Reviewer’s report

Title: Lung function and systemic inflammation associated with short-term air pollution exposure in chronic obstructive pulmonary disease patients in Beijing, China

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Reviewer: Elaine Fuertes

Reviewer's report:

The authors have largely responded to my comments, although a few remaining minor suggestions remain, mostly related to the results.

In line 8 page 10, it is probably more informative to say that there was a difference in the distribution of ozone only (rather than list all the pollutants for which there was no difference).

On line 11 page 11, associations with IL2 were not observed for SO2 (Figure 5, S5). I think the authors meant to say PM10 instead of SO2 here, as PM10 is not mentioned but probably should be. Similarly, why is CO not included in the multilag results for MCP-1 (Figure 6)? For Figure 6 MCP-1, the authors also say that associations with PM2.5 are observed, but this does not appear to be strictly true in the Figure, given that all other results are judged based on the presence/absence of formal statistical significance.

If the authors only presented results that are significant for the biomarkers in Table S3, why are graphs for IL5, VEGF-A and GM-CSF not shown, as from Table S3, significant associations were observed for these outcomes?

Finally, there continues to be some examples of grammatical errors throughout. Some of which are minor: e.g "was" should be "are" on line 11, page 4, the term "miss rate" is incorrect (line 21, page 8). However, in some cases, these grammar issues make the results difficult to interpret. Eg. Lines 14 - 15 page 10, saying that there is no reverse association between air pollution and FEV1 and FEV1% (as compared to FVC). Why would a reverse association be expected? I think what the authors are suggesting is that they did not observe "similar" associations as for FVC. Another example is in line 1 on page 11, the authors state that "an inverse trend was noted" for certain biomakers. What is meant by "inverse". I think the use of increasing levels and decreasing levels would be easier to understand rather than "inverse, positive, negative" which are currently frequently used to describe the results. In some cases, no direction is stated, such as in line 22 page 11 in which associations are referred to as only "significant". I suppose, if accepted, the journal editorial team will consider these issues, but this will likely require some input from the co-authors.
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