

Letter

SIR—

A. J. Smeets et al. [1] recently tried to find a correlation between skin thickness measured by ultrasonography (US) and bone mineral density (BMD) in 94 healthy postmenopausal women. US measurements at the upper arm and forearm (10 at each site) were compared with BMD measured by quantitative computed tomography of lumbar spine and quantitative video microdensity of the hand. Their findings were: 'Skin thickness is significantly correlated with BMI [body mass index], and 'No correlation between US skin thickness measurement, age and BMD measurement'.

A question remains. BMI correlated well with skin thickness, but how did BMI correlate with BMD? A high BMI in postmenopausal women should influence weight-bearing bones positively by the higher mechanical load as well as by the higher level of bioactive estrogens [2,3].

As reported, Smeets et al. [1] used ultrasonic gel with their skin measurements. I would advise users of high-frequency ultrasound: Do not use ultrasonic gel, as to our knowledge the gel has too high a damping effect, and also contains air bubbles which may lead to artifacts in measurement readings.

The skin thickness measurements were performed using the high-frequency ultrasound analog A-image instrument Donoson, which was once manufactured by our company. Pech et al. [4], who did the first clinical tests with this instrument,

pointed to the necessity of doing a large number of scans: they computed the average skin thickness from 100 A-lines. Kluge [5] followed this advice, which is based on the fact that the interfaces between the skin layers are not flat and even planes but interdigitate. Thus the skin measurement results of Smeets et al. [1] could have been significantly enhanced by increasing the number of A-scans.

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