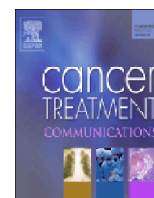




ELSEVIER

Contents lists available at ScienceDirect

# Cancer Treatment and Research Communications

journal homepage: [www.elsevier.com/locate/ctarc](http://www.elsevier.com/locate/ctarc)

## Quality of systematic review and meta-analysis abstracts in oncology journals



Chelsea Koller, Sarah Khan, Jonathan Holmes, David Herrmann, Matt Vassar\*

Oklahoma State University – Center for Health Sciences, 1111 W. 17th St., Tulsa, OK 74107, United States

### ARTICLE INFO

#### Article history:

Received 2 December 2015

Received in revised form

8 July 2016

Accepted 12 August 2016

#### Keywords:

Review, Systematic

Meta-analysis

Cancer

Medical oncology

Abstracting as topic

Funding

### ABSTRACT

**Purpose:** The purpose of this study was to evaluate the quality of reporting in the abstracts of oncology systematic reviews using PRISMA guidelines for abstract writing.

**Methods:** Oncology systematic reviews and meta-analyses from four journals - *The Lancet Oncology*, *Clinical Cancer Research*, *Cancer Research*, and the *Journal of Clinical Oncology* - were selected using a PubMed search. The resulting 337 abstracts were sorted for eligibility and 182 were coded based on a standardized abstraction manual constructed from the PRISMA criteria. Eligible systematic reviews were coded independently and later verified by a second coder, with disagreements handled by consensus. One hundred eighty-two abstracts comprised the final sample.

**Results:** The number of included studies, information regarding main outcomes, and general interpretation of results were described in the majority of abstracts. In contrast, risk of bias or methodological quality appraisals, the strengths and limitations of evidence, funding sources, and registration information were rarely reported. By journal, the most notable difference was a higher percentage of funding sources reported in *Lancet Oncology*. No detectable upward trend was observed on mean abstract scores after publication of the PRISMA extension for abstracts.

**Conclusion:** Overall, the reporting of essential information in oncology systematic review and meta-analysis abstracts is suboptimal and could be greatly improved.

© 2016 Elsevier Ltd. All rights reserved.

## 1. Introduction

Scanning journal abstracts allows clinicians to quickly determine the relevance of a particular article to their clinical practice [1]. The abstract should be written clearly and sufficiently detailed such that clinicians can decide whether to read on if the article is in hand or to download an electronic version for further reading [2]. A recent study found that users of biomedical literature that searched PubMed predominately viewed abstracts exclusively after reviewing titles returned from their searches. These abstract views were well over two times as likely as full-text views [3]. However, despite the importance of abstracts to convey essential information to users of research, clear and comprehensive reporting of core study aspects remains an issue. In an effort to address concerns about the quality and clarity of abstract reporting in clinical trials, the Consolidated Standards of Reporting Trial (CONSORT) group developed a minimum set of essential information for inclusion in an abstract [2]. Since the CONSORT abstract extension was published in 2008, some improvement in abstract reporting has been noted, but it remains an issue [4].

More recently, systematic reviews have played an increasing role in decision making for clinic practice. While allowing biomedical

literature users access to a higher quality of evidence, systematic reviews are still hampered by issues in the quality of abstract reporting [5]. This prompted the release of an extension of the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) statement [6] that detailed a checklist of essential items to include in a systematic review abstract.

Since the extension of the PRISMA statement was published in 2013, no formal evaluation has been conducted on guideline adherence in medical journals. Only Kiriakou et al.'s investigation of systematic review abstracts in oral implantology has been conducted to date [7]. We, therefore, analyzed the extent to which systematic review authors reported this information in abstracts from a sample of leading oncology journals. We analyzed how well authors published in these journals adhered to the PRISMA extension guidelines for abstracts and whether this adherence had changed since the release of the PRISMA extension.

## 2. Materials and methods

### 2.1. Search criteria

Using the h5-Index from Google Scholar Metrics, we selected the six highest ranking oncology journals based on index scores.

\* Corresponding author.

E-mail address: [matt.vassar@okstate.edu](mailto:matt.vassar@okstate.edu) (M. Vassar).

We searched PubMed using the following search string ((((((“Journal of clinical oncology: official journal of the American Society of Clinical Oncology” [Journal] OR “Nature reviews. Cancer” [Journal]) OR “Cancer research” [Journal]) OR “The Lancet. Oncology” [Journal]) OR “Clinical cancer research: an official journal of the American Association for Cancer Research” [Journal]) OR “Cancer cell” [Journal]) AND (“2007/01/01” [PDAT]: “2015/12/31” [PDAT]) AND “humans” [MeSH Terms]) AND (meta-analysis [Title/Abstract] OR systematic review [Title/Abstract]). This search strategy was adapted from a previously established method that is sensitive to identifying systematic reviews and meta-analyses [8]. Searches were conducted on May 18 and May 26, 2015.

## 2.2. Review selection and data extraction

We used Covidence (covidence.org) to initially screen articles based on the title and abstract. To qualify as a systematic review, studies had to summarize evidence across multiple studies and provide information on the search strategy, such as search terms, databases, or inclusion/exclusion criteria. Meta-analyses were classified as quantitative syntheses of results across multiple studies [9]. Two screeners independently reviewed the titles and abstracts of each citation and made a decision regarding its appropriateness for inclusion. Next, screeners held a meeting to revisit the citations in conflict and arrive at a final consensus. Following the screening process, full-text versions of included articles were obtained via EndNote. Full text screening was then completed and conflicts resolved by group consensus excluding addition articles that did not meet requirements to be considered.

## 2.3. Coding abstracts

To ensure the accuracy of the coding process, an abstraction manual was developed and piloted prior to training coders. A training session was conducted to familiarize coders with the process and a subset of studies from the screening process were jointly coded. After training, each coder was given three new articles to code independently. These data were analyzed for inter-rater agreement by calculating the Cohen's kappa. As inter-rater agreement was acceptable ( $k=0.65$ ; agreement=75%), each coder was assigned an equal number of articles for data abstraction. Elements from the abstraction manual are presented in Table 1. After the initial coding process, validation checks were conducted

such that each coded element was verified by a second coder and a meeting was held to discuss disagreements and settle them by consensus. Fig. 1 details the study selection process. Data from the final sample of 182 articles were analyzed using STATA 13.1 and are publicly available on Figshare (<http://dx.doi.org/10.6084/m9.figshare.1499291>).

## 3. Results

### 3.1. Search results

The initial search in PubMed resulted in 337 articles. Using Covidence, we excluded 79 articles during the pre-screening of title and abstracts. During the coding process, there were 76 articles excluded (Fig. 1), including 2 we were unable to retrieve. The final analysis comprised 182 articles, resulting in 102 systematic reviews from the *Journal of Clinical Oncology*, 56 from *Lancet Oncology*, 18 from *Clinical Care Research*, and 1 from *Cancer Research*.

### 3.2. Abstract reporting across journals

Across all journals, components of the PRISMA extension varied greatly in terms of reporting (Fig. 2). The majority of systematic reviews or meta-analyses incorporated these terms into the title (149/182). Additionally, the number of included studies (146/182), information regarding main outcomes (165/182), and general interpretation of results (174/182) were described in the majority of abstracts in our analysis. Other components were reported less frequently. Information related to the search, such as the databases (89/182) and dates searched (86/182), were reported in only about half of abstracts.

### 3.3. Abstract reporting within journals

In general, frequency of reporting of many components was consistent across journals (Table 2). (It should be noted that our search yielded only one study from *Cancer Research*, so we omitted this study from journal comparisons). While overall percentages on particular components across journals did vary, the reporting of certain items appeared with greater frequency across the 3 journals. Perhaps the most notable difference was in funding. *The Lancet Oncology* reported funding sources with the greatest

**Table 1**  
Coded elements and description based on PRISMA extension for abstract.

Item	Assessment criteria/description
Structured	Provided a structured abstract
Title	Clearly identifies article as “systematic review,” “meta-analysis,” both, or meta-regression
Objective	Stated research question and included necessary components: participants, interventions, comparators, and outcomes (clinical or non-clinical): If structured abstract, this information must be in the Background section
Eligibility	Methods used to identify included studies by including characteristics detailing participants, interventions, comparative groups, outcome, study design, language, and publication status: If structured abstract, this must be in the Methods section
Databases	Listed key databases searched
Dates	Listed a range of dates or last searched date; more specific than “last 10 years”
Risk of bias assessment	Mentioned that risk of bias, methodological quality, or study quality was assessed during the study
Included studies	Quantified the number of studies included in synthesis of results
Included participants	Quantified the number of participants included in synthesis of results
Main outcomes	Benefits or harms
Results	Ideally give both the effect size and confidence intervals
Descriptive word	Summarized the direction of the effect by including words similar to: lower, fewer, reduced, greater, increased, etc.
Familiar units	Gave a measure of results in familiar units (days, kg, percentages)
Strength/limitation of evidence	Acknowledged potential qualities that could hinder proper interpretation of results
Interpretation of results	General interpretation of results given summarizing main effects, remaining uncertainties, and necessary ongoing research
General implication of results	Described possible implications for policy or practice
Funding	Source of funding described
Registration	Registration number or name given

Download English Version:

<https://daneshyari.com/en/article/6190328>

Download Persian Version:

<https://daneshyari.com/article/6190328>

[Daneshyari.com](https://daneshyari.com)