

Appendix 3 (as supplied by the authors): Methods of handling missing data

Multiple imputation was used to impute missing data on two binary variables: left ventricular ejection fraction (categorized as $\geq 50\%$ vs $< 50\%$; missing for 68 patients [0.9%]) and acute kidney injury (categorized as present vs absent; missing for 60 patients [0.8%]). Multiply imputed data for acute kidney injury were used in a sensitivity analysis of the primary definition (see supplementary table S4).

Logistic regression models were run using PROC MI in SAS using fully conditionally specified models. Standard methods were used to estimate parameters of interest while allowing for extra imputation variability (SAS PROC MIANALYZE). Data were assumed to be missing at random. Five datasets were imputed independently. All prespecified covariates were included in the imputation models as well as centre of randomization and the treatment group allocation.¹ Data on pre-randomization and preoperative medication use were missing in less than 0.05% of patients; in each case it was assumed that the patient did not use the medication. One patient was missing data on preoperative use of intra-aortic balloon pump or ventricular assist device; non-use was assumed.

Reference

1. Allison P. Imputation of categorical variables with PROC MI. In: *SAS Users Group International*. Vol Philadelphia PA; 2005:April10-13; 113-130.