Reviewer's report

Title: Allelic expression analysis of the osteoarthritis susceptibility locus that maps to chromosome 3p21 reveals cis-acting eQTLs at GNL3 and SPCS1

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Reviewer: Ingrid Meulenbelt

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The manuscript of Gee and al. describes the allelic expression analyses of the genes residing in the OA susceptibility locus that maps to chromosome 3p21. In total 7 genes were tested for allelic imbalances of the respective transcripts. For 2 positional genes GNL3 and SPCS1 significant allelic expression imbalance was observed that contributed to the OA association signal at chromosome 3p21. The paper is clearly written and provides important straight forward results about the functional aspects of the OA susceptibility SNP at 3p21. I have the following minor comments:

Results.
- Could the authors indicate the level of expression of the 2 genes for example was expression of the genes within the highest quartile?

Discussion
- Could the authors indicate whether the genes were responsive to the OA disease process in previous generated expression datasets of healthy versus osteoarthritic cartilage?
- It would be informative for the reader to elaborate a little on the possible hypothesis how these genes could confer risk to OA due to reduced expression?
- What would the authors suggest as next steps with respect to the indicated “detailed follow up investigations…”?

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

Quality of written English: Acceptable

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'