Study examines survival outcomes after different lung cancer staging methods

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In a study appearing in the September 13 issue of *JAMA*, Jouke T. Annema, M.D., Ph.D., of the Academic Medical Center, Amsterdam, and colleagues examined five-year survival after endosonography vs mediastinoscopy for mediastinal nodal staging of lung cancer.

Accurate mediastinal nodal staging is crucial in the management of non-small cell lung cancer (NSCLC) because it directs therapy and has prognostic value. The Assessment of Surgical Staging vs Endosonographic Ultrasound in Lung Cancer (ASTER) trial compared mediastinoscopy (surgical staging) with an endosonographic staging strategy (which combined the use of endobronchial and transesophageal ultrasound followed by mediastinoscopy if negative). The endosonographic strategy was significantly more sensitive for diagnosing mediastinal nodal metastases than surgical staging (94 percent endosonographic strategy vs 79 percent surgical strategy). If mediastinal staging is improved, more patients should receive optimal treatment and might survive longer.

This analysis evaluated survival in ASTER. Of 241 patients with potentially resectable NSCLC, 123 were randomized to endosonographic staging and 118 to surgical staging in 4 tertiary referral centers. Survival data were obtained through patient records, death registers, or contact with general practitioners. Survival data at 5 years were obtained for 237 of 241 patients. The prevalence of mediastinal nodal metastases was 54 percent in the endosonographic strategy group and 44 percent in the surgical strategy group. Survival at 5 years was 35 percent for the

endosonographic strategy vs 35 percent for the surgical strategy. The estimated median survival was 31 months for the endosonographic strategy vs 33 months for the surgical strategy.

"Why did improved mediastinal staging not lead to improved survival? Missing data occurred in less than 2 percent and therefore are an unlikely source of bias. However, ASTER was powered to detect a difference in diagnostic sensitivity, not survival, as reflected by the wide confidence intervals. If a survival difference between the strategies exists, it is likely to be small and a larger sample size may be needed to detect it. However, randomized trials to detect a survival difference based on staging strategy are not likely to be conducted as the endosonographic strategy is now advised in clinical guidelines," the authors write.

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