Kidney Cancer: Radiation Therapy

What is radiation therapy?

Radiation therapy uses high-energy beams of X-rays to kill cancer cells or stop them from growing. The energy beams go through your skin to the tumor.

When might radiation therapy be used for kidney cancer?

Surgery is usually the first choice for treating kidney cancer. But radiation therapy might be used if:

- You’re not healthy enough to have surgery.
- You have only one kidney.
- The kidney cancer has spread to your brain.
- You have pain, bleeding, or other problems caused by kidney cancer that has spread to other parts of your body. An example would be a bone metastasis..
- You have a bone that's weak because kidney cancer has spread there. Radiation can be used along with certain medicines to help stabilize a bone that may be at risk of breaking.
- A single tumor comes back years later. (In this case, radiation is most often given along with immunotherapy or targeted therapy.)

External beam radiation

The most common way to get radiation for kidney cancer is from a large machine that focuses beams of radiation at the cancer. This is called external beam radiation. A special kind of external beam radiation called stereotactic body radiation therapy (SBRT) might be a choice if you have kidney cancer. It might be used to treat the tumor in the kidney if the surgeon cannot operate on you. Or it can be used to treat one spot where the cancer has spread to another part of your body. For instance, it may be used to treat one tumor in your lung or brain.

You often get external beam radiation as an outpatient in a hospital or clinic. This means you go home the same day. External beam radiation is usually given 5 days a week for many weeks. SBRT might be done in only a few sessions over a week or two.

Deciding on a radiation treatment plan

To plan your treatment, you'll meet with a team of cancer specialists. This might include a surgeon, radiation oncologist, and medical oncologist.

You'll work with a radiation oncologist to make a radiation treatment plan. This is a healthcare provider who specializes in treating cancer with radiation. They decide:

- The goal of radiation therapy
- The type of radiation you need
- The dose you need
- How long you need treatment

It may help to bring a family member or friend with you to appointments. Make a list of questions and concerns you want to talk about. During your visit, ask what the goal of radiation therapy is and what you can expect to

feel like during and after treatment.

Getting ready for radiation

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 CT or MRI scans, may be done. These help your healthcare providers know the exact location of the tumor so they can aim the radiation right at it. Also at this session, you may have body molds made 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 an imaging machine to define your treatment field. The field is the exact area 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.

What to expect during radiation therapy

On the days you get treatment, you'll lie on a table while the radiation machine rotates around you.. You may have to wear a hospital gown. Each treatment is a lot like getting an X-ray, but takes longer, up to 15 to 30 minutes. You should plan on being there for about an hour total. You will receive radiation usually 5 days a week, Monday through Friday, for several weeks. Since it's most often done on an outpatient basis, you'll get to go home afterward.

At the start of the treatment session, a radiation therapist helps you get into position. They may use blocks or special shields to protect parts of your body from exposure to radiation. The therapist then lines up lights on the machine with the marks on your skin so the radiation is directed to the right spot. 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. During this time, the therapist can see you, hear you, and talk to you. When the machine sends radiation to your tumor, you'll need to be very still. But you don't have to hold your breath. You can't feel radiation, so it shouldn't hurt. You won't be radioactive afterward.

Side effects of radiation therapy

Talk with your healthcare provider about what you might feel like during and after radiation therapy. Because radiation affects normal cells as well as cancer cells, you may have some side effects. The side effects are normally limited to the area being treated. Short-term radiation side effects tend to get worse as treatment goes on, but can be treated. They get better or go away over time after treatment ends.

Common side effects of radiation therapy include:

- Skin in the treated area becomes irritated, dry, red, and blisters and peels like a sunburn
- Hair loss in the area being treated
- Feeling tired or weak (fatigue)
- Nausea
- Diarrhea
- Trouble breathing

Side effects depend on the part of your body that's being treated and the dose that is being used. Talk with your healthcare provider about what short- and long-term side effects you can expect and what can be done to prevent or ease them. Ask your provider what symptoms to watch out for. Ask your healthcare team under what circumstances you should call them. For instance, your provider may want you to call if you have signs of infection, such as fever or pain that gets worse.

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