

Intensity Modulated Radiation Therapy (IMRT)

Your radiation treatments will be given using IMRT. IMRT stands for intensity modulated (in-TEN-suh-tee MOD-you-lay-ted) radiation therapy. During radiation therapy, high-energy x-rays are used to treat cancer. These x-rays either kill the cancer cells or keep them from growing. In radiation therapy, a machine called a linear accelerator (LIN-ee-ur ak-SELL-er-ay-tor) is used to make a beam of rays. This beam is pointed at the part of your body being treated. In standard therapies, radiation is given from the front, back, and both sides. The strength of the radiation beam is the same from all sides. Some areas can be blocked from the radiation.

With IMRT, your therapist may be treating you from a number of angles and the strength of the beam can be adjusted during the treatment while the radiation is on. This allows your doctor to give high doses of radiation to the treatment area while avoiding nearby structures or tissues. Radiation treatments are painless. You will not feel anything while you are being treated. The radiation beam passes right through your body. There is no radiation in your body or body fluids after treatment.

Preparing Your Special Device

IMRT delivers radiation to a very focused area. For this reason, it's important that you are put in the correct position each time and that you stay still during each treatment. You will come to the Radiation Department so a special device can be prepared for you. This device will help you get into the exact same position each time you are treated. It is called an immobilization (im-MO-bil-uh-zay-shun) device. This device may be a type of mask if we are treating your head, neck, or brain. Or it may be a form that surrounds your body (called a vac bag) if we are treating your trunk area. These are made to fit only you.

IMRT Planning/Simulation

A CT (or CAT) scan will be needed to plan your treatment. This helps your doctor map out the area to be treated and areas to avoid. You may be given a substance through an IV (intravenous) line in your arm or to drink by mouth. Both of these contain something called "contrast." This helps make certain body structures show up better on x-rays.

Treatment Planning

The staff will discuss your treatment appointments with you. The planning process is concise and specific to you and the area to be treated. Planning may involve more than one (1) appointment and must be completed before you can receive your first treatment.

Your radiation oncologist will work with a dosimetrist (do-SIM-uh-trist) and a physicist (FIZ-uh-sist). A dosimetrist is a person who determines correct dosage, and a physicist is a scientist who helps plan the radiation setup. When this step is complete, you will be called back to the Radiation Therapy Department for the next step. This is called a verification.

A verification is like a rehearsal. You will not actually have the treatment. You will only go through the set up but not the treatment. You will be positioned in the device exactly as you will be during treatment and x-rays. Measurements will be taken. You may have marks drawn on your skin with a felt tip marker. When all of the measurements and pictures are taken, you may go home.

Your radiation treatments will begin once your treatment plans have been approved by your radiation oncologist. If you are to receive chemotherapy during your radiation treatments, the radiation nurses will coordinate the timing of both treatments with your medical oncologist.

Daily Treatments

Your daily treatments should take about 30 minutes once you enter the treatment room. You will be positioned in the immobilization device in the exact same way each day. You must lie still during the treatment. Your actual treatment will last from 30 to 90 seconds for each angle treated. You will have treatments Monday through Friday at the same time each day. Once or twice a week, the therapists will take x-ray films to confirm that your treatment setup is correct.

You will see your doctor and nurse at least once a week while you are having treatments. If you have problems between these visits, ask to see a nurse after your treatment session. If it is on the weekend or after hours, call the Radiation Oncology Department.

Your Treatment Plan
