

## PREFACE to Nomenclature Tables for QCT

- 1) We tried to include variables that could be assessed using either 2D or 3D (ie volumetric) QCT methods
- 2) Variable list is not meant to be exclusive. As new regions and variables are developed, we have tried to set this up so that they can follow the same nomenclature format
- 3) Whenever possible, we tried to conform to the guidelines set out by the ASBMR Histomorphometry Nomenclature Committee (Parfitt et al, JBMR 1987)
- 4) Until standardized, specifics locations for the various measurements will have to be specified in the methods sections of any manuscript

### QCT Variables – HIP

FN = femoral neck; TR=trochanteric; IT = intertrochanteric; TH = total hip; PD = prox diaphysis

Geometry	How measured	Suggested nomenclature
Bone width (axis-oriented) (mm) ap: anteroposterior; ml: mediolateral; si: superoinferior		FN.Wi <sub>ap</sub> TR.Wi <sub>ap</sub> IT.Wi <sub>ap</sub> PD.Wi <sub>ap</sub>
Periosteal circumference (mm)	Derived or Measured?	FN.PsC PD.PsC
Total cross-sectional area (average): area inside periosteal boundary (mm <sup>2</sup> )		FN.Ar.Tt <sub>avg</sub> PD.Ar.Tt <sub>avg</sub>
Total cross-sectional area (min): area inside periosteal boundary (mm <sup>2</sup> )		FN.Ar.Tt <sub>min</sub> PD.Ar.Tt <sub>min</sub>
Endosteal volume (mm <sup>3</sup> )		FN.mid.V.Es FN.Tt.V.Es TR.V.Es IT.V.Es TH.V.Es
Cortical volume (mm <sup>3</sup> )		FN.mid.V.Ct FN.Tt.V.Ct TR.V.Ct IT.V.Ct TH.V.Ct PD.V.Ct
Total volume (mm <sup>3</sup> )		FN.mid.V.Tt FN.Tt.V.Tt TR.V.Tt IT.V.Tt TH.V.Tt
Endosteal area (mm <sup>2</sup> )		FN.mid.Ar.Es

		FN.Tt.Ar.Es TR.Ar.Es IT.Ar.Es TH.Ar.Es
Cortical area (mm <sup>2</sup> )		FN.mid.Ar.Ct FN.Tt.Ar.Ct TR.Ar.Ct IT.Ar.Ct TH.Ar.Ct PD.Ar.Ct
Total area (mm <sup>2</sup> )		FN.mid.Ar.Tt FN.Tt. Ar.Tt TR.Ar.Tt IT.Ar.Tt TH.Ar.Tt
Area moment of inertia (max) (mm <sup>4</sup> )		FN.I <sub>max</sub> PD.I <sub>max</sub>
Area moment of inertia (min) (mm <sup>4</sup> )		FN.I <sub>min</sub> PD.I <sub>min</sub>
Area moment of inertia (axis oriented) (mm <sup>4</sup> )		FN.I <sub>ap</sub> PD.I <sub>ap</sub>
Area moment of inertia (polar) (mm <sup>4</sup> )		FN.I <sub>p</sub> PD.I <sub>p</sub>
Apparent (?) cortical thickness (average) (mm)		FN.mid.Ct.Th <sub>avg</sub> FN.Tt.Ct.Th <sub>avg</sub> TR.Ct.Th <sub>avg</sub> IT.Ct.Th <sub>avg</sub> PD.Ct.Th <sub>avg</sub>
Apparent (?) cortical thickness (sectors/quadrants: inferior, superior, anterior, posterior, medial, lateral)(mm)		FN.Ct.Th <sub>infmed</sub>
<b>Density, BMC</b>	<b>How measured</b>	<b>Suggested nomenclature</b>
Trabecular density (mg/cm <sup>3</sup> )		FN.mid.vBMD.Tb FN.Tt.vBMD.Tb TR.vBMD.Tb IT.vBMD.Tb TH.vBMD.Tb
Cortical density (mg/cm <sup>3</sup> )		FN.mid.vBMD.Ct FN.Tt.vBMD.Ct TR.vBMD.Ct IT.vBMD.Ct TH.vBMD.Ct PD.vBMD.Ct
Integral density (mg/cm <sup>3</sup> )		FN.mid.vBMD.int

		FN.Tt.vBMD.int TR.vBMD.int IT.vBMD.int TH.vBMD.int
Trabecular BMC (g)		FN.mid.vBMC.Tb FN.Tt.vBMC.Tb TR.vBMC.Tb IT.vBMC.Tb TH.vBMC.Tb
Cortical BMC (g)		FN.mid.vBMC.Ct FN.Tt.vBMC.Ct TR.vBMC.Ct IT.vBMC.Ct TH.vBMC.Ct PD.vBMC.Ct
Integral BMC (g)		FN.mid.vBMC.int FN.Tt.vBMC.int TR.vBMC.int IT.vBMC.int TH.vBMC.int
<b>DXA-like variables</b>	<b>How measured</b>	<b>Suggested nomenclature</b>
PA-BMD derived for DXA-like regions		FN.aBMD <sub>der</sub> TR.aBMD <sub>der</sub> IT.aBMD <sub>der</sub> TH.aBMD <sub>der</sub>