

# A Retrospective Study of Antineoplastons A10 and AS2-1 in Primary Brain Tumours

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## Abstract

**Objective:** The results of treatment of brain tumours have been disappointing. The objective of this study was to evaluate a new treatment with antineoplastons A10 and AS2-1.

**Patients and Methods:** This study involved a cohort of patients who had failed established therapies and were treated in private practices in the USA and Australia. Patients received daily intravenous injections of antineoplastons A10 and AS2-1 at average dosages of 7.7 and 0.36 g/kg/day, respectively. Tumour dimensions were documented by magnetic resonance imaging. Changes in tumour size were categorised as defined by the National Cancer Institute.

**Results:** Antineoplastons A10 and AS2-1 eliminated or substantially reduced tumours in 44% of patients with brain tumours. Of the 36 evaluable patients, nine had a complete response, seven a partial response, and 12 stable disease. Progressive disease occurred in eight patients. 15 patients are alive today, 86.5% of them for over 3 years from the beginning of treatment. Complete and partial responses were documented in glioblastoma multiforme, astrocytoma, oligodendroglioma, mixed glioma, medulloblastoma, and malignant meningioma. Adverse drug experiences included easily treated abnormalities in plasma electrolytes. In a small percentage of patients additional adverse effects possibly related to antineoplastons included skin rash (19%), somnolence (17%), weakness (14%), nausea (6%), vomiting (3%), headaches (3%), slurred speech (6%), confusion (3%), fever (3%) and fluid retention (3%). Adverse effects were reversed on temporary discontinuation or dose reduction.

**Conclusion:** Antineoplon therapy produced complete or partial responses in 16 of 36 (44%) patients with brain tumours. Compared with standard treatment, antineoplon therapy is associated with prolonged survival time and prolonged time to disease progression.