Reviewer's report

Title: TOPBP1 missense variant Arg309Cys and breast cancer in a German hospital-based case-control study

Version: 1 Date: 4 October 2010

Reviewer number: 1

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This is a carefully conducted study that finds no association between the TOPBP1Arg309Cys allele and breast cancer risk in a hospital based cohort of breast cancer patients and population controls. Taqman SNP genotyping was confirmed by sequencing.

The only minor essential revisions I would like to see are:

1. that Arg309Cys is not referred to a missense "mutation" and that "mutation" genotyping becomes variant genotyping of SNP genotyping (for instance page 4 second paragraph).

2. The order of how the experiments were done needs clarification - what was done first an RFLP screen on 168 samples to identify some heterozygote and homozygote carriers, followed by sequencing and then genotyping of the whole cohort by TAQMAN - this is not very clear in the text which starts with a taqman assay and then details that 168 samples were additionally evalauted by RFLP - what came first?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.