# Correlation Between Altmetric Score and Citation: A Study Based on 1000 Highly Cited Cancer Scientific Outputs

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## Abstract

**Objective:** In recent years, indicators based on social media have been introduced as a complementary and expeditious tool along with traditional scientometric indicators to evaluate scientific outputs. The aim of this study was to comprehensively analyze the altmetric indices on 1000 most cited articles in the field of cancer, which is one of the most vital issues in the medical community and is the second leading cause of death after CVDs.

**Material and Methods:** The present study was descriptive and performed using altmetric indices. Bibliographic information of the research sample was extracted from the Scopus citation database. Data related to social media presence and altmetric score were collected by referring to the page of each article on the journal and altmetric institute site and then Excel and Spss software were used to analyze.

**Results:** Out of 1000 reviewed articles, 96.3% were shared on social media at least once and the most altmetric sources used in these articles were Mendeley (99.6%), Patents (86.3%) and CiteULike (66.3%), respectively. The highest altmetric score belonged to the "Dermatologist-level classification of skin cancer with deep neural networks" with score of 2864, which was published in the Nature journal. Most tweeters and readers were from the US. Most of the tweeters were members of the public and most of the readers were in medicine and dentistry in terms of Ph.D. student status. Finally, the results of spearman tests showed a statistically significant correlation between all altmetric indices (except LinkedIn) and citations (p-value <0.01).

**Conclusion:** The results showed that indicators based on social media can have a positive effect on the number of citations received from articles and as a complementary measure along with citation indicators to evaluate scientific outputs. It is recommended that journals, writers, and researchers use social media to increase the visibility of articles and receive more citations.

**Keywords:** Publications Evaluation, Scientific Indicators, Alternative Scales, Altmetrics, Social Media, Cancer