



## THYROID CANCER

### Increasing trend of thyroid cancer

#### BACKGROUND

Thyroid cancer has been rising in recent decades and the cause of this increase is not clear. Some have suggested that this may perhaps be related to the increased use of radiology studies (like CT scans) that detect very small cancers. These very small thyroid cancers may not significantly impact health outcomes, but managing them contributes to the rising costs of healthcare since most patients will require surgery and all patients will require ongoing monitoring and medical follow-up. This study was done to analyze the trends and ways in how thyroid cancer is detected using nearly 80 years of patient data from residents living in Olmsted County, Minnesota in the U.S.

#### THE FULL ARTICLE TITLE

Brito JP et al. The impact of subclinical disease and mechanism of detection on the rise in thyroid cancer incidence: a population-based study in Olmsted County, Minnesota during 1935 through 2012. *Thyroid* (ePub)

#### SUMMARY OF THE STUDY

This study used information from the Rochester Epidemiology Project, a database of medical records of patients between 1935-2012 living in Olmsted County, Minnesota. During the study period from 1935-2012, there were 476 cases of thyroid cancer. Only 64% had come to attention because of symptoms in the neck or if a physician felt a lump in the neck. The remaining 32% were discovered because of other tests done, including radiologic imaging studies, in patients who had no local neck symptoms. The frequency of new thyroid cancer cases increased steadily from 1935 until 1970, when the number of new thyroid cancer patients in each year remained stable until 1990. However, the frequency of new cases again increased between 1990-2012. While the frequency of new thyroid cancers found because of symptoms or a neck lump remained stable throughout the nearly 80 years, the thyroid cancers identified by imaging studies were the ones which steadily increased.

Furthermore, those cancer which were less aggressive tended to be the ones which were becoming more common. Overall, despite the increased rate of diagnosing thyroid cancer, only 2.3% of patients died from their thyroid cancer. This figure has been stable when comparing between those with the disease during the 1930s vs. those in the 2000s.

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

The reasons for why thyroid cancer has been increasing in recent decades are controversial. The investigators suggest that the increasing common use of radiologic imaging studies done for other reasons, which detected thyroid cancers that were more likely to be without symptoms in this study, is one of the major reasons. Since the rate of death from thyroid cancer has remained completely stable despite this, one can question whether finding occult thyroid cancers necessarily impacts a person's health. Others have also suggested that thyroid autoimmunity, iodine nutrition, environmental exposures, genetic factors, variable access to medical care, treatment patterns, and obesity may also be important reasons that explain why thyroid cancer has become more common. More research is needed to better understand the complexities related to the rising trend of thyroid cancer observed in recent decades.

— Angela M. Leung, MD, MSc

#### ATA THYROID BROCHURE LINKS

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

#### ABBREVIATIONS & DEFINITIONS

**Database:** collection of patient information gathered over many years used to analyze certain trends in medical conditions