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# The landscape of current research on pediatric diffuse midline glioma: a quantitative analysis of shifts, leaders, and future avenues

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## Abstract

**Purpose:** Diffuse midline glioma (DMG) has seen a surge of research interest in recent years with the growth in knowledge of new avenues for potential treatments. However, no bibliometric review of the field has been conducted to visualize the current state of the field. Here, we use bibliometric mapping to visualize the knowledge structure, collaborations, and trends in the field.

**Methods:** A total of 1079 original and review articles from 1996 to 2023 on diffuse midline glioma were extracted from the Web of Science Core Collection on June 3, 2023. These files were analyzed with R and VOSviewer to construct bibliometric visualizations.

**Results:** Research interest in DMG has continued to grow, driven by publications of original research. Molecular characterization of DMG has been a key focus of recent literature, and terms relating to novel small molecules, mutations, immunotherapy, the blood-brain barrier, and liquid biopsy may be areas for future growth in the literature. Collaborating nations have generally been the North American and European nations, but other nations have begun to make their mark in the field. Leading and rising institutions and journals are described.

**Conclusion:** Research in DMG may continue to focus on molecular characterization and new therapeutics based on this knowledge. Novel collaborations between rising nations and institutions in the field may aid in accelerating this research.

**Keywords:** Bibliometrics; Collaboration; Diffuse midline glioma; Trends; VOSviewer.

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