Reviewer's report

Title: High prevalence of protein tyrosine phosphatase non-receptor N22 gene functional variant R620W in systemic lupus erythematosus patients from Kuwait: implications for disease susceptibility

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Reviewer: Hans Nossent

Reviewer's report:

General comments
The authors describe a high prevalence of R620W in SLE patients compared to controls in the Kuwait population, but found no association with SLE severity. The research question is relevant as this PTPN22 gene variant may contribute to the survival of a broader repertoire of lymphocytes, some of which may be auto-reactive and relate to SLE. There is however already a significant body of literature on this in both SLE and RA and I am not sure if this descriptive paper contributes more than observational data mainly of regional interest. The study is too limited in scope to reliably assess R620W role in SLE susceptibility.

Specific comments
1. The introduction is too long and needs to be more concise as the study has limited scope.
2. Disease activity should be reported in a validated manner rather than subjective "mild or moderate/severe" fashion by using e.g. SLEDAI-2K or BILAG scores.
3. There is much overlap between text in results section and tables 1 and 2 - the text can thus be shortened considerably, while tables 3 and 4 can be deleted with results shortly summarised in the text.
4. I am not convinced the authors analysed the data correctly in e.g. table 3. The genotype frequency seems not to differ much across males and females and this should be addressed by a Chi-square analysis for the full cohort rather than frequency comparison between genotypic subgroups. Similar applies to table 4.
5. The discussion should focus on main results and much of the theoretical implications of the R620W variant on lymphocyte function can be deleted as these were not studied and no relation was seen with SLE severity.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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