Finally, new conversations about video-assisted thoracoscopic surgical lobectomy

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In this issue of the *Journal*, Richardson and colleagues¹ have written a timely work regarding the optimization of video-assisted thoracoscopic (VATS) lobectomy with respect to resource management. This arguably represents a milestone in the discussion of VATS lobectomy. Until now, surgeons have focused on the potential benefits and oncologic validity of VATS lobectomy. Now, with the procedure firmly established, conversation has shifted to optimization of deployment and cost on a more granular, surgeon-specific level. Richardson and colleagues¹ give good examples on how to spare resources. Many items that are used routinely are available as reusable products (Figure 1). Expensive, disposable items such as wound protectors, energy devices, and so on are not needed in every case. Staff should open these on demand only. Surgeons sharing hospital resources should discuss standardizing their setups, and hospital systems can facilitate these conversations by providing comparisons between providers and reporting costs immediately at the end of each procedure.

A more important conversation addresses the question of what we are going to do with research that does not adequately account for VATS case selection. Some surgeons understandably avoid VATS for central tumors or those with adenopathy (as evidenced by the discussion responses in the article of Richardson and colleagues¹). The difficulty in quantifying centrality avoidance causes misleading nodal upstaging differences between open and VATS lobectomy in large databases.² To illustrate how this is cost relevant, I cite a recent central tumor case in which I started with all reusable tools. I decided to add an energy device for vascular adhesions and a thin anvil stapler for crowded, immobile hilar vessels. I then added Aquamantys (Medtronic, Minneapolis, Minn) and topical hemostatic agents to deal with annoying oozing. My decision to undertake a tedious dissection rather than converting also added expensive operating room time.

This “optional” addition of time and resources becomes a necessity as surgeons push their VATS reliability rates

Reusable thoracoscopic port.

Central Message

To optimize VATS lobectomy resource use, we need to communicate efficient techniques better and understand how surgeon choice with respect to case complexity affects resource consumption and results.

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FIGURE 1. Photograph of a reusable thoracoscopic port with a metal collar and flexible sleeve.

toward 90%. Equipment comparisons likewise require understanding surgeon case selection and the referral patterns that result accordingly. Furthermore, port choices, tool availability, and variable patient anatomy force each surgeon to adopt a unique set of adaptations to deploy. This idiosyncratic nature of the surgeon's mental construct of the operation causes both reusable and disposable items to change in relative importance. Thus a preferred but expensive tool, even if used routinely, could prevent a particular surgeon from causing a single catastrophic hemorrhage. Compared with the cost of resultant death or prolonged hospitalization, the tool could be worth it.

As with many important contributions, this essay creates more questions than answers. Successful VATS surgeons who have mastered the technique probably should challenge the status quo and change once again to conserve resources. Easing such transitions, especially for paradigm shifts such as robotics or using energy rather than staplers

on vessels, requires on-site conversations with proctor or colleague assistants.

Unfortunately, the ability to leverage opportunities for cost saving without affecting outcomes cannot be determined from the data presented by Richardson and colleagues.¹ Required information includes the surgeon-specific VATS adoption rates for central or complex tumors that require longer operating times (but facilitated by disposable devices). The additional learning curves and unusual but expensive adverse events that result as surgeons alter their practice methods need consideration as well.

References

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