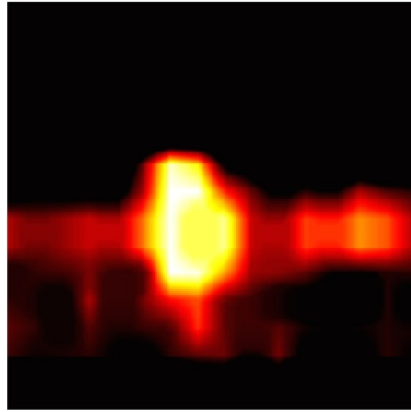




## PAI May Be More Effective For Viewing Prostate Cancer



Photoacoustic imaging (PAI) may be an effective tool for more accurately viewing and monitoring prostate cancer, according to findings by a team of researchers led by scientists from Roswell Park Cancer Institute in Buffalo, New York.

The challenge for clinicians has been to monitor and distinguish early-stage tumors from advanced cases, as active surveillance is often recommended for patients with non-aggressive prostate cancer in order to reduce unnecessary treatment.

PAI is an emerging non-invasive imaging modality that has not yet been used in clinical settings.

The new research, published in the [Journal of Biomedical Optics](#), found that using the new imaging technique, the researchers focused a laser light on prostate cells and then “listened” using ultrasound technology to see how a dye attached to a specific prostate cancer marker, PSMA, reacted to the light waves.

They chose to study this technology’s use in imaging prostate cancer, as the prostate can be imaged in situ. PAI enabled good discrimination between cells with and without the cancer marker.

For patients with more aggressive disease, the technology could offer more precise targeting of biopsies to confirm the need for definitive therapy, explained the study’s senior author, Kent Nastiuk, PhD, Assistant Professor of Cancer Genetics and Genitourinary Cancers at Roswell Park.

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The new imaging technology allows for clinicians to monitor tumor volume, which at present is not measurable, and provides the potential to confirm the initial prostate cancer diagnosis and guide biopsies for improved case management and treatment decision-making, Nastiuk added.

Co-authors in the research included scientists from [Roswell Park Cancer Institute](#), the University of Rochester and the Rochester Institute of Technology.

The project was supported by the National Cancer Institute, the National Institute of Biomedical Imaging and Bioengineering, the National Institute of Arthritis and Musculoskeletal and Skin Diseases, the U.S. Department of Defense and the Sonya A. Sinicki Foundation for Cancer Research.

**See also: [Ultrasound Fights Cancer With Microbubbles](#)**

Source: Roswell Park Cancer Institute

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