disease or leukemoid NK lymphocytosis. Sarcoïd-like granulomas are often observed in voisinage of tumoral foci, but neoplasia is more frequently associated with NK depression.

Determination of the NK subset in BAL clearly deserves further studies in pulmonary diseases.

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Cost Reduction Efforts in a Tuberculosis Laboratory

To the Editor:

The article by Soo Hoo et al (Chest 1984; 86:860-62) and the related editorial on the subject by Sbarbaro (Chest 1984; 86:805) need careful consideration on several important counts. First, as indicated by Sbarbaro, cost containment in medical aspects may perhaps be carried too far, sometimes at the risk of proper diagnosis of disease or delivery of adequate care. Attempts to reduce cost may have more serious consequences in dealing with diseases like tuberculosis for which "diagnosis is becoming more and more difficult." Culture of acid-fast bacilli is the most confirming diagnostic measure for tuberculosis around the world, though in many developing and underdeveloped countries, direct smear for acid-fast bacilli is still a valuable guide. Other factors which serve to alert the physician to the possibility of the disease include persisting (two to four weeks) cough, country of origin, or contact with a tuberculosis patient. In all these situations, definitive diagnosis of tuberculosis can only be obtained by culture examination. Earlier studies comparing the relative merits of x-ray and microscopic examinations or x-ray examination and culture study have indicated that culture examination is by far the most useful diagnostic tool we have. The limitations of the tuberculin test, well analyzed in the editorial by Sbarbaro quoting the American Thoracic Society classification of tuberculosis, need not be over emphasized. Soo Hoo et al have suggested that x-ray examination or tuberculin test, before processing of sputum for acid fast bacilli is done, will yield more positive results; however, there is no evidence to support that position. On the other hand, they have ignored the documented fact that 20 to 25 percent of patients with newly diagnosed tuberculosis have negative or nonsignificant tuberculin skin test results at the time of diagnosis.

Second, while the laboratory staff have made genuine efforts to curtail cost by refusing specimens of sputum already collected, they overlook another important fact, a significant amount of money and time have already been spent by the nursing and courier staff to collect and transport the sputum specimens, especially when the specimen is produced by aerosol induction. In other words, while the laboratory authorities have been trying to reduce the cost in the laboratory, the overall expenses for the hospital or institution is the same and, by refusing specimens which are already collected, the money and time spent already will be wasted. It is also prudent to consider that, unless the laboratory has genuinely reduced the other expenses by reducing the personnel or other operating expenses in the laboratory, the unit cost per specimen processed, or unit cost for positive culture obtained, will be even more, not less, by refusing some specimens already collected; this point has been excellently analysed by Sbarbaro in his editorial.

Third, the dangers that may accumulate by the laboratory personnel action in directing or controlling the clinicians role and privileges in managing the patients should be considered. After all, the clinician has direct and detailed contact with the patient and will be aware of the possibility of tuberculosis and therefore has ordered the specimen of sputum to consider or at least to rule out a diagnosis of tuberculosis. Unless the laboratory has some evidence to show that the physician or his colleagues are indiscriminately ordering a multitude of specimens, the laboratory has no justification to reject any specimen of sputum already collected from the patient. If the laboratory has evidence of overuse by the clinicians of limited laboratory facilities, an effort to educate the clinicians is in order. But at any stage, refusal of a specimen already collected is out of order and likely not in the best interest of the patients and their medical care.

Finally, the modest danger of the superficial take home message from this study should be noted. The dangers of missed or delayed diagnosis with the resulting economic impact on the patient, their contacts in society and the extra costs of treatment and hospitalization with the incorrect diagnosis, all resulting from the physicians' getting a wrong message, should be avoided. While cost containment and avoidance of wastage should be encouraged, they should be carefully weighed against the other benefits and losses for the most important aspect, the health care of the patients.

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Occlusion of the Endotracheal Tube

To the Editor:

We recently observed two patients with Pneumocystis pneumonia and respiratory failure who developed partial occlusion of the distal endotracheal tube due to inspissated secretions. As the alveolar filling process continues in this group of patients, progressive decrease in lung compliance and progressively increasing airway pressure are expected. Both patients were noted to have peak airway pressures of 80 to 90 cm H₂O when receiving tidal volumes of 0.8 to 0.9 L, and both patients had minute volumes of 25 to 32 L/min.

The first patient underwent fiberoptic bronchoscopy and was found to have yellow, thickened secretions adherent to the distal 4 to 5 cm of the ETT, preventing passage of the bronchoscope through the 9 mm ETT. With vigorous manipulations of the scope, the tube was eventually cleared and peak pressures fell to the 40 to 50 range. A second patient (with pneumocystis) was noted to be difficult to suction due to difficulty passing the suction catheter through the 9 mm ETT, and peak airway pressures were in the same range as the first patient. With the use of large suction catheters and aggressive suctioning, pieces of up to 1 cm of dried secretions were removed from the ETT, with subsequent reduction in the peak pressure to 55.

We report these two cases so as to alert physicians caring for this group of patients to the increases in airway pressure that may be secondary to endotracheal tube occlusion and not solely due to decreased lung compliance. Although adherence of secretions to the ETT can occur in any patient, we have observed this in two of ten patients with AIDS and Pneumocystis pneumonia, in one year, that have been mechanically ventilated. Both of these patients were intubated for less than one week before this problem occurred.

These patients typically have respiratory alkalosis prior to intubation, due to their interstitial disease, and we have observed that this respiratory pattern continues, even after intubation and mechanical ventilation. The patient with Pneumocystis who requires ventilatory support usually has extremely high minute volume, frequently greater than 30 L/min, which is at the upper limit of the minute volume that many ventilators can deliver. When we have bronchoscopically examined these patients, they usually have minimal amounts of clear secretions.

It is hypothesized that the high minute volume of these patients contribute to the inspissation of secretions in these patients. It is also possible that some characteristic of the Pneumocystis organism in secretions causes altered adherence characteristics of the sputum, resulting in this problem.

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Fibronectin Concentration in Pleural Effusions

To the Editor:

Fibronectin (FN) is an opsonizing glycoprotein found in plasma

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