Abstracts

Evaluation of a Therapeutic Direct-Contact 915-MHz Microwave Applicator for Effective Deep-Tissue Heating in Humans

J.F. Lehmann, A.W. Guy, J.B. Stonebridge and B.J. deLateur. "Evaluation of a Therapeutic Direct-Contact 915-MHz Microwave Applicator for Effective Deep-Tissue Heating in Humans." 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)): 556-563.

A 13-cm square direct-contact microwave applicator which operates at 915 MHz was evaluated in tissue models and human volunteers to determine its therapeutic effectiveness. It was found that the applicator with radome- and forced-air cooling selectively elevates temperatures in muscles (1-2 cm) to 43-45°C. At this higher range of temperature, certain physiologic responses such as an increase in blood flow are produced. The applicator may also be used to heat malignant tumors of muscle.

❑ Return to main document.