

Brachytherapy – High Dose Rate (HDR) Radiation Vaginal Cylinder

Goal of the procedure:

Brachytherapy, or internal radiation therapy, is a way of giving a higher dose of radiation to the tumor area, while sparing or reducing radiation exposure to other organs, such as the bowel or bladder. You can read more about internal radiation therapy on page 15 of NCI's *Radiation Therapy and You* handbook.

Overview of the procedure:

Your doctor has recommended that you have high dose rate (HDR) radiation brachytherapy using a vaginal cylinder implant. A vaginal cylinder is a hollow cylinder that is placed into the vagina by your doctor. The cylinder itself is not radioactive. The radioactive source is placed into the cylinder once your treatment plan is done. Determining your treatment plan may take a few hours. Your doctor will also decide how many of these treatments you will need. If you are also getting external beam treatment, you will not be treated with the external beam on HDR treatment days.

Each time you come to Radiation Oncology for your HDR treatment, a medical assistant will check your vital signs and weight. You'll put on a gown and then a catheter will be placed in your bladder to drain urine during the procedure. It helps if you have some urine in your bladder, so try not to empty your bladder of urine before your visit. You will be given a special kind of undergarment, which will keep the cylinder in place. The doctor will then place the cylinder in your vagina. The cylinder should be a snug fit. You must be able to tolerate it for the whole time of treatment.

Be sure to tell your doctor if you cannot tolerate the cylinder. Different size cylinders are available. You will be given medication to take before the visit to help with the pain.

Once the cylinder and catheter are placed, you will need to lay flat for a few hours until your treatment is done. You will have a Computerized Tomography (CT) simulation and/or Magnetic Resonance Imaging (MRI) to decide your treatment plan. After the CT and/or MRI is done, you must stay in the same position that the scan was taken in while you wait for your treatment plan to be made.

During this time, the doctor will use your scans to decide exactly how to give your radiation therapy. This is a complex step and may take many hours. In this section, we give you some ideas for what to bring with you to make this time pass more quickly. You may have a friend or family member join you in the HDR suite/exam room while you wait.

When the treatment plan is done, your doctor will attach the cylinder to a machine that will place the radioactive source into the vaginal cylinder. This machine will put in the radioactive source once everyone else has left the room. Your health care team will be in the next room and will be able to see and hear you during your procedure. The length of the treatment depends on the dose recommended by your doctor.

Once your treatment is done, the cylinder will be detached from the machine and a medical assistant will remove the cylinder, and the catheter. You are not radioactive once the treatment is done and it will be safe for you to be around other people.

What to do before your brachytherapy treatments:

Your doctor has ordered these medications for you to take before your treatment.

For Sedation: _____

For Pain: _____

For Diarrhea: _____

Take all medication as instructed. Bring medications with you to all visits. Bring them in the bottle with the drugstore label on it.

What to bring to your treatment:

We will make sure that a driver is with you before the procedure starts. The medications that you take for pain and sedation can cause drowsiness. It is not legal and it is unsafe to drive while under the effect of these drugs.

It is important to find a way to relax while you wait in between the simulation and treatment. You may want to listen to music or read. We have a CD player and DVD player on hand for your use and we also have guided imagery CDs to listen to, to help you relax.

Other things you may bring to your visit:

- CDs, headphones, magazines, books, DVDs.
- Socks and/or a blanket to make you feel comfortable and warm.

The Cancer Center offers an iPad and laptop loan program through the Patient Education Resource Center (PERC) on level B2 of the Cancer Center. You or a family member can go to the PERC to check one out before your procedure starts.

After each brachytherapy treatment:

You may have some vaginal discharge after the cylinder is taken out. We will give you sanitary pads or you may bring your own with you.

The radiation may also cause diarrhea, vaginal irritation, fatigue, and bladder irritation. These may last for many weeks after your last treatment. Refer to your NCI *Radiation Therapy and You* booklet or talk to your doctor or nurse about how to handle these side effects.

Three days after your last treatment, you should start douching once a day with a mixture of peroxide and water. Continue to douche until your radiation oncology doctor tells you to stop. Douching is done to help remove tissue that has been harmed by radiation, letting healthy tissue heal. It also helps stop infection, and vaginal scarring.

Douche Once a Day Using a Mixture of:

- Mix 2 tablespoons of hydrogen peroxide and 1 cup of water.
- You can buy douche bags at your local drug store. You can also buy douching bottles or a Summer's Eve® kit. Empty the contents of the bottles; wash them out and then use the hydrogen peroxide recipe listed above.
- You can add more water to the solution if you feel irritation or burning.
- Clean the applicator with peroxide after each use.
- Stop douching when your Radiation Oncologist tells you to.

A follow-up visit will be scheduled for about one month after treatment has ended. At this visit your nurse practitioner will talk to you about vaginal healing and sexual health.

Call your Doctor if you have:

- Heavy bleeding - soaking a pad in one hour
- Diarrhea (more than four watery stools in a 24 hour period) not controlled by taking Imodium®
- Pain when emptying your bladder of urine
- Temperature higher than 101° Fahrenheit

Call the Radiation Oncology Department at (734) 936-4300 Monday – Friday from 8:00 AM to 4:00 PM.

On weekends, holidays or after 4:00 PM on weekdays, call the paging operator at (734) 936-6267. Ask to have the On-Call Radiation Oncology Resident paged.

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