Reviewer's report

Title: Rapid detection of carriers with BRCA1 and BRCA2 Ashkenazi founder mutations using high resolution melting analysis.

Version: 2 Date: 16 December 2007

Reviewer: Fernando Schmitt

Reviewer's report:

The manuscript presented by Elena Takano and co-authors, reported an interesting and well written study of a new methodology for the study of BRCA1 and BRCA2 germline mutations.

The authors report an important and well conducted study, which aimed to identify a new and more suitable methodology for BRCA mutation screening. The authors show the in a clear way all the possibilities and advantages of the proposed methodology. Although the methodology is not new, as some modifications, which lead to a more secure and reliable identification of hotspot and extra BRCA1 and BRCA2 germline mutations.

Nevertheless, in the discussion section, the authors claimed that this methodology will prove superior to the current approaches. In order to do that, the authors must compare in the setting the HRM approach with the PTT, DGGE and most importantly to DHPLC approaches. Only doing so, it can be proved the superiority of this approach.

In addition, and since it is a methodological manuscript, the authors should include and discuss more technical issues, such as the one raised in the discussion concerning the care that should be taken in DNA isolation with the salt concentration. This issue should be clearly reported in results section.

Minor:
- absence of page number
- methods, HRM Assay Conditions, line 3; used misspelled
- results, figures are numbered 1, 2 and 3, and in text it appears as 1a, 1b and 1c
- Acknowledgements, line 2. Two consecutive periods

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory 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, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.