

AMERICAN THYROID ASSOCIATION

Life Expectancy Is Not Reduced in Patients With Differentiated Thyroid Cancer Who Are Younger Than Age 45

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Verburg FA, Mäder U, Tanase K, Thies ED, Diessl S, Buck AK, Luster M, Reiners C. Life expectancy is reduced in differentiated thyroid cancer patients >= 45 years old with extensive local tumor invasion, lateral lymph node, or distant metastases at diagnosis and normal in all other DTC patients. J Clin Endocrinol Metab 2013;98:172-80. Epub November 12, 2012 Nov 12.doi: 10.1210/jc.2012-2458.

SUMMARY • • • • • • • • •

Background

Virtually all patients with cancer are concerned about their life expectancy. Although patients with thyroid cancer usually have normal life expectancy when treated appropriately, there are many whose life span is limited by the thyroid cancer. This paper is a review of a German database with careful analysis of clinical factors and life expectancy.

Methods

The Wurzburg Thyroid Cancer Database was established in 1980. Using this database, the authors analyzed clinical features and survival of 2011 patients with differentiated thyroid cancer (DTC) who had been treated and followed from January 1980 until December 2011. Patients were treated by total thyroidectomy with subsequent ¹³¹I ablation, except for 391 who had isolated papillary microcarcinoma and were treated with hemithyroidectomy. During follow-up, patients underwent neck ultrasonography, radioiodine scans, and thyroglobulin measurements at 6-month intervals for 5 years and annually thereafter. Persistent disease or recurrence was generally treated with ¹³¹I. Patients were classified as having papillary, follicular, or Hürthle-cell cancer. Those with poorly differentiated or insular carcinoma were not included. Survival rates were calculated by the Kaplan–Meier method and compared with standard mortality rates of the general German population adjusted for birth year and sex.

Results

The median age at diagnosis was 47.6 years and the median follow-up was 7.1 years. During the follow-up, 264 patients (13.1%) died. Overall 14% of the patients had reduced life expectancy. There was no reduction in life expectancy for those younger than age 45, but it was reduced in those older than age 45, especially in those over age 60. There was a statistically significant reduction in relative survival in patients with follicular thyroid carcinoma, those with extensive extrathyroidal invasion, those with lateral-compartment lymph-node metastases (but not central-compartment metastases), and those with distant metastases. The patients' sex had no influence on life expectancy.

Conclusions

Life expectancy is not significantly reduced in 86% of patients with DTC. Only patients who were at least 45 years old and had extensive local invasion, lateral lymph-node metastases, or distant metastases at diagnosis showed a clearly lower life expectancy.

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ANALYSIS AND COMMENTARY • • • • • •

The current report is the largest study of life expectancy in patients with DTC. It confirms and extends the findings in a similar study of 504 patients with DTC (1). Only older patients with risk factors of extrathyroidal extension, lateral lymph nodes, and distant metastases have shortened life expectancy. These patients are classified as stage 4 by the TNM system. However, there is concern that the TNM system inappropriately reduces the risk of patients younger than age 45 who have these more aggressive features because they are classified as stage 2. An analysis of the SEER database showed that mortality of stage 2 patients younger than age 45 was 11-fold greater than that for stage 1 patients (2).

I found it interesting that there was a lack of effect of sex because it is commonly stated that men with thyroid cancer have a worse prognosis than women. There are several caveats to this study. Wurtzburg is in an area of iodine deficiency. The authors state that more than 50% of the DTC cases were discovered incidentally as a result of surgery for large goiters. This is certainly not the case in the United States and other areas without iodine deficiency. Another issue is that a mean follow-up of only 7.1 years may be too short to detect mortality. Also, the authors excluded from their analysis patients with more aggressive forms of DTC, such as insular carcinoma. In addition, a single institution study may be too narrow for a definitive study of life expectancy.

The authors note that, despite the liberal use of 131 I ablation for low-risk patients, there was no excess mortality due to secondary malignancies associated with the use of 131 I therapy in contrast with other studies (3,4).

References

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