

ABSTRACT

The present invention discloses an enhancement agent for high intensity focused ultrasound (HIFU) treatment, which is administered to a patient before HIFU treatment and can reduce the level of EEF at the target location to be treated with HIFU. EEF is presented by the expression: $EEF = \eta Pt / V$ (unit: J/mm³), and refers to the HIFU energy needed to effectively treat a tumor per unit volume of the tumor, wherein, $\eta=0.7$; P refers to the total acoustic power of HIFU source (unit: W); t refers to the total time of HIFU treatment (unit: s); V refers to the volume of HIFU-induced lesions (unit: mm³). If the amount of EEF at the target location before administration of the enhancement agent is defined as EEF_(base) and the amount of EEF at the target location after administration of the enhancement agent is defined as EEF_(measurement), the ratio between EEF_(base) and EEF_(measurement) is more than 1, preferably more than 2, and more preferably over 4. The use of the enhancement agent for HIFU treatment of the present invention makes it possible to treat deep-seated tumors. In addition, patients with hepatic tumors can be effectively treated without removal of ribs. Accordingly, the present invention discloses methods for increasing acoustic energy deposition at target location during HIFU treatment and screening the enhancement agents for HIFU treatment.