

about Optivus

Optivus Proton Therapy, Inc. was founded on the principle of continuous excellence in the design and development of disease treatment technology. Committed to saving lives, the company's mission focuses on developing and advancing the state of the proton therapy it pioneered, which some have called the "beam of hope." This form of radiation therapy, already clinically established to provide significant advantages over conventional radiation treatment or surgery for certain cancers and other diseases, is the sole focus of Optivus' business activities.

*The Optivus team offers more than **two decades** of expertise in all aspects of proton therapy*



Origins of Optivus

In 1987, a team of engineers joined with physicians and scientists from

Loma Linda University Medical Center, (LLUMC), a major Southern California teaching hospital, to pioneer the world's first hospital-based Proton Beam Cancer Treatment Center. Thirty-seven months later, in October 1990, the first treatment room went online. Inspired by the success physicians and patients experienced (see Sidebar), that engineering team founded Optivus in 1993 to pursue their vision of making proton therapy available to cancer patients throughout the world.

Since that time, Optivus has demonstrated its commitment to this vision by designing, developing and integrating more than \$100 million of enhancements to the original LLUMC system, while maintaining an unsurpassed record

of patient throughput, operational reliability, and safety. The Optivus system offered today represents fifth-generation advanced proton beam technology that, when matched with Optivus' track record for reliability and customer support, provides a superior treatment modality combined with proven revenue generation.

A Holistic Approach to Proton Therapy

Optivus maintains its leadership role in proton therapy advances by embracing all aspects of proton therapy: research and development, maintenance and operation of existing systems, financing assistance, and facility planning for turnkey systems. In fact, the Optivus team offers more than two decades of expertise in all aspects of proton therapy. These dedicated individuals bring a commitment to quality and International Organization for Standardization (ISO) principles that have been central to Optivus' success from the beginning.

MISSION To Save Lives with Proton Therapy

Optivus Accomplishments

The Optivus approach has earned an impressive list of accomplishments for its Proton Beam Therapy Systems (PBTS):

Throughput

- More daily patient treatments at a single center than the combined total of all other proton centers worldwide
- An unmatched record of daily patient treatments, with up to 175 patients treated in one day, as well as more than 100 daily treatments continuously for more than seven years

Experience

- Nearly one half million individual patient treatments since 1990, representing the largest percentage of proton therapy treatments worldwide performed at a PBTS facility

Reliability

- An unsurpassed uptime record, with its PBTS operational more than 98% of scheduled treatment time for more than 10 years
- Dozens of major and minor upgrades performed over a 16-year period without impacting clinical operations

Safety

- Perfect safety record after nearly one-half million individual patient treatments
- Superb operational characteristics, enabling immediate system maintenance after shutdown without fear of potential residual radiation exposure to technicians
- Recyclable, environmentally-responsible patient-specific devices, such as apertures and tissue compensators

Recent Innovations

- FDA-cleared Intensity Modulated Proton Therapy (IMPT) system allowing proton beam delivery with three-dimensional conformity to multiple targets, and enabling effective treatment for patients with advanced disease as well as palliative measures
- Image Guidance Proton Therapy (IGPT), which increases speed and accuracy of patient positioning, boosting patient throughput and offering potential for future proton techniques in other areas of medicine

Optivus Firsts

Optivus helped to create and define the gold standard in the proton therapy industry, providing unparalleled experience to treatment facilities with everything from selecting technology and designing floorplans to training staff and servicing equipment. Optivus sets the standard for proton beam therapy with more than twenty patents in the U.S. and more than fifty internationally. It was the first company to:

- Create a therapeutic PBTS product
- Receive FDA clearance for up to five treatment rooms
- Treat more than 100 patients per day in one facility
- Develop the first synchrotron accelerator capable of running for multiple days without service
- Demonstrate greater than 98 percent system reliability for more than 10 years
- Obtain over 15 years of clinical data and best practices
- Implement a 24/7 integrated support system providing immediate diagnostics and on-site servicing

What Patients Say About Proton Therapy and Optivus

“I am a senior academic Pathologist who taught medical school for over 32 years and conducted tumor biology research for over 40 years. When I was diagnosed with early stage prostate cancer (T1c), I chose proton beam therapy because the treatment had a very low side effect profile with minimal to no incontinence and a high chance of maintaining sexual potency. The treatments were painless and, except for mild swelling, were unremarkable. I recommend proton therapy at Loma Linda for the comprehensive treatment of prostate cancer.”

— H. Terry Wepsic, M.D.