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Commentary: Let us raise the bar higher for better patient outcomes

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CENTRAL MESSAGE

Optimal published outcomes inspire us to provide patients better care.

Congratulations to Chan and colleagues[1] for their article comparing segmentectomy with lobectomy for lesions that are 2 to 3 cm in size. This article represents forward thinking and challenges default paradigms. Too many surgeons choose (out of dogma) lobectomy for a lung cancer 2 cm or greater. The authors have shown that segmentectomy is associated with similar recurrence-free and overall survival rates when compared with lobectomy for patients with pT1c lesions. We congratulate the authors on this important and novel finding. Of course, the prospective randomized trials from North American and Japan will shed even further light on these issues. We believe this article and those 2 studies will have similar findings and have great clinical impact.

A few additional points to consider. First, we should differentiate between lobes. Lung nodules are like real estate—location, location, location. A right middle lobectomy that has 2 segments is quite different from a left upper lobectomy that has 5, yet both are lobes. We do many left upper segmentectomies. However, how often do we really do a right middle segmentectomy? The discussion is very well written and referenced. Yet, the type of lobectomy or segmentectomy performed nor the nodules' precise location is discussed. I have never done a right middle lobe segmentectomy for a 2.9-cm tumor. Similarly, the right upper lobe only has 3 segments. However, 23 of the 90 segments were in the right upper lobe and importantly only 3 were anterior segments. This again emphasizes that the location of the nodules is critical to the operation we performed, not just the nodules size. The truth is we are just less likely to do some types of segmentectomies than others for technical reasons.

More important than this issue are the quality metrics that we report as benchmarks. These serve as a bar for each of us to strive. Quality is our highest commodity. Let us together raise the bar so our patients can enjoy better outcomes. The authors are known world-class surgeons. However, I am, to be honest, a tad disappointed in some of the quality outcomes and results they have set in this otherwise-outstanding study: a 12.4% and 11.7% major complication rate, a 6.2- and 7-day length of stay, a 1.1% and 1.7% 30-day mortality, and a 2.2% and a 2.3% 90-day mortality rate for segmentectomy and lobectomy, respectively.[1] These outcomes are not stellar. We as general thoracic surgeons can do better.

The authors explain that many conversions and complications occurred early in their experience. This is understandable and true for all of us who operated during this time frame. Can they present the outcomes and results for the later years of the study to set a bar for all of us to reach? This learning curve was acceptable in the past but is not any longer. We all need to learn, but we can no longer afford to do so at patient expense. It may not be fair, but it is true. Today, nothing is acceptable short of perfection. Today, younger surgeons should have a senior surgeon in the room or close by, especially in a large academic medical center with many general thoracic surgeons. The bar should be set higher. Each day we all should strive to jump well over it. We should enjoy the friendly international competition then look back and help our colleagues behind us jump even higher. This positive culture sets up a flywheel of improving outcomes for our patients and mitigates surgical ego.

The mortality rate for a segmentectomy, even in patients who are elderly with comorbidities and poor pulmonary

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function tests, should be essentially 0, the major complication rate should be less than 5% to 7%, the conversion rate 1% to 2%, and the length of stay should be 1 to 3 days.[2] We should always remove five N2 and at least two N1 lymph node stations. If general thoracic surgeons all over the world really did this every day, if we together, like a highly functional team, encouraged each other with friendly competition, the value of surgery would rise. Our patients would do better. Most importantly, our patients with lung cancer would be more likely to live longer. And, you just can't beat that.

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Commentary: When less is more for lung cancers

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CENTRAL MESSAGE

For patients with clinical stage I lung cancers >2 cm and ≤3 cm, segmentectomy shows promise as an oncologically sound option versus lobectomy and supports the idea that less is more.

"Less is more" is repeated almost habitually in many operating rooms as a reminder of sorts to ensure patients are not exposed to superfluous risks. When a thoracic surgeon considers pulmonary resection for a patient, all things being equal, a concerted effort goes toward preserving lung and maximizing postoperative pulmonary function to maximize beneficence while minimizing harm. One does not need to search too far for an example when considering that lobectomy supplanted pneumonectomy as the resection of choice for lung cancer. The reality is that things are not always equal in the ongoing controversy regarding performing a sublobar resection for lung cancer due to the risk of higher locoregional recurrence and decreased survival.[1,2] Chan and colleagues[3] provide evidence of clear noninferiority for segmentectomy when compared with lobectomy, adding more information to support segmentectomy for primary lesions >2 cm, which is a size not frequently considered for a lesser parenchymal resection.

Using a propensity-matched model and retrospective analysis, 90 pairs of segmentectomies and lobectomies were compared over 13 years for this unique cohort of patients with larger lesions. Patients undergoing segmentectomy demonstrated no difference in terms of perioperative outcome when compared with lobectomy. Outcomes such as cancer-related morbidity, recurrence, and mortality are equally important to a surgical series, and when the authors evaluated these outcomes no differences were noted. Furthermore, there was no difference in the incidence of cancer-related or other-

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