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1: [Cancer](#). 2007 Oct 1;110(7):1542-50.



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Phase 2 study of temozolomide in children and adolescents with recurrent central nervous system tumors: a report from the Children's Oncology Group.

[Nicholson HS](#), [Kretschmar CS](#), [Krailo M](#), [Bernstein M](#), [Kadota R](#), [Fort D](#), [Friedman H](#), [Harris MB](#), [Tedeschi-Blok N](#), [Mazewski C](#), [Sato J](#), [Reaman GH](#).

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BACKGROUND: Effective chemotherapy is lacking for most types of central nervous system (CNS) tumors in children. Temozolomide, an agent with activity against adult brain tumors, was investigated in children and adolescents with recurrent CNS tumors. **METHODS:** Temozolomide was administered orally as monthly 5-day courses at doses of 200 mg/m²/d (patients with no prior craniospinal irradiation [CSI]) or 180 mg/m²/d (prior CSI). Patients with a complete (CR) or partial (PR) response or stable disease (SD) could continue temozolomide for up to 12 cycles. **RESULTS:** The cohort comprised 122 patients, including 113 with CNS tumors. Median age was 11 years (range, 1-23 years). Among 104 evaluable patients with CNS tumors, 5 PRs and 1 CR were observed. PRs occurred in 1 of 23 evaluable patients with high-grade astrocytoma, 1 of 21 with low-grade astrocytoma, and 3 of 25 with medulloblastoma/primitive neuroectodermal tumor (PNET). The CR occurred in an additional patient with medulloblastoma/PNET. No responses were observed in patients with ependymoma, brain-stem glioma, or other CNS tumors. Notably, 41% of patients with low-grade astrocytoma had SD through 12 courses. The most frequent toxicities were grade 3 or 4 neutropenia (19%) and thrombocytopenia (25%); nonhematologic toxicity was infrequent. **CONCLUSIONS:** Although overall objective responses were limited, further exploration of temozolomide may be warranted in children with medulloblastoma and other PNETs, or in patients with low-grade astrocytoma, perhaps in a setting of less pretreatment than the patients in the current study, or in the context of multiagent therapy.

PMID: 17705175 [PubMed - indexed for MEDLINE]

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