

## Prostate Seed Implantation

Several treatments are available for cancer of the prostate. Treatment options depend on many factors. These include your age, prostate-specific antigen level (PSA), rectal exam findings, x-rays, and biopsy results. You should discuss your treatment options with your primary care doctor, urologist, and radiation oncologist.

### What is Prostate Seed Implantation?

Prostate seed implantation (PSI) is a type of radiation therapy that involves placing radioactive seeds into the prostate. PSI delivers a high dose of radiation to the prostate gland and sometimes the seminal vesicles, which lie on either side of the prostate gland.

Your doctors have decided that you are a candidate for PSI. Depending on the stage of your cancer, you may be treated with:

- Seed implant alone

- Seed implant with hormone ablation [ah-BLAY-shun] (injections to block the male hormone)
- Seed implant and external beam radiation therapy with or without hormone ablation

The type of radioactive sources used in PSI come in the form of metallic seeds, about the size of a grain of rice. The number of seeds needed to treat your cancer is determined by the size of your prostate gland and the dose of radiation being used.

Typically, between 70 and 150 seeds are placed at one time. The seeds give off their radiation slowly over several months. Within one year, the radioactivity can be considered gone; however, the metallic seeds will remain in your prostate gland.

### Planning for the Implant

You will need to have a special ultrasound before your implant. This is called a transrectal (trans-REK-tuhl) ultrasound (TRUS). It is done by placing a probe in your rectum to view the prostate gland. This will allow the doctor to take measurements and plan for the PSI. Your radiation oncology nurse will schedule this for you.

### Preparing for the Implant

Two or three weeks before your implant surgery, your urologist's staff will call you to schedule you for routine blood work and a chest x-ray. It is important to have these done promptly, since your seeds have been ordered.

Be sure to tell your doctor if you take aspirin, aspirin products, or blood thinners, such as coumadin®. Your doctor will instruct you on when to stop taking these medications before your surgery.

Your urologist's staff will give you instructions regarding what you may eat and/or drink the day before your implant surgery. You will also be given instructions on the use of a laxative and/or enema. A nurse from the Same Day Surgery Department will call you the afternoon before the day of your surgery. The nurse will go over your instructions and will tell you where to park and when and where to report. Please plan to have a friend or family member come to the hospital with you on the day of your surgery, because you will not be able to drive home.

## The Day of Your Implant Surgery

When you arrive on the day of your surgery, an intravenous (IV) line will be started in your arm. This line will supply you with medications during the procedure. An anesthetist (an-ES-tha-tist) will talk to you about the type of anesthesia (an-es-THEE-zha) you would like to receive. You will be given enemas to clean the rectum.

## The Implant Procedure

You will be taken to the operating room and will be given medication to relax you. Your urologist will then place a probe in your rectum to locate the prostate gland, so it can be viewed on a monitor. A catheter will be placed in your bladder to drain your urine.

Your radiation oncologist will place thin, hollow needles into the prostate gland, through the skin between the scrotum and the rectum. As the needles go through the prostate, they will be seen on the ultrasound monitor.

The radioactive seeds will be placed into your gland about one centimeter apart as the needles are taken out. The procedure will last about 45 to 90 minutes.

After the procedure is complete, you will be taken to the recovery room where you will stay for about two hours. You will then be transferred to the Same Day Surgery Unit. At this time, your friends and family may visit you.

Your urologist will determine when to remove the urinary catheter. Sometimes, the catheter is left in place for two to three days. If this is the case, arrangements will be made to have it removed after you go home.

## After the Implant Surgery

Most patients are discharged three to four hours after the implant procedure. Occasionally, a patient may need to be observed in the hospital until the next day. Your urologist will determine when you will be discharged from the hospital.

You will be given specific instructions about your implant. Keep these instructions so you can share them with your family members or with any doctors you see after your implant. The instructions will answer any questions you may have about radiation exposure to your family and friends after the implant. They are the same precautions that the radiation oncologist discussed with you.

There is little discomfort after the implant. Some patients do experience mild soreness when they sit. This soreness may last for one or two days after the implant. Sometimes, a patient will notice small spots of blood on his underwear after the procedure. This comes from the spot where the needles were inserted and should stop within 24 hours. Applying mild pressure with a clean cloth will stop the spotting. You may notice a small amount of blood in your urine. This is normal and should stop within one to two days.

after the implant. If the blood in your urine lasts more than two days, or if you see clots, call your urologist.

You should avoid heavy lifting or hard, physical activity for the first two days that you are home. After that time, you may return to your normal activity level.

## Side Effects

Side effects after the implant are generally mild and usually due to the radiation from the seeds in the prostate. These may include:

- Frequent urination
- Burning with urination
- Diarrhea or change in bowel habits

These symptoms may last for two to six months after the implant. They will decrease little by little as the seeds lose their strength.

Drinking plenty of fluids and avoiding caffeine may help the symptoms. If the symptoms are bothersome, your doctor will prescribe medication for you. Sometimes, a patient will experience a decrease in the force of the urinary stream. If this concerns you, call your urologist and/or radiation oncologist.

## Follow-up After the Implant

Your follow-up appointments are very important. The radiation oncology nurse will schedule you to see the doctor anywhere from six to 10 weeks after your implant. Your follow-up appointment is dependent on the type of implant you have and whether you will receive external beam radiation treatments.

After seeing the doctor, you will have x-rays and a CT scan taken of your pelvis. The x-rays and CT scan enable your doctor to see the exact position of your seeds and help determine the dose of radiation the prostate gland is receiving.

Follow-up appointments with your urologist and radiation oncologist will be made on a regular basis. A rectal exam and PSA will be done about every three to six months for the first year. If you were receiving hormone therapy, it will continue as scheduled for the length of time discussed before your implant.

If you have further questions, call:

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