

Radiation Therapy (External Beam)

What is external beam radiation therapy?

Radiation therapy is a treatment for cancer. It is used to:

- Remove cancer
- Ease pain by shrinking a tumor
- Help prevent cancer from coming back
- Help other cancer treatments work better

Radiation therapy is often combined with surgery, chemotherapy, or both. The results of radiation therapy are not guaranteed, but your doctor has chosen this therapy because it is likely to help in your case.

How many treatments will I have?

The number of treatments you have will depend on your type and stage of cancer. Typically, a course of treatment may last 2 to 10 weeks.

What can I expect to happen during radiation therapy?

Before therapy

To help you get ready for treatment, you can expect the following:

- Your doctor will explain your treatment plan, possible side effects, and how the treatments may help.
- You'll have a physical exam and tests to pinpoint the exact location of the cancer.
- Small tattoos will be placed on your skin to show the technicians where to aim the radiation. The tattoos are tiny—about the size of a pinhead.
- You will be given instruction on where to go for your therapy and how to prepare for it.



During external beam radiation therapy, a large machine focuses a high dose of radiation on the cancer. The machine moves around you but doesn't touch you. The radiation is invisible and doesn't hurt.

During therapy

Here's what you can expect when you go for your treatment:

- You'll sit in a chair or lie on a table. A technician may use various pieces of equipment to help hold you in position for the treatment.
- The radiation therapist will then go into the next room to control the machine. The therapist can see and hear you. The therapist can talk to you through a speaker.
- You will see lights. These show the therapist exactly where to point the radiation.
- You will need to lie as still as possible while the radiation beam is on. You don't have to hold your breath.

Each treatment session takes around 10 to 20 minutes. The actual radiation time is only a few minutes.

What side effects can I expect?

Side effects may happen soon after therapy begins and often depend on the body part being treated. Side effects can be temporary or permanent, but most will go away within a few weeks to a few months after the radiation treatments are done. Common side effects include:

- **Fatigue (feeling very tired or worn out).**
Try to get at least 8 hours of sleep every night. Plan for short rest times during the day, and especially on weekends when you might have fewer responsibilities. At other times, try to keep your energy up by exercising and walking.
- **Skin changes,** such as redness, dry or flaky skin, itching, sores, or swelling in the treatment area. Do not rub, scrub, or scratch your skin. Protect it from the sun. Do not use heat or an ice pack. Talk with your doctor before using skin products.
- **Low blood cell counts,** which can cause anemia or make it easier for you to get infections. Your doctor may check your blood regularly.
- **Hair loss in the body part that is treated.** This will not affect the hair on your head unless the treatment focuses on that area.
- **Other side effects depend on the body area treated.** For example, if your treatment is focused on your:
 - Stomach, you might have diarrhea, nausea, and vomiting.
 - Pelvis, you might become infertile, experience changes in sexual drive and function, or have bladder and urinary changes.
 - Throat, you might have trouble swallowing or get sores in your mouth.

Your doctor will tell you about other side effects based on your situation. To learn more, visit the National Cancer Institute website: www.cancer.gov.

Talking with your doctor about radiation therapy

The table below lists the most common potential benefits, risks, and alternatives for external beam radiation therapy. There may be other benefits or risks in your unique medical situation. Talking with your doctor is the most important part of learning about these risks and benefits. If you have questions, be sure to ask.

Possible benefits	Possible risks and complications	Alternatives
<p>External beam radiation may:</p> <ul style="list-style-type: none"> • Destroy a cancer tumor • Prevent cancer from coming back • Relieve pain by shrinking a tumor • Help other cancer treatments work better 	<p>Any side effects, risks, and complications will depend on the body part treated and how much radiation you received. These effects can be temporary or permanent. They include:</p> <ul style="list-style-type: none"> • Infertility • Joint problems • Lymphedema (swelling of your arms or legs) • Mouth problems • A secondary cancer <p>Side effects can show up months or years later after treatment is finished.</p> <p>NOTE: Radiation can be harmful to an unborn child. Tell your doctor if you are pregnant or could be pregnant.</p>	<p>Alternatives to radiation therapy may include:</p> <ul style="list-style-type: none"> • Watching and waiting (no treatment) • Chemotherapy • Surgery • Immunotherapy • Medicine that affects hormones • Brachytherapy (radiation put into your body, rather than aimed at the cancer from outside your body) <p>Based on your type of cancer and how it affects you, your doctor may combine several treatments.</p>

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