Bio-Medical Analysis Using Smart Algorithms

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Abstract

Our aim is to propose a new enhanced approach for providing better image fusion for multimodality medical images in terms of fine details which will detect different stages of cancer and suggesting suitable technique for treating cancer to medical practitioners using COMSOL®. The smaller size tumor can be treated using RF Module of COMSOL®. The Effect of heat dissipation of the tissue is modeled using COMSOL Multiphysics®. The proposed algorithm using COMSOL's® LiveLink™ to MATLAB® tool, not only preserves edges and texture information from the image but also removes the noise, providing good visual effect. Due to the problem of Occlusion and Alteration in patient different tomography scan there is requirement of proper Image Registration approach. To design algorithm of image registration for translation, scaling and rotation of biomedical images, by which practitioner will get a benefit to diagnose medical defects. On perspective and quantitative analysis of diagnosis and treatment of cancer using RF Module of COMSOL Multiphysics®.

Reference

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2. K. Saito, T. Taniguchi, H. Yoshimura, and K. Ito, “Estimation of SAR Distribution of a Tip-Split Array Applicator for Microwave Coagulation Therapy Using the Finite Element Method,” IEICE Trans. Electronics, vol. E84-C, no.7, pp. 948–954, July 2001 .

Figures used in the abstract

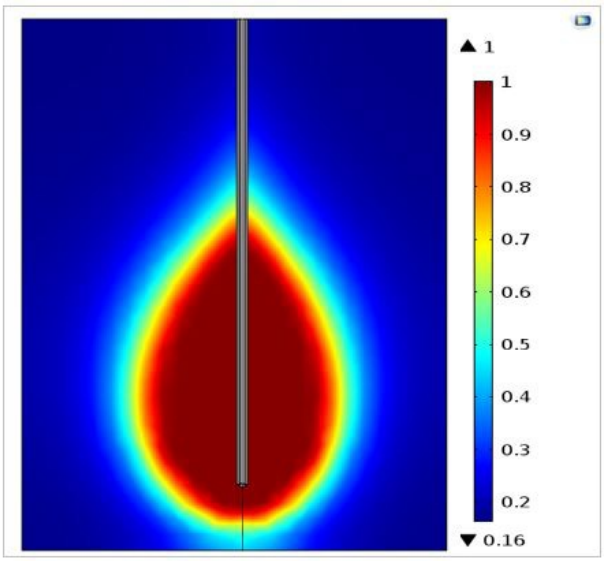

Figure 1: Fraction of necrotic tissue