Author's response to reviews

Title: Gene expression analysis of a Helicobacter pylori-infected and high-salt diet-treated mouse gastric tumor model: Identification of CD177 as a novel prognostic factor in patients with gastric cancer

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Reply to the Reviewer 1:

1. Statistics of microarray: Because we chose the pooling method for microarray analysis, the ordinal statistical methods including t-test are inapplicable. We have received the review of our method for detection of candidate genes by Filgen Inc. (Nagoya, Japan), and added the hierarchical clustering analysis to confirm that all three genes (Cd177, Reg3g and Muc13) are included in a cluster of probes up-regulated only in Group D.

2. Survival rate: The median follow-up period and 5-year survival rate of total 55 patients were 83 weeks (about 19 months) and 30.9%, respectively. The classification of depth of invasion and diagnosis of advanced gastric cancer were made according to the Japanese Classification of Gastric Carcinoma (JGCA, 1998). Recent epidemiological research by the Japanese Gastric Cancer Association (JGCA) has reported that 5-year survival rate of patients categorized as T4, the worst category based on the depth of invasion, was 20.6% (Nashimoto et al., Gastric cancer treated in 2002 in Japan: 2009 annual report of the JGCA nationwide registry. Gastric Cancer, 16: 1-27, 2013). Thus, it is considered that the survival rate in the present study is within reasonable range.
Reply to the Reviewer 2:

1. Depth of invasion: The classification for depth of invasion was not described in the clinical record for the two specimens, although they showed apparent invasion to the submucosa. We added the brief description about this in the caption of Table 4.

2. Numbers of excluded animals: We added the numbers of animals that died or became moribund in the Methods section, as indicated.

3. Group D: It was considered that the combined action of *H. pylori* infection and high-salt diet could be associated with the causes of death and severe weakness in Group D. We did not examine these animals in detail, because the samples which died at an early stage were not suitable for the purpose of this experiment of comparing the cumulative gene alteration.