Reviewer’s report

Title: Pragmatic methods for reviewing exceptionally large bodies of evidence: Systematic mapping review and overview of systematic reviews using lung cancer survival as an exemplar

Version: 0 Date: 08 Jan 2019

Reviewer: Caroline Farmer

Reviewer's report:

Summary

This 'review of reviews' employs a pragmatic approach to identifying systematic reviews of individual prognostic factors evaluated for their association with survival in lung cancer patients. The methodology used by the authors to identify the relevant literature is interesting, appropriate, and clearly outlined, and I think would be of interest to readers of Systematic Reviews. The topic area is also of considerable interest to clinicians and researchers working in the lung cancer field. However, the results and discussion sections are lacking detail, and need considerable revision to appeal to either/both audiences. It may be that the authors decide to focus on one audience only, and so may choose to emphasise one side of the results only (indeed, this paper could have potentially been written as 2 papers: a methodology paper and a paper highlighting risk factors in lung cancer, both of which would have had an interested readership). Some additional detail about the selection of evidence is also required.

Major revisions

* The way in which data from single or multiple histological subtypes is included is not clearly defined throughout the paper. Data from combined populations is stated to be excluded from the outset for most prognostic markers; however the results are generally reported without clearly defining the subtype. Furthermore, the discussion implies that some of this data may be from combined populations (page 20, line 514). In many cases it will not be appropriate to report data from combined populations, as the impact of individual factors will vary between subtypes, and survival in these groups is also known to vary widely. Can the authors please clarify in which cases combined data was included, alongside a clinical rationale for why this is appropriate for the specific risk factor? Also, can the results be clearly separated between each subtype? This is relevant to results for non-modifiable and modifiable prognostic factors.

* The magnitude of the association between prognostic risk factors and outcome should be reported in the results section. Statistical significance does not mean a factor has a notable association with survival. Can a narrative also be included in the results to highlight the most influential factors in each section? The relative importance of individual prognostic factors should also form part of the discussion section.

* It appears as if both raw and adjusted data (i.e. using multivariate analysis) were included in the review; however, these will give very different results. Can the authors please clarify in
the methods section that both were included, and differentiate between adjusted and unadjusted findings in the results?
* Please add percentages to findings in the results to aid understanding. Also why not summarise findings across reviews? i.e. x/XX reported significance across 3 reviews? If the reviews were not sufficiently comparable to combine this way, then these differences should be noted in the results to aid comparison of the findings.
* Please discuss the quality of the reviews (AMSTAR) in the results/discussion.
* There is very limited discussion of the risk factors identified as associated (or not) with survival in lung cancer patients. It would be useful to highlight factors and discuss these with respect to existing research and any possible implications for clinical practice and research.
* If choosing to emphasise the methodological strengths of this study in the results section, then it would be useful to report findings related to the impact and limitations of some of the decisions taken by the team in conducting the review. For example, it would be interesting to read about variation in methodology across the reviews included, and how this was handled by the team/how it affected the results. Also greater discussion of the limitations of this approach would be of interest, and I don't think should take away from the strengths in the justifiable methods used to identify the evidence across the 3 stages.

Minor Revisions

* How were reviews handled where these reported studies that appeared in other reviews? Presumably the authors accounted for this to avoid double counting of evidence?
* How did the team handle different thresholds of risk factors used across studies? Unless all data was continuous?...in which case please clarify.
* Please add the age of the search date to the study limitations: this review is now 3 years out of date. While I appreciate that a review of this magnitude takes time to conduct, this should nevertheless be noted.
* Page 9, line 237: please define 'the last 5 years'. The search was conducted in 2015, and therefore this line could be misleading
* Page 9, line 234: the sentence 'In this report their unique...' is not necessary here and can be moved to the additional file.
* Page 11, line 294: please clarify the 'other' factors
* Page 12 lines 303-305: I'm unclear why the other 5 factors were not investigated. Please clarify why and what these were.
* Page 12, line 306: please add in "did not meet the inclusion criteria" before "but"
* Page 12, line 318: How was "significant" heterogeneity defined?
* Page 13, line 341: 13 out of how many studies?
* Not sure if study 8434, cited page 13 line 338, is helpful to include if no denominator is reported... consider excluding?
* Page 15, paragraph 3 (beginning line 383): the analysis of this factor needs clarifying. How was overall survival defined? Earlier diagnosis will obviously lead to longer survival from the point of diagnosis, but this doesn't mean that earlier treatment impacted on survival, which is obviously the key point. Was this considered?
* Page 15 line 397: typo
* Page 17, line 453: Remove additional "of"
* Page 20, line 508: was this reported in the results?
Page 20, line 514: Assuming that studies reporting data for prognostic factors in an overall lung cancer population were excluded (with the exception of those chosen by stakeholders), I'm therefore unclear what this point refers to.

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An article whose findings are important to those with closely related research interests

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