

Characterization of published errors in high impact oncology journals

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Background: Knowledge within oncology is disseminated primarily via peer-reviewed journals. The potential for dissemination of erroneous data exists, an issue that has not been explored in oncology. We evaluated errata from the Journal of Clinical Oncology and the Journal of the National Cancer Institute published between 2004-2007.

Methods: Two authors independently abstracted data regarding errata and classified them as trivial (eg typographical error) or serious (eg change in outcome). For serious errors, the frequency of citation and error propagation was determined using the Science Citation Index in Web of Science. For publications cited ≥ 150 times, a random sample of 5% were evaluated for error propagation. Canadian oncologists were surveyed regarding attitudes towards published errata.

Results: There were 190 published errors, out of a total of 5118 papers, for an error rate of $4 \pm 1\%$ (SD) per year. 26/190 errors were identified as serious (14 %). The median time from publication of the original article to publication of the erratum was 3.5 mo for trivial errors compared to 8.3 mo for serious errors ($p=0.03$). A median of 1 error per article was reported for papers with trivial errors compared to a median of 2.5 errors per article with serious errors ($p<0.01$). The 26 articles with serious errors were cited 256 times before publication of the error and 1080 times afterwards; of these, 95 and 549, respectively, were evaluated for propagation. Error propagation occurred in 15% of the citations published before error publication, and in 2% of citations published afterwards ($p<0.01$). Survey results indicate that 33% of oncologists do not read the erratum section of journals, and that 45% of oncologists have only read the abstract of an article before citing it in a publication. Although 59% of oncologists have noticed errors in cancer publications, only 13% of these errors were reported.

Conclusions: Error rates in high impact oncology journals average 4% per year, but this is likely an underestimate since errors noticed by readers are not consistently reported to the journal. The accuracy of articles submitted for publication is of utmost importance; while error propagation decreases after erratum publication, serious errors continue to be propagated in the literature.