Author’s response to reviews

Title: Aluminum concentrations in central and peripheral areas of malignant breast lesions do not differ from those in normal breast tissues

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Author’s response to reviews: see over
Campinas, February 13, 2013

Christina Chap
Executive Editor – BMC Cancer

Dear Ms. Chap,

We are pleased to resubmit our manuscript for further publication consideration in BMC Cancer. The discretionary revisions raised by the referee 1 were addressed in this final version. Please find, in the next pages, a detailed response to that referee’s concerns.

We hope the manuscript can now meet the quality requirements of BMC Cancer and can be deemed acceptable for publication.

We are looking forward to receiving your response.

Yours truthfully,

Luis Sarian
Comment 1: “Discretionary Revisions - Could the authors make it absolutely clear that fat was not removed from the breast tissues prior to their analysis for Al content. This is a fundamental difference between this study and our previous study (Exley et al., 2007). Since the authors have both wet and dry weights it would also be of interest to plot %water against [Al] as we would predict that those tissues with the highest fat content (and lowest %water) would also have the lower [Al].”

Response 1: Thank you for this new round of revision. A paragraph expliciting that the tissues used in the study contained fat was inserted in the ‘Methods’ section, as well as an explanation of the consequences and efforts to overcome this issue: “The samples analyzed were fat-rich and this is undesirable in order to have quantitative recovery of aluminum during GFAAS measurements. In this case, an alkaline treatment with TMAH [14] allowed the complete solubilization of the samples. Additionally, the use of (Mg(NO_3)_2) as chemical modifier for the GFAAS heating program showed to be mandatory to obtain quantitative recoveries of the analyte.”. Also, in the footnote for Table 1, which shows the procedures for GFAAS measurements, we have now included the correlation coefficient between Al concentrations and water content in the normal tissues and central/peripheral regions of the tumors. These correlation coefficients illustrate the intensity of the relationship between the relation dry/wet weight and Al content. The footnote text reads as follows: “Note: correlation coefficients for Aluminum concentration and the water content of the samples were: 0.23 for normal tissues; 0.26 for peripheral tumor areas, and 0.16 for peripheral tumor areas, showing
that samples with increased water content (and therefore lower fat content) had slightly higher concentrations of aluminum.”

Editorial request:

- Ethics committee: Please indicate the name of the ethics committee which gave approval.

Response: The full name of the ethics committee which gave approval to this study is now cited in the ‘Methods’ section.