

Supplementary data

Table 2. Measurement error for 29 double-examination stereoradiographs (15 IS and 14 FS)

Axis:	Translations (mm)				Rotations (°)			
	x	y	z	MTPM ^a	x	y	z	TR ^b
Mean _{dif} ^c	0.01	0.00	0.03	0.03	0.07	0.06	0.01	0.05
SD _{dif} ^d	0.08	0.04	0.15	0.20	0.30	0.46	0.11	0.26
CR ^e	0.15	0.07	0.29	0.39	0.58	0.90	0.22	0.51
Minimum	-0.29	-0.09	-0.49	-0.30	-1.24	-1.32	-0.21	-0.29
Maximum	0.12	0.08	0.28	0.75	0.45	1.40	0.30	1.11

There was no statistically significant difference between IS and FS.

^a MTPM: Maximum total point motion is an absolute migration parameter (migration vector).

^b TR: Total rotation was calculated using the 3D Pythagorean Theorem

(TR = square root ($x^2+y^2+z^2$)).

^c Mean_{dif}: Systematic error between two RSA double examinations (should optimally be 0).

^d SD_{dif}: The standard deviation of the differences (SD_{dif}) represents the random variation in the applied RSA method (precision).

^e CR: The coefficient of repeatability (1.96 x SD_{dif}) reflects the clinical precision on an individual basis.

Table 4. Bone mineral density change in the 3 ROIs below the tibial component presented as mean (95% CI) percentage change from the baseline values at 1, 2, and minimum 5 years

ROI	I-beam stem	Finned stem	p-value ^a
Anterior/posterior view			
ROI 1 (lateral to stem):			
1 year	-11 (-16 to -6)	-2 (-11 to 6)	0.2
2 years	-13 (-17 to -10)	-7 (-14 to 0)	0.2
5 years	-17 (-24 to -9)	-15 (-27 to -3)	0.8
ROI 2 (medial to stem):			
1 year	-13 (-16 to 10)	1 (-6 to 8)	0.001
2 years	-13 (-16 to -9)	-2 (-9 to 5)	0.02
5 years	-14 (-20 to -8)	-9 (-16 to -3)	0.3
ROI 3 (below stem):			
1 year	-6 (-8 to -3)	1 (-3 to 6)	0.01
2 years	-6 (-8 to -3)	-1 (-7 to 4)	0.3
5 years	-6 (-10 to -2)	-4 (-11 to 3)	0.9
Mean of anterior/posterior ROIs:			
1 year	-10 (-13 to -7)	0 (-6 to 6)	0.005
2 years	-11 (-13 to -8)	-3 (-10 to 2)	0.1
5 years	-12 (-18 to -7)	-9 (-17 to -1)	0.9
Lateral view			
ROI 1 (anterior to stem):			
1 year	-11 (-16 to -6)	-2 (-11 to -1)	0.2
2 years	-14 (-17 to -10)	-7 (-14 to 0)	0.2
5 years	-17 (-24 to -9)	-15 (-27 to -3)	0.8
ROI 2 (posterior to stem):			
1 year	-13 (-16 to -10)	1 (-6 to 8)	0.001
2 years	-13 (-16 to -9)	-2 (-9 to 5)	0.02
5 years	-14 (-20 to -8)	-9 (-16 to -3)	0.3
ROI 3 (distal to stem):			
1 year	-6 (-8 to -3)	1 (-3 to 6)	0.01
2 years	-6 (-8 to -3)	-1 (-7 to 4)	0.3
5 years	-6 (-11 to -2)	-3 (-11 to 3)	0.9
Mean of lateral ROIs:			
1 year	-10 (-13 to -7)	0 (-6 to 6)	0.005
2 years	-10 (-13 to -8)	-4 (-10 to 2)	0.1
5 years	-12 (-18 to -6)	-9 (-17 to -1)	0.9

^a Two-sample Wilcoxon rank-sum (Mann-Whitney) test.