

# RADIOGUIDED EXCISION OF OCCULT METASTATIC LESION IN THYROID CARCINOMA:

## A safe technique for previously operated neck in 2 patients

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### INTRODUCTION

Identification of neck lesions in patients who have undergone previous neck operation is particularly difficult, because of operative scarring and distorted anatomy. Radioguided occult lesion localization (ROLL) involves the preoperative intratumoral injection of a tracer which is guided by an ultrasonography. In the present study, we investigate the excision efficacy of Roll in performing reoperation in 2 patients with PTC who have undergone previous neck exploration.

### MATERIAL

This study included 2 patients with recurrent/persistent PTC who have previously undergone operation.

#### Patient 1: female, 65Y

PTC:

- T1N1bM0, previously operated in 2010
- 2 radioiodine treatments in 2011 and 2012 (207.4 mCi)
- WBS performed 7 days after treatment: no relevant uptake
- neck ultrasound (4/9/2013): recurrence in the central neck (nodule with 9x7mm) (Fig.1). Fine needle aspiration cytology with FNA Tg confirmed the diagnosis
- TSH=0.02 mU/L; Tg=15.3 ng/mL

#### Patient 2: male, 50Y

PTC:

- T4aN1bM0 previously operated 4 times (neck recurrence)
- 5 radioiodine treatments (735 mCi)
- last WBS (18/2/2008) performed 7 days after treatment: no significant uptake
- 18 FDG-PET(2008): no uptake
- neck ultrasound (2013): 3 nodules in the central neck with 9; 7 and 6 mm (Fig. 2). It was performed a FNA cytology in the largest nodule that confirmed the diagnosis of recurrence
- TSH=0.008 mU/l; tg=10 ng/mL

### METHODS

In both patients <sup>99m</sup>Tc- labeled macroaggregated albumin was injected directly into each lesion under ultrasound guidance 90 mn before surgery. Scintigraphy was performed 30 mn after injection to visualize the focally increased uptake of radiotracer (Fig 3-patient 1 and Fig 4-patient 2). Intraoperative lesion detection was performed with gamma probe by identifying areas of maximum radioactivity.

### RESULTS

In patient 1 the lesion was identified and excised but in patient 2 only two lesions were identified and excised. Histopathological examination confirmed recurrence of PTC in all of the nodules. In patient 1 serum Tg dropped from 15 ng/ml to <2ng/ml but in patient 2 Tg didn't drop significantly and in the follow-up persisted a 7 mm nodule in the central neck.

### CONCLUSIONS

The Roll technique was efficient and safe in the perioperative identification of recurrent thyroid cancer in the central neck. This technique might help decrease the complications rates associated with reoperations.

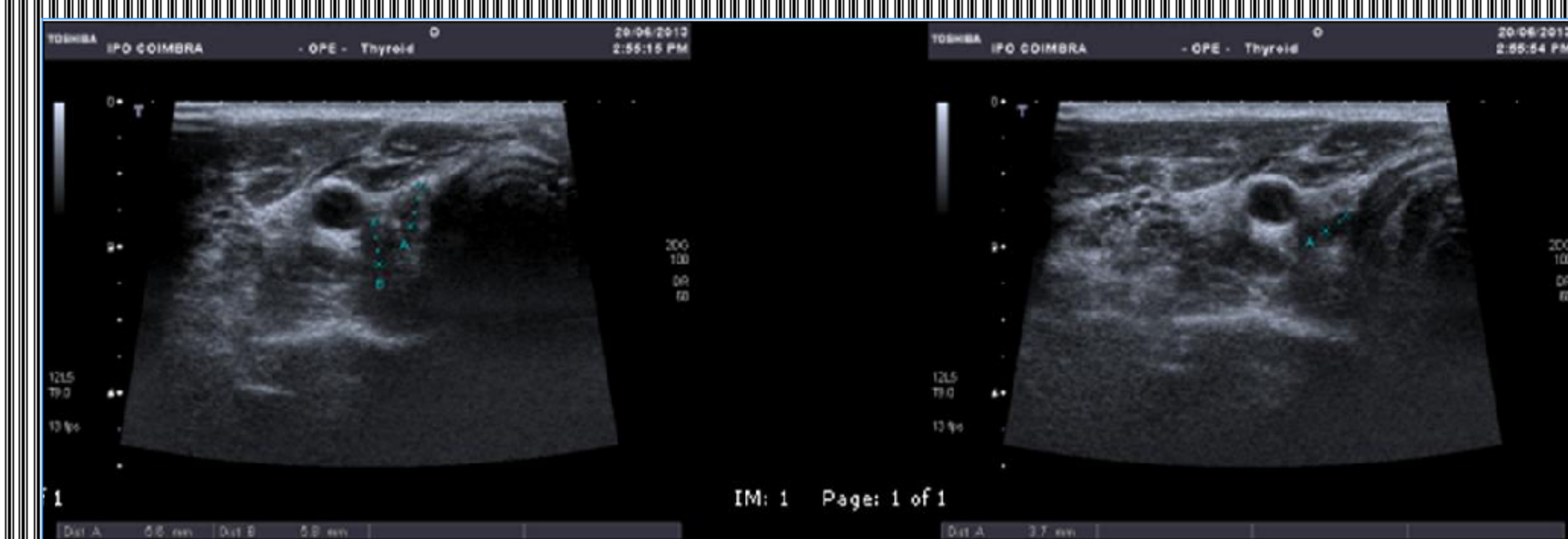


Fig 1

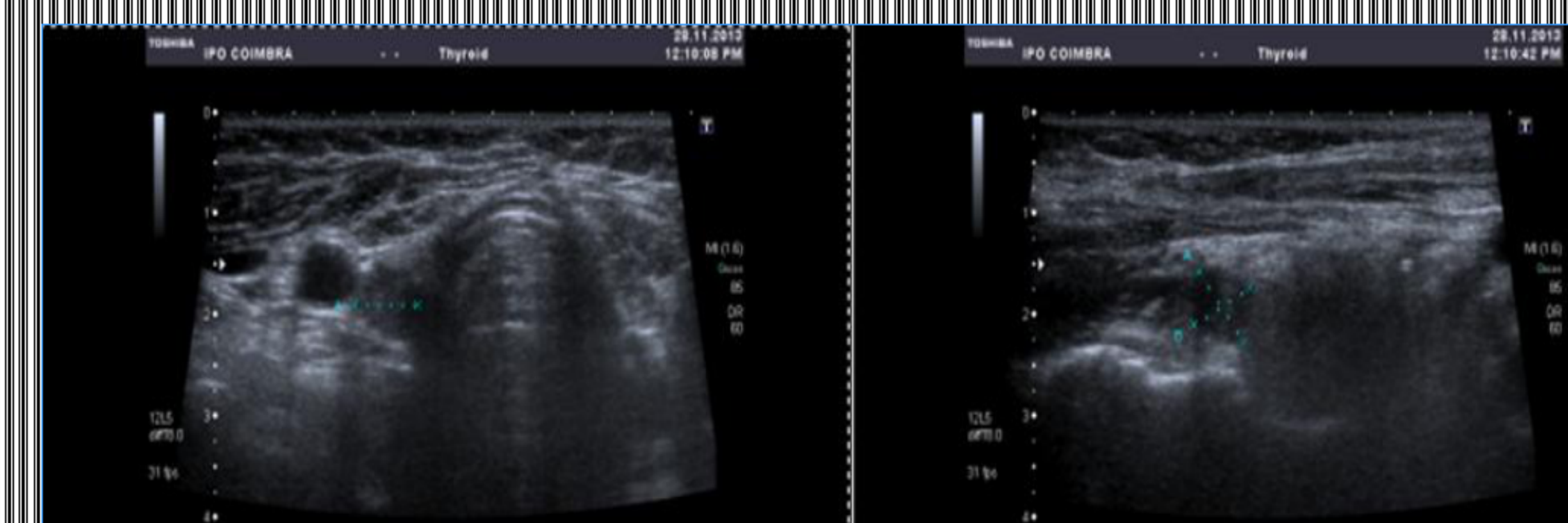


Fig 2

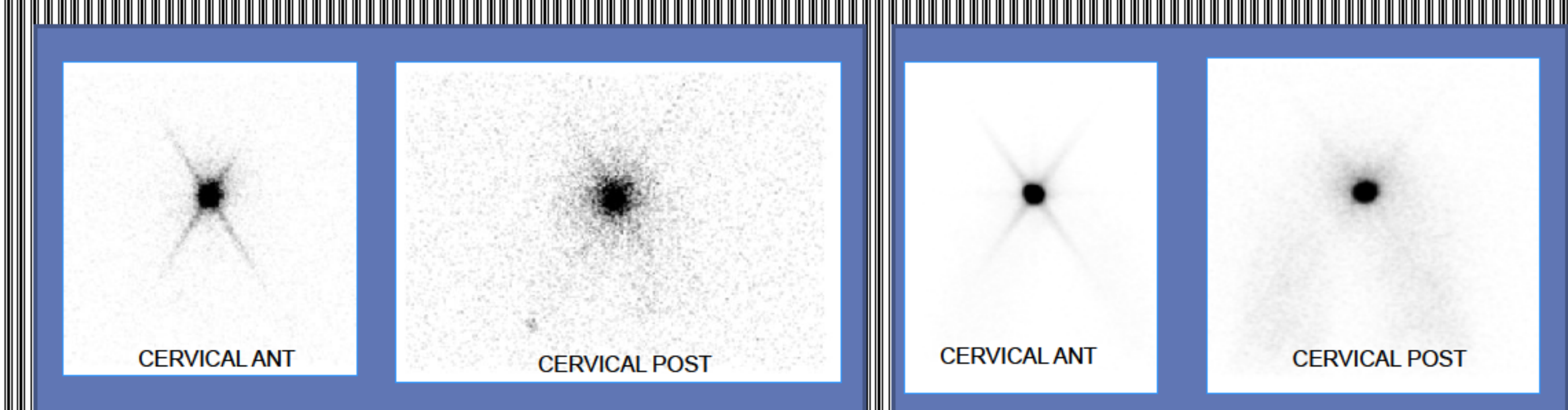


Fig 3

Fig 4

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