

Evaluation of use of medical terminology and interpretation of results in oncology plain language summaries

Michel D. Wissing, Amy C. Porter, Sai A. Tanikella, Preetinder Kaur, Linda J. Cornfield, Shereen C. D’Cruz, Holly R. Tomlin, Holly Capasso-Harris, Linda Tabas
Certara Synchrogenix, Wilmington, DE, USA

Most plain language summaries of cancer studies do not use plain language, and many do not put results adequately in context.

Introduction

- Plain language summaries (PLS) aim to provide a clear, accessible summary of scientific publications for non-specialist readers.
- Therefore, PLS should use language that can be understood by non-specialist readers and put the study results adequately in context.
- We evaluated the language and study interpretation in PLS published in oncology journals in 2021 and 2022.

Methods

- PLS were identified in PubMed using the search terms: ("Oncol*" OR "Cancer" [Journal]) AND ("lay summary" OR "lay abstract" OR "simple summary" OR "plain language summary" OR "plain English summary").
- PLS published in oncology journals in 2021 or 2022 were selected. If an oncology journal had published >20 PLS, the 10 most recent PLS in 2022 and 10 oldest PLS in 2021 that reported on an in-human oncology study were selected from that journal.
- Two professional medical writers independently reviewed and scored the PLS on 3 criteria:
 - Use of medical terminology
 - Level of language
 - Adequate interpretation of study results
- Scoring discrepancies were resolved by an independent third reviewer.
- Scoring of language level was compared to Flesch Kincaid grading.
- PLS were grouped as PLS abstracts (<500 words) or standalone PLS papers (≥1000 words, published as a separate document providing a detailed summary of the scientific data).

Conclusions & Discussion

- Oncology PLS often used medical terminology without explanation and provided inadequate interpretation of study results, limiting their intended use.
- Manual scoring and scoring using Flesch Kincaid grade levels confirmed the frequent use of complex language in PLS.
- We recommend that before publication, PLS on scientific research should undergo careful (peer) review to improve readability, and, importantly, to prevent data distortion in PLS.
- Since limitations were primarily observed when PLS were published in abstract format, flexibility in word limits may enable authors to better explain their research in plain language. Further studies are needed to confirm this.

Results

