Reviewer's report

Title: Predictors of mortality among elderly people living in a south Indian urban community; a 10/66 Dementia Research Group prospective population-based cohort study

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Reviewer: Francesco Landi

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The aim of this study was to evaluate the relative importance of sociodemographic characteristics, socioeconomic factors, health risk behaviours, physical, mental and cognitive morbidities, and the impact of these chronic conditions on health-related quality of life as predictors of mortality among people aged 65 years and over living in urban catchment areas in Chennai, south India. Overall, this topic is of clinical significance. However, even thought the data are of some interest there are some limitations.

- The authors describe the general characteristics of the study sample in Table 1 using different groups. This Table as the others presents the data in confusing way.
- Why do the authors present the data comparing male and female?
- The differences of the baseline characteristics by ascertainment of vital status at follow up is interesting; however, why did the authors consider only the demographic and life style variables?
- I think that a table presenting the differences between subjects alive and died at follow-up (showing the p values) could be more readable.
- In the statistical analysis section, in the discussion of how covariates were selected for inclusion to the proportional hazards models, it seems that the statistical significance for inclusion was based on the ANOVA or Kruskal-Wallis analysis. Did you also check that the covariates meet the proportionality assumption for the Cox multivariate models?
- With the goal of identifying the relationships between different variables with all-cause mortality, the current analysis does not attempt to study the interaction between these variables. The analysis should also include main effects before getting to interaction terms. For example, a second stage of analysis should then explicitly test for interaction between dementia and physical activity. Results should report both the main effects and the interaction terms of dementia, malnutrition, physical activity.
- Furthermore, we have no information regarding some of the most important negative outcome in elderly subjects: drugs and adherence to prescription, comorbidity index, sensory impairments (vision, hearing).
- It is likely that there are significant, not considered differences between the
evaluation groups that may have biased the study results and conclusions. It can be hypothesized that subjects showing higher rate of mortality received a lower level of medical care. This issue needs to be addressed as a potential limitation of the study.