UC Irvine Health offers latest prostate biopsy technology for more accurate results

Artemis device incorporates ultrasound guidance and magnetic resonance imaging

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Prostate cancer patient Paul Kroger and his surgeon, UC Irvine Health urologist Dr. Edward Uchio.

With a family history of prostate cancer and an elevated PSA level, 57-year-old Paul Kroger was not content to follow the "wait and see" approach a urologist advised for his early stage diagnosis. The Los Alamitos resident sought a second opinion and a prostate biopsy from UC Irvine Health experts. Using the latest in targeted prostate biopsy technology, urologic oncologist Dr. Edward Uchiodiscovered that Kroger's cancer was far more aggressive than originally diagnosed. "For decades, physicians have faced the challenge of diagnosing prostate cancer utilizing a relatively blind approach to prostate biopsies," Uchio said. "We can now view prostate lesions while conducting the procedure using a new targeted biopsy system, called Artemis."

Artemis combines ultrasound with magnetic resonance imaging, commonly known as MRI. The MRI displays a color, three-dimensional image of the prostate on a computer screen. Physicians view prostate lesions in real-time, and guided by ultrasound, insert biopsy needles, ensuring that tissues from all suspect areas are captured.

Traditional ultrasound produces only a two-dimensional image of the prostate, so physicians might not see suspect tissues. The biopsy needle can miss existing cancer cells and extract only healthy tissue, resulting in an inaccurate diagnosis.

Prostate cancer is the second-most common cancer among American men, according to the American Cancer Society. Although in most cases it is slow-growing and contained within the prostate gland, almost 30,000 men die of prostate cancer each year.

"In cases like Mr. Kroger's, targeted biopsies improve the detection of significant prostate cancer that is otherwise missed," Uchio said.

UC Irvine Health comprises the clinical, medical education and research enterprises of the University of California, Irvine. Patients can access UC Irvine Health at physician offices throughout Orange County and at its main campus, UC Irvine Medical Center in Orange, Calif., a 411-bed acute care hospital that provides tertiary and quaternary care, ambulatory and specialty medical clinics, behavioral health and rehabilitation. U.S. News & World Report has listed it among America's Best Hospitals for 14 consecutive years. UC Irvine Medical Center features Orange County's only National Cancer Institute-designated comprehensive cancer center, high-risk perinatal/neonatal program, Level I trauma center and Level II pediatric trauma center, and is the primary teaching hospital for UC Irvine School of Medicine. UC Irvine Health serves a region of more than 3 million people in Orange County, western Riverside County and southeast Los Angeles County. Follow us on Facebook and Twitter.

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