

## Supplementary article data

# Early mortality and morbidity after total hip arthroplasty in patients with femoral neck fracture

## A nationwide study of 24,699 cases and 118,518 matched controls

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Table 3. Crude survival at 3 months, 1 year, and 5 years calculated according to Kaplan-Meier with 95% confidence intervals for THA cases and controls, according to the 4 age groups investigated

Time, years	Controls		THA patients	
	Survival	95% CI	Survival	95% CI
Age 60–69				
0.25	99.8	99.7–99.8	97.9	97.5–98.3
1	98.9	98.8–99.1	93.5	92.8–94.2
5	93.1	92.7–93.5	75.0	73.6–76.4
Age 70–79				
0.25	99.3	99.2–99.4	97.5	97.1–97.8
1	97.0	96.8–97.1	93.2	92.8–93.7
5	81.9	81.6–82.3	69.1	68.2–70.1
Age 80–89				
0.25	97.9	97.8–98.0	94.9	94.4–95.4
1	91.3	91.0–91.6	88.4	87.7–89.1
5	56.2	55.7–56.8	50.5	49.4–51.6
Age 90–99				
0.25	94.9	94.3–95.6	89.2	87.4–91.1
1	79.5	78.3–80.6	77.8	75.4–80.3
5	24.2	23.0–25.5	28.6	25.9–31.6

Table 6. Comorbidity burden (CCI) in arthroplasty patients over time

CCI	1992–1998		1999–2005		2006–2012	
	n	%	n	%	n	%
0	36,001	87	42,153	83	38,934	77
1–2	4,861	12	7,456	15	9,148	18
> 2	732	1.8	1,414	2.8	2,518	5

Table 7. Crude and adjusted risk of 90-day cardiovascular mortality with 95% confidence intervals. The adjusted hazard ratio (HR) for each variable was derived from a model adjusting for the other variables included in the model (i.e. gender, age, Charlson comorbidity index (CCI), personal income, and education). By definition, reference groups had an HR of 1

Risk of 90-day mortality	Crude HR	95% CI	Adj. HR	95% CI
Case <sup>a</sup>				
Arthroplasty	2.00	1.70–2.36	1.60	1.35–1.89
Sex <sup>b</sup>				
Female	0.83	0.70–0.97	0.76	0.64–0.90
Age <sup>c</sup>				
60–69	0.28	0.17–0.45	0.32	0.20–0.51
80–89	3.03	2.52–3.63	2.59	2.14–3.12
90–99	7.64	6.03–9.68	5.38	4.13–7.01
CCI <sup>d</sup>				
1–2	3.04	2.58–3.58	2.51	2.13–2.97
> 2	4.75	3.72–6.07	4.16	3.24–5.34
Income <sup>e</sup>				
2nd quarter	0.91	0.76–1.09	0.92	0.77–1.11
3rd quarter	0.70	0.57–0.86	0.83	0.68–1.02
4th quarter	0.40	0.31–0.51	0.69	0.52–0.89
Education <sup>f</sup>				
9 years	0.38	0.32–0.45	0.69	0.56–0.84
High school	0.24	0.19–0.30	0.54	0.41–0.70
University	0.14	0.10–0.21	0.39	0.26–0.59

<sup>a</sup> Reference = controls.

<sup>b</sup> Reference = male.

<sup>c</sup> Reference = 70–79 years.

<sup>d</sup> Reference = 0.

<sup>e</sup> Reference = first quarter (lowest income).

<sup>f</sup> Reference = No school education or level of education unknown.

Table 8. Crude and adjusted risk of hospital admission within 90 days for cardiovascular reasons with 95% confidence intervals. The adjusted hazard ratio (HR) for each variable was derived from a model adjusting for the other variables (i.e. gender, age, Charlson comorbidity index (CCI), personal income, and education). By definition, reference groups had an HR of 1

Risk of 90-day mortality	Crude HR	95% CI	Adj. HR	95% CI
Case <sup>a</sup>				
Arthroplasty	1.53	1.38–1.7	1.14	1.03–1.27
Sex <sup>b</sup>				
Female	0.72	0.65–0.79	0.73	0.66–0.81
Age <sup>c</sup>				
60–69	0.43	0.35–0.52	0.47	0.39–0.58
80–89	1.96	1.78–2.17	1.79	1.62–1.98
90–99	2.50	2.10–2.97	2.18	1.80–2.63
CCI <sup>d</sup>				
1–2	3.46	3.14–3.81	3.10	2.80–3.42
> 2	6.10	5.32–7.00	5.44	4.72–6.26
Income <sup>e</sup>				
2nd quarter	1.05	0.93–1.17	1.01	0.90–1.13
3rd quarter	0.86	0.76–0.97	0.87	0.77–0.99
4th quarter	0.64	0.56–0.73	0.84	0.72–0.97
Education <sup>f</sup>				
9 years	0.70	0.62–0.80	0.93	0.81–1.07
High school	0.55	0.47–0.64	0.83	0.70–0.98
University	0.40	0.32–0.49	0.67	0.54–0.84

<sup>a</sup> Reference = controls.  
<sup>b</sup> Reference = male.  
<sup>c</sup> Reference = 70–79 years.  
<sup>d</sup> Reference = 0.  
<sup>e</sup> Reference = first quarter (lowest income).  
<sup>f</sup> Reference = No school education or level of education unknown.

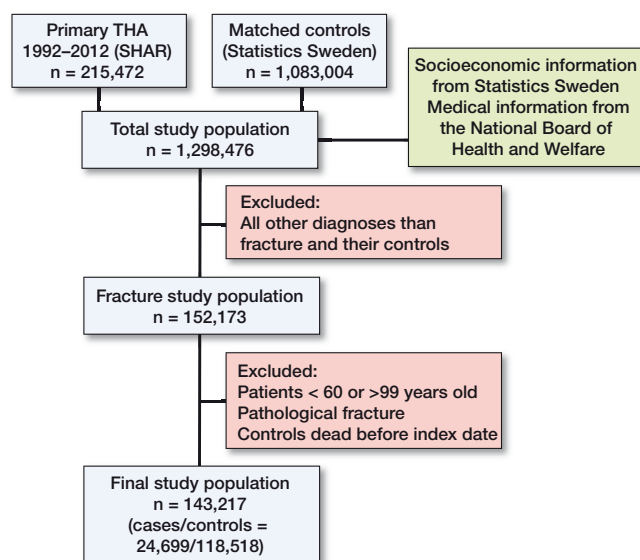


Figure 1. Sources of data and flow chart of study population.

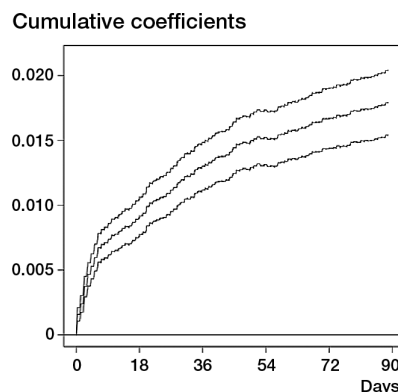


Figure 3. Additive risk of mortality in fracture patients with THA, adjusted for age, gender, Charlson comorbidity index (CCI), income, and level of education.