Abstracts

Techniques for Uniform and Replicable Microwave Hyperthermia of a Model Mouse Carcinoma

J.E. Robinson, A.Y. Cheung, G.M. Samaras and D. McCulloch. "Techniques for Uniform and Replicable Microwave Hyperthermia of a Model Mouse Carcinoma." 1978 Transactions on Microwave Theory and Techniques 26.8 (Aug. 1978 [T-MTT] (Special Issue on Microwaves in Medicine, with Accent on the Application of Electromagnetics to Cancer Treatment)): 546-549.

Two techniques for localized 2450-MHz hyperthermia of experimental mouse cancers are described. In the far-field approach superficial tumors are encapsulated in 5-cm mold-formed spheres of semi-solid phantom material, then placed in an anechoic chamber on an equipower surface. In the applicator approach, tissues are immersed in a temperature-controlled tissue-equivalent liquid bolus, and are irradiated by time-multiplexed parallel-opposed beams. Both techniques feature microwave bolusing for improved coupling and tumor heating uniformity.

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