

Klimenko S.A., Ekimov I.D., Tereshchenko M.F., Tymchyk G.S. Research indicators which influence on image quality at ultrasound diagnosis biological tissue

Established parameters that significantly influence the quality image internal and studied ultrasonic imaging method by using the hysteresis loop, which characterizes the local hysteresis viscoelastic biological tissues (BT). It turned out that setting hysteresis loop recognition tissue degeneration and its components rather change the sensitivity of the scanner. Image studied as a method for evaluation of image deformation various information about BT in B-mode, captured temperature changes and age-related changes BT for a more objective mathematical model describing the interaction of ultrasound with BT. The rate of penetration of molecules through membranes depends strongly on the temperature. Such dependence is considered as a consequence of the need to overcome the potential barrier of a molecule. In our case, the temperature is a function of frequency and intensity of ultrasound, so studies the effect of temperature on the parameters of image quality.

Keywords: ultrasound, viscoelastic hysteresis, hysteresis loop parameters.

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