operative, 30-day mortality and those who were lost to follow-up were excluded. However, patients undergoing exploratory thoracotomy were included. Follow-up information between 12 and 36 months after surgery was available for the remaining 1,749 patients. The results are shown in Table 1.

In this preliminary survival analysis, a progressive degradation of survival as tumor stage increases is found. However, differences in survival between some stages did not reach statistical significance. In our study, pathological stages IB and IIA and IIA and IIB seem to have the same prognosis. Others have reported similar results. This may be because of the few number of patients in stage IIA. Survival differences in pathological stages IIB and IV do not reach statistical significance, either. The few number of patients in stage IV and the fact that this is a highly selected group with surgical treatment may contribute to its similarity to stage IIB.

In conclusion, although the new staging system seems to have an overall prognostic significance, the prognosis of some of the new stages seems to be the same.

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Avoiding Air in Pleural Fluid pH Samples

To the Editor:

Goldstein and colleagues are to be congratulated on obtaining a good agreement of pleural fluid pH values between samples collected directly from the chest versus indirectly from a large (plastic?) syringe. However, they failed to describe exactly how they made the syringe-to-syringe transfer, and their results suggest that the fluid remained “anaerobic,” or nearly so. I am concerned that this report may inadvertently encourage a casual approach to the handling of such specimens.

An informal survey of senior medical residents’ bedside practices (plus 15 years of observation) indicates that physicians handle samples for pleural fluid pH determination in a variety of ways. These include dripping or squirting the fluid into a blood gas syringe after collection, aspirating it from a large collection bag into a blood gas syringe, injecting it into a red-top chemistry tube, switching syringes with the needle in place in the chest, and doing a “second stick” (the direct method, which few use). Opinion also varies as to heparin: most use it (the specimen may clot), but some have been taught to avoid it (the pH may be artifically diminished). The majority of house staff questioned were unaware of the need to keep samples for pH unexposed to air.

I often observe pleural pH values which exceed those in the blood by 0.1 to 0.2 units or more. While such differences may be real to some extent, particularly in transudates, it is likely that some values are spuriously high due to faulty collection technique. It appears that further data on the potential magnitude of error would be of use, as would further education on this topic. Meanwhile, use of a 3-way stopcock can facilitate anaerobic collection from the pleural space without entailing an additional chest tap.

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