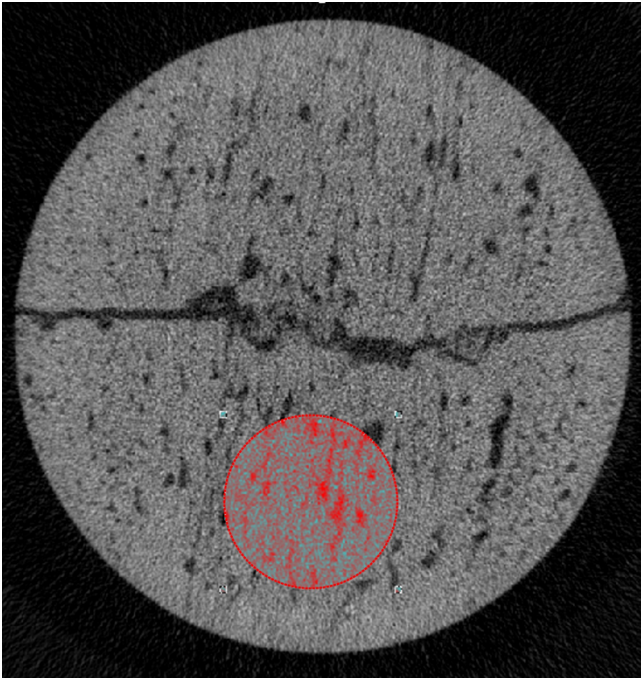


## Supplementary Figures



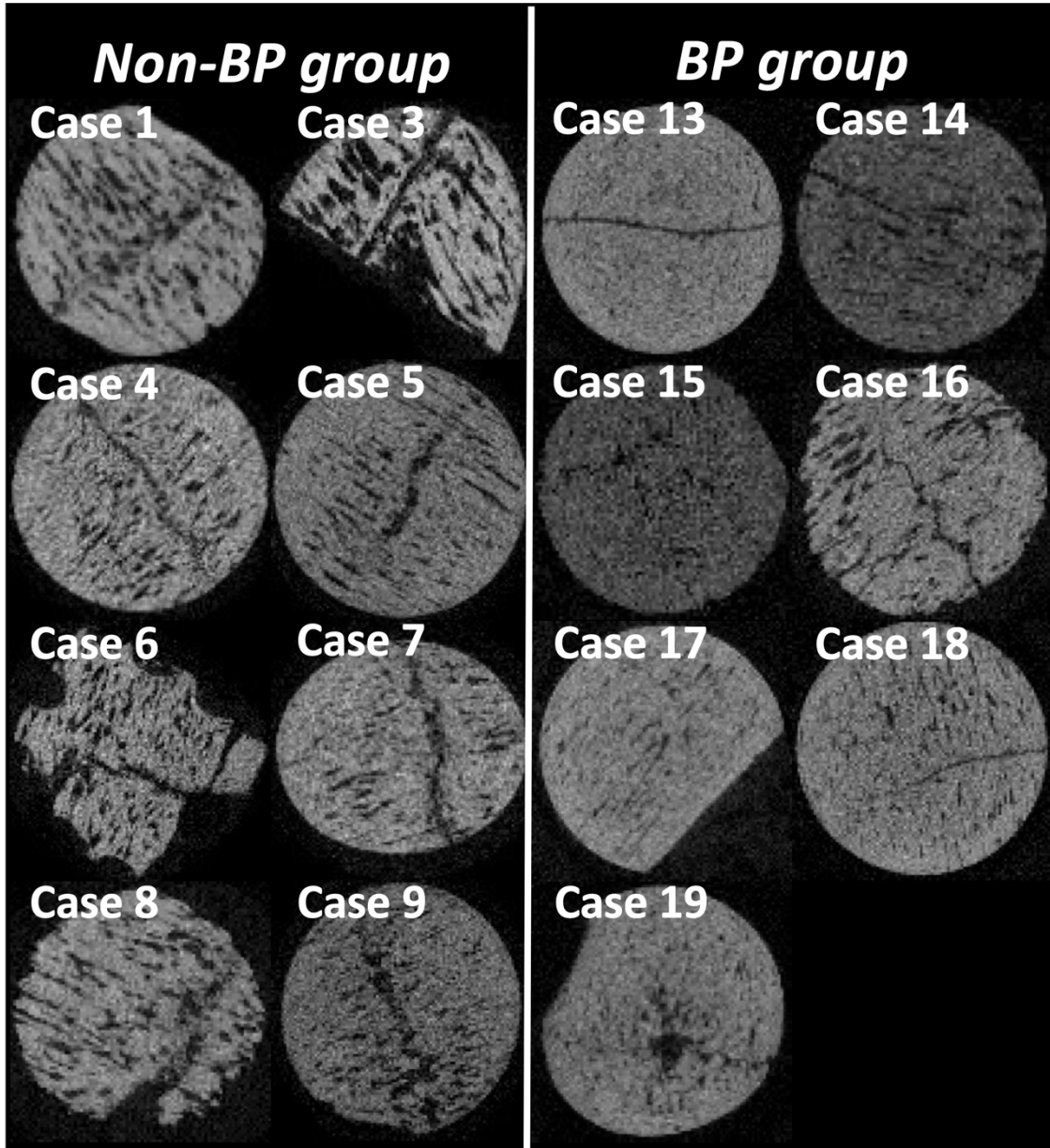
**Figure S1.** Patient who sustained a refracture at the original fracture site 4.5 years after index surgery and who underwent removal of the intramedullary nail 23 months previously due to a femoral neck fracture (Case 4).



**Figure S2.** A region of interest (red circle, 3-mm diameter) was used to perform measurements in the CT-Analyzer (Sky-Scan 1174 micro-CT). The region of interest was chosen so as to avoid the fracture gap and sample margin, while maintaining the largest possible size throughout the samples.

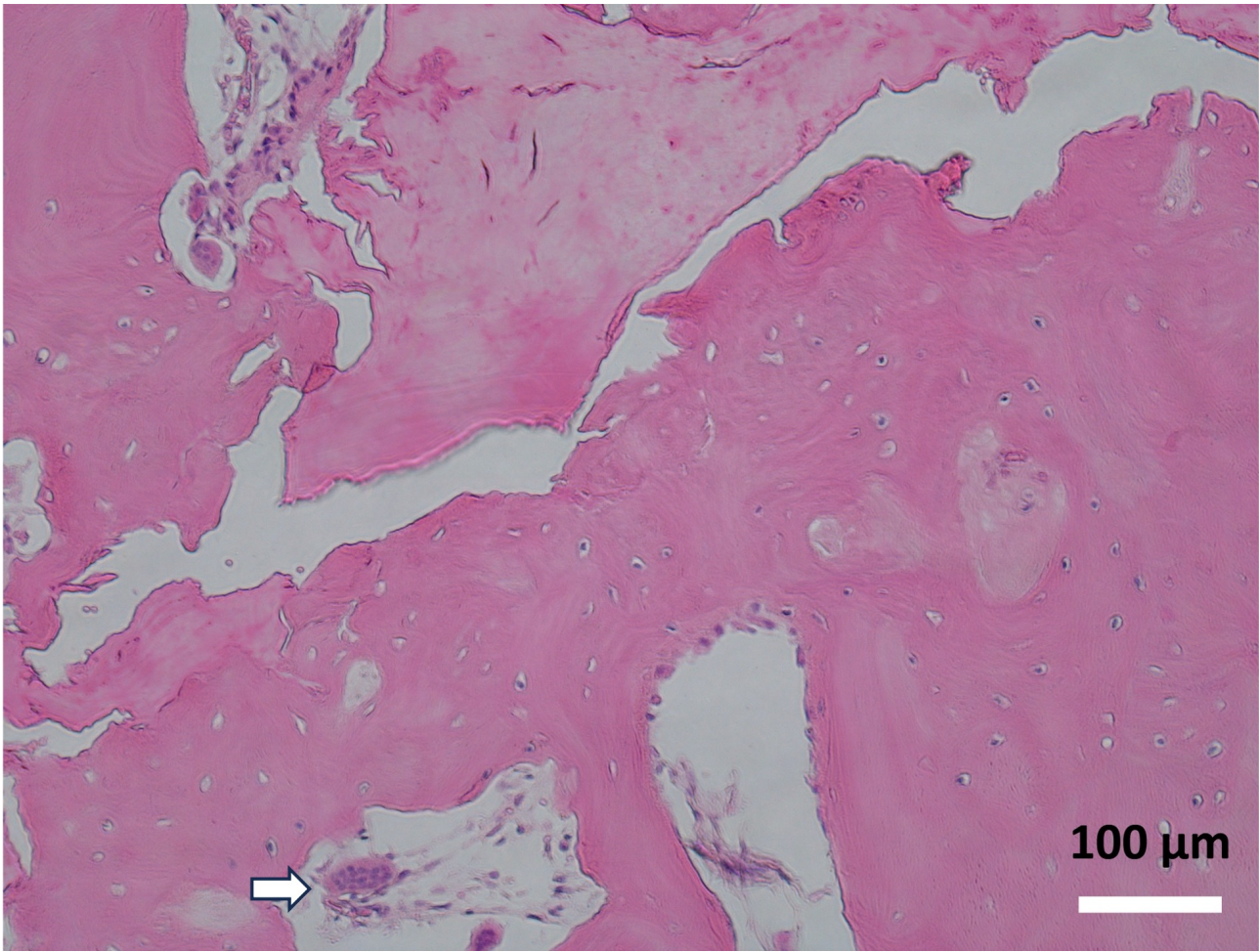


**Figure S3.** Patient in the *BP group* who sustained a new complete AFF proximal to the initial fracture, 5 years and 8 months after the index surgery after removal of the intramedullary nail at 33 months postoperatively owing to local discomfort at the site of nail insertion (**Case 15**).



**Figure S4.** Representative micro-CT images of the fracture gaps in the *BP group* and *non-BP group*.





**Figure S5.** Representative image of an osteoclastic giant cell (arrow) in the *BP group* (Case 11) stained with hematoxylin and eosin, visualized using the 10×/0.45 M27 objective lens (Carl Zeiss).