Abstracts

A Bolusing Technique for Batch Microwave Irradiation of Tumors in the Far Field

A.Y. Cheung, D. McCulloch, J.E. Robinson and G.M. Samaras. "A Bolusing Technique for Batch Microwave Irradiation of Tumors in the Far Field." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 357-359.

A technique of 2450 MHz microwave hyperthermia has been developed for the simultaneous irradiation of multiple mouse tumors in the far field. Superficial 1 cm tumors were exposed to microwaves by being drawn through the surface of a protective mouse shield, then encapsulated in a larger bolus of tissue equivalent material. This technique markedly improved tumor heating uniformity (to ± 0.15° C at 450° C). A replicable bolus shape was formed using expanded polystyrene molds. Placement of the tumor mold assemblies on an equipower surface of our anechoic range permitted the simultaneous irradiation of multiple mouse tumors.

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