**BACKGROUND**

Upfront strategy in glioblastoma (GBM) is well established with surgery followed by concomitant chemoradiotherapy\(^1\). At relapse several options are available but there is no standard. Bevacizumab (BVZ) alone was associated with increased PFS but no benefit in OS\(^2\).

Several trials have assessed the efficacy of BVZ and chemotherapy but only a few compared chemotherapy options\(^3,4\). In this study we aimed to evaluate efficacy and safety of four combinations of BVZ and chemotherapy using real-life data.

**METHODS**

Patients (pts) with newly diagnosed GBM at CGFL (Dijon, France) between 2005 and 2020 were screened. Upfront treatment was concomitant chemoradiotherapy using temozolomide. At relapse, treatment was a combination of BVZ plus either temozolomide, fotemustine, lomustine or irinotecan.

Brain magnetic resonance imaging evaluation was run every 2 to 3 months (mo).

The primary objective was PFS and secondary objectives were OS, 24 months rate of progressive disease and safety.

For statistical analysis combination of BVZ + temozolomide, lomustine and irinotecan were gathered in “Other Group”.

**RESULTS**

160 files were retained, 64% pts were males, median age at diagnosis 60 years and 81% with Karnofsky grade ≥ 90%. MGMT methylation was found in 19% of pts and IDH mutation in only 3 cases.

Moreover, in fotemustine + BVZ group, low performance status <90% or steroid usage was associated with poor median OS: 4.3mo vs not reached (p=0.02) and 6.7mo vs not reached (p=0.03).

**DISCUSSION**

Using real-life data we show that BVZ + fotemustine is less efficacious than BVZ + other chemotherapy such as irinotecan, temozolomide or lomustine in recurrent GBM.

This observation seems especially true for pts with low performance status or concomitant steroid treatment since OS is significantly lower with fotemustine + BVZ combination.

OS and PFS in our analysis, are concordant with other studies assessing the efficacy of combination therapy using BVZ with chemotherapies\(^4\). Regarding safety, we find a higher number of toxic deaths in fotemustine Group in relation with BVZ administration (2 hemorrhages, 4 Gl perforations). This might be in relation with grade 3-4 thrombopenia, more frequent in these pts, worsening BVZ specific adverse effects\(^5\).

Survival outcome is heterogeneous in both groups, some pts showing long survival (one case up to 72 mo with BVZ + irinotecan), which highlights the need for patient selection and identification of response predictive factors.

Our analysis shows that fotemustine is less efficacious than other chemotherapeutics recommended in combination with BVZ in 2nd line GBM systemic treatment.

**CONFLICTS OF INTEREST**

Authors report no conflicts of interest and no specific grant form any funding agency in this work.

**REFERENCES**