



**Figure S1:** Extended femoral  $\mu$ CT results. **(A)**  $\mu$ CT-based quantification of the trabecular and cortical bone mineral density (Tb.BMD, Ct.BMD) in 6- and 24-week-old male and female *Col22a1*<sup>+/+</sup>, *Col22a1*<sup>-/+</sup> and *Col22a1*<sup>-/-</sup> mice as indicated. **(B)**  $\mu$ CT-based quantification the trabecular and cortical bone mineral content (Tb.BMC, Ct.BMC) in the same mice. **(C)**  $\mu$ CT-based quantification cortical area (Ct.Area) in the same mice. **(D)**  $\mu$ CT-based quantification the cortical tissue mineral content (Ct.TMD) in the same mice. Single points indicate individual animals. Error bars indicate standard deviation. Data were analyzed by Student's t-test with Bonferroni correction for multiple testing. \* $p < 0.05$ .