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ADMINISTRATION
Richard W. Dow, MD, FACS
Chair
Daniel Walsh, MD
Vice Chair
Residency Program Director
Kerry Ryan
Director
Linda Barie
Administrative Manager
Audrey Carr
Financial Manager
Christina Cole
Surgery Clerkship Program Coordinator
John Higgins
Database Manager
Donald Likosky, Ph.D.
Departmental Epidemiologist
Dawn Robinson
Residency Program Administrator
Laura Stancs
Assistant to the Chair

SURGICAL RESEARCH LAB
Jeffery Bergeron, DVM
Assistant Professor of Surgery
P. Jack Hoopes, DVM, Ph.D.
Associate Professor of Surgery and Medicine
In gathering my thoughts for this introductory letter for the Department of Surgery’s Annual Report, I have again been struck by the dynamic nature of growth and evolution within the Department of Surgery and within each of the various components of the Dartmouth-Hitchcock Medical Center. I will cite some examples of this growth and evolution in the text of this letter and the body of the report will provide further details of the various sectional and programmatic developments.

From the perspective of the Medical Center, we have just completed a comprehensive review of our Mission and Vision and have revised these documents to reflect our ongoing commitment to advancing health care through research, education, clinical practice, and community partnerships. We have reaffirmed our emphasis on patient safety, quality improvement, and patient satisfaction by articulating our desire to provide each patient with the best care, provided at the right place and at the right time, and to accomplish each of these goals at every single encounter. We are inspired by the challenge of achieving these high standards and look forward to continuing emphasis on transforming health care within our region to achieve the healthiest population possible.

While we have worked hard to become more efficient in providing care for our patients, increasing demand continues to challenge our capacity to achieve that goal of serving each of our patients at the right time, in the right place, and on every occasion. Accordingly, we have embarked on a comprehensive process to clarify our role within the health care system of our region and to develop new strategies to accommodate the demand appropriately served by elements of DHMC. The process has led to plans for further expansion – following up on our recently completed Project for Progress which included a Doctor’s Office Building and additions to our Diagnostic and Treatment Facilities. Currently, an Ambulatory Surgery Center is anticipated to begin construction this winter and it is expected to include six operating rooms in formats which will allow for additional components of an Ambulatory Treatment Center to be subsequently developed. Additional building plans include new translational research space and a new home for the Center for the Evaluative Clinical Sciences – now renamed the Institute for Health Care Improvement – both to be housed within the C. Everett Koop Complex on the south side of our campus.

Within the Department of Surgery, our clinical, educational, and research activities continue to grow and diversify. We have added new faculty to eight of our eleven sections in response to increasing demand for clinical services, educational initiatives, and opportunities to develop new knowledge. We continue to develop sub-specialty programs within the sections and as multidisciplinary initiatives. OR capacity has grown, case volumes have increased, training programs have expanded, and new residencies have been approved – including a “primary certificate” path in Vascular Surgery and RRC approval for a new
training program in Otolaryngology. We are awaiting approval from the RRC in General Surgery in response to our request to increase the size of the training program – moving from finishing four residents each year to five per year. Additionally, we have expanded the range of educational offerings for Dartmouth medical students as they explore options within the surgical disciplines. As our faculty has increased in size and complexity, I have appointed Dr. Samuel Finlayson to the position of Vice-Chair for Academic Affairs and Faculty Development. He is supported by Donny Likosky, Ph.D., the Department’s epidemiologist and a small technical staff. Among his goals, Dr. Finlayson will be helping our faculty respond to the increasing opportunities and expectations for developing new knowledge. Finally, I must reluctantly acknowledge that Father Time has been catching up with me. That recognition has led me to ask the Dean and Institutional Leadership to initiate a search process for my replacement. I plan to continue with my responsibilities as the process of identifying a new Chair moves to completion over the next months and then to retire with the honor of serving the Institution and the Department over the past decade as the highlight of my career.

Richard W. Dow, MD, FACS
Chair, Professor of Surgery

DEPARTMENT STATISTICS 2007

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INTRODUCTION
Under the leadership of Dr. William Nugent, the Section of Cardiac and Thoracic Surgery now functions as two distinct divisions with Dr. Lawrence Dacey leading the Cardiac Division and Dr. David Johnstone leading the General Thoracic Division. Each division is now focused on providing state-of-the-art care for patients with surgical disease of the chest. The Section of Cardiothoracic Surgery continues to lead the Institution in inpatient, outpatient, and referring physician satisfaction ratings.

DIVISION OF CARDIAC SURGERY
The Division of Cardiac Surgery has grown in many ways over the past year. Dr. Joseph DeSimone joined the Division after completing his General Surgical Training at Dartmouth-Hitchcock Medical Center (DHMC) and his Cardiothoracic Training at Johns Hopkins University. Dr. DeSimone joins the Section with a dual appointment. He is an Assistant Professor of Surgery and an Advanced Cardiac Catheterization Fellow in the Section of Cardiology. Dr. DeSimone will spend a portion of this year developing catheter-based techniques with the intention of applying those skills towards the percutaneous treatment of patients with valvular heart disease. In addition, Dr. DeSimone will be working closely with Dartmouth-Hitchcock’s Heart Failure Program as we expand into the treatment of patients with surgically remedial heart failure.

The Aortic Center at Dartmouth continues to thrive under the direction of Dr. Anthony DiScipio. This multidisciplinary initiative routinely offers patients with complex diseases of the thoracic and abdominal aorta many of the most sophisticated surgical interventions performed today. Patients with life-threatening aortic diseases can now be evaluated and electively treated by the most advanced diagnostic and therapeutic modalities available and by a team of professionals dedicated to understanding and treating these conditions. Patient outcomes continue to be excellent.

DIVISION OF GENERAL THORACIC SURGERY
In February 2007, the Comprehensive Thoracic Oncology Clinic was inaugurated within the Norris Cotton Cancer Center at DHMC. This multidisciplinary initiative was two years in the planning and offers all patients with malignant disease of the chest direct access to a multidisciplinary team of experts dedicated to better understanding and treating these devastating conditions. This program meets weekly and combines a clinical conference, where individual patients’ conditions are discussed and treatment plans generated, with a clinic that places clinicians from medical oncology, surgical oncology, pulmonary, diagnostic and interventional radiology, and pathology in one place. This has offered both patients and clinicians the opportunity for “real-time” collaboration and consultation.

The Division of General Thoracic Surgery continues to experience increasing surgical volumes as the region responds to the only major medical center in Northern New England with a dedicated focus on General Thoracic Surgery. Efforts are now underway to initiate thoracic surgical clinics in off-site locations such as Manchester and Nashua, NH.
OUTCOMES
Cardiac Surgery remains the most scrutinized specialty in all of medicine. Since healthcare payers and their patients have insisted on increased accountability in outcomes, the Division of Cardiac Surgery has responded by making their surgical outcomes transparent to the public. DHMC now provides patient access to our cardiac surgical outcomes in a patient-friendly format (www.dhmc.org/qualityReports/list.cfm?metrics=CT).

This initiative, combined with our continued involvement with the Northern New England Cardiovascular Disease Study Group (www.nnecdsg.org), makes the Section of Cardiothoracic Surgery a national leader in understanding and improving cardiovascular healthcare outcomes.

FACULTY
J. Pearce Beissinger, PA-C
Instructor in Surgery
Jean Clark, ARNP
Instructor in Surgery
Lawrence Dacey, MD
Professor of Surgery and Community & Family Medicine
Joseph DeSimone, MD
Assistant Professor of Surgery
Anthony DiScipio, MD
Assistant Professor of Surgery
Ryan Hafner, PA-C
Instructor in Surgery
David Johnstone, MD
Associate Professor of Surgery
Elizabeth Maislen, ARNP
Instructor in Surgery
Jimmy Maneksha, MBBS, MS
Instructor in Surgery
William Nugent, Jr., MD
Professor of Surgery and Community & Family Medicine
John Sanders, Jr., MD
Professor of Surgery
INTRODUCTION
This year the Section of General Surgery realized substantial growth potential within each of its three divisions. Each division is currently recruiting an additional surgeon faculty member to complement and/or expand the current patient care services we provide.

PATIENT CARE
Patient care remains organized under the Division of Trauma and Acute Surgical Illness, led by Dr. John Sutton; the Division of Minimally Invasive Surgery, directed by Dr. William Laycock; and the Division of Surgical Oncology, directed by Dr. Richard Barth.

The Division of Minimally Invasive Surgery experienced the departure of Dr. Ted Trus to relocation at the end of the year. Our first fellow, Dr. Douglas Smink, completed his one-year fellowship in minimally invasive surgery. We are pleased to welcome Dr. Melina Vassiliou to the fellowship position in July.

We are excited about the expansion of advanced laparoscopic rooms in the Mary Hitchcock Memorial Hospital OR which will allow us to continue expanding our surgical services in the best environment possible for surgeons and patients.

The Division of Surgical Oncology formally began the Interdisciplinary Breast Clinic in January 2006 and has been taking excellent care of breast cancer patients. She is developing our presence in Manchester one day per week; her clinics are busy and surgical referrals are growing. The Division will be adding a colorectal surgeon in the next year with focus on benign and oncologic surgical care for patients with colorectal disease.

The Division of Trauma and Acute Surgical Illness continues to work with a large interdisciplinary team to expand and improve trauma and acute surgical care. Drs. John Sutton and Rajan Gupta led the trauma team through the Level 1 trauma designation review process this year. With their leadership, we again received our Level 1 Trauma designation from the American College of Surgeons. Dr. Sutton, after many successful years leading the Trauma program, has stepped down from this role and Dr. Gupta has taken on the Trauma Directorship. The Division continues to be a significant presence in the Critical Care Service of the Intensive Care Unit. With the recruitment of an additional trauma/acute surgeon we expect to see continued growth in this area.

EDUCATION
Dr. Sam Finlayson continues in his position of Assistant Director of the General Surgery Residency Program. Education demands the concerted efforts of several faculty members. Dr. Paul Kispert leads the Morbidity and Mortality conference. Drs. Finlayson and Kispert also lead resident teaching conferences on a bi-weekly basis. Drs. Burchard and Henriques co-direct the surgery clerkship for medical students. Dr. Gina Adrales is leading an institution-wide effort to use the surgical simulation lab to help train our medical students and residents in this unique learning environment.
RESEARCH

Dr. Sam Finlayson has been mentoring the work of surgical residents, leading to several presentations on surgical outcomes at national meetings. Dr. Burt Eisenberg, funded by an RO1 grant, has also mentored a resident doing research on molecular pathways in oncogenesis in the lab during this past year. Dr. Barth has initiated a novel clinical study designed to test whether cryoablation of human breast cancer induces anti-tumor immunity.

FACULTY

Gina Adrales, MD  
Assistant Professor of Surgery

Lori Alvord, MD  
Assistant Professor of Surgery

Richard Barth, Jr., MD  
Associate Professor of Surgery

Kenneth Burchard, MD  
Professor of Surgery and Anesthesiology

Thomas Colacchio, MD  
Professor of Surgery

Burton Eisenberg, MD  
Professor of Surgery

Samuel Finlayson, MD  
Associate Professor of Surgery and Community & Family Medicine

Benjamin Forbush, MD  
Assistant Professor of Surgery

Rajan Gupta, MD  
Assistant Professor of Surgery

Jeffrey Harnsberger, MD  
Assistant Professor of Surgery

Horace Henriques, III, MD  
Associate Professor of Surgery

Paul Kispert, MD  
Assistant Professor of Surgery and Anesthesiology

William Laycock, III, MD  
Associate Professor of Surgery

Jean Liu, MD  
Assistant Professor of Surgery

Elizabeth McCabe, ARNP, MS  
Instructor in Surgery

Ellen McKinnon, ARNP  
Instructor in Surgery

Joseph Meyers, MD  
Adjunct Associate Professor of Surgery

Maureen Quigley, ARNP, MS  
Instructor in Surgery

Nick Perencevich, MD  
Adjunct Associate Professor of Surgery

Frank Pindyck, MD  
Associate Professor of Surgery

Kari Rosenkrantz, MD  
Assistant Professor of Surgery

John Sutton, Jr., MD  
Professor of Surgery

General Surgery Gross Revenue

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INTRODUCTION
The Section of Neurosurgery had another great year, with continued growth in its clinical programs, educational mission, and research activities. Clinical demand is driving additional faculty recruitment; external funding for investigative work has increased; and our two most recent resident graduates, Dr. Kendall Lee and Dr. Patricia Quebada, are now directing the stereotactic and functional program at the Mayo Clinic and initiating the T32 research fellowship program here at Dartmouth, respectively.

CLINICAL ACTIVITIES
Dr. Kadir Erkmen, our newest faculty member, has brought special training and expertise in skull base and acoustic tumor. Surgery for pituitary tumors has grown significantly under the direction of Dr. Nathan Simmons. Together with Radiation Oncology, the radiosurgery program has seen the implementation of a new Trilogy system. Our greatest growth has been in glioma surgery where, in collaboration with the multidisciplinary neuron-oncology tumor board, we continue to participate in the glioma vaccine trial. Cerebrovascular expertise has similarly been boosted by Dr. Erkmen’s arrival, and the institution of a weekly cerebrovascular conference has been a great addition to our work, rounds, and teaching schedule. Collaboration with Dr. Cliff Eskey in neuro-interventional treatment has expanded the center’s capabilities, as has the successful implementation of the Stroke Center, in collaboration with Dr. Tim Lukovits. Our participation in the multidisciplinary Spine Center continues through the long-standing efforts of Dr. Perry Ball and Dr. Nathan Simmons. Pediatric neuro-surgery, under the direction of Dr. Tina Duhaime and Dr. Susan Durham, is being increasingly utilized by the region for its unique dedication and focus on children. Our movement disorders program has successfully initiated its pediatric expansion, and together with our neurology epileptologists, we have seen our surgical epilepsy program continue to thrive. Using Dr. Durham’s special training in peripheral nerves has enabled Neurosurgery to expand its activity in brachial plexus and peripheral nerve tumor and traumatic injury. The recruitment of a new physician assistant, David Sargent, has been one of our most appreciated successes, and together with Carissa Thurston, RN, CNRN, and Sharon Morgan, ARNP, our midlevel providers have made an immediate and most welcome impact on all aspects of clinical care.

EDUCATION
Our neurosurgical residents continue to be a source of pride for our Section. In addition to the honors brought by our last two graduating residents noted above, senior resident Dr. Scott Lollis, in collaboration with Dr. Keith Paulsen and our biomedical engineering colleagues, has just completed his NIH-funded investigative project in magnetic resonance elastography. This past year also saw Dr. Lollis join Dr. Ball in the US Army Reserve. Dr. Durham and Dr. Quebada joined others from the Department of Surgery on a medical mission to Vietnam this past spring. Our elective for first-year and second-year Dartmouth Medical School students continues to be oversubscribed and has provided students with valuable exposure to our field. Dr. Erkmen again taught in the St. Louis skull base surgery course. Dr. Ball gave an invited presentation.
at the Neurosurgical Society of America meeting in California and was invited to join the Neurosurgical Society of America Long Range Planning Committee, The American Association of Neurological Surgeons Professional Liability Committee, and the Executive Committee of the New England Neurosurgical Society as Member-at-Large. Dr. Duhaime was the invited speaker at the International Neurotrauma Society Meeting in Rotterdam, the American Association of Neurological Surgeons national meeting in New Orleans, the AANS/CNS Joint Section for Pediatric Neurological Surgery in Denver, the American Society of Pediatric Neurosurgeons Annual Meeting in Lanai, Hawaii, at the Children’s Hospital of Wisconsin, and at the University of Rochester. Dr. David Roberts was an invited speaker at the Korean Neurosurgical Society in Seoul, the Asian Society for Stereotactic, Functional, and Computer-assisted Surgery in Japan, and the Mayo Clinic, and gave the William Sweet Lecture in Boston. Dartmouth Neurosurgery has been regionally, nationally, and internationally well-represented.

RESEARCH
Clinical studies include participation in the NeuroPace trial, investigating an implanted closed-loop autodetection-electrical stimulation system for the treatment of non-resectable, intractable epilepsy. As noted above, we are actively engaged in Dartmouth’s glioma vaccine trial. We successfully received a fundable priority score on a five-year NIH-funded study of fluorescence-imaging guided tumor resection, a project in collaboration with the Thayer School of Engineering and the University of Toronto. Dr. Lollis’s NIH-funded work on MR elastography, mentioned earlier, is well ahead of the neuron-imaging curve. Our ongoing collaboration with neurophysiologist Dr. J Leiter on the mechanism of deep brain stimulation continues, and together with Dr. Alan Green and the Department of Psychiatry, are exploring potential interventional approaches to addiction. Our pediatric neurosurgeons’ long-standing program in pediatric head injury has utilized instrumented helmets in a variety of athletes to better understand traumatic impact. The journal Stereotactic and Functional Neurosurgery, whose editorial offices are here at Dartmouth, saw its impact factor gain an additional 25%.

FACULTY

Perry Ball, MD
Associate Professor of Surgery and Anesthesiology

Kadir Erkmen, MD
Assistant Professor of Surgery

Sharon Morgan, ARNP, MSN
Instructor in Surgery

Patricia Quebada, MD
Assistant Professor of Surgery

David Roberts, MD
Professor of Surgery

David Sargent, PA
Instructor in Surgery

Nathan Simmons, MD
Assistant Professor of Surgery
INTRODUCTION

The demand for ophthalmologic services continues to grow commensurate with the aging of the American population. The number of Americans developing major eye disease is increasing and vision loss is becoming a major health problem. This past year, the Section of Ophthalmology provided services for nearly 30,000 patients. Through a multidisciplinary and collaborative approach we provide the newest and most effective treatment strategies for ophthalmic disorders. Technological advances include expanding surgical strategies and are provided by our fellowship-trained ophthalmologists.

PATIENT CARE

Dr. Christopher Chapman and Dr. Rosalind Stevens provide comprehensive medical and surgical expertise for patients with complex disorders of the retina, vitreous body, and macula including laser treatment for premature infants with retinopathy of prematurity. The electrophysiology testing center has nearly established normal reference standards and formal clinical testing will begin this fall. Kimberly McQuaid, COMT will coordinate services for pediatric and adult patients. The advent and application of the anti-angiogenic agents Lucentis and Avastin in patients with advanced age-related macular degeneration has demonstrated success in many patients afflicted with this disorder.

Dr. Donald Miller leads the LASIK and Refractive Surgery Program at Dartmouth in conjunction with Dr. Michael Zegans and Dr. William Rosen. On-site care of refractive patients over the past year with the state-of-the-art Wavelight Allegretto laser has demonstrated superb outcomes. One hundred percent of all nearsighted and farsighted patients have demonstrated 20/20 vision or better. Dr. Zegans and Dr. Miller also provide consultations for patients with complex disorders of the cornea, lens, and adnexa including ocular tumors. Dr. William Rosen provides surgical consultation for patients with tumors as well as oculoplastic and orbital disorders.

Dr. David Campbell, Director of the Glaucoma Service, provides consultation for patients with complex glaucoma. An international expert in glaucoma, Dr. Campbell lectures extensively and teaches at The Lancaster Course in Ophthalmology.

Dr. Susan Pepin, Director of Neuro-Ophthalmology, provides definitive consultation for patients with disorders of the visual pathway and complex motility disorders. Working extensively with Neurology, Neurosurgery, and Pediatrics, she coordinates a multidisciplinary team approach for complex diagnostic evaluation and therapeutic management.

We are pleased to welcome our newest faculty member, Dr. Nicholas Uzcategui from The Doheny Eye Institute at USC. Dr. Uzcategui is fellowship trained in two subspecialties. He completed a Pediatric Ophthalmology fellowship at the Childrens Hospital of Los Angeles. He also completed fellowship training in Ophthalmic Plastic and Reconstructive Surgery at the Doheny Eye Institute. Dr. Uzcategui has extensive experience and special interest in pediatric patients with oculoplastic, craniofacial, and orbital disorders. He has lectured extensively and his research interests include vascular tumor malformations and pediatric ptosis. Dr. Christopher Soares will continue to provide consultation and surgical management for pediatric patients as well as for adult patients with motility disorders.

EDUCATION

All providers in the Section of Ophthalmology provide extensive education on-site at DHMC as well as regionally,

Christopher Chapman, MD
Section Chief
Assistant Professor of Surgery and Pediatrics
nationally, and internationally. Dr. Susan Pepin is director of resident and medical student education and coordinates basic science and clinical instruction for DMS medical students, medical residents, and neurology residents. The Section is proud of its collective efforts and success in matching DMS students each year to competitive ophthalmology programs. Dr. Stevens and Dr. Pepin are serving on the DMS admissions committee. Dr. Stevens is a consultant to ORBIS, Helen Keller International, and is leading development of eye care and training for the Dartmouth Medical School Global Health Initiative Project in Tanzania. She is also completing her Master in Public Health degree at The Johns Hopkins School of Medicine.

Dr. Christopher Fields continues to lead the development of an eye care hospital in Nicaragua and participates in the teaching of Dartmouth Medical Students. We are proud of this year’s Ophthalmic Technician Educational Program which was attended by nearly one hundred certified ophthalmic technicians from the New England and New York area. Our Grand Rounds program continues to attract national and international experts in basic science and clinical ophthalmology. Dr. Carol Shields, an international expert in ocular tumors from the Wills Eye Hospital, was honored as this year’s visiting Curts professor.

**RESEARCH**

Dr. Chapman will serve as a principal investigator for the national VEGF Trap study. This will be a randomized controlled clinical study investigating a novel therapeutic anti-angiogenic agent in patients with age-related macular degeneration.

Dr. Zegans, Dr. Miller, and Dr. Christine Toutain lead the National Eye Institute sponsored international “Steroids for Corneal Ulcer Trial” study. Dr Zegans and Dr. Toutain lead several studies in bio-film formation and the study of Pseudomonas Aeruginosa.

Dr. Pepin is studying neuro-ophthalmic predictors of Alzheimer’s disease using frequency doubling technology. She is also part of the clinical therapeutic study of fingolimod (FTY720) for patients with Multiple Sclerosis. In addition, she is studying saccadic eye movement in patients with vascular disorders.

**THE FUTURE**

The Section of Ophthalmology has demonstrated superb outcomes in every subspecialty discipline and will conduct formal reporting for 2007. The Section is committed to developing a digital medical records and imaging software platform for the near future. A fellowship training program is being considered for next year.

**FACULTY**

Alexandra Elliott, MD  
Assistant Professor of Surgery  
(departed)

David Campbell, MD  
Professor of Surgery

Christopher Chapman, MD  
Assistant Professor of Surgery and Pediatrics

Chris Fields, OD  
Instructor in Surgery

Peter Lapre, OD  
Instructor in Surgery

Donald Miller, MD  
Assistant Professor of Surgery

Susan Pepin, MD  
Assistant Professor of Surgery and Pediatrics

John Petrowski, III, OD  
Instructor in Surgery

William Rosen, MD  
Associate Professor of Surgery

Christopher Soares, MD  
Adjunct Assistant Professor of Surgery and Instructor of Surgery

Rosalind Stevens, MD  
Associate Professor of Surgery

Michael Zegans, MD  
Associate Professor of Surgery and Microbiology & Immunology
INTRODUCTION
This past year has seen the Section of Otolaryngology continue to change and evolve to meet the needs of our patient population and our institutional priorities of patient care, education, and research. We have said goodbye to Dr. Glenn Johnson and wish him well in retirement. We will welcome the addition of Dr. Giri Venkatraman, in a few months as a rhinology and sinus surgery specialist. New relationships with basic science research labs have bolstered our growing research program. Our involvement in medical student education continues to grow and our application for our own residency program in otolaryngology is moving forward. It seems that change and the opportunity for improvement await us at every turn.

PATIENT CARE
Pediatric otolaryngology has grown substantially during this past year with the addition of Dr. Mark Smith to our faculty. While our Section has a distinguished history of caring for our pediatric population, Dr. Smith’s training in complex airway management and craniofacial abnormalities takes us to a new level of expertise. An innovative otitis media clinic has been established which has greatly enhanced our capacity to see children with problems related to chronic otitis media.

Head and neck surgical oncology, under the direction of Dr. Benoit Gosselin along with Dr. Joseph Paydarfar, continues to be an area of growth. Our place as a regional referral center is firmly established. Dr. Paydarfar has started seeing head and neck cancer patients at the Manchester clinic, improving access for this patient group.

Otology and neurotology is being managed by Dr. Daniel Morrison. A replacement for Dr. Johnson is expected by the end of 2007. The lateral skull base program, which is run in conjunction with Dr. Kadir Erkmen from neurosurgery, continues to grow. The cochlear implant program for children and adults is thriving with comprehensive implant teams providing superlative care. A new program this past year has been the bone-anchored hearing aid implant (BAHA), an implantable device that is designed to help patients with conductive hearing loss and single-sided deafness.

General otolaryngology services will be substantially enhanced with the addition of Dr. Venkatraman. This area of subspecialization is new for DHMC and offers the opportunity for substantial growth. Dr. Venkatraman, formerly on faculty at Emory University, has a proven research track record as well as experience in medical systems consulting. His unique perspective is a highly valued addition to our Section.

A very exciting development in overall patient care and operational efficiency is the selection of Otolaryngology as the next unit to be evaluated by the Ambulatory Performance Improvement Department. Our practice manager, David Nalepinski, along with Dr. Morrison, have lobbied hard to be included in this process. We welcome the opportunity to work smarter, not harder and to improve patient access and satisfaction – and in consequence, staff and provider satisfaction.

EDUCATION
Our involvement in medical student education has grown. Dr. Morrison has been named Faculty Fellow in Medical Education by the Office of Research in Medical Education for 2007-2008.
He will be developing novel methods of teaching the otology exam to DMS students and then validating these methods. Dr. Morrison and Dr. Smith have expanded our regular participation in the Family and Community Medicine Clerkship. In addition, a new first-year and second-year elective in head and neck surgical anatomy has been added.

We continue down the path to our own residency in Otolaryngology. The next meeting of the Otolaryngology RRC is in August 2007. We are hopeful that our application will be approved at this meeting. Meanwhile, we continue to be fully immersed in educating our visiting UVM resident along with our rotating PGY1 residents.

**RESEARCH**

Dr. Louise Davies is a Robert Woods Johnson Faculty Scholarship recipient. This three-year career development award will support her work with the VA Clinical Outcomes Group and the CECS. She has published three papers in the past year on head and neck cancer epidemiology, thyroid cancer incidence, and tongue cancer recurrence.

Dr. Paydarfar published on wound complications and analysis of frozen section margins for head and neck cancer. He recently obtained a Norris Cotton Cancer Center grant to study EPR oximetry for free flap survival. Dr. Gosselin teamed with Dr. Paydarfar on the wound complication study. They both participated in the Dartmouth Polytrauma Conference and presented posters on the use of allograft for defect reconstruction and the use of holmium laser for sialotripsy at the American Academy of Otolaryngology national meeting in Toronto. Dr. Smith presented the results of a multi-institutional study on treatment of lymphatic malformations at the American Society of Pediatric Otolaryngology meeting and a paper on speech outcomes for velopharyngeal insufficiency at the American Cleft Palate-Craniofacial Association. His publications include a paper on tracheoesophageal fistula and a paper on prognosis in children with the Robin Sequence. Dr. Morrison presented position papers on treatment of Meniere’s disease and analysis of facial paralysis for the American Academy of Otolaryngology Equilibrium and Facial Nerve Disorders committees.

**FACULTY**

Sharon Bry, ARNP
Instructor in Surgery

Louise Davies, MD
Assistant Professor of Surgery and Community & Family Medicine

Peter Dixon, PA
Instructor in Surgery

J Oliver Donegan, MB, BCh
Professor of Surgery

JJ Benoit Gosselin, MD
Associate Professor of Surgery

Glenn Johnson, MD (retired)
Associate Professor of Surgery

Daniel Morrison, MD
Assistant Professor of Surgery

Joseph Paydarfar, MD
Assistant Professor of Surgery

Mark Smith, MD
Assistant Professor of Surgery and Pediatrics

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**Otolaryngology Gross Revenue**

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**Otolaryngology Cases**

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INTRODUCTION

This past year, the Section of Pediatric Surgical Specialties, which includes Pediatric General and Thoracic Surgery, Pediatric Neurosurgery, and Pediatric Urology, has continued to expand while undergoing some exciting changes. The Section was delighted when Dr. Paul Merguerian, Chief of the Division of Pediatric Urology, was appointed the Interim Medical Director of the Children’s Hospital at Dartmouth (CHaD).

This was an exciting process that included open forums and discussions with all providers and administrators of CHaD. This appointment is both an honor and a challenge for Dr. Merguerian and the Section, as we reorganize to balance the needs of the institution with the needs of our patients and their families. To help with additional patient care access, we were approved to recruit our third Pediatric Urologist, a position we expect to fill this coming year. Lynn Brenfleck, RN, BSN was also recruited as the nurse coordinator for the Section. Her primary responsibilities will be with the Pediatric Urology division; however, she will also be working with the Pediatric Neurosurgery patients. Mary Gheen, ARNP joined the Division of Pediatric Urology at the Manchester offices. Dr. Burton Harris has joined the Division of General and Thoracic Pediatric Surgery as a 0.2 FTE and will be seeing patients at the Lebanon campus on Thursdays. Dr. Harris recently retired as Surgeon-in-Chief of the Children’s Hospital at Montefiore in New York to relocate to Vermont.

PATIENT CARE

The Section saw growth in several new programs started last year. Dr. Daniel Croitoru, a world-renowned expert in chest wall deformities, has now performed 45 minimally invasive pectus excavatum repairs since his arrival in 2005. This year, the Section had a 60% increase in cases over last year. In addition, Dr. Croitoru performed eleven thoracoscopic decortications for empyema in children, which has been shown to significantly decrease recovery time and length of stay. Dr. Croitoru also performed seventeen patent ductus arteriosus ligations and released three vascular rings since his arrival. Dr. Susan Durham saw growth in her peripheral nerve surgery cases this past year as the Multidisciplinary Peripheral Nerve Clinic continues to expand. Dr. Ann-Christine Duhaime placed the first deep brain stimulator in a child this past year to treat spasticity and movement disorder. She also saw an increase in brain mapping and epileptogenic foci excisions for children with intractable seizures. Dr. Daniel Herz and Christine Danielson, ARNP have begun a biofeedback program for urinary and fecal incontinence after the purchase of biofeedback equipment with a grant from the Pink Smock Auxiliary.

Dr. Merguerian is scheduled to see patients in the new pediatric outpatient facility at Wentworth Douglas Hospital this fall. Dr. Laurie Latchaw continued seeing patients and operating at the Surgi-Center in Manchester Clinic three times a week and providing consultations for prenatally diagnosed surgical anomalies.

EDUCATION

Educational activities for the Section of Pediatric Surgical Specialists included didactic and informal sessions with medical students and residents in General Surgery, Neurosurgery, Urology, and Pediatrics. Dr. Merguerian was an invited speaker for the Annual Woodstock
Pediatrics Symposium as well as guest speaker at the Elliott and Concord Hospitals. Dr. Herz gave Pediatric Grand Rounds at DHMC and two presentations for CHaD Currents. Dr. Croitoru gave Pediatric Rounds in Rutland, Vermont. Dr. Durham gave Pediatric Grand Rounds at Elliott Hospital and Neurology Grand Rounds at the University of New Mexico. Dr. Duhaime was visiting professor at numerous national and international institutions. Sharon Haire, ARNP was a clinical instructor in inpatient pediatrics for nursing students from UNH. Dr. Merguerian finished his first year in the Masters Program at the Center for Evaluative Clinical Sciences. Dr. Durham has finished her second year in the same program.

RESEARCH
Dr. Durham and Dr. Herz are the Harmes Scholars for 2006 and 2007 respectively. This is awarded to a junior faculty member by a grant to the Department of Surgery to allow support for clinical, outcomes, or basic research over a three-year period. Dr. Durham is studying the effects of Head Impacts on Recreational Snowboarders. Dr. Herz is investigating bladder smooth muscle growth on a poly-lacto-glycolic acid scaffold matrix using chemical nano-etching. Dr. Duhaime received funding as an investigator on three new study grants in addition to her ongoing NIH grant. Clinical research projects include looking at the efficacy of sedated versus unsedated VCUG’s by Dr. Merguerian and a study of asymptomatic Chiari 1 malformations by Dr. Durham.

HIGHLIGHTS
In March 2007, Dr. Durham traveled to Hanoi, Vietnam on an International Outreach Program that provided craniofacial services to that area. Dr. Duhaime received approval from Dean Stephen Spielberg to begin a new Institute for Translational Brain Injury Research at Dartmouth or TBIRD. Dr. Duhaime is also working to establish a Chair in Pediatric Neuroscience with the aid of the medical school, Dartmouth Hitchcock Clinic, and CHaD.

FACULTY

PEDIATRIC GENERAL AND THORACIC SURGERY
Daniel Croitoru, MD
Associate Professor of Surgery and Pediatrics
Sharon Haire, ARNP, MSN
Instructor in Surgery
Burton Harris, MD
Assistant Professor of Surgery and Pediatrics
Laurie Latchaw, MD
Associate Professor of Surgery and Pediatrics

PEDIATRIC NEUROSURGERY
Ann-Christine Duhaime, MD
Professor of Surgery and Pediatrics
Susan Durham, MD
Assistant Professor of Surgery and Pediatrics

PEDIATRIC UROLOGY
Christine Danielson, CPNP
Instructor in Surgery
Daniel Herz, MD
Assistant Professor of Surgery and Pediatrics
Paul Merguerian, MD
Professor of Surgery and Pediatrics
INTRODUCTION

The Section of Plastic Surgery continues to focus on making quality improvement in our daily work. Our successes have been recognized by invitations to present at this year’s International Health Institute’s annual meeting as well as the Quality Conference for the American Academy of Otolaryngology.

Striving to ensure our patients are seen when they wish, we expanded service offering Shared Medical Appointments. Likewise, to improve access, we worked to balance clinical and surgical care within our practice, utilizing flexibility in our scheduling to accommodate patients and better utilize resources.

We expanded the concept of “surgeon booked in two rooms” in the main and minor OR suites, eliminating down time, and meeting our patients’ access needs despite a 1.3 FTE decrease.

Weekly team ‘huddles’ whereby physicians, nurses, and secretaries review upcoming schedules continued. We also introduced daily huddles with nursing and provider staff to improve daily flow, resulting in reduced work toxicity, improved team satisfaction, and communication – leading to understanding our co-workers’ roles and how our actions affect the patient experience.

The participation in last year’s Microsystems course brought together Plastics, Orthopaedics, and Rehab Medicine to address the need for a multidisciplinary hand service. A new team expands on this work to address more specifics of implementation at the Leadership Preventive Medicine Residency Overview of Clinical Microsystems Course. Our premise is the highest quality patient care and resident education can be delivered in a multidisciplinary setting,

where providers collaborate to meet the needs of patients.

We hired two new surgeons this year. Dr. Renee Comizio and Dr. Kenneth Leong both arrived in the summer 2007. They have skills which allow for the expansion of our services, both reconstructive and cosmetic.

Our retreat was highly successful this year and focused on celebrating successes and beginning new focused work – that of customer satisfaction. This has been shared with others at DHMC who have begun using some of our strategies.

EDUCATION

Our ACGME accredited residency training program graduated our first resident in the expanded three-year format. Two external rotations have been established to complement the experience; burn care at the University of Southern California and private practice experience in Portland, Maine.

RESEARCH

Our residents, Dr. Comizio and Dr. Christopher Jensen began a review of breast reconstruction cases and a study on post-bariatric patients undergoing body contouring surgery, respectively.

Dr. Christopher Demas is working with industry to assess the utility of DIRI (thermal imaging) as a tool for planning perforator flap surgery.

Dr. Carolyn Kerrigan is funded by 3M to study their new steri-strip S device. She is also collaborating with researchers from Memorial Sloan Kettering in NYC to develop outcomes measures for women undergoing breast surgery.

Dr. Dale Collins was named Principle Investigator on a multimillion dollar grant
from the Foundation on Informed Medical Decision Making, focusing on implementing shared decision making in General Internal Medicine and integrating it into the breast cancer population. She is also the clinical PI on an NCI grant to develop a platform for patient reported outcomes in oncology at DHMC.

Dr. Mitchell Stotland, along with Dr. Jeffrey Cohen from Neurology, is examining a novel dosing regimen for botulinum toxin in an effort to achieve a permanent paralysis effect. He is also exploring perceptual response to facial difference with Anne Krendl, Ph.D. at Dartmouth Psychological and Brain Sciences. He is studying The Effect of Glabellar Botox Injections on Emotional Processing, with Paul Whalen, Ph.D. at Dartmouth Psychological and Brain Sciences. Lastly, he began work to develop pediatric plastic surgical quality of life measures, collaborating with Dr. Andrea Pusic from Memorial Sloan-Kettering, and Anne Klassen, Ph.D. at McMaster University.

Dr. Joseph Rosen’s grant-funded research includes developing a healthcare system for Vietnam using a Windows-based handheld platform for a distributed networked telemedicine system (funded by Microsoft). Supported by the Institute of Security and Technology Studies (ISTS), Dr. Rosen evaluates various simulation systems for a range of threats against America such as transportation accidents, natural disasters, and nuclear/biological attacks. He is also funded by to work on a robot (HAZBOT) that is remotely controlled and being upgraded for response to hazardous situations.

**PHYSICIAN HIGHLIGHTS**

Dr. Kerrigan serves as President of the Plastic Surgery Educational Foundation this year. She was also the Kazanjian Visiting Professor at Mass General Hospital, Division of Plastic Surgery – the first female surgeon to be so honored. Dr. Demas continues to develop the Cosmetic program at DHMC, and Dr. Rosen has been active in reconstructive surgery services for soldiers returning from Iraq. Dr. Stotland completed his degree at the Center for Evaluative Clinical Sciences; is coordinating our second annual Radford Tanzer, MD Scientific Day; and was promoted to Associate Professor of Surgery and Pediatrics. Dr. Collins continues to gain national recognition. She was invited to showcase the integration of “Shared Decision Making and Computerized Patient Self Assessment” for women undergoing treatment at DHMC’s Comprehensive Breast Program. She was an invited speaker at the 2007 World Health Care Congress in Washington, DC and was selected as a Fellow in the 2007-2008 Class of the Hedwig van American Executive Leadership in Academic Medicine (ELAM) Program.

**FACULTY**

Forst Brown, MD  
Emeritus Active Professor of Surgery

E. Dale Collins, MD  
Associate Professor of Surgery and Community & Family Medicine

Renee Comizio, MD  
Assistant Professor of Surgery

Christopher Demas, MD  
Associate Professor of Surgery

Gerald Doherty, PA  
Instructor in Surgery

Carolyn Kerrigan, MD, CM, MSc  
Professor of Surgery

Kenneth Leong, MD  
Assistant Professor of Surgery

Joseph Rosen, MD  
Professor of Surgery and Radiology

Mitchell Stotland, MD, CM  
Associate Professor of Surgery and Pediatrics
INTRODUCTION

The past year has been a period of growth and evolution for the Transplant Program. We have expanded our services by providing kidney evaluation at the DHMC clinic in Manchester. This has improved our service to the Southern region and supports the increasing demand for transplant services. We have also successfully performed four pediatric transplants providing the only transplant care for children with end stage renal disease in New Hampshire and Vermont. We are pleased that Dr. Michael Chobanian has been appointed to the national pediatric transplant oversight committee for the United Network for Organ Sharing (UNOS). Dr. Chobanian will assist in the development of policies that govern the distribution of organs to children awaiting life saving organ transplant.

RENAL TRANSPLANTATION:

Kidney transplantation remains a key component of the transplant services provided at DHMC. Last year we performed over 50 renal transplants, and we are currently on pace to transplant over 60 patients in 2007. This growth has been accompanied by an increase in program referrals and an expanded patient waiting list. This ensures further growth and development of the DHMC transplant services.

We are particularly pleased with the response of several large insurers who have included DHMC in their center of excellence networks. This offers expanded opportunities for patients in Northern New England to receive their care locally. We are also pleased because inclusion in these networks provides evidence of the quality of care provided to patients at DHMC.

In cooperation with the transparency initiative at DHMC, the Transplant Program has expanded its website to provide improved information to our patients regarding the quality and timeliness of care at Dartmouth. We continue to have clinical outcomes that significantly exceed national averages and expected results given our population demographics. This data will now be available to all patients considering transplant through the website.

PANCREAS TRANSPLANT:

The pancreas transplant program has grown rapidly during the past 24 months. Last year, DHMC was the second largest pancreas transplant program in New England. We have now performed transplants on twenty patients with diabetes mellitus. For many of these patients, this represents the first time in over 30 years that they have not needed to use insulin. We are particularly pleased that the majority of our patients have returned to work and are able to participate actively with their families.

The success of the pancreas transplant program has led to recognition around the region. Dr. David Axelrod has been appointed to the national pancreas transplant oversight committee of UNOS as well as leading the regional pancreas transplant oversight committee.

NON-TRANSPLANT SURGERY:

This year we have initiated the Multidisciplinary Liver Tumor Clinic. The Clinic is co-directed by Dr. Brian Berk and Dr. Axelrod. This clinic provides comprehensive care for patients with primary liver malignancies as well as care for patients with end stage liver...

David Axelrod, MD
Section Chief
Assistant Professor of Surgery and of Community & Family Medicine
The Clinic is cooperatively staffed by Transplantation Surgery, Gastroenterology, Interventional Radiology, Palliative Care, and Oncology. During their evaluation, patients are able to have a complete assessment and care plan developed at a single visit. This has improved care coordination and patient satisfaction. We are particularly pleased as this Clinic is unique in Northern New England. We plan to expand these services into the Manchester clinic to better serve patients in the Southern Region with liver tumors.

The Transplantation Section has also become increasingly involved in the education of medical and surgical trainees. The Section now provides clinical rotations for residents in general surgery and urology as well as fellowship training for nephrology.

**LOOKING AHEAD**

To meet the expanding demand for transplant services, we are expanding the clinical staff. We look forward to welcoming Sarah Parmalee, NP. Ms. Parmalee is a nurse practitioner with excellent transplant experience who will assist us in providing care to the expanding number of successfully transplanted patients. We remain indebted to Cathy Pratt, RN, CTCC, senior transplant coordinator. Through her efforts, we have been able to markedly expand both the living donor transplant program and the pediatric transplant program.

This year also marks an important transition. Dr. Richard Dow has stepped down as Section Chief and will soon retire from his role as a transplant surgeon. The Section of Transplantation Surgery owes a great debt to Dr. Dow. Through his leadership and commitment, the program has grown and developed. We will deeply miss his kindness, humor, and care for patients which have been an anchor for the program.

**PROMOTIONAL AND EDUCATIONAL ACTIVITIES**

The Section has continued to contribute academically. This year we had several oral presentations at the national transplant meetings. We were particularly pleased with the work of Dr. David Zlotnick, one of the DHMC trainees. Dr. Zlotnick worked closely with Dr. Sal Costa in the Section of Cardiology and presented an exciting paper regarding the impact of pulmonary hypertension on transplant outcome. This paper has led to a research initiative to identify and treat pulmonary hypertension prior to transplantation. The Section also has ongoing research projects assessing the access to transplant services for rural populations and the economic implications of the changing organ supply.

**FACULTY**

David Axelrod, MD  
Assistant Professor of Surgery and Community & Family Medicine  
Michael Chobanian, MD  
Associate Professor of Surgery and Pediatrics  
Richard Dow, MD  
Professor of Surgery
INTRODUCTION

The Section of Urology enjoyed a clinically productive year, expanding its role as a regional referral service in oncology, female urology, and lower urinary tract reconstruction. Improvements in surgical volumes, especially in the areas of stone disease and obstructive uropathy, and an increase in new patient appointments, reflect the Section’s commitment to timely, comprehensive service to the DHMC community.

PATIENT CARE

Urology has completed a successful year in terms of improving care to our patients. Kelley Hamill Lemay, ARNP has expanded the scope of her practice to assist in the delivery of general urological services and the prostate screening program initiated by Dr. John Seigne. The continued growth in the volume of renal surgeries and cystectomies suggest that DHMC has successfully provided our community with a timely and comprehensive genitourinary oncological (GU) program. The Section was awarded a Quality Improvement grant to study the access to care and delivery of treatment to patients with muscle invasive bladder cancer.

With two experienced laparoscopic surgeons, the institution is positioned to remain on the forefront of this important and evolving approach to the treatment of GU malignancies. The work of Dr. John Heaney in laparoscopically-assisted pelvic surgery for prostate cancer has been an unalloyed success as witnessed by the fact that half of radical prostatectomies in New Hampshire last year were performed at DHMC. The Section anticipates that the acquisition of state-of-the-art robotic technology within the next year will ensure our institution’s preeminent role in this area of cancer treatment delivery. Collaborating with his colleagues in radiology, Dr. Seigne, having already established a successful PSA/prostate biopsy clinic, is initiating, in conjunction with the Section of Interventional Radiology, a minimally invasive program for the treatment of solid renal lesions. The laparoscopically-assisted live donor nephrectomy program continues to expand and represents an example of successful collaboration with the Section of Transplantation Surgery. Dr. Lori Lerner continues to provide a minimally invasive laser-based option for the treatment of benign prostatic hyperplasia (BPH). Employing holmium laser energy, obstructing prostatic tissue is either ablated or enucleated, resulting in decreased hospitalization and shortened convalescence. As a Section, we continue to look at ways to improve access and care to our patients.

EDUCATION

The Urology Residency Review Committee of the ACGME approved Dartmouth’s petition to train two residents per year. The approval recognizes the growth in clinical GU services at DHMC. Eight residents – two in the research year – allow greater flexibility in the educational block and guarantee a more uniform clinical experience for our trainees. The Section is planning for a site review by the RRC this fall. With full accreditation, we will begin to critically evaluate certain aspects of the block with a goal toward improving the educational experiences of our residents.

The pediatric urological experience of our residents under the direction of Dr. Paul Merguerian and Dr. Daniel Herz continues to expand in depth and volume.
FACULTY

The departure of Dr. Ajay Nangia leaves a void in the Section’s delivery of male factor infertility services. An energetic search for a dedicated endourologist and laparoscopically trained urologist reflects the growing demand for our oncologic and stone-based services.

Section faculty remains generously active in regionally and nationally organized urology; we count no fewer than ten officer and committee assignments in our various societies. Dr. Ann Gormley, Vice President of the Society of Female Urology and Urodynamics, has been invited to sit on the AUA Residency Training Task Force; she continues as her Society’s editor for the Journal of Urology and recently completed a term as chairperson of the AUA audiovisual committee. Dr. Lerner was named to represent the New England Section in the AUA Leadership Program and is the vice chair of the AUA Young Urologists committee. Dr. Seigne continues to represent New Hampshire on the NES-AUA Board of Directors, sits on the AUA Superficial Bladder Cancer Guidelines Panel, and was recently awarded a grant by the Center for Shared Decision Making to study the role of patient education in oncological treatment options.

RESEARCH

Recent graduate, Dr. Tom Schwaab, presented the DHMC experience with autologous dendritic cell vaccine in combination with immunomodulators in the treatment of metastatic RRC, work performed in conjunction with Dr. Seigne and Dr. Marc Ernstoff, at this year’s annual AUA meeting in Anaheim. Dr. Peter Steinberg, a PGY-4 resident, has executed a number of outcomes-based initiatives in the areas of stone disease and bladder cancer. Under the mentoring of Dr. Nangia, he has worked collaboratively with the Emergency Department to institute an efficient algorithm for the assessment and institution of pain treatment for patients presenting with renal colic. Working with Dr. Seigne and Dr. Bihrlle, he has developed a clinical pathway for the efficient evaluation, scheduling, and post-surgical management of patients with muscle invasive bladder cancer. Finally, the Section, in collaboration with Dr. Alan Schned of Anatomic Pathology, has developed a tissue microarray for renal cell carcinoma, a database which should prove invaluable in the years ahead.

FACULTY

William Bihrlle, III, MD
Associate Professor of Surgery
E. Ann Gormley, MD
Professor of Surgery
John Heaney, MB, BCh
Professor of Surgery
Kelly Hamill Lemay, ARNP
Instructor in Surgery
Ajay Nangia, MD
Associate Professor of Surgery (departed)
John Seigne, MB
Associate Professor of Surgery
Laura Stempkowski, ARNP
Instructor in Surgery
EDUCATION
We initiated our new five-year vascular surgery residency this year by recruiting a medical student in the national matching program. In addition, we accepted a current general surgery resident as a transfer into our program, so that on July 1, we matriculated a first-year and second-year resident into our new program. The curriculum consists of two years of vascular surgery and two years of general surgery rotations integrated over the first four years, followed by a final chief residency year in vascular surgery. This training will lead to board certification in vascular surgery, but not general surgery. In addition, we are continuing our traditional two-year vascular fellowship, which follows complete general surgery training, and recently received reaccreditation from the ACGME.

Dr. William Tanski, our eighteenth vascular fellow, completed training this year. He performed 214 open vascular operations and 406 interventional procedures during his two-year fellowship, including 35 carotid artery stent procedures.

Section faculty delivered 59 international, national, and regional continuing medical education presentations this year. The Section also hosted four visiting professors, including the twelfth annual Rodger E. Weismann Visiting Professor, Dr. Elliot Chaikof, Professor of Surgery, Chief, Division of Vascular Surgery at Emory University in Atlanta, Georgia.

Vascular Surgery conferences are held each Monday when faculty and trainees have protected time to attend. They include a bi-weekly clinical conference at which interesting cases are discussed, a bi-weekly Clinical Didactic Conference, a bi-weekly Morbidity & Mortality conference, a bi-weekly Research Conference, and a weekly pre-operative conference to discuss procedures to be performed that week. Journal Club is held twice per month to review contemporary articles of interest, and a Basic Science Conference and Vascular Laboratory Conference are held monthly.

RESEARCH
The vascular biology research laboratory continues to focus on smooth muscle cell biology, investigating the molecular regulation of events leading to smooth muscle proliferation. Dr. Richard Powell and Dr. Eva Rzucidlo have NIH funding for this research. Translational research concerning gene therapy using hepatic growth factor to stimulate lower extremity angiogenesis continues by Dr. Powell. Dr. Mark Fillinger is the national principal investigator for the Pythagoras endoprosthesis trials for Abdominal Aortic Aneurysm repair, and continues to serve as the local principal investigator for multiple endovascular AAA research protocols. He continues his research to predict AAA rupture risk based on wall stress measurement using 3-D CT data, with an international trial currently underway. Dr. Powell is the local principal investigator for four carotid artery stent trials. Dr. Brian Nolan received three new grants this year to study the quality of life of patients with known aortic aneurysms. The Vascular Study Group of Northern New England continues to accrue registry data from hospitals in Maine, New Hampshire, and Vermont, now with more than 6,000 vascular surgery operations analyzed to provide hospital-specific feedback for improving outcomes. The first scientific presentation of the group was made at the Society for Vascular Surgery, which demonstrated excellent regional outcomes and improved usage of preoperative medication based on process improvement efforts. Research activity resulted in eighteen peer-reviewed journal articles and one book chapter published by the
faculty this year, in addition to 47 presentations at surgical society meetings. Section faculty participated in 26 external research grants and contracts this year.

PATIENT CARE
Reflecting national trends, the volume of open vascular operations remained stable, while interventional and endovascular procedures continued to increase this year. Under the direction of Dr. Fillinger, thoracic endovascular procedures have fully integrated into our practice for aortic aneurysm and dissection. Hybrid procedures that incorporate open and endovascular procedures are becoming more common such that one operating room will be equipped with fixed radiology imaging equipment this year. This will facilitate the further development of these procedures, which are increasing for the treatment of aortic disease that requires either debranching of major aortic branches by open bypass prior to endografting, or creation of branched or fenestrated aortic grafts that allow extension of the anchor zone into the visceral aorta to treat thoracoabdominal aneurysms with a less invasive approach.

FACULTY ACTIVITY
Section faculty continued to be extensively involved in national and regional vascular societies where they hold twenty officer or committee roles, in addition to nine positions on the editorial boards of peer-reviewed journals. Dr. Jack Cronenwett was elected an honorary member of the Society for Clinical Vascular Surgery. Dr. Daniel Walsh was named as President-elect for both the Frederick A. Coller Society and New England Society for Vascular Surgery. Dr. Robert Zwolak was elected Vice-Chair of the Governors’ Committee on Socioeconomic Issues for the American College of Surgeons. Dr. Fillinger was named to Editorial Board for the Annals of Vascular Surgery. He was also elected to the NIH/NHLBI Data Safety Monitoring Board for SCCOR.

FACULTY
Christopher Alessi, MD
Assistant Professor of Surgery (departed)
Jack Cronenwett, MD
Professor of Surgery and Community & Family Medicine
Mark Fillinger, MD
Professor of Surgery
Brian Nolan, MD
Assistant Professor of Surgery
Richard Powell, MD
Professor of Surgery and Radiology
Eva Rzucidlo, MD
Assistant Professor of Surgery
Daniel Walsh, MD
Professor of Surgery
Mark Wyers, MD
Assistant Professor of Surgery
Robert Zwolak, MD, Ph.D.
Professor of Surgery

VASCULAR RESEARCH LAB
Mary Jo Mulligan-Kehoe, Ph.D.
Research Associate Professor of Surgery
Kathleen Ann Martin, Ph.D.
Research Assistant Professor of Surgery

FACULTY
Christopher Alessi, MD
Assistant Professor of Surgery (departed)
Jack Cronenwett, MD
Professor of Surgery and Community & Family Medicine
Mark Fillinger, MD
Professor of Surgery
Brian Nolan, MD
Assistant Professor of Surgery
Richard Powell, MD
Professor of Surgery and Radiology
Eva Rzucidlo, MD
Assistant Professor of Surgery
Daniel Walsh, MD
Professor of Surgery
Mark Wyers, MD
Assistant Professor of Surgery
Robert Zwolak, MD, Ph.D.
Professor of Surgery

VASCULAR RESEARCH LAB
Mary Jo Mulligan-Kehoe, Ph.D.
Research Associate Professor of Surgery
Kathleen Ann Martin, Ph.D.
Research Assistant Professor of Surgery

Vascular Surgery Gross Revenue

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
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Vascular Surgery Cases

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<tr>
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<tr>
<td>FY07</td>
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INTRODUCTION
Oral and Maxillofacial Surgery provides a wide array of care, from primary to tertiary levels. Complex cases involving pathology and structural deformities of the maxillofacial region are referred to Dartmouth-Hitchcock from the tri-state area.

PATIENT CARE
With a strong desire to improve patient access, the team worked to bring Shared Medical Appointments for wisdom teeth to the practice this year. In this setting, groups of patients in need of wisdom teeth extractions are seen together for consultation. We hope to create an optimal learning environment for our patients and staff during these visits. Likewise, streamlining the consultation and required surgical experience is a strong goal for us. We are exceedingly proud of our high patient satisfaction results this year and look forward to seeing how such visits impact our survey results.


Dr. Addante is an active participant in a number of DHMC interdisciplinary care clinics. He is a key member of the Craniofacial Anomalies Clinic which was expanded this year. In addition, he participates in Otolaryngology’s Head and Neck Cancer Care Team. He also provides care for patients from the Hematology Oncology Service who typically exhibit coagulation disorders and immune suppression along with their need for oral surgery care.

EDUCATION
Locally, Dr. Addante hosts monthly meetings for the hospital dental staff and presents periodic lectures to members of the dental community on topics of mutual interest.

On the national level, he has been an active member on the Committee on Ethics and Professional Conduct of the American Association of Oral and Maxillofacial Surgeons. He also serves as regional consultant to the American Board of Oral and Maxillofacial Surgery. In addition, he has been a reviewer of several articles for the Association this year.

Although there is no residency in Maxillofacial Surgery at DHMC, Dr. Addante maintains close affiliations with the sections of Plastic Surgery and Otolaryngology and is a valued contributor to the resident teaching programs in each of these specialties.
To strengthen the academic mission of the Department of Surgery, Dr. Sam Finlayson, a general surgeon and Associate Professor of Surgery, was appointed Vice Chair for Academic Affairs and Faculty Development. For the last four years, Dr. Finlayson has been co-director of the Surgical Outcomes Assessment Program (SOAP) within the Department of Surgery. The SOAP has coordinated the Department’s in-house surgical outcome registry, and provided outcomes reports and technical assistance to the clinical faculty. His new role will expand his responsibilities to include specific efforts to promote and facilitate academic opportunities for faculty within all of the departmental sections. Specifically, Dr. Finlayson’s charge is to:

- Coordinate and expand collaborative relationships with other academic resources at Dartmouth, including working with other departments at DHMC, Dartmouth Medical School, and The Dartmouth Institute for Health Policy and Clinical Practice (formerly the Center for Evaluative Clinical Sciences).
- Work in collaboration with section chiefs in the Department of Surgery to develop specific academic goals for individual faculty members, to recruit mentorship to support these goals, and to help identify collaborative opportunities and resources.
- Advise the Chair and section chiefs with regard to allocation of internal resources intended to enhance academic faculty development, including the Harmes Scholar Program and funds designated for academic enhancement.
- Lead efforts to enhance the academic content of department-sponsored conferences and other educational activities.

In this new role, Dr. Finlayson will continue to work with Donny Likosky, Ph.D. and John Higgins in the Department of Surgery, and will report directly to the Department Chair.
The first endovascular AAA repair was performed at DHMC in 1996, as part of the first U.S. clinical trial for endovascular AAA repair. Since then, over 500 endovascular aortic repairs (EVAR) have been performed at DHMC, and the program is recognized among the best in the country and the world. We have been involved in numerous FDA-controlled clinical trials for endovascular repair of abdominal and thoracic aortic aneurysms, and these trials typically involve only 15-20 centers around the country. One of our vascular surgeons, Dr. Mark Fillinger, has been the national Principal Investigator on several national trials and studies.

The Section of Vascular Surgery at Dartmouth has a distinguished record of contributions to the clinical management of abdominal aortic aneurysms. Earlier contributions included studies on the growth rate of aneurysms and their corresponding risk of rupture. More recently, physicians at Dartmouth were among the first in the region to manage abdominal and thoracic aortic aneurysms using an endovascular approach and they were the first in Northern New England to be formally credentialed to implant thoracic endografts. Dartmouth also published the first clinical series, demonstrating EVAR could be performed with a less invasive preoperative imaging workup yet still have outcomes equal or better than any comparable published series. Along with the computer innovation mentioned below, these accomplishments allowed Dartmouth vascular surgeons to “align” the patient’s own vascular anatomy and it enables the surgeon to adjust sizing and placement using the computer program as part of preoperative planning. The computer program also enabled Dartmouth vascular surgeons to demonstrate that 3-D volume and computation of specific points of stress on the aneurysm wall were superior to diameter in determining the risk of aneurysm rupture and the success of endovascular repairs. Many of our computer-based innovations have involved the ongoing collaboration with Thayer School of Engineering and M2S here in Lebanon, NH - providing evidence of the multidisciplinary nature of translational research within the Section.

The endovascular aneurysm program at DHMC has also been able to extend endovascular technology to other innovative applications besides elective aneurysm repair, including the first center in northern New England to perform EVAR for ruptured abdominal aortic aneurysms, thoracic aortic dissections, and thoracic aortic ruptures. DHMC is the first (and still the only) center in New England to perform branched endografts for thoracoabdominal aortic aneurysms. These latter cutting-edge applications involve extending endograft technologies to off-label use, for patients who have extremely poor alternatives with open repair and might otherwise not be offered repair option. Many of the patients referred to DHMC for conventional endografts, clinical trials, or modified endografts are referred specifically because they are felt to have no good option for repair at other centers. We are proud of the endovascular program for aortic aneurysms and other aortic pathology, and gratified to be able to help so many patients with these difficult problems.

Endovascular repair of aortic aneurysms involves a minimally invasive approach that provides an alternative to the large abdominal or chest incisions used for traditional open surgical repair. In the endovascular approach, a stent-graft is delivered remotely under fluoroscopic guidance over a guidewire using a compact delivery system. Multiple components may be used, akin to “building a ship in a bottle.” Using small groin incisions to access superficial arteries, the surgical stress of the procedure is markedly reduced. For example, with a routine endovascular abdominal aortic aneurysm (AAA) repair, the patient goes home the next day instead of 5-7 days later.

Mark Fillinger, MD
Professor of Surgery
FACE OF A CHILD PROGRAM

The Craniofacial Clinic (CFC), Face of a Child Program, offers the highest caliber medical care to individuals affected by congenital anomalies of the cranium, face, ears, nose, and oral cavity. The clinic makes available comprehensive, interdisciplinary services, striving to provide patient-centered care that is safe, equitable, timely, efficient, effective, reliable, and innovative.

Craniofacial anomalies occur in more than 1/500 births. Most affected children are neuro-developmentally normal, have psychological insight into their deformity, and therefore may be influenced by their facial difference in truly profound ways. Craniofacial deformities are often part of complex congenital syndromes, and many of our patients suffer breathing, feeding, hearing, visual, and/or speech/communication compromise. Furthermore, many of the children treated in the Face of a Child Program are at risk for various forms of psychosocial disorder.

Due to the complex nature of many of these conditions, care is often required from a multitude of medical specialists. Bringing diverse providers and patients together in one setting, the Face of a Child Program lessens the logistical and communication burden placed upon families. Patient care is also coordinated with non-clinic providers including CHaD specialists in Pediatric Neurosurgery, Child Development, Sleep Disorders Center, Pediatric Ophthalmology, etc. Without its interdisciplinary model of care, families would be forced to make numerous office visits while trying to integrate and balance assorted — and often overlapping — medical recommendations. CFC providers electronically document their findings and a combined Craniofacial Clinic note is uploaded to the Clinical Information System.

This past year has been a time of significant growth for the Clinic. Due to increasing referrals, the CFC schedule has been extended from a half day per month (2005), to two half days (2006), to one and a half days each month (summer 2007). The number of unique patient appointments has more than doubled over the past two years rising from 123 to 253.

Pediatric Otolaryngologist, Dr. Mark Smith, joined the CFC team this year. Increasing ENT participation has allowed for the performance of more diagnostic studies and greater coordination of care outside of clinic between the disciplines of Plastic Surgery, ENT, and Speech Pathology.

Belinda Ray, the Clinic Coordinator, assumed a full-time position in January, allowing for improved contact with patients/families, assistance with financial needs, and the development of a critical support network to connect families to each other in a supportive context. Improvement projects are also now being focused upon in the CFC including the development of a patient-held record, tracking of patient visits through a relational database, and providing improved educational resource material to families.
The formal engagement of faculty and residents in the third-year clerkship Director of Learning Program has successfully reminded us that learning is a two-way street. While fund of knowledge typically resides on the side of the ‘teacher’; we are all ‘students’ in our understanding of core competencies such as communication, interpersonal skills, and professionalism. We recognize understanding concepts as a role equal to the acquisition of factual knowledge.

Formalizing this learning process provides the opportunity to model the core competency of self-learning. Incorporating these core clinical competencies into the clerkship’s formal curriculum allows minimal transition in expectations as students move from their third-year clerkship into fourth-year sub-internship programs, and onto residencies.

The eight rotation options, Vascular, Trauma/Consult, Transplant/IBD, Oncology/Breast, Cardiothoracic, Pediatric, Minimally Invasive, and the multidisciplined (General, Vascular, Plastics, ENT, Orthopaedics) VA rotation, continue to offer a broad view of the many disciplines within surgery, as well as providing students with a diversity of disease and practice models. All students continue to participate in night call with the Trauma/Consult team. This configuration allows all students a reasonably balanced experience of elective and emergent surgical situations. Night call also allows students to routinely interact and experience non-core surgical disciplines such as Orthopaedics, Neurosurgery, Urology, Plastics, and Ophthalmology. There is a formal didactic morning every Wednesday, starting with Surgical M&M and Grand Rounds and followed by student-focused case studies and presentations.

The Class of 2007 graduated with 18.5% of students entering a surgical field, above the national average of 10 - 12%. Dr. Theodore Yuo was this year’s recipient of the Arthur Naitove Surgical Scholar Award and he will receive his training at University Health Center of Pittsburg-Vascular Surgery. The Naitove Award commemorates one of Dartmouth’s great clinician scientists and is awarded by the Faculty of the Department of Surgery. Dr. Todd Burdette, a General Surgery resident going into Plastic Surgery, was this year’s recipient of the Thomas P. Almy Housestaff Teaching Award. This honor is awarded to a resident by the graduating medical school class. This year marks the fourth year in a row, and the ninth time in eleven years, that a surgery resident has been awarded this unique honor.

For additional information on the Surgery Clerkship and the Sub-Internship Program, the web page remains active and is updated regularly.

The Clerkship Advisory Board meets monthly and is comprised of individuals actively involved in student education. The committee conducts ongoing reviews of the curriculum, examination process, and student progress. The group makes revisions as necessary to maintain a current curriculum and to advance the educational climate. It is the forum by which the surgery clerkship formally interacts with the Dean’s Office in student and curriculum issues.

Kenneth W. Burchard, MD
Surgery Clerkship Co-Director, Consult/Trauma Faculty Learning Leader
Professor of Surgery and Anesthesiology

Horace F. Henriques, MD
Surgery Clerkship Co-Director, General Surgery Faculty Learning Leader
Associate Professor of Surgery
At present, the residency program in General Surgery is training twenty categorical general surgery residents (four residents at each of the five levels of residency training). In addition, three categorical urology residents, four categorical orthopedic residents, two categorical vascular surgery residents, one categorical neurosurgery resident, and four non-designated preliminary surgical residents also participate in general surgery rotations.

Residents in 2007 finished their five years with an average of 1,331 cases. This represents a 13% increase compared with 2006 and a 21% increase since 2004. Along with the increase in number, the complexity of cases has increased as measured by the case mix index and specific measures for trauma patients.

One faculty member, Dr. Gina Adrales, was specifically recruited in December, 2005 to be the Director of the Surgical Simulation Laboratory. Dr. Adrales’s responsibilities include oversight and coordination of the laparoscopic and trauma simulations as well as training in basic surgical skills.

The training program continues to be supported by a data center. The center captures information on all patients who undergo surgical procedures at Mary Hitchcock Memorial Hospital, and collects 30-day outcomes on all patients operated upon by a member of the Department of Surgery. Specific complications are identified, collated, and sorted into defined categories. Data from the center are made available in a confidential manner to house officers and faculty, and are used to inform the discussion at the weekly Morbidity & Mortality conference.

The rotation at Concord Hospital was modified so that second-year and fourth-year residents rotate throughout the year. This change allowed the program to take further advantage of the robust clinical volumes and increasing case complexity occurring in southeastern New Hampshire.

The teaching conference schedule within the training program remains robust. Fourteen conferences are available on a weekly basis on various services. These include GI Tumor Board, Trauma Rounds, and the Surgical Seminars as well as weekly Morbidity & Mortality conference.

Residents in the training program delivered eight peer reviewed publications and seven scientific presentations at national and regional meetings.

AWARDS

Due to the continued programmatic development and related growth of the faculty as well as the need for more surgeons to care for an aging population, the training program asked for an early review by the Residency Review Committee in Surgery to allow an increase in the size of the training program from four approved categorical positions per year to five. The RRC’s decision is pending.
CLINICAL TRIALS

Dale Collins, MD
Integrating Decision Support in Breast Cancer Care
Contour Profile Gel Mammary Prosthesis

Mark Fillinger, MD
Cordis Endovascular Quantum LP
- Protocol No 001-4601
Gore 04-04 - Protocol # AAA 04-04
Gore (Modified) Bifurcated Excluder - 99-04
Gore Excluder 31 mm - Protocol # AAA 03-02
Zenith - Protocol TX2™ Thoracic TAA
VALOR Study - Protocol AneuRx

Carolyn Kerrigan, MD
CLOSEX

William Laycock, MD
SAGES

Donald Likosky, Ph.D.
Mechanism of Neurologic Injury of Cardiac Surgery
Sorin Embolic Project
Redesigning Cardiac Surgery to Reduce Neurologic Injury

Ajay Nangia, MD
BPH Registry - Protocol # L8890
The Role of Vitamin D and the Vitamin D Receptor in Male Infertility

Richard Powell, MD
Genzyme/IMPROVE Study - Protocol # PADM00704
RECOVER - Protocol # 1160.53
EXACT - Protocol # 640-0063-01
VIVA - Protocol # 17683
AneuRx 0205
Empire - Protocol # G060054

Mitchell Stotland, MD
Botox Intervals R&E – MAS

John Sutton, MD
Laparoscopic-Assisted Colectomy

Michael Zegans, MD
Inhibitors of Phospholipase
FEDERAL & CORPORATE

Barth, Richard J.
Ultrasound Guided Cryoblation
ACOSOG Studies Z10 and Z11

Bergeron, Jeffrey
Evaluation of Prototype Electrosurgical Instruments

Collins, E. Dale
Implementing Shared Decision Making in Clinical Care

Cronenwett, Jack
Northern New England Vascular Surgery Quality Improvement Initiative
Ultrasound Screening for Abdominal Aortic Aneurysm

Duhaime, Ann-Christine
Trauma to the Immature Brain: Response, Repair, Treatment
Biomechanics of Pediatric Head Trauma

Eisenberg, Burton
The Molecular Actions of Imatinib Mesylate in GISTs

Finlayson, Samuel
Medical and Surgical Treatment of Esophageal Reflux
Evaluating the Safety and Effectiveness of Endovascular Stent Grafts for AAA

Heaney, John
Prostate Cancer Prevention Trial
PCPT Companion Long Term Follow Up Study for Men with Diagnosed Prostate Cancer
Selenium and Vitamin E Cancer Prevention Trial (SELECT)

Hoopes, P. Jack
Identify the Activated Polyethylene Glycol for Modifying EPO
Intratumoral Iron Oxide Nanoparticle Hyperthermia and Radiation Cancer Treatment
Endoluminal Pyloric Sphincter Injections in a Canine Model
Comparison of Surgery versus Endoscopic Closure of a Large Linear Colon Perforation
Evaluation of Carrier Fiber Assembly for Tissue Structures
GlycoFi Rituxan Project
Noninvasive Chemical Cornea Reshaping Using a Feline Model-Phase II
Evaluation of Carrier Fiber Assembly for Tissue Structures

Johnstone, David
Johnstone Agreement

Keetay, Victoria
Dynamic Assessment of Hearing Aids

Kerrigan, Carolyn
Carpal Tunnel Syndrome: Diagnosis & Treatment Study

Likosky, Donald S.
Redesigning Cardiac Surgery to Reduce Neurologic Injury

Martin, Kathleen
Hedgehog Pathway

Mulligan-Kehoe, Mary Jo
Mechanisms of PAI-1 Induced Anti-Angiogenesis
Philips Master Collaborative Research Agreement

Powell, Richard
Endothelial Cell Regulation of Smooth Muscle Phenotype
Carotid Revascularization Endarterectomy vs Stenting Trial (CREST)

Rzucidlo, Eva
mTOR Regulation of VSMC Differentiation

Zegans, Michael E.
Biofilm Formation Associated with P. aeruginosa Infection of the Eye Steroids in Corneal Ulcers Trial
THE ARThUR NAITOVE DlSTINGUISHED TEACHING AWARD

The Arthur Naitove Distinguished Teaching Award was instituted by the residents in 1997 to recognize a faculty member’s commitment to the housestaff. The award is presented to an attending staff for their commitment to enhance the residency educational experience. The 2007 recipient was Dr. Paul Kispert.

THE HARMESSURGICAL SCHOLAR AWARD

The Harmes Surgical Scholar Award is awarded annually to a faculty member at the Assistant or Associate Professor level in the Department of Surgery. The annual financial award is provided over three years to facilitate career development by strengthening individual professional skills; enhancing contributions to the academic, clinical, and administrative programs of the Department; improving the regional and national visibility of DHMC; and increasing each individual’s sense of professional competence and satisfaction. The Harmes Scholar for 2007 was Dr. Daniel Herz.

THE SURGICAL CHAIR’S AWARD

Each year, the Chair of the Department has the opportunity to acknowledge the contribution of an individual, or several individuals, by distributing the Chair’s Award. The Award is intended to celebrate individual accomplishments which have especially reflected the ideals or goals of the Department and The Chair is expected to sharpen the focus by identifying a particular area or aspect of the Department’s aspirations to be highlighted in the annual selection.

In 2006, two individuals who worked over several years to develop distinctive clinical programs, which have brought distinction to the Institution and improved care and outcomes to our patients, were selected to receive the Chair’s Award. Dr. John Sutton was recognized for his special commitment to the surgical care of patients with esophageal neoplasms, and Dr. Mark Fillinger for his leadership in the endovascular management of arterial aneurysms. Both of these individuals have contributed to their specialty areas in many other ways – Dr. Sutton through his long-term interest and leadership in the area of trauma care, and Dr. Fillinger through his research with finite element analysis and the prediction of the risk of aneurysmal rupture.

Paul Kispert, MD
Section of General Surgery

Daniel Herz, MD
Section of Pediatric Surgery

John Sutton, MD
Section of General Surgery

Mark Fillinger, MD
Section of Vascular Surgery
DEPARTMENT OF SURGERY

Donald S. Likosky, Ph.D.


CARDIOTHORACIC SURGERY

Lawrence J. Dacey, MD

William C. Nugent, Jr., MD

GENERAL SURGERY

Richard J. Barth, Jr., MD


Kenneth W. Burchard, MD

Valerio F, Olsen A, Houston D, Robison C.

Burton L. Eisenberg, MD, FACS


Eisenberg B. Hughes D. The Synthetic Triterpenoid CDDO-Im Inhibits Fatty Acid Synthase Expression and has Antiproliferative and Proapoptotic Effects in Human Liposarcoma Cells. Cancer Investigation 2007. (Accepted for publication)


Samuel R. G. Finlayson, MD


Finlayson S. Delivering Quality to Patients. JAMA 2006; 296:2026-27


Rajan Gupta, MD


PUBLICATIONS


Horace F. Henriques, MD

NEUROSURGERY

Perry A. Ball, MD


Patricia B. Quebada, MD

David W. Roberts, MD


Nathan E. Simmons, MD

OPHTHALMOLOGY

Michael E. Zegans, MD


OTOLARYNGOLOGY

Benoit J. J. Gosselin, MD
Krin T, Levy N, Gosselin, BJ, Rosen W, Zegans M. Systemic T-cell Lymphoma Presenting as Sclerouveitis. Cornea. (Accepted for publication)

Joseph A. Paydarfar, MD

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PUBLICATIONS

Mark C. Smith, MD

PEDIATRIC SURGERY

Daniel Croitoru, MD


Ann-Christine Duhaime, MD


PLASTIC SURGERY

E. Dale Collins, MD


Christopher P. Demas, MD

Carolyn L. Kerrigan, MD


SURGICAL LAB RESEARCH

P. Jack Hoopes


PUBLICATIONS

Selting KA, Waldrep JC, Henry CJ, Hoopes PJ et al: Feasibility and Safety of Targeted Cisplatin Delivery to a Select Lung Lobe in Dogs via Areoprobe® Incorporeal Nebulization Catheter (INC). Cancer Res. (Accepted for publication)

TRANSPLANTATION SURGERY

David A. Axelrod, MD, MBA


Experimental Designs). Clinical Researche Interventional Study Designs (Quasi-

Axelrod D


Mark F. Fillinger, MD


Mary Jo Mulligan-Kehoe, Ph.D.


Brian W. Nolan, MD


Eva Rzucidlo, MD


Mark C. Wyers, MD, FACS


VASCULAR SURGERY

Jack L. Cronenwett, MD


Mary Jo Mulligan-Kehoe, Ph.D.


Brian W. Nolan, MD


Mark C. Wyers, MD, FACS


Eva Rzucidlo, MD


Mark C. Wyers, MD, FACS

Robert M. Zwolak, MD, Ph.D.
