



## THYROID CANCER

### Patients with poorly differentiated thyroid cancer die from distant spread of the tumor

#### BACKGROUND

Most types of thyroid cancer are associated with a relatively good prognosis. An exception to this is poorly differentiated thyroid cancer (PDTC), a rare form of thyroid cancer that is often aggressive. PDTC is associated with high risk of cancer recurrence, spread to lung and/or bones and increased risk of death. Patients are often treated with a combination of surgery, radioactive iodine and/or radiation therapy and possibly newer, molecular targeted therapies. However, younger patients with PDTC that is confined to the gland without cancer invasion in the blood vessels often have a good prognosis. In this study, the cancer characteristics of patients who died from PDTC were compared to those of patients with PDTC but remained alive.

#### THE FULL ARTICLE TITLE

Ibrahimspasic T et al Outcomes in patients with poorly differentiated thyroid carcinoma. *J Clin Endocrinol Metab* 2014;99:1245-52.

#### SUMMARY OF THE STUDY

Between 1986 and 2009, 91 patients (2.6% of all thyroid cancer patients) were operated at Memorial Sloan Kettering Cancer Center in New York and found to have PDTC based on the pathological definition used at the center. They were followed for an average of 50 months. All the patients received surgery, radioactive iodine therapy and/or radiation therapy. A total of 2/3rd

of the patients were alive at 5 years, most (81%) without recurrence of the cancer in the neck but a third of those developed distant metastasis. The remaining 1/3 of patients died from their disease.

Patients who died were more likely to be older, with larger cancers (> 4 cm), with extrathyroidal spread of their cancer to local neck structures, with higher cancer stage and with distant metastasis at diagnosis. In fact, PDTC patients with distant metastasis (lungs and/or bone) were three times more likely to die than those without distant metastasis.

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Unlike most patients with thyroid cancer, patients with PDTC have a poor outcome. Initial therapy can achieve a good local disease control without recurrent disease in the neck. However, once patients develop distant spread of their cancer, they are likely to die of their cancer. These patients should be treated aggressively with consideration of clinical trials with new molecular-targeted cancer drugs.

— Mona Sabra, MD

#### ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

Radioactive Iodine Therapy: <http://www.thyroid.org/radioactive-iodine>

#### ABBREVIATIONS & DEFINITIONS

**PDTC: poorly differentiated thyroid cancer** — a rare form of thyroid cancer with a markedly worse prognosis.

**Radioactive iodine (RAI):** this plays a valuable role in diagnosing and treating thyroid problems since it is taken up only by the thyroid gland. I-131 is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-123 is the non-destructive form that does not damage the thyroid and is used in scans to take pictures of the thyroid (Thyroid Scan) or to take

pictures of the whole body to look for thyroid cancer (Whole Body Scan).

**Clinical trials:** when a new drug is developed, it must undergo an extensive series of steps, called phases, to prove that it is more effective in patients than the drugs that are currently available to treat the condition. A Phase I trial tests a new drug or treatment in a small group of people for the first time to evaluate its safety, determine a safe dosage range and identify side effects. A Phase II trial gives the drug to a larger group of



## **THYROID CANCER**, continued

people to see if it is effective and to further evaluate its safety. A Phase III trial gives the drug to large groups of people to confirm its effectiveness, monitor side effects, compare it to commonly used treatments

and collect information that will allow the drug or treatment to be used safely.