

# Malignancy rate in thyroid nodules with AUS/FLUS cytology in a Cancer Center (Bethesda System for Reporting Thyroid Cytopathology, 2009)

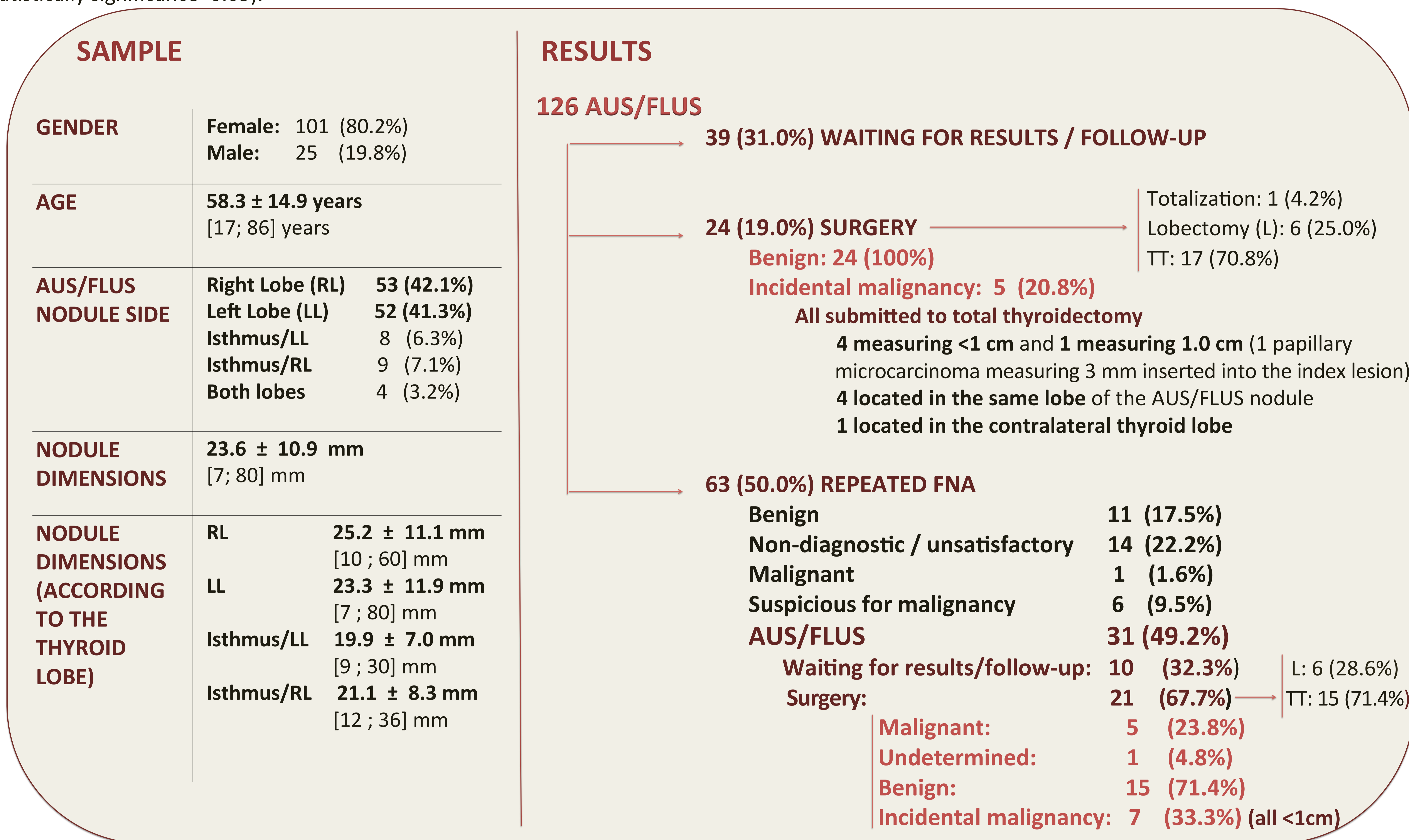
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**INTRODUCTION:** The Bethesda System for Reporting Thyroid Cytopathology is the standard for interpreting fine needle aspiration (FNA) and created a new diagnostic category (III): "atypia of undetermined significance / follicular lesion of undetermined significance" (AUS/FLUS). The risk of malignancy for this category has been ascribed of 5-15% but the real malignancy rate remains unclear and plays a key role to define appropriate management.

**OBJECTIVE:** To determine the malignancy rate in AUS/FLUS cytologies.

**METHODS:** A total of 126 consecutive patients with AUS/FLUS cytology were retrospectively identified. Results of follow-up, repeat biopsy or surgical pathology were evaluated. Total thyroidectomy (TT) was performed if there were contralateral nodules or if the surgeon had to do so during the surgical procedure. Data are presented as frequencies. For comparison we performed Student *t* test for continuous variables and chi-square test for categorical ones (statistically significance < 0.05).



**OVERALL:**  
**SURGERY:** 45.2% (57/126)  
**MALIGNANCY RATE OF THE INDEX LESION:** 19.3% (11/57)  
**INCIDENTAL MALIGNANCY:** 21.0% (12/57)

	MALIGNANCY OF THE INDEX LESION (n=11)		
	MALIGNANT	BENIGN	P VALUE
<b>NODULE (mm)</b>	31.7	23.0	NS
<b>GENDER</b>	9 female	2 female	NS
<b>Age (years)</b>	54.7	55.8	NS

INCIDENTAL MALIGNANCY (n=12)	
<b>TOTAL THYROIDECTOMY</b>	10
<b>LOBECTOMY / TOTALIZATION</b>	2
<b>SAME LOBE OF THE INDEX LESION</b>	11
<b>CONTRALATERAL LOBE OF THE INDEX LESION</b>	1

## CONCLUSIONS:

Repeating biopsy allows a significant proportion of AUS/FLUS patients to avoid surgery. There was no malignancy in the 24 patients submitted to immediate surgery and 17.5% of those who repeated biopsy presented benign results. In our series, nodules with two AUS/FLUS cytologies harbour a malignancy rate of 23.8%. Incidental papillary carcinomas are frequent (overall 21.0%), in accordance with its high prevalence in general population. All incidental cancers measured ≤ 1cm, contributing to the low risk thyroid carcinomas increase. Just one papillary microcarcinoma was located on the contralateral lobe of the AUS/FLUS nodule. Even in the presence of non-suspicious thyroid contralateral nodules, performing lobectomy instead of total thyroidectomy to remove the index lesion could have been a better option, in order to reduce morbidity and social burden.

REFERENCES: Frederico F. R. Maia et al. Thyroid imaging reporting and data system score combined with Bethesda system for malignancy risk stratification in thyroid nodules with indeterminate results on cytology. *Clinical Endocrinology* (2015) 82, 439–444; Ivana Kholová et al. Thyroid Atypia of Undetermined Significance or Follicular Lesion of Undetermined Significance: An Indispensable Bethesda 2010 Diagnostic Category or Waste Garbage? *Acta Cytologica* 2014;58:319–329; Rene Gerhard et al. The Value of Second Opinion in Thyroid Cytology - A Review. *Cancer Cytopathology* 2014. DOI: 10.1002/cncy.21436; Michiya Nishino et al. Should the Thyroid AUS/FLUS Category Be Further Stratified by Malignancy Risk. *Cancer Cytopathology* 2014. DOI: 10.1002/cncy.21412

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