



# COMPARISON OF ASPIRATION VS WITH-OUT ASPIRATION FINE-NEEDLE BIOPSY OF THYROID NODULES FOR ADEQUACY OF CELLULARITY ACCORDING TO BETHESDA SYSTEM



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## INTRODUCTION

➤ Fine-needle aspiration (FNA) is a simple, minimal invasive, cost-effective and widely used diagnostic tool for evaluating thyroid nodules.

➤ Recent times a technique called fine-needle sampling non-aspiration (FNNA) or fine-needle capillary thyroid biopsies (FNC) has been more preferred.

➤ This technique prevents the use of suction so there is no aspiration crush and therefore nondiagnostic outcomes are reduced.

➤ The aim of this prospective study was to compare the FNA and FNNA with reference to diagnostic adequacy and diagnosis according to Bethesda System.

## MATERIALS AND METHODS

➤ Ultrasonography-guided FNA and FNNA biopsy were performed successively on 100 nodules. Both techniques were performed on the same nodule and assessed by the same pathologist, beginning with the first (FNA) on half of the patients (randomly selected) and vice versa.

➤ The pathologist was unaware of the sampling method employed (FNA/FNNA) for any particular set of slides to avoid individual bias.

➤ The final cytopathologic finding was reported by using the Bethesda criteria, in which a sample is considered adequate if it contains a minimum of 6 groups of well observed follicular cells, with at least 10 cells per group.

## RESULTS

➤ During this study interval, FNA and FNNA were performed on 100 thyroid nodules of 99 patients (78 patients were female, 21 were male). The patients' age range was 19-75 years old. The sizes of the thyroid nodules which biopsy samples were taken, are ranged from 6 to 59 mm in mean diameter.

➤ A significant difference between FNA and FNNA examination was found in inadequate results (42% vs 22%,  $p=0.02$ ).

➤ There was no significant differences in nodule features including; echogenicity, calcification and nodul size between the two techniques.

Table 1: The cytopathologic results of FNA and FNNA sampling

	FNA	FNNA	p
Nondiagnostic	42	22	0.02
Benign	55	75	
Suspicious malignancy	1	0	
Cytologic atypia or follicular lesion with undetermined significance	2	2	
Malignant	0	1	

## CONCLUSION

➤ FNNA is an easier technique to perform with better patient compliance.

➤ We think our study will lead a further suggestion to prefer FNNA to reduce nondiagnostic results.