Using L1 CT Attenuation to Predict Fracture Risk

To the Editor:

We thank Zhang et al (1) for their paper. We think the concept of being able to utilize computed tomography (CT) attenuation for the prediction of subsequent vertebral fractures is also applicable to many of our patients as many are too unwell to undergo multiple procedures. It remains unclear to us, though, if determining bone mineral density (BMD) from analysis at a single site is sufficiently helpful.

We certainly agree with their tenet that vertebral BMD can be artefactually elevated due to bone or joint degenerative changes (or a combination of both) and aortic calcification and this has certainly been our experience (2). Exclusively using data at one site is, however, not recommended – and this is well documented by Sahota et al (3). We wonder if utilizing data from multiple sites would aid the authors in attaining higher sensitivity, specificity and predictive values as they are – we think admirably – seeking.

Further, we wondered how many of the patients in this study bore the other risk factors for fractures, popularized by the World Health Organisation (4) and the Garvan Institute (5). We also wondered if there was also any data for fractures at sites other than the vertebra. These are often even more debilitating.

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