Comparison of Wedge vs. Lobar Resection for Stage 1 NSCLC Patients: A SEER-Medicare Analysis

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To the Editor:

We read with interest the Article by Cao and colleagues1. Similarly to their study, we compared outcomes of wedge vs. lobar resection patients using the Surveillance, Epidemiology and End Results (SEER)-Medicare database. We identified 1186 patients with stage I primary non-small cell lung cancer (NSCLC) who had video-assisted thoracoscopic surgery (VATS) or open lobar or wedge resections between 2007 and 2010. All patients were ≥ 65 years old and had tumors sizes < 21mm, making their cancers surgically resectable.

Logistic Regression was used to investigate the associations between having either wedge or lobar lung surgery and surgical outcomes, including post-surgical complications, length of hospital stay >7 days and long term mortality.

Factors statistically associated with wedge resection in the multivariate model were a squamous histology (OR_{adj} 1.51, 95% CI: 1.14-2.00), number of comorbidities (OR_{adj} 1.24, 95% CI: 1.11-1.38), and increasing age (OR_{adj} 1.05, 95% CI: 1.09-1.08). Wedge resection was less likely if the tumor was > 10mm (OR_{adj} 0.40, 95% CI: 0.28-0.57), and located in the middle lobe (OR_{adj} 0.32, 95% CI: 0.16-0.63). Wedge patients were significantly less likely than lobar patients to have node removal/examination (OR_{adj} 0.02, 95% CI: 0.01-0.04).

Patients who underwent wedge resection were less likely to experience in-hospital complications (OR_{adj} 0.53, 95% CI: 0.41-0.70), or a prolonged length of hospital stay (OR_{adj} 0.42, 95% CI: 0.31-0.57) than those who had lobar surgery. There was not a significant difference in long term mortality (OR_{adj} 0.80, 95% CI: 0.59-1.08).

Wedge resection patients had better short-term surgical outcomes than lobar resection patients, and comparable long term outcomes. The present analysis has the advantage over the SEER analysis by Cao et al1 that all the outcomes are adjusted for the presence of comorbidities before surgery. Our analysis adds new information to the paper by Cao: wedge patients were less likely to have nodes examined during surgery. Our data support the use of wedge resection in small stage I NSCLC.

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References

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