

Childs Nerv Syst. 2024 Dec 5;41(1):33. doi: 10.1007/s00381-024-06693-1.

# Bibliometric analysis of the top 100 most cited articles on the immunotherapy for glioblastoma

Chunming He <sup># 1</sup>, Peng Xiong <sup># 2</sup>, Chuan Zeng <sup>2</sup>, Xinyu Qiu <sup>2</sup>, Tao Long <sup>2</sup>, Haimin Song <sup>3</sup>

Affiliations

PMID: 39633087 DOI: [10.1007/s00381-024-06693-1](https://doi.org/10.1007/s00381-024-06693-1)

## Abstract

**Background:** The nature of immunotherapy has rendered it a focal point in the management of glioblastoma (GBM). This bibliometric analysis aimed to analyze the top 100 most cited articles about immunotherapy for GBM to expand the knowledge of research related to this therapeutic approach.

**Methods:** The retrieval of the top 100 articles on "Immunotherapy AND Glioblastoma" was performed using the Web of Science Core Collection database. Relevant details were extracted for bibliometric analysis, and to gain insights, a comparison was made between older and newer articles. Categorical data underwent analysis utilizing Pearson's chi-square test, while continuous data were analyzed using the Wilcoxon rank-sum test.

**Results:** The top 100 articles were distributed across the years 2000 to 2021, with the number of citations ranging from 135 to 1058. Among these articles, publications peaked in 2017 and 2018 (n = 12), and the most common country of correspondence was the USA (n = 73). Clinical Cancer Research was the most cited journal, and authors SAMPSON JH and LIM M had the highest number of papers (n = 6). Newer articles had significantly higher citation rates (p < 0.01), more authors (p < 0.05), more institutes (p < 0.01), and more collaborations between institutions (p < 0.01). Subspecialties showed a trend of more "TME" (1% vs 7%, p = 0.05945) in the before and after group comparison, although this difference was not statistically significant (p > 0.05).

**Conclusion:** The study of the top 100 cited articles on immunotherapy for GBM shows that researchers are actively working together to develop novel approaches to GBM immunotherapy. The high citations, leading countries, journals, and authors, along with evolving research characteristics, indicate a field with great interest and potential. Immunotherapy holds significant promise in GBM treatment.

**Keywords:** Bibliometrics; Citation analysis; Citation growth rate; Glioblastoma; Immunotherapy; Top-cited.

© 2024. The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature.

[PubMed Disclaimer](#)