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Commentary: Wedge versus segmentectomy—It is best to err on the side of caution

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The debate about wedge resection versus segmentectomy for early-stage non-small cell lung cancer rages on, this time, under the form of a large multi-institutional database study by Tsutani and colleagues¹ in this issue of the *Journal*. In this study, 457 patients who underwent either wedge resection or segmentectomy for stage IA non-small cell lung cancer are compared after propensity matching and adjustment for many relevant confounding variables. The authors conclude that the cumulative incidence of cancer recurrence is significantly lower in patients undergoing segmentectomy (6.6%) versus those undergoing wedge resection (13.2%). The results should not be surprising to anyone, because segmental resection is an oncologic operation, where care is taken to dissect and remove all vascular and lymphatic avenues by which the tumor can potentially spread. Proponents of wedge resection would argue that for patients with stage IA cancer, the incidence of such spread is so low that going through the effort of a segmentectomy may not be justified. After all, even in this paper, the incidence of nodal involvement in the segmentectomy cohort was only 0.4%.

Beyond the issue of what operation is being done, is the bigger question of why it is being done. We are not told, in this paper, how patients were selected for either operation. Can we assume that this selection was random, based on surgeon preference or some other unmeasurable confounder? It would not appear so. For the patients who received wedge resection, there was no attempt at lymph node sampling in the hilum or mediastinum. This can only be explained by the fact that the surgeon had some

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CENTRAL MESSAGE

Segmental resection confers a survival advantage over wedge resection in stage IA NSCLC, even with low incidence of nodal spread.

level of certainty about the absence of nodal disease, which drove them to omit nodal sampling. The reverse is also observed. Patients who received segmental resection did not have a meaningful incidence of nodal disease, but somehow the surgeon believed that they did, and nodal sampling was pursued in every patient.

If we had absolute certainty about the absence of lymph node spread, would a wedge resection be an adequate cancer operation? The data in this paper seem to suggest that it would not be, because even with a low incidence of nodal disease, survival with segmentectomy was dramatically greater than with wedge resection. One thing is certain, however. The future of lung cancer surgery is one of operating on small tumors, and until we settle the wedge versus segmentectomy question, it is best to err on the side of caution.

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