Reviewer's report

Title: Comprehensive Geriatric Assessment predicts mortality and adverse outcomes in hospitalized older adults.

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Reviewer: Davide Liborio Vetrano

Reviewer's report:

The present study investigates the applicability and usefulness of CGA to predict in-hospital adverse outcomes in subjects admitted to an acute care unit.

The main aim of the study is very interesting but some minor methodological issue should be discussed:

Major Compulsory Revisions

1 - Linear logistic analysis have been used to investigate factors related to length of hospital stay (LOS). Notwithstanding, LOS presents often a right skewed distribution, due to the phenomenon of the bed blockers patients, particularly frequent within geriatric populations, as that here examined. Specifically, the authors reported in the results section quite different values of mean and median LOS (...Mean and median length of stay were high [16.7 and 12.0 days, respectively]...), supporting a skewed distribution of such variable. In this context, authors should provide clear evidence that assumptions of normality have been covered in such analysis. Otherwise, the study of predictors of increased LOS should be addressed according another methodology (short and long LOS according to the median LOS in logistic regression analysis?)

2 - Among the study limitations, the authors should mention how the experience of a single-center study cannot be generalizable to the whole population.

Minor Essential Revisions

1 - According to the authors’ statement, the data collection lasted three years (January 2009 - December 2011). Due to the nature of the outcomes here investigated and their seasonal dependency, as well as the changes in policies occurring on the long period and potentially affecting the observations, I think that an adequate correction for a time variable (semester?) should be introduced in the analysis.

2 - The secondary outcomes studied in the present study were: delirium, nosocomial infections, functional decline and length of stay. They are clinically relevant issues, sometimes more than mortality per se, both from the management point of view and from the medical one. I suggest to report such results in a table, to make them more accessible to the reader.

3 - In table 1 diseases are listed among the demographic characteristics, I suggest to include a specific section for diseases in this table.
Discretionary Revisions

1 - In the present study the authors considered malnutrition as potential predictor of negative outcomes. I believe worthy, using a MNA cut-off of 23, to assess also the impact of the risk of malnutrition on the outcomes. In fact, such eventual predictive role, can select those individuals at risk of malnutrition for which a hypothetical intervention would be more effective. This is not a mandatory observation but a suggestion to improve the value of results.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests