

**Relapsed malignant gliomas treated with electro-  
hyperthermia: report of 24 patients**

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The purpose of this study was to evaluate the activity and toxicity of electro-hyperthermia (ET) on relapsed malignant glioma patients. Twenty four patients with histologically diagnosed malignant glioma entered the study. Sixteen patients had glioblastoma multiforme, four had anaplastic astrocytoma grade III and four had anaplastic oligodendroglioma. All patients were pre-treated with temozolamide-based chemotherapy and radiotherapy. Hyperthermia with short radiofrequency waves of 13.56 MHz was applied using a capacitive coupling technique keeping the skin surface at 20 degrees C. The applied power ranged between 60-150 Watts and the calculated average equivalent temperature in the tumours was above 40 degrees C for more than 90% of the treatment duration. Two complete remission long lasting (13 months and 72 months), 4 partial remissions and 6 stabilizations were achieved, with a disease control of 50%. The median duration of response was 12 months (range 6-72). The median survival of the entire patient population was 11 months, with 30% survival rate at 1 year. ET appears to have effectiveness in adults with relapsed malignant glioma especially in the histological subtype astrocytoma.