Abstracts

Development and Testing of a 2450-MHz Lens Applicator for Localized Microwave Hyperthermia (Short Papers)

Y. Nikawa, M. Kikuchi and S. Mori. "Development and Testing of a 2450-MHz Lens Applicator for Localized Microwave Hyperthermia (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.11 (Nov. 1985 [T-MTT]): 1212-1216.

A new type of applicator with a convergent lens for localized microwave hyperthermia is developed. A lens applicator of direct contact type was designed to conduct actual and progressive experiments with phantoms of simulated fat and muscle tissues heated at 2450 MHz. The experimental results showed that the heating power penetration depth increased 40 percent with this applicator as compared to a simple rectangular waveguide applicator with the same size aperture that had generally been used for microwave hyperthermia. Our applicator had a concave-shaped aperture and was designed to contact well with the heating medium whose shape was cylindrical like a human body.

❑ Return to main document.