Proton Therapy For Childhood Cancers

(NAPSM)—One of the most advanced cancer treatments, proton therapy, is a precise form of radiation that uses a beam of protons to deliver radiation directly to the tumor, destroying cancer cells while sparing surrounding healthy tissue and vital organs.

"Proton therapy can be especially beneficial for children whose bodies are still developing," explained Anita Mahajan, M.D., Director of Clinical Pediatric Radiation Oncology at MD Anderson.

A proton beam enters the body with a low dose of radiation and deposits its maximum energy directly at the tumor site. The ability of proton therapy to precisely target tumors makes it ideal for treating young cancer patients. Its accuracy lets it treat tumors near or within sensitive organs while limiting radiation exposure to healthy parts of the body. As a result, patients often experience fewer side effects.

"We know children are much more susceptible to the short- and long-term effects of radiation and anything we can do to reduce radiation exposure to normal tissue is critical," said Dr. Mahajan.

Some of the childhood cancers treatable with proton therapy include tumors of the head, neck, spinal cord, heart, lungs and, most commonly, brain—which is what brought Matthew Rager and his family to the proton center.

Dr. Anita Mahajan of MD Anderson Proton Therapy Center (left) with patient Matthew Rager.

Life changed for the Rager family when their 5-year-old son Matthew had a seizure in the middle of the night. Prompting the discovery of a brain tumor, the seizure led to a nationwide search for the best cancer treatment for the child.

"We got involved in an online support group for pediatric brain tumor parents," Denise, Matthew's mother, said. "They all encouraged us to go to a top hospital in the country. So we found MD Anderson, which at the time was one of only a few proton centers in the U.S."

Knowing the possible side effects of traditional radiation in children, the Ragers decided that proton therapy was the best option for Matthew.

"With proton therapy, we are able to target a higher dose [of radiation] directly into the tumor, which allows us to minimize side effects during and after treatment," said Dr. Mahajan.

With Denise and her husband, Eric, convinced that proton therapy was right for their son, the family temporarily relocated from California to Houston for Matthew's daily proton therapy treatments. Their experience led them to purchase a condo there called Matthew's Miracle House, which provides temporary housing for families who need to travel to Houston for cancer treatment.

Now 9 years old, Matthew is cancer-free and continues to do well. So well, in fact, that the fourth grader is on an eighth-grade math level and he enjoys reading and the challenge of strategy games.

With internationally recognized pediatric cancer specialists, MD Anderson Proton Therapy Center is a leader in treating cancer in children. Since the center opened, it has treated more than 400 pediatric patients. Today, the center remains one of only nine proton therapy centers nationally—and is the only one to be integrated with a comprehensive cancer hospital.

For more information, visit www.mdanderson.org/protonforkids.