



# Brachytherapy: High Dose Rate (HDR) Radiation Interstitial Implant

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## **What are the goals of this procedure?**

Brachytherapy, or internal radiation therapy, is a way of giving a higher dose of radiation to a tumor area while reducing radiation exposure to other organs, such as the bowel or bladder. For more information about internal radiation, read Page 15 of the NCI's *Radiation Therapy and You* handbook or visit: <https://www.cancer.gov/publications/patient-education/radiationtherapy.pdf>.

## **What should I expect during this procedure?**

Brachytherapy treatment involves placing radioactive sources such as a catheter, needle or applicator into a device called an interstitial implant. The device is then inserted into the vagina, uterus or body tissues. The interstitial implant is surgically placed into your pelvis first. The radioactive source is placed into the implant later. You will stay in the hospital during this treatment.

Before starting your brachytherapy treatment, you will come to Radiation Oncology for a pelvic exam and a Computerized Tomography (CT) simulation and/or magnetic resonance imaging (MRI). This visit is the first step in the brachytherapy treatment process.

One to two weeks later, you will come back to the hospital for the surgical procedure. The interstitial implant is placed in your pelvis by a gynecologist and your doctor. During surgery, the doctor will make an incision in your lower abdomen.

After you have recovered from surgery, you will be taken to Radiation Oncology, where a CT and/or MRI simulation is done. You will then be admitted to the hospital.

The radioactive source is placed into the implant, often on the day of your surgery. To place the radioactive sources, you will come to the Radiation/Oncology department. This is where the sources will be placed for a set amount of time and then removed, leaving your interstitial implant in place.

After your treatment, you will be returned to your hospital room. You will have a total of five treatments just like we described above and the date/time will be decided by your doctor. Many times, it is possible to have two treatments in one day. You should plan on staying in the hospital for at least three to five days. The interstitial implant will be removed by your doctor. After this is done you will be discharged from the hospital.

### **How can I prepare for my surgery and admission?**

Your doctor or nurse practitioner will go over your preoperative instructions with you. You may see someone from anesthesia for a preoperative evaluation. You will get a [UMHS Preparing for your Operation](#) folder. There is also a video online you can watch called “Preparing for Your Operation”, it can be found at: <http://surgery.med.umich.edu/portal/clinical/patiented.shtml>

### **Bowel preparation two days before your surgery:**

- Drink one bottle of magnesium citrate. This is to clean your intestine of any stool before your surgery.
- Drink only clear liquids (water, tea, broth, etc...). **Do not eat any food.**

### **Bowel preparation one day before your surgery:**

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

- Do not drink alcohol 24 hours before surgery.
- You may take your medications on the morning of your surgery with sip of water.

**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 PM and 4:30 PM that day with more instructions about your surgery.

### **What can I expect during my hospital stay?**

While you are in the hospital, you will be given medication to control your pain and keep you relaxed. You must stay very still and your head cannot be raised higher than your pillow. This is to avoid putting pressure on the pelvis. You will only be able to make limited movements from side to side, and only with the help of a nurse.

You will have an IV and pain pump, which will allow you to give yourself pain medication as you need it at a safe controlled rate. Let your nurse or doctor know if you are having side effects from your pain medication or if the pain is not managed well enough. The goal is to keep you comfortable.

Since the goal is to keep you still, you will be given anti-diarrheal medication and put on a restricted diet to reduce the number of bowel movement. A catheter will be put into your bladder, so that you do not need get up to urinate. It will stay in place during your hospital stay.

Laying still and flat for a long time puts you at risk for developing blood clots. Leg cuffs or sequential compression devices (SCDs) will be placed on your legs to help prevent clots in your legs. They inflate and deflate one leg at a time to improve your blood flow. You may get a shot with blood thinning medicine

daily during your stay. This will also reduce the risk of getting blood clots while you are not able to move.

When the radiation treatment is done, the interstitial implant will be removed by your doctor. Removing the implant involves removing sutures and sliding out the catheters. You do not need to go to the operating room for this. You will be given pain medication and a sedative before the implant is removed.

### **Instructions after HDR brachytherapy**

Your inpatient team of doctors and nurses will give you discharge instructions on how to care for yourself and your incision after surgery.

You may have a slight vaginal discharge after your implant has been removed. The radiation may also cause diarrhea, vaginal irritation, fatigue, and bladder irritation. These side effects may last for many weeks after your treatment. Refer to the NCI *Radiation Therapy and You* booklet, Page 23, for more information on side effects from radiation to the pelvis.

#### **Douche once a day with this mixture:**

- 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 fill them with 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 doctor tells you to.

Three days **after** your discharge from the hospital you should start douching daily with a mixture of peroxide and water. Continue douching until your doctor tells you to stop. Douching is done 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 visit will be scheduled about one month after treatment has ended. At this visit your nurse practitioner will also talk with you about vaginal rehabilitation and sexual health.

### **Call your doctor if you have any of these:**

- Heavy bleeding - soaking a pad in one hour
- Uncontrolled diarrhea
- Pain when urinating
- Temperature greater than 101° F

### **Who can I call with questions?**

**On weekdays, 8:00 AM to 4:00 PM, Monday thru Friday, call the Radiation Oncology Department at (734) 936-4300.**

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

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