Reviewer's report

Title: Tumor volume in subcutaneous mouse xenografts measured by microCT is more accurate and reproducible than determined by 18F-FDG-microPET or external caliper.

Version: 1 Date: 29 July 2008

Reviewer: Carla F.M. Molthoff

Reviewer's report:

Comments to the manuscript “Tumor volume in subcutaneous mouse xenografts measured by microCT is more accurate and reproducible than determined by [18F]-FDG-microPET or external caliper”

General comments:

In this study, results are presented comparing in vivo and ex vivo tumor volume measurements in nude mouse bearing s.c. xenografts using imaging technology and hand-held external calipers. The study has been designed and performed adequately. However, it is a shortage of the investigations that the authors did not include a therapy related response study.

Minor essential revisions:

1. The authors should address the point that is not at all surprising that FDG PET by itself is unsuitable for the determination of tumor size (Discussion).
2. The authors should explain why a therapy related response study was not included.
3. Results, section Tumor volume determined by……., paragraph 1: remove all repetition of results.
4. Results, section intra- and inter-observer variation, paragraph 2: remove line 7 (repetition).
5. Discussion, paragraph 1: the conclusion/discussion of references 10 and 11 are missing. Please add.
6. Discussion, paragraph 7: for response monitoring studies other measures than SUVmean as a measure for tumor volume could be of interest. Please discuss.
7. The legends for all Figures are missing.

Discretionary Revisions:
Please change CT to microCT throughout the manuscript.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.