

Dentistry, a high-tech version: Robots not far off, doctor says

November 24 2009, By Bob Groves

Robots may practice dentistry one day, but there will always be humans telling you to open wide, said a teacher on the cutting edge of tooth care.

Dr. Nicolas Elian, an oral surgeon, said that while robots might even perform his specialty, dental implants, they won't be able to replace a dentist's years of education and hands-on experience.

"There's no substitute for expert skill and clinical judgment," Elian said. "We, as the doctors, will still have to make the commitment" to taking personal care of patients.

Elian, 47, is president and chief executive officer of Vizstara, a high-tech, full-service dental practice and continuing education academy in Englewood Cliffs, N.J.

Vizstara seeks to put patients at ease as soon as they walk in, he said. The sleek \$8 million, 15,000-square-foot facility, which opened a year ago, feels more like a futuristic European spa than a dentist's office. The decor of the center, housed in a former Hyundai headquarters on 300 Sylvan Avenue, is a sweep of marble, walnut, African rosewood and recessed lighting, designed by architect Ezio Riva of Milan.

"It's a very relaxing environment," Elian said.

Each of 12 treatment rooms has its own ergonomically contoured patient chair and individually controlled light, music and temperature. There are

16 televisions throughout. A pediatric wing will soon have a \$20,000 spaceship playroom to distract young patients, in addition to video games and TV.

The inter-disciplinary team of specialists at Vizstara covers every area of oral care, from [teeth](#) and gums, to smiles and jawbones.

The dentists and faculty are affiliated with New York University College of Dentistry, where Elian is head of the implant division. NYU also is where Elian met his wife, Dr. Martha Miqueo-Elia, chief of pediatric and adolescent dentistry at Vizstara, and an attending pediatric dentist at Hackensack University Medical Center.

Vizstara was financed partly by patents Elia holds on implants, tissue engineering and cell-culture products, he said. But all the opulence and expertise is not overly expensive for patients, he said.

"We're very sensitive to the financial climate we're in," Elia said.

"Dr. Elia is my hero," said Amelia Ponticello, who has been his patient the 15 years. "If I hadn't met Dr. Elia, I would have lost my teeth," said Ponticello, 63, an interior decorator from North Arlington. "I was so mismanaged by other dentists. I thought there was no hope. He saved my mouth.

"Everything is state of the art. They do what's best for you, not what's best for them to make money."

Besides treating patients, Vizstara offers advanced study, training and mentoring for dentists who need to earn state-mandated continuing-education credits, or just want keep up with evolving techniques and technology.

The center has two operating theaters, a lecture hall, an educational video production crew, videoconferencing, and Internet broadcasting of microscopic surgical procedures. There also is a simulation lab "staffed" by a dozen mannequins lined up with their mouths open -- like a group of Christmas carolers -- and their teeth exposed for simulated dental work.

Elian is counting on technology as the future of dentistry. He uses a computerized 3-D surgical navigation system that guides his hands and instruments across the topography of the teeth.

The patient's mouth is scanned to create a "road map," which the surgeon watches on a screen. Its greatest advantage is that the screen images show the surgeon where to avoid sensitive nerve endings and sinuses.

"Navigation is quite a system," Elian said. "It is really one step before robotics."

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