

Supplementary Information

Nanomechanical Characterization of Bone Quality Depending on Tissue Age
via Bi-modal Atomic Force Microscopy

New bone $10 \times 10 \mu\text{m}^2$ areas

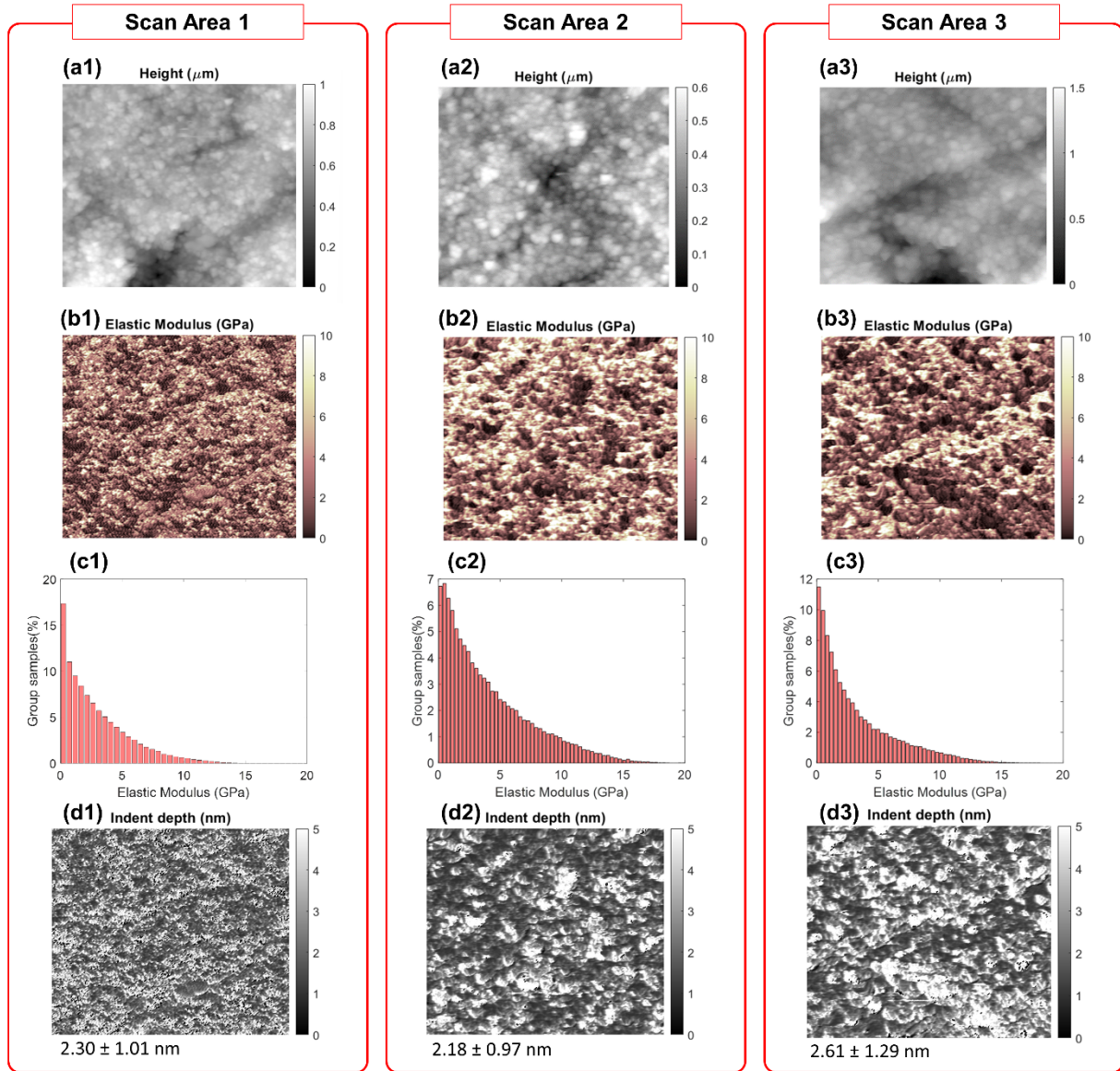


Fig.S1 Bi-modal AFM $10 \times 10 \mu\text{m}^2$ scanning maps in new bone regions. The bi-modal AFM result in each area includes (a) Morphology, (b) elastic modulus, (c) histogram of elastic modulus data, and (d) indent depth. The average and standard deviation values of indent depth are displayed in (d).

New bone $2 \times 2 \mu\text{m}^2$ areas

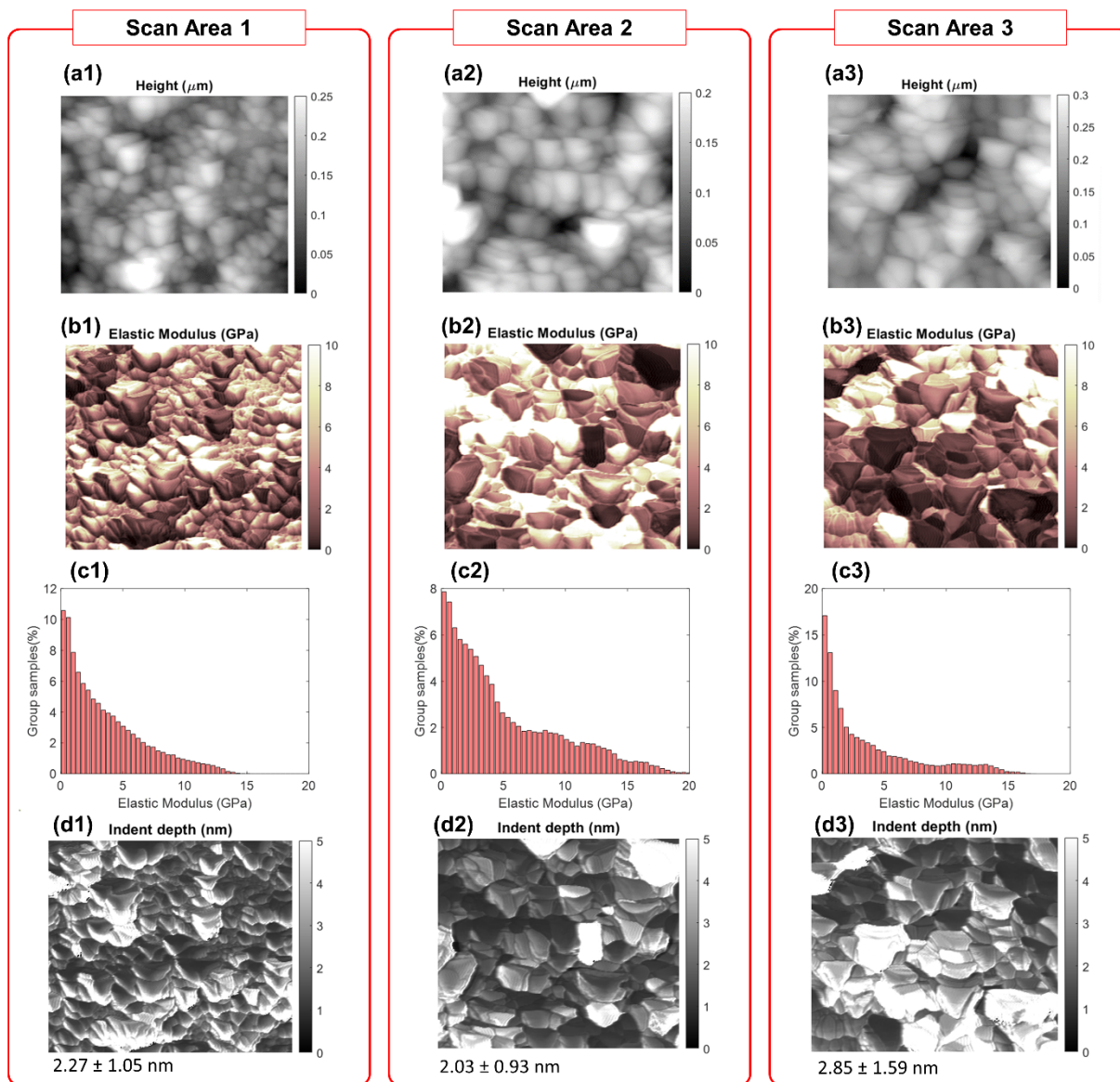


Fig.S2 Bi-modal AFM $2 \times 2 \mu\text{m}^2$ scanning maps in new bone regions. The bi-modal AFM result in each area includes (a) Morphology, (b) elastic modulus, (c) histogram of elastic modulus data, and (d) indent depth. The average and standard deviation values of indent depth are displayed in (d).

Old bone $10 \times 10 \mu\text{m}^2$ areas

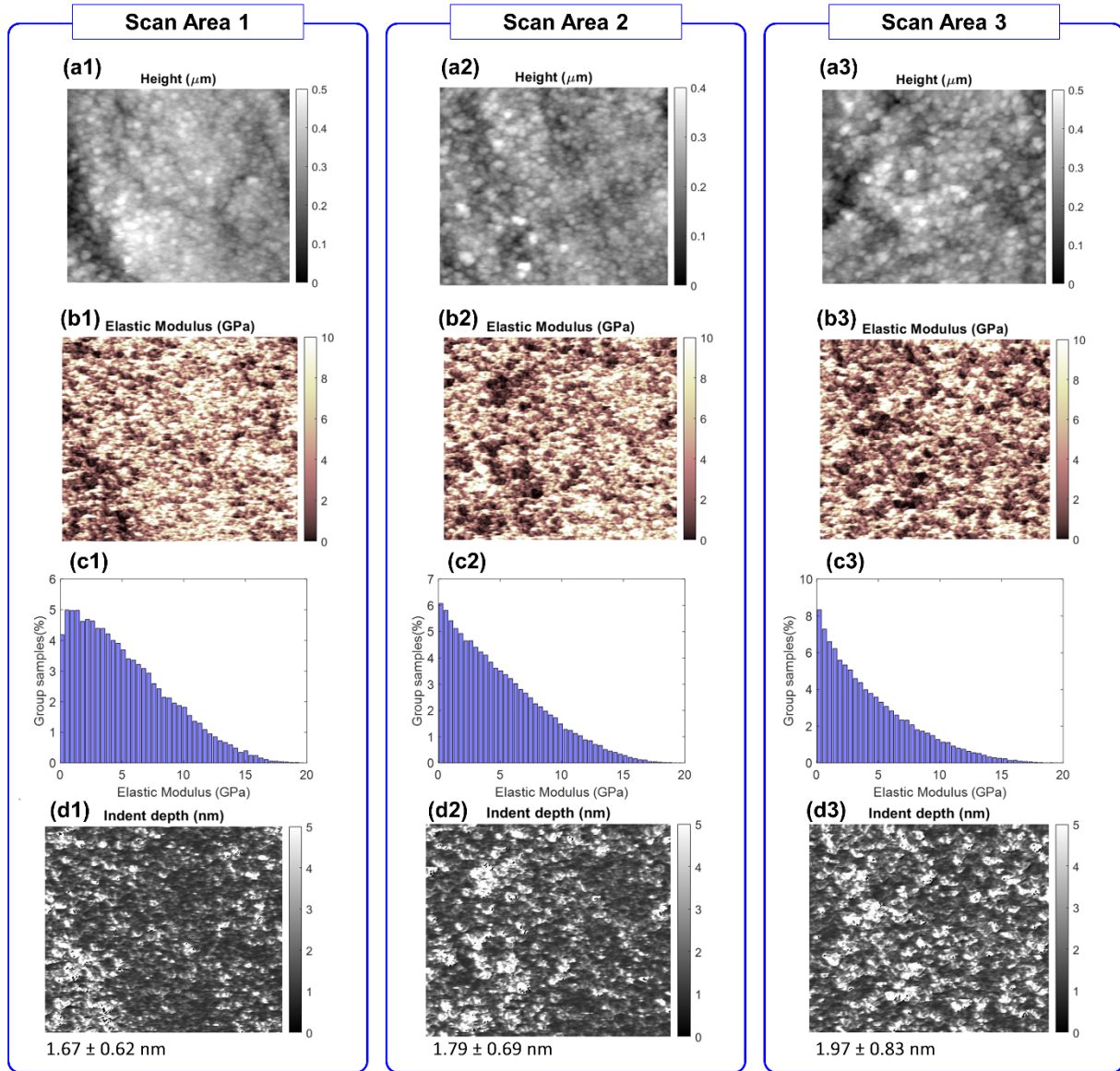


Fig.S3 Bi-modal AFM $10 \times 10 \mu\text{m}^2$ scanning maps in old bone regions. The bi-modal AFM result in each area includes (a) Morphology, (b) elastic modulus, (c) histogram of elastic modulus data, and (d) indent depth. The average and standard deviation values of indent depth are displayed in (d).

Old bone $2 \times 2 \mu\text{m}^2$ areas

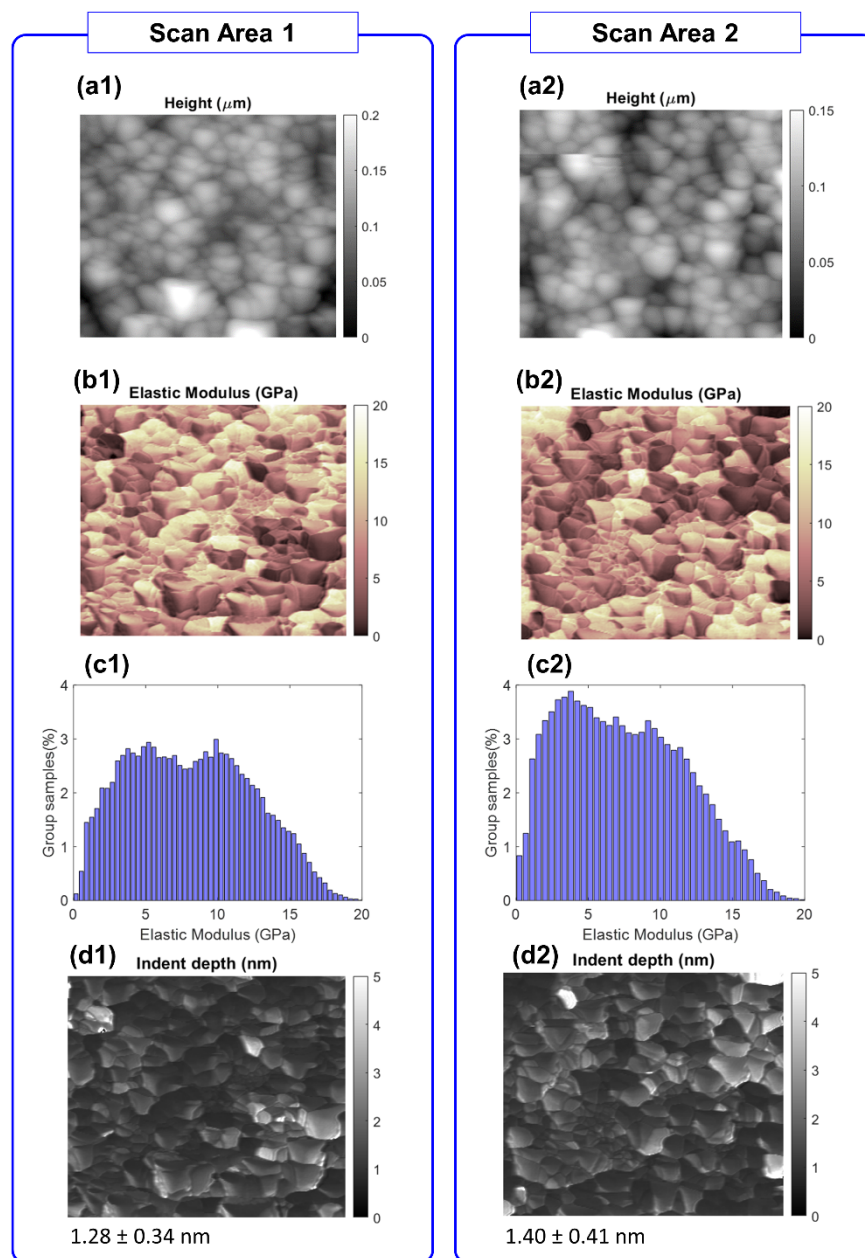


Fig.S4 Bi-modal AFM $2 \times 2 \mu\text{m}^2$ scanning maps in old bone regions. The bi-modal AFM result in each area includes (a) Morphology, (b) elastic modulus, (c) histogram of elastic modulus data, and (d) indent depth. The average and standard deviation values of indent depth are displayed in (d).