

Incidence and Mortality of Thyroid Cancer in 50 Countries: A Joinpoint Regression Analysis of Global Trends



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Purpose

- To evaluate the **incidence** and **mortality trend** of **thyroid cancer**, and compared its incidence trends between different countries, sexes, and age groups.

Methods

- Data on age-standardized incidence and mortality rate of thyroid cancer among 50 countries/regions were retrieved from
 - the **Cancer Incidence in Five Continents Volume XI; the Surveillance, Epidemiology, and End Results Program (SEER)**;
 - the **National Cancer Institute of the United States; the Nordic Cancer Registries (NORDCAN)** for European countries;
 - the **WHO mortality database**.
- The Average Annual Percent Change (AAPC) of the incidence and mortality trends as evaluated by **Joinpoint regression analysis**.



Results

Fig 1. Global incidence mortality of thyroid cancer

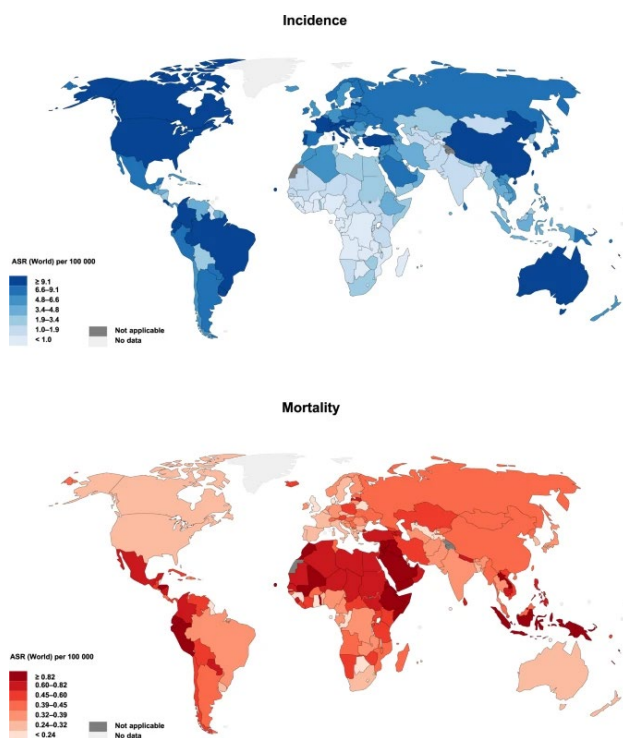


Fig 2. Male incidence trend of thyroid cancer

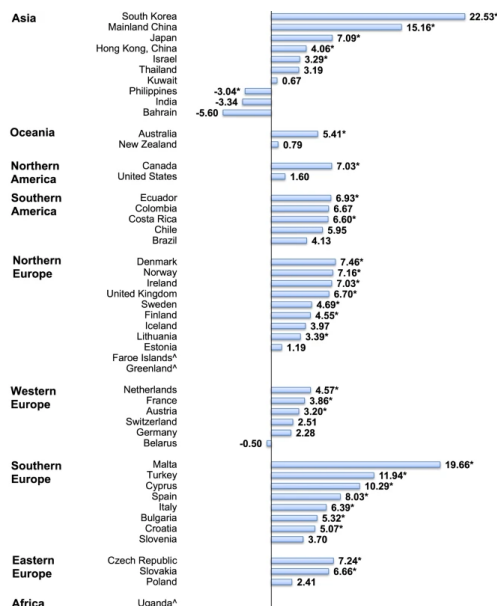
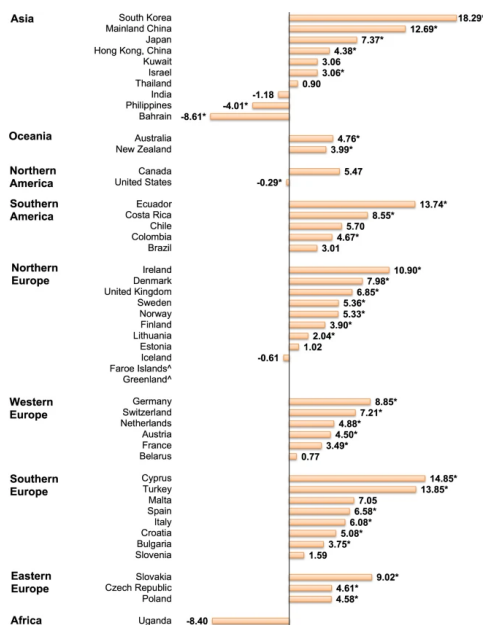


Fig 3. Female incidence trend of thyroid cancer



- The incidence of thyroid cancer increased in **most countries** among individuals, and increased substantially in populations aged <40 years, especially in:
 - China** (male: AAPC **18.6**, 95%C.I. 12.1-25.5, p<.001; female: AAPC **13.3**, 95%C.I. 11.5-15.1, p<.001),
 - Korea** (male: AAPC **25.3**, 95%C.I. 22.3-28.4, p<.001; female: AAPC **18.5**, 95%C.I. 16.2-20.9, p<.001).

Conclusions

- An **increasing incidence** of thyroid cancer was observed in younger subjects in a majority of countries, highlighting the need for more preventive strategies in this population and possible avoidance of over-diagnosis.

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