Title: Serum paraoxonase and arylesterase activities in patients with lung cancer in Turkish population

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Author’s response to reviews: see over
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Iratxe Puebla
Senior Assistant Editor
BMC-series journals

Dear Dr Iratxe Puebla,

Thank you for your letter and efforts for evaluating our manuscript entitled of “Serum paraoxonase and arylesterase activities in patients with lung cancer in Turkish population” by Emin T. Elkiran, Nefsal Mar, Bilge Aygen, Ferit Gursu, Aziz Karaoglu and Suleyman Koca.

We have read and understood all the comments made by the referees and/or editorial board, and we agree to revise our manuscript in accordance with the comments. Please note that, all the revisions made to the text in accordance to the reviewer comments are given in a highlighted manner. Please find our explanations and point-by-point responses to the comments below:

**Query:** “one of the reviewers has pointed out that some language revisions are required on the manuscript. We recommend that you ask a native English-speaking colleague to help you copyedit the paper. Please indicate how the language corrections have been attended to in the cover letter that will accompany your resubmission.”

**Response:**

English writing style, spelling and grammar has been substantially improved. We authors carefully checked the English and we also would like to thank to Dr Ahmet Ayar for his critical reading and helping to improve the English of the paper.

**Response to reviewer 1:**

**Query:** In “2.4. The phenotypic distribution of paraoxonase”. It is necessary to explain PON1 phenotypes in detail.

**Response:** The phenotypic distribution of PON1 is explained in detail in this revised version. Please see, the section 2.4, page 6, the last paragraph. We also added relevant findings in the results section; please see the page 9, the second paragraph.

**Query:** “In “Please compare biochemical parameters among small cell carcinoma, squamous cell carcinoma and adenocarcinoma and also compare them in stages.

**Response:** The required revisions are performed, please see the relevant section in the methods and table 2.

**Query:** In “4-Discussion”. It is necessary to explain PON1 genotypes in detail. Which one is wild type?

**Response:**
Due to technical limitations in our setting we could not perform genotypical analysis. This is mentioned in the text as a limitation. But, the wild type corresponds to the BB phenotype.

**Query:** “In “2.3. Assay………” Please change “[23]” to “[23].”

**Response:** The revision is performed.

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**Response to reviewer 2**

**Query:** “1. The number of analyzed subjects is 39. In my opinion this group (as well as the control group) is too small especially in the view of the paper title “Serum paraoxonase and arylesterase activities in patients with lung cancer in Turkish population”. For instance a recent study of Lee and coworkers on genetic polymorphism of the paraoxonase-1 (PON1) and lung cancer (J Prev Med Pub Health. 2005,38,345-350) involved 177 patients. Spectrophotometric techniques applied by the authors for determination of paraoxonase and arylesterase activities are relatively simple and not expensive. Therefore, it seems that authors could enlarge the number of the studied cases in the relatively short time.

**Response:**

We have also cited the paper by Lee et al on genetic polymorphism of the paraoxonase-1 (PON1) and lung cancer which involved 177 patients, but our study adds more on the finding of above mentioned study (please see the discussion). We wanted to publish the novel findings of this study (the PON1 activity of patients with LC was significantly lower independent from metastasis, smoking status or stage of the disease). Although small, as mentioned in the final section of the discussion, we have reasonable number of cases for this aim.

In our hospital setting we were able to collect data from 39 patients within the 6 months period of this study. Again, the inclusion criteria also limit the number of cases to be involved. A total of 44 patients were enrolled but again 5 were excluded due to the selection criteria.

Additionally, we have revised the title of the manuscript as “Serum paraoxonase and arylesterase activities in patients with lung cancer in a Turkish population”. So, the previous title was in a way problematic, since it sound like to reflect Turkish population (39 patient is definitely not enough to reflect) which is not the main aim of this study.

**Query:** 2. The statistical analysis is inadequate. There are numerous variables e.g. histological type of tumour, stage of the disease, patients demographic data, serum concentrations of HDL, LDL, triglycerides and activities of paraoxonase and arylesterase. Authors should define what is/are independent variable/s and what is/are dependent variable/s and perform multivariate analyses with using multiple linear regression or logistic regression. The 95% confidence intervals should also be calculated.

**Response:** Required revision is performed, please see the revised version, including newly added tables 2 & 5.
Query:
1. How blood was taken for serum specimens preparation?
Response: It is described in more detail, please see the revised version, methods section, page 5, the last paragraph.

Query:
2. What techniques were used for serum HDL, LDL, and triglycerides levels determination? This should be briefly described.
Response: The required information is provided in the revised version.