Reviewer’s report

Title: Somatic mutation analysis of MYH11 in breast and prostate cancer

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Reviewer: Tobias Sjöblom

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In the manuscript by Alhopuro and coworkers, a partial mutational analysis of MYH11 in 155 breast and 71 prostate cancers is performed. 8 exons were selected based on the locations of previously known somatic mutations in colorectal cancers. The results confirm known constitutional polymorphisms, as well as a somatic c.5798delC frameshift mutation in one prostate cancer, but no novel mutations in MYH11 were observed. The manuscript thus largely reports on negative findings.

The abstract and discussion should clearly state the fraction of MYH11 coding sequence that was analyzed, in order to facilitate interpretation of the study. Please indicate MYH11 mutation frequencies in AML and non-MSI colorectal cancers. The reason for increased exon 9 failure in PrC should be clarified, is there a potential for translocations involving this exon?

On a more general note, the selection of exons is based only on two mutations plus a MSI hotspot location, which I find a questionable approach. Although the gene is large, it would make more sense to analyze the entire coding region in a more limited set of samples.

The manuscript is otherwise concisely written and of appropriate length.

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