
Chamberlain M.
University of Washington, Fred Hutchinson Cancer Research Center, Seattle Cancer Care Alliance, 825 Eastlake Ave E, POB 19023, MS G4-940, Seattle, WA 98109-1023, USA. chambemc@uw.edu.

Abstract
Despite recent advances, there remains an unmet need for more effective treatments for newly diagnosed and recurrent glioblastoma (GBM). While currently available alkylator-based and antiangiogenic agents provide some efficacy, novel antiangiogenic and antiglioma treatments that provide enhanced efficacy with improvements in overall survival, the potential to overcome drug resistance and decreased treatment-related toxicity are still needed. Although VEGF-directed angiogenesis is critical during GBM pathogenesis, alternative proangiogenic and glioma-promoting pathways also play a key role in tumor progression. This article reviews the limitations of current GBM treatment, the importance of angiogenic signaling pathways in GBM pathogenesis and the preliminary results of novel antiangiogenic-targeted treatments being evaluated in GBM. Therapies that inhibit multiple glioma signaling pathways, including angiogenesis, have the possibility for further improving outcome in GBM and may represent the best option for increasing overall survival.

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