

Peer Review File

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Reviewer A

The authors are to be commended for submitting an interesting article with regard weak correlation between osteoporotic-like vertebral fracture severity and densitometric T- scores in older Chinese men.

They have reported that OLVF with $\geq 1/3$ height loss always demonstrates radiographic endplate cortex fracture sign. We conclude that a severe grade OLVF ($\geq 2/5$ - $2/3$ vertebral height loss) may not be sufficient to diagnose the patient as being osteoporotic.

The article was well-written and organized. I am sure that this letter would be of interest to readers and would suggest acceptance of the paper for publication.

Reply. Thank you very much for the comments.

Reviewer B

It seems to me an interesting work but I would appreciate it if it was much more schematized, I miss a real structure in the work, I would appreciate it if it was done to be able to explain a better introduction, methodology, inclusion criteria, statistics...

Reply. Thank you very much for the comment. Now we added the new Fig-1 to illustrate. This letter, which is deemed to be concise, only re-analyzes some of the data presented in reference 2. Readers are encouraged to read reference 2 (which is an open access article). For methodology and inclusion criteria, we added the following texts to the revised manuscript.

The data were from the MrOS(Hong Kong) study. At baseline, 2000 Hong Kong Chinese men aged 65 years or older were recruited from the local community for a prospective cohort study from August 2001 to March 2003, to determine the relationship between anthropometric, lifestyle, medical, and other factors with BMD at the hip and spine. The recruitment plan was designed so that the participants would represent the general elderly population in age and gender proportion. All subjects were community dwelling, able to walk without assistance, without bilateral hip replacement, and had the potential to survive the duration of the primary study as judged by their pre-existing medical status. No participants had a known malignancy or previous lumbar spine surgery. During 2014–2017, a year-14 follow-up was carried out with a whole spine MRI performed on a random sample of 271 subjects. From our baseline database of 2000 subjects, we randomly selected 496 cases (sub-group-A, age: 73.0 ± 5.3 years)

following the principle of one out of every four cases and also excluding the cases used in the year-14 follow-up study and those of poor radiograph quality. From the MrOS(Hong Kong) year-14 follow-up, there were 259 subjects (sub-group B, 82.8±3.7 years) with complete data. Putting these two sub-groups together, in total there were 755 subjects, aged 76.4±6.7 years (range: 65-98 years). Areal BMD (unit in g/cm²) of the anterior-posterior lumbar spine and proximal femur was measured by a Hologic QDR-4,500 W densitometers (Hologic, Inc., Bedford, MA, USA). Hong Kong local BMD reference data were used for the T-score calculation.

For the current analyses, the results are presented group-wise focusing on median values, while statistical P-value was not calculated as this is dependent on the sample size.