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# Week at a Glance

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2012 Recognition

Ziya L. Gokaslan, MD  
Rhoton Family Lecture  
Plenary Session I  
Monday, April 16

James R. Bean, MD  
Distinguished Service Award  
Plenary Session I  
Monday, April 16

Brian Greene, PhD  
Theodore Kurze Lecture  
Plenary Session I  
Monday, April 16

Leonidas Quintana, MD  
AANS International Lifetime Recognition Award  
Plenary Session I  
Monday, April 16

Jeffrey N. Bruce, MD  
Ronald L. Bittner Lecture  
Scientific Session I - Tumor  
Monday, April 16

Phillip A. Starr, MD, PhD  
Hunt-Wilson Lecture  
Plenary Session II  
Tuesday, April 17

Donald O. Quest, MD  
Cushing Medalist  
Plenary Session II  
Tuesday, April 17

J. Craig Venter, PhD  
Cushing Orator  
Plenary Session II  
Tuesday, April 17

Cynthia Breazeal  
Louise Eisenhardt Lecture  
Plenary Session III  
Wednesday, April 18

Karin Muraszko, MD  
Van Wagenen Lecture  
Plenary Session III  
Wednesday, April 18

Anthony L. Asher, MD  
Richard C. Schneider Lecture  
Plenary Session III  
Wednesday, April 18

A. Leland Albright, MD  
Humanitarian Award  
Plenary Session III  
Wednesday, April 18
Special Events

AANS International Reception & Award Program
Monday, April 16
6:30-8:00 PM
Bongos Cuban Café

Join leaders from the AANS, international neurosurgical organizations, and special dignitaries speaking in this year’s FLANC International Symposium, during this year’s International Reception. In addition to connecting with colleagues from around the globe, attendees may also meet this year’s International Lifetime Recognition Award recipient: Leonidas Quintana, MD. This prestigious award honors Dr. Quintana for his lifetime of invaluable contributions to neurosurgery, as well as his activity in international neurosurgery. More information on award and fellowship recipients is posted on the AANS website in the “International Activities” tab at www.AANS.org.

In Bongos Cuban Café, “Miami meets Old Havanas tropical ambiance, cuisine, and style.” A DJ will keep the music pumping and Latin and Cuban-inspired hors d’oeuvres will make you feel tropical. Don’t miss spectacular views of the port of Miami, Biscayne Bay, and the Downtown Miami skyline.

There is no fee to attend; however a ticket is required which may be obtained at Lobby C Registration. The American Association of Neurological Surgeons welcomes all annual scientific meeting registered attendees—especially our colleagues from outside the United States.

Attire for the event is Business. Shuttle buses to the AANS International Reception will depart at 6:15 pm to Bongos Cuban Café from the following hotels:

- Loews Miami Beach Hotel
- Fontainebleau Miami Beach
- Hilton Miami Downtown
- Epic Hotel

AANS History Section Dinner
Monday, April 16
6:15-8:30 PM
Rusty Pelican
Key Biscayne, FL

Invited Speaker: Corey Malcom
Director of Archaeology
Mel Fisher Maritime Heritage Society

Enjoy an evening of shipwreck storytelling at this year’s annual dinner of the American Association of Neurological Surgeons (AANS) History Section, to be held at the scenic Rusty Pelican Waterfront Restaurant in Key Biscayne, Fla.

The night will begin at 6:15 p.m. with a half-hour cocktail reception—this is a perfect opportunity to socialize with new and long-time colleagues as you enjoy a spectacular view of Miami and the surrounding bay area. Dinner will begin at 6:45 p.m. Your meal will be followed by a presentation by Corey Malcom of the famous Mel Fisher Maritime Museum in Key West, Fla. This is an event that will surely entertain and enlighten, taking you deep into the ocean and back into history.

During Malcom’s 25 years as the museum’s director of archeology, he has participated in some of the most significant shipwreck research projects in history, including the 1622 galleon *Nuestra Señora de Atocha*, the 1700 English slaver *Henrietta Marie* and the 1564 galleon *Santa Clara*. He also organized the successful survey to locate the long-lost African Cemetery on Key West. Since 2002, he has spearheaded the multi-agency effort to locate the wreck of the pirate-slaver *Guerrero*. A graduate of Indiana University, Bloomington, Ind., and Nova Southeastern University, Fort Lauderdale-Davie, Fla., Malcom is a PhD candidate at the University of Huddersfield, West Yorkshire, U.K.

About the Search for the Pirate-Slaver Guerrero: On Dec. 19, 1827, while being chased by the British Royal Navy schooner HMS *Nimble*, the Havana, Cuba-based pirate ship *Guerrero* wrecked on a South Florida reef and sank. The ship, after a crime-spree along the African coast, was sailing to Cuba with 561 African captives onboard; 41 were drowned. The wreck’s sur-
vivors were rescued by wreckers, but the pirates rose up against the Samaritans, hijacked them and continued their voyage to Cuba. The *Nimble* wrecked, too, but was refloated and repaired.

With such a dramatic tale, and because of its historical significance as one of the few ships known to have wrecked as an active slaver, *Guerrero* has been the subject of much curiosity. Since 2002, the Mel Fisher Maritime Museum, the RPM Nautical Foundation, The National Association of Black Scuba Divers, and the Florida Keys National Marine Sanctuary have partnered to search for and document the wreck sites of both *Guerrero* and *Nimble*. Using sophisticated marine survey gear, and spending considerable time both on and under the water, searchers have, through their efforts, located two promising targets. Malcom, organizer of the search for *Guerrero*, will present an overview of the ship’s fascinating history, and outline today’s efforts to locate and document its remains.

To register for the AANS 2012 Annual Scientific Meeting as well as the AANS History Section Dinner, visit www.aans.org/Annual%20Meeting/2012/Registration.aspx. Tickets can be purchased on-site at the AANS Annual Meeting Registration counters in Registration C, Lobby. Tickets may be purchased until 12:00 PM on Monday, April 16. Space is limited, so register early for this wonderful event. Transportation will be provided; busses will depart from the Loews Miami Beach Hotel and the Miami Beach Convention Center at 5:45 p.m.

If you plan to attend the Albert L. Rhoton Jr. Tribute for the establishment of the Rhoton Endowment for Research - to be held at 8:30 p.m. at Miami’s famous Bongos Cuban Café - transportation will be provided immediately following the dinner.

**WINS Breakfast**  
**Wednesday, April 18**  
**7:30-9:00 AM**  
**Cowrie 1 & 2, Loews Miami Beach Hotel**  
For the sixth year, the Women in Neurosurgery organization is providing AANS Annual Meeting attendees an opportunity to network at a breakfast reception featuring the Louise Eisenhardt Lecturer, Cynthia Breazeal, DCS as our honored guest. If you would like to purchase tickets, please stop by the AANS Annual Scientific Meeting Lobby C Registration.

**NREF Donor and Grant Recipients Reception**  
**Tuesday, April 17**  
**5:30-7:00 PM**  
**Poinciana 1, Loews Miami Beach Hotel**  
Please join us for the annual NREF Donor and Grant Recipient Reception, where Cushing Donor-level ($1,000 and above) supporters will be recognized for their generous support of the NREF and meet incoming and outgoing Research Fellows and Young Clinician Investigators. The NREF hopes that you will contribute and can attend this exclusive, invitation-only event, to be held Tuesday, April 17, 2012. If you wish to attend, simply make your donation to the NREF through the AANS website at www.aans.org/AANSlegacyForms/research/neurosurgery/donation_f.asp or at Lobby C Registration, or stop by the AANS Resource Center, booth #1330. We thank you for your support and hope to see you there!
Special Events

NREF Research Symposium
Tuesday, April 17
4:00-5:30 PM
Americana Ballroom Salon 1
Loews Miami Beach Hotel

Individual donors, corporate sponsors, department chairs and clinical sponsors, as well as current and past NREF grant recipients, are invited to attend the fourth annual NREF Research Symposium to be held Tuesday, April 17, 2012. This invitation-only event will feature presentations by select awardees who recently completed their research and be moderated by members of the NREF’s Scientific Advisory Committee, led by Edward H. Oldfield, MD. This exclusive symposium fosters collegial ties among awardees and exposes their work to academic faculty and department chairs. It also gives NREF contributors the chance to witness the impact of their support and the difference it has made to the residents and young faculty members who receive research grants. We thank you for your support and hope to see you there!
2012 Annual Scientific Meeting Highlights

Budgets, Deficits, and Health Care: A Town Hall Discussion with former U.S. Senator Alan Simpson

Sunday, April 15
4:00-5:30 PM
Jr. Ballroom D, Miami Beach Convention Center

Fee: No charge for registered attendees

You are invited to attend a public forum with former Senator Alan Simpson, Co-Chair of the President’s 2010 Commission on Fiscal Responsibility and Reform. The ballooning federal deficit and growing national debt threaten future economic prosperity, fiscal stability, national security, and health care financing. Health care entitlements all face cost reductions. Cost controls under the PPACA health care reform may radically alter the health care delivery system. Enjoy the entertaining wry humor and penetrating insight Senator Simpson brings in an interactive audience discussion exploring the need, the means, the effects, and the likelihood of balancing the federal budget and what will happen to health care.

AANS 3D Theater
Presenting The Rhoton Collection
Room C127, Miami Beach Convention Center

The AANS is pleased to present The Rhoton Collection, a compilation of three dimensional anatomy presentations developed by internationally renowned surgeon and educator Dr. Albert Rhoton Jr. Carefully crafted over many years, this unique format preserves the stunning beauty of these meticulously prepared lectures.

Be sure to stop by the AANS 3D Theater in Room C127 on the first floor of the Miami Beach Convention Center for more information and to view the 3D presentations.

Monday, April 16
7:30 AM – 5:00 PM

Tuesday, April 17
7:30 AM – 5:00 PM

Wednesday, April 18
7:30 AM – 2:00 PM

The second in a series of 3D lectures, the presentations include:
- Anterior Skull Base I
- Anterior Skull Base 2
- Endoscopic Transnasal and Transoral Approaches to the Skull Base

Presentations will also be available in 2D and 3D formats on AANS’ iTunes U page.

NEW!

#AANS2012Miami

Live Tweet the 2012 AANS Annual Scientific Meeting at www.twitter.com using #AANS2012Miami.

Contribute to the real time discussions or opt to follow the conversations covering the meeting’s Practical Clinics, Breakfast Seminars, international programs, lectures and other meeting related events. Be part of the conversation!
NEW!
Operative Nuances for Managing Complex Cranial Cases: A 3-D Video Presentation
Live streaming is available over the Internet

Tuesday, April 17
Jr. Ballroom A & B, Miami Beach Convention Center
2:00-5:00 PM

Moderator
Aaron Cohen-Gadol, MD

Faculty:
William T. Couldwell, MD, PhD
Michael T. Lawton, MD
Robert F. Spetzler, MD
Gary Steinberg, MD

This 180 minute session will review the important technical nuances for improving patient outcome during complex cranial cases. Detailed surgical videos of different procedures (for tumorous and vascular lesions) by the surgical masters will be reviewed using 3D high definition surgical videos to maximize the learning experience for the viewers.

This session will be interactive through live streaming over the Internet and the audience (both in the meeting room and outside) will be able to ask questions and be provided with a chance to express their opinion through electronic polling.

The nuances of technique for handling the following operations will be beneficial to the general neurosurgeon who deals with all facets of cranial surgery.

- Dissection of the Sylvian fissure
- Clip ligation of anterior and posterior circulation aneurysms
- Microvascular decompression for treatment of trigeminal neuralgia and hemifacial spasm
- Approaching lesions in the pineal region and posterior third ventricle
- Extended retromastoid craniotomy for resection of tumors involving cranial nerves
- Lateral suboccipital approach for removal of meningiomas located in the craniocervical junction

Those attending the course in person will be given instructions during the meeting on how to submit questions to the moderators or participate in polling.

Those attending the meeting via webcast will visit cohen.omnovia.com/room1. Choose the attendee option, “enter the room” and type in your name. The chat function is available at the bottom of the video windows.
2012 Annual Scientific Meeting Highlights

Interact with Presenters, Meeting Attendees & Colleagues through Online Discussions; Live Streaming of Plenary Sessions to AANSconnect

For the first time, the content of AANS science and education will be presented on a global platform, because AANS Plenary Sessions will be webcasted worldwide through live streaming video. Also for the first time, all attendees (both on and off-site) can engage with presenters, discussants, and each other by posting questions and comments in online discussion forums.

These innovations are made possible via AANS’ new social media community, AANSconnect, at www.aansconnect.org. After logging in, both on and off-site meeting attendees can interact with the presenters, discussants, or even each other by posting online comments or questions.

While only the plenary sessions are being streamed, you can use AANSconnect’s discussion forums to discuss all scientific session presentations through your computer, iPod touch, or other mobile device.

Further, the electronic posters are available in AANSconnect for discussion as well.

How to log in
Visit www.aansconnect.org, and click the “login” link in the log-in box (or on the top right)

• AANS Members: Use the same username and password you use to access MyAANS.
• Non-Members: non-member registrants have been granted temporary access to this unique service. Your log-in is the same log-in and password you use to access MyAANS.org.
• If you forgot your username or password, click on the “login help” link then choose the “If you forgot your login credentials, please click HERE” option. The system will send your log-in information to your email address.

How do I view or join the online discussions?
After logging in, mouse over the Annual Meeting Tab and click on “Meeting Discussions” link. Threads are organized by day. Select the day the plenary presentation is in and you will find it listed. Other sessions have overall topic threads. The Annual Meeting tab shows the streaming video with scrolling discussions. You can post from that page as well.

Where are the electronic posters?
Mouse over the Annual Meeting tab, and click on the “poster” link. Posters are organized by categories (mostly subspecialty). Click on the category and a list of posters in that category will appear. When you select the poster you want, click on the attached file to open the poster (see the gray box). You can subscribe to a discussion thread so an email is sent to anytime someone posts a comment regarding the particular poster; you can also bookmark it so you can access it from your profile page.

How can I get help?
Further help regarding how to access the discussion Forums is available in the AANS Resource Center, booth # 1330 in the Exhibit Hall. It is also posted online at http://www.aans.org/Annual%20Meeting/2012.aspx in the “meeting highlights” tab.

What happens after the meeting?
AANSconnect is a great way to stay in touch with all the people you met at the meeting, or collaborated with in the Discussion forums. For AANS members, the interaction doesn’t stop when the meeting ends. Keep using AANSconnect to find people with similar research or subspecialty interests, or join groups around areas that interest you. Non-members, please note that your temporary access expires April 23. You can continue to use the online forums until then.
NEW! AANS Mobile Membership App

The iPod touch® initiative is an innovative program that allows you to utilize the iPod touch for participation at the Annual Scientific Meeting. This device provides information literally at the touch of your fingertips, with a responsiveness that is both immediate and fluid.

Since 2010, when AANS became the first North American medical association to host its annual scientific meeting via the iPod® touch, the organization has continued exploring ways to develop and expand its mobile footprint to members. Using its conference-specific app as a foundation, the AANS has created a robust, year-round membership application that is sure to prove indispensable for anyone in the neurosurgical community.

The new app features content from this meeting including access to program guides, floor maps, exhibitor listings, social venues and more. Additional features contained within this year-round app include:

• A regularly updated news feed containing topics of interest to those in neurosurgical medicine
• Notification of new articles posted to AANS Neurosurgeon
• Listings of upcoming educational courses and offerings
• Articles from current and past issues of the Journal of Neurosurgery
• Access to AANSconnect, the members-only online professional networking community where ideas, experiences, cases and more can be shared amongst one’s peers
• A mobile-friendly version of the AANS website
• Access to MyAANS.org
• Quick links to access the AANS Online Career Center and AANS Marketplace

AANS’ year-round mobile membership app is your portal to the latest Annual Scientific Meeting information, neurosurgical news, updates, educational offerings and content. The organization is excited to share this new tool with today’s neurosurgical practitioners.

Be sure to sync your iPod touch and download the new Mobile Membership app with access to the 2012 AANS Annual Scientific Meeting app from Apple’s iTunes store.

For those who attended last year, bring your iPod touch back this year with the new Mobile Membership app and the 2012 AANS Annual Scientific Meeting app downloaded. With your 2012 AANS Annual Scientific Meeting app, you will be able to access the scientific program, view at-a-glance what events are occurring at any given moment during the meeting, access convention center and exhibit hall maps, view exhibitor information, and communicate with other attendees.

The AANS has made some enhancements to the Annual Scientific Meeting app. These NEW features include:
• Compatibility with multi-platform devices such as Android™ and BlackBerry®
• Ability to sync registration course selections and appointments with personal calendar
• Message feature to communicate with other attendees, exhibitors, and speakers

The AANS is committed to ensuring that you are comfortable with your device, and will provide technical support in the Resource Center and in the registration area in the Convention Center. If you have any questions or concerns please be sure to seek out an AANS staff member on hand to assist in any way.
AANS Opening Reception

**A Walk in the Park–Jungle Island**
Sunday, April 15
6:30 - 8:30 PM
Fee: Included in registration fee

Join us at the AANS Opening Reception at Jungle Island. While on the island, guests can participate in interactive activities with animals or take a relaxing stroll along covered and uncovered trails, enjoying the lush environment and wildlife exhibits. Multiple food and beverage stations and entertainment will be located throughout the Island for all guests to enjoy as they stroll and explore. Trainers will be available to answer any questions and provide guests with a “hands on” unforgettable experience.

Feel free to dress casually for the evening. Be sure to register your guests so that they may attend this exciting event. Transportation departs from all hotels beginning at 6:15 PM.

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**The Albert L. Rhoton Tribute for the Establishment of the Rhoton Endowment for Research**
8:30 PM
Fee: $500 per person

Join us in coming together as a community to celebrate the career, honor the contributions and participate in creating an enduring legacy by endowing a research fellowship in honor of Albert L. Rhoton, MD. The evening honoring Albert L. Rhoton, MD will be held on Monday, April 16 at Bongo’s Cuban Café. The evening includes hors d’oeuvres, open bar, dancing, silent and live auctions and musical entertainment featuring the Miami Sound Machine.

An additional goal of this celebration is to raise more than $1 million for the establishment of the Rhoton Endowment for Research. There is not a more deserving recipient of this honor than Professor Rhoton. His extraordinary contributions to the science and practice of neurosurgery over the last 40 years through education and scientific investigation will echo through time. His meticulous methods of anatomical dissection and microsurgical techniques helped transform the primitive specialty of neurosurgery into the magnificent surgical discipline that it is today. Generations of neurosurgeons from around the world have benefitted as his students, residents, fellows and course attendees, as well as from his extensive publications and videos. We urge you to participate in this extraordinary event and help establish this enduring legacy.

Transportation departs from all hotels beginning at 8:15 PM. Purchase your ticket online at www.aans.org or stop by the Lobby C Registration Area at the Convention Center.
Be part of the most anticipated event in Miami!

The Albert L. Rhoton Tribute for the Establishment of the Rhoton Endowment for Research

Monday, April 16
Bongo’s Cuban Cafe
8:30 PM

Evening includes:
Hors d’oeuvres, open bar, dancing, silent and live auction.
Musical entertainment featuring the Miami Sound Machine

Tickets
General Admission $500 per person

Admission to this exclusive event is limited to the first 730 people.
Introduction, Awards and Lectures

About AANS
Founded in 1931 as the Harvey Cushing Society, the American Association of Neurological Surgeons (AANS) is a scientific and educational association with over 8,100 members worldwide. The AANS is dedicated to advancing the specialty of neurological surgery in order to provide the highest quality of neurological care to the public. All active members of the AANS are board certified by the American Board of Neurological Surgery, the Royal College of Physicians and Surgeons of Canada, or the Mexican Council of Neurological Surgery, A.C. Neurosurgery is the medical specialty concerned with the prevention, diagnosis, treatment and rehabilitation of disorders that affect the spinal column, spinal cord, brain, nervous system and peripheral nerves. For more information on what neurosurgeons do, visit www.AANS.org and select Patient Information.

AANS President
Paul C. McCormick, MD

Paul C. McCormick, MD, MPH, FAANS was named president of the American Association of Neurological Surgeons (AANS) at the 79th AANS Annual Scientific Meeting in Denver, April 9-13, 2011. Dr. McCormick was born in Washington, DC on January 7, 1956. He was raised in suburban Maryland and graduated from Columbia University College with a BA in English in 1978. He was captain of the 1977 Columbia football team. He attended Columbia University College of Physicians and Surgeons and received his MD degree in 1982. Following a general surgery internship at Columbia Presbyterian Medical Center (1982-83) and a fellowship at the National Institutes of Health (1983-84), he completed a residency in neurological surgery at the Neurological Institute of New York (1984-89).

After a one-year fellowship in spinal surgery at the Medical College of Wisconsin (1989-90), he returned to Columbia Presbyterian Medical Center where he remains on staff as Attending of Neurosurgery. Dr. McCormick’s research, clinical, and teaching interests have focused on the evaluation and management of disorders of the spine and spinal cord. He currently holds the faculty appointment of Herbert and Linda Gallen Professor of Clinical Neurosurgery at Columbia University College of Physicians and Surgeons and serves as Director of the Columbia University Spine Center. He received his MPH degree in Health Policy and Management and Clinical Outcomes Assessment from the Columbia University School of Public Health in 2000.

Dr. McCormick has been actively involved in organized neurosurgery since the completion of his residency. He has served on the Scientific Program Committee for the annual meetings of the Congress of Neurological Surgeons (CNS), The American Association of Neurological Surgeons (AANS), and the Joint Section on Disorders of the Spine and Peripheral Nerves. He has served on the Executive Committee and as Vice President of the Congress of Neurological Surgeons and on the Board of Directors of the American Association of Neurological Surgeons. He has also served as Chairman of the Joint Section on Disorders of the Spine and Peripheral Nerves and as a Director of the American Board of Neurological Surgery. He has been invited to give over 200 presentations at national and international meetings, conferences, and visiting lectureships.

Dr. McCormick has published over 190 peer review articles and book chapters, written or edited nine books and supplements, and has served on numerous editorial boards of peer-reviewed journals including Journal of Neurosurgery, Neurosurgery, Spine, and The Spine Journal.

### AANS Presidents

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<tr>
<th>Year</th>
<th>President</th>
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<tr>
<td>2010-11</td>
<td>James T. Rutka, MD, PhD</td>
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<tr>
<td>2009-10</td>
<td>Troy M. Tippett, MD</td>
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<td>2008-09</td>
<td>James R. Bean, MD</td>
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<td>2007-08</td>
<td>Jon H. Robertson, MD</td>
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<td>2006-07</td>
<td>Donald O. Quest, MD</td>
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<td>2005-06</td>
<td>Fremont P. Wirth Jr., MD</td>
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<td>2004-05</td>
<td>Robert A. Ratcheson, MD</td>
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<td>2003-04</td>
<td>A. John Popp, MD</td>
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<td>2002-03</td>
<td>Roberto C. Heros, MD</td>
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<td>2001-02</td>
<td>Stan Pelofsky, MD</td>
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<td>2000-01</td>
<td>Stewart B. Dunsker, MD</td>
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<td>Martin H. Weiss, MD</td>
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<td>Russell L. Travis, MD</td>
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<td>Edward R. Laws Jr., MD</td>
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<td>J. Charles Rich Jr., MD</td>
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<td>1995-96</td>
<td>Sidney Tolchin, MD</td>
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<td>1994-95</td>
<td>Edward L. Seljeskog, MD, PhD</td>
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<td>Julian T. Hoff, MD</td>
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<td>Merwyn Bagan, MD</td>
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<td>James T. Robertson, MD</td>
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<td>David L. Kelly Jr., MD</td>
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<td>Albert L. Rhoton Jr., MD</td>
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<td>George T. Tindall, MD</td>
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<td>Henry D. Garrettsone, MD</td>
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<td>Russel H. Patterson Jr., MD</td>
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<td>W. Kemp Clark, MD</td>
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<td>Robert B. King, MD</td>
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<td>W. Eugene Stern, MD</td>
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<td>Charles G. Drake, MD</td>
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<td>1976-77</td>
<td>Lester A. Mount, MD</td>
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<td>1975-76</td>
<td>Richard L. De Saussure Jr., MD</td>
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<td>1974-75</td>
<td>Richard C. Schneider, MD</td>
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<td>1973-74</td>
<td>Lyle A. French, MD</td>
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<td>1972-73</td>
<td>William F. Meacham, MD</td>
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<td>1971-72</td>
<td>Guy L. Odom, MD</td>
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<td>1970-71</td>
<td>Collin S. MacCarty, MD</td>
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<td>A. Earl Walker, MD</td>
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<td>Henry G. Schwartz, MD</td>
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<td>Eben Alexander Jr., MD</td>
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<td>Francis Murphey, MD</td>
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<td>Frank H. Mayfield, MD</td>
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<td>Barnes Woodhall, MD</td>
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<td>David L. Reeves, MD</td>
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<td>1961-62</td>
<td>Leonard T. Furlow, MD</td>
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<td>J. Grafton Love, MD</td>
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<td>Bronson S. Ray, MD</td>
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<td>Howard A. Brown, MD</td>
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<td>Leo M. Davidoff, MD</td>
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<td>Frederic Schreiber, MD</td>
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<td>Harry Wilkins, MD</td>
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<td>1953-54</td>
<td>Edgar A. Kahn, MD</td>
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<td>William J. German, MD</td>
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<td>Paul C. Bucy, MD</td>
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<td>W. Edward Chamberlain, MD</td>
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<td>1949-50</td>
<td>Frank Tumball, MD</td>
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<td>1948-49</td>
<td>Winchell M.C. Craig, MD</td>
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<td>Cobb Pilcher, MD</td>
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<td>Frank R. Teachener, MD</td>
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<td>Franc D. Ingraham, MD</td>
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<td>1943-44</td>
<td>Edgar. F. Fincher Jr., MD</td>
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<td>1942-43</td>
<td>Eric Oldberg, MD</td>
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<td>1941-42</td>
<td>Tracy J. Putnam, MD</td>
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<td>1940-41</td>
<td>Cornelius Dyke, MD</td>
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<td>1939-40</td>
<td>R. Eustace Semmes, MD</td>
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<td>1938-39</td>
<td>Louise Eisenhardt, MD</td>
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<td>Temple Fay, MD</td>
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<td>1936-37</td>
<td>Kenneth G. McKenzie, MD</td>
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<td>1935-36</td>
<td>Merrill C. Sosman, MD</td>
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<td>1934-35</td>
<td>R. Glen Spurling, MD</td>
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<td>1933-34</td>
<td>John F. Fulton, PhD</td>
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<td>1932-33</td>
<td>William P. Van Wagenen, MD</td>
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### Cushing Cigarette Box

Each year at the Annual Scientific Meeting of the American Association of Neurological Surgeons (AANS), the outgoing president is presented with a special momento of his year in office the “Cushing Cigarette Box” representing more than a half century of neurosurgical tradition. The sterling silver Cushing Cigarette Box was originally presented to Harvey Cushing, MD, by the surgical staff at Peter Bent Brigham Hospital on April 14, 1931, commemorating Dr. Cushing's 2000th verified intracranial tumor operation. Beginning with this cherished tradition back in 1959, Dr. Cushing's nephew, E. H. Cushing, MD, presented the cigarette box to the AANS resident and asked that it be passed on to each succeeding president as a symbol of the Association's highest office.
Special Lectures

Cushing Orator
In 1965 when the AANS was still the Harvey Cushing Society, the board directed that each year an invitation be extended to “one eminent in human affairs,” to deliver the Cushing Oration at the Annual Scientific Meeting. The Oration honors Dr. Harvey Cushing, whose own “wide range of interests went far beyond the operating suite” and is regarded as the highest honor the organization can bestow.

2012 Cushing Orator
From Reading to Writing the Genetic Code
J. Craig Venter, PhD
12:11-12:56 PM
Hall D, Miami Beach Convention Center

J. Craig Venter, PhD, is regarded as one of the leading scientists of the 21st century for his numerous invaluable contributions to genomic research. He is Founder, Chairman, and President of the J. Craig Venter Institute (JCVI), a not-for-profit, research organization with approximately 300 scientists and staff dedicated to human, microbial, plant, synthetic and environmental genomic research, and the exploration of social and ethical issues in genomics.

Dr. Venter, one of the most frequently cited scientists, is the author of more than 250 research articles, including the February 2001 publication of the human genome in the journal, Science.

He and his team have sequenced and analyzed hundreds of genomes, and have published numerous important papers covering environmental genomics, the first complete diploid human genome, and the groundbreaking advance in creating the first self-replicating bacterial cell constructed entirely with synthetic DNA.

Dr. Venter is also Founder and CEO of Synthetic Genomics Inc., a privately held company dedicated to commercializing genomic-driven solutions to address global needs such as new sources of energy and next generation vaccines.

Past Cushing Orators
1980 The Hon. Kingman Brewster
1979 The Hon. Paul Rogers
1978 C. Rollins Hannon, MD
1977 Eli Ginzberg, PhD
1976 Robert O. Egeberg, MD
1975 Paul W. McCracken, MD
1974 Malcolm Moosco, PhD
1973 Wernher von Braun, MD
1972 Robert Q. Marston, MD
1971 Wilder Penfield, MD
1970 Edwin L. Crosby, MD
1969 John S. Millis, PhD
1968 R. Buckminster Fuller, PhD
1967 William H. Stewart, MD
1966 Philip Handler, MD
1965 Louise Eisenhardt, MD
1984 Robert M. Rosenzweig, PhD
1983 Edmund D. Pellegrino, MD
1982 Mortimer J. Adler, PhD
1981 Julius Axelrod, PhD
1979 General Colin L. Powell
1978 R. Buckminster Fuller, PhD
1977 William H. Stewart, MD
1976 John S. Millis, PhD
1975 Philip Handler, MD
1974 Louise Eisenhardt, MD
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1971 C. Rollins Hannon, MD
1970 Eli Ginzberg, PhD
1969 R. Buckminster Fuller, PhD
1968 William H. Stewart, MD
1967 Philip Handler, MD
1965 Louise Eisenhardt, MD

1998 Eric Wieschaus, PhD
1997 William J. Bennett, PhD
1996 William F. Buckley Jr.
1995 General Colin L. Powell
1994 Beverly Sills
1992 Susan Eisenhower
1991 Ronald Z. Sagdeev, PhD
1990 President James Earl Carter Jr.
1989 Theodore Cooper, MD, PhD
1988 The Hon. Brian Dickson
1987 H. Ross Perot
1986 The Hon. Richard D. Lamm
1985 Raymond E. Arvidson, PhD
1984 Robert M. Rosenzweig, PhD
1983 Edmund D. Pellegrino, MD
1982 Mortimer J. Adler, PhD
1981 Julius Axelrod, PhD
1979 General Colin L. Powell
1978 R. Buckminster Fuller, PhD
1977 William H. Stewart, MD
1976 John S. Millis, PhD
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1971 C. Rollins Hannon, MD
1970 Eli Ginzberg, PhD
1969 John S. Millis, PhD
1968 R. Buckminster Fuller, PhD
1967 William H. Stewart, MD
1966 Philip Handler, MD
1965 Louise Eisenhardt, MD
Anthony L. Asher, MD

Anthony L. Asher, MD, FAANS, FACS, is director of the neuro-oncology program at the Levine Cancer Institute and medical director of neuroscience services with Carolinas Healthcare System. He also serves as an adjunct professor in neurosurgery at the University of North Carolina, Penn State University and Vanderbilt University. Dr. Asher attended Wayne State University School of Medicine, where he was awarded one of the original Howard Hughes Medical Institute Research Scholarships. After two years of general surgery training at the University of Michigan Hospitals, he served as a staff fellow in the surgery branch of the National Cancer Institute, National Institutes of Health, before returning to the University of Michigan to complete a neurosurgical residency.

Since completing his residency training, Dr. Asher has been a member of the Charlotte, N.C.-based Carolina Neurosurgery and Spine Associates, where his primary practice interests include neuro-oncology and trigeminal neuralgia. Dr. Asher has established cooperative cancer research programs with clinical and laboratory scientists at community and academic institutions across the country, and is co-founder of the Brain Tumor Fund for the Carolinas. In addition to serving as CNS president from 2007 to 2008, he also has served as chairman of the Central Nervous System Organ Site Committee of the American College of Surgeons Oncology Group and of the AANS/CNS Academic-Community Brain Tumor Alliance. Dr. Asher has led the development of several novel programs in neurosurgical education, including The CNS Neurosurgical Forum; Integrated Medical Learning; and the Self Assessment in Neurological Surgery (SANS). Dr. Asher is currently interested in the development of cooperative clinical outcomes databases and related programs to involve clinicians and scientists in quality improvement across practice settings. He is presently vice president, AANS NeuroPoint Alliance; and director, National Neurosurgery Quality and Outcomes Database.

Ziya L. Gokaslan, MD

Ziya L. Gokaslan, MD, FAANS, FACS, is the Donlin M. Long Professor at Johns Hopkins University School of Medicine, where he serves as professor of neurosurgery, oncology and orthopaedic surgery; Director of the Neurosurgical Spine Program; and Vice-chairman of the Department of Neurosurgery.

Born in the U.S., Dr. Gokaslan returned to Turkey with his family and completed his medical education at the Medical Faculty of Istanbul University. He entered general surgery residency at Baylor College of Medicine in 1985 and, following a one-year internship, joined Baylor’s Department of Neurosurgery as clinical neurotrauma research fellow. Following his neurosurgery training at Baylor, Dr. Gokaslan was accepted into neurosurgery/orthopaedic spine surgery fellowship training at New York University Medical Center in 1993.

Upon completion of his fellowship training, he joined the University of Texas’ Department of Neurosurgery as an assistant professor at the MD Anderson Cancer Center. In 2000, Dr. Gokaslan became Director of the Neurosurgical Spinal Oncology Section and, in 2002, was appointed Deputy Chairman of the Department of Neurosurgery before his recruitment to Johns Hopkins University.

Dr. Gokaslan’s clinical practice is focused on the radical surgical treatment of both primary and metastatic spinal tumors, sacral neoplasms and spinal cord tumors. He also has developed many novel approaches for resection of pancoast tumors, spinal neoplasms and sacral tumors—including total sacrectomy, and complex spinal and pelvic reconstruction. His research focuses on the development of new animal models to study the pathophysiology of neoplastic spinal cord compression, and define the roles of proteolytic enzymes in tumor invasion, as well as develop therapeutic approaches to spinal tumors.

The author of more than 230 peer-reviewed papers and 150 national and international lectures since 1996, Dr. Gokaslan serves on the editorial boards of numerous top academic...
Dr. Muraszko’s research interests include experimental therapies for the treatment of pediatric brain tumors—she is director of the Pediatric Brain Tumor Clinic at the University of Michigan and has worked to develop new therapies for brain tumors—the treatment and diagnosis of Chiari malformations and other congenital anomalies of the spine and brain; and the treatment of children with complex craniofacial anomalies.

She also is the co-founder of Project Shunt at the University of Michigan, a program that since its inception has provided care to more than 300 indigent children in Guatemala, and has been an ongoing yearly medical mission of neurosurgeons, anesthesiologists, neurosurgical residents and nursing staff from the University of Michigan, under her direction, since 1998. Dr. Muraszko is on the Physician’s Advisory Committee of the Spina Bifida Association as well as the March of Dimes.

**Ronald L. Bittner Lecture**

The Ronald L. Bittner Lecture is made possible thanks to an endowment established by Mrs. E. Laurie Bittner, who made the gift in support of brain tumor research, in memory of her late husband who died of a glioma.

Jeffrey N. Bruce, MD

Jeffrey N. Bruce, MD, FAANS, FACS received his medical degree from UMDNJ-Robert Wood Johnson Medical School in 1983. He was a medical staff fellow in the Surgical Neurology Branch of the National Institutes of Health before completing a neurosurgery residency at the Neurological Institute of New York, Columbia Presbyterian Medical Center. Following completion of his residency, he remained on staff, and currently is the Edgar M. Housepian Professor of Neurological Surgery at Columbia University’s College of Physicians and Surgeons, where he serves as Vice-Chairman; Residency Program Director; Co-Director of the Brain Tumor Center; and Director of the Bartoli Brain Tumor Research Laboratory.

Dr. Bruce has authored more than 200 publications as leader of an NIH-funded translational brain tumor research effort with interests in glioma immunology, progenitor cell biology and drug delivery systems. Clinically he specializes in surgical neuro-oncology, with particular interests in skull base, pineal tumors
and pituitary tumors. He has received numerous awards, including the Teacher Recognition Award from Columbia University and the Physician of the Year from CancerCare.

Currently a director of the American Board of Neurological Surgery, Dr. Bruce has previously served as Chairman of the Joint Section on Tumors for the AANS/CNS, Vice-President of the American Academy of Neurological Surgeons, President of the Society of University Neurosurgeons and President of the New York Society for Neurosurgery. He is a member of several neurosurgery-focused editorial boards, including *Neurosurgery*, *Journal of Neuro-oncology*, and *World Neurosurgery*.

**Hunt-Wilson Lecture**

The Hunt-Wilson Lecture is made possible thanks to an endowment established by Dr. Timir Banerjee, in honor of his mentors, William Hunt, MD and Charles Wilson, MD.

**Phillip A. Starr, MD, PhD**

Phillip Starr, MD, PhD, FAANS, currently serves as professor of neurological surgery, and holds the Dolores Cakebread endowed chair, at the University of California, San Francisco. Dr. Starr received his medical and doctorate degrees from Harvard Medical School, did his neurosurgery residency at Brigham and Women’s Hospital from 1990-1996, and completed a fellowship in movement disorders surgery at Emory University.

Dr. Starr’s NIH-funded research addresses the effects of disordered basal ganglia output on cortical function in patients with movement disorders. In addition, with UCSF colleagues Drs. Paul Larson and Alastair Martin, he has developed new surgical approaches to achieve very accurate implantation of drugs and devices at deep brain targets. Dr. Starr directs a fellowship training program in functional neurosurgery, and is past president of the American Society for Stereotactic and Functional Neurosurgery.

**Theodore Kurze Lecture**

The Theodore Kurze Lecture is made possible thanks to an endowment established by Dr. John J. and Mrs. Mary Guarnaschelli to honor and recognize his mentor.

**Brian Greene, PhD**

Brian Greene, PhD, is one of the world’s leading theoretical physicists and a brilliant, entertaining communicator of cutting-edge scientific concepts. *The Washington Post* described him as “the single best explainer of abstruse concepts in the world today.” A physicist and string theorist, he is the author of the book *The Elegant Universe*, which recounts how the theories of general relativity and quantum mechanics have transformed our understanding of the universe, and introduced us to string theory, a concept that might be the key to a unified theory of the universe. The book has sold more than a million copies and served as the basis for an Emmy and Peabody Award-winning NOVA special that Greene hosted.


A graduate of Harvard University and a Rhodes Scholar at Oxford University, Greene is a professor in both physics and mathematics at Columbia University. He has written essays for NPR, *Wired Magazine* and *The New York Times*; appeared on a variety of programs, including *Charlie Rose, Nightline* and *The Late Show with David Letterman*; and made cameo appearances in the films *Frequency, Maze* and *The Last Mimzy*. 
Dr. Cynthia Breazeal is a pioneer of social robotics and human-robot interaction. The author of the book “Designing Sociable Robots,” she also has published more than 100 peer-reviewed articles in journals and conferences on the topics of autonomous robotics, artificial intelligence, human-robot interaction, and robot learning. She has developed some of the world’s most famous robotic creatures ranging - from small hexapod robots, to embedding robotic technologies into familiar everyday artifacts, to creating highly expressive humanoid robots and robot characters. Her research focuses on developing the principles, techniques and technologies for personal robots that are socially intelligent; interact and communicate with people in human-centric terms; work with humans as peers; and learn from people as an apprentice.

Dr. Breazeal received both her SM and ScD in electrical engineering and computer science from the Massachusetts Institute of Technology, where she now serves as associate professor of media arts and sciences. She also founded and directs the personal robots group at the MIT media lab. In addition to serving on several editorial boards in the areas of autonomous robots, affective computing, entertainment technology and multi-agent systems, she is a member of the advisory board for the Science Channel and an overseer at Boston’s Museum of Science.

Past Louise Eisenhardt Lecturers

2011  Kristen Iversen
2010  Mary Sue Coleman, PhD
2009  Geraldine Brooks
2008  Marcia Angell, MD
2007  Sally Ride, PhD

Recipients of Honorary Membership

2007  James A. Ferrandelli, MD
2007  Darell D. Bigner, MD, PhD
2007  Albert J. Aguayo, MD
2005  Armando Basso, MD
2004  Jacques Brotchi, MD, PhD
1997  Carl H. Hauber, JD, CAE
1995  Roy W. Black
1995  John W. Holter
1992  Madjid Samii, MD, PhD
1990  H. Alphans D.Walder, MD, PhD
1990  Andrei P. Romodanov, MD
1989  M. Gazi Yasargil, MD
1988  Chung-Cheng Wang, MD
1988  B. Ramamurthi, MD
1988  Karl August Bushe, MD
1987  Bernard Pertuise, MD
1987  Emil Pasztor, MD
1987  Willem Luyendijik, MD
1987  Alexander Konovalov, MD
1986  Shozo Ishii, MD
1986  Hajime Handa, MD
1986  Murray Goldstein, DO
1986  F. John Gillingham, MD
1984  Kurt Friedrich Schurmann, MD
1984  Lindsay Symon, MD
1983  Elizabeth C. Crosby, PhD
1975  Gerard Guiot, MD
1974  Keiji Sano, MD
1974  Gosta Norlen, MD
1974  Hugo Krayenbuhl, MD
1971  Wilder Penfield, MD
1969  R. Eustace Semmes, MD
1969  Dorothy Russell, MD
1967  Oscar Hirsch, MD
1955  Norman M. Dott, MD
1948  Eduard A. V. Busch, MD
1944  Howard C. Naftziger, MD
1940  Alfred W. Adson, MD
1937  Sir Geoffrey Jefferson, MD
1936  Ernest Sachs Jr., MD
1936  Herbert Olivecrona, MD
1931  Harvey Cushing, MD
Awards Recipients

Cushing Medalist

**Donald O. Quest, MD**

Donald O. Quest, MD, FAANS, joined the Department of Neurological Surgery at the Columbia University College of Physicians and Surgeons in 1978, and rose to become professor of clinical neurosurgery in 1989. Dr. Quest served as Vice Chairman of the Department from 1991-1993 and 1997-2008; he also served as Acting Chairman twice, 1993-1994 and 1996-1997. He has served as Assistant Dean of Columbia's College of Physicians and Surgeons since 2003.

Dr. Quest graduated from the University of Illinois with honors in mathematics in 1961, followed by active-duty service as a U.S Navy aviator aboard the U.S.S. Kittyhawk in the Vietnam conflict from 1961-1966. He was awarded his MD from Columbia in 1970. Following a surgical internship and residency at the Massachusetts General Hospital in 1970-1972, Dr. Quest was a resident in neurological surgery at the Neurological Institute of New York at the Columbia Presbyterian Medical Center from 1972-1975, and was chief resident from 1975-1976. He served as an assistant professor of neurological surgery at the Downstate Medical Center of the State University of New York from 1976-1978 before returning to Columbia.

Dr. Quest served as president of the AANS (2007-2008), the CNS (1986-1987) and the American Academy of Neurological Surgery (2001-2002). He also served as AANS Scientific Program Committee chairman (1990-1991); Annual Meeting chairman (1991-1992); and vice president (1994-1995). In addition to AANS, he is a member of the American Academy of Neurological Surgery, the American College of Surgeons, the American Medical Association, the Neurological Society of America and the Society of Neurological Surgeons.

Past Cushing Medalists

2011  A. John Popp, MD  
2010  Roberto C. Heros, MD  
2009  Edward Hudson Oldfield, MD  
2008  Charles B. Wilson, MD  
2007  Robert G. Grossman, MD  
2006  David G. Kline, MD  
2005  Martin H. Weiss, MD  
2004  John A. Jane Sr., MD, PhD  
2003  Stewart B. Dunker, MD  
2002  Edward R. Laws Jr., MD  
2001  Julian T. Hoff, MD  
2000  Russell H. Patterson Jr., MD  
1999  David J. Kelly Jr., MD  
1998  Albert L. Rhoton Jr., MD  
1997  Robert G. Ojemann, MD  
1996  Shelley N. Chou, MD, PhD  
1995  Richard De Saussure, MD  
1994  Byron C. Pevehouse, MD  
1993  Sidney Goldring, MD  
1992  W. Eugene Stern, MD  
1991  William F. Collins, MD  
1990  Robert B. King, MD  
1989  Lester A. Mount, MD  
1988  Charles G. Drake, MD  
1987  William F. Meacham, MD  
1986  Lyle French, MD  
1985  Francis Murphey, MD  
1984  Eben Alexander Jr., MD  
1983  Guy L. Odom, MD  
1982  W. James Gardner, MD  
1981  Bronson S. Ray, MD  
1980  Paul C. Bucy, MD  
1979  Henry G. Schwartz, MD  
1978  William H. Sweet, MD  
1977  Frank H. Mayfield, MD
Awards Recipients

Distinguished Service Award

The Distinguished Service Award is one of the highest honors bestowed by the American Association of Neurological Surgeons, recognizing exemplary service to the AANS and the field of neurosurgery. The award pays tribute to the contributions of remarkable people within their profession.

James R. Bean, MD

James R. Bean, MD, FAANS, received his medical school degree from Tulane University’s School of Medicine in 1973, and then moved on to receive his neurosurgery training from the University of Kentucky (1974-1980). In 1982, following two years as an assistant professor of neurosurgery at UK, he joined Neurosurgical Associates in Lexington, Ky., and continues to practice neurosurgery while concurrently serving as an advocate for the specialty in a wide range of forums, committees, groups and associations.

Dr. Bean became an appointed delegate to the JCSNS in 1990; was appointed Medical Practices Committee chair in 1992; and was elected Southeast Quadrant chair in 1993, JCSNS vice-chair in 1994, and CSNS chair from 1997-1999. He was instrumental in restructuring the JCSNS as a delegate assembly in 1995-1996. He served on the Washington Committee from 1999-2004, and as chairman from 2002-2004. He also was the first chairman of the AANS Coding and Reimbursement Committee from 2000-2002. Dr. Bean has testified to U.S. Congressional committees on behalf of the AANS on several occasions on health-care policy and professional liability. He served as AANS delegate to the AMA, course co-director for the Neurosurgeon as CEO, editor of the AANS Bulletin, and as invited speaker on numerous panels and seminars on practice-management and health-policy topics.

Dr. Bean served as AANS Treasurer from 2004-2007, and served as AANS President in 2008-2009. In Kentucky, he was President of the Lexington Medical Society, the Kentucky Neurosurgical Society, and a large multispecialty Independent Practice Association, as well board chairman of a sole-source Medicaid Managed Care Consortium for 120,000 recipients.

Using these experiences in molding his AANS service, Dr. Bean has been a tireless advocate for neurosurgery in federal health policy, professional liability reform, medical ethics and innovative practice management. He has been an acknowledged leader whose vision and commitment to the specialty have helped shaped neurosurgery policy, strategy, and action during a two-decade period of profound change in neurosurgery practice, federal policy, payment economics, and professional identity.

Past Recipients of the Distinguished Service Award

2011  Thomas A. Marshall
2010  Katie O. Orrico, JD
2009  In memory of Samuel J. Hassenbusch, MD, PhD
2008  Peter W. Carmel, MD
2007  Mary Louise Sanderson
2006  Lyl Leibrock, MD
2005  John C. Van Gilder, MD
2004  John A. Kusske, MD
2003  Troy M. Tippett, MD
2002  John A. Jane Sr., MD, PhD
2001  Donald H. Stewart Jr., MD
2001  Frank P. Smith, MD
2000  George Ablin, MD
2000  Robert H. Wilkins, MD
1999  W. Ben Blackett, MD, JD
1998  Mark J. Kubala, MD
1997  Ernest W. Mack, MD
1996  Robert E. Florin, MD
1995  Charles Edwin Bracket, MD
1994  William A. Buchheit, MD
1993  Roy W. Black, Codman & Shurtleff, Vice President
Awards Recipients

Humanitarian Award
At the recommendation of President Robert Ojemann, MD, the Board of Directors established the Humanitarian Award in January 1987. The award recognizes AANS members for activities outside the art and science of neurosurgery, which bring great benefit to mankind. The Board of Directors selects the recipient on the recommendation of the Awards Committee. The Humanitarian Award distinguishes those members who have given their time or talents selflessly to charitable or public activity and whose actions have brought honor to the specialty.

A. Leland Albright, MD
Leland Albright, MD, completed LSU School of Medicine in 1969 and continued his medical education at Vanderbilt University, Washington University in St. Louis, and the National Institutes of Health. He completed his neurosurgical residency at the University of Pittsburgh and developed his passion for pediatric neurosurgery there. During his tenure on the faculty at the University of Pittsburgh from 1981-2006 and as Chief of Pediatric Neurosurgery from 1991-2004, he was recognized repeatedly for his excellence in the teaching of pediatric neurosurgery. Dr. Albright and his colleagues have edited two editions of the widely used text, Principles and Practice of Pediatric Neurosurgery.

Dr. Albright’s participation in world missions has been career-long and has emphasized both performing and teaching neurosurgery. In 1980, he spent six months initiating the neurosurgery program at the Baptist Hospital of Pusan, Korea. He also made several short-term mission trips to Maricaibo, Venezuela, and Ogbomosho, Nigeria. In 1991, he answered an e-mail simply entitled, “Neurosurgeon Needed” from a missionary general surgeon in Kijabe, Kenya, requesting help treating children with hydrocephalus and spina bifida. Dr. Albright went to Kijabe yearly thereafter to perform and teach surgical management for children with those diagnoses.

In 2006, Dr. Albright moved to the University of Wisconsin School of Medicine, expecting that he would finish his career there. His yearly trips to Kijabe continued, often with a neurosurgical resident accompanying him. It soon became apparent that short-term intervention was not what the children in Kenya need—there were no pediatric neurosurgeons in Kenya, Tanzania or Ethiopia, and no one to manage pediatric neurosurgical disorders other than spina bifida and hydrocephalus. In 2008, Dr. Albright and his wife, Susan, a pediatric neurosurgery nurse practitioner, established a center of excellence in pediatric neurosurgery. They have lived in Kijabe since September 2010.

At Kijabe Hospital, Dr. Albright established a pediatric neurosurgical fellowship, accredited by the University of Nairobi. The first graduate, Dr. Humphrey Okechi, completed the fellowship in October 2011. The two neurosurgical training programs in Nairobi send residents for 1-3 month rotations, exposing them to teaching and techniques that do not exist elsewhere in East Africa. The numbers of operations are daunting; in 2011, 1,328 operations were done, including 253 MMC closures, 118 ETVs, 410 shunts, and 69 brain and spinal cord tumor operations. More importantly, African neurosurgeons are being taught excellence in surgical technique as well as evaluation and postoperative management. Dr. Albright will continue to serve in Kijabe until 2016, at which time the work will be continued by his trainees.

Past Recipients of the Humanitarian Award
2011 Barth A. Green, MD
2010 Timir Banerjee, MD
2009 Armondo J. Basso, MD, PhD
2008 Robert J. Dempsey, MD
2007 Benjamin C. Warf, MD
2006 Gene E. Bolles, MD
2005 Tetsuo Tatsumi, MD
2004 Charles L. Branch Sr., MD
2003 No Award
2002 Edgar M. Housepian, MD
2001 Gary D. Vander Ark, MD
2000 Merwyn Bagan, MD
1999 Thomas B. Flynn, MD
1998 Lee Finney, MD
1997 Robert J. White, MD
1996 No Award
1995 Melvin L. Cheatham, MD
1994 E. Fletcher Eyster, MD
1993 Manual Velasco-Suarez, MD
1992 William H. Mosberg Jr., MD
1991 George B. Udvarhelyi, MD
1990 A. Roy Tyrer Jr., MD
1989 Hugo V. Rizzoli, MD
1988 Gaston Acosta-Rua, MD
1987 Courtland H. Davis Jr., MD
Awards Recipients

AANS International Lifetime Recognition Award
The AANS International Lifetime Service Award recognizes an international neurosurgeon or other international dignitary for his or her lifetime of contributions to advancing the field of neurosurgery in a country outside the United States and Canada.

Leonidas Quintana, MD
Leonidas M. Quintana, MD, is currently chief of neurosurgical service at Valparaíso, Chile's Carlos Van Buren Hospital, as well as an associate professor of neurosurgery in Valparaíso University's department of neurosurgery in Vina del Mar, Chile.

He received his diplomate in medicine and surgery with maximal distinction from the University of Chile in Santiago in 1972. After working as a general surgeon for several years he returned to school, completing his neurosurgical residency at the University of Chile's post-graduate office in 1979, and was accredited as a neurosurgeon by the Chilean National Board of Specialties that same year. In 1981, Dr. Quintana completed his fellowship in cerebrovascular neurosurgery in Sendai, Japan at the Tohoku University School of Medicine's Institute of Brain Diseases.

In leadership positions, Dr. Quintana has served as president of the Chilean Society of Neurosurgery, the South Cone Society of Neurological Surgeons and the Latin American Federation of Neurosurgical Societies (FLANC), respectively. An international member of AANS as well as numerous other societies, he presently is the second vice-president of the WFNS, representing Latin America, and also has served as honorary president of the Latin American Federation of Neurosurgery.

Past Recipients of the AANS International Lifetime Recognition Award
2011 Shigeaki Kobayashi, MD
2010 Jose G. Martin-Rodriguez, MD
2009 Albino P. Bricolo, MD
2008 Jose Humberto Mateos Gomez, MD

International Travel Scholarship
Xiaolei Chen, MD
The AANS International Travel Scholarship is awarded based on the score and merit of abstracts submitted by neurosurgeons in developing countries. The scholarship provides $1500 to support the attendance of the recipient to the AANS Annual Meeting. The 2012 recipient is Xiaolei Chen, MD from Beijing, China, for his abstract titled Low-grade Insular Glioma Resection with 1.5T Intra-operative MRI: Preliminary Results of a Prospective Randomized Trial. Dr. Chen presents his research in Plenary Session II on Tuesday, April 16.

Best International Abstract Award
Akio Morita, MD, PhD
Akio Morita, MD, PhD, is a director of neurosurgery at the NTT Medical Center Tokyo and professor at Tokyo Health Care University. He graduated from University of Tokyo, Faculty of Medicine in 1982 and soon entered the Department of Neurosurgery at the University of Tokyo. Following his board-certification by the Japan Neurosurgical Society in 1988, from 1989-1996, Dr. Morita completed his clinical fellowship and residency at Mayo Clinic Neurosurgery. In 1997, he took a position as an assistant professor of neurosurgery at the George Washington University, and the following year returned to University of Tokyo as an assistant professor of neurosurgery; in 2006, he moved into his current position as associate professor of neurosurgery. In 2002, Dr. Morita was certified by the American Board of Neurosurgery.

Dr. Morita is clinically specialized in cranial base and cerebrovascular surgeries, and his research interests cover medical engineering, as well as the natural history of vascular and neoplastic disease. In addition to performing more than 2,000 cranial base and cerebrovascular surgeries, he has authored more than 100 peer-reviewed journal papers and presented papers at more than 100 international meetings. Dr. Morita also presently is serving as the principal coordinator of UCAS Japan.
Awards Recipients

International Visiting Surgeons Fellowship

The AANS is committed to increasing its involvement in international neurosurgery, in particular furthering educational opportunities in developing countries. One meaningful offering is the AANS International Visiting Surgeons Fellowship. The AANS funds two observational fellowships per fiscal year to provide meaningful educational experiences in North America to international neurosurgeons who will practice and/or teach neurosurgery in their home countries. The 2012 AANS International Visiting Surgeon Fellowship Recipients are:

Venkatesh Madhugiri, MD
Venkatesh Madhugiri, MD from Pondicherry, India. He will visit LSUHSU in Shreveport, Louisiana under Dr. Anil Nanda’s observation. Dr. Madhugiri will focus on observing complex neurosurgical procedures pertaining to his area of interest, and to study the structure and organization of an academic neurosurgical department, including research facilities.

Victor Andronachi, MD
Victor Andronachi, MD from Chisinau, Moldova. He will visit St. Joseph’s Hospital and Medical Center in Phoenix, Arizona under Dr. Robert F. Spetzler’s observation. Dr. Andronachi will focus his observational fellowship on advancing the study of the skull base microsurgery, and to build and develop a laboratory of cadaver dissection required for training of the neurosurgeon residents.
Neurosurgery Research & Education Foundation 2011 Awardees

Neurosurgery Research and Education Foundation (NREF) Award And Fellowship Recipients

The NREF Research Fellowships and Young Clinician Investigator Awards are made possible thanks to the generous support of AANS members, group practices, hospitals, corporate supporters and the public. These grants truly make a difference to the scientists receiving them. Typically, the NREF funds nine to twelve grants in the area of biomaterials, brain tumors, cerebrovascular disease, endovascular neurosurgery, pain management, pediatrics, spine and trauma.

NREF Research Fellow

Pierpaolo Peruzzi, MD
The Ohio State University

Sponsor: E. Antonio Chiocca, MD, PhD

Project title: Multitargeting the Glioma Stem Cell Population by Means of Specific MicroRNAs

Abstract: With a median survival of 14 months, glioblastoma multiforme, the most common primary brain tumor, remains one of the deadliest human cancers. There is growing evidence that the tumor is supported by a subpopulation of cells, defined as Glioma Stem Cells (GSC), characterized by high proliferative capacity, tissue invasion, and resistance to radiation and chemotherapy. At a molecular level, among other features, these cells have a high expression of Polycomb (PcG) Repressor Group proteins, which act as a negative epigenetic switch determining the repression of multiple genes involved in cell differentiation and senescence. Employing patient samples obtained from their operatory room we have confirmed that many of these proteins are overexpressed in GBM, as compared to normal surrounding brain, and, more importantly, we have found an inverse correlation with the expression of specific microRNAs, namely miR-128, miR-218 and miR-338, whose physiologic function is to downregulate PcG protein production. This suggests that loss of microRNA expression in GBM is a major cause for PcG protein overexpression, resulting in permanence of “stem-like” status of the tumor cells and their inability to undergo the differentiation process. We thus hypothesize that restoring the expression of miR-128, miR-218 and miR-338 in GBM stem cells will result in a phenotypic drift towards a less aggressive cellular behavior, also more susceptible to adjuvant therapy.

NREF/American Academy of Neurological Surgery (AAcNS) Research Fellow

Shawn Hervey-Jumper, MD
University of Michigan

Sponsor: Karin Muraszko, MD

Project title: The Regulatory Role of MicroDNA in Malignant Gliomas and their Detection in Patient Serum

Abstract: Glioblastoma multiforme (GBM) is the most common primary malignant brain tumor in adults. MicroRNAs (miR) are important regulators in human development and serve key roles in tumorigenesis. Using a lenti-miR over-expression construct, MiR effect on GBM proliferation and tumorgenicity will be defined. In vitro functional significance will be assessed via MTS proliferation assay, soft agar clonogenicity assay, as well as immunostaining for ki67, cleaved caspase 3, and CD133/15. Intracranial xenograft formation for miR over-expressing cells will be performed to assess miR effect on tumor size and animal survival. The utility of candidate miRs as serum biomarkers, will be determined by measuring serum miR level throughout the course of GBM patient treatment. These results will give insight into the role of miRs in GBM biology, their potential as therapeutic targets, and use as noninvasive tumor biomarkers.
Neurosurgery Research & Education Foundation 2011 Awardees

**NREF/Biomet Microfixation Research Fellow**

Chad Washington, MD  
Washington University  
Sponsor: Gregory J. Zipfel, MD

**Project title:** The Effect of Sildenafil on Vasospasm and Cerebral Blood Flow after Subarachnoid Hemorrhage

**Abstract:** Background: We propose that sildenafil (a phosphodiesterase V inhibitor) reduces vasospasm and improves cerebral blood flow and autoregulatory function in humans with SAH. Methods: Twelve patients having cerebral vasospasm will be randomized into 4 groups: low-dose sildenafil/angiography, high-dose sildenafil/angiography, low-dose sildenafil/PET, and high-dose sildenafil/PET. The angiography group will undergo a pre- and post- sildenafil angiogram comparing the degree of vasospasm. The PET group will undergo a pre- and post-sildenafil PET scan comparing cerebral blood flow and cerebral autoregulatory function. Conclusion: The information from this study will help elucidate whether sildenafil therapy has beneficial effects in SAH patients.

**NREF/Cerebrovascular Section Research Fellow**

Gary Schwartzbauer, MD  
The University of Maryland  
Sponsor: J. Marc Simard, MD

**Project title:** Contribution of the SUR1/TRPM4 Channel to Cerebrovascular Dysregulation During Cerebral Malaria

**Abstract:** Dysregulation of the SUR1/TRPM4 cation channel in CNS endothelial cells is central to disease progression in SAH, stroke, and trauma. We show SUR1/TRPM4 is also upregulated during human cerebral malaria (CM), a devastating illness that kills 1 million children yearly with no proven cure. Using a mouse model of CM we will test the hypothesis that channel blockade with low dose glybenclamide ameliorates mortality and neurologic sequelae.

**NREF/DePuy Spine Research Fellow**

Craig Shannon, MD  
New York Medical College  
Sponsor: Meena Jhanwar Unyal, PhD

**Project title:** Treatment of Spinal Cord Injury Utilizing Stem Cell Therapy in Conjunction with Anti-Inflammatory Compounds

**Abstract:** Spinal cord injury (SCI) is a devastating condition with, to date, no real therapeutic regimen to reverse or improve neurologic outcomes. Spinal Cord injury is very important because it is encountered so commonly in medicine. Stem cell therapy in conjunction with anti-inflammatory agents offers a promising method in improving functional recovery following SCI. This study is based on the premise that stem cell therapy in conjunction with anti-inflammatory compounds will provide better recovery from SCI. In addition the stem cell therapy with anti-inflammatory compounds would provide a better recovery from SCI with minor or no side effects. This study provides a unique model for treatment strategies using stem cell therapy as well as anti-inflammatory compounds and provides a basis of treatment for SCI in humans. To achieve these aims, first, we will generate and implant stem cells at the site of SCI in rats following thoracic spinal cord contusion (T9-10). Second, we will administer curcumin and/or EGCG individually or in combination at the site of injury.

These studies will contribute to our understanding of fundamental neurosurgical disorders linked by a common mechanism while providing a molecular basis and possible therapeutic avenue for CM for which few are known.
Awards Recipients

NREF/Section on Tumors Research Fellow

Arthur Chou, MD
University of California, Los Angeles

Sponsor: Linda Liau, MD, PhD

Project title: Evaluation of a Novel Cancer Associated Metabolite, 2-Hydroxyglutarate, in IDH1 Mutant Gliomas

Abstract: Mutations in the cellular enzyme isocitrate dehydrogenase 1 (IDH1) have recently been implicated in the formation of gliomas and are found in up to 80% of low-grade and secondary high-grade gliomas. Recent work from our group has identified a novel enzymatic activity of the mutant IDH1 protein that leads to the production of 2-hydroxyglutarate. Aim 1 of the project is to evaluate 2-hydroxyglutarate as a potential biomarker for identifying patients with mutant IDH1 tumors and for monitoring tumor progression. The second aim is to generate in vitro and in vivo models of IDH1-mutant tumors to study its role in tumorigenesis.

NREF/Whelan Neuro-oncology Research Fellow

Michael Oh, MD
University of California, San Francisco

Sponsor: Andrew Parsa, MD

Project title: CD133+ Glioma Cell Proliferation is Regulated by Complement Activation

Abstract: Glioblastoma multiforme (GBM) is the most malignant primary brain tumor in adults with very poor outcomes. A small population of brain tumor-initiating cells (BTICs) in GBM is able to initiate brain tumors in animal models, and may be involved in tumor progression and resistance to adjuvant therapies. We plan to study the impact of complement component C3 activation on GBM BTICs. Using gliomas resected from patients undergoing surgery, we will isolate BTICs and analyze the impact of C3 activation, C3a generation, and C3a receptor activation on tumor growth and invasion. This study could lead to novel therapy for GBM.

2012 William P. Van Wagenen Fellowships

Matthew Christopher Tate, MD
University of California, San Francisco

Project Title: Utilizing awake intraoperative brain mapping in glioma patients to establish a compressive functional brain atlas and to investigate modes of motor plasticity in the human brain

Abstract: My goals in academic neurosurgery are to establish a practice focusing on the treatment of patients with brain tumors involving eloquent areas and to establish a laboratory effort aimed at understanding the structural substrates underlying both normal human brain function as well as functional reorganization in response to brain tumor growth. As a Van Wagenen Fellow under the mentorship of Dr. Hugues Duffau in Montpellier, France, I will utilize direct cortical stimulation in awake human patients to both establish a standardized functional atlas of human brain function and to investigate the functional consequence of brain plasticity following injury.
2012 AANS Annual Scientific Meeting

Awards Recipients

2011 - 2012 Young Clinician Investigators
NREF/Section on Pediatric Neurological Surgery Young Clinician Investigator
Sheila Singh, MD
McMaster University

Sponsor: Mick Bhatia, MD

Project title: The Role of Bmi1 in Neural Stem Cell Regulation and Brain Tumor Development

Abstract: This study will examine the role of the master regulatory stem cell gene Bmi1 in the brain tumor development. We apply our brain tumour initiating cell (BTIC) experimental models to test whether human neural stem cells engineered to overexpress Bmi1 can generate brain tumors, and whether knocking down Bmi1 in human BTICs alters brain tumor formation in mice. We will determine the role of the Bmi1 signaling pathway in brain tumor development, identifying molecular events that uniquely drive the BTIC. Ultimately, our research may generate selective therapies that target the BTIC, thereby improving prognosis for brain tumor patients.

NREF/Codman Young Clinician Investigator
Nader Sanai, MD
Barrow Neurological Institute

Sponsor: Arturo Alvarez-Buylla, PhD

Project title: Characterization of Glial Progenitor Cells in the Postnatal Human Brain

Abstract: Brain tumor stem cells represent a small fraction of gliomas, yet are a propagating element uniquely resistant to radiation and chemotherapy. Despite widespread interest in therapeutically targeting stem and progenitor cell elements within gliomas, the tumor’s cell-of-origin remains unknown. In the adult human brain, 3-4% of all cells within the subcortical white matter are glial progenitor cells, yet, despite this prevalence, other smaller human germinal regions are far better understood. Using a combination of previously-established techniques adapted for human tissue, we will characterize the organization, distribution, magnitude, and in vivo identity of GPCs in the human subcortical white matter.

Medical Student Summer Research Fellowship 2011 Best Abstract
Raanan Alter, BA
Boston University School of Medicine

Project Title: Radiation Response Modifiers for Glioblastoma and other CNS tumors

Abstract: In central nervous system (CNS) tumors, radiotherapy (RT) plays a central role, either as adjuvant therapy after resection, or as primary treatment. RT is efficacious in part because tumor cells are deficient in their ability to effectively repair DNA damage caused by RT. However, RT can also irreparably damage the DNA of surrounding normal, healthy cells, resulting in toxic side effects. Optimal CNS tumor RT therefore strives to strike a balance between DNA damage-induced tumor cell killing, and unwanted side effects. For my research, I will use a novel high-throughput imaging-based platform to directly monitor the kinetics of double-strand DNA breaks and repair coupled to a library of small molecule compounds in glioblastoma and other CNS tumor cell lines. With this assay, I will identify novel therapeutic lead compounds that can either radio-sensitize tumor cells or increase radio-resistance of healthy cells.
Awards Recipients

WINS Louise Eisenhardt Traveling Scholarship Award
Amanda Muhs Saratsis, MD

Amanda Muhs Saratsis, MD, is chief resident in the Department of Neurosurgery at Georgetown University Hospital in Washington, D.C. A Chicago native, Dr. Saratsis attended Northwestern University in Evanston, IL, as an undergraduate, completing dual majors and departmental honors in molecular biology and psychology, with a minor in philosophy. She also studied piano performance at both the Northwestern University School of Music and the Music Institute of Chicago. Dr. Saratsis earned her medical degree from the University of Illinois at Chicago College of Medicine, where she received the Warren H. Cole Surgery Society Award for Excellence in Surgery, as well as nominations to the Gold Humanism and Alpha Omega Alpha Honor Societies. Dr. Saratsis currently is in her final year of residency training in neurosurgery at Georgetown University Hospital. She also investigates laboratory research on pediatric brainstem glioma at the Center for Genetic Medicine Research at Children’s National Medical Center in Washington, D.C., winning the 2011 Kenneth Shulman and Louise Eisenhardt Traveling Scholarship Awards for her work. Upon completion of her residency, Dr. Saratsis plans to pursue fellowship training in pediatric neurosurgery. She resides with her husband in Arlington, Va. An avid runner, she still enjoys playing piano and writing music.

Young Neurosurgeons (YNS) Medical Student Award
Andreea Ana-Maria Seicean

Andreea Seicean, currently is a fourth-year MD/PhD dual degree student at Case Western Reserve University (CWRU) School of Medicine in Cleveland. She completed her BA and MPH degrees at CWRU summa cum laude with high distinction. Having a wide range of research interest, Ms. Seicean has published successfully in the areas of sleep medicine, cardiology and health disparities. Her interest in neurosurgery began the first year of her medical education, and was stimulated through the ongoing mentorship of Robert Weil, MD, chair of the Burkhardt Brain Tumor and Neuro-Oncology Center at Cleveland Clinic Foundation. She is in the process of completing her PhD in health services research, focusing on outcome measures and cost-benefit analysis in neurosurgery, under the guidance of Dr. Weil and Duncan Neuhauser, PhD, The Charles Elton Blanchard MD Professor of Health Management at CWRU. The team recently had its first paper, “Use and Utility of Preoperative Hemostatic Screening and Patient History in US Adult Neurosurgical Patients,” accepted by the Journal of Neurosurgery. Seicean currently is working on several ongoing projects, including an assessment of the effect of age on outcomes in patients undergoing resection of cranial malignant tumors. She intends to pursue a career as a clinical investigator in neurosurgery and will be applying for residency in 2015.

AANS/CNS Cerebrovascular Section
Nils H. Ulrich, MD

Nils H. Ulrich, MD, is a fourth-year resident at the University Hospital of Zurich undertaking his neuroradiology rotation, and is scheduled to complete his residency in 2015. Born and raised in Dusseldorf, Germany, Dr. Ulrich attended Heinrich-Heine-
Section Awards Recipients

University of Dusseldorf, from which he graduated in 2008. Dr. Ulrich graduated with his medical degree from the Department of Neurology in Dusseldorf Magna Cum Laude in the area of stroke research, and in 2009 began his neurosurgical residency at the University of Zurich. Dr. Ulrich also gained experiences in foreign medical systems at the University of Sydney and Mount Sinai School of Medicine in New York City. Dr. Ulrich’s main clinical interests are cerebrovascular diseases, pituitary surgery and intraoperative imaging solutions - in particular the use of intraoperative ultrasound - and plans to pursue a career in academic neurosurgery. In addition to his academic activities, Dr. Ulrich continued his work in pituitary research and has a strong interest in teaching both graduate and medical students. Outside of the operating room, Dr. Ulrich pays high attention to sociocultural issues within neurosurgery. He also is a member of the Swiss Young Neurosurgeons and the German Society of Neurosurgery.

AANS Section On History

Vesalius Award
Sergiy V. Kushchayev, MD

Sergiy V. Kushchayev, MD, PhD, is a Ukrainian neurosurgeon who currently is a research fellow at the Barrow Neurological Institute at St Joseph’s Hospital and Medical Center in Phoenix. He received his medical degree from Bogomolets National Medical Institute in Kiev, Ukraine in 1997. Dr. Kushchayev completed his PhD in 2003. Dr. Kushchayev was a Laureate of Ukrainian State Prize Winner in the field of Science and Technique in 2009 and received an Award of Academy of Medical Sciences of Ukraine in 2000. He was a recipient of the Stipendium of Cabinet of Ministry of Ukraine in 2004. Since 2008, Dr. Kushchayev has been a fellow at the Barrow Neurological Institute, focusing on immunology of malignant brain tumors and investigation of the scaffolds in spinal-cord injury. He is the author of two books and holds four patents.

Section On Pain

William H. Sweet Award
Erlick Pereira, MD

Mr. Erlick Pereira is a British neurosurgery resident at Oxford University Hospitals in the United Kingdom. He studied natural sciences at Trinity College University of Cambridge where he became a senior scholar, gained the top first in experimental psychology and was awarded the Passingham Prize for his BA and MA degrees. He gained his medical degree from Oxford University’s inaugural accelerated medical program where he developed an interest in functional neurosurgery and was awarded the Radcliffe Infirmary, Royal Society of Medicine and John Potter Prizes. He also received Royal College of Surgeons of England and Wellcome Trust awards for medical student work conducted in Zimbabwe, Cape Town, Goa and Sao Paulo—where he learnt Portuguese. He was awarded a graduate scholarship to Somerville College Oxford University where he is now a Fellow. He is undertaking a doctorate in neurosurgery for pain advised by Alex Green and hopes to specialize in minimally invasive complex spinal surgery and neurosurgery for pain alongside functional neurosurgery. To date he has published over 70 papers and book chapters and 80 international and national conference presentations in neurosurgery and neurosciences. He is a member by examination of the Royal College of Surgeons of England and a medical officer for the British Boxing Board of Control.
Section Awards Recipients

AANS/CNS Section On Pediatric Neurological Surgery

Kenneth Shulman Award
Paul Gigante, MD

Dr. Paul Gigante, MD, graduated from Harvard Medical School in 2006 and will complete his residency from New York Presbyterian Hospital in June of 2012.

Hydrocephalus Association Award
Ashley Grosvenor Tian, MD

Ashley G. Tian, MD, was born and raised in Lancaster, Penn. After she graduated from Franklin and Marshall College in 1998 with a BA in biology, Dr. Tian worked in a traumatic brain injury research laboratory at the University of Pennsylvania, studying cellular reaction to stretch injuries. It was this research work that inspired her to pursue a career in neurosurgery. Dr. Tian attended the University of Pittsburgh’s School of Medicine, where she received her doctor of medicine degree in 2006. She then traveled west to become a resident in Stanford University’s Department of Neurosurgery. While on her pediatric rotation, Dr. Tian began her project studying premature infants with intraventricular hemorrhage and post-hemorrhagic hydrocephalus. Dr. Tian plans to pursue a career in pediatrics and continue her work in hydrocephalus research. Her other academic interests include congenital malformations and brain tumors. In her free time, Dr. Tian enjoys traveling, cooking, growing orchids and spending time with her family.

AANS/CNS Section On Neurotrauma And Critical Care

Synthes Resident Spinal Cord Injury Award
Jefferson Wilson, MD

Jefferson Wilson, MD, is a fourth-year neurosurgery resident at The University of Toronto in Toronto, Canada. At present, he is pursuing graduate studies under the supervision of Michael G. Fehlings, MD, PhD, FAANS, which will ultimately lead to a PhD in clinical research methods and biostatistics. His main research interests are in the realm of spinal trauma - specifically, predictive modeling in spinal-cord injury (SCI), development of new classification systems for spinal trauma, and planning and participating in clinical trials investigating new therapies for SCI. His research work currently is supported by post-doctoral fellowship grants from the Christopher and Dana Reeve Foundation as well as the Cervical Spine Research Society.

Synthes Resident Craniofacial Award
Michael Tso, MD

Michael Tso, MD, is in his third year of neurosurgical training and is the chief neurosurgery resident at The University of Calgary in Alberta, Canada. He completed his BS honors degree in life sciences at Queen’s University in Kingston, Ontario, Canada, followed by his medical degree at The University of British Columbia in Vancouver, Canada.

Dr. Tso has been actively involved with clinical research in neurovascular surgery. Later this year, he plans to pursue a PhD investigating mechanisms of delayed cerebral ischemia in subarachnoid hemorrhage. Upon completion of his residency, he intends to seek fellowships in both open cebrovascular and endovascular neurosurgery. Dr. Tso has aspirations of becoming a surgeon-scientist.
Section Awards Recipients

AANS/CSNS
Socioeconomic Session

Byron Cone Pevehouse Award
Brian L. Hoh, MD

Brian L. Hoh, MD, is the William Merz Associate Professor of Neurological Surgery, a Joint Associate Professor of Radiology, and a Joint Associate Professor of Neuroscience at the University of Florida. Dr. Hoh obtained his undergraduate degree at Stanford University, his medical degree at Columbia University College of Physicians and Surgeons, and received residency and endovascular neurosurgery fellowship training at the Massachusetts General Hospital. Dr. Hoh specializes in cerebrovascular and endovascular neurosurgery. He is a previous winner of the AANS NREF Young Clinician Investigator Award, the AANS Robert D. Florin Award, and currently has an NIH K08 award.

Robert Florin Award
Timothy Richard Smith, MD, PhD

Timothy is currently a fifth-year neurosurgery resident at Northwestern University in Chicago. Dr. Smith was born in Tuscola, Illinois, and attended the University of Illinois, where he obtained a bachelor of science degree in human physiology. Dr. Smith continued his focus on medicine in his post-graduate studies, earning a PhD in health science and policy from The University of California, Irvine; a doctor of medicine degree from the University of California, Los Angeles; and an MPH in quantitative methods from Harvard University. Dr. Smith believes that the foundation of all clinical practice and health policy should be solid research. His educational pathway has created a profound interest in the socioeconomic aspects of neurological surgery. Specifically, he researches the practice of defensive medicine and its financial impact on health care.

AANS/CNS Section On Stereotactic And Functional Neurosurgery

Philip L. Gildenberg Resident Award
Sameer A. Sheth, MD, PhD

Sameer A. Sheth, MD, PhD, received his BA in physics and astronomy from Harvard College in Boston, where he developed an interest in the physics of medical imaging. During his MD/PhD training at UCLA, Dr. Sheth focused on neuroimaging, studying the physiology of coupling between neuronal activity and microvascular blood flow.

Dr. Sheth currently serves as a chief resident in neurosurgery at the Massachusetts General Hospital in Boston. In addition to a thorough training in the breadth of neurosurgical disciplines, he has developed a specialty interest in functional epilepsy and oncological neurosurgery. Within residency, Dr. Sheth completed a two-and-a-half-year in folded functional/epilepsy fellowship with Emad N. Eskandar, MD, FAANS. He studied the neurophysiology of associative learning by performing single-unit recordings from the prefrontal cortex and basal ganglia in non-human primates trained in motor learning tasks.

Over the past few years, Dr. Sheth has applied the rigorous techniques of single-unit physiology to study higher cognitive function in patients undergoing lesion, DBS or epilepsy surgery. These intra- and peri-operative electrode recordings have permitted the study of uniquely human behaviors and cognitive processes in previously unexplored regions, including the dorsolateral prefrontal cortex, cingulate cortex and nucleus accumbens. In addition, Dr. Sheth is applying optical imaging techniques that he used in graduate school for studying cerebral hemodynamics to the intraoperative environment. Intraoperative optical imaging can provide high-resolution maps of cortical function, which can be used clinically for delineating eloquent cortex and as a basic science tool for studying functional architecture.
Section Awards Recipients

AANS/CNS Section On Tumors

American Brain Tumor Association Young Investigator Award
Isaac Yang, MD

Isaac Yang, MD, is an assistant professor in the University of California, Los Angeles' (UCLA) Department of Neurosurgery and a principal investigator in the UCLA malignant brain tumor laboratory, under the mentorship of Linda Liau MD, PhD, where he is investigating the utilization of nanoparticles and nanotechnology for application in brain tumor immunotherapy and vaccines. The Lodi, Calif., native's interest in neurobiology started as an undergraduate; he received his bachelor's degree from the University of California, Berkeley, where he was a member of Phi Beta Kappa academic honor society. His training followed with a medical degree from the David Geffen School of Medicine at UCLA. Dr. Yang completed a neurological surgery residency at the University of California, San Francisco (UCSF), as well as an F32 post-doctoral brain tumor research fellowship in the lab of Andrew Thomas Parsa MD, PhD, FAANS, funded by the National Institute of Health's National Research Service Award.

Dr. Yang's clinical focus has been primarily on brain tumors - both glioblastoma and skull base tumors. His research efforts have examined antigen expression and manipulation of the immune response to glioblastoma. He has been recognized with a UCSF Clinical and Translational Scientist Training Award and the Congress of Neurological Surgeons' Dandy Clinical Research Fellowship. Dr. Yang also has been the recipient of several distinguished regional and national awards, including the UCSF Medical Center 2010 Exceptional Physician Award; the AANS Integra Brain Tumor Research Award; the San Francisco Neurological Society Edwin Boldrey Award for Basic Science Research; the American Academy of Neurological and Orthopedic Surgeons' Research Award; the Kaiser Award for Clinical Research; the AANS Leksell Radiosurgery Award; and the Tumor Section Ronald L. Bittner Award on Brain Tumor Research.

Integra Foundation Award
Andrew T. Parsa, MD, PhD

Dr. Parsa specializes in adult brain and spinal cord tumors. He is experienced in the surgical treatment of skull base tumors, acoustic neuromas, and intraoperative mapping of brain function to optimize tumor resection. He is also an active member of the Gamma Knife radiosurgery program. Dr. Parsa has extensive research interests including the development of a brain tumor vaccine. He is the first recipient of the Reza and Georgianna Khatib Endowed Chair in Skull Base Tumor Surgery, awarded in 2007.

Leksell Radiosurgery Award
Edward A. Monaco III, MD, PhD

Edward A. Monaco III, MD, PhD, is a sixth-year resident in neurological surgery at The University of Pittsburgh. In 1999, he graduated summa cum laude with departmental honors in biology and chemistry from Le Moyne College in Syracuse, NY. He completed his PhD in neuroscience in 2004 from Upstate Medical University, also in Syracuse, and his MD from Columbia University College of Physicians and Surgeons in New York in 2006. During Dr. Monaco's fifth and sixth years of residency, he has pursued additional subspecialty training with L. Dade Lunsford, MD, FAANS; Douglas S. Kondziolka, MD, FAANS; and Peter C. Gerszten, MD, MPH, FAANS; in brain and spine stereotactic radiosurgery using the Gamma Knife and LINAC devices, while also performing clinical outcomes research in these areas. His current research interests include better elucidating the effects of different forms of radiation therapy (i.e. whole brain radiation therapy or stereotactic radiosurgery) on normal brain structure and function. Dr. Monaco is married and has three children.
Section Awards Recipients

National Brain Tumor Society Mahaley Award
Frederick F. Lang Jr., MD

Frederick F. Lang Jr., MD, FAANS, was born in Brooklyn, NY in 1988, he received his medical degree from Yale University School of Medicine, New Haven, Conn. He completed a residency in neurosurgery at New York University Medical Center in 1995, and completed a fellowship in neurosurgical oncology the following year at The University of Texas MD Anderson Cancer Center in Houston. Currently, Dr. Lang is Professor and Director of Clinical Research in the Department of Neurosurgery at The University of Texas MD Anderson Cancer Center. He also is adjunct professor of neurosurgery at Baylor College of Medicine in Houston. His clinical practice focuses on deep-seated brain tumors located in eloquent brain regions. Dr. Lang is a National Institute of Health (NIH)-funded translational researcher who has published extensively on gene, viral and cellular therapies for brain tumors. He has served on the Executive Committee of the American Association of Neurosurgeons (AANS)/Congress of Neurological Surgeons (CNS) Section on Tumors, and currently is the Chair of this Section. He is a member of the Executive Committee and the Executive Board of the Society for Neuro-Oncology (SNO), having completed his term as SNO president SNO in 2011. In addition, Dr. Lang is a Fellow of the American College of Surgeons (ACS) as well as the AANS. He also is an associate editor of Neurosurgery and serves on the editorial board of *Neuro-Oncology* and *Translational Oncology*. Dr. Lang served on the Developmental Therapeutic Study Section within the NIH until his tenure ended in 2011.

Preuss Award
Michael Lee Mumert, MD

Michael Mumert, MD, is currently a PGY-5 resident in neurosurgery at the University of Utah School of Medicine in Salt Lake City. He received a Bachelor of Science degree in biology from Evangel University prior to receiving his medical degree from the University of Kansas. During residency, he has been involved in research Dr. Dan Fults’s medulloblastoma lab. His laboratory work with Dr. Fults has focused on investigating and identifying genes involved in promoting spinal metastasis in a Sonic Hedgehog-dependent medulloblastoma mouse model. His academic interests continue to be wide-ranging, but he plans to further his training in spinal metastasis, mechanics, and pathophysiology through a dedicated post-residency fellowship in spine surgery.

Ronald L. Bittner Award on Brain Tumor Research
Daniel P. Cahill, MD, PhD

Born and raised in Connecticut, Daniel P. Cahill, MD, PhD, attended Yale University in New Haven, CT and then Johns Hopkins Medical School in Baltimore, receiving his MD/PhD degrees in 2001. Dr. Cahill completed neurosurgery residency training at the Massachusetts General Hospital (MGH) and began his career on the faculty in neurosurgical oncology at MD Anderson Cancer Center in Houston. He recently rejoined the MGH Brain Tumor Center in 2011, where he currently is an assistant professor of neurosurgery. His clinical practice is focused on the care of brain tumor patients, participates in national clinical trials of novel therapies, and trains neurosurgical residents to surgically diagnose and treat these cancers. Dr. Cahill’s lab-based research effort aims to identify the molecular genetic alterations that affect the development, progression and treatment resistance of brain tumors. By understanding the mechanism by which these alterations drive formation of these cancers, therapeutic strate-
Section Awards Recipients

Phiroz Erach Tarapore, MD

Phiroz Erach Tarapore, MD, earned his BS in biological sciences with honors and distinction at Stanford University in Palo Alto, Calif. During this time, he also received a minor in computer science. For his honors thesis, Dr. Tarapore studied potassium channel overexpression as a potential therapy for ischemic injury in the lab of Robert Sapolsky, PhD. He went on to earn his MD at The University of California, San Francisco (UCSF), where he studied the effects of Sonic Hedgehog protein on neural stem cells in the lab of Arnold Kriegstein, MD, PhD. Subsequently, Dr. Tarapore joined the residency at the Department of Neurological Surgery at UCSF. During this time, he was exposed to and developed an interest in functional mapping techniques of the human brain. He now works in the lab of Srikantan Nagarajan, PhD, where he is refining multi-modal mapping of both motor and language function. Dr. Tarapore’s current research focuses predominantly on navigated transcranial magnetic stimulation and magnetoencephalography as modalities for preoperative mapping, as well as for characterizing the neurophysiology of language production. He lives in San Francisco with his wife, who is an ophthalmologist, and his daughter.

Arthur Po-Fei Chou, MD, PhD

Arthur Po-Fei Chou is currently a fourth-year neurosurgery resident at the University of California, Los Angeles. Though Dr. Chou is originally from Taiwan, he grew up in Los Angeles. After receiving his bachelor’s degree in biochemistry from the University of California, Riverside in 1999, Dr. Chou subsequently enrolled in the Medical Scientist Training Program at the UCLA School of Medicine. He received his PhD in neuroscience in 2006 and his doctor of medicine degree in 2008. Currently, Dr. Chou is conducting research in neuro-oncology under the mentorship of Dr. Linda Liau at UCLA, focusing on the involvement of IDH1 mutation in gliomagenesis. After residency, Dr. Chou plans to pursue a career in academic neurosurgery focusing on malignant brain tumors.

Robert M. Starke, MD

Robert M. Starke, MD, MSc, is a third year neurosurgery resident at the University of Virginia. Dr. Starke Magna Cum Laude from Princeton University. He graduated from Albert Einstein College of Medicine with distinction in Neuroscience Research as a member of the Alpha Omega Alpha Society. He also completed a Masters of Medical Science with Distinction in Clinical and Translational Research as part of the National Institute of Health CRTP. During this time at Columbia University, Dr. Starke conducted basic science, translational, and clinical research in neurovascular surgery and oncology. As part of this research, he was awarded the Alpha Omega Alpha Research Fellowship, the Prize for Overall Excellence in Clinical Research at the National Research Forum, and the award for Outstanding Basic Science Presentation at the Eastern-Atlantic Research Forum.

Dr. Starke’s oncology research interests include minimally invasive intracranial and spinal neurosurgery. His vascular research interests include subarachnoid hemorrhage, intracerebral hemorrhage, cerebral ischemia, arteriovenous malformation, moyamoya disease, and vasospasm. Dr. Starke was a prior recipient of the AANS Synthes Cerebrovascular Section Resident Award and the Leksell Radiosurgery Award.
Section Awards Recipients

AANS Nursing Scholarship
John J. Woodrow, RNFA

The AANS Nursing Scholarship is awarded annually in an effort to provide funding for a nurse to attend the AANS Annual Scientific Meeting. The scholarship is open to member and non-member nurses.

John Woodrow RNFA employed by the University of Arkansas for Medical Sciences in Little Rock, Arkansas. He works with the Movement Disorder and Nerve Stimulator Teams in the role of coordinator to both teams.
Nurse and Physician Extenders Programs

**N&PE**

Watch for this icon throughout the Preliminary Program. It indicates sessions that were designed with you in mind.

Neuroscience Nurse, Nurse Practitioner and Physician Assistant Activities the Scientific Program Committee has organized a comprehensive selection of scientific topics that will be presented. All registered nurses, nurse practitioners, and physician assistants are encouraged to attend any of the Breakfast Seminars that are offered each morning, Monday through Wednesday; and the Practical Clinics on Saturday and Sunday.

Eight Practical Clinics, twenty Breakfast Seminars and one afternoon session is being offered, as well as the Mid-Level Practitioner Luncheon:

**Practical Clinics**

006 Head Trauma: Current Treatments and Controversies with Hands-On Practical Session in Brain Monitoring
009 3-D Anatomy and Approaches to the Supratentorial Area and Anterior Skull Base
010 Thoracic and Lumbar Stabilization and Fusion: Indications and Complications
013 Neurotrauma Critical Care Review and Update for the Practicing Neurosurgeon
016 Microsurgical Management of Intracranial Aneurysms: Site Specific Surgical Anatomy, Operation Intervention and Complication Management
022 Spinal Stabilization, Fusion and Instrumentations: Biomechanics and Techniques
024 Critical Care Procedures for the Neurosurgical Mid-Level Practitioner
035 Brain Neoplasms; Updates on Diagnostics through Therapeutics

**Breakfast Seminars**

105 Multidisciplinary Management of Cerebral AVMs
107 Foraminal and Far Lateral Lumbar Disc Herniations
109 Surgical Treatment of Parkinson’s Disease
112 Management of Vasospasm
113 Management of Adult Scoliosis
114 Intramedullary Spinal Cord Tumors
116 Neurosurgical Management of Intractable Pain
119 Cerebral Trauma State-of-the-Art Treatment
205 Endovascular vs. Microsurgical Techniques for the Optimal Treatment of Intracranial Aneurysms
209 Cervical Spondylotic Myelopathy
216 Professional Issues: Challenges and Opportunities for the Neurosurgical Mid-Level Practitioner
218 Return to Play after Sports Injury
220 Anticoagulation for the Neurosurgeon and Hemostasis in Neurosurgery
223 Cranial Radiosurgery
303 Lumbar Spine Fusion
308 Controversies in the Management of Intracerebral Hematomas
311 Current Use of Biologic Graft Extenders for Spinal Fusion
312 Management of Spinal Axis Trauma
318 Management of Acute Spinal Cord Injury
320 Contemporary Management for Adult Hydrocephalus
126
Mid-Level Practitioner Luncheon
AANS 2012
Monday, April 16
1:00-2:45 PM
Room C219, Miami Beach Convention Center
Fee: $25
Moderator:
Tyiglia Lay, MS, ACNP-BC

TOPIC: DBS for Essential Tremor and Parkinson’s Disease: State-of-the-Art, Unanswered Questions, and Future Directions
Speaker: Robert E. Wharen Jr, MD

This lecture will explore the use of neurostimulation in the treatment of essential tremor and Parkinson’s Disease. The program will examine appropriate patient selection, investigate surgical techniques and analyze expected patient outcomes. Upon conclusion, there will be exploration of some of the unanswered questions and discussion of the opportunities for future research in the application of Deep Brain Stimulation in this complex patient population.

Learning Objectives:
• Understand the selection of patient’s, surgical techniques, and expected outcomes for patients with essential tremor and Parkinson’s Disease treated with DBS
• Understand some of the unanswered questions and opportunities for future research in the application of DBS for patient’s with essential tremor and Parkinson’s Disease

500
Advancements in Neurotrauma Care
Tuesday, April 17
2:00-5:00 PM
Room D233, Miami Beach Convention Center
Fee: $100
Moderator:
Tyiglia Lay, MS, ANP-BC, ACNP-BC
Speakers:
Peter Leroux, MD
Rocco A. Armonda, MD
Allan D. Levi, MD
Barth A. Green, MD

This course will focus on specific decision making challenges that the Neurotrauma clinician faces in caring for the traumatically injured patient. A case based didactic will be used to explore the pathophysiologic changes and the significance of goal directed therapy. The course will allow participants to gain important insight into how and why various management strategies and instituted. Topics to be reviewed include: multi-modality monitoring, traumatic vasospasm following TBI, and the critical care management and use of hypothermia for Spinal Cord Injury.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Identify the signs and symptoms, methods of prevention and treatment of vasospasm in acute traumatic brain injury
• Discuss multi-modality monitoring and its use in goal directed therapy for the treatment of traumatic brain injury
• Express the benefits and potential complications of using hypothermia in the treatment of spinal cord injury
• Identify the unique challenges associated in caring for the spinal cord injured patient in critical care

Not A Member of AANS?
RN, NPs, and PAs are encouraged to become AANS members in the Associate category. Requirements include proof of certification and letters of recommendation from three AANS voting members. For a list of member benefits and access to the online application, please go to http://www.aans.org/en/Members/Membership%20Requirements.aspx
Candidate (Resident/Fellow) and Medical Student Activities

C&MS
Watch for this icon throughout the Preliminary Program. It indicates sessions that were designed with you in mind.

Resident’s Note
Neurosurgical residents and fellows in North America receive free Candidate membership in the AANS! Visit the AANS Resource Center in the Exhibit hall to learn more about membership benefits, or visit http://www.aans.org/Young%20Neurosurgeons/Residents/Resident%20Membership.aspx.

International Candidate (Resident/Fellow)
This membership category offers membership to residents or fellows who are enrolled in a verifiable non-North American neurosurgical training program. International Candidate Members may request transfer to International member status with the submission of a copy of their certification documentation following training. For more information, please visit the AANS Resource Center in the Exhibit hall or the membership area of www.AANS.org.

Marshal’s Program/Office
For those already signed up to Marshal, please report to the Marshal Office at least 30 minutes prior to your scheduled time.

Room C227, Miami Beach Convention Center
Phone: 786-276-4510

Hours:
Saturday, April 14 6:30 AM - 5:30 PM
Sunday, April 15 6:30 AM - 5:30 PM
Monday, April 16 6:30 AM - 5:30 PM
Tuesday, April 17 6:30 AM - 5:30 PM
Wednesday, April 18 6:30 - 10:00 AM

If you are interested in volunteering to serve as a Marshal onsite, please stop by the Marshal Office in Room C227 at any time during the above hours to check availability for open sessions.

May 18 and 19, 2012 • New York City
Advanced Endoscopic Skull Base and Pituitary Surgery

COURSE DIRECTORS:
Vijay K. Anand, MD, FACS
Theodore H. Schwartz, MD, FACS

GUEST FACULTY:
John Jane Jr., MD
Charles Teo, MD

2-DAY COURSE DESCRIPTION: This course is a comprehensive overview of the newly emerging field of endoscopic skull base surgery combining didactic sessions with hands-on cadaver dissection. At the completion of this course, participants should be well equipped to start utilizing these approaches in their own practices. Endoscopic instruments and surgical navigation equipment will be available to participants for use on fresh cadavers during laboratory sessions. Participants will have an opportunity to discuss difficult cases with the faculty during panel discussions. Early registration is highly recommended.

ACREDITATION & CREDIT DESIGNATION STATEMENTS: Weill Cornell Medical College is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Weill Cornell Medical College designates this live activity for a maximum of 16 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

LOCATION:
Weill Cornell Medical College
1300 York Avenue, New York, NY 10065

INFORMATION:
Course Coordinator
Tel: 212-585-6800
email: npcmc@nyp.org
www.cornellneurosurgery.org

Weill Cornel Medical Center
Sessions for Candidates and Medical Students

Sixteen exclusive Practical Clinics and fourteen Breakfast Seminars are being offered complimentary to Residents, Fellows and Medical Students which are listed below:

**Practical Clinics**

- 003 Operative Nuances for Cranial and Skull Base Procedures: A Cadaveric and Case-Based Microsurgical 3-D Video Presentation
- 009 3-D Anatomy and Approaches to the Supratentorial Area and Anterior Skull Base
- 011 Management of Incidental Imaging Findings
- 013 Neurotrauma Critical Care Review and Update for the Practicing Neurosurgeon
- 016 Microsurgical Management of Intracranial Aneurysms: Site Specific Surgical Anatomy, Operation Intervention and Complication Management
- 017 3-D Anatomy and Approaches to the Posterior Fossa and Posterior Skull Base
- 018 Practical and Technical Aspects of Transsphenoidal Surgery
- 019 Coding, Compliance and Revenue Issues in Spine Coding
- 022 Spinal Stabilization, Fusion and Instrumentations: Biomechanics and Techniques
- 023 Update on Spinal Radiosurgery
- 024 Critical Care Procedures for the Neurosurgical Mid-Level Practitioner
- 025 Update on Malignant Brain Tumors for the General Neurosurgeon
- 026 Coding, Compliance and Revenue Issues in Cranial, Non-Spine and E&M Coding
- 027 Peripheral Nerve Injuries, Entrapments and Tumors: Examination and Evaluation
- 029 Brain Mapping and Awake Mapping Techniques
- 030 Practical Course in Neurostimulation for Residents and Fellows

**Breakfast Seminars**

- 106 Suprasellar and Juxtasellar Tumors: Complications & Avoidance
- 112 Management of Vasospasm
- 114 Intramedullary Spinal Cord Tumors
- 205 Endovascular vs. Microsurgical Techniques for the Optimal Treatment of Intracranial Aneurysms
- 206 Peripheral Nerve Entrapment Syndromes
- 210 Functional Neurosurgery for Psychiatric Illness
- 213 Beginning Your Academic Career: Answers to Your Questions
- 223 Cranial Radiosurgery
- 309 Advances in Carotid Disease: Surgery vs. Endovascular Therapy
- 312 Management of Spinal Axis Trauma
- 313 Intracranial Endoscopy
- 316 Spinal Motion Preservation Using the Posterior Column Implants
- 317 Getting the Most Out of Your Residency
- 321 Cerebral Venous System: Surgical Considerations
Sessions for Candidates and Medical Students

**NEUROSURGICAL TOP GUN COMPETITION**
For the seventh consecutive year, the Young Neurosurgeons Committee will host a competition for neurosurgical residents and fellows located in booth #1348 in the exhibit hall. This three day event will include stations such as an image guided lumbar pedicle screw, bone scalpel, virtual ventriculostomy and thoracic vertebroplasty simulators. Each participant has one opportunity at each intricate and demanding surgical station and is scored on his or her performance.

The resident or fellow with the best combined score will be awarded the distinct honor of being the Neurosurgical Top Gun and a prize of $1,000, as well as $1,500 for their residency program. Top scorers at each individual station will win a prize of $200.

*Be one of the first 50 participants and receive a Top Gun t-shirt!*

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**127 YNS Luncheon**
Monday, April 16, 1:00-2:45 PM
Rooms: A203-205
Miami Beach Convention Center
No Fee

MODERATOR: J. Bradley Bellotte, MD
FEATURED SPEAKER: Catherine Mazzola, MD

**DESCRIPTION:**
Come join the AANS Young Neurosurgeons' committee as they celebrate 21 years of service. Hear how one of today’s leaders became established.

Find out how tomorrow’s leaders are shaping neurosurgery. Learn about the impact that young neurosurgeons can make. Dr. Catherine Mazzola has been invited to give her perspective on what it means to be a leader in neurosurgery and how you can make an impact in the AANS and neurosurgery.

Dr. Mazzola is also the Director of the Craniofacial Center at Atlantic Health Systems-Goryeb Children's Hospital and also developed the Pediatric Neuromuscular Center at Goryeb Children’s Hospital. As an active and concerned pediatric neurosurgeon, Dr. Mazzola enjoys mentoring the medical leaders of the future. She was elected to the Executive Committee of the Congress of Neurosurgical Surgery in April 2008 and currently serves as the Chairperson for the northeast quadrant of the CSNS.
**AANS Resource Center**

**Your Connection to Professional Success**
All the resources an AANS Annual Scientific Meeting attendee needs will be in one place. Join us in the AANS Resource Center, booth #1330, for networking, learning, socializing or just a cup of coffee. Our publications, products and services will be available, along with the opportunity to speak with our education staff about CME, webinars and more. Also represented will be the Journal of Neurosurgery, the Neurosurgery Research and Education Foundation, NeuroPoint Alliance, AANS Online Career Center and more.

**Maintenance of Certification**
Check out our educational programs, including Master Series On-Demand CME, self-study education and practice management courses which are integral tools for meeting the AANS MOC requirements.

**NeuroPoint Alliance (NPA)**
The AANS created NeuroPoint Alliance (NPA) to develop a web-based national platform for collection, analysis and reporting of neurosurgical clinical data. NPA is designed to meet the quality care and research needs of a variety of clients including individual neurosurgeons, national organizations (AANS, CNS, ABNS) health care plans, biomedical industry and government agencies.

Learn more about NPA’s largest initiative: the National Neurosurgery Quality and Outcomes Database (N2QOD). This database is a sophisticated information technology resource that will allow any U.S. neurosurgeon, practice group or hospital system to contribute to and access aggregate quality and outcomes data through a centralized, nationally coordinated clinical registry.

Other NPA projects include data collection for the American Board of Neurological Surgeons and NeuroPoint-Spine Disorders. Projects coordinated by NPA include clinical trials, national & local registries, outcomes studies, surveys, data management, and comparative effectiveness research.

**Book Signings**

**Brian Greene, PhD**
**Monday, April 16 - 1:15 PM**
Join us for a book signing with Brian Greene, PhD, Theodore Kurze Lecturer and best-selling author of *The Elegant Universe* and most recently *The Hidden Reality: Parallel Universes and the Deep Laws of the Cosmos*, his most expansive and accessible book to date that takes on the grandest question: Is ours the only universe? Greene takes us on a captivating exploration of parallel worlds and reveals how much of reality’s true nature may be deeply hidden within them. *The Hidden Reality* will be available for purchase in the AANS Resource Center.

**Brian T. Andrews, MD**
**Tuesday, April 17 - 9:00 AM and 3:30 PM**
Join us for a book signing with Brian T. Andrews, MD, author of *Cherokee Neurosurgeon* an authorized biography of famed neurosurgeon, Charlie Wilson, MD, one of America's great neurosurgical pioneers.

**The Latest Information**
Our highly acclaimed *Journals of Neurosurgery* can help advance your clinical knowledge. Learn more about the latest clinical articles and ways to make the online Journals more valuable to your practice. View the JNS mobile platform or find out how you can publish your articles in the Journal as well.

**New this year!** Take part in this new innovative approach to the presentation of pioneering research presented in the *Journals of Neurosurgery*. Paper’s authors will present and discuss their research—touching on how their current work has been influenced by the findings, and where they feel research in this area is headed. Dr. Jane and Editorial Board members will discuss this work in relation to the research submitted to the JNS journals in this area, give their opinions on the significance of the work, and discuss new theories or opportunities it opens for both research and practice. Check the Technology Pavilion Schedule for more details.
Neurosurgery Research and Education Foundation
The NREF remains committed to its mission in providing private, non-governmental funding for research training in the neurosciences for residents and young clinicians. Learn more about the latest research, various grants available and how to participate in planned giving initiatives. Your support is needed to expand the innovative research that will make a difference in the lives of thousands.

AANS Publications
Visit our bookstore for AANS, AANS-Thieme co-published titles and other items.

AANSCodingToday.com
The AANS has partnered with Physician Reimbursement Systems to offer AANS members technological solutions to difficult practice issues - especially coding and billing. Speak to representatives from AANSCodingToday.com to discuss access to a comprehensive, easy-to-use online claims coding tool designed to assist physicians with the constant changes in claims coding and billing rules.

Joining the AANS
Not yet an AANS member? We can help! Complete an application today to take advantage of our many member benefits. Need to change your contact information? We can do that too!

Be sure to visit the AANS Resource Center, booth #1330, located in Exhibit Halls C&B on the first floor of the Miami Beach Convention Center.

Member Benefits through AANS Partner Programs
Members have the advantage of programs that are AANS-reviewed and often offer advantages such as preferred member pricing or exclusive services. The representatives of the following AANS Partner Programs will be in attendance on the exhibit floor.

New! X-Plain Patient Education Institute
Patient education is the most cost-effective measure healthcare organizations can take to enhance patient understanding, improve medical outcomes, boost patient satisfaction and reduce medical errors. The X-Plain Neurological Surgery Patient Education system is a computer-based, system used by clinics and hospitals to:

- Inform patients about recommended treatments and procedures
- Document patient education
- Print patient education handouts

The Patient Education Institute has been developing, marketing and evaluating interactive multimedia health software since 1994 and has published over 650 interactive, multimedia modules for patient education in English and Spanish. Visit with representatives in the Resource Center or view demonstrations at their booth #1937 in the exhibit hall.

NextGen Healthcare
NextGen provides electronic health record (EHR) and health information exchange (HIE) solutions for hospitals, health systems, physician practices and other healthcare organizations. Visit with representatives at their booth #1934 in the exhibit hall.

The Doctors Company—AANS Medical Liability Insurance Program
AANS offers a medical liability insurance program through The Doctors Company, the nation’s largest insurer of physician and surgeon medical liability with $4 billion in assets, 71,000 members, and an A rating from A.M. Best Company and Fitch Ratings. Founded by doctors for doctors, The Doctors Company is fiercely committed to relentlessly defending, protecting, and rewarding the practice of good medicine. Through this medical liability insurance program, AANS members may receive a 5 percent discount on their premium, as well as a claims-free credit of up to 17.5 percent. Visit booth #1234 for more information and to talk to a representative from The Doctors Company.

Thieme
Thieme Medical Publishers is the official neurosurgical book publisher of the AANS and has assumed distribution of over 80 published titles. AANS members receive a 10 percent discount on AANS/Thieme co-published books. Visit their booth #1235 to see the latest releases.
2012 AANS Annual Scientific Meeting
Archived Presentations
Also new this year - your Annual Scientific Meeting registration includes FREE online access to the full compilation of recorded meeting content—that's nearly 250 presentations.

Enjoy 24/7, on-demand access plus:
• All presentations available for downloading in MP4 formats
• MP3 audio files can be downloaded as a free additional feature
• Content archived for 2 years online; CD option available
• Easy search options for subjects, titles, presenters and more

Presentations from prior meetings are available for purchase at http://aans.peachnewmedia.com.

Presentations are captured from special lecturers in plenary sessions, scientific sessions, and section sessions - courses covered by general registration. The unique presentations from international neurosurgical dignitaries speaking in the International Symposium will also be included. Topics cover general neurosurgery, cerebrovascular, neurotrauma, pain, pediatric, spine, stereotactic & functional, tumor, and neurosurgical history.
• Catch sessions missed due to schedule conflicts
• Revisit favorite presentations
• Access stellar research to check a reference

Technology Pavilion Information and Schedule
Technology Pavilion Free Sessions Located within the AANS Resource Center, booth #1330.

All sessions are free to AANS medical attendees and their staff; first-come, first-serve seating. Come early to save your seat - sessions fill up fast!

ICD-10: What Neurosurgeons Need to Know Now To Prepare
On October 1, 2013, the ICD-9 code sets used to report medical diagnoses and inpatient procedures will be replaced by ICD-10 code sets. It is important that you begin preparation now for the transition. Presented by Joseph S. Cheng, MD, AANS Coding Courses’ Director, and John K. Ratliff, MD, AANS Coding Courses’ Co-Director, this brief session will give you an overview of what you need to do to get your practice ICD-10 ready, including how your dictation will need to change.

New Innovations in Neurosurgery!
Join us as we provide information submitted by our corporate supporters on their newest technologies and innovations in neurosurgery. See what’s new and then visit their booths in the exhibit hall!

JNS' "Best of the Best"
Dr. John Jane Sr., Editor-in-Chief of the Journals of Neurosurgery (JNS, JNS:Peds, and JNS: Spine), will host panel discussions on select articles from each of our print journals, published in the past year, that have made a significant contribution to the neurosurgical canon.

The papers’ authors will present and discuss their papers-touching on how their current work has been influenced by the findings, and where they feel research in this area is headed. Dr. Jane and Editorial Board members will discuss this work in relation to the research submitted to the JNS journals in this area, give their opinions on the significance of the work, and discuss new theories or opportunities it opens for both research and practice.
The papers to be presented include:

  Discussants: Michael Fehlings, MD and Mark N. Hadley, MD

- **Journal of Neurosurgery**: Functional Mapping-Guided Resection of Eloquent Cerebral Low-Grade Gliomas Improves Long-Term Survival.
  Discussants: John Sampson, MD and Hugues Duffau, MD

- **Journal of Neurosurgery**: Pediatrics: Institutional experience with 500 cases of surgically treated pediatric Chiari.
  Discussants: Mark Souweidane, MD, Nicholas Barbaro, MD and Joseph Piatt, MD.

Questions and comments are welcome and we look forward to lively discussion.

**Technology Pavilion Schedule**

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td>9:00 - 9:45 AM</td>
<td>ICD-10: What Neurosurgeons Need to Know Now To Prepare</td>
<td>Best of the Best Journal of Neurosurgery: Spine</td>
<td>New Innovations in Neurosurgery</td>
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<tr>
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<td>New Innovations in Neurosurgery</td>
<td>Best of the Best Journal of Neurosurgery: Pediatrics</td>
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<td>Presenter: W. Jerry Oakes, MD</td>
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Section Activities

AANS/CNS Cerebrovascular Section
Monday, April 16
SCIENTIFIC SESSION V - CEREBROVASCULAR  2:00-5:30 PM
Ballroom C, Miami Beach Convention Center

Tuesday, April 17
SECTION SESSION  2:00-5:30 PM
Ballroom C, Miami Beach Convention Center

BUSINESS MEETING  5:30-6:00 PM
Ballroom C, Miami Beach Convention Center

AANS/CNS Section on the History of Neurological Surgery
Monday, April 16
HISTORY DINNER  6:15-8:30 PM
Rusty Pelican

Wednesday, April 18
SECTION SESSION  2:00-5:30 PM
Ballroom D, Miami Beach Convention Center

AANS/CNS Section on Pain
Wednesday, April 18
SECTION SESSION  2:00-5:30 PM
Jr. Ballroom D, Miami Beach Convention Center

AANS/CNS Section on Pediatric Neurological Surgery
Monday, April 16
SCIENTIFIC SESSION IV - PEDIATRICS  2:00-5:30 PM
Ballroom B, Miami Beach Convention Center

Wednesday, April 18
SECTION SESSION  2:00-5:30 PM
Ballroom B, Miami Beach Convention Center

MATSON LECTURE  2:00-3:00 PM
Ballroom B, Miami Beach Convention Center

AANS/CNS Section on Neurotrauma and Critical Care
Monday, April 16
SCIENTIFIC SESSION VI - NEUROTRAUMA  2:00-5:30 PM
Ballroom D, Miami Beach Convention Center

Tuesday, April 17
Section Session  2:00-5:30 PM
Ballroom D, Miami Beach Convention Center

AANS/CNS Section on Disorders of the Spine and Peripheral Nerves
Monday, April 16
SCIENTIFIC SESSION II - SPINE  2:00-5:30 PM
Jr. Ballroom D, Miami Beach Convention Center

Tuesday, April 17
Section Session (SPINE)  2:00-5:30 PM
Jr. Ballroom D, Miami Beach Convention Center

Wednesday, April 18
SECTION SESSION (PERIPHERAL NERVE)  2:00-5:30 PM
Ballroom C, Miami Beach Convention Center

AANS/CNS Section on Stereotactic & Functional Neurosurgery
Monday, April 16
SCIENTIFIC SESSION III - STEREOTACTIC & FUNCTIONAL NEUROSURGERY  2:00-5:30 PM
Ballroom A, Miami Beach Convention Center

Tuesday, April 17
SECTION SESSION  2:00-5:30 PM
Ballroom B, Miami Beach Convention Center

AANS/CNS Section on Tumors
Monday, April 16
SCIENTIFIC SESSION I - TUMOR  2:00-5:30 PM
Jr. Ballroom C, Miami Beach Convention Center

Tuesday, April 17
SECTION SESSION (TUMOR I)  2:00-5:30 PM
Jr. Ballroom C, Miami Beach Convention Center

Wednesday, April 18
SECTION SESSION (TUMOR II)  2:00-5:30 PM
Jr. Ballroom C, Miami Beach Convention Center

AANS/CNS Socioeconomic Session
Tuesday, April 17
SECTION SESSION  2:00-5:30 PM
Ballroom A, Miami Beach Convention Center

Women in Neurosurgery (WINS)
Wednesday, April 18
WINS Breakfast  7:30-9:00 AM
Cowrie 1 and 2, Loews Miami Beach Hotel
AANS and Ancillary Meetings

(Meetings as of March 28th. For up-to-date information please refer to the iPod Touch®.)

Thursday, April 12

AANS Finance Committee Breakfast
7:00-8:00 AM
Poinciana 4
Loews Miami Beach Hotel

AANS Finance Committee Meeting
7:30-10:00 AM
Poinciana 4
Loews Miami Beach Hotel

AANS Strategic Planning Committee
10:00 AM-12:00 PM
Poinciana 4
Loews Miami Beach Hotel

AANS Executive Committee
12:00-5:00 PM
Poinciana 4
Loews Miami Beach Hotel

AANS Executive Committee Working Lunch
12:00-1:00 PM
Poinciana 4
Loews Miami Beach Hotel

CSNS Long Range Planning Committee
7:00-9:00 PM
Poinciana 4
Loews Miami Beach Hotel

Friday, April 13

CSNS Officer Briefing
7:00-7:15 AM
Boardroom
Loews Miami Beach Hotel

CSNS Communications and Education Committee
7:00-8:30 AM
Poinciana 3
Loews Miami Beach Hotel

ANSPA CME Meeting
7:00 AM-5:00 PM
A108
Miami Beach Convention Center

ANSPA Exhibits
7:00 AM-5:00 PM
A109
Miami Beach Convention Center

AANS Board of Directors Breakfast
7:30-8:30 AM
Americana Ballroom Salon 4
Loews Miami Beach Hotel

AANS Board of Directors
8:00 AM-4:00 PM
Americana Ballroom Salon 4
Loews Miami Beach Hotel

CSNS Information Conference for New/Alternative Delegates & Guests
8:00-8:30 AM
Cowrie 1
Loews Miami Beach Hotel

CSNS Young Neurosurgeons Represenational Section
8:30-9:30 AM
Poinciana 4
Loews Miami Beach Hotel

CSNS Executive Committee Meeting
9:00-10:00 AM
Poinciana 1
Loews Miami Beach Hotel

CSNS Finance Committee
10:00-11:00 AM
Boardroom
Loews Miami Beach Hotel

CSNS Website Sub Committee
10:00-11:00 AM
Periwinkle
Loews Miami Beach Hotel

CSNS Resident Fellowship, Leadership Development & Mentoring Committee
10:00-11:00 AM
Sands
Loews Miami Beach Hotel

CSNS Membership/State Societies Committee
10:00-11:00 AM
New Yorker
Loews Miami Beach Hotel

CSNS Publications Subcommittee
10:00-11:00 AM
Sunrise Tellin
Loews Miami Beach Hotel

CSNS Neurotrauma & Emergency Neurosurgery Committee
11:00 AM-12:30 PM
Neptune
Loews Miami Beach Hotel
AANS and Ancillary Meetings

CSNS Medical Legal Committee
11:00 AM-12:30 PM
Cowrie 2
Loews Miami Beach Hotel

CSNS Medical Practices Committee
11:00 AM-12:30 PM
Poinciana 3
Loews Miami Beach Hotel

CSNS Workforce Committee
11:00 AM-12:30 PM
Crown Conch
Loews Miami Beach Hotel

CSNS Coding and Reimbursement Committee and Coding and Reimbursement Committee of the AANS/CNS
11:00 AM-1:30 PM
Poinciana 1
Loews Miami Beach Hotel

CSNS Plenary Session
12:30-5:15 PM
Americana Ballroom Salon 3
Loews Miami Beach Hotel

CSNS Reference Committee
3:30-6:00 PM
New Yorker
Loews Miami Beach Hotel

AANS Voting Board
4:00-5:00 PM
Americana Ballroom Salon 4
Loews Miami Beach Hotel

CSNS Reception
5:15-7:00 PM
Americana Lawn-outdoors

Saturday, April 14

CSNS/CNS Caucus
7:00-9:00 AM
Cowrie 2
Loews Miami Beach Hotel

CSNS/AANS Caucus
7:00-9:00 AM
Cowrie 1
Loews Miami Beach Hotel

CSNS Southwest Quadrant
7:00-9:00 AM
Poinciana 1
Loews Miami Beach Hotel

CSNS Southeast Quadrant
7:00-9:00 AM
Poinciana 1
Loews Miami Beach Hotel

CSNS Northeast Quadrant
7:00-9:00 AM
Poinciana 4
Loews Miami Beach Hotel

CSNS Northwest Quadrant
7:00-9:00 AM
Poinciana 3
Loews Miami Beach Hotel

ThinkFirst Chapter Training
7:30 AM-5:00 PM
Neptune
Loews Miami Beach Hotel

CSNS Plenary Session
9:00 AM-12:00 PM
Americana Ballroom Salon 3
Loews Miami Beach Hotel

CSNS Luncheon
12:00-1:00 PM
Americana Ballroom Salon 2
Loews Miami Beach Hotel

CSNS Executive Committee
1:00-2:30 PM
Poinciana 2
Loews Miami Beach Hotel

N2QOD Scientific Committee
12:30-2:00 PM
Poinciana 3
Loews Miami Beach Hotel

AANS/CNS Joint Officers Meeting
1:30-2:30 PM
Poinciana 1
Loews Miami Beach Hotel

Neuropoint Alliance Board of Directors Meeting
3:00-4:00 PM
Cowrie 2
Loews Miami Beach Hotel

AANS Member Benefit Development Committee
4:30-5:30 PM
Cowrie 2
Loews Miami Beach Hotel

NeurosurgeryPAC Board of Directors
4:30-5:30 PM
Poinciana 1
Loews Miami Beach Hotel
AANS and Ancillary Meetings

Sunday, April 15

ThinkFirst Committee Meeting
7:00 AM-5:00 PM
Sunrise Tellin
Loews Miami Beach Hotel

N2QOD Business Meeting
9:30 AM-10:30 AM
Cowrie 1
Loews Miami Beach Hotel

ASSFN Executive Council Meeting
8:00-11:00 AM
Poinciana 3
Loews Miami Beach Hotel

AANS Leadership Orientation
8:00-9:30 AM
Americana Ballroom Salon 2
Loews Miami Beach Hotel

Neurosurgery Summit
9:30 AM-12:00 PM
B211
Miami Beach Convention Center

AANS Information Technology Committee
10:00-11:30 AM
Poinciana 4
Loews Miami Beach Hotel

Quality Improvement Workgroup of the AANS/CNS
11:00 AM-12:30 PM
Poinciana 2
Loews Miami Beach Hotel

Women in Neurosurgery Executive Committee
11:30 AM-2:00 PM
Crown Conch
Loews Miami Beach Hotel

AANS Van Wagenen Luncheon
11:30 AM-1:30 PM
Lucina
Loews Miami Beach Hotel

The Walter E. Dandy Neurosurgical Society Board of Directors
11:30 AM-1:00 PM
Cowrie 1
Loews Miami Beach Hotel

Journal of Neurosurgery Publishing Group Finance Committee Meeting
12:00-1:00 PM
Triton
Loews Miami Beach Hotel

AANS Education & Practice Management Committee
12:00-1:30 PM
Poinciana 3
Loews Miami Beach Hotel

AANS International Outreach Committee
12:00-1:30 PM
Poinciana 4
Loews Miami Beach Hotel

ACS Advisory Council for Neurological Surgery Luncheon
12:00-2:00 PM
D232
Miami Beach Convention Center

SNS Planning Meeting for the Web Portal Project
12:00-1:00 PM
D231
Miami Beach Convention Center

American Academy of Neurological Surgery Executive Committee Meeting
12:30-2:30 PM
Boardroom
Loews Miami Beach Hotel

Journal of Neurosurgery Publishing Group Editorial Board Meeting
1:00-4:00 PM
Americana Ballroom Salon 1
Loews Miami Beach Hotel

Extra-Mural Subspecialty Item Writing Committee Luncheon Seminar
1:00-2:30 PM
Poinciana 3
Loews Miami Beach Hotel

AANS Public Relations Committee
1:30-3:00 PM
Triton
Loews Miami Beach Hotel

AANS Van Wagenen Fellowship Committee Meeting
2:00-3:00 PM
New Yorker
Loews Miami Beach Hotel

AANS Emerging Technology, Coding & Reimbursement, and Spine Section’s Rapid Response Committee
2:00-3:00 PM
Americana Ballroom Salon 2
Loews Miami Beach Hotel

AANS/CNS Guidelines Committee
2:00-3:00 PM
Poinciana 2
Loews Miami Beach Hotel
AANS and Ancillary Meetings

**AANS Maintenance of Certification/CME Committee**
2:00-3:30 PM
Poinciana 4
Loews Miami Beach Hotel

**Communications and Public Relations Committee**
2:00-3:00 PM
Cowrie 1
Loews Miami Beach Hotel

**NREF Executive Council Meeting**
2:30-4:00 PM
D231
Miami Beach Convention Center

**AANS History Section Business Meeting**
3:00-5:00 PM
B211
Miami Beach Convention Center

**FLANC Neurosurgeons Meeting**
3:00-4:00 PM
Poinciana 3
Loews Miami Beach Hotel

**AANS Membership Committee**
3:00-4:00 PM
Crown Conch
Loews Miami Beach Hotel

**SNS Bootcamp Subcommittee**
3:00-4:00 PM
D232
Miami Beach Convention Center

**AANS Neurosurgeon Editorial Board Meeting**
3:30-5:00 PM
Triton
Loews Miami Beach Hotel

**North American Gamma Knife Consortium (NAGKC)**
4:00-6:00 PM
Poinciana 4
Loews Miami Beach Hotel

**AANS/CNS Section on Pain Executive Council Meeting**
4:00-6:00 PM
New Yorker
Loews Miami Beach Hotel

**Journal of Neurosurgery Publishing Group Reception**
4:00-6:00 PM
Americana Foyer
Loews Miami Beach Hotel

**AANS/CNS Cerebrovascular Section Executive Committee**
4:00-6:00 PM
Americana Ballroom Salon 2
Loews Miami Beach Hotel

**AANS/CNS Section on Disorders of the Spine & Peripheral Nerves Scientific Program Committee**
5:00-6:00 PM
D229 & 230
Miami Beach Convention Center

**AANS Resident Mentoring Reception**
5:30-6:15 PM
Crown Conch
Loews Miami Beach Hotel

**Monday, April 16**

**AANS/CNS Section on Tumors Executive Committee Meeting**
6:00-7:30 AM
Poinciana 3 & 4
Loews Miami Beach Hotel

**ThinkFirst Board of Directors Meeting**
6:00-7:30 AM
Cowrie 1
Loews Miami Beach Hotel

**AANS Development Committee Meeting**
6:15-7:30 AM
Poinciana 2
Loews Miami Beach Hotel

**N²QOD Operations Committee**
7:00-8:00 AM
Poinciana 1
Loews Miami Beach Hotel

**Foundation for International Education in Neurological Surgery (FIENS) Executive Committee**
6:30-8:00 AM
Sunrise Tellin
Loews Miami Beach Hotel

**N²QOD Executive Committee**
8:00-9:00 AM
Poinciana 1
Loews Miami Beach Hotel

**AANS/CNS Section on Disorders of the Spine and Peripheral Nerves Executive Committee**
1:00-2:00 PM
D229 & 230
Miami Beach Convention Center
AANS and Ancillary Meetings

WFNS Fundraising Meeting
1:00-2:00 PM
B113
Miami Beach Convention Center

ABNS Advisory Council Luncheon
1:00-2:00 PM
Americana Lawn - outside
Loews Miami Beach Hotel

AANS/CNS Section on Neurotrauma and Critical Care
1:00-2:00 PM
B211
Miami Beach Convention Center

AANS/CNS Disorders of the Spine and Peripheral Nerves Section Executive Committee
1:00-2:00 PM
D229 & 230
Miami Beach Convention Center

AANS/CNS Joint Military Committee
4:30-6:30 PM
Poinciana 2
Loews Miami Beach Hotel

Young Neurosurgeons Committee
5:00-7:00 PM
Americana Ballroom Salon 2
Loews Miami Beach Hotel

University of Wisconsin, Madison Reception
5:00-7:00 PM
Moon
Loews Miami Beach Hotel

AASAN Meeting
5:00-7:00 PM
Crown Conch
Loews Miami Beach Hotel

Penn Neurosurgery Frazier Club Reception
5:30-7:00 PM
Neptune
Loews Miami Beach Hotel

Washington University Neurosurgery Alumni Reunion
6:00-8:00 PM
Cowrie 1
Loews Miami Beach Hotel

Cleveland Clinic Alumni Reception
5:30-7:00 PM
Sunrise Tellin
Loews Miami Beach Hotel

Indiana University Reception
6:00-8:00 PM
Poinciana 3
Loews Miami Beach Hotel

Jefferson Neurosurgery Cocktail Reception
5:30-8:00 PM
New Yorker
Loews Miami Beach Hotel

Mayo Clinic Alumni Association Reception
6:30-8:00 PM
Triton
Loews Miami Beach Hotel

FLANC Reception
6:00-8:30 PM
The Raleigh Hotel-Poolside

Massachusetts General Hospital Neurosurgery Alumni Reception 2011
6:30-9:00 PM
Periwinkle
Loews Miami Beach Hotel

University of Colorado Alumni Reception
6:00-8:00 PM
Rotunda Area
Loews Miami Beach Hotel

University of Iowa Friends and Alumni Reception
6:30-8:00 PM
Cowrie 2
Loews Miami Beach Hotel

Mayfield Clinic 75th Anniversary Reception
6:00-8:00 PM
Poinciana 1
Loews Miami Beach Hotel

Semmes-Murphey Clinic/U of TN Alumni Reunion
6:30-8:30 PM
Lucina
Loews Miami Beach Hotel

Stanford University Neurosurgery Alumni Reception
6:00-8:00 PM
Americana Lawn-outside
Loews Miami Beach Hotel

Wayne State University Neurosurgery Alumni Reception
6:00-8:00 PM
Sands
Loews Miami Beach Hotel
AANS and Ancillary Meetings

**Tuesday, April 17**

**AANS/CNS Drugs and Devices Committee**  
6:30-8:00 AM  
Poinciana 1, Loews Miami Beach Hotel

**Carotid Study Investigator’s Meeting**  
7:00-8:00 AM  
Lucina  
Loews Miami Beach Hotel

**AANS Ethics Committee**  
1:00-2:00 PM  
D232  
Miami Beach Convention Center

**AANS Kuwait Visiting Scholar’s Program Luncheon**  
1:00-2:00 pm  
B211  
Miami Beach Convention Center

**AANS Cushing Luncheon**  
1:15-3:30 PM  
Americana Ballroom Salon 4  
Loews Miami Beach Hotel

**NREF Research Symposium**  
4:00-5:30 PM  
Americana Ballroom Salon 1  
Loews Miami Beach Hotel

**AANS/CNS Section on Tumor Reception**  
5:30-7:30 PM  
Cowrie 2  
Loews Miami Beach Hotel

**ThinkFirst Open House**  
5:30-7:00 PM  
Poinciana 2  
Loews Miami Beach Hotel

**NREF Donor & Grant Reception**  
5:30-7:00 PM  
Poinciana 1  
Loews Miami Beach Hotel

**Temple University School of Medicine Alumni Reception**  
6:00-8:00 PM  
Cowrie 1  
Loews Miami Beach Hotel

**Wednesday, April 18**

**CSRF Summit**  
7:00-8:30 AM  
Poinciana 1  
Loews Miami Beach Hotel

**Women in Neurosurgery Breakfast Reception**  
7:30-9:00 AM  
Cowrie 1 & 2  
Loews Miami Beach Hotel

**AANS/CNS Section on Pediatric Neurosurgery Executive Committee**  
12:30 PM-1:45 PM  
D232  
Miami Beach Convention Center

**AANS 2012/2013 Annual Meeting Planning Committee and Scientific Program Committee Post Convention Meeting**  
2:00-3:30 PM  
Poinciana 4  
Loews Miami Beach Hotel

**Matson Lecture Reception**  
6:30-7:30 PM  
St. Moritz Lawn-outside  
Loews Miami Beach Hotel
Great deals, new technology, education, meals and more! As you know, the healthcare industry is dynamic, innovative and rapidly changing. Vendor participation in the exhibit hall provides you an opportunity to view, discuss and evaluate the most current devices and services in the industry. Personnel are available at a moment's notice to answer questions, provide specifications and conduct demonstrations to address specific requirements. Whatever your position in the industry; neurosurgeon, neurosurgical resident or neurosurgical nurse, the 2012 AANS Annual Scientific Meeting is the best place to bring your questions and concerns regarding equipment, tools, products and services!

This year, more than 200 companies, occupying more than 800 booths, will showcase their products and services, several of them newly released, many tried and true and all valuable to the life of a neurosurgical practice. Booths will be conveniently located in Halls B and C of the Miami Beach Convention Center.

**Exhibit Hours**

<table>
<thead>
<tr>
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<td>Monday, April 16</td>
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**Beverage Breaks**

While you browse, be sure to enjoy the complimentary beverages offered throughout the Exhibit Hall. The afternoon breaks on Monday and Tuesday will feature a snack in addition to beverages.

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<tr>
<td>Wednesday, April 18</td>
<td>9:00-9:45 AM</td>
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**Lunch in the Exhibit Hall**

Tired of the same old box lunches at meetings? Well not this year! This year, we will be offering a wide range of options in addition to an ethnic theme for each day. Each medical attendee will be provided with a ticket for a complimentary lunch of their choice. Please be sure to come to the exhibit hall to have lunch with your colleagues!

**E-Posters and Email Stations**

Check email and view scientific posters in electronic format. Available Monday through Wednesday during exhibit hours.

**Brian Greene, PhD Book Signing**

Immediately following the Kurze lecture on Monday morning, Brian Greene, PhD will sign his latest book, *The Hidden Reality* in the AANS Resource Center at 1:15-2:00 PM. Copies will be available for purchase on-site. Please be sure to check your program guide on-site for more details.

**Simulator Booth**

New this year! In keeping with the educational focus of the AANS Annual Scientific Meeting, the traditional exhibit hall format will be expanded to incorporate a learning and solutions-driven environment for attendees. The AANS Annual Scientific Meeting will present interactive simulations and demos in the exhibit hall, creating innovative settings that will bring exciting learning opportunities for attendees. Please visit booth #1148.

**Plan Your Visit to the Exhibit Hall Now**

For your convenience, the AANS will once again provide an online interactive exhibiting tool. This software provides real-time viewing of the exhibit floor and denotes locations of exhibiting partners. Busy attendees can pre-plan their valuable time by searching exhibitor locations by company name, booth number, or product category. In addition you now will have the ability to email the exhibiting companies' contact to set-up an appointment. To view the interactive exhibit hall, please visit [http://www.aans.org/floorplans/aans12/default.html](http://www.aans.org/floorplans/aans12/default.html).

**Acknowledgement**

The AANS would like to thank our members for their continued support and interest in patronizing the 2012 AANS Annual Scientific Meeting exhibitors. There is added value to the meeting experience when companies present quality products and services addressing the needs of neurosurgical professionals. The partnership is equally beneficial. Registration fees at the annual meeting would be considerably higher without the income generated from exhibitor participation. In return, exhibitors gain increased exposure to a highly targeted market. Please set aside dedicated time in Miami to visit with exhibitors and let them know you value their partnership.
Commercial Supporters

The AANS wishes to thank the following companies for their support of this year’s Annual Scientific Meeting.

Gold Level Supporter
$50,000-$74,999
Codman
DePuy Spine

Silver Level Supporter
$25,000-$49,000
Integra
Medtronic, Inc.
TrueVision Systems, Inc.

Bronze Level Supporter
$1,000-$24,999
Amedica Corporation
Globus Medical
IMRIS
K2M, Inc.
Northwest Biotherapeutics, Inc
NuVasive, Inc.
Peachtree Financial Solutions
Siemens Medical Solutions, USA
Wiggins Medical

Practical Clinic Gifts In Kind
Access Closure
Accuray Inc.
Ad-Tech Medical Instrument Corporation
Aesculap Implant Systems
Aesculap Inc.
Alpha Omega
Amedica
Biomet Spine
Boston Scientific Neuromodulation
Brainlab, Inc.
Carl Zeiss Meditec, Inc.
Codman Neurovascular
Codman
Cosman Medical
DePuy Spine
Elekta
EV3
FHC, Inc. (Frederick Haer Co.)
Globus Medical
Gore & Associates, Inc.
Hemmedex Inc.
Hitachi Aloka Medical Ltd.
Integra LifeSciences
Integra Radionics
Karl Storz Endoscopy-America, Inc.
Leica Microsystems
Medtronic
Medtronic Navigation
Medtronic Neurologic Technologies
Medtronic Neuromodulation
Medtronic Powered Surgical Solutions
MicroVention, Inc.
NuVasive, Inc.
Pemumbra
PMT Corporation
Stryker Spine
Synthes
Synthes Anspach
Synthes CMF
Synthes Spine
Varian Medical Systems
Zimmer Spine

Pinnacle Partners
As a way for corporate supporters and organizations dedicated to neurosurgery to collaborate with the AANS aside from their traditional support, the AANS established the Pinnacle Partners in Neurosurgery program. This corporate giving program offers corporations many different opportunities to work with the AANS in the areas of training, education and advancing the neurosurgical specialty. Participation in the program affords corporate supporters added recognition and benefits not only through the annual meeting but throughout the year, involvement with the thought leaders in neurosurgery and the chance to further neurosurgical research through the Neurosurgery Research and Education Foundation (NREF). The Pinnacle Partners in Neurosurgery is strengthening ties between the AANS and corporate supporters, both of whom are committed to advancing the field of neurosurgery!

Biomet Spine
Brainlab
Carl Zeiss Meditec, Inc.
Codman & Shurtleff, Inc.
Covidien
DePuy Spine
Elekta
Globus Medical
Integra LifeSciences
Medtronic
MicroVention Inc.
Monteris Medical
NuVasive, Inc.
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For additional information about these corporate supporters or the Pinnacle Partners in Neurosurgery program itself, visit http://www.aans.org/en/Corporate/AANS%20Corporate%20Giving/Pinnacle%20Partners%20Programs.aspx
Exhibitor Information

EXHIBITOR LISTING AS OF THURSDAY, MARCH 15th. FOR UP-TO-DATE INFORMATION, PLEASE REFER TO THE IPOD TOUCH®.

American Association of Neurological Surgeons
5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847)378-0500
Fax: (847)378-0600
www.AANS.org
Booth #1330

The AANS is pleased to present the 80th annual scientific meeting using the Apple iPod touch®. With this device, you will be able to access and integrate every aspect of the Miami Annual Scientific Meeting. The AANS continually offers many benefits to its members including innovative educational programming, clinical and practice management publications, information on AANS meetings including coding and practice management courses, and alternate options to earn CME credit. Other benefits include the AANS Journals of Neurosurgery, AANS Online Career Center, information on EHR systems, medical transcription services and more! Additional information on these programs may be found in the Products and Services area on this device. For assistance and/or charging stations for your iPod touch, please be sure to visit the AANS Resource Center, booth 1330, in the exhibit hall.

AANS Neurosurgical Top Gun Competition
5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847)378-0500
Fax: (847)378-0600
www.AANS.org
Booth #1348

For the seventh consecutive year, the Young Neurosurgeons Committee will present a competition for residents and fellows, located in booth #1348 in the exhibit hall. This three day event will include stations such as image guided lumbar pedicle screw, bone scalpel and virtual thoracic vertebroplasty. In addition we are adding two new exciting stations that include a brain tumor resection and ventriculostomy simulator. Each participant has one opportunity at each intricate and demanding surgical station and is scored on his or her performance. The resident or fellow with the best combined score will be awarded the distinct honor of being the Neurosurgical Top Gun and a prize of $1000. Be one of the first 50 participants and receive a Top Gun t-shirt!

AANS Simulator Booth
5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847)378-0500
Fax: (847)378-0600
www.AANS.org
Booth #1148

In keeping with the educational focus of the AANS Annual Scientific Meeting, the traditional exhibit hall format will be expanded to incorporate a learning and solutions-driven environment for attendees. The AANS Annual Scientific Meeting will present interactive simulations and demos in the exhibit hall, creating innovative settings that will bring exciting learning opportunities for attendees.

Accel Spine
14850 Quorum Drive, Suite 220
Dallas, TX 75254
Phone: (800)713-9489
Fax: (888)831-4892
www.accelSPINE.com
Booth #1030

Accel SPINE designs, develops, manufacturers and markets products for the surgical treatment of spine disorders with a pioneering focus on bringing advanced minimally invasive solutions to market. Accel SPINE has an extensive portfolio of products encompassing ACDF, posterior cervical, open thoracolumbar, percutaneous/MIS thoracolumbar, kyphoplasty and vertebroplasty, interbody fusion and advanced osteobiologics designed under the mantra of simple and reproducible. The Company is committed to generating, developing and commercializing intellectual property that improves spinal fusion rates and clinical outcomes to keep patients ACTIVE FOR LIFE.

Accuray, Inc.
1240 Deming Way
Madison, WI 53717
Phone: (608)824-2839
Fax: (608)824-2991
www.accuray.com
Booth #210

Accuray Incorporated is the premier radiation oncology company that develops, manufactures and sell personalized innovative treatment solutions that set the standard of care, with the aim of helping patients live longer, better lives. The company’s leading edge technologies—the CyberKnife and TomoTherapy Systems are designed to deliver radiosurgery, stereotactic body radiation therapy, intensity modulated radiation therapy, image guided radiation therapy, and adaptive radiation therapy.

AANS/CNS Sections
5550 Meadowbrook Drive
Rolling Meadows, IL 60008
Phone: (847)378-0500
Fax: (847)378-0600
www.AANS.org
Booth #1935

Visit the AANS/CNS Section booth for section news, membership application information and information on upcoming meetings.
Manufacture of cranial perforators, adult and pediatric. Other ACRA-CUT products include cranioblades, wire pass drills, dura separators, and distraction screws. ACRA-CUT’s Scalp Clip System features a reusable applier for smooth application of our disposable pre-loaded clips sold in single and double cartridges.

Ad-Tech Medical Instrument Corporation
1901 William Street
Racine, WI 53404
Phone: (800)776-1555
Fax: (262)634-5668
www.adtechmedical.com
Booth #1319

For over 25 years, epilepsy centers have made Ad-Tech their choice for invasive electrodes for brain mapping and epilepsy monitoring. We offer a large variety of electrodes and accessories to meet you and your patients needs. Visit our booth to discover why Ad-Tech is your best choice.

Advanced Biologics
555 Corporate Drive, Suite 260
Ladera Ranch, CA 92694
Phone: (800)272-0267
Fax: (480)287-9391
www.advancedbiologics.com
Booth #1804

OsteoAMP or “Osteo Allogeneic Morphogenetic Protein” was developed by Advanced Biologics (ABC) to better harness the various growth factors found within allograft tissue. Representing an entirely new class of biologics, OsteoAMP is the only orthobiologic to preserve the native growth factors found in human bone marrow, thus delivering growth factor concentrations exceeding 100X that of leading DBMs.

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3773 Corporate Parkway, Suite 200
Center Valley, PA 18034
Phone: (800)258-1946
Fax: (610)791-6880
www.aesculapusa.com
Booth #1113

Aesculap is the world’s largest manufacturers of surgical instruments and sterilization committed to providing high-quality, innovative products and services to surgical disciplines focusing in General and Neuro. Aesculap Implant Systems focuses on delivering innovative solutions to spine and orthopaedic markets with the goal of improved quality of life for patients.

AllMeds
151 Lafayette Drive, Suite 401
Oak Ridge, TN 37830
Phone: (865)482-1999
Fax: (865)481-0921
www.allmeds.com
Booth #1742

AllMeds’ specialty EHR and practice management tools bring neurosurgery groups specialization and unique workflow solutions that provide their staffs with true meaningful use capabilities, priming practices for Federa; EHR Incentives. AllMeds’ EHR has a higher lifetime customer success rate than any other vendor. Find out why at allmeds.com.

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Salt Lake City, UT 84119
Phone: (801)839-3605
Fax: (801)839-3538
www.amedicacorp.com
Booth #1425

Alpha Omega, a pioneer in stereotactic and functional neurosurgery, is dedicated to advancing the field of microelectrode recording (MER) for Deep Brain Stimulation (DBS). Alpha Omega is regarded as an industry leader in neurosurgical equipment and also manufactures a complete line of cutting edge products for neuroscience research.

Alphatec Spine
5818 El Camino Real
Carlsbad, CA 92008
Phone: (760) 494-3793
Fax: (760) 431-1624
www.alphatecspine.com
Booth #849

Alphatec Spine’s mission is to be the leading global independent, full-line spine company, with a focus on solution for the aging spine. Our goal is to improve the aging patient’s quality of life.
Exhibitor Information

**American Heart Association**
7272 Greenville Avenue
Dallas, TX 75231
Phone: (214)706-1847
Fax: (214)706-1517
my.americanheart.org
Booth #2106

Visit the AHA booth to receive information on AHA Scientific Conferences, AHA/ASA Professional Membership, Scientific Publications, AHA's Focus on Quality Program, Patient Education and much more. Learn how you can join more than 27,000 professional members and receive more benefits than ever!

**American Surgical Co.**
82 Sanderson Avenue
Lynn, MA 01902
Phone: (781)592-7200
Fax: (207)541-9139
www.americansurgical.com
Booth #1747

American Surgical Company offers an inventive approach to neurosurgery by empowering surgeons with innovative array of products of varying materials non-adherent qualities and thicknesses. We believe there is no universal sponge for neurosurgery and that surgeons, not manufacturers, have the unique ability to determine which materials work best in their procedures.

**Anatom-e Neuro Information Systems, Ltd.**
2047 University Boulevard
Houston, TX 77030
Phone: (713)382-3638
www.anatom-e.com
Booth #1845

Anatom-e Neuro Information Systems is a topographical and functional deformable template system that easily maps to any human brain. Used for in-depth pre-surgical planning, precision intra-operative navigation/stimulation and to clarify post operative deficits, physicians find it an accurate way to augment fMRI/DTI. In use at MD Anderson, MGH, The Methodist Hospital, Stanford, and others.

**Apex Medical, Inc.**
100 Quaker Lane
Malvern, PA 19355
Phone: (610)240-4905
Fax: (610)240-4906
www.apexmed.com
Booth #1421

Apex works with leading neurosurgeons to make delicate, safe, sharp microsurgical dissection possible. We agree with one of the first neurosurgeons to use our arachnoid knives that, “everything before this has been micro-tearing.” Find out why the leading neurosurgeons in the world are so excited about Apex Arachnoid Knives.

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Fax: (678) 262-3663
www.arborpharma.com
Booth #2307

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www.aspenmp.com
Booth #1711

Aspen Medical Products is a leader in the development of innovative spinal bracing for post-trauma stabilization, pre-and-post surgical stabilization, pain management and long-term patient care. Aspen Medical Products offers multiple orthotic options that provide unsurpassed motion restriction, superior comfort and an economic advantage, encouraging better patient compliance.

**Aspirus Spine & Neurosciences**
3000 Westhill Drive, Suite 102
Wausau, WI 54401
Phone: (715) 847-2995
Fax: (715) 847-2742
www.aspirus.org
Booth #2004

Aspirus is a non-profit, community-directed health system based in Wausau, Wisconsin. With more than 6,000 employees, Aspirus serves people in Wisconsin and Upper Michigan through an extensive hospital and clinical network, home health & hospice care, pharmacies, critical care, medical goods, nursing homes, a philanthropic & research foundation, and an affiliated physician network.

**ASSI-Accurate Surgical**
300 Shames Drive
Westbury, NY 11590
Phone: (800)645-3569
Fax: (516)997-4948
www.accuratesurgical.com
Booth #510

ASSI will be displaying its Noble Real Non-Stick Bipolar Forceps and Micor Monopolar Forceps, Bipolar Scissors and the finest hand crafted microsurgical instrumentation in stainless steel and titanium.
Bacterin develops innovative biologics designed for specific surgical procedures. Proprietary scaffolds, such as OsteoSponge® and OsteoSelect® DBM Putty, provide superior handling characteristics and osteoinductive properties for optimal surgical outcomes.

Baitella AG is a manufacturer of holding/support systems with articulated arms with quick central fixation for surgery, anaesthesia and intensive care applications. The products are originally Swiss made and mostly OEM manufactured. With the modular Fisso system, customer-defined solutions will be realized easy and fast. Contact Baitella AG for more information.

Baxter is a global, diversified healthcare company with expertise in medical devices, pharmaceuticals, and biotechnology. The company continues its quest for advancing BioSurgery by offering biological products for hemostasis and bone graft substitutes based on the latest scientific advances in the field.

Biomet Microfixation is a leading manufacturer and distributor of advanced craniomaxillofacial products. Biomet offers a complete portfolio of neurosurgical reconstruction products aimed at improving clinical outcomes, increasing operating room efficiency and enhancing ease-of-use. Visit our booth to view our latest innovations.

Blue Chip Surgical develops and manages physician-led, physician-owned outpatient surgical centers, with a particular emphasis in integrating Spine.

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Phone: (406)388-0480
Fax: (406)388-3380
www.bacterin.com
Booth #953

Bacterin develops innovative biologics designed for specific surgical procedures. Proprietary scaffolds, such as OsteoSponge® and OsteoSelect® DBM Putty, provide superior handling characteristics and osteoinductive properties for optimal surgical outcomes.

Baitella AG
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Switzerland
Phone: 41 (0) 44 305 80 00
Fax: 41 (0) 44 305 80 05
www.fisso.com
Booth #1607

Baitella AG is a manufacturer of holding/support systems with articulated arms with quick central fixation for surgery, anaesthesia and intensive care applications. The products are originally Swiss made and mostly OEM manufactured. With the modular Fisso system, customer-defined solutions will be realized easy and fast. Contact Baitella AG for more information.

Baxano, Inc.
655 River Oaks Parkway
San Jose, CA 95134
Phone: (408)514-2200
Fax: (408)514-2201
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Booth #1542

BAXANO’s iO-Flex® System decompresses central, lateral recess and foraminal stenosis while preserving facet joint integrity and stability in laminectomy and fusion surgery. Up to two levels can be decompressed through a single-point access with either an open or tube-based exposure using the iO-Flex® System.

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Phone: (800)423-2090
Fax: (847)940-6622
www.baxterbiosurgery.com
Booth #1130

Baxter is a global, diversified healthcare company with expertise in medical devices, pharmaceuticals, and biotechnology. The company continues its quest for advancing BioSurgery by offering biological products for hemostasis and bone graft substitutes based on the latest scientific advances in the field.

Biomet Microfixation
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Jacksonville, FL 32218
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www.biometmicrofixation.com
Booth #1927

Biomet Microfixation is a leading manufacturer and distributor of advanced craniomaxillofacial products. Biomet offers a complete portfolio of neurosurgical reconstruction products aimed at improving clinical outcomes, increasing operating room efficiency and enhancing ease-of-use. Visit our booth to view our latest innovations.

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Booth #1727

Applying today’s most advanced engineering and manufacturing technologies, we’ve developed our product line to offer surgeons a comprehensive approach for a wide variety of surgical applications for the spine. Visit our exhibit to see how our products can help surgeons change lives for the better, one patient at a time.

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www.bluechipsurgical.com
Booth #341

Blue Chip Surgical develops and manages physician-led, physician-owned outpatient surgical centers, with a particular emphasis in integrating Spine.
Exhibitor Information

Our development model includes both de novo and turnaround of underperforming surgery centers, while our operating model has been successfully implemented across both platforms. Exhibiting a core competency in managed care negotiations, cost controls, surgeon recruiting, staffing and financing, Blue Chip ensures that our surgery centers maximize their potential over the life of our partnership.

BOSS Instruments
104 Sommerfield Drive
Gordonsville, VA 22942
Phone: (540)832-5000
Fax: (540)832-5515
www.bossinst.com
Booth #1418

BOSS Instruments concentrates on the global development and distribution of high quality, German-crafted specialty lines of surgical instruments in disciplines such as: neuro, spine, orthopedic, cardiovascular/thoracic, ENT and ophthalmic. Displayed will be surgical instruments and retractors for cranial, cervical, lumbar and minimally invasive spine procedures.

Brainlab
3 Westbrook Corporate Center, Suite 400
Westchester, IL 60154
Phone: (708)409-1343
Fax: (708)409-1619
www.brainlab.com
Booth #603

Brainlab develops, manufactures and markets software-driven medical technology that supports targeted, less-invasive treatment. Core products are image-guided systems and software that provide real-time information used for surgical navigation and radiosurgical planning and delivery. Founded in 1989, the privately held Brainlab group has 5,000 systems installed in over 80 countries.

Distraction Attraction: Your jagged jaws, your hunchbacked reach, your clickity-clackity-ratchety lock. Ol’ Inge Spreader, you grind out your tasks in such wretched staccato style. Find civilized alternatives to traditional vertebral body distraction, foraminal exposure and to the plethora of problems still plaguing product performance in everyday spinal surgery.

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Booth #1503

Captiva Spine provides innovative solutions to anatomically challenging operations. Our patented Pivotec(R) is a unique articulating TLIF device providing continuous insertion control and safety; also with proven cage retrieval solution. The SmartLOX(TM) cervical plate utilizes a patented Nitinol locking system, for simple and reliable bone screw retention.

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Clinically proven VertAlign® & ComfAlign® Spinal Supports offer effective TLSO and LSO external spinal stabilization, from immobilization through support. The VertAlign & ComfAlign Systems provide a unique patented, “select and apply” molded, rigid, gender specific orthosis available at the point of patient care, which results in timely, effective spinal care.

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Boston Scientific’s Precision Plus™ SCS System powered by SmoothWave™ Technology blends sophistication and simplicity to deliver life-changing therapy for chronic pain patients. Investing in innovative products, clinical initiatives, and world-class service, Boston Scientific is committed to Making life smoother™ for physicians, patients, and the Neuromodulation community.

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East Hanover, NJ 07936
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3750 Torrey View Court
San Diego, CA 92130
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Exhibitor Information

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5160 Hacienda Drive
Dublin, CA 94568
Phone: (925)557-4124
Fax: (925)557-4256
www.zeiss.com
Booth #713

Carl Zeiss Meditec is a global leader in ophthalmic and microsurgery technologies. In its pursuit of helping doctors improve the quality of life of their patients, the Company develops, manufactures and markets an innovative portfolio of solutions for the diagnosis and treatment of eye diseases as well as a comprehensive line of surgical microscope technologies that span the disciplines of eye, spine, ENT, dental and neurosurgery.

CCV
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Libertyville, IL 60048
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ChoiceSpine is committed to bringing superior products to orthopedic and neurosurgeon specialists who focus on the treatment of spinal disorders and deformities, through operative intervention. We are committed to meeting the needs of our customers through new product offerings, existing product enhancement, and continued product research and development.

Cleveland Clinic
9500 Euclid Avenue
Cleveland, OH 44195
Phone: (216)448-8216
Fax: (216)448-8200
www.clevelandclinic.org
Booth #2110

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Codman
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Raynham, MA 02767
Phone: (508)880-8100
Fax: (508)880-8122
www.codman.com
Booth #518

Codman, a Johnson & Johnson company, is a global neuroscience device company that offers a broad range of devices and therapies to treat patients with neurological diseases and conditions. The company, which is a part of the DePuy Franchise, will work with health care providers to forge a new era of innovation in the care and treatment of these patients.

Collagen Matrix, Inc.
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Oakland, NJ 07436
Phone: (201)405-1477
Fax: (201)405-1355
www.collagenmatrix.com
Booth #2126

A leading collagen- and mineral-based biomaterials company, Collagen Matrix, Inc. has applied its expertise in proprietary matrix engineering to develop and commercialize novel implants for tissue and organ repair and regeneration. CMI will feature its DuraMatrix line of collagen dura substitute membranes and its OssiMend family of bone graft matrices.
Exhibitor Information

Collect Rx
416 Hungerford Drive, 4th Floor
Rockville, MD 20850
Phone: (301)230-2440
Fax: (301)230-2417
www.collectrx.com
Booth #2032

Collect Rx Inc. provides services to hospitals, ambulatory surgical centers, physicians, and other healthcare providers to maximize reimbursements on out-of-network bills. Utilizing its proprietary CRXIS™ business intelligence engine and extensive industry expertise, Collect Rx Inc. helps providers increase revenue, save time, and improve the bottom-line.

Compass International
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Fax: (507)281-1736
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Compass International has been designing and developing stereotactic Image-Guided Navigation Systemstems for over 25 years. From the Compass Stereotactic Frame System to the CYGNUS-PFS Frameless Portable System. In addition to designing various instruments used for image-guided navigation.

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Booth #1145

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Congress of Neurological Surgeons
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Schaumburg, IL 60173
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Booth #1745

The Congress of Neurological Surgeon, a world leader in education and innovation, provides members with premier educational programs and promotes innovative research critical to the advancement of neurosurgery. Stop by to learn about Neurosurgery®, the official journal of the CNS, SANS Lifelong Learning and the CNS University of Neurosurgery.

Cosman Medical
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Fax: (781)272-6563
www.cosmanmedical.com
Booth #514

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www.durasealinfo.com
Booth #315

Covidien is a leading global healthcare products company that creates innovative medical solutions for better patient outcomes and delivers value through clinical leadership and excellence. Please visit www.covidien.com to learn more.

CUDA Surgical
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Jacksonville, FL 32216
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Fax: (904)733-4832
www.cudasurgical.com
Booth #1847

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Fax: (508)463-3256
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Booth #930

curasan is a leader in regenerative medicine. Our flagship product, Cerasorb Ortho, is a synthetic, fully-resorbable, pure-phase beta-tricalcium phosphate approved for use in the entire skeletal system. Cerasorb Ortho is the world’s testing standard for beta-TCP and has exceptional stability and open porosity. Several additional products will be released soon.
Exhibitor Information

**Custom Spine, Inc.**
1140 Parsippany Boulevard
Parsippany, NJ 07054
Phone: (973)808-0019
Fax: (973)808-0707
www.customspine.com
Booth #1803

Custom Spine is committed to developing innovative spinal solutions to enhance patients’ quality of life. Our product portfolio offers next generation surgeon friendly spinal implants and instruments to support industry leading surgical techniques for the treatment of spinal disorders in both minimally invasive and open procedures.

**Daewoong Bio**
163-3 Samsung-dong
Gangnam-gu, Seoul 135-715
South Korea
Phone: 82-2-550-8419
Fax: 82-2-550-8616
www.daewoong.com
Booth #745

Bongros is identical to human bone’s inorganic mineral component (Hydroxyapatite). Bongros promotes bone formation by gradually bonding to bone tissue and providing effective space till new bone ingrowth is complete.

CGDBM100 is resembling DBM, removed mineral portion from a bone and it is 93% organic and 5% growth factors including bone morphogenic protein component are remained. Contains higher BMP content which indicates the maximum efficacy of new bone formation than other competitor with maximum of 40% DBM.

**Dept. of Heath and Human Services/NDMS**
409 3rd Street, SW, Suite 330
Washington, DC 20201
Phone: (202)205-7312
Fax: (202)205-8406
Booth #2136

National Disaster Medical System (NDMS) teams are intermittent federal employees, paid by the federal government for their service to the nation when called into action for a national emergency response. There are more than 7,000 professionals on teams throughout the country who have agreed to help devastated communities by becoming a part of NDMS.

**DePuy Spine**
325 Paramount Drive
Raynham, MA 02767
Phone: (800)451-2006
Fax: (508)828-3283
www.depuyspine.com
Booth #518

DePuy Spine, Inc., a Johnson & Johnson company, stands at the forefront of the worldwide spine market offering a broad portfolio of patient-focused products and solutions for spinal disorders backed by a robust pipeline, world-class evidence-based research, education, training and customer service. The company is headquartered in Raynham, Massachusetts.

**DFINE, Inc.**
3047 Orchard Parkway
San Jose, CA 95134
Phone: (408)321-9999
Fax: (408)854-8502
www.dfineinc.com
Booth #1713

DFINE improves the quality of life for patients suffering from vertebral pathologies. Its devices are built upon a (RF) platform that covers two applications. The StabiLi™ Vertebral Augmentation System helps physicians repair fractured vertebrae. The STAR™ Ablation System is used to treat spinal tumors and will commercialize later this year.

**Doctors Research Group, Inc.**
574 Heritage Road, Suite 202
Southbury, CT 06488
Phone: (203)262-9335
Fax: (203)262-9340
www.kryptoniteusa.com
Booth #746

Kryptonite Bone Cement® is a resinous material for the repair of cranial defects.

**Designs for Vision, Inc.**
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Fax: (631)737-1842
www.designsforvision.com
Booth #1725

Just See It™ with Designs for Vision’s lightweight custom-made surgical telescopes—now available with Nike® frames. These telescopes improve visual acuity and reduce back and neck pain. See It Even Better™ or Twin Beam™ L.E.D. providing the brightest and safest un-tethered illumination.
Our products provide advanced thermal control for precision in tissue dissection, tumor resection, and hemostasis. Our patent-pending technology produces surface-only tissue effects with energy that does not pass through the patient, reducing the potential for collateral tissue damage from thermal injury and stray electrical current.

GLIADEL Wafers are small, dime-sized biodegradable copolymer wafers. GLIADEL Wafer is designed to deliver carmustine directly into the surgical cavity created when a brain tumor is resected.

Electrical Geodesics, Inc. (EGI)
1600 Millrace Drive, Suite 301
Eugene, OR 97403
Phone: (541)687-7962
Fax: (541)687-7963
www.egi.com
Booth #1245

EGI offers complete EEG systems with sensor Nets designed for quick, easy and painless application. With Nets ranging from 32- to 256-channels, EGI provides whole-head, dEEG that is practical, cost-effective, and reliable. Every component is designed to maximize patient comfort and satisfaction while enhancing clinical performance and productivity.

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eMagin Corporation
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Bellevue, WA 98004
Phone: (425)284-5200
Fax: (425)284-5201
www.emagin.com
Booth #1246

A leader in virtual imaging technology, eMagin integrates high-resolution OLED microdisplays, magnifying optics, and systems technologies to create a virtual image that appears comparable to that of a computer monitor or a large-screen television. With unique technology for producing high-performance small molecule OLED-on-silicon microdisplays and related optical systems, eMagin is the only company to supply these displays in commercial quantities to OEMs. In addition, the company sells integrated modules to military, industrial and medical customers, as well as personal display systems to consumers. eMagin’s microdisplay operations are co-located with IBM on its campus in East Fishkill, N.Y. Optics and system design facilities are located in Bellevue, WA. For additional information, please visit www.emagin.com
Exhibitor Information

Eminent Spine combines Dr. Courtney’s medical expertise with Dave Freehill’s engineering experience of manufacturing and design to provide cutting-edge technology and biomechanically sound, affordable medical devices that are Bad To The Bone.

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**Esaote North America**
8000 Castleway Drive
Indianapolis, IN 46250
Phone: (317)813-6000
Fax: (317)813-6600
www.esaoteusa.com
**Booth #242**

Esaote North America is a leading manufacturer and distributor of medical ultrasound and MRI equipment in the U.S.

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**Fehling Surgical Instruments, Inc.**
509 Broadstone Lane
Acworth, GA 30101
Phone: (800)334-5464
Fax: (770)794-0122
www.fehlingsurgical.com
**Booth #215**

Fehling Surgical Instruments provides innovative surgical instrument designs using state-of-the-art materials combined with enhanced technology manufacturing techniques. Results are products like the "Fehling CERAMO Surgical Instrument Line". See and feel the black ceramic instruments, new cranial / spinal retractor designs and implants.

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**Globus Medical Valley Forge Business Center-Joan Coney**
2560 General Armistead Ave
Audubon, PA 19403
Phone: (610)930-1800
Fax: (610)930-2042
www.globusmedical.com
**Booth #1515**

Globus Medical, the world’s largest privately held spinal company, is driving significant technological advancements across a complete suite of spinal products. Founded in 2003, Globus’ single-minded focus on advancing spinal surgery has made it the fastest growing company in the history of orthopedics. Globus is driven to utilize superior engineering and technology to achieve pain free, active lives for all patients with spinal disorders.

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**GS Medical**
5200 Soquel Avenue, Suite 104
Santa Cruz, CA 95062
Phone: (831)477-1307
Fax: (866)904-8144
www.gsmedicalusa.com
**Booth #2003**

GS Medical is a manufacturer and global supplier of spinal implants and instrumentation focused on developing innovative surgical solutions. Through our collaborative relationships with surgeons and engineers, we continue to build upon our core line of fusion products including traditional and minimally invasive posterior pedicle screw systems, and intervertebral cages.

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**Hans Biomed USA, Inc.**
140 Sylvan Avenue, Suite 4
Englewood Cliffs, NJ 07632
Phone: (201)224-2333
Fax: (201)224-2330
www.hansbiomed.com
**Booth #2030**

Our allograft products are FDA registered and fully complied with FDA and AATB regulation. In addition we also have the Florida Tissue Bank License for distribution.

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**Harvest Technologies Corp.**
40 Grissom Road, Suite 100
Plymouth, MA 02360
Phone: (508)732-7500
Fax: (508)732-0400
www.harvesttech.com
**Booth #2125**

Harvest manufactures the SmartPreP 2 Cell Concentration System with Bone Marrow Aspirate Concentrate (BMAC) kits for rapid, point-of-care preparation of a Stem Cell Concentrate from Autologous Bone Marrow. In minutes, SmartPreP BMAC2 kits (120cc, 60cc and NEW 30cc kits) produce a predictable Concentrate enriched with multiple Cells and Growth Factors.

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**Hattiesburg Clinic**
415 South 28th Avenue
Hattiesburg, MS 39401
Phone: (601)579-5008
Fax: (601)579-5273
www.hattiesburgclinic.com
**Booth #1846**

Hattiesburg Clinic, founded in 1963, is the largest multi-specialty clinic in Mississippi. A team of 280 physicians and providers combine their skills and experiences to diagnose and treat every patient within one healthcare organization. From primary care to medical specialists, Hattiesburg Clinic is South Mississippi’s healthcare provider of choice.

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**Hemedex, Inc.**
222 Third Street, Suite T123
Cambridge, MA 02142
Phone: (617)577-1759
Fax: (617)577-9328
www.hemedex.com
**Booth #440**
Exhibitor Information

The Bowman Perfusion Monitor by Hemedex addresses the need for continuous, real-time measurements of cerebral perfusion in absolute units. Hemedex's technology provides early warnings of tissue ischemia and can help target appropriate therapies rapidly and accurately. It provides clinicians with a powerful tool to generate valuable prognostic data.

Hemelex Surgical, LLC
1003 Upper Reach Drive
Wilmington, NC 28409
Phone: (910)297-1377
Fax: (910)399-7339
www.hemelersurgical.com
Booth #1318

The Hensler Bone Press is a single use, cost effective device that allows for the proficient evacuation and separation of virtually all of the blood from bone, yielding the maximum amount of compressed autologous bone graft material for procedures, such as spinal fusions.

Hensler Surgical, LLC
1003 Upper Reach Drive
Wilmington, NC 28409
Phone: (910)297-1377
Fax: (910)399-7339
www.henslersurgical.com
Booth #1318

HCA owns and operates 164 healthcare facilities in 20 states with opportunities coast to coast. HCA was one of the nation’s first hospital companies. We are committed to the care and improvement of human life. We strive to deliver quality healthcare that meets the needs of the communities we serve.

Hospital Corporation of America (HCA)
3 Maryland Farms, Suite 250
Brentwood, TN 37027
Phone: (866)889-0203
Fax: (866)729-0192
www.practicewithus.com
Booth #1137

The Hydrocephalus Association is a national non-profit organization. Our mission is to eliminate the challenges of hydrocephalus by stimulating innovative research and providing support, education and advocacy for individuals, families and professionals dealing with the complex issue of the condition. The Association provides comprehensive services that empower individuals and families.

Hydrocephalus Association
870 Market Street, Suite 705
San Francisco, CA 94102
Phone: (888)598-3789
Fax: (415)732-7044
www.hydroassoc.org
Booth #2009

IMRIS is a global leader in providing image guided therapy solutions through its VISIUS Surgical Theatre - a revolutionary, multifunctional surgical environment that provides unmatched intraoperative vision to clinicians to assist in decision making and enhance precision in treatment. VISIUS Surgical Theatres serve the neurosurgical, cardiovascular and cerebrovascular markets and have been selected by leading medical institutions around the world.

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Winnipeg, MB R3T 1N5
Canada
Phone: (204)480-7070
Fax: (204)480-7071
www.imris.com
Booth #835

Infinite Therapeutics
68A Route 125
Kingston, NH 03848
Phone: (603)347-6006
Fax: (603)642-9291
www.infinitetherapeutics.com
Booth #2308

EMBS is the world's largest international society of biomedical engineers. Our members are interested in bioinformatics, biotechnology, clinical engineering, information technology, instrumentation and measurement, micro and nanotechnology, radiology, and robots. We endeavor to bring together the scientists who develop technology with the clinicians who use the technology.

IEEE Engineering in Medicine & Biology Society
445 Hoes Lane
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Fax: (732)465-6435
www.embs.org
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Infinite Therapeutics
68A Route 125
Kingston, NH 03848
Phone: (603)347-6006
Fax: (603)642-9291
www.infinitetherapeutics.com
Booth #2308

Therapeutic Massage Chairs / Inversion Therapy Massage Chairs
Exhibitor Information

**Inion, Inc.**  
2800 Glades Circle, Suite 138  
Weston, FL 33327  
Phone: (954)659-9224  
Fax: (954)659-7997  
www.inion.com  
Booth #1243

Inion is a surgical implants company focused on the development and successful commercialization of innovative biodegradable and bioactive implants in key target markets. The company’s target segments are spine and specialty orthopaedics.

**InTech Medical**  
2851 Lamb Place, #15  
Memphis, TN 38118  
Phone: (901)375-1109  
Fax: (901)367-2977  
www.intech-medical.com  
Booth #338

In’Tech Medical is a leading custom contract manufacturer specialized in spine instruments and implants. Based in the USA and Europe, In’Tech Medical is today internationally renowned for its high quality standard and capacity to rapidly deliver innovative designs...

**InnerSpace**  
1622 Edinger Avenue, Suite C  
Tustin, CA 92780  
Phone: (714)259-7900  
Fax: (888)391-5238  
www.innerspacemedical.com  
Booth #2034

InnerSpace provides surgeons with solutions to treat traumatic brain injury. The company has created a revolutionary ICP sensor, AirPulse ICP, and has integrated access for multimodal monitoring.

**Innovasis, Inc.**  
614 E. 3900 S.  
Salt Lake City, UT 84107  
Phone: (801)261-2236  
Fax: (801)261-0573  
www.innovasis.com  
Booth #1716

Innovasis is a rapidly growing company engaged in the research, development, manufacturing and marketing of spinal implants devices and related products. Innovasis offers a spinal implant line with implants & instruments that address the major pathologies and focus areas of traditional spinal and cranial surgery.

**Integra LifeSciences**  
311 Enterprise Drive  
Plainboro, NJ 08536  
Phone: (609)275-0500  
Fax: (609)275-5363  
www.integra-ls.com  
Booth #707

Integra LifeSciences, a world leader in medical devices, is dedicated to limiting uncertainty for surgeons, so they can concentrate on providing the best patient care. Integra offers a vast portfolio of implants, devices, instruments and systems used in neurosurgery and neuro critical care.

**Invivo**  
3630 SW 47th Avenue  
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Phone: (407)275-3220  
Fax: (352)264-3432  
www.invivocorp.com  
Booth #340

Advancements in MRI technology and analysis capability are revolutionizing the way neuroradiologists interpret MRI studies and the way neurosurgeons plan for procedures. Invivo now offers a complete solution with state-of-the-art head coils, and fMRI stimulus systems and an automated, high performance processing and analysis package. For more information visit www.invivocorp.com or call 800.331.3220

**IsoRay Medical, Inc.**  
350 Hills Street, Suite 106  
Richland, WA 99354  
Phone: (509)375-1202  
Fax: (509)375-3473  
www.isoray.com  
Booth #952

IsoRay Medical develops and markets brachytherapy* solutions for cancer. IsoRay’s current products include the GliaSite Radiation Therapy System (RTS), a temporarily implantable balloon for GBM therapy following resection, and Cesium-131 based meshes for the irradiation of meningiomas post-section.

*Brachytherapy: the placement of radiation therapy sources within the body
The innovative medical technology company dedicates itself to combined surgical technologies, particularly to minimally invasive spinal procedures (“joined minimal access technologies”). joimax® focuses on development, manufacturing and marketing of the technology and methods for integrated endoscopic surgical access to the spinal column, with optimized visualization. The joimax® fully integrated visualization, documentation and tissue removal technologies enable surgeons to conduct their operations independently in a cost effective manner. With the comprehensive education program CM3 which incorporates TESSYS® workshops, visitations and surgeries accompanied by experienced medical trainers and application specialists, the implementation of the procedure will be supported right from the start. joimax® considers itself a partner of operating physicians, living the motto “helping to treat patients!” joimax®, TES®, TESSYS®, iLESSYS®, CESSYS®, Vitegra®, Camsource®, Shrill®, Versicon®, Intracs®, Legato®, Tigrip® and SPOT® are registered trademarks of the joimax® GmbH.

K2M, Inc.
751 Miller Drive SE
Leesburg, VA 20175
Phone: (703)777-3155
Fax: (703)777-4338
www.K2M.com
Booth #1510

K2M, Inc. is an innovative spinal device company that develops simplified solutions for the treatment of complex spinal pathologies and procedures. K2M’s complete portfolio of next generation products includes: spinal stabilization systems, minimally invasive systems, and other advancing technologies for the treatment of deformity, degenerative, trauma, and tumor spinal patients.

Karger Publishers
26 West Avon Road
Unionville, CT 6085
Phone: (860)675-7834
Fax: (860)675-7302
www.karger.com
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Publications include Progress in Neurological Surgery and the journals Pediatric Neurosurgery and Stereotactic and Functional Neurosurgery.

Kelyniam’s PEEK-OPTIMA Custom Cranial Implants are designed and manufactured for each individual patient to correct or replace bony voids in the cranial skeleton caused by trauma, disease or congenital birth defects. Streamlined CAD/CAM design and manufacturing techniques enable Kelyniam to deliver precision fit, patient specific implants to surgeons in as little as 24 hours!
Kinamed manufactures and sells the NeuroPro® Rigid Fixation System designed specifically for neurosurgical skull base and cranial applications. The system includes many unique tools for the neurosurgeon such as the Temporalis Muscle Suspension (TMS) Plate with suture eyelets for secure repositioning of the temporalis muscle, a Chiari Malformation plate and the single-use Quick Tap Power Driver.

Kirwan Surgical Products LLC
180 Enterprise Drive
Marshfield, MA 02050
Phone: (781)834-9500
Fax: (781)834-0022
www.ksp.com
Booth #1910

Kirwan Surgical Products LLC manufactures high-quality electro-surgical instruments and Accessories including a full range of reusable and disposable non-stick bipolar forceps and cords for use in neurosurgical procedures. Kirwan Surgical’s MIS-style and 3-Hole Yasargil-style bipolar forceps employ the same non-stick technology as Kirwan’s AURA line of bipolar forceps.

KLS Martin Group
P. O. Box 16369
Jacksonville, FL 32245
Phone: (904)641-7746
Fax: (904)641-7378
www.klsmartin.com
Booth #939

KLS Martin is a company dedicated to providing innovative medical devices for neurosurgery. We offer a wide variety of surgical instruments, titanium plates and mesh, custom cranial implants, and the revolutionary SonicWeld Rx system for resorbable fixation. Currently based out of Jacksonville, Florida, we have highly qualified representatives covering the needs of surgeons throughout North America.

Kogent Surgical, LLC
754 Goddard Avenue
Chesterfield, MO 63005
Phone: (636)536-5950
Fax: (636)787-0603
www.katalystsurgical.com
Booth #1715

Kogent Surgical offers high quality titanium instruments at competitive prices, revolutionary new multi-function instruments, Single Shaft ISO-CLEAN™ instruments with various scissors, forceps, and needle drivers in a fully flushable design, and unconventional lighted disposable instruments.

Koros USA, Inc.
610 Flinn Avenue
Moorpark, CA 93021
Phone: (805)529-0825
Fax: (805)529-2955
www.korosusa.com
Booth #1540

Over the last 30 years Koros USA, Inc. has been designing and distributing state of the art surgical instruments. Like our Cervical Black Belt, Lumbar Super Slide and ALIF Polaris Retractors along with our Rotating Osteo Punch and Ejector Punch Rongeurs and fine hand instruments.

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#601 World Meridian Venture Center
Seoul, Geumcheongu Gasandong 60-24
South Korea
Phone: 82-22113-8696
Fax: 82-22113-8699
www.kyungwonmedical.com
Booth #1642

Founded in 1991 and had focused in the areas of bone graft, spinal fusion, and osteoporosis treatment. The company has been recognized as a leading manufacturer and distributor in spinal system business in Korea. Kyungwon Medical’s continuous success has been driven by the guide and support from the hospitals and surgeons.

We believe our first responsibility is to develop high-quality products to enhance the gift of life: Our mission is to provide surgeons with predominant product lines, helping them advance clinical results and patient’s quality of life. We strive to give the best customer service and support to hospitals, staffs and surgeons and we are committed to working with you to meet your patients’ need.

Lanx, Inc.
310 Interlocken Parkway, Suite 120
Broomfield, CO 80021
Phone: (303)443-7500
Fax: (303)443-7501
www.lanx.com
Booth #1518

Lanx specializes in devices and systems for all segments of spinal surgery. Integrating leading technology and state-of-the-art engineering, our products have been created to meet the specific needs of our customers and improve outcomes for their patients.

LDR
4030 W. Braker Lane, Suite 360
Austin, TX 78759
Phone: (512)344-3300
Fax: (512)279-8306
www.ldrspine.com
Booth #1739

LDR creates innovative fusion and non-fusion spinal technologies that benefit patients in more than 25 countries worldwide. All resources at LDR are dedicated to the highly specialized segments of orthopaedic and neuro-surgical spine care which enables us to respond quickly and effectively to the
Exhibitor Information

needs of physicians. As with our surgeon customers, LDR is passionate about improving clinical results and the lives of the patients who receive our products.

**Leica Microsystems**
1700 Leider Lane
Buffalo Grove, IL 60089
Phone: (800)526-0355
Fax: (847)405-2075
www.leica-microsystems.com
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The Best just got Better. Don’t miss the unveiling of the new 2012 Leica M720 OH5 and new 2012 Leica M525 OH4 neurosurgical microscopes. See more detail than ever before with brilliant 400 watt Xenon light and Small Angle Illumination (SAI), at Leica Microsystems booth #1118.

**Life Instrument Corporation**
91 French Avenue
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Phone: (781)849-0109
Fax: (781)849-0128
www.lifeinstruments.com
Booth #1142

Life Instrument Corporation is dedicated to serving neurosurgeons and orthopedic surgeons with the highest quality surgical instruments. Since the 1980’s, spine surgery has advanced with new procedures and new approaches to the spine. Life Instrument Corporation was founded to meet the needs of spine surgeons for these new surgical techniques.

**Lippincott Williams & Wilkins/Wolters Kluwer Health**
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Lippincott Williams & Wilkins, a Wolters Kluwer Health company is a leading international publisher of medical books, journals, and electronic media. We proudly offer specialized publications and software for physicians, nurses, students and clinicians. Please visit our booth to browse our comprehensive product line.

**LocumTenens.com**
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Alpharetta, GA 30009
Phone: (800)562-8663
Fax: (770)643-5797
www.LocumTenens.com
Booth #1651

LocumTenens.com is a leading provider of locum tenens physicians nationwide. We are the only full-service, locum tenens agency offering a free Internet job board, including CV builder and a career resource center. Please contact us today at 1.800.562.8663 to speak to a recruiter.

**Market Access Partners**
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Evergreen, CO 80439
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Fax: (303)526-7920
www.marketaccesspartners.com
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Market Access Partners provides market research consulting to the medical device and pharmaceutical industries. We use innovative qualitative and quantitative methodologies to research opinions of physicians, nurses and patients. We offer a management oriented approach to product development and marketing.

**Mazur Marketing**
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Aurora, IL 60506
Phone: (888)830-1588
Fax: (630)859-2378
www.newrongeur.com
Booth #1751

The New Rongeur is a neurosurgeon designed and patented double action bone rongeur with a concave and slanted tip allowing improved bone removal in highly challenging environments like the anterior cervical spine.

**MD Logic EMR**
2170 Satellite Boulevard, Suite 435
Duluth, GA 30097
Phone: (770)497-1560
Fax: (770)497-1469
www.mdlogic.com
Booth #1613

MD Logic is the leading U.S. provider of electronic medical records empowering neurological doctors the technology to document care "real time" in the exam room. Since 1994, MD Logic has been successfully installing electronic medical records in physician practices from coast to coast. Further information available at 800-273-7750 / www.mdlogic.com.

**Medical Education Research Institute**
44 S. Cleveland
Memphis, TN 38104
Phone: (901)722-8001
Fax: (901)722-9009
www.meri.org
Booth #1641
Exhibitor Information

The Medical Education & Research Institute is a nonprofit medical teaching and training facility in Memphis, TN. The MERI conducts state-of-the-art, hands-on educational courses for physicians from across the country and around the world.

**Medicus Healthcare Solutions**  
7 Industrial Way, Unit 5  
Salem, NH 03079  
Phone: (855)301-0563  
Fax: (603)685-0235  
www.medicushcs.com  
Booth #2137

Medicus helps hospitals, Groups, and PMO’s plan for and manage changes in their physician workforce by providing schedule management services, interim staffing, and expertise in workforce transitions like launching new programs, stabilizing your physician workforce or expanding your current practice. We provide a unique approach to the locum staffing model.

**Medtech**  
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France  
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Fax: 33 (0)467 59 74 18  
www.medtechsurgical.com  
Booth #213

Medtech designs and markets innovative robotic-assisted solutions for surgery. The system ROSA™ is a new, multi-purpose platform offering valuable assistance in localizing patient anatomy and performing complex surgical interventions. ROSA™ embodies the new generation of surgical assistance technology aiming at enabling new, less-invasive surgical techniques.

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Phone: (901)393-3133  
Fax: (901)399-2012  
www.medtronic.com  
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At Medtronic (www.medtronic.com), we’re committed to innovating for life by pushing the boundaries of medical technology and changing the way the world treats chronic disease. To do that, we’re thinking beyond products and beyond the status quo - to continually find more ways to help people live better, longer.

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Fax: (888)518-9070  
www.medyssey.com  
Booth #743

Medyssey designs, develops, manufactures and markets products for the surgical treatment of spine disorders through novel instrumentation and advanced orthobiologic solutions designed to improve spinal fusion rates, preservation of mobility and clinical outcomes.

**MEI Healthcare Group**  
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Fax: (954)341-3588  
www.mei.com  
Booth #853

The MEI Healthcare Group is a premier healthcare strategy firm providing Advisory Services, Comprehensive Feasibility Analyses, Capital Equipment, Financing and Marketing solutions to today’s healthcare community.

**Miami Neuroscience Center at Larkin**  
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South Miami, FL 33143  
Phone: (305) 528-8900  
Fax: (786) 871-6820  
www.miamineurosciencecenter.com  
Booth #1252

The Miami Neuroscience Center, led by Dr. Aizik Wolf, is widely regarded as one of the most accomplished Gamma Knife programs in the country. The Center’s team has performed more than 7,000 procedures since 1993, amassing an unparalleled level of expertise. A results oriented program, the Miami Neuroscience Center offers a unique combination of the latest technologies and the most experienced hands to guide them, receiving international recognition for its groundbreaking work in radiosurgery.

**MicroVention**  
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Tustin, CA 92780  
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Fax: (714)247-8019  
www.microvention.com  
Booth #438

MicroVention develops innovative neuroendovascular technologies for the treatment of vascular diseases in small vessels and are committed to developing and manufacturing the highest quality products for our customers and patients. These include platinum and hydrogel coil products, access products and intraluminal products.
Exhibitor Information

**Mizuho America, Inc.**
30057 Ahern Avenue
Union City, CA 94587
Phone: (800)699-2547
Fax: (510)324-4545
www.mizuho.com
Booth #1139

Sugita T2 Aneurysm Clips and other micro instrumentation.

**Mizuho OSI**
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Phone: (510)429-1500
Fax: (510)429-1337
www.mizuhosi.com
Booth #1339

Mizuo OSI® develops, manufactures and globally markets state-of-the-art specialty surgical tables. In addition to the modular spinal table system, the new INSITE™ multi-procedural surgery table will be exhibited. INSITE™ provides 55 inches of metal free interface to optimize the interaction with imaging devices including BodyTom™, O-arm® and 3D C-arms.

**Moeller-Wedel GmbH**
Rosengarten 10
Wedel, Schleswig-Holstein 22880
Germany
Phone: 49 4103 709 272
Fax: 49 4103 709 355
www.moeller-wedel.com
Booth #312

Founded in 1864 as an optical company in Wedel, MÖLLER WEDEL is today a worldwide renowned manufacturer of surgical microscopes.

State of the art technology as ICG, the Microscope Imaging and Operation System MÖLLER MIOS, and accessories that will satisfy all surgeons requirements present MÖLLER as a modern and innovative company.

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Canada
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Booth #1820

Monteris Medical offers a ray of light for clinicians and a ray of hope for patients through advanced MRI-guided solutions for neurosurgery including: the NeuroBlate™ System (formerly AutoLITT®) - minimally invasive, laser interstitial thermal therapy (LITT) for ablation of problematic brain tumors; and the AXiiis® Stereotactic Miniframe—delivery platform for image-guided procedures like brain biopsy.

**MRI Interventions, Inc. (formerly SurgiVision, Inc.)**
One Commerce Square, Suite 2550
Memphis, TN 38103
Phone: (901)522-9300
Fax: (901)522-9400
www.mriinterventions.com
Booth #405

MRI Interventions, Inc. is a leader in the field of MRI-guided interventions, creating innovative platforms for performing the next generation of interventional procedures in the brain and heart. Utilizing a hospital’s existing MRI suite, MRI Interventions’ FDA cleared ClearPoint™ system is designed to enable a range of minimally invasive procedures in the brain.

**National Institute of Neurological Disorders and Stroke (NINDS)**
31 Center Drive, Room 8A07, MSC 2540
Bethesda, MD 20892-2540
Phone: (301)496-5751
Fax: (301)402-2186
www.ninds.nih.gov
Booth #746

The National Institute of Neurological Disorders and Stroke (NINDS) provides information about available research support and offers free publications for patients and their families on stroke, epilepsy, brain injury, and other neurological disorders. Members of the NINDS staff will be available to assist you. Printed material is available.

**National Research Council of Canada/Genomics and Heath Initiative Project on Surgical Oncology**
75 boul.de Mortagne
Boucherville, PQ J4B 6Y4
Canada
Phone: (450)641-5100
Fax: (450)641-5106
www.neurotouch.ca
Booth #845

The National Research Council of Canada is leading a pan-Canadian research program on the development of a VR-based rehearsal (training and planning) system, called Neurotouch, integrated with MRI for neurosurgery. The team is reinforced by a strong cross-Canada network of hospitals, represented by key surgeons from Vancouver to Halifax.

**NEOS Surgery S.L.**
Parc Tecnologic del Valles
C/ Sabaters, 2
Cerdanyola del Valles, Barcelona 08290
Spain
Phone: (34)935944726
Fax: (34)935944737
www.neosurgery.com
Booth #2111

Cranial LOOP and Cranial LOOP (L) are the first 100% PEEK-Optima cranial closure devices. These innovative products are completely instrument-free devices. They are 100% artifact-free in CT scans and MRI. In addition, its 3D adaptation feature allows them to perfectly adapt to the skull’s epicranial and subcranial shape and curvatures.
Exhibitor Information

**NeuroLogica**
14 Electronics Avenue
Danvers, MA 01923
Phone: (978)564-8500
Fax: (978)560-0602
www.NeuroLogica.com
Booth #539

NeuroLogica Corporation conceives, designs, engineers, manufactures and markets innovative medical imaging equipment for healthcare facilities and private practices worldwide.

Established in 2004, NeuroLogica’s founders have over 100 years of combined experience in the design, development and manufacturing of imaging systems including CT. NeuroLogica is ISO 13485:2003 and ISO 9001:2000 certified.

**NeuroPoint Alliance (NPA)**
5550 Meadowbrook Dr.
Rolling Meadows, IL 60008
Phone: (847) 378-0500
Fax: (847) 378-0600
www.neuropoint.org
Booth #1330

NeuroPoint Alliance (NPA) was developed to administer data management, neurosurgical, clinical services and outcomes measurement. NPA’s newest initiative, National Neurosurgery Quality and Outcomes Database (N2QOD), is a quality improvement networking platform, where Practice groups can assess acceptable benchmarks for quality of care and target areas where quality improvement is needed.

**Nexstim, Inc.**
1360 Union Hill Road, Suite 3C
Alpharetta, GA 30004
Phone: (770)664-1000
Fax: (770)664-1217
www.nexstim.com
Booth #2108

Nexstim’s Navigated Brain Stimulation (NBS) System integrates TMS, EMG, and MRI guided navigation to non-invasively stimulate and map the eloquent cortex with the accuracy of DCS. In 2009, Nexstim received FDA clearance for Pre-Procedural Planning. Future FDA applications currently in clinical trials are: Stroke Rehabilitation, Speech, and Depression.

**NextGen Healthcare**
795 Horsham Road
Horsham, PA 19044
Phone: (215)657-7010
Fax: (215)657-7011
www.nextgen.com
Booth #1934

NextGen Healthcare is a leading provider of integrated electronic health record and practice management systems, connectivity solutions, and billing services designed to serve the needs of ambulatory practices and hospitals of all sizes and specialty areas. Our award-winning, certified solutions help improve care quality and increase operational efficiencies.

**Norman Noble, Inc.**
5507 Avion Park Drive
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Phone: (216)761-5387
Fax: (216)761-0455
www.nnoble.com
Booth #1136


**North American Neuromodulation Society**
4700 W. Lake Avenue
Glenview, IL 60025
Phone: (847)375-4398
Fax: (847)375-6424
www.neuromodulation.org
Booth #214

The North American Neuromodulation Society (NANS) is dedicated to being the premier organization representing neuromodulation. NANS promotes multidisciplinary collaboration among clinicians, scientists, engineers, and others to advance neuromodulation through education, research, innovation and advocacy. Through these efforts NANS seeks to promote and advance the highest quality patient care.

**North American Spine Society**
7075 Veterans Boulevard
Burr Ridge, IL 60527
Phone: (630)230-3600
Fax: (630)230-3700
www.spine.org
Booth #407

NICO Corporation is progressing minimal-invasive corridor neurosurgery by creating instruments that allow for safe tumor and cyst removal through smaller openings. This provides neurosurgeons opportunities for less brain retraction, shorter total resection time, and precise control to achieve a more effective gross total resection. NICO’s products offer the potential for less surgical trauma for patients, shorter hospital stays, better clinical outcomes, and improved clinical experiences.
Exhibitor Information

The North American Spine Society is a multidisciplinary medical organization dedicated to fostering the highest quality, ethical, value-based and evidence-based spine care through education, research and advocacy.

Novabone Products LLC
1551 Atlantic Boulevard, #105
Jacksonville, FL 32207
Phone: (386)462-7660
Fax: (386)418-1636
www.novabone.com
Booth #1843

NovaBone Products, LLC, provides a best-in-class synthetic bone graft substitute. The unique bioactive grafting technology delivers an osteoconductive matrix while signaling and stimulating osteoblastic activity to the site. For ease of use and surgical convenience, NovaBone(r) is available in a variety of forms and sizes, along with multiple delivery options.

NSI
6767 S. Spruce Street, Suite 220
Centennial, CO 80112
Phone: (303)860-0261
Fax: (770)632-9604
www.nsi-healthsystems.com
Booth #2124

NSI specializes in the development, manufacturing and distribution of innovative medical devices and technologies.

NSK
700 Shimohinata
Kanuma-shi, Tochigi 322-8666
Japan
Phone: 81 (0)3-5828-7716
Fax: 81 (0)3-5828-0064
www.nsk-surgery.com
Booth #611

NSK is a Japanese corporation with over 80 years experience in the development and production of high speed rotational technologies. Our power systems meet the particular requirements of modern neurosurgery: high performance, ease of use, ultimate precision and a favorable cost-benefit ratio.

Olsen Medical
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Fax: (502)772-4282
www.olsenmedical.com
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1 Kendall Square, Suite B 1301
Cambridge, MA 02139
Phone: (617)551-8435
Fax: (617)551-8445
www.omni-guide.com
Booth #2310

Dedicated to expanding the reach of minimally invasive surgery, OmniGuide brings to surgeons the precision of CO2 laser surgery, in an intuitive, flexible form, enabling precision surgery around intricate anatomy and near critical structures.

Oncology Data Systems, Inc.
1601 SW 89th Street, Suite E-100
Oklahoma City, OK 73159
Phone: (405)680-5222
Fax: (405)680-5444
www.mucheck.com
Booth #241

Gamma Knife Check is an independent dose validation second check software for Elekta’s GammaPlan. The only FDA cleared QA software available for Gamma Knife. Works with both Perfexion and 4C units. Fast! Accurate! Calculates in seconds! Intuitive, easy-to-use interface. Billable under CPT code 77300.
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Fax: (949)495-4224
www.ontium.com
Booth #2211

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Fax: (214)937-2000
www.orthofix.com
Booth #942

Orthofix products surround the patient with preventative, intra-operative and post-operative treatment options. Our spine solutions help surgeons respond with the best treatments available to enhance clinical outcomes, including spinal implants, biologics technology, bone growth stimulators, and spine bracing. Our promise is to be customer focused, patient driven and always responsive.

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3885 Arapaho Road
Addison, TX 75001
Phone: (972)677-4600
Fax: (972)677-4601
www.osteomed.com
Booth #1342

OsteoMed is a global and innovative leader in the development and manufacturing of specialty surgical implants for the spine, neurosurgical, and ENT market as well as orthobiologics products.

OsteoSymbionics, LLC
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Phone: (216)881-8502
Fax: (216)881-8504
www.osteesymbionics.com
Booth #305

Be a neurosurgeon and a plastic surgeon. Correct temporal hollowing during neurosurgery using the OsteoSymbionics’ ST Temporalis implant. With a soft, natural feel, you can save the life and restore the look on open, pterional access procedures. OsteoSymbionics also offers patient-specific hard tissue replacements that are of plastic surgery quality.

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Fax: (212)826-9509
www.paradigmspine.com
Booth #1931

Paradigm Spine offers degenerative and scoliosis solutions in over 50 countries. The company markets the coflex® Interlaminar Stabilization device for spinal stenosis, the coflex-F® Posterior Stabilization device for posterior fusion, the DCI™ System designed as a functionally dynamic cervical spine implant and the DSS® Spinal Stabilization Pedicle based system.

ParaMed Medical Systems
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Park Ridge, IL 60068
Phone: (847)430-3094
Fax: (312)277-4646
www.paramedmedicalsystems.com
Booth #1842

Paramed Medical Systems is manufacturers' and markets the most patient friendly superconductive MRI system in the world, which has a revolutionary weight bearing design.

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Coralville, IA 52241
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Fax: (319)351-6297
www.patient-education.com
Booth #1937

X-Plain Neurological Surgery is patient education software used in neurosurgery clinics to document education. The software is fully narrated, uses simple text, graphics and animations, and asks questions to ensure comprehension. Through a new agreement with AANS, members can receive discounts when licensing X-Plain.

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Fax: (682)564-0390
www.performancegrafts.com
Booth #852
Exhibitor Information

Performance Grafts provides bone tissue and allograft products offering premium processing and sterilization, superior handling and integrity, less post-operative pain, decreased operating time and smaller incisions. Precision-machined allograft surfaces reduce chance of post-operative complication and facilitates ease of placement.

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www.perioptix.com
Booth #2128

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Fax: (440)483-2356
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Fax: (512)340-1481
www.pioneersurgical.com
Booth #515

Pioneer Surgical is a progressive medical device firm with a comprehensive portfolio of industry-leading orthopaedic, biologic, and spine products. Pioneer is focused on creating innovative, cost-effective surgical solutions that benefit surgeons and provide better patient outcomes.

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Fax: (952)470-0865
www.pmtcorp.com
Booth #542

PMT Corporation is the premier supplier of an extensive line of neurosurgical products. Offering highend neck braces, including halo systems and orthotic cest for cervical, thoracic and lumbar spinal immobilization. PMT also offers Cortac, cortical surface electrodes and Depthalon, depth electrodes for epilepsy monitoring; microsurgical, irrigation and Fukushima instruments.

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www.surgicalmicroscopes.com
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www.pro-dex.com
Booth #309

Pro-Dex, Inc. designs, manufactures and assembles powered medical devices, motors, and motion control products for leading OEMs in the medical, dental, factory automation and scientific research markets. Pro-Dex specializes in manufacturing safe and reliable devices to withstand environments where saline, high pH solutions and biomatter are common. As a FDA-registered, 13485-certified manufacturer, Pro-Dex offers full regulatory support to help get products to market quickly and effectively.
Exhibitor Information

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Fax: (859)231-0376
www.qed-medical.com
Booth #1420

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Fax: (757)224-4515
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RosmanSearch is a single-specialty, truly expert, high integrity neurosurgical and neurocritical care recruiting service you can trust. We specialize exclusively in neuro permanent placement, and our neurosurgical recruitment expertise and methodology is truly unique.

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Fax: (850)416-1147
www.sacred-heart.org
Booth #2031

Sacred Heart Health System is a member of Ascension Health, the nation’s largest Catholic, non-profit health system. The hub of the Health System is a 466-bed acute care facility which includes Sacred Heart Hospital in Pensacola, Sacred Heart Children’s Hospital and Sacred Heart Women’s Hospital. Sacred Heart Health system is also comprised of Sacred Heart Hospital on the Emerald Coast, just east of Destin, FL and Sacred Heart Hospital on the Gulf, in Port St. Joe, FL.

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Fax: (651)298-0018
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Booth #342

Scott & White is a fully integrated health system and the largest multi-specialty practice in Texas, sixth largest group practice in the nation. Our established six physician neurosurgery practice is expanding. Opportunities
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The iFuse Implant System by SI-BONE has been developed as a treatment solution for SI joint sacroiliitis. The iFuse implant offers a variety of unique and enhanced product features including, a triangular shaped implant that minimizes rotation and a porous plasma spray coating to support stable bone fusion.

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Siemens Healthcare is one of the world’s largest suppliers to the healthcare industry and the first full-service diagnostics company. The company is known for bringing together innovative medical technologies, healthcare information systems, management consulting, and support services, to help customers achieve tangible, sustainable, clinical, and financial outcomes.

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SIGNUS Medical has a worldwide reputation for developing, marketing and selling unique spinal implants using cutting-edge technology. Vastly differentiated spinal fusion products are now being designed from Endless Carbon Fiber PEEK®. SIGNUS is also spearheading the diagnosis and treatment for the problematic indication of SI pain.

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Booth #830

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Sophysa is focused on the design and manufacture of innovative CSF Management technologies and solutions. Sophysa’s pioneering research and development continues to expand the reach of the global neurosurgical community, focusing on Hydrocephalus, and related disorders of CSF dynamics.
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www.spinesurgicalinnovation.com
Booth #1146

The Spine Surgical Innovation’s Swivel Port System and spine instruments are designed for ease of use and intended for posterior or posterolateral lumbar and cervical MIS procedures. Providing excellent visualization, the flexible system eliminates time consuming “muscle creep” and requires no expensive disposables or consumables.

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Fax: (888)492-0898
www.spineview.com
Booth #410

Spine View, Inc. is committed to the development and commercialization of novel, minimally-invasive technologies aimed at improving spinal decompression and fusion with a collection of surgical and interventional products and procedures.

Spine Wave
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Shelton, CT 06484
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Fax: (203)944-9493
www.spinewave.com
Booth #1707

Spine Wave develops and markets clinical solutions for several market segments, including nuclear augmentation, tumor, trauma, and spinal fusion. The company’s product portfolio includes NuCore® Injectable Nucleus, StaXx® XD and XDL (Lateral) Expandable Devices, CapSure® PS3 Spine System, Sniper® Spine System, Cervical Plate and Spacer, and additional products.

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Booth #1930

Introducing the new Cannulated PediGuard! PediGuard® is the first wireless device that can detect possible vertebral cortex perforations during pedicle preparation by accurately analyzing the electrical conductivity of the surrounding tissues in real-time. PediGuard has assisted both neuro spine surgeons and orthopedic surgeons in over 18,500 surgeries worldwide.

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Booth #1603

Spineology, the innovator in anatomy-conserving spine surgery, develops spinal implants and instruments. Spineology surgical techniques conserve spinal bone, ligament and muscle tissue. Spineology is committed to increasing procedural efficiency, reducing surgical morbidity and accelerating patient recovery. Learn more at spineology.com.
Exhibitor Information

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Booth #2130
Since its foundation in 1999, SpineVision has designed innovative products which offer key advantages to surgeons and benefits to patients. Our current products offer solutions for approximately 90% of spinal pathologies. SpineVision is currently focusing its R&D efforts on hybrid stabilisation and minimally invasive technologies.

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SpotOn utilizes a tablet-based digital portal for nurse education & vendor support in operating rooms and interventional suites. The model is a collaborative effort with hospitals and O.R. vendors that spans all surgical specialties and device/equipment manufacturers. The service additionally enables on-demand, remote visual interface with vendor reps & technical support personnel.

Surgical Acuity designs and manufactures high-performance magnification loupes for surgeons and other medical professionals. Renowned for quality craftsmanship, Surgical Acuity loupes deliver remarkable resolution over a deep and wide viewing field. Superior visualization is achieved through innovative, lightweight optics made from only the finest grade of glass.

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Synthes, a leading global medical device company, manufactures and distributes surgical instruments, implants, and biomaterials for surgical fixation, correction and regeneration of the human skeleton and its soft tissues as well as power equipment for various applications.
Exhibitor Information

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Phone: (713)726-0886
Fax: (713)726-0846
www.tedansurgical.com
Booth #945


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Napa, CA 94558
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www.thedoctors.com
Booth #1234

The Doctors Company is relentlessly committed to advancing, protecting, and rewarding the practice of good medicine. With nearly 71,000 members and $4 billion in assets, we are the nation’s largest insurer of physician and surgeon medical liability. To learn more, visit us at www.thedoctors.com.

The NeuroMatrix Group
6250 Shiloh Road
Alpharetta, GA 30005
Phone: (800)393-6118
Fax: (678)456-5176
www.NeuroMatrix.com
Booth #1649

The mission of NeuroMatrix, established in 1993, is to elevate the standards and practice of Intraoperative Neurophysiologic Monitoring for optimal patient outcomes.

With the top clinical staff in the field, we offer the highest level IONM services available today. With education, integrity, and compassion, We Make Surgery Safer®.

The Walter E. Dandy Neurosurgical Society
3635 Vista Avenue, 5th FL, FDT
St. Louis, MO 63110
Phone: (314)577-8716
Fax: (219)979-0017
www.wedns.org
Booth #1549

The Walter E. Dandy Neurosurgical Society was founded on November 19, 2011 in St. Louis, Missouri. The WEDNS is a global organization focused on providing education to neurological residents, and neurosurgeons in practice. The society is dedicated to the education of neurological anatomy and excellence in operative techniques.

Thieme Medical Publishers
333 Seventh Avenue
New York, NY 10001
Phone: (800)782-3488
Fax: (212)947-1112
www.thieme.com
Booth #1235

Thieme is an award-winning international medical and science publisher serving health professionals and students for more than 125 years. Thieme promotes the latest advancements in clinical practice, publishes the latest research findings, advocates medical education and is known for the high quality and didactic nature of its books, journals, and electronic products.

ThinkFirst National Injury Prevention Foundation
1801 N. Mill Street, Suite F
Naperville, IL 60563
Phone: (630)961-1400
Fax: (630)961-1401
www.thinkfirst.org
Booth #209

Founded by the AANS and CNS in 1986, ThinkFirst is an independent 501c3 non-profit organization providing injury prevention educational programs for kids of all ages. Start a chapter at your hospital, medical school or practice to help prevent traumatic injuries!

Thompson Surgical Instruments
10170 E. Cherry Bend Road
Traverse City, MI 49684
Phone: (231)922-0177
Fax: (231)922-0174
www.thompsonsurgical.com
Booth #742

Thompson Surgical is the original manufacturer of table-mounted retractors. In use for over thirty years, the Thompson Retractor is the only mechanical retractor to offer one frame for all exposure needs, multi-planed retraction, and unlimited customization. Stop by our booth so you can see our latest innovations that will provide you uncompromised exposure.

TNA-The Facial Pain Association
408 W. University Avenue, Suite 602
Gainesville, FL 32605
Phone: (352)384-3600
Fax: (352)384-3606
www.tna-support.org
Booth #339

TNA-The Facial Pain Association (formerly the Trigeminal Neuralgia Association) is a nonprofit organization which serves as an advocate for
Exhibitor Information

patients with neuropathic facial pain, including trigeminal neuralgia, by providing information, encouraging research and offering support. Educational materials are directed to health care professionals and the public regarding the disorders, medications, alternative treatments and surgical options.

TrueVision Systems, Inc.
315 Bollay Drive, Suite 101
Goleta, CA 93117
Phone: (805)963-9700
Fax: (805)963-9719
www.truevisionsys.com
Booth #842

TrueVision® 3D Surgical is the leader in digital 3D visualization and guidance for microsurgery. Santa Barbara, California-based TrueVision® has developed and patented an intelligent, real-time, 3D surgical visualization and computer-aided guidance platform. The company is focused on developing a suite of 3D guidance applications for microsurgery to improve surgical efficiencies and patient outcomes. Visit www.truevisionsys.com for more information.

U & I Corporation
529-1, Yonghyun-dong
Uijungbu, Kyunggi-Do 480-050
South Korea
Phone: (82) 31 852 0102
Fax: (82) 31 852 9025
www.youic.com
Booth #239

Since its inception in 1993, U&I Corporation has been a leading player in the Korean Orthopedic Industry. We, U&I Corporation, are specialized in the design, manufacture and marketing of orthopedic surgical implants used for operative treatment of various bone-related diseases. Our product offerings include Fracture Fixation, Reconstructive Devices and Spinal Implants/Instrumentation Systems. All of our products are manufactured in accordance with ISO13485 Quality System and FDA current Good Manufacturing Practices. Especially two of our Spinal Instrumentation System, PerFix and OPTIMA have received FDA approval and are currently available in the US. We, U&I Corporation, are glad to help the world orthopedic community to meet the varying surgeon’s technical demands, as well as to serve our patients. We, U&I Corporation, hope to be your great and lasting partners.

Varian Medical Systems
3100 Hansen Way
Palo Alto, CA 94304
Phone: (650)493-4000
Fax: (650)493-5637
www.varian.com
Booth #318

Varian Medical Systems is a world-leading manufacturer of medical devices and software for treating cancer and other medical conditions with radiotherapy and radiosurgery. Varian will feature the TrueBeam STx, a radiosurgical device which expands boundaries of traditional surgery and RapidArc Radiosurgery, a treatment technique for precise and efficient treatment.

Vertebral Technologies, Inc.
5909 Baker Road, Suite 550
Minnetonka, MN 55345
Phone: (952)912-5400
Fax: (952)912-5410
www.vti-spine.com
Booth #2036

Vertebral Technologies, Inc. (VTI) has developed lumbar interbody fusion devices that allow surgeons to achieve a large footprint and utilize a less-invasive approach. The InterFuse® S™ is inserted via a PLIF or TLIF approach; the InterFuse T™ is inserted through a TLIF approach, both are commercially available and FDA cleared.

Visionsense
1270 Avenue of the Americas, Suite 301
New York, NY 10020
Phone: (845)680-0233
Fax: (845)503-2256
www.visionsense.com
Booth #1643

The Visionsense VSii system is a complete solution enabling surgeons to use a minimally invasive stereoscopic (3D) camera, for neurosurgical applications. The system has been successfully used by surgeons in a wide range of MIS procedures. The VSii system has 510(k) clearance and is CE Mark approved.

Vycor Medical, Inc.
3651 FAU Boulevard, Suite 300
Boca Raton, FL 33431
Phone: (561)558-2020
Fax: (631)794-2444
www.vycormedical.com
Booth #615

Innovative neuro surgical devices and therapy. Vycor’s Viewsite Brain Access System (VBAS) allows access to deep brain lesions in a minimally invasive method under image guidance. See how this simple device makes so much sense in dealing with the limitations of conventional brain retractors. Access deep tumors; evacuate hemorrhages.

Weatherby Healthcare
6451 North Federal Highway, Suite 800
Ft. Lauderdale, FL 33308
Phone: (800)586-5022
Fax: (800)463-2817
www.weatherbyhealthcare.com
Booth #513
Exhibitor Information

Weatherby Healthcare, an elite staffing company known since 1995 for its superior customer service - Red Ribbon Service, provides each neurosurgeon with a personal consultant who locates the best opportunity from hundreds of temporary jobs nationwide. Meeting the needs of the neurosurgeons and patients alike is our top priority. Call (800)586-5022 or visit www.weatherbyhealthcare.com.

Wenzel Spine, Inc.
206 Wild Basin Road, Bldg. A Suite 203
Austin, TX 78746
Phone: (512)501-4022
Fax: (512)469-0604
www.wenzelspine.com
Booth #1152


Wiggins Medical
2112 Arendell Way
Tallahassee, FL 32308
Phone: (800)497-0851
Fax: (850)942-6595
www.wigginsmedical.com
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Great selection of new and original Kerrison designs. We specialize in Kerrisons and pituitaries. We are the “home of the original black Kerrison.”

World Neurosurgery
1420 San Pablo Street, PMB A106
Los Angeles, CA 90033
Phone: (323)442-3001
Fax: (323)442-3002
www.worldneurosurgery.org
Booth #2123

World Neurosurgery is a publication designed to not only convey high level peer-reviewed clinical, and laboratory neuroscience, but to address issues of political, social, economic, educational, and cultural relevance on six continents as they affect the management and treatment of neurosurgical diseases regionally and globally. It chronicles events, places, people, our times, and literature, internationally.

X-Spine Systems, Inc.
452 Alexandersville Road
Miamisburg, OH 45342
Phone: (937)847-8400
Fax: (937)847-8410
www.x-spine.com
Booth #1923

X-spine is a global spinal implant company dedicated to advancing spinal implant technologies that improve surgery outcomes and optimize surgeon experience. X-spine’s principles of invention, integration and intuition drive our product philosophy.

Ziehm Imaging, Inc.
6280 Hazeltine National Drive
Orlando, FL 32822
Phone: (407)615-8560
Fax: (407)615-8561
www.ziehm.com
Booth #1052

Ziehm Imaging specializes in the development, manufacturing, and worldwide marketing of mobile X-ray based imaging solutions. The company has been a market leader in Germany and other European countries for many years.

Zimmer Spine
7375 Bush Lake Road
Minneapolis, MN 55439
Phone: (952)832-5600
Fax: (952)832-5620
www.zimmerspine.com
Booth #507

Zimmer Spine develops, produces and markets the highest quality spine products and services that repair, replace and regenerate spine health. Zimmer constructs superior fusion and non-fusion spine systems, instrumentation systems, cervical plates, allograft bone filler and Trabecular Metal™ Technologies. We value continuous surgeon education, building confidence and enhancing patient outcomes.
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## Exhibitor Listing-By Product and Service Category

### Allografts/Human Tissue
- Accel Spine
- Advanced Biologics
- Bacterin
- Daewoong Bio
- DePuy Spine
- Hans Biomed USA, Inc.
- Harvest Technologies Corp.
- Innovasis Inc.
- K2M, Inc.
- Medyssey Co., LTD
- NuTech Medical
- Performance Grafts, LLC
- Spineology
- Synthes

### Aneurysm Clips & Accessories
- Aesculap, Inc.
- Apex Medical, Inc.
- Mizuho America, Inc.
- Scanlan International, Inc.

### Aspirators
- Aesculap, Inc.
- Single Use Surgical, Inc.

### Bone Growth Stimulators
- Bacterin
- Daewoong Bio
- Hans Biomed USA, Inc.
- Novabone Products LLC
- Orthofix

### Bone Substitute
- Accel Spine
- Advanced Biologics
- Baxter Healthcare Corporation
- Biomet Microfixation
- Collagen Matrix, Inc.
- curasan Inc.
- Daewoong Bio
- Hans Biomed USA, Inc.
- Harvest Technologies Corp.
- Kelyniam Global, Inc.
- KLS Martin Group
- Kyungwon Medical Co. Ltd.
- Lanx, Inc.
- Novabone Products LLC
- Orthofix
- OsteoMed LP and OsteoMed Spine
- OsteoSymbionics, LLC
- Stryker

### Brain Retraction Systems
- Mizuho America, Inc.
- Pro Med Instruments, Inc.
- Vycor Medical, Inc.

### Computer Hardware
- eMagin Corporation

### Computer Software/Office
- Elekta
- MD Logic EMR
- Patient Education Institute
- Spot On Services
- SRSsoft

### Computer Software/Surgical
- Anatom e Neuro Information Systems, Ltd.
- Monteris Medical, Inc.
- National Research Council of Canada/Genomics and Heath Initiative Project on Surgical Oncology
- Oncology Data Systems, Inc.
- Renishaw
- Spot On Services
- SRSsoft
- TrueVision Systems, Inc.

### Cont. Medical Education Courses
- American Association of Neurological Surgeons
- American Heart Association
- Congress of Neurological Surgeons
- KARL STORZ Endoscopy America, Inc.
- North American Spine Society
- The NeuroMatrix Group

### Cranial Stabilization Systems
- CMF Medicon Surgical, Inc.
- IMRIS
- Innovasis, Inc.
- Monteris Medical, Inc.
- Pro Med Instruments, Inc.
- Vycor Medical, Inc.

### Craniotomes, Drills & Accessories
- ACRA CUT Inc.
- Biomet Microfixation
- CMF Medicon Surgical, Inc.
- Kelyniam Global, Inc.
- Kirwan Surgical Products LLC
- Monteris Medical, Inc.
- NEOS Surgery S.L.
## Exhibitor Listing - By Product and Service Category

### CSF DRAINAGE DEVICES
- InnerSpace 2034
- RAUMEDIC AG 1810
- Spiegelberg GmbH & Co.KG 2210
- Sophysa USA, Inc. 1814

### CT/MRI/MAGNETIC SOURCE IMAGING
- Esaote North America 242
- IMRIS 835
- Invivo 340
- MEI Healthcare Group 853
- Monteris Medical, Inc. 1820
- NeuroLogica 539
- ParaMed Medical Systems 1842
- Sonowand 2131

### DIAGNOSTIC IMAGING
- Anatom e Neuro Information Systems, Ltd. 1845
- BK Medical 1232
- Esaote North America 242
- Invivo 340
- MEI Healthcare Group 853
- MedTech 213
- Philips Healthcare 2103
- Siemens Medical Solutions USA, Inc. 2010
- Varian Medical Systems 318
- Ziehm Imaging, Inc. 1052

### DURA SUBSTITUTE
- Accel Spine 1030
- Collagen Matrix, Inc. 2126

### ENDOSCOPES, NEUROLOGICAL
- Aesculap, Inc. 1113
- joimax, Inc. 749
- KARL STORZ Endoscopy America, Inc. 1719
- Medtech 213
- Norman Noble, Inc. 1136
- Single Use Surgical Inc. 1819
- Visionsense 1643

### ENDOVASCULAR DEVICES
- Codman 518
- MicroVention 438
- Norman Noble, Inc. 1136
- Sonowand 2131

### FINANCIAL ADVISEMENT
- Collect Rx 2032
- MEI Healthcare Group 853

### FUNCTIONAL DEVICES
- Accuray, Inc. 210
- Anatom e Neuro Information Systems, Ltd. 1845
- Brainlab 603
- Hensler Surgical, LLC 1318
- Ontium Medical 2211
- Spine Surgical Innovation Holmed 1146

### FUNCTIONAL STEREOTACTIC SURGERY
- Alpha Omega 1230
- Anatom e Neuro Information Systems, Ltd. 1845
- Compass International 2208
- Cosman Medical 514
- Elekta 725
- Medtech 213
- MRI Interventions, Inc. (formerly SurgiVision, Inc.) 405
- North American Neuromodulation Society 214
- Sonowand 2131
- Varian Medical Systems 318

### HALO SYSTEMS/SPINAL ORTHOSIS
- Aspen Medical Products 1711
- Bremer Group Company 1908
- DePuy Spine 518
- PMT Corporation 542

### HEADLIGHTS, SURGICAL
- CUDA Surgical 1847
- Designs for Vision, Inc. 1725
- KARL STORZ Endoscopy America, Inc. 1719
- PeriOptix, Inc. 2128
- QED Medical 1420
- Sontec Instruments, Inc. 830
- Surgical Acuity 730
- SurgiTel / General Scientific Corp 1242

### HEMOSTATS
- ACRA CUT Inc. 613
- Baxter Healthcare Corporation 1130
- Scanlan International, Inc. 1507

### IMAGE GUIDED NAVIGATION SYSTEMS
- Accuray, Inc. 210
- BK Medical 1232
- Brainlab 603
- Compass International 2208
- IMRIS 835
- Medtech 213
- Medtronic 1103
- Monteris Medical, Inc. 1820
- MRI Interventions, Inc. (formerly SurgiVision, Inc.) 405
# Exhibitor Listing-By Product and Service Category

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## MICROSCOPE SYSTEMS

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## MONITORING SYSTEMS

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**Exhibitor Listing-By Product and Service Category**

**PUBLISHERS**
- Congress of Neurological Surgeons 1745
- Elsevier 409
- IEEE Engineering in Medicine & Biology Society 2035
- Journal of Neurosurgery Publishing Group 1330
- Karger Publishers 1818
- Lippincott Williams & Wilkins/Wolters Kluwer Health 1903
- North American Spine Society 407
- Patient Education Institute 1937
- Thieme Medical Publishers 1235
- World Neurosurgery 2123

**RECRUITERS**
- Aspirus Spine & Neurosciences 2004
- Cleveland Clinic 2110
- Dept. of Health and Human Services/NDMS 2136
- Hattiesburg Clinic 1846
- Hospital Corporation of America (HCA) 1137
- LocumTenens.com 1651
- Medicus Healthcare Solutions 2137
- Miami Neuroscience Center at Larkin 1252
- RosmanSearch, Inc. 1703
- Sacred Heart Health System 2031
- Scott & White Healthcare 342
- Weatherby Healthcare 513

**REHABILITATION**
- Nexstim, Inc. 2108

**RESEARCH, MEDICAL/MARKETING**
- American Heart Association 2106
- Hydrocephalus Association 2009
- IEEE Engineering in Medicine & Biology Society 2035
- Market Access Partners 1905
- Medical Education Research Institute 1641
- National Institute of Neurological Disorders and Stroke (NINDS) 746
- National Research Council of Canada/Genomics and Health Initiative Project on Surgical Oncology 845
- NeuroPoint Alliance (NPA) 1330

**RIGID FIXATION/PLATING SYSTEM**
- Biomet Microfixation 1927
- CMF Medicon Surgical, Inc. 610
- DePuy Spine 518
- Globus Medical 1515
- K2M, Inc. 1510
- Kinamed, Inc. 1640
- KLS Martin Group 939
- Medyssey Co., LTD 743
- NEOS Surgery S.L. 2111
- OsteoMed LP and OsteoMed Spine 1342
- Stryker 1024
- Amedica Corporation 1425

**SHUNTS & VALVES**
- Aesculap, Inc. 1113
- Integra 707
- Sophysa USA, Inc. 1814
- Spiegelberg GmbH & Co.KG 2210

**SPINAL CORD STIMULATION SYS**
- Boston Scientific Neuromodulation 1815
- North American Neuromodulation Society 214
- St. Jude Medical 2005

**SPINAL FIXATION INSTRUMENT**
- Accel Spine 1030
- Captiva Spine, Inc. 1503
- CMF Medicon Surgical Inc 610
- Custom Spine, Inc. 1803
- Fehling Surgical Instruments, Inc. 215
- Globus Medical 1515
- GS Medical 2003
- Innovasis, Inc. 1716
- InTech Medical 338
- K2M, Inc. 1510
- Kyungwon Medical Co. Ltd. 1642
- Laxn, Inc. 1518
- Medyssey Co., LTD 743
- NuVasive, Inc. 2303
- Orthofix 942
- OsteoMed LP and OsteoMed Spine 1342
- SIGNUS Medical, LLC 207
- Spine View, Inc. 410
- Spine Wave 1707
- Spineology 1603
- Stryker 1024
- Synthes 535
- U & I Corporation 239
- Zyga Technology, Inc. 1813

**STEREOTACTIC RADIOSURGERY**
- Accuray, Inc. 210
- Anatom e Neuro Information Systems, Ltd. 1845
- Elekta 725
- MEI Healthcare Group 853
- Nexstim, Inc. 2108
- Varian Medical Systems 318
## Exhibitor Listing-By Product and Service Category

**STERILIZATION CONTAINERS**
- Scanlan International, Inc. 1507

**SURGICAL INSTRUMENTS/SUPPLIES**
- ACRA CUT Inc. 613
- Aesculap, Inc. 1113
- Alpha Omega 1230
- Apex Medical, Inc. 1421
- ASSI Accurate Surgical 510
- Baitella AG 1607
- Baxano, Inc. 1542
- BOSS Instruments 1418
- Buxton BioMedical 1513
- ChoiceSpine 1453
- Compass International 2208
- Covidien 315
- Eminent Spine 949
- Fehling Surgical Instruments, Inc. 215
- InTech Medical 338
- KARL STORZ Endoscopy America, Inc. 1719
- Kinamed, Inc. 1640
- Koros USA, Inc. 1540
- Lanx, Inc. 1518
- Life Instrument Corporation 1142
- Mazur Marketing 1751
- NSI 2124
- NuVasive, Inc. 2303
- Olsen Medical 1718
- Ontium Medical 2211
- Pro Med Instruments, Inc. 134
- Pro Dex, Inc. 309
- Scanlan International, Inc. 1507
- SIGNUS Medical, LLC 207
- Sontec Instruments, Inc. 830
- Spine Surgical Innovation - Holmed 1146
- TeDan Surgical Innovations 945
- U & I Corporation 239
- Wiggins Medical 1723
- InTech Medical 338
- Koros USA, Inc. 1540
- NSI 2124
- Sontec Instruments, Inc. 830
- Spine Surgical Innovation - Holmed 1146
- Spineology 1603
- TeDan Surgical Innovations 945
- Thompson Surgical Instruments 742
- Vycor Medical, Inc. 615

**SUTURES/SPONGES**
- American Surgical Co. 1747
- Covidien 315

**TELESCOPES, SURGICAL (LOUPES)**
- Carl Zeiss Meditec, Inc. 713
- Designs for Vision, Inc. 1725
- PeriOptix, Inc. 2128
- Sontec Instruments, Inc. 830
- Surgical Acuity 730
- SurgiTel / General Scientific Corp. 1242

**ULTRASOUND EQUIPMENT**
- BK Medical 1232
- Esaote North America 242
- Hitachi Aloka Medical 2134
- MEI Healthcare Group 853
- Sonowand 2131

**VIDEO EQUIPMENT**
- Anatom e Neuro Information Systems, Ltd. 1845
- CUDA Surgical 1847
- eMagin Corporation 1246
- KARL STORZ Endoscopy America, Inc. 1719
- Prescott’s, Inc. 406
- QED Medical 1420
- Stryker 1024
- SurgiTel / General Scientific Corp 1242
- TrueVision Systems, Inc. 842
Saturday, April 14

Registration Hours
Lobby C Registration, Miami Beach Convention Center
6:30 AM-5:30 PM

*Lunch Hour
Rooms A101-105, Miami Beach Convention Center
12:00 -1:00 PM

*Beverage Breaks
Lobby B & D
Miami Beach Convention Center
9:45-10:15 AM
2:45-3:15 PM

Practical Clinics
8:00 AM-5:00 PM

NEW COURSE

004
New Advanced Cerebrovascular and Endovascular Procedures
Room Jr. Ballroom A, Miami Beach Convention Center

Co-Directors:
Adel M. Malek, MD, PhD
JD. Mocco, MD

Faculty:
Felipe C. Albuquerque, MD
Ricardo Hanel, MD, PhD
Pascal Jabbour, MD
David J. Langer, MD
Michael T. Lawton, MD
Elad I. Levy, MD
Demetrius K. Lopes, MD
Jacques J. Morcos, MD
Andrew J. Ringer, MD
Adnan H. Siddiqui, MD, PhD
Raymond Turner IV, MD
Erol Veznedaroglu, MD
Babu G. Welch, MD

Fee: $1,500

Learning Objectives:
After completing this educational activity, participants should be able to:
• Apply new technologies that are improving patient care, both in the operating room and the endovascular suite
• Employ advanced techniques on both flow models and actual cadaveric endovascular models
• Refine techniques for deployment of endovascular devices in realistic anatomy

005
Cranial Endoscopy: State-of-the-Art
Room Jr. Ballroom D, Miami Beach Convention Center

Director:
Alan R. Cohen, MD

Faculty:
Luiz Carlos de Alencastro, MD
Johnathan A. Engh, MD
Daniel Guillaume, MD
Costas G. Hadjipanayis, MD, PhD
Carl B. Heilman, MD
Tenoch Herrada-Pineda, MD
Henry W. S. Schroeder, MD, PhD
Laligam N. Sekhar, MD
Mark M. Souweidane, MD
Ning Lin, MD
Timothy W. Vogel, MD
John C. Wellons III, MD

Fee: $1,500

Participants will receive didactic and hands-on instruction in intracranial endoscopy, including indications, techniques, outcomes and complications. Topics covered will include the management of hydrocephalus (including third ventriculostomy), removal of colloid cysts and other intraventricular tumors, endoscope-assisted microneurosurgery, and transsphenoidal procedures.
Learning Objectives: After completing this educational activity, participants should be able to:

- Identify the indications for intracranial endoscopy
- Evaluate specific techniques available for intracranial endoscopy
- Discuss strategies for avoiding complications in intracranial endoscopy

006 Head Trauma: Current Treatments and Controversies with Hands On Practical Session in Brain Monitoring
Room B215, Miami Beach Convention Center

Co-Directors:
Geoffrey T. Manley, MD, PhD
Shelly D. Timmons, MD, PhD

Faculty:
Julian E. Bailes Jr., MD
M. Ross Bullock, MD, PhD
Gregory Hawryluk, MD
Jack I. Jallo, MD, PhD
Raj K. Narayan, MD
David O. Okonkwo, MD, PhD
Eve C. Tsai, MD, PhD

Fee: $570
N&PE Fee: $399

This clinic emphasizes case studies and covers the significant breadth of the field of neurotrauma and critical care. It will emphasize on practical as well as complex case-management issues. In the afternoon, you will have hands-on instruction in techniques and devices for ICP monitoring, Parenchymal Oxygen monitoring and decompressive craniectomy.

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

- Describe the ICU management of the TBI patient
- Describe the current surgical controversies in the management of the brain-injured patient
- Identify the current concepts in dealing with brain-injured athletes
- Discuss management challenges of mild traumatic brain injury and concussion
- Recognize the role of the neurosurgeon in a trauma center and trauma systems

Practical Clinics 8:00 AM-12:00 PM

001 Cranio-Cervical and C1C2 Stabilization Techniques, Surgical Approaches
Room Ballroom A, Miami Beach Convention Center

Co-Directors:
Arnold H. Menezes, MD
Vincent C. Traynelis, MD

Faculty:
Richard C.E. Anderson, MD
Marc E. Eichler, MD
Noel I. Perin, MD
Charles Sansur, MD
Rick C. Sasso, MD
Paul D. Sawin, MD
Nicholas Theodore, MD

Fee: $660

This clinic will include the evaluation of craniocervical anatomy and pathology. Formulation of a treatment for disorders and construction of physiological modes of therapy will be reviewed. The didactic program will be followed by hands-on demonstration.

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

- Formulate craniovertebral junction surgical approaches
- Classify and differentiate craniocervical lesions
- Identify and treat fusions

002 Deep Brain Stimulation: Update and New Directions
Room Ballroom B, Miami Beach Convention Center

Co-Directors:
Aviva Abosch, MD, PhD
Parag G. Patil, MD, PhD

Faculty:
Roy A. E. Bakay, MD
Nicholas M. Boulis, MD
Kelly Foote, MD
Peter E. Konrad, MD, PhD
Brian H. Kopell, MD
Paul S. Larson, MD
Joshua M. Rosenow, MD
Donald M. Whiting, MD

Fee: $450

Practical aspects of surgery for the treatment of Parkinson’s disease, tremor and dystonia will be presented via lectures, videos, case presentations, and device demonstrations. Emphasis will be on anatomical and physiological targeting strategies, intraoperative decision-making, troubleshooting, complication avoidance and management. Cases and intraoperative scenarios will be presented for interactive discussion between the audience and faculty.

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

- Evaluate patients with Parkinson’s disease, tremor and dystonia for surgical management
- Apply the principles and techniques of DBS and lesioning surgeries
- Identify anatomical and physiological localization of the STN, Gpi and thalamus
- Discuss emerging indications for DBS such as medically-refractory obsessive compulsive disorder
Operative Nuances for Cranial and Skull Base Procedures: A Cadaveric and Case-Based Microsurgical 3-D Video Presentation
Room B214, Miami Beach Convention Center

Co-Directors:
Aaron A. Cohen-Gadol, MD
R. Shane Tubbs, PhD

Faculty:
Arthur L. Day, MD
Michael T. Lawton, MD
Troy D. Payner, MD
B. Gregory Thompson Jr., MD
Harry R. van Loveren, MD

Fee: $450

This course will provide an intensive review of the nuances involved with cranial and skull base procedures via primarily neuroanatomical, cadaveric and intraoperative 3-D surgical video presentations. Following the review of each craniotomy approach, the intradural methods of commonly performed procedures for the corresponding approach will be discussed using advanced 3-D technology. The faculty will provide the audience with "pearls" from their surgical experience for each approach discussed. The surgical approaches reviewed would include the variations of pterional (clinoidectomy), orbitozygomatic, suboccipital, retrosigmoid and petrosal craniotomies. Please note that participants will receive a complimentary human skull model from the course for their use in future surgical planning.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Discuss the nuances of techniques used in skull base procedures
- Review common intradural skull base procedures

Fundamental Techniques of Adult Spinal Deformity Surgery: Part 1
Room Jr. Ballroom C, Miami Beach Convention Center

Co-Directors:
Peter D. Angevine, MD
Praveen V. Mummaneni, MD

Faculty:
Robert F. Heary, MD
Tyler Koski, MD
Charles Kunzt, MD
Frank La Marca, MD
Brian A. O'Shaughnessy, MD
Mark Pichelmann, MD
Christopher I. Shaffrey, MD

Fee: $1,500

This hands-on cadaver course will cover the essential fundamental techniques of evaluating and treating patients with adult spinal deformity. The practical "hands-on" portion will include techniques of thoracic and lumbar pedicle screw placement, sacropelvic fixation and posterior column osteotomies, as well as strategies for rod placement and basic deformity correction.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Describe the clinical and radiographical evaluation of and treatment planning for common spinal deformities in adults, including degenerative lumbar scoliosis and thoracic kyphosis
- Describe techniques of thoracic and lumbar pedicle screw placement, sacropelvic fixation and posterior column osteotomies, as well as strategies for rod placement and basic deformity correction

Incorporation of Electronic Technology to Improve Clinical Practice: Current Uses and Future Directions
Room Ballroom C, Miami Beach Convention Center

Director:
Neil A. Feldstein, MD

Fee: $450

This seminar is geared to those interested in expanding their use of computers, tablets and web-based technology to improve clinical practice. Focusing primarily on Mac/PC and iPad operating systems, the seminar will demonstrate how to enhance the day-to-day practice of neurosurgery through the use of readily available programs. A significant portion of the program will discuss teleconferencing with colleagues, and how to simultaneously review images and share presentations in real time. The use and optimization of DICOM image readers (e.g. Osirix-reconstructions, etc.) real time video/image (skype, ichtat, ivideo) conference for case review, conferencing and telemedicine, remote-image access and review, image/video capture and data collection will be discussed and demonstrated. The description and applicability of cloud-computing to clinical practice also will be presented.
Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the selection and editing of both still images and video sequences
• Describe DICOM images of radiographs
• Describe desktop, laptop and mobile devices to view online electronic media such as: home/office computer; EMR; Diagnostic Imaging Centers
• Discuss utilizing desktop, laptop and mobile devices to video conference with colleagues and view selected images together in real time

035 Brain Neoplasms: Updates on Diagnostics Through Therapeutics
Room A111, Miami Beach Convention Center
Co-Directors:
Christi DeLemos, RN
Twyila Lay, NP, MS
Faculty:
Arun Paul Amar, MD
Daniel F. Kelly, MD
Kathy Lupica, NP
Nader Sanai, MD
Rudolph Schrot, MD
Fee: $450
N&PE Fee: $315

This course will focus on the decision-making challenges associated with brain neoplasms. It will explore the role of molecular testing for clinically relevant tissue-based biomarkers in diagnosing tumors as well as providing an overview and critical appraisal of the types of genetic abnormalities that have gained significance in the molecular diagnostics of gliomas, and discuss how these findings effect treatment planning and chemotherapy selections.

NEW COURSE, N&PE COURSE

035
Brain Neoplasms: Updates on Diagnostics Through Therapeutics
Room A111, Miami Beach Convention Center
Co-Directors:
Christi DeLemos, RN
Twyila Lay, NP, MS
Faculty:
Arun Paul Amar, MD
Daniel F. Kelly, MD
Kathy Lupica, NP
Nader Sanai, MD
Rudolph Schrot, MD
Fee: $450
N&PE Fee: $315

This course will focus on the decision-making challenges associated with brain neoplasms. It will explore the role of molecular testing for clinically relevant tissue-based biomarkers in diagnosing tumors as well as providing an overview and critical appraisal of the types of genetic abnormalities that have gained significance in the molecular diagnostics of brain tumors. The course will highlight various surgical techniques and introduce the use of interventional procedures as an adjunct to tumor resection. Moreover, it will examine the use of radiation and various types and modes of chemotherapy administration in an effort to combat the disease process.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the role of minimally invasive neurosurgical techniques in the management of brain tumors
• Compare and contrast the various chemotherapy delivery methods and use of radiation as it relates to tumor type
• Discuss the role of interventional techniques as a surgical adjunct to tumor resection
• Identify the types of genetic abnormalities that have gained significance in the molecular diagnostics of gliomas, and discuss how these findings effect treatment planning and chemotherapy selections

701
International Stereotactic and Functional Masters
Room A209, Miami Beach Convention Center
Director:
Andres M. Lozano, MD, PhD
Faculty:
Carlos Carlotti Jr., MD
Jin Woo Chang, MD
G. Rees Cosgrove, MD
Jorge Legarra, MD
Joachim K. Krauss, MD
Jean Regis, MD
Fee: $450

This is a didactic course comprised of lectures, case presentations and discussion addressing intracranial neurovascular disease. The management and treatment outcomes for vascular malformations, aneurysms, and intracerebral hemorrhage will be reviewed.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the pathogenesis, natural history, evaluation, and medical and surgical management of the entire spectrum of intracranial vascular disease, including vascular malformations, aneurysms and intracerebral hemorrhage

702
International Neurovascular Masters
Room B217, Miami Beach Convention Center
Director:
Juha Hernesniemi, MD, PhD
Faculty:
Hildo R. C. Azevedo Jr., MD
Michael K. Morgan, MD
Robert F. Spetzler, MD
Rokuya Tanikawa, MD
M. Christopher Wallace, MD
Fee: $450

In this educational session, leading international experts in stereotactic surgery will review the history of this specialty and describe how these methods are used in contemporary practice.
• List the treatment options for each of these pathological conditions and explain the latest treatment concepts.

703
**International Tumor Masters**
Room B218, Miami Beach Convention Center

Director:
Manfred Westphal, MD, PhD

Faculty:
Kyu-Sung Lee, MD, PhD
Basant Kumar Misra, MD
M. Necmettin Pamir, MD
Zvi Ram, MD
Jorg-Christian Tonn, MD

Fee: $450

The course will provide an overview of a broad spectrum of tumor entities. Based on the expertise of a panel of international experts, the surgical environment of tumor surgery with special emphasis on new technologies or technologies under development around the world will be illustrated. Participants in the course will see how structured preoperative preparation, intraoperative technology and postoperative follow up will ensure optimal tumor treatment.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
• Discuss the optimal general strategy for the treatment of a wide spectrum of intracranial tumors, including interdisciplinary approaches
• Assess the differential value of technical tools for different types of oncological neurosurgical procedures
• Advise patients on the established or emerging adjuvant therapies
• Assess the value of entering patients into clinical trials

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**Practical Clinics 1:00-5:00 PM**

008
**Negotiating with Hospitals: Challenging the Experts**
Room B217, Miami Beach Convention Center

Co-Directors:
E. Hunter Dyer, MD
M. Sean Grady, MD

Faculty:
Troy D. Payner, MD
Ann R. Stroink, MD
Clarence B. Watridge, MD

Fee: $450

This course will provide case studies of both success and failure from neurosurgeons that negotiated with hospitals. Building on the information presented in previous years, it will allow participants important insight into how and why strategies succeeded or failed. Each case study evaluates approaches to ensure neurosurgical career satisfaction, financial stability, expansion of practice opportunities and availability for patient care. Special attention is paid to the interwoven financial relationships between hospitals and neurosurgeons, and how best to leverage a neurosurgeon’s value to his/her hospital in negotiating resources. All course participants will be requested to submit their own hospital negotiation case studies for discussion of the highly interactive and results-oriented portion of the course.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
• Assess the direct and indirect financial contribution neurosurgeons make to a hospital, and explain administrative “financial speak” essential to successful negotiations
• Define alternative revenue sources for neurosurgeons in your hospital and community
• Determine practical approaches for solving current dilemmas in neurosurgeon-hospital relationships

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009
**3-D Anatomy and Approaches to the Supratentorial Area and Anterior Skull Base**
Room Ballroom D, Miami Beach Convention Center

Director:
Albert L. Rhoton Jr., MD

Fee: $450
N&PE Fee: $315

This course will provide 3-D microsurgical instruction on anatomy and approaches through the temporal bone; cerebellum and fourth ventricle; far lateral and transcondylar approaches; approaches to the cerebellopontine angle; and anatomy and approaches to the jugular foramen.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
• Discuss anatomy and approaches through the temporal bone
• Review approaches to the cerebellum and fourth ventricle
• Discuss far lateral and transcondylar approaches
• Explain approaches to the cerebellopontine angle
• Discuss anatomy and approaches to the jugular foramen
**012**
**Transfacet Technology: An Alternative to Pedicle Screw Fixation with Interbody Techniques**
*Room A204/205, Miami Beach Convention Center*

Co-Directors:
*Randy O. Kritzer, MD*

Faculty:
*Edward C. Benzel, MD*
*Bruce Frankel, MD*
*Larry T. Khoo, MD*
*Kenneth I. Renkens, MD*

**Fee:** $450
**N&PE Fee:** $315

Both the biomechanical properties and clinical applications of transfacet screw technology will be discussed as they relate to ALIF, TLIF and PLIF procedures. During the hands-on portion, participants will perform sawbone trials of all the techniques discussed.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Identify the biomechanical properties of transfacet screws compared to pedicle screw constructs
- Discuss clinical applications so that surgeons will be aware of indications
- Discuss the techniques presented
- Apply the techniques into their physician practices

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**013**
**Neurotrauma Critical Care Review and Update for Practicing Neurosurgeon**
*Room A209, Miami Beach Convention Center*

Co-Directors:
*Craig H. Rabb, MD*
*Patricia B. Raksin, MD*

**Faculty:**
*Ahmed E. Badr, MD*
*Perry A. Ball, MD*
*David O. Okonkwo, MD, PhD*
*Sherry L. Taylor, MD, PhD*
*Philip Villanueva, MD*

This course is designed for the practicing neurosurgeon, to provide a refresher and update on critical care of the neurosurgical trauma patient in the ICU. The primary focus is in the area of non-neuro critical care, including ventilator management, fluids, nutrition, infectious disease, sedation issues and DVT prevention.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Describe contemporary ventilator management, lung-protective strategies and prone ventilation
- Discuss types and methods of fluid resuscitation and management in the trauma patient with head injury
- Discuss strategies for management of sedation and analgesia in neurotrauma patients
- Describe contemporary diagnosis and management of a broad spectrum of medical issues, including infectious disease, endocrine problems, renal function and “never” events
032
Update of General Neurosurgery for Practicing Neurosurgeon
Room A111, Miami Beach Convention Center

Director: Thomas J. Leipzig, MD
Faculty: Robert Spinner, MD
Allan D. Levi, MD
Bernard R. Bendok, MD
Allen Kent Sills, MD

Fee: $450

This session will highlight state-of-the-art principles in patient care utilizing a broad spectrum of actual neurosurgical cases. It is based on the format of the Weekend Update course, and will allow the participant to personally assess their knowledge and practice in comparison to fellow neurosurgeons utilizing an audience response system.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Review diagnosis and management of actual cases representing a broad spectrum of neurosurgical practice
• Describe ‘state-of-the-art’ neurosurgical practice
• Compare management decisions to those of fellow neurosurgeons

FLANC International Symposium
Saturday, April 14
1:00-5:15 PM
Room B212-B213, Miami Beach Convention Center

Cerebrovascular Session
1:00-3:00 PM
Moderator: Jacques J. Morcos, MD

Complex Aneurysms
1:00-1:20 PM
Speaker: Edgardo Spagnuolo, MD

Cerebral Vasospasm Post-Subarachnoid Hemorrhage Pathophysiology and Treatment, An Update
1:20-1:40 PM
Speaker: Leonidas Quintana, MD

Endoscopic Approach to ICH
1:40-2:00 PM
Speaker: Luiz Carlos de Alencastro, MD

Microvascular Decompression: Common and Uncommon Facts
2:00-2:20 PM
Speaker: Rogelio Revuelta Gutierrez, MD

Surgical Management of Deep Cavernous Malformations
2:20-2:40 PM
Speaker: Robert F. Spetzler, MD

Round-Table Case Discussions
2:40-3:00 PM
Moderator: Jacques J. Morcos, MD

Spine Session
3:15-5:15 PM
Moderator: Juan Santiago Uribe, MD

Coronal and Sagital Correction Deformities with XLIF
3:15-3:35 PM
Speaker: Luiz Pimenta, MD, PhD

Biopolymers as Bone Substitute in Spine Surgery - A 10 Year Experience
3:35-3:55 PM
Speaker: Marcos Masini, MD

Neuromodulation for FBSS
3:55-4:15 PM
Speaker: Claudio G. Yampolsky, MD

Tumors of the Craniovertebral Junction
4:15-4:35 PM
Speaker: Juan Vargas, MD

Surgery of the Craniovertebral Junction
4:35-4:55 PM
Speaker: Arnold H. Menezes, MD

Round-Table Case Discussions
4:55-5:15 PM
Moderator: Juan Santiago Uribe, MD

Beverage Break
3:00-3:15 PM

FLANC Reception
The Raleigh Hotel Poolside
1775 Collins Avenue
Miami Beach, FL 33139
6:00-8:30 PM
RESIDENTS:

Are you the Neurosurgical TOP GUN?

Prove it in the AANS neurosurgical competition for neurosurgical residents and fellows located in booth #1348 in the exhibit hall at the 2012 AANS Annual Scientific Meeting, April 14-18, 2012. For the seventh consecutive year, the Young Neurosurgeons Committee will host this three day event which includes stations with image guided lumbar pedicle screw, bone scalpel, virtual thoracic vertebroplasty and virtual ventriculostomy. Each participant has one opportunity at each intricate and demanding surgical station and is scored on his or her performance.

The resident or fellow with the best combined score will be awarded the distinct honor of being the Neurosurgical Top Gun and a prize of $1000, as well as $1500 for their residency program. Top scorers at each individual station will win a prize of $200.

Be one of the first 50 participants and receive a Top Gun t-shirt!
This course is designed to provide the mid-level practitioner with a basis for performing common neurosurgical procedures in the critical-care setting. The morning session will begin by providing an anatomical and pathophysiology review, concluding with a discussion of diagnostic interpretation for common disease states using a case-based approach. In the afternoon session, the mid-level practitioner will have an opportunity for hands-on instruction in techniques and devices for CSF diagnostics, non-surgical spine stabilization and advanced multi modality monitoring.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss intracranial dynamics and identify indications for multi modality monitoring
• Discuss patient selection and demonstrate the application of cervical stabilization devices
• Describe indications for monitoring of lumbar drainage and interpretation of CSF diagnostics
• Identify risks and benefits of common invasive neurosurgical procedures

This one-day course outlines the process of developing, protecting, funding, and commercializing new devices and other innovations in neurosurgery, including clinical trials design, regulatory strategies, market-sizing and exit planning. The course is an adaptation of material taught in the Biomedical Entrepreneurship Program of the Harvard-MIT Program in Health Sciences and Technology, and at Harvard Business School.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Recognize and formulate market opportunities for innovation in neurosurgery
• Develop and present a business plan and funding for startups
• Describe the process of commercialization, including market-sizing, intellectual property, regulatory and reimbursement strategies, prototyping, cost engineering, revenue models, and clinical trials
• Discuss the concepts of starting a company, including governance, boards and advisors, conflicts of interest, partnering with industry, distribution models, and exit strategies

NEW COURSE

037
Disaster Management and Emergency Preparedness (DMEP)
Room A106/107, Miami Beach Convention Center
Director:
Eric Frykberg, MD
Faculty:
John Armstrong, MD
Patty Byers, MD
Lawrence Lottenberg, MD
Fee: $450
DMEP is a one-day course that is both didactic and interactive. It addresses core competencies as outlined by the ACS COT Disaster and Mass Casualty Management Committee. Major topics addressed include planning, triage, incident command, injury patterns and pathophysiology, and consideration for special populations. Small-group discussions are based on illustrative scenarios. DMEP requires pre- and post-course tests, which are reviewed on site. A comprehensive syllabus and supportive resource material are provided.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Discuss the surgical problems, injury patterns, and issues that may result from disasters
- Discuss the role that surgeons can play in planning for and responding to mass casualty incidents and disasters, especially at a hospital level
- Describe the terms and concepts of incident command
- Explain the principles and challenges of disaster triage
- Discuss treatment principles related to blast injury, chemical attacks, and radiological dispersal devices

### Practical Clinics

**8:00 AM-12:00 PM**

#### 010
**Thoracic and Lumbar Stabilization and Fusion: Indications and Complications**

*Room Ballroom A, Miami Beach Convention Center*

**Co-Directors:**
Regis W. Haid Jr., MD
Christopher I. Shaffrey, MD

**Faculty:**
Dean Chou, MD
Charles Kuntz, MD
Praveen V. Mummaneni, MD
Juan Santiago Uribe, MD
Michael Y. Wang, MD

**Fee:** $450
**N&PE Fee:** $315

This course will feature a series of lectures and hands-on presentations in thoracic and lumbar fusion techniques and technology. Discussion will include treatment of degenerative disease and spinal deformity in the thoracolumbar spine. The impact of implant design, technique selection (including minimally invasive approaches) and biological agents will also be discussed.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Review patient selection for thoracic and lumbar fusion
- Discuss translational and rotational techniques for correction of thoracolumbar deformity
- Review open and minimally invasive approaches for lumbar interbody fusion (ALIF, TLIF, PLIF)
- Discuss common complications and management associated with thoracic and lumbar fusion

#### 014
**The Business of Neurosurgery**

*Room A208, Miami Beach Convention Center*

**Director:**
Scott Butler

**Faculty:**
Brian Asmussen
Todd Barnes

**Fee:** $450

This course will cover the current business outlook for neurosurgery. It will focus on advanced practice strategies necessary to ensure your neurosurgical practice not only succeeds but flourishes in this uncertain business environment. The course will be interactive and didactic and will be led by business administrators in collaboration with NERVES.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Maximize hospital support through efficient use of resources
- Analyze FMV Assessment for better call coverage
- Assess differences in new advanced payment modules
- Benchmark your group’s financial status using the NERVES survey
015  
**Current Surgical Techniques and Approaches to MIS Spine Surgery**  
*Room Jr. Ballroom B, Miami Beach Convention Center*  
Co-Directors:  
Richard G. Fessler, MD, PhD  
Langston T. Holly, MD  
Faculty:  
Kurt M. Eichholz, MD  
Anthony K. Frempong-Boadu, MD  
Bernard H. Guiot, MD  
Robert E. Isaacs, MD  
Daniel H. Kim, MD  
Mick J. Perez-Cruet, MD  
Justin S. Smith, MD, PhD  
William R. Taylor, MD  
Michael Y. Wang, MD  
Fee: $1,900  
This course is designed to provide practicing neurosurgeons with the comprehensive exposure to spinal surgical anatomy and techniques by doing side by side comparisons of minimally invasive (MIS) and traditional surgical approaches.  
**Learning Objectives:**  
After completing this educational activity, participants should be able to:  
- Discuss the anatomical nuances of all types of approaches and techniques in spinal surgical procedures, including instrumentation  
- Describe the anatomy of the cervical, thoracic and lumbar regions  
- Cite the pros and cons of minimally invasive approaches  
- Discuss approaches to the cerebellomedullary angle  
- Discuss anatomy and approaches to the jugular foramen

016  
**Microsurgical Management of Intracranial Aneurysms: Site Specific Surgical Anatomy, Operation Intervention and Complication Management**  
*Room A201/202, Miami Beach Convention Center*  
Director:  
Arthur L. Day, MD  
Faculty:  
H. Hunt Batjer, MD  
Ralph G. Dacey Jr., MD  
Steven L. Giannotta, MD  
**Fee: $450**  
**N&PE Fee: $315**  
This course is designed to teach attendees the basics of vertebrobasilar, internal carotid, middle cerebral and anterior cerebral artery aneurysms.  
**Learning Objectives:**  
After completing this educational activity, participants should be able to:  
- Recognize the special features of aneurysms at specific sites  
- Recognize potential pitfalls for safe lesion treatment  
- Identify new methods of intervention for cerebral aneurysms

017  
**3-D Anatomy and Approaches to the Posterior Fossa and Posterior Skull Base**  
*Room Ballroom D, Miami Beach Convention Center*  
Director:  
Albert L. Rhoton Jr., MD  
Fee: $450  
This course will provide 3-D microsurgical instruction on anatomy and approaches through the temporal bone, cerebellum and fourth ventricle, far lateral and transcondylar approaches, approaches to the cerebellopontine angle; and anatomy and approaches to the jugular foramen.  
**Learning Objectives:**  
After completing this educational activity, participants should be able to:  
- Describe anatomy and approaches through the temporal bone  
- Discuss approaches to the cerebellum and fourth ventricle  
- Discuss far lateral and transcondylar approaches

018  
**Practical and Technical Aspects of Transsphenoidal Surgery**  
*Room B218, Miami Beach Convention Center*  
Co-Directors:  
William T. Couldwell, MD, PhD  
Daniel F. Kelly, MD  
Ian E. McCutcheon, MD  
Gail L. Rosseau, MD  
Faculty:  
William F. Chandler, MD  
Matthew G. Ewend, MD  
John A. Jane Jr., MD  
Blas Ezequiel Lopez Felix, MD  
Daniel Monte-Serrat Prevedello, MD  
Edward H. Oldfield, MD  
Jean Regis, MD  
Theodore H. Schwartz, MD  
Jason P. Sheehan, MD, PhD  
Fee: $450  
This clinic will review traditional transsphenoidal approaches and present contemporary modifications of the technique, including endoscopic approaches. Endonasal endoscopic 3-D anatomical skull base dissections also will be presented. In addition, this clinic will update the neurosurgeon on current medical and radiosurgical adjuncts to transsphenoidal surgery.  
**Learning Objectives:**  
After completing this educational activity, participants should be able to:  
- Describe the transsphenoidal approach and contemporary modification  
- Cite the advantages of the endonasal, endoscopic technique  
- Outline current approaches to transsphenoidal surgery  
- Evaluate adjunctive therapies for patients with pituitary tumors
019  
**Coding, Compliance and Revenue Issues in Spine Coding**  
*Room B214, Miami Beach Convention Center*

**Director:**  
Joseph S. Cheng, MD

**Faculty:**  
Peter Angevine, MD  
R. Patrick Jacob, MD  
Robert R. Johnson II, MD  
Kim Pollock, RN  
John Ratliff, MD

**Fee:** $450

This course will cover spine surgery CPT codes and case examples from the simple to the very complex. Minimally invasive and innovative spine surgery techniques will be discussed, and instructions on how to code new technology will be provided. Learn how to code accurately for surgical procedures such as across spinal regions and those where an approach surgeon is used. We will show you how to easily determine which code to use when code descriptions are confusing.

**Learning Objectives:**  
After completing this educational activity, participants should be able to:
- Review the CPT and coding changes for 2012
- Describe how CPT coding affects the neurosurgeon’s revenue and compliance with current rules
- Explain the differences in charges and revenue for a primary surgeon, co-surgeon, or assistant surgeon and what the documentation requirements should be
- Discuss documentation issues in an operative report to support all the codes utilized and appeal payor denials

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021  
**Update on Spine Trauma Management**  
*Room B215, Miami Beach Convention Center*

**Co-Directors:**  
Michael G. Fehlings, MD, PhD  
James S. Harrop, MD

**Faculty:**  
Richard G. Ellenbogen, MD  
Michael G. Kaiser, MD  
Allan D. Levi, MD, PhD  
Timothy C. Ryken, MD  
Christopher I. Shaffrey, MD

**Fee:** $450

The objective of this course is to familiarize surgeons with the acute management of the traumatic spinal column and spinal cord-injured patient. It will discuss the timing and treatment of the acute spinal cord-injured patient, with explanations for present and future treatment strategies. In addition, time will be spent focusing on pediatric and geriatric populations. The course will be presented through case presentations, and attendees are encouraged to bring interesting and difficult case for discussion.

**Learning Objectives:**  
After completing this educational activity, participants should be able to:
- Review evidence-based guidelines for treatment of spinal cord injury
- Detail management of spinal injuries relative to timing of decompression procedures
- Discuss present SCI trials and treatment strategies
- Discuss and detail age-specific injury patterns in the SCI population (pediatric vs. geriatric)
- Review through case examples optimal treatment strategies in the care of SCI patients

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022  
**Spinal Stabilization, Fusion and Instrumentations: Biomechanics and Techniques**  
*Room B118-122, Miami Beach Convention Center*

**Co-Directors:**  
Kaushik Das, MD  
Langston T. Holly, MD

**Faculty:**  
Virany Huynh Hillard, MD  
Adam S. Kanter, MD  
Eric W. Nottmeier, MD  
Naresh P. Patel, MD  
Nicholas Theodore, MD  
Eve C. Tsai, MD, PhD

**Fee:** $450  
**N&PE Fee:** $315

This course will describe the biological and biomechanical principles of spinal fusion. Through the use of didactic sessions and hands-on application, it will also will describe the indications, operative approaches, and surgical techniques used in spinal fusion and instrumentation of the cervical and thoracolumbar spine.

**Learning Objectives:**  
After completing this educational activity, participants should be able to:
- Describe biologic basis and biomechanics of spine fusion
- Describe indications of spinal fusion, instrumentation and arthroplasty
- Describe operative approaches and surgical techniques for spinal fusion and instrumentation
Update on Spinal Radiosurgery
Room Ballroom C, Miami Beach Convention Center
Co-Directors:
Mark H. Bilsky, MD
Peter C. Gerszten, MD
Faculty:
Lilyana Angelov, MD
Steven D. Chang, MD
Jason P. Sheehan, MD, PhD
Jason Weaver, MD
Kevin C. Yao, MD
Fee: $450

Current state-of-the-art techniques in image-guided surgery of the spine will be reviewed. Emphasis will be placed on the current indications for and preliminary outcomes after radiosurgical ablation of benign and malignant spinal lesions.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the most commonly used techniques for spinal radiosurgery
• Explain the current indications for and outcomes after spine radiosurgery
• Explain the relative contraindications to spinal radiosurgery

011 Management of Incidental Imaging Findings
Room B217, Miami Beach Convention Center
Co-Directors:
Cormac O. Maher, MD
R. Michael Scott, MD
Faculty:
Sepideh Amin-Hanjani, MD
William T. Couldwell, MD, PhD
Arthur L. Day, MD
Stephen J. Haines, MD
Kevin O. Lillehei, MD
Mark R. Proctor, MD
Daniel K. Resnick, MD
Eric J. Woodard, MD
Fee: $450

In a point/counterpoint and case-based format, the current management strategy for the majority of incidental findings on cranial and spinal imaging studies will be discussed. Incidental findings such as arachnoid cysts, pineal cysts, pituitary gland cysts, developmental venous anomalies, fibrous dysplasia, fibro-osseous clival lesions, mild ventriculomegaly, asymmetric ventricles, intracranial lipomas, borderline low cerebellar tonsils, a mildly dilated central canal of the spinal cord, T2 weighted bright white matter lesions and other findings will be discussed. The appropriate management will be reviewed and emphasized with case illustrations.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Determine the appropriate management of a multitude of incidental imaging findings on brain and spine MRI studies
• Recognize when further follow-up imaging is necessary, as well as when no further follow-up is needed
• Discuss the reasons why a particular incidental finding needs intervention

Update on Malignant Brain Tumors for the General Neurosurgeon
Room A208, Miami Beach Convention Center
Co-Directors:
Andrew Parsa, MD, PhD
Michael Weaver, MD
Faculty:
Manish K. Aghi, MD
Anthony L. Asher, MD
Richard W. Byrne, MD
Alexandra J. Golby, MD
Frederick F. Lang Jr., MD
Linda M. Liau, MD, PhD
Russell R. Lonser, MD
L. Gerard Toussaint III, MD
Isaac Yang, MD
Fee: $570
This course will provide the practicing clinician with an up-to-date overview of current management strategies for all types of benign and malignant brain tumors. This seminar includes current research topics, but emphasizes practical management issues.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Identify the state-of-the-art management of malignant brain tumors including glial tumors, meningiomas and skull base tumors
- Discuss current concepts in glioma management
- Apply current updates about brain tumors to daily clinical practice decision-making

026 Coding, Compliance and Revenue Issues in Cranial, Non-Spine and E&M Coding
Room B214, Miami Beach Convention Center

Director:
Joseph S. Cheng, MD

Faculty:
R. Patrick Jacob, MD
Robert R. Johnson II, MD
Kim Pollock, RN
John Ratliff, MD

Fee: $450

This course will cover the most common aspects of cranial procedure coding, such as brain tumor; acoustic neuroma, aneurysm; skull base tumors; and traumatic brain injuries, including hematomas and decompressive procedures and skull base surgery. Learn how to code for innovative cranial procedures such as endoscopic skull base surgery.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Review the CPT and coding changes for 2012
- Describe how CPT coding affects the neurosurgeon’s revenue and compliance with current rules
- Explain the differences in charges and revenue for a primary surgeon, co-surgeon or assistant surgeon, and what the documentation requirements are
- Discuss documentation issues in an operative report to support all the codes utilized and appeal payor denials

027 Peripheral Nerve Injuries, Entrapments and Tumors: Examination and Evaluation
Room B215, Miami Beach Convention Center

Co-Directors:
Line Jacques, MD
Robert J. Spinner, MD

Faculty:
Allan H. Friedman, MD
Holly S. Gilmer, MD
Allen H. Maniker, MD
John E. McGillicuddy, MD
Rajiv Midha, MD
Christopher J. Winfree, MD
Lynda Jun-san Yang, MD, PhD
Eric L. Zager, MD

Fee: $450

This clinic will provide an overview of the neurosurgeon’s approach to patients with peripheral nerve injuries, entrapments and tumors.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Discuss indications for the timing of and types of operative intervention on peripheral nerve injuries
- Discuss patho-anatomy, clinical presentation, and management of common entrapments in the upper and lower limbs
- Explain the indications for and approaches to operative interventions on different types of benign and malignant peripheral nerve tumors
- Explain the role of preoperative and intraoperative electrophysiology in the management of patients with these common peripheral nerve lesions

029 Brain Mapping and Awake Mapping Techniques
Room B118-122, Miami Beach Convention Center

Co-Directors:
Gerald A. Grant, MD
Guy M. McKhann II, MD

Faculty:
Mahmoud A. Al-Yamany, MD
Nicholas M. Barbaro, MD
Gene H. Barnett, MD
Mitchel S. Berger, MD
Hugues Duffau, MD
Alexandra J. Golby, MD
Jorge Alvaro Gonzalez-Martinez, MD, PhD

Fee: $450
This course will provide an in-depth review of techniques and technologies that can be applied to identifying and working within eloquent areas of the brain and performing successful resections of neoplasms, and epilepsy foci in adult and pediatric patients. The selection of surgical approaches based on non-invasive monitoring for surgery of epilepsies and brain tumors will be discussed.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Identify the technologies currently available for pre- and intra-operative brain mapping for tumors and epilepsy
- Apply brain mapping techniques to daily practice
- Recognize complication avoidance in epilepsy and brain mapping techniques

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**030 Practical Course in Neurostimulation for Residents and Fellows**
*Room A209, Miami Beach Convention Center*

**Director:**
Christopher J. Winfree, MD

**Faculty:**
Jeffrey E. Arle, MD, PhD
Andre Machado, MD, PhD
Parag G. Patil, MD, PhD
Julie G. Pilitsis, MD, PhD
Konstantin V. Slavin, MD

**Fee:** $450

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**031 MIS II: Direct Lateral Retroperitoneal Transpsoas Fusion**
*Room Jr. Ballroom B, Miami Beach Convention Center*

**Co-Directors:**
Adam S. Kanter, MD
Juan Santiago Uribe, MD

**Faculty:**
Dean Chou, MD
Andrew T. Dailey, MD
Larry T. Khoo, MD
Allan D. Levi, MD, PhD
John C. Liu, MD
John E. O’Toole, MD

**Fee:** $1,500
033
The Science of Clinical Practice: Using Registries and Other Tools to Improve the Quality of Neurosurgical Care
Room B218, Miami Beach Convention Center

Directors:
Matthew McGirt, MD
Anthony L. Asher, MD

Faculty:
Robert S. Dittus, MD
Carol Redding Flamm, MD
Zoher Ghogawala, MD
Koryn Rubin
David M. Shahian, MD
Ted Speroff, PhD

Fee: $450

This course will illustrate the many aspects and uses of prospective data collection in clinical practice for quality improvement, clinical investigation, and/or PQRS/MOC. Issues related to infrastructure, cost, logistics, privacy and other HIPPA regulations, linkage to local EMR, and national databases will be discussed and demonstrated.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Understand how to use data collection and how it applies to clinical practice

Celebrating 75 Years of Neurosurgical Excellence

75 Years
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Frank H. Mayfield, MD
Monday, April 16

101
Physician Autonomy in Business Enterprises: Profits & Pitfalls
Room A101, Miami Beach Convention Center
Moderator:
James R. Bean, MD
Panelists:
Craig Rabb, MD
Richard Roski, MD
Gail Rosseau, MD
Margaret Walker, MD
Edie E. Zusman, MD

There are strengths and limitations to various issues for physicians involved in spine specialty hospitals. This seminar will review some of the applications and ramifications of clinical effectiveness research in current practices and the likely effects in the years ahead.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Assess the strengths and limitations of the various issues for physicians involved in spine specialty hospitals
- Identify the fundamental characteristics and pros and cons of physicians’ financial involvement in spinal implant distributorships
- Explain recent socioeconomic and legal implications for physicians regarding ownership/investment decisions involving medical device suppliers and manufacturers

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102
History Seminar: Harvey Cushing, ICP and the Success of Early Modern Neurosurgery
Room D231, Miami Beach Convention Center
Moderator:
Samuel H. Greenblatt, MD
Panelist:
Mark C. Preul, MD

In the venue of a graduate-style seminar, we will explore the role of Cushing’s early laboratory research on ICP (1900-1901) and its clinical translation to successful tumor surgery at Johns Hopkins. Materials to be read before the meeting will be sent to the participants weeks ahead. They will include an extensive paper on this subject by Dr. Greenblatt and some of Cushing’s papers on which Greenblatt’s argument is based. In effect, the audience will be the panel, whose assignment will be to evaluate the evidence for Greenblatt’s thesis.

**Note:** Please do not sign up for this course if you will not be able to thoroughly read and ponder the assigned material before the meeting. A quick skim on the plane to Miami will not be sufficient.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Explain what Cushing discovered about experimental ICP and its control in Europe in 1900-1901
- Explain Cushing’s early application of his knowledge of ICP to trauma cases
- Explain how Cushing translated his knowledge to elective tumor cases
- Explain why Cushing’s knowledge of ICP was crucial to the success and professionalization of neurosurgery
Maximizing patient outcomes in cerebrovascular and endovascular neurosurgery requires meticulous attention to detail and a comprehensive understanding of complication avoidance and complication management. Designed as a truly interactive session, this seminar will explore advanced techniques in complication avoidance and management through specific, case-based presentations. Panelists and audience participants will be expected to discuss management alternatives to specific events. A summary of lessons learned, guiding principles and specific nuances will be presented at the conclusion of the session.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Discuss complication avoidance and management techniques in the treatment of aneurysms
- Discuss complication avoidance and management techniques in the treatment of AVMs
- Discuss complication avoidance and management techniques in the treatment of carotid disease

Learning Objectives:
After completing this educational activity, participants should be able to:
- Discuss indications for treatment of patients with AVMs
- Describe the role of radiosurgeons and interventionists in the treatment of patients with AVMs

This seminar will concentrate on explaining the approaches and indications for surgical therapy of lesions in the suprasellar region in adults and children. Appropriate preoperative evaluation and surgical decision-making will be discussed. Innovative surgical techniques will be presented. Management of the most common lesions arising in this area will be discussed.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Review the options for surgical approaches to suprasellar and juxtasellar tumors
- Explain the options for cranial approaches to this region
- Describe the anatomy of the endoscopic transsphenoidal approach
- Describe other treatment options for common suprasellar and juxtasellar pathologies
This seminar will describe conditions amenable to lumbar interbody fusion (LIF) and basic surgical approaches, instrumentation and complications of lumbar interbody fusion.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the indications for lumbar interbody fusion and the appropriate investigations to consider in the workup of patients
• Explain the advantages and disadvantages of various lumbar interbody fusion techniques, including minimally invasive options
• Explain approaches to minimize complications
• Discuss the relevant approach anatomy related to LIF surgery
• Discuss the latest technical advances related to LIF surgery

109 Surgical Treatment of Parkinson’s Disease
Room B116, Miami Beach Convention Center
Moderator: Philip A. Starr, MD, PhD
Panelists: Sam Eljamel, MD
Robert R. Goodman, MD, PhD
Steven G. Ojemann, MD
Julie G. Pilitsis, MD, PhD

Participants will discuss current surgical targets for Parkinson’s disease, including a variety of technical approaches and complications.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Identify potential brain targets for deep brain stimulation in Parkinson’s disease
• Discuss technical alternatives in placement of DBS electrodes
• Review complications of DBS for Parkinson’s disease

110 Current and Future Treatments for Pediatric Hydrocephalus
Room B122, Miami Beach Convention Center
Moderator: Mark G. Luciano, MD, PhD
Panelists: Daniel H. Fulkerson, MD
Abhaya Vivek Kulkarni, MD
Joseph R. Madsen, MD
David I. Sandberg, MD

This seminar will review the physiology of hydrocephalus, and how new shunt systems and sensor technology are likely to change our way of treating patients. The dynamic aspects of CSF flow and pressure gradients will be discussed, as well as what pressure sensors reveal about the causes of patient symptoms and how a shunting system might be made using physiological data.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Identify CSF dynamics and how it changes with hydrocephalus
• Distinguish the relationship between clinical symptoms and CSF pressure measurements
• Recognize how this new approach might lead to a better shunt system based on physiological measurements
112 Management of Vasospasm
Room A108/109, Miami Beach Convention Center
Moderator:
Peter David Le Roux, MD
Panelists:
Robert E. Breeze, MD
Rose Du, MD, PhD
Aaron S. Dumont, MD
R. Loch Macdonald, MD, PhD

This course is designed to stimulate interest in the field of neurosurgical pain management. It 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

113 Management of Adult Scoliosis
Room B121, Miami Beach Convention Center
Moderator:
Christopher I. Shaffrey, MD
Panelists:
Peter Angevine, MD
Robert F. Heary, MD
Tyler Koski, MD
Brian A. O’Shaughnessy, MD
Daniel M. Sciubba, MD

This seminar will discuss the strategies, evaluation, and management of adult spinal deformities. Special emphasis will be placed on the association of spinal deformities with conditions commonly treated by neurosurgeons.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss natural history of idiopathic and degenerative scoliosis in adults
• Detail appropriate clinical and radiographic evaluation of adult spinal deformity
• Determine nonoperative and operative treatment options for adult deformity
• Identify patient related factors that compromise surgical treatment
• Discuss treatment strategies, including use of anterior approaches, osteotomies, spinopelvic fixation and osteobiological agents

114 Intramedullary Spinal Cord Tumors
Room B118/119, Miami Beach Convention Center
Moderator:
Lawrence F. Borges, MD
Panelists:
Jacques Brotchi, MD, PhD
George I. Jallo, MD
Russell R. Lonser, MD

This seminar will focus on the clinical evaluation and the current surgical management of intramedullary tumors of the spinal cord.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Evaluate methods and strategies to reduce peri-operative complications
• Identify operative techniques to optimize safe achievement of optimal outcomes

115 Building a Comprehensive Spine Center
Room A106/107, Miami Beach Convention Center
Moderator:
E. Hunter Dyer, MD
Panelists:
Randolph C. Bishop, MD
Mark D. D’Alise, MD
James J. Lynch, MD
Nathan E. Simmons, MD

This seminar will instruct participants on how to develop a multidisciplinary spine center within their hospital and community setting.
Learning Objectives:
After completing this educational activity, participants should be able to:
• Recognize the core components required to build an effective spine center
• Discuss interventional options and design treatment protocols for spine
• Apply strategies for developing an effective comprehensive spine program

116 Neurosurgical Management of Intractable Pain
Room A110, Miami Beach Convention Center
Moderator:
Robert M. Levy, MD, PhD
Panelists:
Konstantin V. Slavin, MD
Michael S. Turner, MD

This seminar will review indications, techniques and outcomes of contemporary neurosurgical procedures for the treatment of intractable pain. Attention will be directed toward practical applications of therapies that can be used in a general neurological practice.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Compare the relative roles of non-invasive and invasive therapies for pain treatment
• Contrast the common indications for stimulation and drug delivery therapies for pain management
• Describe outcomes of neuromodulation therapies for pain management

117 Low-Grade Gliomas
Room B212, Miami Beach Convention Center
Moderator:
Mitchel S. Berger, MD
Panelists:
Hugues Duffau, MD
Mark Shaffrey, MD
Manfred Westphal, MD, PhD
Jeffrey H. Wisoff, MD

This seminar will provide an update on current evaluation and management of low-grade gliomas. The panel will address the variety of tumors and compare outcomes from different treatment strategies.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the range of pathologies included in low-grade gliomas
• Distinguish between different management strategies for low-grade gliomas

118 Challenging Spinal Cases: Pearls and Pitfalls
Room A111, Miami Beach Convention Center
Moderator:
Edward C. Benzel, MD
Panelists:
Haynes Louis Harkey III, MD
R. Patrick Jacob, MD
J. Patrick Johnson, MD
Dennis G. Vollmer, MD

This seminar is designed to present challenging “real life” spine cases that experienced faculty encountered and to allow discussion of these cases.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss how experienced surgeons overcome decision-making obstacles
• Explain the nuances of the clinical decision-making process

119 Cerebral Trauma State-of-the-Art Treatment
Room B213, Miami Beach Convention Center
Moderator:
Alex B. Valadka, MD
Panelists:
Austin R. Colohan, MD
Joshua Medow, MD
David O. Okonkwo, MD, PhD

This seminar will review current and future treatment options for patients with traumatic brain injury.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss optimal management strategies for patients with traumatic brain injury
• Describe therapies that may become clinically available in the near future

120 The Spectrum of Adjuvant Therapy for Brain Tumors
Room D233, Miami Beach Convention Center
Moderator:
Frederick F. Lang Jr., MD
Panelists:
Jeffrey N. Bruce, MD
Randy Jensen, MD, PhD
James M. Markert Jr., MD
Andrew T. Parsa, MD, PhD
This seminar will provide a state-of-the-art review of the different adjuvant treatment options available for patients with malignant brain tumors. It will review current standards of care and then explore newer treatment options, including targeted therapies, intratumoral strategies, immunotherapeutic approaches and viral therapies.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Describe current standards of care for adjuvant therapy of malignant gliomas
- Describe current scientific advances and newly developed adjuvant therapies for malignant gliomas
- Discuss current problems with the design of effective therapies and recommend appropriate treatment options
- Design the best treatment programs based on current data for patients with brain tumors

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**121 New and Evolving Technologies for Minimally Invasive Lumbar Disc Surgery**  
*Room D234, Miami Beach Convention Center*

Moderator:  
Richard G. Fessler, MD, PhD

Panelists:
- Charles L. Branch Jr., MD  
- Dean Chou, MD  
- Larry T. Khoo, MD  
- Jean-Pierre Mobasser, MD  
- Michael K. Rosner, MD

This seminar will present and evaluate new technologies for treating pathologies of the lumbar disc.

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**122 Controversies in Cerebrovascular and Endovascular Neurosurgery**  
*Room D235, Miami Beach Convention Center*

Moderator:  
Erol Veznedaroglu, MD

Panelists:  
- Michael T. Lawton, MD  
- Elad I. Levy, MD  
- Christopher S. Ogilvy, MD  
- Andrew J. Ringer, MD  
- B. Gregory Thompson Jr., MD

The introduction and acceptance of endovascular therapies for cerebrovascular disorders has revolutionized the treatment for cerebrovascular disease. With more cerebrovascular neurosurgeons becoming trained in both techniques, the treatment paradigms are changing and often controversial. This seminar will examine the different treatment modalities for carotid artery disease, intracerebral aneurysms and arteriovenous malformations. The panelists will present data and their own personal treatment methods to support their particular position. Each panelist will present their actual treatment paradigms and be asked to support it.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Define the indications of either carotid endarterectomy or carotid angioplasty and stenting for extracranial carotid artery stenosis
- Describe the treatment options as well as benefits and pitfalls of giant intracranial aneurysms
- Name the patient population that will benefit from open versus endovascular treatment of giant aneurysms
- Describe the indications and the most effective treatment of small arteriovenous malformations and the role of preoperative embolization
- Use evidence-based medicine in conjunction with current practice to determine which patients will benefit most from endovascular therapies or traditional open surgeries

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**123 If I Could Do That Case Over Again: Discussion of Complications of Spine Surgery**  
*Room D236, Miami Beach Convention Center*

Moderator:  
William E. Krauss, MD

Panelists:  
- Michelle J. Clarke, MD  
- Ehud Mendel, MD  
- Eric J. Woodard, MD

Experienced neurosurgeons of various spine specialties will discuss their own complications and how they would avoid them next time.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Discuss complications in cases of minimally invasive spine, fusions and deformity corrections
- Utilize techniques to avoid complications in cases of minimally invasive spine, fusions and deformity corrections
Welcome 9:45-9:50 AM  
Speaker  
Carl B. Heilman, MD

Rhoton Family Lecture  
Advances in Surgical Resection of Primary Spinal Tumors  
9:51-10:14 AM  
Introduced by  
Christopher E. Wolfla, MD  
Speaker  
Ziya L. Gokaslan, MD

NATIONAL BRAIN TUMOR SOCIETY MAHALEY AWARD  
600  
A Prospective Randomized Trial of Seizure Prophylaxis in Patients Undergoing Surgery for Supratentorial Intraparenchymal Tumors  
10:15-10:29 AM  
Authors  
Frederick F. Lang Jr., MD; Adam Wu; Victoria Trinh; Dima Suki; Kenneth Hess; Jeffrey Weinberg; Ian McCutcheon; Sujit Prabhu; Amy Heimberger; Raymond Sawaya (Houston, TX)  
Discussant  
Frederick G. Barker II, MD

INTERNATIONAL ABSTRACT AWARD  
601  
The Natural Course of Unruptured Cerebral Aneurysms: Natural Course Analysis of the Unruptured Cerebral Aneurysm Study in Japan  
10:30-10:44 AM  
Authors  
Akio Morita, MD, PhD; Akira Teramoto (Shinagawa-ku, Japan)  
Discussant  
Frederic B. Meyer, MD

PHILLIP L. GILDENBERG MD RESIDENT AWARD  
602  
Reward Prediction Encoded by Single-Neuron Responses in the Human Nucleus Accumbens  
10:45-10:59 AM  
Authors  
Sameer A. Sheth, MD, PhD; Shaun Patel, BS; Matthew Mian, BSE; E maid Eskandar, MD (Boston, MA)  
Discussant  
Aviva Aboisch, MD, PhD

Theodore Kurze Lecture  
Breakthrough Thinking: Challenge What We Know  
11:00-11:44 AM  
Introduced by  
Michael Brian Sisti, MD  
Speaker  
Brian Greene, PhD

603  
Lumbar Spinal Fusion Plus Laminectomy is Superior to Laminectomy Alone for Grade I Degenerative Spondylolisthesis: SLIP Study Results  
11:45-11:59 AM  
Authors  
Zoher Ghogawala, MD; Edward Benzel; William Butler; James Dziura; Subu Magge; Jean-Valery Coumans; J. Fred Harrington; Volker Sonntag; Fred Barker (Greenwich, CT)  
Discussant  
Praveen V. Mummaneni, MD

Distinguished Service Award Recipient  
12:15-12:18 PM  
Introduced by  
Paul C. McCormick, MD  
Recipient  
James R. Bean, MD

AANS International Lifetime Recognition Award  
12:19-12:22 PM  
Introduced by  
Jacques J. Morcos, MD  
Recipient  
Leonidas Quintana, MD

Presidential Address  
12:23-1:15 PM  
Introduced by  
Donald O. Quest, MD  
Speaker  
Paul C. McCormick, MD
Optional Sessions

126
Mid-level Practitioner Luncheon
1:00-2:45 PM
Room C219, Miami Beach
Convention Center
Fee: $25
See page 39 for more information

127
YNS Lunch Session
1:00-2:45 PM
Room A203-205, Miami Beach
Convention Center
No Fee
Moderator:
J. Bradley Bellotte, MD
Featured Speaker:
Catherine Mazzola, MD
See page 42 for more information

Scientific Session I—Tumor
2:00-5:30 PM
Jr. Ballroom C, Miami Beach
Convention Center
This session will focus on innovations in the diagnosis, management and treatment of tumor neurosurgery. Innovations developed in the last twelve months will be presented.
Moderator: Ricardo J. Komotar, MD

RONALD L. BITTNER AWARD ON BRAIN TUMOR RESEARCH

605
IDH1 Status Determines the Survival Benefit of Surgical Resection for Malignant Astrocytomas
2:30-2:54 PM
Authors
Daniel P. Cahill, MD, PhD; Jason Belko, MD; Vincent Cheung, MD; Dima Suki, PhD; Raymond Sawaya, MD; Sujit Prabhu, MD; Frederick Lang, MD; Kenneth Aldape, MD; Ganesh Rao, MD; Ian McCutcheon, MD (Boston, MA)
Discussant Jeffrey N. Bruce, MD

606
Impact of Intraoperative Magnetic Resonance Imaging and Functional Neuronavigation on Tumor Resection and Function Preservation: A Prospective, Controlled Study in Patients with Gliomas Involving Language Cortex
2:55-3:09 PM
Authors
Jiaoshu Zhang; Xiaolei Chen, MD; Baiman Xu, MD; Fangye Li, MD; Gang Zheng, MD; Jinjiang Li, MD; Xueming Lv, MD; Ting Zhang, MD (Beijing, China)
Discussant Alexandra J. Golby, MD

607
Visualization of 5-Aminolevulinic Acid Fluorescence in Low Grade Gliomas
3:10-3:24 PM
Authors
Laura A. Snyder, MD; Norissa Honea, MSN; Stephen Coons, MD; Stephen Chang, MD; Peter Nakaji, MD; Randall Porter, MD; Kris Smith, MD; Robert Spetzler, MD; Nader Sanai, MD (Phoenix, AZ)
Discussant Michael A. Vogelbaum, MD, PhD

608
Bevacizumab Treatment in Glioblastoma Patients Is Associated with an Increased Development of Secondary Gliosarcoma
4:01-4:15 PM
Authors
Isaac Yang, MD; Marko Spasic, BA; Frances Chow, BA; Winward Choy, BA; Lea Nghiemphu, MD; Timothy Cloughesy, MD; Linda Liao, MD, PhD; Albert LaI, MD, PhD (Los Angeles, CA)
Discussant Russell R. Lonser, MD

609
The Fate of Cyst Remnants Following Endoscopic Colloid Cyst Resection
4:16-4:30 PM
Authors
Caitlin Elizabeth Hoffman, MD; Nicole Savage, BA; Mark Souweidane, MD (New York, NY)
Discussant Peter Nakaji, MD

610
Inferior Petrosal Sinus Sampling Versus Dynamic Magnetic Resonance Imaging in the Surgical Management of Cushing’s Disease
4:31-4:45 PM
Authors
Matthew Bryan Potts, MD; Jugal Shah, BS; Sandeep Kunwar, MD; Manish Aghi, MD, PhD (San Francisco, CA)
Discussant Edward H. Oldfield, MD
The Role of Radiotherapy Following Gross Total Resection of Atypical Meningiomas

Authors
Ricardo Komotar, MD; J. Bryan Iorgulescu; Dhanya Anand, MBBS; Daniel Raper, MBBS; Eric Holland, MD, PhD; Philip Gutin, MD (New York, NY)

Discussant: Michael W. McDermott, MD

LEKSELL RADIOSURGERY AWARD

The Risk of Leukoencephalopathy After Whole Brain Radiation Therapy Plus Radiosurgery Versus Radiosurgery Alone for Metastatic Lung Cancer

Authors
Edward A. Monaco III, MD, PhD; Amir Faraji; Phillip Parry; Uri Hadelsberg; Hideyuki Kano; Ajay Niranjan; Douglas Kondziolka; L. Dade Lunsford (Pittsburgh, PA)

Discussant: Phillip A. Tibbs, MD

SYNTHESS SKULL BASE AWARD

Gamma Knife Radiosurgery of Skull Base Meningiomas

Authors
Robert M. Starke, MD; Brian Williams, MD; Claire Hiles, MD; James Nguyen, BS; Mohamed Elsharkawy, MD; Jason Sheehan, MD, PhD (Charlottesville, VA)

Discussant: Ossama Al-Mefty, MD

Scientific Session II—Spine

2:00-5:30 PM

Jr. Ballroom D, Miami Beach Convention Center

This session will focus on innovations in the diagnosis, management and treatment of spinal neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator: Frank LaMarca, MD

The Miami Project to Cure Paralysis

Yesterday, Today and Tomorrow

2:00-2:29 PM

Invited Speaker
Barth A. Green, MD

How the Assessment of Pelvic Tilt, Pelvic Incidence/Lumbar Lordosis Mismatch and Sagittal Vertical Axis Predicts Disability in Adult Spinal Deformity: A Prospective Analysis

Authors
Justin S. Smith, MD, PhD; Christopher Ames, MD; Frank Schwab, MD; Shay Bess, MD; Benjamin Blondel, MD; Richard Hostin, MD; Oheneba Boachie-Adjei, MD; Douglas Burton, MD; Behrooz Akbarnia, MD; Gregory Mundis, MD; Khaled Kebaish, MD; Robert Hart, MD; Virginie Lafage, PhD; Christopher Shaffrey, MD (Charlottesville, VA)

Discussant: Charles Kuntz, MD

Cost Per Quality-adjusted Life Year Gained of Revision Lumbar Surgery for Adjacent Segment Disease, Pseudoarthrosis, and Same-level Recurrent Stenosis: Defining the Value of Surgical Intervention

Authors
Scott Parker, MD; David Shaw; Stephen Mendenhall; Owoicho Adogwa; Joseph Cheng; Clinton Devlin; Matthew McGirt (Nashville, TN)

Discussant: Daniel K. Resnick, MD

The Impact of Positive Regional Sagittal Alignment on Outcomes in Posterior Cervical Fusion Surgery

3:10-3:24 PM

Discussant: Tyler Koski, MD

Beverage Break

3:25-4:00 PM

Exhibit Hall C & B

Miami Beach Convention Center

Long-Term Outcome of Minimally Invasive Transforaminal Lumbar Interbody Fusion; 5 Years Post Op and Beyond

4:01-4:15 PM

Discussant: Edward C. Benzel, MD

Complications Following Use of Rhabdomyoblasts in Anterior Lumbar Interbody Fusion: An Institutional Cohort Controlled Study

4:16-4:30 PM

Discussant: Allan D. Levi, MD, PhD
Objective Spinal fMRI Metrics Distinguish Complete and Incomplete Clinical Grade in Chronic Spinal Cord Injury
4:31-4:45 PM

Authors
David Cadotte, MD; Patrick Stroman, PhD; David Mikulis, MD, PhD; Rachael Bosma, BSc; Michael Fehlings, MD, PhD (Toronto, Canada)

Discussant Haynes Harkey III, MD

Results and Complications After AxiaLIF 2 Levels. Minimum 2-year Follow-Up
4:46-5:00 PM

Authors
Luiz Pimenta, MD, PhD; Luis Marchi; Leonardo Oliveira; Rodrigo Amaral; Etevaldo Coutinho; Thiago Coutinho; Carlos Castro (Sao Paulo, Brazil)

Discussant Robert F. Heary, MD

Evaluation of the Thoracolumbar Injury Classification System (TLICS) in 458 Consecutively Treated Patients
5:01-5:15 PM

Authors
Joao Paulo de Almeida, MD; Andrei Joaquim, MD; Enrico Ghizoni, MD; Michel Daubs, MD; Brandon Lawrence, MD; Darrel Brodke, MD; Fernando Cendes, MD, PhD; Helder Tedeschi, MD, PhD; Alpesh Patel, MD (Campinas, Brazil)

Discussant Andrew T. Dailey, MD

A Prediction Model for Functional Outcome after Traumatic Spinal Cord Injury
5:16-5:30 PM

Authors
Jefferson Wilson, MD; Michael Fehlings, MD, PhD; Ralph Frankowski, PhD; Robert Grossman, MD; James Harrop, MD; Christopher Shaffrey, MD; Bizhan Aarabi, MD; James Guest, MD, PhD; Marcel Dvorak, MD; Alexander Vaccaro, MD, PhD (Toronto, Canada)

Discussant Barth A. Green, MD

The Basolateral Amygdala is a Critical Structure for Environmental Cue Augmentation of EtOH-Seeking
2:55-3:09 PM

Authors
Jessica Wilden, MD; Sheketha Hauser, PhD; Gerald Deehan Jr, PhD; Zheng Ming Ding, PhD; William Truitt, PhD; William McBride, MD, PhD; Zachary Rodd, PhD (Indianapolis, IN)

Discussant Emad N. Eskandar, MD

Neurosurgical Modulation of Behavioral and Cognitive Networks: An Emerging Paradigm for Scientific Discovery and Clinical Application
2:00-2:29 PM

Invited Speaker
Ali R. Rezai, MD

Results of a Phase 1 Study of MR Guided Focused Ultrasound Thalamotomy for Essential Tremor
2:30-2:54 PM

Authors
William Jeffrey Elias, MD; Diane Huss, PhD; Mohamad Khaled, MD; Stephen Montetith, MD; Johanna Loomba; Eyal Zadacario, PhD; Matt Eames, PhD; Robert Frysinger, PhD; Madaline Harrison, MD; Tiffini Voss, MD; Max Wintermark, MD (Charlottesville, VA)

Discussant Nader Pouratian, MD, PhD

Creation of a Novel Interactive Tool for Computer-Assisted Multi-Modal Trajectory Planning
4:01-4:15 PM

Authors
Abbas F. Sadikot, MD, PhD; Silvain Bériault, MSc; Fahd Alsubaie, MD; Bruce Pike, PhD (Montreal, Canada)
627  Grouped Cognitive Subtraction Using Intracranial EEG
4:16-4:30 PM
Authors
Christopher Richard Conner; Gang Chen, PhD; Thomas Pieters, BA; Nitin Tandon, MD (Houston, TX)
Discussant Matthew A. Howard III, MD

628  Imaging Correlates of Non-Motor Symptoms of Parkinson's Disease
4:31-4:45 PM
Authors
Nader Pouratian, MD, PhD; Zhong Zheng, BS; Shirag Shemassian, MA; Christopher Wijekoon, BS; Antonio DeSales, MD, PhD; Susan Bookheimer, PhD (Los Angeles, CA)
Discussant Kelly Foote, MD

629  DBS of the Third Ventricle Using a Floating Electrode to Treat Cluster Headaches: Proof of Concept
4:46-5:00 PM
Authors
Stephan Chabardes, MD; Romain Carron, MD; Napoleon Torres, MD, PhD; Eric Seigneuret, MD; Pierrick Giraud, MD; Jean François LeBas, MD; Alim Benabid, MD, PhD
Discussant Guy M. McKhann II, MD

630  Auditory Novelty Detection Encoded by Dopaminergic Neurons in Human Substantia Nigra
5:01-5:15 PM
Authors
Chuck Mikell, MD; Brett Youngerman, BA; John Sheehy, BA; Robert McGovern, MD; Teresa Wojtasiewicz, BS; Catherine Schevon, MD, PhD; Guy McKhann II (New York, NY)
Discussant Gordon Baltuch, MD, PhD

631  GPI LFP Activity is Marked by Increased High Frequency (200-300 Hz) Power in PD Patients
5:16-5:30 PM
Authors
Christos Tsiokos; Nader Pouratian (Los Angeles, CA)
Discussant Aviva Abosch, MD, PhD

632  Surgical Treatment of Juvenile Patients with Moyamoya Disease Based on Clinical Use of Hemodynamic Measurement
2:30-2:54 PM
Authors
Tadashi Nariai, MD, PhD; Yoji Tanaka, MD, PhD; Maki Mukawa, MD, PhD; Yosuke Ishii, MD, PhD; Motoki Inaji, MD, PhD; Kenji Ishii, MD; Kikuo Ohno, MD, PhD (Tokyo, Japan)
Discussant R. Michael Scott, MD

633  Arterial Spine Labeling Cerebral Blood Flow as a Correlate of Clinically Significant Hydrocephalus in Children with Brain Tumors
2:55-3:09 PM
Authors
Allyson Alexander, MD, PhD; Kristen Yeom, MD; Robert Lober, MD, PhD; Michael Edwards, MD (Stanford, CA)
Discussant Joseph R. Madsen, MD

634  Endoscopic Endonasal Approach for Skull Base Lesions in the Pediatric Population
3:10-3:24 PM
Authors
Maria Koutourousiou, MD; Srinivas Chivukula; Carl Snyderman, MD; Paul Gardner, MD; Elizabeth Tyler-Kabara, MD, PhD (Pittsburgh, PA)
Discussant Jeffrey H. Wisoff, MD

635  Long-term Survival and Functional Improvement in Pediatric Intramedullary Spinal Cord Tumors
4:01-4:15 PM
Authors
Raheel Ahmed, MD; Olatilewa Awe, MD; Arnold Menezes, MD (Iowa City, IA)
Discussant Rick Abbott, MD
636 Crenolanib in Vitro Therapy in a RCAS/tv-a Murine Model of Diffuse Pontine Brainstem Glioma
4:16-4:30 PM
Authors
Amitoz Manhas, MD; Kelly Barton; Gerald Grant, MD; Oren Becher, MD (Durham, NC)
Discussant Corey Rafel, MD, PhD

637 Detection of Tumor Indicators of Diffuse Intrinsic Pontine Glioma in Cerebrospinal Fluid, Serum and Urine
4:31-4:45 PM
Authors
Amanda Muhs Saratsis, MD; Sridevi Yadavilli, MD, PhD; Suresh Magge, MD; Javad Nazarian, PhD (Arlington, VA)

638 Reoperational Hemispherectomy for Intractable Epilepsy—One Institution's Experiences
4:46-5:00 PM
Authors
Sumeet Vadera, MD; Lara Jehi; William Bingaman (Cleveland, OH)
Discussant Sean M. Lew, MD

639 Occipital Lobe Epilepsy in Children: Pre-operative Evaluation with Magnetoencephalography and Surgical Outcomes
5:01-5:15 PM
Authors
George M. Ibrahim, MD; Gregory Albert, MD, MSc; Aria Fallah, MD; Hiroshi Otsubo, MD, PhD, FRCSC; Ayako Ochi, MD, PhD; Tomoyuki Akiyama, MD, PhD; Elizabeth Donner, MD; Shelly Weiss, MD; O. Carter Sneed, MD; James Drake, MD; James Rutka, MD, PhD (Toronto, Canada)
Discussant William E. Bingaman Jr., MD

640 Management of Pediatric Intracranial Gunshot Wounds: Predictors of Favorable Outcome and a Proposed Treatment Paradigm
5:16-5:30 PM
Authors
Katie Bandt, MD; Chester Yarbrough, MD; Jacob Greenberg, BS; Jeffrey Leonard, MD; David Limbrick, MD, PhD (St. Louis, MO)

641 Minimally Invasive Transpalpebral “Eyelid” Approach to the Anterior Circulation Aneurysms: Forty Cases Experience
2:30-2:54 PM
Authors
Khaled M. Aziz, MD, PhD; Sanjay Bhatia, MD; Mohamed Hammad, MD; Erik Happ, MD (Pittsburgh, PA)
Discussant Troy D. Payner, MD

642 Variation in a Locus Linked to Platelet Aggregation Phenotype Predicts Intraparenchymal Hemorrhagic Volume
2:55-3:09 PM
Authors
Geoffrey Appelboom, MD; Matthew Piazza, BA; Sam Bruce; Steve Zoller, BA; Kerry Vaughan, BA; Aimee Monahan; Brad Zacharia, MD; Zachary Hickman, MD; Neeraj Badjatia, MD, MS; E. Sander Connolly, MD (New York, NY)
Discussant Neil A. Martin, MD

643 Is Intra-arterial Thrombolysis Beneficial for M2 Occlusions? Subgroup Analysis of the PROACT II Trial
3:10-3:24 PM
Authors
Ralph Rahme, MD; Todd Abruzzo, MD; Renee Martin, PhD; Thomas Tomsock, MD; Andrew Ringer, MD; Anthony Furlan, MD; Pooja Khatri, MD (Cincinnati, OH)

644 Long-term Results of Enterprise Stent-assisted Coiling of Cerebral Aneurysms
4:01-4:15 PM
Authors
Kyle Fargen; Maryam Rahma, MD, MS; Brian Hoh; Babu Welch; Giuseppe Lanzino; Alan Boulos; Jeffrey Carpenter; Ansar Rai; Erol Vezenadaroglu; Andrew Ringer; Rafael Rodriguez-Mercado; Peter Kanzemann; Adnan Siddiqui; Elad Levy; J. Mocco (Gainesville, FL)
Discussant Michael T. Lawton, MD
645  The Panacea or the Problem: Flow Diverters in the Treatment of Fusiform Vertebrobasilar Aneurysms 4:16-4:30 PM  Authors  Adib Adnan Abla, MD; Peter Kan, MD; Travis Dumont; L. Hopkins; Adnan Siddiqui; Elad Levy, MD (Phoenix, AZ)  Discussant H. Hund Batjier, MD

646  Risk of Hemorrhage From “De Novo” Cerebral Aneurysms 4:31-4:45 PM  Authors  Daniel H. Fulkerson, MD; William Kemp III, BS; Troy Payner, MD; Thomas Leipzig, MD; Aaron Cohen-Gadol, MD, MSc; Terry Horner, MD (Indianapolis, IN)  Discussant Robert A. Solomon, MD

647  Outcomes after Stereotactic Radiosurgery for ARUBA-eligible Patients 4:46-5:00 PM  Authors  Bruce E. Pollock, MD; Michael J. Link; Robert D. Brown (Rochester, MN)  Discussant Joshua B. Bederson, MD

648  Brainstem Cavernoma Surgery with the Support of Pre- and Post-operative Diffusion Tensor Imaging 5:01-5:15 PM  Authors  Nils Harry-Bert Ulrich; Ralf Kockro, PhD; David Bellut; Oliver Bozinov; Jan Burkhardt; Spyros Kollias; Helmut Bertalanffy (Zurich, Switzerland)  Discussant Daniel Louis Barrow, MD

649  Risk of Hemorrhage and Ischemia after EC/IC Bypass Surgery-An Observational Analysis of 204 Consecutive Revascularization Procedures 5:16-5:30 PM  Authors  Gerrit Alexander Schubert, MD; Marcel Seiz, MD; Peter Schmiedek, MD; Claudius Thomé, MD (Innsbruck, Austria)  Discussant Peter Vajkoczy, MD

Scientific Session VI— Neurotrauma 2:00-5:30 PM  Ballroom D, Miami Beach Convention Center

This session will focus on innovations in the diagnosis, management and treatment of Neurotrauma neurosurgery. Innovations developed in the last twelve months will be presented.

Moderator: Shelly Timmons, MD

650  Functional and Quality of Life Outcomes in Geriatric Patients with Type II Odontoid Fracture: One Year Results from the AOSpine North America Multi-Center GOF Prospective Study 2:30-2:54 PM  Authors  Michael Fehlings, MD; Branko Kopjar; Alexander Vaccaro, MD; Jens Chapman, MD; Christopher Shaffrey, MD; Paul Arnold, MD; Ziya Gokaslan, MD; Darrel Brodke, MD; John France, MD; Sangwook Yoon, MD; Mark Dekutoski, MD; Rick Sasso, MD; Christopher Bono, MD (Seattle, WA)  Discussant Peter G. Gianaris, MD

651  High-Grade Traumatic Cervical Subluxation Injuries: Treatment Strategies and Outcomes 2:55-3:09 PM  Authors  Sanjay Dhall, MD; Daniel Hoh, MD (Atlanta, GA)  Discussant Juan Santiago Uribe, MD

652  Lifetime Attributable Risk of Cancer from Computed Tomography in Patients with Severe Traumatic Brain Injury 3:10-3:24 PM  Authors  David Panczykowski, MD; Patrick Salibi, BS; Nathan Zwagerman, MD; Michael Sheetz, MS; Vikas Agarwal, MD; David Okonkwo, MD, PhD (Pittsburgh, PA)  Discussant Odette Harris, MD

Translational Research in Spinal Cord Injury—What’s New? What’s Hot? 2:00-2:29 PM  Invited Speaker  Michael G. Fehlings, MD, PhD

Beverage Break 3:25-4:00 PM  Exhibit Hall C & B Miami Beach Convention Center
Timing of Cranioplasty After Decompressive Craniectomy for Trauma
4:16-4:30 PM
Authors
Mark Peter Piedra, MD; Andrew Nemecek, MD, MS; Brian Ragel, MD (Portland, OR)
Discussant Jamie S. Ulman, MD

4:31-4:45 PM
Authors
Julio C. Furlan, MD, PhD; Michael Fehlings, MD, PhD (Toronto, Canada)
Discussant Alex B. Valadka, MD

Clinical Outcome of Early Versus Late Surgery for Cervical Spinal Cord Injury
4:46-5:00 PM
Authors
KyoungSuok Cho, MD, PhD; Sang-Bok Lee, MD; Pil-Woo Huh, MD, PhD (Uijongbu, Republic of Korea)
Discussant James S. Harrop, MD

Magnetoencephalographic Virtual Recording: A Novel Diagnostic Tool for Concussion
5:01-5:15 PM
Authors
Matthew J. Tormenti, MD; Donald Krieger, PhD; Ava Puccio, PhD; Malcolm McNeil, PhD; Walter Schneider, PhD; David Okonkwo, MD, PhD (Pittsburgh, PA)
Discussant Julian E. Bailes Jr., MD

New Medical Therapy of Chronic Subdural Hematoma with Tranexamic Acid Without Operations
5:16-5:30 PM
Authors
Kazunari Oka, MD; Hiroshi Kageyama, MD; Terushige Toyooka, MD; Nobusuke Tsuzuki, MD (Kuki, Japan)
Discussant Mark R. Proctor, MD

Introduction to Stereotactic Radiosurgery
5:30-8:30 PM
Moderator
Gene H. Barnett, MD, PhD
Panelists:
Antonio A. F. DeSalles, MD PhD
Peter C. Gerszten, MD
William A. Friedman, MD

Learning Objectives:
Upon completion of this activity, participants should be able to:
• Outline the basic radiobiologic principles of radiosurgery
• Demonstrate current indications, technologies, and outcomes for malignant brain tumors, benign brain lesions, and spine and functional radiosurgery
• Discuss complication avoidance and management in the setting of radiosurgical patients
• Evaluate how applying radiobiologic principles can enhance your neurosurgical practice

Joint Annual Business Meeting of the American Association of Neurological Surgeons and the American Association of Neurosurgeons
5:30-6:30 PM
Rooms C223/224, Miami Beach Convention Center

AANS INTERNATIONAL RECEPTION
6:30-8:00 PM
BONGOS CUBAN CAFÉ
See Page 5 for Transportation Details.

AANS HISTORY SECTION DINNER
6:15-8:30 PM
Rusty Pelican
Fee: $150
Invited Speaker:
Corey Malcom
Director of Archaeology
Mel Fisher Maritime Heritage Society

See page 5 for transportation details.
IMRIS INDUSTRY SUPPORTED SATELLITE SYMPOSIUM
An Intraoperative MR Imaging Journey—The Clinical Experience of the VISIUS Surgical Theatre
6:30-10:30 PM
Loews Miami Beach Hotel

The use of intraoperative imaging during neurosurgery continues to grow as technology evolves and as new studies demonstrating clinical benefits are published. In this symposium, leaders in intraoperative imaging will share their experience with a range of neurosurgical cases focusing on the clinical benefits, workflow optimization and utilization of the VISIUS Surgical Theatre.

No CME is offered for this symposium.
This symposium is not sponsored or endorsed by the AANS.

THE ALBERT L. RHOTON TRIBUTE
8:30 PM
BONGOS CUBAN CAFÉ
See Page 12 for more information.
A Perfect Fit for Your Favorite Valves

New ARES™ Antibiotic-Impregnated Catheters

Introducing our new ARES™ Antibiotic-Impregnated Catheters to reduce the colonization of gram-positive bacteria.

Laboratory tests show the catheters provide antimicrobial activity for at least the first 31 days, the time when patients are most susceptible to shunt infections.1,4

For added convenience, ARES Catheters were designed with the same diameters as our standard catheters, for seamless connection to all Strata®, Delta®, and PS Medical® shunt valves, so you don’t have to mix different shunt brands to get the best of both worlds.

For more information about the ARES Catheters, contact your Medtronic NT sales representative, refer to www.medtronic.com, or call us at 800.468.9710.

References

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Tuesday, April 17

Breakfast for Seminar Participants
6:45-7:30 AM
Rooms A201-205
Miami Beach Convention Center

Breakfast Seminars
7:30-9:30 AM (includes breakfast)
Fee: $100 each, N&PE Fee: $70 for select courses

Beverage Breaks in the Exhibit Hall
9:00-9:45 AM
3:30-4:00 PM

Lunch Break in the Exhibit Hall
1:00-2:00 PM

Online Discussions at: AANSconnect.org

201 How to Get Into and Out of the Skull — A Historical Review
Room A101, Miami Beach Convention Center
Moderator: Jim Goodrich, MD, PhD
Panelists: Larry V. Carson, MD Giuseppe Lanzino, MD

The seminar is designed to give an overview of the history of skull trephinations, craniotomies and craniectomies from antiquity to the 19th century. In addition a review of the history of controlling scalp and skull bleeding will be reviewed focusing on the techniques developed from antiquity to the 19th century. The history of the cranioplasty and the materials used will be discussed and reviewed.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the history and development of the surgical techniques used in the trephination, craniotomy and craniectomy
• Discuss the historical development of techniques used for the control and management of scalp and skull bleeding.
• Describe the development of the cranioplasty, techniques and materials used over the last three centuries.

202 Evaluating Clinical Trials in Cerebrovascular Surgery: A Critical Review “Graduate” Seminar
Room A102, Miami Beach Convention Center
Moderator: Charles J. Prestigiacomo, MD

Designed as a truly interactive, graduate-level course, this Breakfast Seminar will critically explore recently completed trials in the field of cerebrovascular and endovascular surgery. Participants will be required to read and study the “core readings,” to be distributed to the participants several weeks prior to the session; it will include brief questions and thoughts to consider. Key elements to consider when reviewing the publications will revolve around the study design, the interpretation of the results and ways to design a better study.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the elements of good trial design
• Discuss the most recent multicenter trials in cerebrovascular and endovascular surgery
• Present alternative trial designs or follow-up studies that would enhance the extant literature

203 Open vs. Endoscopic Approaches to the Anterior Skull Base
Room A108/109, Miami Beach Convention Center
Moderator: Chandranath Sen, MD
Panelists: Ossama-Al Mefty, MD Carlos A. David, MD Fred Gentili, 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
• Discuss indications and limitations of endoscopic techniques

This seminar will highlight the current controversies surrounding the optimal treatment of ruptured and unruptured intracranial aneurysms using the latest advances and developments in both modalities. 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 develop more informed treatment recommendations
• Evaluate latest advances and available outcomes data to determine their significance for ruptured and unruptured intracranial aneurysms
• Assess treatment failures in intracranial aneurysms treated with either modality
• Assemble strategies for treatment and salvage of recurrent and difficult intracranial aneurysms

205
Endovascular vs. Microsurgical Techniques for the Optimal Treatment of Intracranial Aneurysms
Room B118/119, Miami Beach Convention Center
Moderator:
Adel M. Malek, MD, PhD
Panelists:
Rocco A. Armonda, MD
Hildo R. C. Azevedo Jr., MD
C. Michael Cawley, MD
David M. Hasan, MD
Demetrius K. Lopes, MD

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

208
Spondylolisthesis: Controversies in Management
Room D233, Miami Beach Convention Center
Moderator:
Philip R. Weinstein, MD
Panelists:
Edward C. Benzel, MD
Harel Deutsch, MD
Robert F. Heary, MD
Amer F. Samdani, MD
Luis Manuel Tumialan, 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:
- Identify the various pathologies in myelopathy
- Distinguish the treatment (operative) options for cervical spondylotic myelopathy
- Review operative success/failure rates in cervical spondylotic myelopathy

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**210 Functional Neurosurgery for Psychiatric Illness**
*Room D234, Miami Beach Convention Center*

**Moderator:**
Michael Y. Oh, MD

**Panelists:**
Aviva Abosch, MD, PhD
Emad N. Eskandar, MD
Paul S. Larson, MD
Parag G. Patil, MD, PhD
Ali R. Rezai, MD

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

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**211 Vertebral Column Tumors**
*Room A111, Miami Beach Convention Center*

**Moderator:**
Mark H. Bilsky, MD

This seminar is intended to provide an overall review of management of both primary and metastatic spinal tumors. This should include thorough 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 the 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
This seminar will provide approaches to lesions across the lateral skull base with emphasis on preservation of normal function and avoidance of common pitfalls.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Determine which routes of approach to the lateral skull base are most appropriate for a given lesion
- Discuss the normal anatomic structures most at risk with each approach and describe the strategies to preserve them
- Identify the equipment and monitoring necessary to accomplish the procedures described
- Discuss complications that may occur with lateral skull base procedures so as to provide meaningful informed consent for patients planning to undergo such surgery

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**214 Using Stereoscopic 3-D Video Recording in Neurosurgery Practice and Education**
*Room B114, Miami Beach Convention Center*

**Moderator:**
Lawrence F. Borges, MD

**Panelists:**
Aaron A. Cohen-Gadol, MD
Michael N. D’Ambra, MD
David Kaplan, MD
Albert L. Rhoton Jr., MD
Jeffrey M. Sorenson, MD
Robert F. Spetzler, MD

This seminar will explore how 3-D 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 2-D and 3-D video
- Discuss the special and additional technology that is required to acquire and produce 3-D video
- Compare and contrast the different display methods for using this 3-D video for enhancing education
- Discuss how the special tools of 3-D video can provide greater content for neurosurgical education
- Discuss how the increased content displayed with 3-D video can be used to improve the practice of neurosurgery

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**215 If I Could Do That Case Over Again: Discussion of Complications of Cranial Surgery**
*Room B115, Miami Beach Convention Center*

**Moderator:**
Anil Nanda, MD

**Panelists:**
John Diaz Day, MD
Ralph Dacey, MD
Steven L. Giannotta, MD

Experienced neurosurgeons of various cranial specialties will discuss complications and how they would avoid them if given a second opportunity.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Discuss what complications can occur in cases of vascular, skull base, pediatrics and endovascular surgery
- Employ techniques to avoid complications in cases of vascular, skull base, pediatrics and endovascular surgery

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**216 Professional Issues: Challenges and Opportunities for the Neurosurgical Mid-level Practitioner**
*Room B116, Miami Beach Convention Center*

**Moderator:**
Twyila Lay, NP, MS

**Panelists:**
Tracey Anderson, CNRN, FNP-BC, ACNP-BC
Julia Galletly, MS, ACNP-BC, CCRN
Joseph A. Hlavin, PA-C
Marianne E. Langlois, PA-C

This dynamic and interactive seminar will provide a forum for participant discussion of unique challenges to neurosurgical practice. The seminar will encourage participants to discuss situations and strategies for establishing your practice, arts of contract negotia-
tion, credentialing, privileging associated with invasive procedures and review of malpractice insurance coverage.

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

- Discuss strategies for establishing the mid-level role in a new setting
- Identify three key elements of contract negotiation
- Analyze the debate surrounding mid-levels performing invasive neurological procedures
- Compare and contrast malpractice insurance policies

### 217 Osteoporosis and Spinal Fusion Surgery
**Room B212, Miami Beach Convention Center**

**Moderator:** Deborah L. Benzil, MD

**Panelists:**
Sanford Baim, MD
Edward C. Benzel, MD
Frank La Marca, MD
Gregory R. Trost, MD

This course will provide a state-of-the-art update on diagnosis, pathophysiology, medical management and pre-operative treatment of osteoporosis, as well as explore the implications for spinal surgery and spinal fusion. It also will help neurosurgeon decision-making that occurs increasingly in everyday office practice with the aging of the population. In addition, experts will share tricks for avoiding complications when fusions are necessary in patients with osteoporosis.

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

- Explain the diagnosis, pathophysiology, medical management and pre-operative treatment of osteoporosis
- Explain the impact of osteoporosis on everyday spine practice and decision-making
- Describe techniques for avoiding complications in spinal surgery when treating patients with osteoporosis

### 218 Return to Play After Sports Injury
**Room D235, Miami Beach Convention Center**

**Moderator:** Mark D. Krieger, MD

**Panelists:**
Julian E. Bailes Jr., MD
H. Hunt Batjer, MD
Richard G. Ellenbogen, MD
Srinivas K. Prasad, MD
Robert J. Spinner, MD

The identification and management of sports-related injuries has received much recent attention in the press and in the neurological literature. This seminar will address the neurosurgeon's role in evaluating and clearing children, high school athletes, college athletes and professional athletes who have head trauma, spine injuries, peripheral nerve injuries and congenital anomalies.

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

- Explain the standard tests and techniques for evaluating the injured athlete
- Describe the pathophysiology of sports related injuries of the head, spine and peripheral nerves
- Apply the data and expert opinion on return-to-play guidelines to their practice

### 219 Developing New Technology: Bringing Device to Market
**Room B121, Miami Beach Convention Center**

**Moderator:** Matthew A. Howard III, MD

**Panelists:**
John R. Adler Jr., MD
Richard D. Bucholz, MD
Kevin T. Foley, MD
Michael W. McDermott, MD

This course will discuss how neurosurgeons brought ideas for new innovation and turned them into successful products. Negotiating industry relationships also will be discussed.

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

- Explain the steps necessary to file a patent
- Discuss the steps necessary to develop prototypes
- Discuss the steps necessary to negotiate with industry
- Discuss regulatory issues

### 220 Anticoagulation for the Neurosurgeon and Hemostasis in Neurosurgery
**Room B122, Miami Beach Convention Center**

**Moderator:** Christopher M. Loftus, MD

**Panelists:**
Michael G. Fehlings, MD, PhD
Hugh J. L. Garton, MD,
Christopher Roark, MD
Bruce Tranmer, MD

This course will update the neurosurgeon on DVT prophylaxis, reversal of coumadin, the use of Factor 7a and restitution of coagulation after neurosurgery procedures.
Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss appropriate use of Factor 7a
• Explain how to rapidly reverse the effects of coumadin
• Discuss when it is safe to restart coumadin after neurosurgery procedures
• Discuss the most commonly used DVT prophylaxis measures

221
Developing Philanthropy to Fund Neurosurgery Research and Program Development
Room B117, Miami Beach Convention Center
Moderator:
Edie E. Zusman, MD
Panelists:
Mitchel S. Berger, MD
Robert F. Heary, MD
Douglas S. Kondziolka, MD
Susan C. Pannullo, MD
Ann R. Stroink, MD

With the current economics of health care and the challenges for traditional NIH funding, leading neurosurgeons from academic and community practices have recognized the value of philanthropy as the lowest overhead source of needed revenue to fund research, support salaries, and build clinical programs. Experts from around the nation will show the successful and ethical ways they have raised millions of dollars in philanthropy revenue to achieve their program development goals.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Develop new program revenue sources through philanthropy
• Describe structuring directed gifts for neurosurgery
• Identify new opportunities for research funding, including bridge funding, salary protection through endowed professorships

222
Max Out the Web to Improve Your Practice
Room B213, Miami Beach Convention Center
Moderator:
Joseph S. Cheng, MD
Chaim B. Colen, MD
Panelists:
J. Bradley Bellotte, MD
Jonathan E. Hodes, MD

This seminar will cover aspects of design that can help you maximize the web in your practice. It will be divided into a didactic portion that “surfs” topics such as e-learning, using social media along with a hands-on skills portion that allows you to design, or redesign, your website to meet your needs. In addition, we will discuss new technologies, online marketing of your practice, search engine optimization, improving your presence in the community, and other important topics for using the web in your practice. Using your iPod touch for the hands-on session will magnify your learning experience. You should know how to search the web, and read and navigate email. Knowledge of html, C++, or similar languages is NOT a requirement for this course.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Explain basic aspects of radiotherapy planning
• Discuss radiotherapy applications for brain and spinal tumors and AVMs
• Discuss radiotherapy for functional disease of the brain
• Discuss the importance of optimizing your Web design to gain a better web-based presence

223
Cranial Radiosurgery
Room D236, Miami Beach Convention Center
Moderator:
William A. Friedman, MD
Panelists:
Frank J. Bova, MD, PhD
John Buatti, MD
Jean Regis, MD
Jason P. Sheehan, MD, PhD

This clinic will illustrate various radiosurgery methods currently available.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Explain basic aspects of radiosurgery planning
• Discuss radiosurgery applications for brain and spinal tumors and AVMs
• Discuss indications of radiosurgery for functional disease of the brain
• Discuss differences among the various radiosurgery techniques available
Intraoperative Imaging: State-of-the-Art and Future Directions

Room A208, Miami Beach Convention Center

Moderator:
Erol Veznedaroglu, MD

Panelists:
Adam S. Arthur, MD
Philip H. Gutin, MD
Roger Hartl, MD

This seminar will discuss the current uses of real time intraoperative imaging in both cranial and spinal neurosurgery. The current use of intraoperative use of MR, angio and CT scan will be illustrated. Issues of logistics, room requirements and costs will be discussed.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the surgical needs for intraoperative imaging
• Explain the types of future imaging services that can be utilized

Plenary Session II
9:45 AM-1:00 PM
Hall D, Miami Beach Convention Center

Moderators:
Nicholas M. Barbaro, MD
Regis W. Haid, Jr., MD

701 Cingulotomy for Treatment—Refractory Obsessive-Compulsive Disorder: A Prospective Long-Term Follow-Up of 63 Patients
9:45-9:59 AM

Authors
Sameer A. Sheth, MD, PhD; Jonathan Neal; Matthew Mian, BSE; Frances Tangherlini, BS; Darin Dougherty, MD; G. Cosgrove, MD; Emad Eskandar, MD (Boston, MA)

Discussant G. Rees Cosgrove, MD

Matthew Mian, BSE; Frances Tangherlini, BS; Darin Dougherty, MD; G. Cosgrove, MD; Emad Eskandar, MD (Boston, MA)

Discussant G. Rees Cosgrove, MD

702 Patency of the Ophthalmic Artery After Flow-Diversion Treatment of Paraclinoid Aneurysms
10:00-10:14 AM

Authors
Ross Puffer; David Kallmes; Harry Cloft; Giuseppe Lanzino (Rochester, MN)

Discussant Jacques J. Morcos, MD

BYRON CONE PEVEHOUSE MD AWARD
703 Higher Complications and No Improvement in Mortality in the ACGME Resident Duty-Hour Restriction Era: An Analysis of Over 107,000 Neurosurgical Trauma Patients in the Nationwide Inpatient Sample Database
10:15-10:29 AM

Authors
Brian L. Hoh, MD; Daniel Neal, MS; Dominic Kleinhenz, BS; Daniel Hoh, MD; J Mocco, MD, MS; Fred Barker II, MD (Gainesville, FL)

Discussant Ralph G. Dacey Jr., MD

INTEGRA FOUNDATION AWARD
704 A Phase 2 Multicenter Trial of Autologous Heat Shock Protein-peptide Vaccine (HSPPC-96) for Recurrent Glioblastoma Multiforme (GBM) Patients Shows Improved Survival Compared to a Contemporary Cohort Controlled for Age, KPS and Extent of Resection
10:30-10:44 AM

Authors
Andrew Thomas Parsa, MD, PhD; Courtney Crane; Seunggu Han; Valerie Kivet; Anne Fedoroff; Nicholas Butowski; Susan Chang; Michael Prados; Jennifer Clarke; Mitchel Berger; Michael McDermott; Manish Aghi; Andrew Sloan; Jeffrey Bruce (San Francisco, CA)

Discussant John H. Sampson, MD, PhD

705 Cost-utility and Comparative Effectiveness Analyses of Laminectomy Versus Comprehensive Medical Management for Lumbar Stenosis
10:45-10:59 AM

Authors
Scott Parker, MD; Scott Zuckerman; David Shaw; Stephen Mendenhall; Joseph Cheng; Clinton Devin; Matthew McGirt (Nashville, TN)

Discussant Peter Angevine, MD

Hunt-Wilson Lecture
The Amazing World of Functional Neurosurgery
11:00-11:20 AM

Introduced by
G. Rees Cosgrove, MD

Speaker
Philip A. Starr, MD, PhD

706 Low-grade Insular Glioma Resection with 1.5T Intra-operative MRI: Preliminary Results of a Prospective Randomized Trial
11:21-11:35 AM

Discussant Mitchel S. Berger, MD

NEW COURSE
2012 AANS Annual Scientific Meeting
Mechanisms of Pediatric Head Injuries in Team Sports: Implications for Prevention
11:36-11:50 AM

Authors
Newton Cho; Michael D. J. Cusimano, MD; Matthew Wong; Khizer Amin; Mariam Shirazi; Kelly Russell, PhD; Steven McFaul, MSc; Minh Do, PhD (Toronto, Canada)

Discussant Richard G. Ellenbogen, MD

Stereotactic Radiosurgery for Arteriovenous Malformations with Hemorrhage History: the University of Pittsburgh Experience in 407 Consecutive Patients
11:51 AM-12:05 PM

Authors
Hideyuki Kano, MD, PhD; Douglas Kondziolka, MD; John Flickinger, MD; Huai-che Yang, MD; Kyung-Jae Park, MD, PhD; Thomas Flannery, MD, PhD; Ajay Niranjan, MCh, MBA; L. Dade Lunsford, MD (Pittsburgh, PA)

Discussant Robert F. Spetzler, MD

Cushing Medalist
12:06-12:10 PM

Introduced by Paul C. McCormick, MD
Recipient
Donald O. Quest, MD

Cushing Orator
From Reading to Writing the Genetic Code
12:11-12:56 PM

Introduced by Edward H. Oldfield, MD
Speaker
J. Craig Venter, PhD

Optional Sessions
500 Advancements in Neurotrauma Care
Tuesday, April 17
2:00-5:00 PM
Room D233
Miami Beach Convention Center
Fee: $100
See page 39 for more details

Operative Nuances for Managing Complex Cranial Cases: A 3D Video Presentation
Tuesday, April 17
2:00-5:00 PM
See page 9 for more details

AANS/CNS Cerebrovascular Section Session
2:00-5:30 PM
Ballroom C, Miami Beach Convention Center
Moderators
Ketan R. Bulsara, MD
Nicholas C. Bambakidis, MD

Introduction of the Donaghy Lecturer
2:00-2:10 PM
Speaker
E. Sander Connolly Jr., MD

Donaghy Lecture
Patient-Centered Approach to Cerebrovascular Disease: Research and Critical Care
2:11-2:36 PM
Speaker
Robert A. Solomon, MD

SAMMPRIS and Its Implications
2:37-2:52 PM
Speaker
Brian L. Hoh, MD

Pre Radiosurgery Embolization for AVMs—Helpful or Harmful
2:53-3:08 PM
Speaker
Douglas S. Kondziolka, MD

Current Indications for EC-IC Bypass: Fall Out From COSS
3:09-3:23 PM
Speaker
Jacques J. Morcos, MD

Q&A
3:24-3:29 PM

Beverage Break
3:30-4:00 PM
Exhibit Hall C & B
Miami Beach Convention Center

Abstract Presentations
4:00-5:30 PM

Small Cerebral Aneurysms, Do They Rupture?
4:00-4:07 PM
Authors
Parviz Dolati-Ardejani, MD; Michael Tso, MD; William Morrish, MD, FRCP; John Wong, MD, MSc, FRCSc; Garnette Sutherland, MD, FRCSC (Calgary, Canada)

Current Status of Randomized Trials Comparing Coiling and Clipping of Aneurysms
4:08-4:15 PM
Authors
Robert Spetzler, MD, Cameron McDougall, MD, Felipe Albuquerque, MD, Joe Zabramski, MD, Peter Nakaji, MD
711 Surgical Clipping of Vertebralbasilar Aneurysms and Oculomotor Nerve Palsy—A Single Institutional Experience
4:16-4:23 PM
Authors
Osama Iqbal Ahmed, MD; Lissa Baird, MD; Rishi Wadhwa, MD; Anil Nanda, MD (Shreveport, LA)

712 Endovascular Intervention versus Standard Medical Therapy for Patients Presenting with Clinically Severe Acute Ischemic Strokes—A Large Single Center Experience
4:24-4:31 PM
Authors
Peter Kan, MD; Maxim Mokin, MD; Adib Abla, MD; Travis Dumont, MD; Shady Jahshan, MD; Jorge Eller, MD; Mei-Jen Ho, Adnan Siddiqui, MD, PhD; Nelson Hopkins, MD; Elad Levy, MD (Buffalo, NY)

713 The Deleterious Effects of Methamphetamine Use in Aneurysmal Subarachnoid Hemorrhage
4:32-4:39 PM
Authors
Eric Michael Thompson, MD; Noah Beadell, MD; Johnny Delashaw, MD; Justin Cetas, MD, PhD (Portland, OR)

714 MMP-9: A New Player in Cerebral Vasospasm Pathophysiology
4:40-4:47 PM
Authors
Ananth Vellimana; Byung Han, PhD; Eric Milner, BS; Mengliang Zhou, MD, PhD; Guangyi Ling, MD; Gregory Zipfel, MD (St. Louis, MO)

715 Endovascular Therapy for Acute Stroke in the Elderly: A Comparison of Outcomes in Patients Above and Below 80 Years
4:48-4:55 PM
Authors
Jeremiah Nicholas Johnson, MD; Mohamed Elhammady, MD; Ramsey Ashour, MD; Anupama Kathiresan, MD; Dileep Yavagal, MD; Mohammad Aziz-Sultan, MD (Miami, FL)

716 Macrophage Imaging within Human Cerebral Aneurysm Wall Using Ferumoxytol-Enhanced MRI: Pilot Study
4:56-5:03 PM
Authors
David M. Hasan, MD (Philadelphia, PA)

717 Multimodality Treatment of 835 Patients with Arteriovenous Malformations: Factors Related to Complete Occlusion and Complications
5:04-5:11 PM
Authors
Stavropoula I. Tjoumakaris, MD; Richard Dalyai, MD; Thana Theofanis, BS; Pascal Jabbour, MD; Aaron Dumont, MD; Fernando Gonzalez, MD; Robert Rosenwasser, MD (Philadelphia, PA)

718 Asymptomatic Moyamoya Registry (AMORE) Study 2012-2019—A Nationwide, Multicenter Prospective Survey on Prognosis of Asymptomatic Moyamoya Disease in Japan
5:12-5:19 PM
Authors
Satoshi Kuroda, MD, PhD; Kiyohiro Houkin, MD, PhD; Susumu Miyamoto, MD, PhD; Joji Nakagawara, MD, PhD; Kuniaki Ogawara, MD, PhD; Koji Iihara, MD, PhD; Ken-ichiro Kikuta, MD, PhD; Teiji Tominaga, MD, PhD; Yoshikazu Okada, MD, PhD; Norihiro Suzuki, MD, PhD; Shigeru Nobawa, MD, PhD; Tadashi Nariai, MD, PhD; Kiyotaka Fujii, MD, PhD; Jun-ichi Ono, MD, PhD; Kazuo Yamada, MD, PhD; Kazuo Kitagawa, MD, PhD; Izumi Naka, MD, PhD; Nobuo Hashimoto, MD, PhD (Sapporo, Japan)

719 Cranial Dural Arteriovenous Fistulas: Decision-making, Results and Complications in a Contemporary Consecutive Series of 60 Patients.
5:20-5:27 PM
Authors
David John Daniels, MD; Michael Link, MD; Harry Cloft, MD, PhD; David Kallmes, MD; Giuseppe Lanzino, MD (Rochester, MN)

AANS/CNS Cerebrovascular Section Business Meeting
5:30-6:00 PM

AANS/CNS Stereotactic and Functional Surgery Section Session
2:00-5:30 PM
Ballroom B, Miami Beach Convention Center

Moderator: Konstantin V. Slavin, MD

Neuromodulation for Obesity
2:00-2:19 PM
Speaker
Michael Y. Oh, MD

Neuromodulation for Cluster Headaches
2:20-2:39 PM
Speaker
Alon Y. Mogilner, MD, PhD
Neuromodulation for Reflex Sympathetic Dystrophy
2:40-2:59 PM
Speaker
Michael Stanton-Hicks, MD

720
A Novel Murine Neocortical Epilepsy Model Created by Over-expression of Adenosine Kinase (ADK) in Cortical Astrocytes
3:00-3:09 PM
Authors
Hai Sun, MD; Ricky Wang, PhD; Detlev Boisen, PhD; T Zhi, BA; M Hrebesh, PhD; Haiying Shen, PhD (Portland, OR)

721
In-hospital Complications of Movement Disorder Surgery in the United States
3:10-3:19 PM
Authors
Anand Indulal Rughani, MD; Bruce Tranmer, MD; Michael Horgan, MD; Paul Penar, MD; Travis Dumont, MD (Burlington, VT)

722
Nucleus Accumbens Deep Brain Stimulation Suppresses Binge Eating in Mice: A Mechanistic Approach
3:20-3:29 PM
Authors
Casey Harrison Halpern, MD; Jeffrey Keating, PhD; John Wolf, PhD; Mark Attiah, BS; Jurg Jaggi, PhD; Gordon Baltuch, MD, PhD; Marc Dichter, MD; Tracy Bale, PhD (Philadelphia, PA)

723
Amygdala Deep Brain Stimulation is Superior to Paroxetine in a Rat Model of PTSD
4:00-4:09 PM
Authors
David Anthony Stidd, MD; Scott Kralh, PhD; Jean-Marc Fellous, PhD; Jean-Philippe Langevin, MD (Tucson, AZ)

724
Intralaminar Thalamic Deep Brain Stimulation Enhance Memory and Cortical Plasticity
4:10-4:19 PM
Authors
Sheng-Tzung Tsai, MD; Shin-Yuan Chen, MD, MSc; Li-Jin Chen; Jeng-Rung Chen; Yueh-Jan Wang; Guo-Fang Tseng (Hualien City, Taiwan)

725
Improved P300 Speller Performance Using Electrocorticography
4:20-4:29 PM
Authors
William Farran Speier IV; Itzhak Fried, MD, PhD; Nader Pouratian, MD, PhD (Los Angeles, CA)

726
Automated and Reliable Tractography-Based Thalamic Segmentation for DBS Surgery
4:30-4:39 PM
Authors
Nader Pouratian, MD, PhD; Alex Genco, BS; Alex Zemanyan, BS; Zhong Zheng, BS; Antonio DeSalles, MD, PhD; Ivo Dinov, PhD (Los Angeles, CA)

727
Pallidal Stimulation and Status Dystonicus in DYT1 Primary Generalized Dystonia
4:40-4:49 PM
Authors
Sharon Ben-Haim, MD; Tyler Cheung, MD; Ron Alterman, MD (New York, NY)

728
Distinct Functional Brain Rhythms Have Specific Gyral Representation
4:50-4:59 PM
Authors
Kai Joshua Miller, MD; Dora Hermes; Adam Hebb; Adam Sachs; Josef Parvizi; Jaimie Henderson; Eb Fetz; Nick Ramsey; Jeffrey Ojemann (Stanford, CA)

729
Zona Incerta Stimulation Guided by Microelectrode Defined Borders and MR/CT-Fusion for Tremor of Non-Parkinsonian Etiology
5:00-5:09 PM
Authors
Peter C. Warnke, MD; Catherine Ojakangas, PhD; Jacqueline Bernard, MD; Tao Xie, MD, PhD (Chicago, IL)
Correlating Statistical Maps of Contraction due to Stimulation and the Optimal Implant Position for Subthalamic Deep Brain Stimulation with the Anatomy
5:10-5:19 PM

Authors
Srivatsan Pallavaram; Pierre-François D’Haese, PhD; Srivatsan Pallavaram, PhD; Timothy Goble, PhD; Kristin Philip; Alexander Taghva, MD; Chima Oluigbo, MD; Punit Agrawal, DO; Benoît Dawant, PhD; Ali Rezai, MD (Nashville, TN)

Role of the Neurosurgeon in Shaping Healthcare Policy
2:47-3:17 PM

Speaker
Joseph Cheng, MD

Q&A
3:18-3:29 PM

National Coverage Decisions: Rationale and Impetus with the New Healthcare Laws
2:00-2:25 PM

Speaker
Louis Jacque, MD

Determined Healthcare Coverage and Policy Positions in our Economic Environment
2:26-2:46 PM

Speaker
Alan Rosenberg, MD

The Relationship of State Medical—Legal Risk Environment to Defensive Medicine in Neurosurgery
4:00-4:08 PM

Authors
Timothy Richard Smith, MD, PhD; Christopher Getch, MD; Maya Babu, MD, MBA; Brian Nahed, MD; Robert Heary, MD; Hunt Batjer, MD (Chicago, IL)

Intraoperative Spinal Neuromonitoring—A Socioeconomic Review
4:09-4:17 PM

Authors
Krystal Lynne Tomei, MD; Nicholas Bambakidis, MD (Jersey City, NJ)

Pitfalls of Calculating Hospital Readmission Rates Based Solely on Nonvalidated Administrative Datasets
4:18-4:26 PM

Authors
Beejal Y. Amin, MD; Urvij Modhia, MD; Steven Takemoto, PhD; Sigurd Berven, MD; Praveen Mummaneni, MD (San Francisco, CA)

The Relative Impact of Lumbar Spondylosis on Quality of Life in The United States: A Population Health Perspective
4:27-4:35 PM

Authors
Scott Parker, MD; Cyrus Wong; Marcus Gates; Matthew McGirt (Nashville, TN)

4:36-4:44 PM

Authors
Kristin Jaclyn Weaver, MD, PhD; Dan Neal, PhD; Daniel Hoh, MD; J. Mocco, MD, MS; Fred Barker II, MD; Brian Hoh, MD (Gainesville, FL)

Total Money Raised, Comparison to Health Related PACs
4:45-4:53 PM

Authors
Mark A. Spatola, MD (Orange Park, FL)

Use and Utility of Preoperative Hemostatic Screening and Patient History in U.S. Adult Neurosurgical Patients
4:54-5:02 PM

Authors
Beejal Y. Amin, MD; Urvij Modhia, MD; Steven Takemoto, PhD; Sigurd Berven, MD; Praveen Mummaneni, MD (San Francisco, CA)
739
Using the Electronic Medical Record to Maximize Practice Efficiency: An Example in the Neurosurgery ICU
5:03-5:11 PM
Authors
Christopher Michael Nickele, MD; Joshua Medow, MD (Madison, WI)

740
Aggressive Treatment of Traumatic Brain Injury is Cost Effective
5:12-5:20 PM
Authors
Jared Pisapia, MD; Robert Whitmore, MD; Jayesh Thawani, MD; M. Sean Grady, MD; Joshua Levine, MD; Matthew Sanborn, MD; Sherman Stein, MD (Philadelphia, PA)

741
Is there a Shortage of Neurosurgeons in the US, and What is a “Shortage,” Anyway?
5:21-5:29 PM
Authors
William T. Couldwell, MD, PhD; Steve Slane, PhD; Aaron Cohen-Gadol, MD; Michael Vogelbaum, MD, PhD; Beth Dery, MBA; Judy Rosman, JD (Salt Lake City, UT)

Symposium
What There’s to Know Spinal Fusion: Basic Science Of Bone Healing and Scientific Evidence Regarding the Advantages and Disadvantages of Fusion Augmentation
2:00-3:29 PM

Biology and Biomechanics of Spinal Fusion
2:00-2:14 PM
Speaker
Michael Steinmetz, MD

Basic Science Behind Mechanism of Action of DBMs, BMPs, and Stem Cell Technology
2:15-2:29 PM
Speaker
Daniel K. Resnick, MD

Scientific In Vitro and Clinical Evidence to Support Electrostimulation in Bone Healing
2:30-2:44 PM
Speaker
Nicholas Theodore, MD

Outcomes and Complications of BMPs in Spinal Surgery: When to Use and When Not to Use
2:45-2:59 PM
Speaker
Christopher I. Shaffrey, MD

BMPs and Cancer: Review of the Literature and Laboratory Data
3:00-3:14 PM
Speaker
Paul Park, MD

Controversies in Spinal Fusion: Cost/Benefit and Risk/Benefit Analysis
3:15-3:29 PM
Speaker
Joseph S. Cheng, MD

AANS/CNS Spine Section Session
2:00-3:30 PM
Jr. Ballroom D, Miami Beach Convention Center
Moderators
Praveen V. Mummaneni, MD
Frank La Marca, MD

Should Routine Screening Ultrasonography for Deep Vein Thrombosis Be Used in Asymptomatic Patients During Hospitalization for Elective Spine Surgery? An Analysis and Review of 587 Consecutive Patients
4:01-4:08 PM
Authors
David Kojo Hamilton, MD; Akil Patel, MD; Charles Sansur, MD (Baltimore, MD)

The Scope and Impact of Wrong—Level Lumbar Spine Surgery: a Survey of the Joint Section on Disorders of the Spine and Peripheral Nerves
4:09-4:17 PM
Authors
Michael W. Groff, MD; Joshua Heller; Eric Potts, MD; Praveen Mummaneni, MD; Christopher Shaffrey, MD; Justin Smith, MD, PhD (Boston, MA)
744 Long-Term Health-Related Quality of Life Outcomes After Minimally Invasive Transforaminal Lumbar Interbody Fusion: Analysis of 318 Consecutive Patients
4:18-4:25 PM
Authors
Daniel K. Fahim, MD; Namath Hussain, MD; Evan Begun, BS; Joseph Joshua, BS; Mick Perez-Cruet, MD, MS (Royal Oak, MI)

745 Kyphotic Deformities of the Cervical Spine: Retrospective Study of 90 Patients
4:26-4:33 PM
Authors
Petr Nesnidal, MD; Jan Stulik; Jan Kryl, MD; Tomas Vyskocil, MD; Michal Barna, MD (Prague, Czech Republic)

746 Is Surgery for Cervical Spondylotic Myelopathy Cost Effective?
4:39-4:46 PM
Authors
Eric Woodard, MD; Branko Kopjar; Michael Fehlings, MD; Sangwook Yoon, MD; Paul Arnold, MD; Eric Massicotte, MD; Alexander Vaccaro, MD; Darrel Brodke, MD; Christopher Shaffrey, MD; Robert Banco, MD; Jens Chapman, MD; Michael Janssen, DO; Christopher Bono, MD; Rick Sasso, MD; Mark Dekutoski, MD; Ziya Gokaslan, MD; Neilank Jha; Stephanie Hewson (Seattle, WA)

747 Post-Operative C5 Root Palsy and the Use of Neurophysiologic Monitoring
4:47-4:54 PM

748 Very Late Complications of Cervical Arthroplasty: Results of Two Controlled Randomized Prospective Studies
4:55-5:02 PM
Author
Robert J. Hacker, MD (Springfield, OR)

749 Anterior Corpectomy Versus Posterior Laminoplasty—Is the Risk of Postoperative C5 Palsy Different?
5:03-5:10 PM
Authors
Nathan Christopher Rowland, MD; Jau ching Wu, MD; Gurpreet Gandhoke, MD; Praveen Mummaneni, MD (San Francisco, CA)

Synthes Craniofacial Award
2:31-2:45 PM
Speaker
Michael Tso, MD

Synthes Spinal Cord Injury Award
2:46-2:59 PM
Speaker
Jefferson Wilson, MD

J Douglas Miller Lecture
The Evolving Role of the Neurosurgeon in Neurotrauma
3:00-3:29 PM
Speaker
P. David Adelson, MD

Synthes Craniofacial Award
2:31-2:45 PM
Speaker
Michael Tso, MD

Synthes Spinal Cord Injury Award
2:46-2:59 PM
Speaker
Jefferson Wilson, MD

J Douglas Miller Lecture
The Evolving Role of the Neurosurgeon in Neurotrauma
3:00-3:29 PM
Speaker
P. David Adelson, MD

AANS/CNS Neurotrauma Section Session
2:00-5:30 PM
Ballroom D, Miami Beach Convention Center

Announcement of 2011 Codman Recipient
2:00-2:05 PM

2010 Codman Presentation
Searching for the Period of Vulnerability: A Repeat Concussive Study
2:06-2:30 PM
Speaker
Chad William Farley, MD

Synthes Craniofacial Award
2:31-2:45 PM
Speaker
Michael Tso, MD

Synthes Spinal Cord Injury Award
2:46-2:59 PM
Speaker
Jefferson Wilson, MD

J Douglas Miller Lecture
The Evolving Role of the Neurosurgeon in Neurotrauma
3:00-3:29 PM
Speaker
P. David Adelson, MD

Abstract Presentations
4:00-5:30 PM
Moderators
Jamie S. Ullman, MD
David O. Okonkwo, MD, PhD

750 Autologous and Acrylic Cranioplasty: A Single-Institution Review of 258 Cases
4:00-4:08 PM
Authors
Daniel Robert Klinger, MD; Christopher Madden, MD; Joseph Beshay, MD; Jonathan White, MD; Kim Rickert, MD (Dallas, TX)

751 Simvastatin Treatment Induces Angiogenesis and Improves Functional Outcome After Traumatic Brain Injury in Rats
4:09-4:17 PM
### AANS/CNS Tumor I Section Session
2:00-5:30 PM
Jr. Ballroom C, Miami Beach Convention Center

**Moderators**
- Ennio Antonio Chiocca, MD, PhD
- Ricardo Jorge Komotar, MD

#### Symposium
**Difficult Meningiomas—Current Treatment Paradigms**
2:00-3:30 PM

**Introduction**
2:00-2:02 PM
Speaker
Ricardo Jorge Komotar, MD

**Preoperative Embolization for Complex Meningiomas**
2:03-2:13 PM
Speaker
Howard A. Riina, MD

**Q&A**
2:14-2:16 PM

**Surgical Approaches to Complex Meningiomas**
2:17-2:32 PM
Speaker
Jacques J. Morcos, MD, FACS

**Q&A**
2:33-2:35 PM

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### 752
**Medial Septal Theta Frequency Stimulation Improves Spatial Working Memory Following Traumatic Brain Injury.**
4:18-4:26 PM

Authors
Asim Mahmood, MD; Hongtao Wu; Michael Chopp (Detroit, MI)

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### 753
**Decompressive Craniectomy with Lattice Duraplasty: A Study on Intracranial Pressure and Imaging Features**
4:27-4:35 PM

Authors
Darrin J. Lee, MD; Gene Gurkoff, PhD; Ali Izadi, BS; Philip Schwartzkroin, PhD; Robert Berman, PhD; Jan Muizelaar, MD, PhD; Bruce Lyeth, PhD; Kiarash Shahlaie, MD, PhD (Sacramento, CA)

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### 754
**Delayed Neurologic Deterioration Following Mild Head Injury: Etiology, Temporal Course and Outcomes**
4:36-4:44 PM

Authors
Osamah Choudhry; Charles Prestigiacomo, MD; Pratik Shukla; Nihar Gala; Ziad Sifri (Newark, NJ)

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### 755
**Dynamic Phase Amplitude Coupling Between ICP and EEG in Traumatic Brain Injured Patients**
4:45-4:53 PM

Authors
Mahsa Malekmohammadi; Shadnaz Asgari, PhD; Paul Vespa, MD; Xiao Hu, PhD; Nader Pouratian, MD, PhD (Los Angeles, CA)

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### 756
**Intermittent vs. Continuous Cerebrospinal Fluid Drainage Management in Adult Severe Traumatic Brain Injury: A Prospective, Non-Randomized Cohort Study**
4:54-5:02 PM

Authors
Nathan T. Zwagerman, MD; Einyinna Nwachuku; David Pandykowski; Ava Puccio; Anita Fetzick; Bobby Scruggs; Daniel Winger; David Okonkwo (Pittsburgh, PA)

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### 757
**Early and Late Changes in Lower Urinary Tract Function Following Experimental Cervical Spinal Cord Injury**
5:03-5:11 PM

Authors
Daniel Jin Hoh, MD; Teresa Martin-Carreras; Gabriele Grossl; Michael Lane; David Fuller; Paul Reier (Gainesville, FL)

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### 758
**Predictors of Outcome in Acute Subdural Hematoma: A Retrospective Single-Center Analysis of 319 Patients**
5:12-5:20 PM

Authors
Ulrich Meier, MD, PhD; Ferass AlZain, MD; Martina Ebenau; Johannes Lemcke, MD (Berlin, Germany)

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### 759
**Management of Chronic Subdural Hematoma: A Brazilian National Survey and Systematic Literature Review**
5:21-5:29 PM

Authors
Alisson R. Teles, MD; Jorge Kraemer, MD, PhD (Porto Alegre, Brazil)
The Role of Radiotherapy for Atypical Meningiomas
2:55-3:10 PM
Speaker
Philip H. Gutin, MD

Chemotherapeutic Options for Malignant Meningiomas
3:14-3:29 PM
Speaker
Susan M. Chang, MD

Beverage Break
3:30-4:00 PM
Exhibit Hall C & B
Miami Beach Convention Center

Abstract Presentations
4:00-5:30 PM
Moderators
Nader Sanai, MD
Ricardo Jorge Komotar, MD

PREUSS AWARD
760 Identifying Genes that Promote Spinal Metastasis in Sonic Hedgehog—Dependent Medulloblastoma in Mice
4:00-4:09 PM
Authors
Michael Lee Mumert, MD; Carolyn Pedone; Xiaochong Wu, PhD; Paul Northcott; Michael Taylor, MD, PhD; Daniel Fults, MD (Salt Lake City, UT)

761 Early Morning Cortisol Levels as Predictors of Short and Long-term Adrenal Function after Endonasal Transsphenoidal Surgery for Pituitary Adenomas and Rathke’s Cleft Cysts
4:10-4:19 PM
Authors
Nancy McLaughlin, MD; Pejman Cohan, MD; Philip Barnet, MD; Amy Eisenberg, RN, NP; Charlene Chaloner, RN; Daniel Kelly, MD (Santa Monica, CA)

762 Symptomatic Hyponatremia and Diabetes Insipidus after Endoscopic Pituitary Surgery
4:20-4:29 PM
Authors
Edward R. Laws Jr., MD; Jacek Kunicki; Sherry Iuliano; Gami Barkhoudarian (Boston, MA)

763 Endoscopic Third Ventriculostomy in Adults: Outcome Analysis in 140 Patients
4:30-4:39 PM
Authors
Walter Grand, MD; Jody Leonardo (Buffalo, NY)

764 Identification of Retinol Binding Protein 1 (RBP1) Methylation as a Marker of IDH1 and IDH2 Mutation in Gliomas
4:40-4:49 PM
Authors
Arthur Po-Fei Chou, MD, PhD; Reshmi Chowdhury; Sichen Li; Weidong Chen; Andrew Kim; Julia Selfridge; David Piccioni; Stephen Chang; Shadi Lalezari; Jeffrey Lin; Robert Prins; Paul Mischel; William Yong; Timothy Cloughesy; Stanley Nelson; Linda Liu, MD, PhD; Albert Lai, MD, PhD (Los Angeles, CA)

765 Impact of Intraoperative Stimulation Brain Mapping on Glioma Surgery Outcome: A Meta-Analysis
4:50-4:59 PM
Authors
Philip C. de Witt Hamer, MD; Santiago Gil Robles, MD; Aeliko Zwinderman, PhD; Hugues Duffau, MD, PhD; Mitchel Berger, MD (Bennebroek, Netherlands)

766 An Extent of Resection Threshold for Recurrent Glioblastomas
5:00-5:09 PM
Authors
Mark E. Oppenlander, MD; Andrew Wolf, BS; Peter Nakaji, MD; Randall Porter, MD; Kris Smith, MD; Robert Spetzler, MD; Nader Sanai, MD (Phoenix, AZ)

767 Extent of Resection at Repeat Cranietomy for Recurrent Glioblastoma Predicts Overall Survival
5:10-5:19 PM
Authors
Orin Bloch, MD; Seunggu Han, MD; Gurvinder Kaur, BS; Manish Aghi, MD, PhD; Michael McDermott, MD; Mitchel Berger, MD; Andrew Parsa, MD, PhD (San Francisco, CA)

768 A Comprehensive Long-Term Retrospective Analysis of Silent Corticotrophic Adenomas versus Non-Hormone Expressing Adenomas
5:20-5:29 PM
Authors
Arman Jahangiri, BS; Sandeep Kunwar, MD; Lewis Blevins, MD; Manish K. Aghi, MD (San Francisco, CA)
The principles of selecting suitable approaches, techniques and tactics of multimodality treatment of acoustic neuromas will be described.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Identify the indications for operative treatment, radiation treatment, drug treatment and observation
- Apply technical details of acoustic tumor surgery
- Discuss how to avoid complications and study the outcome of surgery, radiation treatment and observation

### 302 Minimally Invasive Spinal Neurosurgery: Indications, Techniques and Complications
**Room B118/119, Miami Beach Convention Center**

**Moderator:**
Kevin T. Foley, MD

**Panelists:**
E. Hunter Dyer, MD
Kurt M. Eichholz, MD
Langston T. Holly, MD

This seminar will focus on endoscopic and minimally invasive techniques for cervical, thoracic and lumbar spine surgery. Techniques for decompression and fusion will be discussed.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Describe various endoscopic and minimally invasive techniques for spinal surgery
- Discuss the indications, results and potential complications for these techniques

### 303 Lumbar Spine Fusion
**Room A106/107, Miami Beach Convention Center**

**Moderator:**
Joan Frances O'Shea, MD

**Panelists:**
Andrew T. Dailey, MD
Eric M. Massicotte, MD
Russ P. Nockels, MD
Daniel K. Resnick, MD

This seminar describes and discusses the issues of patient selection, surgical indication and surgical techniques as they pertain to lumbar fusion. A global approach will be provided.

**Learning Objectives:**
After completing this educational activity, participants should be able to:
- Identify the fundamentals of the surgical decision making process
- Discuss factors involved with patient selection for lumbar spine fusion
- Distinguish between the surgical strategies for lumbar spine fusion and their relative indications, as well as their pros and cons

### 304 Cavernous Malformation: Current Controversies in Management
**Room A102, Miami Beach Convention Center**

**Moderator:**
Murat Gunel, MD

**Panelists:**
Michael T. Lawton, MD
R. Michael Scott, MD
Robert F. Spetzler, MD
Gary K. Steinberg, MD, PhD

This seminar will use didactic and case-based discussion to explain the clinical diagnosis and management of patients with intracranial cavernous malformations.
Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the presentation, diagnosis and natural history of intracranial cavernous malformations
• Review the expectant, surgical and radiosurgical treatment options for patients with cavernous malformations
• Review familiar cavernous malformation syndromes

305
Functional Mapping of the Cerebral Cortex: Advantages and Limitations
Room A104, Miami Beach Convention Center

Moderator: Richard W. Byrne, MD
Panelists: Isabelle M. Germano, MD Hiroto Kawasaki, MD Daniel L. Silbergeld, MD

All aspects and methods of functional mapping for neurosurgery will be discussed, including removal of brain tumors, vascular lesions, and epilepsy for awake and asleep patients.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Identify and work within eloquent areas of the brain
• Discuss the technologies available to localize eloquent cortex, how this can enhance the safety of the surgery and what their limitations are
• Describe common technical errors made in functional mapping

306
Chiari Malformations: Diagnosis Treatments and Failures
Room A105, Miami Beach Convention Center

Moderator: Edward H. Oldfield, MD
Panelists: Ulrich Batzdorf, MD Karin M. Muraszko, MD W. Jerry Oakes, MD

This seminar will focus on the pathophysiology of Chiari malformations, the indications for treatment, therapeutic options, and the basis of their success and failure.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe the current concepts of the pathophysiology of Chiari malformations
• Recognize the indications for treatment of Chiari malformations
• Discuss the options for treatment of Chiari malformations

307
Update on Lumbar Stenosis
Room A110, Miami Beach Convention Center

Moderator: Robert E. Isaacs, MD
Panelists: Christopher H. Comey, MD Carl Laurysen, MD William Mitchell, MD Claudius Thome, MD

This seminar will evaluate short-term and long-term outcomes of both surgical and nonsurgical treatment of lumbar stenosis. It also will evaluate recently developed minimal access treatments for stenosis.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the natural history of spinal stenosis
• Explain the data underlying non-operative therapies for spinal stenosis
• Explain the data underlying conventional operative therapies for spinal stenosis
• Explain the data underlying the newer and less conventional operative therapies for spinal stenosis

308
Controversies in the Management of Intracerebral Hematomas
Room A108/109, Miami Beach Convention Center

Moderator: David W. Newell, MD
Panelists: Jonathan A. Friedman, MD Alexander Mendelow, PhD Yong-Kwang Tu, MD

The pathophysiology of spontaneous intracerebral hemorrhage will be described, as well as current treatment options. Recent ongoing clinical trials for treatment of ICH patients will be discussed.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the management of intracerebral hemorrhage according to current clinical evidence
• Discuss rationale for current clinical studies
• Discuss evidence based medicine in the management of a patient with intracerebral hemorrhage
309 Advances in Carotid Disease: Surgery vs. Endovascular Therapy
Room B121, Miami Beach Convention Center
Moderator: Christopher M. Loftus, MD
Panelists: Felipe C. Albuquerque, MD Robert E. Harbaugh, MD Sean D. Lavine, MD John A. Wilson, MD

This seminar will explore the risk/benefit ratio for high-risk carotid surgery.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss surgical strategies for maximizing chances of remission in patients with acromegaly and Cushing’s disease
• Describe utility and technical nuances of endovascular endoscopic removal of pituitary adenomas
• Construct appropriate adjunctive treatment algorithms for patients needing additional therapy after unsuccessful pituitary surgery

310 Pituitary Tumors
Room B122, Miami Beach Convention Center
Moderator: Daniel F. Kelly, MD
Panelists: Griffith R. Harsh IV, MD John A. Jane Jr., MD Kevin O. Lillehei, MD Nelson M. Oyesiku, MD, PhD

Participants will obtain a state-of-the-art update on endonasal surgical management of pituitary tumors, as well as medical and radiosurgical adjunctive therapies.

311 Current Use of Biologic Graft Extenders for Spinal Fusion
Room B212, Miami Beach Convention Center
Moderator: James S. Harrop, MD
Panelists: Robert S. Bray Jr., MD Allan D. Levi, MD, PhD Srinivas K. Prasad, MD Stephen I. Ryu, MD Nelson Saluda, MD

This seminar will focus on novel cutting-edge strategies for spine stabilization, specifically focusing on bone graft extenders and substitutes and biological adjuncts for fusion.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the use of biologics and graft extenders for use in spinal fusion
• Discuss the current use of BMP for spinal arthrodesis
• Discuss current and future use of biologics in treatments for spinal cord injury
• Discuss current and future use of biologics for disc disease

312 Management of Spinal Axis Trauma
Room B213, Miami Beach Convention Center
Moderator: Gregory R. Trost, MD
Panelists: Bizhan Aarabi, MD J. Bradley Bellotte, MD Steven Casha, MD, PhD Sean M. Lew, MD Nicholas Theodore, MD

A variety of commonly encountered spine injuries/fractures will be discussed. The controversies and rationale for treatment strategies will be reviewed.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the pertinent issues and alternatives of surgery for spine injuries
• Review rationale for various spine trauma treatments

313 Intracranial Endoscopy
Room B112, Miami Beach Convention Center
Moderator: Alan R. Cohen, MD
Panelists: Luiz Carlos de Alencastro, MD James M. Drake, MD David F. Jimenez, MD Henry W. S. Schroeder, MD, PhD

This seminar focuses on the state-of-the-art of intracranial endoscopic neurosurgery, including ventriculoscopic surgery, endoscope-assisted microsurgery, endoscopic transnasal surgery and endoscope-assisted craniosynostosis surgery.
Learning Objectives:
After completing this educational activity, participants should be able to:
• Review the current state of intracranial endoscopy
• Explain the endoscopic treatment of hydrocephalus, cysts and tumors
• Describe the indications for endoscopic transnasal and skull base surgery
• Evaluate the efficacy of endoscope assisted craniosynostosis surgery
• Discuss complications and strategies for complication avoidance

314
Malignant Brain Tumors: State-of-the-Art Treatment
Room D233,
Miami Beach Convention Center
Moderator:
Joseph M. Piepmeier, MD
Panelists:
Mitchel S. Berger, MD
Ennio Antonio Chiocca, MD, PhD
Francesco DiMeco, MD
Andrew Parsa, MD, PhD

This seminar will discuss new advances in the management of malignant gliomas, including gene therapy, convection-enhanced drug and immunotherapy. These advances will be discussed in the context of tumors managed by the neurosurgeon.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Examine innovative techniques for surgery
• Review the tumor biology with gene and vaccine therapy
• Examine the role of stem cells in gliomas

315
Employment or Not: What are the Options?
Room B113,
Miami Beach Convention Center
Moderator:
James I. Ausman, MD, PhD
Panelists:
James R. Bean, MD
Fernando G. Diaz, MD, PhD
Gregory B. Lanford, MD
Troy D. Payner, MD
Khalid A. Sethi, MD
Kristopher Webb, MD
Richard N. Wohns, MD

A wide range of treatment strategies and implantable devices have been developed to treat facet disease, spinal stenosis and other manifestations of posterior column disease. The implantable devices include X-Stop, Dynasis, TOPS and others. The biomechanical principle of each implant class, the results of recent clinical trials, and the known limitations and failures on these implants will be presented by investigators in the field.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss all employment options
• Discuss how to negotiate in any situation
• Explain how to have power in the coming healthcare crisis

316
Spinal Motion Preservation Using The Posterior Column Implants
Room B114,
Miami Beach Convention Center
Moderator:
M. Samy Abdou, MD

This course will address the single most pressing issue facing neurosurgeons today. Should you become an employee of the hospital? The panel, in an open discussion with the audience, will discuss each of the available options. In addition, discussion will include whether or not Obamacare and ACOs will really happen; how you can get leverage in bundling of payments; how to negotiate with the hospital and/or others; what are the tricks of the “other side” and how do you recognize those “tricks?” The panel will discuss techniques you can use to remain independent and to gain and use power.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Discuss the normal anatomy of the posterior spinal column, as well as the pathophysiology of degenerative disease.
• Discuss the biomechanical basis of non-fusion technology
• Explain the design features of both pedicle screw-based and inter-spinous process implants
• Compare and contrast the differing treatment strategies
• Discuss the relevant clinical results of pedicle screw-based stabilization devices and inter-spinous process implants

Panelists:
Domagoj Coric, MD
Russ P. Nockels, MD
William C. Welch, MD

317
Getting the Most Out of Your Residency
Room D234,
Miami Beach Convention Center
Moderator:
Lawrence S. Chin, MD
Panelists:
Howard M. Eisenberg, MD
John S. Kuo, MD, PhD
N. Scott Litofsky, MD
Fassil B. Mesfin, MD, PhD
David J. Padalino, MD
This seminar will help medical students and beginning residents maximize their experience during residency.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Explain the residency application process
- Review ways to maximize residency for professional development
- Explain how to balance professional and personal development
- Develop strategies to maximize financial success during residency
- Discuss the future of neurosurgery

319 New Innovations in Epilepsy Surgery
Room B116,
Miami Beach Convention Center

Moderator:
Nicholas M. Barbaro, MD
Panelists:
Mojgan Hodaie, MD
Jean Regis, MD
Matthew D. Smyth, MD

This seminar will focus on the surgical approaches to epilepsy that do not involve removal of tissue. Various electrical stimulation techniques will be discussed, including vagus nerve stimulation and deep brain stimulation (open and closed loop), as well as procedures currently under investigation, such as radiosurgery and cerebral cooling. More traditional non-resective techniques, such as corpus callosotomy and multiple sub-pial transection, will also be included in this comprehensive discussion. Neurosurgical leaders in the respective fields will present the latest information on these topics.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Discuss clinically relevant aspects of the pathophysiology of epilepsy
- Discuss current experimental therapies being developed as non-resective strategies in the surgical treatment of epilepsy
- Review the currently approved non-resective surgical treatments of epilepsy

320 Contemporary Management for Adult Hydrocephalus
Room D235,
Miami Beach Convention Center

Moderator:
Guy M. McKhann II, MD
Panelists:
Marvin Bergsneider, MD
Petra Margarete Klinge, MD, PhD

This seminar will review the current management and controversies in the evaluation and treatment of adult (normal pressure) hydrocephalus.

Learning Objectives:
After completing this educational activity, participants should be able to:
- Discuss current pathophysiology of adult hydrocephalus
- Describe preoperative evaluation strategies to determine surgical candidacy in adult hydrocephalus
- Evaluate the pros and cons of shunt surgery versus ETV in the management of adult hydrocephalus

321 Cerebral Venous System: Surgical Considerations
Room B117,
Miami Beach Convention Center

Moderator:
Albert L. Rhoton Jr., MD
Panelists:
Ossama Al-Mefty, MD
Turker Kilic, MD, PhD
Jacques J. Morcos, MD
Laligam N. Sekhar, MD
Chandranath Sen, MD

This seminar will review the anatomy and surgery of the major venous sinuses and veins of the brain, and the approaches to the cavernous sinus and jugular foramen.
Learning Objectives:
After completing this educational activity, participants should be able to:
• Explain the venous hazards of intracranial surgery
• Recognize operative procedures to avoid injury and complications related to the major venous sinus intracranial veins, the cavernous sinus and jugular foramen
• Discuss the anatomy of the approaches to the cavernous sinus and jugular foramen

322
Choosing and Developing a Neurosurgical Practice
Room A111, Miami Beach Convention Center
Moderator:
Kathryn Beauchamp, MD
Clarence B. Watridge, MD
Panelists:
Joshua J Beardsley, PA-C
J. Nozipo Maraire, MD
Harry R. van Loveren, MD
Gregory J. Zipfel, MD

This seminar will discuss the classification and management of idiopathic, congenital, paralytic, and iatrogenic deformity in the developing spine.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Detail appropriate clinical and radiographic evaluation of adolescents and young adult spinal deformity
• Identify patient related factors that compromise surgical treatment

323
Principles and Techniques of Deformity Correction in Adolescents and Young Adults
Room A208, Miami Beach Convention Center
Moderator:
Christopher I. Shaffrey, MD
Panelists:
Peter Douglas Angevine, MD, MPH
Amer F. Samdani, MD
Harry L. Shubarger, MD

This course will review the classification and management of idiopathic, congenital, paralytic, and iatrogenic deformity in the developing spine.

Learning Objectives:
After completing this educational activity, participants should be able to:
• Describe cost effectiveness research (CER) and distinguish it from traditional clinical trials
• Describe the social and political motivation for this type of research and understand the importance that clinicians participate in all levels of CER
• Describe the drawbacks and shortcoming of CER as it applies to surgically managed disease states

WINS Breakfast
Wednesday, April 18
7:30-9:00 AM
Cowrie 1 & 2
Loews Miami Beach Hotel
Fee: $100

For the sixth year, the Women in Neurosurgery organization is providing AANS Annual Meeting attendees an opportunity to network at a breakfast reception featuring the Louise Eisenhardt Lecturer, Cynthia Breazeal, DCs as our honored guest. Dr. Cynthia Breazeal is the director of the Personal Robots Group at the MIT Media Laboratory. She developed the robot “Kismet” which is internationally recognized and is one of the best known robots developed to explore social and emotional aspects of human-robot interaction.
Louise Eisenhardt Lecture
Socially Assisted Robots and Applications in Healthcare
9:45-10:06 AM
Introduced by
Susan C. Pannullo, MD
Speaker
Cynthia Breazeal, DcS

Richard C. Schneider Lecture
The Science of Practice—Addressing the Challenges of Modern Healthcare
10:52-11:15 AM
Introduced by
Douglas S. Kondziolka, MD
Speaker
Anthony L. Asher, MD

AMA Update
11:16 - 11:19 AM
Speaker
Peter W. Carmel, MD

SYNTHERS RESIDENT CRANIOFACIAL AWARD
804
The Utility of a Screening Protocol for Blunt Cerebrovascular Injury Using Computed Tomographic Angiography
11:20-11:34 AM
Authors
Michael Tso, MD; Michael Lee; Parviz Dolati, MD; Corina Tiruta, MSc; Chad Ball, MD; William Morrish, MD; Alim Mitha, MD, MSc; Andrew Kirkpatrick, MD; John Wong, MD, MSc (Calgary, Canada)
Discussant Mitesh V. Shah, MD

805
Gamma Knife Thalamotomy for Medically-Refractory Tremor in Patients Not Suitable for DBS
11:35-11:49 AM
Authors
Douglas S. Kondziolka, MD; Ali Kooshkabadi; Daniel Tonetti (Pittsburgh, PA)
Discussant Isabelle M. Germano, MD

NREF Grant Presentations
11:50-11:54 AM
Speaker
Griffith R. Harsh IV, MD

CNS Update
11:55-11:58 AM
Speaker
Christopher E. Wolfla, MD
2011 - 2012 CNS President

Van Wagenen Lecture
Leadership Training in Neurosurgical Resident Education Guaranteeing the Future of Neurosurgery
11:59 AM-12:19 PM
Introduced by
Odette A. Harris, MD
Speaker
Karin M. Muraszko, MD

806
Durability of Carotid Endarterectomy
12:20-12:34 PM
Authors
Fredric B. Meyer, MD; Maya Babu MD (Rochester, MN)
Discussant Felipe C. Albuquerque, MD

Humanitarian Award
12:35-12:39 PM
Introduced by
Paul C McCormick, MD
Recipient
A. Leland Albright, MD

807
The Impact of Extent of Resection on Malignant Transformation of Pure Oligodendrogliomas
12:40-12:54 PM
Authors
Laura A. Snyder, MD; Andrew Wolf, BS; Randall Porter, MD; Kris Smith; Robert Spetzler, MD; Nader Sanai, MD (Phoenix, AZ)
Discussant Frederick F. Lang Jr., MD
808
Natural History of Arachnoid Cysts in Adults
12:55-1:09 PM
Discussant Frederick A. Boop, MD
Authors
Cormac O. Maher, M; Wajd Al-Holou, M.D.; Samuel Terman, B.S.; Craig Kilburg, M.D.; Hugh J.L. Garton, M.D.; Cormac Maher, M.D. (Ann Arbor, MI)

Introduction of Incoming AANS President
1:10-1:11 PM
Introduced by Paul C. McCormick, MD
Speaker Mitchel S. Berger, MD

AANS History Section Session
2:00-5:30 PM
Ballroom D, Miami Beach Convention Center
Moderator Mark C. Preul, MD

2:00-2:10 PM
Introduced by Mark C. Preul, MD

2:11 - 2:45 PM
Neural Regeneration, History of Florida
Antonio Ponce De Leon, MD

2:46-2:55 PM
Introduced by Larry V. Carson, MD

2:56-3:29 PM
Magical Waters for Restoration of Life
T. Forcht Dagi, MD, PhD

VESALIUS AWARD
809
Percutaneous Vertebroplasty: A History of Procedure, Technology, Culture, Specialty and Critical Economics
4:00-4:13 PM
Authors
Sergiy V. Kushchayev, MD; Sergiy Kushchayev, MD; Philip Wiener; Robert Spetzler, MD; Volker Sonntag, MD; Mark Preul, MD (Phoenix, AZ)

810
The Giant Chasers-Harvey Cushing and John Hunter
4:14-4:27 PM
Authors
James L. Stone, MD; James Goodrich, MD, PhD; Kenji Muro (Evanston, IL)

811
The Treatment of Glioblastoma Multiforme: Have We Come Far?
4:28-4:41 PM
Authors
Mark C. Preul, MD; M. Kalani, MD, PhD; Jay Turner, MD, PhD; Nader Sanai, MD; Robert Spetzler, MD; Mark Preul, MD (Phoenix, AZ)

812
The Historical Path to the Current Understanding and Management of Tethered Spinal Cord

4:42-4:55 PM
Authors
Sam Safavi-Abbasi, MD, PhD; Pal Randhawa, MD; Naina Gross, MD; Timothy Mapstone, MD (Oklahoma City, OK)

813
Manucher Javid, Urea and the Rise of Osmotic Therapy for Intracranial Pressure
4:56-5:09 PM
Authors
Brandon Rocque, MD; John Kuo, MD, PhD; Robert Dempsey, MD (Madison, WI)

814
Historical Evolution of the Microvascular Decompression Procedure for Trigeminal Neuralgia: From Dandy to Jannetta
5:10-5:26 PM
Authors
James Liu, MD; Osamah Choudhry; Bradley Kushner; Pratik Shukla, BA; Ronald Apfelbaum, MD (Newark, NJ)

Q&A
5:27-5:29 PM

AANS/CNS Pain Section Session
2:00-5:30 PM
Jr. Ballroom D, Miami Beach Convention Center
Moderators
Christopher J. Winfree, MD
Julie G. Pilitsis, MD, PhD
WILLIAM H. SWEET YOUNG INVESTIGATOR AWARD

815
Deep Brain Stimulation for Phantom Limb Pain
2:00-2:08 PM

Authors
Erlick Pereira, MD; Sandra Boccard; Liz Moir; Clara Chamadoira; Paulo Linhares; Maria Jose Rosas; V Rebelo; Rui Vaz; Alexander Green; Tipu Aziz (Oxford, United Kingdom)

816
Endoscopic-Assisted Posterior Extrapleural Upper Thoracic Sympathectomy. A Cadaveric Study
2:09-2:17 PM

Authors
Ahmed M. Raslan, MD; Andrew Nemecek, MD (Portland, OR)

817
Predictors of Outcome After Radiosurgery for Trigeminal Neuralgia
2:18-2:26 PM

Authors
Hussein Al-Ahmadi, MD; Gelareh Zadeh; Norman Laperriere; Shobhan Vachrjani; Fred Gentili; Nora Mazloom; Mojgan Hodaie (Toronto, Canada)

818
Comparison of Visual Analogue Scale (VAS) to Odom’s Criteria for Use in Cervical Clinical Evaluation
2:27-2:35 PM

Authors
Dennis E. Bullard, MD; Jillian Valentine, BA (Raleigh, NC)

819
Microvascular Decompression for Trigeminal Neuralgia in Patients With and Without Prior Stereotactic Radiosurgery, a Retrospective Review of a Consecutive Single Surgeon Experience
2:36-2:44 PM

Authors
Joseph C. T. Chen, MD, PhD (Los Angeles, CA)

820
Percutaneous Trigeminal Rhizotomy in a Biplane Angiosuite
2:45-2:53 PM

Authors
Jonathan Jay Stone, MD; Katherine Rose; Zeguang Ren, MD; Babak Jahromi, MD, PhD (Rochester, NY)

821
Long-Term Follow-Up of Paddle Lead Cervical Spinal Cord Stimulation for Failed Neck Surgery Syndrome
2:54-3:01 PM

Authors
Nestor Denys Tomycz, MD; Srinivas Chivikula, BS; John Moossy, MD (Pittsburgh, PA)

822
Long-term Follow-up of Patients Implanted with a 5-Column Paddle Electrode for Neuropathic Pain
3:02-3:10 PM

Authors
Chengyuan Wu, MD; Ashwini Sharan, MD (Philadelphia, PA)

823
Predicting Outcomes in Patients with Trigeminal Neuralgia: Pre-operative FIESTA MRI and Microvascular Decompression
3:11-3:19 PM

Authors
Kurt J Niesner; Jonathan Forbes, MD; Calvin Cooper, MD; Peter Konrad, MD, PhD; Joseph Neimat, MD, MS (Nashville, TN)

824
Modified Techniques of Microvascular Decompression in Patients with Trigeminal Neuralgia: Recent Encounters with 80 Consecutive Patients
3:20-3:28 PM

Authors
Hidetoshi Kasuya, MD; Shigeru Tani (Tokyo, Japan)

John Loeser Lecture
4:00-4:59 PM
Speaker
Richard Deren Penn, MD

AAMS/CNS Pediatrics Section Session
2:00-5:30 PM
Ballroom B, Miami Beach Convention Center

Moderator
Alan R. Cohen, MD

Matson Lecture
Medulloblastoma Redefined: The Molecular Basis of the Subtypes of CNS Embryonal Tumors
2:00-3:00 PM
Speaker
Scott L. Pomeroy, MD, PhD
825 Pediatric Bone Flap Resorption Rates after Decompressive Craniectomy for Severe Traumatic Brain Injury 3:01-3:10 PM
Authors Ning Lin, MD; Lissa Baird, MD; Darren Orbach, MD, PhD; Edward Smith, MD (Boston, MA)

826 Factors and Rates of Bone Flap Resorption in Pediatric Patients after Craniectomy for Traumatic Brain Injury 3:11-3:20 PM
Authors Christian Andrew Bowers, MD; Marion Walker, MD; Jay Riva-Cambrin, MD; Dean Hertzler, MD (Salt Lake City, UT)

827 Predicting the Clinical Behavior of Pilocytic Astrocytomas in Children: Utility of Magnetic Resonance Spectroscopy 3:21-3:30 PM
Authors Ryan Casserly; Mark Krieger, MD; Yasser Jeelani, MD; Brian Lee, MD, PhD; Caleb Standafer, BA; J. McComb, MD; Stefan Bluml, PhD (Los Angeles, CA)

Beverage Break 3:30-4:00 PM
Lobby C & D
Miami Beach Convention Center

Abstract Presentations 4:00-5:30 PM

828 Routine Sectioning of the C2 Nerve Root and Ganglion for C1 Lateral Mass Screw Placement in Children: Surgical and Functional Outcomes and Patient Satisfaction 4:00-4:09 PM
Authors Akash J. Patel, MD; Jerome Boatey, MD; Alison Brayton, RN; Andrew Jea, MD (Houston, TX)

829 Five Year Seizure Remission and AED Usage in Pediatric Epilepsy Surgery: The UCLA Experience 4:10-4:19 PM
Authors Jason Scott Hauptman, MD; Christina Sison; Kayvon Pedram; Gary Mathern, MD (Los Angeles, CA)

830 Radiation Exposure During Cerebral Angiography and Embolization in Children 4:20-4:29 PM
Authors Ning Lin, MD; Jodi Manchester; Edward Smith, MD; Darren Orbach, MD, PhD (Boston, MA)

831 The Role of Magnetoencephalography in Children Undergoing Hemispherectomy: A Retrospective Cohort Study 4:30-4:39 PM
Authors Aria Fallah, MD; Cristina Torres, MD; George Ibrahim, MD; Samuel Cheshier, MD, PhD; Hiroshi Otsubo, MD; Ayako Ochi, MD; Sylvester Chuang, MD; O. Carter Snead, MD; James Rutka, MD, PhD (Toronto, Canada)

832 Pediatric Thalamic Tumors: Management Strategies and Outcomes 4:40-4:49 PM
Authors Lissa Catherine Baird, MD; Geoffrey Martello; Ning Lin, MD; Susan Chi, MD; Michelle Silvera, MD; Nicole Ullrich, MD; Liliana Goumnerova, MD (Boston, MA)

833 Dysembryoplastic Neuroepithelial Tumours in Pediatric Patients: Long-term Follow-Up and Outcome 4:50-4:59 PM
Authors Mustafa Moh'D Y. Nadi, MD; Kathleen Dorris, MD; Brian Hurwitz; Maryam Fouladi, MD, MSc; Cynthia Hawkins, MD, PhD; Maria Lamberti-Pasculi; Mi-Ok Kim; Dandan Li; Eric Bouffet, MD; James Drake, MD, MSc (Toronto, Canada)

834 Long-term Outcomes of Pediatric Patients after Endoscopic Fenestration and Shrinkage Fulguration of Suprasellar Arachnoid Cysts 5:00-5:09 PM
Authors Neena Ishwari Marupudi, MD; Sandeep Sood, MD; Steven Ham, DO (Detroit, MI)

835 Prognostic Factors in Management of Primary Spinal Cord Astrocytoma in Children 5:10-5:19 PM
Authors Elizabeth Goodman; Mark Krieger, MD; Yasser Jeelani, MD; Caleb Standafer, BA; J. McComb, MD (Philadelphia, PA)
836
Response to Hypoxia is Variable
Medulloblastoma
5:20-5:29 PM
Authors
Eric Michael Thompson, MD; Leslie Muldoon, PhD; Edward Neuwelt, MD
(Portland, OR)

837
A Cadaveric Micro-Anatomic Study
of Intra-Fascicular Topography of
Brachial Plexus
4:00-4:14 PM
Authors
Sumit Sinha, MD (New Delhi, India)

838
Outcomes of a Novel Minimalist
Approach for the Treatment of
Cubital Tunnel Syndrome
4:15-4:29 PM
Authors
William Humphries, MD; William Humphries, MD, MPH (Houston, TX)

839
Early Versus Delayed Endoscopic
Surgery for Carpal Tunnel
Syndrome: A Prospective Study
4:30-4:44 PM
Authors
Pankaj Kumar Singh; P. S. Chandra, MCh (New Delhi, India)

840
Detection of Root Avulsion in
Traumatic and Obstetric Brachial
Plexus Lesions by High-Resolution
3D Constructive Interference in
Steady State MRI
4:45-4:59 PM
Authors
Thomas Schmidt, MD; Christian Heinen, MD; Maria Pedro, MD; Gregor Antoniadis, PhD, MD; Thomas Kretschmer, PhD, MD; Ralph König, MD (Oldenburg, Germany)

841
Open Carpal Tunnel Release,
Retrospective Analysis From 101 Patients
5:00-5:14 PM
Authors
Jose Avila-Ramirez, MD; Rodrigo Avila-Cervantes, MD; Victor Reyes-Rodriguez, MD; Rene Dominguez-Herz, MD (Mexico City, Mexico)

Beverage Break
3:30-4:00 PM
Lobby C & D
Miami Beach Convention Center

Abstract Presentations
4:00-5:30 PM

Q&A
5:15-5:29 PM
Exosome-Based Biomarker Analysis in Glioma
2:10-2:23 PM
Speaker
Bob S. Carter, MD, PhD

CTC-Chip and Circulating Tumor Cells
2:30-2:43 PM
Speaker
Brian Nahed, MD

Prediction of Tumor Subtype and Grade Using Physiologic Imaging
2:50-3:03 PM
Speaker
Donald M. O’Rourke, MD

T-Lymphocyte Prediction of Progression vs Pseudoprogression
3:10-3:23 PM
Speaker
Andrew Parsa, MD, PhD

Beverage Break
3:30-4:00 PM
Lobby C & D
Miami Beach Convention Center

Abstract Presentations
4:00-5:30 PM
Moderators
William T. Curry Jr., MD
Ricardo Komotar, MD

The Short-Term Effect of Surgery on Health Related Quality of Life and Functional Outcome in Patients with Metastatic Epidural Spinal Cord Compression (MESCC)—Results of the Ongoing AOSpine North America Prospective Multicenter Study
4:00-4:09 PM
Authors
Laurence Rhines, MD; Branko Kopjar; Michael Fehlings, MD; Charles Fisher, MD; Paul Arnold, MD; James Schuster, MD; Alexander Vaccaro, MD; Ziya Gokaslan, MD; Joel Finkelstein, MD; John France, MD; Mark Dekutoski, MD (Seattle, WA)

Increased Frequency of Presenting with Seizures in Patients with Isocitrate Dehydrogenase 1 (IDH1) Mutant Gliomas
4:10-4:19 PM
Authors
Arthur Po-Fei Chou, MD, PhD; Harry Ching; Stephen Chang; Jose Carrillo; Shadi Lalezari; Marko Spasic; Winward Choy; Andrew Kim; Julia Selfridge; Jennifer Quan; Yiannis Philippou; Justin Dye; Horacio Soto; Daniel Nagasawa; Gary Mather; Richard Green; Issac Yang; Robert Prins; Albert Lai; Linda Liau (Los Angeles, CA)

The Effects of HDAC Protein Inhibition on the DNA Damage Response in Bone Cancer
4:30-4:39 PM
Author
Raanan Y. Alter (Boston, MA)

Preoperative Multi-modal Motor Mapping: A Comparison of Magnetic Source Imaging, Navigated Transcranial Magnetic Stimulation, and Direct Cortical Stimulation
4:40-4:49 PM
Authors
Phiroz Erach Tarapore, MD; Matthew Tate, MD; Anne Findlay; Susanne Honma; Danielle Mizuiri; Mitchel Berger, MD; Srikanth Nagarajan, PhD (San Francisco, CA)
847 Subcortical Injury is an Independent Predictor of Worsening Neurological Deficits Following Awake Craniotomy Procedures 4:50-4:59 PM
Authors
Sujit S. Prabhu, MD; Victoria T. Trinh; Komal Shah; Dima Suki; Sawaya Raymond; Daniel K. Fahim (Houston, TX)

848 Identifying RNA and Protein Expression Profile of Bone Invading and Non-Invading Meningiomas 5:00-5:09 PM
Authors
Gelareh M. Zadeh, MD; Shahrzad Jalali, PhD (Toronto, Canada)

Authors
Raj K. Shrivastava, MD; Abtin Tabaei, MD; Sedat Ultakan, MD (New York, NY)

850 Quantitative Subcortical Monopolar Motor Mapping Thresholds for Safe Eloquent Tumor Surgery 5:20-5:29 PM
Authors
Kathleen Seidel; Lennart Stieglitz, MD; Jürgen Beck, MD, PhD; Philippe Schucht, MD; Andreas Raabe, MD, PhD (Bern, Switzerland)
General Information

AANS Convention Center Office
Room C227, Miami Beach Convention Center
HOURS:
Saturday, April 14 6:30 AM-6:00 PM
Sunday, April 15 6:30 AM-6:00 PM
Monday, April 16 6:30 AM-6:00 PM
Tuesday, April 17 6:30 AM-6:00 PM
Wednesday, April 18 6:30 AM-6:00 PM

AANS Hotel Office
Room Venus, Loews Miami Beach Hotel
HOURS:
Thursday, April 12 7:00 AM-5:00 PM
Friday, April 13 7:00 AM-5:00 PM
Saturday, April 14 7:00 AM-5:00 PM
Sunday, April 15 7:00 AM-5:00 PM
Monday, April 16 7:00 AM-5:00 PM
Tuesday, April 17 7:00 AM-5:00 PM
Wednesday, April 18 7:00 AM-5:00 PM

AANS Press Room
Room C226, Miami Beach Convention Center
No outside materials for distribution and no sharing of lists will be allowed.
HOURS:
Monday, April 16 8:30 AM-5:00 PM
Tuesday, April 17 8:30 AM-5:00 PM
Wednesday, April 18 8:30 AM-5:00 PM

AANS Speaker Ready Room
Room B210, Miami Beach Convention Center
HOURS:
Saturday, April 14 7:00 AM-5:00 PM
Sunday, April 15 7:00 AM-5:00 PM
Monday, April 16 6:30 AM-5:00 PM
Tuesday, April 17 6:30 AM-5:00 PM
Wednesday, April 18 6:30 AM-5:00 PM

Accessibility
The Miami Beach Convention Center is committed to accommodating the needs of individuals with disabilities in accordance with the Americans with Disabilities Act. All areas are wheelchair accessible. TDD phones are located in Lobby C. These telephones adhere to ADA code height requirements. All elevators are equipped with Braille signage. Additionally, restrooms and drinking fountains are ADA accessible.

To reserve wheelchairs and scooters call Scootaround at (888) 441-7575 or visit their web site at www.scootaround.com. Please note: there is a minimum of a one week rental. Rates include delivery and pickup to and from your hotel or the convention center.

Admission To Sessions/Exhibits
Badges are required to enter all scientific sessions and the exhibit hall. Badges are distributed at the time of registration. Badges must be worn at all times. Participants of the 2012 AANS 80th Annual Scientific Meeting are identified by the following badge colors:

- Physician Attendees: Green
- Candidates/Medical Student: Brown
- Physician Extenders (RNs, PAs and Allied): Purple
- Staff: Royal Blue
- Exhibitors: Gray
- Spouse/Guests: Orange
- Media: Yellow

Americans With Disabilities Act
AANS wishes to take those steps to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. If you require any of the auxiliary aids or services identified in the Americans with Disabilities Act in order to attend any AANS program, please contact the AANS Convention Center Office, Room C227, 2nd Level of the Miami Beach Convention Center.
General Information

Attendee On-Site Registration Hours
Lobby C Registration, Miami Beach Convention Center
Friday, April 13 5:00 – 7:00 PM
Saturday, April 14 6:30 AM – 5:30 PM
Sunday, April 15 6:30 AM – 5:30 PM
Monday, April 16 6:30 AM – 4:00 PM
Tuesday, April 17 6:30 AM – 4:00 PM
Wednesday, April 18 6:30 AM – 3:30 PM

Attire
Attire for the AANS 80th Annual Scientific Meeting is business or business casual depending on the nature of the event or unless otherwise indicated.

Beverage Breaks
Exhibit Halls C & B, Miami Beach Convention Center
Monday, April 16 9:00 – 9:45 AM
3:25 – 4:00 PM
Tuesday, April 17 9:00 – 9:45 AM
3:25 – 4:00 PM
Wednesday, April 18 9:00 – 9:45 AM
Lobby C & D, Miami Beach Convention Center
Wednesday, April 18 3:30 – 4:00 PM

Boarding Pass
Print your boarding pass before you leave for the airport! The Boarding Pass Kiosk will be available in the Lobby C Registration area of the Miami Beach Convention Center.

Business Center
Skywalk, 3rd Level, Miami Beach Convention Center
Open 8:00 AM-5:00 PM Daily
Phone: 786-276-2696
A full service business center is located on the third level Skywalk of the Miami Beach Convention Center. They provide on-site printing, signage, equipment rentals and much more! You will appreciate the Hands Free Ship-It-Home Service, which stores, packs and ships attendee items for one low price. No need to lug it everywhere back to the hotel or airport. The Business Center also has workstations with high-speed Internet, as well as, office supplies, copy, fax and printing services. You can also upload your artwork on their website for expedient service!

Cell Phones And Pagers
As a courtesy to other attendees and speakers, the AANS asks that you silence your cell phone or pager during all scientific sessions. If you must make a call, please step outside the meeting room.

Child Care Services
Please check with your concierge at your hotel.

Climate/Time Zone
Spring is a great time to visit Miami. The average high temperature in April is 84° Fahrenheit, with the low averaging being 68° Fahrenheit. Spring temperatures can fluctuate between warm or cool days and evenings. It does rain occasionally at this time of year as well. It is recommended checking www.weather.com two days before your flight for the latest on weather and temperature. Please use this information to pack appropriately.

When visiting the tropical-like city of Miami, it is recommended to bring sunglasses, sunscreen and lip balm. Miami tends to be very casual, so you can feel comfortable wearing shorts, jeans and sandals just about anywhere. Nicer clothing is recommended for fine dining, theatre performances and nightclubs. A light jacket or sweater is also good to have on hand.

*Miami is located in the Eastern Time Zone.*
General Information

CME Self-Reporting Stations
AANS Resource Center Booth #1330 and Lobby C Registration area in the Miami Beach Convention Center.

E-Mail Stations
AANS Resource Center, Booth #1330 and Lobby C Registration area in the Miami Beach Convention Center.

Exhibit Hours

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First Aid Room
Located in Lobby C Registration area on Level One of the Miami Beach Convention Center

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Future Meetings
81st AANS Annual Scientific Meeting
New Orleans, LA
April 27-May 1, 2013

82nd AANS Annual Scientific Meeting
San Francisco, CA
April 5-9, 2014

83rd AANS Annual Scientific Meeting
Washington, DC
May 2-5, 2015

Headquarters Hotel
Loews Miami Beach Hotel
1601 Collins Avenue
Miami Beach, FL 33139
www.LoewsHotels.com/MiamiBeach

Information Booth
Lobby C Registration, Miami Beach Convention Center
Phone: 786-276-4520 (General Information)
Phone: 786-276-4521 (Restaurants and Reservations)
For general information about the 2012 AANS Annual Scientific Meeting, surrounding area or restaurant recommendations, visit the General Information Booth or the 2012 Miami and Local Information Booth located in Lobby C Registration area of the Miami Beach Convention Center.

HOURS:

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iPod Lounge
Available in the Lobby C Registration of the Miami Beach Convention Center.

Lost And Found
Phone: 786-276-4517
Security Office located in C1 on the first level of the Miami Beach Convention Center in between Hall C and Jr. Ballroom A.

Meeting Location
Miami Beach Convention Center
1901 Convention Center Dr.
Miami Beach, FL 33139
http://www.miamibeachconvention.com/

No Smoking Policy
Smoking is not permitted at any of the official AANS events, the Miami Beach Convention Center and the majority of the official AANS hotels. In addition, smoking is prohibited by Florida state law in all bars, nightclubs and restaurants.

Safety
For your safety, the AANS recommends removing your badge when walking outside of the convention center. In addition, please refrain from walking by yourself in the city streets at night.
General Information

Shuttle Bus Schedule
The AANS will provide shuttle service at regular intervals between the Miami Beach Convention Center and all hotels.

Preliminary Shuttle Bus Schedule
Convention Center - Washington Avenue Hall B entrance or Convention Center Drive Hall C entrance

Route A Pink Route - Every 10-20 minutes
Loews Miami-Curbside on Collins Avenue
Ritz Carlton-Use the Loews stop on Collins Avenue

Route B Green Route - Every 10-20 minutes
Fontainebleau Hilton Resort-Curbside on Collins Avenue
Eden Roc Renaissance-Curbside on Collins Avenue
Grand Beach Hotel-Curbside on Collins Avenue

Route C Blue Route - Every 10-15 minutes
Surf Comber Hotel-Curbside on Collins Avenue
The Perry South Beach-Curbside on Collins Avenue
Courtyard Ocean Front-Curbside on Collins Avenue
Best Western Atlantic Beach Resort-Curbside on Collins Avenue
Holiday Inn Miami Beach-Curbside on Collins Avenue

Route D Orange Route - Every 10-24 minutes
Hilton Downtown-Outer Driveway
Hyatt Regency Miami-Curbside near front entrance
JW Marriott Marquis-Use the Hyatt stop
EPIC Hotel Miami-Use the Hyatt stop

Route E Yellow Route - Every 20-30 minutes
Conrad Miami-Curbside near front entrance
Four Seasons Hotel Miami-Curbside near front entrance

Please note: A full schedule is available at the above hotels and at Lobby C Registration.

Taping and Photography Prohibited
Audio-taping, videotaping or photography by individuals is strictly prohibited in all scientific sessions.

Ticket Sales, Tours and Attractions
Tickets for the Opening Reception, Albert L. Rhoton Tribute, Practical Clinics, Breakfast Seminars, Mid-level Practitioner Luncheon, YNS Luncheon (No Charge), International Reception (No Charge), WINS Breakfast and the History Section Dinner are available for purchase (if applicable) in Lobby C Registration.

Transportation
Car Rental
AANS is pleased to provide members the opportunity for car rental savings through Alamo Rent-a-Car in conjunction with the 80th AANS Annual Scientific Meeting. Alamo provides AANS members year round discounts off car rentals at 138 locations in North America and 275 overseas locations. In addition, members are given the opportunity to earn valuable miles, credits or points with airlines and hotels through Alamo’s partnership with most major airlines and hotel partners. To request your year-round discount, call Alamo toll-free at the number listed below or visit online at www.alamo.com. At the time of reservation, don’t forget to identify yourself as an AANS member and provide the identification information below.

For Reservations Call:
Alamo Rent-a-Car
(800) 462-5266 or visit www.alamo.com
Please mention or enter ID# 706768
You can potentially receive up to 10% off your car rental.

Return Airport Service
AANS will provide direct-to-airport service available from the Miami Beach Convention Center on Wednesday, April 18 from 11:15 AM-5:15 PM with continuous service every 1/2 hour. The cost for this direct service is $20 which includes luggage handling. Due to limited seating, you are strongly encouraged to make your reservation well in advance once you arrive at the Convention Center. Keep in mind that the airport is approximately 12 miles from Miami Beach, so allow yourself an ample amount of time before your flight. All reservations must be paid in cash on-site in Miami Beach at the AANS Shuttle Information Counter located in Lobby C Registration area prior to your shuttle departure.

WiFi
Complimentary in the Miami Beach Convention Center.
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Michael A. Chabraja, Esq., Parliamentarian/Legal Counsel

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The main goals of the American Association of Neurological Surgeons’ Annual Scientific Meeting are to serve as a primary source of continuing medical education tailored specifically to our specialty; to advance neuroscience research; and to promote a climate conducive to excellence in clinical practice. The Annual Scientific Meeting Committee is dedicated to meeting these goals. The AANS Annual Scientific Meeting is the principal mechanism for the transfer of scientific, technical and intellectual information to the neurosurgical community. Feedback obtained from the online attendee evaluation survey is one important factor in determining the program content of this meeting. Special recognition is extended to the individuals of the 2012 Annual Scientific Meeting Committee and the committees they represent for their perseverance and commitment to making the Annual Scientific Meeting of the American Association of Neurological Surgeons a success.

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Please call AANS for more information about the contact hours.

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