

# Study shows SBRT for stage I NSCLC safe and effective

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Stereotactic body radiotherapy (SBRT) is considered the treatment of choice for early-stage non–small-cell lung cancer (NSCLC) if patients are inoperable because of additional medical conditions. This is based on several prospective phase II trials, which reported consistently high rates of local tumor control. However, these studies only included small number of patients, the methodology of SBRT varied between the studies and SBRT was mainly practiced in specialized centers. Therefore, safety and efficacy of SBRT practiced in routine clinical practice outside of study protocols is not well analyzed.

A working group called Extracranial Stereotactic Radiotherapy was formed within the German Society for Radiation Oncology and this group performed a patterns-of-care and patterns-of-outcome analysis looking at safety and efficacy of SBRT for stage I NSCLC in Germany and Austria. Their research, published in the August issue of the *Journal of Thoracic Oncology (JTO)*, concludes SBRT for stage I NSCLC was safe and effective in this multi-institutional environment. In addition, radiotherapy dosage was identified as a major treatment factor influencing local tumor control and overall survival.

The researchers looked at data from 582 patients treated at 13 institutions between 1998 and 2011. Average follow-up for all patients was 21.4 months and the maximum was 144 months (12 years); follow-up was more than 3 years for 108 patients. Three-year freedom from local progression was 79.6 percent for all 582 patients.

The biological effective dosage was the most significant factor influencing freedom from local progression and overall survival. No evidence of a learning curve or improvement of results with larger SBRT experience and implementation of new radiotherapy technologies was observed. The group concluded that SBRT for stage I NSCLC was safe and effective in this multi-institutional, academic environment, despite considerable inter-institutional variability and time trends in SBRT practice.

Provided by International Association for the Study of Lung Cancer

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