Elastographic Imaging of the Cervix and Uterine Wall

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing an elastographic method and device for producing diagnostic images of the cervix, uterus and pelvic floor.

OVERVIEW

Elastography is a new ultrasound imaging technique that detects and images the local stiffness properties of tissues under compression. Elastrography promises to improve the diagnosis of several uterine and cervical disorders. For example, it could provide a more direct measure of cervical incompetence – a disorder believed to be the principal cause of an estimated 25 percent of premature deliveries – because the stiffness properties of the cervix relate more closely to cervical competence than does the current measure, cervical length. In addition, unlike conventional ultrasound, elastography can potentially distinguish uterine fibroids from adenomyosis foci, due to the differences in stiffness between these tissue types.

THE INVENTION

A group of UW-Madison researchers has now developed an elastographic method and device for producing diagnostic images of the cervix, uterus and pelvic floor. Their invention includes a number of ways to achieve the controlled tissue compression needed for imaging, such as using the ultrasound probe itself to compress the uterus or cervix, or inflating a balloon (similar to the balloons used in angioplasty) inside these organs to compress them.

APPLICATIONS

- Elastrography imaging of the cervix, uterus and pelvic floor
- Diagnosis of incompetent cervix, endometrial cancer and other disorders

KEY BENEFITS

- Provides a simple, low-cost alternative to magnetic resonance imaging (MRI) for the

THE WARF ADVANTAGE

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.

diagnosis of uterine, cervical and pelvic disorders
- Could provide a more reliable measure of cervical incompetence and the risk of premature delivery than the current measure, cervical length
- Unlike conventional ultrasound, holds potential for distinguishing between fibroids and adenomyosis in the uterus
- Could be used to distinguish endometrial cancer from benign uterine disorders such as hyperplasia

ADDITIONAL INFORMATION

Tech Fields
Medical Imaging - Ultrasound

CONTACT INFORMATION

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846.