A WEDGE IS STILL BETTER THAN STEREOTACTIC BODY RADIATION THERAPY IN THE NATIONAL CANCER DATABASE

To the Editor:

We read with great interest the study by Udelsman and colleagues1 titled “Overall Survival in Low-Comorbidity Patients With Stage I Non-Small Cell Lung Cancer Who Chose Stereotactic Body Radiotherapy Compared to Surgery,”2 which further demonstrates the comparative effectiveness of stereotactic body radiation therapy (SBRT) to surgery for stage I lung cancer in otherwise healthy patients.

As discussed during the American Association for Thoracic Surgery 2023 meeting, this work adds modestly to the growing body of evidence from national cancer registries on the overall survival advantage of lobar and sublobar lung resection over SBRT, and remains subject to the inherent limitations of retrospective observational studies from this data source.2-4 An earlier study by Littau and colleagues addressed the current study’s research question, also from the National Cancer Database (NCDB), with advanced econometric methods using instrumental variable analyses to further minimize inherent confounding. In that study and within the limitations of the observational construct, we demonstrated that all extents of resection, whether lobar or sublobar, were still associated with improved survival over SBRT even after using the instrumental variable causal-inference research design. The results presented by Udelsman and colleagues1 reproduce the previously published results with an additional year of data.

The authors of the current study state that their work is differentiated by including patients diagnosed after the year 2012, which the authors suggest is an “era of established SBRT.”1 This contextual comparison is vague and does not build on prior published work by others. In fact, SBRT was derived from brain stereotactic radiosurgery that dates back to 1951, and the Food and Drug Administration approved SBRT for lung cancer in 2001. At least 2 prior studies directly referenced in their article also included patients after 2012 and addressed the same research question at hand.2,3 Perhaps the authors were referring to a previous similar study by their group, which compared SBRT with surgery in healthy patients from the NCDB in the time period of 2004 to 2012, with similar results.3 The authors are frugal in differentiating their present work from theirs and others. Although we are pleased to see that the data from the NCDB are consistent and reproducible by many expert health services researchers nationally, it is important to note that redundancy can still be harmful to science, because it may skew or over-inflate future studies in favor of one modality over the other. That being said, we agree with the authors that surgery, including wedge resection, is associated with improved survival.

Last, the authors rightfully conclude that continued accrual in prospective studies, such as the VALOR trial, is essential to ultimately answer the research questions asked. VALOR will have one limitation in its current design, however, by not including patients planned to undergo wedge resections. With the results of the Cancer and Leukemia Group B 140503 showing noninferiority,5 coupled with adequate lymph node dissection and maintaining oncologic standards, thoracic surgeons will find it difficult not to offer minimally invasive wedge resections to even the least healthy of patients. Thus, wedge resections will likely always be associated with superior survival compared with SBRT in registry data.

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References

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