Reviewer's report

Title: TCF7L2 variant genotypes and type 2 diabetes risk in Brazil: significant association, but not a significant tool for risk stratification in the general population

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Reviewer: Anke Hinney

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Marquezine et al. found association of TCF7L2 SNP rs7903146 risk alleles and type 2 diabetes mellitus (T2DM) in 560 patients with coronary heart disease from Brazil. Additionally, they assessed the use of this marker for a predictive test for T2DM in 1,449 population-based samples. This is the first time a South American population was screened for this SNP and its influence on T2DM.

Major Points

As the power to detect the well established effect of the TCF7L2 SNP of T2DM in the population-based study group is extremely low (24%, see Results), the study group is too small to validly assess the effect of the SNP in a predictive test. Hence, these analyses should either be removed from the manuscript or the size of the study groups has to be increased considerably.

The description of the population-based study group is to my mind too long. It should be shortened considerably.

Minor Points

‘Coronary heart disease’ is to my mind more commonly used than ‘coronary disease’ and could thus be replaced.

The abbreviation TCF7L2 should be in italics, if the gene is referred to.

The English should be checked by a native speaker; additionally there a numerous typos (e.g. Abstract: ‘assess’ instead of ‘access’).

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

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.