

INTRODUCTION

The presence of undetectable serum levels of stimulated thyroglobulin (Tg) together with negative imaging tests is the criterion used to define remission in low-risk Differentiated Thyroid Cancer (DTC).

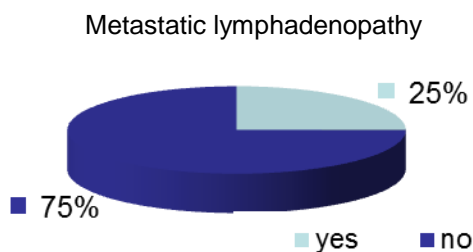
Most guidelines recommend 131-I ablation after thyroidectomy to remove any possible residual thyroid tissue.

Our aim was to know how often undetectable Tg levels are achieved BEFORE ablation to avoid unnecessary radiation treatments.

PATIENTS

One hundred and eighteen patients (106 women and 12 men, age 15-83 years) with low-risk DTC who underwent total thyroidectomy from 2005 to 2011 were included.

Sex	Men: 10% Women: 90%
Age	48,2 +/- 13,9 years (x+/-sd)
Differentiated thyroid cancer type	Papillary cancer: 88% Follicular cancer: 10% Unknown: 2%
Size	2,7 +/-1,6 cm (x+/-sd)
Metastatic lymphadenopathy	Yes: 25% No: 75%



METHODS

- Tg, anti-Tg antibodies (TgAb) and TSH were analysed before and the fifth day after a dose of recombinant human TSH administration. They were measured in an Inmmulite® 2000 (Tg functional sensitivity: 0.9 ng/ml) 6 to 18 weeks after the surgery.

- Subsequently, a dose of 100 mCi of 131-I was administered to all patients and other possible treatments were applied when necessary.

- A correlation between postoperative stimulated Tg concentration and clinical situation at the end of the follow-up (25.6 ± 15.6 months) was performed.

RESULTS

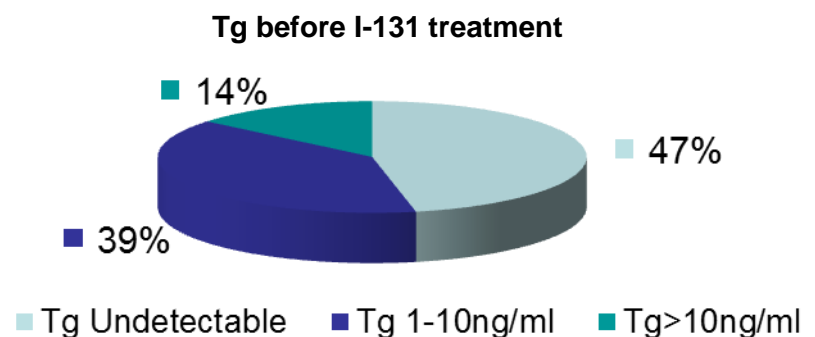
Eleven patients with positive TgAb were excluded.

Tg levels were undetectable in 50 patients (47%), 1-10 ng/ml in 42 (39%) and >10 ng/ml in 15 (14%).

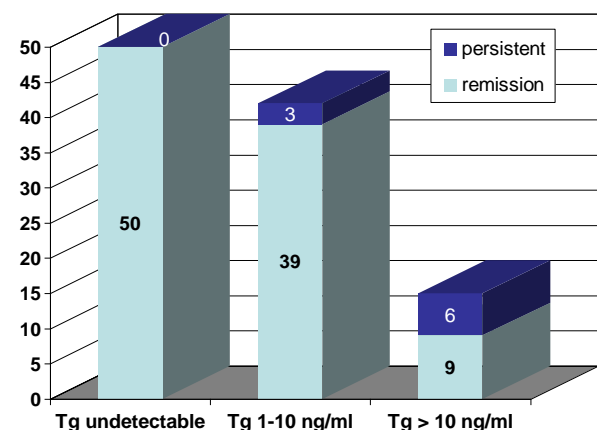
26% of the patients with metastatic lymphadenopathy had undetectable Tg levels. However, this number rises to 54% in those who had not metastatic lymphadenopathy.

At the end of the study there was no evidence of recurrence in the 50 patients with undetectable postoperative Tg.

Remission criteria were met in 39/42 and 9/15 patients with Tg between 1-10 ng/ml and >10 ng/ml, respectively.



Correlation Tg long term follow-up



CONCLUSIONS

- In near half of the patients with low risk DTC 131-I therapy is not necessary to achieve undetectable Tg levels after total thyroidectomy.
- An undetectable postoperative stimulated Tg predicts the absence of recurrence during the long term follow-up.
- 131-I ablation should not be necessarily performed in all the patients with low - risk DTC.