

Stereotactic radiotherapy stops lung cancer from growing in frail patients

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Stereotactic body radiation therapy (SBRT) stopped the growth of cancer at its original site in the lung for three years among nearly 98 percent of patients with early non-small cell lung cancer (NSCLC) who are unable to have the cancer surgically removed, according to an updated three-year study presented November 2, 2009, at the 51st Annual Meeting of the American Society for Radiation Oncology (ASTRO).

The study also shows that more than half (56 percent) of these patients lived for three years after diagnosis, while 48 percent survived for three years after cancer treatment with no sign of the disease returning. Researchers also found that despite the high potency of treatment, less than 20 percent of these extremely frail patients experienced a serious decline in their health status. This finding was better than researchers expected and is similar to the risks for healthier patients to undergo radical surgery.

"The results of the RTOG 0236 study confirms that SBRT should now be considered a standard treatment in early-stage lung cancer patients with co-existing serious medical problems, such as emphysema, heart disease and stroke," Robert D. Timmerman, M.D., lead author of the Radiation Therapy Oncology Group (RTOG) study and a radiation oncologist at the University of Texas Southwestern Medical Center in Dallas said. "It also begs the question of whether SBRT should be considered in healthier patients with [lung cancer](#) who are treated with surgery."

Stereotactic body radiation therapy is a specialized type of external beam [radiation therapy](#) that pinpoints high doses of radiation directly on the cancer in a shorter amount of time than traditional treatments. Cancer centers often call the treatments by the brand names of the manufacturers, including Axesse, CyberKnife, Gamma Knife, Novalis, Primatom, Synergy, X-Knife, TomoTherapy and Trilogy. Treatment in the study was delivered in 1½ to 2 weeks, instead of a typical period of 6 to 8 weeks.

For the past century, the standard treatment for early-stage NSCLC has been radical surgery that has involved removing a lobe or even the entire lung on the affected side. This surgery can be difficult for many patients as other medical conditions can hinder their recovery. The phase II trial took place from May 2004 to October 2006 and involved 55 patients at eight RTOG institutions in the U.S. and Canada. They received SBRT with a dose of 54 Gy in three fractions. The medium follow-up after treatment was 34 months.

Source: American Society for Radiation Oncology

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