Therapeutic advances in the treatment of glioblastoma: rationale and potential role of targeted agents.

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Abstract
Despite advances in standard therapy, including surgical resection followed by radiation and chemotherapy, the prognosis for patients with glioblastoma multiforme (GBM) remains poor. Unfortunately, most patients die within 2 years of diagnosis of their disease. Molecular abnormalities vary among individual patients and also within each tumor. Indeed, one of the distinguishing features of GBM is its marked genetic heterogeneity. Nonetheless, recent developments in the field of tumor biology have elucidated signaling pathways and genes involved in the development of GBM, and several novel agents that target these signaling pathways are being developed. As new details on the genetic characteristics of this disease become available, innovative treatment regimens, including a variety of traditional treatment modalities such as surgery, radiation, and cytotoxic chemotherapy, will be combined with newer targeted therapies. This review introduces these new targeted therapies in the context of current treatment options for patients with GBM. It is hoped that this combined approach will overcome the current limitations in the treatment of patients with GBM and result in a better prognosis for these patients.


Publication Types, MeSH Terms, Substances

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