

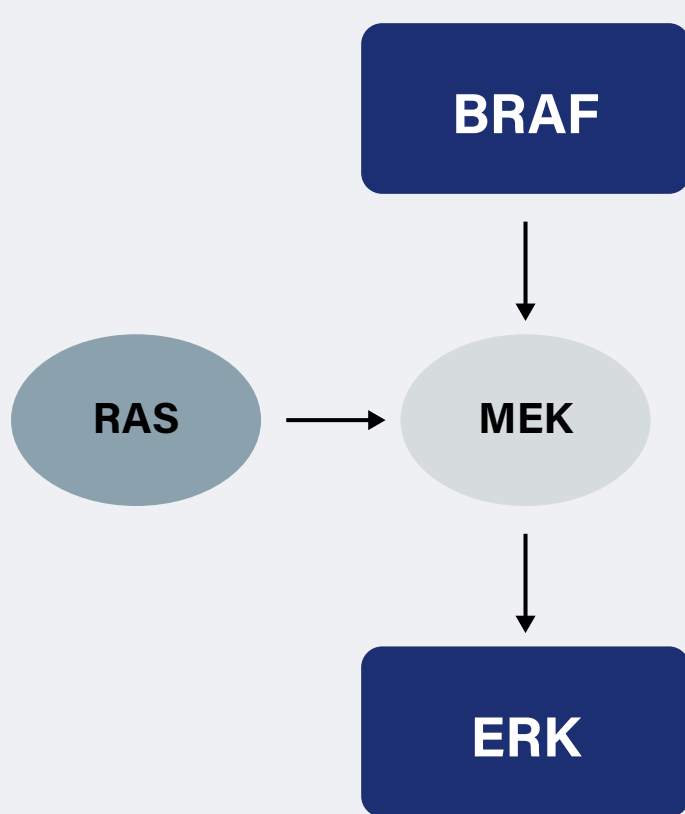
Exploring Targeted Therapies in Pediatric Low-Grade Glioma

Pediatric low-grade glioma (pLGG) is the most common central nervous system tumor in childhood.¹

70% of all sporadic pLGG cases result from structural variants in the *BRAF* gene, resulting in uncontrolled cell proliferation and survival.¹



Targeted therapies for pLGG aim to stop excessive MAPK signaling.²



BRAF Inhibitors
Class I
Dabrafenib
Encorafenib
Vemurafenib
Class II
Belvarafenib
Tovorafenib

MEK Inhibitors
Trametinib
Cobimetinib
Binimetinib
Selumetinib

BRAF inhibitors bind to the mutated *BRAF* protein and block its kinase activity.³

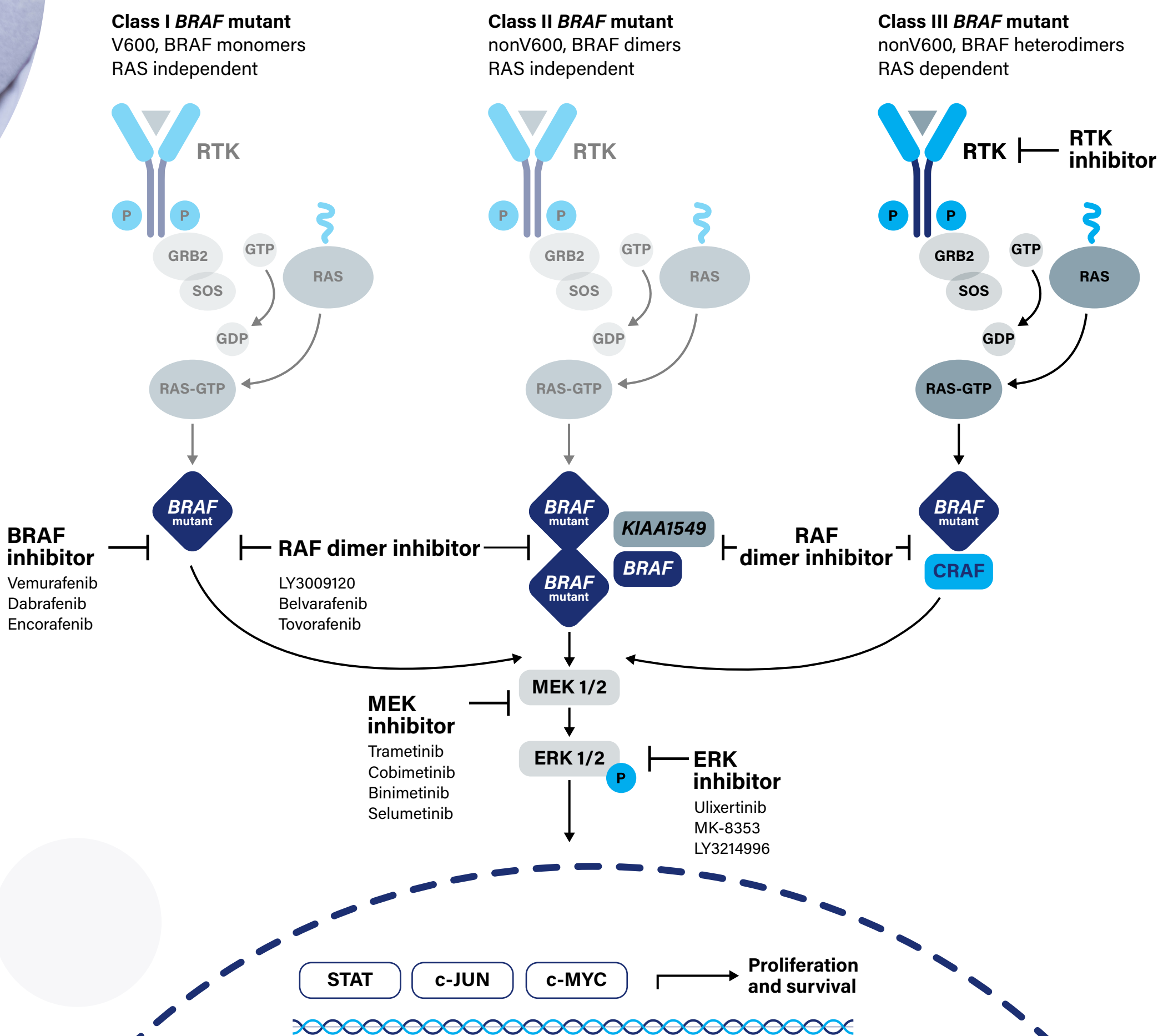
MEK inhibitors bind to the MEK protein to block its kinase activity.³

Some tumors may develop resistance when treated with a targeted monotherapy.³

Combination therapies may include both *BRAF* and MEK inhibitors to help prevent or overcome resistance mechanisms.³



Targeted Therapies Focused on MAPK Signaling⁴



References

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3. Cipri S, Del Baldo G, Fabozzi F, et al. Unlocking the power of precision medicine for pediatric low-grade gliomas: molecular characterization for targeted therapies with enhanced safety and efficacy. *Front Oncol.* 2023;13:1204829. doi:10.3389/fonc.2023.1204829.
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