

## Supplementary article data

# Predictors of mortality following primary hip and knee replacement in the aged

## A single-center analysis of 1,998 primary hip and knee replacements for primary osteoarthritis

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Appendix. The association of patient characteristics, preoperative clinical state, and operative data, with overall mortality following in univariate analysis. The results are presented as hazard ratios (HR; calculated with use of Cox regression analysis) with their 95% confidence intervals (CI)

	Overall mortality HR (95% CI)		Overall mortality HR (95% CI)
<i>Patient characteristics</i>		Renal function	1.06 (0.97–1.14)
Age (increase of 1 year)	1.13 (1.10–1.16)	Normal	1
Age group		Mild insufficiency	1.90 (0.91–3.97)
75–79 years	1	Moderate insufficiency	2.03 (0.96–4.30)
80–84 years	1.76 (1.35–2.29)	Severe insufficiency	6.39 (1.92–21.24)
≥ 85 years	3.41 (2.47–4.71)	<i>Operative data</i>	
Sex		Operated joint	
Female	1	Hip	1.10 (0.87–1.40)
Male	1.59 (1.25–2.04)	Knee	1
Body mass index (increase of 1 kg/m <sup>2</sup> )	0.96 (0.93–0.99)	Laterality	
< 20 kg/m <sup>2</sup>	1.19 (0.49–2.01)	Unilateral	1
20–24 kg/m <sup>2</sup>	1.50 (1.13–2.01)	Bilateral	0.70 (0.43–1.12)
25–30 kg/m <sup>2</sup>	1	Type of knee replacement (knee replacements only)	
> 30 kg/m <sup>2</sup>	0.84 (0.61–1.15)	Cruciate-retaining	1
ASA risk score		Cruciate-substituting	1.46 (1.03–2.07)
II	1	Constrained	0.98 (0.44–2.17)
III	2.16 (1.62–2.87)	Hinge or other	3.19 (1.15–8.87)
IV or V	3.87 (2.23–6.71)	Fixation method	
Charnley class / Knee Society class		Cemented	1
One hip/knee involved	1	Hybrid	1.25 (0.86–1.83)
Both hips/knees involved	0.99 (0.78–1.27)	Cementless	0.56 (0.25–1.25)
Other reasons for restricted mobility	0.86 (0.44–1.69)	Duration of operation (unilateral procedures only)	
<i>Preoperative clinical state</i>		≤ 87 minutes	1
Use of walking aids		88–101 minutes	0.98 (0.69–1.38)
None	1	102–120 minutes	0.87 (0.62–1.23)
Any	2.14 (1.54–2.98)	> 120 minutes	1.01 (0.72–1.42)
Walking ability		Blood loss per 100 ml	1.03 (1.00–1.06)
Unable to walk	4.14 (1.88–9.13)	≤ 200 ml	1
Indoors only	2.35 (1.63–3.39)	201–500 ml	1.21 (0.91–1.61)
Less than 1 km	1.27 (0.92–1.75)	501–800 ml	1.07 (0.75–1.53)
Over 1 km/unlimited	1	> 800 ml	1.37 (0.91–2.05)
Preoperative clinical score (increase of 5 points)		Blood transfusion	
Harris hip score	0.88 (0.83–0.94)	None	1
Knee Society score	0.92 (0.88–0.96)	Any	1.42 (1.10–1.83)
Severe osteoarthritis <sup>a</sup>		ASA, American Society of Anesthesiologists; GFR, estimated glomerular filtration rate;	
No	1	<sup>a</sup> Severe osteoarthritis is defined as presence of axial deformity of	
Yes	1.43 (1.12–1.82)	> 10 degrees, range of motion < 80 degrees or severe antero-posterior or medio-lateral instability in knees, and as presence of positive	
<i>Preoperative laboratory data</i>		Trendelenburg sign, <100 total range of motion or severe limp.	
Anemia	2.02 (1.52–2.70)		
GFR (decrease of 10 mL/min)			