

## Author's response to reviews

**Title:** Lung cancers attributable to environmental tobacco smoke and air pollution in non-smokers in different European countries: a prospective study.

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**Version: 2 Date:** 13 November 2006

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All changes are in red in the revised version of the manuscript.

### Reviewer No. 1

1. estimates for PM10 and SO<sub>2</sub> have been included, and clarifications added concerning the meaning of the different indicators of air pollution. In fact, we have found a statistically significant association only with exposure to NO<sub>2</sub>. Estimates of the odds ratio were 1.05 (95% confidence interval 0.65-1.69; =>27 vs. <27 ug/m<sup>3</sup>) for PM10, and 1.15 (0.92-1.43; =>11 vs. <11 ug/m<sup>3</sup>) for SO<sub>2</sub>.
2. and 3. a few sentences about the joint effect of air pollution and smoking have been added, together with an estimate of the joint effect of ETS and air pollution. The odds ratio for the joint exposure to both ETS and NO<sub>2</sub> was as high as 4.51, but the confidence interval was very wide (0.46-43.48).
4. a reference to different sources of NO<sub>2</sub> has been incorporated.
5. The OR for NO<sub>2</sub> was also adjusted for potential confounding from ETS by including cotinine levels in the logistic regression models. The cotinine-adjusted OR was 1.62 (95% confidence interval 0.92-1.43).
6. a clarification on potential bias related to measurement error has been included
7. also the association between heavy traffic road and social class has been highlighted

### Reviewer No. 2

1. the non-representative nature of the EPIC cohort has been highlighted in the discussion
2. estimates for never and ex-smokers are now shown separately. Among never smokers the association with NO<sub>2</sub> was represented by an OR of 1.09 (confidence interval 0.78-1.52), while in ex-smokers the OR was 1.59 (1.10-2.30). Concerning ETS, the estimates were 1.05 for never smokers (0.60-1.82) and 2.32 for ex-smokers (0.94-5.71); after adjustment for smoking duration and number of cigarettes smoked the relative risk remained unchanged.
3. heterogeneity of estimates by country is mentioned in the results. We found little heterogeneity among study centres, with a p-value for interaction with country of 0.94 for ETS and 0.76 for NO<sub>2</sub>. However, the sample size did not allow the estimation of risks for individual centres.
4. a caveat about the weakness of the prevalence estimate in Germany has been added.