Reviewer's report

Title: A case-control study on the combined effects of p53 and p73 polymorphisms on head and neck cancer risk in an Italian population

Version: 2 Date: 29 January 2009

Reviewer: Sujata Patil

Reviewer's report:

The revised manuscript is greatly improved, and clarifies many issues. However, some comments and questions remain.

Major Revisions

1) The authors have stated that the power calculation in the discussion (page 10) was not done apriori. Such calculations are difficult to interpret, though I do acknowledge that there is debate on this issue. In my view, power calculations are done to inform a study design before accrual and I would not include this. However, if the authors want to include this, state clearly that this power calculation was done after the completion of the study.

2) I am still not clear why a multinomial logistic regression rather than several multivariate logistic regressions were done. With multinomial logistic regression, the endpoint would be oral cavity oropharynx, larynx, controls as a single categorical outcome, and not split out into pairwise comparisons. Also, the goodness of fit statistics are stated in the text but never interpreted.

3) Since this is matched study design, does one need to use the appropriate matched analysis techniques (e.g. conditional logistic regression)? This should be clarified.

Minor Revisions

1) For the Kaplan-Meier plots, does x-axis really go to 200 months? This means some patients had over 16 years of followup. But, in the text, patients were recruited from 2002. Can this be clarified? Please label the y-axis.

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

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.