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

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Liver cancer represents a major clinical challenge. The aim of the SUDCAN collaborative study was to compare the net survival from liver cancer between six European Latin countries (Belgium, France, Italy, Portugal, Spain and Switzerland) and provide trends in net survival and dynamics of excess mortality rates (EMRs) up to 5 years after diagnosis. The data were extracted from the EUROCARE-5 database. First, net survival was studied over the period 2000–2004 using the Pohar-Perme estimator. For trend analyses, the study period was specific to each country. Results are reported from 1992 to 2004 in France, Italy, Spain and Switzerland and from 2000 to 2004 in Belgium and Portugal. These trend analyses were carried out using a flexible excess-rate modeling strategy. There were little differences between the six countries in the 5-year age-standardized net survival (2000–2004): it ranged from 13\% (France and Portugal) to 16\% (Belgium). An increase in the net age-standardized survival was observed in all countries between 1992 and 2004, both at 1 year and at 5 years (the highest in Spain, the lowest in France). Generally, patients aged 60 years showed the highest increase. There was a progressive decrease in EMR over the 5-year period following diagnosis. The study confirmed the poor prognosis of liver cancer. Innovative treatments might improve the prognosis as well as preventive screening of cirrhotic patients with good liver function. Efforts are also needed to improve registration practices. European Journal of Cancer Prevention 25:S56–S62 Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.

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Introduction

Liver cancer is one of the most lethal cancers worldwide. In European Latin countries (Belgium, France, Italy, Portugal, Spain, and Switzerland), in 2012, the number of new liver cancers was estimated at 27,047 and the number of related deaths at 24,143 (Ferlay \textit{et al.}, 2013). Among these countries, the age-standardized (world) incidence and mortality rates ranged in 2012 from 3.1 to 7.1 (male/female ratio from 2.8 to 4.8) and from 2.9 to 5.7 per 100,000 person-years, respectively (Ferlay \textit{et al.}, 2013). The European mean age-standardized 5-year relative survival for liver cancer in the EUROCARE-5 study was 11.7\%. Only pleural and pancreas sites had lower 5-year survivals (De Angelis \textit{et al.}, 2014).

Recent developments have occurred in cancer survival analyses. Net survival from cancer is the survival that would be observed if cancer was the only cause of death. This major epidemiological indicator thus allows comparisons without interference from other causes of death. The mortality rate associated with net survival is called the excess mortality rate (EMR); it corresponds to the mortality because of cancer that adds to the expected mortality because of other causes. In addition to the net survival, it is thus highly informative to provide a detailed description of the dynamics of the EMR over the time elapsed since diagnosis.

Liver cancer has been and is still a major challenge for developed and less developed countries. To date, no mass screening programs have been recommended as yet. During the last 20 years, relevant diagnostic procedures (ultrasonography, computed tomography, and MRI) have been introduced to detect hepatic cell carcinoma at early stages and several treatment strategies have

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