Abstracts

P17.06.B. DIFFERENT DOSAGE OF BEVACIZUMAB TREATMENT IN THE PERSISTENT IDHWT ASTROCYTOMA AND ITS IMPACT ON OUTCOME
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BACKGROUND: Angiogenesis is one of the most distinctive hallmarks of glioblastoma (GBM). Although bevacizumab did not show to improve overall survival in phase 3 trials, it was approved by FDA and is often pre-prescribed as standard of care in the recurrent clinical setting. The aim of this study is to evaluate the difference in terms of survival and between the 5 mg/m^2 and 10 mg/m^2 bevacizumab schedule in recurrent GBM. MATERIAL AND METHODS: All pts treated at Veneto Institute of Oncology from May 2013 to March 2022 were retrospectively reviewed. Major inclusion criteria were: histologically confirmed diagnosis of IDHwt GBM/IDHmut grade 4 astrocytoma (according to the WHO 2021 classification), relapse after first or subsequent line of therapy, treatment with bevacizumab at 5 mg/m^2 or/and 10 mg/m^2 every 2 weeks until progression/death or unacceptable toxicity. Bevacizumab was administered as off-label therapy. The treatment schedule was at physician's discretion. RANO criteria and CTCAE v5.0 were used for response and toxicity assessment. RESULTS: 81 pts were evaluable and 24 (29.6%) were excluded due to missing data. Median number of prior lines of treatment was 2 (range 1-7) and 41% of pts received the therapy beyond the third line. Median time between the last standard maintenance TMZ (sTMZ) cycle and the mTMZ administration was 6ms (range 1-30) and 40% of pts started mTMZ after 3ms from sTMZ. All pts were evaluable for response: 5 (2%) and 48 (40%) showed PR and SD. mOS from the start of mTMZ was 5.4ms (95% CI 1.4-3.6-4.3), mPFS was 2.6ms (95% CI 2.3-3.2-4.8). At univariate analysis, MGMTm and MGMTnttum pts had a mOS of 5.6 and 4.4ms (p=0.03); mOS of pts < or =2 with 5 or 10 mg/m^2 was 5.6ms (p=0.001); number of prior lines of therapies, time between sTMZ and mTMZ and age were not significant. At multivariate analysis, MGMT methylated status (HR=2.3, 95% CI, p=0.004) and ECOG-PS (HR=0.5, 95% CI, p=0.017) remained statistically significant for mOS, while MGMT was not a factor statistically associated with OS. The most common grade 3-4 hematologic toxicities were lymphopenia (10%) and thrombocytopenia (3%). Grade 3-4 nonhematologic toxicities were uncommon. CONCLUSION: Rechallenge with mTMZ can be a well tolerated treatment option for recurrent GBM, even in heavily pretreated pts. Pts with MGMTm and good ECOG-PS might report the major benefit.

P17.08.B. SINGLE INSTITUTIONAL RETROSPECTIVE REVIEW OF RE-IRRADIATION IN HIGH GRADE GLIOMAS IN A TERTIARY UK CENTRE
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BACKGROUND: Recurrent high grade gliomas (HGG) pose a treatment challenge as no definite guidelines exist. Re-excision could be appropriate in some cases while systemic therapy options are only a handful. We thus need to resort to the option of re-irradiation at some point but there could be a wide variety of techniques, volumes & doses to choose from due to lack of robust evidence. The UK wide BRIOCR study for Glioblastoma Multiforme (GBM) showed standard re-irradiation with 50.4 Gy in 28 fractions to be the best option. In this retrospective study, we aim to report our institutional practice with re-irradiation & our patient outcomes. MATERIAL AND METHODS: Electronic health records over a period of 3 years from 1 Jun 2019 to 30 May 2021 were searched for patients meeting with HGG that underwent a course of re-irradiation. Various patient factors, tumour & treatment factors at baseline and at recurrence and survival data were collected. RESULTS: Total of 8 patients received re-irradiation with all except one having a performance status of 1 at the time of treatment. Seven patients had GBM, one had transformation from low grade to GBM, and one had a grade 4 astrocytoma. All patients had been treated with TMZ at least once. Our median number of prior lines of treatment was 2 (range 1-4) and 30% of pts received bevacizumab at first recurrence. 28 (84.9%) pts were evaluable for response; 7 (21%) and 5 (15%) showed PR and SD. 48 (60%) pts received the 10 mg/m^2 schedule, 10 (13%) were inferior to the 5 mg/m^2 schedule and 4 (5%) had an ECOG-PS of 0 or 1 and 4 (8%) had ≥65ys, MGMT was methylated in 66 of 105 (62%) and in 9 of 106 (8%). Grade 3-4 most common adverse events were hypertension (18%) in pts treated with 10 mg/m^2 and hypertension (16%) and proteinuria (2%) in pts treated with 5 mg/m^2. At median follow-up of 5.4 and 7.7ms (p=0.08); mOS for pts with ECOG-PS < or ≥2 was 9.0 (95% CI 4.3-14.0) and 7.7ms (95% CI 4.3-6.4), mPFS was 2.6ms (95% CI 2.3-2.8). At univariate analysis, PR (HR=2.07, 95% CI, p=0.02) was significantly associated only with PFS. As regards survival, pts who received the 5 mg/m^2 or the 10 mg/m^2 schedule had a mOS of 18.9 months (range: 11.6 - 190.5 months). The median time to progression from re-RT was 5.4 months (CI: 3.4 - 7.4) and median survival from re-RT was 7 months (CI: 6.2 - 7.8). The median overall survival since diagnosis was 18.9 months (CI: 11.6 - 19.5 months). CONCLUSION: Re-irradiation is a safe & feasible treatment option in carefully selected cases of high grade glioma.

P17.07.A. METRONOMIC TEMOZOLOMIDE THERAPY IN HEAVILY PRETREATED PATIENTS WITH RECURRENT GliOBLASTOMA: A LARGE MONO-INSTITUTIONAL RETROSPECTIVE STUDY
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BACKGROUND: Glioblastoma (GBM) is the most common and aggressive primary brain cancer. Despite advances in surgical and first-line treatment, all pts relapse. The aim of this study is to evaluate the benefit of metronomic Temozolomide (mTMZ) for recurrent GBM. MATERIAL AND METHODS: FrOm September 2013 to March 2022 were retrospectively reviewed. Major inclusion criteria were: first-line therapy with Stupp protocol, relapse after first or subsequent line of therapy, treatment with mTMZ schedule (50mg/m^2 continuously), histologically confirmed diagnosis of GBM. RANO criteria and CTCAE v5.0 were used for response and toxicity assessment. RESULTS: 120pts were enrolled. Median follow-up was 15.6ms. Median age was 59ys (range 18-81), ECOG-PS was 0-2 in 107/102 (83%) and 3 in 11 (9%); MGMT was methylated in 97 of 102 (95%) and 2 in 11 (9%). Median number of prior lines of treatment was 2 (range 1-7) and 41% of pts received the therapy beyond the third line. Median time between the last standard maintenance TMZ (sTMZ) cycle and the mTMZ administration was 6ms (range 1-30) and 40% of pts started mTMZ after 3ms from sTMZ. All pts were evaluable for response: 5 (2%) and 48 (40%) showed PR and SD. mOS from the start of mTMZ was 5.4ms (95% CI 1.4-3.6-4.3), mPFS was 2.6ms (95% CI 2.3-3.2-4.8). At univariate analysis, MGMTm and MGMTnttum pts had a mOS of 5.6 and 4.4ms (p=0.03); mOS of pts < or =2 with 5 or 10 mg/m^2 was 5.6ms (p=0.001); number of prior lines of therapies, time between sTMZ and mTMZ and age were not significant. At multivariate analysis, MGMT methylated status (HR=2.3, 95% CI, p=0.004) and ECOG-PS (HR=0.5, 95% CI, p=0.017) remained statistically significant for mOS, while MGMT was not a factor statistically associated with OS. The most common grade 3-4 hematologic toxicities were lymphopenia (10%) and thrombocytopenia (3%). Grade 3-4 nonhematologic toxicities were uncommon. CONCLUSION: Rechallenge with mTMZ can be a well tolerated treatment option for recurrent GBM, even in heavily pretreated pts. Pts with MGMTm and good ECOG-PS might report the major benefit.

P17.09.A. REGORAFENIB AND RE-IRRADIATION: ANALYSIS OF CLINICAL OUTCOMES AND TOXICITIES IN PATIENTS WITH RECURRENT GliOBLASTOMA
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BACKGROUND: Glioblastoma is the most common and aggressive primary brain tumor in adults. The aggressiveness and poor prognosis related to this disease join to the limited available treatment options. The current standard of care involves surgical resection followed by concomitant radiotherapy and chemotherapy. At recurrence, there is no standard treatment exist and there are no guidelines to facilitate decisions in the recurrent setting. Available options include re-operation, re-irradiation, systemic therapy, alone or in combination. In recent years, immunotherapy strategies have revolutionized the treatment of many cancers, increasing the hope for GBM therapy, Regorafenib (Stivarga) is an inhibitor of several kinases involved in the mechanisms that regulate neoangiogenesis processes, through the inhibition vascular endothelial growth factor (VEGF) receptors and the modification of the tumor microenvironment; specifically, it stabilizes PSAT1 (phosphatase and tensin homolog) by inhibiting its phosphorylation and its degradation. The dual regulatory mechanism underlying PSAT1-induced autophagy arrest accounts for the superior anti-GBM effect of Regorafenib compared with Temozolomide. MATERIAL AND METHODS: 15 patients with documented disease progression after surgery followed by RT and TMZ were assigned to re-

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