Abstracts

Three-Dimensional Computer Simulation in Deep Regional Hyperthermia Using the Finite-Difference Time-Domain Method

D. Sullivan. "Three-Dimensional Computer Simulation in Deep Regional Hyperthermia Using the Finite-Difference Time-Domain Method." 1990 Transactions on Microwave Theory and Techniques 38.2 (Feb. 1990 [T-MTT]): 204-211.

The finite-difference time-domain method is used for detailed three-dimensional simulation for applications in deep regional hyperthermia. The ability to simulate SAR patterns from the near field of prototype applicators is demonstrated by comparison with measured data. The method is also used to simulate treatments on commercially available equipment by using a detailed model of a cancer patient constricted from computerized axial tomography scans. The model has 1 cm resolution and consists of 34751 cells. The method is further used to anticipate results of treatments with prototype applicators.

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