Minimally invasive surgery (MIS) for thoracic diseases has proven advantages including decreased postoperative pain and hospital length of stay when compared to thoracotomy, and multiple studies provide data to suggest that MIS is oncologically equivalent to thoracotomy for the treatment of early stage lung cancer. Despite the evidence, thoracotomy remains the more commonly performed procedure with video-assisted thoracic surgery (VATS) being performed in about 30% of lobectomies (1-4). The question remains as to whether robotic or VATS is a superior approach to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9). What makes the study by Yang et al. unique, is the use of propensity matching to differentiate between robotic, VATS, and open approaches to lobectomy for non-small cell lung cancer (NSCLC). This topic has also been the focus of many previous studies which reveal no clear-cut differences between the two in regards to post-operative outcomes (4-9).
facility, the significant difference in nodal upstaging during open surgery versus VATS was eliminated (2).

We would like commend the authors on this well organized and thorough comparison of the various surgical approaches to early stage lung cancer. Without the ability to conduct randomized controlled trials allocating patients to either robotic, VATS, or thoracotomy for lobectomy, this is the best information that we have to date and may finally solidify the notion that MIS is as efficacious as open surgery. Related to this topic is the use of muscle sparing thoracotomies and enhanced recovery after surgery (ERAS) protocols for lobectomy when MIS is not technically feasible and the positive effects on perioperative outcomes (12). Further research is needed to determine the role of ERAS following open lobectomy.

In conclusion, although minimally invasive techniques for lobectomy are increasing in frequency, they still have not become mainstream. The results of this study provide further evidence that MIS is as oncologically sound as open techniques and highlights the similarities between VATS and robotic surgery. Nonetheless, a true comparison of VATS and robotic surgery is not realistic until MIS is accepted as oncologically equivalent to open cases and robotic technology becomes more readily available.

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Footnote

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