

Ultrasonic Biopsy Needle Shear Wave Imaging

Published date: Aug. 14, 2019

Technology description

An apparatus and method for estimating and imaging mechanical properties of biological tissues. The apparatus includes one or two ultrasound emitting devices (transducers) that first apply an acoustic radiation force to vibrationally displace a sphere embedded in the medium. Alternatively, a biopsy needle may be inserted into the medium and vibrated along its axis to generate shear waves. During and after vibration, ultrasound is again applied to image shear waves in the medium that propagate from the vibrating sphere or needle. By measuring the local wavelength of the shear waves, the shear modulus and viscous coefficient of the medium surrounding the vibrating element are estimated.

Institution

[University of Illinois, Urbana-Champaign](#)

联系我们



叶先生

电话：021-65679356

手机：13414935137

邮箱：yeyingsheng@zf-ym.com