PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	How European primary care practitioners think the timeliness of cancer diagnosis can be improved – a thematic analysis
AUTHORS	Harris, Michael; Thulesius, Hans; Neves, Ana Luísa; Harker, Sophie; Koskela, Tuomas; Petek, Davorina; Hoffman, Robert; Brekke, Mette; Buczkowski, Krzysztof; Buono, Nicola; Costiug, Emiliana; Dinant, Geert-Jan; Foreva, Gergana; Jakob, Eva; Marzo, Mercè; Murchie, Peter; Sawicka-Powierza, Jolanta; Schneider, Antonius; Smyrnakis, Emmanouil; Streit, Sven; Taylor, Gordon; Vedsted, Peter; Weltermann, Birgitta; Esteva, Magdalena

VERSION 1 – REVIEW

REVIEWER	Steven Narod Professor, Dalla Lana School of Public Health University of Toronto Toronto Canada
REVIEW RETURNED	14-Mar-2019

GENERAL COMMENTS	This is an ambitious attempt to define the scope of a systemic problem (cancer treatment delay) and to seek solutions by asking caregivers for their opinions. Of course as expected they will provide answers which put themselves in a good light and which support greater resources devoted to the problem. Nothing really surprising here and this is opinion rather than evidence. I am not a fan of papers where the respondents may be stakeholders in the issues at stake, with regard to funding, salaries etc. We all say what we do to make ourselves appear moral and good and to justify a bigger piece of the pie. It is like asking someone why they didn't go to the gym today, Sunday (the gym is closed on Sundays.) They will say "the gym is closed". It doesnt matter that they haven't been to the gym in two years.

REVIEWER	Elizabeth Sarma National Cancer Institute, USA
REVIEW RETURNED	24-Apr-2019

GENERAL COMMENTS	This qualitative study characterized primary care practitioners' thoughts about how to improve the timeliness of cancer diagnosis across 20 different European countries. The manuscript is well written, and the use of data from PCPs in a variety of countries is

	a strength. However, I have a few questions and comments about the manuscript. - The number of PCPs responding to the open-ended question is highly variable across countries (Table 1; p. 12). Could you please explain in a bit more detail how the sampling was conducted that led to the wide variability? In addition, please comment in the Discussion how the sample affects the overall conclusions, since certain countries are more represented than others. - The Results section is challenging to read because it consists of a list of quotations from a couple of participants for each point. The diagram pulls the information together well. Is there an alternative way to present the material in the Results so that it is easier to read (perhaps a table for the quotations)? - It is laudable to pool data from multiple countries to create the diagram; however, I struggle to understand how the diagram will be useful to any one country, since these countries are quite different. In turn, a clearer justification for combining the 20 countries in one analysis would help strengthen this manuscript.

REVIEWER	Dr Nicole Rankin University of Sydney Australia
REVIEW RETURNED	31-May-2019

GENERAL COMMENTS	Thank you for the opportunity to review this manuscript. The authors present a qualitative analysis of one data item from a quantitative survey about the timeliness of cancer diagnosis and where improvements could be made across 20 European countries. The breadth of participants is commendable and I acknowledge the significant the efforts required in gaining human ethics approvals and translation of study materials. The two published papers – protocol and the quantitative results – make absolutely no reference at all to the single open-ended item. It seems highly unusual that there should be no inclusion of a methodological approach for analysing the item in the protocol paper. This omission does not sit comfortably with proceeding to create an analysis and a manuscript based on one item. An intention to conduct this analysis should have been signalled much earlier. The current manuscript presents a breadth of issues generated from the one item. The data-driven approach described in the methods is justified, and the themes appear to be sensibly grouped. The results presented on pages 13-20 present quotes and give an indication of how improvements could be made at a superficial level; there is no depth or exploration that would be generated from qualitative interviews. There is no cross-referencing with the quantitative data for the five (Northern, Southern, Eastern, Western and Central) European geographical areas to provide any further insights about the variations in responses. A mixed-methods approach to analysis may have yielded a greater understanding of how health systems inhibit or facilitate opportunities for change in referral pathways or how the PCPs experience these challenges in everyday practice. The principle findings in the discussion note that there was only one item related to the 'research question'. There is no research question presented anywhere earlier in the article. The authors

	could make improvements to manuscript in this regard. The limitations should include that there was no cross-country or geographical comparison – and thus, the statement on page 22, lines 49-53 that "…countries need to put this study's findings into the context of their own systems, so that they can identify which recommendations are particularly relevant for their own jurisdictions" is not at all justified and should be removed. There are no recommendations resulting from the analysis and this was not the study's purpose. The results do not show how geographical areas could make improvements as there is no analysis on this level. The manuscript section that makes comparisons with other studies lacks depth. Two references (an Irish and UK study) are included – but there is no mention of qualitative studies from any of the other participating countries. The inclusion of an Australian study seems irrelevant. The section on future research could include a suggestion of more qualitative research. The discussion could therefore be significantly improved.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

This is an ambitious attempt to define the scope of a systemic problem (cancer treatment delay) and to seek solutions by asking caregivers for their opinions. Of course as expected they will provide answers which put themselves in a good light and which support greater resources devoted to the problem. Nothing really surprising here and this is opinion rather than evidence. I am not a fan of papers where the respondents may be stakeholders in the issues at stake, with regard to funding, salaries etc. We all say what we do to make ourselves appear moral and good and to justify a bigger piece of the pie. It is like asking someone why they didn't go to the gym today, Sunday (the gym is closed on Sundays.) They will say "the gym is closed". It doesnt matter that they haven't been to the gym in two years.

• The reviewer makes a good point that qualitative data, by the nature of its collection, is subjective. We accept that our study reflects the views of primary care practitioners across Europe, who may well have different perspectives to other stakeholders such as politicians, policymakers and the public, and have added a sentence to this effect in the 'Unanswered questions and future research' section. Nevertheless, our objective here was to capture the views of PCPs across Europe with respect to cancer diagnosis.

• Our study is typical of qualitative research, in which respondents usually are 'stakeholders in the issues at stake'. At no part in the manuscript do we provide themes or quotations that 'put [caregivers] themselves in a good light'. On the contrary, some of our findings indicate areas of activity where respondents feel their own performance could be improved. As funding is a key issue in healthcare, we feel that it is completely appropriate to report stakeholders' opinions and recommendations on this. Further, as this paper reports a qualitative analysis, we report themes rather than actuals levels of any specific variable.

Reviewer: 2

This qualitative study characterized primary care practitioners' thoughts about how to improve the timeliness of cancer diagnosis across 20 different European countries. The manuscript is well written, and the use of data from PCPs in a variety of countries is a strength.

• Thank you.

The number of PCPs responding to the open-ended question is highly variable across countries (Table 1; p. 12). Could you please explain in a bit more detail how the sampling was conducted that led to the wide variability? In addition, please comment in the Discussion how the sample affects the overall conclusions, since certain countries are more represented than others.

• The sampling method is explained. In the results section we now state that ‘To reduce the risk of bias from countries with larger numbers of respondents, we coded a maximum of 100 respondents’ comments, randomly sampled, per country.’
• In a qualitative analysis sample, size is not considered in terms of precision and variability of measurements, but in terms of identifying all possible themes or discourses, that is, saturating the possible discourses. Our sample included enough subjects in terms of gender, years since graduation, site of practice, number of doctors in practice and different countries’ representation. In this sense we consider that we obtained an acceptably representative sample.
The Results section is challenging to read because it consists of a list of quotations from a couple of participants for each point. The diagram pulls the information together well. Is there an alternative way to present the material in the Results so that it is easier to read (perhaps a table for the quotations)?
• We thank the reviewer for this suggestion to use tables as an alternative way to present our results. However, we believe that the presentation method that we have chosen presents our data as a coherent discourse. We submit that this method (i.e. theme/subtheme heading, followed by a description of the theme, followed by quotes to illustrate and provide evidence for those themes/subthemes) is the best and least confusing way for us to describe and provide evidence for our analysis. This is especially the case as we believe that many readers of this paper will be primary care practitioners, and our current style of presenting our results will be the most accessible to them.
It is laudable to pool data from multiple countries to create the diagram; however, I struggle to understand how the diagram will be useful to any one country, since these countries are quite different. In turn, a clearer justification for combining the 20 countries in one analysis would help strengthen this manuscript.
• As this reviewer states, ‘the use of data from PCPs in a variety of countries is a strength’. Despite the diversity of the participating countries, all the themes were based on data from each of those countries. In other words, each country had PCPs whose coded comments contributed to each of the themes.
Reviewer: 3
Thank you for the opportunity to review this manuscript. The authors present a qualitative analysis of one data item from a quantitative survey about the timeliness of cancer diagnosis and where improvements could be made across 20 European countries. The breadth of participants is commendable and I acknowledge the significant the efforts required in gaining human ethics approvals and translation of study materials.
• Thank you.
The two published papers – protocol and the quantitative results – make absolutely no reference at all to the single open-ended item. It seems highly unusual that there should be no inclusion of a methodological approach for analysing the item in the protocol paper. This omission does not sit comfortably with proceeding to create an analysis and a manuscript based on one item. An intention to conduct this analysis should have been signalled much earlier.
• The final, open-ended survey question on which this paper is based had been included so that we could understand the survey’s quantitative findings. Consequently, this qualitative analysis had not been included this in our protocol paper. While we understand the reviewer’s point, we respectfully argue that the full potential of research data is not always apparent at the beginning of a study. There are many examples in the literature of important and innovative research being conducted in ways that were not anticipated at the outset. The work of Prof. Scott Murray provides an especially good example of this: BMJ 2010; 340 doi: https://doi.org/10.1136/bmj.c2581. The possibility of analysing and publishing the qualitative data from our free-text survey question came about because of the unanticipated richness of the responses.
The current manuscript presents a breadth of issues generated from the one item. The data-driven approach described in the methods is justified, and the themes appear to be sensibly grouped. The results presented on pages 13-20 present quotes and give an indication of how improvements could be made at a superficial level; there is no depth or exploration that would be generated from qualitative interviews.

• Our intention was to elicit and summarise the views of European PCPs, including those from countries that do not have the expertise or resources to perform interview research – some of the participating countries have very rudimentary primary care research facilities. We agree with the reviewer, though, that a European-wide interview study, although logistically highly challenging, would be very desirable.
There is no cross-referencing with the quantitative data for the five (Northern, Southern, Eastern, Western and Central) European geographical areas to provide any further insights about the variations in responses. A mixed-methods approach to analysis may have yielded a greater understanding of how health systems inhibit or facilitate opportunities for change in referral pathways or how the PCPs experience these challenges in everyday practice.
• As stated above, despite the diversity of the participating countries, all the themes were based on data from each of those countries. In other words, each country had PCPs whose coded comments contributed to each of the themes.
The principle findings in the discussion note that there was only one item related to the 'research question'. There is no research question presented anywhere earlier in the article. The authors could make improvements to manuscript in this regard.
• We apologise that we had not made our research question clearer. We have revised the final sentence of our introduction to read: 'The aim of this study was to elicit the views of GPs and other PCPs from across Europe on how they thought the timeliness of cancer diagnosis could be improved.'
The limitations should include that there was no cross-country or geographical comparison –
• Please see comments above.
and thus, the statement on page 22, lines 49-53 that "…countries need to put this study's findings into the context of their own systems, so that they can identify which recommendations are particularly relevant for their own jurisdictions" is not at all justified and should be removed.
• We agree and have done that.
There are no recommendations resulting from the analysis and this was not the study's purpose. The results do not show how geographical areas could make improvements as there is no analysis on this level.
• Please see comments above.
The manuscript section that makes comparisons with other studies lacks depth. Two references (an Irish and UK study) are included – but there is no mention of qualitative studies from any of the other participating countries.
• Those were the only studies that we found examining PCPs' views on how to improve timely diagnosis of cancer. We now also explain how our work maps across to qualitative studies with patients.
The inclusion of an Australian study seems irrelevant.
• This has now been removed.
The section on future research could include a suggestion of more qualitative research.
• This has now been done.

VERSION 2 – REVIEW

REVIEWER	Elizabeth Sarma National Cancer Institute USA
REVIEW RETURNED	03-Jul-2019

GENERAL COMMENTS	The authors have addressed my concerns.

REVIEWER	Dr Nicole Rankin University of Sydney, Australia
REVIEW RETURNED	04-Jul-2019

GENERAL COMMENTS	The authors' response to the reviewers comments and the revised manuscript addresses the concerns raised, however, there seems to have been very little effort made to locate other articles with which to make comparisons. I had no trouble finding some after a quick search on Google: - Green, T., et al. (2015). "Cancer detection in primary care: insights from general practitioners." Br J Cancer 112 Suppl 1(Suppl 1): S41-S49. - Adams, E., et al. (2011). "Views of cancer care reviews in primary care: a qualitative study." The British journal of general practice : the journal of the Royal College of General Practitioners - Watt G. Occasional paper 89. General practitioners at the deep end: the experience and views of general practitioners working in the most severely deprived areas of Scotland. London: Royal College of General Practitioners, 2012. I would recommend that this section of the manuscript be further revised.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 3

The authors' response to the reviewers comments and the revised manuscript addresses the concerns raised, however, there seems to have been very little effort made to locate other articles with which to make comparisons. I had no trouble finding some after a quick search on Google:

- Green, T., et al. (2015). "Cancer detection in primary care: insights from general practitioners." Br J Cancer 112 Suppl 1(Suppl 1): S41-S49.

- Adams, E., et al. (2011). "Views of cancer care reviews in primary care: a qualitative study." The British journal of general practice: the journal of the Royal College of General Practitioners

- Watt G. Occasional paper 89. General practitioners at the deep end: the experience and views of general practitioners working in the most severely deprived areas of Scotland. London: Royal College of General Practitioners, 2012.

I would recommend that this section of the manuscript be further revised.

- We thank the reviewer for this suggestion. We have now extended our search for relevant literature and added new comparisons and references to the ‘Comparison with other studies’ section.

- Regarding the articles that the reviewer drew to our attention:

    - We had already used the Green (2015) paper as a reference in the Background section, but we now refer to it in the ‘Comparison with other studies’ section.

    - The excellent Adams (2011) paper is about the views of patients and practitioners regarding the care of patients with an established diagnosis. However, our paper is about issues relating to timeliness of cancer diagnosis, i.e. patients who have not yet received a cancer diagnosis.

- The Watt (2012) paper is about the views GPs working in severely deprived areas, with no mention of cancer. There is no obvious overlap with our own paper.