

Chronic Lymphocytic Leukemia (CLL): 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. A machine directs the beams of energy at the cancer. Radiation therapy is also called radiotherapy. Its goal is to kill cancer cells or shrink tumors.

When is radiation therapy used for CLL?

Chemotherapy is the most common treatment for patients with CLL because the disease is located throughout the body, but in rare cases, radiation therapy is also used. CLL cancer cells are very sensitive to even small doses of radiation. 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 or swollen lymph nodes and ease certain symptoms.
- **You have bone pain.** If chemo isn't working, radiation can 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 CLL, 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 type of radiation, the dose, and how long you need treatment.

External beam radiation is used for CLL. A machine directs the radiation through your skin. The machine doesn't touch you. Radiation treatments don't hurt. They're a lot like getting an X-ray. 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. Before your first treatment, your healthcare team will take specific measurements to make sure your body is in the right place for every treatment. During treatment, the therapist will leave the room to turn on and run the machine. You'll be able to hear and talk with the therapist over an intercom. The therapist can see you the whole time. You may hear whirring or clicking noises from the machine. You will not be radioactive afterward.

Possible side effects of radiation therapy

Radiation therapy can kill cancer cells, but it can also damage nearby normal cells. This can cause side effects. Some people have few or no side effects because the doses used for CLL are usually quite low. If you do have side effects, treatment may rarely be stopped until your side effects clear up. Tell your healthcare provider right away about any side effects you have. It's important to treat them before they get worse.

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

- Skin irritation in the area being treated, including peeling and redness that may look like a burn
- Hair loss in the treated area (this might be permanent)
- Feeling tired (fatigue)

- Nausea, vomiting, and diarrhea if you get radiation to your belly (abdomen)

Radiation can also lower your blood counts. This raises your risk for infections. So your healthcare provider will watch your blood counts closely.

Working with your healthcare provider

Talk with your healthcare providers about what side effects you should watch 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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