

ITALIAN REFERENCE DATA OF VERTEBRAL HEIGHTS FOR MORPHOMETRIC X-RAY ABSORPTIOMETRY (MXA): NORMODEXA STUDY

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To define Italian reference values of normal vertebral dimensions for morphometric X-ray absorptiometry (MXA).

The 7 centres participating in the study [Ancona, Catania (2), Genova, Imola, Rome, Verona] enrolled 1200 women, according to Black method, including a sample of fertile women (<44 yrs) and postmenopausal women from 45 to >74 yrs. All women enrolled had MXA, two centres using the Hologic QDR4500A, five centres using the GE Lunar Prodigy. Both systems acquired spine images with dual-energy (high-definition). MXA images were centrally analyzed by an experienced radiologist.

Intra-operator precision was found to be similar on the two systems, Hologic and GE Lunar: CV% was 1.7% for the posterior height and 2.2% for the anterior height. The observed vertebral heights of the Italian women were smaller (-9%) than the American values yet stored. In postmenopausal women, was observed an inverse relationship with age ($r=0.6$, $p<0.001$) between age and mean vertebral. Vertebral heights significantly correlated with years since menopause ($r=0.5$, $p<0.001$) decreasing much more in the first 5 years after the menopause.

These preliminary results indicates the usefulness also for MXA of normal values stratified for age and for years since menopause.

(D.M. Black et al. JBMR 1991;6:883-892).