

Contrast-enhanced subharmonic imaging detects prostate cancers not identified by MRI

April 10 2018

A test of contrast-enhanced subharmonic imaging (SHI) has shown promise in detecting prostate cancers that were not identified by MRI, according to a study to be presented at the ARRS 2018 Annual Meeting, set for April 22-27 in Washington, DC.

SHI is a new technique for imaging of microbubble ultrasound [contrast](#) agents with improved suppression of background tissues. The study to be presented by Venkata Masarapu of Jefferson Medical College of Thomas Jefferson University was conducted to evaluate contrast enhanced SHI of the [prostate](#) for detection of prostate [cancer](#).

Among the study group of 28 patients, contrast enhancement was clearly observed with color and power Doppler imaging, as well as with both harmonic imaging (HI) and SHI techniques in all subjects. SHI provided improved contrast signal and tissue suppression relative to conventional HI. Areas of increased vascularity were best delineated with maximum-intensity projection SHI, which allowed visualization of microvascular architecture.

This first in vivo application of contrast-enhanced SHI demonstrated contrast enhancement in the prostate of every study patient, with focal areas of contrast enhancement corresponding to sites of cancer in 18% of targeted biopsies, including five patients whose cancer was not identified by MRI. The results indicate that SHI provides improved

conspicuity of microbubble contrast enhancement and may improve the performance of contrast-enhanced ultrasound for detection of prostate cancer.

More information: For more information, visit: www.arrs.org/am18

Provided by American Roentgen Ray Society

Citation: Contrast-enhanced subharmonic imaging detects prostate cancers not identified by MRI (2018, April 10) retrieved 9 April 2024 from <https://medicalxpress.com/news/2018-04-contrast-enhanced-subharmonic-imaging-prostate-cancers.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--