Author’s response to reviews

Title: Accuracy of a non-invasive CT-based measuring technique for cement penetration depth in human tibial UKA.

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Editors comments: All comments have been addressed.

Reviewers comments: Thank you for your comments. We have included the sample size calculation/ power analysis in the manuscript (methods/results). However, we would like not to include the bone density assessment for the following reason. The analysis might confuse readers because,

- it was carried out before implantation (doesn't necessarily match the resection line, doesn't account for higher density after impaction of the components)
- it was done only in limited areas, not in the general tibial head/medial compartment (only trabecular bone, only in three regions of interest of 1.6 cm2 each, in the anterior, middle and posterior part of the medial tibial head, measured on 20 axial CT images, starting below the last one with osteosclerotic bone)

By excluding specific regions, the resulting HU are relatively low (161,5 SD 50,3). They do serve to demonstrate the preoperative variance between specimens, but not in understanding how to identify the correct threshold value after implementation (sclerotic bone, higher density due to impaction of the component/ drill wholes, cortical bone).