

Peer Review File

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Reviewer A

This is not new as information, but still any good confirmatory data is interesting.

I would avoid using CAC score as abbreviation because it makes the reader think its the actual Agatston score. Use another way that clearly defines that it is something different. Calcium Score (any method) is a proxy for age, vascular age, morbidity in general.

Reply: Dear reviewer, we have changed the abbreviation into coronary calcium (CC)-score to avoid the association with the Agatston score. We think that it is clearly described and discussed that the investigated Weston score in our manuscript is different from the Agatston score. Notably, the Weston score is highly correlated with the gold standard Agatston score, as discussed in our manuscript, as well as in the limitations part.

I am a bit surprised to that there was not a very different mean age between survivors and non survivors. In my experience the issues were much more frequent in older/sicker patient "ab initio".

Reply: Dear reviewer, age is a certain risk factor for mortality as discussed in our manuscript. Yet, in the present patient sample it reached not statistically significant. We have adjusted in our analysis for the factor age. We believe that this factor was assessed for.

I miss 2 very important parameters for the analysis which is weight/height and its derivatives (BMI/BSA) and Diabetes/Metabolic Disease; eventually, also COPD and pulmonary disease would be useful to see.

Reply: Dear reviewer, we agree with you on this topic. However, due to the emergency setting of the COVID-19 pandemic, there is lack of anamnestic data in the patient's records. We have added this into the limitations part. "Forth, the patient history for known coronary heart disease and metabolic diseases was not available for all patients. Therefore, we could not address for this factor in the multivariable analysis. It remains elusive, whether CA scoring adds prognostic relevance beyond the anamnestic presence of CA scoring in patients with COVID-19."

Reviewer B

Interesting review concerns an area of increasing interest in cardiology and radiology.

Reply: Dear reviewer, thank you for your positive statement. We believe that the topic is of interest for both fields, especially as it provides data regarding imaging markers as a non-diagnostic by-product.

However patient stratification is not very detailed. The scoring reporting was done by a single radiologist or was it a comparative study with Cohen's k? would have been useful to stratify patients not only by Weston score but also by location of coronary lesion.

Reply: Dear reviewer, the reading was performed by a single radiologist. In fact, this is a limitation of the manuscript. However, it was shown in the first papers regarding the Weston score that it is a reliable method with very low interreader variability. We have added it into the limitations part to address this important fact. "Moreover, the reading was performed by one radiologist without a test for interreader variability. However, it was shown in previous analyses that the Weston score has low interreader variability, which reduces this limitation of the present work (17)"

Statistical model is poor of clinical variable.

Reply: Dear reviewer, the present analysis focuses on the CT imaging parameter of coronary calcifications. We have addressed that more clinical features could be of interest but cannot be provided due to the nature of this study. We have discussed this limitation in the manuscript. However, we believe that the present paper leads to further multicentric analyses with better clinical data.

Is interesting to note that calcium score was neutral on orotracheal intubation in most of the papers on the topic? How do you explain this discrepancy?

Reply: Dear reviewer, the exact reasons are difficult to explain. This is one of the first analyses to semiquantitative assess the amount of coronary calcifications. Most analyses have only assessed the presence of coronary calcifications on the CT images. This could be one of the reasons.

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Reply: Dear reviewer, thank you for this valuable recommendation. We have added it into the manuscript as reference nr 22.