

SUPPLEMENTARY TABLE 1. UNITS, NOMENCLATURE, AND DEFINITIONS OF THE CANCELLOUS AND CORTICAL BONE VARIABLES MEASURED IN THE TIBIA (VIA HISTOMORPHOMETRY) AND FEMUR (VIA μ CT)

<i>Bone variable</i>	<i>Units</i>	<i>Symbol</i>	<i>Definition</i>
<i>Histomorphometry</i>			
Cancellous bone volume	%	Cn.BV/TV	Ratio of bone area to the total area of marrow space
Trabecular number	#/mm	Tb.N	Average number of trabeculae per mm
Trabecular width	μ m	Tb.Wi	Average 2D thickness of trabeculae
Trabecular separation	μ m	Tb.Sp	Average 2D distance between trabeculae
Cortical tissue area	mm^2	Ct.T.Ar	Total cross-sectional area from the periosteal perimeter inward
Cortical bone area	mm^2	Ct.B.Ar	Total cross-sectional area encompassed by cortical bone
Marrow area	mm^2	Ma.Ar	Total cross-sectional area encompassing the marrow cavity
Cortical width	μ m	Ct.Wi	Average cortical thickness
Osteoblast surface	%	Ob.S/BS	Percent of bone surface occupied by osteoblasts
Osteoclast surface	%	Oc.S/BS	Percent of bone surface occupied by osteoclasts
Osteoid surface	%	OS/BS	Percent of bone surface occupied by osteoids
Mineralizing surface	%	MS/BS	Percent of mineralizing surface per bone surface
Periosteal surface	%	Ps.MS/BS	Mineralizing surface at periosteal perimeter
Endocortical surface	%	Ec.MS/BS	Mineralizing surface at endocortical perimeter
Mineral apposition rate	$\mu\text{m}/\text{d}$	MAR	Rate of mineral apposition per day
Bone formation rate	$\mu\text{m}^3/\mu\text{m}^2/\text{day}$	BFR/BS	Rate of bone formation per day
<i>μCT variables</i>			
Cancellous bone volume	%	BV/TV	Ratio of cancellous bone volume to total volume in marrow space
Trabecular number	#/mm	Tb.N	Average number of trabeculae per mm
Trabecular thickness	mm	Tb.Th	Mean 3D thickness of trabeculae
Trabecular separation	mm	Tb.Sp	Mean 3D distance between trabeculae
Structural model index	no units	SMI	Indicator of trabecular shape; 0=parallel plates, 3=cylindrical rods
Total bone area	mm^2	Tt.Ar	Total cross-sectional area from the periosteal perimeter inward
Cortical bone area	mm^2	Ct.Ar	Total cross-sectional area encompassed by cortical bone
Medullary area	mm^2	Ma.Ar	Area encompassing the marrow cavity
Cortical area fraction	%	Ct.Ar/Tt.Ar	Ratio of cortical bone area to total bone area
Cortical thickness	mm	Ct.Th	Average cortical thickness

Cancellous variables were measured in the region of interest (ROI) at the proximal tibial metaphysis (histomorphometry) or distal femoral metaphysis (μ CT). Cortical variables were measured in the ROI at the tibial diaphysis (histomorphometry) or femoral diaphysis (μ CT). Readers are directed to citations²⁹⁻³¹ for in-depth reviews of skeletal histomorphometry and to citation³² for further review of μ CT assessment of bone morphometry.