

Vertebral fracture assessment by dual X-ray absorptiometry: reply to comments by Fechtenbaum et al.

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Dear Editor,

We thank Fechtenbaum et al. [1] for their interest in our work [2]. We agree with them that caution is needed when vertebral fractures (VF) are diagnosed by vertebral fracture assessment (VFA) and that interreader variation remains a problem in the diagnosis of VFs. In their letter to the editor, Fechtenbaum et al. state that “there was no information about the agreement between radiologists or the number of discrepancies that justified re-evaluation” in our study report (1). This is partly incorrect. We do report kappa values to quantify disagreements between the two radiologists that evaluated spinal radiographs in our study. In a per patient analysis, kappa was 0.78 for one or more grade II–III VFs and 0.52 for one or more grade I–III VFs. However, the numbers of discrepancies between the radiologists that required a common reassessment of the radiographs were not reported. For one or more grade II–III VFs, the two-by-two table of agreement was (yes1/yes2 74, yes1/no2 12, no1/yes2 12, no1/no2 137). For one or more grade I–III VFs, the table of agreement was (yes1/yes2 100, yes1/no2 9, no1/yes2 49, no1/no2 77). It appears that radiologist 2 was more liberal when diagnosing grade I VFs than radiologist 1, whereas there was no difference in the preva-

lence of grade II–III VFs between the radiologists. After common reevaluation, the number of patients with one or more grade I–III VFs was 137, and the number with one or more grade II–III VFs was 82.

Fechtenbaum et al. also state that “the authors suggest measuring the vertebral heights.” We are unsure if this comment is aimed at our study. In any case, in our paper, we do not suggest that vertebral heights must or should be measured when analyzing VFA images. The DXA technicians in our study were instructed to use the software for height measurements to guide the classification of potentially deformed vertebra if visual assessment was insufficient.

References

1. Fechtenbaum J, Kolta S, Briot K, Roux C (2016) Vertebral fracture assessment by dual X-ray absorptiometry. *Osteoporos Int*. doi:10.1007/s00198-016-3854-6
2. Rud B, Vestergaard A, Hyldstrup L (2016) Accuracy of densitometric vertebral fracture assessment when performed by DXA technicians—a cross-sectional, multiobserver study. *Osteoporos Int* 27: 1451–1458. doi:10.1007/s00198-015-3395-4

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