

Global burden, Risk factors, and Temporal Trends of Ureteral Cancer: a comprehensive analysis of cancer registries



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Introduction

Ureteral cancer is a rare cancer. This study aimed to provide an up-to-date and comprehensive analysis on the global trends of ureteral cancer **incidence** and its association with **lifestyle and metabolic risk factors**.



Method

■ Conducted a study on ureteral cancer using data from the

- **Global Cancer Observatory**
- **Cancer Incidence in Five Continents databases.**

■ We analyzed the

- (1) global incidence of ureteral cancer by region, country, sex, and age group by **age-standardized rates (ASR)**;
- (2) associated risk factors on a population level by univariable **linear regression with logarithm transformation**; and
- (3) incidence trend of ureteral cancer by sex and age group in different countries by **Average Annual Percentage Change (AAPC)**.

Results

- The global age-standardized rate of ureteral cancer incidence in 2022 was **22.3** per **10,000,000** people.
- Regions with higher human development index (HDI), such as **Europe**, **Northern America**, and **East Asia**, were found to have a higher incidence of ureteral cancer.
- Higher **HDI** and gross domestic product (**GDP**) and a higher prevalence of **smoking**, **alcohol drinking**, **physical inactivity**, **unhealthy dietary**, **obesity**, **hypertension**, **diabetes**, and **lipid disorder** were associated with higher incidence of ureteral cancer.
- An overall **increasing trend of ureteral cancer** incidence was observed for the past decade, especially among the **female population**.

Fig 1. Global incidence of ureteral cancer by sex, all ages, in 2022

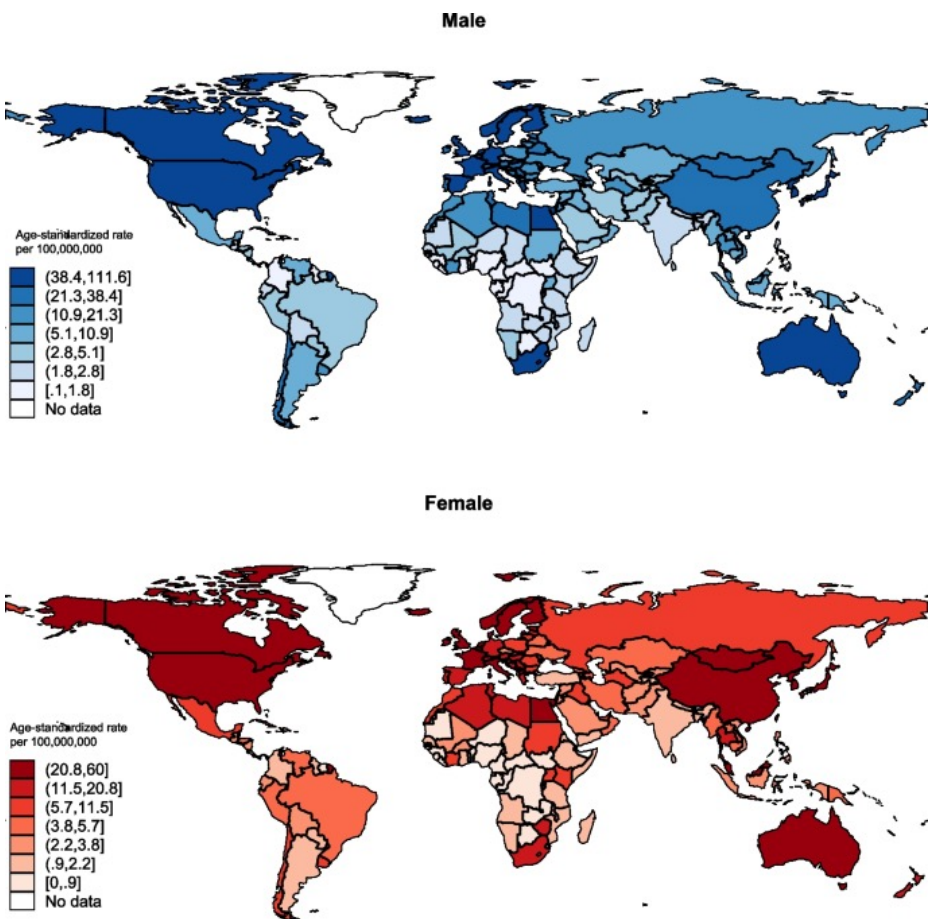


Fig 2. Association between risk factors and ureteral cancer by sex

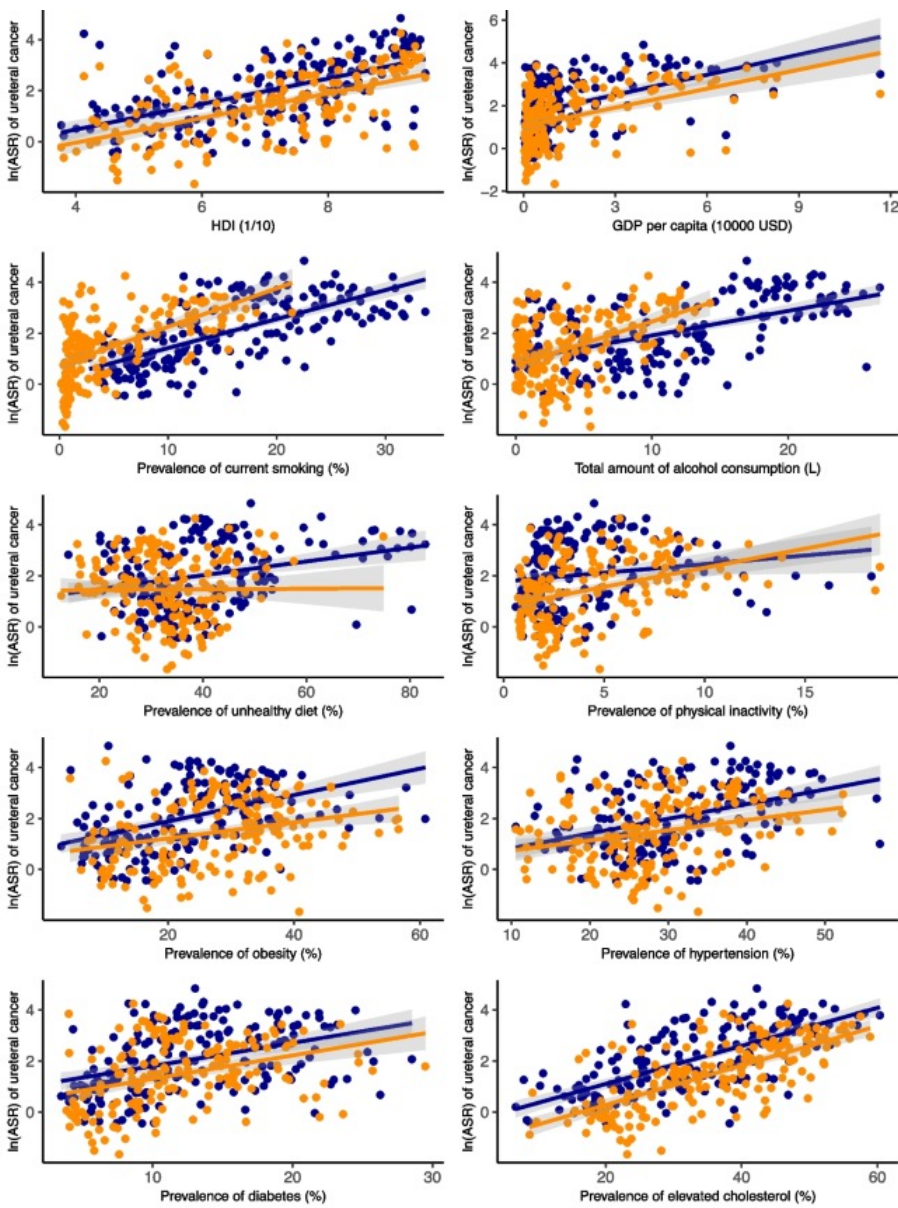
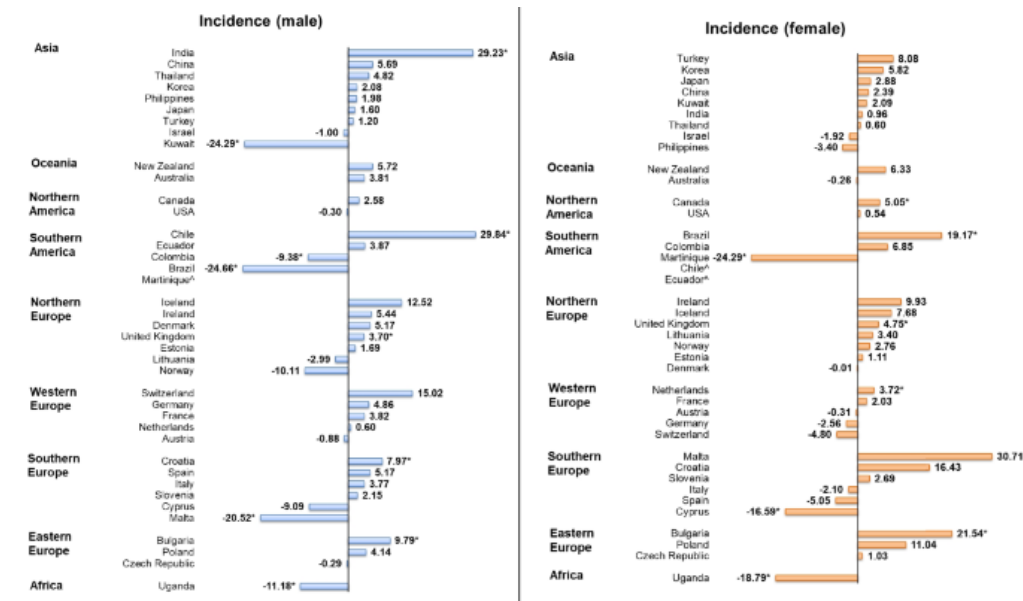


Fig 3. AAPC of ureteral cancer incidence by sex, all ages



AAPC, annual percentage change; *p values less than 0.05; *not analysable due to zero cases throughout the period.

Kuwait Male, Brazil Male, Martinique Female exclude 2003 as outlier; Malta Male only applicable in 2008-2012 period

Conclusions

- Although ureteral cancer was relatively rare, the **number of cases reported was rising** over the world.
- The rising **trends among females were more evident** compared with the other subgroups, especially in **European countries**.
- Further studies could be conducted to examine the reasons behind these epidemiological changes and confirm the relationship with the risk factors identified.

Acknowledgments

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