Reviewer's report

Title: Antioxidants and breast cancer risk - a population-based case-control study in Canada

Version: 1 Date: 3 August 2010

Reviewer: Hoda Anton-Culver

Reviewer's report:

The research question posed by the authors focused on the effect of antioxidants on breast cancer is somewhat novel. The study population is appropriate and the design is appropriate for testing the relevant questions.

The statistical methods in the most part are appropriate and well described. However a major concern is that the conclusion that there is no effect of antioxidants from dietary sources or from supplementation less than 10 years cannot be supported by the way the data analysis was done. The data analysis of antioxidants effect from dietary sources was done separately and independently from the analysis to examine the antioxidant intake from supplementation. The analysis should be redone using a model that includes all confounders in a way that mutual adjustment for antioxidants from dietary sources and those from supplementation are included in the model. In other words, is there an effect of supplemental antioxidants for more than 10 years after adjusting for antioxidants intake from dietary sources?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'