

The Epigenetic Background Depended Treatment Planning for Glioblastoma Multiforme

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Abstract : Glioblastoma (WHO grade IV), is the malignant form of brain tumor, the genetic background of the GBM is highly variable. The tumor mass of a GBM is multilayered and every tumor layer shows distinct characteristics with a different cell population. The treatment planning of GBM should be focused on the tumor genetic characteristics. We screened primary glioblastoma multiforme (GBM) in a population-based study for MGMT and RAR β methylation and IDH1 mutation correlated them with clinical data and treatment. There was no correlation between MGMT-promoter methylation and overall survival. The overall survival time of the patients with methylated RAR β was statically (OS;p<0,05) significance between the patients who were treated with chemotherapy and radiotherapy. Here we showed the status of IDH1 gene associated with younger age. We demonstrated that the together with MGMT gene the RAR β gene should be used as a potential treatment decision marker for GBMs.

Keywords : RAR β , primary glioblastoma multiforme, methylation, MGMT

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