



# Wealthy

# LIVING®

WINTER 2009



## THE NEW AGE OF **ROBOTICS**

*Meet da Vinci® and Mako, the robotic-assisted surgery systems that are revolutionizing patient care.*



**EISENHOWER NEUROSCIENCE INSTITUTE**

BRAIN SURGERY

EISENHOWER GREG AND STACEY RENKER PAVILION

**E**isenhower Medical Center steps into the age of high-tech medicine offering two new, state-of-the-art robots: the da Vinci® S HD™ System, and the MAKOpasty®. In October 2008, Eisenhower surgeons began using the da Vinci®

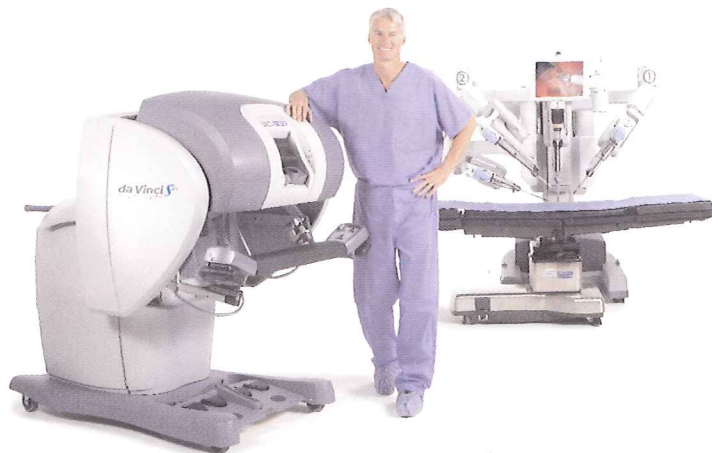
S HD™ System, a state-of-the-art system that integrates three-dimensional, high definition instruments with robotic technology to virtually extend the surgeon's eyes and hands during surgery. In November, Eisenhower orthopedic surgeons initiated a new knee re-surfacing procedure known as MAKOpasty®, which utilizes a surgeon-interactive robotic arm for minimally invasive orthopedic knee procedures.

Minimally invasive surgeries, like laparoscopic and endoscopic surgeries, are performed through dime-sized incisions, resulting in shorter recovery times, less pain, less blood loss, fewer infections and shorter hospital stays than traditional surgery.

### da Vinci® S HD™ System

The da Vinci® S HD™ System consists of four interactive robotic arms. Three of the arms, equipped with articulated EndoWrist® instruments, actually perform the surgery through tiny, strategically placed incisions just one to two centimeters long. The fourth arm is outfitted with a camera that projects highly detailed images onto a computer console viewed by the surgeon. Designed to enhance minimally invasive surgeries, the da Vinci offers the advantage of arms that act as the virtual extension of a surgeon's hand.

While seated at the console unit, the surgeon uses the console's master controls to maneuver the robotic arms. The console unit displays a three-dimensional, high-definition view of the surgical



field. The images are magnified 10 times the original size.

On October 2, Enrique Jacome, MD, gynecology was the first physician in Riverside County to perform surgery using da Vinci, experiencing firsthand the system's incomparable capabilities. "With a three-dimensional image, you have the full perception of an enhanced surgical field right in front of you," says Dr. Jacome. "These instruments have way better ability than a wrist because these instruments are capable of having a 360-degree range of motion."

At Eisenhower, surgeons in several different specialties (gynecology, urology and cardiothoracic, among others) will be using the da Vinci system. Eisenhower physicians currently using the da Vinci system are: gynecologists Enrique Jacome, MD, and Eduardo Garza, MD; cardiothoracic surgeons Surindra Mitruka, MD and Joseph Wilson, MD; and urologists Lance Walsh, MD, Michael Sanford, MD, John Faulkner, MD and William Page, MD.

### The da Vinci® Prostatectomy

The da Vinci Prostatectomy is currently the first choice for treatment of localized prostate cancer in the United States. The da Vinci system is ideal for a minimally invasive prostatectomy — the removal of the prostate to treat prostate cancer. The unequaled precision, control, dexterity and acute visualization of da Vinci uniquely allow the surgeon to perform highly complex and extremely delicate procedures through very small incisions, thereby preserving the fragile structures surrounding the prostate and minimizing complications.

Urologists Lance Walsh, MD, Michael Sanford, MD, John Faulkner, MD and William Page, MD have all performed da Vinci prostatectomies at Eisenhower Medical Center.



**Enrique Jacome, MD, gynecology, was the first physician in Riverside County to perform surgery using da Vinci, experiencing firsthand the system's incomparable capabilities.**

For more information about the da Vinci Prostatectomy, please call the Arnold Palmer Prostate Center at 760-674-3838.

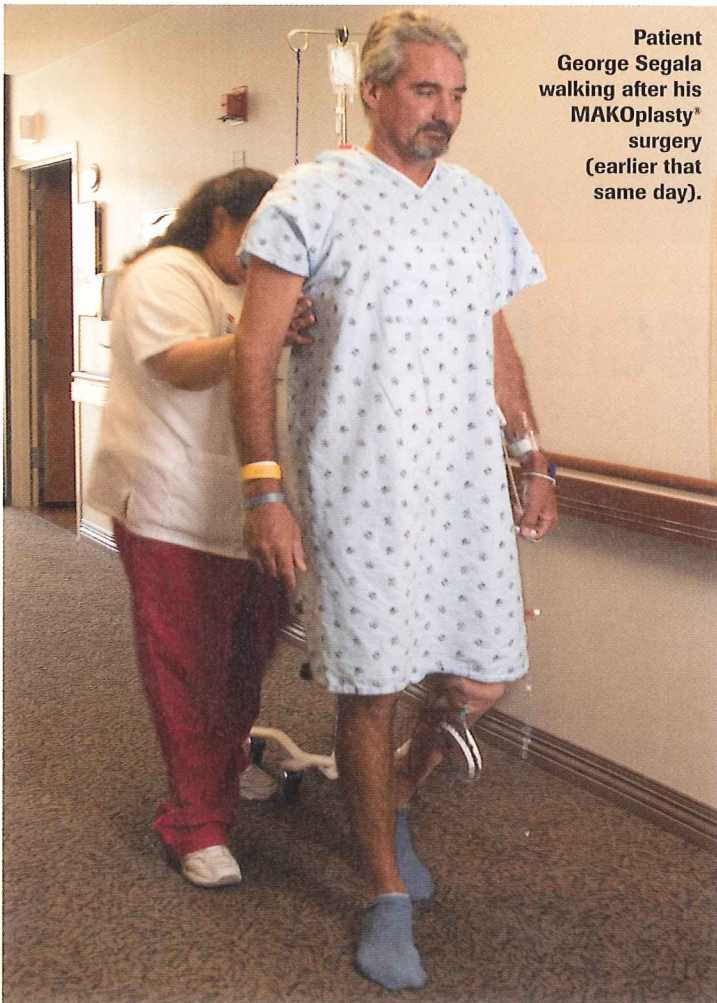


## MAKOplasty®

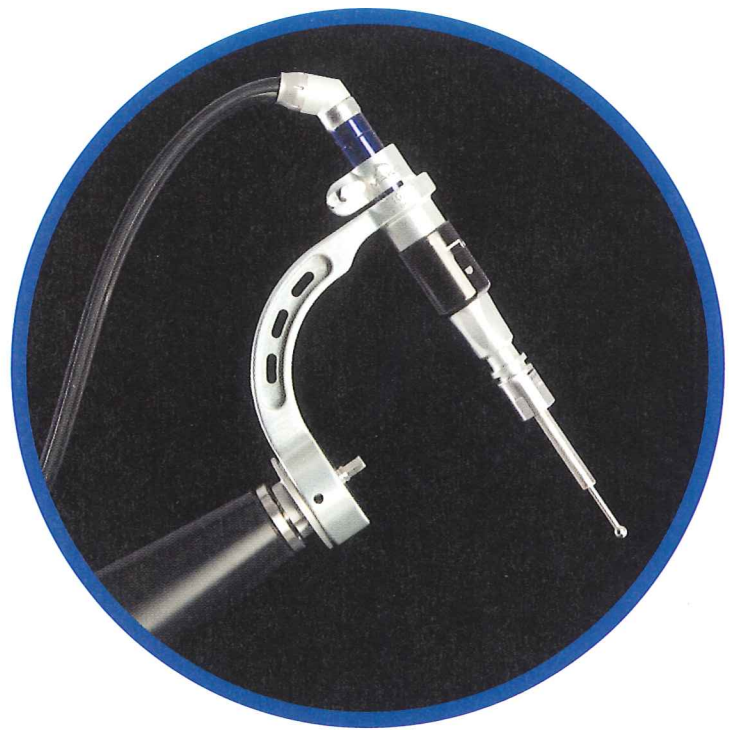
This fall, Eisenhower orthopedic surgeons inaugurated the use of MAKOplasty®, a robotic arm procedure that provides a new treatment option for patients who suffer with early to mid-stage osteoarthritis of the knee. Osteoarthritis is the most common form of arthritis and a leading cause of disability. According to the American Academy of Orthopedic Surgeons, more than 15 million Americans suffer from osteoarthritis of the knee. That number is expected to grow dramatically as the baby boomer generation ages.

The MAKOplasty® procedure is powered by the Tactile Guidance System™, which features a surgeon-interactive robotic arm and visualization technology. Using a CT scan of the patient's knee, the surgeon creates a surgical plan preoperatively detailing the technique for bone preparation and implant positioning. During the procedure, the system creates a three-dimensional live-action, virtual view of the patient's bone surface and correlates the image to the pre-programmed surgical plan.

As the surgeon uses the robotic arm to manipulate resurfacing cutting tools inside the knee, audio, visual and tactile feedback alerts the surgeon when he approaches the end of the perimeter of the bone preparation, reducing human errors of judgment in bone preparation. This technology provides for more consistently reproducible precision during the bone preparation as well as optimal positioning of the partial knee implants.



**Patient George Segala walking after his MAKOplasty® surgery (earlier that same day).**



**The MAKOplasty® procedure uses the Tactile Guidance System™, which features a surgeon-interactive robotic arm and visualization technology.**

“For patients with severe arthritis, total knee replacement is their best option. But, there are many patients with less severe osteoarthritis who would see a tremendous improvement in their mobility and a reduction in their pain if they had a partial replacement,” says Orthopedic Surgeon John Velyvis, MD of the Eisenhower Joint Replacement Center. “With MAKOplasty®, we are able to give patients a partial implant using a minimally invasive procedure through a very small incision. This technology really is the next evolution in joint replacement, allowing us to greatly expand the number of patients we can help.”

Since the procedure is considerably less invasive than a total knee replacement, patients typically spend only one night in the hospital and begin to regain normal movement within weeks of the procedure.

“With MAKOplasty®, I am able to take a patient's CT scan and create a very precise preoperative plan and model for the surgery. MAKO's robotic arm then enables me to follow the surgical map I've created,” explains Dr. Velyvis.

Dr. Velyvis is the first surgeon at Eisenhower Medical Center to be trained on the new technology. On November 17, Dr. Velyvis utilized MAKOplasty® on his first patient at Eisenhower — 46-year-old George Segala who suffered from post-traumatic arthritis. According to Dr. Velyvis, this patient was able to walk without the assistance of a walker on the same day he had the procedure.

“I have done this procedure many times and have been very impressed with the results. Recovery is very quick, and patients see a dramatic improvement in mobility almost immediately,” said Dr. Velyvis.

At Eisenhower Medical Center, state-of-the-art robotics now offer patients more options in health care than ever before.

For more information, please visit [www.emc.org](http://www.emc.org).

