

## Response to Comments:

The authors wish to thank the reviewer for his/her comments and suggestions. We have made changes to the document based on these suggestions and we hope that the revised manuscript is better suited for publication.

**Specific Comments to Authors:** The abstract is poorly presented and structured. The aim of the work should be clearly stated. It is not appealing to present the combined mean age ( $56 \pm 15$  years) and gender (women 35%) of the patients and control altogether. In order to add value to the reached results and superiority of DECT, it should be compared to the detected cases by X-ray or regular CT.

1. The abstract is poorly presented and structured. The aim of the work should be clearly stated.

We have re written the background of the abstract explicitly stating the purpose of the work was to determine if dual energy CT could be used to identify urate deposits within the vasculature and if this deposition was different between patients with gout and controls. Additionally, we have now clearly stated the aim of the work in the last paragraph of the introduction.

2. It is not appealing to present the combined mean age ( $56 \pm 15$  years) and gender (women 35%) of the patients and control altogether.

We respectfully disagree with the reviewer that it is not appealing to present the combined data in the results. The first paragraph of the results presents the data for the entire population in this study. Table 2 explicitly states the distribution of the demographics, clinical and imaging variables based on the groups. By briefly providing both the overall data as well as the breakdown by groups, the manuscript in the current form provides a clearer picture of the overall results.

3. In order to add value to the reached results and superiority of DECT, it should be compared to the detected cases by X-ray or regular CT.

It appears that the reviewer has not understood the purpose of the study and does not grasp the concept of this work. We apologize for being unclear about presenting the purpose of the study and have now updated the introduction and abstract to highlight this better.

Traditional CT or X-ray CANNOT be used to detect and quantify monosodium urate in the vasculature. Only by using the material decomposition technique from dual energy CT data (DECT) can we detect urate deposits in the vasculature and even this has only been shown in this paper and in one other previous work (Reference 35). Furthermore reference 35 only detect urate but does not perform any quantification. Ours is the first manuscript that we are aware of that actually demonstrates that quantification of monosodium urate burden in the vasculature is even feasible.