

# Proton Therapy

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Proton therapy is a type of radiation therapy that is used to kill cancer cells or stop their growth. It delivers a beam of special particles called protons that stop at the tumor, so it's less likely to harm nearby healthy tissue.

Proton therapy is often used to treat brain and spinal tumors. It can also be used to treat other cancers that have not spread throughout the body, such as breast, chest, esophagus and prostate.

## Benefits of proton therapy

- Less radiation to healthy tissue and nearby organs
- Can reduce side effects in children and young adults who have growing tissues and bones
- Can be used with chemotherapy or surgery if needed
- Can be used when the same area must receive radiation again

## Step 1: CT Simulation – also called CT Sim

CT simulation is the planning phase of radiation. You **do not** receive radiation on this day.

During this visit, you lie in a CT scan machine in the position you will be in for your radiation treatment. Pictures of your treatment area are taken and used for planning radiation. You will get markings or tattoos that help with positioning on the treatment table. This visit can take up to 1 hour.

Based on the site being treated, a custom face mask or body mold is made. This helps keep you in the same position for each treatment. You may also have an intravenous (IV) line and contrast dye for the CT scan, plus an MRI or PET scan.

## **Step 2: Planning and waiting**

Your radiation doctor, physicists and dosimetrists use your CT sim pictures to plan your radiation. The plan is sent to your insurance company for approval. This process often takes up to 2 weeks.

## **Step 3: Practice run**

During the practice run, you do not get radiation. You lie on the treatment table and your custom mask or body mold is placed on or under you. Images are taken to make sure the treatment plan and set up are right. If you **are not** getting anesthesia or sedation, the practice run is often done the day before you start treatment. If you are getting anesthesia or sedation, the practice run is done on your first treatment day.

## **Step 3: Radiation treatments**

Radiation therapists use your markings or tattoos to help you lie on the radiation table in the same position as your CT sim. They use a face mask or body mold to keep you in the right position.

Each visit takes about 30 to 60 minutes. You will not feel or see anything during the treatments. Your treatment does not make you radioactive or harmful to others. Once a week you have an on-treatment visit (OTV) with your nurse and doctor. They ask how you are doing and can help you manage side effects.

## **Step 4: Ringing the bell**

You can celebrate your last radiation treatment by ringing a bell in our department.

## **Step 5: Follow-up visits**

Follow-up visits include seeing your doctor or a nurse practitioner and may include imaging tests like a CT scan. Your doctor talks about your follow-up plan before your treatment is finished.