The Future of Surgery: A Paradigm Shift
38th Annual Scientific Meeting
# Table of Contents

**Letters of Welcome**  
Governor of Tennessee ................................................................. .4  
Mayor of Memphis ................................................................. .5  
Chairman of the Board ................................................................. .6

**Leadership**  
AANOS Planning Committee ........................................................... .7

**Continuing Medical Education**  
Course Sponsor ................................................................................. .7  
Overall Course Objectives ................................................................. .7  
Disclosure Policy ................................................................................. .7  
Accreditation ...................................................................................... .7  
Credit Designation .............................................................................. .7

**Neurosurgical and Orthopaedic Scientific Sessions**  
Featured Presentations ........................................................................... .8  
Neurosurgical and Orthopaedic Presentations Part I ....................................... .9  
Neurosurgical and Orthopaedic Presentations Part II .................................. .10

**ICS-US Scientific Program**  
Opening Ceremony and Special Lecture ..................................................... .11  
Trauma Surgery in the 21st Century ......................................................... .11  
Acute Care Surgery ............................................................................ .11  
Featured Lecture ................................................................................ .12  
Annual Ethics Forum .......................................................................... .12  
Annual Research Scholarship Competition ........................................... .12  
Pediatric Surgery ................................................................................ .13  
Dr. Arno A. Roscher Endowed Lecture .................................................. .13  
Use of Ultrasound in Surgery Lectures .................................................. .13  
Alternatives in Minimally Invasive Colorectal Surgery Lecture Series ............... .14  
Considerations in Surgical Oncology .................................................... .14  
Challenges in Vascular Surgery ............................................................. .15  
The Dr. Andre Crotti Award Recipient’s Lecture ....................................... .15  
Multidisciplinary Platform Presentations ................................................. .16

**Hands-On Workshops**  
Use of Ultrasound in Surgery ............................................................... .14  
Alternatives in Minimally Invasive Colorectal Surgery ................................ .14  
Abdominal Wall Reconstruction: Management of the Open Abdomen and Complex Hernias ................................................................. .16

Social Activities .................................................................................. .17  
Acknowledgements .............................................................................. .18  
Scientific Abstracts ............................................................................... .19  
General Meeting Information .................................................................. .24  
Moderator and Presenter Index ............................................................... .25  
Memphis Hilton, Floor Plans ................................................................... .Inside Back Cover  
Schedule at a Glance ............................................................................ .Back Cover
Dear Friends,

On Behalf of the great State of Tennessee, I am pleased to extend a warm welcome to the attendees of the 38th Annual Scientific Meeting. We certainly are glad you’re here and extremely proud to have this event in our state.

During your stay, I hope you will have time to make new acquaintances and explore Memphis and all the Volunteer State has to offer. Wherever you travel in Tennessee, you will find friendly people known for authentic southern hospitality, eager to invite you back for another visit.

Again, welcome to Tennessee. Crissy and I send our very best wishes and hope your future endeavors are filled with joy and success.

Warmest regards,

Bill Haslam
June 11, 2014

American Academy of Neurological and Orthopaedic Surgeons
The Future of Surgery: A Paradigm Shift
38th Annual Scientific Meeting
June 13-14, 2014

Dear Members,

As Mayor of the city of Memphis, Tennessee, it is indeed an honor and my pleasure to welcome each of you to our great city for your 38th Annual Scientific Meeting. We are grateful that you have chosen Memphis as the host city for this event, and I hope that you will enjoy your visit.

The unique and lively city of Memphis embraces our southern hospitality within its diverse culture and remarkable heritage. As I am sure you know we are home to the world-renowned St. Jude Children's Hospital, where we witness lifesaving medical innovations daily. In addition there is much to explore including the many fine restaurants and tourist attractions such as the famed Beale Street, Graceland - the home of Elvis Presley, the historic landmark where freedom still rings - our National Civil Rights Museum, and the Stax Museum of American Soul Music to name but a few.

On behalf of the citizens of Memphis, I extend best wishes to you for a successful event.

Best Regards,

A C Wharton, Jr.,
Mayor
Dear Colleagues,

It is my pleasure to welcome you to the 38th Annual Scientific Meeting of the American Academy of Neurological and Orthopaedic Surgeons being held here at the Hilton Hotel in Memphis on June 12, 13 and 14th. Join your peers from around the world in this historic location and take advantage of this opportunity to acquire over 20 hours of ACCME accredited category one CME credits. We have combined our meeting with the International College of Surgeons. Working closely with ICS, we have designed a program specifically for Neurosurgery and Orthopaedic Surgery specialists that will be presented on Friday and Saturday. There are also several relevant presentations during the morning sessions on Thursday, June 12th, as well as an Ethics session in the afternoon. I encourage you to attend.

This year’s program includes presentations on cutting-edge Neurosurgical and Orthopaedic Surgery topics by specially invited guest speakers and Academy members as well. The unique presentations given by internationally renowned speakers, such as the Keynote addresses of Dr. Shay Bess and Dr. Michel Kliot, will certainly enhance your practice by increasing your surgical knowledge.

We will also host The 5th Annual Fund Raiser and Awards Dinner on Friday evening featuring an elegant dinner, entertainment and awards ceremony. Special guest entertainer Steve Barcellona will amaze and confuse you while hopefully giving you fond memories of the camaraderie of the evening. Don’t miss this event, which will benefit the AANOS Scholarship Fund.

On behalf of the members of the Scientific Organizing Committee and the Board of Directors I welcome you to Memphis and our conference.

Sincerely,

William E. Mathews, MD, FICS
Chair, American Academy of Neurological and Orthopaedic Surgeons
The AANOS Planning Committee

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Course Sponsor
International College of Surgeons – United States Section
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Oversight of Course Objectives
The Annual Scientific Meeting is designed to offer information regarding the latest surgical advancements and technology to address gaps in knowledge that may exist for practicing surgeons in all surgical specialties, residents in training, and allied health professionals. The desired outcome of this program is increased knowledge, better competency in cutting edge treatment modalities, and enhanced treatment decision making. It is the expressed goal of the course to provide enough material that upon completion of the activity the participant can make educated decisions to incorporate the latest surgical techniques and technologies as well as discern when these procedures are warranted to provide optimum patient care.

Topics presented during the Annual Scientific Meeting have been designed to address and improve the attendee’s knowledge and skills in the following competencies, patient care or patient-centered care, medical knowledge, practice-based learning & improvement, quality improvement and professionalism.

Disclosure Policy
It is the policy of both the American Academy of Neurological and Orthopaedic Surgeons and the ICS-US that any individual who is involved in planning or presenting in a program designated for AMA Physician’s Recognition Award Category 1 Credit™ must disclose all relevant financial relationships with a commercial interest prior to being included in the final program. This information is disclosed to the audience prior to the activity. The ICS-US has procedures in place to address a conflict of interest should one arise. Our complete Policy on Commercial Support and Independence is available on FICS Online or by request from Headquarters. Additionally, faculty members are asked to disclose when any discussion of unapproved use of a pharmaceutical or medical device occurs.

Accreditation
The International College of Surgeons-United States Section is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor Continuing Medical Education for physicians.

Credit Designation
The International College of Surgeons-United States Section designates this live activity for a maximum of 22 AMA PRA Category 1 Credits. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Peripheral Nerve Pathology That Can Mimic Spinal Radiculopathy
Michel Kliot MD, Clinical Professor of Neurosurgery UCSF Medical Center, San Francisco, CA

After completing graduate work in Neurobiology at Stanford University, Dr. Kliot obtained his MD from Yale Medical School. His General Surgery Internship was followed by a Neurosurgical Residency at the Neurological Institute in New York City. Subsequently he did a traveling peripheral nerve fellowship, spending time with Dr. Alan Hudson at the University of Toronto and Dr. David Kline at LSU Medical School in New Orleans. He joined the Department of Neurological Surgery at the University of Washington in 1991 where he served as an Associate Professor.

Dr. Kliot specializes in the diagnosis and treatment of peripheral nerve problems which include entrapment neuropathies such as carpal tunnel syndrome, traumatic nerve injuries such as those involving the brachial plexus, and masses involving peripheral nerves such as tumors. He and his colleagues have helped to develop improved methods of diagnosing and treating peripheral nerve problems using high resolution MRI techniques. He is involved in translational research that encompasses assessing clinical outcome and developing new methods of evaluating and treating patients with peripheral nerve problems; developing and applying non-invasive methods to assess intracranial pressure and tissue pathology generating pain; developing new ways of acutely repairing damaged axons using nanotechnology devices; and determining why some tumors grow and others do not.

Complications Associated with use of BMP in Adult Spinal Deformity
Shay Bess, MD, Orthopaedic Surgeon, Rocky Mountain Scoliosis & Spine, Denver, CO

Dr. Bess received his undergraduate degree from Columbia University, and medical doctorate from The Johns Hopkins University School of Medicine. He completed an orthopaedic surgery residency at Case Western Reserve University and completed a fellowship in pediatric and adult spinal surgery at the Washington University in St. Louis. Dr Bess is a member of the Scoliosis Research Society and North American Spine Society, actively participates in pediatric and adult scoliosis research with the International Spine Study Group and the Growing Spine Study Group and is a surgeon for the Foundation of Orthopaedics and Complex Spine which a charity organization that travels to Ghana, Africa to provide scoliosis and spine surgery for children in need. Dr. Bess’ treatment interests include pediatric and adult scoliosis, pediatric and adult spinal deformity, early onset scoliosis, kyphosis, revision spine surgery, cervical spine, and spine tumors.

Post Traumatic Epilepsy
Leo Chen, MD, Neurologist, The Permanente Medical Group, Sacramento, CA

Update on Endovascular Management of Stroke
Gustavo Luzardo, MD, Associate Professor of Neurosurgery, Chief of Endovascular Surgery, University of Mississippi Medical Center, Jackson, MS

Experience with Mazor Robot in Lumbar and Thoracic Spine Fusion
James R. Feild, MD, MS, FICS, Private Practice Neurosurgery, Memphis TN
Friday June 13, 2014

38TH ANNUAL SCIENTIFIC MEETING

The American Academy of Neurological and Orthopaedic Surgeons is a scientific and educational association of orthopedists and neurosurgeons that was founded in 1976 in order to improve the quality of care provided to patients in these two major subspecialty fields.

NEUROLOGICAL & ORTHOPAEDIC SURGERY PART I

8:30 - Noon  TN Grand Ballroom C

Developed by the AANOS Scientific Organizing Committee in collaboration with the ICS-US Section CME Committee, internationally renowned guest speakers will give presentations in their areas of expertise focusing on state-of-the-art neurosurgery, orthopaedic surgery, spinal surgery and neurology. Abstract submissions relevant to this year’s theme, The Future of Surgery: A Paradigm Shift, will also be presented by Academy members and non-members alike.

Participants in this lecture series will increase their knowledge as it pertains to the topics presented and improve their ability to diagnose and treat patients that may be suffering from diseases such as: Adult Spinal Deformity, Peripheral Nerve Problems, Stroke and Post Traumatic Epilepsy. In addition, treatment options related to Lumbar and Thoracic Spine Fusion, Intracranial Pressure Management, Management of Brain Tumors, Lumbar Disc Disease, Proximal Humerus Fractures and more will be discussed with ample time for questions and interactive learning.

OPENING CEREMONY

Welcome and Introductions

Moderators: William Mathews, MD & Craig Clark, MD

Orthopaedic Surgery Keynote Speaker

Disability Associated with Adult Spinal Deformity
Shay Bess, MD, Orthopaedic Surgeon, Rocky Mountain Scoliosis & Spine, Denver, CO

Neurosurgical Keynote Speaker

Evaluation and Treatment of Peripheral Nerve Problems: Evolving Diagnostic Methods and Treatments
Michel Kliot MD, Clinical Professor of Neurosurgery UCSF Medical Center, San Francisco, CA

Experience with Mazor Robot in Lumbar and Thoracic Spine Fusion
James R. Feild, MD, MS, FICS, Private Practice Neurosurgery, Memphis TN

Update on Endovascular Management of Stroke
Gustavo Luzardo, MD, Associate Professor of Neurosurgery, Chief of Endovascular Surgery University of Mississippi Medical Center, Jackson, MS

Post Traumatic Epilepsy
Leo Chen, MD, Neurologist, The Permanente Medical Group, Kaiser Foundation Hospital, Assistant Clinical Professor, Volunteer Series, UC Davis Department of Neurology, Sacramento, CA

LUNCH PRESENTATION

Noon - 1:30 PM  TN Grand Ballroom B

Moderator: Demetrius E.M. Litwin, MD

Leadership and Legacy
Wickii T. Vigneswaran, MD, FICS, Professor of Surgery, Associate Chief of Cardiac and Thoracic Surgery, Director of Lung and Heart Lung Transplantation, University of Chicago Medical Center, Chicago, IL
Saturday June 14, 2014

**Neurological & Orthopaedic Surgery Part II**

9:00 - Noon

**Moderators:** Maxime Coles, MD & Jeffrey Epstein, MD

**Cerebral Perfusion Pressure and Intracranial Pressure Management**
Quirico U. Torres, MD, FICS, Neurosurgeon, Abilene, TX

**Damage Control Spine Surgery**
Gene E. Bolles, MD, FICS, Associate Professor of Neurosurgery, University of Colorado Medical Center and Denver Health Medical Center, Denver, CO

**Digital Protractor as a Supplement to Posterior Cervical Spine Instrumentation: A Cadaveric Study**
Chris Karas, MD, Assistant Professor, Ohio University, Attending Neurosurgeon, Ohio Health, Westerville, OH

**Peripheral Nerve Pathology That Can Mimic Spinal Radiculopathy**
Michel Kliot, MD, Clinical Professor of Neurosurgery UCSF Medical Center, San Francisco, CA

**Recombinant Human Bone Morphogenetic Protein-2 (rhBMP-2) Use in Adult Spinal Deformity (ASD) Does Not Increase Major, Infectious or Neurological Complications and May Decrease Return to Surgery at One Year: A Prospective, Multicenter Analysis**
Shay Bess, MD, Orthopaedic Surgeon, Rocky Mountain Scoliosis & Spine, Denver, CO

**Advanced Imaging in Management of Brain Tumors**
Lucia Zamorano, MD, FICS, Professor of Neurological Surgery William Beaumont Oakland University School of Medicine, Birmingham, MI

**Use of Epidural Steroids to Treat Lumbar Disc Disease**
Charles Keller, MD, Orthopaedic Surgeon, League City, TX

**Use of a Bone Filler to Augment Fixation of Proximal Humerus Fractures**
Gerald Q. Greenfield, Jr., MD, MS, FICS, Clinical Assistant Professor UTHSC-San Antonio, San Antonio, TX

**Perilunate Dislocation of the Carpus. Case Study and Literature Review of Carpal Instability**
Sudhir B. Rao, MD, Orthopaedic Surgeon, Big Rapids Orthopaedics PC and Premier Hand Center, Big Rapids, MI

**Fractures and Dislocation in the Pediatric Shoulder**
Maxime J.M. Coles, MD, FICS, Orthopaedic Surgeon, Sebasticook Valley Hospital, Pittsfield, ME

**Sacroiliitis**
W. Craig Clark, MD, PhD, FICS, Staff Neurosurgeon, Greenwood Leflore Neurosurgery Clinic, Greenwood, MS

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**Lunch Presentation**

**Noon - 1:30 PM**

**Moderator:** Demetrius E.M. Litwin, MD

**Asset Protection: Legal Risks and Rising Taxes How to Run a More Profitable Practice**
Victoria J. Powell, JD, JD, LL.M, Director, Doctors Financial Education Network; Managing Member, Lifetime Investment Management, LLC, Phoenix, AZ

**The First Reported Case of Spontaneous Upper Arm Compartment Syndrome in a Patient on Clopidogrel**
Daniel Sherif Zakaria Boctor, MA, MBBChir, MRCS, MRCGP, Orthopedic Resident, Lister Hospital, Ilford, Essex, UK

**Spinal Epidural Arteriovenous Malformations: Report of a Case and Discussion of Classification Schemes and Recommended Treatment**
Caitlin Clark, Third Year Medical Student, University of Texas-Houston, Houston, TX

**Surgical Treatment of the Aging Lumbar Spine**
Jeffrey Epstein, MD, FICS, St Catherine of Siena Medical Center Brookhaven Memorial Hospital Medical Center, Babylon, NY

**Navigation, Robotics and Endoscopy in MISS (Minimally Invasive Spine Surgery)**
Lucia Zamorano, MD, FICS, Professor of Neurological Surgery William Beaumont Oakland University School of Medicine, Birmingham, MI

**Marjolin Ulcer: Review of the Literature and Case Report**
Alfonso E. Pino, MD, FICS, Emeritus Orthopedic Comanche County Medical Center Vice Chair Orthopedic ICS USA Secretary American Fracture Association, Dublin, TX

**Chronic Joint Pain with the Intertarticular Injection of Hyalluronate Components**
Richard Gershanik, MD, Miami, FL
THURSDAY JUNE 12, 2014

OPENING CEREMONY AND KEYNOTE LECTURE
8:00 - 9:00 AM TN Grand Ballroom A

Moderator: Ari Halldorsson, MD

Welcome and Introductions
Ari Halldorsson, MD, ICS-US Section President

SPECIAL MESSAGE
William Mathews, MD, FICS, Chair, American Academy of Neurological and Orthopaedic Surgeons

KEYNOTE PRESENTATION: Current Trends in Management of Major Burn Patients
This presentation will identify treatment options for burn patients as well as burn related complications and issues. Participants in this session will gain practical knowledge about current burn therapies.

John Anthony Griswold, MD, Professor and Peter C. Canizaro Chairman Department of Surgery Texas Tech University Health Sciences Center Lubbock, Medical Director Timothy J. Hammar Regional Burn Center University Medical Center, Lubbock, TX

TRAUMA SURGERY IN THE 21ST CENTURY
9:00 - 10:30 AM TN Grand Ballroom A

Moderators: Uretz Oliphant, MD & Mark Perlmutter, MD

This session offers a comprehensive review of various aspects of trauma related surgical issues including: new technology, geriatric considerations, how to implement educational models in remote locations and safer alternatives to achieve hemostasis. Participants in this course will increase their knowledge of the topics presented to provide improved patient care.

Implementation of Trauma Triage/Resuscitation Simulation Based Education with Web Based Follow Up In Rural Honduras
Ulises Torres, MD, FICS, University of Massachusetts Medical School, Worcester, MA

Advances in Patient Care Technologies for Trauma and Surgical Critical Care
Harry Linne Anderson, III, MD, FICS, Attending Surgeon Program Director, Surgical Critical Care Fellowship St. Joseph Mercy Ann Arbor Ann Arbor, Michigan Clinical Professor of Surgery Wayne State University School of Medicine Detroit, Ann Arbor, MI

Evolution of Geriatric Trauma
Steven Brooks, MD, FICS(J), Assistant Professor of Surgery Trauma, Surgical Critical Care and Acute Care Surgery Texas Tech University Health Science Center, Lubbock, TX

Hemostatic Agents in Trauma
Yana Puckett, MD, FICS(J), General Surgery Resident, PGY-2, Texas Tech University Health Sciences Center, Lubbock, TX

Surgery in the Geriatric Population
LeRone Simpson, MD, Resident - General Surgery, PGY 4 Texas Tech, Lubbock, TX

Coffee Break – 10:30 AM to 10:45 AM

ACUTE CARE SURGERY
10:45 - Noon TN Grand Ballroom A

Moderators: Sharmila Dissanaike, MD & Steven Brooks, MD

This lecture series will define the specialty of acute care surgery, update the audience on the changing epidemiology of necrotizing soft tissue infections, outline optimal management of decubitus ulcers, and identify best practice with respect to acute cholecystitis.

Acute Care Surgery in Evolution
Heena Santry, MD, Assistant Professor of Surgery and Quantitative Health Sciences, University of Massachusetts Medical School, Worcester, MA

Surgical Management of Decubitus Ulcers
Sharmila Dissanaike, MD, FICS, Professor of Surgery, Texas Tech University Health Sciences Center, Lubbock, TX

Damage Control Strategies in the Management of Acute Injuries
Stephanie Savage, MD, MS, Assistant Professor of Surgery Trauma/Critical Care University of Tennessee Health Science Center, Memphis, TN

Necrotizing Soft Tissue Infections: An Increasingly Common Problem
Sharmila Dissanaike, MD, FICS, Professor of Surgery, Texas Tech University Health Sciences Center, Lubbock, TX

2014 Modern Treatment of Acute Cholecystitis
Steven Brooks, MD, FICS(J), Assistant Professor of Surgery Trauma, Surgical Critical Care and Acute Care Surgery Texas Tech University Health Science Center, Lubbock, TX
Lunch Presentations

Noon - 1:30 PM  TN Grand Ballroom B

Moderator: Demetrius E.M. Litwin, MD

The Global Burden of Surgical Disease in Children: How Serious is it and How Can We Help?
Domingo T. Alvear, MD, FICS, Department of Pediatric Surgery, Pinnacle Health Hospital, Harrisburg, PA

Global Surgery
Paul Del Prado, MD, General Surgery Resident PGY 4 - Texas Tech University, Lubbock, TX

Featured Lecture

1:30 - 1:50 PM  TN Grand Ballroom A

Moderator: Frank Bongiorno, MD

Light Adjustable Lens, Phase III FDA Study
Phillips Kirk Labor, MD, FICS, Founder, Eye Consultants of Texas, Grapevine, TX

Annual Ethics Forum

1:50 - 3:20 PM  TN Grand Ballroom A

Moderator: Frank Bongiorno, MD

Bioethics faces a major challenge in light of the pluralistic nature of our society. Multiple religions, philosophical frameworks, worldviews and vocational commitments would seem to render impossible our ability to find a common framework for adjudicating our most pressing ethical challenges in the world of medicine. This lecture suggests human dignity as a framework for both making bioethical decisions and engendering virtues necessary for the ethical practice of medicine. Ample time will be allotted for audience discussion.

Bioethics in a Pluralistic Society: Can We Ever Find Agreement?
Dennis Hollinger, PhD, President & Colman M. Mockler Distinguished Professor of Christian Ethics, Gordon-Conwell Theological Seminary, Hamilton, MA

Annual Research Scholarship Competition

8:00 - 9:45 AM  TN Grand Ballroom A

Moderator: Anthony Dardano Jr., DO & Chand Ramaiah, MD

The Scholarship Committee of the ICS-US Section accepts submissions from medical students, surgical residents and surgical fellows. Participants have submitted an original clinical research paper with pertinent clinical application for this annual competition. All papers are judged and scored by the members of the ICSUS Section Scholarship Committee prior to the Annual Surgical Update. An additional panel of judges will score the oral presentation of the research during the meeting in Memphis. Scores will be tallied and those with the highest combined score will be awarded prizes. Participants in this session will be presented with the latest research being conducted by some of the brightest young minds in medicine and surgery.

Quality of Life Assessment After Peroral Endoscopic Myotomy
Yalini Vigneswaran, MD, General Surgery Resident, PGY 3 University of Chicago Medical Center, Chicago, IL

Mesna and Hydroxypropyl Methylcellulose Assist in Delayed Submucosal Dissection in a Rabbit Cecal Model
Gokulakkrishna Subhas, MD, FICS(J), Resident in General Surgery, Providence Hospital and Med Centers, Southfield, MI

Impact of Plasma Glucose Level at the Time of FDG Administration on the Accuracy of FDG-PET/CT in the Diagnosis of Pancreatic Lesions
Alireza Hamidian Jahromi, MD, FICS, General Surgery Resident, Louisiana State University Health Shreveport, Shreveport, LA

Short-Term Surgical Missions: A Cost-Benefit Analysis
Jonathan Egle, MD, General Surgery Resident, Providence Hospital and Medical Centers, Southfield, MI

Patterns of Failure After Open Inguinal Hernia Repair with Mesh: A Study of Five Cases
Thomas Buddensick, MD, Resident in General Surgery, St. Agnes Hospital, Baltimore, MD

Kidney Access Device (KAD): A New Concept and Invention
Jasneet S. Bhullar, MD, MS, FICS(J), Junior ICS Fellow, General Surgery Resident, Department of Surgery, Providence Hospital & Medical Centers, Southfield, MI
Pediatric Surgery

10:00 - Noon  TN Grand Ballroom A

Moderators: Domingo Alvear, MD & Bhashkar Rao, MD

This session will review and define the most current approaches for the diagnosis and treatment of common and uncommon pediatric conditions. Participants will improve their ability to identify, treat and recommend treatment for diseases such as Wilms Tumor, Neuroblastoma, Abdominal Trauma, Liver Tumors and Omphalocele.

Keynote Presentation

Biology and Management of Neuroblastoma
Andrew Davidoff, MD, Chairman, Department of Surgery, St. Jude Children's Research Hospital, Memphis, TN Professor of Surgery, Pediatrics and Pathology & Laboratory Medicine, University of Tennessee Health Science Center, Memphis, TN

Abdominal Trauma in Children
James W. Eubanks, III, MD, Chief of Pediatric Surgery, Associate Professor of Surgery and Pediatrics, University of Tennessee Health Science Center, Medical Director of Trauma Le Bonheur Children's Hospital, Memphis, TN

Biology and Management of Wilms Tumor
Andrew Davidoff, MD, Chairman, Department of Surgery, St. Jude Children's Research Hospital, Memphis, TN Professor of Surgery, Pediatrics and Pathology & Laboratory Medicine, University of Tennessee Health Science Center, Memphis, TN

Omphalocele: Surprises Beyond the Size
Domingo T. Alvear, MD, FICS, Department of Pediatric Surgery, Pinnacle Health Hospital, Harrisburg, PA

Lunch Presentation

Noon - 1:30 PM  TN Grand Ballroom B

Moderator: Demetrius E.M. Litwin, MD

Leadership and Legacy
Wickii T. Vigneswaran, MD, FICS, Professor of Surgery, Associate Chief of Cardiac and Thoracic Surgery, Director of Lung and Heart Lung Transplantation, University of Chicago Medical Center, Chicago, IL

The Dr. Arno A. Roscher Endowed Lecture

1:30 - 2:15 PM  TN Grand Ballroom A

Moderators: Ari Halldorsson, MD & Arno Roscher, MD

For more than a century, histopathology, in the form of a tissue biopsy, has served as the Gold Standard for diagnosis and therapeutic decisions in cancer surgery. This era is drawing to a close. Participants in this special lecture will be presented with new information relating to clinically important means of subtyping tumors for optimal therapy.

The Need for a New “Gold Standard” in Cancer Diagnosis: the Role of Immunohistochemistry
Clive Taylor, MD, MA, D. Phil, Professor of Pathology, Keck School of Medicine, University of Southern California, Los Angeles, CA

Uses of Ultrasound in Surgery Lecture Series

2:15 - 3:45 PM  TN Grand Ballroom A

Moderators: Annette Rebel, MD & Zaki Hassan, MD

Many procedures are performed without image evaluation or guidance. This contributes to patient morbidity and mortality, failed procedures and unnecessary complications. This session through a series of didactic presentations will instruct the participant on the various uses of ultrasound in surgery. Upon completion of this session the participant will understand the basics of ultrasound and when the use of this technology is appropriate as well as beneficial in a surgical setting.

Participation in this session is required if you are registered for the hands-on workshop that follows.

Transcatheter Aortic Valve Replacement and Transesophageal Echocardiography
Randy Legault DO, Senior Assistant Professor, University of Kentucky, Lexington, KY

Ultrasound Evaluation of a Hypotensive Patient
Annette Rebel, MD, FICS, Assistant Professor of Anesthesiology, Department of Anesthesiology, University of Kentucky, Lexington, KY
Ultrasound Assessment of Intracranial Pressure
Judson Mehl, DO, Critical Care Fellow, University of Kentucky, Lexington, KY

Hands-on workshop follows at 4:00 PM for paid participants in TN Grand Ballroom E

Coffee Break – 3:45PM to 4:00PM

Alternatives in Minimally Invasive Colorectal Surgery Lecture Series
4:00 - 6:00 PM TN Grand Ballroom A

Moderators: Bryan Butler, MD & Larry S. Sasaki, MD

This session will discuss various methods to perform minimally invasive colorectal surgery. In addition, participants will learn techniques for successful use of stapling and energy devices. Surgeons that have attempted minimally invasive colorectal surgery in the past but have encountered technical difficulties would benefit from participating in this course. In addition, participation in this course will be beneficial for surgeons that are currently performing open colorectal procedures and are interested in exploring the options currently available for minimally invasive colorectal surgery.

The hands-on portion of this course will demonstrate the currently available techniques as discussed in the lectures. Participants will have the opportunity to practice the technique of their choice during the lab.

Upon completion of this course, participants should be able to: Define patient selection for minimally invasive colorectal procedure; Describe indications and contraindications for these procedures; Discuss the different minimally invasive techniques currently available; Describe the advantages and disadvantages of each technique; Discuss preparation and positioning of the patient; Discuss the currently available instrumentation that facilitates the performance of minimally invasive colorectal surgery.

Participation in this session is required if you are registered for the hands-on workshop that follows on Saturday.

Laparoscopic Colectomy
Brian Matier, MD, Colon and Rectal Surgeon, Buffalo Medical Group, PC, Buffalo, NY

Single Site Colectomy
Bryan N. Butler, MD, FICS, Clinical Assistant Professor, Section of Colon Rectal Surgery, State University of New York at Buffalo, Buffalo, NY

Hand-assisted Laparoscopic Colectomy
Larry S. Sasaki, MD, FICS, Assistant Clinical Professor of Surgery, Louisiana State University Medical Center, Shreveport, LA

Colon Interposition to Manage Long Gap Esophageal Atresia - Is it a Good Option?
Domingo T. Alvear, MD, FICS, Department of Pediatric Surgery, Pinnacle Health Hospital, Harrisburg, PA

Robotics in Colorectal Surgery
Deepa Taggarshe, MD, FICS(J), Fellow in Colon and Rectal Surgery, University at Buffalo, SUNY, Buffalo, NY

SATURDAY June 14, 2014

Alternatives in Minimally Invasive Colorectal Surgery Workshop
8:00 - Noon TN Grand Ballroom E
Hands-on section of workshop for paid participants.

Considerations in Surgical Oncology
8:00 - 9:45 AM TN Grand Ballroom A

Moderator: Michael Jacobs, MD & Joshua Mammen, MD

Various oncologic issues are discussed in this session comprised of submitted abstracts. Participants will increase their knowledge as it relates to the unique complications of surgical oncology.

Results of Completion Lymph Node Dissection (CLND) in Sentinel Lymph Node-positive Pediatric Melanoma: A Single Institution Experience
Fazal Nouman Wahid, MD, Fellow, Pediatric Surgical Oncology, St Jude Children's Research Hospital, Memphis, TN

Totally Laparoscopic Right HemiHepatectomy without Pringle Maneuver: Video-based Education Technique and Tips
Michael J. Jacobs, MD, FICS, Attending Surgeon Providence Hospital, Southfield, MI
A Comparative Analysis of Prostate Cancer Pre-Treatment Characteristics Stratified by Age
Anish Kapur, MS-4, Aureus University School of Medicine, Aruba, Colts Neck, NJ

Surgical Management of Colorectal Liver Metastases
Janak Parikh, MD, MSHS, Assistant Clinical Professor of Surgery, Wayne State University Clinical Professor of Surgery, St. John/Providence Health, Novi, MI

Surgical Management of Diseases of Thymus
Sarah Aftab Ahmad, MD, General Surgery Resident Texas Tech University Health Sciences Center, Lubbock, TX

Surgical Management of Adrenocortical Carcinomas
Regan Williams, MD, Assistant Professor of Surgery and Pediatrics, University of Tennessee Health Science Center, Memphis, TN

Coffee Break (ICS) – 9:45AM to 10:00AM

Challenges in Vascular Surgery
10:00 - Noon TN Grand Ballroom A

Moderator: Dixon Santana, MD & Nikalesh Reddy, MD

This session will focus on the identification and treatment options for challenging cases in vascular surgery. Upon completion of this course participants will improve their understanding of the various options to treat the types of cases discussed and be better prepared to provide optimum patient care.

Complications Related to Long-Term in Dwelling Inferior Vena Cava Filters and Promoting Filter Retrieval
Roger L. Gonda, Jr., MD, FICS. Chairman Radiology: St. John Providence Hospital and Medical Centers Associate Clinical Professor of Radiology Michigan State University Staff Radiologist: Garden City Hospital, Southfield, MI & Matthew Osher, MD. Radiology Resident PGY-3, St. John Providence Hospital and Medical Center, Royal Oak, MI

Splenic Artery Steal Syndrome- A Review
Soniya Pinto, MB, BS, Research Fellow, Department of Radiology, New York Presbyterian/ Weill Cornell Medical Center, Richmond Hill, NY

Acute Adult and Pediatric Cardiovascular Cases: A Surgical Motion Picture Presentation
Adnan M. Cobanoglu, MD, Professor of Surgery, Immediate Past Chairman, Faculty Council, Case Western Reserve University School of Medicine, Cleveland, Beachwood, OH

May-Thurner Syndrome, Acute Presentation and Management
Dixon Santana, MD, Associate Professor in Surgery Vascular and Endovascular Surgery Texas Tech Health Sciences Center, Lubbock, TX

PICC Lines: Indications, Complications, Lessons Learned
Cheryl Kelley, RN, BSN, VA-BC, Independent Vascular Access and Infusion Therapy Consultant, Belington, WV

Lunch Presentation
Noon - 1:30 PM TN Grand Ballroom B

Moderator: Demetrius E.M. Litwin, MD

Asset Protection: Legal Risks and Rising Taxes How to Run a More Profitable Practice
Victoria J. Powell, JD, JD, LL.M. Director, Doctors Financial Education Network; Managing Member, Lifetime Investment Management, LLC, Phoenix, AZ

The Dr. Andre Crotti Award for Distinguished Service to the Profession of Surgery Recipient’s Lecture
1:30 - 2:15 PM TN Grand Ballroom A

Moderator: Ari Halldorsson, MD

The Importance of Surgical Leadership in Medicine
Bernhard T. Mittemeyer, MD. Professor Emeritus at Texas Tech University Health Sciences Center, Lubbock, TX
MULTIDISCIPLINARY PLATFORM PRESENTATIONS

2:15 - 5:00 PM  TN Grand Ballroom A

Moderators: Reza Saidi, MD & Thavam Thambi-Pillai, MD

Addressing the varied surgical specialties that are represented within the College, this session will include submitted abstract presentations from ICS Fellows, Non-members, Residents and Medical Students. Participants will increase their comprehension of the topics and cases discussed allowing for optimal patient care.

Empyema; an Old Disease Making a Comeback
Ari O. Halldorsson, MD, FICS, President, ICS-US Section, Professor of Surgery Residency Program Director Texas Tech University Health Sciences Center, Lubbock, Texas Medical Director Trauma/Surgical ICU at University Medical Center, Lubbock, TX

Usage of Robotics in General Surgery
Caleb Sallee, MD, General Surgery Resident, Texas Tech University, Lubbock, TX

Management of Pneumothorax and Intrathoracic Airspaces
Francis J. Podbielski, MD, MS, FICS, Visiting Clinical Associate Professor of Surgery, University of Illinois at Chicago Medical Center, Chicago, IL

Prevention, Evaluation, and Management of Post-Operative Complaints After Laparoscopic Sleeve Gastrectomy
Thomas D. Willson, MD, FICS(J), Saint Joseph Hospital, Chicago, IL

An Epigenetic Assay That May Avoid Unnecessary Repeat Prostate Biopsies and Lower Healthcare Costs
Arnold J. Willis, MD, FICS, Professor of Urology, Associate Dean of Clinical Sciences Aureus University School of Medicine, Aruba, Alexandria, VA

The True Cost of Noise in Hernia Repairs
Shamik Dholakia, MD, MRCS, MBBS, BSc, Surgical Registrar, Heath Park, Cardiff, Wales

Liver Transplantation for Malignant Neoplasms
Reza F. Saidi, MD, FICS, FACS, Assistant Professor of Surgery, Alpert Medical School of Brown University, Rhode Island Hospital, Department of Surgery, Division of Organ Transplantation, Providence, RI

The Effect of Dialysis within 24 hours of Transplantation on the Incidence and Length of Delayed Graft Function
Farah Karipineni, MD, Surgical Resident, Albert Einstein Medical Center, Philadelphia, PA

ABDOMINAL WALL RECONSTRUCTION: MANAGEMENT OF THE OPEN ABDOMEN AND COMPLEX HERNIAS

11:00 - Noon  Lectures  Davidson Board Room
1:30 - 5:30 PM  Demonstration  TN Grand E

Offering a comprehensive review of pre-clinical and clinical data this session will discuss the management of the open abdomen as well as complex hernias and the challenges posed to even the most experienced surgeon. New technologies using both biological and synthetic mesh as well as the latest applications utilizing wound closure devices will be demonstrated. During this interactive workshop participants will learn how to identify appropriate indications and appropriate operative techniques in management of the complex abdominal wall hernia. Participants will also increase their knowledge of hernia repair techniques, materials and indications for use.

Faculty
Anthony Dardano Jr, DO, FICS, Associate Professor of Clinical Biomedical Sciences and Founding Program Director General Surgery Residency Program Florida Atlantic University, Charles E. Schmidt College of Medicine President-elect Medical Staff Boca Raton Regional Hospital, Boca Raton, FL

Jose F. Yeguez, MD, FICS, Department of Surgery at Boca Raton Regional Hospital and Delray Medical Center, Boca Raton, FL


**Welcome Reception**

*Wednesday  6:00-7:00 PM  TN Grand Ballroom D&E*

Our first evening in Memphis begins with a cocktail reception. Join us as we kick off the 76th Annual Surgical Update; reconnect with old friends and meet members you may not have encountered before.

**Explore Memphis**

*Thursday  10:00-11:00 AM  Director's Row 1*

This event, geared towards Alliance members, spouses, and family members who are visiting Memphis during the Annual Meeting will provide attendees with an overview of how Memphis came to be what it is today and an understanding of the not-to-be-missed highlights of the city during your visit. A representative from the Memphis Convention and Visitor’s Bureau will share the historical importance and highlights of our host city.

**Alliance Board of Directors & General Membership Meeting**

*Thursday  11:00-12:00 PM  Director’s Row 1*

Please join us to discuss Alliance plans for the Annual Meeting and beyond. Topics will include future leaders, 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.

**Graceland Tour Excursion**

*Thursday  3:30 PM-7:30 PM  Gather at Registration*

Graceland is a destination NOT to be missed when you visit Memphis. We are especially pleased to offer this tour to ALL attendees – Thursday’s CME schedule will end early in order that all meeting attendees can participate. Thanks to a generous donation from US Section President Ari Halldorsson the ticket cost for each attendee has been reduced substantially.

Experience life as Elvis did at Graceland with an audio-guided tour featuring commentary and stories by Elvis and his daughter, Lisa Marie. The journey through the Mansion includes the decorated funky styles of the Jungle Room, racquetball court, and Meditation Garden, where Elvis rests.

After the Mansion tour, you will visit the Automobile Museum and see over 33 vehicles owned by Elvis, including the famous Pink Cadillac. Adjacent to the Automobile Museum are his custom jets; your tour begins in an airport terminal and then continues aboard the Lisa Marie, an aircraft customized by Elvis. Before the end of the tour, visit Sincerely Elvis, an exhibit that changes annually and currently features, “ICON: The Influence of Elvis Presley Presented by Fender”. Curated by the Graceland archives team in partnership with the Rock and Roll Hall of Fame and Museum, this groundbreaking exhibit features 75 artifacts on loan from the famed Cleveland museum, along with items from the collections of many of today’s biggest names in music who have been influenced by the King of Rock ‘n’ Roll. The exhibit celebrates Elvis’ status as a music pioneer and icon that paved the way for many of today’s artists and celebrities. **Price: $45 per person. Check with Registration for On-Site Availability.**

**5th Annual AANOS Fundraising Event and Awards Dinner**

*Friday  7:00 PM  TN Grand Ballroom C*

The 5th Annual AANOS Fundraising Event and Awards Dinner will feature an elegant dinner, award presentations, and entertainment. **Price: $100 per person. Check with Registration for On-Site Availability.**

**United States Section Convocation & Presidential Recognition Ceremony**

*Saturday  6:30 PM  TN Grand Ballroom B*

All attendees, families, friends and guests are invited to attend this hallmark event, the 76th AnnualConvocation 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 its Fellows, and their accomplishments.

**New Fellows Reception**

*Saturday  7:30 PM  TN Grand 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 award winners. All attendees are encouraged to attend.

**Gala Dinner**

*Saturday  8:30 PM  Southeast Ballroom*

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 have some wonderful entertainment planned to celebrate our host city of Memphis and it’s contributions to the history of rock and roll. Black Tie attire is optional. **Price: $125 per person. Check with Registration for On-Site Availability.**
Acknowledgements

Welcome

The Chairman of the Board, Officers and Members of the American Academy of Neurologic and Orthopaedic Surgeons would like to welcome the following new members who have joined the Academy in the last 12 months.

Christopher Barry  
Neurosurgery  
Del City, OK

Kenneth Kamler  
Orthopaedic Surgery  
Ridgewood, NY

Raymond Rawson  
Neurosurgery  
Petoskey, MI

Frank Segreto  
Orthopaedic Surgery  
Ronkonkoma, NY

Peter Dipaolo  
Orthopaedic Surgery  
Woodland Park, NJ

Chris Karas  
Neurosurgery  
Westerville, OH

Francis Samonte  
Neurology  
Roslindale, MA

With Our Thanks

The following individuals made financial contributions during the past twelve months to support the American Academy of Neurologic and Orthopaedic Surgeons and its many worthy programs.

David Weiss  
Morrisville, PA

Mark Perlmutter  
Mechanicsburg, PA

Anca Bereanu  
Yardley, PA

This Scientific Meeting would not be possible without the generous support from the following:

Exhibitors

Arbor Pharmaceuticals, LLC  
DePuy Synthes Spine

SI-BONE, Inc.  
Southern Spine, LLC
The following Abstracts are listed in alphabetical order by presenting author.

They have been reproduced as submitted with limited editing.
THE FIRST REPORTED CASE OF SPONTANEOUS UPPER ARM COMPARTMENT SYNDROME IN A PATIENT ON CLOPIDOGREL

Daniel Sherif Zakaria Matta Doctor, MA MBChir MRCS MRCP
Ilford, Essex, United Kingdom

Purpose: Compartment syndrome is a limb-threatening orthopaedic emergency. Spontaneous compartment syndrome is very rare with most localised to the lower leg and forearm compartments. To our knowledge there is only one reported case of spontaneous upper arm compartment syndrome to date. We present a second, and the first reported in a patient who was not on warfarin therapy.

Methods: A 70 year old female inpatient with emphysema, developed sudden painful swelling of the left upper arm overnight, with no history of trauma. Anticoagulant medications included 75 milligrams of clopidogrel daily for angina and 5000 units of dalteparin as standard daily thromboembolic prophylaxis for hospital patients.

On examination, she was obese. Her heart rate was 100. There was gross tender swelling of the anterior and medial aspects of the left upper arm. Peripheries were cool with a palpable radial pulse. However, there was no palpable ulnar pulse and decreased sensation over the index and middle fingers.

Results: Computed Tomography demonstrated an intramuscular hematoma of the left biceps. The patient underwent fasciotomy for compartment syndrome and evacuation of 600 millilitres of blood in the operating room. Further exploration revealed no source of bleeding which stopped spontaneously.

Conclusions: This case represents only the second reported case of spontaneous upper arm compartment syndrome, and the first in a patient who was not on warfarin therapy.

SPINAL EPIDURAL ARTERIOVENOUS MALFORMATIONS: REPORT OF A CASE AND DISCUSSION OF CLASSIFICATION SCHEMES AND RECOMMENDED TREATMENT

Caitlin Clark, BA
Third Year Medical Student, University of Texas-Houston, Eads, TN

Purpose: Spinal epidural AVMs are exceedingly rare lesions, with only about 100 cases reported in the literature. As a result very little is known regarding alternative treatments for patients with these lesions.

Methods: This study was a retrospective review of the case in question, with an exhaustive search of the historical and current literature.

Results: Most common classification schemes ignore true spinal epidural AVMs. As with dural AV fistulas, treatment consists of obliteration of the arteriovenous communication without any treatment of any intradural veins that may be enlarged or engorged due to venous hypertension.

Conclusions: By understanding the most common classification schemes and the current consensus for treatment of each class, the surgeon can make better treatment decisions for his/her patient.

SACROILIITIS

W. Craig Clark, MD, PhD, FISC
Staff Neurosurgeon, Greenwood Leflore Neurosurgery Clinic, Greenwood, MS

Purpose: In recent years the number of lumbar fusions has skyrocketed. Recent research has shown that one of the long term consequences of lumbar fusion is developing dysfunction of the sacroiliac joint or sacroiliitis. In fact, latest studies would indicate that this is as high as 75% at five years post fusion. The purpose of this study is to explore this diagnosis and options for treatment available to this increasing cohort of patients.

Methods: The present study is a review of current literature to establish the historical context of the diagnosis, current clinical means to make an accurate diagnosis, and the treatment options available to these patients. Recommendations are then made based on these criteria and the author’s developing clinical experience with this entity.

Results: Sacroiliitis is far more common than generally realized, and may account for 20–25% of the back pain patients seen in the typical neurosurgical practice. Surgical fixation/fusion of the sacroiliac joint may offer excellent symptomatic relief in properly selected patients. Options for achieving this fixation/fusion are equally efficacious, and selection of the method of fixation/fusion should be based on surgeon preference and familiarity with the instrumentation and technique.

Conclusions: Every neurosurgeon who treats back pain should be familiar with the techniques of diagnosis and treatment of this entity. The role of surgical fixation/fusion continues to evolve, and will develop over time as treatment of this disorder becomes more commonplace.
SURGICAL TREATMENT OF THE AGING LUMBAR SPINE

Jeffrey Epstein, MD, FICS
Attending, St. Catherine of Siena Medical Center, Brookhaven Memorial Hospital Medical Center, Babylon, NY

Purpose: To discuss the various surgical treatment of the aging spine, as well as to address some of the newer options, some of which have already fallen by the wayside.

Methods: Discuss the surgical treatment and indications for each.

Results: Discuss the results of the treatments.

Conclusions: Discuss the pros and cons of these treatment, as well as introduce new options.

EXPERIENCE WITH MAZOR ROBOT IN LUMBAR AND THORACIC SPINE FUSION

James Feild, MD, MS, FCIS
Private Practice Neurosurgery, Memphis, TN

Purpose: To discuss the various surgical treatment of the aging spine, as well as to address some of the newer options, some of which have already fallen by the wayside.

Methods: Discuss the surgical treatment and indications for each.

Results: Discuss the results of the treatments.

Conclusions: Discuss the pros and cons of these treatment, as well as introduce new options.

CHRONIC JOINT PAIN WITH THE INTRAARTICULAR INJECTION OF HYALURONATE COMPONENTS

Richard O. Gershank, MD
Neurology/Neurosurgical Pain Management Center, Miami, FL

This is a new approach to acute or chronic joint pain performed in our pain center. We have been the ‘first’ one to extend the use of hyalurionate/hyaluronic acid components to most of the affected joints, which have been originally designed to use only in patients with severe intractable knee pain, second to osteoarthritis which had not had relief with conventional Tx. Performed in our institute, this study analyzed the several Visco-supplement products on the market. Provided to a group of 468 patients. 92% with a follow-up of four years, 94% completed treatment. To degree of osteoarthritis, pain parameter, range of motion, joint overuse, prior arthrocentesis or surgery, weight, job and sports related injuries (which most of the time were related to younger population). Epidemiology: Incidence, most of these patients underwent nerve blocks previously because chief complaint of MUP, including and not limited to the spine, low back syndrome, neck pain/occ. H/A, with radicular manifestation and localized joint pain over-imposed. 92% of this group the mean age was 69.6 years old. Knee P (2nd to arthritis) was the most affected joint (45%), followed by the shoulders (38%), hips (35%), hands (15%), foot and ankle (14%) 2nd to osteoarthritis and traumatic arthropathies incidence are most of the time recorded. Prevalence: Of those with osteoarthritis, 58% were female and 42% were male. Inflammatory arthritis (in younger population, osteoarthritis in popula- tion >60). Risk factors: Obesity, avascular necrosis, septic arthritis, advanced age, and trauma. DM was present in 18% of this group of patients. Etiology: No cause is known related to idiopathic osteoarthritis. The common alteration is the progressive loss of the articular cartilage with increasing overload of the joint. Several hyaluronic components via interarticular injection have been provided after conventional Tx. Including and not limited to 1) General measures, 2) Special Physical Therapy, 3) Avoidance or discontinuation of heavy impact activities, 4) Use of a cane to reduce stress, 5) Alternative therapy, 6) Medications, 7) Nutrients, 8) Opioid pain meds (have not been used), 9)Intra-articular joint blocks and/or corticoids have been provided by others or by referral physicians. These products have been provided to patients with severe, sometimes intractable pain, in which the joint’s alignment was preserved, and on poor candidates for surgery or those who refuse surgery under any circumstances.

USE OF A BONE FILLER TO AUGMENT FIXATION OF PROXIMAL HUMERUS FRACTURES

Gerald Greenfield, Jr, MD, MS, FICS
Clinical Assistant Professor UTHSC- San Antonio, San Antonio, TX

Purpose: The purpose of the study was to evaluate the efficacy of the use of a bone substitute to augment fixation of proximal humerus fractures in osteoporotic bone.

Methods: Prior reports by our group have documented the efficacy of the use of percutaneously placed plates for fixation of proximal humerus fractures. Paucity of bone in osteoporotic fractures often makes stable fixation difficult. We used a bone substitute to augment fixation in order to obtain a more stable fixation. Ten consecutive patients comprised our initial trial of this technique. All were treated by the authors in a continuation of our previously described technique.

Results: Use of a bone substitute to augment fixation in osteoporotic fractures allowed a stable construct which enabled earlier motion and restoration or improve functional ability. There were no infections associated with the bone substitute. All fractures healed and there was no hardware failure.

Conclusions: Use of a bone substitute to augment fixation in unstable osteoporotic proximal humerus fractures improved functional restoration.
DIGITAL PROTRACTOR AS A SUPPLEMENT TO POSTERIOR CERVICAL SPINE INSTRUMENTATION: A CADAVERIC STUDY

Chris Karas, MD
Assistant Professor, Ohio University, Attending Neurosurgeon, Ohio Health, Westerville, OH

Purpose: Current technologies for assisting in the placement of spine instrumentation include fluoroscopy and navigation systems. The disadvantage of these adjuncts to spine surgery include radiation exposure and high cost. The objective of this study is to test the ability of a novel device, specifically a digital protractor, to assist in the insertion of C3-7 lateral mass screws and C2 pedicle screws.

Methods: The cervical spine of a prone cadaveric specimen was exposed. A digital protractor was added to the handle of a surgical multi-axial screwdriver. The device was zeroed at a plane perpendicular to the lateral mass at previously defined entry points and screws were placed at specific known angles to within one degree. Postoperative CT scan was performed and lateral mass screw purchase was evaluated at C3-7. Bilateral C2 pedicle screw purchase was evaluated as well. All screws were placed without intraoperative fluoroscopy. The right side was placed by the attending spine surgeon. Left side was placed by a 1st year medical student.

Results: At C2, screws purchased the pedicles satisfactorily and bilaterally. At C3-7 all screws purchased the lateral masses satisfactorily and bilaterally.

Conclusions: The addition of a digital protractor to current cervical spine instrumentation is a useful adjunct to the accurate placement of C2 pedicle screws and subaxial lateral mass screws, is relatively inexpensive, and requires no radiation exposure. Future utilities may include a kinesthetic educational tool, research device, or complement to existing technology.

EVALUATION AND TREATMENT OF PERIPHERAL NERVE PROBLEMS: EVOLVING DIAGNOSTIC METHODS AND TREATMENTS

Michel Kliot, MD
Clinical Professor of Neurosurgery, UCSF Medical Center, San Francisco, CA

Purpose: Review approaches to dealing with a broad range of peripheral nerve problems.

Methods: Review my personal experience and literature where relevant.

Results: We are developing new imaging methods to visualize axonal pathways in the setting of trauma and tumors.

Conclusions: New developments are improving the treatment of a variety of peripheral nerve problems.

MARJOLIN ULCER: REVIEW OF THE LITERATURE AND CASE REPORT

Alfonso E. Pino, MD, FICS
Emeritus Orthopedic Comanche County Medical Center, Vice Chair Orthopedic ICS USA, Secretary American Fracture Association, Dublin, TX

Purpose: To review the diagnosis and treatment of this unusual type of lesion with difficult diagnosis unless a high index of suspicion and previous experience is present.

Methods: In this review of the literature and the case report we study the origin and possible causative pre cancerous condition. The initial symptom which point out to skin cancer, the difficult initial diagnosis with late arrival to the Surgeon. The case presented was a 72 years old, alcoholic, white male right handed, with lesion in opposite hand. History of previous burn several years ago years and later indolent ulcer in the site treated by Family physician. Eleven months ago an Orthopedic did biopsy and examination with a positive result for ‘Squamous Cell Carcinoma’ with poor prognosis due to the advanced stage of the disease. Patient did not returned and continued procrastinating his grave lesion and came to the senior author for second opinion and care. Temporary ray amputation and multiple biopsies were done and the exam showed metastasis in the axilla and chest, consult with oncologist was requested and patient did not return until later another staff member performed a mid forearm amputation an later demise.

Results: Marjolin Ulcers are diagnosed late, referral to surgeon comes in grate number of cases when the metastatic disease is present and amputation in the extremities is one of the only modality of local care plus the Oncologist management of the metastasis. In the extremities Osteomyilits is another entity which we need to deal with The results are poor unless early diagnosis is done before propagation to other tissue is done.

Conclusions: Optimal management of Marjolin Ulcers involves a multimodality approach directed at a correct diagnosis which is difficult and aggressive treatment including the co morbidities. Early diagnosis is the best treatment today. In the elderly debilitated, with metastasis results are poor, survival depend of the team approach involvement. In the young if the resection is satisfactory and no metastasis are present results can be permanent.
PERILUNATE DISLOCATION OF THE CARPUS. CASE STUDY AND LITERATURE REVIEW OF CARPAL INSTABILITY
Sudhir Rao, MD
Orthopaedic Surgeon, Big Rapids Orthopaedics PC and Premier Hand Center, Big Rapids, MI

Ligamentous injury to the carpus results in a spectrum of instability. Perilunar dislocation of the wrist is the most severe form of injury. This is an uncommon injury which is sometimes missed at initial presentation. Early recognition and timely surgical intervention is necessary to optimize outcome and minimize complications and sequelae. This presentation aims to explain the injury complex through case study and review of literature.

CEREBRAL PERFUSION PRESSURE AND INTRACRANIAL PRESSURE MANAGEMENT (BRAIN RESUSCITATION) IN HEAD INJURY
Quirico Torres, MD., FICS
Volunteer Consultant, Abilene Medical Mission, Department of Neurosurgery, Hendrick Medical Center, Abilene, TX

Purpose: Treatment of Traumatic brain injury patients are directed towards the timely management of Cerebral Perfusion Pressure(CPP=MAP-ICP) and intracranial Pressure to produce a better outcome in Rehabilitation. Maintenance of CPP OF 60-70 mmHq and ICP management of less than 18-20 mmHq 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.

Results: Early detection of abnormal ICP wave pattern followed with surgical decompression improved the survival.

Conclusions: In general, results indicate that current scientific evidence is insufficient to support the use of injection therapy in patients with low back pain or sciatica.

USE OF EPIDURAL STERoids TO TREAT LUMBAR DISC DISEASE
Charles Xeller, MD
Member, Board of Directors, American Academy of Disability Evaluating Physicians, League City, TX

Purpose: The purpose of this study is to review the literature to ascertain appropriate indications, methods and results of utilizing epidural steroids to treat lumbar spine back pain.

Methods: Review of recent literature to ascertain results of epidural steroids and to reach conclusions regarding appropriate injection methods to treat lumbar spine pain.

Results: In general lumbar epidural steroids to treat low back pain do NOT improve the average level of function, or reduce the need for surgery, or provide long term pain relief beyond 3 months. The routine use of these injections is NOT recommended.

Conclusions: In general, results indicate that current scientific evidence is insufficient to support the use of injection therapy in patients with low back pain or sciatica.
CANCELLATION POLICY
The cancellation deadline was May 24, 2014. Refunds will be issued, minus a $50 processing fee, upon receipt of written notification via fax or mail. Verbal or written cancellations after May 24, will not be honored. Please allow four to six weeks after the meeting for your refund.

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

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

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

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. This includes: Spouses, Domestic Partners and Relatives. This category is not appropriate for physicians who will attend CME Sessions.

To register for the meeting, please visit the Meeting Registration Desk.

AIRPORT TRANSPORTATION:
Hilton Airport shuttle:
The Hilton Memphis complimentary shuttle will depart on the hour (by request), between the hours of 6am and 10pm. Shuttle schedules subject to change during inclement weather.

PARKING
Valet parking $9/day
Self parking complimentary
Hotel concierge can assist with on-site rental car arrangements.

TAXI
City Wide Taxi Cab Co, (901) 324-4202
DeSoto Taxi Cab, (901) 457-5411
Yellow Cab Co, (901) 577-7777

ATTIRE
Business casual attire is recommended in educational sessions. Casual attire is appropriate for most social events. Evening attire is recommended for the Convocation and New Fellows Reception. Black tie is optional for the Gala Banquet.

CONTINUING MEDICAL EDUCATION (CME) INFORMATION
CME Program Evaluation Forms are included in each registrant’s packet. To receive CME Credit, you must complete a Program Evaluation Form for each educational sessions you attend. Leave the packets intact; including any blank sessions.

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:

ICS-US 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 14, 2014.

Convocation
Pre-registered participants in the convocation should return to the registration area by 5:30 pm to receive your gown, and ceremony instructions. Anyone who arrives after this time will not be able to participate in the convocation. If you did not meet the April 7 pre-registration deadline it will not be possible to participate in this year’s ceremony.

You may prefer to leave your suit jacket with a friend or relative or hang it at the Registration Desk during the Ceremony. (please do not leave any valuables with the jacket). Participants will be formally processing in to the event, please do not carry anything with you (bags, cameras, etc.)

Convocations guests should be seated in TN Grand Ballroom B by 6:20pm to allow the ceremony to begin on time. If you have previously participated in the convocation, please plan to attend this event so that we can offer a robust welcome to all of your new ICS colleagues.

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 their slides.

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 in the Schedule at a Glance. Every effort will be made to facilitate your request.

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.
Moderator and Presenter Index

A
Ahmad, Sarah Aftab .................................................................15
Alvear, Domingo T .................................................................12, 13, 14
Anderson, III, Harry Linne ..................................................11

B
Bess, Shay ...............................................................................8, 9, 10
Bhullar, Jasneet S .................................................................12
Boctor, Daniel Sherif Zakari ..................................................8, 10, 20
Boles, Gene E .........................................................................10, 20
Bongiorno, Frank .................................................................12
Brooks, Steven .......................................................................11
Buddensick, Thomas .............................................................12
Butler, Bryan N .....................................................................14

C
Chen, Leo ...............................................................................8, 9
Clark, Caitlin .........................................................................8, 10, 20
Clark, W. Craig .......................................................................9, 10, 20
Cobanoglu, Adnan M .............................................................15
Coles, Maxime J.M .................................................................10

D
Dardano, Jr. Anthony ..............................................................12, 16
Davidoff, Andrew ..................................................................13
Del Prado, Paul .......................................................................12
Dholakia, Shamik .....................................................................16
Dissaneike, Sharmila ..............................................................11

E
Egle, Jonathan ........................................................................12
Epstein, Jeffrey .......................................................................10, 21
Eubanks, III, James W ............................................................13

F
Feild, James R .........................................................................8, 9, 21

G
Gershank, Richard ..................................................................10, 21
Gonda, Jr., Roger L .................................................................15
Greenfield, Jr, Gerald O ..........................................................10, 21
Griswold, John Anthony ........................................................11

H
Halldorsson, Ari O ..................................................................11, 13, 15, 16
Harnidian Jahromi, Alireza .....................................................12
Hassan, Zaki ...........................................................................13
Hollinger, Dennis ....................................................................12

J
Jacobs, Michael J .................................................................14, 16

K
Kapur, Anish ..........................................................................15
Karas, Chris ..........................................................................10, 22
Karipineni, Farah ..................................................................16
Kelley, Cheryl .........................................................................15
Klot, Michel ...........................................................................8, 9, 10, 22

L
Labor, Phillips Kirk ..................................................................12
Legault, Randy .......................................................................13
Litwin, Demetrius ..................................................................9, 10, 11, 12, 13, 15
Luzardo, Gustavo ...................................................................8, 9

M
Mammen, Joshua ....................................................................14
Matier, Brian .........................................................................14
Mathews, William ...................................................................9, 11
Mehl, Judson ..........................................................................14
Mittemeyer, Bernhard T ........................................................15

O
Oliphant, Uretz ......................................................................11
Osier, Matthew .....................................................................15

P
Parikh, Janak .........................................................................15
Perlmutter, Mark ....................................................................11
Pino, Alfonso E ......................................................................10, 22
Pinto, Soniya ..........................................................................15
Podbielski, Francis J ..............................................................16
Powell, Victoria J ...................................................................10, 15
Puckett, Yana .........................................................................11

R
Ramaiah, Chand ....................................................................12
Rao, Bhaskar N .....................................................................10, 23
Rao, Sudhir B .........................................................................12
Rebel, Annette .......................................................................13
Reddy, Nikalesh .....................................................................15
Roscher, Arno ........................................................................13

S
Saidi, Reza F ...........................................................................16
Sallee, Caleb ...........................................................................16
Santana, Dixon ......................................................................15
Santry, Heena .......................................................................11
Sasaki, Larry S ........................................................................14
Savage, Stephanie ...................................................................11
Simpson, LeRone .....................................................................11
Subhas, Gokulakkrishna ........................................................12

T
Taggarshe, Deepa ..................................................................14
Taylor, Clive ..........................................................................13
Thambi-Pillai, Thavam ..........................................................16
Torres, Quirico .......................................................................10, 23
Torres, Ulises ........................................................................11

V
Vigineswaran, Wickii T ..........................................................9, 13
Vigineswaran, Yalini ..............................................................12

W
Wahid, Fazal Nouman ............................................................14
Williams, Regan ....................................................................15
Willis, Arnold J ......................................................................16
Wilson, Thomas D ..................................................................16

X
Xeller, Charles ......................................................................10, 23

Y
Yeguez, Jose ..........................................................................16

Z
Zamorano, Lucia .....................................................................10
**SCHEDULE AT A GLANCE**

**WEDNESDAY JUNE 11**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00-4:00 PM</td>
<td>Meeting Registration Prefunction</td>
</tr>
<tr>
<td>7:00-9:00 AM</td>
<td>Officer Breakfast</td>
</tr>
<tr>
<td>TN Grand Ballroom C</td>
<td></td>
</tr>
<tr>
<td>8:00-8:30 am</td>
<td>Endowment Fund, Board of Trustees Meeting</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>8:30-12:30 pm</td>
<td>US Section Standing Committee Meetings</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
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</tr>
<tr>
<td>12:30-1:30 pm</td>
<td>Officer Luncheon</td>
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<tr>
<td>TN Grand Ballroom C</td>
<td></td>
</tr>
<tr>
<td>1:30-3:00 pm</td>
<td>Board of Regents Meeting</td>
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<tr>
<td>Southeast Ballroom</td>
<td></td>
</tr>
<tr>
<td>3:00-5:00 pm</td>
<td>Executive Council &amp; House of Delegates Joint Meeting</td>
</tr>
<tr>
<td>Southeast Ballroom</td>
<td></td>
</tr>
<tr>
<td>6:00-7:00 pm</td>
<td>Welcome Reception</td>
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<tr>
<td>TN Grand Ballroom D&amp;E</td>
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</table>

**Thursday June 12**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:00-3:00 PM</td>
<td>Meeting Registration</td>
</tr>
<tr>
<td>TN Grand Foyer</td>
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</tr>
<tr>
<td>7:00-9:00 AM</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:00 AM</td>
<td>Opening Ceremony and Keynote Lecture</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>9:00 - 10:30 AM</td>
<td>Trauma Surgery in the 21st Century</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>10:00-11:00 AM</td>
<td>Explore Memphis</td>
</tr>
<tr>
<td>Director's Row 1</td>
<td></td>
</tr>
<tr>
<td>11:00-12:00 PM</td>
<td>Alliance Board of Directors &amp; General Membership Meeting</td>
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<tr>
<td>Director's Row 1</td>
<td></td>
</tr>
<tr>
<td>10:45 - Noon</td>
<td>Acute Care Surgery</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>Noon - 1:30 PM</td>
<td>Lunch Presentations</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>1:30 - 1:50 PM</td>
<td>Featured Lecture</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>1:50 - 3:20 PM</td>
<td>Annual Ethics Forum</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>3:30 PM-7:30 PM</td>
<td>Graceland Tour Excursion</td>
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<tr>
<td>Gather at Registration</td>
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**Friday June 13**

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>7:00-4:00 PM</td>
<td>Meeting Registration</td>
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<tr>
<td>TN Grand Foyer</td>
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<tr>
<td>7:00-9:00 AM</td>
<td>Continental Breakfast</td>
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<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>8:00 - 9:45 AM</td>
<td>Annual Research Scholarship Competition</td>
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<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>8:30 - Noon</td>
<td>Neurological &amp; Orthopaedic Surgery Part I</td>
</tr>
<tr>
<td>TN Grand Ballroom C</td>
<td></td>
</tr>
<tr>
<td>10:00 - Noon</td>
<td>Pediatric Surgery</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>10:00-11:00 AM</td>
<td>Explore Memphis</td>
</tr>
<tr>
<td>Director's Row 1</td>
<td></td>
</tr>
<tr>
<td>11:00-12:00 PM</td>
<td>Alliance Board of Directors &amp; General Membership Meeting</td>
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<tr>
<td>Director's Row 1</td>
<td></td>
</tr>
<tr>
<td>Noon - 1:30 PM</td>
<td>The Dr. Arno A. Roscher Endowed Lecture</td>
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<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>1:30 - 2:15 PM</td>
<td>Uses of Ultrasound in Surgery Lecture Series</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>2:00 - 5:00 PM</td>
<td>AANOS Board of Directors Meeting</td>
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<tr>
<td>TN Grand Ballroom D</td>
<td></td>
</tr>
<tr>
<td>4:00 - 6:00 PM</td>
<td>Uses of Ultrasound in Surgery Hands-On Workshop</td>
</tr>
<tr>
<td>TN Grand Ballroom E</td>
<td></td>
</tr>
<tr>
<td>4:00 - 6:00 PM</td>
<td>Alternatives in Minimally Invasive Colorectal Surgery Lecture Series</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
<td></td>
</tr>
<tr>
<td>7:00 PM</td>
<td>5th Annual AANOS Fundraising Event and Awards Dinner</td>
</tr>
<tr>
<td>TN Grand Ballroom C</td>
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**Saturday June 14**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:00-4:00 PM</td>
<td>Meeting Registration</td>
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<tr>
<td>TN Grand Foyer</td>
<td></td>
</tr>
<tr>
<td>7:00-9:00 AM</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>8:00 - Noon</td>
<td>Alternatives in Minimally Invasive Colorectal Surgery Hands-On Workshop</td>
</tr>
<tr>
<td>TN Grand Ballroom E</td>
<td></td>
</tr>
<tr>
<td>10:00 - Noon</td>
<td>Challenges in Vascular Surgery</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
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</tr>
<tr>
<td>11:00 - Noon</td>
<td>Abdominal Wall Reconstruction Lectures</td>
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<tr>
<td>Davidson Board Room</td>
<td></td>
</tr>
<tr>
<td>Noon - 1:30 PM</td>
<td>Lunch Presentations</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>1:30 - 2:15 PM</td>
<td>The Dr. Andre Crotti Award Recipient's Lecture</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
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</tr>
<tr>
<td>2:15 - 5:00 PM</td>
<td>Multidisciplinary Platform Presentations</td>
</tr>
<tr>
<td>TN Grand Ballroom A</td>
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</tr>
<tr>
<td>1:30 - 5:30 PM</td>
<td>Abdominal Wall Reconstruction Demonstration</td>
</tr>
<tr>
<td>TN Grand Ballroom E</td>
<td></td>
</tr>
<tr>
<td>6:30 PM</td>
<td>United States Section Convocation &amp; Presidential Recognition Ceremony</td>
</tr>
<tr>
<td>TN Grand Ballroom B</td>
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</tr>
<tr>
<td>7:30 PM</td>
<td>New Fellows Reception</td>
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<tr>
<td>TN Grand Foyer</td>
<td></td>
</tr>
<tr>
<td>8:30 PM</td>
<td>Gala Dinner</td>
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<tr>
<td>Southeast Ballroom</td>
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**Exhibit Show**

Representatives from several companies will be present in TN Grand Ballroom B.

Thursday 7:00-3:30 PM
Friday 7:00-6:00 PM
Saturday 7:00-1:30 PM

Please take a moment to visit these individuals whose support enhances our meeting.