Reviewer’s report

Title: Anemia status, hemoglobin concentration and outcome after acute stroke: a cohort study

Version: 1 Date: 11 November 2009

Reviewer: XinQi Dong

Reviewer’s report:

Major Compulsory Revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

Reviewer appreciates the opportunity to review this original research. Authors addressed an important issue regarding anemia, Hb, and adverse outcomes in this population. There are many merits to this manuscript. However, my initial enthusiasm was dampened by the number of concerns I have for this manuscript.

Major Compulsory Revisions

1. The major concern is the selection of statistical methods. Authors should consider Cox model to examine the questions posed, and it is not clear to me why logistic regression is superior. Cox model would provide a much more rigorous method of evaluating the questions at hand.
2. I applaud the authors for using Hb-sq to examine the spectrum. In addition, I would like to see categorical presentation of higher ranges of Hb compared with normal ranges, to provide further confirmatory evidence of the adverse outcome of the upper range Hb for mortality and NH placement.
3. It is not clear to me why NH placement and Mortality should be combined.
4. References 1-5 should be separately out for each of the specific outcomes citations.
5. Briefly describe TOAST for readers who might not be familiar
6. MDRD needs reference
7. Author should consider the role of other CBC markers in this analysis, especially the inflammatory markers and other anemia categorizations variables.
8. Author should consider the role of cognitive function, nutritional status as
potential confounds as well in the analyses.