Intermountain® Healthcare

Radiation Therapy (External Beam)

What is it?

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

Why do I need it?

Because radiation can destroy cancer cells, this therapy may be used to:

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

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

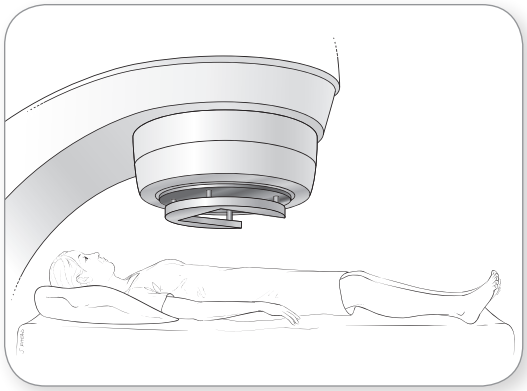
How long will the treatments last?

Depending on your type and stage of cancer, a course of treatment usually lasts 2 to 10 weeks.

- **Each week,** most people have a daily treatment for five days in a row. Some people have two treatments every day. Saturdays and Sundays are days off — use these days to rest and recuperate from the effects of treatment.
- **Each session** usually takes 10 to 20 minutes. The actual radiation time is only a few minutes.

What happens before?

- Your doctor will explain the treatment plan, possible side effects, and how the treatments may help. Be sure to ask any questions you have. It can help to write down your questions in advance.



This treatment aims a high dose of radiation at cancer cells. The goal is to shrink a tumor or ease cancer symptoms.

- You'll have a physical exam. You will also have tests to pinpoint the exact location of the cancer.
- A healthcare provider will place small tattoos on your skin to show where to aim the radiation. The tattoos are permanent, but to minimize skin discoloration they are tiny — about the size of a pinhead.

What happens in each treatment?

When you go for a treatment, wear comfortable clothes. Do not use powder, lotion, deodorant soap, deodorant, or wear jewelry near the treatment area.

During each treatment:

- You'll sit in a chair or lie on a table. A healthcare provider might 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 that show the therapist exactly where to point the radiation.
- While the radiation beam is on, lie as still as possible. You don't have to hold your breath.

What about side effects?

Side effects from radiation therapy include:

- **Fatigue (feeling very tired or worn out).** It helps to get at least 8 hours of sleep every night. Plan for short rest times during the day, and especially on weekends. At other times, try to keep your energy up by exercising and walking.
- **Skin changes in the treatment area,** such as redness, dry or flaky skin, itching, sores, or swelling. Do not rub, scrub, or scratch your skin. Protect it from the sun. Do not use heat or an ice pack. Ask your doctor before using skin products.
- **Low blood cell counts,** which can cause anemia or make you prone to infection. 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 effects depend on the body area treated.** For example, if your stomach is treated, you might have nausea. If your pelvis is treated, you might become infertile. Your doctor will tell you about other side effects based on your situation.

See the National Cancer Institute website for more information: **www.cancer.gov/cancertopics/coping/radiation-therapy-and-you**

Talking with your doctor about external beam 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.

Potential benefits	Risks and potential complications	Alternatives
External beam radiation may: • Destroy a cancer tumor • Prevent cancer from coming back • Relieve pain by shrinking a tumor • Help other cancer treatments work better The results are not guaranteed, but your doctor is recommending this treatment because it may help.	**The list below shows side effects that can happen soon after therapy begins.** These can depend on the body part treated. Side effects can be temporary or permanent, but most will go away a few weeks to a few months after the radiation treatments are done. • Skin changes (dry or itchy skin, peeling, blisters) in the treatment area • Fatigue • Diarrhea, nausea, or vomiting (depending on the area being treated) • Drop in blood counts • Hair loss in the treatment area • Trouble swallowing or mouth problems • Sexual changes • Urinary or bladder changes **Some effects can show up months or years later.** These depend on the body part treated and how much radiation you received. These effects can be temporary or permanent. They include: • Infertility • Joint problems • Lymphedema (swelling in your arms or legs) • Mouth problems • A secondary cancer **Radiation can be harmful to an unborn child. Tell your doctor if you are pregnant or could be pregnant.**	Alternatives to external beam radiation may include: • Watching and waiting (no treatment) • Chemotherapy • Surgery • Immunotherapy • Medication that affects hormones • Brachytherapy (radiation put into your body, rather than aimed at you from outside your body) Based on your type of cancer and how it affects you, your doctor may combine several treatments.

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