The current standards suggested by the NIH for α1-proteinase inhibitor infusion suggest that there is little justification for the performance of α1-antitrypsin levels in individuals on replacement therapy. We would offer that the opposite may be true, particularly in that population receiving monthly replacement therapy. Until such time as delayed clearance from epithelial lining fluid can be shown in those individuals whose nadir serum levels are substantially below protective threshold, we are recommending for our patient population that monthly therapy be discontinued and conventional weekly therapy be performed. In all such individuals, establishment of acceptable nadir levels has been achieved.

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Monitoring Hemodynamics and Blood Gases During Fiberoptic Bronchoscopy

To the Editor:

In addition to the data being presented in the November issue of Chest, we would like to draw attention to an article published by our group. Montravers et al and Papazian et al assessed the cardiovascular effects and the oxygenation status of patients treated with mechanical ventilation and undergoing bronchoalveolar lavage and protected specimen brushing during fiberoptic bronchoscopy. Our study addressed the effects of several endoscopic procedures like the introduction of the bronchoscope, removal of the instrument, catheter suction, bronchoalveolar lavage and transbronchial biopsy on heart rate, systemic blood pressure, and transcutaneously measured blood gases in 77 consecutive patients. In contrast to the data being presented in Chest, our patients were hemodynamically stable and were not mechanically ventilated, yet they received routinely 10 L O2/min via face mask during bronchoscopy. Sedation was performed with either midazolam or diazepam.

Before applying oxygen and premedication, the initial transcutaneous oxygen pressure (tcpO2) was 68 ± 1 mm Hg and the initial transcutaneous carbon dioxide pressure (tcpCO2) 38 ± 2 mm Hg; the corresponding values from arterialized blood samples were 74 ± 1 mm Hg vs 37 ± 0 mm Hg. Before larynx passage, tcpO2 was 187 ± 7 mm Hg and tcpCO2 44 ± 1 mm Hg. At the end of bronchoscopy just before removal of the instrument, tcpO2 had declined to 149 ± 6 mm Hg and tcpCO2 had increased to 47 ± 1 mm Hg. Eight minutes after removal and stopping, the oxygen supplementation tcpO2 was 65 ± 2 mm Hg (range: 38 to 90 mm Hg) and tcpCO2 was 45 ± 1 mm Hg (range: 27 to 68 mm Hg). No significant changes in the transcutaneously measured blood gases occurred during suctioning, bronchoalveolar lavage, or in conjunction with transbronchial biopsies—at least eight biopsies were performed in each patient.

Blood pressure and heart rate did not change significantly during the different diagnostic procedures. Nevertheless, the systolic and diastolic pressures were higher during bronchoscopy than before the procedure. The most extreme individual blood pressure values and heart rate values were recorded just after passage of the vocal chords. Looking at the initial values, no exact prediction of the time course was possible.

Although our data resulted from a different group of patients, compared with the recent studies, the results were rather similar. If supplemental oxygen is given and adequate premedication is performed, monitoring of hemodynamics and blood gases during fiberoptic bronchoscopy with different diagnostic procedures is not necessary in patients without cardiovascular or respiratory risk.

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Primary Site of Lung Cancer With Systemic Metastasis

To the Editor:

In 1990, we found that lung cancer metastatic to the skin almost always originated from a primary site in the upper lobe of the lung; seven of the eight patients (87.5 percent) had an upper lobe primary cancer. A similar association has been reported in the literature on bronchogenic cancer metastatic to the brain. Read et al reported that 70 (76.1 percent) of the 92 patients with solitary brain metastases had primary lung cancers in the upper lobes. In a review of long-term survivors after brain metastasis from lung cancer, Sarma and Weilbaecher noted that 10 of 11 patients (90.9 percent) had upper lobe primary sites. Is distant metastasis more likely from a primary site in the upper lobe? Or is this association more apparent than real?

We reviewed data from the records of 450 patients diagnosed with bronchogenic carcinoma at the Wilkes-Barre General Hospital (WBGH) in the years 1986 through 1991 and from the records of 36,563 patients in the 1986-1987 SEER (Surveillance, Epidemiology, and End-Results Reporting) data base of the National Cancer Institute (NCI), Washington, D.C. Distant metastases were present in 101 cases from the WBGH and 13,994 cases from the NCI.

Between 62.4 percent (NCI) and 65.5 percent (WBGH) of all systemic metastases arose from upper lobe cancers. Further analysis of WBGH data showed that upper lobe carcinomas were responsible for 62.8 percent of metastases to the central nervous system, 61.3 percent of those to bone, and 59.1 percent of those to liver. However, these data are nearly identical to those showing the proportion of all lung cancers that originated in a particular site in the lung. Between 57.6 percent (WBGH) and 62.7 percent (NCI) of lung cancers in general arose in the upper lobes. There were differences between institutions with respect to the proportion of cancers from each site that metastasized to distant sites, but within each institution there was no statistically signif-