Despite the fact that these findings support the implementation of lung cancer screening, concerns remain about harms. Harms associated with screening include increased frequency of invasive procedures, unnecessary testing and procedures, and short-term psychological distress.⁶ Critics of lung cancer screening also question its mortality benefits.⁷ The study by Kamel and colleagues⁵ helps to address these concerns and highlights the benefits of screening. Kamel and colleagues⁵ show that less, not more, invasive procedures are effective for patients with screen-detected lung cancer. The use of SLR as a curative treatment for screen-detected lung cancers reduces the upfront cost (from a risk–benefit standpoint) and may improve the mortality benefit of screening. The option of SLR for screen-detected lung cancer also expands the pool of patients who can be offered curative treatment, including patients with diminished lung capacity who may not easily tolerate lobectomy.

This research suggests that patients can be offered a less-aggressive surgical treatment without compromising survival outcomes. Future studies should expand the length of follow-up to account for any delayed detriments in overall survival conferred by potential increased recurrence in the SLR group. Furthermore, if a less-extensive surgical

technique is appropriate for treating screen-detected lung cancer, Stereotactic body radiation therapy may also be just as reliable a method to treat screen-detected cancers and may in fact be the preferred treatment in higher-risk and/or frail patients. Although this would be a reasonable extrapolation, this should be a focus of future study.

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Commentary: Lobectomy should be the exception rather than the rule to resect screen-detected stage I non–small cell lung cancer

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Traditionally, surgeons divide sublobar resections (SLRs) into intentional and compromise. The intentional SLRs

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CENTRAL MESSAGE

Sublobar resections should be the preferred operations for screen-detected stage I lung cancer as they yield comparable survival rates and less perioperative complications than lobectomies.

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are performed in those patients who would be fit enough to tolerate a lobectomy and with peripheral, predominantly non-solid tumors smaller than 2 cm.¹ Compromise segmentectomies are performed in patients deemed unfit for lobectomy for impaired cardiopulmonary function or other underlying severe comorbidities.

In addition, there are other circumstances in which a SLR may be more convenient than a lobectomy. A growing number of patients (especially referred from lung cancer-screening programs) present with multiple nodules located in different areas of the lung. These may present synchronously or at different times. In these patients, a lung-sparing procedure appears indicated to allow for repeated treatments (surgical or nonsurgical ones). Some nodules may be difficult targets for computed tomography-guided biopsy and other endoscopic diagnostic procedures or may be sited in a too-deep location for a wedge resection. Especially in patients with previous tumors in other organs or with a low radiologic malignancy score, a segmentectomy may serve the dual purpose to obtain a tissue diagnosis and definitive treatment.

The study from Kamel and colleagues² represents an important contribution corroborating the aforementioned classification. There have been multiple studies from big data analyses and large databases showing that SLR (particularly segmentectomies) may be at least equivalent to lobectomies in stage I non-small cell lung cancer (especially in tumors smaller than 2 cm). In addition, the recent results from the Japan Clinical Oncology Group randomized trial have confirmed that segmentectomies are not inferior to lobectomies for peripheral tumors smaller than 2 cm. However, the importance of the study from Kamel and colleagues² is the inclusion of patients from a real-world scenario. The authors found comparable overall and cancer-specific survivals in patients undergoing lobectomy or SLR (predominantly wedges), whereas lobectomies were associated with increased rate

of complications. In the context of screen detected nodules, SLR seem particularly justified as tumors detected through screening programs may be more indolent and have a more favorable biologic behavior compared to those diagnosed by other routes. This study represents reassuring evidence supporting the use of SLR in some of the aforementioned scenario such as multiple nodules (including patients with previous lung cancer resections) or nodules difficult to tissue-diagnose, which are common occurrences in screen-detected tumors. Whether a greater rate of segmentectomies (proportional to wedges) would have improved even more the outcome of these patients remains a matter of debate but appears plausible in light of current evidence, which favors segmentectomies over wedges.^{3,4} Kamel and colleagues² should be congratulated for an excellent post-hoc analysis from the National Lung Screening Trial, which adds to the current knowledge on SLR and will certainly have an impact on our clinical practice along with the upcoming findings from randomized trials. In light of this study, we should probably change our classification of SLR in the context of screen detected nodules. Stage I screen detected nodules should all be treated by a lung sparing procedure if technically feasible.

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