

GPS-like technology helps diagnose prostate tumors

May 3 2013, by Delthia Ricks

The lead investigator of a way to obtain images of prostate tumors and accurately diagnose them said Thursday that the new technology is the medical equivalent of a global positioning system for the prostate gland.

North Shore-Long Island Jewish Health system only institution other than the National Institutes of Health in Bethesda, Md., to use the new [diagnostic system](#), Dr. Art Rastinehad of North Shore-LIJ said Thursday at a news conference.

Current biopsy testing relies on decades-old technology, which misses a vast number of cancers and delays treatment for many men, Rastinehad said.

"Biopsies have been performed the same way for the last 30 years," said Rastinehad, who noted the current technique involves a [needle biopsy](#) and [ultrasound imaging](#).

If the cancer grows outside what can be seen on an ultrasound, the tumor can be missed, Rastinehad said, adding that standard technology evaluates less than half a percent of the [prostate gland](#).

He and his collaborators at the NIH have been testing a new system, which they helped to develop. It is loosely called a fusion biopsy, Rastinehad said, because it involves both MRI and ultrasound imaging.

Additionally, Rastinehad said, a so-called field generator, similar to a

[GPS device](#), is placed over a patient's hip to guide the entire biopsy process. The MRI and ultrasound images, meanwhile, are overlaid in real-time, providing a more comprehensive, multidimensional view of the gland.

"Our goal is to have a more image-based standard of care for biopsying prostate cancer, but we are still building a body of evidence," Rastinehad said.

Developed by Invivo, a division of Philips Healthcare, the entire system is called UroNav.

Rastinehad and his NIH colleagues have tested it on more than 900 men and think that it provides multiple advantages over the current standard. The [Food and Drug Administration](#) approved the system for widespread use last month. More than 240,000 new cases of prostate cancer are diagnosed annually nationwide. About 30,000 men die of the disease.

Rich Bolton, 61, a retired financial executive, underwent a biopsy with the system in January as part of Rastinehad's research.

Bolton, who lives in Point Lookout, N.Y., said he had routine screenings for [prostate cancer](#) involving the prostate specific antigen blood test which on more than one occasion had come back with a high reading.

"I had been watching my PSA numbers starting back in December of 2007," Bolton said. "The numbers started to rise and I got a prostate biopsy and it came back negative.

"My PSA rose again in 2009," Bolton said. "I have a family member who is a urological surgeon in Kentucky and he was a bit concerned but made sure I stayed on top of it."

Bolton got a second biopsy-but that also came back negative.

His doctor put him on Proscar, a drug that could address a high PSA not due to cancer. But as time passed, the PSA remained high, which prompted his Garden City physician to recommend Rastinehad, whose research into precision imaging was gaining notoriety on Long Island.

Bolton's fusion [biopsy](#) revealed an advanced cancer.

"Dr. Rastinehad's instruments have GPS in them so he found the cancer," Bolton said.

"I am stage 4, but I probably wouldn't have known this for another couple of years."

"I had a full body scan and the cancer is really isolated. It's manageable," Bolton said. "They caught it late, but they caught it while it is treatable."

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