Title: The diagnostic value of homocysteine for the occurrence and acute progression of chronic obstructive pulmonary disease

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Reviewer's report:

MS number: PULM-D-20-00524
Title: The diagnostic value of homocysteine for the occurrence and acute progression of chronic obstructive pulmonary disease
This is an interesting research that the authors evaluated whether the homocysteine level was elevated in chronic obstructive pulmonary disease (COPD) patients and its correlation with the occurrence and acute progression of COPD. However, there are some part need to be improved.

Abstract
1. In the Background, please provided the full term of "Hcy".

Background
The study rationale was reasonably provided and the objective of the study was clearly stated.

Methods
In the sub heading "Patients"
1. Please remove "19" after the word "CAT".
2. Please remove "20" after the word "MMRC".

In the sub heading "Statistical analysis"
1. Please correct "interquartil" to "interquartile".

Results
Table 1
1. Please provide more demographic data including the BMI, ratio of FEV1/FVC, comorbidity.
2. Demographics data between groups should be present in column.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Acute exacerbation group</th>
<th>Non-acute exacerbation group</th>
<th>Control group</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEV1</td>
<td></td>
<td></td>
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</tbody>
</table>

Table 2
P-value from post hoc comparison between groups should be provided.

Figure 1A, 1B
The symbol indicated P-value should be provided.

In sub heading "Correlation analysis between Hcy level and ventilation function"
Please provide R-value, not only < 0.
Please provide the cut off value of Hcy level in the table.

As you stated that the positive predictive rate (PPV), negative predictive rate (NPV) were calculated. Thus, the PPV and NPV should be provided in the table 4.

Discussion
Because the population of this study was not include the GOLD grade D, the generalizable should be mention in the limitation of the study.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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Yes