



Patient John Tsota stands among the robotic arms that assisted in his prostate surgery. He was back on the golf course 3½ weeks after the procedure.

Renaissance Robot

New technology means even faster procedures and recoveries. Meet George Jetson's surgeon. His name is da Vinci.

On an operating table at St. Francis Hospital, John Tsota lies in a deep Trendelenburg position—abdomen higher than his head.

From 15 feet away, Dr. Fran Schanne operates.

Schanne sits at the console of a Stairmaster-sized da Vinci Surgical System, manipulating any combination of four robotic arms to perform Tsota's prostatectomy. Micro-instruments—including electric scissors used for cutting and a prograsp used to hold things—at the ends of the arms mimic the movements of Schanne's fingers, hands and wrist, which he guides by watching a three-dimensional color image of the surgical field magnified 10 times.

Schanne is assisted by a team of seven: an anesthesiologist, a certified registered nurse, a nurse anesthetist, a circulating nurse, a scrub technician, a robotics coordinator and a surgical physician's assistant, who stands by Tsota to manually guide the camera, suction and retraction. The surgical physician's assistant, Jim Kozub, works in unison with Schanne.

Before manning the da Vinci, Schanne makes six incisions in the abdomen, each less than 12 millimeters long. Through one incision, an endoscope, or tiny video camera, is inserted so Schanne can see.

Through another incision, he manipulates the prostate while, through a third incision, a cutting tool burns away tissue around the organ. Another incision will be used to remove the freed prostate from Tsota's body.

Schanne had performed radical prostatectomies laparoscopically many times, but the da Vinci often allows him to do it better—and faster: three hours using the da Vinci, eight to 12 hours by laparoscope.

Schanne says a laparoscopic radical prostatectomy can last eight to 12 hours.

Tsota's procedure lasted about 3½ hours.

Tsota was walking the next day, then went home two days later.

Three and a half weeks after his surgery, Tsota was back on the golf course.

St. Francis is the only hospital in Delaware to have a da Vinci. Specially trained on the \$1.5 million machine, Schanne became the first urologist in Delaware to perform a robotic prostatectomy in October 2006.

Advantages of a da Vinci procedure are many. It is more precise than a human surgeon can be. It reduces blood loss. (Patients typically lose about 100 cubic centimeters of blood during the robotic procedure. Two to three times that amount of blood would be lost during traditional open surgery.) And it reduces the risk of infection. All that adds up to faster recovery times for patients.

At St. Francis, surgeons also use the da Vinci Surgical System to perform hysterectomies, myomectomies (to remove uterine fibroids), cystectomies (to treat bladder cancer), nephrectomies (to remove kidneys) and minimally invasive direct coronary artery bypasses.

Doctors diagnosed Tsota's prostate cancer in April. By early summer, he knew he'd have to have his prostate removed. Tsota was hoping to be back in golf shape for his late-August vacation in Hawaii.

Tsota's cousin had undergone a radical prostatectomy in Chicago via the da Vinci Surgical System. Tsota discovered that St. Francis had recently purchased a da Vinci, so he visited to get an up-close look at the machine. He even sat at the console where Schanne would operate. Tsota decided to become Schanne's 50th robotic prostatectomy patient.

Tsota's procedure lasted about 3½ hours. He was walking the next day, then went home two days later. Three and a half weeks later, he was back on the golf course.

Schanne notes that the robotic procedure isn't the right choice for everyone. Age, diabetes, heart disease and other medical problems are all factors.

Tsota returned to St. Francis for a follow-up about a week after surgery. He was experiencing some gas pains, which he says is typical, but he was elated to hear the pathology report: Schanne had removed all of the cancer. Prognosis for a full recovery was good.

"I'm still a little sore where the incisions were," Tsota said, "but nothing that requires medication. Today, this is the best I've felt. I'm walking around here like a 10-year-old."