Reviewer's report

Title: Family history of cancer on survival of patients with gastrointestinal cancer in northern Iran, using frailty models

Version: 2 Date: 25 April 2011

Reviewer: Hans C. van Houwelingen

Reviewer's report:

The paper has much improved, but I am not fully satisfied yet.

Major.
1. The survival graphs shown in the response to my previous review should be included in the paper, because they are clinically much more relevant than all the residual plots.
2. The paper is biased against the Cox model. The violation of the PH assumption might be there, but there are similar assumption underlying the other models that are not tested. Adding a frailty term could remedy the violation of the PH assumption. Moreover, the baseline hazard of the Cox model would show a similar humor in the hazard, I presume.
3. The paper is biased in favor of frailty models. Parameter estimates in frailty models are hard to interpret because they condition on the unobservable frailty. The effects on marginal survival matter and not those on the conditional survival given the frailty.

The issues 2. and 3. do not require additional analysis, but they would require some changes in the text to correct the biased perspectives.

Level of interest: An article of limited interest

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