

Refocusing the quality lens to examine real-life value

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In their manuscript, *The Long Term Survival of Robotic Lobectomy for Non-Small Cell Lung Cancer: A Multi-Institutional Study*, published in the *Journal of Thoracic and Cardiovascular Surgery*, Cerfolio and coauthors astutely point out what is perhaps an unfortunately incomplete measure for oncologic surgery as a whole (1). Specifically, for pulmonary lobectomy performed for non-small cell lung cancer (NSCLC), their premise is that 30- and 90-day mortality may not capture the entirety of quality for patients undergoing surgical therapy for this disease. They propose a more meaningful metric of 5-year survival to fully capture the value associated with impeccable technical skill and judgement. To support their position, they compare their laudable collective results using the robotic approach to those with the more traditional video assisted thoracoscopic surgery (VATS) or thoracotomy approach. From a cohort of 1,339 patients at four different institutions, with a median follow-up of 30 months, they report impressive stage-specific survival when compared to historical data associated with VATS and thoracotomy approaches. They attribute the favorable stage-for-stage outcomes with the robotic approach to factors including reduced immunosuppression related to a lesser invasive approach and improved lymph node dissection leading to better pathologic upstaging and the requisite necessary chemotherapy and radiation therapy.

Among many unique highlights from this manuscript, which include reporting the largest compilation of prospective data that can address their specific long-term survival issue, are the results of robotic lobectomy in patients with N2 disease, specifically. Prior publications detailing 5-year survival for patients with Stage IIIA disease consistently report much lower survivals ranging

from 24–36% (2–4). In the current series, the 5-year stage specific survival was approximately twice that at 62%. There were 31 patients who were diagnosed with Stage IIIA disease preoperatively and treated with neoadjuvant therapy, however the majority were found to have N2 disease intraoperatively (91/122). Of those diagnosed preoperatively, the 5-year survival was 51% compared to 66% for those diagnosed postoperatively. This finding may also suggest yet another advantage to robotic lobectomy that has yet to be fully realized. While this observation may be confounded in many ways, the thoracic surgeon's greater ability to achieve a complete mediastinal lymphadenectomy with the robot, which the authors suggest was their experience, indeed may be a technical benefit in the right robotic hands that should be further investigated and possibly magnified.

The shortcoming of this study arrives in its ability to be generalized to those performing robotic lobectomy at other centers. The surgeons in this study are leaders in robotic surgery and practice at high volume centers which also are known to be centers of excellence in thoracic oncology with access to premier radiologists, pulmonologists, oncologists, and other services. This observation is not an indictment of the authors, but more so a commentary on the more established processes of care associated with their institutions that other thoracic surgeons may not have or be able to duplicate, at least, immediately or even in the near future.

The authors emphasize the importance of measuring true quality and reiterate the almost universally accepted definition of value over cost. By their own admission, the authors did not perform a robust quality, value, or cost analysis. In all fairness, that type of analysis would have

been beyond the scope of the manuscript. It is undeniable though, that systems and organizations may eschew the long-term survival metric in favor of ones that are easier to capture and ostensibly more relevant to the episodes of care for which they are involved. The reality is that in order to capture this longer-term data to assess quality and value, there would be a greater cost to obtain this information owing to the need to have the infrastructure and personnel among other elements that would require resources. In the current economic state of healthcare, this goal may not be achievable so easily without the appreciation of long-term survival as a universally accepted quality measure. It is an absolute given that for clinicians, the survival of patients undergoing curative-intent operations should be followed out to the 5-year mark, at the minimum. Therefore, including it as a marker for long-term quality would be an outcome measure that potentially would be straightforward to collect since it is already being tracked. This proposition then raises a fundamental issue of whether or not focusing on centralizing oncologic care at high volume centers or those centers with specific expertise such as that which would be found at the authors' institutions would bring with it other downstream considerations. In fact, if better long-term survival was to be realized at higher volume centers or centers with specific expertise, a strategy to funnel patients to these centers would appear to be more prudent than trying to replicate similar results at scattered, smaller, or less experienced centers. It is well documented that oncologic care varies significantly between smaller communities and major cities with high volume centers (5). Other issues aside, if the systems, organizations, and governments truly aspire to achieve for what is best for our patients as well as for patients with other oncologic disorders requiring surgery as a modality of therapy, then they should adjust

their vision to this better and more useful far-sighted quality metric. That kind of investment would truly add to and convey the real-life value to what is being measured.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

References

1. Cerfolio RJ, Ghanim AF, Dylewski M, et al. The long-term survival of robotic lobectomy for non-small cell lung cancer: A multi-institutional study. *J Thorac Cardiovasc Surg* 2018;155:778-86.
2. Walker WS, Codispoti M, Soon SY, et al. Long-term outcomes following VATS lobectomy for non-small cell bronchogenic carcinoma. *Eur J Cardiothorac Surg* 2003;23:397-402.
3. Goldstraw P, Chansky K, Crowley J, et al. The IASLC Lung Cancer Staging Project: Proposals for Revision of the TNM Stage Groupings in the Forthcoming (Eighth) Edition of the TNM Classification for Lung Cancer. *J Thorac Oncol* 2016;11:39-51.
4. Park BJ, Melfi F, Mussi A, et al. Robotic lobectomy for non-small cell lung cancer (NSCLC): long-term oncologic results. *J Thorac Cardiovasc Surg* 2012;143:383-9.
5. Bendzsak A, Nenshi R, Darling G, et al. Overview of lung cancer surgery in Ontario. *Ann Thorac Surg* 2011;91:361-6.

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