

World Neurosurg. 2025 Feb 11:123716. doi: 10.1016/j.wneu.2025.123716. Online ahead of print.

Trends in the Management of Oligodendrogliomas: A Multinational and Multidisciplinary Survey Study

Kelly Jiang¹, Anita Kalluri¹, Michelle Odonkor¹, Daniel Martinez Heinemann¹, Carly Weber-Levine¹, Divyaansh Raj¹, Joshua Materi¹, Maureen Rakovec², Estela Pineda³, Kristin J Redmond⁴, Carlos Romo⁵, David O Kamson⁶, Matthias Holdhoff⁷, Karisa C Schreck⁸, José Juan González Sánchez³, Chetan Bettegowda¹, Jordina Rincon-Torroella¹

PMID: 39947316 DOI: 10.1016/j.wneu.2025.123716

Abstract

Objective: Oligodendrogliomas present challenges in management despite their favorable prognosis. Optimal therapeutic strategies are not well-established. We aimed to characterize current practice patterns and identify areas of discordance in oligodendroglioma management.

Methods: A 20-question survey was distributed February-July 2023 to four professional neurosurgery/neuro-oncology societies to assess practices in oligodendroglioma management. The survey collected data on demographics, diagnostic practices, and treatment decisions. Data analysis was performed using chi-square/Fisher's exact tests.

Results: Sixty-three physicians responded, representing 12 countries. Diagnostic practices were consistent among respondents. However, variations in management recommendations were observed. Providers were divided between rarely (36.5%), sometimes (25.4%), and often (30.2%) using TMZ as sole chemotherapy for patients with newly diagnosed oligodendroglioma. For patients with subtotal resection of grade 2 oligodendroglioma, 33.3% of providers recommended upfront radiation/chemotherapy, 27.0% recommended observation, and the remaining 39.7% were divided among options including surgery, chemotherapy, and clinical trials. European providers more frequently recommended surgery (33.3% vs 0.0%), whereas radiation/chemotherapy (35.7% vs 26.7%) or observation (31.0% vs 13.3%) were more commonly recommended by US/Canada providers ($p=0.009$). Providers also disagreed on adjuvant therapy for grade 3 oligodendroglioma. 47.6% recommended radiation/PCV, and 33.3% recommended radiation/TMZ. This decision varied by region, with European providers more frequently recommending radiation/PCV (86.7% vs 33.3%), and US/Canadian providers more frequently recommending radiation/TMZ (40.5% vs 6.7%; $p=0.004$).

Conclusion: This study underscores the complexity of oligodendroglioma management and the importance of ongoing research to refine therapeutic strategies. Further studies, especially with the introduction of IDH inhibitors in the practice, are warranted to track practice patterns and reassess recommendations.

Keywords: IDH inhibitor; Oligodendroglioma; PCV; glioma; neuro-oncology; temozolomide.

Copyright © 2025. Published by Elsevier Inc.

[PubMed Disclaimer](#)