Reviewer’s report

Title: Macronutrients, Vitamins and Minerals Intake and Risk of Esophageal Squamous Cell Carcinoma in a Population at Risk for Esophageal Cancer

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Reviewer: H Boeing

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1. The authors argue that there are many advantages to convert intake of foods into intake of nutrients and having data calculated in this way can give valuable hints for etiological research. This is true under the assumption that food intake is measured relatively precisely, nutrient tables being used reflect the nutrient composition of the local foods, and that variation in nutrient concentration of a single food group is minor compared to the variation between food groups. In this study, the authors used a semi quantitative dietary assessment instrument and a nutrient table developed for the US. There is the claim that not enough data on nutrient composition is available for Iranian foods. Further, nutrient values were used in the statistical analysis without directly referring to the foods, which contributed most to the nutrient intake and its variation. The conclusion being drawn by the authors argue in favour for nutrients which have been investigated in several of intervention studies in high-risk areas without definite conclusions. Thus, this study does not really contribute new insights to this issue since there had been several reports in the past about diets with inadequate provision of nutrients related to this type of cancer.

2. Having used a semi-quantitative dietary assessment instrument does not really favour to compare the results with objective data of dietary recommendations. Thus, the authors should highlight that all conclusions about adequacy of the diet is relative and that this method only allows to compare cases with controls but not to make statements regarding quantities of intake. This type of comparison over-stresses the type of methods being used, and gives the reader the impression that this type of comparison is state of the art.

3. The authors should clearly highlight that some of the extreme relative risk estimates are simply due to the low numbers. It is completely legitimate to draw first conclusion from this study. However, it needs to be clearly stated that this study has the character of a pilot study conducted in an area with low alcohol consumption allowing a further search for risk factors of this cancer. However, it deserves is in my view more research to identify the aspects of diet habits causally related to this cancer site. Particularly it is interesting to investigate which of the dietary factors could substitute the dominating role of alcohol and smoking for cancers of the upper GI tract seen in Western societies.