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Reply to the Editor:

We appreciate the opportunity to comment on the letter by Sortini and associates regarding our recent article on the indication for preoperative localization of small peripheral pulmonary nodules in thoracoscopic surgery.¹ We agree that intraoperative ultrasonography is noninvasive and effective in locating the solid target nodules.

We have some experience with intraoperative ultrasonographic examination with an ultrasound scanner (B&K Medical, Gentofte, Denmark) with a linear scan multifrequency probe (5-7.5 MHz), and we encountered the same limitations in patients as those faced by Sortini and colleagues.² Chief was difficulty in obtaining an image as long as any air remained in the lung, caused by an incomplete lung collapse. Visualizing pulmonary lesion by ultrasonography requires complete collapse of the lung, which is often impossible in patients with obstructive disease such as emphysema. Formless abnormalities may be particularly difficult to visualize. In our experience, intraoperative ultrasonography is effective in locating the multiple solid pulmonary nodules, such as multiple metastatic pulmonary tumors. On the other hand, small and deep nodules may be missed by ultrasonography. Especially soft nodules, such as localized bronchioloalveolar cell carcinoma (BAC), could be more difficult to separate from normal but collapsed lung because the image is soft, small, faint and of similar consistency to the surrounding normal lung parenchyma. BAC shows a replacement growth of atypical cells with mild thickening of the alveolar septa, sometimes without fibrotic fo-

ci.³ BAC is not uncommon; it actually accounted for 45% (n = 32/71 patients) of the adenocarcinoma seen during our study. In such cases, preoperative localization can be more effective. The technical differences mentioned may explain in part the poor yield of ultrasonography in our hands in distinguishing BAC. It is generally accepted, however, that localization with intraoperative ultrasonography has several limitations.^{4,5}

From a practical standpoint, we use a preoperative localization technique because at our institution most small pulmonary nodules that require localization are BAC. The procedure is safe and accurate, and we believe that the requirement for preoperative localization will remain as long as the application of thoracoscopic surgery increases. Thus discussion of the indications for preoperative localization is still important.

Again, we agree that intraoperative ultrasonography is effective in selected cases in our experience. We need to make the right choice of localizing method in each case for minimally invasive surgery.

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Negative aspects of preoperative delay in early stage non-small cell lung cancer

To the Editor:

We would like to express our opinion about the article of Quarterman and associates,¹ "Effect of Preoperative Delay on Prognosis for Patients With Early Stage Non-Small Cell Lung Cancer." We think that in this work there are some negative aspects. The first is based on the assumption that larger tumors are larger because they are more aggressive. So if you diagnose a solitary pulmonary nodule of 2 cm diameter and if the contention that "larger tumors might present as larger tumors because they are more aggressive and not simply because they are older"¹ is biologically true, is the nodule that you have diagnosed an older less aggressive nodule or an aggressive nodule in early phase? If the nodule diagnosed is an aggressive nodule in the early phase, is it acceptable to take a "watch and wait" approach, or, without any histologic findings from less invasive methods, is prompt surgery a better option? Until it can be ascertained that a nodule is nonaggressive without a histologic diagnosis, we prefer the surgical approach.

The second negative aspect in the work of Quarterman and associates¹ is the cutoff between diagnosis and delayed resection. We think that no surgeon should wait so long for perform a surgical operation in a patient with the diagnosis of solitary pulmonary nodule. In fact, isn't the correct cutoff 90 days, because the maximum delay between diagnosis and treatment is 10 or 15 days? We therefore consider it wrong to compare patients operated on within 90 days and at least 90 days after presentation. It would be more correct to compare patients operated on within 15 days and patients operated on at least 90 days after diagnosis. We think that the watch and wait approach is not the best choice. We prefer the surgical approach, because the survival after surgical resection improves dramatically for stage 1A; in fact, for primary lesions smaller than 3 cm with no nodal spread, the 5-year survival approaches 70% to 80%.² For us the surgical approach for solitary pulmonary nodules is the criterion standard even for patients with a history of malignancy,³ for whom an immediate histologic diagnosis is still more important. We do apply the watch and wait approach,