# **Treating Bladder Cancer: Radiation**



# What is radiation therapy?

Radiation is a way to treat cancer. It uses high-energy beams of X-rays or other particles to kill cancer cells or stop them from growing. As the cancer cells die, healthy cells take their place.

## When might radiation therapy be used?

Radiation is often part of the treatment for bladder cancer. Your healthcare provider may suggest this treatment for several reasons:

- As part of the main treatment for early stage bladder cancers (those that are small and haven't spread) when surgery or chemotherapy (chemo) can't be used.
- To try to shrink cancer so the whole bladder doesn't need to be removed.
- To try to kill any cancer cells left after surgery when the whole bladder wasn't removed.
- To ease symptoms like pain, bleeding, or blockages caused by tumors that can't be treated with surgery or that have spread to other organs.
- To treat tumors that have spread to one other part of the body, like the brain or a bone.

Radiation for bladder cancer is often given along with chemo. This is called chemoradiation. The chemo helps the radiation work better.

To plan your treatment, you'll meet with a team of cancer specialists. This might include a surgeon (a urologist), radiation oncologist, and medical oncologist. A radiation oncologist is a healthcare provider who specializes in treating cancer with radiation. They decide on the dose and the length of your treatment.

#### **External beam radiation therapy**

The most common way to get radiation for bladder cancer is from a large machine that focuses beams of radiation at the cancer. This is called external beam radiation therapy (EBRT). Sometimes special types of EBRT, such as intensity-modulated radiation therapy (IMRT), are used. This is done to try to limit the amount of radiation that reaches and damages nearby normal cells.

You get EBRT on an outpatient basis in a hospital or clinic. This means you go home the same day. EBRT is usually given 5 days a week for many weeks.

#### **Getting ready for treatment**

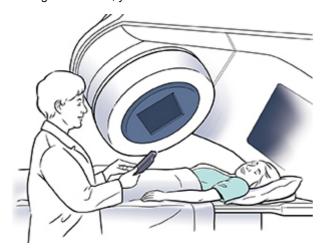
Before your first radiation treatment, you'll have an appointment called simulation. This is needed to find exactly where on your body the radiation beam needs to be directed. It may take up to 2 hours. During this session, imaging tests, such as an MRI or CT scans, may be done. These tests help your healthcare providers know exactly where the tumor is so they can aim the radiation right at it. Also at this session, body molds might be made. These are done to put you in the exact same position and help keep you from moving during treatments.

Then you'll lie still on a table while a radiation therapist uses a machine to define your treatment field. The field is the exact place on your body where the radiation will be aimed. Sometimes it's called your port. The therapist may mark your skin with tiny dots of semipermanent ink or tattoos. This is so the radiation will be aimed at the exact same place each time.

### **During treatment**

You might be asked to empty your bladder before treatment and change into a gown. You'll lie on a table while the machine is placed over you. The radiation therapist helps you get into position. They may use blocks or special shields to protect parts of your body from exposure to radiation. Treatment itself doesn't take long, up to 15 or 30 minutes. It's a lot like getting an X-ray. Lights from the machine will be lined up with the dots on your skin. The radiation is then aimed at the target area.

When you're ready, the therapist leaves the room and turns the machine on. You may hear whirring or clicking noises as the machine moves during radiation. This may sound like a vacuum cleaner. The machine won't touch you and treatment won't hurt. You may be asked to briefly hold your breath, and you must be very still. During the session, you'll be able to talk to and hear the therapist over an intercom.



#### After treatment

You won't be radioactive after treatment. You can return to your normal activities soon after each visit.

But because some nearby tissue is affected, you may have side effects. Radiation side effects tend to occur slowly over time as treatment goes on.

The side effects from radiation tend to be limited to the area being treated. Some people have few or no side effects. If you do have them, your healthcare provider may change how much radiation you get each treatment 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 notice right away. It's important to treat them before they get worse.

#### Short-term side effects

Side effects of bladder radiation may include:

- Diarrhea
- Upset stomach (nausea) or vomiting
- Bladder irritation. (This can cause burning, frequent peeing, or feeling the need to pee often.)
- Extreme tiredness and low energy (fatigue)
- · Some loss of pubic hair in the treated area. (This may be permanent.)
- Skin changes (often like a bad sunburn) in the treated area
- Blood in your pee or stool
- Vaginal irritation, burning, discharge, and dryness (women)
- Rectal irritation or bleeding (rare)

Most side effects go away over time after treatment ends. But if you have any of these side effects, talk with your provider about how to deal with them.

### Long-term side effects

These may include:

- Bladder damage (radiation cystitis), which can cause blood in your pee or pain when peeing
- · Loss of bladder control (incontinence)
- · Problems with erections (erectile dysfunction)
- Early menopause
- Infertility (unable to cause or carry a pregnancy). If you wish to have a child in the future, talk with your healthcare provider about your choices before starting radiation therapy.
- Bleeding from bladder
- Permanent damage to intestine or rectum (rare)

Some long-term side effects of radiation may not show up until many years after treatment. They depend on the dose of the radiation and the area that's treated. Ask your healthcare provider what you may expect.

# Working with your treatment team

Ask what side effects you might expect and what to do if they become serious. Make sure you know what number to call with questions or problems. Check if there's a different number for evenings, weekends, and holidays.

It may be helpful to keep a diary of your side effects. A written list will make it easier to remember your questions when you go to appointments. It'll also make it easier for you to work with your healthcare team to make a plan to manage side effects.

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