



What Is Proton Therapy?

Proton therapy is an advanced form of radiation treatment that uses a beam of the positively charged part of an atom — the proton — to damage the DNA of cancer cells. Because the beam can target the tumor's exact three-dimensional shape, proton therapy provides a very precise delivery of radiation. The benefits include:

- Less risk to surrounding healthy tissue
- Reduced number of treatments due to higher treatment dosing
- Reduced long-term side effects



Cancers Treated by Proton Therapy

Proton therapy treats tumors in sensitive areas, causing less damage to normal tissue than conventional x-ray therapy. Pediatric cancer patients benefit from proton therapy because it reduces radiation exposure to their smaller and still developing bodies. Proton therapy can treat a wide range of cancers, including:

- Brain and spine
- Breast
- Esophageal and upper GI
- Head, neck and skull base
- Lymphomas
- Liver
- Lung and thorax
- Pediatric
- Prostate
- Sarcoma
- Recurrent tumors

How Proton Therapy Works

Creating Protons: Protons are small particles extracted from hydrogen atoms, and a cyclotron accelerates them to two-thirds the speed of light. Electromagnets guide protons through a beam-line to a treatment room.

Precise Targeting: Using images from a patient's computed tomography (CT), as well as magnetic resonance imaging (MRI) and/or PET if available, a customized plan is designed for each patient. Before each treatment, on-board imaging allows the therapy team to precisely target the tumor. The patient is carefully positioned using a robotic treatment couch. A massive gantry, weighing more than 120 tons, rotates around the patient and precisely delivers radiation to the shape, size and depth of the tumor target. The protons then destroy the cancerous cells, and their unique physical properties minimize exposure and subsequent damage to the surrounding tissue.

Proton beams are designed to deposit their highest radiation dose at the tumor, and unlike x-ray therapy, proton therapy delivers less radiation as it enters the

body and little to no radiation after it reaches the tumor. This reduces damage to surrounding healthy tissue and potential short-term and long-term side effects.

Pencil Beam Capabilities: Texas Center for Proton Therapy also has an even more advanced form of proton therapy known as pencil-beam or spot-scanning proton therapy. This technique delivers small "pencil beams" of proton therapy measuring only millimeters wide that yield an even greater level of radiation dose conformity and precision. This technology also allows the delivery of Intensity Modulated Proton Therapy (IMPT). With three treatment rooms, Texas Center for Proton Therapy is the largest pencil beam facility in the region.

Cone Beam CT: This center also has the capability to perform three-dimensional volumetric imaging using an on-board cone-beam CT. Performed prior to treatment, Cone Beam CT allows for more accurate targeting of the tumor. Texas Center for Proton Therapy is the only proton center in Texas with this technology.

Adaptive Treatment Planning: Proton therapy requires ongoing treatment planning based on the most current and accurate “picture” of the tumor possible. Scans are performed periodically during a treatment regimen to take into account the changing, shrinking size of the tumor. The clinical team then adapts its treatment to continue targeting only the tumor, minimizing damage to nearby healthy tissue.

Duration: Treatment sessions typically last for 15 to 45 minutes, and the complete course of treatment may be from one to 45 daily sessions.

Cost of Therapy

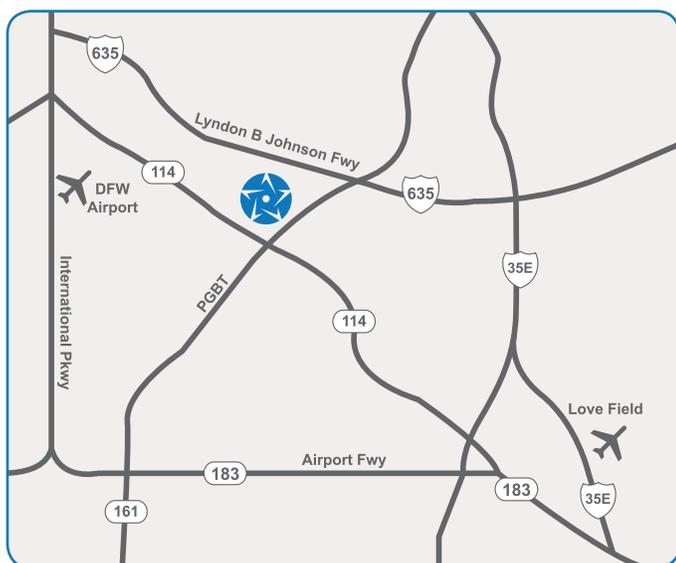
Texas Oncology, which operates Texas Center for Proton Therapy, is contracted with nearly all of the major insurers in Texas. The cost of proton beam therapy at Texas Center for Proton Therapy is substantially less than hospital-owned-and-operated proton centers because we are a physician group practice. There are no expensive hospital or facility charges at Texas Center for Proton Therapy.

Patient Support Services

Texas Center for Proton Therapy will offer support services to assist patients while they are receiving daily treatment for six to eight weeks. The goal of these services is to make their lives a little easier and allow them to focus on their care and recovery. Services will include assistance finding accommodations at reduced rates to fit the individual needs of patients and their families.

Texas Center for Proton Therapy has negotiated preferred rates for our out-of-town patients needing local lodging. Our Patient Support Administrator will work with all patients and their families to help meet their needs during treatment.

To learn more, visit
TexasCenterforProtonTherapy.com.



1501 West Royal Lane
Irving, Texas 75063
469-513-5500

