Trends in net survival from cervical cancer in six European Latin countries: results from the SUDCAN population-based study

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Cancer survival is a key measure of the effectiveness of a healthcare system. As differences in healthcare systems are present among European Latin countries, it is of interest to look specifically at their similarities and differences in terms of cancer survival. Incident cases were extracted from the EUROCARE-V database for France, Italy, Spain, Switzerland, Portugal, and Belgium. One and 5-year net survivals (NS) were calculated for the period 2000–2004 using the Pohar-Perme estimator. Trends in NS over the 1992–2004 period and changes in the pattern of cancer excess mortality rate until 5 years after diagnosis were examined using a multivariate excess mortality rate model. There were moderate differences in age-standardized NS between countries (5-year NS range: 83–88%), but significant differences in the age groups 15–54 and 55–74 years (at 5 years up to +16 and +18% between any two countries). During the study period, excess mortality and NS improved in Italy, Spain, and Portugal. In Italy and Portugal, this improvement was slightly similar at ages 40, 55, and 70 whereas, in Spain, there was a sharp increase in NS at age 55. Because of this improvement, excess mortality and NS were similar in all six countries in 2004. Excess mortality peaked around 1 year after diagnosis in the youngest ages, but decreased gradually in the elderly. Detailed analyses showed differences in excess mortality and NS from cervical cancer between European Latin countries. However, these differences decreased over the study period because of the considerable improvement in Spain, Italy, and Portugal.  

Keywords: cancer registries, cervix uteri, Europe, excess mortality rate, Latin countries, net survival, trend analysis  
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Introduction  
SUDCAN study was carried out upon an initiative of the GRELL (http://www.grell-network.org) and aimed at comparing cancer net survival (NS) among Belgium, France, Italy, Portugal, Spain, and Switzerland. In these countries, in 2012, the world-standardized incidence and mortality rates of cervical cancer ranged from 3.6 to 8.6 and from 1.1 to 3.7 per 100,000 person-years, respectively (Ferlay et al., 2013). In 2012, in Europe, cervical cancer was ranked sixth and seventh in terms of incidence and mortality, respectively (Ferlay et al., 2013). The European mean age-standardized 5-year survival for cervical cancer was estimated at 59.0% (De Angelis et al., 2014). Cervical cancer is thus a major public health issue because of its frequency, particularly in young women.  

Cancer survival is one key measure of the effectiveness of a healthcare system. European Latin countries have some differences in their healthcare systems; therefore, it is of interest to look specifically at their differences in cancer survival. NS from cancer is the survival that would be observed if cancer were the only cause of death. This major epidemiological indicator enables comparisons between countries or periods without interference from other causes of death. The mortality rate associated with NS is the excess mortality rate (EMR); it corresponds to the mortality because of cancer that adds to the expected mortality owing to other causes. Thus, it is highly informative to provide, in addition to NS, a detailed description of the dynamics of the EMR over the time elapsed since diagnosis.  

One objective of the SUDCAN study was a brief overview of the NS after cervix uteri cancer over the 2000–2004 period in each participating country, but its main objective was to investigate the trends in NS and the dynamics of the EMR up to 5 years after diagnosis.