Reviewer's report

Title: Genetic polymorphisms of MDM2 and P53 genes are associated with risk of nasopharyngeal carcinoma in a Chinese population

Version: 1 Date: 9 February 2010

Reviewer: Odilia Popanda

Reviewer's report:

The authors analyzed two polymorphisms, MDM2 309 and TP53 Arg72Pro, for single and joined effects on nasopharyngeal cancer risk in a Chinese Han population. They found that both SNPs affected NPC risk, when occurring together even in a more-than-multiplicative manner. SNPs were however not found to interact with EBV infection status of patients, an important NPC risk factor. Genotyping and data analysis seem to be carefully done, important controls are included. Data for the MDM2 SNP and NPC risk as well as the interaction of both SNPs with NPC are yet missing. Thus these data contribute further evidence that these SNPs may modulate risk of many cancer types. Both SNPs are functional affecting either protein function (TP53) or mRNA expression levels (MDM2). Higher MDM2 mRNA levels were again confirmed by the authors in a NPC tissue of 71 patients.

Minor essential revisions.

The official gene symbol for the gene encoding p53 protein is TP53.

Based on the associations presented this reviewer suggests to avoid the term “supermultiplicative” as it is also used in mathematics and genetics. The term “more than multiplicative”, as used in methods and in the cited paper, seems adequate at this stage of the analysis which must be confirmed in further studies.

Methods: The DNA amount of 100 ug for p53 PCR seems to be high. For the p53 genotypes, the restriction pattern should be given.

The authors should compare allele frequencies with already published ones.

mRNA quantification: ß actin does not seem to be the ideal reference gene as expression levels of ß actin are much higher.

Are data available on smoking and alcohol consumption and do these risk factors affect NPC risk?

Discussion, line 4: increased levels of MDM2 expression in human bone marrow: reference?

Major compulsory revisions.

The authors must urgently revise the references. They are not presented as they appear in the manuscript and some of the references listed are not present in the manuscript. It is not sufficient to copy the reference list from another manuscript.

The manuscript is rather well written but at some positions difficult to understand.
and should therefore be revised (examples are: discussion, paragraph 3, line 5: “Moreover, another meta-analysis studies …. were significantly increase susceptibility”; or Results, Gene-gene interaction, line 6: what is the meaning of mentioning the second OR at this position?)

**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, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests