

## Peer Review File

Article information: <https://dx.doi.org/10.21037/atm-23-1079>

### Reviewer A

1) First of all, my major concern regarding this study is the lower AUC values of the four CAP parameters, all lower than 0.7, according to figure 4. This suggests poor predictive accuracy of CAP for MACEs, so this is a failed study on the predictive accuracy of CAP and the conclusion “CSP, CDP, and CMP have good predictive ability for postoperative in-hospital outcomes” is misleading. The authors need to consider whether the current data are suitable to answer the clinical question of predictive accuracy. I suggest the authors to focus on the associations between CAP and MACEs only.

**Reply: We revised the conclusion. Thank you for your advice. We agreed with you on the predictive accuracy of CSP, CDP, and CMP. We hope that this study serves as a preliminary study which will inspire further studies in the future. Thanks.**

Changes in the texts: Page 3, line 1-2: CSP, CDP, and CMP have certain predictive ability for postoperative in-hospital outcomes in STEMI patients.

2) Second, the title needs to clearly indicate the outcomes as MACE and the clinical research design of this study, i.e., a retrospective cohort study.

**Reply: We revised the title.**

Changes in the texts: page 1, line 3-5: Central arterial pressure predicts in-hospital outcomes major adverse cardiovascular events after acute ST-segment elevation myocardial infarction: a retrospective cohort study

3) Third, the abstract needs further revisions. The background did not describe the clinical significance of this research focus. The methods did not describe the inclusion of subjects, the assessment of baseline clinical factors and CAP parameters, follow up procedures, and diagnosis of MACEs. The results need to briefly summarize the clinical characteristics of the study sample including the incidence rate of MACEs. Please also report OR and accurate P values to quantify the associations of CAP parameters with MACEs. The conclusion needs comments for the clinical implications on the main findings on the associations.

**Reply: We revised the abstract.**

Changes in the texts: Please check the abstract for details. Thanks.

4) Fourth, in the introduction of the main text, the authors need to review known factors associated with the prognosis of STEMI patients, have comments on the

limitations of prior studies, and have comments on the potential clinical significance of the focus on CAP parameters.

**Reply: We discussed these points in the introduction section.**

Changes in the texts: Please check in the introduction section, thanks.

5) Fifth, in the methodology of the main text, please correctly describe the clinical research design, sample size estimation, and data collection of baseline clinical factors. In statistics, please describe the details of multiple logistic regression, i.e., how factors were included and selected. Please describe P value for statistical significance.

**Reply: We revised these points in the method section.**

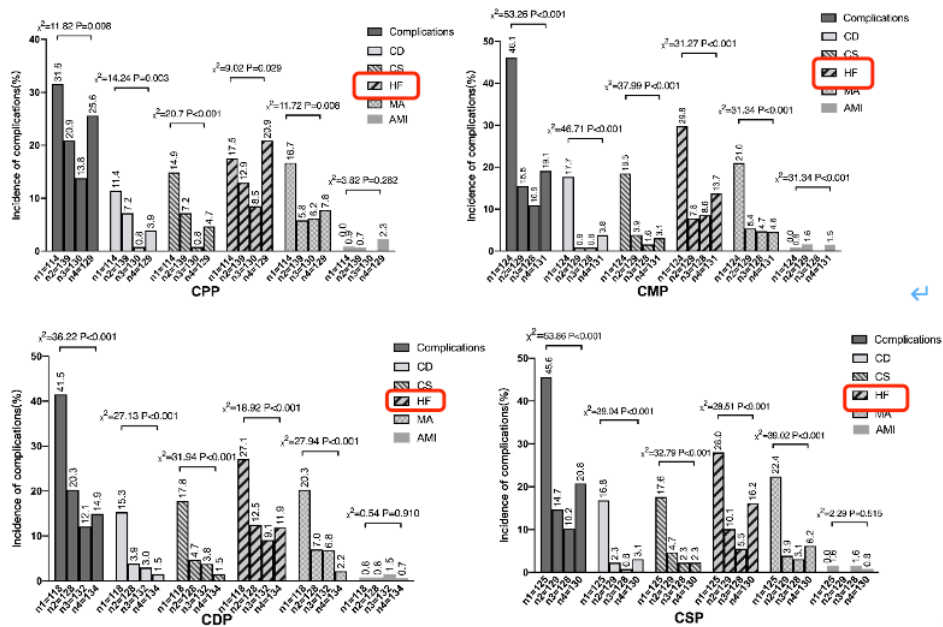
Changes in the texts: Please check in the method section, thanks.

**Reviewer B**

**1. Figure 1**

Please check which is correct, AHF or HF? Only HF in the figure, the figure and legend should be matched.

death; CS, cardiogenic shock; **AHF, acute heart failure**; MA, malignant arrhythmia; AMI,



**Reply: We revised the legend.**

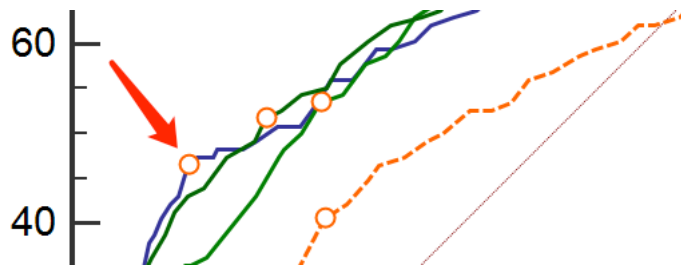
**2. Figure 2**

Please defined BNP in the legend.

**Reply: We defined BNP in the legend.**

### 3. Figure 4

Please explain the meaning of these circles in the legend.



**Reply: We explained the meaning of these circles in the legend.**

### 4. Table 1

Please add the description to the table footnote that what data are presented in table.

On admission					
LnBNP	5.24±1.76	6.23±2.06	4.95±1.56	51.86	0.000
cTnI (ng/mL)	3.66±8.78	5.66±3.07	3.07±7.95	7.88	0.005
Peak LnBNP	7.28±1.24	8.32±1.25	6.98±1.06	132.20	0.000
Peak cTnI (ng/mL)	33.35±17.86	36.20±17.45	32.52±17.92	3.83	0.051
LVEF (n, %)	59.9±10.2	52.89±13.05	61.98±8.22	81.72	0.000
HbA1c (n, %)	6.8±2.88	7.07±5.21	6.75±1.68	1.11	0.292
LDL-C (mmol/L)	2.98±0.93	2.96±1.00	2.98±0.92	0.05	0.827
HDL-C (mmol/L)	1.13±2.21	1.49±4.57	1.02±0.42	4.05	0.045

**Reply: We added the description to the table footnote that how the data are presented in table.**