

# Bone metastasis from differentiated thyroid cancer treated successfully with I131. Case report

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## Introduction

Thyroid cancer is a very common malignancy and fastest increasing of all cancer all over the world. Differentiated thyroid cancer (DTC) in general has a good prognosis when it is diagnosed early. Late stage disease with bone metastasis may cause severe complications, increase mortality rate, decrease the quality of life, and shorten the patients' survival. The treatment is still controversial. Surgery or radioiodine therapy alone is usually unsatisfactory, thus the management needs multidisciplinary collaboration.

## Case Presentation

We report a case of a 40-year-old female presented to American Hospital, in August 2012, presenting with a complaint of progressive swelling of her neck for the last year on the left side. Her past history was right thyroid lobectomy for multiple nodules at the age of 28, biopsy was microfollicular adenoma. She had a palpable mass on the right side of the neck that corresponded to a hypoechoic nodule 1,58 x 1,73 x 2,15 cm seen in the thyroid ultrasound with increased flow on color Doppler. Her serum thyroid-stimulating hormone (TSH) was 1,45 and thyroglobulin (Tg) was 948,9 µg/L (reference range: 1–100 µg/L). Calcitonin was normal. Thyroid scan showed a cold nodule in the left lobe. FNA-cytology was negative for malignancy. The patient was elected to proceed with completion thyroidectomy. Surgical pathology showed multifocal papillary thyroid cancer 1,4 cm with no vascular or capsular invasion. On September 2012, four weeks after surgery, she received 100 mCi and underwent post-treatment whole body scan, which revealed uptake on the thyroid bed and intense activity in the region of the pelvis. Pelvic CT showed a lytic lesion in the sacral bone. She started treatment with Levothyroxine 175 mcg/day. On April 2013, four weeks without treatment, TSH was 132,4, Thyroglobulin 0,1 and the thyroglobulin antibodies (anti-TG) were negative. Diagnostic whole body scan with 5 mCi showed resolution of the previously seen areas of uptake within the thyroid bed and pelvic area. On October 2015, she is on treatment with LT4 175 mcg/day, Tg 0,01, TSH 0,05 and negative Anti TG. Pelvic CT showed decreased lytic lesion with peripheral sclerotic pattern.

## Conclusions:

This case demonstrates the benefits of RAI therapy even in patients with metastatic thyroid cancer treated successfully only with I131.