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Commentary: Be selective when you wedge

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Multiple retrospective series suggest that segmentectomy may be equivalent to lobectomy for small node-negative cancers.^{1,2} Two prospective randomized trials, CALGB 140503³ and JCOG 0802,⁴ have demonstrated that in patients at average risk, the perioperative complication rate is no different between segmentectomy and lobectomy. The survival and recurrence outcomes from these studies are not yet mature but are best poised to answer the question of oncologic superiority. More than one-half (59%) of sublobar patients in CALGB 140503 were wedge resections.

Many consider wedge resection to be a compromise operation best used for predominant ground glass lesions or small tumors in high-risk individuals. A large multi-institutional propensity-matched study demonstrated that wedge resection carries a 37% lower mortality and 50% lower morbidity than lobectomy/segmentectomy, with the greatest benefit seen in high-risk populations.⁵

In this issue of the *Journal*, Tsutani and colleagues⁶ report a propensity-matched analysis of 457 patients undergoing “curative” wedge resection and segmentectomy. The propensity analysis matched patients for many critical variables, including age; sex; forced expiratory volume in 1 second; SUVmax; tumor size; presence of ground glass lesions; and lymphatic, vascular, and visceral invasion, but not diffusion capacity or other comorbidities. In 163 matched pairs, the 5-year cumulative incidence of recurrence was 6.6% in the segmentectomy group and 13.2% in the wedge resection group.

A major limitation of this study is that lymph node dissection was not performed in the wedge resection cohort, which is routine in that population, as the authors explain.

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CENTRAL MESSAGE

Segmentectomy likely has a lower risk of recurrence than wedge resection for early lung cancers, but wedge resection may be safer in high-risk patients.

Another limitation is that this series was performed in healthy patients with good lung function, a population generally not treated by wedge resection except in patients with the smallest tumors. It is also important to note that just as all segmentectomies are not equivalent, wedge resections may vary widely in their ability to obtain wide margins, depending on proximity to the edge or apex of the lung. Proper selection makes all the difference.

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