

Evolution of lung cancer mortality in Spain: 1980-2022, a joinpoint analysis

Authors: Alberto Ruano Ravina, Mónica Pérez-Ríos, Carla Guerra-Tort, Cristina Candal-Pedreira, Guadalupe García, Lucía Martín-Gisbert, Ana Teijeiro, Julia Rey Brandariz
Affiliation: Department of Preventive Medicine and Public Health. Universidade de Santiago de Compostela, Spain

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Background

Lung cancer is the **leading cause of cancer mortality** in **men** and the **third** leading cause of cancer death in **women in Spain**. The **objective** of this study was **to analyze the evolution of lung cancer mortality in Spain** for both sexes from **1980 to 2022**.

Methods

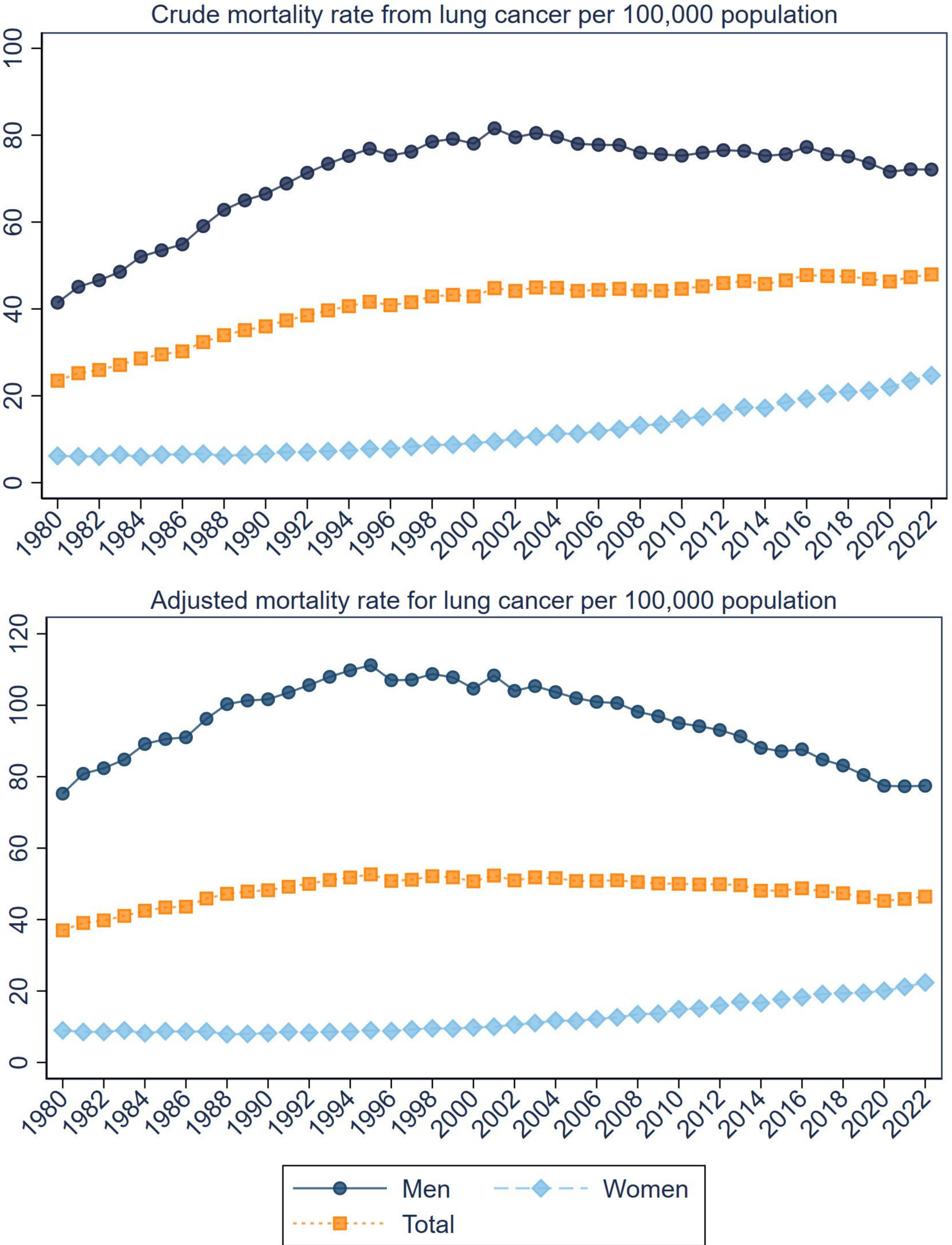
- **Lung cancer mortality data** (ICD-10: C33-C34) and the population needed to calculate lung cancer mortality rates were obtained from the **National Institute of Statistics**.
- **Lung cancer mortality rates were calculated** for the years 1980 to 2022, **both crude and age-adjusted** using the direct method.
- **Joinpoint regression models** were used to analyze the trend of the adjusted rates.
- **Annual percentage changes (APC)** and their 95% confidence intervals (95%CI) were calculated, overall and by sex.

Results

1980-2020: **lung cancer** caused **745,182 deaths** in Spain, with **84.9% (632,907 deaths)** occurring in **men** and **15.1% (112,275 deaths)** occurring in **women**.

Table. Trend analysis through the annual percentage change (APC) in men and women, accompanied by the 95% confidence interval (95% CI).

Men			
Period	APC	95%CI	
1980-1993	2.7	2.4	2.9
1993-2006	-0.6	-0.9	-0.3
2006-2022	-1.8	-2.0	-1.6
Women			
Period	APC	95%CI	
1980-1989	-1.0	-1.7	-0.3
1989-1999	1.6	0.9	2.3
1999-2022	3.8	3.6	4.0



Conclusions

- **Lung cancer mortality** rate has **increased alarmingly** in Spanish **women**, while in men has stabilized.
- The **adjusted rates** show a **decrease** in **men**, which may explain the stabilization observed in the crude rates due to the aging of the population.
- The **rate of increase** in **lung cancer** death rates in **women** has **doubled since 1999**, highlighting the need for immediate preventive measures to curb this trend.

Conflicts of interest: None

Contact of the corresponding Author:
alberto.ruano@usc.es

