

# HIGH-DOSE RATE (HDR) Brachytherapy Implant for the Cervix or Endometrium (Ring and Tandem or Ring and Tandem with Needles)

Your radiation oncologist has ordered high dose rate brachytherapy (bray-key-THAIRuh-pee) to treat your cancer. This procedure delivers a high dose of radiation over a short period of time. It is given directly to a tumor site and limits the dose of radiation to nearby body tissues.

You can expect to have three to six implant treatments. If you begin your implants while you are receiving external beam radiation, you will have one implant per week. On the day of your implant, you will not receive an external beam treatment. Once you have finished your external beam treatments, you will have two implants a week until all are completed.

## Preparation for treatment

Your radiation oncologist will need to insert applicators for the implant treatments. Before this is done, your cervical canal will be stretched and held open with a plastic sleeve (stent). The stent won't be removed until after your last treatment. Stent placement is done as an outpatient procedure in the operating room. Pre-Operative clearance will need to be obtained by your primary care physician prior to stent placement.

## Stent placement

You will be given medication to make you sleepy, so you are comfortable during the procedure.

The stent will be inserted and held in place with two or three stitches. It is not likely that you will feel the stent once it is in place; however, you should avoid sexual intercourse until the stent is removed. This will prevent any possible discomfort to you or your partner. After the stent is placed, you will go to the recovery room to wake up. When you are awake, you will be transferred to the Same Day Surgery Unit. You will then be discharged.

## Applicators

The applicators used for the implant treatment include a tandem (thin tube) and a ring applicator (thin tube that forms a circle on one end) or a ring applicator with needles. A spatula-like instrument, called a rectal retractor, is also placed in the vagina under the applicators. This helps limit the dose of radiation to the rectum. The stent and applicators are individually fitted for each patient.

Before each implant treatment:

- You may take all of your regular medication with a light meal before your treatment (example: crackers, toast). Your nurse will be more specific as to what you will be allowed to eat with your medication.
- Your radiation oncologist may give you medication to help you relax. You will be given instructions on when to take this medication.
- If you are receiving conscious sedation for your procedure, you may not eat or drink anything 8 hours before the procedure. This also includes your medication. If you have any questions about your medication, please ask your doctor or nurse and they will advise you about when you can take your medications.
- If an MRI is done with your procedure, do not have any food 4 hours prior. You can take your medication with a small amount of water.

Please have someone come with you to your implant treatments, because you will not be able to drive yourself home.

## **Planning the treatment**

Before each implant treatment, you will change into a hospital gown. You will be taken into the simulation (planning) room and will lie down on an x-ray table. Your legs will be held up in stirrups, similar to the position you are in when having a pelvic exam.

Your vaginal area will be washed with a cold antiseptic liquid. A catheter (soft tube) will be placed in your bladder. The radiation oncologist will use a speculum (gynecologic instrument) to see the opening in the stent. The doctor will then place the applicators and the rectal retractor into your vagina. You may experience bleeding from your vagina and cramping, pressure or pain in your lower pelvic area and vagina.

Your legs will be removed from the stirrups and you will remain lying flat on the table. You may feel fullness in your vagina. After the applicator(s) is placed you will have a CT scan or MRI to check the placement of the applicators. Your doctor will also use the scans to assist him or her to plan your treatment. After the scans are done, you will be moved onto a stretcher and taken to a holding area. Your family may stay with you at this time.

This procedure is repeated before each treatment. You can expect to be laying flat for 3 to 4 hours for each treatment. Your doctor and the staff take great care to plan each treatment.

## **Your implant treatment**

When the treatment plan is completed, you will be taken to the treatment room and moved onto the treatment table. The radiation oncologist will connect the applicators to the treatment machine with thin tubes. During the treatment, the radioactive sources will move through the tubes and into the applicators. You will not feel any discomfort at this time.

The radioactive source will remain inside the applicators and will never come in direct contact with your body tissues. Only the source inside the applicator is radioactive. You will not become radioactive.

The actual treatment time is about 15 minutes. It is important that you lie still during the treatment and do not move below your waist. You will be alone in the room during the treatment. Medical staff will be able to hear, see, and talk to you by way of an intercom system. You will be able to talk to them if you need anything.

After your treatment is complete, the radioactive source will automatically return to the treatment machine. The applicators and bladder catheter will be removed by the medical staff. You will receive discharge instructions from the nurse before going home.

## **Side effects**

Neither you nor any of your body fluids will be radioactive after this treatment. You may notice some mild vaginal spotting after the procedure. This should clear up within a day or two. Other side effects include:

- Vaginal discharge
- Cramping
- Bladder irritation

- Diarrhea
- Fatigue

Your doctor or nurse will help you manage any side effects that may occur.

### **After the last treatment**

At the end of your last implant treatment, the radiation oncologist will remove your stent. You **do not** have to go to the operating room for stent removal. The stent is removed in the radiation department. You will be asked to schedule a follow-up appointment with your radiation oncologist in one month.

### **What to report to your doctor or nurse**

You should report any of the following symptoms to your nurse or doctor immediately:

- Temperature above 101°F
- Heavy vaginal bleeding
- Abdominal pain unrelieved by Tylenol or Motrin
- Change or difficulty with urination or bowel movement

### **In an emergency, call:**

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