

High Dose Rate (HDR) Brachytherapy for Vaginal, Cervical or Endometrial Cancer using the Syed / Y-Applicator

Your radiation oncologist has ordered high dose rate (HDR) brachytherapy (bray-key-THAIR-uh-pee) to treat your cancer. This procedure delivers a high dose of radiation over a short period of time. It is given directly to a tumor site using special applicators, which limit the dose of radiation to nearby body tissues.

You can expect to have 4 to 8 brachytherapy treatments. The treatment is given twice daily over 2 to 4 days while you remain in the hospital.

Consultation

Your radiation oncologist and radiation oncology nurse will meet with you to discuss the HDR brachytherapy procedure. They will answer any questions you have about the procedure. You will then be asked to sign a consent form for the radiation treatment.

A physical exam, including a pelvic exam, is usually done at the time of the consultation.

Preparation for treatment

Your doctor may order a pre-operative clearance which will include routine blood work, x-rays, or an EKG (electrocardiogram) before the procedure. Before any treatment begins, you will sign a consent form for the procedure and the placement of the applicators.

The applicators may be soft plastic tubes, thin metal rods, or needles. Your radiation oncologist will decide which type of applicator is right for you.

You will be taken to the operating room to have the applicators placed. Your surgeon and radiation oncologist will be in the operating room with you. First, a soft plastic tube (catheter) will be placed into your bladder. This will make you more comfortable during your hospital stay. Next, a staff member from the Anesthesia Department will talk to you about anesthesia options. He or she will ask if you want to have an epidural (eh-pih-DOO-rul) catheter placed in your lower back. An epidural catheter can help control any pain you may have during your hospital stay. Then, your radiation oncologist will place the hollow brachytherapy treatment applicators into and/or surrounding the tumor. The applicators do not have any radioactive material inside at this time.

After the applicators are placed, you will go to the recovery room to wake up. From the recovery room, you will be taken to the Radiology Department where you will have a CAT (CT) scan and adjustment of needles. After the CT scan, you will be taken to the Radiation Oncology Department. More x-rays and measurements may be taken. The radiation oncologist will use the x-rays and special measurements to plan your treatment. Medicine will be available if you have discomfort during this planning session.

The planning process will take several hours. During this time, you will stay in your hospital room. You will remain in the hospital until your radiation treatment is completed and the applicators are removed.

Brachytherapy treatments

For each treatment, you will be taken to the Radiation Oncology Department in your hospital bed. Once in the department, you will be placed in the treatment room. A staff member will check your identification. The applicators will then be attached to the treatment machine using soft, flexible tubes. Sometimes movement of the tubes may cause some discomfort. Medicine will be available if you have discomfort.

All staff will leave the room during your treatment. You will be closely monitored through use of a video camera and an intercom. The radioactive sources will be loaded and removed from the applicator by a special machine. You may hear some clicking noises from the machine as the sources move in and out. You will not feel any difference when the radioactive material is inside the applicators.

Once the treatment is complete, a hand-held scanner will be used to confirm that the radioactive source has returned to the specially sealed container in the machine. Then, the catheters will be disconnected from your applicators. The ends of the applicators projecting from your body will be covered with small rubber caps to keep the inside of the applicators dry. You will return to your hospital room.

Activity with the applicators in place

You will be on bed rest while the applicators are in place. The staff will help you roll from side to side. You will be able to raise the head of the bed slightly. If you raise the head of the bed too high, you could put pressure on the ends of the applicators, which will cause pain.

While you are on bed rest, it is important to breathe deeply, gently cough, and wiggle your toes and feet. This will help to prevent complications. You will have special stockings on your legs to help your blood circulate while you are in bed. You may be given a blood thinner to prevent blood clots from forming.

While you are in your room, you may read, do small hobbies, watch TV, and use the telephone. Your family may visit freely. You will not be radioactive.

Diet

Good nutrition is important to help you tolerate the stress of disease, surgery, and the brachytherapy treatments. Since you will not be able to sit up in bed, choose finger foods such as sandwiches to eat during your hospital stay.

Medicine

It is best if you are slightly constipated while the applicators are in place. This will help to keep the applicators from moving. You will be placed on a low fiber diet and may be given medicine to slow down your bowel activity.

Medicine to relieve pain will be available. Medicine to help you relax or sleep also will be available. Ask your nurse for these medicines as needed. You will continue to take medicine that you took before being admitted to the hospital unless your doctor tells you not to.

Safety Precautions

Both you and the radiation oncology staff must follow certain safety precautions during your treatment. By following these precautions, it is more likely that the radiation will go only to the areas that need treatment.

Do not move from the waist down while you are having your treatment. Keep hands and arms above your waist. During treatment, do not touch the applicators or area from which they project. Before the catheters are disconnected, a hand-held scanner will confirm the radioactive source has returned to the special container.

The radiation oncology staff must leave the room during your brachytherapy treatments. You may notice they wear small badges on their clothing. These badges record the amount of radiation they are exposed to during their work hours.

Removal of the applicators

The removal of your applicators takes only a few minutes. It is done after your final brachytherapy treatment in the radiation oncology department. Pain medicine will be available before or after the procedure if you need it. After the applicators are removed, pressure will be applied over the insertion sites for several minutes to keep the area from bleeding. You will then be taken back to your room to prepare for discharge.

Discharge instructions

After being on bed rest for several days, you may be dizzy and weak when sitting up the first few times. Be sure to call and ask for help before sitting up or getting out of bed. You will be required to walk without help, eat and retain food and fluids, and void (pass your water) without difficulty before being discharged home.

Activity

You may be more tired than usual for several weeks following brachytherapy or surgery.

Plan rest periods throughout the day. If you had surgery, your surgeon will discuss what activities you can and cannot do.

Diet

Return to your normal diet upon discharge, unless your doctor gives you special instructions. If constipation results from the low fiber diet, take stool softeners and a laxative. If diarrhea occurs, continue the low fiber diet.

Skin care

If you have a dressing from surgery, your surgeon will tell you when you can remove it and how to care for your incision. Skin reddening in the treated area is normal after brachytherapy. There also may be some hair loss in that area.

The skin may become irritated from the applicators or catheters. It may be red and sore. Tell the doctor or nurse about any peeling or weeping of the skin. Your doctor may order different creams for you to apply. For comfort and healing of the area, follow these guidelines:

- Wash the area with mild soap and lukewarm water. Gently pat dry.
- Avoid extreme temperatures on the affected area. This includes hot showers, hot water bottles, heating pads, or ice bags.
- Avoid any friction or rubbing of clothing on the area. Do not scratch the affected skin. If itching occurs, call your radiation doctor or nurse for medicine.
- Wear cotton clothing to allow air flow around the tender skin.
- Avoid using any lotions or creams unless recommended by the radiation oncology nurse.

- Take a sitz bath in plain, warm tap water at least three times a day.
- Do not put anything into the vagina until your follow-up visit with your radiation oncologist.

What to report to your doctor or nurse

You should report any of the following symptoms to your doctor or nurse immediately:

- Unusual bleeding
- Temperature of 100.5 F (38.0 C) or higher
- Chills
- Severe discomfort in the treatment area that your prescription pain medicine does not help
- Sudden shortness of breath or chest pain. If this occurs and you are unable to speak with your doctor, go directly to the nearest emergency room.

In an emergency, call
