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CBM Announces Ultrasound Guided FNA & College of American Pathology Accreditation

CAP accreditation for CBM Pathology means national recognition by the College of American Pathologists, with personal congratulations to the medical director for excellence in the services being provided at CBM Pathology. In addition, our laboratory has expanded, as Dr. MacLeod completed specialty training and is certified to perform ultrasound guided fine needle aspiration (US-FNA) biopsy procedures. We are excited to help meet the needs of the Washington DC, MD and VA communities and provide a convenient outpatient options for patients FNA biopsies under ultrasound guidance. The medical team of board certified pathologists brings more than forty years combined experience performing and diagnosing FNA biopsies. Patients are examined in our newly outfitted examining room located within our laboratory adjacent to histology and cytology labs, so specimens can be processed in-house, reducing the time it takes to assess adequacy and provide a final diagnosis. The preliminary diagnosis can be made within four hours, often in an hour of the procedure. Dr. MacLeod is committed to excellence and CBM Pathology bases success on how well we serve our referring doctors and their patients.

Molecular Thyroid Testing

Indeterminate cytology presents a challenge to the patient care team managing thyroid cancer risk. Molecular testing offers insight into cancer types and can help characterize malignancy. The detection of mutations conveys a high likelihood that the nodule is malignant and the detection of certain markers, such as BRAF, have been linked to tumor aggressiveness. Adjunctive, molecular FNA testing can help distinguish between benign and malignant and can also increase sensitivity 85.7- 97% and specificity 97-100%. The goal is to obtain a pre-surgery diagnosis, which may lead to improved surgical efficiency. FNA cytology can provide an extra sample for molecular thyroid testing when cases are indeterminate.

REFERENCES

Nikiforov, Y. et al. Impact of Mutational Testing on the Diagnosis & Management of Patients with Cytologically Indeterminate Thyroid Nodules: A Prospective Analysis of 056 FNA Samples. *J Clin Endocrin Metab.* Nov. 2011, 96(11).

US-FNA Diagnostic Triage: Ultrasound Imaging Provides Better Understanding

In diagnosing palpable and non-palpable superficial nodules/masses, our interventional cytopathologists can efficiently manage patient care and save time for the patient and referring physician. On-site assessment of the adequacy of FNA biopsy decreases the non-diagnostic rate to about 1% and is cost effective in that it limits the need for patients to return for repeat procedures.

In addition, ultrasound guidance decreases the non-diagnostic rate for FNA biopsy by visualizing the exact location of the needle during the procedure, and allows specific targeting toward solid or suspicious areas in heterogeneous nodules. Ultrasound guidance increases overall accuracy, increases specificity, and increases the negative predictive value of FNA. Importantly, this strategy offers patients the smallest, safest possible biopsy in as few clinic visits as possible.

US is also helpful in patient evaluation. For example, a thyroid gland may appear nodular by physical exam, but the US may only show thyroid enlargement without a sonographically definable nodule. In this instance, a biopsy may not be indicated. On the other hand, patients who appear to have a large, single nodule may be found to have two or more component nodules on US. In this instance, the sonographic details of the nodules may lead to better selection of the more worrisome/suspicious nodule for biopsy. For instance, a somewhat larger nodule may not demonstrate increased blood flow on Doppler or any other worrisome US features, whereas a smaller, adjacent nodule may have markedly increased blood flow and microcalcifications, thus enabling the biopsy to be directed toward the smaller but more sonographically worrisome nodule. According to ATA guidelines issued in 2009, "a thyroid nodule <1 cm may lack warning signs yet eventually cause morbidity and mortality."

US-FNA is a pivotal diagnostic tool in the triage of patients to efficiently evaluate nodules. Information gained during the less invasive biopsy procedure can help manage preoperative patient care.

REFERENCES

Fischer, A. et.al. Five Top Stories in Cytopathology. *Archives of Pathology & Laboratory Medicine.* July 2013, 137 (7): 894-903.



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