

**SUPPLEMENTARY FIG. S2.** TBI permits transplanted BMSC engraftment and subsequent new bone formation in a cell dose-dependent fashion. Representative three-dimensional reconstructions of microcomputed tomography ( $\mu$ CT) images 4 weeks post-transplantation (side, coronal, and transverse view; region of interest: starting immediately beyond the epiphyseal plate and extending 2 mm distally by transaxial tracing for 135 cuts). (A–E) Nonirradiated and (F–J) irradiated animals. (A, F) Vehicle-transplanted (right) tibiae and BMSC-transplanted (left) tibiae at (B, G)  $1.32 \times 10^5$  (1%), (C, H)  $1.32 \times 10^6$  (10%), (D, I)  $6.60 \times 10^6$  (50%), or (E, J)  $1.32 \times 10^7$  cells/mL (100%) (EP: epiphyseal plate, side view: scale bar 1 mm, coronal and transverse views: scale bar 500  $\mu$ m, n=7 animals per group).