



Toward an effective strategy in glioblastoma treatment. Part I: resistance mechanisms and strategies to overcome resistance of glioblastoma to temozolomide.

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Résumé en anglais	<p>Glioblastoma multiforme (GBM) is a devastating disease and the most lethal of adult brain tumors. Treatment is based on surgery, radiotherapy and chemotherapy by oral temozolomide (TMZ), which is the most potent chemotherapy agent for the treatment of GBM. Despite TMZ efficiency, the prognosis of these tumors remains poor. This is because of inherent or acquired resistance of glioma tumor cells to TMZ. This resistance is caused by DNA repair enzyme activity, overexpression of epidermal growth factor receptor (EGFR), galectin-1, murine double minute 2 (Mdm2), p53 and phosphatase and tensin homolog (PTEN) mutations. Many strategies to overcome this resistance have been developed. In this review, we will describe the main mechanisms of GBM resistance to TMZ and different strategies developed to reverse the phenotype of these tumor cells. Finally, we will discuss the drawbacks and limitations of these strategies.</p>
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- [1] [http://okina.univ-angers.fr/publications?f\[author\]=10517](http://okina.univ-angers.fr/publications?f[author]=10517)
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