Author's response to reviews

Title: Determinants of gastric cancer screening attendance in Korea: a multi-level analysis

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Editor-in-Chief

BMC Cancer Editorial Office

RE: Determinants of gastric cancer screening attendance in Korea: a multi-level analysis

Dear Editor-in-Chief:

Thank you very much for your letter dated January 27, 2015 inviting us to submit a revised manuscript, referred to above, to your journal. We have made modifications on the manuscript according to suggestions by reviewers. Detailed information regarding the revision is provided in the attached document.

We hope that we have adequately addressed the reviewers’ concerns and that the revised manuscript is now acceptable for publication in the BMC Cancer. We are looking forward to hearing from you regarding the journal’s decision.

Sincerely,

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Response to the reviewers

Reviewer 1

Major

1. Participation in screening program was defined by self-reports, however there was no information about whether symptomatic individuals undergoing upper GI examinations at clinics or hospitals were discriminated from asymptomatic attendance.

Authors’ response: In the Korea National Health and Nutrition Examination Survey, there was no question about whether the participants had any symptoms at the time of gastric cancer screening. Responders without taking a screening examination within 2 years prior to the interviews were uniformly defined as non-participants in screening program. According to the NCSP guidelines, endoscope or UGI are provided every 2 year in Korea (this was not described in the body, but was found out in Reference 6). Is this right? If so, uncontrolled participation at longer intervals or occasional missing of biennial examination seems to be conceivable. Is it acceptable that these behaviors were ignored as inappropriate attendance of gastric cancer screening program? The validity of definition of screening program attendance should be discussed.

Authors’ response: Among non-attendants, 39.5% never participated in a gastric cancer screening and 16.2% underwent examination more than two years prior to the response date (Results lines 126-127). We did not find any relevant article for the validity of the questionnaire items for gastric cancer screening attendance conducted in Korea, although possible overestimation of self-reporting of cancer screening was discussed in a Japanese study (lines 227-229).

3. According to reference 7 shown in the introduction of the manuscript, lifetime and recommendation screening rates of gastric cancer in 2012 were 77.9% and 70.9% respectively, although the present data reported 43.95% of participation rate in 2007-2009. What is this discrepancy? Further discussion seemed to be required about this issue.

Authors’ response: According to the Korean National Cancer Screening Survey, 2004-2012, which include the information of reference 7, the lifetime and recommendation screening rates of gastric cancer in 2007-2009 were 55.3-65.1% and 45.6-56.9%, respectively and had been improved gradually. (page 11, lines 229-231).
Minor

1. Section of ‘Materials and Methods’ seemed to be insufficient, since there were no descriptions about followings i.e.; what services and intervals were provided by the NCSP, what queries were made by the KNHANES # concerning participation in gastric cancer program, and so on. Such information seemed important to understand the present study.

Authors’ response: We added the following sentences in the Materials and methods section.

The NCSP guidelines recommend gastric cancer screening to population aged 40 and older for every two years by either upper endoscopy or upper GI series. The question for gastric cancer consisted with the screening modality (endoscopy only/upper GI series only/both endoscopy and upper GI series) and the date of the latest screening (within 1 year/between 1-2 years/more than 2 years/never attended to the screening). (page 4, lines 84-88)

Reviewer 2

- Major Compulsory Revisions
- Even though limited experiences of screening programs for gastric cancer in other countries, discussion must be improved by comparing this manuscript’s results;

Authors’ response: The following sentences were added in the Discussion. (page 10, lines 216-220). Our results are generally consistent with previous study which used the KNHANES 2005 and reported positive association between higher educational attainment, highest income and gastric cancer screening rates [8]. Although none of the previous study used multi-level approach for the gastric cancer screening rate, results from the Korean National Cancer Screening Survey suggested socio-economic disparities in both organized and opportunistic gastric cancer screening by education and income levels [23].

- Further explanation on absence of gender and access influence on adherence to the program should be given. Women tend to be more involved in screening programs and this was surprisingly not the case as it was also the no relation of access and adhesion.
Authors’ response: As the reviewer mentioned, the adherence to the screening programs is generally higher in women than men in Korea. However, similar or slightly higher adherence to gastric cancer screening in men than women is consistent with previous study (ref 7, 8). For gastric cancer screening, men are more likely to choose endoscopy as a primary screening modality than women, and the proportion of endoscopy screening is steadily increasing (ref 20). (page 9, lines 192-195)

- Explain exclusion criteria namely why non-respondents of gastric cancer screening questions (n=655) were excluded. How different were these individuals?

Authors’ response: Since participation of gastric cancer was the main research variable, we could not include those who did not respond to the gastric cancer screening questions. The non-respondents were more likely to be older, men, and not to respond to education and occupation questions than their counterparts (page 4, lines 78-79). Also please refer the discussion regarding this issue (lines233-237).