

**Re: Are Biochemical Markers of Bone Turnover Representative of Bone Histomorphometry in 370 Postmenopausal Women?**

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DISCLOSURE STATEMENT: The author has nothing to disclose  
(other than authorship of 5 papers referenced).

Sir:

The results of the informative study of Chavassieux et al (1) are especially interesting more for the uncertainty they raise about the optimum interpretation of the biochemical markers studied than about how representative the iliac biopsy indices are of bone turnover in other parts of the skeleton.

The last sentence of the Conclusion states "The iliac crest bone may not represent perfectly the whole bone turnover." This to my mind is somewhat un-balanced in light of previous results from the authors' own laboratory. It was shown previously that iliac histomorphometry accompanied by pre-biopsy in vivo tetracycline labeling according to similar or identical methodology was considerably more predictive of bone formation, bone resorption (2,3) and even skeletal blood flow (4) as assessed using validated radio-isotopic markers administered within the same month than of the biochemical markers chosen for study in the present paper. Moreover, iliac histomorphometry predicted simultaneous changes in whole body net loss or uptake of calcium, as measured by the metabolic balance technique (5), and in loss or gain of radial trabecular bone density as measured by quantitative computed tomography (6). In general, it was shown that the imprecision of prediction by iliac histomorphometry could be largely or in some cases wholly accounted for by methodological imprecision, which does not appear to be the case in the present study.

Could it be that the biochemical markers studied do not in the authors' words "represent perfectly the whole bone turnover" and therefore in some way do not succeed in "integrating" perfectly any aspect of bone turnover across the whole skeleton?

Sincerely,

(260 words)

## References

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- 2 [The assessment of bone formation and bone resorption in osteoporosis: a comparison between tetracycline-based iliac histomorphometry and whole body 85Sr kinetics.](#)  
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3. [Calcium-47 kinetic measurements of bone turnover compared to bone histomorphometry in osteoporosis: the influence of human parathyroid fragment \(hPTH 1-34\) therapy.](#)  
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