

Chronic Myeloid Leukemia (CML): Radiation Therapy



What is radiation therapy?

Radiation therapy is a treatment for cancer that uses high-energy X-rays to kill cancer cells or stop them from growing. Radiation therapy is also called radiotherapy. Its goal is to kill cancer cell or shrink tumors.

When is radiation therapy used for chronic myeloid leukemia (CML)?

Chemotherapy is the most common treatment for CML, but in rare case, radiation therapy is also used. It might be used if:

- **You have symptoms that aren't being helped by other treatments.** For instance, your spleen may be swollen and pressing against your stomach. This can make it hard for you to eat. Radiation can be used to reduce swelling in the spleen and ease the pressure on your stomach.
- **You have bone pain.** If chemo isn't working, radiation can help stop the growth of leukemia cells. This can help ease pain caused by the overgrowth of leukemia cells in your bone marrow.
- **You're getting ready for a stem cell transplant.** This is rarely done for CML, but radiation therapy to the whole body kills not only leukemia cells, but also your bone marrow cells. This can help keep you from rejecting the transplanted stem cells. It's called total body irradiation. Equal doses of radiation are sent to all parts of your body.

How is radiation therapy given?

A healthcare provider who specializes in cancer and radiation is called a radiation oncologist. This healthcare provider works with you to decide the kind of radiation you need. They also figure out the treatment dose and how long you need treatment.

Radiation treatments don't hurt. They are a lot like getting an X-ray, except that they take longer, about 15 to 30 minutes. However, you should plan a total of 1 hour each day for total treatment. You can have the treatments either as an outpatient or as an inpatient. Outpatient means you go home the same day. Inpatient means you stay overnight in the hospital. If you're having treatment aimed at just a small part of your body, you'll likely do this as an outpatient. If you're getting ready for a stem cell transplant, you may have the treatments as an inpatient.

Possible side effects of radiation therapy

Radiation therapy can kill cancer cells, but it can also damage nearby normal cells. This can cause short- and long-term side effects. Some people have few or no side effects.

If you do have side effects, your healthcare provider may change the dose of your radiation or how often you get treatment. Or treatment may be stopped until your side effects clear up. Tell your healthcare provider about any side effects you have right away. It's important to treat them before they get worse.

The short-term side effects from radiation therapy depend on where the radiation is aimed, and can include:

- Nausea, vomiting, and diarrhea if you get radiation to your belly (abdomen)
- Feeling tired (fatigue)
- Hair loss in the treated area (this might be permanent)
- Skin irritation in the area being treated, including blistering and peeling
- Sore mouth (mucositis) and dry mouth if the head and neck are being treated

Radiation can also lower your blood counts. So your healthcare provider will watch your blood counts closely.

Long-term side effects may not show up for several years after treatment is over. Long-term side effects may include:

- Growth of another type of cancer in the treated area
- Chronic skin problems, such as redness
- Low blood counts. After treatment with radiation (and chemotherapy), your bone marrow may not completely recover. You may have low blood counts and need careful monitoring.
- Infertility (unable to have children)
- Cataracts

Working with your healthcare providers

Talk with your healthcare providers about what short- and long-term side effects you should watch out for. Also ask about what can be done to prevent or ease them. Know when you should call your healthcare team. Make sure you know what number to call with questions or problems, even on evenings, holidays, and weekends.

It may be helpful to keep a diary of your side effects. Write down any changes you notice, how bad they are, and when they happen. A written list can make it easier for you to remember your questions when you go to your next appointment. It can also make it easier for you to work with your treatment team to make a plan to manage your side effects.

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