Reviewer's report

Title: Heat Shock Protein-27, -60 and -90 expression in gastric cancer: association with clinicopathological variables and patient survival

Version: 1 Date: 28 May 2008

Reviewer: Oliver Stoeltzing

Reviewer's report:

The study by Giaginis et al. “Heat Shock Protein-27, -60 and -90 expression in gastric cancer: association with clinicopathological variables and patient survival” investigated the expression of distinct HSPs, which are being implicated in cancer progression, in human tissues of gastric adenocarcinomas. The authors found that HSP-27, HSP-60, HSP-90 proteins were expressed in gastric adenocarcinoma specimens. Expression of HSP-27 was significantly associated with tumor size and the presence of organ metastasis. HSP-90 expression was not associated with any of the clinicopathological parameters. Surprisingly, high HSP-90 expression was significantly associated with longer overall survival times.

Interesting study, especially the fact that Hsp90 expression is associated with an improved survival is somewhat intriguing. This finding actually demands further attention, as it could imply that loss of chaperoning (i.e. Hsp90) leads to a more aggressive phenotype, hence leading to poor prognosis (and resistance to therapy?). The paper would therefore substantially be improved if authors could provide data on differences in Hsp90 client protein expression (HER2, EGFR?...) in these tissues.

Specific comments: Minor Essential Revisions

1. Methods: it is not clear what authors mean with “expression” versus “staining intensity”, and the relevance of this distinction. Why were two rating systems applied? I strongly suggest using only one rating system and performing adequate analysis of relevant variables. In addition, the rationale for the arbitrary cut-off threshold for Hsp expression (52% vs 48%) is not clear. The authors need to explain, or refine this threshold in terms of using one cut-off value throughout the manuscript (i.e. 50%?).

2. Significant data on “sex” and “age” do not appear to be important variables, otherwise authors need to explain why this finding is really clinically relevant. I would suggest omitting these data.

3. What is the clinical significance of Hsp60 expression? This remains unclear. In addition, Ki-67 staining does not provide any significant information as it does not correlate with staining. This needs to be addressed or omitted.

4. Tables are very large and contain too many non-relevant data. Authors should
focus and revise. (again using one rating system is sufficient).

5. Figure 1: this figure should be optimized in terms of presenting staining of normal and tumor tissues of both intestinal and diffuse type cancers, and at two magnifications (inserts).

**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