



## FACT SHEET – Proton Therapy

**CONTACT:** Kristen Chandler, 502-939-3323, [kchandler@protonintl.com](mailto:kchandler@protonintl.com)

Proton therapy is an advanced form of radiation therapy that is highly effective and, because of the precision of the proton beam, has fewer short- and long-term side effects than traditional radiation.

As with X-ray radiation, proton therapy kills cancer cells by preventing them from dividing and growing.

The X-ray beam releases radiation as it enters the body, strikes the tumor and then exits the body, damaging healthy tissue in its path along the way. The proton beam, custom sized and shaped according to the mass of the tumor, enters the body, releases the peak of its energy at the back of the tumor and then stops. While some energy is released before it hits the tumor, it is far less than with X-ray radiation. It is the damage to healthy tissue from radiation that causes most side effects.

Proton therapy treats many solid cancer tumors, including tumors of the brain, central nervous system, eye, gastrointestinal tract, head and neck, liver, lung, prostate, spine and some breast tumors. It is also appropriate for some non-cancerous tumors.

Proton therapy is particularly important when treating children. Because of their small size, children are vulnerable to the damage and side effects of radiation therapy. Research studies report that proton therapy reduces the chances of secondary or recurrent tumors occurring later in life.

Because of its precision, the proton beam can deliver a higher, more effective dose of radiation to the tumor than an X-ray beam.

For most patients, treatment with protons is given five-days a week for four- to eight-weeks, depending on the cancer tumor and other factors. Including preparation time, it takes about 15-25 minutes for a treatment, however, patients are only “under” the proton beam for minutes. Treatments are safe and painless.

Proton therapy has been in clinical use for more than 50 years and has emerged as an important therapy in the past decade as technological advances have made it possible to locate and determine the size and shape of tumors, which is key for using this precise therapy to its greatest advantage.

As more proton treatment centers have opened, considerable research is underway and regularly published, reinforcing the effectiveness of the therapy. Patients receiving proton therapy are entered into a registry to add to research on outcomes and effectiveness.

Proton treatment is covered by Medicare and the majority of commercial insurance policies.

Protons are not the best choice for every kind of cancer or for every patient. Before treatment, comparative studies are done to project the results of using protons or X-ray beam radiation to select the best option.

There are currently 22 proton centers operating in the United States with another eight under construction.

For more information, the National Association for Proton Therapy <http://www.proton-therapy.org> is a nonprofit organization offering information and resources to patients and the medical community. It is supported primarily by proton center members.