Reviewer's report

Title: pO2 Polarography, Contrast Enhanced Color Duplex Sonography (CDS), [18F] Fluoromisonidazole and [18F] Fluorodeoxyglucose Positron Emission Tomography: Validated Methods for the Evaluation of Therapy-Relevant Tumor Oxygenation or only Bricks in the Puzzle of Tumor Hypoxia?

Version: 2 Date: 9 December 2006

Reviewer: Joseph G Rajendran

Reviewer's report:

General

A number of grammatical errors throughout the paper need to be corrected/edited.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The introduction indicates a total of 36 patients but the methods (patients section) gives a different number (38) This needs to be clarified. The period from which the patients were included for the study and whether they were consecutive or not should be specified. There is a need for more details about the timing of the tests related to therapy.

2. There should be more details such as the size and location of the metastatic lymph nodes. Correlation with the size and other parameters will provide additional correlative information. How many lymph nodes total and per patients were included for the study? There is also a need for a statement whether the data from individual patient were obtained for the same lymph nodes or multiple nodes.

3. More details about patient positioning and the use of any immobilization devices should be indicated.

4. FDG imaging parameters such as the glycemic status at the time of scanning and the cut-off for inclusion need to be more clearly written.

5. FMISO imaging needs a clarification on at what scanning phase the blood samples were obtained and whether it was arterial or venous.

6. There is no indication as to the timing of these various tests and if they were done within close proximity to each other. This needs to be indicated as it will have a bearing on the outcome of individual tests and help correlation meaningful.

7. A number of grammatical errors throughout the paper need to be corrected/edited.

8. Some of the details in the discussion section need to be removed or moved to the introduction section. This will shorten the discussion section and help with the flow of reading.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Needs some language corrections before being published
Statistical review: No

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