

## Gastric cancer mortality trends in Tuscany, Italy, 1971-2004

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### ABSTRACT

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**Aims, background, and methods.** In Tuscany, Italy, gastric cancer mortality has been decreasing since 1950, although with relevant geographical variability across the region. In Eastern Tuscan areas close to the mountains (high risk areas), gastric cancer mortality has been and is still significantly higher than that recorded in Western coastal areas and in the city of Florence (low risk areas). High-risk areas also showed higher *Helicobacter pylori* seroprevalence. Aim of this paper is to study gastric cancer mortality trends in high and low-risk areas, during the period 1971-2004, using age-period-cohort models.

**Results.** In high-risk areas, gastric cancer mortality rates declined from 61.4 per 100,000 in 1971-74 to 19.8 in 2000-2004 and in low-risk areas from 34.9 to 9.8. Mortality decline in high-risk areas was mainly attributable to a birth cohort effect, whereas in low-risk areas it was due either to a birth cohort effect or a period effect. In low- and high-risk areas, birth-cohort risks of dying decreased over subsequent generations, except for the birth cohorts born around the second world war.

**Conclusions.** Gastric cancer mortality in areas with higher *H. pylori* seroprevalence in Tuscany (high-risk areas) showed a predominant decline by birth cohort, in particular for younger generations, possibly due to the decrease of the infection for improvement of living conditions.

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**Key words:** gastric cancer, *H. pylori*, Italy, mortality, Tuscany.

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