Reviewer's report

Title: Association of the rs738409 polymorphism in PNPLA3 with liver damage and the development of nonalcoholic fatty liver disease

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Reviewer: stefano romeo

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In the manuscript entitled “Association of the rs738409 polymorphism in PNPLA3 with liver damage and the development of nonalcoholic fatty liver disease” Kikuko Hotta and colleagues showed a replication of the association of the PNPLA3 rs738409 sequence variant and NASH in individuals of Asian Descent with NAFLD. The cohort studied even though not extremely large is very well phenotyped and it has enough power to detect difference given the higher rs738409 minor allele frequency in Asians. The statistical approach is fundamentally correct even though there are some aspects that can be improved. I think replication studies in human genetics especially among different ethnic groups are important and valuable.

Minor Essential Revisions:

1. Continuous variables with skewed distribution should be presented as median and interquartile range. Specifically in table 1: triglycerides and in table 4: triglycerides, ferritin, hyaluronic acid, fibrosis stage. These variables should be logarithmically transformed before entering the multivariate analyses (this is not clarified in the methods).

2. In the discussion the rs738409 minor allele frequency reported for African Americans (24%) is not correct; in fact it is 14%.

3. Table 4: numbers of individuals across the different genotypes should be included in the table

4. In tables litre should be reported as L and not l, BMI (kg/m2) should be changed in BMI (kg/m2).

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.