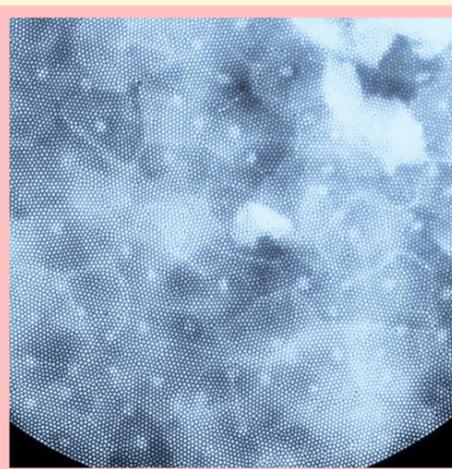
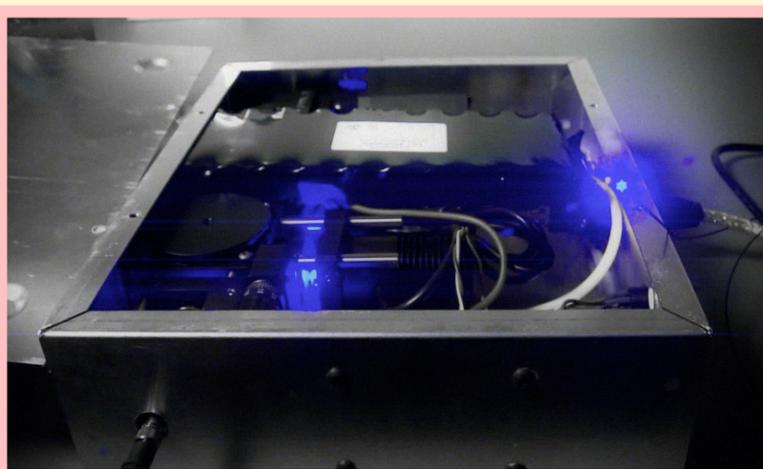


# ADVANCES IN RESEARCH: WOMEN'S HEALTH

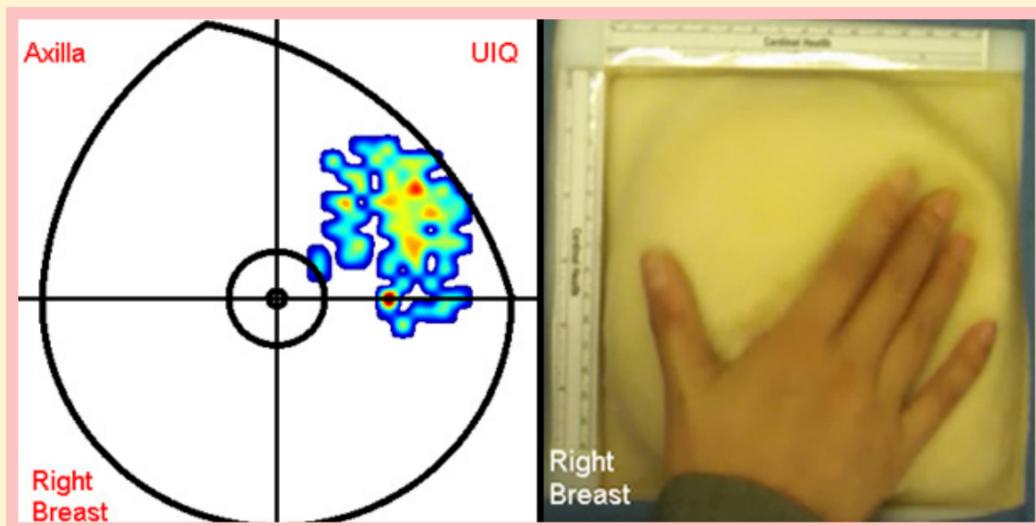
## INSTANT CERVICAL CANCER DIAGNOSIS

NIBIB-funded researchers at Rice University have developed a battery-powered, low cost, fiber optic microscope that allows the user to place a fiber probe on tissue and image the cells with subcellular resolution. This helps identify precancerous lesions at the earliest stage when they are most amenable to inexpensive treatment. The biggest challenge in developing this microscope was to fit the technology into a package that was sufficiently portable, robust, and battery-powered so it could be used in settings that lack electricity and other necessary infrastructure. This microscope can be applied right onto the suspicious area and an accurate diagnosis can be made at the point of care. [Learn More...](#) (External link)



Source: Rice University

## BREAST EXAM TRAINING FOR DOCTORS



Source: Northwestern University

Although mammograms detect breast cancers in many patients, clinical breast palpation remains an important part of a woman's annual physical. This clinical exam can detect tissue abnormalities such as cysts or breast cancers missed by mammography.

NIBIB-funded researchers at Northwestern (now at University of Wisconsin) have developed silicone breast models representing different types of tissue and using sensors to determine if the practitioner presses too hard or not hard enough. This innovative system also allows the practitioner to learn what different types of breast tissue feel like. The device measures and records the practitioner's hands-on skills so she can rehearse the most effective techniques before applying them in a clinical setting.

## NEW BREAST CANCER SCREENING DEVICE

NIBIB-funded researchers at UC Davis have developed a "breast only" CT scanner that can image the breast in three dimensions and has the potential to reveal small tumors obscured behind dense breast tissue, common in younger women. The scanner uses a radiation dose comparable to mammography, by sending X-rays only through the breast and not the chest; it also doesn't require the breast to be compressed. Recently, positron emission tomography (PET) technology has been incorporated into the scanner. A PET scan highlights areas of increased metabolic activity, which could indicate the presence of a tumor. [Read More...](#)



Source: University of California, Davis

## NEW HINTS TO TREAT ENDOMETRIOSIS



Source: Shutterstock

For a disease that affects an estimated 6 to 10% of women, surprisingly little is known about endometriosis — a disorder that causes uterine tissue to grow outside the uterus. The tissue is not cancerous but can result in both chronic and intense pain as well as infertility.

Researchers funded by NIBIB at MIT have discovered new information about the immune networks and signaling pathways involved in inflammation, which plays a role in endometriosis. This knowledge may give doctors valuable clues on how to classify patients and create new drugs to treat this painful disease for the first time in more than a decade.

### FOR MORE INFORMATION:

The National Institute of Biomedical Imaging and Bioengineering  
www.nibib.nih.gov