Reviewer’s report

Title: Factors associated with online media attention to research: A cohort study of articles evaluating cancer treatments

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Reviewer: Simon R. Knight

Reviewer’s report:

This manuscript reports an analysis of "public" attention to studies of oncological interventions reported over a 6-month period in 25 high impact medical journals. The authors use the Altmetric score as a measure of attention, and demonstrate a relationship with journal impact factor and press release, but not study design and positive conclusions.

The article is well written and clear, and the methods are well designed. There are a few issues and limitations that warrant further discussion:

1) The authors describe, in the title and elsewhere, the altmetric score as a measure of "public" interest in an article. This is not strictly true - whilst some of the sources (news, possibly twitter and facebook) may reflect true public interest, others (F1000, Mendeley etc.) are more likely to reflect professional interest in an article. The is supported by the relationship between Altmetric score and subsequent citation rates in previous analyses. It would probably be better to term it "media interest" rather than "public interest".

2) As above, it would be very interesting to measure the impact of the various predictors (press release, article type, impact factor etc.) on each component of the altmetric score, rather than the composite.

3) There are some methodological limitations that require further discussion. The search strategy is very basic, using the word "cancer" without MeSH subheadings or alternative terms such as "malignancy". Data extraction was limited to one reviewer for 75% articles (although the authors did assess agreement in the first 25%). Using a fixed time-point for the altmetrics score means that the length of follow-up varied between articles. Whilst the authors try to correct for this in analysis, this may not be robust as the cumulation of altmetric score over time is not linear.

4) The 25 source journals should be listed in the supplemental digital content.

5) A number of the RoM values for predictor variables have wide confidence intervals, and so there is possibility of a type II error

I am struggling to understand what figure 3 represents - if it is to be retained, it requires much more explanation.
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