

Rapid On-site Evaluation of
Ultrasound Guided Fine Needle
Aspiration Thyroid Nodule Biopsy:
Does it Have a Role in the Reduction
of Non-diagnostic Sample Rate?

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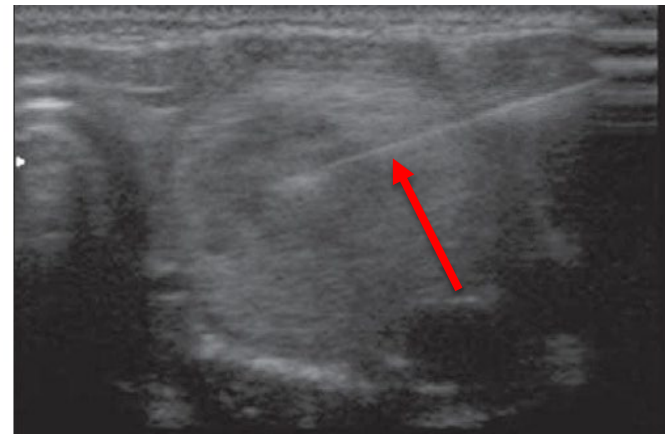
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Background

- Thyroid nodules are one of the most common incidental imaging findings
- US guided FNA is used for tissue sampling
- FNAs are increasing due to increasing find of thyroid nodules



Ultrasound guided outpatient FNA



Needle FNA in suspicious nodule

Current protocol

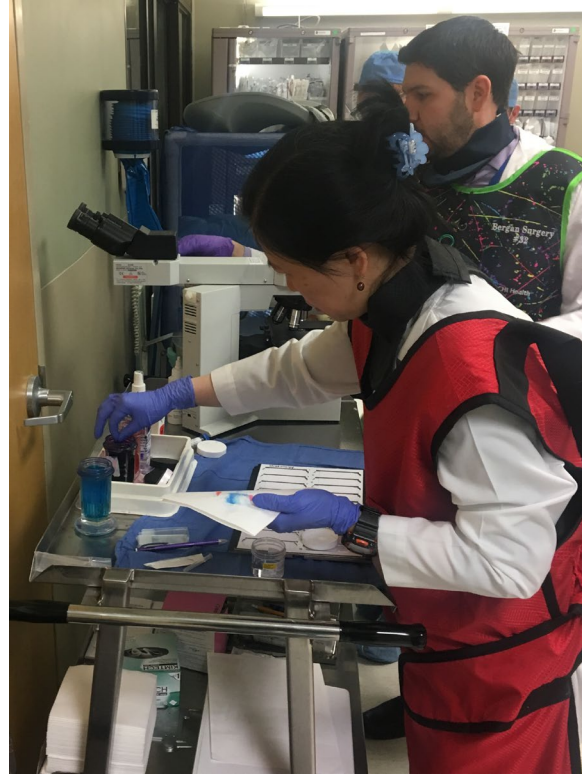
- 6 FNA passes are obtained for each nodule
- 20-25g needle used
- Non-diagnostic specimen is possible due to inadequate passes
- Operator unsure if specimen is adequate upon completion of FNA



Aim

Detect the effect of rapid on site evaluation on the success of obtaining adequate diagnostic samples and decreasing re-biopsy rate

Implementing rapid on-site cytological exam to check for sample adequacy



Pathology team present in room at time of biopsy with rapid stains



Methods

- Thyroid nodules FNA 2017-2018 were identified.
- Variables:
 - Sample adequacy, yes or no
 - On-site exam, yes or no
 - Nodule size
- Fisher's exact test used to determine significance
- Small nodules (≤ 2 and ≤ 3 cm) studied

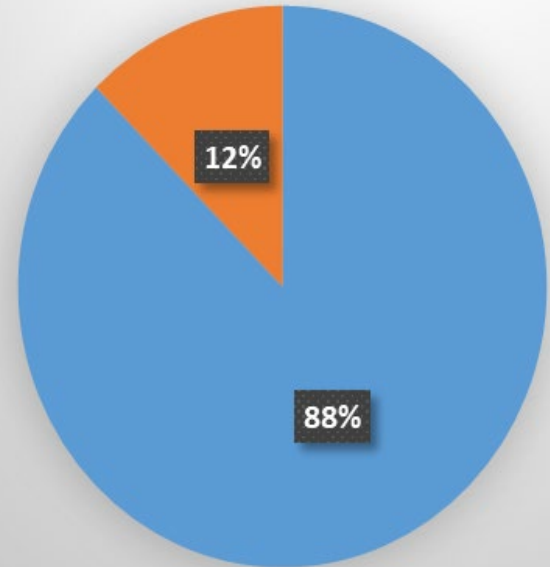
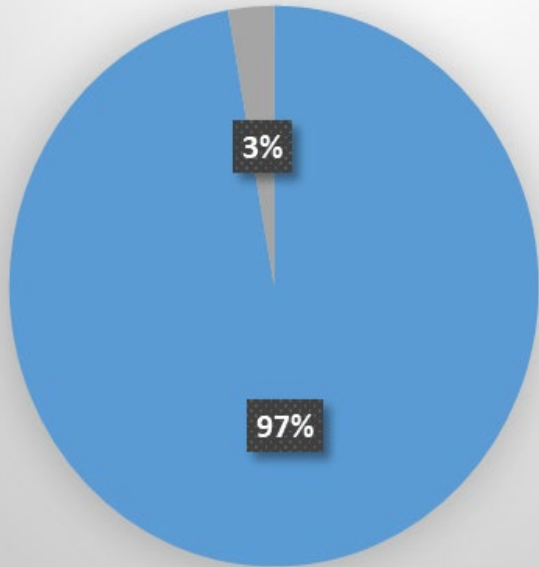
Results

- 355 patients with 443 nodules were reviewed
- On-site cytological exam was performed in 60 cases (17%) with 65 nodules
- 121 patients with nodules ≤ 2 cm

Noules ≤ 2 cm

Onsite cytology performed

Onsite cytology not performed



RR = 0.8, p = 0.839
(p = 0.08)

Adequate
Adequate
Inadequate
Inadequate

Adequate
Adequate
Inadequate
Inadequate

Conclusion

- FNA biopsy of thyroid nodules is one of the most commonly performed procedures.
- Inadequate sample is frustrating for the patient, results in rebiopsy, and increases cost.
- Performing rapid on-site cytological exam, particularly in nodules less than 2 cm resulted in reduction of the incidence of obtaining inadequate sample.
- In our experience, this has led to improving the quality and safety of patient care.

Thank
You!

Department of Radiology

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