Reviewer's report

Title: An assessment of the portability of ancestry informative markers between human populations

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Reviewer: Shweta Choudhry

Reviewer's report:

In this manuscript authors tried to addressed the issue whether ancestry-informative markers (AIMs) identified in one population can be used to correct for population stratification in other populations. They genotyped 10 BritAIMs in ~1000 individuals from 53 populations worldwide and assessed the degree to which these 10 BritAIMs capture population stratification in other groups of populations by use of the Fst statistic. They found that BritAIMs are generally not useful to distinguish between continental groups or within continental groups distantly related to Britain. Their analysis also suggest that the portability of AIMs across geographical scales (e.g. between Europe and Britain) can be limited and should therefore be taken into consideration in the design and interpretation of genetic association studies. I have following comments:

1. As authors pointed out the result of the study was foreseeable since there is no a priori reason for expecting SNPs that differ dramatically in allele frequency within Britain to differ dramatically among continental groups. I would like to see the result of how AIMs identified to distinguish within a continental group say e.g. Europe perform when inferring ancestry and for correcting population stratification in different European populations compared to AIMs that are specific to each population (e.g. BritAIMs for Britain). This analysis will provide more useful information than the analysis performed by the authors since most of the AIMs panel available in the literature are for differentiating between continental groups or within continents but not for each specific population.

2. Table 1 and 2 are missing from the manuscript.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'