**Supplemental methods**

**Microcomputed tomography (microCT)**

Soft tissue was removed and tibiae were fixed in 70% ethanol at 4°C. The distal end of tibiae were scanned using a Skyscan 1172 microCT scanner (Bruker, Belgium) as previously described.22 The X-ray voltage and amperage were 80 kV and 124 µA, and a 1 mm aluminium filter was used. Images were acquired with an isotropic voxel size of 12 µm, with 180° of rotation, and a rotation step of 0.44°. After standardised reconstruction using NRecon software (Bruker, version 1.6.9.18), the datasets were analysed using CTAn software (Bruker, version 1.18.8.0). Standardised parameters of trabecular and cortical bone microstructure were measured.23 The trabecular region of interest was 1.07 mm and 0.95 mm distal to the growth plate in females and males respectively, and extended 3.58 mm in the distal direction. The cortical region of interest was 9.54 mm distal to the growth plate, and extended 2.38 mm in the distal direction in both sexes.