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COMPARISON OF OUTCOMES BETWEEN MUSCLE-SPARING THORACOTOMY AND VIDEO-ASSISTED THORACIC SURGERY IN PATIENTS WITH

cT1 N0 M0 LUNG CANCER

To the Editor:

We read with interest the article published by our colleagues Zhao and associates¹ from Fudan University in the October 2017 issue of the *Journal*. The article retrospectively compares the perioperative outcomes of muscle-sparing thoracotomy with those of video-assisted thoracic surgery (VATS) by applying a propensity-matched analysis to 241 pairs of patients. Zhao and associates¹ conclude that VATS was associated with decreases in hospital stay and postoperative complications.

When comparing the technical aspects of the procedure, the only significant difference between VATS and muscle-sparing thoracotomy was rib spreading, and not the size of the skin incisions. Although Zhao and associates¹ succeeded in matching the pairs of the patients with many patient and tumor characteristics, they failed to address 2 crucial factors that affect the perioperative outcomes when comparing surgical techniques: the surgeon and the pain factors.

When it comes to VATS, although there seem to be as many ways to perform the procedure as there are surgeons, it is important to note that surgeons who perform VATS also tend to have different and more aggressive chest tube management strategy and discharge practices than those who perform open surgery. The article did not address who performed the surgery, and that key factor was not used in the matching algorithm.

Pain is one of the major factors associated with perioperative morbidity and a prolonged stay. It is well established that minimally invasive surgery is associated with less pain than thoracotomy. The difference in pain between the 2

procedures disappears, however, if patients are enrolled on care maps that address pain in a multilevel way, such as described by Rice and colleagues² and by Mehran and associates.³ The method of analgesic management was not documented in the study reported by Zhao and colleagues.¹ The differences the authors noted between VATS and muscle-sparing thoracotomy thus should be interpreted with caution, because not all the elements contributing to these differences were accounted for in their methodology and analysis.

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DIRECT COMPARISON BETWEEN VIDEO-ASSISTED THORACOSCOPIC SURGERY AND MUSCLE-SPARING MINITHORACOTOMY IN

THE ERA OF MINIMALLY INVASIVE THORACIC SURGERY

Reply to the Editor:

We thank Mehran and colleagues for their interest in our article.¹ Video-assisted thoracoscopic surgery (VATS) has become increasingly popular worldwide. Numerous studies have shown VATS to be associated with shorter hospital stays and lower rates of postoperative complications compared with conventional open thoracotomy, and some have also shown equivalent survival outcomes for early-stage lung cancer.^{2,3} VATS may also, however, increase difficulty of surgery and prolong operative time. The efficacy of complete lymphadenectomy is also questioned. Muscle-sparing thoracotomy (MST) also has significant smaller incision and is associated with better postoperative physical activity and less nerve impairment

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