



THYROID CANCER

Increasing obesity is associated with rising papillary thyroid cancer incidence and development of larger thyroid cancers

BACKGROUND

The number of patients with papillary thyroid cancer has been rising since the mid 1970's. Initially, this was attributed to more frequent use of neck ultrasound and CT scans which could identify new cases of thyroid cancer that would not have otherwise been found. More frequent neck imaging can certainly account for the increase in incidence of small, early stage papillary thyroid cancers; however, it cannot explain a reported rise in the incidence of large (>4 cm) papillary thyroid cancers as well as increase in death from thyroid cancer. As such, it is likely that other environmental factors may also be contributing to the changing incidence of papillary thyroid cancer.

The epidemic of obesity over this period mirrors the rise in papillary thyroid cancer; therefore, there may be a positive relationship between thyroid cancer and obesity. In fact, recent studies have shown a relationship between one's fat mass and diagnosis of papillary thyroid cancer. Further, obesity has already been linked to many other types of cancers such as gastrointestinal, breast, kidney and endometrial cancers.

The goal of the current study was to quantify the impact of rising rates of obesity on the incidence of papillary thyroid cancer.

THE FULL ARTICLE TITLE

Kitahara CM et al. 2019, Impact of overweight and obesity on U.S. papillary thyroid cancer incidence trends (1995–2015) J Natl Cancer Inst. Epub 2019 Oct 22.

SUMMARY OF THE STUDY

The authors used data from a large US study called the *National Institutes of Health (NIH)—AARP diet health study*, which started in 1995 when members of the American Association of Retired Persons (AARP) between ages 51-70 completed a questionnaire about health and lifestyle characteristics which included

questions about weight and body mass index (BMI) . Then, using local cancer registries and databases they identified 604 people from the study that were diagnosed with new papillary thyroid cancer between 1995-2005.

Compared with normal weight (BMI 18.5-24.9 kg/m²), being overweight (BMI 25.0-29.0 kg/m²) and obese (BMI > 30.0 kg/m²) was associated with a 1.26-fold and 1.30-fold increase in the risk of papillary thyroid cancer. Being overweight or obese was not associated with an increased risk of small papillary thyroid cancers, but rather with a 3-fold (for overweight) and 5-fold (for obese) risk of large papillary thyroid cancers. Overall, the association between BMI and risk of papillary thyroid cancer was stronger in men than women.

Due to the rising incidence of overweight and obesity in the USA between 1995 and 2015, the proportion of cases of papillary thyroid cancer that were attributed to either of these conditions also increased from 11.4 % to 16.2% (any size papillary thyroid cancer) and from 51.4% to 63.2% (large papillary thyroid cancers) by the end of the study period. In other words by 2015 one in every 6 of all papillary thyroid cancers, a nearly two-thirds of large papillary thyroid cancers among adults older than 60 years were attributable to overweight and obesity.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

While historically not thought of as a strong risk factor for thyroid cancer, adiposity has now been implicated in the rise of papillary thyroid cancer, particularly large cancers. The exact mechanism of obesity in thyroid cancer development is still unknown, but one wonders if a substantial number of papillary thyroid cancers can be avoided by implementing public health interventions targeting overweight and obesity in the population.

— Phillip Segal, MD





THYROID CANCER, continued

ATA THYROID BROCHURE LINKS

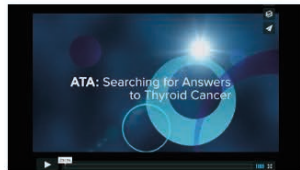
Thyroid Cancer (Papillary and Follicular): <https://www.thyroid.org/thyroid-cancer/>

ABBREVIATIONS & DEFINITIONS

Body-mass index (BMI): a standardized measure of obesity calculated by dividing the weight in kilograms by the square of the height. A normal BMI is 18.5-24.9, overweight is 25-30 and obese is >30.

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).

Watch how your donations help find answers to thyroid cancer



The American Thyroid Association (ATA) – Searching for Answers to Thyroid Cancer
April 17, 2016



13



Differentiated Thyroid Cancer – Support ATA's ongoing Research
April 17, 2016



19



Medullary Thyroid Cancer – Help the ATA Find a Cure
April 17, 2016



10



Anaplastic Thyroid Cancer – Support Research for Treatments
April 17, 2016



11

www.thyroid.org/donate/

