Reviewer's report

Title: BACH1 Ser919Pro variant and breast cancer risk

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Reviewer: Thilo Doerk

Reviewer's report:

This manuscript reports on the mutation analysis of BACH1/BRIP1 in Finnish breast cancer patients. The authors initially performed CSGE scanning of the whole coding region in 43 patients with familial breast cancer. This did not reveal a clearly pathogenic mutation suggesting that BACH1 mutations do not substantially contribute to familial breast cancer in Finland. However, it is difficult to critically evaluate whether this conclusion is safe because the details of the CSGE scanning procedure are not shown. The authors should list their primers in a short table, there are no space restrictions in a pure on-line journal.

A common missense substitution, Ser919Pro, was subsequently screened in a large association study with unmatched case-control design. The authors did not detect an increased breast cancer risk neither in the whole series nor in women with premenopausal disease. They should briefly comment on the power of the study to detect small odds ratios. Furthermore, it would be interesting to learn whether there is also no difference in risk when the patients were stratified by family history. The latter question is raised because a previous kin-cohort study (Ref. 14) had revealed an increased risk in sisters of affected patients. Apart from such minor issues, the manuscript is well written and the results are clear.

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests