# Abstracts

## Field Simulation of Dipole Antennas for Interstitial Microwave Hyperthermia

The electromagnetic field of dipole antennas for interstitial microwave hyperthermia is investigated using a finite integration algorithm program. The numerical method is applied to conventional, clinically used applicators and is also used for the improvement and optimization of sophisticated applicators, e.g., in a triaxial technique. Simulations of the frequency dependent impedance match, the E-field and the specific absorption rate (SAR) distribution of different applicators immersed in a muscle phantom are presented and compared with measurements. More-over, results for arrays of two and four applicators are given. The field simulation allows one to study the effects at the various discontinuities of the applicator-catheter-tissue system and gives a better understanding of known phenomena.

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