

# INDICATIONS AND OUTCOMES OF REPEATED THYROID FINE-NEEDLE ASPIRATIONS: A RETROSPECTIVE EVALUATION FROM A TERTIARY CENTER

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## BACKGROUND

Fine needle aspiration (FNA) is the first-line diagnostic test for evaluating thyroid nodules. This test can effectively distinguish between neoplastic and non neoplastic nodules. The Bethesda System suggest that thyroid nodules with non diagnostic (ND), atypia/follicular lesions of undetermined significance (A/FLUS) aspiration should undergo repeat sampling. We aimed to investigate the clinical validity of repeated FNA in the management of patients with thyroid nodules in our institution.

## METHODS

This was a retrospective cohort study of 668 nodules of 529 patients who undergone repeated sampling in Baskent University Hospital between 2000 and 2014. All cytological results were reported according to Bethesda system. All patients had an initial examination classified as non-diagnostic, benign, or A/FLUS, and at least one more repeated FNA.

## RESULTS

The majority of patients were female (n=421, %79,6). The mean age of patients was 60.1±14.5 years. First evaluation revealed that 467 (89.9%) of nodules were benign, 180 (26.9%) were non diagnostic and 21 (3.1%) were A/FLUS). Enlargement of the nodule (%27.9) was the most common indication for a repeated sampling followed by non-diagnostic cytology (%26.9). Re- aspiration altered the initial diagnosis in 84.4% and 66.7% of the non-diagnostic and (A/FLUS) patients but only in 10.7% of patients with a benign cytology the initial diagnosis was changed. We evaluated the outcome of patients whose initial and repeated cytological diagnosis are non diagnostic and A/FLUS (Table 1). Outcome data was obtained 23 (65.7%) of these patients.

**Table-1: Outcome data of patients with initial and repeated diagnosis of non diagnostic and A/FLUS.**

FNA1-FNA2	Surgery	Repeated Biopsy
ND-ND (n=28)	Nodular hyperplasia-6 Papillary thyroid ca-2	Benign-7 ND-1
A/FLUS (n=7)	Nodular hyperplasia-5	Benign-2

## SUMMARY OF CONCLUSIONS

Enlargement of nodule was the most common indication for a repeated sampling even if the first evaluation was benign. Re-aspiration did not alter the initial diagnosis of benign nodules. Several studies have shown that approximately 90% to 98% of patients with an initial benign diagnosis will not change after multiple FNAs, and concluded that routine repeated examinations should not be considered for all patients. Repeat FNA is useful in cases whose initial diagnosis is non diagnostic or A/FLUS, but repeated aspiration for patients with an initial benign examination appears to not increase the expected likelihood of a malignant cytology.

## REFERENCES

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