Author’s response to reviews

Title: Childhood cancer mortality in Japan, 1980-2013

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Version: 2 Date: 22 March 2015

Author’s response to reviewers

MS: 3528309951469383
Title of revised manuscript: Childhood cancer mortality in Japan, 1980–2013
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Version: 2
Date: 23 March 2015
Reviewer 1: Amy Linabery

Major revisions
1) We rewrote the discussion for CNS tumors (page 10, line 166-182). We added the importance of a nationwide, childhood cancer registry, according to the reviewer’s advice.
2) Data used in papers published by Baba S (2010) and Marugame T (2007) (reference 12 and 14 in previous version) are from a local cancer registry, not a local childhood cancer registry.
3) We rewrote sentences in the methods and added information describing the study period. (page 5 line 84-92)
4) We rearranged content in the results section according to the reviewer’s advice.
5) The comparison of mortality rates in the 47 prefectures has been removed.
6) We rewrote the sentences explaining the increasing trends during the 1980s and 1990s, page 9 line 147-151.

Minor essential revisions
7) We have changed ‘per 100,000 persons’ to ‘per 1,000,000 persons’.
8) We have verified this issue. The order of causes of death differs because ranks differ by age of population (0–14 years versus 1–14 years) and calendar year (2005 versus 2013).
9) The registration of vital events in vital statistics is complete in Japan. Quality of data is described in the method, page 4 line 64-65.

10) We added “WHO 2000–2025” and a reference to page 4, line 70.

11) We rewrote the sentences in the methods regarding the four countries used for comparison (page 5, line 84-89).

12) A description of the study period has been added. (page 5, line 89-92)

13) The word “incidence” has been removed.

Discretionary revisions

14) The sentence has been changed according to the reviewer’s comment (page 13, line 233).

Reviewer 2: Danny Youlden

Major points

1) Death statistics by prefecture are recorded by the place of residence at deaths in Japan. Since the rarity of death from childhood cancer, especially in recent years, makes it difficult to explain the results geographically, in the revised paper we have removed SMR by prefecture, according to the other reviewer’s comments.

2) In addition to reporting APC for the whole study period, we would like to present and compare rate changes for the most recent years in Japan and other countries. However, comparing the final segment of APC directly may not be suitable when the intervals of the last segment are different. AAPCs provide average APCs over a prespecified fixed interval, which allows us to compare trends for different groups in the same period. In Tables 1 and 2, we provide AAPCs of the last five observations to describe the changes in the most recent 5 years and AAPCs between 2000 and 2010 to compare the recent changes between Japan and other countries. Since the observation periods differ between Japan (1980–2013) and the other four countries (1980–2010), we selected 2000–2010 to compare data for the same period.

Minor points

3) Information on quality of data was added on page 4, line 64-65. The registration of vital events in vital statistics is complete. Because the data used for our analysis were obtained from vital statistics – not from individual death certificates and medical records directly – it is difficult to estimate the percentage of histological verification for cancer diagnosis in our study.

4) SMRs by prefecture have been removed from this revised paper.

5) We rewrote the results section in the revised manuscript, including deleting the sentence “...around 0.7 per 100,000 population in the same period” (previous version, line 110-113).

6) We added APC to the sentences, according to the comments (page 6, line 108-113).

7) SMRs by prefecture have been removed from this revised paper.
8) We added the references based on the comments.
9) We have rewritten the discussion involving mortality and trends for CNS tumors (page 10, line 166-182).
10) We appreciate the reference the reviewer provided, and in the revised manuscript we compared and cited some of the Austria study results (page 10, line 179-182).
11) We did not remove Figure 1. Since childhood cancer death is rare, especially in recent years, here we provide 5-year average rates to avoid the problem of random variation.
12) We changed the minimum number of observations between two joinpoints from four to six based on the reviewer’s comment (page 5, line 79-81).
13) SMRs by prefecture have been removed from this revised paper.

Discretionary revisions

14) Because the data are not from a program of cancer surveillance, we do not have detailed medical information such as histological diagnosis, thus it is impossible to recode ICD to ICCC in the current study.
15) We changed the minimum number between two joinpoints from four to six based on the reviewer’s advice. (page 5, line 79-81)
16) The sentence has been deleted according to the reviewer’s comment.

Miscellaneous

1) We recalculated mortality rates using the standard world population (WHO 2000–2025) in the revised manuscript (the previous version used the standard world population (1960) to calculate rates). In addition, setting in joinpoint analysis (the minimum number between joinpoint) has been modified, thus the results and contents of the text, figure, and tables have been changed.

The English of this revised manuscript has been edited by Edanz recommended by BioMed Central.

We believe that the manuscript has improved and hope it will now prove acceptable for publication in BMC Cancer.

Yours sincerely,

Limin Yang
Junichiro Fujimoto