# Clinical Thyroidology<sup>®</sup> for the Public

## THYROID CANCER

ATA risk stratification system correctly predicts the chances of thyroid cancer relapse at 1 year.

### BACKGROUND

In 2015, the American Thyroid Association (ATA) published the most recent guidelines for the management of thyroid nodules and cancer. In an effort to predict how patients with thyroid cancer will respond to the initial treatment, the ATA recommended to categorize the patients at the time of diagnosis into three risk groups: low, intermediate and high risk for recurrence or relapse of thyroid cancer. Patients will be placed on one of the three categories based on the characteristics of their initial thyroid cancer (for example, size of the cancer, presence or absence of special aggressive cancer variants, presence of large lymph nodes involving cancer, invasion of blood vessels and spread to other parts of the body. Each category of risk is associated with an estimate of the chances of cancer relapse). This study evaluates how well these risk categories that were assigned at the time of diagnosis match the response to therapy after 1 year of treatment in a large group of thyroid cancer patients.

### THE FULL ARTICLE

Giorgio Grani et al. Real-world performance of the American Thyroid Association risk Estimates in Predicting 1-year Differentiated Thyroid Cancer Outcomes: A prospective multicenter study of 2000 patients. Thyroid. Epub 2020 Jul1. PMID 32475305

### SUMMARY OF THE STUDY

The authors used an Italian database of almost 7000 patients with thyroid cancer. They included in their study over 2000 patients who were diagnosed with thyroid cancer between 2013 and 2019. The majority of the patients were women. Most patients (77%) have evidence of spread of the cancer to the neck lymph nodes. Most of the patients had a total thyroidectomy. A total of 57% of patients received radioactive iodine

therapy. The response to the treatment was evaluated at 1 year after the surgery. To evaluate presence or absence of cancer in these patients, they measured the thyroglobulin levels in the blood (thyroid cancer marker), they performed a thyroid ultrasound and some patients had a nuclear medicine radioactive scan done. The response to therapy was classified as: 1) *excellent*: if there was no evidence of cancer; 2) *biochemically incomplete*: if the thyroglobulin level was elevated; 3) *structurally incomplete*: if there was evidence of cancer or a mass in the thyroid ultrasound or on the nuclear scan (this group of patients is the one with highest chances of dying of the disease); and 4) *indeterminate*: it there were inconclusive ultrasound findings or thyroglobulin elevations.

Of all patients, 54% were classified as low risk, 38% were classified as intermediate risk and 8% were classified as high risk. In terms of their response to therapy: only 2% of the patient in the low risk group dah a structurally incomplete response (consistent with the presence of cancer), 6% of the intermediate risk group had a structurally incomplete response and 15% of the high risk group had a structurally incomplete response.

## WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study supports the utility and value of the ATA stratification system. This means that by categorizing the patients with thyroid cancer at the time of diagnosis into low, intermediate and high risk groups one can adequately predict their chances of being on remission or having a relapse of thyroid cancer after 1 year of treatment. This classification system can also help guide treatment in a more individualized way and avoid needless aggressive therapies.

— Susana Ebner MD

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### THYROID CANCER, continued

### ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): <u>https://www.thyroid.org/thyroid-cancer/</u> Radioactive Iodine Therapy: <u>https://www.thyroid.org/radioactive-iodine/</u> Thyroid Surgery: <u>https://www.thyroid.org/thyroid-surgery/</u>

### **ABBREVIATIONS & DEFINITIONS**

**Cancer metastasis:** spread of the cancer from the initial organ where it developed to other organs, such as the lungs and bone.

**Cancer recurrence/relapse:** this occurs when the cancer comes back after an initial treatment that was successful in destroying all detectable cancer at some point.

**Thyroglobulin:** a protein made only by thyroid cells, both normal and cancerous. When all normal thyroid

tissue is destroyed after radioactive iodine therapy in patients with thyroid cancer, thyroglobulin can be used as a thyroid cancer marker in patients that do not have thyroglobulin antibodies

**Total thyroidectomy:** surgery to remove the entire thyroid gland.



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