Author’s response to reviews

Title: Planning for the future: cancer incidence projections in Switzerland up to 2019

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Author’s response to reviews: see over
ANSWERS TO THE REVIEWERS

We thank the reviewers for their very helpful comments which have all been considered in the revised manuscript. Please refer to the highlighted version of the manuscript.

English language has been reviewed throughout the manuscript by a native-English speaker.

Reviewer 1

The paper is well-written and informative. I have a few minor suggestions detailed below.

Minor Essential Revisions
1. Several of the numbers in the abstract differ from those presented elsewhere in the text and in Table 2. On page 9, the number presented for cancers of the corpus uteri match the abstract rather than Table 2.

All the discrepancies between the numbers in the abstract and the rest of the paper have been corrected and now the figures match.

2. Some graph labels in Figure 2 had a couple of minor spelling/grammatical errors (ie. Stomac, Others cancers).

The mistakes have been corrected.

3. Reference 6 was referenced 3 times at the one place on page 6.

Discretionary Revisions

This has been corrected and the reference 6 now appears only once.

4. For Figure 1, there could be benefit in ensuring the lines for males and females were distinguishable when printed in black and white.

To be able to distinguish the lines for males and females in figure 1 we added the label M and F on the side of each curve.

5. Would suggest including a reference for the first sentence in paragraph 3 on page 4 (starting: Switzerland’s population is older...”


6. Please check that reference 14 is correct, as it did not seem to refer to the model used here (as mentioned on page 11).

The reference 14 has been cancelled.

7. Was 1985 the first year cancer data was collected? Might there be benefit in briefly explaining why you chose to start at 1985, for those unfamiliar with the Swedish cancer registry system?
In Switzerland cancer registration has been a gradual process. The first cancer registry started in the canton of Geneva in 1970, followed quickly by other French-speaking cantons (Neuchatel and Vaud in 1974). At the beginning of the 80s the registries of the German cantons of Zurich, St. Gallen-Appenzell and Basel were created. We chose to use cancer incidence data starting from 1985 because at that time the operating cancer registries covered approximately 50% of the Swiss population (48.7%). We added this information in the text (page 5, line 7): "by 1985 cancer registries covered approximately 50% of the Swiss population."

8. Occasionally, the tone comes across as more confident than might be justified.
For example, on page 10, in the middle of paragraph 2, the statement, “However, part of the differences is no doubt attributable to…” could potentially be considered over-confident. (Also, recommend changing ‘differences’ to ‘difference’.)

We changed the sentence as follows: “However, part of the difference could be attributable to differences in the intensity.....”

9. I was surprised to see C96 included as non-Hodgkin lymphoma. There could be benefit in explaining why this was included, as I am not aware of other Registries including this code in the definition.

Both IARC, in their Cancer Incidence in 5 continents (CI5) publications, and NICER in their annual reports on cancer incidence and mortality include C96 in the non-Hodgkin lymphoma site. Consequently, we have chosen to follow this convention and trust that this is acceptable.

10. At the end of page 8 (Results) you mention the cancer sites whose incidence rates are expected to decrease in the future. Should oral cavity/pharynx for males also be included here?

We agree with the reviewer and we have included oral cavity and pharynx among the sites that are expected to decrease.

11. Although ‘non-melanotic skin cancer’ is a commonly used term, a more accurate term would be ‘keratinocytic skin cancer’, as this only includes BCC and SCC. Cancers like Merkel cell are non-melanocytic skin cancers, but included in Registry data.
We have changed the term as suggest by the reviewer.

12. The sentence at the start of the final paragraph on page 8 would possibly read better as "Rates are expected to decrease during the next 10 years for stomach..."
The sentence has been changed as suggested.
Reviewer 2

The authors projected the national cancer incidence in Switzerland up to 2015-2019 using NORDPRED software and historical cancer incidence data (1985-2009) from 11 cantonal cancer registries covering about 60% of the national population in 2005-2009. All cancers combined and 12 major cancers were included in the projection. The changes in projected incidence were separated into contribution from changes in cancer risk and that due to changes in population ageing and growth. The methods used seem to be appropriate and the results produced are reasonable. However, I am not sure how useful these national projections of cancer incidence are, as authors mentioned that the Swiss health system is highly decentralised (page 11) which means that the cantonal government is responsible for the cancer control programs for their population. In this sense, canton-specific projections will be more useful for cancer control in Switzerland. In the Conclusion (on page 12) the authors stated that ‘New and more effective preventive measures should be put in place to counteract the inevitable increase in the number of cancer cases’. Whose responsibility is this? Federal government? Or Cantonal government?

Reflecting the historical evolution of the confederation, cantons sit at the centre of delivering and funding health services in Switzerland. However, cantons share joint responsibilities with the confederation in policy making, regulation and monitoring. The confederation has increasingly strengthened its role in health promotion and prevention by establishing national policies in areas where it previously had no or limited responsibilities. For example, new national programmes on HIV/AIDS prevention, tobacco, alcohol, narcotics, as well as nutrition and physical activity, have been introduced. Efforts are also underway to co-ordinate policy development on tobacco, alcohol and diet and physical activity. And with our estimate of the burden of cancer for the whole country we intended to contribute to this process providing information essential for a national programme against cancer. We have added a sentence to reflect this increasing role of the federal government in health promotion and policy programs and the opportunity this presents: “However, with the confederation recently strengthening its role in health promotion and policy programs, there are new opportunities for improving the impact of such measures.” (page 11, line 6)

Because the historical data only covered up to 60% of the national population (in 2009) and the projections are based on such data, one of the assumptions is that the cancer incidence rates in these regions without a cancer registry were similar as these regions with registry coverage in the past and would be comparable in the future. This is a relative strong assumption and it would be good that the authors provide some discussion on the uncertainty of the projections based on this.

The reviewer raises an excellent point. However, this assumption is based on a sound understanding that in Switzerland the homogeneity of health policies, programs and trends tracks the major languages groups in the country. As all major language areas are well represented in Swiss cancer registry data (i.e.90% in the French, 100% in the Italian and 40% in the German language areas), this historical
data provides a relatively sound basis for forward planning. This is also in keeping with practice in other settings; in a recent paper (JCO 2009, 27(17):2758-2765) Smith et al. estimated the number of cancer patients diagnosed in the USA through 2030 using the Surveillance Epidemiology and End Results-17 database, which represents approximately 26% of the United States population. We have revised the discussion to reflect this with the following sentence: “However, at the end of 2009 cancer registration coverage was 61% of the whole country, with good representation of all major language regions at almost 100% for French-speaking Switzerland, 100% for the Italian-speaking region and 40% for the German-speaking region.” (page 12 line 11).

Specific comments
1. There are some discrepancies in the reporting of the total number of new cases projected for 2015-2019: In Abstract – in one place it is 46000 (last sentence of the Results) but 45700 if you add together the total number of males (25700) and females (20000); in the Results these numbers are different again – 25910 for males and 20359 for females; in the Discussion the total number reported is 46300 (males and females combined) on page 9.

The discrepancies between the numbers in the abstract and in the text of the paper have been corrected.

2. In Background section: in the 3rd paragraph – what is the meaning of the word “presage”?

We have changed the word presage to predict.

3. In Methods section: The term NICER stand for ‘the National Institute for Epidemiology and Cancer Registration’, but it is “the National Institute for Cancer Epidemiology and Registration” according to reference 3.

We corrected this error.

4. On page 6, 4th paragraph the references for 6,7 should be fixed. [6,6,6,7]

This has been corrected.

5. Table 1: Cancer type C14 is included in both ‘Oral Cavity & Pharynx’ and ‘Other cancers’.

For the calculation of incidence rates cancer C14 is only included in Oral cavity and pharynx. The mistake in the table 2 has been corrected.