Reviewer's report

Title: Susceptibility to Type 1 Diabetes conferred by the PTPN22 C1857T Polymorphism in the Spanish population

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Reviewer: Klaus Badenhoop

Reviewer's report:

The authors analysed the PTPN22 SNP C1858T in a case control study of Spanish patients with type 1 diabetes and controls from the Madrid region. They confirm a significant association for the T allele.

Although they touch this only briefly, their data clearly demonstrate a difference in female and male patients: Santiago et al. show that in the group with early disease onset there is a significant difference between female patients and female controls (Pallelic = 0.006). Male patients compared with male controls show only a trend (Pallelic = 0.1172). The authors have ignored that and should point it out and discuss it appropriately. Kahles et al have observed a similar difference, whereas Herman found the reverse. In a study of psoriatic arthropathy PTPN22 was particularly associated with the male sex (Huffmeier U, Reis A, Steffens M, Lascorz J, Bohm B, Lohmann J, Wendler J, Traupe H, Kuster W, Wienker TF, Burkhardt H. Male restricted genetic association of variant R620W in PTPN22 with psoriatic arthritis. J Invest Dermatol. 2006 Apr;126(4):932-5). The authors should discuss potential genetic and epigenetic factors influencing the gender differences of immunogenetic associations in type 1 diabetes.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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

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

Declaration of competing interests:
'I declare that I have no competing interests'