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Regression equations for stature reconstruction from the lower limb bones of contemporary White South Africans

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ABSTRACT

In 2008, Dayal and colleagues generated regression equations to estimate the total skeletal height (TSH) of White South Africans. However, the validity of these equations has been questioned. The magnetic resonance imaging scanograms of 74 White South African adults were used to assess the reliability of these equations. The physiological lengths of the femur (FEPL) and tibia (TPL) were measured from these scans and input into the appropriate equations by Dayal and colleagues to calculate TSH_D. Paired t-tests, mean differences (MD), and mean absolute differences (MAD) were used to compare TSH_D with the measured TSH (TSH_{Meas}) taken directly from the scanograms and ELS were compared with the measured stature (LSM) taken of participants prior to their scans. Although there were no significant differences between TSH_{Meas} and TSH_D for males and TSH_{Meas} and TSH_D(TPL) for females, all ELS_L were significantly differ-

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