

SURGERY

Synopsis

Chairman's Message



Carlos A. Pellegrini, MD,
FACS, FRCSI (Hon.)
The Henry N. Harkins
Professor & Chair

Friends & Colleagues of the Department of Surgery:

In this issue we focus on our Plastic Surgery services. "Plastic" Surgery got its name from the Greek word "plastike" or the art of modeling or sculpting. This definition is descriptive, but not complete. In the fullest sense, Plastic Surgery is about reconstructing, correcting or fixing that which is broken, wounded or deformed. Especially in the academic world, the role of Plastic Surgery is often that of partnering with another specialty or the final step in making a patient whole. As you read, you will notice that words like "teamwork, team, collaboration, and multi-disciplinary" are used often to describe the work of our plastic surgeons. This is accurate and necessary. A Harvard researcher, Amy C. Edmondson, the Novartis Professor of Leadership & Management at the Harvard Business School has been studying teamwork for many years. She comments, in her latest book "Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy," that there has to be a seismic shift in how we think about teamwork because the nature of work is more dynamic than ever before. She calls it "teaming" and states that people have to get good at reaching out, getting up to speed, establishing quickly who they are and what they bring and trying to make progress without a blueprint.

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Plastic Surgery: Rebuilding Lives

Overview of Plastic Surgery at UW Medicine

The official specialty of Plastic Surgery was integrated into the Department of Surgery in 1977 upon the recruitment of **Loren Engrav, MD**, Professor Emeritus. He was recruited by John Schilling, MD, then Chair of the Department of Surgery (1975-1982), to partner with **David Heimbach, MD** in creating what is now the world-leading Harborview Burn Center. Of necessity, he felt, the Burn Center should incorporate plastic surgery procedures for burn victims. From its very inception, Plastic Surgery has been both its own specialty with specific skills, research and necessary training – and also has been fully integrated with a host of other specialties and conditions: the Burn Center, Orthopaedics, Trauma and Oncology to name some. At UW Medicine, plastic surgeons work across the spectrum of age: from small children through older adults. As much or more than any other surgical specialty, plastic surgeons must be both supremely good surgeons and excellent team-players. The Division of Plastic Surgery at UW Medicine has created just such a team. Each of them has a budding or mature reputation



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Chairman's Message — *Continued from page 1*

She states: "There's a growing recognition that most of today's truly important problems related to the environment, related to smart cities, related to health care simply cannot be solved without cross-disciplinary collaboration." Plastic Surgery is ahead of the curve in this respect.

These surgeons – all of whom have world-class skills – are also some of the finest collaborators or "teammates" in the world. Plastic Surgery at UW Medicine is held in high regard by other specialties both for their skill and their collaborative excellence – always putting the needs of the patient first. They have been able to accomplish amazing things working with other services: Trauma, Burn, Orthopedics, Oncology, General Surgery, and Otolaryngology/Head & Neck Surgery among others. As an example, when you watch the true story of Lilly James' recovery from injuries that seemed impossible to come back from, you will see "teaming" in action. Lilly James would not be living the life she is able to live today without the incredible skill and collaboration shown by the many who rapidly teamed up to care for her, not least was [Dr. Nicholas Vedder](#), Chief of the Division of Plastic Surgery.

Another example of the teamwork necessary to create a world-class place of care is the Craniofacial Center at Seattle Children's Hospital. Their multi-disciplinary Center, co-directed by [Dr. Richard Hopper](#), has catapulted that program to # 1 in the nation. Similarly, the UW Medicine Center for Reconstructive Surgery is a clinical powerhouse and also a partner to many other specialties. It is a particularly strong partner to all facets and specialties of oncology care.

The newest addition to our plastic services is the UW Medicine Plastic and Aesthetic Surgery Clinic at Northwest Hospital, providing rejuvenative services and cosmetic surgery in a community setting. We are glad to be able to provide this service to patients who want and need it – often the final step in life changing experiences, such as bariatric surgery. This Clinic is also pivotal in offering required training opportunities for our plastic surgery residents.

Each part of the Plastic Surgery Service – at every location – is strong clinically; several of them are the only service of their kind in the Pacific Northwest. Our strong clinical programs make us strong academically as well. Our resident training and fellowship programs are nationally known. Every year we match with exceptional medical students; our fellowships fill with top tier candidates. Our trainees go on to careers in all types of plastic surgery – academic as well as private practice.

We have interesting research projects underway in Plastic Surgery. You will read about one effort in particular: [Dr. Jason Ko](#), an Assistant Professor in Plastic Surgery who is developing an outstanding research program.

As you read the Plastic Surgery articles and others, including the many awards our surgeons continue to garner, I am sure you will appreciate this issue.

Sincerely,

Carlos A. Pellegrini, MD, FACS, FRCSI (Hon.)
The Henry N. Harkins Professor & Chair
Department of Surgery
University of Washington

Plastic Surgery: Rebuilding Lives

Continued from page 1

as a world-class plastic surgeon; and as important, they are excellent collaborators, team players and innovators with other specialties.

The Division grew from a single surgeon (Dr. Loren Engrav) to four in 1990 when Drs. Joseph Gruss, Richard Rand and Nicholas Vedder joined the Division. The current Division of Plastic Surgery has 16 full-time faculty, with multiple faculty at every UW Medicine affiliated medical center: [Harborview Medical Center \(HMC\)](#); [UW Medical Center \(UWMC\)](#); [Seattle Children's Hospital \(SCH\)](#); the [Veteran's Affairs Puget Sound Health Care System \(VAPSHCS or "VA"\)](#); [Northwest Hospital \(NWH\)](#); and [Valley Medical Center \(VMC\)](#). In addition, there are seven active adjunct faculty and nine active clinical faculty. The residency program began in 1988 and now has a six-year integrated Plastic Surgery residency, soon to have 24 residents. There are eight clinical fellows in the areas of Hand surgery (joint with Orthopaedics), Craniofacial and Microsurgery that train and operate from multiple locations.

By following the principle of only bringing on team players and actively surrounding themselves with people better than the team already here, the Plastic Surgery Division is in the enviable position of being regarded by many as the leading Plastic Surgery program in North America. The faculty and trainees are incredibly accomplished, compatible, and mutually respectful. They are individuals who enjoy getting up in the morning to do what Plastic Surgery is all about: rebuilding patients' lives through providing innovative solutions to medicine and Surgery's most challenging problems, developing the next generation of Plastic Surgery leaders, and creating the future of the specialty through research. In the next sections, the full spectrum of Plastic Surgery at UW Medicine will be explored.

Plastic Surgery Clinical Programs

Harborview Medical Center Plastic Surgery Services

UW's Plastic Surgery service began at HMC and HMC is still the hub for Plastic Surgery. Serving over 1,500 patients in 2013, the Division of Plastic Surgery at Harborview is busy and continues to grow. [Dr. Nicholas](#)

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Plastic Surgery: Rebuilding Lives

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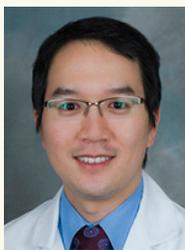
[Vedder](#) who became Chief of the Division of Plastic Surgery in 2002, following Dr. Loren Engrav, primarily practices at HMC and focuses on surgery of the upper extremities. [Dr. Jeffrey Friedrich](#) also specializes in hand surgery as well as urogenital reconstruction. [Dr. Jason Ko](#) joined the faculty at Harborview in 2012 and has quickly built a busy hand practice. [Dr. Kari Keys](#) joined in 2012 and serves the needs of patients with complex wounds and surgical complications in need of reconstruction. Microsurgical reconstruction is provided by Drs. Friedrich, Ko, and Keys and Vedder.



Vedder



Friedrich



Ko



Keys

The Division of Plastic Surgery at Harborview has a longstanding and exceptional relationship with the [Department of Orthopaedics](#). It is the center for the UW Unified Hand Surgery Service (Hand Surgery). Together, the hand surgeons of Plastic and Orthopaedic Surgery provide seamless service to patients with both traumatic and non-traumatic hand disorders. Hand Surgery within UW Medicine has existed for 24 years as a truly unified clinical, educational and research program. The service has seven faculty, residents from both programs, and four clinical fellows crossing HMC, UWMC, SCH and NWH. It is a model of interdepartmental, interdisciplinary collaboration both at the UW and nationally.

Plastic Surgery at Harborview has always been about solving problems. At its core, it is a specialty of fixing what otherwise cannot heal. Whether it is coverage of exposed vessels, coverage of spinal hardware, or closure of devastating traumatic injuries, Plastic Surgery at Harborview collaborates with every surgical specialty as well as with community surgeons who find that they have a difficult wound problem to solve. The plastic surgery services provided at Harborview are a critical element of the overall mission of UW Medicine. Care here is often to the

deeply underserved or marginalized populations not just of our city, but of our neighboring states as far away as Alaska.

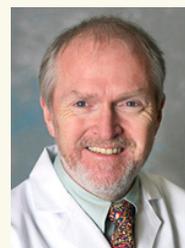
One example of the incredible care that is provided by the plastic surgeons and their multi-disciplinary team at HMC is recounted in this [video production](#) about Lily James.



Lily James Post-Op

UW Medicine Center for Reconstructive Surgery (Reconstructive Surgery Center)

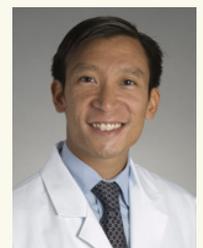
Peter Neligan, MB, Professor and UWMC Plastic Surgery Section Chief was recruited to develop and grow a major reconstructive center on the UWMC campus. Dr. Neligan came to UW from Ireland by way of Canada and brings a truly international reputation. Under his leadership, the UW Medicine Center for Reconstructive Surgery has grown from one individual in 2006 to seven full time faculty: five surgeons and two physician assistants. They include: [Peter C. Neligan, MB, Professor and Section Chief](#); [Hakim Said, MD, Associate Professor](#); [Otway Louie, MD, Associate Professor](#); [Shannon Colohan, MD, Assistant Professor](#); and, [Alex Gougoutas, MD, Assistant Professor](#). Two Teaching Associate PA-Cs are integral and round out the team: [Jennifer Flannery, PA-C](#) and [Anne Chapin, PA-C](#). The UWMC Reconstructive Plastic Surgery team performs a large volume of complex microsurgical



Neligan



Said



Louie

reconstruction: the second largest microsurgical group after MD Anderson. The plastic surgeons work with other specialties on combined complex cases. Such a mixture of cases provides an

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Plastic Surgery: Rebuilding Lives

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Colohan



Gougoutas



Flannery



Chapin

excellent opportunity for training through both the residency program as well as the microsurgical fellowship program.

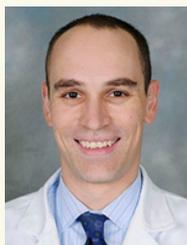
Oncologic Cases

Breast: The largest volume of oncologic cases is related to breast cancer. The Reconstructive Surgery Center provides services for UW Medicine's breast program, offering all modalities of treatment. It is the only unit in this region to offer ALL reconstructive modalities, including autologous free tissue transfer, fat grafting and implant reconstruction. This is a multidisciplinary program in which they work not only with breast surgeons, but also medical and radiation oncologists in planning the best treatment for patients. Most breast cancer patients require multiple procedures in order to complete their reconstruction. Annually the plastic surgeons do approximately 150 free flap breast reconstructions and an equal number of expander/implant reconstructions.

Soft Tissue Sarcoma: Working with Drs. [Chappie Conrad](#) and [Darin Davidson](#) of the [Department of Orthopaedic Surgery](#), the Reconstructive Center provides reconstructive services for the Soft Tissue Sarcoma Program. The volume of these cases has increased significantly in the past several years since Dr. Davidson was recruited. These are complex cases generally



Conrad



Davidson

requiring free tissue transfer for reconstruction. Timing of cases is also crucial in order to accommodate both chemotherapy and radiation therapy. Approximately 20 of these combined cases are done annually.

In addition, surgeons in this Center are frequently called on by other services to provide reconstruction following tumor resection. Plastic surgeons support: Thoracic Surgery for chest wall tumors, General Surgery and Gynecologic Oncology for pelvic reconstructions and Dermatology for major soft tissue reconstructions. Reconstructive surgery for Merkel Cell Carcinoma and for Melanoma, particularly melanoma of the head and neck are also carried out by plastic surgeons. All of these cases require pre-operative lymph node mapping in the Radiology department.

Non-Oncology Reconstructive Cases: Apart from the oncology cases listed above the Reconstructive Center provides all kinds of major reconstruction for benign conditions. These include conditions such as neurofibromatosis, morbid obesity (in conjunction with the Bariatric Service), and benign breast disease (Mammary hypertrophy, breast asymmetry, Poland Syndrome and gynecomastia). The Reconstructive Center is also called upon to assist General Surgery with abdominal wall reconstruction including component separation.

Facial Re-Animation Surgery: Some the newest and most unique services provided involve facial reanimation. Facial paralysis is a devastating condition that can be congenital or acquired. Acquired facial paralysis can result from tumor ablation but can also follow benign conditions such as Bell's Palsy. The treatment of this condition is called facial re-animation surgery. We provide this service both at this site (UWMC) as well as at Children's (SCH). The surgery is very complex and involves the transfer of muscle from the leg (gracilis muscle) to the face in order to replace the non-functioning facial muscles. This procedure is offered in only a limited number of centers across the country and ours is the only service of its kind in the Northwest.

Lymphedema Surgery: The most frequent cause of lymphedema in this country is secondary to treatment for cancer, either breast cancer, or pelvic cancer. In either case, part of the treatment involves removal of regional lymph nodes with subsequent radiation. This results in lymphedema of the arm or leg. The treatment for lymphedema has traditionally been conservative, consisting of compression to limit swelling of the limb. This is overall an unsatisfactory treatment. More recently reconstructive surgical options have been introduced. These consist of connecting the lymphatic system to the venous system (Lymphatico Venous Anastomosis) or transferring lymph nodes from another region of the body to replace the ones that have been removed (Vascularized lymph node transfer). Both of these operations are done at UWMC. We are one of only about five centers in the country offering these two surgeries.

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Plastic Surgery: Rebuilding Lives

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Vascularized Composite Allotransplantation (VCA): We are in the process of developing a VCA Program at UWMC. Currently there is great interest in this area of reconstructive surgery. To date, almost 30 face transplants have been performed around the world. We have put together a team to do these complex surgeries and have developed an IRB proposal that is soon to be submitted. The hope is to be able to offer face transplantation within our Center for Reconstructive Surgery. To date, several centers have been set up around the country, though only three have completed clinical transplants: The Cleveland Clinic did the first clinical face transplant in the country; The Brigham and Women's hospital in Massachusetts has the largest experience with five face transplants; while one has been done in Baltimore. There is currently no center in the Northwest. We hope to fill that void.



Drs. Peter Neligan (left) and Otway Louie (right) in the OR

Pediatric Plastic Surgery: The Craniofacial Program at Seattle Children's Hospital

At Seattle Children's Hospital, the Division of Plastic Surgery, under the leadership of Dr. Richard Hopper, has four world-renowned plastic surgeons: [Richard Hopper, MD](#), Associate Professor and co-Director of the Craniofacial Center; [Craig Birgfeld, MD](#), Associate Professor; [Joseph Gruss, MD](#), Professor and [Raymond Tse, MD](#), Assistant Professor. The Division also has the services of two part-time plastic surgeons and two craniofacial fellows are in training. It is one of SCH's flagship international programs. Starting from humble beginnings in 1990, Dr. Gruss and now Dr. Hopper have diligently worked to develop this program into the powerhouse it is. They now perform more complex intracranial reconstructive procedures than any other program in the country and run a craniofacial fellowship that has now trained many of the young leaders in craniofacial surgery around the country. It has three sites of practice: in Seattle (at SCH), Bellevue and the Tri-cities. The Division offers a number of key programs, including a brachial plexus program, a facial reanimation program, and is a partner with Orthopaedic surgery in the pediatric hand program.



(From left to right: Drs. Birgfeld, Hopper, Gruss and Tse

Photo credit: Erik Stuhau, Seattle Children's Hospital

The Division is located within the nationally known Craniofacial Center, which comprises a 40 member integrated team that completes over 10,000 patient encounters a year and performs 2,400 surgeries covering the full range of congenital deformities from craniosynostosis, cleft lip and palate, rare deformities, facial tumors and orthognathic conditions.

"Daily Parent" recently ranked Seattle Children's Hospital as number three among national pediatric hospitals, partially due to the renown of the Craniofacial Center, stating "the largest craniofacial center in the nation calls Seattle Children's Hospital (SCH) home. This team of elite surgeons provides care for cleft palates and other rare facial disorders affecting children."

[Read the article >>](#)

The National Craniofacial Plastic Surgery Fellowship at Seattle Children's Hospital has been in existence since 1993 and has graduated 22 fellows, many who now hold academic leadership positions across the country. Most recently, the Center is now offering an annual International Fellowship position to train craniofacial surgeon leaders who will return to their home countries.



Drs. Raymond Tse (right) and Austin Hayes (center)

Photo credit: Erik Stuhau, Seattle Children's Hospital

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Plastic Surgery: Rebuilding Lives

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As the Division of Plastic Surgery and the Seattle Children's Craniofacial Center continue to grow, the focus will be on clinical standard work and care pathways in order to demonstrate the safety and quality of the work done in this Center to potential patients in the region, the country, and across the world.

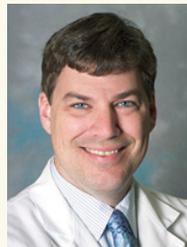


From left to right: Drs. Craig Birgfeld, Richard Hopper, John Waldhausen (pointing)

Photo credit: Erik Stuhag, Seattle Children's Hospital

Plastic Surgery at the VA

The provision of Plastic Surgery at the Veterans Affairs hospital is unique and the faculty there see it as an incredibly rewarding job. The VAPSHCS is fortunate to have dedicated staff plastic surgeons: many VA hospitals do not. [David Mathes, MD](#), Associate Professor has served for several years Plastic Surgery VA Section. In 2012, to respond to growing needs, [Dr. Kari Keys](#), Assistant Professor, (pictured on page 3) joined Dr. Mathes with her primary practice site at the VA. Unfortunately, for the Plastic Surgery Division and the VA, Dr. Mathes will be leaving his position at the VA later in the summer. Fortunately, Dr. Keys is able to step into the role of Section Chief.



Mathes

In addition to traditional reconstructive plastic surgery needs of any population, as more of the service men and women return from war, a remarkable number of plastic surgery needs are found in this patient population. Needs range from facial reconstruction or breast reconstruction following breast cancer, to treatment of battle scars. An ever-changing and diverse set of surgical skills is needed to serve the veteran population. A notable change in treatment: two years ago, the Division of Plastic Surgery was able to get the VA to approve use of a novel injectable treatment for Dupuytren's contracture of the hand. This was a condition that previously required complex surgical treatment followed by months of outpatient therapy.

The in-office injection does not require surgery and there is shortened recovery time. This one change is much more helpful to patients and also allows plastic surgeons to serve 40-50 more patients per year.

In addition to staff plastic surgeons, the other Division plastic surgeons cover needs at the VA. For example, hand surgery needs are cared for by Dr. Vedder. Last year, the Veterans Hospital partnered with Northwest Hospital to expand operative capacity. This collaboration has been efficient and well-managed with smooth and unified care for our veterans.

Needs range from facial reconstruction or breast reconstruction following breast cancer, to treatment of battle scars. An ever-changing and diverse set of surgical skills is needed to serve the veteran population.

UW Medicine Plastic and Aesthetic Surgery Clinic at Northwest

The newest addition to the Plastic Surgery family of services opened in April 2014. It has been long in the planning. Aesthetic or "cosmetic" plastic surgery has not been a programmatic focus of UW Medicine until now, though all of our surgeons are well-trained in the full spectrum of aesthetic procedures and several have particular interest in this area of practice.

The reasons behind beginning a Plastic and Aesthetic Surgery Clinic at this time are several. Clinically, it is something patients have asked for and wondered why the UW Medicine does not provide much in the way of aesthetic plastic surgery. They know and trust their doctors at UW and want to get these services from UW surgeons as well. Second, other UW Medicine care providers often need these services to complete treatment of a patient. For instance, after bariatric surgery and significant weight loss, body contouring is the important final step. As important, we now have sufficient numbers of faculty to staff and provide aesthetic plastic surgery at all times. And with the addition of Northwest Hospital to UW Medicine, there is enough surgical and clinical space to deliver the services in a more intimate community setting. Finally, the new service will enhance our large and well-established plastic surgery residency program. A full-spectrum plastic surgery training experience requires significant aesthetic practice. This new center presents increased opportunities for training our residents in this part of the curriculum.

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Plastic Surgery: Rebuilding Lives

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[Dr. Hakim Said, MD](#), Associate Professor (pictured on page 3) and [Dr. Alex Gougoutas](#), Assistant Professor (pictured on page 4) will be primary site providers with other faculty, including [Otway Louie, MD](#), Associate Professor (pictured on page 3) and [Shannon Colohan, MD](#), Assistant Professor (pictured on page 4) from the UWMC Reconstructive Center providing services on a rotating basis. A full continuum of aesthetic services will be provided from rejuvenating treatments on site to surgical facelifts, tummy tucks and more expansive body contouring.

Training Future Plastic Surgeons at UW Medicine

The Plastic Surgery Residency Program was established in 1988. Since that beginning, the program has grown dramatically. As the number of full-time faculty and affiliated community-practice surgeons grew, the Division was able to provide more educational opportunities to trainees. It is because of growth that the Plastic Surgery graduate training program applied and was granted permission to expand the residency to four residents per year for a total of 24 residents in our six year integrated program.

Residency training throughout the country began a seismic shift at the beginning of this current academic year with the implementation of the [“Next Accreditation System” \(NAS\)](#). The NAS represents an overhaul of the way in which faculty and programs evaluate resident trainees and the methods that the [Accreditation Council on Graduate Medical Education \(ACGME\)](#) uses to evaluate residency training programs. Change can be difficult and moving to the NAS has been likened to “redesigning an airplane while it is flying,” but the Plastic Surgery residency program at UW embraced the change and spent the past year preparing for implementation. This has entailed a complete redesign of the evaluation system, the semi-annual review system and much of the documentation that is required for residency programs. It has not been pain-free, but the division is well-prepared at this point and actually anticipates benefits in the way that trainees acquire competencies and the quality of the feedback able to be provided.

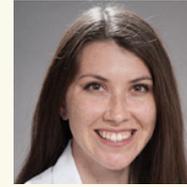
Ultimately, the truest testament to the type of residency training program is the caliber of plastic surgeons that the program produces. Using that metric this residency training program is second to none. Upon graduation, UW Plastic Surgery residents are prepared for both community and academic practice, and have flourished in all practice settings. Our trainees have entered practice from Washington to Rhode Island, and have excelled in all aspects of the specialty. Recently we have had a number of residents matriculate to very prestigious craniofacial fellowships and subsequently enter academic practices at vaunted institutions across the country. Similarly two of our recent trainees are currently in extremely competitive hand surgery fellowships and will be entering practice in the next several months.

Common threads of graduates of our program are that they are exceedingly well-trained, have passed the written and oral board examinations on the first try, are thoughtful and conscientious physicians, and make us proud to say that we trained them.

Plastic Surgery Residents



Goldsberry, R1



Ledbetter, R1



Rommer, R1



Kemp, R2



Miller, R2



Oh, R2



Pet, R3



Sandvall, R3



Tom, R3



Chong, R4



Kasukurthi, R4



Lipira, R4



Miranda, R5



Sousa, R5



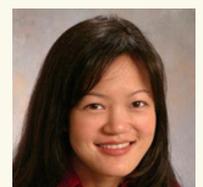
Lien, R5



Prucz, R5



Paukert, R6



Peng, R6

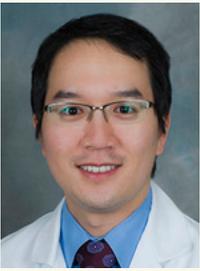


Swanson, R6



Schultz, R6

Researcher Profile: Jason Ko, MD



Jason Ko, MD

Approximately 1,800 US military personnel have suffered traumatic major limb amputations in Iraq and Afghanistan, and as many as 41,000 people in the US have sustained upper extremity loss. As the incidence of extremity amputations in our wounded warriors has increased, the [US Department of Defense's \(DoD\) Defense Advanced Research Projects Agency \(DARPA\)](#) has spent \$144 million on prosthetics research and development since 2006.

In 2009 the DoD announced the [Peer Reviewed Orthopaedic Research Program \(PRORP\)](#) Clinical Trial Award, which is intended to support the rapid implementation of clinical trials with the potential to have a significant impact on military combat-relevant orthopedic injuries. [Jason Ko, MD](#), Assistant Professor of Surgery in the Division of Plastic Surgery and Adjunct Faculty of the Department of Orthopaedics and Sports Medicine, is the Co-Principal Investigator of the 2012 PRORP Clinical Trial Award entitled, "Targeted Reinnervation as a Means to Treat Neuromas Associated with Major Limb Amputation." This \$2.5 million award provides support to a 4-year multicenter, prospective clinical trial that will evaluate the effects of "targeted muscle reinnervation" (TMR) on neuroma formation in upper and lower extremity amputees. The project is led by PI [Gregory Dumanian, MD](#) at Northwestern University, and also includes Walter Reed National Military Medical Center in Bethesda, MD, and San Antonio Military Medical Center in San Antonio, TX. In addition to serving as Co-PI for the entire project, Dr. Ko is the PI for the UW portion of the trial and is supported by his Co-Investigators [Douglas Smith, MD](#), Professor of Orthopaedics and Sports Medicine, and [Janna Friedly, MD](#), Assistant Professor of Rehabilitation Medicine, at Harborview Medical Center.

TMR is a revolutionary surgical technique performed in upper and lower extremity amputees whereby amputated nerves are transferred to intact target muscles to create new motor signals that allow the amputee to intuitively control a bionic limb. Developed by Drs. Gregory Dumanian (PI of the grant) and [Todd Kuiken](#) at Northwestern University, TMR has received previous funding support from the [National Institutes of Health \(NIH\)](#), DoD, and other sources. TMR has been featured in respected scientific journals such as *Lancet*, the *Journal of the American Medical Association (JAMA)*, the *Journal of Bone and Joint Surgery*, *Plastic and Reconstructive Surgery*, and, most recently, the *New England Journal of Medicine*. In addition, TMR has gained nationwide attention as an innovative strategy to help amputees and has been highlighted in the *New York Times*, *TIME Magazine*, *Newsweek*, the *Economist*, *National Geographic*, *New Yorker Magazine*, the *Oprah Winfrey Show*, *Good Morning America*, *CNN*, and other major media outlets.

Painful neuromas are a significant problem after amputation, and although TMR was initially intended for the motor control of bionic limbs in amputees, Drs. Dumanian and Kuiken noticed early on that amputees with pre-existing neuroma pain had less pain after the TMR surgery. It was hypothesized that TMR surgery provided an avenue for amputated nerves to grow into target muscles, rather than form disorganized, painful neuromas. Supported by a grant he received from the Plastic Surgery Foundation (PSF), Dr. Ko spent 18 months in the laboratory testing this hypothesis during his residency at Northwestern University. His demonstration that TMR prevents neuroma formation in various animal models helped to formulate the concepts behind the current DoD grant.

Dr. Ko's initial interest in research began when he was a medical student at Duke University in Durham, NC, where he spent a year in the Frank Hawkins Kenan Plastic Surgery Laboratory, and his interest in research continued throughout his residency in plastic and reconstructive surgery at Northwestern and a fellowship in hand and microvascular surgery at UW.

Shortly after joining as faculty in the Department of Surgery, he received the aforementioned DoD grant as well as a grant from the [Musculoskeletal Transplant Foundation \(MTF\)](#) for work in the field of vascularized composite allotransplantation (VCA). Dr. Ko attributes much of his early research success to the support he has received from [Nicholas Vedder, MD](#), Professor of Surgery and Chief of Plastic Surgery, and [Carlos Pellegrini, MD](#), Henry N. Harkins Professor and Chair of Surgery, who not only supported, but embraced, Dr. Ko's desire to seek additional training in brachial plexus, peripheral nerve, and microvascular surgery in Taiwan and Japan immediately after joining the Department of Surgery.

During these two months in Asia, Dr. Ko learned innovative surgical techniques that he uses in his clinical practice today, while also making time to apply for three research grants during this span. Dr. Ko states that his time in Asia was extremely educational for a number of reasons, and it only served to strengthen his interest in making research a core component of his academic career.

Currently, Dr. Ko is the newest member of the Department of Surgery Research Leadership Committee and is involved with a number of research projects, including a multicenter effort focusing on hand and upper extremity surgery funded by the Plastic Surgery Foundation (PSF), in addition to other multicenter clinical trials. Since joining the faculty at UW, Dr. Ko has established multidisciplinary collaborations with faculty within Electrical Engineering, Neurological Surgery, Rehabilitation Medicine, and Bioengineering, and together they are in the process of seeking extramural funding from the DoD, DARPA, and the NIH for research related to amputee care, revolutionizing prosthetics, and TMR.

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Researcher Profile: Jason Ko, MD

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Orthopedic-related injuries and major limb amputations make up a large portion of the devastating casualties resulting from conflicts overseas, and many of our wounded US Warfighters will suffer from chronic pain due to symptomatic neuromas that do not respond to currently accepted treatment modalities. Harborview Medical Center is a unique civilian medical center that treats a high volume of extremity amputees, and Dr. Ko hopes that UW's involvement with this DoD clinical trial will help define TMR as the new standard of care for the treatment of neuromas in amputees.

2014 New Faculty



Muhammad Nuri, MD

[Dr. Muhammad Nuri](#), Assistant Professor joins the Department of Surgery in the Division of Cardiothoracic Surgery. He is a member of the section of pediatric cardiothoracic surgery and will serve as the site director of the regional pediatric cardiothoracic surgery program at Mary Bridge Children's Hospital & Health Center. His clinical interests focus on neonatal, pediatric cardiac surgery and international outreach.

A native of Pakistan, he received his undergraduate and medical school training in Pakistan. He proceeded to the United States to complete his general surgery and thoracic surgery residency training at West Virginia University and Penn State University respectively. He was then sponsored by the Royal College of Surgeons of England to complete a fellowship in congenital cardiac surgery at Great Ormond Street Hospital for Children. He returned to Pakistan for four years to participate in a voluntary medical mission. The mission focused on establishing adult and pediatric cardiac surgical services in the rural setting for the first time in Pakistan.

To focus on neonatal surgery, he returned to the United States to complete a post doctoral fellowship in congenital cardiac surgery at Columbia University and an ACGME accredited fellowship at Emory University. His research interests include health services research and healthcare resource utilization, with a specific focus on the delivery of cardiac services in the pediatric population.

"The University of Washington and Seattle Children's Hospital afforded the privilege to work with an extremely talented core of individuals. The ability to impact life and productivity of an individual from an extremely early age is fulfilling and rewarding. My goal is to establish a trusting relationship with our patients and deliver safe and effective care."

Honors and Awards

Faculty



Bulger

[Eileen Bulger, MD](#), Professor, Trauma & Burn Division, is Co-Principal Investigator with [Dr. Catherine Hough, MD](#), Associate Professor in the Department of Medicine, Division of Pulmonary and Critical Care, on a 7-year grant from the [National Institutes of Health \(NIH\)](#) for the establishment of the Pacific Northwest Clinical Center. This Center will serve as one of 12 Clinical Centers in the new [National Heart, Lung, and Blood Institute \(NHLBI\)](#) Clinical Trials Network for the [Prevention and Early Treatment of Acute Lung Injury \(PETAL Network\)](#). Coordinated by Massachusetts General Hospital, the PETAL Network will develop and conduct high-quality randomized, controlled clinical trials using a multidisciplinary and collaborative approach in order to prevent, treat and improve outcomes of patients with, or at risk for, acute respiratory distress syndrome (ARDS). The Center will also collect biologic samples and clinical data necessary to determine the molecular phenotype of disease pathogenesis, response to therapy, and recovery. Drs. Bulger and Hough are joined on this project by [Erik Van Eaton, MD](#), Assistant Professor, Trauma & Burn Division, who will serve as Co-Investigator, and [Ronald Maier, MD](#), Professor and Jane and Donald D. Trunkey Chair in Trauma Surgery, who will serve as Contributor.



Byrd

[David Byrd, MD](#), Professor, General Surgery Division, has been selected as one of the healthcare provider recipients for the Spring 2014 [UW Medicine Cares Award](#) at the UW Medical Center.

UW Medicine established the UW Medicine Cares Award in 2013, a program to formally recognize and celebrate the accomplishments and excellence of those in the UW Medicine community who consistently exemplify the UW Medicine Service Culture Guidelines. The guidelines are professional standards that ensure that anyone who encounters UW Medicine receives the same great care and service throughout the system.

Each UW Medicine entity – Harborview Medical Center, Northwest Medical Center,

(continued on page 10)

Honors and Awards

Continued from page 9

Valley Medical Center, UW Medical Center, UW Neighborhood Clinics, UW Physicians and Airlift Northwest – participates in the UW Medicine Cares Award program.

[Read the nomination and comments >>](#)



Evans

Heather Evans, MD, Assistant Professor, Trauma & Burn Division, was awarded the [Surgical Infection Society's Junior Faculty Fellowship Award](#) which will assist funding her [mPOWER](#) project.

The purpose of this fellowship is to provide the opportunity for a junior faculty member to undertake a meaningful research project in an area relevant to surgical infectious diseases, and foster interest in surgical infections and academic surgery as a career focus.



Farjah

Farhood Farjah, MD, Assistant Professor, Cardiothoracic Division was elected to the Editorial Board of the [Annals of Thoracic Surgery](#), the official journal of the [Society of Thoracic Surgeons](#).



Gibran

Nicole Gibran, MD, Professor, Trauma & Burn Division, received the Harvey Stuart Allen Distinguished Service Award at the [American Burn Association](#) Annual Meeting on March 26, 2014 in Boston, MA.

This award is presented to an outstanding North American scientist for their contribution in the burn field. The first award was presented in 1969 at the suggestion of Dr. Curtis P. Artz. Dr. Allen was born in Livingston, Montana and died at the early age of 48 of a myocardial infarct. Following his surgical training at King's County Hospital in Brooklyn and in Chicago, he became associated with the Department of Surgery at Northwestern University. He served during World War II in the North African and Mediterranean Theaters of War. After the War, he became involved with the Burn Unit at Cook County Hospital. He was among the pioneers in developing aggressive coverage of the burn

wound, introduced several dressings in burn therapy, and focused his attention on meticulous care of the burn wound. The present day care of burns owes much to the teachings of Harvey Stuart Allen.

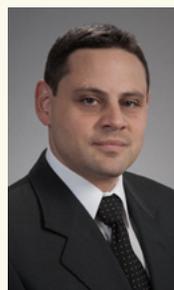


Van Eaton

Erik Van Eaton, MD, Assistant Professor, Trauma & Burn Division, was named the 2014 recipient of the [UW School of Medicine Alumni Early Achievement Award](#).

The Alumni Early Achievement Award honors an individual from the last 20 years who has excelled in his or her career in medicine, or made significant contributions or remarkable achievements in clinical care, medical science, humanitarianism or administrative activities.

Residents



Montenovo

Martin Montenovo, MD, transplant surgery resident, was selected to receive a Young Innovator Award from the [American Society of Transplant Surgeons \(ASTS\)](#) for his abstract submission entitled "*The Clinical Impact of Hepatitis C-Positive Donors in Liver Transplantation: Patient Protection or Lost Opportunities?*"

[Read the abstract on page 89 >>](#)



Simianu

Vlad Simianu, MD, general surgery resident, presented at the [American Surgical Society \(ASA\)](#) 134th Annual Meeting that Washington has seen a dramatic threefold increase in elective colectomy for diverticulitis over the past 13 years, despite evolving recommendations.

[Read more >>](#)

Research Reinvestment Fund Awardees

The Research Reinvestment Fund was established to help achieve the Department of Surgery's goal of becoming the premier home for surgical research. The call for proposals for Round 4 funding featured two award types: the Individual Investigator Award, which provides one year of support to junior and early-career investigators for the development of pilot data critical to obtaining extramural funding, and the Unique Opportunity Award, which is a two-year award supporting initiatives involving multi-disciplinary collaborations resulting in novel and high impact research activities. DOS received a record number of faculty submissions and the selection process was extremely competitive. Congratulations are in order to the following investigators:

Individual Investigator Awards



[Giana Davidson, MD](#), Assistant Professor, General Surgery

This award provides support to improve the health of patients receiving specialized post-acute care following hospitalization. Understanding the post-hospital period is essential for improving healthcare for the increasing proportion of patients requiring skilled nursing facilities (SNFs) following discharge from the hospital. This support will help to build a multi-disciplinary collaborative effort aimed for research and quality improvement initiatives through pilot data collection to create benchmarking standards of care for SNF patients.



[Sara Javid, MD](#), Assistant Professor, General Surgery

This project aims to create an adapted Patient Reported Outcomes (PRO) tool to guide breast cancer quality improvement activities, through a collaborative effort among breast cancer patients and surgeons. Through focus groups and online surveys, Dr. Javid will select metrics from validated PROs tools that reflect the quality of life and treatment satisfaction issues most relevant to patients who have recently undergone oncologic breast surgery. The adapted PROs tool will be implemented and evaluated for feasibility across hospitals within the SCOAP hospital network.



[Lena Sibulesky, MD](#), Assistant Professor, Transplant Surgery

Dr. Sibulesky's project will investigate the mechanism of biliary stricture formation (ischemic cholangiopathy/ischemic type biliary strictures) in donor after cardiac death (DCD) liver allografts. Understanding the molecular mechanism of the stricture formation will allow effective therapies to ameliorate ITBS in liver transplantation. Overcoming the major complication of ITBS will potentially lead to significant expansion in donor livers in an era of increasing organ shortage.

Unique Opportunity Award



[Rafael Alfonso, MD](#), Research Assistant Professor, General Surgery

This award provides support for the consolidation of a multi-disciplinary group called the Collaborative for Healthcare research in behavioral economics and decision sciences (CERTAIN CHOICES). This project will: 1) formally establish CERTAIN CHOICES with an initial focus on surgical interventions; 2) create and test tools focused on identifying and changing clinicians' behaviors to improve healthcare delivery, and 3) develop pilot data and research activities to pursue funding opportunities to sustain and grow CERTAIN CHOICES.

The total award for this funding round was \$125,000, and it is anticipated that the results of these exciting projects will result in further funding from external sponsors.

Department of Surgery Grant Activity Report

Congratulations to Department of Surgery Principal Investigators, who received 14 awards in the 3rd quarter of AY2014 totaling \$3.5 million! Of these awards, 10 were new awards or competing renewals:

Principal Investigator	Sponsor Name	Title
Eileen Bulger, MD (Co-PI with Catherine Hough, MD, Department of Medicine)	National Institutes of Health (NIH)	Pacific Northwest Clinical Center for the NHLBI PETAL Network
David Byrd, MD	Fred Hutchinson Cancer Research Center (FHCRC)	Biospecimen Repository
Heather Evans, MD	UW Center for Commercialization	Mobile Post-Operative Wound Evaluator (mPOWER)
Heather Evans, MD	UW Institute for Translational Health Sciences	Understanding the post discharge experience of surgical patients: a prospective observational study
Heather Evans, MD	Surgical Infection Society (SIS)	mPOWER: Mobile Post-operative Wound Evaluator
Farhood Farjah, MD, MPH	Cancer Research Network	Automated Tool to Measure Lung Cancer Risk Factors in Pulmonary Nodule Patients
Nicole Gibran, MD	Fibrocell Science, Inc	a Phase II, Double-Blind, Randomized, Placebo- Controlled Pilot Study of azficel-T for the Treatment of Restrictive Burn Scars
Thomas Hatsukami, MD	National Institutes of Health (NIH)	Culprit Plaque in Acute Cerebral Infarction: A Histological and MRI Assessment
David Mathes, MD	Wake Forest University Baptist Medical Center	Tolerance induction to Vascularized Composite Allografts in a Pre-Clinical Large Animal Model
Jorge Reyes, MD	Gerber Foundation	Genomic Analysis of Hepatoblastoma in Children

ATTENTION ALUMNI!

Let us know what you are up to now!

If you would like to share news about your career and family or reflect upon your residency experience in UW Department of Surgery, we want to hear about it to publish in *Surgery Synopsis*.

Please send your updates and photos to
surgeditors@uw.edu.

Surgery Synopsis Reader Feedback

Below are comments we received from readers regarding our Winter 2014 issue:

“Wonderful piece about Kris Calhoun and her son. I’ve heard people make the comment: “If I want really good medical care, I’m going to masquerade as a 10-year-old and sneak into the Seattle Children’s Hospital.” Very true.”

*Paula Carvalho, MD,
Professor of Medicine,*

*UW Division of Pulmonary and Critical Care Medicine and Academic Section Head,
Pulmonary/CCM, Boise VAMC*

“What a wonderful story by Dr. Kristine Calhoun! Altogether a very nice issue. I was a bit sad to read about Patch stepping down, but delighted for Brant. Give him my congratulations!”

*Jean McAllister, former Assistant to the
Department of Surgery Chairman,
Dr. Carlos A. Pellegrini*

“Wonderful newsletter and news. Lovely article about Dr. Kim Riehle!”
Ann De Lancey, Friend of the Department

“Thank you for including me in the *Surgery Synopsis* newsletter. It brought a smile to my face to read about Seattle Children’s Hospital and the part Dr. David Tapper played in elevating its residency program. I have forwarded this to the kids to remind them of the important work David did.”

Susan Tapper, widow of Dr. David Tapper

[Seattle Children’s Hospital Story >>](#)

[Researcher Profile:
Kimberly Riehle, MD Story >>](#)

If you wish to submit comments about the content of this newsletter, please send them to surgeditors@uw.edu.

Save the Dates

**13TH ANNUAL
TAPPER LECTURE**
Thursday, May 1, 2014
8:00am–9:00am
Seattle Children’s Hospital
Wright Auditorium

Dr. Diana Farmer
Pearl Stamps Stewart
Endowed Chair
Professor and Chair, UC Davis
Department of Surgery
Surgeon-in-Chief, UC Davis
Children’s Hospital
Fellow, Royal College
of Surgeons

**2ND ANNUAL
FACULTY DEVELOPMENT
SEMINAR**
Wednesday, June 4, 2014
6:30am–8:30am
Health Sciences Building
Room K-069
For all faculty, fellows
and residents.

**15TH ANNUAL MEETING OF THE
WASHINGTON STATE CHAPTER
OF THE AMERICAN
COLLEGE OF SURGEONS**
Thursday, June 12-15, 2014
Sunriver, OR

**INTERN
ORIENTATION WEEK**
June 16–24, 2014
Event Contact:
Gina Coluccio
coluccio@uw.edu
206.543.3687

**DOS CHIEF
RESIDENT DINNER**
Saturday, June 21, 2014
6:00pm–10:00pm
Bell Harbor International
Conference Center
2211 Alaskan Way
Seattle, WA 98121
Event Contact:
Denise Lin
dsl720@uw.edu
206.543.3654

**AMERICAN COLLEGE
OF SURGEONS
CLINICAL CONGRESS**
Sunday, October 26, 2014
San Francisco, CA

**65TH ANNUAL
STRAUSS LECTURE**
Friday, November 21, 2014

Dr. Marco Patti
Professor of Surgery and
Director of the Center
for Esophageal Diseases
University of Chicago
Pritzker School of Medicine

HARKINS SYMPOSIUM
Friday, November 21, 2014
7:30am–2:00pm
Alder Hall
Speakers TBA

**DOS ANNUAL
HOLIDAY BRUNCH**
Saturday, December 20, 2014
10:30am–1:00pm
UW Club

**SEATTLE SURGICAL SOCIETY
ANNUAL MEETING**
Friday, January 23, 2015
Hyatt Olive 8 Hotel
Seattle, WA

**21ST ANNUAL
SCHILLING LECTURE
AND DOS RESEARCH DAY**
Friday, February 27, 2015
Dr. Walter J. Pories
Professor of Surgery
Brody School of Medicine
East Carolina University

Please see the
Department of Surgery’s
monthly Grand Rounds
schedule under
Special Events on our website:
www.uwsurgery.org

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Surgery Synopsis is an in-house newsletter published on a quarterly basis to highlight the academic and research activities of the University of Washington School of Medicine Department of Surgery. This publication is distributed to the Department's faculty, residents, staff, and friends.

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