

[Home](#) > [Navigating Cancer Care](#) > [How Cancer is Treated](#) > [Radiation Therapy](#) > [What to Expect When Having Radiation Therapy](#)

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## **What to Expect When Having Radiation Therapy** [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 02/2013

 *Listen to the [Cancer.Net Podcast: Radiation Therapy - What to Expect](#)[3], adapted from this feature*

*This article, the second in a four-part series, outlines what you will experience before, during, and after treatment. The other articles in this series provide [an overview of radiation therapy](#)[4], including the various types; [describe the side effects of treatment](#)[5]; and [answer frequently asked questions](#)[6].*

### **The radiation therapy team**

If your treatment plan includes radiation therapy, a team of highly trained medical professionals will work together to provide you with the best possible care. This health care team may include:

**Radiation oncologist.** A radiation oncologist is a doctor who specializes in giving radiation therapy to treat cancer. This doctor oversees your radiation therapy treatments and works closely with other members of the radiation therapy team to develop the treatment plan.

**Radiation oncology nurse.** A radiation oncology nurse specializes in caring for patients who are having radiation therapy. This person can answer questions, provide information about the treatments, monitor your health during treatment, help you manage potential side effects, and offer support and counseling to you and your family.

**Medical radiation physicist.** As an expert in working with sophisticated radiation equipment, a medical radiation physicist helps the radiation oncologist design the often complex treatment plans, including the appropriate dose of radiation.

**Dosimetrist.** Supervised by the medical radiation physicist, a dosimetrist helps the radiation oncologist craft the treatment plan, calculating the appropriate dose of radiation.

**Radiation therapist or radiation therapy technologist.** A radiation therapist is primarily responsible for maintaining and operating the treatment machines and administering your scheduled treatments.

**Other health care professionals.** There are a number of other specialists who will work to care for all of your physical and psychological needs during treatment, including social workers, nutritionists or dietitians, physical therapists, and dentists.

Learn more about the [oncology team](#) [7].

## **Before treatment**

**Consultation and informed consent.** Before treatment begins, you will meet with a radiation oncologist to decide whether radiation therapy is a necessary part of your treatment plan. The doctor will review your records and perform a physical examination before discussing the potential risks and benefits of radiation therapy with you. This is also your opportunity to ask any questions you may have.

If you choose to receive radiation therapy, you will be asked to give written permission (informed consent) and undergo tests to plan your treatment. The informed consent form confirms that you have received information about treatment options and that you are willing to undergo radiation therapy. By signing the informed consent form, you are also telling your health care team that you understand there is no guarantee the treatment will achieve the intended results.

**Simulation and treatment planning.** Your first radiation therapy session is called a simulation and does not involve an actual treatment. During this visit, your radiation therapy team will position your body and use imaging scans, such as a [computed tomography \(CT\) scan](#) [8], a [magnetic resonance image \(MRI\)](#) [9], or an x-ray, to help direct the radiation beam to target the tumor. The tumor's location may be marked on your skin with a very small, dot-like temporary or permanent tattoo to help the radiation therapist precisely aim the radiation beam each time treatment is given. Depending on where the tumor is located, the radiation therapist may recommend using an immobilizer to ensure you will stay in exactly the same position throughout each radiation treatment. This could include tape, foam sponges, specially designed headrests, molds, or plaster casts. For people receiving radiation therapy to the head or neck, a special mesh mask, known as a thermoplastic mask, may be molded to your face and secured to the table to gently hold your head in place.

After the simulation, your radiation therapy team will review your information and design a treatment plan. Frequently, sophisticated computer software helps the team develop this plan. Your doctor will then write a prescription outlining the course of your radiation treatment.

## **During treatment**

**External-beam radiation therapy.** Each session of external-beam radiation therapy, in which radiation is given from a machine located outside the body, is quick and painless. Treatments are usually scheduled five times per week, Monday through Friday, and continue for three to nine weeks. The sessions typically last about 15 minutes. Although the radiation beam and your body

position are adjusted so the radiation only targets the tumor, the radiation will affect some of the healthy tissue surrounding the tumor. The two-day pause in treatment each week allows your body to repair this damage.

**Internal radiation therapy (brachytherapy).** Both temporary and permanent placement of radioactive sources in the body may require anesthesia (medication to block the awareness of pain) and a brief hospital stay. These treatments may be repeated across a number of days or weeks. Most patients feel little to no discomfort during the treatment, but some may experience weakness or nausea from the anesthesia. If you receive a permanent implant, you will need to take certain precautions to protect other people from radiation exposure [4] until the implant loses its radioactivity. These precautions are not necessary if a temporary implant has been removed.

**Weekly progress reports.** Your radiation oncologist will evaluate your progress at least once a week (more often if needed) and may adjust your treatment plan accordingly. In addition, your treatment team will use special x-rays called portal images or special scans known as cone-beam computed tomography to provide image guidance to ensure the radiation beam is always aimed correctly.

**Personal care.** Many people experience fatigue, skin sensitivity at the site of radiation exposure, and emotional distress during radiation therapy. The best way to care for yourself during this time is to plan for extra rest; eat a balanced, nutritious diet; treat your skin with lotions approved by your health care team; minimize your exposure to the sun; and seek emotional support. Learn more about coping during treatment [10].

## **After treatment**

Once treatment ends, the radiation oncologist will need to see you for follow-up appointments to monitor your recovery and watch for any side effects of treatment, which may not happen right away. You may want to ask your doctor for a written record of your radiation treatment so that you can have it for future reference. As your body heals, you will need fewer follow-up appointments.

## **More Information**

Types of Treatment [11]

ASCO Cancer Treatment Summaries [12]

Managing Stress [13]

## **Additional Resources**

RT Answers: What to Expect [14]

RT Answers: About the Radiation Oncology Treatment Team [15]

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## **Links:**

[1] <http://www.cancer.net/navigating-cancer-care/how-cancer-treated/radiation-therapy/what-expect-when-having->

radiation-therapy

[2] <http://www.cancer.net/about-us>

[3] [http://www.cancer.net/sites/cancer.net/files/radiation\\_therapy\\_what\\_to\\_expect.mp3](http://www.cancer.net/sites/cancer.net/files/radiation_therapy_what_to_expect.mp3)

[4] <http://www.cancer.net/node/24728>

[5] <http://www.cancer.net/node/24677>

[6] <http://www.cancer.net/node/24539>

[7] <http://www.cancer.net/node/24957>

[8] <http://www.cancer.net/node/24486>

[9] <http://www.cancer.net/node/24578>

[10] <http://www.cancer.net/node/21>

[11] <http://www.cancer.net/node/25071>

[12] <http://www.cancer.net/node/25394>

[13] <http://www.cancer.net/node/24589>

[14] <http://www.rtanswers.org/treatmentinformation/whattoexpect/index.aspx>

[15] <http://www.rtanswers.org/treatmentinformation/treatmentteam/index.aspx>