



# Video-assisted thoracoscopic surgery lobectomy: pulled in many directions

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In this issue of *Journal of Thoracic Diseases*, Liao and colleagues (1) describe with accompanying videos their technique of a fissureless, single direction video-assisted thoracoscopic surgery (VATS) left upper and left lower lobectomy. The authors report that this method is clear, easily followed, and can be applied to any lobectomy. The main concept of this technique is to maintain the same retraction on the lung, manage the most superficial structure first regardless of what it is, and proceed sequentially to deeper structures.

Studies have established the safety, feasibility and oncologic outcomes of VATS lobectomy. Despite this, adoption of VATS technique remains low (2). While the overall approach is thoracoscopic, there is a multitude of ways the surgeon can perform the lobectomy, each with its advantages and disadvantages. Traditionally, exposure of the pulmonary artery is done by dividing the lung parenchyma overlying the artery in the fissure. “Fissureless” or single direction surgery takes a “hilum first, fissure last” sequence.

It is important for the surgeon to be familiar with multiple techniques to successfully and safely complete a VATS lobectomy. First and foremost, knowledge of the anatomy is of the utmost importance. Anatomic variations can lead the surgeon into a lethal misadventure if they simply just take whatever structure comes next without knowing what may be underneath (3). In addition, after stapling the bronchus, the detached lobe would be only attached to the hilum by a few remaining pulmonary artery branches which could easily avulse off of the main trunk.

As our specialty evolves with immunotherapy, repeat operations, and parenchymal sparing techniques, the thoracic surgeon needs to adapt to obliterated planes and distorted anatomy. This is only possible by knowing the

arterial, venous and bronchial anatomy and mastering the different approaches to effectively and safely complete the lobectomy. Ultimately, it is the set of the sails, not the direction of the wind that determines which way we will go.

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## Footnote

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

## References

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