

THE INCREASING INCIDENCE OF THYROID CANCER IN CANADA.

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Background/Purpose: The incidence of thyroid cancer is increasing in Canada.

The purpose of this study was to investigate the following questions: 1) what was the magnitude of increased incidence for thyroid cancer in Canada from 1992-2007? 2) is there an association between socioeconomic status (SES) and thyroid cancer incidence in Canada? 3) is there a difference in thyroid cancer incidence and/or the effect of SES on incidence between cities, towns, and rural areas?

Methods: Thyroid cancer cases were drawn from the Canadian Cancer Registry. Demographic and socioeconomic information were extracted from the Canadian Census of Population data. We linked cases to income quintiles (InQs) according to patients' postal codes, and categorized place of residence into city, town, or rural. We performed a logistic regression analysis to identify relationships between these variables.

Results: The overall incidence of thyroid cancer in Canada increased by 158%. Incidence was significantly higher in individuals from higher InQs (IRR 0.77 for lowest InQ compared to highest). The incidence of thyroid cancer was 40% higher in cities than in towns or rural areas. Lastly, when we allowed the relationship between thyroid cancer incidence and geography of residence to vary by SES we found that incidence between highest and lowest InQs was significantly larger in cities than in towns and was insignificant in rural areas.

Discussion & Conclusion: Our study confirmed the dramatic increase in thyroid cancer incidence in Canada. Thyroid cancer incidence was significantly higher in higher InQs and in cities. This data supports the theory that increased access to imaging is largely responsible for this increased incidence.