Reviewer's report

Title: Population-based SEER trend analysis of overall and cancer-specific survival in 5,138 patients with gastrointestinal stromal tumor

Version: 2 Date: 31 March 2015

Reviewer: Jens Eickhoff

Reviewer's report:

The authors of this manuscript conducted a trend analysis assessing survival outcomes in a large cohort of GIST patients over a 11-year time period using the SEER database. The analysis provides compelling evidence of a statistically significant and clinical relevant increase in overall and cancer-specific survival from 1998 to 2008. Overall, it is a well written manuscript addressing a highly relevant topic. There are no major methodological flaws.

Major Compulsory Revisions:

- Page 7, The authors indicate that “the statistically optimal cut-off value of mitotic count was 5 in 50 high power fields (HPF). For GIST size, the statistically optimal cut-off is 8cm”. How was the optimal cut-off defined/determined? Presumably, this was based on the results of the ROC curve analysis, but there are different ways to define an optimal cut-off. Please clearly describe how the optimal cut-off was defined/determined.

Minor Essential Revisions:

- Page 17, Table 2: The table summarizes the results of both the univariable and multivariable analysis. Table 2 is labeled as “Multivariable survival analysis”. Please change this to “Univariable and multivariable survival analysis”. Please include the covariates which were used in the multivariable analysis in the footnote of the table

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:

I declare that I have no competing interests.