Author's response to reviews

Title: Cancer patterns among children of Turkish descent in Germany: a study at the German Childhood Cancer Registry.

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Author's response to reviews:

Dear Editor,

We thank the reviewers for their detailed and helpful comments. We revised the manuscript accordingly, implementing the reviewers' suggestions wherever possible. All changes are explained below in detail.

Reviewer 1

Minor essential revisions:

We changed the phrase `cancer risks¿ into `cancer patterns¿ as suggested.

Discretionary revisions:

We added a sentence about the proportion of 2nd generation migrants of Turkish children in Germany in the discussion.

Reviewer 2

Major compulsory revisions:

1. We changed the phrase `Turkish children¿ into `children with Turkish names¿ in all tables and provided an explanation in the text.

2. Data about ethnic origin are not routinely registered in Germany. The underlying reasons are practical (operationalisation and actual information of the notifying doctor) rather than ethical; there is no legal requirement neither to include nor to explicitly ban this information from cancer registration reports. We added a sentence in `Material and Methods¿.

3. We changed the phrase `mostly German¿ to `for the most part German¿. The vast majority of the `non-Turkish¿ children is indigenous German; however, there is a small number of children with other than Turkish migration background (most
of them are `ethnic¿ German children who immigrated from the former Soviet Union). We explained in more detailed in the Discussion section that we compare migrant children originating from Turkey with children who are for the most part German. This operationalisation of migrant status is commonly used in migrant research. It is, of course, a surrogate for a multidimensional set of factors including genetic, behavioural and contextual variables. The individual measurement of these factors was not possible in our retrospective, registry-based study.

4. We added a sentence about the frequency of binational Turkish-German marriages in Germany to the discussion section.

5. The informations in the registry about country of birth and nationality incomplete and mostly based on the subjective assessment of reporting doctors. The validity of this information is questionable. So we decided not to include them in our analyses.

6. Valid data about nationality are not available in the GCCR, so an estimation of the numerator for nationality based incidence rates was unfortunately not possible.

7. We conducted stratified analysis for 5y periods of diagnosis time. No differences in the PCIRs were found, so we decided not to show these additional tables. The starting point of cancer registration is described at the beginning of the `Materials and Methods¿ part and we refer to an article from Kaatsch that describes the completeness of registration and routine analyses of the GCCR, describing the development of cancer rates over the years.

8. We added a sentence about characteristics (male-female ratio). Other characteristics could be seen in the tables 2b and 2c (stratification for sex) and table 3 (stratification for age at diagnosis). With regard to the comment on the distribution of Hodgkin Lymphoma subtype, we are hesitant to include a subtype distribution specifically only for Hodgkin (119 cases in total in the children with Turkish names; 13 subgroups) while there are numerous other overall diagnoses that also could be shown in more detail. Technically the Hodgkin subtypes can easily be displayed, but we would like to do this only if we understood better why Hodgkin in particular is of interest.

9. Until now there is no evidence for a lower access to cancer care of Turkish children. Turkish migrants are often members of the lower social classes. However, in the German health care system the diagnosis and treatment of childhood cancer is tertiary care, which means that independently from SES, every case will be treated on the highest level. Further research could focus on differences in diagnosis time and survival of migrant children, but at present there are no hints for such differences.

10. We have included a paragraph in the Discussion on the interpretation regarding EBV-related cancers and the comparison with data from Turkey. However, we used ACCIS data specific for childhood cancer (with reference) for
this rather than Globocan 2002 as suggested by the reviewer. The available data are limited, but point to a higher incidence of Burkitt lymphoma and nasopharyngeal cancer in Turkish children.

We hope that our explanations and responses are clear and look forward to further communications.

Kind regards

Jacob Spallek