



Video-assisted thoracoscopic surgery or open thoracotomy approach for surgery for non-small cell lung cancer—no definitive answer, yet

Marcin Zielinski

Department of Thoracic Surgery, Pulmonary Hospital, Zakopane, Poland

Correspondence to: Marcin Zielinski, MD, PhD. Department of Thoracic Surgery, Pulmonary Hospital, Ul. Gładkie 1, 34 500 Zakopane, Poland. Email: marcinz@mp.pl.

Comment on: Bendixen M, Jørgensen OD, Kronborg C, *et al.* Postoperative pain and quality of life after lobectomy via video-assisted thoracoscopic surgery or anterolateral thoracotomy for early stage lung cancer: a randomised controlled trial. *Lancet Oncol* 2016;17:836-44.

Submitted Aug 11, 2016. Accepted for publication Aug 15, 2016.

doi: 10.21037/tcr.2016.08.41

View this article at: <http://dx.doi.org/10.21037/tcr.2016.08.41>

An assessment of postoperative pain has always been a problem in surgery on non-small cell lung cancer (NSCLC). First of all, there has never been any prospective randomized trial comparing a traditional posterolateral thoracotomy and a newer anterolateral approach, despite some theoretical considerations that the second one should be less painful. Currently, we face a similar problem with comparison between multiportal *vs.* uniportal video-assisted thoracoscopic surgery (VATS) lobectomy. The third issue is a comparison of the VATS and open thoracotomy approach for lobectomy for NSCLC addressed by Bendixen *et al.* (1). These authors deserve a special credit for publication of the first prospective randomized study in the Western literature devoted to this problem. Well-planned methodology is a strong side of the study. Proficiency of the participating surgeons both in the open and the VATS approach was especially valuable. Bendixen *et al.* proved that the VATS approach was associated with less postoperative pain and better quality of life than was an anterolateral thoracotomy for the first year after surgery and concluded that VATS should be the preferred surgical approach for lobectomy in stage I NSCLC.

However, the question is how strong was the evidence the authors provided to support such conclusions. If one analyzed the pain scores assessed by NRS scale it was apparent that the biggest difference was found for the postoperative day 1, 2 and 2 weeks, with no significant difference afterwards till the end of a 1-year follow-up period. The results of measurements of quality of life tests

were inconsistent, with EQ5D significantly better for VATS (with most individual dimensions did not differ significantly between groups at most timepoints, however) and no significant differences obtained by the EORT QLQ-C30 scale.

All this meant that the real differences between VATS and anterolateral thoracotomy were slight at best and their clinical significance was unknown.

However, there are some further questions. Specifically, what did it mean the term an anterolateral thoracotomy? Contrary to the VATS approach which was strictly standardized in the study, the ways by which an anterolateral thoracotomy was performed were highly variable. Did a 9 cm long incision mean the same as a 25 cm one? Or, even more important, did a maximum rib spreading of 5 cm cause a similar pain as did a 16 cm spreading?

The next question is if VATS approach is as successful in hands of occasional users as it is in case of surgeons with huge experience.

Keeping all these doubts in mind it is clear that Bendixen *et al.* were right in proposing further studies, preferentially the multicentric ones to examine various aspects of VATS *vs.* open thoracotomy approach. No question, the authors set high standards of methodology to which the future investigators must equal.

Nevertheless, for all the reasons mentioned above the superiority of VATS over open thoracotomy approach for lobectomy for NSCLC does not seem to be definitively established.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned and reviewed by the Section Editor Long Jiang (Second Affiliated Hospital, Institute of Respiratory Diseases, Zhejiang University School of Medicine, Hangzhou, China).

Conflicts of Interest: The author has completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/tcr.2016.08.41>). The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are

appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

References

1. Bendixen M, Jørgensen OD, Kronborg C, et al. Postoperative pain and quality of life after lobectomy via video-assisted thoracoscopic surgery or anterolateral thoracotomy for early stage lung cancer: a randomised controlled trial. *Lancet Oncol* 2016;17:836-44.

Cite this article as: Zielinski M. Video-assisted thoracoscopic surgery or open thoracotomy approach for surgery for non-small cell lung cancer—no definitive answer, yet. *Transl Cancer Res* 2016;5(S3):S574-S575. doi: 10.21037/tcr.2016.08.41