

Abstracts

Instrumentation for Invasive and Non-Invasive Microwave Hyperthermia of Brain Tumors

R.W. Paglione, F. Sterzer, A. Winter and J. Laing. "Instrumentation for Invasive and Non-Invasive Microwave Hyperthermia of Brain Tumors." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 767-769.

Nineteen patients with malignant brain tumors who had failed to respond to conventional therapies were treated with invasive thermotherapy. In the last four of these patients the thermotherapy was combined with brachytherapy. Hyperthermic temperatures (-43 °C) were induced in the tumors using microwaves at a frequency of 2450 MHz that were guided into the tumors by one or more semi-rigid coaxial applicators. The feasibility of non-invasively heating malignant brain tumors that are located close to the skull is being investigated. A microwave lens that can concentrate 915 MHz microwave power into small tissue volumes shows promise of being clinically useful.

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