

23 **-Non-methylated MGMT as Predictive
Factor in Newly Diagnosed Glioblastoma Multiforme Treated with Bevacizumab Concurrent with
Radiotherapy Followed by Adjuvant Bevacizumab plus Irinotecan versus Temozolomide
Concurrent with Radiotherapy Followed by Adjuvant Temozolomide**

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Abstract

Background and Purpose: Temozolomide is the standard treatment for patients with newly diagnosed glioblastoma multiforme that had methylated O6-methylguanine–DNA methyltransferase promoter, but it had a limited efficacy in non-methylated MGMT. Thus the aim of this study is to compare bevacizumab plus irinotecan versus standard temozolomide in newly diagnosed non methylated MGMT glioblastoma multiforme.

Patients and Methods: This study was carried out in oncology department, Tanta university hospital. Patients were randomized into two groups with ratio 2:1, group A received bevacizumab (BEV) (10 mg/kg every 2 weeks) during radiotherapy, followed by maintenance BEV (10 mg/kg every 2 weeks) plus irinotecan (IRI) (125 mg/m² every 2 weeks) until progressive disease. Patients in the group B received 75 mg/m² daily temozolomide (TMZ) during RT followed by adjuvant chemotherapy six cycles of TMZ (200 mg/m² once daily for 5 days every 4 weeks). In recurrence in group B; patients could receive second-line BEV+IRI. The primary end point was the progression-free survival rate.

Results: There was improvement in progression free survival, overall response and overall survival in favour of BEV+IRI versus TMZ. In univariate analyses for progression free survival, age, sex, performance status, extent of resection and line of treatment was statically significance while in multivariate they remained statistically significant. As regard overall survival all prognostic factors were significant in univariate analysis but only line of treatment was statically significant in multivariate analysis.

Conclusion: BEV+IRI could be a good alternative to TMZ in nm MGMT newly diagnosed GBM but required larger studies.

Keywords: Temozolomide; Glioblastoma; Temozolomide; Adjuvant chemo