

Demographic shift disproportionately increases cancer burden in an aging nation: current and expected incidence and mortality in Hungary up to 2030

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Dear editor

I would like to thank Menyhárt et al¹ for their recent publication, but I have a number of issues I would like to raise regarding the data collection and analysis.

According to the Methods section, the authors have used the National Cancer Registry and Central Statistical Office database as a data source for the analysis. Both organizations share publicly available data at <http://www.onkol.hu/hu/rakregiszter-statisztika> and http://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_wnh001.html. However, in their recent article, the authors did not refer to either website. Since the National Cancer Registry did not provide additional information to the authors, the authors were ethically obliged to clarify the exact source of their data. Also in the Methods section, the authors did not point out the exact selection criteria for cancer cases, stating only “All cancer cases are classified according to the International Statistical Classification of Diseases and Related Health Problems, 10th revision”. The Authors did not explain that only tumors with “C” diagnostic code (ICD10) were counted, as well as, in situ, benign, and borderline lesions. Moreover, the paper did not reveal whether secondary tumors (C77–C79) and malignant nonmelanocytic tumors of the skin (C44) were included in the analysis. Although an exact definition was absent, the incidence list did not appear to contain the latter cancer group; however, case numbers are in the same range as that of lung, colorectal, and breast cancer.

I would also like to point out that according to the official website of the Central Statistical Office, during the period 2006–2015, 324,258 patients died due to malignant disease, however, the paper presents this number as 331,119. Also, the National Cancer Registry of Hungary collects cases with the ICD10 code C00-097, D00-D09, D303, and D33, which means analysis of incidence and mortality was performed on different patient populations (incidence: C00-097, D00-D09, D303, and D33; mortality: C00-C97 and D00-D48). Finally, I wish to raise the issue of how the case numbers of 712,785 reported in the study, were calculated from the publicly available data of the National Cancer Registry.

As I have shown, it seems there may be some inaccuracies in the data used in the study and this raises questions about the results presented.

Disclosure

The author reports no conflicts of interest in this communication.

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Reference

1. Menyhárt O, Fekete JT, Gyórfy B. Demographic shift disproportionately increases cancer burden in an aging nation: current and expected incidence and mortality in Hungary up to 2030. *Clin Epidemiol.* 2017;10:1093–1108.

Authors' reply

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Dear editor

We wish to thank Dr Kenessey for his queries and offer the following responses to help clarify the issues raised.

Regarding the use of the two source databases, the manuscript went through multiple rounds of revisions and was peer-reviewed by five reviewers (including the earlier version of the manuscript) and two editors. At no stage were any concerns raised about the clarity of data sources, because it was clarified in the article, as quoted “Population-based incidence data for the period between 2001 and 2014 were collected by the National Cancer Registry of Hungary. Mortality data for the time frame between 1996 and 2015 were acquired from the Central Statistical Office of Hungary. The National Cancer Registry of Hungary was established in 2000 to replace former hospital-based data collection systems, and it remains in close contact with community hospitals to ensure the quality of the compiled data. Since 2001, the collected incidence data are publicly available”. Since there is only a single National Cancer Registry of Hungary, there was no place for any ambiguity as to the database used. More importantly, although the database of the National Cancer Registry is a publicly available website, all the data are listed in Hungarian only and there is no English translation available. We did not think providing the link to this site would be very beneficial for the international readers who comprise the majority of *Clinical Epidemiology's* readership.

In response to the selection criteria, the number one ranked journal in the field of Oncology (*CA: A Cancer Journal for Clinicians*) publishes the yearly US Cancer Statistics in which “All cancer cases are classified according to the International Statistical Classification of Diseases and Related Health Problems, 10th revision”. We used the same classification system for our selection criteria as was

detailed in the article. As the data were downloaded from the National Cancer Registry of Hungary, the database does not contain information about secondary malignancies (C77–C79) and therefore could not have been included in the analysis. We followed the common international practice in which C44 is not included in the group of melanomas of the skin. In our tables, the major types of malignancies were clearly labeled, and the manuscript included the statistics of the major cancer types.

Regarding the issue raised about the number of patients reported as dying due to malignant disease, we downloaded all mortality data on the 16th of September 2016. In the mortality data, we included all cases listed under C00–D48, including benign tumors and tumors with ambiguous origin. If these tumors were left out, the numbers would correspond with the number presented by Dr Kenessey. Our justification for the inclusion of this data was that these tumors were indeed lethal and our intention was to provide the most comprehensive tumor-related characterization of the present mortality in the population.

In response to the incidence and mortality analyses, we clearly indicated in the manuscript the sources of the incidence and mortality data, and how data availability restricts this analysis. For estimates of overall mortality, we refer to our previous response. The future estimates for incidence and mortality of each tumor type strictly depends on the specific data for that tumor. For example, female breast cancer (BC) is labeled by the BNO code, C50. Thus, both incidence and mortality estimates for BC were only based on C50 data. It would be beneficial for the National Cancer Registry to change its practice and harmonize the list of collected data with the Central Statistical Office of Hungary for the sake of better compatibility.

Finally, according to a statement on the website of the National Cancer Registry, the most recent data are not publicly available, because of ongoing quality controls, and “data for the latest 3–5 years are likely to change after finishing the corrections”. We downloaded the data in the Fall of 2016, when data from 2015 were not yet available. This is why we substituted data from 2015 with the mean of the two most recent years, as described in the Methods section. Minor discrepancies between our case numbers and that of the reader can be expected due to recent data corrections.

Disclosure

The authors report no conflicts of interest in this communication.

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