

# Patients with Differentiated Thyroid Cancer and Coexistent Hashimoto's Thyroiditis Have a Better Prognosis Than Those without Thyroiditis

Jerome M. Hershman

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## SUMMARY ●●●●●●●●●●●●●●●●●●●●

### Background

There is a high prevalence of Hashimoto's thyroiditis (HT) in patients who undergo surgery for differentiated thyroid cancer (DTC). The purpose of this study was to determine whether patients with HT and DTC have a better prognosis than those with DTC without HT.

### Methods

The study included 753 patients with DTC in a database of the Rabin Medical Center in Tel Aviv. All patients had been treated with total thyroidectomy and RAI ablation and had been followed for more than 1 year. The diagnosis of HT was made based on a history of hypothyroidism and positive antithyroid antibodies or diffuse lymphocytic infiltration in both lobes on the pathology specimen. Patients with peritumoral lymphocytic infiltration were excluded.

There were 646 patients in the control group without HT and 107 in the HT group. Various clinical variables were compared in the two groups. A multivariate analysis was performed with regard to lymph-node involvement, stage at diagnosis, and persistent disease at the end of follow-up. In addition, a subgroup analysis was carried out comparing 98 patients in the HT group with a similar number in the control group matched for age, sex, and disease severity.

### Results

Hashimoto's thyroiditis was present in 14% of the 753 patients. In comparison with the control group, the HT group was predominantly female (93% vs. 77%,  $P < 0.001$ ), had a slightly smaller primary tumor (17.9 mm vs. 21.2 mm,  $P < 0.01$ ), had less lymph-node involvement (23% vs. 34%,  $P < 0.02$ ), and had less persistent disease at 1 year (13% vs. 26%,  $P < 0.04$ ).

The multivariate analysis showed that the presence of HT was an independent negative predictor of lymph-node involvement at presentation (odds ratio, 0.34; 95% confidence interval [CI], 0.17 to 0.66) and persistent disease at the end of follow-up (odds ratio, 0.48; 95% CI, 0.24 to 0.93). The subgroup analysis showed that patients with HT were less likely to receive additional treatments with radioiodine.

The disappearance of antithyroglobulin antibodies was tracked in 50 patients. The median time to disappearance from the initial treatment was 15 months (range, 2 to 78 ). Eight patients had persistent antibodies despite no evidence of recurrent disease.

### Conclusions

The study shows that HT is associated with a less aggressive form of differentiated thyroid cancer and a better long-term outcome.

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## ANALYSIS AND COMMENTARY ● ● ● ● ●

Patients with HT are not predisposed to the development of DTC (1). However, in patients with HT who also have DTC, the cancer is less aggressive and the prognosis is better than in those without DTC, as shown in this study. This conclusion is in agreement with some other studies (2-4), but other reports do not substantiate the beneficial effect of HT on the outcome of DTC (5-7). Based on their conclusion that DTC in the presence of HT follows a less aggressive course, the authors of the present report recommend that this concept should be included in tailoring therapy. In an effort to relieve the stress of

the disorder, it is reasonable to tell patients with DTC and Hashimoto's or focal lymphocytic infiltration that this is a favorable host response to the tumor.

One limitation of the study is that the authors do not clearly state how many patients with HT were diagnosed by clinical criteria and how many were diagnosed by histopathology or how many with clinical criteria did not have typical histopathology.

What is the possible mechanism whereby HT may ameliorate DTC? Infiltration by cytotoxic T cells may kill carcinoma cells.

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