

## Advantages of Proton Therapy

Thompson Proton Center is pleased to provide an advanced form of radiation therapy to our patients. Proton therapy has several advantages compared to traditional radiation therapy.

Benefits of proton therapy include:

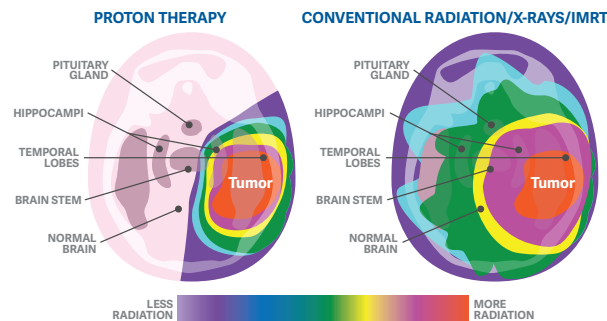
- **Controlled delivery and dosage of proton energy**, allowing direct targeting of the tumor for the maximum prescribed dosage of radiation.
- **Improved quality of life**, during and after treatment, from greater precision in treating the tumor.
- **Lower risk of side effects and impact to bodily functions**, as unnecessary radiation to nearby healthy tissue and vital organs is prevented.
- **Cancer in critical areas** close to organs and structures that could be damaged by radiation can be safely targeted and treated.
- **Proton therapy can be a treatment option for people with a recurrent cancer** that has previously been treated with radiation. Proton therapy can be directed to avoid the areas that have received a maximum lifetime dose of radiation while still targeting the recurrence.

## Cancers We Treat

Proton therapy allows tumors to be treated with extreme accuracy, delivering cancer-killing energy to the target with less damage to surrounding healthy tissue and a lower risk of side effects. These qualities make proton therapy the ideal treatment for many types of cancers, including:

- Brain and Spine Cancer
- Breast Cancer
- Head, Neck and Oral Cancer
- Lung Cancer
- Lymphomas
- Pediatric Cancer
- Prostate Cancer
- Re-irradiation

A consultation with a board-certified, proton-experienced radiation oncologist is the best the way to determine if proton therapy is the preferred treatment for your cancer. To schedule a consultation, call (865) 770-7401 and speak with a coordinator.



To learn more about  
proton therapy and  
Thompson Proton Center,  
call (865) 770-7401 or visit  
[ThompsonProton.com](http://ThompsonProton.com)



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Image courtesy of IBA

## Proton Therapy for Cancer Patients

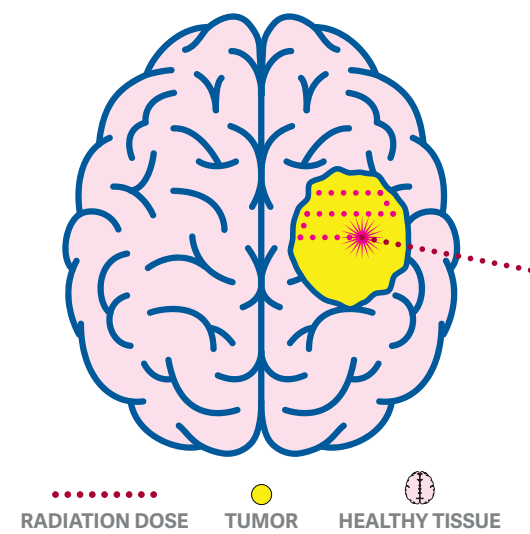


## About Proton Therapy at Thompson Proton Center

Proton therapy is one of the world’s most advanced forms of radiation therapy for cancer treatment. It has become a trusted method for precisely targeting tumors and reducing the risk of side effects. The physician can plan exactly where the maximum energy of the proton beam will be released, avoiding unnecessary radiation to nearby healthy tissue and vital organs.

Thompson Proton Center utilizes pencil beam scanning, the most precise form of proton therapy. This provides greater customization and precision in radiation therapy for cancer treatment, allowing physicians to target the tumor area with the highest radiation dose by a proton beam only millimeters wide.

### PENCIL BEAM SCANNING



## Frequently Asked Questions

### What is the difference between proton therapy and traditional radiation therapy?

Proton therapy is an advanced form of external beam radiation therapy that uses protons rather than the high energy x-rays used in traditional radiation therapy. Both types of radiation therapy destroy cancer cells by damaging their DNA. Traditional radiation therapy uses high energy x-rays to target the tumor. The x-rays pass through the tumor and continue on their path, then exit the body. Because x-rays do not stop at the tumor, they deposit unnecessary radiation and damage healthy tissue as they exit the body. Protons can be focused directly to the tumor and stop at that target in the body. This precise accuracy eliminates any unnecessary radiation beyond the planned area.

### What is the treatment like for proton therapy?

Proton therapy is a painless and non-invasive treatment. Treatment side effects or complications are decreased because proton therapy minimizes unnecessary radiation to healthy tissue.

The goal of the proton therapy team is to make your treatment sessions as comfortable as possible. During treatment, the therapy team will use various support cushions and positioning tools to help you maintain your aligned position.

### How long does a proton therapy session last?

The actual therapy only takes a few minutes. The entire treatment session, including exact positioning and alignment of the patient and the equipment, usually lasts between 20 and 30 minutes.

### How many proton therapy sessions will I need?

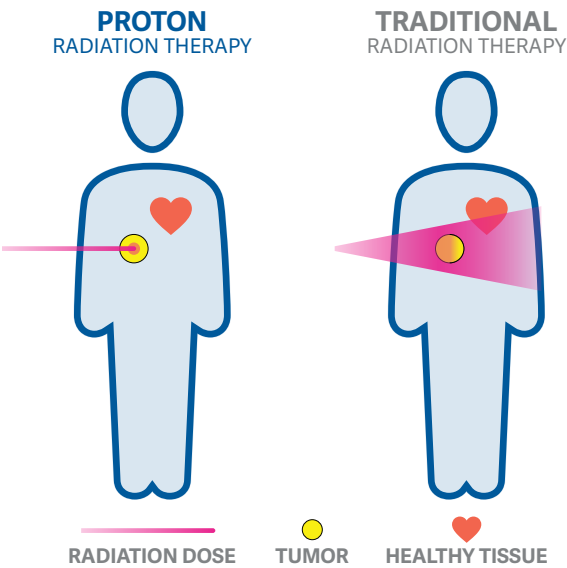
Your physician and care team will develop a customized treatment plan for you. Most patients have treatments five sessions a week for several weeks. Since side effects are minimal, patients can typically maintain their pre-treatment lifestyle and routines throughout the course of treatment.

### Can proton therapy be combined with other treatment options?

Yes. Proton therapy can be used in conjunction with other cancer treatment modalities, such as surgery, chemotherapy and immunotherapy.

### Is proton therapy approved by the Food and Drug Administration?

Yes, it earned approval in 1988.



Just as with traditional radiation therapy, proton therapy treats tumors by directing radiation into the tumor site, where doses of radiation destroy cancerous cells. Thompson Proton Center utilizes pencil beam scanning, which is the most precise form of proton therapy. This makes it possible for physicians to treat the tumor with a higher, more effective dose, while reducing damage to nearby healthy tissue. This leads to lower risks of side effects and improved quality of life, both during and after treatment.