agree that the results should be replicated in a larger patient population from multiple centers before they are adopted as being definitely valid, as is true for all clinical studies from a single center.

Liou et al then go on to present data that seemingly respond to this need by interrogating the Cystic Fibrosis Foundation Patient Registry and conclude that our model was useless in predicting actual changes in FEV₁ percent predicted (Fig 1 in their letter). We are reluctant to engage in a dispute about the meaning of their results because in a letter to the editor too little information is available about the methods employed. For instance, legitimate concerns about data quality are raised by Liou et al themselves in their letter. Furthermore, at the very least, it would be important to exactly replicate the methods used in our study before concluding that there were or were not meaningful differences. We have real concerns that Liou et al did not do this. For instance, in our study, 54% of the patients were in the “slow group” showing pulmonary function decline (i.e., the rate of decline for each patient was less than the group mean + 2 SEs). The coefficient of determination for the linear regressions in this group averaged only 0.44 ± 0.30. Clearly, linear regressions in such patients cannot predict future events (in this case, for instance, the FEV₁ percent predicted for the next year) with great confidence. Of course, by definition, these patients show little change in their pulmonary function, and therefore, with all other things being equal, they would not be likely candidates for lung transplantation referral. We never implied that such patients do not require close clinical observation and follow-up. If circumstances change, the clinician must adapt accordingly.

In contrast, 35% of the patients were in the “rapidly declining” group. In these patients, the mean coefficient of determination was a startling 0.9 ± 0.1. These results would suggest that for these patients the model should be highly predictive. Our conclusion regarding the referral for lung transplantation for these patients is that with this knowledge referrals could have occurred at an earlier time, potentially saving lives.

It is no surprise then that when Liou et al simply lump all the data in the Cystic Fibrosis Foundation Registry together (Fig 1 in their letter) the strategy that we proposed appears to be of little use; but we discount the value of such an analysis. This concern is relevant to both of the issues raised by Liou et al. Nevertheless, we urge Liou et al to submit their analyses of the complete registry database for publication so that their methods and analytic strategies can be properly peer-reviewed.

Liou et al also have mischaracterized and inappropriately applied our regression model to their data set. The regression model is not used to “predict when the FEV₁% drops below 30%” as they state, but, as stated in our article,1 “the rate of decline was used to predict the age at which %FEV₁ would reach 20%.” We agree that the decision to proceed with transplantation should not be based solely on a patient’s FEV₁ percent predicted and only assert in our article that this model may be utilized in timing the referral for lung transplantation.

Finally, we dispute the contention that our proposed method is not simple. It is of course trivially simple to analyze the four best points (per annum) of FEV₁ percent predicted data by linear regression! Whether, for example, the data have been obtained by accepted standards or the referral center would have access to the required prior data are issues that can be addressed in a straightforward manner if and when others corroborate our proposed approach in future studies.

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REFERENCE

Value of Fiberoptic Bronchoscopy in Patients Undergoing Surgery for Solitary Pulmonary Nodules

To the Editor:

The American College of Chest Physicians evidence-based guidelines on the diagnosis and management of lung cancer do not recommend preoperative fiberoptic bronchoscopy (FB) in patients undergoing surgery for solitary pulmonary nodules (SPNs), qualifying the level of evidence as Good, None, D.1 Based on experience with real patients, we disagree. Preoperative FB is able to avoid serious mistakes on account of any of the not-so-unusual findings, as follow:

1. FB can detect subclinical disorders in vocal cords related to inferior laryngeal nerve compromise, changing staging and therapy.
2. Unexpected variations in bronchial anatomy could lead to difficult intraoperative situations (e.g., double right-upper-lobe bronchial and vessels branching).
3. Subtle extrinsic compression of the bronchial wall, usually undetectable by CT scan, could change strategy. Endobronchial ultrasonography can be useful to guide histologic diagnosis.
4. Simultaneous central endobronchial lesions could be diagnosed. Dramatic changes in surgical approach could be necessary. Autofluorescence bronchoscopy can be useful when available.
5. Fluoroscopy-guided BF, even when not obtaining a cytologic or histologic diagnosis, is extremely important in localizing the segment where the SPN is placed in case it is not palpable during surgery. This can lead to an adequate “blind” segmental resection instead of a useless operation.

Randomized trials to base these kinds of observations on evidence could be unachievable. However, clinical mistakes can be cumbersome when a safe procedure such as FB is missing in the individual patient

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