

BREAKFAST FOR SEMINAR PARTICIPANTS

6:45–7:30 AM

EXHIBIT HOURS

9:00 AM–3:30 PM

BEVERAGE BREAKS

9:00–9:45 AM

2:45–3:30 PM

LUNCH BREAK

1:15–2:00 PM

WOMEN IN NEUROSURGERY (WINS)

WINS Breakfast

7:30–9:00 AM

Invitation only

BREAKFAST SEMINARS

7:30–9:30 AM

Fee: \$100 each, includes breakfast

301

Open vs. Endoscopic Approaches to the Anterior Skull Base

Moderator:

Fred Gentili, MD

Panelists:

Carlos A. David, MD

Atul Goel, MD

John A. Jane Jr., MD

Amin Kassam, MD

Sandeep M. Kunwar, MD

This seminar will review the pathologic conditions affecting the anterior cranial base and surgical strategies employed for extradural, intradural and combined compartment lesions. Panelists will discuss steps in avoidance and management of complications, demonstrate specialized (expert) surgical approaches and indicate the appropriate application of emerging

technology to anterior cranial base problems.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Describe the various approaches to the anterior skull base
- ✦ List pathologies that would indicate use of an anterior skull base approach
- ✦ Explain various approaches to the anterior skull base
- ✦ List the advantages of using the endoscope for anterior skull base approaches
- ✦ Current indications and limitations of endoscopic techniques

302

Cerebral Neuromonitoring

N&PE

Moderator:

Odette Althea Harris, MD, MPH

Panelists:

Helmut Bertalanffy, MD, Prof

Jeremy D. W. Greenlee, MD

Lawrence F. Marshall, MD

Shirley I. Stiver, MD, PhD

Daniel Yoshor, MD

This seminar will review the use of various cerebral neuromonitoring techniques for use in patients undergoing neurosurgical procedures and care in the neurosurgical intensive care unit.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss applications of electrophysiology, functional mapping, ICP monitoring, CBF measurements, TCD and tissue chemical analysis for patients undergoing cranial and spinal surgery
- ✦ Identify the uses for different cerebral and spinal neuromonitoring techniques for surgical and ICU patients
- ✦ Discuss application of electrophysiology, ICP monitoring, CBF measurements, TCD and tissue chemical analysis for patients in the neurosurgical intensive care unit

303

Emerging Concepts in Stem Cell Biology and Cell Based Therapies

Moderator:

John A. Boockvar, MD

Panelists:

Daniel James Guillaume, MD

Daniel A. Lim, MD, PhD

Nathan R. Selden, MD, PhD

Viviane S. Tabar, MD

Victor C. K. Tse, MD, PhD

The breakfast seminar will introduce participants to the basic biology of stem cells in the Central Nervous System (CNS). The seminar will focus on stem cell biology as it relates to CNS development, neurodegenerative disease, brain tumor formation and CNS injury. The seminar will focus on the “reality vs. hype” of stem cell based therapies for CNS injury or disease.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss the basic definitions and terminology related to Stem Cell Biology and the Central Nervous System
- ✦ Summarize recent advances in the Science of Stem Cells as it relates to CNS injury or disease
- ✦ Discuss recent advances in Stem Cell based therapies for the treatment of CNS injury or disease

304

International Opportunities in Neurosurgery

Moderator:

Benjamin T. White, MD

Panelists:

Atos Alves De Sousa, MD

Merwyn Bagan, MD, MPH

Armando Basso, MD

Yoko Kato, MD

Gail L. Rosseau, MD

This seminar will highlight past, present and future efforts of the Foundation for International Education in Neurological

Surgery (FIENS), an organization dedicated to fostering neurosurgical education and training in developing countries. Current volunteer activities at FIENS sites around the world will be provided and information on how to become a FIENS volunteer (for both attending and resident neurosurgeons) will be discussed.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss the current educational and material needs of neurosurgical training programs in the developing world
- ✦ Explain how to become an international neurosurgical volunteer

305

Epilepsy: New Surgical Treatment and Management Approaches

Moderator:

Lisa P. Mulligan, MD

Panelists:

Nicholas M. Barbaro, MD
 Frederick A. Boop, MD, FACS
 Gerald A. Grant, MD
 Kathryn Lois Holloway, MD
 Guy M. McKhann II, MD
 Dennis D. Spencer, MD

This seminar will examine the preoperative evaluation for surgery and emphasize the changing descriptive of the epileptogenic and how this may alter new surgical therapies.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Describe the common preoperative evaluations for surgery
- ✦ Describe what each evaluation provides
- ✦ Recognize how surgical approaches are made based on these evaluations

306

N&PE R,F&MS

Coil vs. Clip for Intracranial Aneurysms

Moderator:

Meryl A. Severson III, MD

Panelists:

Rocco A. Armonda, MD
 C. Michael Cawley, MD, FACS
 David M. Hasan, MD
 Demetrius K. Lopes, MD
 Adel M. Malek, MD, PhD
 Cameron G. McDougall, MD

Free for Residents, Fellows and Medical Students

This seminar will highlight the current controversies surrounding the optional management of ruptured and unruptured intracranial aneurysms. Experts in the field will present their perspectives, experience and ideas for future study.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Analyze individual patients and make more informed treatment recommendations
- ✦ Evaluate available data and determine their significance for ruptured and unruptured intracranial aneurysms
- ✦ Assess treatment failures in intracranial aneurysms
- ✦ Assemble strategies for salvage of intracranial aneurysms

307

R,F&MS

Peripheral Nerve Entrapment Syndromes

Moderator:

Eric L. Zager, MD

Panelists:

Allan J. Belzberg, MD
 David G. Kline, MD
 Shaun Thomas O'Leary, MD, PhD
 Robert J. Spinner, MD, FACS
 Lynda Jun-san Yang, MD, PhD

Free for Residents, Fellows and Medical Students

This seminar will discuss the evaluation and management of peripheral nerve entrapment syndromes.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Describe the clinical presentation and diagnostic evaluation of the various entrapment syndromes
- ✦ Discuss the conservative and surgical management options of peripheral nerve entrapment syndromes

308

Complications and Complex Spinal Surgery: Lessons Learned

Moderator:

Ziya L. Gokaslan, MD, FACS

Panelists:

Christopher Pearson Ames, MD
 John Joseph Knightly, MD
 Anthony H. Sin, MD
 Michael Y. Wang, MD
 Kevin C. Yao, MD

This seminar will utilize distinctive presentation and panel discussion of cases to analyze complications associated with complex spine surgery. An emphasis will be placed on complication avoidance and management.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Analyze the causes of surgical complications in the spine
- ✦ Formulate strategies to avoid and manage spine surgery complications and apply these principles to one's practice

309

Spondylolisthesis: Controversies in Management

Moderator:

Philip R. Weinstein, MD

Panelists:

Harel Deutsch, MD
 Robert F. Heary, MD
 Dennis J. Maiman, MD, PhD
 Paul J. Marcotte, MD
 Daniel K. Resnick, MD

A complete discussion of spondylolisthesis with emphasis on degenerative spondylolisthesis including treatment and treatment failures will be the focus of this seminar.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Recognize different types of spondylolisthesis and review the symptoms with natural history of each type
- ✦ Review indications for current treatment options of degenerative spondylolisthesis
- ✦ Recognize results and potential implications of treatment options for degenerative spondylolisthesis
- ✦ Describe complications and causes of treatment failure for degenerative spondylolisthesis
- ✦ Describe recent advances in diagnosis and treatment of degenerative spondylolisthesis

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N&PE

Cervical Spondylotic Myelopathy

Moderator:

Iain H. Kalfas, MD

Panelists:

Michael G. Kaiser, MD, FACS
 Paul K. Maurer, MD
 Praveen V. Mummaneni, MD
 Hiroshi Nakagawa, MD
 Brian R. Subach, MD, FACS

This seminar will look at how cervical myelopathy can be caused by disc herniation, hard bone spurring, congenital stenosis, OPLL and subluxations. In addition, there can be instability and deformity. Multiple cases will be presented and the participants, followed by the panel, will go over treatment options and guidelines.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Identify the various pathologies in myelopathy
- ✦ Distinguish the treatment (operative) options for cervical spondylotic myelopathy
- ✦ Review operative success/failure rates in cervical spondylotic myelopathy

311

Update in Psychosurgery

Moderator:

G. Rees Cosgrove, MD, FRCSC

Panelists:

Aviva Abosch, MD, PhD
 Paul S. Larson, MD
 Kendall H. Lee, MD, PhD
 Michael Y. Oh, MD
 Parag G. Patil, MD, PhD

This seminar will address the issues of surgery for psychiatric illness. Indications for surgery and the therapeutic results for different procedures will be discussed.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss neurobiological basis of psychiatric disorders
- ✦ Discuss currently available surgical treatments
- ✦ Discuss indications of psychosurgery
- ✦ Discuss current results for psychosurgical procedures

312

Vertebral Column Tumors

Moderator:

Mark H. Bilsky, MD

Panelists:

Peter C. Gerszten, MD, MPH
 James S. Harrop, MD
 Ehud Mendel, MD, FACS
 Laurence D. Rhines, MD
 Timothy C. Ryken, MD

This seminar is intended to provide an

overall review of management of both primary and metastatic spinal tumors. This would include cervical evaluation of patients, as well as various surgical resection/reconstruction technologies and state-of-the-art radiation therapy options.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Explain the differences in the approach to metastatic and primary spine tumors
- ✦ Discuss the difference between percutaneous cement augmentation and open surgery in the treatment of instability
- ✦ Discuss whether en bloc resection is the whole answer in primary bone tumors
- ✦ Explain how or if spinal radiosurgery has changed the treatment of metastatic spine tumors
- ✦ Discuss whether botox injections have helped postoperative muscle spasm and postradiation fibrosis

313

N&PE

Integrating Mid-Level Practitioners into Your Practice

Moderator:

Twyla Lay, NP, MS

Panelists:

Moustapha Abou-Samra, MD
 Dean Barone, PA-C, MPAS
 Matt El-Kadi, MD, PhD
 Thomas A. Kopitnik Jr., MD
 Webster H. Pilcher, MD, PhD

This seminar will discuss how to integrate a mid-level practitioner into your practice from an administrative and financial standpoint.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss the value a PA or NP can bring to your practice
- ✦ Discuss administrative incorporation of PAs and NPs into private and academic practice

- ✦ Describe reimbursement issues with use of a mid-level practitioner

314

R,F&MS

Surgical Approaches to the Lateral Skull Base

Moderator:

Jeffrey J. Olson, MD

Panelists:

Jeremy N. Ciporen, MD
John G. Golfinos, MD
Carl B. Heilman, MD
Joung H. Lee, MD
William Alex Vandergrift, MD

Free for Residents, Fellows and Medical Students

This seminar will address both commonly used and unusual surgical approaches to the lateral skull base and how to avoid complications.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss the pathologic processes best addressed by lateral skull base surgical approaches
- ✦ Discuss the strengths and weakness of a lateral skull base approach for a given pathologic process
- ✦ Describe the technical aspects of standard and unusual lateral skull base approaches
- ✦ Identify the most common complications to the lateral skull base and steps to take before, during and after surgery to avoid them

315

Models for a Successful Neurosurgical Practice

Moderator:

Clarence B. Watridge, MD, FACS

Panelists:

Paul Joseph Camarata, MD
Joseph S. Cheng, MD, MS
Richard Arthur Roski, MD
Craig Andrew Van Der Veer, MD

Building a booming and successful neurosurgical practice in this day and age is no simple task. Experts in community, academic and international neurosurgical practices will present the keys to building a successful practice while achieving quality patient care.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Explain the benefits of neurosurgical practice to hospital partnerships
- ✦ Discuss various reimbursement methodologies for partnerships
- ✦ Explore the complexities of payer contracting
- ✦ Familiarize oneself with the advances and advantages of electronic health records
- ✦ Explain the benefits of ancillary services to patients and practice

316

R,F&MS

Beginning Your Academic Career: Answers to Your Questions

Moderator:

Harold F. Young, MD

Panelists:

Robert J. Dempsey, MD
Jeffrey R. Leonard, MD
Fredric B. Meyer, MD
Bruce Tranmer, MD

Free for Residents, Fellows and Medical Students

An open forum for residents and faculty in academic programs seeking advice on how to advance their careers. Faculty will include prominent heads of academic programs. Audience question format is oral or written.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Explain future trends in academia
- ✦ Discuss career management in academia with experts
- ✦ Discuss the future of academic medicine

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R,F&MS NEW

Neuromodulation for Chronic Pain

Moderator:

Christopher J. Winfree, MD

Panelists:

George T. Mandybur, MD
Alon Y. Mogilner, MD, PhD
Julie Georgia Pilitsis, MD, PhD
Joshua M. Rosenow, MD
Donald M. Whiting, MD

Free for Residents, Fellows and Medical Students

This course is designed to stimulate interest in the field of neurosurgical pain management. This course will provide participants with detailed instruction in both the theory and application of a variety of neurostimulation techniques, including spinal cord stimulation, spinal nerve root stimulation, cranial nerve stimulation, motor cortex stimulation, and deep brain stimulation.

Learning Objectives:

- After completing this educational activity, participants should be able to:
- ✦ Explain the rationale for the use of neurostimulation, the types of painful conditions amenable to these techniques, and the limitations in their use
 - ✦ Discuss the proper patient selection to optimize beneficial outcomes when using these treatment strategies
 - ✦ Discuss the basic operative techniques as well as operative nuances when using implantable devices

318

N&PE R,F&MS

Evaluation of the Child with a CSF Shunt

Moderator:

Joseph H. Piatt Jr., MD

Panelists:

Bermans J. Iskandar, MD
Timothy B. Mapstone, MD
Tae Sung Park, MD

Free for Residents, Fellows and Medical Students

This seminar is intended for surgeons in general neurosurgical practice who follow and evaluate children with hydrocephalus and CSF shunts.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Conduct a focused history and examination of the child with a CSF shunt
- ✦ Plan a sensitive, specific and efficient diagnostic evaluation of symptoms compatible with CSF shunt failure
- ✦ Perform critical assessment of brain imaging studies in children with CSF shunts
- ✦ Select appropriate dispositions of children with shunts visiting the emergency department and recognize evolving, critical situations that require aggressive management
- ✦ Minimize risk of complications of management decisions and surgical technique

319

NEW

Using Stereoscopic 3D Video Recording in Neurosurgery Practice and Education

Moderator:

Lawrence F. Borges, MD

Panelists:

Saleem I. Abdulrauf, MD, FACS
 Antonio Bernardo, MD
 Michael M. D'Ambra, MD
 David Kaplan, MD, FRCS
 Albert L. Rhoton Jr., MD

This seminar will explore how 3D stereoscopic video technology can be used by neurosurgeons to enhance their practice of neurosurgery and to improve neurosurgical education.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss the difference between 2D and 3D video
- ✦ Discuss the special and additional

technology that is required to acquire and produce 3D video

- ✦ Compare and contrast the different display methods for using this 3D video for enhancing education
- ✦ Discuss how the special tools of 3D video can provide greater content for neurosurgical education
- ✦ Discuss how the increased content displayed with 3D video can be used to improve the practice of neurosurgery

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NEW

Unexpected Intraoperative Vascular Complications During Intracranial Surgery-What to Do Next: A Video Presentation

Moderator:

Aaron A. Cohen-Gadol, MD

Panelists:

Johnny B. Delashaw Jr., MD
 Lorenzo F. Munoz, MD
 Troy D. Payner, MD
 Duke S. Samson, MD
 Robert A. Solomon, MD

The seminar will include a review of 10-15 surgical videos of the most challenging moments in cerebrovascular and skull base surgery involving unexpected vascular injury (intraop aneurysm rupture, carotid injury during transsphenoidal surgery etc.) The panelists will discuss their management scheme. The final outcome based on the management of the surgeon at the time will be reviewed.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Evaluate and prevent techniques that would place vascular structures at risk during intracranial surgery
- ✦ Manage unexpected vascular injuries during cerebrovascular and skull base surgery
- ✦ Discuss various ramifications associated with methods to repair intraoperative vascular injuries

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NEW

Maintenance of Certification: Current Status and Trends

Moderator:

Nelson M. Oyesiku, MD, PhD

Panelists:

Charles L. Branch Jr., MD
 Erica D. Cleveland
 Warren R. Selman, MD

The panelists will describe and discuss the MOC process, current standards and future implementation of MOC. Current and future ABNS Diplomates will find the session instructive.

Learning Objectives:

After completing this educational activity, participants should be able to:

- ✦ Discuss the rationale and process of MOC and demonstrate how to collect data from their clinical practice to meet the requirements of MOC
- ✦ Describe the current standards and future trends of the MOC process

PLENARY SESSION III

9:45 AM–1:00 PM

Moderators:

Nicholas M. Barbaro, MD
 Carl B. Heilman, MD

9:45–10:04 AM

LOUISE EISENHARDT LECTURE

Introduced By:

Karin M. Muraszko, MD

Speaker:

Mary Sue Coleman

800 10:05–10:19 AM

STRYKER NEURO-ONCOLOGY AWARD
Preoperative ACTH Stimulation Test and Immediate Postoperative Cortisol Levels Accurately Predict Postoperative Hypothalamic-Pituitary-Adrenal Axis Function after Transsphenoidal Surgery

Authors:

Nicholas F. Marko, MD; Amir H. Hamrahan, MD; Robert J. Weil, MD (Cleveland, OH)

801 10:20–10:34 AM

Complications of Gamma Knife Surgery in a Series of 1400 Patients with Cerebral AVMs

Authors:

Chun-Po Yen, MD; Jason P. Sheehan, MD, PhD; Ladislau Steiner, MD, PhD (Charlottesville, VA)

802 10:35–10:49 AM

Endoscopic Third Ventriculostomy in Adults: A Technique to Deal with the Neural (Opaque) Floor

Authors:

Walter Grand, MD; Jody Leonardo, MD (Buffalo, NY)

803 10:50–11:04 AM

Optimal Management of Anticoagulation Following Central Nervous System Hemorrhage in Patients with High Thromboembolic Risk

Authors:

Gregory W. Hawryluk, MD; James Austin, MSc; Julio Furlan, MD; Jang Bo Lee, MD; Cian O’Kelly, MD, MSc; Michael G. Fehlings, MD, PhD, (Toronto, Canada)

11:04–11:09 AM

HUMANITARIAN AWARD

Presented By:

Christopher M. Loftus, MD, FACS

Recipient:

Timir Banerjee, MD

804 11:10–11:24 AM

Cortical Biopsy and Empirical Post-Operative Shunt Programming: A Novel Approach to Idiopathic Normal Pressure Hydrocephalus

Authors:

Joel A. Bauman, MD; Peter Madsen, BS; Roy Hamilton, MD, MS; Sunil Patel, MS; Anuj Basil, MD (Philadelphia, PA); Eric M. Jackson, MD (Boston, MA); Edward B. Lee, MD; Joanna Lopinto, BSN, RN; Steven E. Arnold, MD; Christopher M. Clark, MD; Leslie M. Shaw, MD; John Q. Trojanowski, MD, PhD; M S. Grady, MD (Philadelphia, PA)

805 11:25–11:39 AM

High-Dose Intra-Arterial Verapamil for the Treatment of Cerebral Vasospasm after Subarachnoid Hemorrhage: Prolonged Effects on Hemodynamic Parameters and Brain Metabolism

Authors:

Robert M. Stuart, MD; Raimund Helbok, MD; Pedro Kurtz, MD; Michael Schmidt, PhD; Luis Fernandez, MD; Kiwon Lee, MD; Neeraj Badjatia, MD; Stephan Mayer, MD; Sean Lavine, MD; Philip Meyers, MD; Jan Claassen, MD (New York, NY)

806 11:40–11:54 AM

Long-Term Outcome after Less Invasive Surgery for Decompression of Lumbar Stenosis – A Randomized Comparison of Unilateral Laminotomy, Bilateral Laminotomy and Laminectomy

Authors:

Claudius Thome, MD; Gerrit A. Schubert, MD; Reinhard Stier; Aldemar A. Hegewald, MD; Peter Schmiedek, MD (Mannheim, Germany)

807 11:55 AM–12:09 PM

The Value of Glioblastoma Extent of Resection: A Volumetric Analysis of 500 Patients

Authors:

Nader Sanai, MD (Phoenix, AZ); Zaman Mirzadeh, MD; Mei-Yin Polley, PhD; Mitchel S. Berger, MD (San Francisco, CA)

808 12:10–12:24 PM

Complications of Transforaminal Lumbar Interbody Fusion: A Single Center Experience

Authors:

Matthew Tormenti, MD; Matthew B. Maserati, MD; Christopher M. Bonfield, MD; Peter C. Gerszten, MD; John J. Moossy, MD; Adam S. Kanter, MD; Richard M. Spiro, MD; David O. Okonkwo, MD, PhD (Pittsburgh, PA)

809 12:25–12:39 PM

INTERNATIONAL ABSTRACT AWARD
Endovascular Treatment of Ruptured Intracranial Aneurysms with Pipeline™ Flow-Diverter Stent: Pros and Cons

Authors:

Pedro Lylyk, MD, Prof; Boris Pabon, MD; Angel Ferrario, MD; Esteban Scrivano, MD; Javier Lundquist, MD; Rosana Ceratto, MD; Rodolfo Nella, MD (Buenos Aires, Argentina)

12:40–1:00 PM

THEODORE KURZE LECTURE

Introduced By:

Troy M. Tippet, MD

Microsurgical Anatomy and Safe, Gentle and Accurate Neurosurgery

Speaker:

Albert L. Rhoton Jr., MD

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N&PE

Endovascular Management of Ischemic and Hemorrhagic Stroke

2:00–5:00 PM

Fee: \$100

Free for N&PE

Moderator:

Adnan H. Siddiqui, MD, PhD

Speaker:

Bernard R. Bendok, MD

Peng Roc Chen, MD

Kai U. Frerichs, MD

Elad I. Levy, MD, FACS

Kenneth M. Liebman, MD

Laura Mason, ANP-C

See page 69 for more details

2:45–5:30 PM

AANS SECTION ON HISTORY

Moderators:

Charles Joseph Prestigiacomo, MD, FACS

Mark C. Preul, MD

2:45–4:05 PM

SYMPOSIUM

History of Philadelphia Neuroscience

Moderators:

James T. Goodrich, MD

Chris A. Sloffer, MD, MBA

2:45–3:04 PM

Dr. Frazier: Pioneer in Philadelphia Neurosurgery

Speaker:

Eugene S. Flamm, MD

3:05–3:24 PM

The Contributions of W.W. Keen

Speaker:

James L. Stone, MD, FACS

3:25–3:44 PM

Pennsylvania History

Speaker:

TBA

3:45–4:04

Discussion

810

4:06–4:15 PM

VESALIUS AWARD

The Discovery of the Pyramidal Neurons: Vladimir Betz and a New Era of Neuroscience

Authors:

Sergiy V. Kushchayev, MD (Phoenix, AZ); Vitaiy I. Tymbaliuk, MD; Viktor G. Cherkasov, MD (Kiev, Ukraine); Volker K.H. Sonntag, MD; Robert F. Spetzler, MD; Mark C. Preul, MD (Phoenix, AZ)

811

4:16–4:25 PM

Josef Klingler: Modeling of White Matter Tracts and an Anatomic Guide for Stereotactic Neurosurgery

Authors:

Abhishek R. Agrawal, MD; Aman Deep, MD (Phoenix, AZ); Hermann Wichers, PhD; Annetrudi Kress, MD, PhD; Josef P. Kapfhammer, MD (Basel, Switzerland); Volker K.H. Sonntag, MD; Robert F. Spetzler, MD; Mark C. Preul, MD (Phoenix, AZ)

812

4:26–4:35 PM

Sushruta: Surgeon of Ancient India

Authors:

Kiran F. Rajneesh, MD, MS; Alexander J. Lin, BS (Irvine, CA); Deepali N. Tukaye, MD, PhD (Baltimore, MD); James J. Yeh; Huzaifa Hakimuddin; Devin K. Binder, MD, PhD (Irvine, CA)

813

4:36–4:45 PM

John Hunter's Giant

Authors:

James L. Stone, MD, FACS (Chicago, IL); James T. Goodrich, MD, PhD (New York, NY); George R. Cybulski, MD, FACS (Chicago, IL)

814

4:46–4:55 PM

Harvey Cushing's Contributions to Mapping the Motor and Sensory Cortex 1896-1912

Authors:

Courtney Pendleton, BS; Hasan A. Zaidi, BS; Shaan Raza, MD; Kaisorn Chaichana, MD; Benjamin S. Carson, MD (Baltimore, MD); Aaron A. Cohen-Gadol, MD, MSc (Indianapolis, IN); Alfredo Quinones-Hinojosa, MD (Baltimore, MD)

815

4:56–5:05 PM

The Early History of Pituitary Surgery for Cushing's Disease

Authors:

Gautam U. Mehta, MS (Bethesda, MD); Edward H. Oldfield, MD, FACS (Charlottesville, VA)

816

5:06–5:15 PM

The Early Professionalization of Neurosurgery: Cushing's and Sach's "Neuro-Surgical Club"

Authors:

Mark C. Preul, MD; Daniel D. Cavalcanti, MD; Robert W. Ryan, MD (Phoenix, AZ); Russel H. Patterson Jr., MD (New York, NY)

817

5:16–5:25 PM

Intraneural Ganglia: From Curiosity to Controversy to Characterization

Authors:

Robert J. Spinner, MD; Marie-Noelle Hebert-Blouin, MD; Huan Wang, MD; Diana Angius, MD; Janine Hegarty (Rochester, MN)

5:26–5:30 PM

Question and Answer

2:45–5:30 PM

AANS/CNS SECTION ON PAIN

Moderators:

Alon Y. Mogilner, MD, PhD
Julie Georgia Pilitsis, MD, PhD

818

2:45–3:00 PM

WILLIAM SWEET AWARD

Microvascular Decompression after Failed Gamma Knife Radiosurgery for Trigeminal Neuralgia

Authors:

Raymond F. Sekula, MD; Andrew M. Frederickson, BS; Peter J. Jannetta, MD; Sanjay Bhatia, MD; Matthew R. Quigley, MD (Pittsburgh, PA)

819

3:01–3:08 PM

Local and Sustained Anticytokine Delivery Reverses Gait and Sensory Changes in Experimental Disc Herniation Radiculopathy

Authors:

Mohammed F. Shamji, MD, PhD (Ottawa, Canada); Kyle D. Allen, PhD; Mostafa Gabr, MD; Michael Sinclair, BS; Brian Mata, MD; Dana L. Nettles, PhD; Jun Chen, PhD; Liufang Jing, MS; William J. Richardson, MD; Lori A. Setton, PhD (Durham, NC)

820

3:09–3:17 PM

Commissural Myelotomy in the Treatment of Intractable Visceral Pain: Technique and Outcomes

Authors:

Ashwin Viswanathan, MD; Allen W. Burton, MD; Ian McCutcheon, MD (Houston, TX)

821

3:18–3:26 PM

Posterior Fossa Exploration for Trigeminal Neuralgia Patients Older than 70 Years of Age

Authors:

Bruce E. Pollock, MD; Terry K. Schiefer, MD; Kathy J. Stien, RN (Rochester, MN)

822

3:27–3:35 PM

Minimally Invasive Outpatient Implantation of Spinal Cord Stimulation Laminectomy Electrodes: An Alternative to Percutaneous Placement?

Authors:

Jonathan P. Miller, MD; Alia Hdeib, MD (Cleveland, OH)

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3:36–3:44 PM

Neuropathic Pain Mechanisms in the Dorsal Root Ganglia

Authors:

Gabriel C. Tender, MD; Jianguo Cui, MD, PhD (New Orleans, LA)

3:45 AM–4:30 PM

LOESER LECTURE

Neurostimulation of the Peripheral Nervous System. What is Old and What is New?

Speaker:

Giancarlo Barolat, MD

4:31–5:15 PM

Complex Regional Pain Syndrome: Insights on Pathophysiology and Treatment

Speaker:

Robert J. Schwartzman, MD

5:16–5:30 PM

Question and Answer

2:45–5:30 PM

AANS/CNS SECTION ON PEDIATRICS

Moderators:

George I. Jallo, MD
David W. Pincus, MD, PhD

2:45–3:30 PM

DONALD D. MATSON LECTURE

Introduced By:

Ann-Christine Duhaime, MD

Genetic Control of Brain Development

Speaker:

Jeffrey Golden, MD

3:31–3:38 PM

KENNETH SHULMAN AWARD

Cell Proliferation and Neuronal Migration after Closed Head Injury in the Immature Piglet

Recipient:

Symeon Missios, MD

3:39–3:40 PM

Invited Response

3:41–3:48 PM

HYDROCEPHALUS AWARD

Immortalization and Functional Characterization of Rat Arachnoid Cells

Recipient:

Christopher G. Janson, MD

3:49–3:50 PM

Invited Response

824

3:51–3:58 PM

Predictors for Outcome after Surgery for Chiari Malformation Type 1

Authors:

Katherine E. Hekman, BA; Leonardo Aliagra, BA; Aman Gaurav-Luther, BS; David M. Frim, MD, PhD (Chicago, IL)

3:59–4:00

Invited Response

825 4:01–4:08 PM

**WINS LOUISE EISENHARDT
RECIPIENT**

**Pseudotumor Cerebri after Surgical
Remission of Cushing's Disease**

Authors:

Erin Kiehna, MD (Charlottesville, VA);
Meg Keil, RN; Maya Lodish, MD;
Constantine Stratakis, MD (Bethesda,
MD); Edward H. Oldfield, MD
(Charlottesville, VA)

4:09–4:10 PM

Invited Response

826 4:11–4:18 PM

**Results from a 20-Year Experience
of Pediatric Arteriovenous
Malformation Radiosurgery**

Authors:

Bruce E. Pollock, MD; Michael J. Link,
MD; Paula J. Schomberg, MD
(Rochester, MN)

4:19–4:20 PM

Invited Response

827 4:21–4:28 PM

**Surgical Management for Cranial
Congenital Dermal Sinus**

Authors:

Chiachien J. Wang, PhD; Tien T.
Nguyen, MD; Mark D. Krieger, MD; J.
Gordon McComb, MD (Los Angeles,
CA)

4:29–4:30 PM

Invited Response

828 4:31–4:38 PM

**Minimally Invasive Endoscopic
Transventricular Hemispherotomy for
Medically Intractable Epilepsy – A
New Approach and Cadaveric
Demonstration**

Authors:

Biji Bahuleyan, MD; Sunil Manjila,
MD; Alan R. Cohen, MD, FACS
(Cleveland, OH)

829 4:39–4:46 PM

**Brain Tumors in the First Year of Life
- The CHEO Experience**

Authors:

Mohammed F. Shamji, MD, PhD;
Naveen Mehrotra, MD; Michael
Vassilyadi, MD; Enrique Ventureyra,
MD (Ottawa, Canada)

830 4:47–4:54 PM

**Complications in Pediatric Spine
Surgery: A Comparative Survey of
the Perceptions of Surgeons,
Caregivers, and Patients**

Authors:

Shobhan H. Vachhrajani, MD (Toronto,
Canada); Daniel H. Fulkerson, MD;
Alison Brayton, RN (Houston, TX);
Abhaya V. Kulkarni, MD, PhD
(Toronto, Canada); Andrew H. Jea, MD
(Houston, TX)

831 4:55–5:02 PM

**Endoscopic Lamina Terminalis
Fenestration for Treatment of
Obstructive Hydrocephalus Following
Failed ETV**

Authors:

Amer Khalil, MD; Xiao Di, MD, PhD
(Cleveland, OH)

832 5:03–5:10 PM

**Pediatric Spine Injuries (Report of
43 Cases)**

Authors:

Mohammad R. Ehsaei, MD (Mashhad,
Iran)

833 5:11–5:18 PM

**Multifactorial Etiology in
Spontaneous Neonatal Intracranial
Hemorrhage**

Authors:

Selfy Oswari, MD; M. Zafrullah Arifin,
MD; Akhmad Imran, MD (Bandung,
Indonesia)

5:19–5:30 PM

Open Discussion

5:31–6:00 PM

PEDIATRICS BUSINESS MEETING

2:45–5:30 PM

AANS/CNS SECTION ON

PERIPHERAL NERVE

Moderators:

Allen H. Maniker, MD
Lynda Jun-san Yang, MD, PhD

2:51–3:30 PM

**INTEGRA FOUNDATION DAVID G. KLINE
LECTURESHIP**

Introduced By:

Robert J. Spinner, MD, FACS

Speaker:

Alan R. Hudson, MD

3:31–4:45 PM

**Symposium: What's New in
Peripheral Nerve Surgery?**

3:31–3:45 PM

Brachial Plexus Surgery

Speaker:

Rajiv Midha, MD, MS, FRCS

3:46–4:00 PM

Entrapments

Speaker:

Eric L. Zager, MD

4:01–4:15 PM

Benign Tumors

Speaker:

Robert J. Spinner, MD, FACS

4:16–4:30 PM

Malignant Tumors

Speaker:

Abhijit Guha, MD

4:31–4:45 PM

Pain

Speaker:

Allan J. Belzberg, MD

834 4:46–4:52 PM

Role of Surgical Resection of Malignant Peripheral Nerve Sheath Tumors in Patients with NF1

Authors:

Gavin P. Dunn, MD, PhD; Scott R. Plotkin, MD, PhD; Ziv Williams, MD (Boston, MA)

4:53–4:54 PM

Discussion

835 4:55–5:01 PM

The Surgical Treatment of Posttraumatic Brachial Plexus Lesions- A Personal Experience of 78 Cases

Authors:

Sumit Sinha, MD; Ashok K. Mahapatra, MD; Mahesh C. Misra, MD (New Delhi, India)

5:02–5:03 PM

Discussion

836 5:04–5:10 PM

Outcome after Delayed Oberlin Transfer in Brachial Plexus Injury

Authors:

Manish S. Sharma, MS; Gopal Sedain, MS; Bhawani S. Sharma, MS (New Delhi, India)

5:11–5:12 PM

Discussion

837 5:13–5:19 PM

Use of Ultrasonography In Ulnar Nerve Entrapment Surgery-A Prospective Study

Authors:

Hakan Simsek, MD; Ahmet M. Kutlay, MD; Ahmet Çolak, MD, Prof; Serdar Kaya, MD; Mehmet N. Demircan, MD, Prof (Istanbul, Turkey)

5:20–5:21 PM

Discussion

838 5:22–5:28 PM

Matching of Motor-Sensory Modality in the Rodent Femoral Nerve Model Shows No Enhanced Effect on Long-Term Peripheral Nerve Regeneration

Authors:

Wilson Z. Ray, MD; Philip J. Johnson, PhD; David H. Kawamura, MD; Thomas H. Tung, MD; Susan E. Mackinnon, MD (St Louis, MO)

5:29–5:30 PM

Discussion

2:45–5:30 PM

AANS/CNS SECTION ON TUMOR II

Moderator:

Bob S. Carter, MD, PhD

2:45–4:00 PM

SYMPOSIUM

2:45–2:54 PM

Introduction to Brain Mets Guidelines

Speaker:

Steven N. Kalkanis, MD

2:55–3:04 PM

Role of Whole Brain Radiation Therapy

Speaker:

Minesh P. Mehta, MD

3:05–3:14 PM

Role of Surgical Resection

Speaker:

Roy Andrew Patchell, MD

3:15–3:24 PM

Role of Stereotactic Radiosurgery

Speaker:

Mark E. Linskey, MD

3:25–3:34 PM

Medical Management- Chemo, Steroids, Anticonvulsants

Speaker:

Timothy C. Ryken, MD

3:35–3:44 PM

Recurrent Disease and Emerging/Novel Therapies

Speaker:

Charles S. Cobbs, MD

3:45–3:49 PM

Conclusion

Speaker:

Steven N. Kalkanis, MD

3:50–4:00 PM

Question and Answer Session

839 4:01–4:10 PM

High Rates of Language Deficit Following Parietal Glioma Resection

Authors:

Nader Sanai, MD (Phoenix, CA); Juan Martino, MD; E.J. Hendricks, BS; Mitchel S. Berger, MD, FACS (San Francisco, CA)

840 4:11–4:20 PM

Long-term Outcomes Following Gamma Knife Radiosurgery in the Treatment of Nonsecretory Pituitary Adenomas

Authors:

Rupa Gopalan, BS; Bhuvanewara Basina, MD; Mohamed A. Khaled, MD; Jason P. Sheehan, MD, PhD (Charlottesville, VA)

841 4:21–4:30 PM

Impact of Surgical Methodology – Piecemeal versus En Bloc Resection – On the Early Neurological and Functional Outcomes of Patients with a Newly Diagnosed Single Brain Metastasis

Authors:

Akash J. Patel, MD; Dima Suki, PhD; Benjamin D. Fox, MD; Wael Hassaneen, MD; Mustafa Aziz Hatiboglu, MD; Raymond Sawaya, MD (Houston, TX)

842 4:31–4:40 PM

Quantification of Glioma Removal by Intraoperative High-Field Magnetic Resonance Imaging

Authors:

Daniela Kuhnt, MD (Marburg, Germany); Sven Martin Schlaffer; Oliver Ganslandt, PhD, MD; Michael Buchfelder, PhD, MD (Erlangen, Germany); Christopher Nimsky, PhD, MD (Marburg, Germany)

843 4:41–4:50 PM

SETA – Simplified Endoscopic Transnasal Approach

Authors:

Yvonne Mondorf, MD; Katja Plasmans, MD; Michael Robert Gaab, MD, PhD (Hannover, Germany)

844 4:51–5:00 PM

PREUSS AWARD

Modeling Angiogenesis and Therapeutic Response to Notch Inhibition in a Novel 3-D Organotypic Culture System of Glioblastoma

Authors:

Viviane S. Tabar, MD; Rong Wang, PhD; Fumiko Shimizu, PhD; Georgia Panagiotakos, BS; Maartje van der Heijden; Tamara Major, PhD; Jayanthi Menon, MS; Koos Hovinga, MD (New York, NY)

845 5:01–5:10 PM

Hypofractionated High-Dose Irradiation Using IMRT Planned by Methionine PET for the Treatment of Glioblastoma Multiforme

Authors:

Kazuhiro Miwa, PhD, MD; Jun Shinoda, MD, PhD; Masayuki Matsuo, MD, PhD; Mikito Yamada, MD, PhD; Takeshi Ito, MD, PhD; Kazutoshi Yokoyama, MD, PhD; Jitsuhiro Yamada, MD, PhD (Japan, Minokamo, Gifu); Hirohito Yano, MD, PhD; Toru Iwama, MD, PhD (Gifu, Japan)

846 5:11–5:20 PM

Venous Infarction after Meningioma Surgery: Incidence, Risk Factors, and Outcome in 705 Patients

Authors:

Michael E. Sughrue, MD; Martin J. Rutkowski, BA; Gopal Shangari, BA; Shanna Fang, BS; Andrew T. Parsa, MD, PhD; Mitchel S. Berger, MD, FACS; Michael W. McDermott, MD (San Francisco, CA)

847 5:21–5:30 PM

Clinical Outcomes after Surgical Resection of Lesions in Eloquent Cortex using Functional MRI

Authors:

Mark P. Garrett, MD; David Wilson, MD; Leslie Baxter, PhD; Kris Smith, MD (Phoenix, AZ)

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