Reviewer’s report

Title: Health-related quality of life in survivors of stage I-II breast cancer: randomized trial of post-operative conventional radiotherapy and hypofractionated tomotherapy.

Version: 1 Date: 21 February 2012

Reviewer: Kai Budischewski

Reviewer’s report:

The early bird catches the worm, or doesn’t it?
1. Is the question posed by the authors well defined?  
Yes

2. Are the methods appropriate and well described?  
No. It might be appropriate to use a student-t-test to compare the means of two groups, but for repeated measurements an analysis of variance with a repeated measurements design is much more suitable. Furthermore, according to the authors, t-tests were calculated for at least 23 scales at 6 times of measurement, cumulating to 138 significance tests. An adjustment of the alpha-error is strongly recommended. (major compulsory revisions)

3. Are the data sound?  
No. The sample size drops significantly from T4 (101 patients; 1 year after RT) to T5 (66 patients; 2 years after RT) to T6 (34 patients; 3 years after RT). Every conclusion about increasing or decreasing scores over the period of 3 years is very weak according to the decrease in sample size. The authors should either limit their work to T1 – T4 and disregard T5 and T6 or wait until they collect a bigger sample. (major compulsory revisions)

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?  
Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?  
No. The discussion lacks several points: First, the abovementioned decline in sample size. Second, limitations of the statistical techniques to analyse the data should be discussed (adjustment of alpha-error, why were student-t-tests used?) (minor compulsory revisions)

6. Are limitations of the work clearly stated?  
See 5.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes

8. Do the title and abstract accurately convey what has been found?
   Yes

9. Is the writing acceptable?
   Not yet. The authors should consider the help of a native speaker (e.g. „But only
   a few studys which also investigate the patient reported outcome.“ „Subsequently
   it decreased in both treatment arms at 3 month post-RT which was clinically
   meaningful in TT, nevertheless it there was no significantly different with CR.“
   (Discretionary Revisions)

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I declare that I have no competing interests