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CORRECTION

Correction: Large cortical bone pores in the tibia are associated with proximal femur strength

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There are errors in Tables 1 and 3. Please see the correct Tables 1 and 3 here.

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Table 1. Bone properties of the tibia midshaft measured with microCT and SAM.

	Name	Unit	Description
microCT			
vBMD$_{tot}$	Bone mineral density	[mgHA/cm^3]	Of the entire bone
vBMD$_{cort}$			Of the cortical bone
SAM			
Tt.Ar	Total area	[mm^2]	Area occupied by the bone cross section
Ct.Ar	Cortical area	[mm^2]	Area of cortical bone
T.Ar	Tissue area	[mm^2]	Area of the bone tissue
Ct.Wba	Areal portion of cortical tissue	[%]	Cortical tissue area / Tt.Ar
Ct.Th	Cortical thickness	[mm]	Most frequent minimum distance between peri- and endosteal surfaces
Ct.Po	Cortical porosity	[%]	100 × (1 –tissue pixels / cortical bone pixels)
Po.D	Pore density	[#/mm^2]	Number of pores per square mm
relPo.n$_{60\mu m}$	Prevalence of large pores	[%]	Number of pores with diameter larger than a fixed threshold divided by total number of pores
Po.Dm	Pore diameter	[μm]	Diameter of the largest inscribed circle [20]
Po.Dm$_{10\%}$	Po.Dm quantiles	[μm]	Quantiles of the Po.Dm distribution
relCt.Po$_{60\mu m}$	Relative proportion of porosity	[%]	Proportion of porosity due to pores with diameter above fixed threshold

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Table 3. Hip DXA, macroscopic geometry and vBMD of the tibia midshaft, architecture and composition of tibial cortical bone.

								control for aBMD$_{neck}$			
				STANCE		FALL		STANCE		FALL	
			aBMD$_{neck}$	hvFE_S	hvFE_Fu	hvFE_S	hvFE_Fu	hvFE_S	hvFE_Fu	hvFE_S	hvFE_Fu
	Mean ± SD (min-max)	CV [%]	Pearson r								
Left hip (n = 19)											
DXA											
aBMD$_{neck}$ [mgHA/cm^2]	529 ± 96 (404–760)	18	/	0.62*	0.74**	0,66*	0,78**	/	/	/	/
Left tibia (n = 19)											
MicroCT (whole cross section)											
vBMD$_{tot}$ [mgHA/cm^3]	617 ± 133 (261–776)	22	0.46	0.69*	0.65*			0.58	0.52		
vBMD$_{cort}$ [mgHA/cm^3]	914 ± 54 (801–988)	6		0.72**	0.63*			0.65*	0.53		
SD(vBMD$_{cort}$) [mgHA/cm^3]	185 ± 36 (131–266)	19		-0.66*	-0.59*			-0.62*	-0.54		
SAM (whole cross section)											
Tt.Ar [mm^2]	441 ± 110 (326–829)	26									
Ct.Ar [mm^2]	238 ± 65 (77–349)	25	0.51	0.59*	0.71**	0,58	0,60*		0.58		
T.Ar [mm^2]	235 ± 59 (96–333)	22	0.47	0.52	0.67*	0,57	0,60*		0.55		
Ct.Wba [%]	49.1 ± 14.5 (15.6–69.8)	27	0.51	0.76**	0.73**		0,48	0.65*	0.61*		
SAM (ROI$_{US}$)											
Ct.Th [mm]	2.98 ± 1.19 (0.82–5.35)	40	0.75**	0.66*	0.81**	0,77**	0,81**		0.57	0.56	0.54
Ct.Po [%]	11.1 ± 3.6 (7.7–21.4)	32									
Po.D [1/mm^2]	16.9 ± 1.8 (13.2–21.1)	11									
Po.D$_{60\mu m}$ [1/mm^2]	4.5 ± 1.1 (2.8–6.2)	25									
Po.D$_{100\mu m}$ [1/mm^2]	1.3 ± 0.7 (0.5–3.4)	56		-0.54	-0.56				-0.52		
Po.D$_{160\mu m}$ [1/mm^2]	0.3 ± 0.3 (0.1–1.4)	94		-0.52	-0.52			-0.49	-0.54		
relPo.n$_{60\mu m}$ [%]	27.9 ± 6.7 (18.0–38.4)	24									
relPo.n$_{100\mu m}$ [%]	7.6 ± 4.3 (2.5–20.9)	56		-0.53	-0.57			-0.47	-0.56		

(*Continued*)

Table 3. (Continued)

								control for $aBMD_{neck}$			
				STANCE		FALL		STANCE		FALL	
			$aBMD_{neck}$	hvFE_S	hvFE_Fu	hvFE_S	hvFE_Fu	hvFE_S	hvFE_Fu	hvFE_S	hvFE_Fu
$relPo.n_{160\mu m}$ [%]	1.9 ± 1.8 (0.4–8.5)	96		-0.51	-0.52			-0.49	-0.56		
Po.Dm [μm]	51 ± 6 (44–67)	12			-0.47			ns	ns		
SD(Po.Dm) [μm]	34 ± 7 (23–55)	21		-0.55	-0.57			-0.52	-0.60*		
$Po.Dm_{10\%}$ [μm]	19 ± 4 (12–25)	20									
$Po.Dm_{90\%}$ [μm]	91 ± 19 (68–152)	21		-0.49	-0.54				-0.51		
$Ct.Po_{60\mu m}$ [%]	7.9 ± 3.6 (4.5–18.9)	46		-0.46	-0.50				-0.48		
$Ct.Po_{100\mu m}$ [%]	4.8 ± 3.5 (1.5–16.4)	73		-0.50	-0.52				-0.51		
$Ct.Po_{160\mu m}$ [%]	2.4 ± 2.6 (0.4–11.4)	107			-0.47				-0.50		
$relCt.Po_{60\mu m}$ [%]	68.9 ± 8.6 (54.8–88.3)	13		-0.51	-0.60*	-0,49	-0,50		-0.60*		
$relCt.Po_{100\mu m}$ [%]	40.1 ± 13.9 (17.3–77.0)	35		-0.61*	-0.63*	-0,46	-0,48	-0.54	-0.62*		
$relCt.Po_{160\mu m}$ [%]	18.9 ± 12.1 (5.1–53.6)	64		-0.50	-0.53				-0.54		

The last nine columns show the Pearson coefficients of the linear correlation with aBMDneck, hvFE_S and hvFE_Fu and the Pearson r of the linear partial correlation analysis controlling for the effect of $aBMD_{neck}$, for both STANCE and FALL loading conditions. Coefficients are reported only for p-values < 0.05. The 95% Confidence Intervals for the correlation coefficients of this table can be found in S3 Table.

* $p < 0.01$;

** $p < 0.001$.

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Reference

1. Iori G, Schneider J, Reisinger A, Heyer F, Peralta L, Wyers C, et al. (2019) Large cortical bone pores in the tibia are associated with proximal femur strength. PLoS ONE 14(4): e0215405. https://doi.org/10.1371/journal.pone.0215405 PMID: 30995279