

Performing the Stretta Procedure for GERD

New Minimally Invasive Treatment Of Gastroesophageal Reflux Disease

The Center for Minimally Invasive Surgery is pleased to announce the introduction of a new minimally invasive technique for the treatment of gastroesophageal reflux disease (GERD). Called the Stretta procedure, this newly developed outpatient endoscopic procedure takes about one hour to perform, and provides considerable benefits to patients.

Stony Brook University Hospital is the only health facility in Suffolk that offers the Stretta procedure, the use of which further demonstrates our commitment to providing truly state-of-the-art patient care.

Arif Ahmad, MBBS, assistant professor of surgery and director of the Center for Minimally Invasive Surgery, and Louis T. Merriam, MD, assistant professor of surgery, have acquired the training necessary to perform the procedure. With special expertise in minimally invasive "videoscopic" surgery, they both have a long-standing interest and proficiency in the surgical correction of GERD.

Because there is no hospital stay involved with the Stretta procedure, patients undergoing the procedure are able to participate in normal activities the following day.

Describing the procedure's benefits, Dr. Ahmad says: "No hospital stay is required and typically patients may return to normal activities the following day. Moreover, most patients are able to discontinue acid-reducing GERD medications in a month."

The procedure itself is performed with a flexible, disposable catheter connected to a radiofrequency (RF) generator. With the patient under conscious sedation, the surgeon delivers controlled RF energy to the lower esophageal sphincter (LES) muscle and gastric cardia to create thermal lesions.

As the lesions heal, the barrier function of the LES is enhanced, reducing the frequency of reflux events.

Early clinical studies appearing in the medical literature demonstrate that the Stretta procedure is a promising new treatment of GERD, which affects 1 in 14 adults in the United States today.

For consultations/appointments with Dr. Ahmad and Dr. Merriam, please call the Center for Minimally Invasive Surgery at (631) 444-4545.



Initial experience with the Stretta procedure for the treatment of gastroesophageal reflux disease

BACKGROUND: The Stretta device (Curon Medical, Sunnyvale, CA) is a balloon-tipped four-needle catheter that delivers radiofrequency (RF) energy to the smooth muscle of the gastroesophageal junction. It can be used for the endoscopic treatment of gastroesophageal reflux disease (GERD).

PATIENTS AND METHODS: Data prospectively collected on the first 25 consecutive patients undergoing the Stretta procedure at Vanderbilt University Medical Center between August 2000 and March 2001 are reported. Patient evaluation included esophageal manometry, ambulatory 24-hour pH testing, a standard GERD-specific quality-of-life survey (QOLRAD), a general quality-of-life survey (SF12), and endoscopy.

Stretta surgery was performed following a standardized protocol. Thermocouple-controlled RF energy was delivered to the lower esophageal sphincter (LES) after endoscopic location of the z-line. Patients were followed up 3 months after endoscopic treatment. Results are presented as mean \pm SEM.

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AMBULATORY SURGERY CENTER NOW OPEN AT STONY BROOK

Opened in early March, the new Ambulatory Surgery Center at Stony Brook is located next to University Hospital. The spacious, state-of-the-art facility (32,000 square feet) is designed to create a comfortable, stress-free outpatient surgery experience for both adult and pediatric patients.

The Center has six operating rooms and two minor procedure rooms—all with the latest equipment and monitors.

Consistent with the latest concepts in ambulatory surgery, the recovery area is divided into two stages. The first-stage room serves as a conventional recovery area and is set up for those patients requiring more frequent observation.

But many patients go directly to a second-stage room where they can be fed, enjoy their families, and relax before going home—thanks to new short-acting anesthetics, combined with minimally invasive surgical techniques, that are allowing more and more patients safely to bypass the conventional recovery process with minimal, if any, pain or nausea.

The Center's planners paid particular attention to the needs of children and their families. There are pediatric play areas with specially designed furniture for children, as part of our effort to make their experience as pleasant as possible.

Easy accessibility for both patients and surgeons is a high priority of the Center. Parking is easy, plentiful, and free of charge.

The Center also houses the preoperative testing area for inpatient surgery. This area allows patients to have their inpatient preoperative lab tests, EKGs, chest x-rays, and history/physicals all done in one easy visit.

For more information, please visit the Ambulatory Surgery Center's website at www.uhmc.sunysb.edu/AMB



**STONY
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All correspondence should be sent to:
Dr. Jonathan Cohen
Writer/Editor, POST-OP
Department of Surgery
Health Sciences Center T19
Stony Brook, NY 11794-8191, USA

The Lung Cancer Evaluation Center, established by the Cancer Institute of Long Island at Stony Brook, provides comprehensive care for patients with known or suspected lung cancer, as well as those individuals at special risk of developing lung cancer.

Patients who have x-ray abnormalities that might represent lung cancer, or patients who have a known diagnosis of cancer, can undergo evaluation by all of the physicians involved in the diagnosis and treatment of lung cancer.

At the conclusion of the initial visit, each patient's case has been reviewed by the Center's multidisciplinary team of physicians, and a plan for diagnosis or treatment is then formulated based on their combined expert opinion.

For more information, please call the program coordinator, Eileen Vilim, RN, at (631) 444-2981.

lung
cancer
evaluation
center

Performing the Stretta Procedure for GERD
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RESULTS: Prior to treatment, patients had a mean DeMeester score of 31.0 ± 11.4 , an LES pressure of 24 ± 2 mm Hg, and normal esophageal peristalsis. Of the 25 outpatient procedures, 19 were done under conscious sedation and 6 under general anesthesia. There was a small learning curve (76 ± 8 min for the first three procedures; 50 ± 2 min for the subsequent 22).

The mild to moderate pain during the first 24 postoperative hours was controlled with over-the-counter medication. Two complications were noted: one patient presented with ulcerative esophagitis and gastroparesis 10 days after the Stretta treatment, and one patient developed pancreatitis on postoperative day 27, which was probably unrelated to the Stretta procedure.

Eight of the thirteen patients (62%) available for 3-month follow-up were off all antisecretory medication. The other five patients were still taking medications but had been able to reduce the amount considerably. The average daily dose of proton pump inhibitors was 43.0 ± 5.0 mg/preoperatively and 6.4 ± 2.2 mg/3 months postoperatively ($P < 0.001$). Other classes of GERD treatment such as metoclopramide had been completely abandoned.

In all patients, QOLRAD scores improved (3.5 ± 0.4 to 5.5 ± 0.5 ; $P < 0.001$) as did SF12 physical (23.7 ± 3.0 to 31.0 ± 3.4 ; $P < 0.008$) and mental (40.5 ± 2.9 to 47.7 ± 3.2 , $P < 0.017$) scores. All patients would undergo a Stretta procedure again except one 78-year-old man with progressive Alzheimer's disease.

CONCLUSION: The Stretta procedure is a promising new modality in the management of GERD. It can be safely performed in one short session with gastroesophageal endoscopy under conscious sedation in an outpatient setting. It improves GERD symptoms and quality-of-life scores in patients at 3 months and eliminates or significantly reduces the need for antisecretory drugs.

- Richards WO, Scholz S, Khaitan L, Sharp KW, Holzman MD. Initial experience with the Stretta procedure for the treatment of gastroesophageal reflux disease. *Journal of Laparoendoscopic and Advanced Surgical Techniques*. Part A. 2001 Oct;11:267-73.

PERFORMING HISTORIC HEART OPERATION

Saving Patient's Life With Five Simultaneous Procedures Including New Technique

In December, the Division of Cardiothoracic Surgery made history by performing a series of five heart procedures on a single patient during a single operation, giving the patient a new and unexpected lease on life.

This operation marked the first time so many cardiac procedures were successfully performed at once.

A novel microwave technique, moreover, was used to treat the patient's abnormal heart rhythm.

The history-making heart operation, which took three and a half hours to complete, was performed by Irvin B. Krukenkamp, MD, professor of surgery and physiology/biophysics and chief of cardiothoracic surgery, and Adam E. Saltman, MD, PhD, assistant professor of surgery and physiology/biophysics, along with eight other members of Stony Brook's cardiac team.

The patient, a 69-year-old man from Blue Point, NY, was released from cardiac rehabilitation in early January, after having successfully completed his formal recuperation post-surgery. Prior to the operation, he had a life expectancy of about six months.

Now, according to Dr. Krukenkamp, the father of three and grandfather of four can expect to live well into his eighties.

The entire operation comprised a single-vessel bypass procedure to relieve a blocked coronary artery; replacement of a damaged aortic valve; patching the hole between the heart's upper chambers; repairing a leaky tricuspid valve to restore proper blood flow in



Dr. Irvin B. Krukenkamp



Dr. Adam E. Saltman

the right side of the heart and relieve the heart failure and potential liver failure; and curing the abnormal heart rhythm with the new microwave catheter technique.

SAVING A LIFE AND ADVANCING CARE

The patient had arrived at University Hospital a week before Christmas, suffering from atrial fibrillation, a potentially lethal cascade of abnormal heartbeats. The cardiac team was aware of his fibrillation, as well as his congestive heart failure.

But the initial evaluation of the patient further revealed two more serious problems: a blocked coronary artery and a damaged aortic valve in need of replacement.

Three major procedures were thus planned preoperatively. At surgery, two additional serious problems were identified: an atrial septal defect—a hole in the patient's heart—and a leaky tricuspid valve.

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INTRODUCING OUR NEW *Pediatric Surgeon*



Dr. Thomas K. Lee

Thomas K. Lee, MD, has joined Richard J. Scriven, MD, and Cedric J. Priebe, Jr., MD, in our Division of Pediatric Surgery as assistant professor of surgery. Board certified in both general surgery and pediatric surgery, Dr. Lee comes to Stony Brook from a prestigious private pediatric surgical practice in New Hyde Park, NY.

Dr. Lee received his MD from the University of Chicago in 1988. He subsequently completed his residency in general surgery at the New York Hospital-Cornell University Medical Center in 1995. During his general surgery residency, he spent two years in the laboratory at the University of Pittsburgh Health Center, studying small bowel transplantation.

In 1997, he completed his residency training in pediatric surgery at Cardinal Glennon Children's Hospital-St. Louis University.

Dr. Lee's clinical practice at Stony Brook will provide comprehensive surgical care for children—from newborn infants to adolescents.

The spectrum of his pediatric surgical expertise includes the management of congenital and/or acquired diseases of the neck (cystic hygroma, torticollis, masses) and chest (airway, chest wall deformity, mediastinal, lungs, esophagus), hepatobiliary system (biliary atresia, gallbladder disease, liver, spleen), alimentary tract (appendicitis, Hirschsprung's disease, anorectum abnormality), and the skin and soft tissues; repair of inguinal hernia and undescended testicles; and surgical management of childhood tumors, including those of the kidney and adrenal glands.

Stony Brook University Hospital is one of the few centers in the New York City area and on Long Island that offers pediatric minimally invasive surgery.

In addition, Dr. Lee will also be associated with the pediatric trauma program at Stony Brook.

As a member of the perinatal group at Stony Brook, Dr. Lee will be assisting our maternal-fetal medicine and neonatology physicians in the management of congenital anomalies and newborn emergencies.

Dr. Lee also has extensive experience in extracorporeal life support (ECMO), and plans to eventually bring that special treatment to Suffolk County.

Areas of Dr. Lee's special clinical interest include pediatric advanced minimally invasive surgery (laparoscopy and thoracoscopy).

In addition to performing laparoscopic cholecystectomy and appendectomy, he performs advanced minimally invasive surgery in children including antireflux procedures (funduplications), splenectomy, orchiopexy for intra-abdominal testicle, and a variety of thoracic operations.

WHAT IS MINIMALLY INVASIVE SURGERY?

Minimally invasive surgery (MIS) is also known as **minimal access surgery** or as **videoscopic** and **endoscopic surgery**. The terms, laparoscopy or thoracoscopy, which are commonly used references to MIS, describe the specific body cavity where the surgeon is working; that is, abdomen and thorax, respectively.

MIS is an expanding group of different kinds of operations performed with newly developed surgical instruments and **methods that minimize physical stress to patients**. It involves the use of a small telescope and thin instrument (3-12 mm; or about one-sixteenth to three-quarters of an inch).

The telescope magnifies the body's internal structures with the help of digital imaging, and projects the image onto a video monitor in the operating room.

MIS requires only small incisions, a distinguishing feature of this revolutionary approach to surgical care. Without the trauma of the larger incision used in conventional operations, both **pain and healing time are greatly reduced**.

With smaller incisions, **smaller and more cosmetic scars** are a major advantage of MIS.

Other benefits of MIS include **shorter hospital stays OR no hospital stays at all, less need for postoperative pain medication, and earlier returns to work and normal activity/diet**. Reduced hospitalization, it should be noted, means reduced costs.

The total hospital cost of a laparoscopic operation is generally less than what conventional surgery requires. For example, a cholecystectomy (gallbladder removal) using the laparoscopic method may cost at least three to four times less than the same operation done with open surgery.

PEDIATRIC SURGEONS PERFORMING MIS

Laparoscopic procedures, such as cholecystectomy and appendectomy, were being performed with regularity in adults by the beginning of the 1990s. However, use of MIS in children did not gain popularity until now.

Several limitations existed for the development of MIS in children. One is the small number of patients. For example, gallbladder disease is rare in children. Therefore, there is less opportunity for the application of the minimally invasive techniques.

In most cases, pediatric MIS has reduced hospitalization to either outpatient or short stay, with just one- to two-week recovery at home. Some patients can return to school in just a couple days after their operation, and parents can then return to work.

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Dr. Lee is also planning to introduce to our area “minimal access repair” of pectus excavatum, a chest wall deformity seen in children and adolescents.

Dr. Lee is a member/fellow of several prestigious national and local medical associations. He is a fellow of the American College of Surgeons, surgery specialty fellow of the American Academy of Pediatrics, member of the American Pediatric Surgical Association, associate member of the Children’s Oncology Group, and member of Suffolk County Medical Society and Medical Society of the State of New York.

For consultations/appointments with Dr. Lee, please call (631) 444-4538.

MINIMALLY INVASIVE SURGERY FOR CHILDREN

Abdominal

- Diagnostic laparoscopy
- Appendectomy
- Antireflux surgery
- Splenectomy
- Pyloromyotomy
- Colectomy, pull-through procedures
- Small bowel resection
- Meckel’s diverticulum resection
- Peritoneal management of VP shunt

Genitourinary

- Orchiopexy/exploration for undescended testis
- Contralateral hernia exploration
- Nephrectomy
- Adrenalectomy

Hepatobiliary

- Liver biopsy
- Cholecystectomy
- Common bile duct exploration

Thoracic

- Thoracoscopy with or without biopsy
- Thoracoscopic decortication
- Wedge resection of lung
- Video-assisted anterior spinal fusion
- Pectus excavatum repair

INTRODUCING OUR NEW Plastic and Cosmetic Surgeon



Dr. Balvant P. Arora

Balvant P. Arora, MBBS, has joined Alexander B. Dagum, MD, and Steven M. Katz, MD, in our Division of Plastic and Reconstructive Surgery as assistant professor of surgery. He comes to Stony Brook from Lenox Hill Hospital in New York, where he spent the previous academic year as a fellow in cosmetic surgery.

Dr. Arora received his MBBS (Bachelor of Medicine and Bachelor of Surgery) in 1984 from the University of Baroda, in Vadodara, India. From the same institution, he then received his MS (Master of Surgery, 1988) in general surgery and his MCh (Magister Chirurgie, 1991) in plastic surgery.

In 1992, after practicing plastic surgery in India, Dr. Arora moved to the United States. He subsequently joined our residency program here at Stony Brook in 1995. He left in 1998 to pursue further training in plastic surgery at the Oregon Health Sciences University in Portland, which he completed in 2000.

This training was followed by his fellowship in cosmetic surgery at Lenox Hill Hospital.

Dr. Arora’s practice at Stony Brook includes general plastic and reconstructive surgery, with an emphasis on cosmetic surgery in which he has special expertise. He is skilled at providing care for both adults and children.

Among the cosmetic surgery procedures that Dr. Arora performs are face-lift, blepharoplasty (eyelid lift), liposuction, breast augmentation and reduction, total body contouring, laser resurfacing, chemical peel, Botox injection, collagen injection, and hair transplantation.

In addition, Dr. Arora also performs minimally-invasive endoscopic plastic surgery including breast augmentation and brow-lift.

Hand surgery is another specialty at which Dr. Arora is skilled. His expertise enables him to treat the most challenging and complicated hand and wrist problems as well as minor conditions and injuries.

Dr. Arora’s research interests include cultured skin graft and skin substitution.

For consultations/appointments with Dr. Arora, please call (631) 444-4545.

TRACHEAL STENTING FOR RELIEVING AIRWAY OBSTRUCTION

Although the mainstay of therapy for patients with lung cancer remains complete surgical resection, not every patient is a candidate for this type of surgery. Specifically, patients with narrowing of their airways due to tumors or other types of obstructions suffer from the complications of little or no airflow to the affected lung.

The goal of our program in tracheal stenting is to relieve this obstruction, re-establishing normal airflow.

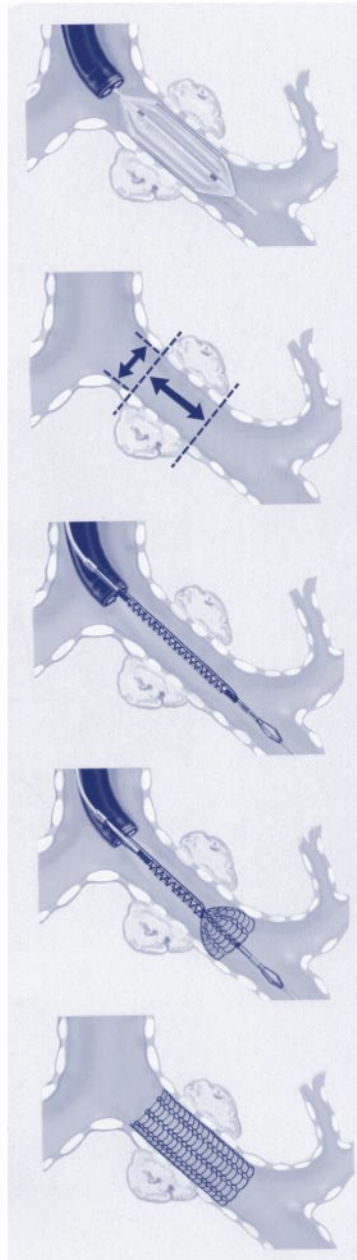
Over the years, several methods of relieving these obstructions have been attempted. One of the most successful is to first remove the obstructing lesion, such as a tumor, and to keep the opened airway patent with a stent—a cage-like cylinder made of metal mesh.

Our thoracic surgeons are well versed in these techniques to open the airway and re-establish airflow to the lungs.

The stenting procedure consists of performing a bronchoscopy to look in the airways under general anesthesia. The obstructed area is then opened either with a balloon or by removing the obstructing tissue. The length and width of the area to be treated are measured, and the stent delivery system is then inserted and the stent expanded.

The management of symptomatic tracheobronchial complications can be an important adjunct to the surgical care of patients with unresectable benign or malignant airway obstruction. For these patients, stenting may offer significant palliation and improved quality of life.

For consultations/appointments with our thoracic surgeons, please call (631) 444-1820.



The insertion of a tracheal stent to establish normal airflow and thereby relieve the symptoms of airway obstruction.

Some Recent Publications*

- Barle H, Gamrin L, Essen P, **McNurlan MA, Garlick PJ**, Wernerman J. Growth hormone does not affect albumin synthesis in the critically ill. *Intensive Care Med* 2001;27:836-43.
- Cadet P, Mantione K, **Bilfinger TV, Stefano GB**. Real-time RT-PCR measurement of the modulation of Mu opiate receptor expression by nitric oxide in human mononuclear cells. *Med Sci Monit* 2001;7:1123-8.
- Chen EH, Logman ZM, Glass PS, **Bilfinger TV**. A case of tracheal injury after emergent endotracheal intubation: a review of the literature and causalities. *Anesth Analg* 2001;93:1270-1.
- Chen EH, Rosa D, El-Maghrabi MR, **Maitra SR**. Effects of sepsis on mitogen-activated protein kinase signal transduction pathways [abstract]. *Shock* 2001;15:62.
- Chen EH, Rosa D, Pang E, **Brathwaite CE, Maitra SR**. Effects of sepsis on the expression of SAPK/JNK signaling pathway [abstract]. *FASEB J* 2001;15:A1123.
- Eslami MH, **Ricotta JJ**. Operation for acute peripheral arterial occlusion: is it still the gold standard? *Semin Vasc Surg* 2001;14:93-9.
- Friedman S, DeMuro JP, **Brebbia J, Ortega D, Barraco R, Brathwaite CE, Perez JM, Smith T**. Pneumatosis cystoides intestinalis in a patient with celiac sprue. *Contemp Surg* 2001;57:11-3.
- Imoberdorf R, Bartsch P, Peheim E, **Garlick PJ, McNurlan MA, Turgay M, Ballmer P**. Plasma volume, albumin and fibrinogen synthesis during active and passive ascent to high altitude. *J Appl Physiol* 2001;90:528-37.
- Irie H, Abrahami A, Abumrad N, Gaudette GR, **Saltman AE, Krukenkamp IB**. The CD36 protein is an important modulator of ischemia/reperfusion injury in the murine heart. *Surg Forum* 2001;52:72-4.
- Ricotta JJ**. Presidential address: Towards competence in vascular care. *J Vasc Surg* 2001;34:955-61.
- Ricotta JJ, Bilfinger TV, Gorski Y**. Carotid plus coronary disease. In: Conwett JL, Rutherford RB, editors. *Decision-making in vascular disease*. Philadelphia: Saunders, 2001: 84-7.
- Smouha EE**, Chen D, Li B, Liang Z. Computer-aided virtual surgery for congenital aural atresia. *Am J Otol* 2001;22:178-2.
- Stefano GB**, Murga J, Benson H, Zhu W, **Bilfinger TV**, Magazine HI. Nitric oxide inhibits norepinephrine-stimulated contraction of human internal thoracic artery and aorta. *Pharmacol Res* 2001;43:199-203.
- Stefano GB**, Neenan K, Cadet P, Magazine H, **Bilfinger TV**. Ischemic preconditioning - an opiate constitutive nitric oxide molecular hypothesis. *Med Sci Monit* 2001;7:1357-75.
- van Bemmelen PS**, Gitlitz DB, Faruqi RM, Weiss-Olmanni J, Brunetti VA, **Ricotta JJ**. Limb salvage using high-pressure intermittent compression arterial assist device in cases unsuitable for surgical revascularization. *Arch Surg* 2001;136:1280-6.
- Zhu, **Bilfinger TV**, Baggerman G, Goumon Y, **Stefano GB**. Presence of endogenous morphine in human heart tissue. *Int J Mol Med* 2001;7:419-22.

* The names of faculty authors appear in boldface.

TREATING INOPERABLE CIRCULATION DISORDERS

In November, Paul S. van Bemmelen, MD, PhD, clinical assistant professor of surgery, and fellow members of our vascular surgery division published an article in the *Archives of Surgery* describing the clinical study of a nonsurgical treatment of inoperable circulation disorders.

This novel treatment is good news for patients with poor circulation who are not good surgical candidates.

The first author of the report, Dr. van Bemmelen is a pioneer in the use of external intermittent compression devices for treating circulation disorders in patients for whom surgery is not possible.

Good news for patients with poor circulation who are not good surgical candidates

Dr. van Bemmelen is the inventor of the patented arterial assist device called ArtAssist, which is currently used throughout the world. He has the longest clinical experience with the use of this device for the treatment of rest-pain, necrosis (black discoloration) of parts of the foot, and intermittent claudication (walking difficulty).

Typical reasons to use this type of treatment are: advanced age and poor medical condition, multiple previous bypass attempts, lack of veins that could be used to make a new bypass, and lack of distal outflow arteries in the foot to which to connect a bypass.

ARTERIAL ASSIST

Dr. van Bemmelen's arterial assist device applies a unique form of pneumatic compression to the foot, ankle, and calf to increase arterial blood flow to the lower limbs.

The device triples blood flow at the tissue level. It provides a compres-

sion regimen that effectively simulates the beneficial effects of brisk walking, without pain or tissue trauma.

First, using wrapped cuffs, the device compresses the foot and ankle.

A second later the calf is compressed, and the foot, ankle, and calf veins are almost completely emptied. In return, the arterial blood is more easily pushed down to the toes and blood-deprived tissues.

A second mechanism of action accounting for the large blood-flow increase involves the endothelium—cells that form the lining of all blood vessels. The endothelial cells release important biochemical factors, such as nitric oxide that helps circulate the blood.

This substance is released in amounts corresponding to the rate of blood flow moving along the cells that line the vessels.

Patients with poor circulation (peripheral arterial occlusive disease) have lost pulsatile blood flow, and their blood circulates in a sluggish manner. This inhibited movement causes a loss of those important biochemical factors needed to maintain proper circulation.

When the arterial assist device is used, pulsatility is returned to a limb by rapid compression. This creates high flow rates intended to stimulate release of these important biochemical factors and likely stimulates the formation of collateral vessels.



Dr. Paul S. van Bemmelen

For consultations/appointments with Dr. van Bemmelen, please call (631) 444-4545. Patients who already have undergone arteriography/angiography should bring the x-ray films with them at the time of their initial consultation. Please turn to page 8 for Bio-note on Dr. van Bemmelen.

Limb salvage using high-pressure intermittent compression arterial assist device in cases unsuitable for surgical revascularization

Hypothesis: Intermittent compression therapy for patients with inoperable chronic critical ischemia with rest pain or tissue loss may have beneficial clinical and hemodynamic effects.

Study Design: Case series of 14 consecutive ischemic legs that underwent application of a 3-month treatment protocol during a 2 1/2-year study.

Setting: Veterans Administration Hospital.

Patients: Thirteen patients with 14 critically ischemic legs (rest pain, n = 14; tissue loss, n = 13) who were not candidates for surgical reconstruction were treated with rapid high-pressure intermittent compression. The patients had a mean age of 76.2 years, 8 were diabetic, and they represented 10% of referrals for chronic critical ischemia. They were not amenable to revascularization owing to lack of outflow arteries (n = 7), lack of autogenous vein (n = 5), or poor general medical condition (n = 3).

Intervention: All patients were instructed to use the arterial assist device for 4 hours a day at home for a 3-month period.

Main Outcome Measures: Limb salvage and calibrated pulse volume amplitude.

Results: After 3 months, 9 legs had a significant increase in pulse-volume amplitude ($P < .05$). These legs were salvaged, whereas the 4 amputated legs demonstrated no hemodynamic improvement. We noted a direct correlation between patient compliance and clinical outcome. Patients in whom limb salvage was achieved used their compression device for longer periods of time (mean time, 2.38 hours a day) compared with those who underwent amputation (mean time, 1.14 hours a day) ($P < .05$). These mean hours of use were derived from an hour counter built into the compression units.

Conclusions: Intermittent high-pressure compression may allow limb salvage in patients with limb-threatening ischemia who are not candidates for revascularization. Further studies are warranted to assess intermittent compression as an alternative to amputation in an increasingly older patient population.

- van Bemmelen PS, Gitlitz DB, Faruqi RM, Weiss-Olmanni J, Brunetti VA, Ricotta JJ. Limb salvage using high-pressure intermittent compression arterial assist device in cases unsuitable for surgical revascularization. *Archives of Surgery* 2001;136:1280-6.

Division Briefs

Cardiothoracic Surgery

Dr. Irvin B. Krukenkamp, professor of surgery and chief of cardiothoracic surgery, is chair of the 2002 **Research Classic Golf Tournament**, to take place in September. Proceeds of this major fundraiser will benefit cardiac research at Stony Brook.

In October, Dr. Krukenkamp was appointed director of the **Heart Center** of University Hospital. The full development of cardiac services is one of the hospital's recently announced strategic initiatives. The goals of the program are to provide excellence in cardiac care, develop the academic programs in teaching and research, and increase the volume of patients cared for at Stony Brook.

The hospital plans to invest over \$10 million that will help create a state-of-the-art heart center and concomitantly create additional capacity.

Bio-note

Dr. Paul S. van Bemmelen, who joined the Department in 1998, is currently co-director of University Hospital's Leg and Foot Ulcer Treatment Group, medical director of the Non-Invasive Vascular Laboratory, and chief of vascular surgery at the Northport Veterans Affairs Medical Center.

Dr. van Bemmelen received his MD from the University of Leiden (Netherlands) in 1978, and his PhD from the University of Amsterdam in 1985, for which he developed an experimental model of venous hypertension to study damage to vein valves.

After completing his general surgery residency in Rotterdam in 1988, Dr. van Bemmelen went to the University of Washington in Seattle for a one-year research fellowship in vascular surgery. He then returned to the Netherlands for a two-year clinical fellowship in general vascular surgery.

In 1991, Dr. van Bemmelen returned to the United States, going to Southern Illinois University, where he completed his residency training in general vascular surgery. From there he relocated to Long Island, establishing a private practice in Port Jefferson, NY, and subsequently joining our vascular surgery team.

Dr. van Bemmelen's clinical practice encompasses all aspects of general vascular surgery.

Areas of particular interest include wound care management; noninvasive vascular diagnosis with color-duplex in arterial and venous disease; nonsurgical treatments for vascular disorders; use of laser-Doppler techniques to study changes in the circulation of the skin in pathological states (e.g., diabetes, arterial disease, and venous insufficiency) and their relationship with ulceration of the toes, feet, ankle, and legs.

For the second year in a row, the cardiac laboratory has been recognized by the **Intel Science Talent Search (STS)**. In January, Lukasz K. Oleszak, a senior at Ward Melville High School in East Setauket, NY, was named a semifinalist in the 61st annual competition. He had conducted his study in the laboratory: "Using Computer-Aided Speckle Interferometry to Determine Regional Deformation in the Beating Rabbit Heart." Often considered the "Junior Nobel Prize," the Intel STS is America's oldest and most prestigious pre-college science competition.

General/Gastrointestinal Surgery

Dr. Arif Ahmad, assistant professor of surgery and director of the Center for Minimally Invasive Surgery, joined our faculty last July, and continues to build his practice: in January he performed **laparoscopic bariatric surgery** to treat morbid obesity—the first time such surgery was ever done at University Hospital.

Dr. Ahmad and **Dr. Louis T. Merriam**, assistant professor of surgery, have completed special training in the technique of the new **Stretta procedure** for the minimally-invasive treatment of gastroesophageal reflux disease (see cover story).

Otolaryngology-Head and Neck Surgery

Dr. Arnold E. Katz, professor of clinical surgery and chief of otolaryngology-head and neck surgery, has served as chair of the ad hoc committee of the executive board of the faculty senate to establish a **code of ethics** for our medical school.

Dr. Katz has also served as adviser to a group of medical students who are committed to creating a code of ethics for medical students.

Last September, Dr. Katz and Boston-based dermatologist Dr. Donald Grande presented a workshop titled "Reconstruction of Large Facial Defects after Mohs Surgery" at the annual meeting of the American Academy of Otolaryngology-Head and Neck Surgery, held in Denver, CO. In November, he presented a lecture titled "Special Problems and Survival Strategies: Can the Small Division Survive?" at the meeting of the Society of University Otolaryngologists-Head and Neck Surgeons, held in Washington, DC.

Once again, Dr. Katz is cited as a "doctor of excellence" in the latest edition (2001) of the Castle Connolly Guide, *Top Doctors: New York Metro Area*.

Dr. Eric E. Smouha, associate professor of surgery and neurological surgery, was recently elected to the Otosclerosis Study Group, a national organization.

In September, Dr. Smouha presented his study titled "Computer Databases in Clinical and Academic Practice," at the annual meeting of the American Academy of Otolaryngology-Head and Neck Surgery, in Denver, CO.

Supporting his research, Stony Brook's General Clinical Research Center has awarded Dr. Smouha a research grant to fund his project titled "Matrix Metallo-Proteinases in Cholesteatoma."

Plastic and Reconstructive Surgery

Dr. Alexander B. Dagum, associate professor of surgery and chief of plastic and reconstructive surgery, is currently working with **Dr. Arnold E. Katz**, professor of surgery and chief of otolaryngology-head and neck surgery, to establish an **integrated cutaneous oncology program** that will provide a multidisciplinary approach to the reconstruction of large defects following the removal of advanced skin cancer.

Dr. Dagum's current research activities include a collaboration with the School of Medicine's orthopaedics department and the School of Engineering's materials science department in novel research to elucidate the biomechanical aspects of wrist and mandibular fractures.

Last October, Dr. Dagum presented a lecture titled "Current Concepts in Replantation and Free Tissue Transfer" at the annual meeting of the American Association of Surgical Physician Assistants, held in New Orleans.

Surgical Research

The recent award of a research grant to **Dr. Margaret A. McNurlan**, associate professor of surgery, by the National Institutes of Health has enabled studies of the mechanisms of muscle wasting in the elderly to commence. This project is designed to demonstrate whether subclinical inflammation and insulin resistance are responsible for the failure of new protein synthesis in muscle as aging progresses.

A second project on muscle wasting is currently being carried out by **Dr. Peter J. Garlick**, professor of

surgery and director of surgical research. A number of disease states, such as renal failure and critical illness, are associated with acidosis (the blood becoming more acid), and patients with it can often have life-threatening wasting.

Dr. Garlick has already shown, in a collaboration with a group in Switzerland, that acidosis in healthy volunteers inhibits new protein synthesis, and he now is undertaking projects in kidney dialysis patients and healthy volunteers to further investigate this problem.

In addition, Dr. Garlick has been heavily involved with the Food and Nutrition Board of the National Academy of Sciences in revising its recommendations for the dietary intake of protein and amino acids.

Surgical Oncology

Dr. Brian J. O'Hea, assistant professor of surgery and medical director of the Carol M. Baldwin Breast Care Center, has again been cited as a "doctor of excellence" in the latest edition (2001) of the Castle Connolly Guide, *Top Doctors: New York Metro Area*.

Vascular Surgery

Dr. John J. Ricotta, professor and chairman of surgery and chief of vascular surgery, delivered the **Presidential Address** at the 30th Annual Symposium on Vascular Surgery of the Society for Clinical Vascular Surgery, held in mid-March in Las Vegas. The audience included about 1,000 vascular surgeons from all over the United States and Canada. He focused on issues related to endovascular training.

Dr. Paul S. van Bemmelen, assistant professor of surgery, has been appointed chief of vascular surgery at the Northport Veterans Affairs Medical Center. See the article on page 7 about his **novel treatment of inoperable circulation disorders**, called ArtAssist.

Dr. Fabio Giron Retires After 24 Years Of Distinguished Service



In October—on the last day of that month—Fabio Giron, MD, PhD, retired from his faculty position in the Department. Dr. Giron had been a distinguished member of our faculty since 1977, when he started his position here as professor of surgery and chief of vascular surgery at the VA Medical Center in Northport. From 1978 until his retirement, he also served as chief of vascular surgery at University Hospital.

Born in Sanlucar de Barrameda, Spain, in 1931, Dr. Giron received his MD with honors (*premio extraordinario*) in 1954 from the University of Valladolid. In 1960, he completed his surgical training in Madrid, after which he served on the surgical faculty of the University of Madrid for four years.

In 1964, Dr. Giron came to the United States. From then until 1970, he pursued research at Tufts-New England Medical Center Hospital in Boston for two years, and then further clinical training in vascular surgery at Mount Sinai Hospital in New York for two years. Subsequently, he served for two years as a member of the surgical faculty of Tufts University, from which he received his PhD in 1970.

That year, Dr. Giron moved to New York to join the surgical faculty of the Mount Sinai School of Medicine, and to serve as chief of vascular surgery at the VA Medical Center in the Bronx. He then came to Stony Brook in 1977.

Highly respected by his peers, Dr. Giron distinguished himself as one of the "Doctors of Excellence" featured in past editions and the latest edition (2001) of the Castle Connolly Guide, *Top Doctors: New York Metro Area*. His genius, his humanity, and his humor will be missed, but long remembered, by those who worked with him, as well as by those whom he taught the art of surgery.

Alumni News

Since the class of 1975 entered the profession of surgery, 149 physicians have completed their residency training in general surgery at Stony Brook. The alumni of our residency program now practice surgery throughout the United States, as well as in numerous other countries around the world.

Dr. Juan R. Madariaga ('79), an expert in the surgical treatment of hepatobiliary diseases and bile duct tumors and an active liver transplant surgeon, is no longer with the University of Pittsburgh Medical Center, where he had been for a decade. In January 2001, he joined the transplant team at the University of Miami/Jackson Memorial Medical Center. He now is professor of surgery in the surgery department at the University of Miami and a member of its Division of Liver/Gastrointestinal Transplant.

This division is directed by another alumnus of our residency program, **Dr. Andreas G. Tzakis** ('83). Like Dr. Madariaga, Dr. Tzakis went to the University of Miami from the University of Pittsburgh, where he had started performing liver transplants in the early 1980s and subsequently progressed to directing Pittsburgh's pediatric and intestinal transplant programs. Dr. Tzakis joined the faculty at Miami in 1994.

Dr. Tom R. Karl ('81) started a new position, in November, as professor of surgery and chief of pediatric cardiac surgery at the University of California-San Francisco.

Dr. Peter J. Ferrara ('87), who specializes in surgical oncology and general surgery, entered private practice early last year in Scottsdale, AZ. His residency at Stony Brook had been followed by a two-year fellowship in surgical oncology at Ohio State University, and then a two-year commit-

ment in the US Public Health Service, for which he was stationed at the Phoenix Indian Medical Center, a 150-bed tertiary care hospital in downtown Phoenix, where he was staff surgeon. He then became chief of surgical oncology at Maricopa Medical Center in Phoenix, a position he held until June 2000.

Dr. Elias R. Quintos ('87), a cardiothoracic surgeon with Binghamton Cardiovascular and Thoracic Surgeons, PC, located in Johnson City, NY, writes to us: "All our surgeons have been doing nearly all our myocardial revascularizations using the off-pump technique for nearly three years with good results. Bleeding, postoperative pulmonary complications, and postoperative length of stay appear to be less."

Dr. Dean P. Pappas ('99), after his residency at Stony Brook, completed fellowship training in colorectal surgery in Florida. In July 2000, he entered private practice in Garden City, NY, working with **Dr. Victor A. Gallo** ('79). He recently achieved board certification in both general surgery and colon/rectal surgery. In order to best care for women with pelvic floor dysfunction, he and his partner have teamed up with a local urologist, and together they have created the Wellness Pavilion located in Garden City, which is a combined colorectal and urology physiology lab.

Performing Historic Heart Operation (Continued from Page 3)

The new microwave technique was presented for the first time in November, during the annual meeting of the American Heart Association.

This procedure had never been performed on the East Coast. Dr. Saltman, who is director of our surgical electrophysiology program, used a microwave ablation catheter to create therapeutic lesions on the heart. The procedure, which took no more than 20 minutes, is expected to permanently cure the patient's irregular heartbeats.

Successful use of new microwave technology for treating atrial fibrillation

In addition, Drs. Krukenkamp and Saltman performed a bypass operation to overcome the clogged artery and used a bovine heart valve to replace the patient's faulty aortic valve.

The new microwave technique was beneficial because the conventional operation to correct an irregular heartbeat takes three hours to complete. By shortening the operating time and also reducing blood loss, the new microwave technique was a much safer procedure for the patient.

In the conventional operation, a series of cuts are made on the heart to create scar tissue. The scars block misfiring impulses, which then lose their chaotic path across the heart.

With the newly FDA-approved microwave technology, Dr. Saltman accomplished the same goal in a fraction of the time. He worked with a narrow foot-long catheter that uses microwave energy to destroy the abnormal electrical pathway causing the patient's arrhythmia.

Restoration of normal heart rhythm also improves the function of the heart and relieves the symptoms of congestive heart failure.

WWW. To submit alumni news online AND to find current mailing addresses of our alumni, please visit the Department's website at www.uhmc.sunysb.edu/surgery

GENERAL SURGERY ALUMNI: Please send your e-mail address—for inclusion in the Alumni Directory—to cohen@surg.som.sunysb.edu

Deborah Iorio Receives Trauma Award

In December, Deborah A. Iorio, RN, trauma registrar of our trauma program, was chosen the 2001 New York State Trauma Registrar of Distinction by the New York State Trauma Advisory Committee (STAC) and the New York Division of the American Trauma Society—for her “commitment to and pursuit of excellence.”

Iorio, who joined the Department’s trauma division in 1996, contributes to the Suffolk County Trauma Registry. She has been innovative in streamlining the registry requests for medical records. She trains new personnel, and also assists the database manager in report writing on a daily basis.

Iorio is also responsible for data collection at the non-trauma medical centers in Suffolk County. She has successfully maintained a good relationship with each hospital that ensures the data is available.

Five years ago, New York’s STAC and Trauma Society created awards of distinction for a nurse and physician in trauma to recognize excellence. In 1999, the category of *registrar* was added because of the unique contributions that registrars make to a trauma program.

This prestigious award is peer-nominated, and selected by a committee that reviews the recommendations in a blinded manner. There are almost 50 trauma centers throughout the state, and there are at least that many registrars.

The Suffolk County Trauma Registry is an information system of the most seriously injured patients and the treatment that they have received. The purpose of the registry is to evaluate the quality

of trauma patient care and to plan and evaluate injury prevention programs.



OUR ELECTRONIC PHYSICIAN DIRECTORY



The Department provides a physician directory as part of its website—please visit us at the following address to find information about our individual surgeons (see sample page below), as well as our programs in patient care, education, research, and community service:

www.uhmc.sunysb.edu/surgery



Dr. Alexander B. Dagum

MD: University of Ottawa (1987).

Residency Training: Plastic Surgery, University of Toronto.

Fellowship Training: Hand and Microsurgery, University of Toronto and SUNY-Stony Brook.

Certification: Plastic Surgery ([Royal College of Physicians and Surgeons of Canada](#)).

Specialties: Reconstructive and aesthetic surgery; [breast reconstruction after cancer](#), breast reduction, and breast augmentation; nose surgery; cleft lip and cleft palate sur-

gery; treatment of facial fractures; hand surgery (microsurgical repair of bony, soft tissue, and nerve injuries); reconstructive surgery for burn patients; facelift, general liposuction, and tummy-tuck surgery; evaluation and surgical management of chronic wounds (skin grafting and soft tissue flap coverage).

Additional: Chief of Plastic and Reconstructive Surgery; expertise in not only conventional surgical approaches, but also the latest [microsurgical techniques](#); Fellow, American College of Surgeons ([FACS](#)); Fellow, Royal College of Physicians and Surgeons of Canada ([FRCSC](#)); see [recent publications](#).

Languages Spoken: English, Spanish, and French.

Consultations/Appointments: 631-444-4545.

What Is Minimally Invasive Surgery?

(Continued from Page 4)

Second, the increased number of MIS performed corresponds to the development of better and smaller computer components. The development of computer components, specifically, digital imaging, improved the pediatric surgeon’s ability to visualize the operating field.

Third, our subjects are smaller, and we need smaller instruments. We could not use adult instruments for many of our patients. Therefore, we had to wait for the surgical instrument company to manufacture those important tools.

Finally, many established and fine technical surgeons needed to learn a new method of operation. Thus, we needed to be trained.

Surgery to treat a variety of pediatric abdominal and thoracic problems—such as gallbladder disease, appendicitis, disease of the spleen, undescended testicle, gastroesophageal reflux disease, spontaneous pneumothorax, and even pectus excavatum (a congenital abnormal development of the chest wall)—used to require large incisions, and about a week in the hospital, and a six- to eight-week recovery time.

STONY BROOK SURGICAL ASSOCIATES, PC

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John S. Brebbia, MD
Martyn W. Burk, MD, PhD
Louis T. Merriam, MD
Brian J. O'Hea, MD

BURN CARE

Collin E.M. Brathwaite, MD
John S. Brebbia, MD
Harry S. Soroff, MD

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Maisie L. Shindo, MD
Eric E. Smouha, MD

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PLASTIC AND RECONSTRUCTIVE SURGERY

Balvant P. Arora, MBBS
Alexander B. Dagum, MD
Steven M. Katz, MD

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Martyn W. Burk, MD, PhD
Louis T. Merriam, MD
Brian J. O'Hea, MD

TRANSPLANTATION

John J. Ricotta, MD
Wayne C. Waltzer, MD

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Robert D. Barraco, MD
Collin E.M. Brathwaite, MD
John S. Brebbia, MD
J. Martin Perez, MD

VASCULAR SURGERY

John J. Ricotta, MD
Paul S. van Bemmelen, MD, PhD



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For consultations/appointments with our physicians, please call

- (631) **444-4550** for our specialists in breast care
- (631) **444-1820** for our specialists in cardiothoracic surgery
- (631) **444-4545** for our specialists in general/gastrointestinal surgery
- (631) **444-4121** for our specialists in otolaryngology-head and neck surgery (ENT)
- (631) **444-4538** for our specialists in pediatric surgery
- (631) **444-4545** for our specialists in plastic and reconstructive surgery
- (631) **444-4545** for our specialists in surgical oncology
- (631) **444-2209** for our specialists in transplantation
- (631) **444-1045** for our specialists in trauma/surgical critical care
- (631) **444-2565** for our specialists in vascular surgery
- (631) **723-5000** for our specialists at Stony Brook Outpatient Services in Hampton Bays: breast care - general/gastrointestinal surgery - pediatric surgery - vascular surgery

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STONY BROOK UNIVERSITY

Stony Brook, New York 11794-8191

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