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The gold standard for High-Grade Glioma treatment recommends beginning chemoradiation within 6 weeks of surgery. Disparities in access to healthcare in Argentina are notorious, often leading to treatment delays.

Prost et al. conducted a retrospective study to evaluate if time to chemoradiation after surgery is correlated with progression-free survival (PFS). The study included clinical cases with a histological diagnosis of Glioblastoma (Glioblastoma), Anaplastic Astrocytoma (AA) or High-Grade Glioma (HGG) in patients over 18 years of age from 2014 to 2020. They collected data on clinical presentation, type of resection, time to surgery, time to chemoradiation, location within the Buenos Aires Metropolitan Area (BAMA) and type of health insurance. They found 63 patients that fit the inclusion criteria, including 26 (41.3%) females and 37 (58.7%) males. Their median age was 54 years old (19-86). Maximal safe resection was achieved in 49.2% (n = 31) of the patients, incomplete resection in 34.9% (n = 22) and the other 15.9% (n = 10) received a biopsy, but no resection. The type of Healthcare insurance was almost evenly divided, with 55.6% (n = 35) of the patients having public vs. 44.4% (n = 28) having private health insurance. The median time to chemoradiation after surgery was 8 (CI 6.68-9.9) weeks for the global population. When we ordered the patient's PFS by time to chemoradiation we found that there was a statistically significant effect of time to chemoradiation on patient PFS. Patients had a PFS of 10 months (p = 0.014) (CI 6.89-13.10) when they received chemoradiation <5 weeks vs a PFS of 7 months (CI 4.93-9.06) when they received chemoradiation between 5 to 8 weeks and a PFS of 4 months (CI 3.76-4.26 HR 2.18 p = 0.006), when they received chemoradiation,>8 weeks after surgery. Also, our univariate and multivariate analysis found that temporal lobe location (p = 0.03), GMB histology (p = 0.02), and biopsy as surgical intervention (p = 0.02) all had a statistically significant effect on patient PFS. Thus, time to chemoradiation is an important factor in patient PFS. Our data show that although an increase in HGG severity contributes to a decrease in patient PFS, there is also a large effect of time to chemoradiation. The results suggest that they can improve patient PFS by making access to healthcare in Buenos Aires more equitable by reducing the average time to chemoradiation following tumor resection [1)].

2: Martín Noguerol T, Barousse R, Socolovsky M, Luna A. Quantitative magnetic resonance (MR) neurography for evaluation of peripheral nerves and plexus injuries. Quant Imaging Med Surg. 2017 Aug;7(4):398-421. doi: 10.21037/qims.2017.08.01. Review. PubMed PMID: 28932698; PubMed Central PMCID: PMC5594015.

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Prost DM, Merenzon MA, Gómez-Escalante JI, Primavera A, Vargas Benítez M, Gil AS, Marenco PM, Califano MM, Moughty Cueto C, Zaloff Dakoff JM, Colonna M, Mazzón A, Zaninovich RS, De Cristófaro OR. Effects of time to chemoradiation on high-grade gliomas from the Buenos Aires Metropolitan Area. PLoS One. 2021 Apr 2;16(4):e0249486. doi: 10.1371/journal.pone.0249486. PMID: 33798233.