Reviewer's report

Title: Single Nucleotide Polymorphisms in DNA Repair Genes as Risk Factors Associated to Prostate Cancer Progression

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Reviewer: Veronika Vymetalkova

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Comments to the Author

In the present manuscript, Henriquez-Hernandez et al evaluated the effect of single nucleotide polymorphisms in 6 genes involved in DNA repair and prostate cancer progression.

The methods are appropriate. The study design is adequate. Although the study lacks novelty, the results might be of importance in the field of prostate cancer research. The results are interesting and may give a light on the process of carcinogenesis of prostate cancer. However the work and the manuscript have several limitations and imperfection that should be considered and corrected.

Major Compulsory Revisions

1. The association of polymorphisms and prostate cancer risk has been intensively studied. The authors point out that the population is of Spanish origin. An argument should be provided as to why major differences in genetic risk underlying disease phenotype would be expected in a population that is relatively closely related to other populations on the European continent.

2. Authors use a threshold P value 0.05. This does not take into account the fact that several SNPs are addressed over several phenotypes. This increases the likelihood of false positive results and would be avoided by applying a correction for multiple testing.

3. The rs25489 and rs1799782 in XRCC1 and rs1805388 and rs1805386 in Lig4 seems to be in perfect linkage disequilibrium, thus only on SNP from both genes are needed to be genotyped and presented in all the text and tables. This argument should be analyzed.

Minor Essential Revisions

Table 1: instead of percentage, thenumber for respective alleles, OR and 95% CI should be presented

Only two desimals should be used in all the text and tables

When genes mentioned, the name of the gene should be in italics

Table 2 and 3 should be placed in supplementary documents

Figures 1 and 3 should be also placed into supplementary documents
**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' below.