

Thyroid Cancer: External Radiation Therapy



What is external radiation therapy?

Radiation therapy involves high energy X-rays or particles that kill cancer cells or slow their growth. In external radiation therapy, the radiation is aimed at the cancer from a source outside the body.

External radiation is a local therapy. This means it affects the cancer cells only in treated areas. This type of radiation may be given alone, with chemotherapy, or with hormone therapy. It is sometimes used before surgery to shrink tumors. It may be used after surgery to kill cancer cells left behind. External radiation may also be used to treat cancers that can't be removed with surgery.

When is external radiation therapy used to treat thyroid cancer?

External beam radiation therapy is not a common treatment for thyroid cancer.

It may be used to treat thyroid cancers that don't take up iodine, such as anaplastic or medullary cancer. It is also helpful when radioactive iodine was tried, but the cancer cells didn't absorb the iodine well.

It can be used to treat areas where the cancer has spread, such as the bones or the brain. It may be used to treat pain or other symptoms. This is called palliative radiation.

What to expect during external radiation therapy

Radiation treatment is a lot like getting an X-ray. The radiation comes from a large machine. The machine doesn't touch you during the treatment. The treatments don't hurt and they are quick.

This therapy is often given once a day, 5 days a week, for about 5 to 6 weeks. The actual treatment time you spend receiving the radiation is often just a few minutes. But it takes more time to get you into place and set up the procedure.

Before you start treatment, imaging scans will be done in the area of your cancer. This is called a simulation scan. This is done to measure the exact location of the tumor so the beams of radiation can be focused there. Small marks may be put on your skin to mark the treatment area. This makes sure that the radiation reaches only the tumor, and not healthy parts of your body. On the day of treatment, you are carefully put into the right position. You may see lights from the machine lined up with the marks on your skin. These help the therapist know you are in the right position. The therapist will leave the room while the machine sends radiation to your tumor. During this time, they can see you, hear you, and talk to you. When the machine sends radiation to your tumor, you will need to be very still, but you don't have to hold your breath. The treatment itself is a lot like getting an X-ray and is very quick. The whole process will likely take less than an hour.

Side effects of external radiation therapy

Radiation therapy affects normal cells as well as cancer cells. Talk with your healthcare provider about what you might feel like during and after radiation therapy. Ask what short- and long-term side effects you can expect. Side effects often get worse as treatment goes on. But remember, many of these side effects can be treated. Common side effects of external radiation for thyroid cancer can include:

- Severe tiredness (fatigue)
- Trouble swallowing
- Dry mouth
- Cough
- Hoarseness

- Loss of appetite
- Low blood counts
- Nausea
- Skin that feels and looks like it's sunburned (dry, red, and blistered) in the treated area

Most of these side effects will get better or go away over time after you finish treatment. Your healthcare provider will talk with you about how to manage these and other possible long-term side effects. This includes injury to the esophagus, which might need a feeding tube, which is usually temporary.

Working with your healthcare team

Ask your healthcare provider about what symptoms to watch out for and when you should call your healthcare team. For instance, your healthcare provider may want you to call if you have signs of infection, such as fever, or pain that gets worse. Make sure you know what number to call with questions. Is there a different number for evenings, holidays, and weekends?

It may be helpful to keep a diary of your side effects. Write down any physical, mental, and emotional changes. A written list will make it easier for you to remember your questions when you go to your appointments. It will also make it easier for you to work with your healthcare team to make a plan to manage your side effects.

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