

What is a Prostate Seed Implant (Brachytherapy)?

Radiation therapy is a treatment for cancer that uses high-energy X-rays to destroy cancer cells. There are two types of radiation therapy: external beam radiation therapy (EBRT) and internal radiation therapy (brachytherapy). Prostate seed brachytherapy implants are a type of internal radiation therapy used to treat prostate cancer. Prostate seed implant therapy is accurately planned so that specific parts of the prostate receive more direct radiation. At the same time, the organs near the prostate gland (bladder and rectum) receive much lower doses of radiation.

A prostate seed implant procedure is done in the operating room under anesthesia. During this procedure, the doctor places about 20 – 30 hollow needles into the prostate gland. This is generally done by the Radiation Oncologist and Urologist. On average, each needle holds 2 – 6 radioactive seeds such that each patient will be implanted with 60 – 150 metallic seeds. The needles are guided through the skin directly into the prostate gland using ultrasound guidance. Three (3) to four (4) weeks before the implant, an ultrasound plan or “map” is created to determine how many seeds are required and in what distribution.

After the procedure, patients stay in the hospital for 4-8 hours for observation and recovery from anesthesia. Most patients will go home the same day. All patients will have a catheter inserted into the bladder at the time of surgery; however, almost 90% of patients go home without the catheter.

Side effects of this therapy may include frequent urination, urinary urgency, burning on urination, slow urinary stream, and fatigue. Less often, patients may experience diarrhea and soft stools. There may be some discomfort that can be well managed with pain medication. The nursing and medical staffs are available to discuss the management of side effects and discomfort with you.

How Do I Set Up This Therapy?

Step One – Consulting with a Specialist About Your Care

- Your Urologist refers you to the Department of Radiation Oncology.
- You schedule a consultation with the Radiation Oncologist. You and the Radiation Oncologist determine whether you are a candidate for this treatment therapy.

Step Two – Having an Ultrasound Procedure (2 to 3 Weeks Before Surgery)

- You return to Radiation Oncology for a *Volume Study*. During the Volume Study, the staff brings you into an examination room.
- There, the staff positions you on a table with your knees flexed up in stirrups (*lithotomy* position). The doctor inserts a rectal probe which connects to an ultrasound machine. Using ultrasound images, the Radiation Oncologist locates the prostate gland and measures your bone structure and the size of the gland.

Pre-Register for Surgery Online or by Phone

Pre-registration is a **two-step** process that is necessary for you to complete before having a prostate seed implant procedure. Step one (1) involves registration of your insurance and personal information. Step two (2) involves speaking with a registered nurse (RN) who informs you of any necessary testing you may need before your surgery.

1. **Pre-register online at www.cpmc.org/services/pre-reg.html**. Click “Register online” for the campus where your surgery is scheduled. Follow the online instructions to complete the Surgery Pre-Admission form. This will take about 10 to 15 minutes. Be sure to have your insurance information readily available when you complete the online form. If you do not wish to pre-register online, you may call (415) 600-2500 to register by phone.
2. **Speak with a nurse by calling (415) 600-2500** no earlier than 2 weeks before your surgery. You may speak with a nurse at that time or schedule a phone appointment for a later time. Please have a current list of medications you are currently taking, including vitamins, over-the-counter medications, and herbal preparations. The nurse will inform you of any further testing you may need.

How Do I Prepare for a Seed Implant Surgical Procedure?

7 – 10 Days Before Surgery

- If you are taking blood-thinning medications such as Aspirin, Heparin, Coumadin (Warfarin), Plavix (Clopidogrel), or Non-Steroidal Anti-inflammatory medications such as Naprosyn (Naproxen), Advil (Ibuprofen), Motrin (Ibuprofen), stop taking these medication seven (7) days before surgery. **Note:** If you take Coumadin (Warfarin) or Plavix (Clopidogrel), talk with your primary doctor prior to stopping these medications.
- You may continue to take Tylenol (Acetaminophen) and Vicodin (Hydrocodone and Acetaminophen).

The Day Before Surgery

- Eat a low-fiber diet. For example, avoid raw and cooked vegetables, whole grain bread, brown rice (white rice is all right), and raw fruit.
- **Nothing to eat or drink after midnight:** Do not eat or drink anything including coffee, water, Lifesavers[®], and chewing gum after midnight the night before your surgery, unless otherwise indicated by your surgeon/primary doctor. If you have had something to eat or drink, please notify your surgeon.
- Fill any prescriptions you may have before you go to the hospital.
- Arrange for a designated driver (responsible adult) to drive you home on the day of your procedure.

On the Day of Surgery

- Plan to arrive two (2) hours before your scheduled procedure. **Note:** If you are scheduled for surgery at 7:00, 7:15, or 7:30 a.m., please arrive at 6:00 a.m.
- The procedure takes about one (1) hour.
- Go to: **Ambulatory Care Unit (ACU)**
2351 Clay Street
Stanford Building – 6th floor
(415) 600-3480

After Surgery

- Family members and friends may visit once you are transferred to the nursing unit after your surgery.
- You will have a thin tube (catheter) in your urethra to drain the bladder after surgery. The catheter drains urine into a bag. Most often, the nurse removes the catheter before you go home. Sometimes, the catheter remains in place if there is increased swelling of the prostate after surgery. If you are sent home with the catheter, nurses will teach you how to care for it. You will return in a few days to have your catheter removed after the procedure.
- Your medications include:
 - 1) an antibiotic: Cipro (Ciprofloxacin Hydrochloride), Septra (Sulfamethoxazole and Trimethoprin) or Levaquin (Levofloxacin)
 - 2) a prostate relaxant: Cardura (Doxazosin), Flomax (Tamsulosin), Hytrin (Terazosin)
 - 3) and pain medication: Vicodin, (Hydrocodone and Acetaminophen), Tylenol (Acetaminophen)

The nurses will teach you about these medications. It is important that you begin taking these medications after returning home on the night of your seed implant surgery.

Managing Pain

The doctors and nurses will ask you about your pain. Please report right away if pain is limiting or stopping you from doing the activities your doctors and nurses recommend. Report any problems with sleep, mood, or appetite caused by pain. If you are comfortable, you will feel better and recover faster.

Before You Go Home

Talk to the nurses and doctors about any special instructions and safety precautions you may need to follow at home.

Caring for Yourself at Home

- **Straining Your Urine the First 24 Hours Following Implant Procedure:**
 - Strain your urine for the first 24 hours following implant procedure after you leave the hospital as there is a possibility a seed may be passed during urination. The passing of a seed usually occurs within one (1) day of the implant procedure. See page 6 of this handout for what to do if a seed is found.
 - A kit is provided for you to use when you leave the hospital. In this kit, you will find a disposable filter for you to strain your urine for the first 24 hours following the seed implant.
- **Measure Your Urine Output:** The nurse teaches you to measure your urine in a container. Measure your urine for 24 hours. If your urine output is less than 150 cc in a 6-hour period or you develop significant pain or pressure in your abdomen, call your doctor. In rare cases, patients may develop a blockage in the bladder that prevents urination.
- **Drink Plenty of Fluids (Water, Juices) Once You Go Home for 4 – 6 Hours after You Leave the Hospital (unless on fluid restriction):** This ensures normal flow of urine and may help to prevent blockages. If on fluid restriction, discuss with your doctor.
- **Having an Increased Sense of Urinary Urgency:** You may feel an increased sense of urinary urgency that may last as long as 6 weeks after surgery, but usually subsides in 1 – 2 weeks. This may include urinary frequency up to every 15 – 20 minutes during the day and night. This is due to swelling of the prostate and the radiation therapy.
- **It is normal to have blood-tinged urine** for 3 – 5 days after surgery. You may also notice some small blood clots when you urinate. Drink plenty of liquids to keep the urine diluted and light pink if possible; if on fluid restriction, discuss with your doctor.
- **Check the Seed Implant Site for any Bleeding or Drainage:** Be sure to keep the area clean.
- **Apply Ice to the Surgery Site as Needed for Discomfort:** You may experience bruising or tenderness in this region (especially the scrotum).
- **Take the antibiotics as prescribed until finished.**

Caring for Yourself at Home *(continued)*

- **Take pain medication prescribed as needed.**
- **Do not take Aspirin, Blood-thinning medication, Non-Steroidal Anti-Inflammatory medications** such as Motrin or Advil (Ibuprofen) or Aleve (Naproxen) for three (3) days after surgery.
- **About Your Diet:** You may resume your normal diet after the implant procedure. Avoid caffeinated-containing beverages (coffee, tea, cola) for three (3) days to prevent bladder spasms or blockages with urinary flow. Herbal teas are all right.
- **Bathing:** You may shower the next day. You may take a tub bath 24 hours after the procedure.
- **Activity Level:** Rest for 24 hours. Walking and moving about are encouraged. No prolonged sitting for periods over 3 – 4 hours at a time. Avoid strenuous activity or heavy lifting (no lifting greater than 10 pounds) for five (5) days after your procedure. No bike riding or lower body exercises for three (3) days. No swimming until seven (7) days after the procedure. After that you may return to your normal activity.
- **Sexual Activity:** Sexual intercourse with a condom may be resumed anytime after the implant. Initial ejaculations may be uncomfortable and can be discolored (dark brown, black, or red). This discoloration is normal and is a result of bleeding that may occur during ejaculation or have occurred during the implant. One week after the seed implant, it is not necessary to use a condom. It is extremely rare for a seed to be released into the ejaculate. You may sleep in the same bed with your partner. You may resume sexual activity when you feel able. Also, there is less volume (amount) of ejaculate. In most cases, this is temporary.

What to Do if a Seed is Found

- A seed will look like a short, metallic pin about 1/8 inches long. The passing of a seed usually occurs within one (1) day of the implant procedure.
- Use the tweezers (or another device – for example, cotton swab, forceps) provided in the kit if you find a seed and you can retrieve it from the filter.
- Place the seed in the container you were given when leaving the hospital and bring it to your follow-up appointment. Do not place it in the mail.
- Return the reusable portions of the kit (except for the plastic strainer) at your next follow-up appointment.

Caring for Yourself at Home *(continued)*

You May Experience These Symptoms After the Implant Procedure

- Burning sensation when you pass urine the first few times.
- Passing urine with a small amount of blood or clots. These symptoms usually stop in a day or two.
- Need to urinate more frequently for several weeks.
- Strong need to urinate – "urgency" for several weeks.

Call Your Doctor if You Have Any of the Following Symptoms

- Urine output less than 150 cc in six (6) hours or have increased pressure or distension in the lower abdomen.
- Inability to urinate for over six (6) hours.
- Fever (101°F / 38.3°C or above), chills.
- Persistent bleeding, redness at the implant insertion site.
- Yellowish discharge from the implant site.
- If you go home with a catheter and experience any problems, call your doctor for assistance.
- If you have questions or problems not covered by these instructions, call your doctor.

Safety Precautions at Home After Seed Implant

- **Radiation Safety is a Concern for Our Patients:** The implant seed you receive is an I-125 seed. I-125 seeds are low-energy radioactive materials that quickly lose their radioactivity. Because of the low energy of the seed, most of the radiation is contained within the prostate gland. Some radiation is given off to the surrounding structures such as the rectum and bladder.
- **Observe the Following Precautions Listed Below to Protect Those Around You from Unnecessary Radiation:** Because there is a very small amount of radiation outside the body, you should observe the following precautions to make sure that those around you are protected from unnecessary radiation:

Safety Precautions at Home After Seed Implant *(continued)*

- **Precaution – Pregnant Woman:** Any pregnant woman or possibly pregnant woman should not have prolonged personal contact with you for the first month. She can say hello to you briefly, and then move to a physical distance of three (3) feet or more away. She should not sit next to you and she should not hug you. Note: At the physical distance of the three (3) feet limit, there is no limit to the length of time she can be in the same room.
- **Precaution – Children:** You should not hold children age 18 and younger, especially not on your lap during the first month following the implant. Also, you should limit the time a child spends closer than three (3) feet to you to less than one (1) hour per day. This restriction should continue for one (1) full month's time.
- **Under Other Circumstances, No Other Radiation Contamination Problems:**
 - For example, linen, clothing, tableware, dishes, toilet facilities may be used by other persons without special precautions. Items that you touch or items that you may use – do not become radioactive.
 - Touching the patient – does not contaminate anyone.
 - Shaking hands or kissing the patient is all right provided that the time recommendations listed above are followed.
 - Your bodily wastes (urine and stools) are not radioactive.

When Do I Make My Follow-Up Appointment?

- One (1) month after you have left the hospital, you will be given an appointment to return for a set of X-ray films or a CT scan to confirm the number and position of the seeds implanted.
- Follow-up appointments with your urologist and radiation oncologist will be done on a regular basis.

Urologist Telephone #: () _____

Radiation Oncologist Telephone #: () _____

- Digital rectal exams and PSA will be done at intervals indicated.

More Ways to Learn

- Go to www.cpmc.org/learning.
- If you are interested in attending a support group, visit www.prostateawarenessfoundation.org.
- For information on how to obtain a Personalized Health Research Information Packet on your specific condition, please contact the Health & Healing Library (a Planetree affiliate) at (415) 600-3681.
- Visit the National Cancer Institute at www.nih.gov and search under "Prostate."

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Note: This information is not meant to replace any information or personal medical advice which you get directly from your doctor(s). If you have any questions about this information, such as the risks or benefits of the treatment listed, please ask your doctor(s).