Reviewer’s report

Title: A Prospective Study of Dietary Selenium Intake and Risk of Type 2 Diabetes

Version: 1 Date: 7 June 2010

Reviewer: Qi Sun

Reviewer’s report:

This is well-written manuscript. The topic, selenium intake in relation to diabetes, is very interesting and pertains to the interest of readers of this journal.

Major Compulsory Revisions:

1. Unfortunately, selenium intake is assessed by a FFQ, which is known for its inaccuracy in assessing selenium intake. Unless the authors can provide direct evidence, such as strong correlation between FFQ selenium and red blood cell selenium, results based on FFQ assessments of selenium are always questionable. Despite the authors’ arguments that in Italy soil selenium content variation is minor, the authors still need to provide direct evidence to support that FFQ selenium assessments are accurate. We cannot believe the results until we see the evidence.

2. 1,290 women could not be re-contacted over the follow-up and were further excluded. The authors need to compare who were lost during follow-up with who remained in the cohort to see whether loss-to-follow up is likely differential or not.

3. It's puzzling why a logistic regression rather than a Cox regression was used for data analysis. Most diabetes diagnoses should have a relatively clear date of diagnosis, which can be utilized to calculate time-to-event in Cox regression. In addition, those 1,290 women could not be re-contacted over the follow-up should be censored in Cox regression rather than be deleted from the analysis. When using Cox regression, proportional hazard assumption should be evaluated.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

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