

## Supplementary article data

# Precision of radiostereometric analysis (RSA) of acetabular cup stability and polyethylene wear improved by adding tantalum beads to the liner

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Submitted 2014-05-16. Accepted 2015-04-01.

Table 1. The mean (SD) precision (mm), and precision interval (all calculated from double examinations) in measuring superior femoral head penetration into the polyethylene (wear) in the x-, y-, and z-planes. The precision is defined by the SD × critical value (t) and the precision interval is defined by the mean (SD) × t

Method / Plane	Mean (SD)	Precision	Precision interval
Liner (n = 45)			
x	-0.016 (0.081)	0.163	-0.179 to 0.148
y	-0.015 (0.042)	0.086	-0.101 to 0.070
z	0.092 (0.284)	0.573	-0.481 to 0.665
Shell (n = 48)			
x	-0.022 (0.120)	0.242	-0.264 to 0.220
y	-0.027 (0.128)	0.257	-0.284 to 0.231
z	0.091 (0.397)	0.798	-0.707 to 0.888
Shell + liner (n = 50)			
x	0.001 (0.058)	0.116	-0.114 to 0.117
y	-0.013 (0.057)	0.115	-0.128 to 0.102
z	0.033 (0.196)	0.393	-0.360 to 0.425

Table 3. The mean (SD) precision (°), and precision interval (all calculated from double examinations) in measuring acetabular cup rotation in the x-, y-, and z-planes. The precision is defined by the SD × critical value (t) and the precision interval is defined by the mean (SD) × t

Method / Plane	Mean (SD)	Precision	Precision interval
Liner (n = 44)			
x	0.013 (0.410)	0.826	-0.813 to 0.838
y	-0.095 (0.529)	1.067	-1.163 to 0.972
z	0.011 (0.170)	0.343	-0.332, 0.353
Shell + liner (n = 45)			
x	0.061 (0.286)	0.579	-0.519 to 0.640
y	0.008 (0.231)	0.467	-0.458 to 0.475
z	0.004 (0.143)	0.289	-0.284 to 0.292