

Cancer mortality in Córdoba, Argentina, 1986-2006: an age-period-cohort analysis

Sonia Alejandra Pou¹, Alberto Rubén Osella², Aldo Renato Eynard³, and María del Pilar Díaz⁴

¹Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET); Facultad de Matemática, Astronomía y Física, Universidad Nacional de Córdoba. Ciudad Universitaria. CP 5000. Córdoba, Argentina; ²Laboratorio di Epidemiologia e Biostatistica, IRCCS Saverio de Bellis, Castellana Grotte, Bari, Italy; ³Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET); la Cátedra de Biología Celular, Histología y Embriología e Instituto de Biología Celular, Facultad de Ciencias Médicas, Universidad Nacional de Córdoba, Ciudad Universitaria, Córdoba; ⁴Cátedra de Estadística y Bioestadística, Escuela de Nutrición, Facultad de Ciencias Médicas, Universidad Nacional de Córdoba, Ciudad Universitaria, CP 5000, Córdoba, Argentina

ABSTRACT

Aims and background. Cancer is the second main cause of death in Argentina, surpassed only by cardiovascular disease. However, analytical approaches isolating some of the known effects, such as age at death, period of death and birth cohort, have never been performed in cancer mortality studies in Argentina. The aim of this study was to analyze cancer mortality trends in a representative region of the country, the Córdoba province (1986-2006).

Methods and study design. Overall age-standardized (world population) mortality rates for cancer (all sites) were computed by a direct method. Joinpoint regression was fitted to the age-standardized mortality rates for both sexes to provide estimated and 95% confidence intervals of the annual percentage changes. The effects of age (15 age groups), period of death (1986-90, 1991-95, 1996-00 or 2001-06), and birth cohort (18 overlapping 10-year birth cohorts) covariates on mortality rates were estimated using a sequentially fitted Poisson regression model.

Results. During the study period, 102,737 people died of cancer in Córdoba, with the age-standardized mortality rates decreasing from 139.3 to 118.7/100,000 person-years. Although this reduction was more noticeable in men, the joinpoint regression model showed a significant change of the age-standardized mortality rates after 1996 in both sexes. Age-period-cohort analysis suggested that the cancer mortality trends may be linked with a strong age effect and a moderate or mild period and cohort effect, related to sex and place of residence.

Conclusions. Based on the observed cohort effect, it may be argued that there has been a lower exposure level to some risk factors, such as diet and other environmental factors, in Córdoba over the last decades. **Free full text available at www.tumorionline.it**

Key words: age-period-cohort model, Argentina, cancer mortality, Córdoba.

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Correspondence to: María del Pilar Díaz, Enrique Barros esq. Enfermera Gordillo, Ciudad Universitaria, CP 5000, Córdoba, Argentina.
Tel/Fax +54-351-4334027;
e-mail pdiaz@fcm.unc.edu.ar

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