Therapeutic options in recurrent glioblastoma--An update.

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Abstract

INTRODUCTION: Standards of care are not yet defined in recurrent glioblastoma.

METHODS: We reviewed the literature on clinical trials for recurrent glioblastoma available in PubMed and American Society of Clinical Oncology (ASCO) abstracts until June 2015.

RESULTS: Evidence is limited due to the paucity of randomized controlled studies. Second surgery or re-irradiation are options for selected patients. Alkylating chemotherapy such as nitrosoureas or temozolomide and the vascular endothelial growth factor (VEGF) antibody, bevacizumab, exhibit comparable single agent activity. Phase III data exploring the benefit of combining bevacizumab and lomustine are emerging. Novel approaches in the fields of targeted therapy, immunotherapy, and tumor metabolism are coming forward. Several biomarkers are being explored, but, except for O(6)-methylguanine DNA methyltransferase (MGMT) promoter methylation, none has assumed a role in clinical practice.

CONCLUSION: Proper patient selection, development of predictive biomarkers and randomized controlled studies are required to develop evidence-based concepts for recurrent glioblastoma.

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