

The Current Situation and Development of Hyperthermia Technology in Integrated Cancer Treatment

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1. The current situation of thermal therapy and the basic assessment

1.1. Description of tumor thermotherapy

The current tumor thermotherapy technology, from the beginning simple technology, has gradually formed a kind of new and high technology based on the electronic, computer, optical, electromechanical, aerospace and aviation technologies. Using devices such as microwave, radio frequency (rf), laser, ultrasound, magnetic mediated, it can carry out six big classifications for the treatment of tumor, namely deep/intracavity thermotherapy, hyperthermia, whole-body hyperthermia, high intensity focused ultrasound (HIFU), minimally invasive thermal ablation, and magnetic induction hyperthermia.

Compared with other treatments, the thermotherapy, with nonionizing radiation, the toxic and side effect is far lower than the surgery, radiotherapy and chemotherapy; and its curative effect is also no less than the targeted drug treatment and immunotherapy and it has more advantages in price.