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Lung cancer mortality trend by birth cohort in men, Tuscany, 1971-2006

Giuseppe Gorini, Elisabetta Chellini, Andrea Martini, Lucia Giovannetti, Lucia Miligi, and Adele Seniori Costantini

Occupational & Environmental Epidemiology Unit, Cancer Prevention & Research Institute (ISPO), Florence, Italy

ABSTRACT

Aims and background. In Tuscany, lung cancer mortality in men has shown a decreasing geographical trend over the last 3 decades from the most industrialized north-western coastal areas (Massa-Carrara, Viareggio) to the south-eastern areas (Arezzo, Siena), following the path of the development of industrial activities. The aim of the study was to evaluate lung cancer mortality in males by birth cohort in order to verify whether there was also a decreasing birth cohort trend in male lung cancer mortality rates between north-western and south-eastern Tuscan areas.

Methods. Lung cancer deaths that occurred in men resident in Tuscany, 1971-2006, were analyzed by birth cohort, age group and local health authority area.

Results. Rates in men >65 years were significantly higher in Viareggio and Massa-Carrara than in the south-eastern areas for all generations, in particular for men born in 1896-1926. Rates for men aged 55-64 years were higher in Massa-Carrara and Viareggio than in south-eastern areas for men born before 1926, whereas for younger generations the rates leveled off. For men aged 45-54 years, rates were similar in all areas only for younger generations (men born around 1951 and 1956), whereas for men aged 35-44 years, rates were similar in all areas for all generations considered.

Conclusions. The higher lung cancer mortality rates in men aged >65 years and born in 1896-1926 in the north-western areas than in those born in the south-eastern areas may indicate that the tobacco epidemic spread earlier in the north-western areas of Tuscany, following the path of industrialization. However, the higher mortality rates in north-western than in south-eastern areas are at least in part attributable to the high occupational risks for lung cancer experienced by workers in these areas during the first half of 20th century. Free full text available at www.tumorionline.it

Key words: lung cancer, mortality, smoking, occupation.

Correspondence to: Giuseppe Gorini, MD, Occupational & Environmental Epidemiology Unit, Cancer Prevention & Research Institute (ISPO), Via di S.Salvi 12, 50135 Florence, Italy.
Tel +39-055-6268347;
fax +39-055-6268385;
e-mail g.gorini@ispo.toscana.it

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