Reply to “Comment on ‘Correlation between Hounsfield unit derived from head, thorax, abdomen, spine and pelvis CT and *t*-scores from DXA’”

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We thank the commenters for their interest in our paper aimed to determine the correlation between HU from several areas and *t*-score from DXA [1]. For this purpose, we collected data from patients who underwent both CT and DXA examinations regardless of the diagnosis from a single institution.

Generally, we are in agreement with the comments presented by the authors. We are in the midst of further analysis and will be reported in a future publication. The questions we would like to answer include the possibility of multivariate regression analysis by combining HUs from several areas to result in a better correlation to the *t*-score from DXA. This will reduce the reliance on the bone mass density of a single area. We are also interested in analysing the thresholds for osteopenia as suggested by the commenters. We are aware that osteopenia detection should be a focus for fracture preventive measures. However, in a resource-limited context in low- and middle-income countries and high prevalence areas like Malaysia, osteoporosis diagnosis tends to be the aim. Furthermore, we based our research protocol on the review by Gausden et al. in which studies within the review performed threshold analyses mainly for osteoporosis [2].

As for the question on the better correlation between the HU from the hip and the *t*-score from DXA, we should note

that the difference between hip and L3 in the presented study was rather marginal ($r=0.691$ vs 0.683 , respectively). One probable explanation for the slightly higher correlation for the hip is that we scored the bone mass density of the lumbar by averaging L1–L4. This contrasts to Lee et al. which utilised the *t*-scores from L1 to L4 individually [3].

References

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