

FINE NEEDLE ASPIRATION BIOPSY- A METHOD TO DISTINGUISH BETWEEN THYROID NODULES AND PARATHYROID ADENOMAS

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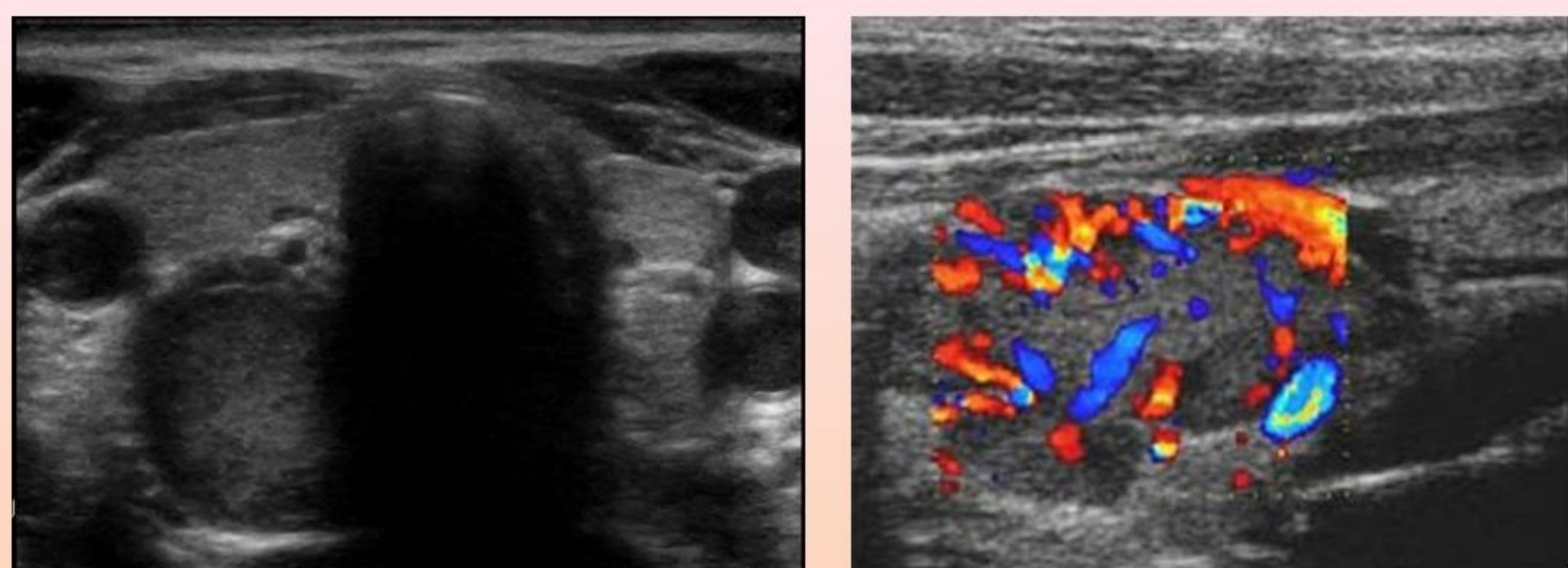
Introduction

High-resolution ultrasound (US) allows the location of large parathyroid adenomas. These tumors should be however differentiated from thyroid nodules. For the confirmation of the parathyroid adenoma, we propose US-guided fine-needle aspiration biopsy (FNAB) of suspected nodules, with additional parathyroid hormone (PTH) analysis in the washout of the aspirate (PTH-FNA).

Case report

- A 51 year old woman, recent menopause onset
- history of **kidney lithiasis** and **Pouteau-Colles and rib fractures** at minimal trauma
- attended our clinic for the investigation of a **multinodular goiter**

Cervical ultrasound



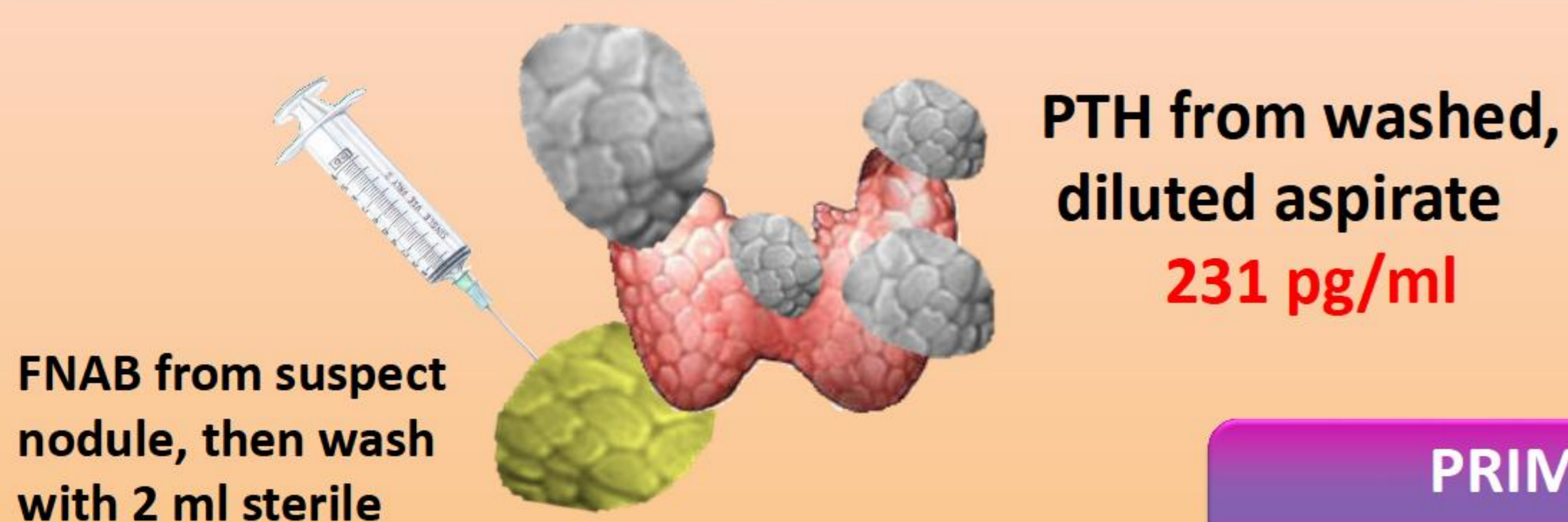
Metabolic profile

	Normal ranges
10.1 mg/dl	Calcium 8.4-10,20mg/dl
2.7 mg/dl	Phosphate 2.5-4.7 mg/dl
281 pg/ml	PTH 11-67 ng/ml
11.08 ng/ml	25OHD ₃ >30ng/ml
350 mg/24h	Calciuria 100-300mg/24h

BMD (DXA, Hologic)

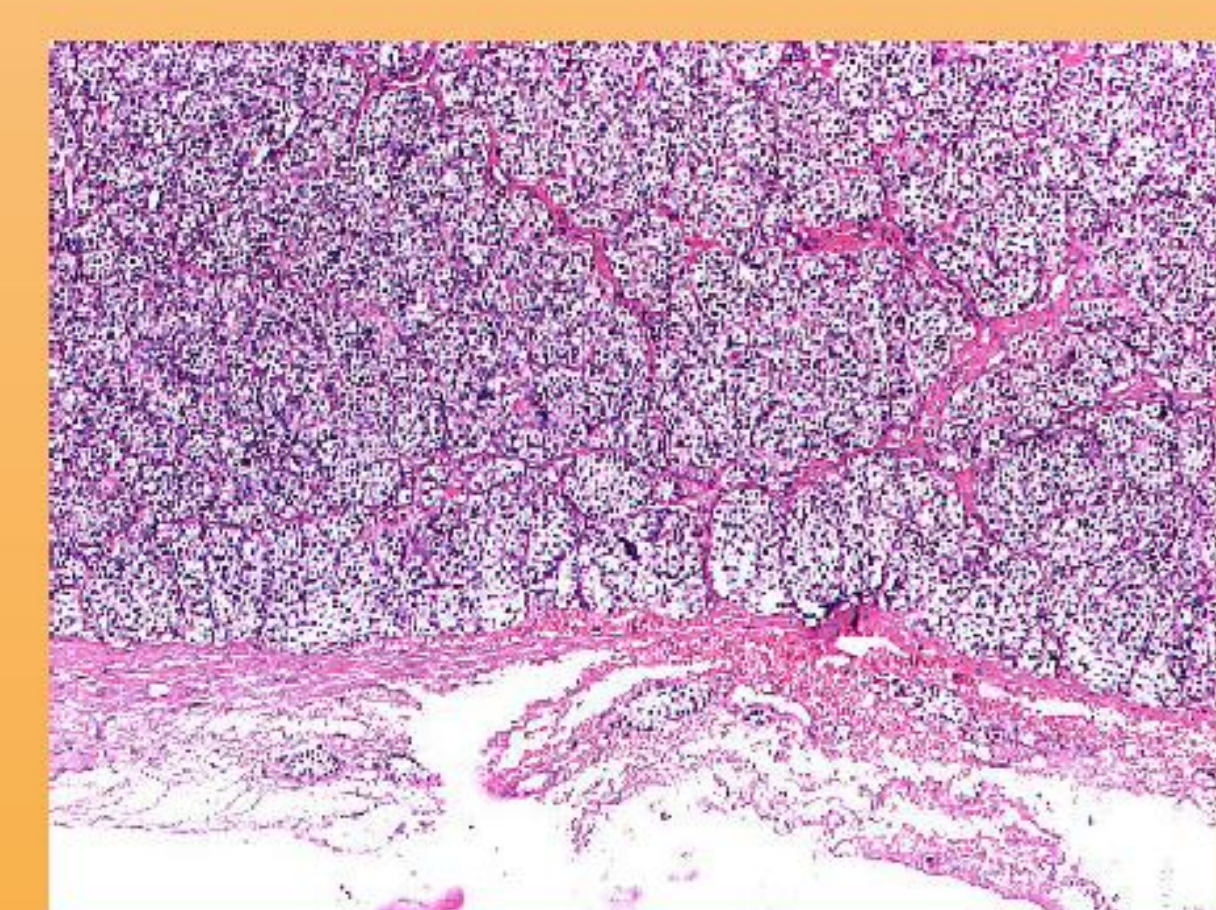
Lumbar T-score = - 3.3
Femoral neck T-score = - 1.9
Radial T-score = - 4.1

Low BMD of the inferior 1/3 of the radius is suggestive for Primary Hyperparathyroidism

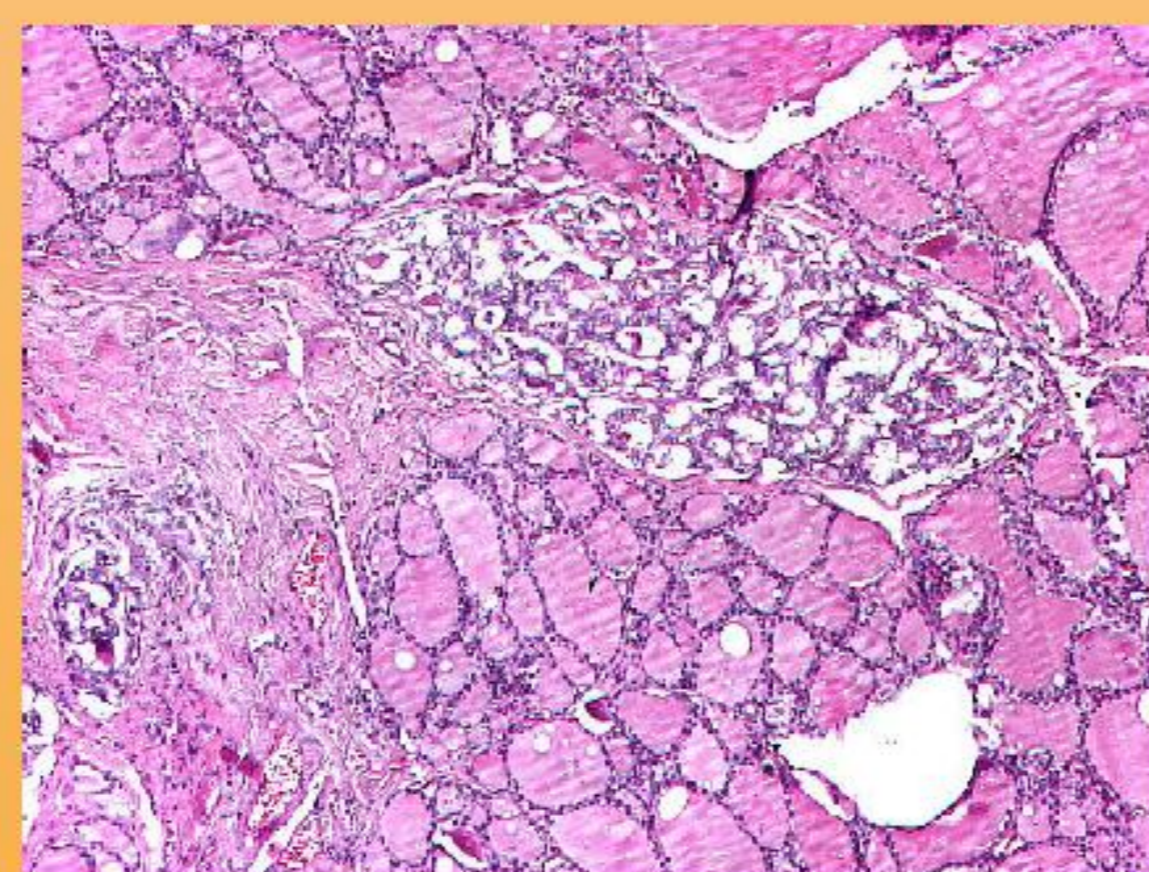


**PRIMARY HYPERPARATHYROIDISM
MULTINODULAR GOITER**

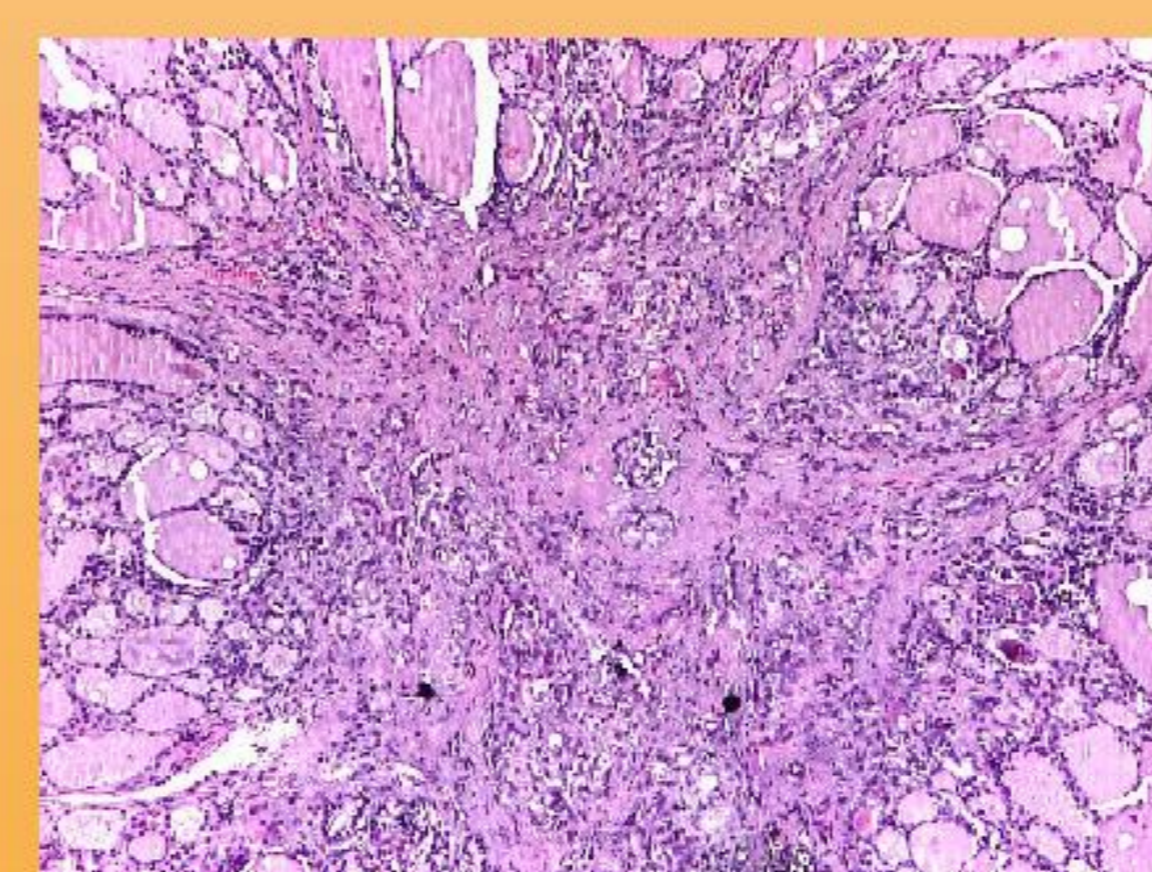
TOTAL THYROIDECTOMY AND EXCISION OF THE INFERIOR RIGHT NODULE



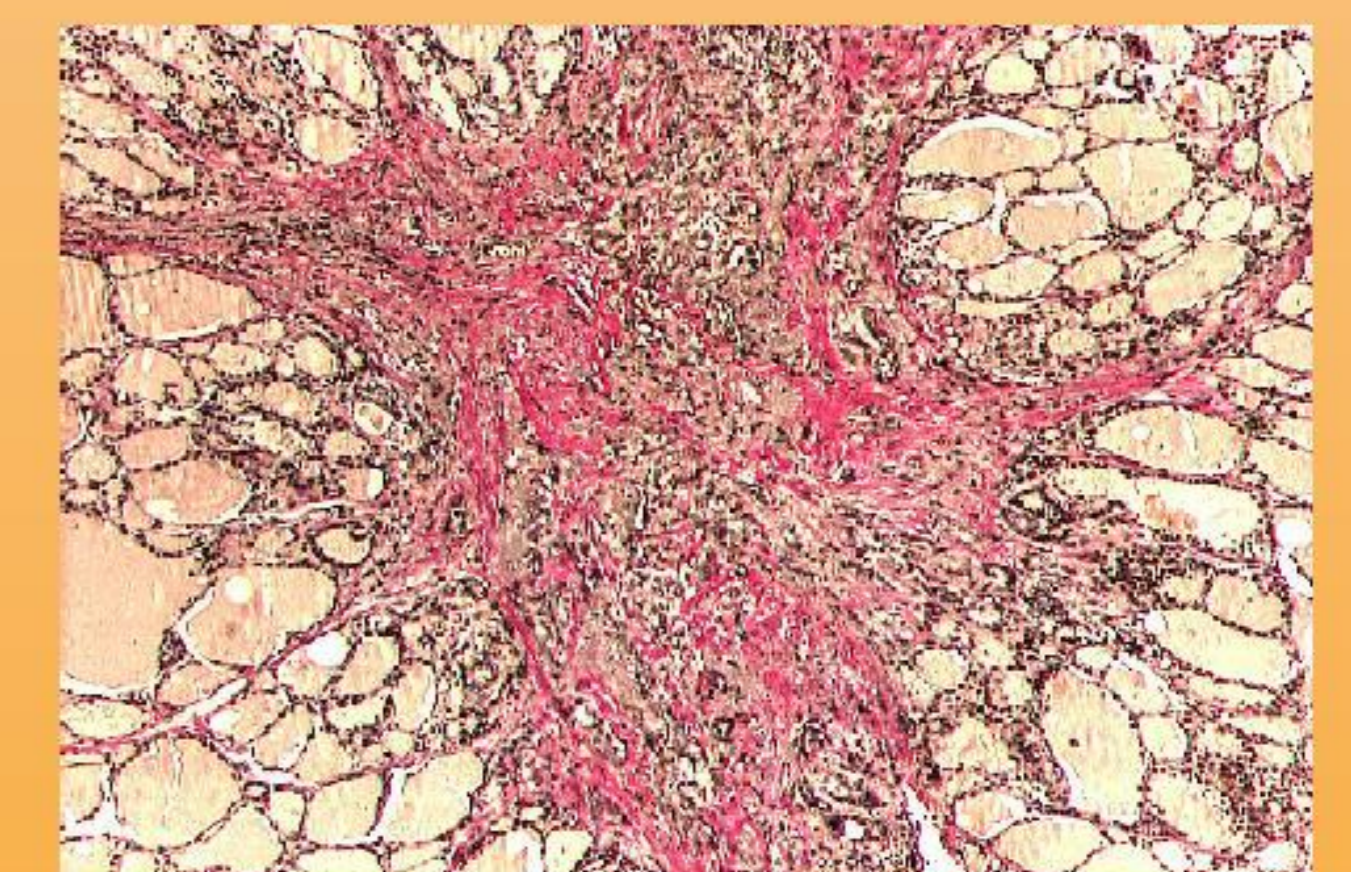
Parathyroid adenoma (HE)



Papillary microcarcinoma n° 1 (HE)



➤ Sclerotic papillary microcarcinoma n° 2 (HE)



➤ Sclerotic papillary microcarcinoma n° 2 (Van Gieson)

Conclusions

- PTH-FNA is a reliable and possibly a more accurate and faster method than additional imaging techniques to localize a large parathyroid adenoma in patients with concomitant thyroid nodules.

Acknowledgements

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