



# Brachytherapy: Low Dose Rate (LDR) Radiation Interstitial Implant

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## **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 your 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 brachytherapy using a low dose rate (LDR). Low dose rate brachytherapy delivers a lower dose to the tumor area than external radiation. Low dose rate refers to the amount of time over which then internal radiation is delivered. The radiation is delivered by placing radioactive sources into a device called an interstitial implant. The interstitial implant includes catheters and is surgically placed into your pelvis. For this type of treatment, you must lie flat for several days and you will need to stay in the hospital.

Before starting your brachytherapy treatment you will come to Radiation Oncology for a pelvic exam and a CT simulation. 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 an operating room by a gynecologist and your radiation oncologist. A low abdominal incision is made during the surgery. After you have recovered from surgery you are taken to Radiation Oncology, where you will have a CT simulation done. You will then be admitted to the hospital to a lead lined room located on the eighth floor.

The interstitial implant itself is not radioactive. The radioactive sources are placed into the implant at a planned time, often on day 2 of your hospital stay. Once the sources are in place, they will stay there for the time your doctor prescribes (usually 48-96 hours). When the treatment is complete, the radioactive sources will be removed. The interstitial implant will be removed at the bedside by your radiation oncologist. After this is done you will be discharged from the hospital by your oncologist.

### **Preparing for your surgery and admission**

Your doctor or nurse practitioner will go over the pre-operative instructions with you, and refer you to anesthesia for a pre-operative evaluation. You will receive 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 begin drinking clear liquids only (NO FOOD).
- **The evening before** your surgery drink one bottle of magnesium citrate.
- **After midnight the night before** surgery, do not eat or drink anything, including: food, chewing gum, or candy. Do not drink alcohol 24 hours prior to surgery.

**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 further instructions about your surgery.

### **During your hospital stay**

After the radioactive sources are placed, lead shields will be positioned around your bed and the nursing staff will only be allowed to spend a short amount of time in your room. No pregnant women or children are allowed in the room after the source is in place. Other family and friends may visit you during your treatment, but they will need to sit a certain distance from your bed behind the lead shield, and they are only allowed to stay for four hours a day at most.

During your treatment, medication will keep your pain controlled and keep you relaxed, as you must remain very still. Your head can not be raised higher than your pillow. This is to avoid pressure on the pelvis. You will only be able to make minimal movements from side to side, and only with assistance from a nurse.

You will have a 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 experiencing 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 movement of your bowels. A catheter will be placed into your bladder during your surgery, so that you do not need to move to urinate, and it will remain in place throughout your hospital stay.

Laying still and flat for a long time puts you at risk for developing blood clots. Leg cuffs that are also known as sequential compression devices (SCDs) will be placed on your legs to help prevent clots in your legs. They will inflate and deflate one leg at a time to improve your circulation. An injection of a blood thinning medicine may also be given to you daily during your stay. This will

also reduce the risk of developing blood clots while you are not able to move.

When the radiation treatment is complete, the interstitial implant will be removed by your radiation oncologist. Removing the implant involves removing sutures and sliding out the catheters, but this does not require that you go to the operating room. You will be given pain medication and a sedative before the implant is removed.

### **Instructions after LDR brachytherapy**

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

You may experience slight vaginal discharge following removal of the implant. The radiation may also cause diarrhea, vaginal irritation, fatigue, and bladder irritation, which may last for several 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 Daily Using a Solution of:**

Mix 3.5 ounces of hydrogen peroxide and 1 quart of water

You can purchase douche bags at your local drug store

Further dilute the solution with water if you experience irritation or burning

Stop when the Radiation Oncologist tells you to

Three days after your discharge from the hospital you should begin douching daily with a solution of peroxide and water, and continue to do so until your radiation oncology physician 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 appointment will be scheduled about one month after treatment has ended. At this visit your nurse practitioner will also be discuss vaginal rehabilitation and sexual health.

### **Problems You May Encounter**

**Please notify your Doctor if you experience any of the following:**

- ◆ heavy bleeding - soaking a pad in one hour
- ◆ uncontrolled diarrhea
- ◆ pain when urinating
- ◆ temperature greater then 101° F

**On weekdays** (8am to 4pm; Monday-Friday) contact Radiation Oncology Department at (734) 936-4300.

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

### **Who to call with Questions**

On weekdays (8am to 4pm; Monday-Friday) contact the Radiation Oncology Department at (734) 936-4300.

**This document is not intended to take the place of the care and attention of your personal physician or other professional medical services.  
Our aim is to promote active participation in your care and treatment by providing information and education.  
Questions about individual health concerns or specific treatment options should be discussed with your physician.**

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