

What is Brachytherapy?



This is a treatment to give radiation therapy inside the body, directly to tumor cells. The radiation is targeted to lessen its affect on healthy areas around a tumor. **Brachytherapy** is pronounced **brake-ee-ther-a-pee**. It is an important method to kill cancer cells. Other terms used are radiation implant or internal radiation therapy.

Brachytherapy may be used to treat many kinds of cancer. It can be used along with other treatments used for cancer. It can be used along with surgery, chemotherapy or other types of radiation therapy. Depending on what area of the body is treated and on the dose, the treatment is given in several different ways. You may have it as an inpatient, or in a clinic, and some people have it at the time they have surgery.

What happens during a Brachytherapy treatment?

Most radiation implants use a technique where hollow tubes (catheters) or needles are put into the tumor. Then, small radioactive pellets are inserted through the tubes. The radiation works to kill areas of tumor tissue that surround the tubes or needles.

What side effects do people have?

All radiation therapy works by killing cancer cells. Some nearby tissue is also affected. This treatment targets a tumor, so healthy tissue may not be much affected. It is possible a person may have few side effects. The side effects you may have depend on the dose and placement, your other health conditions and treatment.

How long will treatment take?

The length of treatment and what to expect depends on the type of brachytherapy you receive.

Here is information about the three kinds of Brachytherapy

- **Permanent Implant**

This procedure can be used for treatment to several areas of the body. A number of radioactive pellets, also called seeds, are placed inside a tumor. The pellets will remain permanently where they are placed. The pellets give off a known amount of radiation. This amount decreases over a period of time. After that period of time, there will be no measurable radiation outside your body. You may need to follow radiation safety precautions for some length of time (days, weeks or months) after the pellets are placed. The length of time depends on your particular treatment plan. You will be taught the necessary precautions and how long to follow these.

- **Removable Implant**

This is a temporary implant that is meant to stay in where it is placed in your body to kill cancer cells. This usually stays in place between 2 - 7 days.

Radiation Safety Precautions will be used while you are in the hospital.

These safety measures are used to protect others from any unnecessary radiation. Visiting times are limited while the implants are in place.

Protective lead shields are placed inside your hospital room. Your visitors will be instructed to stay about 6 feet away from your bed, behind the shield. People who are under age 18 or anyone who may be pregnant should not visit with you while you have the implants in place.

You will be given instructions by care staff, and also by radiation safety staff. You will be asked to stay in your room. And you will have special procedures to throw away uneaten food and dispose of body waste during this time. Health care staff who work in this setting will use safety measures to protect themselves. They must be careful since they work around this type of treatment again and again. These safety measures are used so that only you have the effect of the radiation-not your caregivers or visitors.

- **High Dose Remote Brachytherapy**

High dose rate remote Brachytherapy can give radiation treatment directly to a target area. This treatment is usually within a few minutes. HDR Brachytherapy is may be used to treat many types of cancers - cervical, breast, lung, pancreas, prostate and esophagus. A high dose of radiation treatment is given directly to the tumor through tubes (catheters or needles). It depends on the exact treatment you need as to whether it is done while you are an inpatient or outpatient. The source of radiation is removed after the treatment is given. This means most people may leave the treatment area soon after recovery from the procedure. This kind of treatment can also be used during surgery. The radiation treatment can be given directly to tumors that are difficult to reach.

For more information

Talk to your doctor or Radiation Oncologist about your radiation therapy needs. See related handouts:

- Intraoperative Radiation Therapy (IORT)
- Radioactive Prostate Implant
- Internal Radiation for Gynecological Cancer

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