



Brachytherapy – High Dose Rate (HDR) Radiation Smit Sleeve, Ring and Tandem

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 on page 15 of the [Radiation Therapy and You](#) handbook.

Overview of Procedure

Your doctor has recommended that you have high dose radiation (HDR) brachytherapy using a Smit sleeve and ring and tandem. The Smit sleeve will be attached to your cervix in the operating room while you are under sedation. The Smit sleeve stays in place during the treatment. A ring and tandem is placed into your vagina and attached to your Smit sleeve prior your simulation and treatment. The Smit sleeve and ring and tandem are not radioactive. The radioactive source is placed into the ring and tandem once your treatment plan is completed. The whole process may take a few hours, and your doctor will decide how many of these treatments you will need. If you are receiving external beam treatment, you will not be treated with the external beam on HDR treatment days.

On the first day, you may be treated with radiation after your Smit sleeve placement, after you have recovered from sedation. On the days you come for your HDR treatment, a medical assistant will check your vital signs and weight, tell you to put on a gown, and then will place a catheter to drain urine during the procedure. It helps if you have some urine in your bladder, so avoid urinating just before your appointment. Once you are ready, the doctor and resident will examine you, place the ring and tandem, and attach it to the Smit

sleeve. They will pack gauze in your vagina around the ring and tandem to hold it in place.

The packing may cause pressure and some pain. You may be told to take medications to help with this pain before your appointment.

Once the ring and tandem and catheter are placed, you will need to lay flat until treatment is done. You will first have a Computerized Tomography (CT) simulation scan and/or Magnetic Resonance Imaging (MRI), which is used to create 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 created. During this time, the doctor will use your scans to decide exactly how to give your radiation therapy. This is a complex process and may take many hours. In the next section, we give you some ideas for what to bring with you to make this time pass more quickly. During this time you may have a friend or family member join you in the HDR suite/exam room.

When the treatment plan is done your doctor and a medical physicist will connect you to a machine that will put in the radioactive source into the ring and tandem. This machine will put in the radioactive source once everyone else has left the room. The medical 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 prescribed by your doctor.

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

Preparing for Smit sleeve placement

Your doctor or nurse practitioner will go over the preoperative instructions with you and you will get a UMHS Preparing for Your Operation folder.

Call 866-936-8800, between 7:30-11:30AM the day before your surgery. Leave your name, hospital registration number, and phone number on the answering machine. A nurse will call you back between 12:30-4:30PM that day with more instructions about your surgery.

Bowel preparation 1 day before your surgery:

The evening before have liquids only. This is important since you will not be able to use the bathroom during the procedure. If you are having loose stools or diarrhea, take Imodium®. Do not drink alcohol 24 hours before surgery.

After midnight the night before surgery, do not eat or drink anything, including: food, chewing gum, or candy.

Instructions for after Smit sleeve placement:

You will be given discharge instructions by the recovery nurse. They will go over your recovery from sedation procedures.

No: tampons, douching, intercourse, swimming or tub baths until Smit sleeve is removed at the end of brachytherapy treatment and your doctor has given the approval.

After the Smit sleeve is placed and based on your treatment plan, you will be either sent home, or you will be transferred to the Department of Radiation Oncology for your first treatment.

Instructions for your brachytherapy treatments

Medications: Your doctor has ordered these prescriptions for you to take before the procedure:

For pain: _____

For sedation: _____

For diarrhea: _____

Take all medications as told. Bring medications with you to each visit. Bring them in the original bottle with the drugstore label on it.

Note: If you come for your first treatment on the day of your Smit sleeve placement, you will be given pain medication and sedatives in the OR that will still be in your system when you come for treatment, and you will not need to take pain medication or sedatives.

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 effects of these drugs.

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

Other things you may bring to your visit:

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

The Cancer Center offers an iPad 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-out an iPad before your procedure starts.

After each brachytherapy treatment:

You may have some vaginal discharge after the ring and tandem have been removed. We will give you with pads, or you may bring your own with you.

The radiation may also cause diarrhea, vaginal irritation, fatigue and bladder irritation. This 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.

On your last treatment day, the ring and tandem and your Smit sleeve will be removed in clinic. Three days

after your last treatment you should start douching every day with a mixture of peroxide and water, and continue to do so until your radiation oncology doctor tells you to stop. Douching is done to

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.

help remove tissue that has been harmed by radiation, allowing healthy tissue to heal. It also helps prevent infection, and vaginal scarring.

A follow-up appointment will be scheduled for about one month after treatment has ended. At this visit your nurse practitioner will talk about vaginal rehabilitation 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

On weekdays, 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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