

Brachytherapy – High Dose Rate (HDR) Radiation Vaginal Cylinder

What is High Dose Rate (HDR) Brachytherapy?

HDR Brachytherapy (or internal radiation therapy) is a way of treating the area of a tumor with radiation by using an implant. This allows a higher dose of radiation to be given to that area while reducing radiation exposure to other organs such as the bowel or bladder. You can read more about internal radiation therapy on page 15 of *Radiation Therapy and You* (National Cancer Institute) handbook: <https://www.cancer.gov/publications/patient-education/radiationtherapy.pdf>

Your doctor has recommended that you have 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.

What can I expect during the procedure?

Simulation

1. Each time you come to Radiation Oncology for your HDR treatment, a medical assistant will check your vital signs and weight.
2. You'll put on a gown and then a catheter will be placed in your bladder to drain urine during the procedure.

3. You will be given a special kind of undergarment, which will keep the cylinder in place.
4. 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 simulation and the treatment. Be sure to tell your doctor if you cannot tolerate the cylinder. Different sized cylinders are available. You may take medication before the visit to help with any discomfort.
5. 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 or Magnetic Resonance Imaging (MRI) to decide your treatment plan.
6. 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. On page 3, 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.

Treatment

7. When the treatment plan is done, your doctor will attach the vaginal cylinder to a radiation machine. The machine will place the radioactive source into the vaginal cylinder. The radioactive source will go into the cylinder after 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.
8. 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.

How do I prepare for my brachytherapy treatments?

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

- **For sedation:** Take Ativan 30 to 60 minutes before arriving in clinic for treatment. If you take Ativan, you must have a driver and follow the instructions in the discharge agreement.
- **For Pain:** Take Norco, Ibuprofen, or Tylenol 30 to 60 minutes before arriving in clinic for treatment
- **For Diarrhea:** Take Imodium if needed.
- While there are no restrictions on food or drink, avoid anything that could irritate your bowels or that may cause bowel changes before treatments.
- Avoid all fluids 2 hours before each treatment.

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

What should I bring to my treatment?

- Bring a driver if you take mild sedation such as Ativan or prescription pain medication such as Norco or Oxycodone before your treatment. These medications can cause drowsiness. It is not legal or safe to drive while under the effect of these drugs. We will make sure that the driver is with you before the procedure starts.
 - If you do not take these medications, you may drive yourself.
- Something to help you relax. 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, DVD player and guided imagery CDs (to relax and listen to) that are all available for your use.
- Other things you may bring to your visit:
 - CDs, headphones, magazines, books, DVDs.
 - Socks or a blanket to make you feel comfortable and warm.

What will happen after each brachytherapy treatment?

- You may have some vaginal discharge or spotting (bleeding) after the cylinder is taken out. We can give you sanitary pads or you may bring your own.
- The radiation may also cause:
 - diarrhea
 - vaginal irritation
 - fatigue
 - bladder irritation

These may last for many weeks after your last treatment. Refer to your *Radiation Therapy and You* (National Cancer Institute) handbook or talk to your doctor or nurse about how to handle these side effects.
- A follow-up visit will be scheduled for about 6 weeks after treatment has ended. At this visit your nurse practitioner will talk to you about vaginal healing and sexual health.

When should I call the doctor?

Call your doctor if you have any of the following symptoms:

- Heavy bleeding - soaking a pad in one hour
- Uncontrolled diarrhea (more than four watery stools in a 24-hour period) not controlled by taking Imodium®
- Pain when emptying your bladder of urine
- Difficulty with urinating or unable to urinate
- Cloudy urine

- Blood in urine
- Abdominal (belly) pain
- Lower back pain
- Temperature higher than 101 degrees Fahrenheit

What is the contact information?

- Monday - Friday from 7:00am to 5:00pm:
 - Call the Radiation Oncology Department at (734) 936-4300
- For urgent matters 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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