Reviewer's report

Title: Detailed analyses of a sertraline randomized withdrawal study in patients with major depressive disorder

Version: 1 Date: 7 February 2010

Reviewer: Wenbin Lu

Reviewer's report:

Major Compulsory Revisions:

(1) For the use of cure model, it is usually required sufficiently long follow-up. For the sertraline randomized withdrawal study considered in this paper, the total follow-up is only about 120 days. In addition, there is a very late relapse time (nearly at 110 days) in the placebo group, and beyond this time point, there are only a few censored times. So my questions are: a.) is there any biological support for the "cure" in the study? b.) is the follow-up sufficiently long for identifying the cure? Some statistical tests may be conducted for checking whether the follow-up is sufficiently long (for example, Maller and Zhou, 1996).

(2) For the real data application, it is desirable that the authors can compare the results obtained from the Cox cure model with those of the standard Cox model without cure fraction, and show that the Cox cure model considered in this paper can provide a better fit to the data.

(3) The authors should give more interpretations for the tree results obtained using the cure survival CART, such as Figure 2. What is the main difference of the tree results compared to those based on variable selection of the Cox cure model?

(4) In the cure survival CART, the exponential distribution is used for the event time of uncured subject, which is too restrictive. It will be more useful that the authors can extend the method to the usual semiparametric Cox cure model or at least the Weibull distribution for the event time of uncured subject.

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