the long-term survival of patients undergoing pulmonary resection after TEMLA have never been published.

The transcervical approach to the mediastinum is fascinating indeed. Its applications warrant investigation in well-designed clinical trials and, if justified by these trials, implementation into routine practice. We should not, however, allow our fascination to blur our objectivity and clear vision of all aspects of the matter. Safety of our patients is certainly a priority.

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Reply to the Editor:

We appreciate the interest in our article demonstrated by Kuźdżał and colleagues. In response, we would like to draw their attention to several facts.

First, in our article we clearly stated that transcervical extended mediastinal lymphadenectomy (TEMLA) and video-assisted mediastinal lymphadenectomy (VAMLA) are more invasive than mediastinoscopy or endobronchial ultrasonography and therefore should only be considered in specific

situations. Such circumstances generally involve the suspicion of N2 or N3 involvement not detected by imaging, particularly when the detection of such disease would change surgical options. Therefore Kuźdżał and colleagues' call for safety is echoed by us as well.

Second, most TEMLA and VAMLA reports are from a few select centers. The safety of these procedures should be replicated by many other centers before the techniques are accepted by the surgical community at large. This point was made in our article multiple times.

Third, several statistics are quoted by Kuźdżał and colleagues that point out potential downsides of TEMLA. For example, the overall high rate of morbidity is quoted from their references, but the highest proportion of morbidity is a widened mediastinum, which is of doubtful functional significance.^{1,2} The 1.2% mortality from TEMLA that they mentioned also seems erroneous, as the reference cited clearly states that the mortality was not related to the procedure itself. Kuźdżał and colleagues also mention isolated instances of injury to mediastinal structures; however, this is a well-known complication of mediastinal surgery in general, and such instances have been reported with mediastinoscopy as well.³ Of the various complications noted in the communication of Kuźdżał and colleagues, perhaps the most concerning is the statement that 21% of patients become unfit for further surgery solely as a result of TEMLA; however, this seems to be their inference rather than a result declared in the articles they referenced. Contrary to this inference, the final citation included in their letter (a 2010 analysis of 587 TEMLA patients) reported a 6.8% complication rate, with 2.1% major enough to limit subsequent thoracotomy, and a 15% aggregate TEMLA-negative nonthoracotomy rate. This 15% (not 21%) contains some patients unfit for thoracotomy who underwent surgical staging for better treatment

planning (nonthoracotomy rates approach 10% in mediastinoscopy series). Intuitively, enhanced TEMLA and VAMLA dissections should be a bit more prone to complications than mediastinoscopy when performed as isolated procedures. When we integrate them with video-assisted thoracoscopic surgery or thoracotomy under the same anesthetic, however, we just observe a different surgical approach for the same mediastinal lymph node dissection and do not expect substantial additional morbidity. Finally it is important to note that TEMLA and VAMLA use most of the safe exposure techniques from well-validated procedures such as mediastinoscopy and transcervical thymectomy.

Therefore, although we agree that TEMLA and VAMLA deserve further study in multiple centers to assess generalizability of safety and lymph node yield, we do not see anything in the current literature that raises safety concerns to the extent interpreted by Kuźdżał and colleagues. If such data exist, they ought to be published. Certainly in our unpublished experience with more than 100 (mostly post-induction) patients, we have not seen any sign of prohibitive morbidity. It is uncertain whether new surgical approaches such as these will be evaluated by adequately powered randomized clinical trials. Until they are, our surgical community will have to judge their utility by thoughtfully interpreting retrospective studies.

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IS INTRACAVITARY THORACOSCOPIC ULTRASONOGRAPHY REALLY NEEDED FOR EVERY INTRAPARENCHYMAL PULMONARY NODULE?

To the Editor:

We read with interest the report by Khoreba and colleagues,¹ "Thoracoscopic localization of intraparenchymal pulmonary nodules using direct intracavitary thoracoscopic ultrasonography prevents conversion of VATS procedures to thoracotomy in selected patients," which appeared in the November issue of the *Journal*. We congratulate Khoreba and colleagues¹ for their effort in clarifying the usefulness of this technique in practice of video-assisted thoracoscopic surgery (VATS) for localization of intraparenchymal pulmonary nodules; however, we want to share some significant concerns we had as we read their report.

Our first concern pertains to the indications for ultrasonography in patients with indeterminate pulmonary nodules. In the study of Khoreba and colleagues,¹ 27 nodules were found not more than 1 cm distant from the pleura on computed tomographic scan. For these cases, we argue that they didn't really need ultrasonography to find a lesion just beneath the pleura, because direct visualization, palpation by finger, or a sliding method with an instrument might be helpful in localization of the target nodule, and most cases did not require any type of special localization method.²

Second, in 1 case there was an unidentifiable nodule with high probability of malignancy, and a thoracoscopic lobectomy was performed directly. Of course, thoracoscopic

lobectomy is a standard procedure for unidentifiable nodules with high probability of malignancy.³ A thoracoscopic segmentectomy is also encouraging with curative purpose, because survival after thoracoscopic segmentectomy for small peripheral non-small cell lung cancer (≤ 2 cm) has been reported to be comparable to that after thoracoscopic lobectomy.⁴ In our practice, we have found direct segmentectomy to be an alternative method for management of those small and indeterminate peripheral pulmonary nodules, without the need to identify the precise location of the nodules by ultrasonography.

Third, Khoreba and colleagues¹ concluded that VATS ultrasonography prevented conversion to thoracotomy or lobectomy without tissue diagnosis in 43.5% of cases (20/46). We argue that if precise location of the target nodule could not be confirmed, would the 20 cases all have needed to be converted to thoracotomy or lobectomy? In our practice of dealing with those so called "unidentifiable nodules," we haven't seen such a high conversion rate. Furthermore, even in the practice of lobectomy by VATS, the conversion rate was only 2.66% (11/414) in our group.⁵

We do agree with Khoreba and colleagues¹ that intracavitary thoracoscopic ultrasonography could locate intrapulmonary nodules with high sensitivity and specificity. We believe, however, that just because intracavitary thoracoscopic ultrasonography is useful does not mean that it should be done in every case. The practical value of VATS ultrasonography appears excessively amplified.

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Reply to the Editor:

In our study, patients were recruited on the basis of the attending general thoracic surgeon's impression of difficulty in finding the nodules on reading the preoperative computed tomographic scan. Indeed, there were nodules not more than 1 cm from the visceral pleura; however, these nodules were chosen because of their small size or nonsolid nature (ground glass). Patients who had nodules that were believed to be easily found on thoracoscopy were not enrolled in the trial. In fact, a large proportion of video-assisted thoracoscopic surgical (VATS) wedge procedures performed during the study period were performed without the use of ultrasonography. We agree with the statement in the letter that "just because intracavitary ultrasonography is useful does not mean that it should be done in every case." We do not perform VATS with ultrasonography in all cases, only when we cannot find the nodule with standard techniques.