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Advances in the treatment of IDH-mutant gliomas

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Abstract

Purpose of review: Isocitrate dehydrogenase (IDH) mutation is a defining molecular driver of WHO grade 2-4 astrocytomas and oligodendrogliomas. In this article, we review the recent therapeutic approaches specifically targeting IDH-mutant gliomas and summarize ongoing clinical trials in this population.

Recent findings: The IDH inhibitor vorasidenib recently demonstrated its efficacy after surgical resection in grade 2 IDH-mutated gliomas. Several studies in patients with IDH-mutant gliomas are currently exploring various strategies to target IDH mutations, including the use of small-molecule inhibitors, immunotherapies, peptide vaccines and agents targeting metabolic and epigenomic vulnerabilities.

Summary: Mutant-IDH targeting holds significant promise in treating progressive or recurrent IDH-mutant gliomas. Recent results with IDH inhibitors will change practice and influence the existing guidelines in a near future.