

ABSTRACT

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Strategies to better treat glioblastoma: antiangiogenic agents and endothelial cell targeting agents.

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Glioblastoma multiforme (GBM) is the most prevalent and aggressive form of glioma, with poor prognosis and high mortality rates. As GBM is a highly vascularized cancer, antiangiogenic therapies to halt or minimize the rate of tumor growth are critical to improving treatment. In this review, antiangiogenic therapies, including small-molecule drugs, nucleic acids and proteins and peptides, are discussed. The authors further explore biomaterials that have been utilized to increase the bioavailability and bioactivity of antiangiogenic factors for better antitumor responses in GBM. Finally, the authors summarize the current status of biomaterial-based targeting moieties that target endothelial cells in GBM to more efficiently deliver therapeutics to these cells and avoid off-target cell or organ side effects.

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