

# THYROID NODULES IN CHILDREN AND ADOLESCENTS

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## Background:

The presence of a thyroid nodule (TN) is a rare clinical condition during childhood and adolescence. In children, classically was considered malignant and total thyroidectomy was recommended whenever a TN was detected or in the case of cold nodules. There are not long time series in children, but recent clinical guidelines recommend an initial management as in adults.

## Objective:

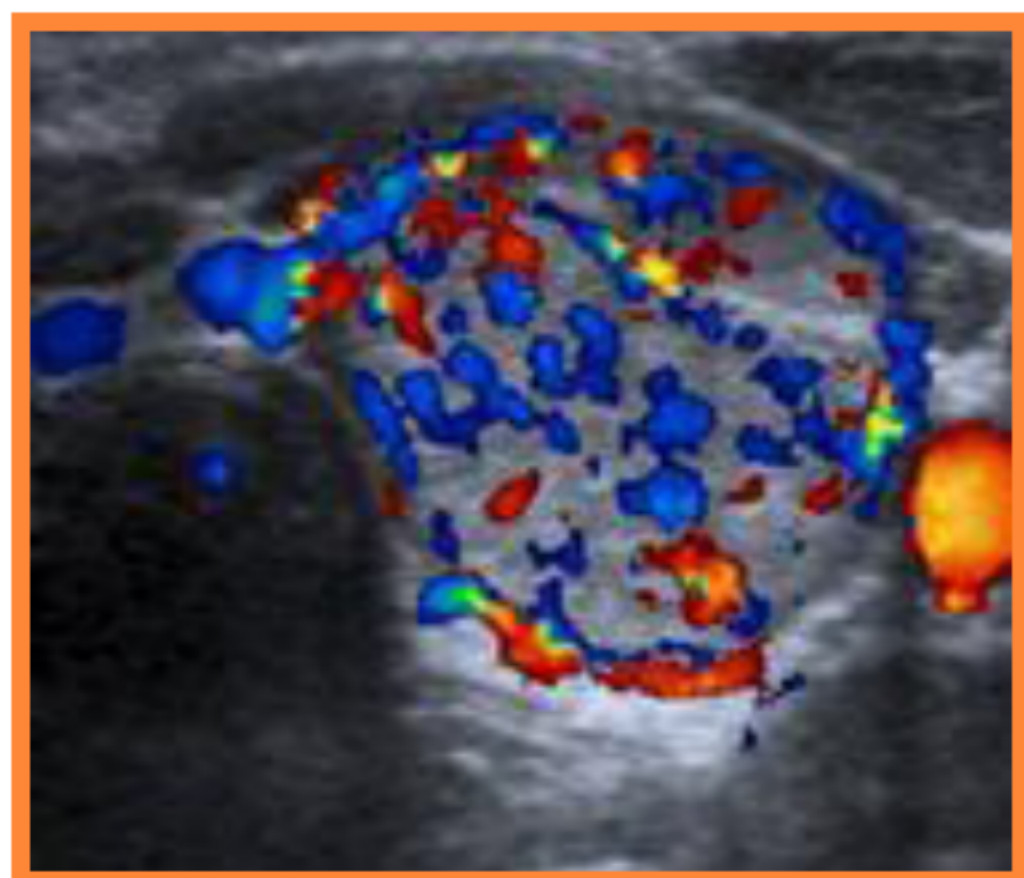
Review TN in children in our area.

## Method:

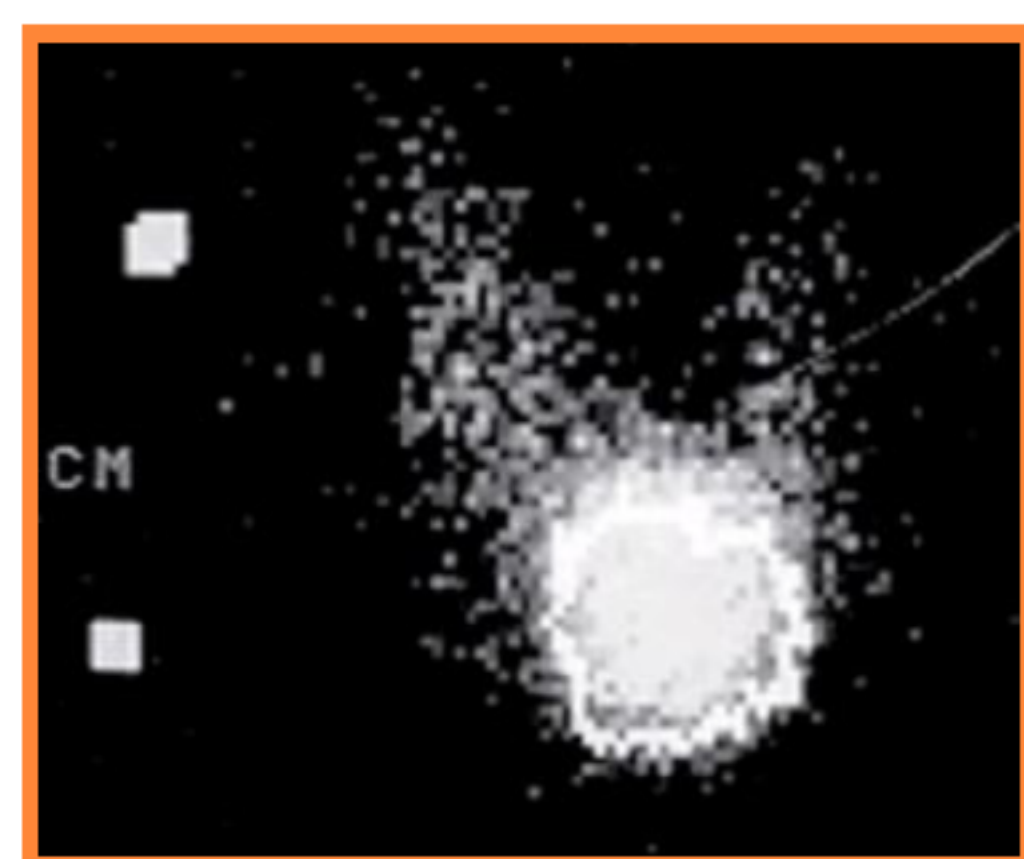
Retrospective study (1999-2014) of TN > 1 cm in children (0-15 years) in our area (Biscay; 138.000 pediatric population).

## Results:

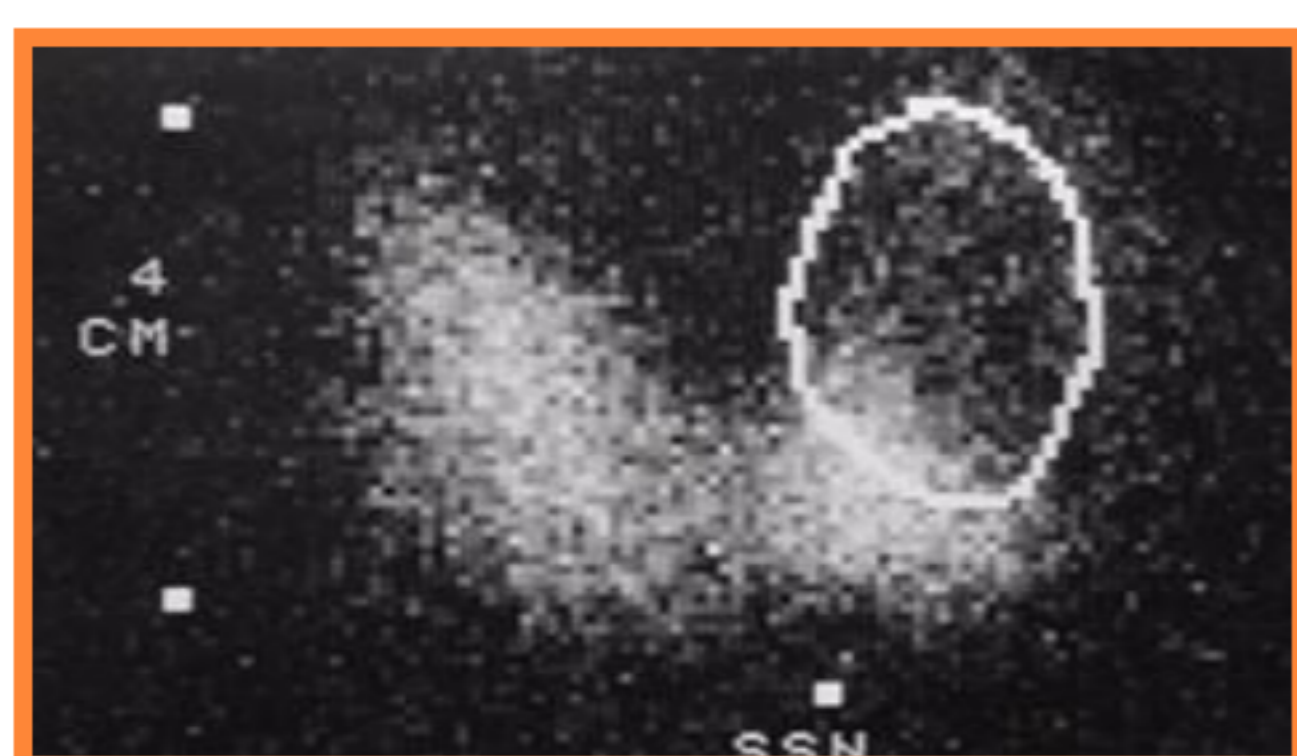
We found 15 TN, determining an incidence of 0.7/100.000/year. Diagnostic was done by palpation in 40%. Mean age was 12.6 years and 80% were girls. Thyroiditis was associated in a 26.7%. Radiation history was related in a 13.3% and a 46% had familiar history of non malignant thyroid disease. Thyroid function was normal in all cases. Long diameter in U.S. was  $2.6 \pm 1.6$  cm. Only in 6 cases scintigraphy was performed, being 3 cold nodules. Fine needle aspiration biopsy (FNAB) and/or guided aspiration biopsy (GAB) was done in all nodules. 5 of them were considered "non benign" and surgery was indicated. Malignant diagnostic in macroscopic study was confirmed in 4 TN:



Doppler imaging: Intranodular central vascularization



Scintigraphy: Hot nodule



Scintigraphy: Cold nodule

	U.S (cm)	Scint	PAAF	GAB	Surgery	Diagnostic	Follow-up
Case 1	7,5	No	Papillary	No	Total	C.Papillary	NR
Case 2	5	Cold	Follicular	No	Total	C.Follicular	NR
Case 3	3	Cold	No	Follicular	Hemi	A.Follicular	Benign
Case 4	2,5	Hot	Follicular	Benign	Total	C.Papillary	NR
Case 5	2	No	No	Papillary	Total	C.Papillary	NR

NR: No recurrence. C:Cancer. A:Adenoma

## Conclusion:

TN > 1cm is a rare and a serious clinical condition in children. In this study, 26,6% of TN were malignant. In children, as in adults, we consider the use of PAAF and/or GAB always necessary to a correct management of TN.

