



Supplementary Figure 1. (A, B) Biomechanical test of L4 and left femur; (C-N) micro-CT 3D analysis of femora and L4; (O, P) 2D-analysis of L4 and femur images.

(C, D) scans of femur, L4 and 5 phantoms; (E, F) femoral head and corpus vertebra of L4; (G, H) thresholds for cortical bone: femur 1.1 and L4 0.9 g/cm^3 to the highest measured threshold; (I, J) for trabecular bone: femur 0.5 to 1.1 and L4 0.4 to 0.9 g/cm^3 ; (K, L) for soft tissue: femur -0.1 to 0.5 and L4 -0.1 to 0.4 mg/cm^3 ; (M, N) for total tissue: femur and L4 -0.1 to the highest threshold; (O, P) red bounded regions: cortical and trabecular bone.