

Quantitative Ultrashort Echo Time (UTE) Magnetic Resonance Imaging of Femoral Trabecular Bone in Aging and Osteoporosis

ELECTRONIC SUPPLEMENTARY MATERIAL

Supplementary Table S1: Comparison of axial quantitative measurement among the four groups assessed by reader 2

Variables	Group	Reader 2							
		Median (Q1-Q3)	Overall <i>P</i>	P-value in post-hoc					
				A vs. B	A vs. C	A vs. D	B vs. C	B vs. D	C vs. D
Diameter (mm)	A	37.1 (36.39-38.87)	0.076						
	B	39.19 (37.03-40.47)							
	C	38.53 (37.15-40.53)							
	D	37.51 (36.89-40.53)							
PMR head total (a.u.)	A	4.15 (3.78-4.96)	<0.001	0.035	0.001	<0.001	0.618	0.157	0.157
	B	5.46 (4.76-6.87)							
	C	6.40 (4.94-9.09)							
	D	8.57 (7.42-13.12)							
PMR head center (a.u.)	A	3.67 (3.22-4.18)	<0.001	0.128	0.001	<0.001	0.263	0.042	0.128
	B	4.55 (3.55-5.45)							
	C	5.22 (4.39-7.15)							
	D	6.86 (6.22-9.57)							
MI head total (%)	A	12.12 (10.30-13.66)	<0.001	0.015	<0.001	<0.001	0.562	0.097	0.272
	B	8.83 (7.54-10.46)							
	C	7.95 (5.93-9.72)							
	D	6.10 (5.01-8.02)							
MI head center (%)	A	13.20 (11.52-16.03)	<0.001	0.042	0.001	<0.001	0.425	0.081	0.243
	B	10.09 (8.89-12.78)							
	C	9.07 (6.99-11.33)							
	D	6.83 (6.13-9.11)							

Data are presented as median with interquartile range (Q1-Q3).

Group A: Normal Young, Group B: Old Normal, Group C: Osteopenia, Group D: Osteoporosis.

Overall group comparisons were performed using the Kruskal-Wallis test.

Post-hoc pairwise comparisons were conducted using Dunn's test with Holm correction.

PMR, pore-to-matrix ratio; MI, matrix index

Supplementary Table S2: Comparison of oblique-coronal quantitative measurement among the four groups assessed by reader 2

Variables	Group	Reader 2							
		Median (Q1-Q3)	Overall <i>P</i>	P-value in post-hoc					
				A vs. B	A vs. C	A vs. D	B vs. C	B vs. D	C vs. D
Diameter (mm)	A	35.95 (34.37-36.72)	0.295						
	B	36.69 (34.69-38.64)							
	C	35.92 (33.22-37.21)							
	D	35.09 (32.73-36.70)							
PMR head total (a.u.)	A	3.68 (3.38-4.58)	<0.001	0.012	0.001	<0.001	0.294	0.043	0.228
	B	5.38 (4.80-6.74)							
	C	6.00 (4.82-7.86)							
	D	8.31 (6.63-10.74)							
PMR head center (a.u.)	A	3.35 (2.90-4.10)	<0.001	0.053	0.032	<0.001	0.757	0.121	0.121
	B	4.67 (4.03-5.45)							
	C	4.66 (3.95-6.52)							
	D	6.22 (5.63-7.59)							
PMR neck (a.u.)	A	7.16 (5.69-7.81)	<0.001	<0.001	<0.001	<0.001	0.647	0.387	0.130
	B	16.86 (11.94-20.183)							
	C	17.34 (11.08-22.62)							
	D	21.24 (16.28-25.92)							
MI head total (%)	A	13.22 (11.23-14.74)	<0.001	0.011	0.001	<0.001	0.939	0.311	0.292
	B	9.37 (8.05-11.60)							
	C	8.65 (7.36-11.17)							
	D	6.56 (5.75-8.97)							
MI head center (%)	A	14.05 (12.09-15.78)	<0.001	0.042	0.001	<0.001	0.425	0.081	0.243
	B	10.54 (8.89-17.39)							
	C	9.38 (7.85-13.06)							
	D	7.55 (6.17-9.95)							
MI neck (%)	A	10.55 (9.80-11.75)	<0.001	0.003	<0.001	<0.001	0.583	0.309	0.309
	B	6.86 (5.60-8.09)							
	C	5.66 (4.01-6.58)							
	D	3.70 (3.15-5.32)							

Data are presented as median with interquartile range (Q1-Q3).

Group A: Normal Young, Group B: Old Normal, Group C: Osteopenia, Group D: Osteoporosis.

Overall group comparisons were performed using the Kruskal-Wallis test.

Post-hoc pairwise comparisons were conducted using Dunn's test with Holm correction.

PMR, pore-to-matrix ratio; MI, matrix index