



## THYROID CANCER

### The risk of cancer increases when a thyroid nodule is larger than 2cm

#### BACKGROUND

Thyroid nodules are very common, occurring in up to 50% of the population over 60 years old. Many of these nodules are small (<1 cm). In the evaluation of thyroid nodules, factors such as young age, male gender, prior head and neck irradiation and family history of thyroid cancer can increase the risk of cancer. However, it is not known whether or not larger nodules have a higher risk of being cancerous than smaller ones. Certainly larger nodules in other organs such as in the lung carry a higher risk of cancer. In this study, the authors examined the effect on nodule size on the risk of thyroid cancer.

#### THE FULL ARTICLE TITLE

Kamran SC et al. Thyroid nodule size and prediction of cancer. *J Clin Endocrinol Metab* 2013;98:564-70. Epub December 28, 2012; doi: 10.1210/jc.2012-2968.

#### SUMMARY OF THE STUDY

A total of 7348 thyroid nodules greater than 1 cm from the records of 4955 consecutive patients referred to a single hospital for evaluation of thyroid nodules from 1995-2009 were studied. A total of 49% of the nodules were between 1 to 1.9 cm, 27% between 2 to 2.9 cm, 14% between 3 to 3.9cm and 11% were greater than 4cm. Based on the findings at surgery, 13% of the nodules were cancers and of these, papillary thyroid cancer was the most common type (86%). A diagnosis of cancer was made in 10.5% of nodules measuring 1 – 1.9 cm. The risk of cancer increased to 15% of nodules greater than 2 cm. In nodules that were larger than this 2 cm threshold, the cancer risk was unchanged. However, the proportion of

rarer types of thyroid cancer such as follicular and Hurthle cell cancer did progressively increase with increasing nodule size.

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

This is the largest study to date correlating thyroid nodule size and the risk of cancer. This study shows that nodules >2 cm hold a higher risk of cancer than cancers <2 cm. While this risk does not increase beyond 2.0 cm, the proportion of rarer types of thyroid cancer does. However, this was a retrospective study from one single institution and thus the significance of the results must be confirmed.

— Philip Segal, MD

#### ATA THYROID BROCHURE LINKS

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

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

#### 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% are cancerous.

**Papillary thyroid cancer:** the most common type of thyroid cancer.