

Radiation Treatment

What is radiation treatment and how does it work?

Radiation treatment, sometimes called radiotherapy, works by focusing energy into cancer cells in your body and destroying them. Many forms of radiation are available. The best choice for you depends on the type of cancer you have, the extent of the cancer and its location.

Different types of cancer react to radiation in different ways, so treatments vary. Also, it takes time for the body to get rid of dead cancer cells. After you have completed treatment, months often pass before the tumor is completely gone.

With careful planning, radiation can be directed to the cancer and away from most normal body tissue. This often requires several beams of radiation to be used, these beams target your tumor from multiple directions, sometimes even across your body from the opposite side. You may also need more than one type of radiation, which may require using more than one machine.

Will radiation treatment make me radioactive?

External Radiation Therapy: This is the most common type of radiation we use. You will **not** be radioactive after receiving this treatment, so do not worry about hurting your family and friends.

Internal Radiation Therapy: If you are hospitalized for insertion of internal radiation sources, you will stay in a protected room until the internal radiation is removed. If you need this type of radiation, your doctor will explain it to you in detail.

Internal radiation sources that are permanently implanted, such as radioactive seed implants, will make you radioactive for a short period of time after they are inserted. Your healthcare team will give you more information if you are treated with these forms of radiation therapy.

Oral Radiation Therapy: If you receive radiopharmaceuticals you **can be** radioactive for a short period of time. Your healthcare team will give you more information if any of these treatments are prescribed for you.

Who will give me the radiation treatment?

Your health care team will work together to provide you with the best care throughout your treatment. The team is led by a radiation oncologist, a doctor who specializes in radiation treatment.

A radiation therapist delivers the treatment and will assist you before and after your treatments. A radiation oncology nurse will work with the radiation doctor to help you throughout your treatment. Your health care team also may include other doctors and health care professionals.

What can I expect during a visit with a radiation oncologist?

You will see your radiation doctor who can advise you whether you can benefit from radiation treatment. He or she will explain why you may benefit from the treatment and the specific side effects associated with it. You will then be asked to sign a consent form agreeing to treatment.

The process begins with a treatment planning session (simulation). Simulation is done to place you in the best position so that we can accurately target the area to be treated. You will be in the same position as you will be during the actual treatments. Special devices may be used to help hold you still during the

treatments. Computerized tomography (CT) scans will be taken so that your doctor can map out the areas to treat.

Once your doctor approves your CT scans and other devices made, the radiation therapist will mark your exact treatment area, either directly on your skin or on a plastic mask if your head and/or neck will be treated. Because the marking fluid may stain, you may want to wear old clothing or a cotton T-shirt underneath your good clothing

If you receive marks on your skin during your simulation, please do not wash them off until a member of your healthcare team says it is okay to do so. As treatments progress, the marks may change as directed by your doctor.

What will happen during radiation treatment?

Every day when you arrive for treatment:

- Check in as instructed. Tell the front desk staff any time you have waited more than 30 minutes for your appointment.
- You will be asked to put on a gown or remove clothing to allow the treatment marks placed during your simulation to be seen.
- It may take a few minutes for the radiation therapists to align you to your marks. Some treatments require imaging before each treatment. The treatment machine takes images to line you up, and will then treat you. The images are used to accurately target your tumor. The actual treatment itself will only last a few minutes.
- You will be assisted onto the treatment table and positioned by the radiation therapists, once you are positioned, **do not move** until the treatment is complete.
- After the radiation therapist has helped position you on the table, he or she will:
 - leave the room;
 - monitor you by closed-circuit television
 - stay in contact with you through an intercom.
- You will be assisted off of the table when your treatment is complete.

Keep in mind that the treatment machines are large and sometimes noisy while in use. Just relax and breathe normally. You should not feel any pain.

If you need something, speak out loud without moving to alert the radiation therapist.

How often will I get radiation treatments?

Most treatments are scheduled every weekday, Monday through Friday, allowing you to rest on Saturday and Sunday. The treatment cycle usually takes from 2-8 weeks.

Your doctor will examine you and review your progress once a week. We refer to these visits as “On Treat Visits” (OTV’s) and they will be before or after your treatment on a specific day of the week. These visits are a good time to ask for refills of medications that have been prescribed to you by your radiation oncologist. Your nurse will work closely with you and the doctor to help you manage any side effects you may have. Your nurse will notify you what day of the week when you sign consents for treatment.

Important: If it is not your normal OTV day and you are having a problem, please tell your therapist. Your therapist will contact your nurse to determine what action to take.

What delays can I expect?

The most frequent cause of delay is equipment downtime. This happens when a radiation treatment

machine cannot be used because it is being serviced. In most cases of downtime, you will be asked to wait. We apologize in advance for this and we do try to minimize machine downtime during the business day. Sometimes unforeseen emergencies arise with patients that require them to be immediately treated. We will do our best to inform you of this in advance, allowing you to make alternate arrangements and minimize your wait time.

What side effects may I have, and how long will they last?

Side effects depend on the part of the body being treated. Most go away a few weeks after treatment stops. Some common side effects include:

- Red, itching and peeling skin – This usually happens in your treatment area after about 3-4 weeks of radiation treatment. Report any skin problems to your nurse or doctor. Refer to the next section for skin care information.
- Fatigue – You may feel more tired than usual. Make sure to get plenty of rest, and do not overexert yourself. The best way to combat fatigue caused by radiation treatment is to maintain your previous activity level. Try to incorporate some light activity such as walking into your day.
- Loss of appetite – You may not feel like eating. This side effect is common if your abdomen or mouth is in the treatment area. If so, try eating several small meals or snacks throughout the day instead of 3 big meals. A dietitian can give you more tips on eating during treatment.
- Hair loss – You may have hair loss, but only in the area being treated.
- Problems with swallowing – Problems with swallowing may occur after the first 2 weeks of treatment if your neck or chest is in the treatment area.

You will receive information about your type of radiation treatment. This information will include what to do in case of problems and how to manage side effects. Tell your doctor or nurse if you have side effects.

How do I take care of my skin while I am getting radiation treatment?

- Toward the end of your treatment, the radiated skin may become pink and itchy. In some cases, the skin will blister and flake, like a sunburn. What to do:
 - Notify your doctor or nurse if you have any blistering or peeling skin.
 - Do not use any soaps with perfume or alcohol. Use a mild soap like Dove or Ivory.
 - Use a lotion that is water based (no shea or coconut oil) on your treatment area at least twice a day, more if instructed. Any lotion you apply should be soaked in your skin when you come for your radiation treatment.
- Leave the marks on your skin until all of your treatments are finished. In some cases, you may rinse the treatment area with warm water, but do not rub or scrub off the marks. Your nurse will talk with you in more detail about caring for the treatment area. Do not use soap on the marks.
- Wear loose-fitting, cotton clothing that does not rub the treatment area.
- Do not put anything hot or cold on the treatment area, and do not expose the area to sun light.
- If your skin itches in the treatment area, do not scratch it. If this is a problem for you, tell your nurse or doctor. Some medicines may relieve the itching.
- Before shaving any part of the treatment area, check with your nurse or doctor. If you are allowed to shave, use an electric shaver.

Will I be able to have sex?

You may have sexual intercourse if it is comfortable for you. With most therapies, you are not radioactive, and your partner is not in danger from the radiation treatments or the cancer.

You must use some type of birth control if you have sexual intercourse during treatment. Your doctor can help you decide what kind of birth control is best for you.

You may want to address concerns about sexual activity with your radiation oncologist. Coping with the diagnosis of cancer and its treatment can be difficult. Your radiation treatment health care team is here to help you. Please tell your nurse or doctor about your concerns.

What other things can I do to help myself during treatment?

Eat a well-balanced diet. Every day, choose foods from these groups: breads and cereals; meats and eggs; milk or milk products; and vegetables and fruits. Always follow the dietary recommendations of your dietitian or other members of your health care team.

- Try to eat enough food to keep your weight at the same level as before treatment. Your body needs more calories now, so you may need to eat more than usual. A dietitian can help you set up a food plan.
- Tell your doctor or nurse if you lose or gain 5 or more pounds (2.2 or more kilograms).
- Drink 8-12 (8-ounce size) cups of fluid (2-3 liters) every day. Fluids may include water, gelatin, ice pops, juices, decaffeinated tea and soup.
- If you notice your weight going down, try to drink fluids that are high in calories, such as milkshakes or nutritional supplements. For more information about nutrition during treatment, talk with a member of your health care team.
- Get some exercise and plenty of rest. It is okay to continue your regular activities as long as you take rest periods and do not overexert yourself. Your doctor will talk with you about how much exercise you should get.
- Try to sleep at least 6 hours at night and take naps during the day if you can.

What should I do about medicine?

Tell your doctor or radiation treatment nurse if you are taking prescription or over-the-counter medicines. He or she will review your current medicines, which usually can be continued throughout your treatment. Your local doctor may still prescribe any medicines you are taking for problems other than cancer. You may continue to buy your routine medicines at your local drugstore.

What if I have other questions?

If you or your family has questions about your care, please ask a member of your health care team. Your on treat visit day is an opportunity to bring family, friends and caregivers with you to your visit to address their concerns.

Being told that you have cancer can affect you and your family in many different ways. A counselor or social worker may be able to help you with individual counseling, support groups, community resources, and transportation while you are receiving treatment.

With your help, your radiation treatment team can give you the best care possible.

Resources

MD Anderson Cancer Center

Radiation Treatment Center Website

<http://www.mdanderson.org/patient-and-cancer-information/care-centers-and-clinics/specialty-and-treatment-centers/radiation-treatment/index.html>

National Cancer Institute (NCI)

Radiation Therapy Website: <http://www.cancer.gov/about-cancer/treatment/types/radiation-therapy>