



THYROID CANCER

All forms of thyroid nodule calcification seen on computed tomography (CT) are associated with thyroid cancer

BACKGROUND

While ultrasound imaging has become the most common tool for evaluating patients with thyroid nodules, computed tomography (CT) scans are often used as well. This is especially common in patients that are going to surgery. The gold standard for determining if a nodule is cancerous is still a biopsy. However, many studies have attempted to identify findings that are specifically associated with either cancer or noncancerous (benign) nodules. Calcium deposits in nodules have been associated with both conditions. If the calcium deposits are within the nodule and small (microcalcifications), this indicates that the nodule highly likely to be a cancer. In this study, the authors examined the patterns of calcium deposits in nodules as identified in CT scans and the association of these deposits with thyroid cancer.

THE FULL ARTICLE TITLE

Wu CW et al. Calcifications in thyroid nodules identified on preoperative computed tomography: Patterns and clinical significance. *Surgery* 2011. September 10, 2011 [Epub ahead of print]. doi:10.1016/j.surg.2011.07.032.

SUMMARY OF THE STUDY

The authors reviewed the records of 383 patients seen at their medical center who had a thyroidectomy for either a large goiter or presumed diagnosis of thyroid cancer. They reviewed the images of the neck CT scan obtained prior to surgery looking for calcifications in the thyroid nodules. They then connected the presence and pattern of the calcifications seen in those thyroid lumps to the surgical pathology results.

Calcium deposits were seen in 1/3 of thyroid lumps detected by CT. They were more likely found in cancerous nodules than benign nodules (54 % versus 22%). If a patient had only one thyroid nodule that also contained microcalcifications, the risk of thyroid cancer was 96%.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Patients with calcium deposits within thyroid nodules by CT, especially if they have only one nodule, likely have thyroid cancer and need to be referred for biopsy and/or surgery.

— Mona Sabra, MD

ATA THYROID BROCHURE LINKS

Thyroid Nodules: http://thyroid.org/patients/patient_brochures/nodules.html

Thyroid cancer: http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html

ABBREVIATIONS & DEFINITIONS

Computed Tomography (CT): an imaging test that is used to examine structure of organs within the body. CT uses x-rays to create a picture of a cross-section of the body.

Thyroid Ultrasound: a common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.