



EVALUATION OF BENIGN THYROID NODULES IN A 10 YEAR FOLLOW-UP

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Introduction

American Thyroid Association recommends that benign thyroid nodules should be reevaluated 6-18 months after initial FNA and in case of stability the follow-up should be 3-5 years. However there isn't any consensus about the periodicity of the follow-up, since there isn't enough knowledge about benign thyroid nodules behaviour.

Objectives

Evaluate the nodules in terms of function, size and malignancy in a 10-year follow-up

Methods

Retrospective study of 347 patients (543 benign thyroid nodules) followed in consultation.

Inclusion criteria:

- follow-up ≥10 years;
- normal thyroid function;
- Initial benign FNAC.

Evaluation at 5 and 10 years of the following parameters:

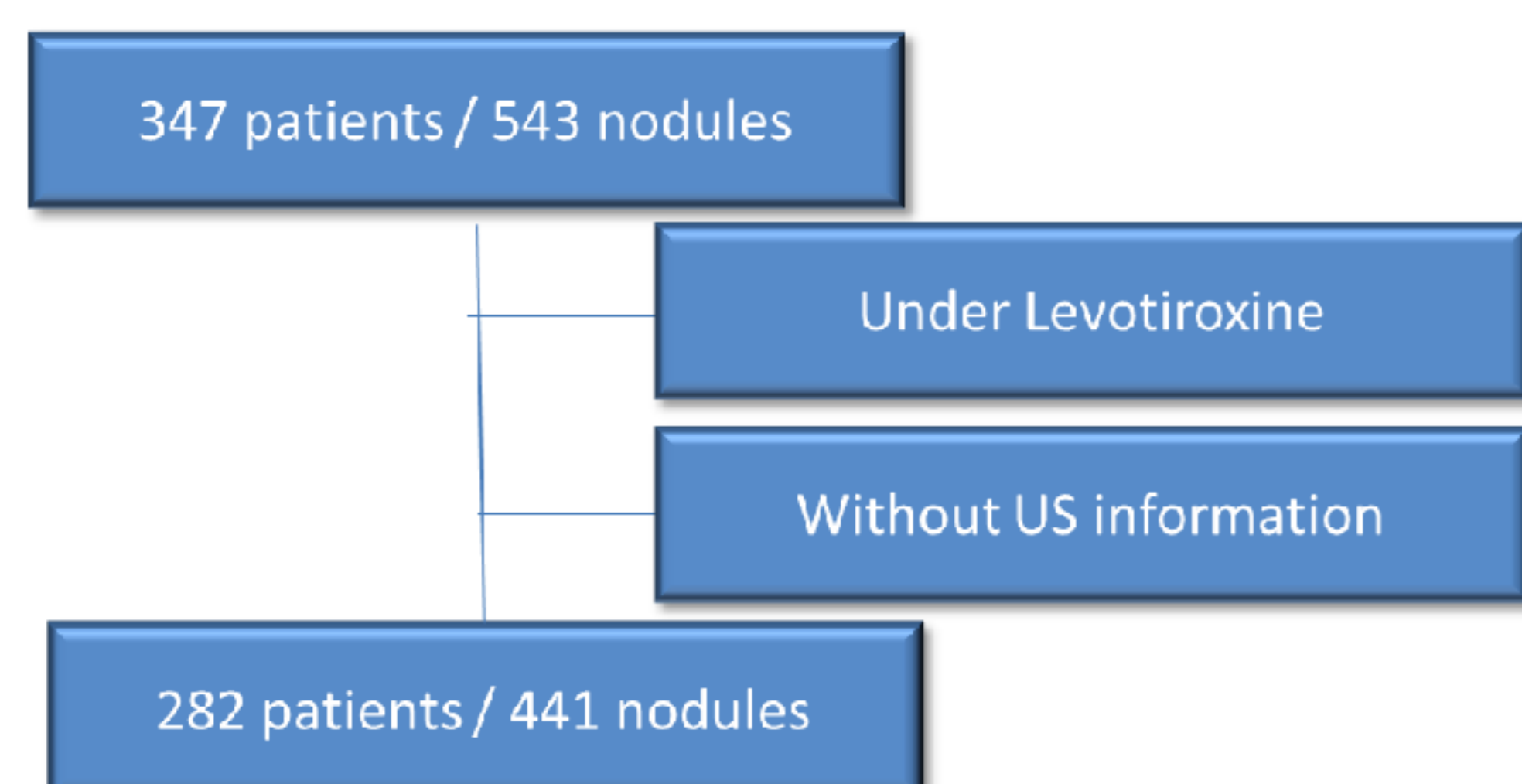
- Size;
- growth (>20% diameter and at least 2mm in two dimensions);
- cythology;
- thyroid function;
- therapeutic approach

Statistic analysis:

Methods of descriptive statistics: frequency tables and contingency for categorical variables and mean, standard deviation , minimum and maximum for continuous variables

Results

Population Selection



Population Features

Patients Number	282
F/M	201/81
Age (Years)	56.3±13,1
Total number of nodules	441
Diameter (mm)	18,9±12,1

Size evolution

	0-5 anos	0-10 anos
Increased (%)	29,45	31,5
Average growth (mm)	9,91±8,46	11,53±7,31
Decreased (%)	19,1	15,7
Average decreased (mm)	8,81±4,85	6,84±4,83
Maintenance (%)	51,45%	52,8%

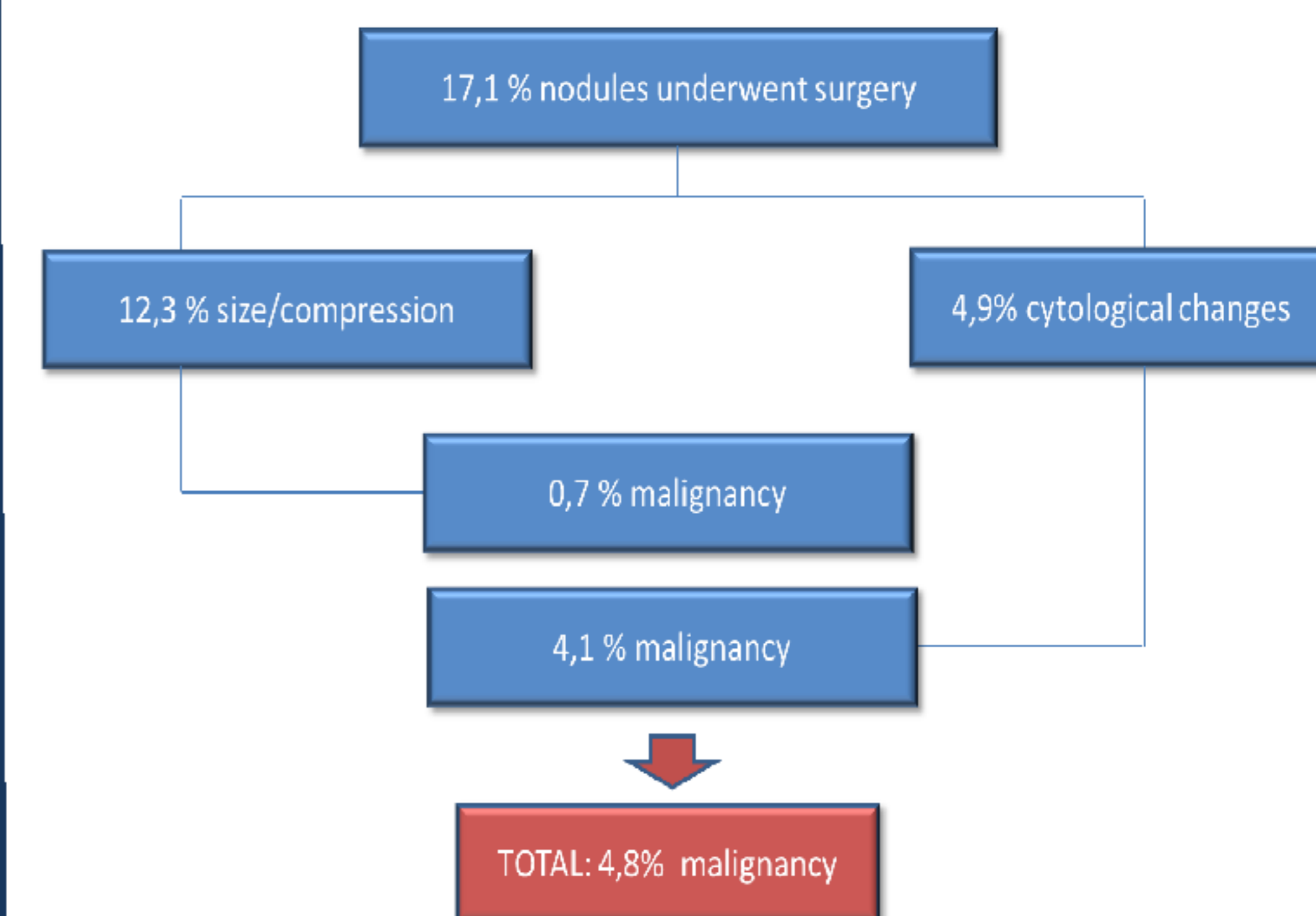
Citological Results

	0-5 anos	0-10 anos
FLUS	1,4%	2,0%
Bethesda IV, V, VI	2,0%	2,9%

Thyroid Function

No nodule became hyperfunctioning

Surgery Results



Resected Nodules Features

	0 anos	0-5 anos	0-10 anos
Size (mm)	29,09	35,01	37,64
	±13,63	±11,07	±8,43
Increased (%)		32,25	35,48

Discussion

Study	Follow-Up (Years)	N	Growth Definition	Increased %	Decreased %	Maintain %	Hyper Function %	Surgery %	Malignancy %
Silva J,	10	441	>20% >2mm in 2 dimensions	31,5	15,7	52,8	0	17,2	4,8
Negro R	5	249	>50% diameter	9,2	-----	-----	0	2,0	0,8
Brander et al	5	34	Not defined	33	25	42	----	----	0
Kuma et al	10	134	Not Defined	20	42-79	21-48	----	8,0	3,0
Lim et al	2-3	202	>50% volume	12,9	-----	-----	----	4,8	0,8
Lim et al	2-3	202	>30% volume	23,3	-----	-----	----	4,8	0,8

In literature, each author chooses a different growth definition, which makes difficult to compare results. In our study we have a high number of nodules that underwent surgery, probably because other doctors refer to our clinic nodules with bigger sizes. Our malignancy rate is 4,8%, however we don't know if they are initial false negatives (in literature it's around 5%). No study showed that nodules became hyperfunctioning.

Conclusion

In this study it was found that about 1/3 of nodules increased in size and 4,79% revealed to be malignant, even with a previous benign cytology. Our results favour a monitoring and a FNAC repetition of the nodules during follow-up, an usual practice in our department.

