



# Radiation Treatment: What to Expect

PAID PROMOTIONAL FEATURE

The Radiation treatment can sound intimidating if you don't know what to expect. External beam radiation, the most common type used in cancer treatment, takes just a few minutes per session. During that time, a machine called a linear accelerator aims a beam of high-energy X-rays at cancer tumors. The beam damages the DNA of cancer cells, killing them while leaving healthy tissues intact.

A simulation is done before any radiation treatment begins. This includes a CT scan, which will show where to aim the radiation. A mold customized to your body will be made, so that you rest in the same position for every treatment session.

Your radiation oncologist will meet with RBOI's dosimetrists and medical physicists. It can take one to

two weeks to design a treatment plan based on your CT scan. Your treatment will be highly tailored and specific to your unique body shape and exact tumor location.

In the treatment room, your customized mold will be retrieved and you will rest in the same position as you did during the simulation. The linear accelerator will move around your body while, outside the room, your radiation therapist will monitor your treatment through cameras and computer systems. You will hear the accelerator running, but you will not feel the radiation while you receive it.

RBOI has created a video that walks you through the radiation treatment process. On RBOI.com, go to the Patient Services drop-down menu, then to Before Treatment, and click on Your First Visit.



## Your Radiation Team

Members of RBOI's radiation team are full-time, board-certified, and monitor you closely throughout treatment.

- Your **RADIATION ONCOLOGIST** specializes in cancer treatment and has completed a 4-year medical degree plus a 4-year residency in radiation oncology. (A radiation oncologist is different from a medical oncologist, who is also an expert in drug and hormone cancer treatments, such as chemotherapy.)
- Based on your radiation oncologist's prescription, the **MEDICAL DOSIMETRIST** calculates the radiation dose for each treatment and plans how to deliver that dose to the cancer tumor(s). Medical dosimetrists are educated in physics, anatomy, and radiobiology.
- The **MEDICAL PHYSICIST** verifies radiation dose calculations and checks that the equipment used to deliver the treatments is calibrated correctly and working properly. He or she has a master's or doctorate degree in medical physics.
- The **RADIATION THERAPIST** administers radiation treatments. He or she prepares the patient for each treatment, applies the radiation, records and verifies each treatment, and monitors the patient during treatment. Radiation therapists complete 2-year or 4-year professional educational programs focusing on physics, radiation safety, anatomy, and patient care.

### by the numbers

1895

German physicist Wilhelm Conrad Roentgen discovers X-rays

3

Ways radiation therapy is delivered: external beam, brachytherapy (*internal insertion of radiation-emitting sources*), and radioisotope therapy (*injection of a radioisotope to target the disease*)

16,400

Radiation therapists in the US in 2021 (Bureau of Labor Statistics)

About 50%

Cancer patients who can benefit from radiation therapy in managing their disease (National Institutes of Health)

- **ONCOLOGY NURSES** educate cancer patients and their families, monitor patients for signs and symptoms related to radiation therapy, and perform nutrition analyses. Oncology nurses are registered nurses with specialized experience in caring for cancer patients.
- **LICENSED CLINICAL SOCIAL WORKERS** have specialized knowledge of cancer's impact on individuals and those around them. RBOI's counselors meet with patients, families, and caregivers individually or together, and help connect you to appropriate resources, support, and services.



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A Higher Standard

### Patient-centered radiation oncology close to home

**The Villages** 352.259.2200  
**Ocala** 352.732.0277  
**Timber Ridge** 352.861.2400  
**Inverness** 352.726.3400  
**Lecanto** 352.527.0106

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