Author's response to reviews

Title: Potentially malignant skin lesions: an increasing burden on general practice

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Author's response to reviews: see over
Dear Prof. Altiner,

Thank you for considering our revised manuscript entitled “Potentially malignant skin lesions: an increasing burden on general practice” for publication in BMC Family Practice.

Based on the very useful comments of the reviewer, we have revised the manuscript. In the attachment you will find our response point by point as well as a revised version of the manuscript, the figures, tables and the approval by The Medical Ethical Board of the University Medical Center Groningen. We hope that this revised version of our manuscript is acceptable for publication in your journal.

We are looking forward to your reply,

Yours sincerely, also on behalf of the other authors,

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General comment given by the reviewer:
1. The reviewer wants the search to be validated, i.e. wants to know how we ensured that our search strategy using ICPC codes was actually picking up potentially malignant skin lesions.

   Reply: We understand the reviewers concerns and agree that it is highly important that our search is reliable in identifying potentially malignant skin lesions. Therefore, we implemented the following strategy. First of all, ICPC codes used in this study were selected by a team of experts consisting of researchers and two experienced (>25 years) general practitioners. In addition, in order to standardize registration, all GPs participating in this general practice registration network were trained to uniformly register based on this ICPC registration. For the validity of Registration Network Groningen (RNG) data we refer to a recently published paper in which RNG morbidity registration data were compared to other registration data. In that study, RNG registration constituted the ‘gold standard’. (ref: M.C.J. Biermans et al. External Validation of EPICON: A Grouping System for Estimating Morbidity Rates Using Electronic Medical Records. J Am Med Inform Assoc. 2008 Nov-Dec; 15(6): 770–775.)

Your suggestion to verify the diagnoses in a randomly selected number of patients may not lead to the desired validation of diagnoses. This is because GPs seldom register (e.g. as plain text in the medical record) a patient’s reason for encounter as ‘fear for cancer’. They prefer to use a somatic description of the lesion they diagnosed perhaps because fear is such an ‘common’ symptom to them (ref: Van der Heide WK. Voiding problems in men in general practice [doctoral thesis]. Groningen: University of Groningen, 2006. ISBN: 90 367 2631.). In addition, general practitioners hardly ever record their concern when faced with a potentially malignant lesion. In other words, a random sample would not really help us to identify non-matching diagnoses for potentially malignant lesions. In order to clarify the quality of the data we have added the sentence: ‘All GPs in this network are especially trained for this type of ICPC registration’ (page: 4) to the methods section.

2. The reviewer points out that: another key point is that the paper had clear implications for the issue of where potentially malignant lesions are biopsied (see for example the work of Sinclair et al BJGP 2011). A discussion of this literature is essential if this paper is to highlight the correct policy messages. BJGP 2011.

   Reply: We are not sure if we understand the reviewer’s comment correctly. As we surmised an increasing trend, our goal was to investigate and report the demand for care in general practice due to patients with potentially malignant skin lesions. Furthermore, dermatologist refer to the present alarming number of skin cancer cases as the skin cancer epidemic. We believe that a better understanding of the healthcare demand and adopted treatment policy by general practitioners is the first step towards identifying possible areas of care that could be improved. However, it was not our intention to investigate whether the quality of the care as delivered by the general practice is adequate.

Point by point comment given by the reviewer:
1. The authors must be much clearer about precisely what lesions (and their range) would have been picked up by their search methods.

   Reply: In order to address this concern we have clarified ICPC codes in Table 1. Please, also see our comments made in addressing general point 1 and point by point comment 6.

2. The authors must also indicate how they have validated that the consultations they were identifying were really related to potential skin cancer. At the very least they must have looked at a sample of primary care records of patients picked up by the search to confirm this and this must be reported if the article is to be published.

   Reply: We understand the reviewers concern and addressed this concern in our general comment point 1.
3. I think the title should be changed to "Potentially malignant skin lesions..." and potential should replace possible throughout.

   **Reply:** We agree with the reviewer and replaced “possible” with “potentially” throughout the article.

4. The results paragraph in the abstract is too brief and needs some more detail

   **Reply:** In response to this comment we have added more information to the results paragraph in the abstract. Therefore, we rephrased this paragraph from: ‘From 2001 onwards we found an annual increase in demand for care due to potentially malignant skin lesions of 6.8% (p<0.01) and 14.3% of the patients were referred. After 2006, minor surgery was performed on 29.5% of the patients.’ to: ‘From 2001 onwards we found an annual increase in demand for care due to potentially malignant skin lesions of 6.8% (p<0.01) and in 2010 the benign:malignant ratio was 14:1. In total 14.3% of the patients were referred and after 2006, minor surgery was performed on 29.5% of the patients. Most surgeries and referrals took place within 30 days.’ (Page: 2)

5. The background needs to include information and references to the debate about location of skin lesion excision - recent work of e.g. Sinclair et al from northeast Scotland should be referenced.

   **Reply:** Please, see general comment point 2.

6. The ICPC codes must be detailed and stated within the text of the methods section. The authors must also carefully justify the inclusion of each. I am currently not clear on the rationale for assuming that S04 and S99 are sensible inclusions. The authors need to explain why they are.

   **Reply:** In response to the reviewer’s comment we have detailed and justified the use of ICPC codes in the text. Therefore, we replaced the following sentence: ‘For this selection, we used the following ICPC codes S04, S26, S77, S79, S80, S81, S82, S83 and S99. (see appendix)’ by: ‘To identify consultations for potentially malignant skin lesion without running the risk of also selecting too many consultations for other reasons, 2 GPs (KvdM and WvdH; both > 25 years experience) and 1 researcher (CK) selected the ICPC codes. Consequently, the following ICPC codes S04 (Lump/swelling localised), S26 (Fear of cancer of skin), S77 (Malignant neoplasm of skin), S79 (Benign neoplasm of skin, other), S80 (Unspecified neoplasm of skin, other), S81 (Haemangioma/lymphangioma), S82 (Naevus/mole), S83 (Congenital skin anomaly, other ) and S99 (Skin disease, other) were used for this analysis. The latter ICPC code was included because it also includes actinic keratosis. (See appendix)’ (Page 4)

7. We need to know the raw numbers of each ICPC code that was included in the analysis. This needs a new table - we also need to know the threshold assigned for rejecting S26, 81 and 83 from analysis.

   **Reply:** We have now included the raw number of consultations for each ICPC code into Table 1. ICPC codes with less than 25 annual consultations were not used in the analysis. We rephrased the sentence: ‘Due to the small number of patients registered with the codes S26, S81 and S83, these codes were not included in this assessment.’ Into: ‘Due to the small number of annual consultations (<25), codes S26, S81 and S83 were not included in the analysis.’ (Page: 5)

8. The authors need to state how they confirmed that ethical approval was not needed. They should include details of the organisations that they checked this with or refer to the documentation which supports their decision.

   **Reply:** The Registration Network Groningen has obtained a general approval for study projects using RNG registration data from the Medical Ethical Board of the University Medical Center Groningen. We have added this information to this rebuttal. Furthermore, we have added the sentence: ‘This was confirmed by the Medical Ethical Board of the University Medical Center Groningen.’ (Page: 5)
9. Are the authors able to produce data on their benign/malignant lesions (i.e. 1/15 in 2010) for each year? This would be an instructive result for presentation and comment.

   **Reply:** We thank the reviewer for this very useful comment. We have added a table (Table 2) with this ratio for each year. Furthermore, we noticed an error in the presented ratio of 2010. Instead of 15:1, it should read 14:1. Of course, we have corrected this throughout the document.

10. The word "average" is imprecise - they should be reporting the median number of contacts. Can they confirm this.

   **Reply:** We agree with the reviewer that the median number of contacts should be reported instead of the average number. We have changed this into: ‘(median number of contacts: 2)’. (Page: 7)

11. The discussion should be reorganised and structured: sections required are; Summary of Main Findings; Strengths and Limitations of Study; Context with other literature; Implications of results and conclusions.

   **Reply:** In response to this comment, we have restructured the discussion.

12. For the conclusion the authors should be able to estimate the approximate costs to primary care of these consultations using cost data on national cost per consultation. They should include this data to support their conclusions.

   **Reply:** The reviewer raises a very interesting point. However, for now we feel that this is beyond the scope of our study. Such an analysis should be based on a thorough plan and requires additional funding.

13. Appendix. The ICPC codes table should be revised to indicate how many instance of each code was available for analysis by year. i.e. changing the table to a 10 x 12 table.

   **Reply:** Please, see also point by point comment 7. We agree that this information should be available to the reader. We have, therefore, added this information to table 1.

14. The Figure legends should be applied to the figures to which they relate. This was extremely confusing!

   **Reply:** We agree with the reviewer. However, in our paper we followed the instructions published on the website of BMC Family Practice that calls for “The legends should be included in the main manuscript text file at the end of the document, rather than being a part of the figure file.”. For clarity, we have added relevant information to the figures.

15. Table 1: The ICPC codes should be spelt out within this table.

   **Reply:** In response to the reviewer’s comments, we have clarified the ICPC codes in Table 1.

**Quality of written English:** Not suitable for publication unless extensively edited

   **Reply:** As English is not our native language this manuscript was edited by Native Speaker Translations (http://www.nstranslations.nl/) prior to submission. We are therefore taken by surprise by this comment. Perhaps the reviewer could be more explicit about the nature of the desired adaptations or indicate which text in the paper needs extensive editing. However, if required we will present this manuscript for additional editing to another native speaker English language correction service. Please advise.