

**THYROID CANCER****The increased incidence of thyroid cancer is worldwide****BACKGROUND**

The incidence of thyroid cancer has increased dramatically during the past three decades and it is now the fastest growing cancer in women. Almost all of this increase is in papillary thyroid cancer. The reason for this is unclear, although many point to the increase in imaging studies of the neck where small thyroid nodules are discovered before they become apparent on physical exam. This has led to some investigators stating that thyroid cancer is being over diagnosed, meaning that many of the small thyroid cancers being found would never progress to the stage where survival or health would be affected. However, there are many factors in the environment that may also cause an increase in thyroid nodules and thyroid cancer, including the release of radiation from nuclear reactor accidents. The current study is a worldwide review of the incidence of thyroid cancer that attempts to identify risk factors for the increasing incidence.

THE FULL ARTICLE TITLE

Wiltshire JJ et al. Systematic review of trends in the incidence rates of thyroid cancer. *Thyroid* 2016;26:1541-52.

SUMMARY OF THE STUDY

The authors searched 2 major databases of published scientific studies (Medline and EMBASE) for all articles on the incidence of thyroid cancer. The initial search yielded 4722 titles and abstracts, but only 60 studies were considered suitable for the final analysis. A total of 54 of the studies showed a significant increase in the incidence of thyroid cancer over the past 50 years while 2 studies found low incidence rates attributed to poor

access to health care. The largest number of studies was from Europe. All 13 reports from North America and 7 of 9 studies from Asia reported significant increases in incidence, as did 3 articles from South America. The incidence was higher in women than in men, but the trend for increasing incidence was similar in both sexes. All 4 studies that had adequate data on follicular thyroid cancer reported increasing incidence.

Of the 6 studies that evaluated exposure to ionizing radiation and thyroid cancer, 3 reported a positive association, including one from Belarus close to the Chernobyl accident. A very large table summarized each of the 60 studies, including potential risk factors. The few studies with positive data reported radiation exposure and iodine supplementation as risk factors.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This systematic review strongly supports a widespread and persistent increase in the incidence of thyroid cancer. It remains unclear if this increased incidence is simply due over diagnosis of small thyroid cancers or if it represents a true increase in thyroid cancer that may cause problems. While further studies are needed to help sort this out, the updated 2015 American Thyroid Association guidelines recommend against fine needle biopsy of thyroid nodules less than 1 cm in size and suggest consideration of active surveillance rather than surgery for very-low-risk cancers.

— Alan P. Farwell, MD, FACE

ATA THYROID BROCHURE LINKS

Thyroid Cancer: <http://www.thyroid.org/thyroid-cancer/>

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. There are 4 variants of papillary thyroid

cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

Follicular thyroid cancer: the second most common type of thyroid cancer.