

**THYROID CANCER****Thyroid nodules in older patients are less likely to be cancers but those that are cancers may be more aggressive****BACKGROUND**

Thyroid nodules are abnormal growths of thyroid cells that form lumps within the thyroid gland. Thyroid nodules occur in up to 50% of people and are more common in the older population. The risk of a nodule being a thyroid cancer is ~5-8% overall, although some studies suggest the risk is higher in young people. However, more data are needed to determine the risk of cancer in thyroid nodules in older patients. The aim of this study was to determine the impact of patient age on the formation of thyroid nodules and on the risk that these nodules may prove cancerous.

**THE FULL ARTICLE TITLE**

Kwong N et al. The influence of patient age on thyroid nodule formation, multinodularity, and thyroid cancer risk. *J Clin Endocrinol Metab.* October 14, 2015 [Epub ahead of print].

**SUMMARY OF THE STUDY**

A total of 6391 patients (ages 20-95) who were evaluated at the Brigham and Women's Hospital Thyroid Nodule Clinic between 1995 and 2011 were included in the study. The patients were grouped into six age groups (20-29, 30-39, 40-49, 50-59, 60-69, ≥70 years old). All these patients had a thyroid ultrasound and a thyroid biopsy was performed in all solid thyroid nodules >1cm.

The study found that the oldest group (≥70 years old) had 43% more thyroid nodules than the youngest group

(20-29 years old). Additionally, the oldest group had a 30% higher risk of having multiple thyroid nodules as compared to the youngest group. During this 16-year period, 16% of patients (1018) were diagnosed with thyroid cancer. The youngest group of patients had a 14.8% risk of cancer per thyroid nodule at diagnosis, while the oldest group had a 5.6% risk of cancer per nodule. However, the number of high-risk thyroid cancer significantly increased with advancing age, ranging from 0% in the youngest group to 16% in the oldest group.

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

This study showed that older patients have more thyroid nodules >1cm, but the risk that these nodules are cancerous decreases with age. However, when thyroid cancer is found in older patients, it is more likely that these are high risk cancers. The results of this study suggest that even though thyroid nodules are more common in older patients, they should be carefully evaluated in order to detect thyroid cancers that may be aggressive.

— Maria Papaleontiou, MD

**ATA THYROID BROCHURE LINKS**

Thyroid Nodules: <http://www.thyroid.org/thyroid-nodules/>

Thyroid Disease in the Older Patient: <http://www.thyroid.org/thyroid-disease-older-patient/>

**ABBREVIATIONS & DEFINITIONS**

**Thyroid nodule:** an abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (Benign), ~5-8% are cancerous.

**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.

**Thyroid fine needle aspiration biopsy (FNAB):** a simple procedure that is done in the doctor's office to determine if a thyroid nodule is benign (non-cancerous) or cancer. The doctor uses a very thin needle to withdraw cells from the thyroid nodule. Patients usually return home or to work after the biopsy without any ill effects.