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# RECONSTRUCTIVE MICROSURGERY

## What's New in Reconstructive Microsurgery?

By Roman Skoracki, MD, FRCSC, Michael Klebuc, MD and Joan E. Lipa, MD

**T**he mild January weather and beautiful beaches of Cancun provided the backdrop for the 2010 American Society for Reconstructive Microsurgery Annual Meeting. This year's gathering of reconstructive surgeons from around the world was visited by 746 participants for the combined meeting and a record number of 428 attendees for the ASRM. Surgeons traveled from 30 countries to exchange knowledge and experience, to make new acquaintances and to be with old friends.

The exciting program was the result of a rigorous selection process lead by Joan Lipa, choosing the 78 best papers and 26 best posters among over 300 excellent submissions.

### SATURDAY

The meeting kicked off on Saturday with Peter Neligan's President's Welcome. It was immediately followed by a futuristic panel moderated by Jesse Selber, exploring the emerging role of robotics in microsurgery, peripheral nerve and hand surgery.

The Joint Presidential Keynote Lecture was provided by Bob Woodruff of *ABC World News Tonight* who was severely injured in



**Incoming President Keith Brandt, MD (right), presents outgoing President Peter Neligan, MD with a commemorative plaque.**



**Buncke Lecturer Julian Pribaz, MD**

January of 2006 by a roadside bomb while reporting near Taji, Iraq. He provided an inspiring account of his journey from injury to recovery, highlighting the role

of the medical care he received.

During the AAHS/ASPN/ASRM Joint Outstanding Papers Presentations, Jan Jeroen Vranckx provided an exciting description of three successful tracheal allotransplants following initial indirect revascularization of the graft in a heterotopic position for the treatment of long, non-malignant tracheal stenoses without lifelong immunosuppression. Toni Zhong showed us that perioperative fluid management is related to early post-operative complications in breast free flap reconstruction surgery, with a crystalloid volume between 70-110cc/kg/first 24h being the optimal.

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## What's New in RM?

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A number of reconstructive Masters shared their experiences in the afternoon during the Master Series in Microsurgery. Tips, Tricks and Pearls were offered to participants in a wide variety of areas ranging from pediatric microsurgery to office management for the microsurgeon starting out.

### SUNDAY

Sunday began with a panel moderated by Christopher Crisera examining the unique reconstructive challenges produced by the global war on terror. The panelists described the impact of improvised explosive devices, high rates of extremity injuries and the role of craniectomy and secondary reconstruction. The necessity of managing intercranial dead space during skull reconstruction was emphasized.



**Presidents' Invited Lecturer Roger Khouri, MD.**

Roger Khouri provided the President's Invited Lecture titled "Beyond Microsurgery" where he explored the concept of tissue regeneration versus tissue transfer and shared his experience with breast reconstruction utilizing serial fat grafting in conjunction with a negative pressure therapy. This was followed by a memorial for William G. Shaw describing his pioneering work and numerous contributions to the field of reconstructive microsurgery. Later in

the morning the ASRM and ASPN teamed up to present a combined Facial Paralysis Panel. Julia Terzis, Ronald Zuker and Chris Coombs shared their extensive experience highlighting nuances in functional free muscle flap surgery, masseter to facial nerve transfer and a global approach to the paralyzed face emphasizing eye closure and blink restoration.

The concurrent scientific paper sessions were organized into the following areas of interest: Breast, Extremity, Head and Neck, International Showcase, Nerve, Outcome Studies, Translational Research and Trunk and General Reconstruction. The following will provide a brief summary of what was presented within the Nerve and Breast sessions.

### Concurrent Paper Sessions

#### Nerve

Ivica Ducic presented a retrograde dissection technique to relief compression of the lateral femoral cutaneous nerve in patients with meralgia paresthetica, to achieve complete decompression while avoiding accidental injury to the nerve. Wendy Yee performed a

metanalysis of the existing literature demonstrating that tendon transfer may be slightly superior to nerve transfer with respect to strength for elbow flexion after upper extremity nerve injury. However weak evidence suggested that significant complications are less often associated with nerve transfer compared to tendon transfer. For brachial plexus injuries Shu-ying Chang showed that contralateral C7 transfer is a good option for motor and sensory restoration in severe brachial plexus root injury and severe spastic hand patients and transfer to the musculocutaneous and median nerves followed by functioning muscle transplantation for deep finger flexors replacement can provide a reasonable outcome for elbow and finger flexion. Similarly Dominique Tremblay presented a biomechanic cadaveric study showing that reorienting the latissimus dorsi muscle's line of pull into that of the infraspinatus muscle decreases the force necessary for external rotation, suggesting that clinical results can be improved with this muscle trans-

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**Godina alumni**



It was a beautiful night for the ASRM reception



## What's New in RM?

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fer by modifying the origin and insertion of the muscle. Several excellent papers were dedicated to nerve research. Matthew Wood development a microsphere sustained release Glial-derived neurotrophic factor delivery system to promote nerve regeneration after peripheral nerve injury. Olawale Sulaiman is using a rat sciatic nerve injury model to attempt to determine the spatiotemporal expression of Regeneration-Associated Genes in the distal nerve stump after acute and chronic nerve injuries as well as during nerve regeneration after immediate and delayed repair and to explore the effect(s) of transforming growth factor- $\beta$  and forskolin on the expression of RAGs after chronic nerve injury and during regeneration. Bradley Hubbard created a bioengineered, autologous nerve conduit through bioprinting resulting in superior axonal regeneration in a 1cm rat sciatic nerve interposition model compared to collagen tube alone. Ayhan Kilic presented a new rat model of cable grafting sural nerve cables into a 1cm sciatic nerve defect, as a viable control group treatment that uses a single entry



exposure, incurs minimal morbidity, and maintains preservation of muscle attachment, to be used in various experimental trials for diverse aspects of surgery in the field of peripheral nerve regeneration. William Janes presented that temporary deafferentation via either tourniquet ischemia or localized lidocaine injection resulted in kinematic changes, including increased cervicothoracic flexion and altered scapula orientation in healthy volunteers similar to those seen in patients with upper extremity nerve compression. Ching-Hua Hsieh profiled the expression of muscle-specific miRNAs to identify the regulated genes in the innervated skeletal muscle after denervation and re-innervation. T. Nijhuis compared the vein supported with muscle and bone marrow stromal cells to a nerve autograft as a conduit for 1.5cm rat nerve defects showing that the later resulted in



better functional regeneration. Jacob Alant introduced a traumatic neuroma in continuity (NIC) injury model in rodents combining traction and compression forces which duplicated histological features and poor functional recovery consistent with NIC formation.

### Breast

The first breast session was initiated with a series of papers examining potential strategies to decrease the morbidity of free flap harvest from the anterior abdominal wall. Garvey and Associates from The M.D. Anderson Cancer Center evaluated a group of 615 patients who underwent breast reconstruction with a DIEP or muscle sparing free TRAM based on either the medial

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## What's New in RM?

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or lateral branches of the deep inferior epigastric artery. No difference in hernia formation or bulging was associated with use of the lateral branch of the DIEA as has been previously postulated. Next Sandberg and associates presented their experience closing abdominal donor site defects primarily and with the use of underlay hernia materials. They concluded that in routine cases, primary closure is associated with a small number of bulges and hernias and for cost effectiveness hernia materials should be reserved for more complex cases. The same group also examined the impact of adjuvant chemotherapy on abdominal donor site morbidity and found a trend toward higher hernia rates when adjuvant chemotherapy was administered.

Nelson and associates evaluated the influence of advanced age on abdominal wall strength after DIEP or muscle sparing free TRAM surgery. They found little to no difference in postoperative abdominal function in the group older than sixty years of age as compared to the younger cohort. Next Lin, Selber et al queried whether bilateral free flap breast reconstruction was associated with significantly higher risk than unilateral reconstructions. Despite longer operative times and higher rates of intra-operative vessel thrombosis bilateral reconstructions were not associated with significantly higher post-operative complications rates. The group from Manitoba then shared their experience with SIEA flap breast reconstruction emphasizing the importance of adequate vessel caliber and length for achieving a successful result. The potential role of Tamoxifen in the genesis of microvascular thrombosis was now discussed by the group from the M.D. Anderson Cancer Center. In a review of 577 patients no increased rates on flap thrombosis were identified in

## ASRM "Best" Awards 2011



### Best Microsurgical Case of the Year Award

Steven C. Bonawitz, MD

Presented by Dr. Michael Zenn (right)



### Best Microsurgical Save of the Year Award

Donald Baumann, MD, FACS

Presented by Dr. Michael Zenn (right)

## ASRM Resident Abstract Poster Winners

### Best Clinical Paper:

Brian Patrick Kelley, MD

*"Should Tamoxifen Be Held Prior to Microsurgical Breast Reconstruction?"*

### Clinical Paper Runner-Up:

Oren Z. Lerman, MD

*"Cost Benefit of Preoperative Imaging in DIEP Flap Breast Reconstruction"*

### Best Translational Research Paper:

Brett T. Phillips, MD

*"Comparison of Intraoperative Perfusion Techniques to Predict Mastectomy Skin Flap Necrosis: Preliminary Results of a Prospective Clinical Trial"*

### Best Clinical Poster:

Helen G. Hui-Chou, MD

*"Secondday Revisions and Refinements of Free Perforator Flaps for Lower Extremity Reconstruction"*

### Best Translational Research Poster:

David S. McDonald, MD

*"Correlating Spy Imaging (ICG Fluorescence Angiography) with Flap Outcomes"*

patients receiving Tamoxifen within 28 days of surgery as compared to those who had never taken the drug or had discontinued its use earlier. Zong et al. from Toronto demonstrated that a regional block of T-6 through L1 could be achieved utilizing Bupivacaine and a submuscular epidural catheter significantly reducing postoperative narcotic use. The session was concluded by the group from Penn exploring the role of interoperative vascular complications with the ultimate fate of the free tissue transfer. They found a trend toward higher rates of postoperative venous thrombosis following

an intraoperative venous thrombosis however, this trend did not hold true with regard to the arterial anastomosis. The use of heparin and aspirin were not associated with decreased rates of postoperative vascular complications.

## MONDAY

Monday morning began with a series of break out panels discussing lymphedema and scalp reconstruction, perforator imaging and structuring a microsurgical practice. The breakout sessions were followed by the second annual Young Microsurgeons

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## What's New in RM?

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Group Panel (YMG) which highlighted the complex reconstructions performed by the young members of the ASRM with critics provided by sage members of the society. The day was also eventful for Peter Neligan's Presidential Address in which he emphasized the role of the reconstructive microsurgeon as a valuable member of a multidisciplinary team sighting examples from skull base surgery. James Higgins provided this year's Godina Lecture outlining his travels and highlighting the role of microsurgery in hand and upper extremity reconstruction. The presentation culminated with Samir Mardini, MD, being awarded the 2011 Godina Traveling Fellow. The scientific sessions included numerous cutting edge presentations in the areas of head and neck, trunk, extremity and breast reconstruction along with translational research and an international showcase.

## Concurrent Paper Sessions

### Head and Neck

Both head and neck sessions exemplified the ingenuity of reconstructive surgeons from the US and abroad. Chung-Kan Tsao showed that mandibular reconstruction plates bent at defined angles to emulate pre-morbid symmetry can simplify the inset of fibula segments while re-establishing adequate occlusion and facial contour. Nicholas T. Haddock demonstrated that use of preoperative planning with computer-generated images as well as the use of patient specific osteotomy guides makes mandibular reconstruction more exact and decreases total operative time. Tuija M. Yla-Kotola presented that union of a reconstructed mandible, by way of a fibula free flap, was generally favourable but resorption resulted in a significant reduction of mandibular and fibular height at follow-up. Examining three different treatment modalities for the radial forearm osseocutaneous flap donor site, Philip



**2011 Godina Lecturer James Higgins, MD (left) with William Zamboni, MD**

Joseph Torina, found the combination of iliac crest bone grafting and plating combined is a safe and effective technique that maximizes both early and late strength of the radius and decreases fractures while allowing for harvest of greater segments of bone. Yur-Ren Kuo presented a simple and elegant technique of a stair-step flap for secondary lower lip revision for

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THE **ASRM** COUNCIL AND THE 2011 ANNUAL MEETING PROGRAM AND TECHNICAL EXHIBITS COMMITTEES WOULD LIKE TO EXTEND THEIR **THANKS** TO THE **2011 EXHIBITORS** FOR THEIR SUPPORT AND PARTICIPATION:

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St. Louis, School of Medicine

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Wound Care Technologies

## What's New in RM?

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circular contracture, downward and notching deformity of the lower lip, and insufficient alveolabial sulcus after prior lip and cheek composite defect reconstruction with a free flap. Chih-Hung Lin showed that a functioning free gracilis myocutaneous flap may be designed in such a way as to provide a reliable single stage facial reconstruction and reanimation following tumor ablation to restore oral continence and facial expression primarily. Marcos Jaeger demonstrated that a secondary orbicularis occuli and/or orbicularis oris plication can

sure. Patrick Garvey described a total sacrectomy reconstruction using a VRAM flow-through flap anastomosed to a double-barreled free fibula flap thereby satisfying the bone and soft tissue requirements in a resection site with few local recipient vessels. Thomas Davenport presented a free vascularized fibular strut graft to intra-abdominal vessels within an expandable titanium cage as a novel technique of an anterior spinal fusion for the surgical management of spinal osteomyelitis. Britt Colebunders performed cadaver dissections to identify 7 potential entrapment sites of the pudendal nerve, 3 of which were in relation to Alcock's canal to clarify



**The annual meeting's social events provided opportunities to connect with colleagues.**

improve the aesthetic appearance of the smile after an initial free gracilis facial reanimation. An innovative technique of a split-gracilis free functional muscle transfer for the reconstruction of a near-total upper and lower lip defect resulting in a functioning oral sphincter in a single-stage was described by Matthew Choi.

### Trunk and General Reconstruction

Donald Baumann demonstrated that ipsilateral component separation for VRAM flap donor sites with excessive fascial tension (as determined by the attending surgeon to be excessive and at extremely high risk for postoperative failure) results in fewer postoperative wound complications, hernias and bulges despite a more difficult clo-

sure. Patrick Garvey described a total sacrectomy reconstruction using a VRAM flow-through flap anastomosed to a double-barreled free fibula flap thereby satisfying the bone and soft tissue requirements in a resection site with few local recipient vessels. Thomas Davenport presented a free vascularized fibular strut graft to intra-abdominal vessels within an expandable titanium cage as a novel technique of an anterior spinal fusion for the surgical management of spinal osteomyelitis. Britt Colebunders performed cadaver dissections to identify 7 potential entrapment sites of the pudendal nerve, 3 of which were in relation to Alcock's canal to clarify the pertinent anatomy to microsurgeons for operative approaches to neurolyse or reconstruct the pudendal nerve. Hsiang Wei Teng shared his experience of 500 consecutive cases of live donor liver transplantation with microvascular technique over the past 14 years in Brazil. Hans Serleth introduced a laparoscopic, transperitoneal approach for the harvest of the free rectus abdominis muscle with no abdominal bulge or hernia formation and high patient satisfaction. Pamela Portschy presented that post-operative enoxaparin (starting 6-8 hours after surgery) did not increase overall re-operative hematoma rates even in higher risk patients undergoing breast reduction and breast reconstruct-

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tion. Theresa Wang showed that while microvascular reconstruction is possible in hypercoagulable patients, flap failure rates are significantly higher (14%) even with anticoagulation as suggested by a hematologist and failures, which occur later in this group (day 3-4) are universally not salvageable. Janae Maher showed that the nitinol U-clip, a new penetrating clip applied in an interrupted fashion for microvascular arterial anastomosis, decreases operative time and provides reproducible anastomoses with high patency rates.

### Extremity

The extremity section kicked into high gear with the group from UCLA presenting a 30 year follow up of the first lower extremity replantation performed in the United States. The patient enjoyed an excellent result experiencing many years of near normal function and an active life style. Next Cavadas and Landin shared their experience with bilateral non HLA matched trans-humeral transplantation. Despite development of diabetes the patient demonstrated good elbow range of motion and functional finger flexion-extension at one year. Members of the Bunke Clinic presented their 10 year experience with pediatric microsurgery demonstrating a 92% success rate in a large series of complex microvascular extremity surgeries and replantations. In a

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## What's New in RM?

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subsequent paper they also demonstrated the cost effectiveness and high patient satisfaction rates associated with patients who were treated with limb salvage verses lower extremity amputation. This was followed by the LSU group from New Orleans who shared their experience with free flap reconstruction in the lower extremity.

### International Showcase

Erkki Tukiainen shared his experience with the osteomuscular latissimus dorsi flap for the reconstruction of composite tibial defects showing the need for additional bone grafting or a change of fixation in 1/3 of the patients and full weight bearing in all within 4 months. Arik Zaretski demonstrated the flexibility and generosity of the thigh as donor site for a great variety of composite flaps with minimal donor site morbidity. Bruno Battiston demonstrated favorable results of restoration of ulnarly innervated intrinsic muscles of the hand and of skin sensibility by a distal connection of the anterior interosseous nerve and the superficial sensory palmar branch of the median nerve to the motor and sensory components of the ulnar nerve at the wrist in patients with isolated proximal ulnar nerve lesions. Goetz Giessler elucidated skeletal deformities in NOMA patients as coronoid hypertrophy, which in extreme cases presents as fusion between the mandibular ramus and the zygoma or even the skull base, loss of the maxilla, the vomer and nasomaxillary pillars, which need to be addressed by skeletal restoration to obtain optimal results. Serdar Nasir examined blood flow in flap pedicles and recipient arteries, finding hemodynamic differences in flow between free skin and muscles flaps. Yur-Ren Kuo demonstrated that mesenchymal stem cells (MSC) combined with

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## American Society for Reconstructive Microsurgery

### 2011 Council and Committees

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Robert Whitfield, MD



## New Venue for the 2012 Annual Meeting

Special congratulations to Dr. Peter Neligan for a fantastic annual meeting. The 2011 ASRM meeting held in Cancun, Mexico attracted 428 registrants, coming in as the highest attended ASRM meeting thus far. The scientific meeting run by his program director, Dr. Joan Lipa received rave reviews and set a new standard for future meetings to try and match.

ASRM 2012 will be a new venue for the society. This will be the first time the meeting will be held in VEGAS! Keeping with our tradition of holding the meeting in a resort setting, the meeting is being held at the Red Rock Resort and Spa. The facility has excellent meeting facilities and spacious accommodations. Considering the new venue and some of our recent weather issues during the annual meeting I felt compelled to investigate Las Vegas, NV. Las Vegas is officially in the Mojave Desert with the Spring Mountains to the west. The name Las Vegas actually means "the meadows" because of the green meadows discovered by the early travelers around the many mountain springs, thus the name of the mountain range. OK enough fun facts. The important stuff; over 300 days of sunshine and an average rain fall of only 4.2 inches. Daytime highs in the winter average in the 60s so bring your swim trunks and golf shoes.

Did I mention that we're in Vegas? Let's see that means, shows, dining, entertainment, gambling and Elvis weddings. The resort is located just off Hwy 215 which loops around the city and is 10 minutes from the Las Vegas strip. Programming for the meeting is being delayed slightly in the morning to accommodate those who might spend late hours exploring the strip. Shows fill up quickly,

### PRESIDENT'S LETTER



Keith Brandt, MD

*The membership of ASRM provides a huge resource to draw from for educational programming.*

especially on the weekends so plan far ahead.

Plan to bring the family. The resort is not on the strip and is surrounded by outdoor activities. The nearby canyon and mountain range provide great opportunities for; hiking, horseback riding, mountain biking and is the 5th most popular destination for rock climbing. If you are a novice the resort has an indoor rock wall for practicing. Let's not forget the golfing opportunities in the Vegas area. If you are into water, the hotel can arrange kayaking or river raft trips to Black Canyon below the Hoover Dam. Take a tour of the Hoover Dam approximately one hour from the resort. Lake Mead is the lake formed by the dam, also offers recreational activities. See resort website for additional

details, [http://www.redrocklasvegas.com/adventure\\_spa/adventure\\_activities.pdf](http://www.redrocklasvegas.com/adventure_spa/adventure_activities.pdf). For those unfamiliar with the geography as I was, the Grand Canyon is 5 to 6 hours away (depending on which rim you are heading to) and difficult to do in a single day trip.

And, by the way, we are going to have a great scientific meeting. David Song, MD, MBA, FACS, Program Chair is working hard to design a program that encompasses the best of both our American and international members. The membership of ASRM provides a huge resource to draw from for educational programming. Take advantage of this opportunity to brush up on your reconstructive skills, both microsurgical and non-micro complex reconstructions. As a special treat, Dr. Song was able to secure Steven Levitt, author of *Freakonomics*, as the ASRM invited guest lecturer. Professor Levitt's talk is guaranteed to dazzle so plan to bring your spouse.

The relaxed environment of the meeting is a great way to meet and discuss complex issues with experts in the field. Programs encourage your residents and students to submit abstracts. Questions afterwards are routinely constructive and this provides a great environment for them to develop their presentation skills.

As you can see, there will be lots to do in Vegas. Save the dates of January 14 -17, 2012 and plan to attend the 27th meeting of the American Society for Reconstructive Microsurgery. Stay extra days and enjoy everything Vegas and Nevada have to offer. Look for future issues of *Reconstructive Microsurgery* to bring you additional details about the meeting. [RM](#)



# Learning from Mistakes and Doing Better

Given that this is my first editorial as the secretary, I read previous editorials for guidance. Most were eloquent and heartfelt, and all had a message to convey. So on the plane back from an informal meeting with microsurgery colleagues in Switzerland, I wrote what I thought was an articulate editorial about microsurgery and the opportunities afforded to me during my education and training. It was a piece about the valuable professional and personal contacts and collaborations that I have made from attending ASRM/AAHS meetings and how important these meetings are.

I wrote my editorial on the back pages of my printed itinerary. Once I got home, I went about tidying up and fed those pages, which I thought I would not need any more, into my shredder, forgetting that just hours before, I had poured onto them a bit of my soul. As I was trying to rewrite the editorial, I asked myself if what I had written were that special that I would resurrect the words verbatim.

What happened with the shredder and the error due to my oversight is an interesting parallel of life and the pursuits we take. The question is: what do we learn from what we have done?

Every action, whether intentional or unintentional, may have a significant reaction. What we say on the spur of the moment can sway another person into our confidence or repel the person forever to be our antagonist. What actions we take during microsurgery can profoundly change a patient's life:



E. Gene Deune, MD

*Learning is an everyday activity.*

a success resulting in a functional extremity or an error resulting in an amputation.

To be better, we need to learn from our mistakes. For some this comes easily. For others, it is difficult. For the fortunate ones, we learn from our mentors and teachers. For those who are in the first generation without teachers, we learn from ourselves and from our colleagues. For those who are lucky, we learn from our students, as they have superseded what we have taught them.

Our professional societies offer us those opportunities to learn from others' mistakes and achievements, to take away pearls of conduct, behavior, and techniques without the associated learning pain. We take the wisdom of others to make things better. This is the strength of our meetings. Mingle

with those who you don't know and extend a hand of friendship. They may be strangers in a strange land. They may speak a different language but they share the same passion for learning. Respect those who may not have achieved as much as you, as one day they may be your equal or superior.

Learning is an everyday activity, and once a year we come together to share our knowledge. I hope to see you at the 2012 ASRM meeting in Nevada and to learn a great deal from you.

These were not my original words. I made them better. [RM](#)

## RECONSTRUCTIVE MICROSURGERY

The mission of the American Society for Reconstructive Microsurgery is to promote, encourage, foster and advance the art and science of microsurgical and other complex reconstructions; and to establish a forum for teaching, research and free discussion of reconstructive microsurgical methods and principles among the members.

President	Keith Brandt, MD
Editor	E. Gene Deune, MD
Executive Director	Krista A. Greco
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## Balance

**H**ow do we find it in our lives and at work. More time is demanded to keep pace with our decreasing reimbursement. It is only a matter of time before our reimbursement for free tissue transfers and complex reconstructive is significantly reduced. What will happen then? Will the patient requiring a mastectomy be left with only rotational flap options or tissue expansion? Will the patient with a lower extremity injury or tumor be subjected to weeks or months of negative pressure wound therapy, granulation, and ultimately a skin graft?

These decisions have to be made each and every day by those of us who provide these services. Is the day coming when the technique that is used is dictated by the hospital? Each institution has developed quality review committees that perform ongoing reviews of performance. In centers where reconstructive surgeons perform complex reconstructions utilizing large amounts of resources will there come a time when this practice will be limited. As reconstructive surgeons, we try to design plans in concert with other providers to give patients the most appropriate and comprehensive care plans. I would like to think that as physicians and surgeons will be able to control the manner in which we care for patients with complex reconstructive problems. What looms on the horizon can be unsettling.

With issues like the following: scope of practice, the cuts to physician reimbursement, and physician taxes, where does the new concept of Accountable Care Organization (ACO) come into play? The concept of the ACO comes from Dr. Elliot Fisher, Dartmouth Medical School. For three decades, the Dartmouth Atlas Project has looked at the



**Robert Whitfield, MD**

*As reconstructive surgeons, we try to design plans in concert with other providers to give patients the most appropriate and comprehensive care plans.*

variation in care in the United States. This project has identified several differences in cost and quality of care around the country. With this information the ACO model was developed. This model will need significant support to transition to in the future. The Brookings Institution and Dartmouth Institute for Health Policy have created the Brookings-Dartmouth ACO Learning Network to provide support for providers looking to transition to the ACO Model.

There are many payment reform models. The ACO on the surface seems to be superior to the primary care medical home, bundled payments, partial capitation and full capitation. An ACO is sup-

posed to strengthen primary care, foster coordination among providers, remove payment incentives to increase volume, foster accountability for total per-capita costs, possible provider risk sharing, and no requirement for "lock in" of patients.

The ACO Model assumes that physicians will join them. In many settings, physicians have left hospitals and formed single specialty groups. This gives physicians the power to negotiate managed care contracts and profit from their owned ancillaries. Pulmonologists make far more money owning and running their sleep lab than practicing critical care in the hospital. What will the incentive be for physicians to join an ACO? The ACO Model would be better for Medicare and Medicaid. Why wouldn't physicians just opt out of Medicare and Medicaid? So far physicians adding new office based services, raising rates, dropping out of Medicare and Medicaid, and demanding payment for call, have countered threats to physician income.

So where does this leave the Young Microsurgeon. At this point it is not clear what the structure of the ACO pilot programs will take. There are only a few groups that have more than one or two microsurgeons around the country. This limits the ability to negotiate with an ACO. However, this may lead to opportunities to develop state or regional virtual groups to negotiate with an ACO. As these ACO pilots start across the country it is imperative that all surgeons that perform complex reconstruction evaluate what is happening in their community and state. It is extremely important that we all be aware of what is happening with health care reform but especially with respect to the development of ACO pilots. **RM**

## Web site Redesign in Progress

Michael Klebuc, MD  
Chair, Electronic Communications  
Committee

The Electronic Communications Committee is actively engaged in a major redesign of the ASRM web site. The new site will adopt a more modern aesthetic to reflect the high-tech nature of reconstructive microsurgery while providing easier navigation. The site will provide links to electronic journals, meeting information and educational modules. A new physician finder tool is also being developed to assist patients in their search for a microsurgical care provider. Anticipated launch in the late fall of 2011. [RM](#)

## CPT Coding Corner

Paul S. Cederna, MD, FACS  
Chair, CPT/RUC Committee

It is time again for the most exciting, thrilling and engaging segment of the entire ASRM newsletter; the CPT Coding Corner. I am going to do my best to highlight those changes in the new 2011 CPT codes which are most relevant for the members in the American Society of Reconstructive Microsurgery. The current procedural terminology (CPT) code set for 2011 includes several changes of interest to reconstructive surgeons. Additionally, CPT has added several features to the CPT-4 Manual to help clarify coding in a variety of situations including new guidelines, coding tips and evaluation of

management tables. These new features are in addition to the new, revised, and deleted CPT codes set forth for 2011. All of the new CPT codes take effect January 1, 2011. Because of HIPAA requirements, insurers must accept all of the new codes beginning on January 1, 2011. All of the changes have been approved by the American Medical Association CPT Editorial Panel.

### 2011 CPT Code Changes

#### Evaluation and Management – Three New Codes

99224 – Subsequent observation care, per day, for the evaluation and management of a patient which requires at least two of the three following components:

1. Problem focused interval history
2. Problem focused exam
3. Medical decision making that is straight forward or of low complexity. Usually the patient is stable, recovering, or improving. Physicians typically spend 15 minutes at the bedside on the patient's hospital floor or unit.

99225 – Subsequent observation care, per day, for the evaluation and management of a patient which requires at least two of these three key components:

1. An expanded problem focused interval history
2. An expanded problem focused examination
3. Medical decision of moderate complexity. Usually the patient is responding inadequately to therapy and has developed a minor complication. Physicians

typically spend 25 minutes at the bedside and on the patient's hospital floor or unit.

99226 – Subsequent observation care, per day, for the evaluation and management of a patient, which requires at least two of these three components:

1. A detailed interval history
2. A detailed examination
3. Medical decision making of high complexity. Usually the patient is unstable or has developed a significant complication or a significant new problem. Physicians typically spend 35 minutes at the bedside and on the patient's hospital floor or unit.

#### Wound Debridement

There are a number of changes which have occurred in relation to the management of wound débridements. There are three new CPT codes and two deleted CPT codes. To highlight these changes:

#### Deleted Codes

11040 and 11041 – Debridement; skin; partial and full thickness

#### New CPT Codes (add on codes)

11045 – Debridement subcutaneous tissue, each additional 20 square centimeters

11046 – Debridement muscle/facia each additional 20 square centimeters

11047 – Debridement bone, each additional 20 square centimeters

The CPT codes 11042, 11043, and 11044 will all remain the same.

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## Committee Reports

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### Modifiers

There have been a number of changes for 2011 for the use of “modifiers”. I will highlight the two most important changes in modifiers which apply to our membership. Modifier 50 (bilateral procedure) has been revised to delete the term “operative” when describing procedures.

Modifier 76, 77, and 78 (repeat procedures and unplanned return to the operative/procedure room) have been revised to clarify that these modifiers may be reported by a physician or by “other qualified health care professional”.

### Skin Substitute Grafts

It should be noted that the CPT editorial panel has approved new introductory language and eight new CPT codes that describe the topical application of skin substitute grafts. The 24 current CPT codes that describe skin substitute grafts will be deleted. These code additions, deletions, and revisions all require review of physician work. Dr. Martha Matthews, MD, is the American Society of Plastic Surgeons RUC advisor and has circulated a survey to all members of the ASPS to gain more information regarding the amount of work related to each of the potential CPT coding changes for 2012. Completing this survey is impor-

tant because these values determine the rate at which Medicare and other payers will reimburse for each of these procedures. I strongly encourage everyone to take the AMA/RUC Physician Work Survey.

The number of CPT code changes during the past year is significantly greater than many years in the past. There will be a substantial number of changes in reconstructive plastic surgery in the upcoming year as well. I will keep you apprised of all of these changes and how they will impact billing and reimbursement in each of your practices. If there are any questions, please feel free to contact me at any time. [RM](#)

## Volunteer Opportunities in Haiti

By Fred Duffy, MD

**H**aiti remains a chaotic country 17 months after the earthquake and it remains to be seen how effectively the Haitians and the world community can rebuild the country with the influx of aid that has been received over the past year. The country’s suboptimal infrastructure and health care system remain shattered.

Partners in Health (<http://www.pih.org/>) remains active and their efforts in Haiti are expanding with the construction of a new teaching hospital in Mirebalais (<http://www.pih.org/news/entry/march-madness-in-mirebalais/>).

Mirebalais is a short trip from Port-au-Prince so travel to and from the site will be convenient. I believe there are six ORs planned and the hospital will have the first CT scanner in the country available for public use. PIH has begun preliminary discussions with several universities to develop teaching programs at this institution.



What has made PIH a good fit for collaboration with our organization from the start is the health care infrastructure they have built over the past 20 years. We obviously need ORs, anesthesia, post-op care, etc for our more complicated cases and the new hospital in Mirebalais will have these capabilities.

I will be returning to Haiti to operate in Cange, PIH’s primary facility, in late May and will be setting up another trip in the fall. At this point PIH prefers small teams so that local surgeons can contin-

ue to use the facilities...OR time is at a premium in all these facilities. If anyone is interested in joining me this fall please contact me: [fjduffy@sbcglobal.net](mailto:fjduffy@sbcglobal.net). It remains to be seen what long term collaboration we might be able to build with PIH but I think this new hospital is a unique and exciting opportunity.

Please also contact me with other opportunities or organizations you may be working with so that I can build a database of opportunities for our members that we can eventually put on our website. Thanks! [RM](#)

# Lawn Mower Injury Prevention Campaign

The ASRM and fellow organizations are teaming up once again in an awareness campaign for the prevention of lawn mower injuries. The American Society for Reconstructive Microsurgery (ASRM), American Society of Plastic Surgeons (ASPS), American Society of Maxillofacial Surgeons (ASMS), American Academy of Pediatrics (AAP) and American Academy of Orthopaedic Surgeons (AAOS) have taken the lead over the past five years to educate

adults and children on the importance of lawn mower safety and how to prevent devastating injuries from happening.

This campaign includes a press release, audio news release and a video posted on YouTube. Last year's news release aired on nearly 2,000 radio stations across the country (including major markets such as Los Angeles, Chicago, Philadelphia, Boston and



Washington, D.C.) and was heard by approximately 11.5 million listeners. We look forward to

another successful year.

The official launch of the 2011 Lawn Mower Injury Prevention Campaign will be in June, National Safety Month. Please visit [www.microsurg.org](http://www.microsurg.org) for updates.

**RM**

## American Society for Reconstructive Microsurgery 2011 New Members

### Active

- Charles Chalekson, MD  
*Templeton, CA*
- David S. Chang, MD  
*San Francisco, CA*
- Christopher Crisera, MD  
*Los Angeles, CA*
- Detlev Erdmann, MD  
*Durham, NC*
- Ida K. Fox, MD  
*St. Louis, MO*
- Timothy W. King, MD  
*Madison, WI*
- Ewa Komorowska-Timek, MD  
*Grand Rapids, MI*
- Valerie Lemaine, MD  
*Rochester, MN*
- Morgan Norris, III, MD  
*Houston, TX*
- Michelle Palazzo, MD  
*Louisville, KY*
- Justin Sacks, MD  
*Houston, TX*
- Christiaan Schrag, MD  
*Calgary, Alberta, Canada*
- Mark Smith, MD  
*New York, NY*
- Mark T. Villa, MD  
*Houston, TX*

### Candidate

- John W. Antonetti, MD  
*Dallas, TX*
- Anuja K. Antony, MD  
*Chicago, IL*
- Peter Arnold, MD  
*Jackson, MD*
- Alexander F. Au, MD  
*Philadelphia, PA*
- Patrick L. Basile, MD  
*Bethesda, MD*
- Matthew J. Carty, MD  
*Jamaica Plain, MA*
- Albert Chao, MD  
*Houston, TX*
- Michael Chu, MD  
*Norfolk, VA*
- Mark W. Clemens II, MD  
*Houston, TX*
- Jennifer F. Cocco, MD  
*Dallas, TX*
- Damon S. Cooney, MD  
*Pittsburgh, PA*
- Michael Curtis, MD  
*Syracuse, NY*
- Warren A. Ellsworth IV, MD  
*Houston, TX*
- Jessica Erdmann-Sager, MD  
*Boston, MA*
- Josef Hadeed, MD  
*Durham, NC*

- Oren Lerman, MD  
*New York, NY*
- Ali N. Mesbahi, MD  
*McLean, VA*
- Serdar Nasir, MD  
*Ankara, Turkey*
- Minh-Doan Nguyen, MD  
*Cincinnati, OH*
- Melissa M. Poh, MD  
*Los Angeles, CA*
- Brian C. Reuben, MD  
*Pittsburgh, PA*
- Ali Sadeghi, MD  
*New Orleans, LA*
- Hani Sbitany, MD  
*Philadelphia, PA*
- Matthew Steele, MD  
*Gainesville, FL*
- Mark Sisco, MD  
*Chicago, IL*
- John M. Thomassen, MD  
*Ft. Lauderdale, FL*
- Winnie Tong, MD  
*Chapel Hill, NC*
- Catherine A. Walsh, MD  
*Albuquerque, NM*
- Alex Wong, MD  
*Los Angeles, CA*
- Kamakshi Zeidler, MD  
*Palo Alto, CA*



## What's New in RM?

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cyclosporine-A therapy significantly prolong allotransplant survival in a miniature swine model indicating that the MSC regulatory activity on T cells might contribute to significant prolongation of CTA survival.

### Breast

The role of preoperative perforator imaging proved a hot topic during the second round of breast papers. Tong, Dixon et al. reported a positive effect with the use of preoperative CT-angiography (CTA) which was found to reduce overall operative time. The University of Washington group also found that CTA could speed up the perforator dissection and enhance operator confidence yet cautioned that in 2/3 of cases the perforators selected were different from those predicted preoperatively. The experience at the University of Pennsylvania stands in contrast to the preceding papers where no statistically significant reduction of operative time was encountered in their microvascular breast reconstructions. The role of imaging technologies in determining flap viability was also explored. Phillips and Lanier et al. found SPY technology and fluorescein dye angiography more sensitive than clinic exam in predicting mastectomy flap viability but cautioned that the tests tend to over predict the extent of true flap necrosis. Next in a multicenter study doctors, Levin, Lester and Allen reported their 10 year experience correcting unsatisfactory implant reconstructions with perforator flaps finding many of the patients requesting treatment for mild capsular contractures (Baker I/II) and unnatural feeling breasts verses severe contracture which is usually presumed to be the key motivating factor. The UCLA group also shared their experience with free flap reconstruction of the breast after unsatisfactory implant reconstruction.

## A MESSAGE FROM THE PROGRAM CHAIR



## Viva ASRM and Viva Las Vegas!

*Plans are well underway to host ASRM 2012 at Red Rock, Las Vegas, January 14-17. The Program Committee once again is poised to offer attendees the best platform to discuss the newest technologies, relevant translational findings and hopefully a clear glimpse into the future of where microsurgical and complex reconstructive surgery is headed.*

*Red Rock, Las Vegas is the perfect getaway for this next meeting. Situated close to the Vegas strip yet tucked away near the Red Rock Mountains for those who desire a more serene outdoor escape, ASRM 2012 promises to provide the tried and true classics such as "Best Case/Best Save" and "Disasters of the Masters" as well as newer hits such as the Young Microsurgeons Group (YMG) panel. World-class golf courses, fine dining and entertainment, hiking and an international airport round out the reasons why ASRM 2012 will provide something for everyone.*

*The Scientific Call for Abstracts is now open and the deadline for submission is July 1, 2011. We've had a record number of submissions these last few years and we hope to repeat this with a strong international representation, especially from the Brazilian Microsurgery and Reconstructive Surgery Society in order to provide rich and meaningful content.*

*Once again relevant panels will offer thoughtful insights into controversial topics and real-time audience response systems will be employed to illustrate how and what our colleagues are thinking. Finally, a focus on the economics of reconstructive surgery promises to provide value for all attendees.*

*"What Happens in Vegas Stays in Vegas", so the saying goes, but odds are what will happen at Red Rock Casino Resort & Spa, January 14-17, 2012 will be an ASRM meeting worth talking about long after.*

*I look forward to seeing you at Red Rock in 2012.*

**David H. Song, MD, MBA, FACS**

*2012 Program Chair*

They found increased scar formation around the recipient vessels enhanced the technical complexity of the procedure in the group with previous expander-implant reconstruction however, no significant difference was noted in the rate of flap loss or flap take backs. Flap

innovation was also part of the program with Allen and colleagues introducing the deep femoral artery perforator flap (DFAP) which allows the saddle bag region of fat to be harvested on a lateral, frequently septocutaneous vessel.

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## What's New in RM?

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Additionally, the group from The Medical University of South Carolina presented an analysis of complications arising during 240 consecutive DIEP flaps confirming previous reports that smoking, radiation and diabetes are associated with higher complication rates. They also saw a positive correlation with immediate reconstruction and post-operative thrombocytopenia.

### Translational Research

Great strides were made in research related to composite allotransplantation. Yur-Ren Kuo was able to demonstrate that treatment with Adipose-Derived Stem Cell in combination with transient immunosuppression significantly prolongs allograft survival and induction of tolerance associated with increasing the regulatory T cells expression in a rodent hindlimb model. Cheng-Hung Lin showed that low dose rapamycin and double negative T cells combined with lymphoablative conditioning or cytokine immunomodulation extended skin graft and mouse hindlimb osteomyocutaneous flap survival beyond 60 days. Gerhard Mundinger noted that costimulatory blockade provided by a selective CD28 antagonist failed to prolong rejection-free CTA survival in non-human primates. He also elucidated several of the mechanisms involved in chronic rejection responses in the non-human primate facial and vascularized fibula model. Bahar Gharb showed that topical tacrolimus may be more effective than topical clobetasol for prevention and treatment of rejection in face allotransplantation in the rat model. Michael Pharaon investigated the use of quantitative spectral imaging to monitor oxygenated and deoxygenated hemoglobin, total hemoglobin and tissue saturation within a rodent pedicle flap model, finding it valuable in detecting arterial and venous

occlusion. Batalia Jimenez presented that, similar to mechanical pre-conditioning, pharmacologic pre-conditioning with hydrogen sulfite confers protection from ischemia-reperfusion injury to murine myotubes through activation of the JAK-STAT pathway. Ergun Kocak demonstrated that direct injection of novel recombinant adeno-associated viral vectors into muscle flaps is a fast and reliable method for localized gene delivery by the transfected flap alone.

The academic portion of the action packed day drew to a close with additional breakout sessions discussing, local flaps in the head and neck reconstruction, health care reform, hand transplantation and shaping the reconstructed breast. The evening was just warming up with the largest social

event of the meeting. The ASRM gala was held on the expansive Caribe Grille Terrace at the Ritz Carlton. Despite some initial rain drops the clouds parted and a fantastic night of zesty food, lively music and good conversation was enjoyed by all.

### TUESDAY

Tuesday morning began with additional break out panels addressing laryngo-tracheal reconstruction, flap salvage, perforator selection and abdominal wall reconstruction. Dr. Julian Pribaz was this year's distinguished Buncke Lecturer. His lecture titled "Will the Brave New World of Transplantation be the Answer to the Limitations of Reconstructive Surgery" provided a fascinating comparison of microsurgical

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**All programs and applicants must be registered by September 15<sup>th</sup> and September 30<sup>th</sup> respectively.**

The ASRM is very excited to pioneer this process for microsurgery which addresses the needs of our future microsurgeons and our educational partners. Please help us spread the word of this major step in microsurgery to young surgeons and programs.

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**312-456-9579**  
[contact@microsurg.org](mailto:contact@microsurg.org)

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## What's New in RM?

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reconstruction and composite tissue allotransplantation (CTA) in the management of extensive facial injuries. He outlined the Harvard experience with their first facial transplant and provided insight as to how CTA may alter the future course of reconstructive surgery.

The concurrent paper sessions Outcomes studies and head & neck II were held on Tuesday morning.

### Concurrent Paper Sessions

#### Head and Neck

Melissa Poh presented a surgical algorithm and outcomes for a large series of supercharged jejunal flaps for esophageal reconstruction. Hung-Chi Chen offered an improvement of the bowel-esophageal anastomosis by placing an extra apron of the seromuscular layer over the anterior suture line, resulting in a lower leak rate. The potential use of the FAMM flap was explored by Tommaso Addona for the use of partial glossectomy defects. Jan Jeroen Vranckx presented the use of prefabrication of the trachea in combination with a radial forearm free flap for the reconstruction of hemilaryngectomy defects to salvage the functional larynx and avoid laryngectomy in unilateral tumors. L. Lantieri presented anatomic dissection details to facilitate allotransplantation of functional eyelids. Daniel Schmid reviewed twenty years of experience with microsurgical reconstruction of hemifacial atrophy at the University of Wisconsin. Many diagnostic and treatment pearls were presented. Patrick Garvey, while examining the vascular pedicle of the ALT flap found that CTA identified proximal perforators better than distal ones and larger perforators better than smaller ones. CTA accurately predicted the location and origin of visible perforators and less accurately predicted their course and size.

Ravit Yanko-Arzi discovered that microvascular reconstruction of previously radiated head and neck cancers allows for re-irradiation, which significantly reduces recurrence and improves survival in patients with recurrent cancers. This was however associated with a higher late complication rate. The use of a second ipsilateral pectoralis major myocutaneous flap for head and neck defects was described by Shih-Heng Chen, who harvested the initial skin island and pectoralis muscle based on the thoracoacromial vessels medially and the subsequent skin and muscle laterally based on the lateral thoracic vessels.

#### Outcome Studies

Mazen Bedri demonstrated that increased hospital case-volume (>30/year) is associated with decreased complication rates and length of stay for patients undergoing autologous free-tissue breast reconstruction, and with decreased hospital charges for patients undergoing DIEP flaps, in the state of Maryland. Neil Tanna corroborated these findings for autologous tissue based breast reconstructions, but noted that patient outcomes were similar for tissue expander based breast reconstructions. Winnie Tong reinforced that perforator flaps appear to be as profitable as pedicled TRAM flaps for breast reconstruction but demonstrated lower morbidity. Rimante Seselgyte presented that late head and neck surgery start time (after 9am) contributes to increased overall complications leading to re-operations at Mayo Clinic in Rochester. Theresa Wang examined the role of the plastic surgeon as economic contributor to the hospital bottom line and found that plastic surgery contribute significantly to the bottom line in performing many joint cases and salvaging complications that reduce patient morbidity and mortality for the hospital, as well as outperforming most other surgical services in surgeon productivity while lagging behind the

average in reimbursements for inpatient admissions. David Lee exposed that plastic surgery journals have prolonged lag-times between manuscript submission and print publication with Microsurgery having one of the shortest lag-times, suggesting an efficient peer-review system, fast editorial decisions, and an efficient printing process. Christopher Shale, in reviewing the national trauma data bank, comparing treatment patterns of traumatic thumb amputations between university and community hospitals, found that practice patterns were

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### ASRM FUTURE ANNUAL MEETINGS

**2012**

**JANUARY 14-17, 2012**

Red Rock Casino Resort Spa  
Las Vegas, NV

**2013**

**JANUARY 12-15, 2013**

Naples Grande  
Naples, FL

**2014**

**JANUARY 11-14, 2014**

Grand Hyatt Resort & Spa  
Kauai, HI

### UPCOMING INTERNATIONAL MEETINGS IN 2011

#### WSRM 2011 PRE CONGRESS

June 25-27, 2011  
Bucharest, Romania  
[www.wsrn.net](http://www.wsrn.net)

#### WSRM 2011

6th Congress of the World Society for Reconstructive Microsurgery  
June 29-July 2, 2011  
Helsinki, Finland  
[www.wsrn.net](http://www.wsrn.net)

#### ASRM AND ITALIAN SOCIETY OF MICROSURGERY MEETING

October 27-29, 2011  
[www.microchirurgia.org](http://www.microchirurgia.org)

# 2012

## AAHS ASPN ASRM ANNUAL MEETINGS

NOW ACCEPTING  
ABSTRACTS

AMERICAN ASSOCIATION for HAND SURGERY  
January 11-14, 2012

AMERICAN SOCIETY for PERIPHERAL NERVE  
January 13-15, 2012

AMERICAN SOCIETY for  
RECONSTRUCTIVE MICROSURGERY  
January 14-17, 2012

Red Rock Casino Resort & Spa, Las Vegas, Nevada

### What's New in RM?

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similar between the two practice settings with slightly higher rates of attempted replant and success in the University setting. Toni Zhong presented a significant improvement in patient satisfaction, psychosocial wellbeing, and sexual well-being as early as 3 weeks post-operatively in patients undergoing breast reconstruction. Caroline Payne showed that patients suffering from osteoradionecrosis of the mandible reported significant difficulties with speech and social eating after osseocutaneous free flap reconstruction, whereas conservatively-managed ORN patients reported more depressive symptoms and concerns about getting “back-to-normal” and more “fears-of-recurrence”.

Last but not least, Steven Kronowitz moderated a panel about back up flaps when a DIEP flap was not available or inadequate.

A series of awards were given out during the 2011 ASRM meeting, recognizing excellence in abstracts submissions. For a complete list of award recipients, see box on page 4.

#### Extremity/Breast

The extremity section kicked into high gear with the group from UCLA presenting a 30 year follow up of the first lower extremity replantation performed in the United States. The patient enjoyed and excellent result experiencing many years of near normal function and an active life style. Next Cavadas and Landin shared their experience with bilateral non HLA matched trans-humeral transplantation. Despite development of diabetes the patient demonstrated good elbow range of motion and functional finger flexion-extension at one year. Members of the Bunke Clinic presented their 10 year experience with pediatric microsurgery demonstrating a 92% success rate in a large series of complex microvascular extremity surgeries and replantations. In a

subsequent paper they also demonstrated the cost effectiveness and high patient satisfaction rates associated with patients who were treated with limb salvage versus lower extremity amputation. This was followed by the LSU group from New Orleans who shared their experience with free flap reconstruction in the lower extremity.

#### Breast

The first breast session was initiated with a series of papers examining potential strategies to decrease the morbidity of free flap harvest from the anterior abdominal wall. Garvey and Associates from The M.D. Anderson Cancer Center evaluated a group of 615 patients who underwent breast reconstruction with a DIEP or muscle sparing free TRAM based on either the medial or lateral branches of the deep inferior epigastric artery. No difference in hernia formation or bulging was associated with use of the lateral branch of the DIEA as has been

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## What's New in RM?

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previously postulated. Next Sandberg and associates presented their experience closing abdominal donor site defects primarily and with the use of underlay hernia materials. They concluded that in routine cases, primary closure is associated with a small number of bulges and hernias and for cost effectiveness hernia materials should be reserved for more complex cases. The same group also examined the impact of adjuvant chemotherapy on abdominal donor site morbidity and found a trend toward higher hernia rates when adjuvant chemotherapy was administered.

Nelson and associates evaluated the influence of advanced age on abdominal wall strength after DIEP or muscle sparing free TRAM surgery. They found little to no difference in postoperative abdominal function in the group older than sixty years of age as compared to the younger cohort. Next, Lin, Selber et al queried whether bilateral free flap breast reconstruction was associated with significantly higher risk than unilateral reconstructions. Despite longer operative times and higher rates of intra-operative vessel thrombosis, bilateral reconstructions were not associated with significantly higher post-operative complications rates. The group from Manitoba then shared their experience with SIEA flap breast reconstruction emphasizing the importance of adequate vessel caliber and length for achieving a successful result.

The potential role of Tamoxifen in the genesis of microvascular thrombosis was then discussed by the group from the M.D. Anderson Cancer Center. In a review of 577 patients no increased rates on flap thrombosis were identified in patients receiving Tamoxifen within 28 days of surgery as compared

to those who had never taken the drug or had discontinued its use earlier. Zong et al. from Toronto demonstrated that a regional block of T-6 through L1 could be achieved utilizing Bupivacaine and a submuscular epidural catheter, significantly reducing postoperative narcotic use. The session was concluded by the group from Penn exploring the role of interoperative vascular complications with the ultimate fate of the free tissue transfer. They found a trend toward higher rates of postoperative venous thrombosis following an intraoperative venous thrombosis: however, this trend did not hold true with regard to the arterial anastomosis. The use of heparin and aspirin were not associated with decreased rates of postoperative vascular complications.

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Tong, Dixon et al. reported a positive effect with the use of preoperative CT-angiography (CTA) which was found to reduce overall operative time. The University of Washington group also found that CTA could speed up the perforator dissection and enhance operator confidence yet cautioned that in 2/3 of cases the perforators selected were different from those predicted preoperatively. The experience at the University of Pennsylvania stands in contrast to the preceding papers where no statistically significant reduction of operative time was encountered in their microvascular breast reconstructions.

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flap necrosis. Next in a multicenter study, Drs. Levin, Lester and Allen reported their 10-year experience correcting unsatisfactory implant reconstructions with perforator flaps, finding many of the patients requesting treatment for mild capsular contractures (Baker I/II) and unnatural feeling breasts versus severe contracture which is usually presumed to be the key motivating factor. The UCLA group also shared their experience with free flap reconstruction of the breast after unsatisfactory implant reconstruction. They found increased scar formation around the recipient vessels enhanced the technical complexity of the procedure in the group with previous expander-implant reconstruction. However, no significant difference was noted in the rate of flap loss or flap take-backs.

Flap innovation was also part of the program with Allen and colleagues introducing the deep femoral artery perforator flap (DFAP) which allows the saddle bag region of fat to be harvested on a lateral, frequently septocutaneous vessel. Additionally, the group from The Medical University of South Carolina presented and analysis of complications arising during 240 consecutive DIEP flaps confirming previous reports that smoking, radiation and diabetes are associated with higher complication rates. They also saw a positive correlation with immediate reconstruction and post-operative thrombocytopenia.

We look forward to an equally informative and exciting meeting in 2012 at the Red Rock Casino, Resort and Spa in Las Vegas, Nevada. [RM](#)