

Supplementary Material for:

Low-cycle full-field residual strains in cortical bone and their influence on tissue fracture evaluated via in situ stepwise and continuous X-ray computed tomography

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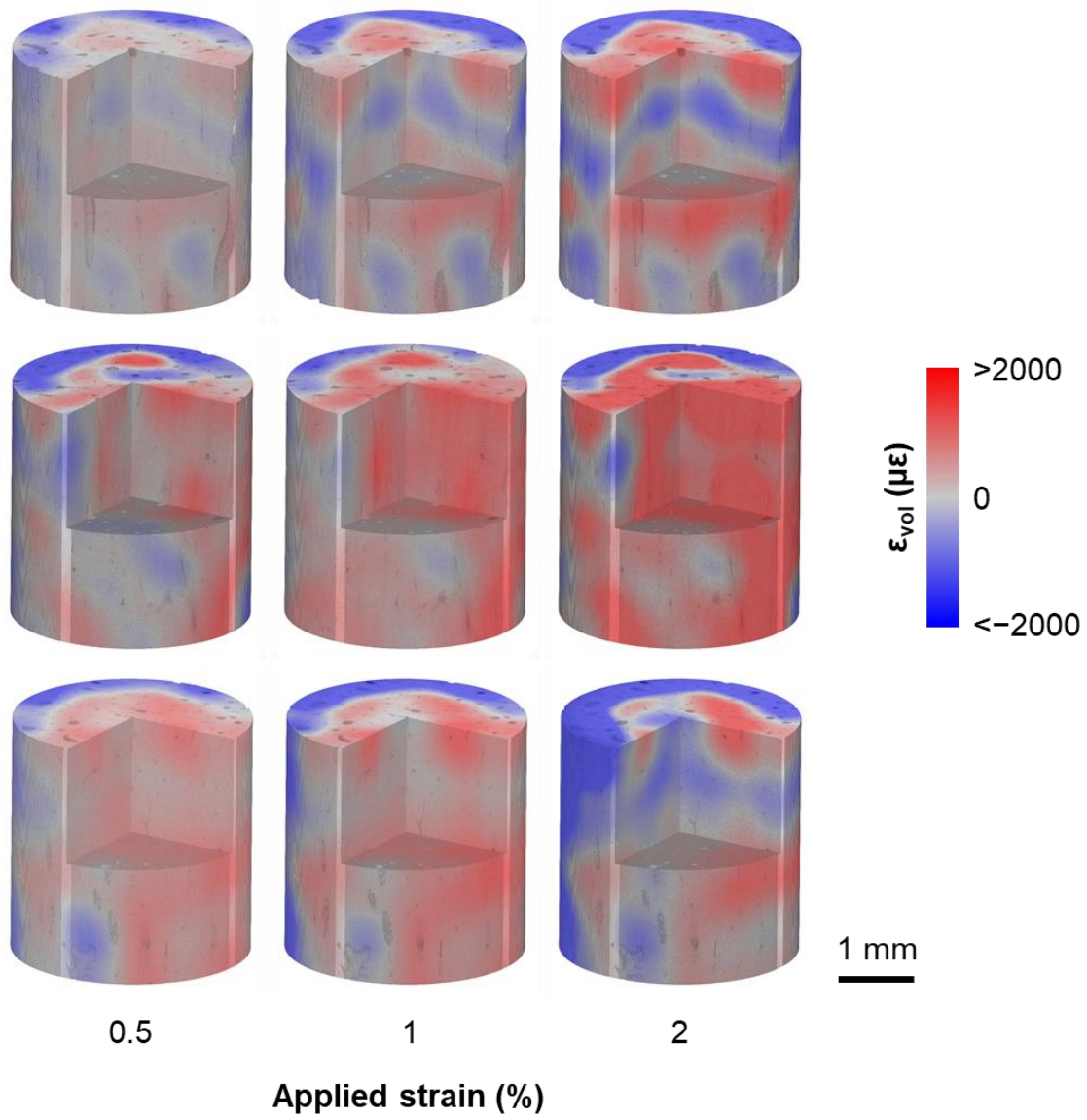


Figure S1. DVC-computed volumetric strain (ϵ_{vol}) distribution for in situ XCT progressive compression test in the three cortical bone specimens analysed.

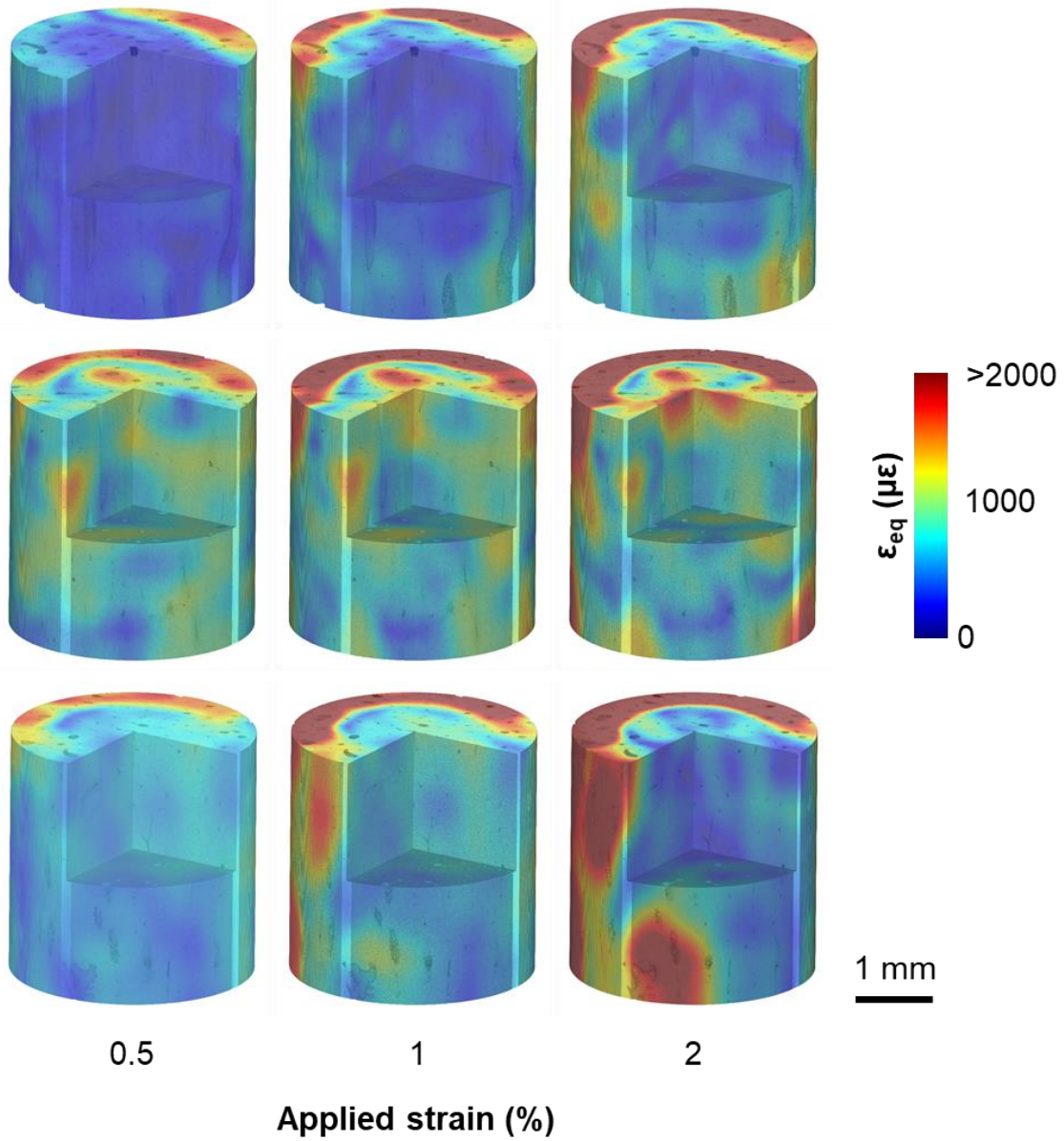


Figure S2. DVC-computed von Mises equivalent strain (ϵ_{eq}) distribution for in situ XCT progressive compression test in the three cortical bone specimens analysed.

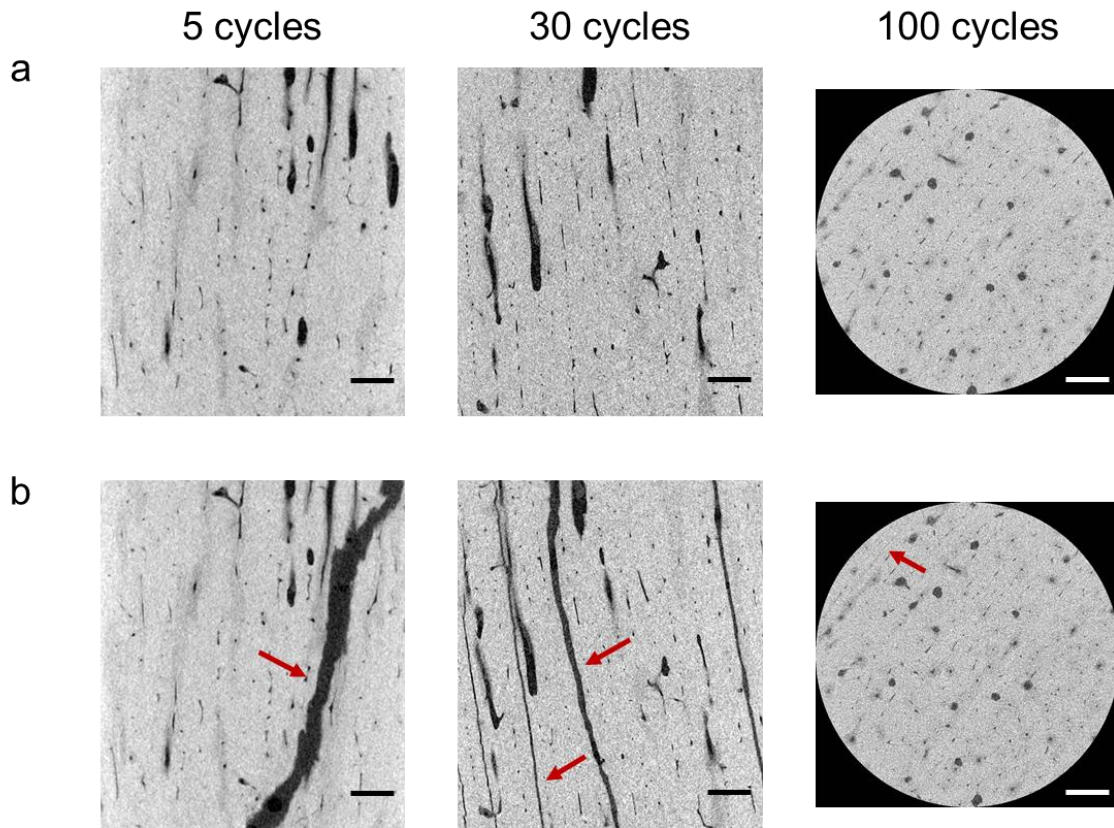


Figure S3. XCT cross-sections of cortical bone specimens subjected to 5, 10 and 100 cycles of compressive loading (a) after cyclic test and (b) following overloading. Longitudinal cracks (red arrows) can be identified in the less cycled specimens whereas only small cracks were visible in the specimen subjected to 100 cycles. Scale bar is 500 μm .

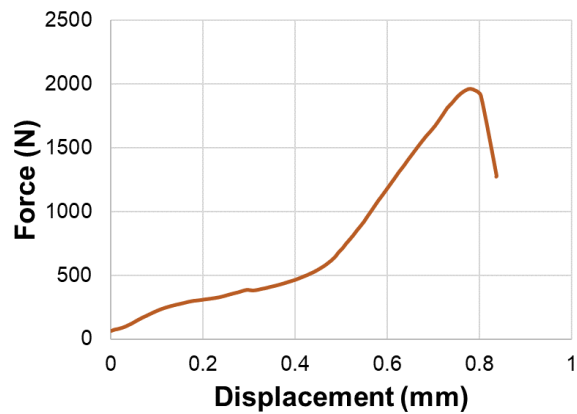


Figure S4. Force-displacement mechanical curve up to failure of cortical bone specimen following 100 cycles of compressive loading. Test was stopped once force drop was evident.