To Needle, Brush, Cut or Watch?

The pulmonary nodule does indeed remain a diagnostic dilemma. Until the mid 1960's, most of the limited diagnostic procedures for pulmonary nodules had such a low specific diagnostic yield that the clinician had essentially two choices: 1) to recommend diagnostic thoracotomy, or 2) to observe, usually with repeated x-ray examinations. Proponents of each approach could accumulate or quote the series necessary to support their surgical or observation approach. Unfortunately for the individual patient, statistics offered little solace when the "wrong" approach was chosen.

In this issue of Chest, Zelch et al (see page 149) present their recent experience with percutaneous needle (noncutting) aspiration biopsy of solitary nodules. Their 93 percent accuracy in separating benign from malignant lesions is excellent, as is their 0 percent mortality with no "major" morbidity. Both figures assuredly reflect good technical skills and experience of the operator, as well as the talented support from the cytologist-pathologist. From their experience they feel that needle aspiration is quicker and "easier" on the patient than the bronchial brushing approach popularized by Fennessy. Both diagnostic approaches have very similar indications, limitations, complications and results and, therefore, the choice to needle or brush depends largely on the operator's experience. Our experience at the University of Colorado Medical Center leads me to recommend brushing of the more central lesion and needle aspiration of the more peripheral lesion. The larger the lesion the more I favor needle aspiration, as the center of the lesion can be entered where the more diagnostic tumor cells or infectious organisms are present. The periphery of larger nodules tend to give misleading inflammatory necrotic cells in both cancer and granuloma.

The question that must be asked of all non-thoracotomy "procedurists" is what happened to their false negative (cancer cases thought to be benign) cases? Did a delay in making the right diagnosis allow a potential resectable curable cancer to progress to an incurable cancer? One can minimize this true disaster by considering all patients with nondiagnostic results (ie, no cancer, Tuberculosis, cysts, etc) as diagnostic thoracotomy candidates. If the patient is in the 40 to 60 year age range with a marked smoking history one usually recommends early thoracotomy for undiagnosed nodules; however, for a high surgical risk patient in his 70's the best medical judgment (after considering one's own false negative percentages vs the local mortality rate from a diagnostic thoracotomy) may still be a period of observation and/or repeating "safer" diagnostic procedure.

The new procedures, therefore, have eliminated the need of "diagnostic thoracotomy" in 50-75 percent of patients with pulmonary nodules; however, selection and experience are still needed for any individual case.

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REFERENCES
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Insertion Site for Heart Catheters

Heart catheterization, widely accepted and used for cardiac physiologic and anatomic assessment over the past three decades, is still being refined and evaluated in its practice and application. Historically, catheters were first introduced into the heart of man through arm veins and arteries. In most laboratories this is still the preferred route. However, a number of heart laboratories now utilize the femoral approach because of ease of catheter introduction and manipulation. Rao, (see page 239) presents data documenting the virtues of the femoral route for infant and child catheterization. Special emphasis is given to the fact that entrance to the left heart was gained in 64 percent of pediatric femoral vein catheterizations. Among those dealing with congenital heart disease, it is well established that entry into the left...