

# Operation: Cryosurgery

## Partnership helps bring leading edge treatment to Mattoon

**M**ichael Miller, 58, was dumbfounded when his family physician said the dreaded word: cancer. “I thought, ‘No. Not me.’ I hadn’t had any pain or idea anything was wrong.” Miller, who has made transmissions at Hydro-Gear in Sullivan, Illinois, for the last 10 years, had his Prostate Specific Antigen (PSA) tested during an employee health fair. Elevated blood levels led to his diagnosis. Miller’s family physician referred him to urologist David Di Domenico, M.D., at Urology Associates in Mattoon, Illinois, who sent Miller to the Division of Urology at SIU School of Medicine in Springfield for treatment.

Miller is just one of dozens of patients who have been referred to SIU School of Medicine from Dr. Di Domenico and his partner, Roger Rives, M.D. at Urology Associates. The connection between Urology Associates and the medical school means that dozens of Urology Associates’ patients are getting leading edge technology at SIU School of Medicine in Springfield.

The need is significant. “There are no urologists between Effingham and Mount Vernon,” says Dr. Rives, who has offered full urologic services to the Mattoon community for 28 years. Many of his patients travel from the southern parts of the state. Dr. Rives and Dr. Di Domenico estimate they refer five or ten patients a month to SIU School of Medicine urologists for minimally-invasive urologic procedures such as urinary diversions or complicated kidney stones, as well as major cancer surgeries such as radical prostatectomies and nephrectomies. “We used to do all these procedures, but not minimally invasively,” Dr. Rives ex-

plains. Other patients requiring major surgeries for cancer tumors and complicated stones are also referred to SIU. “We can’t support all minimally-invasive procedures at an institution of this size,” says Dr. Rives. “It’s better that it’s done in a centralized, tertiary center with physicians who are doing those on a daily basis.”

*For Michael Miller, his was an early-stage cancer, which made him a good candidate for a cryosurgical ablation, a new type of minimally-invasive surgery that freezes abnormal tissue. Although other treatment options were available to Miller, he was insistent on cryosurgery to get rid of the cancer quickly and completely. Dr. Di Domenico knew there was one place in the area that could perform cryosurgery: SIU School of Medicine.*

According to the National Cancer Institute, cryosurgery is used for a variety of cancers, from early stage skin cancers, retinoblastoma (a childhood cancer affecting the retina) and precancerous conditions of the cervix. “Cryo” may have even greater potential as a treatment in combination with other treatments. Its use also is under investigation for breast, colon, and kidney cancer.

Cryosurgery for kidney cancer is done at SIU School of Medicine by Dr. Bradley Schwartz, D.O.

Miller isn’t the typical patient for cryosurgical ablation, which, while approved as a primary treatment for any man with prostate cancer, is typically the treatment of choice for older men who have had a recurrence of prostate cancer following radiation therapy. It’s this group that spurred SIU surgeon Thomas Tarter, M.D., to learn the technique for his patients — the majority of whom are re-



ferred to him from physicians in the state.

Dr. Tarter, who performed Miller's cryosurgery, estimates he does about 10 cryosurgeries a year on the prostate and considers it the favored treatment for selected patients.

In this minimally-invasive procedure, Dr. Tarter uses thin needles and an ultrasound machine to guide probes through small incisions. Argon gas freezes the entire prostate to -40 degrees Centigrade, killing any cancer cells lurking in the walnut-sized gland.

Cryosurgery has advantages and disadvantages. As with other minimally-invasive procedures, cryosurgery affords patients less time in the hospital, less blood loss, and faster recovery time. For prostate patients, there is a low risk of incontinence but a high chance of erectile dysfunction.

Dr. Di Domenico explains that recent advances in tools and ultrasound allow cryosurgery to be more precise, further minimizing complications. The procedure can also be repeated, if needed. Research is being done to attempt to use cryo to isolate freezing

to just tumor cells, but cancer often is found in several regions of the prostate gland, says Dr. Tarter, who surgically removes the prostate gland for about 60 patients a year.

While long-term studies are in progress, shorter-term studies indicate that cryosurgery may be more effective than other treatment modalities for prostate cancer. "Cryo is here to stay," asserts Dr. Tarter. "It's a wonderful treatment modality for those men who have a local recurrence of cancer following radiation therapy and provides a good, curative option for older men who have significant prostate cancer that could progress in their lifetime."

*Miller made the 90-mile drive to SIU School of Medicine and says he felt more comfortable about the procedure after talking with Dr. Tarter. On March 27, 2008, Miller underwent the two-hour procedure and puts it very simply. "I came in Sunday, had it done Monday, and came home Tuesday. I was a little sore, but I felt like nothing happened." By Thursday, he was talking with friends at the factory where he works. "My wife couldn't believe all*

Dr. Tarter, center, and Dr. Benson, right, prepare for a case prior to surgery.



*the friends I had," Miller says. Within three weeks, he was back at work and remains cancer free at his last checkup with Dr. Di Domenico.*

*His factory had another health fair last summer, and Miller had another blood draw. His PSA is down to healthy level. "Tell people to get themselves tested," Miller urges. As for the care he received at SIU, Miller says, "They gave me really good health care. Let me put it this way: They give 110 percent at SIU."*

Miller's happy ending is just the beginning of the story of many patients shared through the informal SIU School of Medicine/Urology Associates partnership. Urology at SIU is a tertiary referral center, with patients coming from 21 urologists practicing south of Interstate 80. These patients have cancers or urologic malignancies. In addition, eight medical oncologists and two radiation oncologists outside of Springfield refer patients to the division. "A regionalization of care is taking place, especially for major, invasive cancer operations such as bladder cancer," Dr. Tarter says.

While the major, complex surgeries are done in Springfield, Dr. Tarter explains that the minimally-invasive cryosurgical ablation surgery was something that Urology Associates could do at their facility. The doctors, impressed with cryosurgery,

*"There's no reason why anyone with a urologic malignancy needs to go out of Illinois."*

— Dr. Tarter

were eager to incorporate it into their practices. "Especially for our older patients," says Dr. Di Domenico. "It will save them having to travel out of town."

"When we saw how well the patients did with the cryo and how easy it was for the patient — the minimal impact on their lifestyle, we realized it was something we could do here," Dr. Rives says.

The urologists traveled to SIU to learn the advanced procedure from Dr. Tarter, whom they have known for a decade. They observed Dr. Tarter doing multiple cases and talked with company specialists about the procedure. The doctors also took an online course and a course in Texas to learn more about cryosurgical ablation for prostate cancer. Dr. Di Domenico and Dr. Rives have done about a half-dozen cases since their training in September.

Dr. Tarter is pleased to share the expertise. "Our goal here at SIU School of Medicine is to provide service and support to excellent physicians in the communities throughout central and southern Illi-

nois,” says Dr. Tarter. “We’re here to add value to their practice and enhance the health care of central and southern Illinois.” He summarizes, “There’s no reason why anyone with a urologic malignancy needs to go out of Illinois.”

The informal partnership among the urologists continues as the SIU urology program also covers the practices of Dr. Rives and Dr. Di Domenico when they are unavailable, essentially “taking call” for patients who need admissions or a procedure at St. John’s Hospital or Memorial Medical Center.

“Our relationship with SIU has been phenomenal,” says Dr. Di Domenico. “It’s enabled us to see that our people get the best possible care. SIU is doing the major procedures and has excellent resources. That’s where you’d want to be.”

Dr. Rives is also pleased with the partnership. “With SIU’s ability to do robotic surgery with the DaVinci system, and the faculty’s ability to do laparoscopic surgeries, it really is a disservice to our patients not to offer them the highest level of care they possibly can have,” Dr. Rives says. “We’ve been very pleased with SIU, and our patients are very pleased with the facilities, the empathy of the doctors, and the results. It’s been a win-win situation for all of us. I can tell my patients that if I had a problem or a family member had a problem, I would not hesitate to go to SIU for my care.” ●●●



Courtesy Dr. Rives

Dr. Benson and Dr. Rives at work in Haiti.

## MISSION TO HAITI

Dr. Rives (above, right) and SIU urology resident Aaron Benson, M.D., '07, paired up to serve the underserved population of St. Louis de Nord in Haiti, 900 miles off the coast of the United States.

Dr. Rives has gone to St. Louis de Nord, population 40,000, for nine years with the Northwest Christian Haitian Mission. The area is greatly underserved, says Dr. Rives, one of 35 medical personnel who volunteer at the mission’s outpatient surgery center. “The Haitian government spends about \$2 per person per year for health care.”

Dr. Rives met Dr. Benson at an Illinois State Urologic Meeting in Springfield last September through Dr. Tarter, who knew that Dr. Benson had gone to Haiti with his own Christian group earlier that year. After learning about Dr. Rives’ group, the young resident was eager to return to the area.

A few weeks later, Dr. Benson was treating patients in Haiti with Dr. Rives and the mission group. The clinic was filled to capacity each day with patients pre-screened for surgical or urological problems. Dr. Rives and Dr. Benson saw hundreds of patients that week. Dr. Benson recalls performing 37 surgeries over five days. “The level of care we were able to provide in a destitute environment was striking,” Dr. Benson says. “No matter where you go, what medicine you practice, it’s about serving people. I’m thankful to have the opportunity to use the training God’s blessed me with to help people in another part of the world that’s so poor, whose people get so little health care.” He plans to return with the mission group later this year.

Dr. Tarter is working to offer similar outreach experiences to all urologic residents. “It gives SIU a presence in these countries,” says Dr. Tarter of the work. “At SIU, we have a strong humanitarian mission. We’re here for a greater purpose.” ●●●