Reviewer's report

**Title:** Increased expression of MMP9 is involved in poor prognosis in nasopharyngeal carcinoma

**Version:** 1  **Date:** 14 December 2009

**Reviewer:** NK Mak

**Reviewer's report:**

Association between MMP expression and tumour development has been well documented. This manuscript reported the analysis on the correlation between clinicopathologic features of NPC and the expression of MMP-9 by the tumour samples. The expression of MMP-9 was determined by PCR and immuno-histochemical methods. Clinicopathologic features were based on the examination of 164 paraffin-embedded NPC tissues and 32 normal tissues.

Comments:

1. Page 4, line 4: Peoples…….. before any therapy”. Which methods (RT, chemotherapy with a single agent or more than 1 agents, any adjuvant therapy etc. ?) were used for these NPC patients? Since the overall survival is influenced by the treatment method, it is more appropriate to include this information for data analysis.

2. Page 5, Results: MMP9 mRNA was highly expressed in NPC tissue: Proteolytic cleavage of the pro-enzyme MMP-9 is required for the activation of MMP-9. What is the rationale for measuring the MMP-9 mRNA? Measuring the expression of MMP-9 proteins using immunohistochemical staining method on these tissues is more meaningful as the paraffin samples were also analyzed using immunohistochemical staining. Furthermore, the expression level of MMP9 in T1, T2 and T5 was similar to N4 and N5.

3. Page 6, line 1 – 3: “We observed ….., respectively”. This sentence is not clear.

4. Page 6, line 4 – 5: the p value for the MMP9 expression in the normal tissue is p=0.004, indicating that MMP9 is also highly and significantly expressed in the normal tissue. This observation is inconsistence with the statement in page 5, line 20.

5. Page 6, line 5 (Table 2): There are 2 Table 2 in the additional file!

6. Page 6, line 9: Table 1. The order of Table 1 should be before Table 2 (line 5).

7. Table 3: multivariate survival analysis of MMP9 protein expression: Data analysis for the age, gender and smoking was not done in this Table.

8. Page 8, 2nd paragraph, line 8-9 “However, no reports concerning the correlation between MMP9 expression and the survivin of NPC patients have
been published”. What is the relationship between MMP9 and surviving?

9. page 12, Figure 2 legend (line 2): where is A1?

10. The association between high level of MMP2 (but not MMP9) expression and poor survival of NPC patients had previously been reported (Eur. J. Surg. Oncol., 30, 560 - 564). The discrepancy between these 2 studies needs to be discussed.

11. Typos: e.g.
Front page: The title “……invovled……”; (involved),
Page 4, line 6: …”reserved…” (preserved), and other typos elsewhere in this manuscript.
Page 5, line 10: abbreviation for “NESG”

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'