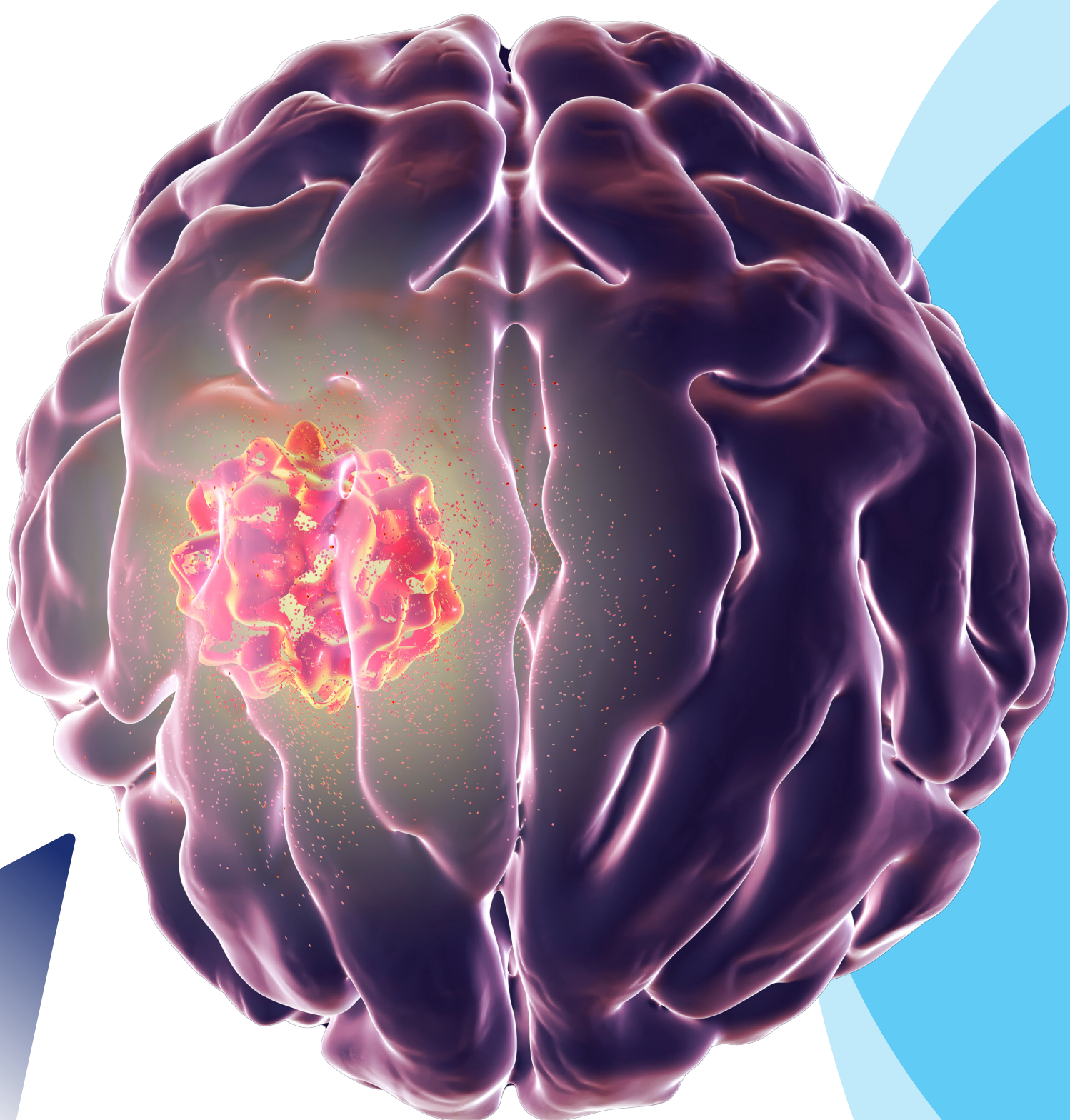


Navigating the Spectrum of Second-Line Therapies for Pediatric Low-Grade Glioma

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

Total resection is the recommended first-line therapy for pLGG, when possible.¹

However, many pLGG tumors are located in areas of the brain where only biopsy or partial resection is feasible.¹



Radiation can be effective as a second-line therapy but is associated with high rates of morbidity.¹

Chemotherapy can be effective but may involve logistically difficult regimens and immunosuppression.¹

Targeted therapies can address specific genetic alterations driving these tumors.¹

Several studies have evaluated the safety and preliminary efficacy of targeted therapies.²

The most common adverse events are fatigue, rash, dry skin, diarrhea, anemia, and CPK elevation.²

Therapy	Response rate	Adverse events
Selumetinib ^{3,4}	30-40%	CPK elevation, hypoalbuminemia, rash, anemia, dry skin, fatigue, diarrhea
Trametinib ⁵	15%	Paronychia, diarrhea, dry skin
Trametinib + Dabrafenib ⁵	25%	No dose-limiting toxicities encountered
Binimetinib ⁶	56%	Dermatologic and other events led 22% of patients to discontinue the drug
Tovorafenib ⁷	64%	Hair color changes, CPK elevation, anemia, fatigue, maculopapular rash
Vemurafenib ⁸	53% of patients were without progressive disease at 12-months	Maculopapular rash
Dabrafenib ⁹	44%	Fatigue, rash, dry skin, pyrexia, maculopapular rash

Patient quality of life

Tumor characteristics

Clinical and disease history

Molecular profile

Considerations for Choosing a Second-Line Therapy for pLGG¹⁰

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