

Prostate Awareness

NEW TECHNOLOGIES HELP
PINPOINT EXTENT OF CANCER
AND IMPROVE TREATMENT

By Mike Boyer

The CyberKnife delivers a pencil-thin radiation beam that's very precise and tracks movement in the prostate, reducing exposure to other nearby organs.

Prostate cancer is one of those things men don't want to hear about, but one in six are diagnosed with the disease annually.

The causes of prostate cancer aren't known, but it's more prevalent in African-American men, men over 65, or those with an immediate family history of prostate cancer. It remains one of the leading causes of cancer deaths in men, claiming about 29,000 lives annually, but more than two million men live with the disease. The prostate is a walnut-sized gland that sits behind a man's bladder and helps form semen.

Unlike heart disease and some other cancers, there is no "one-size fits all" treatment, says Tom Young, a spokesman for the Cincinnati Prostate Cancer Information Group.

"With prostate cancer there are a lot of options," says Young, who was diagnosed with the disease in 2001. "Surgeons want to cut and radiologists want to use radiation and the poor patient is caught in between."

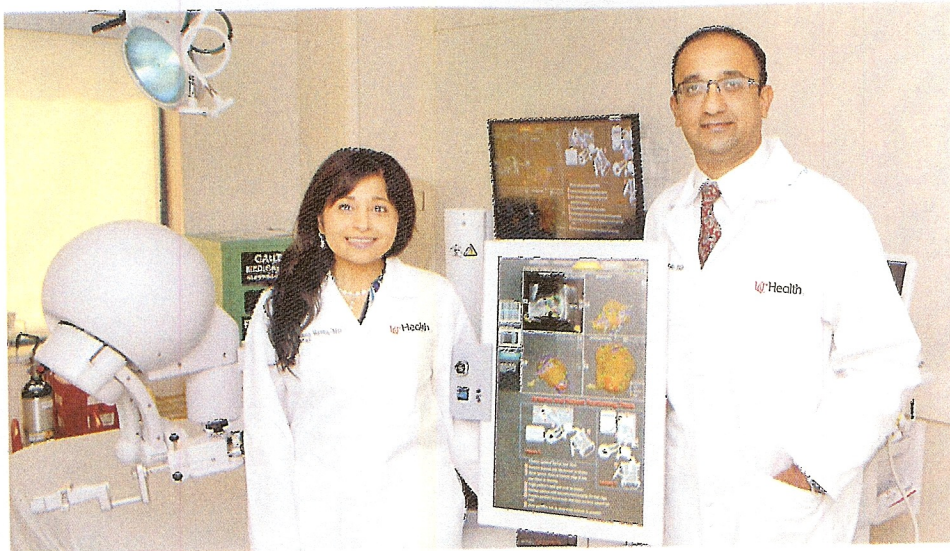
Part of the Cancer Support Community at 4918 Cooper Road, Blue Ash, the all-volunteer Prostate Cancer Information Group, is an information resource of prostate cancer patients for men facing

the disease.

"The biggest hurdle [men face] is, 'What should I do?'" says Young. "Our goal is to give enough information so that they can choose what way they want to go and when they're all finished they won't say, 'I wish I would have done something else.'"

The group has meetings twice a month in Blue Ash and maintains a private panel email chain, where patients can pose confidential questions and get answers from the 360 area men who participate. For more information, visit cincinnati.prostate.com.

The last couple years, there's been a debate over recommendations against using



Drs. Sadhna Verma and Krishnanth Gaitonde of the UC Cancer Institute believe MRI-guided biopsies improve treatment dramatically.

a popular blood test, the PSA—or prostate specific antigen—test, to screen men for the disease. The advisory U.S. Preventive Services Task Force in 2012 concluded the benefits of PSA screening didn't outweigh the potential harms from false positive results and an over diagnosis of men with low-level disease. Besides a variety of risks, such as infection from treatment, there are also side effects of incontinence and erectile dysfunction that are common.

But many urologists, including Dr. Gary Kirsh, president of the Norwood-based Urology Group, say the PSA has been getting a bad rap.

"The message to men is: you should have a PSA test. A baseline probably by age of 50, unless you're African American or have a family history of prostate cancer in which case you should have it at 45," he says. "Then you ought to have a test every year or two. It doesn't mean you have to have a biopsy. It doesn't mean you have to have a surgery. But you shouldn't be putting your head in the sand."

For cancer confined to the prostate, there are three treatment options: Surgery to remove the prostate, most commonly using robotic technology and minimally invasive techniques; radiation to kill the cancer cells in the prostate without surgery; and active surveillance of patients with low-level cancer with regular PSA tests and prostate biopsies.

The good news for men in the Tristate is that a number of innovations are eliminating unnecessary treatment and offering

better outcomes for those diagnosed with the disease.

The UC Cancer Institute, for example, has been a leader in using advanced magnetic resonance imaging technology to better pinpoint cancer within the prostate.

Dr. Krishnanth Gaitonde, associate professor in urology at UC and chief of urology at the Cincinnati VA Medical Center, says the biggest problem is determining which cancers are low grade and can be watched and which are aggressive and require treatment.

"I told two patients this yesterday, 'You are dealing with a disease which is likely not going to kill you, so you want to choose a treatment that's not going to make you miserable.'"

His colleague, Dr. Sadhna Verma, an internationally recognized radiologist, has pioneered use of MRI technology to detect prostate cancers. The UC Medical Center is the only hospital in Ohio using what's called "multi-parametric magnetic resonance imaging" for prostate biopsies.

The standard biopsy process, which Dr. Verma calls "poke and hope," involves taking 12 needle-sized "cores" of prostate tissue. The problem is that this type of random sampling can miss potentially serious cancers, particularly in the front of the prostate that is hard to reach. But with the MRI technology, trained radiologists can pinpoint areas of potential cancer in the prostate.

Dr. Verma, who began investigating prostate imaging technologies in 2007,

calls them "man-o-grams." She's done thousands of MRIs, including more than 200 over the last couple years using the latest technology that merges MRIs and ultrasound images, using a GPS-like tracking software to identify and label potential cancers, guiding the biopsy. She led a clinical trial prior to FDA approval of the MRI guided biopsy. Besides herself and Dr. Gaitonde, Drs. James Donovan and Nilesh Patil are also trained in the technology at UC.

Dr. Gaitonde says the MRI-guided biopsy can be done on an outpatient basis, using less expensive local anesthesia in less than half an hour. He says the technology is a step forward in what's known as focal therapy, a sort of male "lumpectomy" targeting a section of the prostate gland, and killing the cancer with radiation while leaving the healthy tissue in place.

The Urology Group has introduced recently approved DNA analysis of prostate tumors to determine whether they can be watched or need treatment, Dr. Kirsh says.

The analysis, called Oncotype DX, was first used in breast cancer treatments and, like the MRI guided biopsy, helps physicians pinpoint the extent of disease.

"Characterizing the DNA of the cancer gives us a probability that somewhere else where we didn't biopsy is a more dangerous cancer," Dr. Kirsh says.

For example, he says a recent patient with a family history of prostate cancer had a biopsy that found a small cancer, but the DNA analysis found a 40 percent probability of more dangerous cancer in the prostate.

"In the past, we would have told that patient to be just watched," he says, but the DNA analysis indicated treatment should be started.

The Urology Group, one of the largest urology practices in the country with a staff of 300 and 37 physicians, last year also introduced a more-targeted radiation treatment called CyberKnife.

Used originally to treat brain cancers, CyberKnife reduces the typical eight-week radiation treatment regime to five days. Using what's called stereotactic radiation therapy, the CyberKnife delivers a pencil-thin radiation beam that's very precise and tracks movement in the prostate, reducing exposure to other nearby organs, Dr. Kirsh says. ■