

Appendix 6 (as supplied by the authors): Sensitivity analysis of methylprednisolone vs placebo on the risk of acute kidney injury: Three different methods of handling missing peak postoperative serum creatinine data (missing in 0.8% of patients)^a

	Number of Events (%)		Relative Risk (95% CI)		p value ^d
	Methylprednisolone	Placebo	Unadjusted ^b	Adjusted ^c	
	n = 3647	n = 3639			
Primary analysis ^e	1479 / 3647 (40.6 %)	1426 / 3639 (39.2%)	1.03 (0.98 to 1.09)	1.04 (0.96 to 1.11)	0.3
Multiple imputation ^f			1.04 (0.97 to 1.12)	1.04 (0.97 to 1.12)	0.3
Complete-case analysis ^g	1478 / 3616 (40.9%)	1425 / 3608 (39.5%)	1.03 (0.98 to 1.09)	1.04 (0.96 to 1.11)	0.3

^a Acute kidney injury was defined as an increase in serum creatinine concentration of 0.3 mg/dL or more ($\geq 26.5 \mu\text{mol/L}$) or 50% or more (from the preoperative value) within 14 days of surgery, or receipt of dialysis within 30 days of surgery.

^b Analyzed using modified Poisson regression without adjustment for covariates or accounting for centre.

^c Adjusted for 10 prespecified covariates (defined in supplementary table S3); missing data on left ventricular ejection fraction was imputed using multiple imputation as described in supplementary appendix S1.

^d Obtained from the adjusted model.

^e A peak postoperative serum creatinine measurement was available for 99.1% of patients. Of 62 patients missing a peak postoperative value (31 in the methylprednisolone group and 31 in the placebo group), 2 received dialysis within 30 days of surgery and were coded as having acute kidney injury (1 in the methylprednisolone group and 1 in the placebo group). The remaining 60 patients were assumed to not have acute kidney injury; of these 60 patients, 50 (83.3%) died on the day of surgery or on day 1 or 2 after surgery (27/30 [90.0%] in the methylprednisolone group and 23/30 [76.7%] in the placebo group).

^f Multiple imputation was used to impute the response variable (acute kidney injury; yes vs no) and one covariate (left ventricular ejection fraction; $\geq 50\%$ vs $< 50\%$) in the modified Poisson regression; numerators/denominators not provided for this analysis. Details in supplementary appendix S1.

^g Excludes 60 patients with no outcome data as described in footnote 'e'. In this analysis, missing data on left ventricular ejection fraction was estimated using multiple imputation as described in supplementary appendix S1.