Reviewer’s report

Title: The influence of taste disorders on dietary behaviors in patients with cancer under chemotherapy treatment

Version: 2 Date: 30 November 2009

Reviewer: Barbara Stewart-Knox

Reviewer’s report:

1. Of concern is that there are no baseline results for either dependent variable (dietary habits and/or taste acuity). The patients were not tested until after two chemotherapy sessions. As it stands, the report tells us that cancer patients on chemotherapy have less acute taste perception and poorer dietary quality than healthy individuals. Is this finding novel? Without baseline measures, it is impossible to determine if (any) taste deficit or change in dietary habits was related to the individual differences, the cancer, or the chemotherapy treatment. A repeated measures design including baseline would have been more appropriate/robust. Alternatively, matching the control and test groups might have reduced any error occurring as a result of this design weakness. Although there were no demographic differences between the cancer patients and controls, there may be other differences that would have warranted matching. The controls were healthy. Who were they and how were they approached and selected (this information was requested in the first review)? Given the lack of baseline data, a matched control group would be appropriate, perhaps as a third group?

2. Was the range of the taste solution dilutions sensitive enough? As pointed out in the previous review, there were apparent floor effects (no detection) for Umami. Suggest that the results for Umami be omitted?

3. The data analysis fails to address the research question of whether dietary habits and taste acuity are related in chemotherapy patients. Correlation might be more appropriate to answer the question of a relationship between taste acuity and dietary habits. ANOVA would enable dietary habits, taste acuity and zinc status to be analysed together and allow a range of other relevant variables to be included and controlled. The full statistical values are not reported. Suggest the authors consult a statistician.

4. Suggest the authors enlist the assistance of an English writer to correct grammar and punctuation (particularly the abstract) should they seek to develop the discussion.