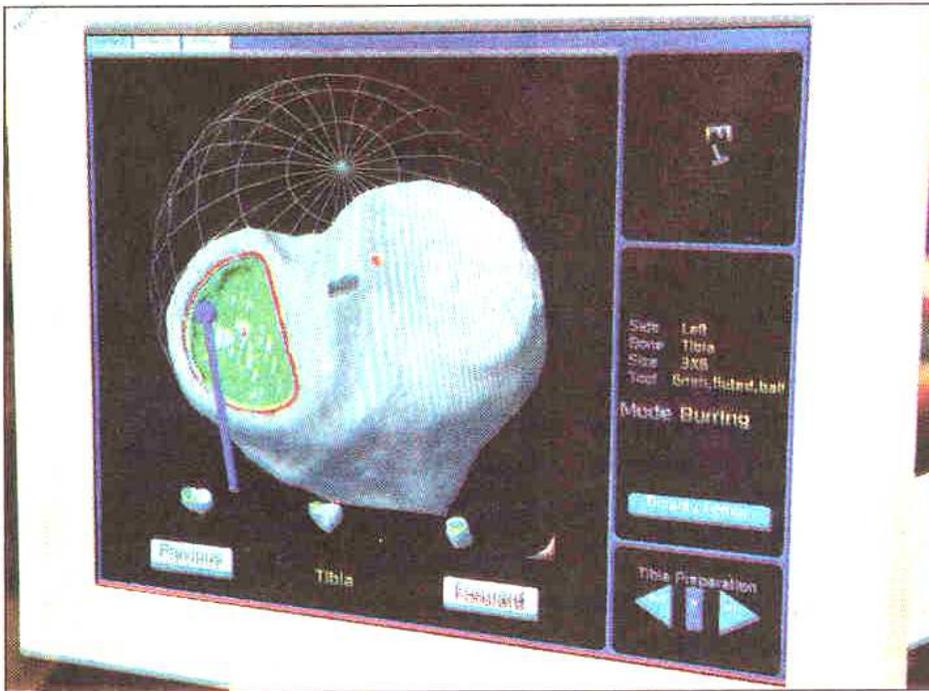




**PAGING "DR. BUSH":** Dr. Martin Roche, left, chief of orthopedics at Holy Cross Hospital in Fort Lauderdale, lets Gov. Jeb Bush operate the robotic system while MAKO President and CEO Maurice R. Ferré looks on at MAKO Surgical Corp. in Davie. **Staff photos/Lou Toman**

A company's robot installs implants while a monitor positions them during ...

# HIGH-TECH 3-D KNEE SURGERY



**BY GLENN SINGER**  
BUSINESS WRITER

As America's Baby Boomers turn into senior citizens, one piece of evolution is likely: There will be a lot more arthritic knees that require implant surgery.

A Davie company, which has raised more than \$25 million in venture financing, hopes to capitalize on the need by marketing a robot to install implants and a three-dimensional monitor to position them properly.

Using the system, the physician needs to make only a small incision, reducing hospital time and speeding recovery. The monitor, which resembles a video game, helps increase precision.

**TRACKING REPLACEMENT:** A monitor shows doctors what the robot is doing at MAKO Surgical Corp. The Davie company develops advanced technologies and procedures for minimally invasive knee-replacement surgery.

"We're working toward the day when knee surgery can be performed on an outpatient basis, said Dr. Maurice R. Ferré, president and chief executive officer of MAKO Surgical Corp., a 2-year-old firm whose investors include MDS Capital Corp., The Exxel Group, Aperture Venture Partners, MediTech Advisers, Ivy Capital Partners and Sycamore Ventures.

## MAKO SURGICAL CORP.

**FOUNDED:** November 2004

**BUSINESS:** Develops and builds robotic surgical systems

**ADDRESS:** 2555 Davie Road, Suite 110, Davie.

**OWNERSHIP:** Private

**FUNDING:** \$25 million in venture capital

**CHIEF EXECUTIVE OFFICER:** Dr. Maurice R. Ferré

**EMPLOYEES:** 63

■ **KNEES** CONTINUES ON 2D

# Knee surgery made easy

## ■ KNEES

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An estimated 350,000 total-knee replacements are performed in this country each year, but that is projected to increase to some 1.5 million by 2030. Performing many of them at outpatient centers could cut the cost appreciably, Ferré said.

For now, the procedure, which has been cleared by the Food and Drug Administration, is available only at Holy Cross Hospital in Fort Lauderdale. And the only one qualified to perform it is orthopedic surgeon Martin Roche.

"The 3-D system provides great precision. It also requires an incision about 2 to 2 1/2 inches long -- roughly half the length of one required for more traditional surgery," Roche said.

Roche performed the first robotic surgery at the end of June, and to date has used the system on seven patients. He said they go home from the hospital the next day, two to three days earlier than with traditional surgery.

MAKO and Holy Cross are conducting an "outcome study" to determine whether it would be safe to transfer some of the procedures to outpatient centers. They will study the incidence of complications, such as heart problems and blood clots, before such a move would be considered.

MAKO, named after a fast, aggressive shark, also stands for "minimally arthroscopic keyhole orthopedics." The company attracted the attention of Gov. Jeb Bush at a recent Florida Venture Forum. Bush followed up by visiting the firm on Monday and watching a demonstration of the robotic equipment.

Even though his father, Maurice A. Ferré, was mayor of Miami, Maurice R. Ferré said he never met Bush. But he said he was gratified that the governor paid a visit to the company's new headquarters, which has 63 employees and a robot manufacturing and testing facility.

Bush, who has promoted Florida as a potential biosciences Mecca, told employees he applauded MAKO "for advancing important new technologies that benefit Florida's growing population of Baby Boomers."

MAKO has a lot more up its sleeve, officials said. The company owns or licenses some 230 patents and patent applications in such areas as robotics, image-guided surgery, implants and materials. The company has an affiliation with the University of Florida to discover new, improved materials for joint replacements.

And, company chief Ferré said, the work doesn't end with knees.

"One day we hope to be doing shoulders and hips, too," he said. "We also have a tremendous opportunity to run training programs for doctors. That will be a big focus for us."

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