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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.