Reviewer's report

Title: Risk of breast cancer and family history of other cancers in first-degree relatives in Chinese women: a case control study

Version: 1 Date: 14 March 2014

Reviewer: GEMA LLORT

Reviewer's report:

- Major Compulsory Revisions

1- In the conclusion I think is possible to explain the same in other words less confusing in the sentence:
   “An increased breast cancer risk ...and younger, is not clear, and I counsel specify better”...

   It is not clear: that subjects have more risk? limited to first-degree relatives? who must be under 50 years?

2- In the conclusion: Risk-reduction options should be considered for these women with high risk of breast cancer. I think is important to be cautious at this point because the definition of women at HIGH RISK for breast cancer is more complex. Perhaps this women are at moderate risk of breast cancer?? I think that the important is to remark that we need future cohort studies with a larger sample and that also consider other risk factors for breast cancer.

3- In discussion: In the second paragraph: is it not correct when the authors said: for women with family history of above cancer, risk-reductions options, including increased screening, chemoprevention and even prophylactic surgery, should be considered. I suggest to modify this sentence, because at this moment the prophylactic surgery only has to be considered and offered after genetic risk assessment to women who are carriers of a genetic mutation of a breast cancer gene of a high penetrance.

4- In the discussion, I will recommend to include include and compare the results with those of the Turati et al case control- study (F Turati et al, Annals of Oncology, 00:1-6,2013), and those from contrast different results.

   I recommend include and compare the results with those of the case control study Turati, and also with the findings of the Swedish database (Hemminki K, Eur J Cancer 2012).

   In the study of Turati, they provide a case-control study a Picture of the associations between family history of cancer and cancer risk, and confirmed and quantified known associations with family history of cancer at discordant sites. Turati et al found a significant association between breast cancer and family history of colorectal cancer and of hemolymphopoietic cancers, with a OR of 1.5 and 1.7, respectively.

5- In the discussion: IN the fourth paragraph, before reference 31: When the
authors said: The presence of BRCA1/2 mutations are associated with hormone receptor negative breast cancer (31). It would be important to correct and to say: The presence of mutations in the BRCA1 gene are associated with hormone receptor negative breast cancer, because BRCA2 has a higher prevalence of breast cancer with hormone receptors positives.

- Minor Essential Revisions

6-Before and after reference 26-28, and also other times in the article: there is the same expression that the authors repeated some times: “AND SON ON”, that I would recommend to the authors than they consider to vary for another expression.

- Discretionary Revisions

7-In the Background, after Ref 8: I would recommend changing the phrase:”the incidence, clinical and mortality of breast cancer are different in different populations and countries” , because it does not fit the context of the paragraph. And assess and replace this with a sentence that includes the following concept : “The magnitude of the association with family history varies between studies, cancer sites, countries, and State of sex and age, being generally stronger for younger probands.

8- at the end of the discussion when referring to the point: “third, due to the nature of the design of this study, our findings should be confirmed by future cohort studies. In this point, is very important to consider adding : ” cohort studies that also considering other risk factors for breast cancer in patients

9-Please consider that in any point of the discussion to consider to explain the concept that family history reflects the consequences of genetic susceptibilities, Shared environment, and common behaviors. Most of the increased risk found for family history are supported by existing evidence pointing to genetic aspects of cancer. Although most of the cancer susceptibility genes confer a high risk of developing the disease and are highly penetrant, they are to rare so they not account for a large proportion of common cancers, and probably

They would be explained by predisposing genes of lower penetrance, as is the case of common polymorphisms in genes involved in the production of sex hormones or their analogues or genes involved in the metabolism of exogenous or endogenous mutagens.

10- In the limitations consider that the number of incident cases from some neoplasms is relatively small, and this limits the precision of the risks estimates, especially for subgroup analyses. Some associations may be chance findings or others based on a limited number of exposed cases and controls and need independent confirmation.

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.

Declaration of competing interests: I DECLARE THAT I HAVE NO COMPETING INTERESTS.