Reviewer’s report

Title: Correlation between Interleukin-17 Gene Polymorphism and Osteoarthritis Susceptibility in Han Chinese Population

Version: 1 Date: 01 Nov 2018

Reviewer: Ingrid Meulenbelt

Reviewer's report:

The rational to study IL17 assumes that OA is an autoimmune disease which it is not. Furthermore, the results do not match the conclusions that are drawn. Additional revisions are necessary.

Please add page numbers in addition to the line counts in this way it is very difficult for me to indicate the section/sentence I am referring to. Better use consecutive line numbers throughout the manuscript.

Osteoarthritis per definition is not an autoimmune disease. This suggestion should be removed from introduction and first paragraph of the discussion. Please address here how the immune system could come into play in OA. Is IL17 expressed in bone, cartilage and/or synovial tissues?

Please remove the sentence in the discussion indicating that IL-17 serum level may be greatly related to the risk of knee OA. Since the SNPs do not affect the IL-17 serum levels the observed association of increased IL-17 serum levels among OA patients could only mean that IL-17 serum could be a marker of ongoing OA disease process. Per definition the results of a cross sectional study design of a level with a disease can not provide information on underlying the disease process.

In the discussion please remove the section "CD4+ Th17 cells…. Until …..modulate the susceptibility to OA". It is unclear how the statement refers to any of the results in the paper other than that the 2 SNPs that were investigated do not affect the IL-17 levels in serum and as such it could not explain the association observed with the SNPs and OA.

The results of the serum IL-17 association among OA patients does not justify the statement (final sentence discussion) that serum IL-17 may facilitate in predicting the risk of developing OA. The association of serum IL-17 with OA could just be a marker of ongoing OA disease process. Actually, the fact that the SNPs do not show association to the level indicates that the SNP does not affect the serum IL-17 levels. Instead the authors need to hypothesize in which way the IL-17 SNPs could contribute to OA if not via levels?

The option of a false positive result should be added to the discussion

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

Yes

**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.

No

**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:

Needs some language corrections before being published

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