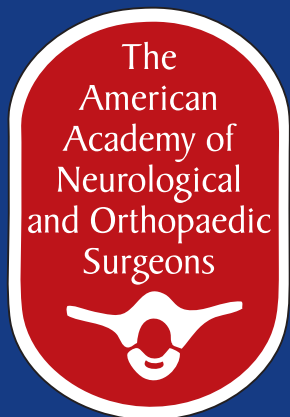


Meeting Program

35<sup>th</sup> Annual Scientific Meeting  
June 10-11, 2011

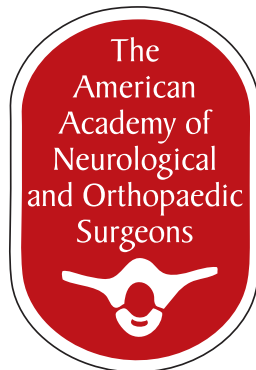
American Academy of Neurological &  
Orthopaedic Surgeons

Portland, Oregon



# 35<sup>th</sup> Annual Scientific Meeting

## American Academy of Neurological and Orthopaedic Surgeons



June 10-11, 2011  
Portland Hilton and Executive Towers  
Portland, Oregon

The American Academy of Neurological and Orthopaedic Surgeons is a scientific and educational association of neurosurgeons and orthopedists. The Academy was founded in 1977 in order to improve the quality of care for patients requiring expertise in these two major surgical specialties by setting high standards for training, credentialing, peer review and ongoing surgical education.

## Table of Contents

### Letters of Welcome

Mayor of Portland .....	4
Scientific Organizing Committee .....	4

### Leadership

Scientific Organizing Committee .....	5
AANOS Board of Directors .....	5

In Memoriam .....	6
-------------------	---

### Continuing Medical Education

Featured Presenters .....	7
Accreditation .....	7
Credit Designation .....	7

### Scientific Program

Orthopaedic & Neurological Surgery Presentations .....	8
Symposia on Cardiac & Cerebrovascular Disorders in Neurosurgical Disease .....	9

Exhibitors and Sponsors .....	13
Scientific Abstracts .....	14
Social Activities .....	26
Portland Rose Festival Events .....	27
General Meeting Information .....	28
74th Annual Surgical Update Announcement .....	29
Presenter Index .....	30

Portland Hilton and Executive Towers, Floor Plans .....	Inside Back Cover
Schedule at a Glance .....	Back Cover



# 35<sup>th</sup> Annual Scientific Meeting

June 10-11, 2011, Portland, Oregon



OFFICE OF MAYOR SAM ADAMS  
CITY OF PORTLAND

June 10, 2011

Dear Friends:

On behalf of the residents of the City of Portland, welcome!

The Rose City is honored and delighted to host the 35<sup>th</sup> Annual Scientific Meeting of the American Academy of Neurological and Orthopaedic Surgeons.

I hope that in addition to exploring the newest and most promising developments in the world of surgery, you will also take some time to explore the Portland metropolitan region. As Portlanders, we are extremely proud of what our city has to offer both residents and visitors. It is a place of outstanding natural beauty, fascinating and unique culture, a national destination for northwest inspired culinary experiences and strong commercial activities accessible by our nationally renowned transportation system.

Portland is consistently ranked as one of the most livable cities in the United States. We are fortunate to have a wonderful quality of life that includes abundant green spaces, nearby mountains and rivers, and cultural offerings, including a world class symphony and museum, a farm-fresh food movement, outstanding wineries, and of course, our own Portland Trailblazers. Our Saturday Market, which is open most of the year (and on Sundays), is a showcase for local artisans and handcrafted goods. Farmers markets featuring the freshest produce can be found throughout the metropolitan area.

No matter what activities you choose to pursue during your stay, you'll find the people of Portland ready to help make your visit as enjoyable as possible. Best wishes for a great meeting and a wonderful visit to our fine city!

Sincerely,

Sam Adams  
Mayor

Dear Colleagues and Friends,

It is our pleasure to welcome you to the 35<sup>th</sup> Annual Scientific Meeting of the American Academy of Neurological and Orthopaedic Surgeons being held at the Hilton Hotel in Portland, Oregon. As you join our peers from around the world in this splendid location please take advantage of this opportunity to acquire up to 24 hours of ACCME accredited category one continuing medical education credits. Participate in an innovative program designed specifically for Neurosurgery and Orthopaedic Surgery specialists.

This year's program includes presentations on Neurosurgical and Orthopaedic Surgery Trauma, a Symposium on Cardiac & Cerebrovascular Disorders in Neurosurgical Disease, and special invited guest speakers presenting information about how to enhance the medical-legal health of your practice. The unique presentations given by internationally renowned speakers will certainly enhance your practice viability and reputation while increasing your surgical knowledge.

We are greatly honored to have Gene Bolles, MD as our 2011 Key Note Speaker. Dr. Bolles shares his unique experience acquired through providing both military and civilian Neurosurgical trauma care. Dr. Bolles has been honored for his expertise and global humanitarian efforts and his experiences have been highly publicized in the media. I encourage you to make a special effort to be present for his lecture.

We will also host The **2nd Annual "Fun" draiser and Awards Dinner** on Friday evening featuring an elegant dinner, entertainment, and awards ceremony. Special guest speaker, Jeffrey Segal, MD, JD will present *Frivolous Lawsuits, Angry Bloggers, Hostile Review Sites, and Other Joys of Medicine; How to Bullet-Proof Your Practice*. Don't miss this event, which will benefit the AANOS Scholarship and CME Funds.

On behalf of the members of the Scientific Organizing Committee and the Board of Directors we welcome you to "The City of Roses", offering wonderful daytime adventures and an exciting nightlife!

Sincerely,

Kazem Fathie, MD, PhD, FICS, FACS  
Chairman, American Academy of Neurological and Orthopaedic Surgeons

William E. Mathews, MD, FICS  
2011 Chair, AANOS Scientific Organizing Committee

Clara Raquel Epstein, MD, FICS  
Neurosurgery Chair, International College of Surgeons US Section

Maxime J.M. Coles, MD, FICS  
Orthopaedic Surgery Chair, International College of Surgeons US Section

## Scientific Organizing Committee

**William E. Mathews, MD, FICS**  
**Committee Chair**  
Lafayette, CA

**Harilaos T. Sakellarides, MD, FICS**  
Boston, MA

**Alfonso E. Pino, MD, FICS**  
DeLeon, TX

**Quirico U. Torres, MD, FICS**  
Abilene, TX



### International College of Surgeons Liaisons

**ICS Chair of Neurosurgery**  
**Clara Raquel Epstein, MD, FICS**  
Boulder, CO

**ICS Chair of Orthopaedic Surgery**  
**Maxime J.M. Coles, MD, FICS**  
Girard, KS



### Administrative Staff

**Dr. Behnaz Agahian**  
Foster City, CA

**Mr. Nick Rebel**  
Executive Director  
Chicago, IL

## AANOS Board of Directors

**Chairman of the Board**  
**Professor Kazem Fathie, MD, PhD, FICS, FACS**  
Las Vegas, NV

**Vice Chairman of the Board**  
Harilaos Sakellarides, MD, FICS  
Boston, MA

**CME Committee Chair**  
William E. Mathews, MD, FICS  
Lafayette, CA

**Murtadha Al-Marashi, MD**  
Monterey, CA

**Sudhir B. Rao, MD**  
Big Rapids, MI

**Manuel Alzugaray, MD**  
Miami, FL

**Mark S. Sanders, MD**  
Houston, TX

**Clara Raquel Epstein, MD**  
Boulder, CO

**Quirico U. Torres, MD, FICS**  
Abilene, TX

**James D. Key, MD, J.D., MBA**  
Dallas, TX

**Paul Wakim, D.O.**  
Huntington Beach, CA

**William E. Mathews, MD, FICS**  
Concord, CA

**David Wren, Jr., MD**  
Richmond, CA

**Alfonso E. Pino, MD, FICS**  
DeLeon, TX

**Charles Xeller, MD, FICS**  
League City, TX

**Jose G. Ramon, MD, FICS**  
Edwardsville, IL

**Lucia Zamorano, MD, FICS**  
Birmingham, MI

# In Memoriam

**Harilaos T. Sakellarides MD, PHD, FAAOS, FAANOS, FACS, FICS, FRCS**

**Aug 13, 1922 - April 27, 2011**



## Prayer for the Departed

Christ our eternal King and God, You have destroyed death and the devil by Your Cross and have restored man to life by Your Resurrection; give rest, Lord, to the soul of Your servant [Harilaos T. Sakellarides MD](#) who has fallen asleep, in Your Kingdom, where there is no pain, sorrow or suffering. In Your goodness and love for all men, pardon all the sins he has committed in thought word or deed, for there is no man or woman who lives and sins not, You only are without sin.

For You are the Resurrection, the Life, and Repose of Your servant [Harilaos T. Sakellarides MD](#), departed this life, O Christ our God; and to You do we send up glory with Your Eternal Father and Your All-holy, Good and Life-creating Spirit; both now and forever and to the ages of ages. Amen.

The worlds of orthopedics and hand surgery have lost one of its giants with the passing of Dr. Harilaos Sakellarides after a brief hospitalization. Dr. Sakellarides, author of numerous articles concerning techniques of musculoskeletal and hand surgery, and contributor to several of the world's most commonly used orthopedic texts, has been known and renowned among his orthopedics colleagues for more than a half-century.

Dr. Sakellarides was born in Greece where he attended medical school, graduating in 1950. He trained as a resident surgeon throughout the decade of the 1950's in Europe's most acclaimed orthopedic programs in both Paris and London, before completing fellowship training at the Hospital for Special Surgery in New York. In 1958, he joined several other Greek and Greek-American surgeons as a founder of the Hellenic Hippocratic Orthopedic Society - where he would later serve as President. He was soon invited to the Mass. General Hospital, where he was one of the founders of the Department of Hand Surgery, and participated as an attending surgeon from 1959 thru 1964. In 1963, he was recognized by both colleagues and journalists for his new and innovative techniques, and was featured in a 2-page article in TIME magazine as one of America's future prominent surgeons. He did not disappoint and of his many designations Fellow American Academy of Orthopedic Surgeons, Fellow Royal College of Surgeons and Hall of Fame, Fellow American College of Surgeons, Pioneer of Hand Surgery -International College of Surgeons, Francais, Academie de Chirurgie to name a few.

In 1965, he joined the staff at Boston University Medical Center. Assistant Clinical Professor of both Hand and Orthopedic Surgery for the next 3 decades. During this time, he also served as Chief of Hand Surgery at Franciscan Children's Hospital, past President and presently Vice Chairman of the American Academy of Neurologic and Orthopedic Surgeons, and Visiting Professor of Hand/Orthopedic at teaching hospitals in Greece, among them Ioannina Medical School and University of Larissa, and in India, Roumania It has been estimated that he performed more than 20,000 orthopedic and hand surgeries during his career, which spanned more than 6 decades. He was a member of numerous prestigious medical societies, and his resume lists his participation in 39 international and national organizations and societies. He traveled tirelessly to medical conferences around the world. He was dedicated to the welfare and recovery of his patients, welcoming friends and old patients into his office until just days before his passing. His motto was to do no harm.

He leaves behind his wife Loukia and daughter Joanne, son Theodore H. of Chestnut Hill, daughter Maria and her husband Dr. Yianni Vlachiotis of Ekali Greece. Funeral Service was held at Annunciation Greek Orthodox Cathedral of New England.

### Key Note Speaker

Friday, June 10

Broadway I&II



We are pleased to have **Gene Bolles, MD**, Neurosurgeon, Assistant Professor University of Colorado, Department of Neurosurgery, Denver Health Medical Center, Rocky Mountain Regional Trauma Center, Denver, CO provide this year's Key Note Address on.

### 2<sup>nd</sup> Annual "Fun"draiser and Awards Dinner

Friday, June 10

Alexander's, 23rd Floor



The 2<sup>nd</sup> Annual AANOS "Fun"draising Event and Awards Dinner will be held on Friday evening, June 10, 2011 in Portland, OR. All Proceeds Benefit the AANOS Scholarship and CME Funds. We are pleased to have **Jeffrey Segal, MD, JD**, Neurosurgeon, Founder, CEO Medical Justice Services, Inc., Greensboro, NC

present **Frivolous Lawsuits, Angry Bloggers, Hostile Review Sites, and Other Joys of Medicine: How to Bullet-Proof Your Practice.** Please visit the registration desk by 4:00 pm on Thursday June 9 to purchase tickets if you have not already done so.

### 2011 AANOS Translational Research Scholarship Recipient

Friday, June 10

Broadway I&II



**Three Dimensional Volumetric MRI Studies in the Preclinical Mouse Model of Melanoma Brain Metastases, Amr Morsi, MD**, Post-Doctoral Research Fellow, IMCG, Interdisciplinary Melanoma Program New York University Langone Medical Center, Joan and Joel Smilow Research

Center New York University, Departments of Neurosurgery and Radiology, New York, NY

### Accreditation

The American Academy of Neurological and Orthopaedic Surgeons is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor Continuing Medical Education for physicians.

### Credit Designation

The American Academy of Neurological and Orthopaedic Surgeons designates this live activity for a maximum of *12.5 AMA PRA Category 1 Credits*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### Off-Label/Experimental Discussions

Some medical devices discussed or demonstrated in AANOS educational activities may not have been cleared by the FDA or may have been cleared by the FDA for specific uses only. AANOS requires the Faculty for this Course to disclose unlabeled uses of products. It is the Faculty's responsibility to disclose when an unlabeled use of a commercial product, or an investigational use not yet approved for any purpose will be discussed during an education activity.

### Faculty Disclosure

It is the policy of AANOS to abide by the Accreditation Council for Continuing Medical Education Standards for Commercial Support. Standard 2: "Disclosures Relevant to Potential Commercial Bias and Relevant Financial Relationships of Those with control over CME Content", requires all planners, including course directors, chairs, and faculty, involved in the development of CME content to disclose their relevant financial relationships prior to participating in the activity. Relevant financial relationships will be disclosed to the activity audience. The intent of this disclosure is not to prevent a speaker with a significant financial or other relationship from making a presentation, but to provide participants with information that might be of potential importance to their evaluation of a presentation.

### Conflict of Interest Resolution Statement

When individuals in a position to control or influence the development of the content have reported Financial Relationships with one or more commercial interests, AANOS utilizes a process to identify and resolve potential conflicts to ensure that the content presented is free of commercial bias. The content of this presentation was vetted through AANOS's process of peer review and content validation and modified as required to meet this standard.

# Scientific Program of the American Academy of Neurological & Orthopaedic Surgeons

**Friday, June 10 9:00am-3:00pm Broadway I & II**

Participants will learn of the most recent advances in Neurosurgery, Orthopaedic Surgery and Spinal Surgery. In addition, neurosurgical disease in cardiac and cerebrovascular disorders will be addressed as part of a special symposium that will enhance your practice and increase your surgical knowledge. The following AANOS presentations are available to all attendees registered for either meeting.

## **C5 Palsy Following Anterior Cervical Discectomy and Fusion**

**William E. Mathews, MD, FICS**, Neurosurgeon/Chair, AANOS Scientific Organizing Committee and Continuing Medical Education Committee, Lafayette, CA

## **Human Bites: Review of Literature and Case Report**

**Alfonso E. Pino, MD, FICS**, Orthopaedic Surgeon, Dublin, TX

## **Three Dimensional Volumetric MRI Studies in the Preclinical Mouse Model of Melanoma Brain Metastases**

**Amr Morsi, MD**, Post-Doctoral Research Fellow, IMCG, Interdisciplinary Melanoma Program New York University Langone Medical Center, Joan and Joel Smilow Research Center New York University, Departments of Neurosurgery and Radiology

## **Robotic Spinal Surgery**

**William C. Welch, MD, FICS**, Neurosurgeon, Vice Chair, Department of Neurosurgery; Chair, Department of Neurosurgery at Pennsylvania Hospital, Professor of Neurosurgery, Philadelphia, PA

**Coffee Break 10:30 – 10:45am**

## **Solutions for Minimally Invasive Spine Surgery Challenges**

**Larry Teik-man Khoo, MD**, Neurosurgeon, The Spine Clinic of Los Angeles, Los Angeles, CA

## **Unexplained Low Back Pain - SI Joint Dysfunction**

**E. Jeffrey Donner, MD**, Orthopaedic Surgeon, Rocky Mountain Associates in Orthopedic Medicine, P.C., The Spine Institute, Loveland, CO

## **Pedicle Screw Placement Using Neuronavigation**

**Mario Ammirati, MD, MBA**, Neurosurgeon, Professor of Neurosurgery and Radiation Medicine, Director, Skull Base Neurosurgery, Stereotactic Radiosurgery, Dardinger Microneurosurgical Skull Base Laboratory, The Ohio State University Medical Center, Department of Neurological Surgery, Columbus, OH

## **A Global Team Approach to Neurosurgical Trauma**

**Gene Bolles, MD**, Neurosurgeon, Assistant Professor University of Colorado, Department of Neurosurgery, Denver Health Medical Center, Rocky Mountain Regional Trauma Center, Denver, CO

**Lunch 12:00 – 1:30 PM**

## **Join us at lunch for The International College of Surgeons:**

### **A 42-Year Journey** as presented by **Arno A. Roscher, MD**.

From his time of acceptance as an ICS Fellow in 1968, Dr. Roscher became extremely active on both the national and international level. He has served on various scientific committees throughout the years, including President and Regent of the California State Chapter. He has been a Vice President of the US Section and continues to serve as an ICS World Governor. He was the Scientific Chairman for more than 20 Medical/Surgical Symposia, and has authored and presented over 100 articles and abstracts. In 2004, Dr. Arno Roscher was awarded an Honorary Fellowship in the College for his life-long commitment to our mission and goals.

**CAREOPS®: Care Provider Optimization - Vicarious Trauma & Stress in Surgical Teams & Physicians**

**Stephen Robinson**, Director, Magis Group, Boulder, CO

**Pain Management in Injured Coal Miners**

**Diane Shafer, MD, FICS**, Orthopaedic Surgeon, Williamson, WV

**A Paradigm Shift in International Continued Neurosurgical Education through Implementation of the Internet & Technology**

**Dr. Ganesalingam Narenthiran, BSc(MedSci)(Hons) MB ChB MRCS(Edin)**, Neurosurgeon, Specialist Registrar in Neurosurgery, Wessex Neurological Centre, Southampton General Hospital, Southampton, United Kingdom

**Diffusion Tractography Integrated Neuronavigation Surgery to Convert "Inoperable" Brain Tumors to Safely Resectable**

**Surbhi Jain, MD, FICS**, Neurosurgical Oncology, Assistant Professor, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL



Saturday, June 11

9:00am-5:00pm

Broadway I & II

**Symposia on Cardiac & Cerebrovascular Disorders in Neurosurgical Disease**

**The Heart of Cerebrovascular Disorders**

**Clara Raquel Epstein, MD, FICS**, Neurosurgeon, CEO of Boulder Neurosurgery Center, LLC and Boulder Neurosurgery Foundation, Inc., Boulder, CO and Chair of Neurosurgery, International College of Surgeons, US Section

**Management of AVMs**

**Lucia Zamorano, MD, FICS**, Neurosurgeon, Lucia Zamorano, MD, PLC, Michigan Brain & Spine Surgery Center, Detroit, MI

**Avoiding Complications in Neurosurgery in the Semi-sitting Position**

**Mario Ammirati, MD, MBA**, Neurosurgeon, Professor of Neurosurgery and Radiation Medicine, Director, Skull Base Neurosurgery, Stereotactic Radiosurgery, Dardinger Microneurosurgical Skull Base Laboratory, The Ohio State University Medical Center, Department of Neurological Surgery, Columbus, OH

**Acute Ischemic Stroke**

**Gregory A. Christofridis, MD**, Professor of Radiology and Surgery, Section Chief of Neuroradiology, The University of Chicago Medical Center, Chicago, IL

**Three Dimensional Echocardiographic Surgical View of the Mitral Valve**

**Nadia S. Nathan, MD**, Anesthesiologist, Associate Professor, SUNY, Upstate Medical University, Syracuse, NY

**Coffee Break 10:45 – 11:00AM**

**Saturday, June 11 9:00am-5:00pm Broadway I &II**

**Multimodal Brain Monitoring in Traumatic Brain Injury**

**Jefferson William Chen, MD, PhD**, Neurosurgeon, Director, Neurotrauma, Legacy Emmanuel Hospital, Department of Neurological Surgery, Portland, OR

**Pediatric Neurosurgical Trauma - Effective Management & Treatment**

**Jaime Diegopérez Ramírez, MD**, Neurosurgeon, Centro Neurológico CMABC, México City, México

**Surgical Adjuncts in the resection of Gliomas; the Use of 5-ALA fluorescence**

**Jefferson William Chen, MD, PhD**, Director, Neurotrauma Legacy Emmanuel Hospital, Department of Neurological Surgery Portland, OR

**Lunch 12:00 – 1:00PM**

**Pitfalls in the Management of Clavicle Fractures**

**Maxime J.M. Coles, MD, FICS**, Orthopaedic Surgeon, Traumatologist, Girard Medical Center, Girard, KS and Chair of Orthopaedic Surgery, International College of Surgeons, US Section

**Annular Repair After Lumbar Microdiscectomy can Prevent Recurrent Disc Herniation**

**Abid A. Qureshi, MD**, Orthopaedic Surgeon, Muir Orthopaedic Specialists, Walnut Creek, CA

**Treatment of Peripheral Injuries in the Upper Extremity**

**Onaly Kapasi, MD**, Orthopaedic Surgeon, Newton, MA

**Treatment of Single Level Cervical Disc Herniations with Radiculopathy using Cervical Disc Prosthesis: Clinical and Radiological Outcomes**

**W. Craig Clark, MD, PhD, FICS**, Neurosurgeon, President, The Neurosurgical Center, Memphis, TN

**Acute Flexor Tendon Injuries in the Upper Extremity**

**Olarewaju Oladipo, MD**, Orthopaedic Surgeon, Randolph, MA

**Limited Open Incision for Carpal Tunnel Release**

**Moheb S. Moneim, MD**, Orthopaedic Surgeon, University of New Mexico HSC, Albuquerque, NM

**Somatotopic Localization of Pain in Awake Patients Undergoing Lumbar Surgery**

**Robert P. Uteg, MD**, Neurosurgeon, The Bonati Spine Institute, Hudson, FL

**Challenging Cases in Private Orthopaedic Practice**

**Sudhir B. Rao, MD**, Orthopaedic Surgeon, Big Rapids Orthopaedics PC and Premier Hand Center, Big Rapids, MI

**Coffee Break 3:00-3:15pm**

**Balloon Kyphoplasty after Vertebroplasty for Recurrent Vertebral Fractures: A Case Study**

**Michael Y. Chang, DO**, Physiatrist, Muir Orthopaedic Specialists, Walnut, CA

**Current Concepts on Thumb CMC and STT Osteoarthritis**

**Dimitrios Kapoutsis, MD**, Orthopaedic Surgeon, Beth Israel Deaconess Medical Center, Boston, MA

**Vagal Neuralgia: Nerve Block Treatment**

**Richard Gershanik, MD**, Orthopaedic Surgeon, Neurological & Neurosurgical Pain Management Center, Miami, FL

**Decreased Blood Loss in Total Knee Arthroplasty Patients by Using a Novel Gelatin/Thrombin Hemostatic Agent**

**James L. Comadoll, MD**, Orthopaedic Surgeon, RoMedical Care, Salisbury, NC

**The Long Term Safety and Efficacy of the Intrathecal Therapy Using Sufentanyl in Chronic Pain**

**Jose J. Monsivais, MD, FICS**, Orthopaedic Surgeon, Hand and Microsurgery Center of El Paso, El Paso, TX

**Cerebral Perfusion Pressure and Intracranial Pressure Management- Brain Resuscitation in Head Injury**

**Quirico U. Torres, MD, FICS**, Neurosurgeon, Abilene, TX

**The Treatment of the Rheumatoid Hand**

**Spiros Stamelos, MD**, Orthopaedic Surgeon, Arlington Heights, IL

**Outpatient Based Minimally Invasive Lumbar Endoscopic Spine Surgery” A Two-Year Follow-Up**

**John A. Polikandriotis, MBA**, Laser Spine Institute, Tampa, FL

**Trauma and Critical Care I:  
Dealing with Dilemmas**

**Thursday, June 9      8:00am-5:00pm      Pavilion Ballroom  
East**

ICS-US Specialty Group Chairs and invited faculty, together, will offer a multidisciplinary approach to describe innovative, appropriate techniques and technology for optimal care of the injured or seriously ill patient; discuss treatments, techniques and technology for optimal care in critical care settings; discuss appropriate surgical response to injuries and illness with added complications such as obesity and pregnancy. The ethical dilemmas of trauma will also be a focus of this activity.

Accessibility to this information through lectures, videos, and power-point presentations will be key to your continuing professional development. These presentations are not merely limited to those members who hold professorships, but they include the trials and triumphs of research from our Junior Fellows and Residents and the case presentations of practicing clinicians.

**Opening Ceremony – Welcome and Introductions**

**Sharmila Dissanaiké, MD, FICS**, Associate Professor, Department of Surgery, Texas Tech University Health Sciences Center, Lubbock, TX

**Introduction of Key Note Speaker and Opening of Session:**

**Dinesh Ranjan, MD, FICS**, United States Section President, Chief, Surgical Services, Oscar G. Johnson VA Medical Center, Iron Mountain, Michigan.

**The Impact of Health Care Reform on Surgery**

**Donald D. Trunkey, MD, FICS (HON.)** Professor of Surgery, Section of Trauma and Critical Care, Oregon Health & Science University, Portland, OR

**MODERATORS:**

**Ari Halldorsson, MD, FICS & Dinesh Ranjan, MD, FICS**

**Damage Control In Trauma**

**Vijay K. Mittal, MD, FICS**, Chair and Program Director, General Surgery, Providence Hospital and Medical Centers, Southfield, MI; Associate Clinical Professor of Surgery, Wayne State University, Detroit, MI

**Management of the Open Abdomen**

**Anthony N. Dardano, Jr., DO, FICS**, ICS-US Co-Chair Division of Plastic Surgery, Voluntary Assistant Professor of Surgery, Miller School of Medicine, University of Miami, Miami, FL

**Orthopaedic Trauma Priorities**

**Maxime J.M. Coles, MD, FICS**, ICS-US Chair, Division of Orthopaedic Surgery, Orthopaedic Surgeon, Traumatologist, Girard Medical Center, Girard, KS

**Neurosurgical Management of Penetrating Cranial and Cervical Trauma – A Team Approach**

**Clara Raquel Epstein, MD, FICS**, ICS-US Chair, Division of Neurosurgery, Boulder Neurosurgery Center, LLC, Boulder Neurosurgery Foundation, Inc., Boulder, CO

Panel Q & A – Mittal/Dardano/Coles/Epstein

**10:30-10:40am – Coffee Break**

**MODERATORS:**

**John Iljas, MD, FICS & Sharmila Dissanaiké, MD, FICS**

**Management of Hepato-Biliary Injuries in Trauma Patients**

**Thavam C. Thambi-Pillai, MD, FICS**, Sioux Falls, SD

**Endo Vascular Management of Great Vessel Injuries**

**Dixon Santana, MD, FICS**, ICS-US Chair, Division of Vascular Surgery, Texas Tech University Health Sciences Center, Lubbock, TX

**Broken Faces/Broken Bodies: The Surgical Trauma of Domestic Violence**

**Jay A. Bachicha, MD, FICS**, ICS North American Federation Secretary and ICS-US Immediate Past President, Department of Obstetrics & Gynecology, Chief, Patient Education and Health Promotion, Kaiser Medical Center, Hayward, CA

Panel Q & A – Thambi-Pillai/Santana/Bachicha

**12:00pm-1:00pm – Lunch**

**MODERATORS:**

**Marco A. Pelosi III, MD, FICS & John D. Wassner, MD, FICS**

**Trauma Surgery's Greatest Hits: From the 16th Century to the Present**

**Thomas D. Johnston, MD**, Iron Mountain, MI

**Initial Management of the Pregnant Trauma Patient**

**Ari Halldorsson, MD, FICS**, ICS-US Chair, Division of Thoracic Surgery, Professor and Vice Chair, Program Director, Department of Surgery, Texas Tech University Health Sciences Center, Lubbock, TX

**Management of Chronic Pelvic Floor Trauma**

**Marco A. Pelosi III, MD, FICS**, ICS-US Chair, Division of Obstetrics & Gynecology, Bayonne, NJ

**Current Management of Rectal Injuries**

**Larry S. Sasaki, MD, FICS**, ICS-US Colorectal Specialty Group Chair, Assistant Clinical Professor of Surgery, Louisiana State University Medical Center, Shreveport, LA

Panel Q & A – Johnston/Halldorsson/Pelosi/Sasaki

**2:40pm-2:50pm – Coffee Break**

**MODERATORS:**

**Destiny Chau, MD & Zaki-Udin Hassan, MD, FICS**

**Case Report of Toric Crystalens Implantation with Post Capsular Rupture**

**Phillips Kirk Labor, MD, FICS**, ICS-US Chair, Division of Ophthalmology, Grapevine, TX

**Complications of Inhalation Injury in Burns: ARDS, Pneumonia, and Death**

**Sharmila Dissanaik, MD, FICS**, Associate Professor, Department of Surgery, Texas Tech University Health Sciences Center, Lubbock, TX

**Anesthesia and Critical Care in the Disaster Environment: Implications for the Surgical Care Team**

**Destiny Chau, MD**, Department of Anesthesiology, University of Kentucky Medical Center, Lexington KY

Panel Q & A – Labor/Dissanaik/Chau

**Diagnosis and Management of Esophageal Injuries**

**John Fitzwater, MD**, Texas Tech University Health Sciences Center, Lubbock, TX

**Implementation of a Resuscitation Cart for Patients with Severe Sepsis and Septic Shock**

**Kevin W. Hatton, MD, FICS**, Assistant Professor of Anesthesiology and Surgery, University of Kentucky, Chandler Medical Center, Lexington, KY

**Use of the Human Patient Simulator to Teach Withdrawal of Care and DCD in the Non-Resuscitable Trauma Patient**

**Zaki-Udin Hassan, MD, FICS**, ICS-US Chair, Division of Anesthesiology, Assistant Professor of Anesthesiology, University of Kentucky, Lexington, KY

**Advances in Acute Care Surgery**

**Steven Brooks, MD**, ICS Junior Fellow, Texas Tech University Health Sciences Center, Lubbock, TX

Panel Q & A – Fitzwater/Hatton/Hassan/Brooks

**Closing Remarks and Announcements**

**Dinesh Ranjan, MD**

Please refer to the ICS-US Meeting Program for more information about their program and the presentations scheduled on Friday & Saturday.

# The Academy would like to thank it's Exhibitors and Sponsors for their continued support

**Revolution**  
Leads to  
**Evolution**

First, We Achieved a Breakthrough in Lumbar Fusion... Then, We Improved Upon It.

**AXIALIF<sup>®</sup> 2L<sup>+</sup>**

- Conical profile
- "Dial-in" distraction at L5-S1
- Larger diameter
- Fixation Rod
- Dilator Trials

To learn more, please call 877-896-1292, or visit us at [www.Trans1.com](http://www.Trans1.com)

**Trans1**  
*A New Foundation for the Future of Spine*

Caution: United States federal law restricts this device to sale by or on the order of a physician. Refer to "Instructions for Use" for full prescribing information including contraindications, warnings, precautions, and potential adverse events. Trans1 and AxialIF are registered trademarks and 2L+ is a trademark of Trans1, Inc. Gold coloration is for illustrative purposes only.  
1236 Copyright ©2010 Trans1, Inc. All rights reserved. 45-0375 Rev. A 12/16/10

**PMT<sup>®</sup>** CORPORATION  
*Quality, Innovation and Customer Driven*



# American Academy of Neurological & Orthopaedic Surgeons Presentations

# SCIENTIFIC ABSTRACTS

\*To review abstracts submitted for the International College of Surgeons Program, please refer to the ICS-US Meeting Program Book.

Abstracts are re-printed as submitted with limited changes.

## **Balloon Kyphoplasty After Vertebroplasty For Recurrent Vertebral Fractures: A Case Study**

**Michael Y. Chang, D.O.**

### **Purpose**

Cement vertebral augmentation is a minimally invasive treatment for osteoporotic vertebral compression fractures. Refractures after vertebral augmentation is a well-known complication. Treatments for recurrent vertebral fractures includes conservative management, repeat percutaneous cement augmentation, and open surgical reduction. We present a method outside of extent literature for treatment of recurrent vertebral fractures previously augmented by percutaneous vertebroplasty. This treatment utilizes balloon kyphoplasty. This case study demonstrates an alternative way of treating recurrent vertebral compression fracture.

### **Method**

An 85-year-old female suffered an osteoporotic vertebral compression fracture at L3 after a fall and had subsequently undergone a percutaneous vertebroplasty. After 2 months, patient had severe axial back pain, and a repeat magnetic resonance imaging demonstrates a refracture of the L3 vertebral body. Under biplanar fluoroscopy, balloon kyphoplasty was performed at the L3 level.

### **Results**

The combination of minimally invasive procedures resulted in rapid pain relief and mobilization in this patient. The balloon kyphoplasty allowed us to create a channel in which bone cement can be safely deposited without the concern of cement extravasation or retropulsion due to the previous vertebroplasty cement.

### **Conclusion**

Using balloon kyphoplasty is an efficient and safe method for treating vertebral compression refractures.

## **Surgical Adjuncts In The Resection Of Gliomas: The Use Of 5-Ala Fluorescence**

**Jeff Chen, MD**

### **Introduction**

The resection of cerebral gliomas is difficult because of the infiltrative nature of the tumors and the difficulty in defining the borders. An increase in the extent of resection has been shown to occur with the use of 5-ALA intraoperative fluorescence (Stummer et al., 2006). This also affects the recurrence rate (Stummer et al., 2000). We report our single institutional experience with 5-ALA fluorescence guidance in 24 glioma patients.

### **Methods**

An IND was obtained from the FDA to use 5-ALA as an adjunct in the surgical resection of cerebral gliomas. The patients had pre-operative MRIs consistent with the diagnosis of glioma. Informed consent was obtained and the patients were given 5-ALA orally at 10mg/kg (n=4), 20 mg/kg (n=4), 30 mg/ml (n=4) 3 hours before the brain was to be visualized. This was the 1st phase of the study. 30mg/ml gave the best fluorescence signal, and in the 2nd phase of the study (n=12), the 30mg/kg dose was used. The anesthetic technique used was general endotracheal anesthesia or awake/Propofol. Tumor was visualized with a Zeiss Pentero microscope with excitation wavelength of 400-410nm and observed at 635 nm. Specimens were obtained, fluorescence was graded and compared to the pathologic grading. All patients had post-operative MRIs within 72 hours of surgery. Post-operative liver function tests/LDH were followed.

### **Results**

In our 24 patients, the following pathology was encountered: grade IV glioma (n=15), grade III glioma (n=1), grade III oligodendroglioma (n=3), grade II glioma/oligodendroglioma (n=4), other (n=1). All tumors demonstrated bright fluorescence except two of the grade II gliomas. Eight of the tumors were recurrent tumors. Immediate post-operative scans demonstrated > 95% resection of the area of MRI enhancement. Post-operative elevations in LFTs and LDH were transient and clinically insignificant.

### **Conclusions**

5-ALA is a safe and useful adjunct that may be used to maximize the resection of gliomas.

### **References**

Stummer W, Pichlmeir U, Meinel T, Wiestler OD, Zanella F, Reulen H-J. Fluorescence-guided surgery with 5-ALA for resection of malignant glioma: a randomized controlled multicentre phase III trial. *Lancet Oncology* 7: 392-401, 2006.

Stummer W, Novotny A, Meinel T, Stepp H, Goetz C, Bise K, Reulen H-J. Fluorescence-guided resection of GBM by using 5-ALA induced porphyrins: a prospective study in 52 consecutive patients. *J Neurosurg* 93: 1003-1013, 2000.

## **Multimodal brain monitoring in Traumatic Brain Injury: Cerebral Microdialysis**

**Jeff Chen, MD**

### Introduction

Cerebral microdialysis (MD) has been utilized clinically in the world for many years. With FDA approval in the United States in 2005, this monitoring technique has been increasingly utilized nationally. It has been implemented as component of multimodal monitoring for traumatic brain injury, stroke, and aneurysmal subarachnoid hemorrhage. We describe a 5-year, single institutional experience using cerebral microdialysis at a community-based hospital, Legacy Emanuel Medical Center (LEMC).

### Methods

The CMA 600 and ISCUSflex analyzers, CMA 106 pumps and CMA 70 MD catheters were obtained from CMA Microdialysis AB (Solna, Sweden). Artificial CSF was perfused at 0.3  $\mu$ l/min, and samples were collected hourly by the bedside nurse. Analytes examined using the ICU pilot software included lactate, pyruvate, glucose, glutamate, and glycerol. All cerebral MD catheters were implanted by board-certified, attending neurosurgeons at LEMC.

### Results

Between July 2005 and July 2010, 248 cerebral MD catheters were implanted in 174 patients undergoing multimodal brain monitoring. Most MD catheters (185) were placed directly at the time of open craniotomy, and none were associated with cranial infections. The patients ranged in age from 5 months to 90 years, with a mean of 49 years. The male to female ratio was 1.4:1. Mechanisms of injury were categorized as: traumatic brain injury (126), cerebral vascular accident (24), aneurysmal subarachnoid hemorrhage (17), and tumor (7).

### Conclusion

Cerebral microdialysis was readily implemented in a community-based hospital, and is an important adjunct in multimodal brain monitoring.

## **Treatment of Single Level Cervical Disc Herniations with Radiculopathy using Cervical Disc Prosthesis. Clinical and Radiological Outcomes**

**W. Craig Clark, MD, Ph.D., FACS, FICS**, President, The Neurosurgical Center, Memphis, TN

Caitlin M. Clark, B.A., Medical Student, University of Texas-Houston School of Medicine, Houston, TX, The Neurosurgical Center, Southaven, MS

The purpose of this study was to determine the clinical and functional outcomes of cervical disc arthroplasty in the treatment of herniated cervical discs with radiculopathy.

The study design is a retrospective analysis of patients treated by one surgeon from 2007-2009. All patients were followed at least one year. All patients were evaluated including clinical examination, Oswestry Disability Index (ODI), and Visual Analog Scale (VAS) pain assessment before, immediately after surgery, and follow-up at 6 weeks, 6 months and one year. Changes in the mean scale scores were evaluated using the student's T test statistic. Patients with neck pain alone without radiculopathy and patients with multilevel involvement were excluded. The ODI showed the mean value of the index improved from 56 to 5 at 6 months (p

## **Pitfalls in the Management of Clavicle Fractures**

**Maxime J.M. Coles, MD**

The clavicle is a “S” shape bone connecting the axial skeleton to the upper extremity and also allowing deformation under stress. In the adult, fall, motor vehicle accident and direct blow are often responsible of most injuries. The Brachial Plexus and the subclavian vessels run in close proximity and can be injured. This subclavian muscle is believed to be protecting these vital structures.

Fractures of the middle third are the most common (81%) of the clavicle fracture and will heal usually with conservative treatment (Padded strap, sling etc.). A small percentage (4.5%) will develop non union. Risk factors like age, female gender, fracture displacement and comminution are contributory. Recent literature has shown that mal-union can cause significant morbidity while it was previously believed to be clinically insignificant. The challenge is to identify the fractures creating disability. Shortening of the clavicle has been found responsible of poor results.

Pre-contoured plate fixations with bone grafting using standard or locking screw have shown good results. The plate is better placed anteriorly than superiorly because of the clavicle subcutaneous position. An, anterior plate needs more contouring and can negatively affect the deltoid or the pectoralis origins. Intramedially roding with K-wire or screw fixation is less invasive than plating leaving an intact periosteum Smooth or threaded pin/6.5 mm canulated screw has also been successful in the treatment of such fractures.

Vascularized bone transfer from the medial femoral condyle has been used as a salvage procedure in recalcitrant non union. Although non union is rare the incidence is more significant than previously believed-

Distal third clavicle fracture represents 15% of all clavicle fractures and the Neer’s classification has helped in the management when the acromioclavicular joint and coracoclavicular ligaments, are involved. There are many methods of fixations from primary suture to suture stabilization of ligament. Open Reduction Internal Fixation (ORIF) are well documented in the literature.

Medial end clavicle fractures (2-3%) are rare but can be the source airway or great vessels compromise. CT scan evaluation is helpful in any decision making. Fixation method in using the Rhomboid (coracoclavicular) ligament with the sternoclavicular ligament have provided stabilization of this joint.

## **Decreased Blood Loss in Total Knee Arthroplasty Patients by Using a Novel Gelatin/Thrombin Hemostatic Agent**

**James L. Comadoll, MD**

Blabon, Gary\*; Hutchcraft, Audrey§; Krishnan, Sangeeta§; Bechter, Mark§; Kreuwel, Huub§, \*RoMedical Care. Salisbury, NC, United States  
§Baxter BioScience. Westlake Village, CA, United States

### **Purpose**

Total Knee Arthroplasty (TKA) is associated with major postoperative blood loss and can lead to blood transfusions and complications. Increased use of anticoagulants to manage venous thromboembolism potentially exacerbates this situation. This study was done to compare surgical outcomes related to bleeding control in unilateral TKA patients either treated with or without a topical hemostatic agent consisting of a gelatin matrix in combination with human thrombin.

### **Methods**

This single-investigator retrospective chart review examined 83 patients undergoing unilateral TKA treated from 2007 to 2008 either with (n=42) or without (n=41) the hemostatic agent. Outcomes related to blood loss, hemoglobin (Hb) levels, transfusion and length of stay were analyzed after controlling for age, sex, BMI and pre-surgery hemoglobin.

### **Results**

Patients not treated with the hemostatic agent experienced a mean ( $\pm$  SD) maximum drop in Hb levels of  $3.24 \pm 0.82$  mg/dL. In contrast, patients treated with the hemostatic agent observed a mean maximum drop of  $1.84 \pm 0.65$  mg/dL. This difference was statistically significant. Both Hb at pre-surgery and BMI were found to have a significant relationship to maximum decrease in Hb levels although this was parallel between the two groups. Patient demographics revealed similar baseline characteristics. No major complications were observed and groups had similar safety profiles.

### **Conclusion**

Utilization of a novel hemostatic agent resulted in effective hemostasis even in anti-coagulated patients resulting in a reduction in blood loss as measured by Hb levels. A multicenter, prospective, randomized, controlled study is warranted, due to the limitations inherent with a single-investigator retrospective chart review.

## Treatment of Peripheral Injuries in the Upper Extremity

**Onaly A. Kapasi, MD**

Harilaos T. Sakellarides, MD, Boston University School of Medicine  
Boston, MA

### Purpose

To show that such traumas can be treated by nerve grafting with very satisfactory end results.

### Methods

Microscope, microsurgical and fine suture material techniques are used. Experimental work proved: 1) The detrimental role of tension at the suture line. 2) The deleterious effect of postoperative stretching on successful functional recovery. 3) Regeneration axons advanced more easily through nerve grafts of 2cm with two tension free anastomoses compared with a single suture under tension. The epineurium was the primary source of connective tissue proliferation.

### Results

Motor recovery for Median nerve: Excellent 40%; Good 40%; Fair 20%. Ulnar nerve: Excellent 38%; Good 40%; Fair 22%. Radial nerve: Excellent 42%; Good 38%; Fair 20%.

### Conclusions

Encouraging results were obtained providing certain details of the method are strictly followed.

## Thumb CMC & STT Arthritis - Arthroscopy, Arthroplasty, and Arthrodesis

**Dimitrios V Kapoutsis, MD** Beth Israel Deaconess Medical Center,  
Boston MA and 424GMHospital of Thessaloniki, Greece

A common, painful, and debilitating disease, osteoarthritis (OA) of the first carpometacarpal joint (1st CMC), or basal joint of the thumb, is the second most common site of osteoarthritis in humans, affecting up to 25% of women and 8% of men.

Symptomatic isolated scaphotrapezotrapezoid (STT) joint arthritis, on the other hand, can affect up to 16% of the population, mainly women over the age of 50. Within the carpus, after the radioscapholunate joint, it is the second most common site of osteoarthritis in the human wrist. The prevalence of OA in the 1st CMC and STT joints appears to be a relatively unique phenomenon owing to the development of the basal joint complex, an integral component for the functional capacity as demonstrated by the human hand today. Evidence of degenerative arthritic disease has yet to be found in our ancestors' simplified thumbs. Compared to the digits of other species that simply move in a flexion-extension plane, the primate thumb differs in its ability to perform a wide circumduction motion, perhaps indicating that stability at the basal joint was compromised for the ability to pinch and grasp. The high compression forces that occur during simple pinch and strong grasp, however, require a stable TM joint, hence leading to the modern problem of widespread cartilage erosion and the subsequent development of OA in this joint.

## **C5 Palsy Following Anterior Cervical Discectomy And Fusion**

**William E. Mathews, M.D.**

### **Purpose**

The postoperative complication of C5 paralysis is more common than reported in the literature. The incidence associated with anterior cervical discectomy and fusion (ACDF) is yet to be established. The prognosis and etiology is not well understood. Most of the cases go unreported because most of the palsies resolve with time and conservative management. However, some patients are left with devastating impairment of upper extremity function. Two hundred consecutive cases from my practice were analyzed during a period in which I had six cases of C5 palsy following ACDF. While this not an excessive number (and is below the loosely reported incidence of about 8%), each case was worrisome both to the patient and to me, the surgeon. As a result, I was determined to eliminate this complication from my surgical practice.

### **Method**

In this study, I analyzed the clinical, imaging studies and surgery performed on 200 patients with C4-5 disc disease operated in a five year period by one surgeon. Six of these patients had C5 palsy immediately following ACDF. All six patients had some degree of deltoid motor weakness prior to ACDF ranging from grade 4/5 to 2/5 on manual muscle testing (MMT). The MRI/CT studies showed marked foraminal stenosis at multiple levels on all six patients. Two patients had disc protrusion to the side of deltoid muscle paralysis. The other three had disc bulging with associated degenerative changes including OPLL. One patient had a disc herniation at C4-5 and C3-4 with associated degenerative changes. The patients who did not have C5 palsy following ACDF had, for the most part, less degenerative disease and minimal deltoid weakness (4/5 on MMT) preoperatively and were mostly one or two level disc surgeries.

### **Results**

The initial MRI was carefully reviewed in all cases of C5 palsy and compared with the post-operative MRI. One case was suggestive of preoperative T2 magnetic resonance signal changes in the anterior horn area of the spinal cord. These changes persisted postoperatively. All six cases had in common multiple level disease and ACDF, i.e. two or more disc levels. In addition, the more severe the stenosis, the more likely a C5 palsy would occur subsequent to ACDF. Only one two level ACDF had C5 palsy. Predicting who might develop C5 palsy from the preoperative MRI was suggested but not fully established.

### **Conclusion**

In one of my cases, the MRI detected spinal cord signal changes suggestive of edema in the anterior horn cells. Although the scan findings are suggestive as the etiology of C5 palsy, this is not conclusively

established in this study. There was a suggestion of edema in the C3-4 and C4-5 anterior horn cells (the anterior horn cells for the C5 and C6 nerve roots) postoperatively on the T2-weighted magnetic resonance images. To me this indicated that my decompression may have been too extensive for the nerve root in a severely stenosed foramen. All C5 palsy patients were treated aggressively with steroids, galvanic nerve/muscle stimulation and physical therapy including both active and passive shoulder range of motion exercises. All six patients recovered complete function in the affected deltoid muscle. Five patients had full return of function within one to six weeks postoperatively. One patient recovered function in nine months. The return of function was with unexplained spontaneity ("overnight") in all six patients. As a result of these critical analyses, my operative technique was altered to include the use of the diamond tip burr and high speed drill with less use of the Kerrison/curette to decompress the nerve root in the severely stenosed foramina with multilevel disc surgery. Of course, the operating microscope was used in all cases.

## **Limited Open Incision For Carpal Tunnel Release**

**Moheb S Moneim, MD**, University of New Mexico HSC, USA.

There are several techniques described for Carpal Tunnel release. Techniques vary between an extended open incision proximal to the Wrist flexion crease to arthroscopic release.

### **Purpose**

The author will present his technique of limited palmer incision that has been used in hundreds of patients.

### **Methods**

The incision starts distal to the wrist flexion crease and extends distally longitudinally in the palm for 1.5- 2cm. Bier block anesthesia is used in all patients. An essential step is to identify the palmer fascia which the author considers the gate to the carpal tunnel. The fascia is divided and a self retaining retractor is introduced. The transverse carpal ligament is identified and the tunnel is entered by incising the ligament starting in the safe zone. Hemostat is inserted deep to the ligament to protect the median nerve then the release is carried out proximally and distally. The median nerve is inspected for the degree of compression and no synovectomy or epineurotomy are done. Post operatively a splint is applied for comfort and unrestricted activity including return to work occurred in two weeks.

### **Results**

The patient satisfaction has been excellent with no complications apart from occasional scar tenderness. There was improvement in grip and pinch strength.

### **Conclusion**

Limited open carpal release is a safe technique with high satisfaction and early return to work. No special instruments are needed.

## The Long Term Safety and Efficacy of the Intrathecal Therapy Using Sufentanyl in Chronic Pain

**Jose J. Monsivais, MD, FACS**, Hand and Microsurgery Center of El Paso, El Paso, Texas USA

Diane B. Monsivais, PhD, CRRN, The University of Texas at El Paso School of Nursing

### Purpose

To describe the long term safety and efficacy of intrathecal therapy using Sufentanyl for the management of chronic neuropathic pain including failed back surgery syndrome.

### Methods

This was a prospective cohort study of 19 (long-term follow-up on 12) chronic pain patients who failed other treatments. Follow-up is 2-25 years, with average 7 year follow-up.

Standardized psychological screening was used to assess suitability. The Brief Pain Inventory (BPI), DASH, and pain scales were used for post-treatment assessment.

### Data Analysis

Repeated measure analysis (matched T-tests) was used to compare BPI, DASH, and pain scale scores at baseline and regular intervals throughout treatment.

### Results

There was a marked improvement in functional outcomes and the multi-dimensional assessment of pain. Pain scales showed a modest improvement.

The complication rate was low and limited to catheter recall (1) and pump recall (1). One pump had to be replaced earlier for motor stall. There were no other complications (toxicity, withdrawals, granulomas, or deaths).

Four patients terminated therapy. Reasons included psychiatric diagnosis (1), discontinued after 2 years because got married and said she felt she didn't need it anymore (1), died from unrelated causes after 4 years of therapy (1), had it removed because he did not wish to return to work because he was getting a large pension (1).

### Conclusions

Intrathecal therapy with Sufentanyl therapy offers a good treatment alternative for those cases that have failed surgery and standard pain treatment. Strict patient selection based on psychological screening, control of co-morbidities, a proper pain management may contribute to successful outcome.

## Three Dimensional Volumetric MRI Studies in Preclinical Mouse Model of Melanoma Brain Metastases

**A. Morsi**<sup>1&2</sup>,

E.B. Voura<sup>2</sup>, S. Pun<sup>1</sup>, D. M. Hoang<sup>1</sup>, A. Baig<sup>1</sup>, E. Parker<sup>2</sup>, J.G. Golfinos<sup>2</sup> and Y.Z. Wadghiri<sup>1</sup>

Departments of <sup>1</sup>Radiology and <sup>2</sup>Neurosurgery, New York University Medical Center

### Introduction

Ninety five percent of patients with melanoma metastases to the brain succumb to their disease within six months of diagnosis. Animal models displaying specific clinical features have been established to better understand the progression of these metastases and to test new treatment strategies designed to counteract them. But a visually accurate means to non-invasively monitor the dynamics of tumor growth in vivo and the effects of novel therapies taking place in these animals remains elusive. Magnetic Resonance Imaging (MRI) allows for a three-dimensional rendering of cancerous lesions in the context of the whole brain. Furthermore, MRI is non-invasive and offers unrivaled natural tissue contrast. Capitalizing on these positive attributes, we used a series of MRI scans to longitudinally follow the brain tumorigenesis of B16F10 cells over four weeks after their intracarotid injection into C57BL6 mice. Our MRI results were reminiscent of the radiological features observed in clinical scans of patients with melanoma brain metastases. Furthermore, our analyses also allowed for the longitudinal monitoring of tumor volume, providing an improvement over conventional single end point histological analyses, as well as a baseline for the preclinical testing of future treatment regimens.

### Methods

An intracarotid injection of 105 B16-F10 melanoma cells was performed on C57Bl6 mice (Perides et al. 2006). Tumorigenesis was followed over 4 weeks with serial MRI scans. The MRI protocol consisted of acquiring (150- $\mu$ m)<sup>3</sup> resolution 3D brain datasets of contrast agent-free pre-T2 weighted RARE (30-min) to delineate the endogenous effect of edema from the tumor and both pre-T1 weighted (T1-w, 15-min) and pre-T2\* weighted datasets (30-min) to map the presence of melanin. Subsequent to a femoral injection of Gd Magnevist representing a clinical double dose (120  $\mu$ l of 50  $\mu$ M of GdDTPA per 30 g mouse weight), a post-T1-w sequence (15-min) was acquired to monitor the presence of leakage.

### Results

100% of the tumors identified were ventricular or leptomenigeal and not parenchymal as observed clinically (1a,b), confirming reports by Zhang et al. (2009). Even so, MRI studies conducted using this model displayed characteristic clinical radiological findings (Gaviani et al., 2006): edema on T2RARE (2a), T1 brightening from melanin without contrast (2b) and melanin susceptibility effect on T2\* (2c), as well as increased T1 brightening with contrast agent denoting leakage (2d). Our  $\approx$ MRI

### **Three Dimensional Volumetric MRI Studies in Preclinical Mouse Model of Melanoma Brain Metastases (continued)**

technique also provided accurate longitudinal assessment of growth rates and volumetric changes (2e,f,). In addition to characterizing the overall growth behavior of the developing lesions, using three-dimensional volumetric measurements we were able to monitor volume changes within the same tumor through serial MRI scans on the same subject over multiple time points (3).

#### **Conclusion**

Our MRI analyses are reminiscent of clinical radiological findings of melanoma brain metastasis and show that MRI is a reliable non-invasive imaging modality for early tumor detection and helps in better understand the pattern of tumor growth in mouse models used in preclinical cancer studies. More importantly, our longitudinal monitoring of tumor progression through in-vivo volume measurements could potentially provide a more accurate assessment of drug efficacy as compared to the end stage histology analyses.

### **Acute Flexor Tendon Injuries and Treatment**

#### **Olarewaju Oladipo, MD**

Harilaos T. Sakellarides, MD, Boston University School of Medicine  
Boston, MA

#### **Purpose**

To demonstrate the different techniques in treating acute flexor tendon injuries (the so called "no-man's land) and the use of silicone rod and tendon grafting in severe flexion contracture of the fingers.

#### **Methods**

Excision of the divided tendons is performed first, then excision of scar tissue and insertion of silicone rods. After two and a half to three months from the first operation, the second stage is performed consisting of removal of silicone rod, and insertion of tendon graft.

Results: Excellent 33%; Good 44%; Fair 23%.

#### **Conclusions**

Primary repair of injured flexor tendons has improved during the last 20 years due to accurate surgical repair with excellent postoperative care.

### **Human Bites: Review of Literature and Case Report**

#### **Alfonso E. Pino MD**

#### **Objective**

To review the diagnosis and treatment of this unusual type of injury. If diagnosis is not done early serious complications can follow. A review of medical literature available is reported

#### **Methods**

In this review of the human bites de mechanism of injury, early diagnosis and treatment at the first doctor encounter is emphasized. If an experienced ER doctor evaluate the patient, do the correct diagnosis, performed a satisfactory debridement and labage, followed by appropriate prophylactic antibiotic therapy, and referral if needed, the out come of this injury will have a better chance of good recovery . The diagnosis is difficult and must patients come late for medical care. If the patient is infected no good result can not be obtained. Very seldom a complete recovery is seen.

#### **Results**

Human Bites are linked with a wide variety complications due to the septic tenosynovitis, compartment syndrome, adhesions and fibrosis, LOM, ankylosis, flexion contractions, lost of grip and pinch in the hand, deforming scars in tissue enveloped. The results in our patients were mixed. Results in other series shows better out come, in general associated with younger patients and type of injury

#### **Conclusion**

Optimal management of Human Bites involves a multimodality approach directed at a correct diagnosis which is difficult specially in initial visit. Surgery, debridement and antibiotics are the best mode of treatment today. Results in the infected patient are consistently poor,

## Outpatient Based Minimally Invasive Lumbar Endoscopic Spine Surgery: A Two-Year Follow-Up

**John A. Polikandriotis, PhD, MBA**, Laser Spine Institute, Tampa, FL, USA

### Purpose

The safety and efficacy of outpatient minimally invasive procedures is becoming well documented. However, few large studies evaluating these types of outpatient procedures have been presented. The purpose of this study is to assess the complications and functional outcomes of outpatient minimally invasive spine surgery.

### Methods

A total of 3,958 consecutive outpatient endoscopic decompression procedures were performed from January 2008 through December 2008 at one facility. 80.6% of the procedures performed were endoscopic laminotomies/foraminotomies. The remaining 19.4% of the procedures included plasma disc decompressions, percutaneous laser decompression, thermal facet ablation and hardware removal. A retrospective chart review including a 12 week, 6 month, 12 month and 24 month patient follow-up was performed and perioperative complications, VAS, ODI, SF36, return to work and return to daily activities are reported. Of the 3,958 patients, a total of 1,483 patients completed the 3 month survey, 1,226 completed the 6 month survey, 675 completed the 12 month survey and 369 completed the 24 month survey.

### Results

Of the 3,958 procedures performed, there were 0 (0.00%) mortalities, 1 (0.00%) code blues, 5 (0.13%) perioperative infections, 2 medication error (0.00%), 12 hospital admissions (0.30%) and 67 dura leaks (1.69%) with 8 of the dura leaks requiring a return to surgery.

As seen below, there were significant VAS and ODI improvements seen at 6 weeks and maintained throughout a year. \* = p<0.05 vs. Preoperative.

	Preoperative	6 weeks	12 weeks	6 months	12 months
VAS	6.41	2.69*	3.14*	3.13*	3.01*
ODI	42.0	N/A**	24.7*	22.7*	21.6*

In addition, significant improvements were seen in the SF36 data. \* = p<0.05 vs. Preoperative.

	Preoperative	12 weeks	6 months	12 months	Normative Data
Physical Well Being	34.7	56.6*	55.9*	60.1*	82
Physical Limitations	15.8	44.6*	42.4*	50.0*	81
Pain	29.0	58.9*	57.0*	64.4*	75
Vitality	50.2	69.3*	74.1*	75.5*	61
Social well Being	59.9	78.9*	70.4*	73.1*	82
Emotional Limitation	53.4	64.9*	71.1*	75.7*	81
Mental Well Being	44.0	55.2*	55.9*	60.5*	75
General Health	70.1	68.4*	67.9*	70.1*	72
Health Compared to last year	37.1	70.4*	74.7*	78.49*	

\*\* = no ODI data was collected at 6 weeks.

Finally, return to work and return to daily activities data are presented below.

	2 weeks	6 weeks	12 weeks	6 months	12 months
Return to work	62%	77%	77%	87%	87%
Return to Daily Activities	79%	79%	80%	76%	82%

### Conclusions

Endoscopic laminotomy/foraminotomy decompression of the lumbar spine can be performed in an outpatient setting safely and successfully.

## **Annular Repair Can Prevent Recurrent Disc Herniation After Lumbar Microdiscectomy**

**Abid A. Qureshi MD**, Katherine Thickman PA, Muir Orthopedic Specialists, Walnut Creek CA

### **Purpose**

The purpose of this study was to examine the outcome of microdiscectomy in a single orthopaedic spine surgical practice.

### **Methods**

A retrospective independent chart review was conducted of consecutive lumbar microdiscectomy patients over a three year period (2008- 2010). Average follow-up from surgery, was 19 months (range 1.5 to 34 months). Outcome was qualified as excellent (no pain or symptoms), good (minimal pain), fair (moderate pain) or poor (severe pain, with or without reoperation).

### **Results**

Microdiscectomy was performed on eighty-eight lumbar levels in eighty-six patients. Average patient age was 47 years and 63% were males; 27% were workers compensation cases and 9% admitted to smoking. There was no annular defect in 9.1% of levels. In 80.7% of levels the annular defect was repaired, using manual suturing (n=7) or commercially-available products such as Xclose Tissue Repair System (n=64). 10.2% of levels with a defect were either deemed non-repairable or annular repair was unsuccessfully attempted. Good to excellent results were achieved in 77% of patients. Twenty-three percent of patients had fair to poor outcome with two (3%) requiring a second surgery (7.5 and 14 months after primary discectomy) for spondylolisthesis and persistent radiculopathy. Both of these patients had annular repair and were female and collecting workers compensation.

### **Conclusions**

Outcome after microdiscectomy with annular repair appears to be excellent with minimal negative affects. Annular repair can reduce reoperations below that which has been reported in the literature.

## **Challenging Cases In Private Orthopaedic Practice**

**Sudhir B Rao, MD**, Big Rapids Orthopaedics PC and Premier Hand Center, Big Rapids, Michigan

### **Purpose**

In a small town orthopaedic practice one is often confronted with complex cases. Depending on one's training, capabilities and confidence the surgeon may choose to "ship" the case or take up the challenge.

### **Method**

Five cases are described. These represent a wide spectrum of orthopaedic surgery

### **Results**

Case 1: 16 year old male with Arthrogyrosis, with fixed hip and knee contractures

Case 2: 45 year old male in roll over car accident with crush injury to hand

Case 3: 65 year old female with glenoid fracture and recurrent shoulder dislocation

Case 4: 50 year old male with extensive degloving injury to leg following ATV accident

Case 5: 80 year old female with comminuted fracture of proximal humerus

### **Conclusion**

Challenging cases present to us quite often. These can be demanding requiring considerable time and effort. The guiding principle should always be to do the best one can for the patient.

## **Pain Management in Injured Coal Miners**

**Diane Shafer, MD**

### **Purpose**

Evaluate the efficacy and challenges of a variety of methods and modalities that treat coal miners injured in accidents.

### **Methods**

Evaluate inpatient and outpatient records of coal miners injured in mining accidents from 1980-2010. Records include diagnostic workups, operative reports, therapeutic records, psychologic evaluations, pharmacy records, inpatient and out patient care.

### **Results**

Over 10,000 coal miners sought care for injuries sustained in surface and deep mines from 1980-2010. Over half, 5,937, required care for a period of time more than 30 days. Many developed chronic pain despite conservative and surgical treatment, medication, nerve blocks, and therapy.

### **Conclusion**

Coal miners develop chronic pain as a result of injuries in surface and deep mines. They suffer from poverty, comorbid conditions, and limited social support. They receive healthcare from state and federal agencies which limit care, medications, and therapy. The care and treatment of coal miners crushed in the coal mines pose financial, medical, legal, and medical challenges.

## **The Treatment of the Rheumatoid Hand (Early Stages)**

**Spiros Stamelos, MD**, Boston University School of Medicine Boston, MA

### **Purpose**

Early preventive surgery may avoid serious deformities in the hand.

### **Methods**

For the early ulnar drift, when the joint is well preserved, a dorsal synovectomy is performed with plication of the radial collateral ligament on the radial side and tendon transfer, namely, the extensor digiti quinti minimi is transferred to the radial aspect of the extensor hood. The extensor hood is rerouted over the summit of the MP joint. For the moderate and severe ulnar drift, when there is subluxation or dislocation of the MP joints, and there is already alteration of articular cartilage, a synovectomy is again done through a dorsal approach. A dorsal synovectomy is performed of all metacarpal phalangeal joints. Then resection of the metacarpal head is followed, the ulnar intrinsics are resected, the radial collateral ligament is preserved. Then silicone prostheses are inserted through drill holes on each metacarpal head. These prostheses are then inserted into the base of the proximal phalanges. The radial collateral ligament is then repaired and transferred proximally to the distal part of the metacarpal. For this procedure, again the extensor indicis proprius and extensor digiti quinti minimi are transferred on the radial side of the extensor apparatus. Eventually the extensor hood is centralized over the dorsum of the MP joint by plicating the extensor hood on the radial side.

Results: Excellent 56%; Good 25%; Fair 19%/

### **Conclusions**

Serious deformities can be prevented by early surgery.

## **Cerebral Perfusion Pressure and Intracranial Pressure Management**

**Qurico U. Torres MD, Ph.D.** Dept. of Neurosurgery, Hendrick Medical Center

Treatment of Traumatic brain injury patients are directed to management of Cerebral Perfusion Pressure(CPP=MAP-ICP) and with more emphasis more so than Intracranial Pressure management.

Maintenance of CPP OF 60-70 mmHg and ICP management of less than 20 mmHg is associated with better outcome.

Identification of specific abnormal ICP wave pattern will help in further control of impending brain decompensation.

Emergency room and Critical care management team approach in managing brain trauma patients plays a big role.

Brain Trauma Foundation Guidelines was also discussed to update the participants.

Use of critical care medications and dosages will be shared to the participants.

## **Somatotopic Localization of Pain in Awake Patients Undergoing Lumbar Surgery**

**Robert P. Uteg M.D., FAANS**

Alfred O. Bonati, M.D., The Bonati Spine Institute, Hudson, Fl.

### **Purpose**

The authors conducted a study to determine the importance for somatotopic localization of pain in awake patients during lumbar surgery.

### **Method**

The study group included 250 patients with lumbar radiculopathy. This included diagnoses of degenerative disc disease, facet disease and disc herniations; previously operated patients who had undergone laminotomy, discectomy, partial facetectomy, foraminotomy and fusion procedures with radicular symptoms were included. Minimally invasive laparoscopic surgery utilizing awake IV sedation and local anesthetics were performed. The site of nerve compression was observed intraoperatively and surgical decompression was carried out. Patients were able to confirm pain resolution during the procedure.

### **Results**

Pain site etiologies could be broken down along nerve roots in 4 levels: Intrathecal, nerve root shoulder (but proximal to the pedicle), nerve looping around the pedicle; nerve distal to the pedicle. Low midline back pain was attributable to disc disease. Back pain which started near the midline which radiated laterally or inferiorly was attributed to facet disease innervated by dorsal rami rootlets.

### **Conclusions**

Awake and cooperative surgical patients will lead the surgeon to the areas responsible for pain generation. By directing intraoperative decompression and nerve ablation measure to these reported sites, a high level of pain relief can be achieved and unnecessary procedures avoided.

# Social Activities

## Alliance Board of Directors & Membership Meeting

**Wednesday, June 8**      **9:00-10:30am**      **Director's Suite**

Please join us to discuss Alliance plans for the Annual Meeting and beyond. Topics will include future leaders, recruitment, fundraising, the 2011 Stipend Review, and current & future social activities for the Alliance. If you have ever wondered what the Alliance is or does, then this meeting shouldn't be missed.

### Welcome Reception

**Wednesday, June 8**      **6:00-7:00pm**      **Alexander's 23rd Floor**

Our first evening in Portland begins with a cocktail reception. Join us in the scenic 23rd floor restaurant to reconnect with old friends and meet members you may not have encountered before. You'll still have time to head out on the town to sample offerings at one of the many excellent restaurants located within walking distance of the hotel.

### Alliance Silent Auction

**Thursday-Saturday**      **Plaza Foyer**

The Alliance Silent Auction returns this year. Items will be on display near the registration desk. Bids may be placed throughout the meeting. Final bids will be placed at the New Fellows Reception on Friday evening and winners will be announced before the Gala Dinner. Be sure to attend the complimentary reception to get in a final bid, and pick up your winning items. Items not taken home with the winner, will be subject to shipping charges in addition to the final bid amount.

### Alliance Tea Party and Movie Discussion

**Thursday, June 9**      **2:30pm**      **Broadway I**

Join other Alliance members and meeting attendees for a casual afternoon tea, and movie viewing. All are welcome to attend, reconnect with old friends and get to know new members. A movie about the Rose Festival and the history of Portland will be viewed. There is no ticket fee, however you must pre-register.

## Eddie May's Murder Mystery Dinner

**Thursday, June 9**      **6:30-9:00pm**      **Offsite**

You'll just die laughing while dining and playing with a host of hilarious characters, all part of Eddie May Mysteries, North America's longest running murder mystery dinner theater troupe. Join us for a private dinner and show at Kell's Irish Bar & Restaurant in Downtown Portland. Tickets must have been ordered in advance, \$69 per person. **On-site tickets will not be available after 4:00 pm on Wednesday June 8** You must have a ticket to be admitted, tickets will contain location information and instructions on how to get to the venue.

### 2<sup>nd</sup> Annual AANOS "Fun"draising Event and Awards Dinner

**Friday, June 10**      **6:00-9:00pm**      **Alexander's 23rd Floor**

The 2<sup>nd</sup> Annual AANOS "Fun"draising Event and Awards Dinner will feature an elegant dinner, award presentations, entertainment and a special lecture by **Jeffrey Segal, MD, JD**, Neurosurgeon, Founder, CEO Medical Justice Service, Inc., Greensboro, NC. He will present **Frivolous Lawsuits, Angry Bloggers, Hostile Review Sites, and Other Joys of Medicine; How to Bullet-Proof Your Practice**. Dr. Segal is the founder and CEO of Medical Justice, which is a membership-based organization that offers proven services and proprietary methods to protect physicians' most valuable assets – their practice and reputation. All Proceeds Benefit the AANOS Scholarship and CME Funds. **Please visit the registration desk by 4:00 pm on Thursday June 9 to purchase tickets if you have not already done so.** \$100 per person. You must have a ticket to be admitted.

### Rose Parade Viewing Party

**Saturday, June 11**      **10:45am**      **Plaza Foyer**

The Grand Floral Parade is the crown jewel of the annual Rose Festival, anticipated annually by both locals and festival guests. In 2011 the parade will offer an extravaganza of the Rose Festival's theme, 'Carnival of Roses'. Participation is complimentary but is limited to the first 15 reservations. Gather at the Meeting Registration Desk to be shown to the viewing stands.

## Social Activities (continued)

### United States Section Convocation & Presidential Recognition Ceremony

**Saturday, June 11**      **6:30-7:30pm**      **Pavilion Ballroom East**

All attendees, families, friends and guests are invited to attend this hallmark event, the 73rd Annual Convocation of the US Section. Brimming with splendor and pageantry, this impressive ceremony includes the formal induction of New Fellows and this year's Honorary Fellow into the College. Join us in this celebration of the College, all of our Fellows, and their accomplishments. We do ask guests to proceed directly to the Ballroom and take their seats by 6:20pm so that the ceremony can start on-time.

### New Fellows Reception

**Saturday, June 11**      **7:30-8:30pm**      **Plaza Foyer**

Immediately following the Convocation and Presidential Recognition Ceremony, this reception will afford you the opportunity to meet your National Section and International Officers, provide you with the opportunity to meet your newest colleagues from coast to coast, and of course, honor our incoming President and Honorary Fellow. The Alliance Silent Auction will conclude at this event, be sure to attend to pick up your winning bids. All attendees are encouraged to attend.

### Gala Dinner

**Saturday, June 11**      **8:30-11:00pm**      **Pavilion Ballroom East**

We end our meeting and our week together as we started it; in Fellowship, join us as we come together for one last event before we bid farewell until next year. We are pleased to present the 'sound of the Portland Rose festival' with a private performance from the Choncords Chorale Group, who will perform the concert they have created in conjunction with the 2011 Rose Festival activities. Black Tie attire is optional. Tickets should have been ordered in advance. \$125 per person. On-site tickets will not be available after 4:00 pm on Thursday June 9.

## Portland's Rose Festival

For over one hundred years, the Portland Rose Festival has served families and individuals from Oregon and beyond with events and programs that spotlight the riches of the Pacific Northwest heritage and environment while offering colorful examples of many international cultures. Attended by more than two million people, the festival is annually one of the top three most highly decorated events by the International Festivals & Events Association (IFEA) and in 2007 was named Best Festival in the World. Among the festival's most popular events are the Grand Floral Parade, one of the nation's top two all-floral parades, and the WaMu Waterfront Village, which features the Best Children's Programming in the World, according to the IFEA.

### Selected Rose Festival Activities June 8-12, 2011

**June 8, 1:00 p.m.**

#### *Fred Meyer Junior Parade*

Join Fred Meyer and thousands of kids at the parade!

#### **Location:**

NE Sandy and 52nd

**June 8 - 12**

#### *Fleet Week*

Ship tours will be available daily. Location: Tom McCall Waterfront Park's esplanade seawall from the Steel Bridge to Waterfront Village.

**June 9, 1:00 p.m. - 9:00 p.m.**

**June 10, 10:00 a.m. - 5:00 p.m.**

#### *123rd Annual Spring Rose Show*

Each year the Lloyd Center Ice Rink is transformed into a delightful rose garden for the Annual Spring Rose Show, the largest and longest-running rose show in the nation.

#### **Location:**

Lloyd Center Ice Rink  
**Admission:\$3 — At the door**

**June 11, 8:30 a.m.**

#### *Queen's Coronation*

Enjoy two of Portland's favorite traditions for one great price. Directly following the ceremony, watch for the court and the newly crowned Queen, as they ride in the Spirit Mountain Casino Grand Floral Parade!

#### **Location:**

Veterans Memorial Coliseum.  
**Admission: \$30 call for tickets**  
(877.789.7673)

**June 11 & June 12,  
8:00 am-4:00 pm**

#### *Dragon Boat Races*

80 teams compete (including local, national, and international teams) with heats of four teams competing every nine minutes. These races are held on the Willamette River (near the Hawthorne Bridge), in boats graciously provided through the Portland-Kaohsiung Sister City Association.

#### **Location:**

South end of Tom McCall Waterfront Park

# General Meeting Information

The official language of this conference is English, and all sessions and events shall be conducted in English.

Meeting-related fees must be paid in US funds. Company or cashier checks as well as Visa, Master Card, and American Express are acceptable forms of payment.

Unless noted, all prices within this brochure are in US dollars.

## Cancellation Policy

The cancellation deadline was May 27, 2011. Refunds will be issued, minus a \$50 processing fee, upon receipt of written notification via fax or e-mail or mail. Verbal or written cancellations after May 27, will not be honored. Please allow four to six weeks after the meeting for your refund.

Continuing Medical Education (CME) Information  
CME Program Evaluation Forms will be distributed prior to the commencement of each day's educational session.

To receive CME Credit, you must complete a Program Evaluation Form for each day of educational sessions you attend.

Program Evaluation Forms must be completed and returned to the Meeting Registration Desk prior to the conclusion of the conference. You may also mail your forms to:

AANOS Headquarters  
Department of CME  
1516 North Lake Shore Drive  
Chicago, IL 60610-1694

The deadline for submission of all CME Program Evaluation forms is Monday, July 11, 2011.

## Meeting Registration

Everyone attending or participating in educational sessions, including faculty, is expected to register for the meeting.

Pre-registered attendees may retrieve their conference materials from the AANOS/ICS-US Meeting Registration Desk located in the Plaza Foyer, 2nd Floor of the Portland Hilton. The Meeting Desk will be staffed throughout the meeting as follows.

Wednesday, June 8	8:00-4:00 pm
Thursday, June 9	7:00 am-2:00 pm
Friday, June 10	7:00 am-2:00 pm
Saturday, June 11	7:00 am-2:00 pm

## Special Needs and Questions

If you have any special needs that must be addressed to ensure your comfort and/or if you require information not listed in this brochure, please see the ICS-US Staff at the Registration desk during the hours listed above. Every effort will be made to facilitate your request.

## Speaker Prep Area

A laptop computer has been set-up near the registration area. Speakers who did not submit their presentations in advance of the meeting should load their powerpoint files the day before their presentation. Speakers may also use this laptop to preview/review their slides.

## Spouse/Guest Supplement

Anyone attending the meeting who is not a registered attendee, should be registered as a spouse/guest. The \$150 fee covers the costs such as lunches, breakfasts and coffee breaks etc.

## Tickets/Workshop Registration

Tickets for social events and workshop registration MAY be available onsite on a VERY limited basis. However, staff is not responsible for events that are sold-out/unavailable or cancelled. Check with the Meeting Registration desk as soon as possible.

## Attire

Business casual attire is recommended in educational sessions. Casual attire is appropriate for most social events. Evening attire is required for the Gala Banquet, during which women usually wear cocktail dresses and men business suits or tuxedos.

## ICS-US Convocation

Convocation guests should be seated in Pavilion Ballroom East by 6:20pm to allow the ceremony to begin on time.

## Weather

While Portland experiences annual rainfall of 40 inches, June is the beginning of the summer dry season for the city. Afternoon temperatures typically reach into the 70's and low 80's in June. However, mornings and evenings can be cool, and rain is still possible in early June.

## Parking

Hilton Valet Parking 503-226-1611 x2172:  
Hotel front door, on 6th Avenue between Salmon and Taylor Streets.

- \$8 per hour/\$20 daily max.
- \$8 evening max. after 5 pm to Midnight
- \$27 for overnight guests

Hilton Self-Park 503-226-1611 x2158:  
On Taylor Street between 6th and Broadway

- \$ 3 per half hour/\$22max. per 12 hours
- \$ 8.75 Early Bird Special (in by 9:30 am)
- \$8 evenings (6:00 pm to 1:00 am)
- \$20 for registered overnight guests

## Taxicabs

You cannot hail a cab on the street in Portland. To catch a cab downtown, go to a hotel with a dedicated taxi stand, or order a cab by phone from one of the city's main operators:

### Broadway Cab

800.248.TAXI (8294) or 503.227.1234 [www.broadwaycab.com](http://www.broadwaycab.com)

### Radio Cab Company

503.227.1212 [www.radiocab.net](http://www.radiocab.net)

### Green Cab & Green Shuttle

877.853.3577 or 503.234.1414 [www.greentrans.com](http://www.greentrans.com)

## Hyatt Regency Atlanta

### June 8-9, 2012

Our downtown location will find you just steps from some of Atlanta's most popular destinations...



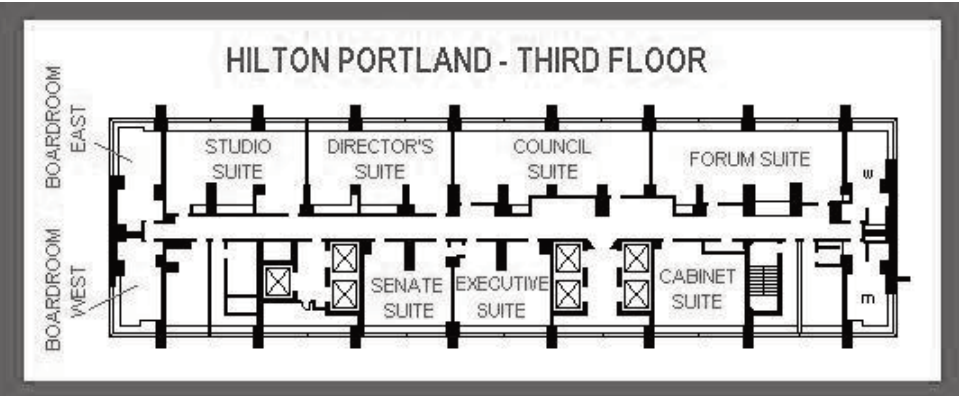
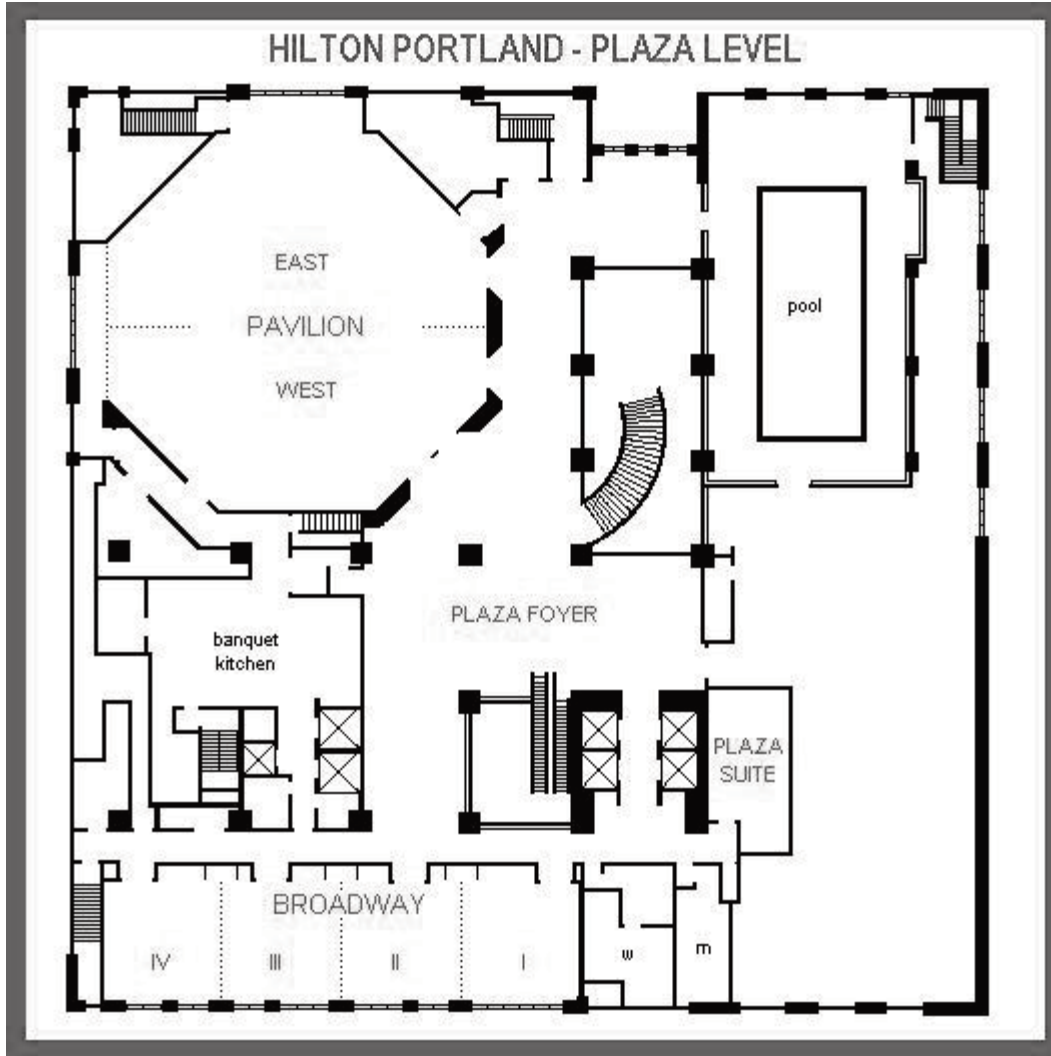
Mark your calendar now to be sure you can join us next year in Atlanta!

# Presenter Index

<u><b>A</b></u>	<u><b>H</b></u>
Ammirati, Mario . . . . .8, 9	Halldorsson, Ari O. . . . .11, 12
	Hassan, Zaki-Udin . . . . .12
<u><b>B</b></u>	Hatton, Kevin W. . . . .12
Bachicha, Joseph A. . . . .12	
Bolles, Gene . . . . .8	<u><b>I</b></u>
Brooks, Steven . . . . .12	Ilijas, John . . . . .11
	<u><b>J</b></u>
<u><b>C</b></u>	Jain, Surbhi . . . . .9
Chau, Destiny F. . . . .12	Johnston, Thomas D. . . . .12
Chang, Michael Y. . . . .10	
Chen, Jefferson William . . .10	<u><b>K</b></u>
Christoforidis, Gregory . . . .9	Kapasi, Onaly . . . . .10
Clark, W. Craig . . . . .10	Kapoutsis, Dimitrios . . . . .10
Coles, Maxime J.M. . . . .10, 11	
Comadoll, James L. . . . .10	<u><b>L</b></u>
	Labor, Phillips Kirk . . . . .12
<u><b>D</b></u>	
Dardano, Jr., Anthony N. . . . .11	<u><b>M</b></u>
Dissanaike, Sharmila . . .11, 12	Mathews, William E. . . . .8
Donner, E. Jeffrey . . . . .8	Mittal, Vijay . . . . .11
	Moneim, Moheb S. . . . .10
<u><b>E</b></u>	Monsivais, Jose J. . . . .10
Epstein, Clara Raquel . . .9, 11	Morsi, Amr . . . . .8
<u><b>F</b></u>	<u><b>N</b></u>
Fitzwater, John . . . . .12	Narenthiran, Ganesalingam .9
	Nathan, Nadia S. . . . .9
<u><b>G</b></u>	
Gershanik, Richard . . . . .10	<u><b>O</b></u>
	Oladipo, Olarewaju . . . . .10

<u><b>P</b></u>	<u><b>Z</b></u>
Pelosi III, Marco A. . . . .12	Zamorano, Lucia . . . . .9
Pino, Alfonso E. . . . .8	
Polikandriotis, John A. . . . .10	
	<u><b>Q</b></u>
<u><b>Q</b></u>	Qureshi, Abid A. . . . .10
Qureshi, Abid A. . . . .10	
	<u><b>R</b></u>
<u><b>R</b></u>	Ramírez, Jaime Diegopérez 10
Ramírez, Jaime Diegopérez 10	Ranjan, Dinesh . . . . .11, 12
Ranjan, Dinesh . . . . .11, 12	Rao, Sudhir B. . . . .10
Rao, Sudhir B. . . . .10	Robinson, Stephen L. . . . .9
Robinson, Stephen L. . . . .9	
	<u><b>S</b></u>
<u><b>S</b></u>	Santana, Dixon . . . . .11
Santana, Dixon . . . . .11	Sasaki, Larry S. . . . .12
Sasaki, Larry S. . . . .12	Shafer, Diane . . . . .9
Shafer, Diane . . . . .9	Stamelos, Spiros . . . . .10
Stamelos, Spiros . . . . .10	
	<u><b>T</b></u>
<u><b>T</b></u>	Thambi-Pillai, Thavam C. . . .11
Thambi-Pillai, Thavam C. . . .11	Tiekman-Khoo, Larry . . . . .8
Tiekman-Khoo, Larry . . . . .8	Torres, Quirico U. . . . .10
Torres, Quirico U. . . . .10	Trunkey, Donald D. . . . .11
Trunkey, Donald D. . . . .11	
	<u><b>U</b></u>
<u><b>U</b></u>	Uteg, Robert P. . . . .10
Uteg, Robert P. . . . .10	
	<u><b>W</b></u>
<u><b>W</b></u>	Wassner, John . . . . .12
Wassner, John . . . . .12	Welch, William C. . . . .8
Welch, William C. . . . .8	

# Portland Hilton and Executive Tower Floor Plans



## Alexander's Restaurant

Can be found on the 23rd floor, look for directional signs upon exiting the elevator.

# 73rd Annual Surgical Update

# Schedule at a Glance

# 35th Annual Scientific Meeting

<b>Wednesday June 8</b>  <b>Meeting Registration</b> 7:00am - 4:00pm <b>Plaza Foyer</b>	7:00-8:00am <i>Officer Breakfast</i> Broadway IV	8:00am-12:30pm <i>US Section Standing Committee Meetings</i> Broadway II&III	9:00am-10:30am <i>Alliance Board of Directors &amp; General Membership Meeting</i> Director's Suite	12:30-1:30pm <i>Officer Luncheon</i> Alexander's Restaurant	1:30-3:00pm <i>Board of Regents Meeting</i> Broadway II&III	3:00-5:00pm <i>House of Delegates Meetings</i> Broadway II&III	5:00-6:00pm <i>Welcome Reception (All are welcome)</i> Alexander's 23rd Floor	6:00-8:00pm <i>Executive Committee Meeting</i> Broadway I		
<b>Thursday June 9</b>  <b>Meeting Registration</b> 7:00am - 4:00pm <b>Plaza Foyer</b>	7:00-7:45am <i>Continental Breakfast</i> Pavilion Ballroom East	8:00-8:30am <i>Opening Ceremony</i> Pavilion Ballroom West	8:30am-5:00pm <i>Trauma &amp; Critical Care: Dealing with Dilemmas</i> Pavilion Ballroom West	Noon - 1:00 pm <i>Luncheon</i> Pavilion Ballroom East	2:30 - 5:00 pm <i>Alliance Tea Party &amp; Movie Discussion</i> Broadway I	6:30-9:00 pm <i>Eddie May's Murder Mystery Dinner</i> Off-site - refer to tickets for location				
<b>Friday June 10</b>  <b>Meeting Registration</b> 7:00am - 4:00pm <b>Plaza Foyer</b>	7:00-7:45am <i>Continental Breakfast</i> Pavilion Ballroom East	8:00am-Noon <i>Research Scholarship Presentations</i> Pavilion Ballroom West	8:00-11:30am <i>Workshop: HALS and Lap-Assisted Approaches to Left Colectomy and LAR with Cadaveric Lab Part I: Lecture Series</i> Broadway IV	9:00am-3:00pm <i>AANOS Orthopaedic &amp; Neurological Surgery Presentations</i> Broadway I&II	Noon-1:15pm <i>Luncheon Special Presentation by Dr. Arno A. Roscher</i> Pavilion Ballroom East	1:30-5:30 pm <i>Scientific Papers</i> Pavilion Ballroom West	1:30pm-4:30pm <i>Workshop: Ultrasound Guided Procedures</i> Broadway III&IV	3:00pm-5:00pm <i>AANOS Business Meeting</i> Director's Suite	6:00-9:00pm <i>2nd Annual AANOS "Fun"draising Event and Awards Dinner</i> Alexander's 23rd Floor	
<b>Saturday June 11</b>  <b>Meeting Registration</b> 7:00am-4:00pm <b>Plaza Foyer</b>	7:00-7:45am <i>Continental Breakfast</i> Pavilion	8:00am-Noon <i>Trauma &amp; Critical Care II: What's New</i> Pavilion Ballroom West	7:30am-Noon <i>Workshop: HALS and Lap-Assisted Approaches to Left Colectomy and LAR with Cadaveric Lab Part II: Hands-On Workshop</i> Gather in Plaza Foyer	9:00am-5:00pm <i>AANOS Orthopaedic &amp; Neurological Surgery Presentations</i> Broadway I&II	10:00-3:30pm <i>Workshop: Component Separation For Complex Abdominal Wound Closure: Didactic and Cadaveric Lab Series</i> Broadway IV	10:45 AM <i>Rose Parade Viewing Party</i> Gather in Plaza Foyer	Noon-1:00pm <i>Luncheon</i> Pavilion Ballroom East	1:00pm-3:30pm <i>Surgical and Medical Ethics in Trauma and Critical Care</i> Pavilion Ballroom West	3:45pm-5:15pm <i>Surgical Outreach: International Missions and Austere Environments: Report from the Fellows</i> Pavilion Ballroom East	6:30-7:30pm <i>Convocation &amp; Presidential Recognition Ceremony</i> Pavilion Ballroom East  7:30-8:30pm <i>New Fellows Reception</i> Plaza Foyer  8:30-11:00pm <i>Gala Banquet</i> Pavilion Ballroom West