Review of: "Population estimates of biomarkers of exposure to carbon monoxide, nicotine, and NNK in smokers and non-smokers"

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Population estimates of biomarkers of exposure to carbon monoxide, nicotine, and NNK in smokers and non-smokers.

Please elaborate the abbreviation NNK in title.

Ayala-Fierro aimed to do a meta-analyses to establish such a population estimate for BOEs to carbon monoxide, nicotine and nicotine-derived nitrosamine ketone based on pooled weighted average from published literature.

The researchers found that smokers had significantly higher levels of NNAL, COHb and NEQ compared to non-smokers. This is an interesting study. However, the manuscript would benefit from the following corrections/amendments:

1. It is not clear whether the researchers consider passive smokers in their analyses. Passive smokers comprise a significant proportion among the populations and may lead to biased estimates for any generalized study.

2. The researchers may like to give brief background of Epanechnikov kernel density estimator.

3. In the analyses, 33,882 smokers and 3,238 non-smokers were taken. This discrepency may lead to biased estimates. The authors may like to give the rational of this analyses.

4. It is not clear why the authors did not cover other indicaters of inflammation including mRNA and microRNA in their research.

5. The authors may like to elaborate how these analyses normalize for gender, race, age, and other demographic features.