

and answer queries on asthma and doping, Royal Decree 641/2009 of the 17th of April, BOE 8/5/2009, that regulated doping control processes says, "All athletes with a license to participate in official state competitions may be selected at any time to undergo tests during competitions or outside competitions". No comments.

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## Mortality in Lung Cancer and COPD

### Mortalidad en cáncer de pulmón y en enfermedad pulmonar obstructiva crónica

To the Editor:

In the interesting article by Abal et al<sup>1</sup> entitled «Lung Cancer and COPD: a frequent association» a broad clinical cohort of 996 patients over a period of 5 years is assessed. The first conclusion is relevant and current: The association of both pathological conditions is frequent, and the most frequent histological diagnosis is squamous carcinoma; however, it is more difficult to take in its second and significant conclusion. The survival of patients with lung cancer and COPD is greater than that of patients with lung cancer without COPD. This second finding seems contrary to all that has been published so far with reference to comorbidities of both conditions, and we make reference to the excellent review in these same pages by Díez Herranz<sup>2</sup> in 2001 and other more recent sources.<sup>3-5</sup> It has even been reported that greater mortality has been seen in non-smokers with both conditions.<sup>6</sup> The authors themselves are surprised and theorize in the «Discussion» about a possible diagnostic bias and about the fact that patients with COPD may be diagnosed with lung cancer before patients without COPD. Probably, a repeat analysis of the data would make it possible to reconsider said conclusion, based on a view of the Kaplan-Meier survival curves (Fig. 1) and a significant difference of  $p = 0.016$  obtained using the Mantel-Haenszel test (logarithmic ranges). Maybe due to the baseline differences between both groups (Table 4), it would be more appropriate to use an adjusted Cox regression model for the significant variables in the bivariate analysis, including sex, age, smoking and stage of lung cancer or other variables. The time in months/years between COPD

diagnosis and cancer diagnosis could also be modelled. Finally, although in «Methods» section it is indicated that diagnosis and COPD classification were carried out according to GOLD directives, it would be interesting to repeat the same model eliminating those COPD cases diagnosed without spirometry.

Nevertheless, as Brody and Spira<sup>3</sup> state, most smokers never will develop either COPD or lung cancer, it is important to investigate this relationship in detail.

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## Response by the Authors

### Respuesta de los autores

To the Editor:

We thank Joan B. Soriano for the interest shown in our recently published article.<sup>1</sup> We consider his comments are relevant and correct, and the suggestions undoubtedly improve on the original.

Following his advice, we have re-analysed the data eliminating the 16 COPD patients without spirometry. The Kaplan-Meier survival curves continue to be significantly different between patients with and without COPD, being greater in COPD patients ( $p = 0.006$ ).

Indeed, as the author points out in his letter, and this is seen in the results, an adjusted Cox regression model was used for significant variables in the bivariate analysis, although only stage and treatment remained in the final model. COPD, on the contrary, was not statistically significant. In the discussion we commented on the