


Commentary on “Predictors of Acute Kidney Injury After Hip Fracture in Older Adults”

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We are grateful for the interest from Hu et al. in our article.^{1,2} There are different ways to select variables to be selected in a regression model, and there are different preferences among researchers.

In general, p-values driven selection of covariates, such as stepwise selection of covariates, are being criticized by an increasing number of analysts, see Lydersen (2015) and references therein.³


Our initial list of candidate preventable risk factors were based on apriori judgment and potential clinical relevance, with use of conceptual frameworks as directed acyclic graphs to identify possible confounders.⁴ Then, we kept as candidate preventable risk factors only those that were statistically significant in the univariate analysis. For the rest, we have refrained from p-value driven selection of additional covariates. We did also ensure that no pairs of variables in the presented multivariable models were correlated to an extent that would lead to multicollinearity.

We regard the step 2 and 3 proposed by you as having the potential to introduce similar problems as stepwise selection of covariates. We agree that the associations between postoperative haemoglobin and albumin and acute kidney injury are interesting. However, inclusion of postoperative albumin in a large multivariable model might have led to collider bias⁵ as several other covariates and the outcome all could lead to low

albumin. Details of postoperative sepsis were unfortunately not available in our data set.

We apologize for not clarifying these aspects clearly enough in the original article and once again want to express our gratitude to Hu et al. for their good questions.

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