

# Analysis finds wide variation in lung cancer rates globally

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The only recent comprehensive analysis of lung cancer rates for women around the world finds lung cancer rates are dropping in young women in many regions of the globe, pointing to the success of tobacco control efforts. However, rates continue to increase among older women in many countries, indicating a need for more concentrated efforts to initiate or expand comprehensive tobacco control programs across the globe to curtail future tobacco-related lung cancer deaths. The study is published early online in *Cancer Epidemiology, Biomarkers & Prevention*.

Lung cancer is now the second leading cause of cancer death in [women](#) worldwide. An estimated 491,200 women died of lung cancer in 2012,

more than half (57%) of whom resided in economically developing countries. Differences in smoking patterns account for much of the variation in lung cancer rates around the globe. Smoking in females became common in North America, Northern Europe, Australia, and New Zealand as early as the 1940s, but remained rare throughout the 20th century in the developing world and in places with strong social norms against it, such as the Middle East. Only recently is female smoking becoming more common in many of these countries, because of increasing social acceptance, newly open markets, and/or targeted marketing by the tobacco industry.

Because the tobacco epidemic among women has varied globally, researchers led by Lindsey Torre, MSPH documented and compared contemporary trends in lung cancer mortality, to identify opportunities for intervention. They used the World Health Organization's Cancer Mortality Database covering populations on 10 six continents to calculate age-standardized lung cancer death rates during 2006 to 2010 and annual percent change in rates for available years from 1985 to 2011 and for the most recent five years for which data is available by population and age group (30–49 and 50–74 years).

Lung cancer mortality rates among [young women](#) (30-49 years) were stable or declining in 47 of the 52 populations examined. In contrast, among [older women](#) (50-74 years), rates were increasing for more than half (36/64) of populations examined, including most countries in Southern, Eastern, and Western Europe and South America. Lung cancer mortality rates (per 100,000) during 2006-2010 ranged from 0.7 in Costa Rica to 14.8 in Hungary among young women and from 8.8 in Georgia to 120.0 in Scotland among older women. For both age groups, rates were highest in parts of Europe (Scotland, Hungary, Denmark) and North America and lowest in Africa, Asia, and Latin America.

"The widespread reduction in lung cancer we found in young women in

many parts of the globe is encouraging, and probably reflects both successful tobacco control efforts and increased awareness about the health hazards of smoking," said Torre. "The greatest opportunity we have right now for slowing a tobacco-fueled epidemic is in those countries where smoking among women is rare, such as Africa and most of Asia. And while decreasing [lung cancer](#) death rates are encouraging, many countries have yet to implement the kinds of comprehensive tobacco control measures that have led to drops in other countries."

**More information:** International Variation in Lung Cancer Mortality Rates and Trends among Women. Lindsey A. Torre, Rebecca L. Siegel, Elizabeth M. Ward, and Ahmedin Jemal. Cancer Epidemiol Biomarkers Prev. Published Online First May 16, 2014; DOI: [10.1158/1055-9965.EPI-13-1220](https://doi.org/10.1158/1055-9965.EPI-13-1220) . [cebp.aacrjournals.org/content/ ... EPI-13-1220.abstract](http://cebp.aacrjournals.org/content/...EPI-13-1220.abstract)

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