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ABSTRACT

Objective: This analysis was conducted to understand recent publication trends in oncology case reports/series.

Research design and methods: A literature search was conducted to identify recently published (1/1/11 to 12/28/16) oncology articles using case study, case report, or case series in the title. Anne O'Tate (http://arrowsmith.psych.uic.edu/cgi-bin/arrowsmith_uic/AnneOTate.cgi) was used to examine trends in frequency, top journals, topical focus, and author data (number, region).

Results: During the time frame for this analysis, 5151 oncology articles met the search criteria (~6% of the total volume when not restricted to oncology). There was an increase of ~75% in oncology case report/series publication volume during this period compared with an increase of ~35% for all case reports/series. Across 1321 journals that published case reports/series in oncology, the top 5 journals were *Oncology Letters* (n=313), *Journal of Medical Case Reports* (n=231), *Gan To Kagaku Ryoho* (n=163), *International Journal of Surgery Case Reports* (n=141), and *World Journal of Surgical Oncology* (n=103). The most common National Library of Medicine Medical Subject Headings terms fell under the topic areas of tumor type (28.7%), diagnostic methods (14.8%), outcomes (12.8%), patient populations (6.6%), and chemotherapy (6.2%). Less than 10% of these articles had 1 (n=110) or 2 (n=356) authors, and 22.3% included >7 authors. In contrast, when including nononcology articles, only 13.7% included >7 authors. Authors on case reports/series were more likely to be from the Asia-Pacific (6132/13,901; 44.1%) and European (4279/13,901; 30.8%) regions; <25% of authors (n=2344) were from the Americas.

Conclusions: Case reports/series remain important communication vehicles in oncology, particularly for regions outside the United States. Surprisingly, ~22% of oncology case reports/series included >7 authors, 8 percentage points higher than for all case reports/series.

INTRODUCTION

- Case reports and case series are publications that relate a novel or unusual clinical presentation with the course of treatment and follow-up in a single patient or small number of patients
- The specific advantages offered by case-based publications include generating new research hypotheses and highlighting novel adverse events and rare diseases that may not be observed during other studies
- However, some question the current value of case-based publications as a communication tool

OBJECTIVE

- To assess the current utilization of case reports and case series in oncology to understand trends in publication volume, topic areas, and regional distribution

RESEARCH DESIGN AND METHODS

- PubMed was searched to retrieve publications including the terms "case study," "case report," or "case series" in the title
 - Time frame: January 1, 2011, to December 28, 2016
- Publication records were examined to identify trends in publication volume by year and journal, topical focus, and characteristics of author lists across all therapeutic areas and within the oncology field
 - Analysis tool: Anne O'Tate (http://arrowsmith.psych.uic.edu/cgi-bin/arrowsmith_uic/AnneOTate.cgi)

RESULTS

- The search criteria retrieved 81,875 case studies, case reports, and case series published across all therapeutic areas from 2011 to 2016, with 5151 of these articles focused on oncology
- The number of case-based publications across all therapeutic areas, and in oncology specifically, increased from 2011 to 2015 and appeared to plateau in 2015 (Figure 1)

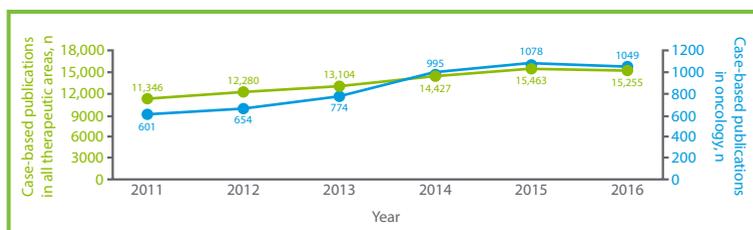


Figure 1. Number of case-based publications by year from 2011 to 2016.

- The growth in relative frequency of case-based publications from 2011 to 2016 was similar between all therapeutic areas (19.8%) and oncology (17.3%)
 - Relative frequencies were calculated as percentages of case-based publications among all articles published in all therapeutic areas or specifically in oncology
- The *Journal of Medical Case Reports* was the top journal publishing case-based publications during the review period (Table 1)
 - Journals with the most oncology case-based publications, listed in descending order by total number, were *Oncology Letters*, *Journal of Medical Case Reports*, *Gan To Kagaku Ryoho*, *International Journal of Surgery Case Reports*, and *World Journal of Surgical Oncology*

Table 1. Journals With the Largest Percentage of Case-Based Publications, 2011-2016

Journal	Scope	All articles, n	Case-based publications, n (%)
<i>J Med Case Rep</i>	Case reports that expand medical knowledge; research on case report methods	2458	2298 (93.5)
<i>Int J Surg Case Rep</i>	Case reports related to surgery	2258	899 (39.8)
<i>Oncol Lett</i>	All aspects of clinical oncology	5225	1126 (21.6)
<i>World J Surg Oncol</i>	Research articles and case reports on surgical oncology and allied subjects	1815	356 (19.6)
<i>J Clin Diagn Res</i>	Clinical findings in developing countries	6219	812 (13.0)

- Oncology case-based publications were primarily focused on the topic areas of tumor type (28.7%), diagnostic methods (14.8%), outcomes (12.8%), patient populations (6.6%), and chemotherapy (6.2%; Figure 2)



Figure 2. Most frequent focus areas for oncology case-based publications that were included in the analysis.

- Most oncology case-based publications had ≤5 authors (Figure 3A)
- Oncology case-based publications tended to have larger numbers of authors compared with all therapeutic areas (Figure 3B)

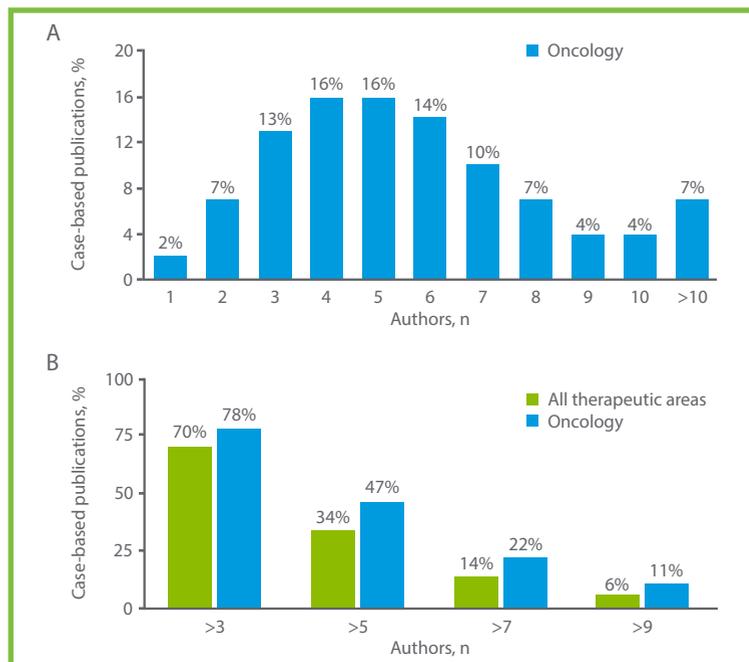


Figure 3. Percentages of case-based publications, 2011-2016, by (A) number of authors in oncology articles and (B) number of authors in articles published in oncology versus all therapeutic areas.

- More case-based publications were generated from the Asia-Pacific region and Europe than from North America and South America (Figure 4)

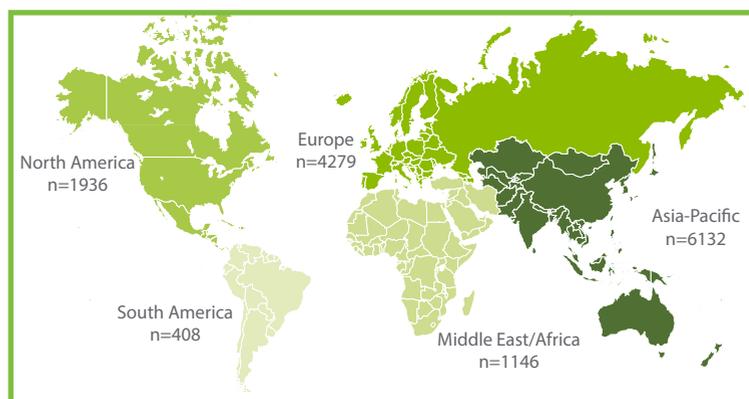


Figure 4. Global regional distribution of case-based publications, 2011-2016.

CONCLUSIONS

- The utilization of case-based publications has undergone continued growth since 2011, which is partially attributable to the recent rapid growth in journals that emphasize case studies
- The 8 percentage-point higher frequency of publications with >7 authors in oncology versus all therapeutic areas may reflect collaboration on case-based publications among the many members of the multidisciplinary care teams required for optimal cancer treatment
- During the review period, case-based publications continued to be a prominent communication tool, with particularly strong utilization in the Asia-Pacific region and Europe, suggesting the continued importance of these reports in reaching particular regions for global publication plans

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