be given to relieve this discomfort. If you are taking oxybutynin, ditropan, or detrol for this particular problem, you must stop taking it the day before you have your Foley removed.

The Appearance of Blood

Blood in urine is normal. Urine can appear just pink tinged to red tinged. This should be clear by the time of catheter removal.

Blood around the catheter and or urine around the catheter is normal but should be just urine or none by the time of catheter removal. You will usually notice with bowel movement or bladder spasm.

Looking Ahead

Sexual Activity

Sexual recovery is typically more gradual than urinary recovery. The return of sexual function varies depending on your age, previous function, and the extent of the tumor. For those men who have return of erections, it is a gradual process. Most men do not have erections sufficient for vaginal penetration immediately after catheter removal. Erection recovery can take months or years; during this period, medications can be used to help your erections be firmer and more durable. Many men, however, do experience some improvement over the first year and even more during the second year after the operation. The stimuli for erection during the first year will also be different. Visual stimuli will be less effective, and physical stimulation will be more effective. For this reason, **do not be afraid to experiment with sexual activity-you can do no harm.** If you obtain a partial erection, attempt vaginal penetration- this form of stimulation is a major factor to enhance further erection, but do not feel too discouraged if it does not work well. Do not wait until you have the "perfect erection" before attempting intercourse. In addition, you should be able to have an orgasm even if you do not have an erection. With orgasm, there will not be an emission of semen because the prostate and seminal vesicles have been removed. There are many aids available to assist in getting an erection. Your doctor will discuss this in detail with you.

Cancer Follow-up

After the first return clinic visit (6-8 weeks following surgery), your doctor will determine how often it will be necessary for you to return. You may follow-up with your University of Michigan Urologist or urologist near your home, or with your primary care or local physician. For your follow-up, you should have a PSA test done at least twice in the first year and at least once a year thereafter. If you choose to have your local physician perform this test instead of coming to the Michigan Urology Center, forward the results to us and please call your University of Michigan Urologist to review the PSA test results if you have any concerns. **The schedule for PSA testing is: every 6 months until 5 years after the surgery, then yearly.**

Reasons to Call Your U of M Urologist Without Delay!

DAYTIME **734-647-8903**

AFTER 5:00 PM **734-936-6267; ask for the Urology resident on call**

- **Any signs of pulmonary embolus** (blood clot from pelvis which has gotten into the blood circulation of the lung):
 - Chest pain
 - Difficulty breathing or shortness of breath
 - Sensation of heart "racing"
 - **THE ABOVE SYMPTOMS REQUIRE IMMEDIATE ATTENTION AND IF YOU ARE UNABLE TO REACH YOUR U of M UROLOGIST OR UROLOGIST ON CALL YOU SHOULD GO TO A NEARBY EMERGENCY ROOM IMMEDIATELY**
- **Signs of a blood clot in the legs or pelvis** (Deep Venous Thrombosis)
 - Pain in the back of the thigh, calf, or groin
 - Swelling of the leg
- **Problems with the surgical incision**
 - Redness and/or warmth around incision
 - Pus draining from incision
- **Problems with the Foley Catheter**
 - Urine not draining
 - Red blood which doesn't clear soon after resting and increasing fluid intake
 - Foley catheter inadvertently pulled out from the bladder or penis
- **Other**
 - Fever with temperature by mouth greater than 101°F
 - Nausea, vomiting or severe abdominal bloating
 - Pain not relieved by prescribed medications
 - Inability to urinate after catheter removal

Post Treatment Implications

After your treatment is completed, you will need to monitor your health because prostate cancer can come back. Here are some things for you and your loved ones to consider.

How to make sure the treatment has worked

- After you have completed your treatment, you will have regular doctor visits and tests:
 - you may have a **Digital Rectal Exam** even if your **prostate** was removed during surgery
 - you will likely have PSA tests conducted for several years after therapy
- If your **PSA** goes up, this can be an early warning that the **cancer** has returned.
- If all tests remain normal over a period of time, your **cancer** is said to be in remission (that means the cancer cannot be found). You should still have regular doctor visits and tests from time to time.

If your cancer returns

- Sadly, no treatment is foolproof. If the cancer comes back, it is generally more difficult to treat the second time around.
- If your **cancer** is still confined to the **prostate gland** area, your doctor may try a type of local treatment different than the first.
- If your **cancer** has spread beyond the **prostate gland** area, you will need to have a treatment that will effect the entire body, not just the area of the **prostate**. This is called **systemic therapy**.

What Happens if Your Cancer Gets Worse: Treatment of Later Stage Prostate Cancer

The Treatments discussed in this booklet, so far, are for men with early stage prostate cancer.

- Early stage prostate cancer is still confined in the prostate gland.
- It is cancer that appears not to have spread, and is treated with local therapy (watchful waiting, surgery or radiation).
- Early prostate cancer is often curable.

Some men will experience a rise in PSA after primary treatment. This is often the first sign that the cancer has returned.

- In 20 to 30 of every 100 men diagnosed with prostate cancer, the cancer comes back after primary (local) treatment.
- Your doctor will carefully watch the PSA number and also monitor how quickly the PSA goes up.
- Rising PSA prostate cancer may be treated with additional local therapy or systemic therapy. Your doctor will help you decide when you should get additional therapy and which type of therapy will be best for you.

Some men will have cancer that has spread beyond the prostate. This is called Locally Advanced or Advanced Prostate Cancer.

- Locally advanced prostate cancer is cancer that has left the prostate gland, but is still in the region just around the prostate (seminal vesicles, pelvic lymph nodes). Often, locally advanced prostate cancer is treated with the intention to cure. Men with locally advanced prostate cancer have a higher risk of their cancer returning after primary therapy than men with prostate cancer that is confined to the prostate.

What Happens if Your Cancer Gets Worse: Treatment of Later Stage Prostate Cancer (Continued)

What is advanced prostate cancer?

- About 17 of every 100 prostate cancer patients will have cancer that has spread beyond the prostate when they first see the doctor.
- Prostate cancer that has left the prostate and traveled to bone, lymph nodes or other places in the body is called **metastatic prostate cancer**.
- Advanced prostate cancer cannot be cured, but many men are able to live a long time with it.
- Local treatment is usually not used by itself in men with advanced prostate cancer because local treatment alone cannot cure advanced prostate cancer.
- Advanced prostate cancer is usually treated with systemic therapy (hormonal or chemotherapy treatments that go through your whole system and affect the cancer wherever it is).
- The aim of the systemic therapy is also to control certain symptoms, such as pain and trouble passing urine.

If you develop later stage prostate cancer, your medical team will talk with you about treatments for that stage of cancer. Options for additional treatment are salvage radiation, classic hormonal ablation, and even chemotherapy.

FREQUENTLY ASKED QUESTIONS

Q. If I have metastatic, or advanced, prostate cancer, what are the standard options for treatment?

The first step in controlling metastatic cancer at this point is hormonal therapy (medical or surgical castration) to remove testosterone from the body. Ninety percent of testosterone in the body is produced by the testicles from signals received from the brain. One of these signals is the lutenizing hormone releasing hormone (LHRH). This hormone is blocked by medicines that stop the production of testosterone. Another 10% of the body's testosterone comes from the breakdown of steroids - hormones that are made in the adrenal gland.

Q. What is adjuvant therapy?

Adjuvant therapy refers to treatment that happens near or after the time of another treatment, such as surgery or radiation. Neoadjuvant therapy refers to treatment with hormones or chemotherapy prior to surgery or radiation. Studies suggest that patients with locally advanced prostate cancer benefit from adjuvant hormone ablation after primary therapy. This is especially true for patients with disease outside of the prostate treated with radiation. It is now a standard of care for most patients to receive hormone therapy in this setting for anywhere from 3 months to 2 years. Treatment with hormones after surgery is more controversial. A recent study suggested that patients found to have positive lymph nodes at the time of surgery live longer if they receive hormone therapy soon after their operations.

Q. How do hormone levels effect my risk for prostate cancer?

High levels of testosterone appear to increase the risk of developing prostate cancer. Men with high levels of estradiol (female hormone) appear to be at a decreased risk.

FREQUENTLY ASKED QUESTIONS (Continued)

Q. What is hormone ablation?

Hormone ablation - also called androgen ablation - is an extremely common treatment for metastatic cancer. This can take several forms, but three are considered to be standards of care: surgical castration by removing the testicles, single agent monotherapy with an LHRH analog (Lupron or Zoladex), or complete androgen blockade by adding a nonsteroidal antiandrogen to surgical castration or monotherapy (CAB). The two most common nonsteroidal antiandrogens are flutamide (Eulexin) and bicalutamide (Casodex). These block the ability of testosterone to bind inside the prostate cancer cell to its receptor. In theory, this blocks the remaining 10% of the circulating testosterone from fueling the cancer cell. However, there is still very little evidence that adding an antiandrogen to monotherapy actually helps men to live longer.

Q. What is intermittent androgen blockage (IAB) for metastatic prostate cancer?

While monotherapy or complete androgen blockade (CAB) remain the standard of care for patients that need hormonal therapy, IAB is being investigated as well as used for treatment by some physicians. In this treatment, patients are cycled on and off hormonal treatment as their PSA normalizes. Most patients are started on CAB and after 6-8 months, when their PSA is undetectable, are taken off of their hormones until the PSA rises to between 2 and 4, and sometimes as high as 10. The cycle is then repeated. Although not conclusively proven, it is felt by many physicians that this is a safe therapy that does not decrease a patient's survival. It has been shown in clinical trials to increase the quality of life of patients.

FREQUENTLY ASKED QUESTIONS (Continued)

Q. What is anti-androgen withdrawal syndrome?

Approximately 20-30% of patients who are treated with complete androgen blockade will develop "anti-androgen withdrawal syndrome." This syndrome, seen mainly in patients who have been on flutamide or bicalutamide for multiple years, occurs because as the cancer changes the anti-androgen drug, which typically blocks the androgen receptor, actually binds to it and turns it on. This stimulates the cancer cells to grow. Therefore, what was once a good drug becomes a harmful one. That is why when the patient's PSA starts to rise on CAB, the first thing to do is stop the nonsteroidal anti-androgen. This may decrease the PSA for an average of six months.

Q. What is total peripheral blockade?

Peripheral blockade is "triple dose Casodex," which is 150 mg of Casodex daily. A very recent development from a clinical study in Europe has suggested that high-dose Casodex may work just as well as monotherapy. If this is true, it would leave men with circulating testosterone and give them all of the benefits of hormone therapy. The main side effect of this therapy is breast enlargement. This can be prevented by giving a low (and perfectly safe) dose of radiation to the patient's breast prior to treatment.

Nutrition and Dietary Supplements

How Can You Lower Your Risks?

While there are certain risk factors for developing prostate cancer that cannot be controlled, there are ways – most of them quite simple – to possibly lower the risks of developing prostate cancer or having the cancer return.

Diet

Saturated fat (especially animal fat like those found in hamburger and steak) and fiber affect your risk of dying from prostate cancer. Studies have shown that tumors grow faster in animals fed a high-fat diet. This may be connected to the risk of high testosterone levels, which are controlled not only by genes, but also by diet – the amount of fat you eat changes the amount of circulating testosterone in your body. In general, the higher the fat in the diet, the higher the level of circulating testosterone.

In addition to avoiding a high fat diet, and increasing your fiber intake, there are **several foods that are associated with cancer prevention**, such as Soy and Green Tea.

Supplements

Vitamin E and selenium have been shown to decrease the risk of developing prostate cancer in some studies. The National Institutes of Health is sponsoring a large study to determine for certain if these agents actually do stop the development of prostate cancer. In the meantime, the current recommended doses are 50-100 IU per day of Vitamin E and 200 micrograms of selenium.

Finally, **lycopene**, which is found in cooked tomatoes, has been demonstrated in one study to potentially decrease prostate cancer risk.

How Can You Lower Your Risks?(Continued)

Alcohol

While there is no conclusive evidence, a number of studies have suggested that men who drink heavily have a slightly increased risk of getting prostate cancer. Whether this is actually the case or not, men who drink heavily are likely to incur other health problems, so it is not advised.

Occupation

While there is no conclusive evidence of a correlation between occupation and prostate cancer, industries such as fishing and forestry, railway transport, water treatment, farming and aircraft manufacturing have been associated with prostate cancer risk. This is likely because of certain occupational exposures, such as metallic dust, liquid fuel combustion products, lubricated oils and greases, and large amounts of herbicides and pesticides. Men who were exposed to Agent Orange in Vietnam may have a higher risk of developing prostate cancer as well.

How Can You Lower Your Risks? (Continued)

Alternative and Conventional Options

First, remember that a heart healthy diet equals a prostate healthy diet.

Consider the following:

- Saturated or hydrogenated fat
 - Decrease to less than 10% of calories (ideally, less than 7%).
 - One of the only studies (Quebec City) that examined diet impact after prostate cancer diagnosis found an improved prognosis for those who consumed less than 10% of calories from saturated fat.
- Trans-fatty acids/partially hydrogenated oils
 - Eliminate from the diet.
 - Research has demonstrated a greater relationship between trans-fatty acids and cardiovascular risk than that between saturated fat and cardiovascular risk.
 - New research demonstrates a possible relationship between intake and cancer risk.
- Fruits and vegetables (not just tomato products)
 - Increase consumption of all types of fruits and vegetables, for example: tomato products, cruciferous veggies (broccoli, cauliflower, Brussels sprouts, etc.).
- Soy/flaxseed products
 - Increase consumption to 1 to 2 servings per day.
 - Examples include: soybeans, soy protein powder, flaxseed, etc.
 - The FDA has approved advertising claiming that 25 grams of soy protein per day (not isoflavones) can reduce cholesterol when substituted for animal protein.
 - Flaxseed is high in fiber so it should not be taken at the same time as oral medications/supplements (allow a 2- to 3-hour time window).

Alternate and Conventional Options (Continued)

• Weight and Exercise

- Maintain a healthy weight (Body mass index [BMI < 30]). To calculate your BMI, visit <http://nhlbisupport.com/bmi/bmicalc.htm>
- Exercise 30 minutes per day/ 5 days a week.
- Obesity appears to be related to a higher incidence of, and possibly worse prognosis for, a number of cancers, including prostate cancer.
- The mental health benefits of regular physical activity are as strong as the physical health benefits.
- Exercise is particularly important in men on hormonal therapy for prostate cancer.

• Dietary supplements – think dietary sources first!

Selenium

- 200 mg per day, ideally from a brewers' yeast source, if you qualify.
- Initial evidence suggests that current or recent smokers or those with low levels of plasma selenium are the only individuals who may benefit.
- Go for the dietary sources first (fish, garlic, Brazil nuts, etc.) before taking this supplement.
- Do not necessarily supplement if you are taking a cholesterol-lowering drug (statin) with or without niacin.

Vitamin E

- 50 to 400 IU per day – if you qualify.
- Initial evidence suggests that current or recent smokers are the only individuals who may benefit.
- Again, go for the dietary sources, such as nuts, seeds and oils (soybean, canola, olive, safflower).
- Vitamin E supplements have been a big disappointment over the past few years in cardiovascular trials such as the Heart Outcomes Prevention Evaluation (HOPE) trial and the Primary Prevention Project (PPP).
- In addition, vitamin E supplements reduce levels of dietary vitamin E and dietary vitamin E was recently found to inhibit COX-2 activity (vitamin E supplements do not).
- Do not necessarily supplement if taking a cholesterol-lowering drug (Statin) with or without niacin or aspirin.

Alternate and Conventional Options (Continued)

• Dietary supplements (Continued)

Aspirin

- Low-dose (81 mg per day) aspirin/nonsteroidal anti-inflammatory drugs (NSAIDS) . The gold standard, if you qualify.
- Every major randomized trial (Physicians Health Study, PPP, etc.) of low-dose aspirin has ended early because it reduces the risk of a first or second cardiovascular event by 50% within 5 years.
- Side effects from aspirin are serious (internal bleeding and ulcers), so supplement only if you qualify and your doctor agrees that you need aspirin.

Special Conditions

- During any treatment (seeds, external beam, radical prostatectomy, etc.) do not take supplements or you will compromise your treatment.
- Allow at least 3 to 6 months (talk to your doctor) before going back on supplements. This is a good time to focus on lifestyle changes.

Hot flashes

- This occurs as a result of hormone ablation.
- Mild to moderate hot flashes may be reduced with one or two dietary sources of soy protein each day (60g = 76 mg of isoflavones), and/or with 800 IU of supplemental vitamin E supplements if you not are on a cholesterol-lowering drug (statin) and/or aspirin.
- If these do not help, it is time to talk prescriptions with your doctor (for example, megestrol acetate, DES, venlafaxine, paroxetine).

Alternate and Conventional Options (Continued)

• Dietary supplements (Continued)

Osteoporosis

- Take 400 to 800 IU of vitamin D per day (400 IU in a multivitamin). Fall and winter months require about 800 IU per day. This should be combined with calcium supplements (a minimum of 500 mg per day to a maximum of 1200 mg per day). Calcium citrate supplements, like Citracal, can be taken with or without meals and are the best calcium supplements for those with a history of oxalate stones, but they cost more.
- Exercise is also extremely important in preventing osteoporosis.
- If a dual-energy x-ray absorptiometry (DEXA) scan shows more serious osteopena or osteoporosis, talk to your doctor about the advantages and disadvantages of drug therapy (for example, bisphosphonates or estrogen).

What Do I Need to Know If I am Coming from Out of Town?

Preparing for My Hospital Stay

If you choose to have your surgery performed at the University of Michigan under the care of the Michigan Urology Center, please keep the following in mind:

- Carefully read the materials in Tab 5: If You Choose Surgery, to understand what you might expect from your surgery and your stay at the U of M Hospital.
- After you are released from the hospital, you will still be recovering from major surgery and may find travel difficult. You may consider staying at the Med Inn located on the Medical Campus, or at a local hotel until you feel able to travel, or until your catheter is removed.
- You may also have the catheter removed at a clinic near your home.
- Discuss these options with your doctor and develop a plan that is best for you and your family.

How do I get to Ann Arbor?

Maps of Michigan, Ann Arbor, and the University of Michigan Medical Campus are included in this section. If you wish to obtain more information about the Hospital or get driving directions and you have access to the internet, log on to:

<http://www2.med.umich.edu/Guide/mapsdirect.cfm>

Or, call The Michigan Urology Center:

1-866-URO-MICH (876-6484)

How do I get to Ann Arbor? (Continued)

Air Transportation

Detroit Metro Airport (DTW) is located about 30 minutes East of Ann Arbor. Please contact one of the companies listed below to arrange for transportation to and from Detroit Metro Airport:

Metro Cars Inc.	734-946-5700
Arbor Limousine Service	734-663-5959
Ann Arbor Sedan Service	734-645-6060

If you prefer to rent a car, maps of the greater Ann Arbor area are included or can be obtained from rental car companies or by referring to the maps on the following pages.

Where Can I Stay in Ann Arbor?

Lodging

The University of Michigan Health System has a 90-room hotel, called the **Med Inn**, located between the University Adult Hospital and CS Mott Children's Hospital. It offers comfortable, cost-effective accommodations. A complimentary continental breakfast is included. All rooms with double beds and suites are non-smoking and barrier free for the ease of the patient and family. **For information, call 1-800-544-8684 or 734-936-0100.** Please note that you need to call in advance for a reservation as the Med Inn is full almost every evening.

Nearby hotels offer discounts to families traveling in to Ann Arbor for medical purposes. **You may call the Campus Inn at 1-800-666-8693 or the Bell Tower Hotel 734-769-3010**, if rooms are not available at the Med Inn or if you wish to stay outside of the hospital. Both hotels are within 1 mile of the hospital and can arrange for transportation for you to and from the hospital. Please note that these hotels are booked on football weekends well in advance. You can visit www.mgoblue.com to view a current year football schedule for the University of Michigan.

If you have access to the internet and would like additional information on accommodations in Ann Arbor, log on to: **www.annarbor.org**

What Dining Options are Available?

Dining

University Hospital Cafeteria

The University Hospital Cafeteria, catered by Aramark, is on the 2nd floor of the adult hospital. The cafeteria offers a variety of foods including salads, sushi, sandwiches, soups and pastas. Brochures near the cafeteria's entrance contain suggestions from our Mfit Healthy Dining.

Hours of operation:

Monday through Friday - 7 a.m. to 2 p.m.; 5 to 7 p.m.

Saturdays, Sundays and holidays - 7 a.m. to 2 p.m.

Wendy's

The menu at Wendy's features their usual counter fare, potatoes and salads to go. The hours of operation of Wendy's are convenient for our guests needing to eat outside of normal meal times.

Hours of operation:

Monday through Friday 7:00 a.m. to 2 a.m. (except Friday close at midnight)

Saturday 10:30 a.m. to 12 a.m.

Sunday 10:30 a.m. to 2:00 a.m.

Holidays 10:30 a.m. to 9:00 p.m.

Coffee

The University of Michigan Health System has various coffee carts throughout the complex offering bagels, scones, muffins and normal coffee options.

How Can I Find Additional Information on Ann Arbor?

For additional information, contact:

Ann Arbor Area Convention & Visitors Bureau

120 West Huron Street

Ann Arbor, MI 48104-1318

Phone: (734) 995-7281

Toll free: (800) 888-9487

Fax: (734) 995-7283

Email: info@annarbor.org

Other Helpful Information

Who Do I Call if I Have a Problem?

The University of Michigan Health System:

734-936-4000

This is also the number to give out to friends and family who may wish to call and check on you after surgery

The Michigan Urology Center Clinic:

1-866-URO-MICH (876-6484)

Telephone numbers for contacting your Michigan Urology Center Doctor:

734-936-0054 - Office of James Montie, M.D.

734-615-0564 - Nancy Rodriguez-Galano, RN

**In Case of an Emergency After Normal
Business Hours:**

**734-936-6267 - ask for the Urology Resident
on Call**

Where Can I Find Additional Support?

Prostate Education and Support Groups in Michigan:

- **See a complete listing in the back of this section.**
- **Visit Health Topics A to Z**

University Of Michigan Health Services UMHS Prostate
Examinations : <http://www.med.umich.edu>

Urinary Incontinence and Support Services in Michigan:

Ann Arbor	(734) 712-3655
Birmingham	(734) 258-3700
Detroit	(313) 745-7020
Farmington Hills	(248) 477-7400
Grand Rapids	(616) 247-7030

Impotence and Support Services in Michigan:

Detroit	(313) 343-3469
Farmington Hills	(248) 477-6100
Grand Rapids	(616) 391-1230
Mt. Clemens	(734) 466-8666
Port Huron	(734) 985-1573
Warren	(810) 759-7455

American Cancer Society Offices in Michigan:

Southfield	(248) 483-4300
Lansing	(517) 332-3200
Grand Rapids	(616) 364-6121
Traverse City	(231) 947-0860

Where Can I Find Additional Support? (Continued)

Information and Support Outside of Michigan:

The American Cancer Society

www.cancer.org (enter your zip code) or
(800) ACS-2345

American Foundation for Urologic Disease (AFUD)

300 W. Pratt St., Ste. 401
Baltimore, MD 21201-2463
(800) 242-2383

National Cancer Institute (NCI)

31 Center Drive MSC 2580
Building 31, Room 10A16
Bethesda, MD. 20892-2580
(800) 4-Cancer

USTOO!

800-8-80-USTOO or www.ustoo.org

If you call any of these resources you do not have to give your name.

Glossary

A Review of the Medical Words Used in this Booklet

B **Biopsy** – Doctor snips a small piece of tissue, which is looked at closely under a microscope.

Bladder – pouch inside your body where urine is stored. When the bladder is full, you feel like you need to pass your urine.

Bone scan – an imaging procedure to tell if prostate cancer has spread to the bones.

Bowels – the long tube in the body that holds bowel movements.

Brachytherapy – type of internal seed radiation sometimes used to treat prostate cancer. The seeds are inserted through the area underneath the testicles.

C **Cancer** – the general term for a group of diseases in which body cells start to grow out of control.

Cancer grade – best guess about how fast the cancer is probably growing (how aggressive it is). With prostate cancer, the grade is also called the Gleason Sum or Gleason Score.

Cancer stage – tells about how big the cancer is and about how much it has probably spread.

Catheter – Tube used to drain the urine from the bladder. In men, the tube is put in through the penis.

Clinical trial – research studies that test new drugs or procedures with less well-known or unknown effects or side effects.

Conformal radiation therapy – conformal external beam radiation is a better way of directing the radiation to the prostate without spilling over to other tissues.

CT scan – an X-ray procedures that uses a computer to look at many areas of the body. It can be used to tell if prostate cancer has spread.

D **Diagnosis** – when a doctor figures out what is wrong with a patient, using information the patient gives, a physical exam, and test results.

Digital Rectal Exam (DRE) – when a health care provider inserts a finger in the rectum to feel the prostate.

E **Erection** – when the penis gets hard.

External beam radiation – a treatment using a radiation source outside the body to treat a cancer.

G **Gleason sum** – grade of a prostate cancer resulting from looking at a biopsy sample through a microscope. Also called the Gleason Score or Cancer Grade.

H **Hormone** – a natural substance produced in one part of the body that affects cells elsewhere in the body.

Hormone ablation therapy – cancer treatment that involves lowering or blocking male hormones.

I **Incontinence** – the inability to control the flow of urine from the bladder. Not being able to control passing your urine (pee).

Impotence – the inability to have an erection; penis does not get hard.

In remission – cancer is not found after treatment.

Internal seed implant (brachytherapy) – radiation therapy in which a radiation source is placed in the prostate.

L **Laparoscope** – a lighted tube used to help remove the prostate through the abdomen.

Local therapy – treatment that affects a tumor and the area nearby.

Lymph nodes (glands) – small areas in the body where germs or cancer cells are trapped. Lymph nodes also have special cells that help fight infections. These nodes are often removed during surgery.

M **Metastasis** – prostate cancer that has spread to distant places in the body like bone or liver.

MRI – a non X-ray procedure that uses a computer to look at many areas of the body. It can be used to tell if prostate cancer has spread.

N **Node** – a short-hand way of saying lymph node.

O **Oncologist** – a doctor who specializes in treating cancer. Radiation oncologists treat cancer with radiation. Medical oncologists use hormones and drugs to treat cancer.

P **Prostatitis** – inflamed or infected area of the prostate.

Prostate Specific Antigen (PSA) – a substance made by the prostate that can be measured with a blood test. A high level in the blood may or may not indicate prostate cancer.

R **Radiation therapy** – treatment using radiation to destroy cancer.

Rectum – opening in the bottom where the bowel movements come out.

S **Scrotum** – in men, the pouch of skin that contains the testicles (balls).

Second opinion – term used by insurance and medical experts to mean asking another doctor to review your case and the treatment proposed to you.

Seed implant (brachytherapy) – radiation therapy in which a radiation source is placed in the prostate.

Semen – male sex fluid.

Seminal vesicle – a small sac attached to the prostate that holds sperm. Cancer may spread there.

Stage – with cancer, the stage describes how much cancer has probably spread.

T **Testicles** – Male sex glands (balls).

Tumor – an abnormal mass of tissue, sometimes used to talk about cancer.

U **Urethra** – a tube that carries urine or semen to the outside of the body, through the penis.

Urologist – a surgical doctor who specializes in diseases of the Urinary and male sex organs.

The Michigan Urology Center wishes to thank the following for their help in making this project possible for our patients:



Domino's Pizza

Jan Brandon for lending her creativity and expertise with design and language

The Michigan Cancer Consortium for allowing us to use illustrations and concepts from its booklet "Making the Choice"

The following faculty and staff of the Michigan Urology Center:

Opal Lesse, MSN

James E. Montie, MD

Karen Olson, PhD

Kenneth J. Pienta, MD

Nancy Rodriguez-Galano, NP

Howard Sandler, MD

David P. Wood, Jr., MD