Reviewer’s report

Title: Prognostic scores in brain metastases from breast cancer

Version: 1 Date: 29 December 2008

Reviewer: Gustavo Viani

Reviewer’s report:

I would like to thank the authors of Nieder et al for their submission to BMC Cancer titled “Prognostic scores in brain metastases from breast cancer” This paper deals with the stratification of breast cancer patients who undergo whole brain radiotherapy as part of the management of their disease. Since breast cancer is the second most common cause of brain metastases and a major cause of cancer in women, the management of patients with brain metastases is both timely and relevant given the controversy surrounding optimal management.

Major revisions

1- The Brain Metastases Score System and SIR were first described in a group of patients who received radiosurgery. Is it the authors’ intent to show that it is valid in patients with metastases from breast cancer that did not receive radiosurgery? The introduction should introduce this scoring system if this is one of the major goals of the paper.

2- Further information regarding the degree of resection (biopsy only, subtotal, gross total, etc) should be provided. Since the amount of surgery will influence tumor control, this should be more clearly stated if possible.

3- Further details regarding the radiation therapy should be provided, such as whether fields included leptomeninges and schedule doses used.

4- Further information regarding the population should be provided in a table-1 including sex, age, KPS, total dose, extracranial disease controlled or not, number of metastases, chemotherapy or hormone therapy, type of surgery or radiosurgery.

5- The authors should be provided a table for univariate and multivariate analysis as well as a table for the prognostic index created. I suggest that all values of p will be cited in the manuscript.

6- In the discussion section, the authors should mention, the main causes for differences among the prognostic index with 4-tiered score vs 3 tiered score, in terms of sensibility and specificity of each one. For example, will be that a BS-BM of 0 had greater specificity, but lower sensitivity BS-BM? Probably this fact could occur because the BS-BM takes into account only three variables (i.e., KPS, primary tumor control, and the presence of extracranial metastases), which have been found in most studies to be important prognostic factors for survival. Thus it seems that less important factors had been affected indirectly by the other main factor as extracranial metastases or surgical resection. I think that this discussion
would improve the quality of your analyze.

7-In the conclusion section, would be important quote which systems were positive or negatives to predict survival in patients with brain metastases from breast cancer. For example, the stratification systems examined were able to identify quite well those patients who might or might not benefit from WBRT. Rpa..., BS-BM..., SIR...

**Level of interest:** An article of importance in its field

**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' below. If your reply is yes to any, please give details below.