Reviewer’s report

Title: Loss of heterozygosity: what is it good for?

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Reviewer: Anna Sablina

Reviewer’s report:

In this manuscript, the authors analyzed the potential mechanisms by which LOH could contribute to development and progression of ovarian cancers. The results are based on analysis of 86 tumors from their cohort and the TCGA ovarian data. The authors looked through several possibilities - such as increased mutation and methylation levels of the LOH-located genes, etc. Their conclusion is that growth advantage mediated by LOH depends on its effect on multiple genes. They also suggest that a combined approach (CNV, sequencing, methylation) is required to identify novel tumor suppressor genes.

A suggested workflow is clear and straightforward and conclusions are in line with previously published studies focused on the role of LOH in other cancer types.

Discretionary Revisions:
As a proof of principle the authors should apply a suggested combined approach to identify novel tumor suppressor genes in ovarian cancer.

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

Quality of written English: Acceptable

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

Declaration of competing interests:
I have no competing interests.