Proton Therapy for Patients with Cancer

Precision Therapy. Fewer side effects.

Proton therapy is one of the most advanced forms of radiation cancer treatment that precisely targets tumors. Because this precision causes less damage to healthy tissue, proton therapy patients experience fewer side effects than with standard X-ray radiation.

Effective in treating a broad range of tumors

Although tumors can be treated with surgery, chemotherapy and standard X-ray radiation, proton therapy can be particularly beneficial for patients with certain types of cancer as well as some non-cancerous tumors and arteriovenous malformations. The ability of protons to deposit more energy directly in the tumor makes proton therapy an ideal treatment option for many patients, especially those whose tumors are near critical organs or structures.

Tumors most appropriate for proton therapy include:

- Base-of-skull tumors
- Breast tumors
- Gastrointestinal cancers including anal, rectal, colon, esophageal and pancreatic
- Gynecological cancers including uterine, cervical and vulvar
- Head and neck tumors
- Lung tumors
- Melanoma of the eye
- Pediatric tumors
- Pituitary gland tumors
- Prostate cancer
- Soft tissue sarcoma
- Tumors near the spine

Particularly beneficial for children

Since children’s bodies are still growing, they can experience more serious short-term and long-term side effects from X-ray radiation than adults. Research has shown that proton therapy may significantly reduce the risk of developmental and growth delays, secondary tumors, reductions in IQ and other complications often associated with standard X-ray radiation. This is why proton therapy is often preferred when children need radiation treatment for cancer or other types of tumors.¹


The most important benefit of proton therapy is that protons result in less damage to healthy tissue compared to other forms of radiation treatment resulting in fewer side effects.