



NATHAN ARMES/UNIVERSITY OF COLORADO

Targeted focal therapy brings health care executive, prostate cancer survivor peace of mind.

Cancer is always a frightening word, even for a high-profile member of the health care community. For Larry Biro, director of the VA Heart of Texas Health Care Network (VISN 17) in Dallas, getting the diagnosis of prostate cancer was scary and unex-

pected. Even though his preliminary diagnosis indicated low-risk disease, he said, waiting for his final diagnosis and learning what stage cancer he had were very stressful.

Fortunately, Biro's low-risk cancer was small. A team of physicians led by E. David Crawford, M.D., director of

Urologic Oncology at the University of Colorado Cancer Center and a professor at VA Eastern Colorado Health Care System in Denver for 30 years, successfully treated the cancer. Crawford said Biro's experience provides a typical example of how a patient with early prostate cancer warning signs can progress over the years to an actual diagnosis of prostate cancer.

"It all started in fall 2006," said Biro. That's when Crawford noticed a rising prostate specific antigen level, a key marker for prostate cancer. He recommended a standard 12-core transrectal biopsy, which came back negative.

But because Biro's PSA level continued to rise at subsequent three-month checkups, he said, "Dr. Crawford put me on Avodart." Over the next two years, it reduced his PSA level from 5.6 ng/dl to a stable 1.95 ng/dl.

Although Biro responded well to Avodart, in spring 2009, Crawford recommended a new test that measures the concentration of prostate cancer antigen 3 gene in urine. Biro's results were slightly elevated, Crawford said. "I took another PCA3 test in fall 2009," added Biro, "and it was even higher." Accordingly, Crawford recommended a second biopsy, which also came back negative.

However, added Crawford, "Transrectal biopsies are imperfect. Often people must undergo multiple sets of them to find a cancer."

A spring 2010 PCA3 test heightened Biro's fears. "I remember distinctly," he said. "I was in Washington, D.C., where I had traveled for a meeting, and got an e-mail saying that my PCA3 level had doubled to the high 80s," a level which indicates a high probability of prostate cancer.

Unsure of what to do, Biro called Crawford, who quickly e-mailed several colleagues. One of them—the PCA3 test's inventor—suggested an MRI. When this also found no cancer, Crawford recommended a 3-D mapping biopsy, a cutting-edge technique



Opposite: According to his doctor, Larry Biro's experience is a typical example of how a patient with early prostate cancer warning signs can progress over the years to an actual diagnosis of prostate cancer.

Left: Dr. E. David Crawford, director of Urologic Oncology at the University of Colorado Cancer Center, goes over prostate biopsy results with Larry Biro. A 3-D mapping biopsy showed Biro had low-grade cancer. The 3-D mapping biopsy is a technique Crawford helped pioneer. Standard transrectal biopsies sometimes do not find cancer, even when it is present.

he helped pioneer at UCCC.

Biro underwent this one-hour procedure in June 2010. Rather than taking the standard 12 samples, or cores, Crawford took 50 cores, guided by a template placed under the perineum, to produce a computerized 3-D map of Biro's entire prostate.

"We now know this biopsy method yields information as valid as a post-surgery, whole-mount pathologic specimen would give us. Now we have a pretty complete picture of the disease within the prostate, and we can make more personalized treatment recommendations for each patient," said Crawford. Biro's 3-D mapping biopsy showed low-grade (Gleason grade 6) cancer in 10 percent of one biopsy core.

Fortunately, Biro already knew a lot about treatment options. "This had been going on for nearly four years," starting with his high PSA in 2006. As supervisor of the VA health care system and social services for most of the state of Texas, which includes four VA medical centers that provide care to 300,000 Veterans, he added, "I talked to a lot of doctors and read hundreds of articles."

Although the information was

helpful, he said, "I had always feared the possible side effects from a whole-gland solution for a cancer that affected a tiny fraction of my prostate."

Radiation therapy or radical prostatectomy—completely irradiating or removing the prostate gland, respectively—often leaves patients with many side effects, including incontinence and erectile dysfunction, Biro explained.

"The thought of wearing diapers for the rest of my life and losing sexual function over one small spot of cancer wasn't appealing," he said.

So instead, Crawford recommended either active surveillance—closely monitoring Biro to make sure his cancer wasn't growing—or targeted focal therapy. Guided by the 3-dimensional biopsy map, TFT destroys only the diseased portion of the prostate by freezing it with cryotherapy.

"I couldn't see doing active surveillance," said Biro. "Knowing that I had cancer, I didn't know what I'd be waiting for. I felt like I might as well get it done."

In that regard, he said TFT provides an intermediate option between active surveillance and radical treatments. This focal therapy may be

likened to a "male lumpectomy," said Crawford.

The procedure itself, performed by Crawford in October 2010, took about 60 minutes. Afterwards, Biro wore a catheter for four days.

"After that," he said, "there were a few minor complications, such as blood in the urine," a normal side effect which lasted a couple months, but no sexual or other side effects.

At his first post-TFT checkup, his PSA had dropped 80 percent, Biro added. "Months out, everything has gone as planned."

Indeed, Crawford said that for selected patients with prostate cancer, TFT appears to provide a safe, effective treatment option. "Approximately one-third of the men who are diagnosed with prostate cancer are potentially candidates for active surveillance or TFT." In UCCC's experience, with more than 250 3-D mapping biopsies, he added, "about 40 percent of patients turn out to have low-grade cancers that are amenable to TFT."

For more information, visit www.3dprostate.com or call Dr. Clifford Jones, University of Colorado Urologic Oncology, 720-848-0684. 