

## Response to Letter to the Editor

**Pre-burn malnutrition increases  
operative mortality in burn patients**

## who undergo early excision and grafting in a sub-Saharan African burn unit: Methodological issues

Dear Editor in chief,

Drs. Ashrafi-Asgarabad and Safiri raise several questions about the methodology we employed in our article [1]. Thank you for this opportunity to respond to their letter.

The first question has to do with selection of variables for our multivariable logistic model. As stated in the article, we used variables that were either (a) significantly associated with mortality in our univariable analysis, but only if the confidence intervals were narrow and we had sufficient data about a particular variable; or (b) have been reported to be associated with burn mortality in LMICs in other studies.

The second question is regarding potential collinearity of our variables. This question is not relevant to our final model as collinearity does not affect or negate the overall predictive model of a multivariable logistic regression model. Individual covariates can be affected by this concept, but our article emphasizes the interaction between nutritional stress, operative timing, and %TBSA burned. We did not set out to negate or minimize the contribution of any of these variables to our operative mortality. Our article aims to develop a multi-causation predictive model of burn mortality in our burn patients, which is represented by the full multivariable logistic regression model.

Regarding the large odds ratio and wide confidence interval of the association of amputation with mortality: it is widely accepted that wide confidence intervals indicate sparse data. However, amputation was not used in our multivariable logistic regression model, and we reported this finding merely in the interest of completeness of data.

Finally, we make no claims regarding the validation of our z-score model in the current article. We are in the process of testing this model to validate it.

## REFERENCE

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- [1] Grudziak J, Snock C, Zalinga T, Banda W, Gallaher J, Purcell L, et al. Pre-burn malnutrition increases operative mortality in burn patients who undergo early excision and grafting in a sub-Saharan African burn unit. *Burns* 2017(October).

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