

New treatment option emerging for some with early stage lung cancer

November 4 2009

Patients with early stage, non-small cell lung cancer who are not able to undergo surgery, now have a highly effective treatment option.

Physicians say that option, radical stereotactic radiosurgery performed with CyberKnife, leads to a 100 percent overall survival after three years in patients with good lung function before treatment. These are the results of a study presented today at the annual CHEST meeting in San Diego. The study is a semifinalist for an Alfred Soffer Research Award, selected for "outstanding original scientific research."

For patients with small tumors characterized as early-stage disease, surgical removal of the affected lobe (lobectomy) is the standard of care. However, surgery is sometimes not an option because of other pre-existing medical conditions such as emphysema or heart disease.

"Our goal has been to find a reasonable option for patients who don't want or can't tolerate surgery," says the study's lead author, Brian T. Collins, MD, a radiation oncologist with the Lombardi Comprehensive Cancer Center at Georgetown University Hospital. "What we discovered is a very promising option that may be relevant for other stage one patients as well. More follow up with these patients is planned to see how they progress five years after treatment."

Twenty-four patients were treated as part of the study. Each patient's "forced expiratory volume in 1 second" or FEV1 was measured.

"We use the FEV1 to grade the severity of a patient's COPD," says Eric

D. Anderson, MD, a pulmonologist at Georgetown University Hospital and presenting author of the abstract. "It measures the ability of a patient to exhale forcefully." COPD stands for Chronic Obstructive Pulmonary Disease and is commonly referred to as emphysema.

At an average follow up of 36 months, the overall survival for all patients was 79 percent with five deaths occurring due to progressive lung dysfunction. For patients with a better FEV1, survival was 100 percent.

Collins says the treatment was well tolerated with mild fatigue only reported by the majority of patients.

"What we also learned from this study is that patients with poorer lung functioning don't do nearly as well," Collins explained. The overall survival in this group of patients was only 30 percent.

"This information is important for the doctor and patient when making treatment decisions," says Collins. "In treating someone with poor lung function, it would seem prudent to modify the treatment dose in order to reduce further damage to the lungs that stereotactic radiosurgery causes."

[Lung cancer](#) is the leading cause of cancer deaths with more than 215,020 people diagnosed each year and 161,804 dying of the disease, according to the American Cancer Society. While there is no screening test for lung cancer that would allow doctors to find the disease in its earliest, most curable stage, some tumors are found early because of medical tests being done for other conditions.

"These results are important because lung cancer is typically the result of long term smoking which causes significant health problems like emphysema. For these patients traditional lung surgery can be too risky because of their other health issues. This study shows that CyberKnife is

a viable and promising option for patients to consider when their lung tumor has not spread to the lymph nodes or to distant parts of the body and surgery is too high-risk," explains Collins.

Source: Georgetown University Medical Center ([news](#) : [web](#))

Citation: New treatment option emerging for some with early stage lung cancer (2009, November 4) retrieved 2 May 2024 from

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