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### Sensitivity to temozolomide in brain tumor initiating cells.

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#### Abstract

Molecular alterations in glioblastoma have the potential to guide treatment. Here, we explore the relationship between temozolomide (TMZ) response and O(6)-methylguanine DNA methyltransferase (MGMT) status in brain tumor initiating cells (BTICs). Methylation, expression, and sensitivity were assessed in 20 lines; associations were evaluated by Fisher's exact test. Some BTICs were sensitive. Sensitivity to TMZ was only associated with protein expression ( $P = .001$ ). There were atypical BTICs including TMZ-resistant lines in which the methylation-specific PCR reaction revealed both methylated and unmethylated bands. BTICs are not uniformly resistant to TMZ; some are sensitive. MGMT status does not predict TMZ response with high precision.

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