

# MedStat

News for Physicians and Employees ■ November/December 2008

GW HOSPITAL  
FIRST IN NATION  
TO USE MVISUM

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*Pictured above: Farid Gharagozloo, MD, Clinical Chief of Cardiothoracic Surgery Services; Harold Frazier, MD, Director of Urologic Oncology; Thomas Jarrett, MD, Chairman of Urology; Farzad Najam, MD, Associate Clinical Professor of Surgery; and Jason Engel, MD, Vice Chairman of Urology and Director of Urologic Robotic Surgery with GW Hospital's first da Vinci Surgical System, purchased in 2003.*



## GW HOSPITAL FIRST IN AREA TO ACQUIRE SECOND DA VINCI ROBOT

In 2003, GW Hospital was the first public hospital in DC to purchase a da Vinci Surgical System. Now, GW Hospital is the first in the region to have a second da Vinci robot. The new robot, the *da Vinci S HD*, features three-dimensional, high-definition vision.

"GW Hospital's robotic surgery cases increased by 128% over a two-year period," said **Trent Crable**, interim Chief Executive Officer and Chief Operating Officer. "It's clear that robotic surgery is the future of

medicine. The public demands it and I have doctors lining up at my door everyday asking to get time on the da Vinci robot."

During robot-assisted surgery, the surgeon sits at a console a few feet away from the patient. The surgeon views the surgical area three-dimensionally in real-time on a monitor and operates through tiny incisions, using electromechanically enhanced instruments on a patient-side cart.

*(continued on page 3)*

THE GEORGE WASHINGTON UNIVERSITY HOSPITAL



## HIGH-TECH IMPLANT RECONSTRUCTIVE DENTISTRY

Thanks to advanced technology, dental implant therapy is no longer the painful, drawn out procedure it used to be—often requiring up to 14 months for completion. Previously, clinicians would perform multi-phased surgery, completely submerging the implant within the bone under the tissues, wait for several months; perform a second procedure exposing the implant to the oral environment for a few more months while a metal cap allowed the gum tissues to form and then finally placing a prosthesis. Patients would leave the office with floppy removable appliances made from acrylic with denture teeth during the healing period. Today, dental implants and definitive prosthesis can be permanently placed the same day that teeth are extracted—in a procedure that is known as “Teeth in an Hour”.

**Lawrence Singer, DMD**, Assistant Clinical Professor of Surgery, explains how i-CAT® cone beam 3-D dental imaging and software has revolutionized how dentists perform implant procedures in terms of accuracy and speed. Based on the i-CAT's high definition 3-D digital image of the jaw, a replica of the patient's mouth is created through 3-D rendering, much like a CT scan. However, the radiation from a cone-beam scan is a fraction of that of a conventional head CT scan and less than that of a chest x-ray. The scan enables Dr. Singer to see the precise shape and measurements of the oral structures and perform virtual placement of the implants prior to surgery. From the computer modeling he generates a surgical guide made out of resin that sets on the jaw.

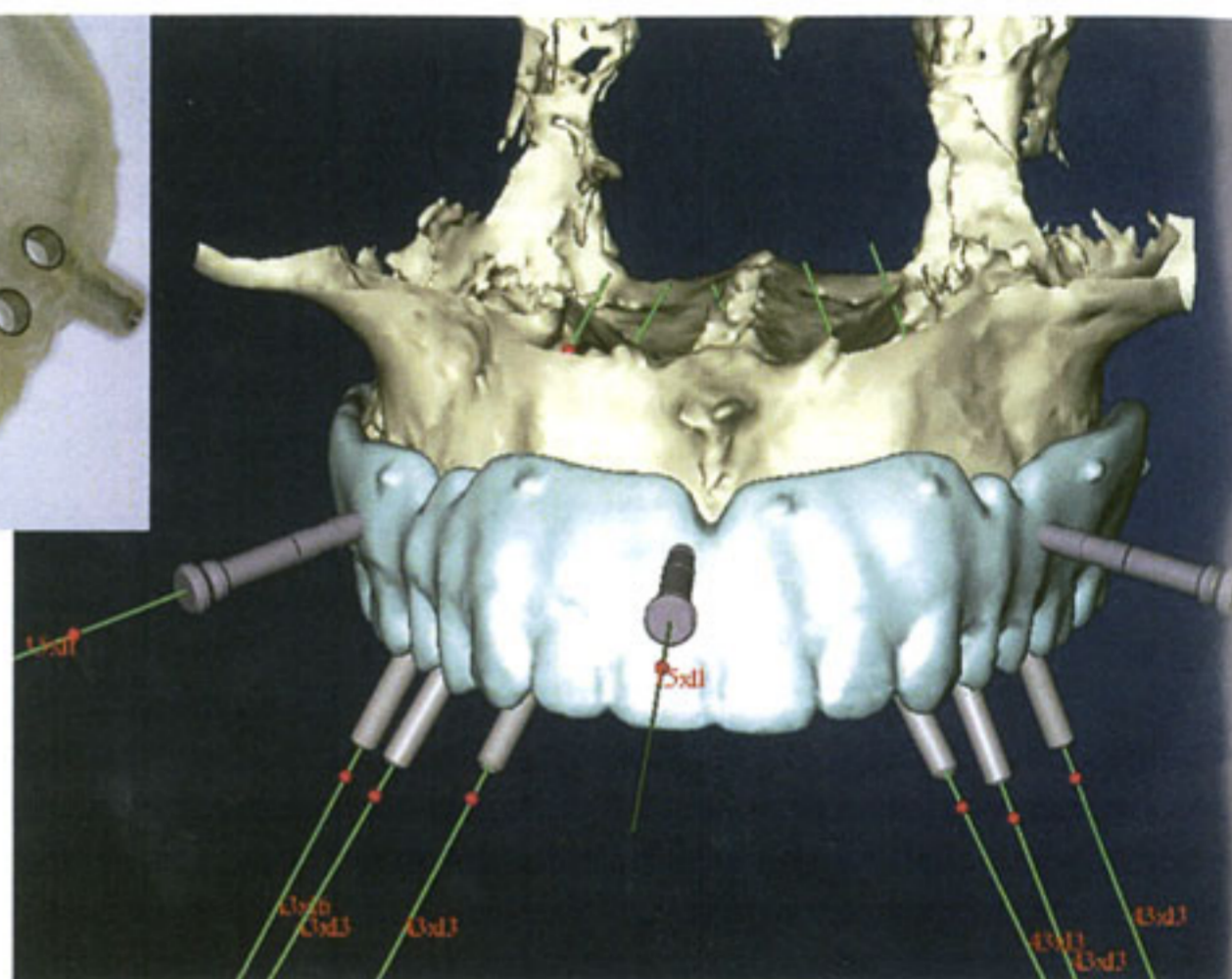
This surgical procedure requires a conservative punch access instead of a conventional incision; there are no sutures and there is very little if any post-operative swelling or discomfort. The implants Dr. Singer uses are small titanium posts on top of which prosthetic teeth made of porcelain are permanently attached. This post will integrate into the jawbone and the implant will be secure, permanent and extremely comfortable. The look, feel and function can be virtually indistinguishable from natural teeth.

Overall, Dr. Singer's focus is on maxillofacial reconstructive dentistry, whether caused by trauma, disease, neglect or for purely cosmetic reasons. At GW Hospital he is on call for trauma cases where the upper and lower jaws are broken and teeth are damaged or lost. He regularly works with different medical specialties, including emergency medicine, cardiology, internal medicine, ENT's, plastics and oncology to help assess and treat the oral/maxillofacial aspect of disease or trauma.

Image Courtesy of Simplant



Computer-generated surgical guide made of resin and metal



3-D image rendering software is used to generate image and plan implant placement. Information is sent to a milling computer that fabricates a surgical guide.



Left: Pre-operative photo of partially edentulous patient. Right: Post-operative photo showing implants and definitive prosthesis placed.

Dr. Singer is very interested in working with medically compromised patients, TMJ and sleep apnea patients. There is a positive correlation between periodontal disease and a host of other systemic conditions including heart disease, premature birth and diabetes among others.

Dr. Singer also monitors patients being treated with bisphosphonates for osteoporosis or bone cancer. While these medications are helpful in controlling bone metabolism and slowing bone loss, there have been instances of jawbone osteonecrosis.

Much the same way that the laser is used in other medical surgeries, Dr. Singer is using special laser technology to treat oral disease and jaw lesions, as well as aid in performing tooth extractions and placing dental implants. With this less invasive approach, patients experience less bleeding, significantly less pain, faster healing and better results. “As people live longer, the focus has shifted from extraction to tooth preservation. We are using the most advanced technology and higher medicine to help patients regain and maintain their oral health,” says Dr. Singer. ■