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Reply to the Editor:

We thank Dr Conti and colleagues[1] for their constructive comments on our report[2] and the Editor for giving us the opportunity to reply.

We agree with Dr Conti and colleagues' remarks; in fact, in our experience with 41 cases of tracheobronchial rupture, we treated only 6 cases surgically (3 for iatrogenic lesions during thyroid and esophageal surgery and 3 for traumatic lesions [2 with stab wounds and 1 with electric saw wounds]). Our described case was a slightly different one. With this patient, we were presented with a very difficult and somewhat delicate situation, and we resorted to a successful semiconservative treatment, which is in agreement with Conti and colleagues' remarks. Moreover in our report, even if we say ". . . conservative treatment is preferred for stable patients with small uncomplicated tracheobronchial lesions . . . ." we also add that conservative treatment has been successfully described for bigger lesions. We are well aware of Conti and colleagues' experience,[3] and we congratulate them, but unfortunately, the *Journal* allows only 5 references for case reports.

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A segmentectomy for stage IA non–small cell lung cancer should be associated with surgical margin cytology findings and a frozen section histologic examination of lymph nodes

To the Editor:

I enjoyed reading the article written by Nomori and colleagues.[1] Their strategy for performing a segmentectomy with little risk of local relapse included the following features: (1) Hilar and mediastinal lymph nodes are dissected as much as possible, (2) the lobectomy must be completed when metastasized cancer is found in any of the dissected lymph nodes, and (3) in nested cases with a sentinel node, frozen section histologic examinations can be limited to the sentinel lymph node.

I agree with their strategy regarding local/regional recurrence in the lymphatics. However, the crucial concept of possible local relapse is not addressed, because a relapse of non–small cell lung cancer can occur at the surgical margin, which is independent of the lymphatic system.

When complete excision has been accomplished with compromised patients with clinical stage I non–small cell lung cancer, surgical margin recurrence has been observed in approximately half of the cases with malignant cytologic results, even when the margin showed a malignant negative histology.[2,3] Thus, a cytologic malignant positive margin in the residual lung after a segmentectomy has the potential of surgical margin relapse. On the basis of my experience with complete excisions for compromised patients, the segmentectomy should be accompanied by a surgical margin cytologic examination and frozen section histology findings of the dissected hilar and mediastinal lymph node.

I have performed 22 segmentectomies without lymph node metastasis, in which there were 2 cases (9%) with malignant positive cytology results at the surgical margin, for which completion lobectomies were performed. If those residual lobes had been left, surgical margin relapse may have occurred, even though there was no metastasized lymph node. Thus, I recommend performing a surgical margin cytologic examination in patients who undergo a segmentectomy and in cases of excision, because malignant cytology findings have been documented in cases with malignant negative histology findings.[4,5]

Here are some questions for Dr Nomori and colleagues: What was the status of the margin of the lung that underwent a segmentectomy? Was a margin cytologic examination carried out? Also, what options do you propose if the margin cytology were shown to be malignant positive by a cytologic method?

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Reply to the Editor:

We appreciate the comments by Sawabata. Sawabata and colleagues previously reported

that a cytologic examination at the staple margin of wedge resection for lung cancer predicted a recurrence at the margin better than a histologic examination.[1] In this article, Sawabata and coworkers described that 7 of the 15 patients (47%) who underwent wedge resection showed positive cytology at the staple margin, whereas histologic examination showed positive cytology in 3 of the patients (20%). Four of the 7 patients with a positive cytology margin had margin relapse. However, 3 of the 4 patients with recurrence showed a negative histology margin at the staple. In a multicenter prospective study, Sawabata and colleagues[2] also reported that 40 of 118 patients (34%) showed a positive cytology margin on the staple line in wedge resection for lung cancer, whereas histology showed a positive margin in 18 of the 118 patients (15%). Therefore, they concluded that the cytologic diagnosis on the staple line was more sensitive than histologic diagnosis to show remaining cancer cells at the surgical margin of wedge resection.

Although we have never experienced such a high rate of margin relapse (27%), as well as positive histology margin (20%), in patients with lung cancer who underwent wedge resection, cytologic examination on the staple line could be useful for examining a margin of segmentectomy. Before our present study, one of the authors (H. N.) experienced a margin relapse in a patient who was undergoing upper division segmentectomy for adenocarcinoma, which was treated by completion upper lobectomy afterward. In that patient, although the histology margin was negative in the specimen, cancer cells might remain on the staple margin of segmentectomy. Although histology can show a limited area of the margin, cytologic examination may be able to determine the overall length of the staple line.

However, histologic diagnosis is usually more reliable than cytologic diagnosis. In addition, cytologic examination sometimes shows a vague diagnosis, such as, "it is suspected of malignancy." In fact, Sawabata and colleagues' results[1] showed a cytology positive margin in 47%, which could include false-positive results. Higashiyama and coworkers[3] reported far less frequency; a cytologic examination of the surgical margins in patients undergoing limited surgery for lung cancer showed positive results in 11 of 112 patients (9.8%). Although we do not usually use cytologic examination on the staple line in both segmentectomy and wedge resection, we have judged the complete resection by macroscopic findings and histologic diagnosis on the surgical margin. If cytologic examination on the staple line showed positive results, we would determine a further resection by both macroscopic findings and histologic diagnosis of the surgical margin. If we judge the margin to be positive from the total findings, we will further resect the next segment or convert to lobectomy. In fact, we did perform a segmentectomy for 2 segments or 1 segment with 2 subsegments in some patients to take a sufficient surgical margin in our study.

In a multicenter study, Sawabata and colleagues[4] also reported that the surgical margin was usually negative when the margin distance was greater than 2 cm or the maximum tumor diameter. In our segmentectomy, the margin is usually more than 2 cm as described in the article,[5] which could be sufficient to make a negative margin. In addition, to make a surgical margin sufficient in segmentectomy, we usually cut the lung surface by electrocautery before cutting by the stapler on the segmental plane, which can make the margin greater than using a stapler alone on lung tissue. Sawabata and colleagues[4] also reported on a device to make a surgical margin sufficient, that is, a less traumatic jaw closing-type stapler can make the surgical margin negative more frequently than an aggressive clumping type.

We agree with Sawabata and colleagues that an intraoperative histologic or cytologic examination on the surgical margin is important, as well as N-staging during segmentectomy, and that a device to make the margin sufficient is also important.

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The sinuses of Valsalva: They should be anatomically correct and physiologically compliant

To the Editor:

The article "Six Stitches to Create a Neosinus in David-type Aortic Root Resuspension" by Moritz and colleagues, which appeared in the February issue of the *Journal,*[1] confirms our observations made in the late 1980s on handmade "Valsalva" grafts[2] and that the onion shape itself guarantees neither physiologic function nor longevity of aortic valve leaflets. Digitized stress measurements further demonstrated that even if 3 sinuses are refabricated, as the authors propose, significant stress reduction was obtained only if the neosinuses closely matched the anatomy of the preserved or implanted leaflets.[3] One may get closest to such an arrangement with "custom-made" oyster-form concave leaflets, handmade to match the anatomic features[4] (Figure 1).