

## **The increasing incidence of thyroid cancer: the influence of access to care.**

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**Background:** The rapidly rising incidence of papillary thyroid cancer may be due to overdiagnosis of a reservoir of subclinical disease. To conclude that overdiagnosis is occurring, evidence for an association between access to health care and the incidence of cancer is necessary.

**Methods:** We used Surveillance, Epidemiology, and End Results (SEER) data to examine U.S. papillary thyroid cancer incidence trends in Medicare-age and non-Medicare-age cohorts over three decades. We performed an ecologic analysis across 497 U.S. counties, examining the association of nine county-level socioeconomic markers of health care access and the incidence of papillary thyroid cancer.

**Results:** Papillary thyroid cancer incidence is rising most rapidly in Americans over age 65 years (annual percentage change, 8.8%), who have broad health insurance coverage through Medicare. Among those under 65, in whom health insurance coverage is not universal, the rate of increase has been slower (annual percentage change, 6.4%). Over three decades, the mortality rate from thyroid cancer has not changed. Across U.S. counties, incidence ranged widely, from 0 to 29.7 per 100,000. County papillary thyroid cancer incidence was significantly correlated with all nine sociodemographic markers of health care access: it was positively correlated with rates of college education, white-collar employment, and family income; and negatively correlated with the percentage of residents who were uninsured, in poverty, unemployed, of nonwhite ethnicity, non-English speaking, and lacking high school education.

**Conclusion:** Markers for higher levels of health care access, both sociodemographic and age-based, are associated with higher papillary thyroid cancer incidence rates. More papillary thyroid cancers are diagnosed among populations with wider access to healthcare. Despite the threefold increase in incidence over three decades, the mortality rate remains unchanged. Together with the large subclinical reservoir of occult papillary thyroid cancers, these data provide supportive evidence for the widespread overdiagnosis of this entity. #

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