## Yale Department of Surgery

This Issue: GLOBAL SURGERY AT YALE OUR HERITAGE

SURGICAL EDUCATION RESEARCH IN SURGERY





**Nita Ahuja, MD, MBA, FACS** William H. Carmalt Professor of Surgery and Oncology Chair, Department of Surgery Surgeon-in-Chief, Yale-New Haven Health Yale University, School of Medicine

Please welcome our new faculty: Tomer Avraham, MD, Assistant Professor, Plastics Ramesh Batra, MD, Assistant Professor, Transplantation Danielle Bertoni, MD, MPH, Assistant Professor, Surgical Oncology Andrew Dhanasopon, MD, Assistant Professor, Thoracic Surgery Danielle Haakinson, MD, Assistant Professor, Transplantation Cecilia Helwig, MD, Assistant Professor, Otolaryngology Douglas Hildrew, MD, Assistant Professor, Otolaryngology Naiem Nassiri, MD, Associate Professor, Vascular Surgery Heather Osborn, MD, Assistant Professor, Otolaryngology Tristen Park, MD, Assistant Professor, Surgical Oncoogy

Greg Tietjen, PHD, Assistant Professor, Transplantation

### Dear Colleagues and Friends,

I am honored to be the 15th leader of the Department of Surgery and the first female chair in its 200+ year history. Our Department has been a surgical leader with many firsts including development of the first artificial heart and first use of chemotherapy. Our continued commitment to improving patient outcomes is evidenced by our research work in biomedical engineered nanoparticle therapies, 3-D printing of tissues, and TRICUSPID studies. From my very first visit to Yale, I felt that collaborative spark where faculty, residents, and students are interested in improving health. Having trained and developed my surgical experience at Duke University and John Hopkins, I am a passionate advocate for mentorship of trainees, staff, and faculty. I want these newsletters to be a vehicle for you to hear about highlights of our tripartite missions of research, education, and clinical care. In this newsletter edition:

- We welcome our 12 new faculty members
- Read about one of our clinical Global Surgery Programs in Nicaragua and the great work they are doing there.
- Our new Cardiac Surgery Section Chief Dr. Arnar Geirsson discusses research advances in his section
- Dr. Walter Longo, Director of Surgical Education, continues his discussion of our departmental heritage, this time documenting the history of the Plastics Surgery section. In addition, he recognizes the memory of a valued member of our family, Dr. Jeffrey Moley.

I hope you find this newsletter informative and enjoyable. It is our goal to provide you with insight and perspective into the valuable work being done within the department. We appreciate your interest in our great department.

Sincerely,

Please follow the important happenings of the Yale Department of Surgery on our Twitter Account **@yalesurgery** 



# Hand Help: A Model for Hand Surgery in the Global Arena

Marc E. Walker, MD, MBA Chief Resident, Plastic & Reconstructive Surgery

Βv

Alex Sun, BS Medical Student, Yale University School of Medicine **Cyril Gary, BA** Medical Student, Yale University School of Medicine Jack Kanouzi, MD Postdoctoral Research Fellow, Plastic Surgery

In 2017, a team of 34 individuals traveled to Managua, Nicaragua as a part of a weeklong surgical mission trip to provide care for individuals in developing nations with upper extremity disease. This team of surgeons, anesthesiologists, nurses, students, therapists, and interpreters was organized by Hand Help, Inc., a nonprofit organization founded in 2005 by Dr. Grant Thomson, Professor of Plastic Surgery and Director of the Yale Hand and Comprehensive Microsurgery Center. Since its founding, Hand Help has treated more than 1,800 patients in developing countries with congenital and traumatic diseases of the upper extremity. In 2017, the group performed 91 cases, ranging from wrist cyst excisions to complex tendon and peripheral nerve transfers in children and adults.

#### THE PROBLEM

Having adequate hand function is crucial for our daily living. Our hands allow us to interact with the world and society. In lower-resource countries, many individuals critically rely on the use of their hands for the ability to work. Eighty percent of the population in Nicaragua are engaged in manual labor including agriculture and factory work. For children with congenital hand deformities, many parents worry that their children will have no future. Operative interventions need not be overly complex or time-consuming to make a world of difference in the lives of these patients. It is important to recognize that resource-poor populations also suffer from disease common to resource-abundant populations. One common pathology that we observed during this mission was carpal tunnel syndrome, which can seriously impair an individual's ability to work or perform day-to-day life activities. In a matter of minutes, a carpal tunnel release can provide almost immediate resolution of symptoms with minimal risk of complications or postoperative management.

#### LOGISTICS

Members of the Hand Help team began planning for several months prior to the mission. Each trip costs approximately \$30,000–35,000. Fundraising campaigns are typically launched online and take place at local charity events. Aside from the monetary costs, all medical supplies were donated from hospitals and manufacturers, and all trip participants volunteer their time every year. In the process of sharing our cause with the New Haven community, several local businesses supported our cause, including CandiTopia (located at 1022 Chapel Street, New Haven CT), which donated \$4,000 to last year's mission.

This past year, Hand Help partnered with Hospital Alemán Nicaragüense (HAN), located in Managua. While this is a large 300-bed hospital that is staffed by several attending surgeons and surgical residents, there are still limited resources and patients typically wait for months to be treated.

The Hand Help team arrived in Managua on a Saturday, and Sunday was then spent in our intake clinic, triaging patients at HAN. Often, these were

In lowerresource countries, many individuals critically rely on the use of their hands for the ability to work.





This is a replicable model that can be achieved in many settings, since it is one that does not place the burden of providing equipment and supplies on the host. patients who had traveled from outside Managua to be seen by the Hand Help team. On Sunday night, the attending surgeons met to develop an operative schedule for the week, which balanced the limited personnel, instrument sets, disease acuity, and need for postoperative monitoring.

#### NEW TECHNOLOGY

This year, the Hand Help team demonstrated the efficacy of using minimally-invasive endoscopic carpal tunnel release in the global surgery setting. For this procedure, the team brought an endoscope donated by the manufacturer and the accompanying monitor and tower. Introducing new technology was not without its hurdles, as our team quickly discovered that the autoclave method we were using was not compatible with the scope, and instead relied on other sterilization methods. One of the patients, Renata, presented to the Hand Help mission three years prior for an open carpal tunnel release. In 2017, she returned for her contralateral hand, and was very satisfied that she was able to receive the endoscopic procedure. Throughout the week, Nicaraguan surgeons and residents would stop in the endoscopy room to observe as

Dr. Thomson performed these endoscopic carpal tunnel releases. On our final day, we had the opportunity to provide educational lectures to HAN staff and students, and Dr. Thomson gave a lecture on endoscopic carpal tunnel release.

#### HAND HELP MODEL

The Hand Help model is one that differs from many other global surgery organizations. Of the team that embarks on the trip every year, there is a diverse group of expertise, including plastic and orthopaedic surgeons, pediatric anesthesiologists, pediatricians, interpreters, hand therapists, residents and students. Many of the individuals who participate in the trip trained at Yale under Dr. Thomson or have some ties to the university.

Through this diversity of expertise, the team provides a continuum of care from screening, perioperative care, and discharge counseling for hand therapy. This effort would not be possible without the partner hospital, HAN, which provides the facilities for our work, and whose staff assist as administrative, nursing, and support personnel, and also follow-up care after the team leaves. As a result, this is a replicable model that can be achieved in many settings, since it is one that does not place the burden of providing equipment and supplies on the host. In the coming year, Hand Help will travel to Peru to continue their mission of providing surgery care for the hand and upper extremity as well as rehabilitating lives in these communities.

## Cardiac Surgery: Research

ale has been, and continues to be, a catalyst for medical innovation and excellence. The Section of Cardiac Surgery is continuing Yale's commitment to research by augmenting the basic science and clinical research capacity for faculty, residents, and researchers alike. The Section has initiated internal projects which are furthering outcome research in a variety of subspecialties, developing risk models relevant to aortic surgery, preventing thoracic aortic aneurysms, and studying the post-surgical effects on endocarditis patients resulting from intravenous drug use.

#### YALE'S COMMITMENT TO RESEARCH

The Section of Cardiac Surgery continues to deepen its external research footprint. Yale recently became a member of the Cardiothoracic Surgical Trials Network (CTSN), which receives support from several institutions, provide the infrastructure to develop, coordinate, and conduct multiple collaborative proof-of-concept studies and interventional protocols to improve cardiovascular disease outcomes. Two trials that Yale will participate in are "Evaluating the Benefit of Concurrent Tricuspid Valve Repair During Mitral Surgery (TRICUSPID)" and "Hybrid Coronary Revascularization (HYBRID)".

The TRICUSPID trial evaluates the benefit of concurrent tricuspid valve repair during surgery for degenerative mitral valve disease. The medical community is divided in their opinion on whether surgeons should routinely repair mild to moderate tricuspid regurgitation (TR) in patients who are undergoing planned mitral valve surgery. Repairing mild to moderate TR could potentially curtail development of severe TR over time. However, for many patients, mild to moderate TR results in no symptoms or other medical problems.

The HYBRID trial is a randomized trial of hybrid revascularization versus percutaneous coronary interventions for multi-vessel coronary artery disease. The use of minimally invasive left thoracotomy off-pump bypass grafting with staged percutaneous intervention to other coronary artery lesions is a novel concept that will likely expand the surgical indication for surgical coronary revascularization.

#### OUR DEDICATION TO ADVANCING CARDIAC SURGERY

Additionally, Yale recently became one of the few centers in the United States to become a member of the "Transcatheter Mitral Valve Replacement with the Medtronic Intrepid<sup>™</sup> TMVR System in Patients with Severe Symptomatic Mitral Regurgitation (APOLLO)" trial. The trial evaluates the safety and efficacy of the Intrepid<sup>™</sup> TMVR system as a treatment for those with severe symptomatic mitral regurgitation. Transcatheter technology has revolutionized the way that aortic stenosis is managed. Yale has been an active participant in many recent trials concerning transcatheter aortic valve technology, and expansion into the mitral valve space is just one example of Yale's dedication to exploring new methods for managing this complex condition.



Transcatheter technology has revolutionized the way that aortic stenosis is managed

## Congratulations to Our New Faculty



Tomer Avraham, мр

Assistant Professor, Plastic Surgery

Dr. Avraham has joined the Department of Surgery as an Assistant Professor in the Section of Plastic Surgery, coming to us from Mount Sinai Health System where he was an Assistant Professor for two years.

Dr. Avraham is currently the Acting Director of the Microvascular Breast Reconstruction Program within Yale's Department of Surgery.

Dr. Avraham received his undergraduate degree in Biology with a minor in History from Tufts University. He earned his medical degree from Tufts University School of Medicine and completed his residency at NYU Langone Medical Center and a research fellowship at Memorial Sloan Kettering Cancer Center.



#### Andrew Dhanasopon, MD

Assistant Professor, Thoracic Surgery

Dr. Dhanasopon has joined the Department of Surgery as an Assistant Professor in the Section of Thoracic Surgery.

Dr. Dhanasopon received his undergraduate degree in Bioengineer-

ing from the University of California and earned his medical degree from the David Geffen School of Medicine at the University of California. He completed his general surgery residency at Johns Hopkins Hospital and his cardiothoracic surgery fellowship at Yale University.

Dr. Dhanasopon has 16 peer reviewed publications and has given 10 peer reviewed presentations. Dr. Dhanasopon will support the Section of Thoracic Surgery and will also spend time at the West Haven Veterans Administration (VA).



#### Ramesh Batra, MD

Assistant Professor, Transplantation

Dr. Batra has joined the Department of Surgery as an Assistant Professor in the Section of Transplantation, coming to us from Loyola University Medical Center in Illinois.

Dr. Batra received his surgical

training in NHS based hospitals in the United Kingdom, and was admitted to the membership of Royal College of Surgeons of Edinburgh. He received additional transplant training at the London based Royal Free Hospital and Guy's and St Thomas' Hospital. He went on to complete the ASTS abdominal transplant fellowship at Mayo Clinic Arizona along with pediatric liver transplantation at Phoenix Children's hospital, where he later became a faculty member of the Loyola University Medical Center in Illinois.

Dr. Batra's clinical and research interests and expertise include living organ donation, shortening organ transplant wait lists by selectively utilizing extended spectrum organs and tackling the ethical and technical challenges of organ donation and transplantation.



#### Danielle Haakinson, мо

Assistant Professor, Transplantation

Dr. Haakinson has joined the Department of Surgery as an Assistant Professor in Transplantation.

She received her undergraduate degree in Biological Sciences from Colorado State University and

earned her medical degree at the University of Colorado. She completed both her general surgery residency and abdominal transplant surgical fellowship at the Mayo Clinic Arizona.

Dr. Haakinson's clinical interest and expertise is in minimally invasive surgery, performing laparoscopic donor nephrectomies using the instrument only technique. Her research interests include the diabetic management of surgical and transplant patients, marginal organ utilization and surgical education.

The Yale Department of Surgery is excited to welcome our new faculty for the 2017–2018 academic year. We are proud to have such a talented and diverse group of individuals joining our team.



Danielle M. Bertoni, мD, мPн Assistant Professor, Surgical Oncology

Dr. Bertoni has joined the Department of Surgery as an Assistant Professor in the Section of Surgical Oncology, coming to us from the Kaiser Permanente Medical Group in California. Dr. Bertoni received her undergradu-

ate degree from Boston University and her MPH from Boston University School of Public Health. She earned her medical degree from the University of Medicine and Dentistry of New Jersey and was the Chief Resident during her residency at Stanford Hospital. She went on to complete her colon, rectal and breast surgery fellowships there.

Dr. Bertoni will work with Dr. Mary Pronovost at the Breast Center in Trumbull, Fairfield, and Bridgeport Hospital.



#### Cecilia Helwig, мр

Assistant Professor, Otolaryngology

Dr. Helwig has joined the Department of Surgery as an Assistant Professor specializing in Pediatric Otolaryngology.

Dr. Helwig received her undergraduate degree in Medical Sciences and her medical degree and she completed

her residency all at the University of Chile. She completed her research and clinical fellowships at the Rady Children's Hospital affiliated with University of California San Diego.

Dr. Helwig is a member of the American Academy of Otolaryngology–Head and Neck Surgery and the American Academy of Pediatric Otolaryngology. She also serves as the chair of the American Society of Pediatric Otolaryngology's Young Members Committee.

Dr. Helwig's clinical interests include all aspects of pediatric otolaryngology, specifically hearing loss and cochlear implantation.



#### Douglas Hildrew, мр

Assistant Professor, Otolaryngology

Dr. Hildrew has joined the Department of Surgery as an Assistant Professor in the Section of Otolaryngology.

Dr. Hildrew received his undergraduate degree in Chemistry from Millersville University and his Master of

Medical Science from Drexel University College of Medicine. He earned his medical degree from the State University of New York in Syracuse, completing his residency at Tulane University and an otology, neurotology & skull base surgery fellowship at the University of Pittsburg Medical Center.

Dr. Hildrew's interests are in otology, neurotology and head and neck surgery. He will support the section with a shared appointment at Yale/YNHH and the West Haven Veterans Administration (VA).



#### Naiem Nassiri, MD

Associate Professor, Vascular Surgery

Dr. Nassiri has joined the Department of Surgery as an Associate Professor in the Section of Vascular Surgery, coming to us from Rutgers-Robert Wood Johnson University Hospital & Bristol Myers Squibb Children's

Hospital where he was founder and director of the Vascular Anomalies & Malformations Program and co-founder and co-director of the Pelvic Vascular Disease Program.

Dr. Nassiri received his undergraduate degree in Biological Sciences from the University of California. He earned his medical degree from Oregon Health & Science University in Portland, Oregon, completing his general surgery residency at the University of California, Los Angeles and an integrated vascular surgery residency at the Lenox Hill Heart & Vascular Institute of New York.

Dr. Nassiri has a shared appointment at Yale and the West Haven Veterans Administration (vA). He will assist in the growth and development of the Vascular Surgery program.



Heather Osborn, MD Assistant Professor, Otolaryngology

Dr. Osborn has joined the Department

of Surgery as an Assistant Professor in the Section of Otolaryngology. Dr. Osborn received her undergraduate degree in Political Studies

from Queen's University in Canada and earned her medical degree from the Schulich

School of Medicine and Dentistry at Western University, Ontario. She completed her residency in Otolaryngology at the University of Toronto and a head and neck oncology/microvascular reconstruction fellowship from Harvard Medical School.

Dr. Osborn has a shared appointment at Yale and Bridgeport Hospital and will assist in the growth and development of the Otolaryngology Surgery program.



#### Tristen Park, мо

Assistant Professor, Surgical Oncology

Dr. Park has joined the Department of Surgery as an Assistant Professor in the Section of Surgical Oncology.

Dr. Park received her undergraduate degree in Cell and Molecular Biology with honors from Cornell University.

She earned her medical degree from Columbia University's College of Physicians and Surgeons and completed her general surgery residency at Rutgers University and a three year combined surgical oncology research fellowship and clinical immunotherapy fellowship at the Surgery Branch of the National Cancer Institute, National Institutes of Health. She subsequently completed a breast surgical oncology fellowship at Duke University.

Dr. Park's clinical/research interests and expertise include the treatment of breast cancer and breast diseases, including triple negative breast cancer, cancer immunotherapy and the potential role of immunotherapy in the treatment of breast cancer.



#### Yan Ho Lee, мD

Assistant Professor, Otolaryngology

Dr. Lee has joined the Department as an Assistant Professor in the Section of Otolaryngology, coming to us from the University of Pittsburgh.

Dr. Lee received her undergraduate degree in Biomedical Engineering

from Columbia University. She earned her medical degree from Penn State University and completed a clinical fellowship in facial plastic and reconstructive surgery from Mount Sinai in New York.

Dr. Lee's clinical interest and expertise is in facial plastic surgery and facial reconstructive work in the Section of Otolaryngology.



#### Greg Tietjen, PHD

Assistant Professor, Transplantation

Dr. Tietjen joined the Department of Surgery as an Assistant Professor in the Section of Transplantation.

Dr. Tietjen received his undergraduate degrees in English from Wake Forest and Physics from University of Oregon.

He earned his PHD in Biophysics from the University of Chicago.

Dr. Tietjen's work focuses on translating a recently established technique in clinical organ transplant (ex vivo isolated organ perfusion) into a platform for the development of targeted nanomedicines. By providing the ability to precisely control where drugs go following administration, this work has the potential to be transformative not only for organ transplant, but also for treating a wide array of diseases from cancer to autoimmunity. Dr. Tietjen's approach will also be a valuable tool for basic science research in areas of particular strength at Yale (e.g. Immunobiology, Vascular Biology).

# Our Heritage: Plastic Surgery

n 1959 the clinical program in plastic surgery was established under the direction of Dr. Robert Chase, an expert in surgical techniques of the traumatized hand. Dr. Chase completed his general surgery residency at Yale University, followed by three years of general and reconstructive surgery residency with the U.S. Army. He subsequently completed his plastic surgery residency at the University of Pittsburgh.

#### The departmental goal was for Dr. Chase, in collaboration with Dr. John Kirchner of otolaryngology and Dr. Donald Shedd of general surgery, to develop plastic surgery as a support mechanism for a center in head and neck surgery.

During the academic year 1968–69, the Department of Surgery continued to grow in strength, thriving in the areas of teaching, research and service commitments. Dr. Thomas Krizek, an outstanding young recruit who went on to become the Associate Dean for Graduate and Continuing Medical Education and an appointed member of the Board of Directors of the American Board of Plastic Surgery, established a formal Plastic and Reconstructive Surgery Section within the Department of Surgery. Additionally, under Dr. Krizek's direction, the Residency Training Program in Plastic and Reconstructive Surgery was approved.

## NEW RECRUITS, NEW ADVANCES IN MEDICINE

In the 1970's, the department continued to build the Section of Plastic Surgery with the recruitment of new faculty including Drs. Martin Robson and William Frazier. The section experienced diverse growth in the areas of teaching, research and scholarship through the combined efforts of the full and part time faculties. This time also brought about clinical advancement with a major contribution to wound healing management. The Department of Plastic Surgery was on the forefront of objectively qualifying the number of bacteria in wounds required for infection to occur, incorporating this information into patient management of wound debridement, closure and skin grafting.

In 1976, new and promising surgeons were appointed new roles.

- Dr. Stephen Ariyan was appointed Assistant Professor of Surgery after completing his residency at Yale with a major interest in immunobiology of head and neck cancers.
- Dr. Irving Polayes, associate Chief of the section, was promoted to Clinical Professor of Plastic Surgery.
- Dr. Neal Koss was elected President-Elect of the Society for Computer Medicine.

- Dr. Marvin Arons became Chief of the Section of Plastic and Reconstructive Surgery at the Hospital of St. Raphael and for the first time residents rotated through the program.
- Dr. Stephen Flagg continued to be active on the hand service and was elected President of the Southern New England Hand Society.
- Dr. Polayes was elected Vice President in both the American Society of Maxillofacial surgeons and the New England Society of Plastic and Reconstructive Surgeons.

## PROFOUND CHANGE CONTINUED AT YALE THROUGH THE DECADES

1978 marked the end of a period of profound change with Dr. Krizek accepted the position as Professor and Chief of Plastic Surgery at Columbia University in New York. Additional changes during the late 1970's within the section included:

- Appointment of Dr. William Frazier as Interim Chief until the appointment of Dr. Stephen Ariyan in 1979
- Drs. Mary Mcgrath and Charles Cuono joined the section
- Extensive education expansion to include programs to address congenital deformities, hand surgery, maxillofacial and other trauma, head and neck cancer and aesthetic surgeries and burn patients









John Persing, MD

Stephen Ariyan, MD

Charles Cuono, MD

Thomas Krizek, MD

- Establishment of a Microsurgery Service to coordinate and concentrate expertise in replantation, microvascular and free-flap surgical techniques
- Appointment of Dr. Mark Weinstein as Clinical Instructor in Surgery after completion of his training at UCLA and rapidly became a valuable contributor to the Yale-New Haven Medical Center
- Development of a national course in maxillofacial surgery led by Dr. Polayes
- Establishment of a human cadaver skin bank for use in grafting procedures under the guidance of Dr. Charles Cuono
- Continued research efforts in the areas of surgical infection, tumor immunology, wound healing, microsurgery, glycoproteins and seromucoids and flap physiology

The 1980's were a pivotal time for the Section of Plastic Surgery. In 1983, the faculty expanded with the recruitment of Drs. Zeno Chicarelli and Richard Stahl. In 1985, Dr. Ariyan was appointed the prestigious honor of President of the New England Society of Plastic and Reconstructive Surgeons in 1986. His accomplishments continued as an editorial board member for plastic and Reconstructive Surgery and a board member of the American Board of Plastic Surgery. It was also during this time that

he authored the authoritative textbook, Cancer of the Head and Neck, and also received the Distinguished Service Award from the Society of Head and Neck Surgeons in May 1989.

The 1990's marked a decade of changes for the Section of Plastic Surgery. In 1991, Dr. Ariyan resigned as Chief of the Section of Plastic Surgery, as did Dr. Stahl and went into private practice in New Haven. At that time, Dr. Cuono was appointed Acting Chief of the Section and by 1992 the Section of Plastic Surgery underwent a process of reorganization. It was during the 1990's that,

- John Persing, MD was recruited from the University of Virginia to become the new Section Chief
- Harry Spinelli, MD was appointed Assistant Professor and along with Dr. Cuono maintained academic motivation and growth
- Research efforts continued in the areas of immunobiology and molecular biology of the skin, real time assessment of skin grafts and flaps, development of permanent skin replacement and wound healing and infection
- The Plastic Surgery Research Laboratory continued to investigate the effects of biologic dressings in open wounds, particularly burns utilizing cryopreservation of freeze dried material that could be reconstituted and applied to burn wounds

- A human cadaver skin bank was established and basic research in the viability and efficacy of this type of wound coverage occurred
- The Melanoma Immunology Laboratory continued to evaluate the efficacy of intralymphatic immunotherapy by monitoring the cellular immune mechanisms in patients by lymphocyte cytotoxic assays
- Medical students and students from the Department of Epidemiology and Public Health completed their doctoral or masters theses in health quality assurance in areas of wound bacteriology, surgical infections, wound healing and skin allograft biology
- A joint project between the Sections of Plastic Surgery and Cardiothoracic Surgery was initiated to investigate the feasibility of reconstructing skeletal muscle ventricles for cardiac assistance or cardiac replacement
- Dr. J. Grant Thomson initiated a hand program which continues to bring expertise and skill to reimplantation and microvascular reconstruction to this day. He additionally coordinated the Upper Extremity Program for the treatment of mangled extremities, initiated first hand fellowship approved by the ACGME at Yale and presently remains the program director for the hand fellowship. His accomplishments continued as he was elected President of the New England Plastic Surgery Society and the New England Hand Society and is the originator of the overseas volunteer program "Hand Help", which has been annually visiting Latin America providing otherwise unavailable care to those with extremity injuries.

• Dr. Richard Restifo, was recruited to direct the University Plastic Surgery Breast Program to coordinate medical and surgical oncologists to deliver reconstructive options to patients with breast cancer. Although he has since started a private practice, the program continues full force under the direction and guidance of a team of physicians including Drs. Alex Au, Michael Alperovich, Tomer Avraham, Stefano Fusi, Jeffery Solomon and Stirling Craig.

### OUR RESEARCH AND FACULTY EXPANSION CONTINUES TO THRIVE

Starting in the 2000's and continuing until today, research efforts continued to thrive with the appointment of several new faculty members and the continuation and initiation of research initiatives including:

- Dr. Thomas L. McCarthy joined Dr. Michael Centrella to continue their NIH sponsored research which was an integral to the understanding of bone development and possible perturbations with disease and congenital deformities. Their research focused on the interactions of osteoblasts and cytokines to enhance and maintain bone structure during development.
- Dr. David Leffell, an internationally renowned skin cancer expert, was appointed as Affiliated Faculty from the Section of Dermatology.
- Dr. Joseph Shin (now Chief of Plastic Surgery at Dartmouth), was appointed Director of the craniofacial team following a craniofacial fellowship at the University of Miami to enhance the treatment of congenital facial deformities, such as clefts of the face. During this time, novel instruments and operative techniques were developed in distraction osteogenesis of the facial skeleton. The craniofacial program continued to grow and expand. Derek Steinbacher DMD

MD, was named Director of the Craniofacial Program. His combined degrees in dentistry and medicine have afforded him the opportunity to expand Yale's Craniofacial Program as the Chair of Dentistry at YNHH and Supervisor of the Maxillofacial Residency Program within the medical center. Dr Steinbacher is also the Director of the Yale Craniofacial Fellowship, with our first fellow Dr. Raj Sawr Martinez appointed in 2017.

- Dr. Michael Alperovich was recruited to Yale from NYU following his residency in plastic surgery and a fellowship in craniofacial surgery. He has been supporting the microvascular breast reconstruction effort with colleagues over his first year, and will now be focusing his efforts toward craniofacial surgery. He has developed a substantial ongoing research effort related to pathology and neurocognitive outcomes in craniofacial surgery and breast reconstruction.
- Former Yale resident, Dr. Deepak Narayan, now Professor of Plastic Surgery and Chief of Plastic Surgery at the VA (West Haven), has focused his work on mechanisms of pathology and surgical treatment of melanoma and its reconstruction, identifying novel methods of treatment for some of the most complex of problems to include using biophage treatment for resistant bacterial infections. He currently serves as President of the New England Plastic and Reconstructive Surgery Society.

- Dr. Henry Hsia returned to Yale following a plastic surgery residency and NIH sponsored post-doctoral research fellowship at Princeton to serve as Director of the Yale New Haven Hospital Wound Center. He and his team plan to implement a system wide, coordinated approach among practitioners to enhance care of problematic, chronic wounds. His current research efforts focus on nanotechnology delivery of treatment products, and clinical responsibilities to help patients with these very difficult physiologic and psychosocial impacts.
- Dr. Jim Clune, has also returned to Yale following residency and an orthopedic based hand/upper extremity fellowship at UC Irvine. He has received specialized training in complex hand surgery, specifically wrist and carpal bone fractures, and peripheral nerve surgery to include segmental nerve transfers for brachial plexus reconstruction. He has interests in oncologic reconstruction and collaborates with the orthopedic faculty and Dr. Thomson in this work.

### PLASTIC SURGERY RESIDENCY THEN AND NOW

Through combined faculty efforts, including strong support of Dr. Zeno Chicarelli, the Chief of Plastic Surgery at St Raphael's campus and Dr. Mark Weinstein, organizer of multiple site overseas volunteer surgery programs, the clinical and research aspects of plastic and econstructive surgery continued.

The plastic surgery residency evolved from a traditional plastic surgery residency following a general surgery residency to a six-year integrated plastic surgery program. Through the combined efforts of the Section of Plastic Surgery and the Department of Surgery, Yale's Section of Plastic Surgery residency program remains one of the very best in the nation. Offering breadth, volume and emphasis on improvement and innovation, graduates of the program are amongst the top plastic surgeons worldwide.

## IN MEMORIAM: Jeffrey F. Moley, MD

Dr. Moley was a pioneer in his field. t is with great sadness that the Yale community report the unexpected passing of Jeffrey F. Moley, MD on October 15, 2017. Dr. Moley, who was born in New York City, received his Bachelor's Degree from Harvard University and earned his Doctorate in Medicine from Columbia University College of Physicians and Surgeons.

As the son of a surgeon, and also with direction to pursue a career in surgery by his medical educators, he matriculated into the Yale Surgery Residency in 1981. During his residency training at Yale, he was also involved in research activities at the National Cancer Institute of the National Institute of Health (NIH).

Following his surgical residency at Yale, he was successfully recruited by the Department of Surgery at Washington University in St. Louis where he remained for the duration of his career. During his time at Washington University, he achieved titles of both Professor of Surgery and Chief of the Section of Endocrine and Oncologic Surgery.

Dr. Moley was a pioneer in his field. He most notably researched and treated Multiple Endocrine Neoplasia (MEN). Along with Samuel Wells, Jr., MD, he was an integral part of the team that identified genetic mutations responsible for MEN syndromes.

Dr. Moley was a man of many interests which included a lifelong passion of history and politics. He was also a skilled jazz guitarist, mandolin player and a member of a blue grass music band.



He is survived by his wife Kelle, a Yale medical student graduate and Professor of Obstetrics and Gynecology at Washington University and his three sons: Patrick, Charles and John.

Jeff was clearly one of our most successful Yale Surgery Residency graduates and above all, he was loved and admired by everyone who came in contact with him.

—Walter E. Longo, MD

### Yale Department of Surgery

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EDUCATION PATIENT CARE RESEARCH

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