Author's response to reviews

Title: Association of Cardiac and Renal Function with Extreme N-terminal Fragment Pro-B-Type Natriuretic Peptide Levels in Elderly Patients

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Author's response to reviews: see over
Dear editor,

Thank you very much for your letter and advice. We have carefully revised the paper, and would like to re-submit it for your consideration. Below follows our response to the REVIEWER COMMENTS and related revisions that have been made. All comments have been carefully worked through and changes have been applied and/or discussed below. We hope that the revision is acceptable, and I look forward to hearing from you.

Thank you and best regards.

Yours sincerely,

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**Reviewer:** Vladimir Jakovljevic

**Reviewer's report:**

Cui et al investigated very interesting topic regarding role of N-terminal Fragment Pro-B-Type Natriuretic Peptide Levels in Elderly Patients and his association with cardiac and renal Index. The authors analyzed the data of demographic, clinical, and echocardiographic features on 152 consecutive elderly patients aged more than 80 years old with NT-proBNP levels3000pg/ml, divided in two subgroups: 1) NT-proBNP levels between 3000-10000 pg/mL and(2) NT-proBNP levels > 10000 pg/mL. On the basis of presented data, the authors concluded that the extreme elevation of NT-proBNP levels (> 3000pg/ml) is mainly determined by impaired renal function in elderly patients above 80 years. Extreme NT-proBNP levels may be useful for the assessment of the severity of
impaired renal function. Study is well designed and based on serious literature data. The number of patients is adequate for valid conclusions. Results are clearly reported and discussion supported findings in the study.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

I have only a few suggestions:

1) In the abstract is one, but important spelling mistake. Paragraph Methods, line 16, it should be 1000 pg/ml instead 1000/ml.

We apologize for this spelling mistake and which had been corrected it. (P2,1.13)

2) I kindly suggest to authors that can take a look and cited one article published recently in AJPP (article attached) in order to support part of discussion about association of NT-pro-BNP and heart failure

Thank for your suggestion, and we are fully agree with your comments. After reading this article, we cited it the in the revised manuscript, and the associated part are marked in red color in the revised discussion as follow: (P6,1.35-38)

Melki et al. recently found that NT pro-BNP may be the best single best predictor of left ventricular function in patients with non-ST-segment elevation acute coronary syndromes (1).

**Reviewer:** Besim Prnjavorac

**Reviewer's report:**
This manuscript could be acceptable with Minor Essential Revisions as noted above.

P.S. I declare that I have no conflict interest with this issue.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no conflict of interest with this issue.

- The posed questions were defined correctly;
- The methods were appropriate and well used for the problem analyzed in this issue;
- The data were collected and analyzed in appropriate methods; In part of the manuscript „Participants“ „left atrial diameter“ was wrote twice;

We are very sorry for our mistakes, and had corrected them and marked in red color in the revised manuscript. (P4,1.8-13)

Other parameters of structural and functional of heart, such as left atrial diameter, right atrial diameter, interventricular septum, posterior wall, left ventricular end systolic diameter(LVESD) and left ventricular end diastolic diameter(LVEDD), fractional shortening (FS) were also reviewed from electronic medical records closed to the day when NT pro-BNP exceeded 3000 pg/mL.

- Conclusions are clearly done and well balanced and supported by the data. Use of term BNP an NT-proBNP (Correct use NT pro-BNP) were inconsistently. Term BNP and NT pro-BNP are not the same). That is to be correct by authors.

We appreciate your remark and fully agree with your opinion that Term BNP and NT pro-BNP are not the same, so the difference between BNP
and NT pro-BNP were introduced in the part of the introduction as follows: (P3,1.2-7)

B-type natriuretic peptide (BNP; 77-108 amino acids) and its N-terminal (1-76 amino acids) counterpart, NT-proBNP, are cardiac biomarkers that have been established for assessing left ventricular dysfunction and congestive heart failure. Respecting NT pro-BNP has a longer half-life than BNP, measurement of circulating levels of NT pro-BNP have been prior recommended in the diagnosis and prognosis of patients with symptoms of left ventricular dysfunction.

In addition, our paper cited several studies(2,3), where BNP levels were directly measured. In the present study, we measured NT pro-BNP and corrected the inconsistency in the revised manuscript.

- Limitation of the work were clearly stated;
- Acknowledge of the authors, regarding of analyzed issue, is generally well, with clarification of use of terms BNP and NT pro-BNP;
- Abstract is well, but renal and cardiac index were no used in the issue as could be expect according to title;

With reference to the Reviewer’s comments, we revised this point as follows: (P2,1.3-7; P3,1.16-19)

Furthermore, the relationship between extreme NT pro-BNP levels and cardiac and renal function in elderly patients has not been reported. The aim of the present study was to examine a hypothesis that extreme NT
pro-BNP levels may be associated with impaired cardiac and renal function in elderly patients.

- English is understandable, but some correction should be done;

Thank you for your suggestion. The revised manuscript had been polished by a native speaker and potential mistakes had been revised as far as possible.
Reference

