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# A critical review of RAF inhibitors in BRAF-mutated glioma treatment

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## Abstract

BRAF gliomas have garnered significant attention in research due to the lack of effective treatments and their notable incidence, constituting 3% of all gliomas. This underlines the importance of investigating this area and the impact that targeted therapies could hold. This review discusses the development of targeted therapies for these tumors, examining the effectiveness of first-generation BRAF inhibitors such as Vemurafenib, Dabrafenib and Encorafenib, while addressing the challenges posed by paradoxical ERK activation. The advent of pan-RAF inhibitors, notably Tovorafenib, offers a promising advance, demonstrating enhanced efficacy and better penetration of the blood-brain barrier, without the issue of paradoxical activation. Nevertheless, continued research is essential to refine therapeutic strategies for BRAF-mutated gliomas, given the evolving nature of targeted therapy development.

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