The Department of Radiation Oncology at the University of Alabama at Birmingham Comprehensive Cancer Center is among the world's first to begin using radiation technology that dramatically reduces treatment times.

UAB's Hazelrig-Salter Radiation Oncology Center is the third U.S. site to acquire TrueBeam technology. TrueBeam, by Varian Medical Systems Inc., can complete a standard 40-minute radiation therapy in less than a minute for select patients. The precision of the instrument, measured in increments of less than a millimeter, comes from real-time patient imaging, positioning, beam shaping and many other data points synchronized continually as treatment progresses.

"This technology gives us the tools we need to shrink the number of treatment visits for some patients from weeks to days," says James A. Bonner, M.D., chair of UAB's Department of Radiation Oncology and a senior advisor at the Cancer Center. "Patients coming to UAB can expect leading-edge care with more options for fighting cancer and, hopefully, improved chances for survival."

TrueBeam made its debut in the United States earlier in 2010 at Stanford University in Stanford, Calif., and at Memorial Sloan-Kettering Cancer Center in New York.

TrueBeam can be used to treat tumors anywhere in the body where radiation treatment is indicated. The technology opens the door to new treatment plans and improved quality of life in patients who have challenging cancers such as in the lung, breast, abdomen and head and neck, as well as cancers that are treated with radiotherapy. However, the technology is still very

new, and long-term outcomes have not been determined.

It can perform advanced external-beam radiotherapy, including image-guided radiotherapy and radiosurgery, intensity-modulated radiotherapy, stereotactic body radiotherapy and other procedures.

“This accuracy involves a first-of-its-kind synchronization between imaging, patient positioning, beam shaping, motion control and dose management,” says Richard Popple, Ph.D., a UAB assistant professor of radiation oncology and physics team leader. “More than 100,000 data points are monitored continually as a treatment progresses, ensuring that the system maintains a true focus on the tumor and avoids healthy tissue.”

TrueBeam’s radiation delivery times are 50 percent faster than conventional “intensity-modulated” radiation therapy with up to a five-fold reduction in the number of steps needed to treat patients compared to many other machines, according to a Varian statement .

The UAB Department of Radiation Oncology is a world-renowned technological leader in the fields of cancer treatment, research and education. At the forefront in the delivery of cancer care in Alabama and the Southeast, the department is dedicated to the most technically advanced therapy treatments with compassionate care for patients in the new Hazelrig-Salter Radiation Oncology Center.

The UAB Comprehensive Cancer Center is among the 40 cancer centers in the nation to meet the stringent criteria for the National Cancer Institute's comprehensive designation. The center is a leader in groundbreaking research, reducing cancer disparities and leading-edge patient care.

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