



THIS STORY HAS BEEN FORMATTED FOR EASY PRINTING

Hospital debuts proton beam therapy

Radiation device aids cancer fight

By Alice Dembner, Globe Staff, 11/14/2001

On the site of the antiquated Charles Street Jail, a pair of three-story, 100-ton gantries support some of the most sophisticated medical technology in the country - a \$50 million device built to attack cancer with a stream of particles moving at just under the speed of light.

On the receiving end of the particle beam yesterday was Jonathan Barres, a father of six, who simply had to slip off his shoes, don a special mask and lie on a "couch" as doctors used robotics to direct the particles with pinpoint precision. With four one-minute blasts of radiation, Barres became the first patient treated at the nation's most advanced proton beam center.

"This is not a cure-all for cancer, but it's a major step forward for radiation oncology," said Barres's doctor, Jay S. Loeffler, director of the new center at Massachusetts General Hospital. "With this very precise technology, we hope to have a positive impact on patient survival."

Unlike traditional radiation therapy, which uses high-energy X-rays and costs about half as much, proton therapy spares the tissues around the cancer. It is the recommended treatment for some skull- and spine-based cancers, and certain eye tumors. It is particularly useful in cancers where traditional radiation causes severe side effects or cannot be given in high enough doses to help, said Loeffler, who is chairman of radiation oncology at Mass. General.

Over the next six months, the new center will replace the Harvard Cyclotron Laboratory in Cambridge, which was built in the 1940s for nuclear physics research, but adapted for radiation treatment and since used on more than 9,000 patients.

The new center will eventually allow treatment of more than 65 patients a day, compared with 20 at the Cyclotron. The only other hospital-based cyclotron is located at Loma Linda University Medical Center near Los Angeles.

Built using \$26 million from the National Cancer Institute and nearly as much raised by MGH, the new cyclotron generates higher doses of radiation and greater precision in treatment, allowing it to be used on new parts of the body and on deep tissues. With a few computer keystrokes, doctors can shift the beam to any angle, "sneaking it around other tissue," Loeffler said. The center expects to draw patients from around the country as well as from abroad.

Dr. Mary Ann Stevenson, chairwoman of radiation oncology at Beth Israel Deaconess Medical Center, compared the old cyclotron to "Frankenstein's laboratory," and said the new facility, built with patient comfort in mind, is an important addition to Boston's medical arsenal. "It is

tremendously important for a small number of patients with extremely rare cancers," she said. "But this isn't going to change the way the bulk of our patients are treated."

Jonathan Barres hopes the treatment will give him back his life, which he has devoted to raising six children and a commercial real estate business. After he was diagnosed in August with a benign tumor in the base of his skull, surgeons removed as much of it as they could without damaging his brain. To kill the remaining tumor, the 51-year-old Stonington, Conn., resident had a choice of radiation. He decided the proton beam was likely to have the least impact on his eye and cognitive abilities, and didn't hesitate at being the center's first patient. Yesterday was the third of his 31 days of radiation.

"I really wanted to have the best treatment I could," he said. "As the first, I'd be getting more care and doing something that could help others. I'm either the guinea pig or I'm going to feel like the first man to go to the moon."

This story ran on page B2 of the Boston Globe on 11/14/2001.

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