

Table S-4: Output of the statistical linear mixed models (difference, 95% confidence interval and p-value) of the absolute effects of an air gap (0, 5, 10 cm) between calibration phantom and body model, for HU and BMD in the cortical and trabecular ROI, and simulated failure load (N). *The interaction between CT scanner and air gap was not significant for cortical HU, trabecular HU and failure load and therefore, these effects of slice thickness and FOV hold for all of the CT scanners.

Cortical HU									
0 cm - 5 cm				5 cm - 10 cm			0 cm - 10 cm		
Scanner	Difference	95% CI	p-value	Difference	95% CI	p-value	Difference	95% CI	p-value
All*	-14.2	-20.1 – -8.3	<0.001	-12.2	-18.1 – -6.3	<0.001	-26.4	-32.3 – -20.5	<0.001
Cortical BMD (mg/cm³)									
0 cm - 5 cm				5 cm - 10 cm			0 cm - 10 cm		
Scanner	Difference	95% CI	p-value	Difference	95% CI	p-value	Difference	95% CI	p-value
P1	-39.0	-49.3 – -28.7	<0.001	-15.7	-25.9 – -5.4	0.003	-54.7	-65 – -44.4	<0.001
P2	-20.7	-31 – -10.5	<0.001	-21.1	-31.4 – -10.9	<0.001	-41.9	-52.1 – -31.6	<0.001
GE	-21.9	-32.2 – -11.7	<0.001	-9.8	-20 – 0.5	0.06	-31.7	-42 – -21.4	<0.001
To	-21.8	-32.1 – -11.5	<0.001	-16.7	-27 – -6.4	0.001	-38.5	-48.8 – -28.2	<0.001
Trabecular HU									
0 cm - 5 cm				5 cm - 10 cm			0 cm - 10 cm		
Scanner	Difference	95% CI	p-value	Difference	95% CI	p-value	Difference	95% CI	p-value
All*	-1.4	-3.2 – 0.4	0.1	-1.3	-3.1 – 0.5	0.2	-2.7	-4.5 – -0.9	0.004
Trabecular BMD (mg/cm³)									
0 cm - 5 cm				5 cm - 10 cm			0 cm - 10 cm		
Scanner	Difference	95% CI	p-value	Difference	95% CI	p-value	Difference	95% CI	p-value
P1	-7.7	-12.1 – -3.3	0.001	-3.6	-8 – 0.7	0.1	-11.4	-15.7 – -7	<0.001
P2	-9.3	-13.7 – -5	<0.001	-3.4	-7.8 – 0.9	0.1	-12.8	-17.2 – -8.4	<0.001
GE	1.5	-2.9 – 5.9	0.5	-0.4	-4.8 – 4	0.9	1.1	-3.3 – 5.4	0.6
To	-5.0	-9.3 – -0.6	0.03	-3.4	-7.8 – 1	0.1	-8.3	-12.7 – -4	<0.001
Failure load (N)									
0 cm - 5 cm				5 cm - 10 cm			0 cm - 10 cm		
Scanner	Difference	95% CI	p-value	Difference	95% CI	p-value	Difference	95% CI	p-value
All*	-231.3	-354.6 – -107.9	<0.001	-43.9	-167.3 – 79.5	0.5	-275.2	-398.5 – -151.8	<0.001