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Advances in Treatment of Isocitrate Dehydrogenase (IDH)-Wildtype Glioblastomas

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Abstract

Purpose of review: The management of isocitrate dehydrogenase (IDH)-wildtype glioblastomas is an area of unmet need. Despite multimodal therapy incorporating maximal safe resection, radiotherapy, and temozolomide, clinical outcomes remain poor. At disease progression or relapse, available systemic agents such as temozolomide, lomustine, and bevacizumab have limited efficacy. We review the recent advances in the treatment of IDH-wildtype glioblastomas.

Recent findings: A broad repertoire of systemic agents is in the early stages of development, encompassing the areas of precision medicine, immunotherapy, and repurposed medications. The use of medical devices may present opportunities to bypass the blood-brain barrier. Novel clinical trial designs aim to efficiently test treatment options to advance the field. There are a number of emerging treatment options for IDH-wildtype glioblastomas which are undergoing evaluation in clinical trials. Advances in our scientific understanding of IDH-wildtype glioblastomas offer hope and the prospect of incremental improvements in clinical outcomes.

Keywords: Clinical Trials; Glioblastoma; Immunotherapy; Medical Devices; Repurposed Medications; Targeted Therapy.