Medical devices

Wave ultrasonic transducer torque for uterine cervix

A research group of the Public Health System of Andalusia has developed a device using ultrasonic sensors for medical diagnostic ultrasound to detect early pregnancy.

Oficina de TRANSFERENCIA DE TECNOLOGÍA
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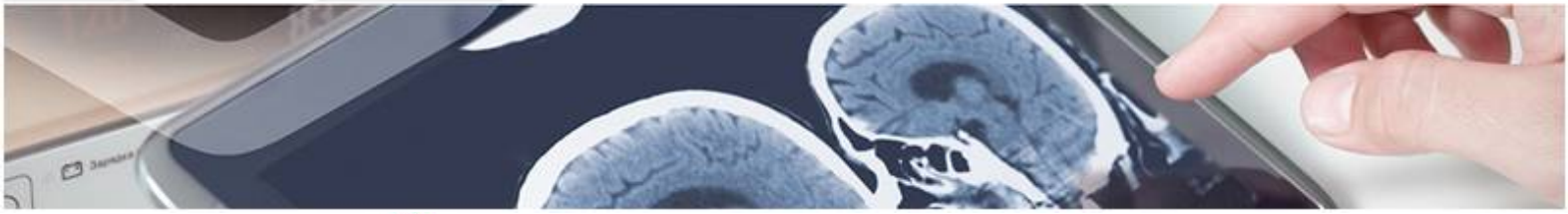

Description

The invention comprises a transducer capable of generating an ultrasonic pulse which propagates the torque through a sample and is capable of acting as a receiver to collect the pulse distorted after passing through the sample, which comprises two or more piezoelectric elements arranged regularly (preferably equidistant) between two discs, preferably made of materials ceramic, so that each piezoelectric element is in contact with two electrodes of different loads distributed perpendicular to the polarization of said piezoelectric elements. Those electrodes with electrically excited by a power source generating pulses, common design ultrasound equipment.

Thus, after receiving an electric pulse creates a magnetic field which, in combination with the direction of polarization, generates an elastic movement.

Advantanges

Among the main advantages of this device include, firstly, the propagation of torsional waves is governed primarily by the resistance, which is more sensitive to pathological changes, and therefore a good indicator of them.

Secondly, the design minimizes spurious waves and motion modes. Furthermore, low pressure waves are generated, which are more sensitive to the conditions of high pressure.

Third, compared to other approaches for generating torsional waves, the device generates efficiently a wide range of higher frequencies.

This device can detect early pregnancy with a range of 15 days.

Intellectual Property

This technology is protected by patent.

Aims

The group is looking for a license agreement holding and /or collaboration.

Classification

Area: Medical Devices

Technology: Women's Health

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