



da Vinci Si
SURGICAL SYSTEM

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MONITORING CURVED SCISSORS

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A BOLD, NEW ERA OVER A DECADE OF DA VINCI ROBOTIC SURGERY AT CMH

The future of medicine arrived at Community Memorial Hospital more than a decade ago, and has since ushered in a bold, new era of surgical innovation that is changing the medical landscape.

It was late 2004 and a dedicated group of doctors, hospital administrators and Community Memorial Health System board of trustees had spent the better part of a year setting the groundwork to bring a state-of-the-art da Vinci Robotics surgical device to the Ventura hospital.

The arrival of the da Vinci Robotics system to CMH marked the beginning of a whole new frontier in surgery that has helped 1,500 Ventura County patients recover from complicated surgeries in days instead of weeks.

The da Vinci robot has—in short—allowed CMH's highly trained team of surgeons make the impossible possible, and Dr. Marc Beagler has been leading the charge since the program's forward-thinking inception 10 years ago.

Beagler is quick to point out, however, all the other physicians who were central to bringing the da Vinci program to CMH and helping it

succeed, especially doctors Gösta Iwasiuk, Cedric Emery and Constance Payhrer, in addition to President & CEO, Gary Wilde.

"It was the first da Vinci program between Los Angeles and San Francisco in a non-academic setting at that time," said Beagler, a urologist, the medical director for robotics at CMH, and co-medical director of its operating rooms.

Of course, to truly appreciate the importance of bringing the da Vinci Robotics device to Ventura and how it benefits patients across the county, it's necessary to understand what it does.

Laparoscopic surgery—a form of minimally invasive surgery—is when a doctor makes a very small incision to insert long, thin surgical tools into the area of the body which requires surgery, typically in the pelvis or stomach.

The three most commonly performed laparoscopic surgeries include, robotic-assisted nephrectomy, prostatectomy and partial nephrectomy.

The da Vinci Robotics device, made by the Northern California-based Intuitive Surgical, is a three-armed robot which allows surgeons to

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perform these amazingly precise surgeries with very small incisions.

The pinpoint incisions don't require as much recovery time as larger incisions, a procedure doctors commonly refer to as a "keyhole surgery."

"This means there is far less pain and discomfort after surgery," Beagler said.

What's more, the small incision means less blood loss, less scarring and a much shorter recovery time.

Two of the da Vinci's arms can be affixed with interchangeable surgical instruments. A wide variety of instruments allows doctors to perform specific tasks during a surgery, such as clamping, suturing or cutting into tissue.

The third da Vinci arm is equipped with a tiny telescopic video camera, called an endoscope. It's worth noting that it was the advancement in video technology—namely 3-D imaging—which

allowed laparoscopic surgery to become so widely used. Before 3-D imaging, surgeons could not precisely operate the surgical instruments because two-dimensional imaging did not give doctors a deep enough field of vision for such complex and exact procedures.

The design of the da Vinci's robot arms and instruments allow a range of motion even greater than the human wrist, according to Intuitive Surgical.

"It's really an extension of our own hands," Beagler said.

With a da Vinci robot, the surgeon sits at a console to watch the 3-D video taken by the light-affixed endoscope which is inside the patient's body during the surgery. The surgeon controls the surgical tools using an extraordinarily high-tech console that includes a set of extremely precise controllers the surgeon uses his fingers

to manipulate.

"It allows us to operate very precisely, using three-dimensional laparoscopic visualization," he said.

It is so precise, in fact, a surgeon using a da Vinci robot can cut and peel the extremely thin skin of a grape with such absolute exactness that it does not cut into the grape itself.

This precision equates to less tissue damage and faster recoveries.

"Patients do so much better after the operation is done with the da Vinci," he said. "They do better long term and overall we feel this has improved our patient care exponentially. The difference between robotically assisted laparoscopic surgery and standard laparoscopy is the improved instrumentation and visualization provided by this platform. Standard laparoscopy is like operating with chopsticks and a standard

IT'S A FUTURE OF LESS PAIN, BETTER OUTCOMES AND SHORTER RECOVERY TIME IN THE HOSPITAL FOR THE PATIENTS AT CMH.

T.V., where the da Vinci platform provides 3-D high definition and instruments with a full six degrees of freedom.”

Mastering the da Vinci requires extensive training—by both the physicians and the team of highly trained nurses and staff who assist in the operating room.

“It’s always a team effort,” Beaghtler said. “We have a team of very experienced nurses and very experienced assistant surgeons that help us in the operating room and we have experienced registered nurses first assistants.”

He said surgical training on the da Vinci takes six months and includes hundreds of hours of practice with the robot—first on cadavers and then on animals—all of which is done under the watchful eye of a panel of doctors who eventually transition their training to oversee operations on real patients.

Beaghtler, who served as an attending physician at Loma Linda University Medical Center for four years and who was also an associate professor of urology, said learning how to master the da Vinci robot took considerable time and effort. It’s advanced training, he said, not all surgeons have done.

Even when the doctors have perfected using the da Vinci robot, surgeons undergo constant training.

“We all have ongoing medical education, go to courses and continue to be trained on robotics surgery,” Beaghtler said.

Yet it’s not just the high level of training which sets the robotics program at CMH apart from other hospitals along the Central Coast. It’s the fact that doctors at CMH have spent over a decade performing surgeries using the robot and gaining invaluable experience that helps ensure patients’ health and the best outcomes possible.

“We’re always challenged in the operation, but at this point we’ve had so much experience and so many years doing these surgeries that we are quite confident,” he said.

What’s more, Beaghtler said, is that CMH has sought out outstanding doctors who have extensive experience with the da Vinci robot. Such was the case with the 2010 hiring of Dr. Seyed Khoddami, a urologist and clinical assistant professor of urology at the USC Keck School of Medicine.

Khoddami and Beaghtler are partners at the Community Memorial Health System San

Buenaventura Urology Center.

CMH now has 17 physicians trained on the da Vinci robot. The staff performs approximately 300 surgeries a year at the Ventura hospital.

“We have the most dynamic, diversified and experienced program in the county.”

Certainly the future of the da Vinci program at CMH will be tied to the opening of the new 350,000-square-foot hospital.

Beaghtler said the design of the new hospital’s state-of-the-art operating rooms will incorporate the da Vinci robot.

“It will be easier for us to use the equipment in the operating room,” he said.

Now in its third generation, plans are already underway to bring a fourth-generation robot to Ventura.

“The technology has evolved exponentially.”

But it’s not just the technology that has evolved; it’s also the capabilities of the doctors who control the machines.

Beaghtler called laparoscopic partial nephrectomies “the game-changer in robotically-assisted surgeries.”

A partial nephrectomy is when the surgeon removes a tumor from a kidney without removing the organ.

“Five years ago most of these tumors required the removal of the entire kidney, now we can specifically go in and remove the cancer and leave the rest of the kidney intact so it can do its job.”

The laparoscopic surgeries performed each day at CMH may certainly be a sign that the future of medicine is here, but Beaghtler said the use of the da Vinci robot means doctors will get even more precise and continue to push the envelope of what can be done laparoscopically.

It’s a future of less pain, better outcomes and shorter recovery time in the hospital for the patients at CMH.

And to the doctors at CMH, it’s a future that certainly looks bright. 

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