

## Bladder Wall Micromotion

### Detection with Non-Invasive Ultrasound

Virginia Commonwealth University researchers developed a novel technique to detect and identify patients with Overactive Bladder (OAB). The technology can be readily used with existing equipment. The application of this software helps increase the ability to detect Overactive Bladder syndrome and Detrusor Overactivity (DO). Current methodologies depend on urodynamics testing by filling the bladder with an invasive catheter. Dr. Speich's novel system would allow for invasive or non-invasive micromotion and bladder width testing.

### Benefits

- » Non-invasive
- » Easily Integrated

### Applications

- » Diagnosis of Detrusor Overactivity
- » Diagnosis of Overactive Bladder Syndrome
- » Targeted Drug Trials





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## The technology

A novel automated algorithm utilizes fast Fourier transforms to analyze a region of interest. The software can then measure relative bladder thickness, pressure and micromotion in order to help diagnose OAB and DO in a non-invasive manner. Existing laboratories can easily adopt this technique using standard equipment.

Physicians and Urologists can use this technology as an alternative to trans-vaginal probing. In addition to reducing pain or stress on the patient, this technology can be integrated into a urodynamics system to provide real-time analysis of bladder wall micromotion to a physician. These measurements provide supplemental information to be used in the urodynamics system in order to better diagnose DO and OAB. The micromotion measurements provide the ability to identify different patient sub-groups for targeted treatments and novel drug trials. VCU is seeking market insights on commercialization of this bladder thickness and micromotion detection software. We welcome interest from potential partners and licensees.

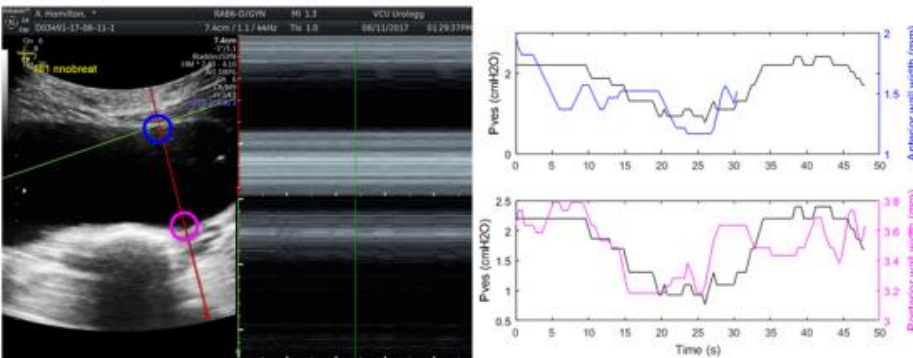


Figure 1: Bladder thickness measurement during filling and unfilling of bladder

## Additional information

### Patent status:

Patent Pending; U.S. and foreign rights available

### License status:

This technology is available for licensing to industry for further development and commercialization

### Category:

Medical Device, Diagnostic

### VCU Tech #:

18-020F

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VCU Innovation Gateway is responsible for commercializing VCU research. We are committed to enhancing the overall culture of innovation and entrepreneurship at VCU and contributing to the growth of the region's innovation ecosystem. This broader mission fosters collaborations with local and prospective companies to build external support for our inventors, and grows an entrepreneurial population to help us commercialize our technologies through new venture creation and thus support economic growth of our region.

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