Reviewer's report

Title: Physical Activity and Diet Behaviour in Colorectal Cancer Patients Receiving Chemotherapy: Associations with Quality of Life

Version: 1  Date: 1 July 2009

Reviewer: Kristina H Karvinen

Reviewer's report:

This is a well-written paper examining relationships between physical activity, diet and quality of life in on-treatment colorectal cancer survivors. The findings provide a novel insight into these relationships in a previously unexamined sub-population of colorectal cancer patients.

Major Compulsory Revisions

1. One of my major concerns with this manuscript is the “Exploratory Analyses” on page 12. The authors claim that since such a low percentage of participants (26.2%) were meeting physical activity guidelines, they would examine relationships between a new definition of physical activity (i.e., any activity at all) and quality of life. This seems strange. First of all, 26.2% does not seem like a low percentage meeting physical activity guidelines when compared to other studies of cancer survivors and the general population. In fact, I would argue that 26.2% is high considering this sample is currently on chemotherapy. Second, I fail to understand what the advantage is of examining a category of physical activity that encompasses anywhere from 15 minutes of mild physical activity a week upward to heavy, regular physical activity. At this point there isn’t any evidence that suggests that 15 minutes of mild physical activity has any health or QOL benefits. My suggestion would be to completely remove this section. In a larger sample size, three categories of activity could be examined (i.e., meeting physical activity guidelines, some moderate-to-vigorous activity but not sufficient to meet guidelines, no moderate-to-vigorous activity), but I think with such a small sample size this kind of analysis would be underpowered.

2. Another concern is the interpretation of the physical activity results on pages 13-14. The authors claim that because few participants were meeting physical activity guidelines, they must be inappropriate for CRC survivors on chemotherapy. This doesn’t make any sense. The percentage of the regular population meeting public health recommendations for exercise is also relatively low, yet it would be ridiculous to conclude that this is the case because the recommendations are too high. The guidelines are there because we know from research studies that that is the minimal amount of activity that is required for health benefits. It is possible that these guidelines are in fact inappropriate for CRC survivors on...
chemotherapy, but at this point we do not know what the optimal volume is for this population. Certainly it cannot be ascertained by examining the percentage of people that actually meet that goal. The authors should remove these statements from the discussion.

Minor Essential Revisions

1. Page 2 (Abstract) – The latter part of the first sentence is inaccurate. I don’t think you are referring to the role of QOL in the relationship between CRC risk and physical activity.

2. Page 2 (Abstract) – The purpose statement is not entirely in line with the purpose in the main body of the text. Mention secondary purposes since they are discussed in the conclusion.

3. Page 10 (Results) – Under “Quality of Life and Social Support”, an interpretation of means scores is provided. All interpretations of data should be in the discussion section.

4. Page 11 (Results) – Second paragraph – “The data revealed that BMI was negatively correlated with QOL, and age, total social support…were positively associated”. Is a bit misleading. It sounds like the latter variables are associated with BMI.

5. Page 11 (Results) – Last paragraph – The first sentence reads that “Individual t-tests were used to determine the significance between groups…” It might help to clarify exactly what the groups are.

6. Page 12 (Results) – First paragraph – This paragraph seems redundant to the results in the first paragraph on page 11.

7. Page 13 (Discussion) – First paragraph – “Specifically, diet behaviour, ….was better achieved in this sample than physical activity” This state is confusing. It would make more sense to say “meeting dietary guidelines”.

8. Page 13 (Discussion) – Last full paragraph – Indicating that because 85% of the sample was meeting recommendations for fruit and vegetable intake “may also suggest that current diet guidelines are reasonable for survivors undergoing adjuvant or metastatic chemotherapy” doesn’t make any logical sense. We could just as well say that just because 85% of a population eats fast food on a daily
basis we should incorporate that into their dietary guidelines since it is feasible for them. These kind of statements should be removed.

9. Page 14 (Discussion) – Last paragraph – The authors state that the percentage of CRC survivors in previous studies that meet physical activity guidelines is “low”, yet the range is from 25-54%. These percentages do not seem particularly low, in fact they could be considered comparable to the general age-matched population.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.