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Hair coloring, stress and smoking increase the risk of breast cancer: A case–control study

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Dear Editor of *Clinical Breast Cancer journal*

Thank you for the recent constructive comments on the manuscript. Please find responses to our reviewers' comments as follows:

Responses to the comments from our first reviewer:

The present manuscript reports the association between hair coloring, stress and smoking and risk of breast cancer. The subject is important and the manuscript is well written. However, the manuscript needs some revision.

My minor comments can be found on the manuscript, my main comments:

Third paragraph, lines 5-8: Authors wrote "Iranian women suffer from breast cancer at younger age…. Women diagnosed with breast cancer are one decade younger…". This is not correct. Mean age at breast cancer diagnosis is about 10 years lower in Iran and many other developing countries compared to developed countries but not the risk (incidence). The reason for younger mean age at diagnosis in developing countries is their younger population not the higher risk of early onset breast cancer. I suggest authors read this paper: Ghiasvand R, Adami HO, Harirchi I, Akrami R, Zendehdel K. Higher incidence of premenopausal breast cancer in less developed countries; myth or truth?. BMC cancer. 2014 May 19;14(1):343.

That is correct, the text is revised to make it clear that it is the mean age and not the risk of BC that is different from developed countries (page2, lines 16 to 24)

Page 3, data collection: what was the response rate for the cases and controls?

Done (page 5, lines 23 to 26)

Page five, first paragraph: Stepwise is not a proper selection strategy to adjust for important confounders. It is not clear which confounders were adjusted for in the multivariable model. All the important confounders should be entered into the model. Please redo the analysis if necessary.

Done, all important variables are in the final model as they contributed to the model's goodness of fit (table2)

Authors did not mention if they tested for interaction between variables or not. Since premenopausal and postmenopausal breast cancers have differences in risk factor profile, separate analysis for pre and postmenopausal breast cancers or testing for interaction between menopausal status and other variables might be informative. Especially, BMI is associated with an increased risk of postmenopausal breast cancer but not the premenopausal. Authors should do the stratified analysis by menopausal status and report the results separately if different.