Reviewer’s report

Title: Low-carbohydrate, high-protein diet score and risk of incident cancer; a prospective cohort study

Version: 2 Date: 20 March 2013

Reviewer: András Keszei

Reviewer’s report:

In their manuscript, Nilsson and colleagues describe a cohort study investigating the relationship between low-carbohydrate and high-protein diet score (LCHP) and cancer incidence. Overall, no association was found between LCHP and cancer risk. The study has a well-defined and relevant research questions, the methods are, in general, appropriate, and the manuscript is well written.

Major Compulsory Revisions:

I have remarks regarding the description of the cohort; choices and description of exclusions; and the handling of BMI in the analysis.

1. It is not clear form the ‘Study design and cohort’ section during which time period recruitment took place.
2. Line 77: What does the year range 1990-1996 stand for? Is it the time period when 30 year old individuals were recruited?
3. Lines 87-95: Were exclusions individuals or participation occasions? Or all exclusions reported as excluded subjects had only one sampling occasion?
4. Lines 93-94: Is it necessary to exclude more than 15% of participant occasions because of repeated sampling? With changes in dietary habits over time, repeated measures provide additional exposure information, which can be analyzed in a time-varying analysis. Furthermore, the exclusion might introduce bias.
5. Lines 130-133: BMI is a potentially important confounder in this analysis. Dichotomizing BMI leads to a loss of information, and in my view, is unnecessary. The violation of the proportional hazard assumption does not justify dichotomizations, as there are various ways to deal with the violation of this assumption.

Minor Essential Revisions

1. Line 108: Please indicate the response alternatives, or the most extreme alternatives.
2. Please indicate in the ‘Statistical analysis’ section that sex-specific analyses were performed.
3. Lines 136-140, and tables 2 and 3: Were multivariable models adjusted for energy intake as presented in the tables, or were not adjusted as indicated in the
text?

4. Please consider presenting person-time at risk in the cohort for exposure categories in tables 2 and 3, to allow calculation of incidence densities.

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