

## References

1. Light RW. Pleural diseases. 5th ed. Philadelphia: Lippincott, Williams & Wilkins; 2007.
2. Kimmerling EA, Fedrick JA, Tenholder MF. Invasive *Aspergillus niger* with fatal pulmonary oxalosis in chronic obstructive pulmonary disease. *Chest*. 1992;101:870-2.
3. Lai CC, Liaw SJ, Hsiao YC, Chiu YS, Laio WY, Lee LN, et al. Empyema thoracis due to *Rhizopus oryzae* in an allogenic bone marrow transplant recipient. *Med Mycol*. 2006;44:75-8.
4. Justiniani FR, Hippalgaonkar R, Martínez LO. Charcoal-containing empyema complicating treatment for overdose. *Chest*. 1985;87:404-5.
5. Villena V, López-Encuentra A, García-Luján R, Echave-Sustaeta J, Álvarez-Martínez CJ. Clinical implications of appearance of pleural fluid at thoracentesis. *Chest*. 2004;125:156-9.
6. Ishimoto O, Saijo Y, Narumi K, Kimura Y, Ebina M, Matsubara N, et al. High level of vascular endothelial growth factor in hemorrhagic pleural effusion of cancer. *Oncology*. 2002;63:70-5.

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## Lung Cancer Mortality in Spain

### Mortalidad por cáncer de pulmón en España

To the Editor:

We read with interest the article by Cayuela and coworkers<sup>1</sup> on lung cancer mortality in Spain, recently published in *Archivos de Bronconeumología*. We fully agree with the authors in regard to their method, which is widely used in the literature; we also agree with their conclusions pointing to a lung cancer mortality trend in Spain which, as in other European countries, reflects changes in smoking habits.

Nonetheless, we cannot agree with the justification for the study. The authors state as follows: "In Spain, studies reporting trends in cancer mortality were carried out during the late 1980s and early 1990s... There are no recent studies on lung cancer mortality in Spain that allow us to ascertain whether the changes observed in Andalusia and the rest of Europe can also be observed in the Spanish population as a whole." They further state: "To our knowledge, this is the first analysis of trends with national data and a long follow-up period (25 years)."

In 2002, we published an analysis of lung cancer mortality for both men and women in Spain based on an age-period-cohort model; this study, completed in the second half of the 1990s, referred to a 25-year period covering 1973-1997.<sup>2</sup> In 2005, we published a study based on data up to 2002 that indicated the beginnings of a smoking-associated lung cancer epidemic among Spanish women.<sup>3</sup>

Other authors have also published analyses of data for Spain and other European countries. In 2007, for example, Levi et al<sup>4</sup> communicated the results of a joinpoint regression analysis of data referring to the period 1970-2004 for young women in a number of European countries, but paying particular attention to Spain and France. Another study (cited by Cayuela and coworkers), published in 2004, used age-period-cohort models to conduct a detailed

analysis of mortality data for the period 1968-1997 for Spain and other members of the European Union, which, at that time, was composed of 15 member states.<sup>5</sup> Yet another study (also cited by Cayuela and coworkers), published in 2005, used joinpoint regression analysis to study lung cancer mortality in women from Spain and a number of other European countries for the period 1965-2001.<sup>6</sup>

Consequently, there were studies analyzing lung cancer mortality with a long follow-up period (25 years) after the late 1980s and in the early 1990s that analyzed lung cancer mortality, whether exclusively in Spain or in Spain and other countries.

## References

1. Cayuela A, Rodríguez-Domínguez S, López-Campos JL, Vigil E, Otero R. Mortalidad por cáncer de pulmón en España. Evolución en 25 años (1980-2005). *Arch Bronconeumol*. 2008;44:70-4.
2. Franco J, Pérez-Hoyos S, Plaza P. Changes in lung-cancer mortality trends in Spain. *Int J Cancer*. 2002;97:102-5.
3. Franco J, Marín J. The beginning of the tobacco-related lung-cancer epidemic among Spanish women. *Int J Cancer*. 2006;118:1063-4.
4. Levi F, Bosetti C, Fernández E, Hill C, Lucchini F, Negri E, et al. Trends in lung cancer among young European women: the rising epidemic in France and Spain. *Int J Cancer*. 2007;121:462-5.
5. Bray F, Tyczynski JE, Parkin DM. Going up or coming down? The changing phases of the lung cancer epidemic from 1967 to 1999 in the 15 European Union countries. *Eur J Cancer*. 2004;40:96-125.
6. Bosetti C, Levi F, Lucchini F, Negri E, la Vecchia C. Lung cancer mortality in European women: recent trends and perspectives. *Ann Oncol*. 2005;16:1597-604.

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