Reviewer’s report

Title: Use of supplementary phenotype to identify additional rheumatoid arthritis loci in a linkage analysis of 342 UK affected sibling pair families

Version: 1 Date: 1 October 2009

Reviewer: Zhi Wei

Reviewer’s report:

In this manuscript, the authors fit a proportional hazards model using sex as the covariate. The estimated cumulative hazard of rheumatoid arthritis (RA) is then used as a quantitative trait in a non-parametric multipoint variance component linkage analysis with 353 microsatellite markers distributed across the 22 autosomal chromosomes. They identified 3 new loci with genome-wide suggestive linkage evidence for RA.

Major Compulsory Revisions:
This is an interesting idea. But my major concern is that it is not clear how sensitive their findings/results are to the (proportional hazards) model fitting. Bootstrap might give some idea. In addition, in their proportional hazards model, why not regress directly over each individual SNP with sex as the covariate to get the association evidence?

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

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.