Annual Meeting Registration and Advance Program

April 18–25, 2015 · Washington, DC

Hotel Reservation Deadline: March 18, 2015
Early Registration Deadline: March 27, 2015
The 67th AAN Annual Meeting

Experience innovative research, exceptional education programs, and boundless networking opportunities at the AAN Annual Meeting in Washington, DC, April 18–25, 2015.


Late January, 2015: Abstract Notifications Available

March 18, 2015: Annual Meeting Hotel Reservation Deadline

March 27, 2015: Annual Meeting Early Registration Deadline

Location

Walter E. Washington Convention Center
Washington, DC

Headquarter Hotel

Marriott Marquis Washington, DC

Register Online

Customize Your Week with Easy Online Registration

With online registration, you can:

- Register
- Book your hotel
- Plan your itinerary
- Search for programs by topic or day
- New! Choose from three registration packages! See page 8 for details

AAN.com/view/AM15
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Program current as of 11/05/14. Program subject to change.
Plan to Attend the 67th AAN Annual Meeting

"Welcome to the 67th AAN Annual Meeting! The 2014 meeting in Philadelphia broke attendance records and brought together the world’s best minds in neurology to experience exceptional education and innovative research, and take part in unlimited networking opportunities. I have no doubt the 2015 Annual Meeting will be just as spectacular. We’re thrilled to be bringing the 2015 Annual Meeting to the U.S. capital, and hope you’ll join us—either for a few, or all eight days—to take part in top CME opportunities in your subspecialty, discover and share the latest scientific research, and meet up with old friends or make new, lasting connections. I look forward to seeing you in Washington, DC!"

-Stefan M. Pulst, MD, FAAN
Chair, Meeting Management Committee

Key Dates and Deadlines:

Hotel Reservation Deadline: **March 18, 2015**

Early Registration Deadline: **March 27, 2015**

67th AAN Annual Meeting: **April 18–25, 2015**

Location

Walter E. Washington Convention Center
Washington, DC

Headquarter Hotel

Marriott Marquis Washington, DC

Visit AAN.com/view/AM15
An Experience No Other Conference Can Match

The AAN Annual Meeting delivers an experience no other conference can match. That’s because at an AAN Annual Meeting you not only can choose courses based on your area of interest, but you also have access to a wide array of courses offering updates and review of topics such as multiple sclerosis, epilepsy, movement disorders, stroke, child neurology, and many more.

Customize the meeting for the schedule that works best for you and/or your practice. With so many exceptional education programs and scientific sessions available in a variety of subspecialties, plus unparalleled networking opportunities—all week long—the AAN Annual Meeting can be tailored to be a perfect fit for you no matter what your interest, career stage, or schedule.

Advancing Neurology. Working for You!

- **For Neurologists**
  The Annual Meeting is the place for top CME programming, innovative scientific research, and opportunities to meet up with neurology’s thought leaders from around the world. New Silver and Gold Registration Packages provide great value for your CME programming, providing access to all education courses for one flat rate.

- **For Students and Junior Members**
  The Annual Meeting is essential, providing exposure to a variety of interests and unmatched networking opportunities. Students and Junior members get significant discounts on registration and course fees. Learn more about highlights for students, residents, and fellows on page 106.

- **For Other Physicians and Advanced Practice Providers**
  New! Customize the meeting to your needs with new tracks offering focused education and programming. Learn more about the new Clinical Research Track, the new Advanced Practice Provider Track, and the always popular Subspecialty in Focus Track on page 14.

Come for 3 days or stay for all 8. Make the meeting your own!
NEW Three Registration Packages Available

Choose the one that works best for you!

- **Meeting Registration** with education courses available for additional fees.
- **Silver Registration Package** includes meeting registration plus full access to the 2015 Annual Meeting education program.*

**Gold Registration Package and BEST VALUE!**

Get full access to the 2015 Annual Meeting education program,* plus AAN Annual Meeting On Demand, the digital library of the Annual Meeting. Gold Registration Package offers:

- Flexibility: Attend sessions in-person or on demand
- Access to the syllabi summaries of more than 160 programs
- Ultimate CME earning power: Earn CME during the meeting or afterwards via Annual Meeting On Demand!

Register Today at [AAN.com/view/AM15](http://AAN.com/view/AM15)

*Skills Workshops, Skills Pavilions, and Leadership Courses excluded from Silver and Gold Registration Package pricing. Attendee must identify courses to be included as part of Silver and Gold Registration Package. Courses are subject to closure due to reaching maximum capacity. Attendee is only permitted to select courses that he/she plans to be in the room for. Attendee will not be able to register for courses with conflicting time schedules.
The AAN is always working to make your Annual Meeting experience even better!

New Registration Options
Choose from three registration options for 2015: Meeting Registration or the new Silver or Gold Registration Packages*, which provide the flexibility to attend any course of interest for one flat rate! The Silver Registration Package includes all education courses for one rate. The Gold Registration Package includes the Silver Registration Package plus Annual Meeting On Demand, the comprehensive digital library of Annual Meeting presentations.

Convenient Networking
You’ll have plenty of time for networking—the hour between 12:00 p.m. and 1:00 p.m. will be open each day, making it easy to find time to meet with colleagues.

Simplified Format
To help make navigating the Annual Meeting easier, all education programs are referred to as ‘courses’ regardless of day or time offered and duration of program.

Tailored Learning with NEW Education Course Delivery Methods
The AAN recognizes that everyone has a different learning style, so this year we’ll be providing you with new ways to learn. In addition to the traditional learning style, attendees will have the opportunity to attend programs using unique approaches including “chalkboard-style” classrooms, shorter lectures followed by one-on-one Q&As with faculty, and a “gallery-style” environment where attendees learn in smaller groups from numerous stations.

The topic areas for courses and sessions are:
- Aging, Dementia, Cognitive, and Behavioral Neurology
- Cerebrovascular Disease and Interventional Neurology
- Child Neurology and Developmental Neurology
- Epilepsy/Clinical Neurophysiology (EEG)
- General Neurology
- Global Health and Infectious Disease
- Headache
- Movement Disorders
- MS and CNS Inflammatory Disease
- Neuro Trauma, Critical Care, and Sports Neurology
- Neuromuscular and Clinical Neurophysiology (EMG)
- Neuro-oncology
- Neuro-ophthalmology/Neuro-otology
- Neurorehabilitation
- Pain and Palliative Care
- Practice, Policy, and Ethics
- Research Methodology, Education, and History
- Sleep

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Looking for Interesting and Unique Things to Do While in the DC Area?

While most people are aware of options like the Washington Memorial, The White House, and the Smithsonian Museums, Washington, DC is home to multiple unique places to visit.

National Park Service Memorials
While strolling along the famous National Mall, be sure and visit some of these beautiful new memorials, conveniently situated near the famous Lincoln Memorial:
- Korean War Veterans Memorial
- World War II Memorial
- Franklin Delano Roosevelt Memorial
- Martin Luther King, Jr. Memorial

Learn more at nps.gov/nama/index.htm.

Hillwood Estate Museum & Gardens
Discover the grand estate of Post Cereal heiress Marjorie Merriweather Post. Situated on 25 acres overlooking Rock Creek Park in northwest Washington, DC, the beautiful estate boasts a world-renowned collection of Russian and French decorative arts, as well as extensive gardens and special exhibitions. Learn more at HillwoodMuseum.org.

Frederick Douglass National Historic Site
Visit Cedar Hill, home of the famed abolitionist Frederick Douglass who was born into slavery and escaped to spend the rest of his life fighting for justice and equality for all people. This National Historic Site, administered by the National Park Service, works to preserve the legacy of Douglass’s tireless struggle and inspire people today. Learn more at nps.gov/frdo/index.htm.

Continued on page 106
What’s Included with Your Registration?

When planning your week, be sure and take advantage of these FREE education, scientific, practice, advocacy programs, and social events—going on all week long and at no additional cost to you!

FREE Programs to help you:

- Stay current with the latest research and scientific sessions
- Network with colleagues
- Participate in Academy business

Saturday, April 18

11  New Windows into the Brain: Technological Advances in Frontline Neurologic Diagnosis via the Visual and Oculomotor Systems
   8:00 a.m.–12:00 p.m.

12  Management of Asymptomatic Cerebrovascular Lesions
   1:00 p.m.–5:00 p.m.

Sunday, April 19

C170  Clinical Research: Introduction and Methods
   8:00 a.m.–12:00 p.m.

13  Dopamine-mediated Neural Plasticity in Motor and Non-motor Circuits
   8:00 a.m.–12:00 p.m.

C171  Opioids and Marijuana in Your Practice
   8:30 a.m.–12:00 p.m.

S1  Section Topic Controversies
   1:00 p.m.–2:30 p.m.

C43  Advanced Practice Provider Symposium
   1:00 p.m.–4:00 p.m.

C172  Clinical Research: Drug Development and Clinical Trials
   1:00 p.m.–5:00 p.m.

14  Infectious, Paraneoplastic, and Autoimmune Encephalopathies: Advances in Clinical Diagnosis and Emerging Insights about Pathogenesis
   1:00 p.m.–5:00 p.m.

Capitol City Celebration
   6:00 p.m.–10:00 p.m.

Monday, April 20

C59  Leadership in Neurology: Be a Champion for Your Patients and Protector of Your Subspecialty with Payers, Policymakers, and the Public
   6:30 a.m.–8:00 a.m.

C60  Resident and Fellow Career Breakfast: The Early Years (registration is required)
   6:30 a.m.–8:30 a.m.

AAN/AANI Business Meeting
   8:00 a.m.–8:30 a.m.

I5  Pediatric Neurotrauma: From Coma to Concussions
   8:00 a.m.–12:00 p.m.

C173  Clinical Reasoning: From a Novice to an Expert
   8:30 a.m.–12:00 p.m.

S2  Section Topic Controversies
   1:00 p.m.–2:30 p.m.

16  Future Therapies: How We Will Be Treating, Preventing, and Curing Epilepsy in the Year 2025
   1:00 p.m.–5:00 p.m.

C174  All You Need to Know About Health Information Technology to Avoid Taking a HIT
   1:00 p.m.–5:00 p.m.

Tuesday, April 21

P2  Poster Session II
   7:30 a.m.–11:00 a.m.

Presidential Plenary Session
   9:00 a.m.–12:00 p.m.

Exhibit Hall
   11:30 a.m.–5:00 p.m.

S3  Section Topic Controversies
   1:00 p.m.–2:30 p.m.

Scientific Platform Sessions
   1:00 p.m.–2:45 p.m.
I7 The Global Burden of Neurological Infections: Epidemiology, Treatment, and Prevention
1:00 p.m.—5:00 p.m.
I8 Advances in ALS and Other Motor Neuron Diseases
1:00 p.m.—5:00 p.m.
P3 Poster Session III
3:00 p.m.—6:30 p.m.
Scientific Platform Sessions
3:15 p.m.—5:00 p.m.
Hot Topics Plenary Session
5:30 p.m.—6:30 p.m.

Wednesday, April 22

P4 Poster Session IV
7:30 a.m.—11:00 a.m.
Contemporary Clinical Issues Plenary Session
9:00 a.m.—12:00 p.m.
Exhibit Hall
11:30 a.m.—5:00 p.m.
Scientific Platform Sessions
2:00 p.m.—3:45 p.m.
I9 Treating Dementia in an Age of Mixed Disease
2:00 p.m.—6:00 p.m.

I10 CP The Dynamic Brain in Health and Disease: Plasticity and Reprogramming
2:00 p.m.—6:00 p.m.
P5 Poster Session V
3:00 p.m.—6:30 p.m.
Scientific Platform Sessions
4:00 p.m.—5:45 p.m.
Highlights in the Field Sessions
6:00 p.m.—7:00 p.m.

Thursday, April 23

P6 Poster Session VI
7:30 a.m.—11:00 a.m.
Frontiers in Neuroscience Plenary Session
9:00 a.m.—12:00 p.m.
Exhibit Hall
11:30 a.m.—3:00 p.m.

I11 CP The Promise of Novel Biomarker Approaches in Advancing Treatment
1:00 p.m.—5:00 p.m.
P7 Poster Session VII
3:00 p.m.—6:30 p.m.
Scientific Platform Sessions
3:15 p.m.—5:00 p.m.
Highlights in the Field Sessions
5:30 p.m.—6:30 p.m.
Controversies in Neurology Plenary Session
5:30 p.m.—7:00 p.m.

Friday, April 24

Clinical Trials Plenary Session
12:00 p.m.—1:30 p.m.
Neurology Year in Review Plenary Session
4:30 p.m.—6:00 p.m.
Closing Party
6:30 p.m.—8:00 p.m.

Extend Your Experience with These Annual Meeting Resources

- Your Academy is Working for You:
  Your one-stop shop for AAN products, services, and more
- American Brain Foundation:
  Support cures for brain disease and see the future of neurology
- Neurology Career Center in Academy Central and the Exhibit Hall:
  Meet employers, search for jobs, and get career tools
- Resident/Medical Student Rush Line:
  Free education program tickets, first-come, first-served
- Annual Meeting Mobile App:
  Available in January 2015
- Annual Meeting On Demand:
  The digital library of content from the 2015 AAN Annual Meeting presentations
  (Now included with the Gold Registration Package)
- Residents Experience:
  A unique place to network, find information, and participate in informal presentations specifically geared to those in the early stages of their career
- International Experience:
  Provides an opportunity for international attendees to network and participate in discussions on a variety of topics
The field of neurology is rapidly changing, and there's nowhere like the AAN Annual Meeting to make sure you're up-to-date. The 67th AAN Annual Meeting in Washington, DC, offers innovative research, exceptional education programs, and boundless networking opportunities. Log in to the registration site where you can:

- Register quickly and easily
- Make your hotel selection and reservation
- Print your schedule and not miss a thing at the meeting!

### Ways to Save

The Annual Meeting offers a great value for the quality and quantity of programming. Try some of these savings tips:

- **Renew your AAN membership or join the AAN now** for maximum savings on registration and course fees at AAN.com/view/membership.
- **Register now to avoid increased rates** after the March 27, 2015, early registration deadline.
- Purchase education programs individually or select the Silver or Gold Registration Package option and register for any course of interest for one flat rate.

**Registration Options**

**Meeting Registration**: Meeting Registration with education courses available for an additional fee.

**Silver Registration Package**: The Silver Registration Package includes all education courses for one flat rate. Choose this registration option before the meeting or on-site. You can change another course at any time, including at the meeting, with no change fee. However, you will not be able to register for courses with conflicting time schedules.

**Gold Registration Package**: Silver Registration Package as described above plus Annual Meeting On Demand, the comprehensive digital library of Annual Meeting presentations.

### Registration Fees

<table>
<thead>
<tr>
<th>Member Type</th>
<th>Meeting Registration Before March 27, 2015</th>
<th>Silver Registration Package Before March 27, 2015</th>
<th>Gold Registration Package Before March 27, 2015</th>
<th>Meeting Registration After March 27, 2015</th>
<th>Silver Registration Package After March 27, 2015</th>
<th>Gold Registration Package After March 27, 2015</th>
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<tbody>
<tr>
<td>Students</td>
<td>$0</td>
<td>$300</td>
<td>$499</td>
<td>$0</td>
<td>$370</td>
<td>$569</td>
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<tr>
<td>Senior/Honorary</td>
<td>$0</td>
<td>$695</td>
<td>$1,094</td>
<td>$0</td>
<td>$780</td>
<td>$1,179</td>
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<tr>
<td>Junior and Non-neurologist Member*</td>
<td>$100</td>
<td>$400</td>
<td>$599</td>
<td>$130</td>
<td>$500</td>
<td>$699</td>
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<tr>
<td>Neurologist Member**</td>
<td>$305</td>
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<td>$1,399</td>
<td>$420</td>
<td>$1,200</td>
<td>$1,599</td>
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<tr>
<td>Nonmember</td>
<td>$610</td>
<td>$2,000</td>
<td>$2,499</td>
<td>$840</td>
<td>$2,300</td>
<td>$2,799</td>
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</table>

1 Skills Workshops, Skills Pavilions, and Leadership Courses excluded from the Silver and Gold Registration Package pricing. Attendee must identify courses to be included as part of Silver and Gold Registration Package. Attendee is only permitted to select courses that he/she plans to be in the room for. Attendee will not be able to register for courses with conflicting time schedules.

2 Includes meeting access only, education courses must be paid for individually.

3 Includes access to meeting and ability to register for education courses at no additional cost.

* Junior Intern, Resident or Junior Fellow, Business Administrator, Non-neurologist Clinician, Nurse Practitioners, Physician Assistants, Research Scientist, Research Coordinator

** Active, Associate, Fellow
Three Easy Ways to Register

Online

Fast, easy online registration available at AAN.com/view/register
Online registration walks you step-by-step through completing your registration, reserving a hotel, and personalizing your itinerary with top-tier education courses, scientific sessions, special Annual Meeting events, and more!

Fax/Mail

A printable registration form is available at AAN.com/view/register
Download and print a registration form to complete and mail or fax to:

<table>
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<tr>
<th>Mail:</th>
<th>Fax:</th>
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<tbody>
<tr>
<td>AAN Registration/CMR</td>
<td>(415) 293-4071</td>
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<tr>
<td>33 New Montgomery, Suite 1100</td>
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<tr>
<td>San Francisco, CA 94105</td>
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Deadline: March 27, 2015
Registrations received after March 27, 2015, will be processed at a higher rate.

Questions
Online: AAN.com/view/register
Email: AANReg@cmrus.com

Telephone
US/Canada: (800) 676-4226  International: (415) 979-2283

Changes in Education Programs
Select education programs carefully. An administrative fee of $20 ($30 after March 27, 2015) will be charged for program cancellations without a replacement program.
Many programs and events are included with your registration. See page 6 for details.

Cancelled or Closed Programs
Education programs may be closed due to reaching maximum capacity or cancelled due to insufficient enrollment. In the event of cancellation, registration for the cancelled course will be fully refunded. The AAN is not responsible for airfare, hotel, or other costs incurred by participants in the event of program or registration closure or cancellation.

Cancellations/Refunds of Registration
Until March 27, 2015—Refund less $50 administrative fee
March 28–April 10, 2015—Refund less $100 administrative fee
After April 10, 2015—No refund

• All cancellations must be submitted in writing to AANReg@cmrus.com or faxed to (415) 293-4071.
• No-shows will not receive a refund.
• Name substitutions are not permitted.
• No refunds will be processed for amounts of $20 or less.

Special Accommodations Deadline: March 27, 2015
The Walter E. Washington Convention Center and the AAN are in compliance with the Americans with Disabilities Act or Human Rights Code and strive to accommodate all visitors. Information booths, designated parking, and assisted listening devices are available. If you require special accommodation to attend the Annual Meeting, submit your request while registering online or contact Laurie Dixon no later than March 27, 2015, at ldixon@aan.com or (612) 928-6154.

Kosher meals may be provided at any breakfast or lunch, and must be arranged on or before March 27, 2015, through the registration website or by contacting AAN Registration/CMR at AANReg@cmrus.com, (800) 676-4226, or (415) 979-2283. There is a $50 surcharge per meal. On-site requests cannot be accommodated.

Group Registration Deadline: April 2, 2015
Group registrations are those in which 10 or more individuals’ fees are paid for with one check or credit card. Special registration instructions are available online AAN.com/view/register or by contacting CMR’s Group Registration at (800) 676-4226 (US/Canada) or (415) 979-2283 (International) or email AANGroups@cmrus.com. See page 48 for housing information.
### Meeting at a Glance

#### Saturday April 18

<table>
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<tr>
<th>Time</th>
<th>Section</th>
<th>Topic</th>
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<td>8:00 a.m.</td>
<td>C1, C2-C7</td>
<td>Integrated Neuroscience</td>
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<td>12:00 p.m.</td>
<td>S1</td>
<td>Section Topic Controversies</td>
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<td>1:00 p.m.</td>
<td>C10-16</td>
<td>Integrated Neuroscience</td>
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<td>3:00 p.m.</td>
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#### Sunday April 19

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<td>8:00 a.m.</td>
<td>C26-27</td>
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**Capitol City Celebration**

6:00 p.m.–10:00 p.m.
## Meeting at a Glance

### Wednesday April 22

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:00 a.m.</td>
<td>C100–C106</td>
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<tr>
<td>7:00 a.m.</td>
<td>P4 Poster Session IV</td>
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<tr>
<td>8:00 a.m.</td>
<td>Contemporary Clinical Issues Plenary Session</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>C107–112</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>Scientific Platform Sessions</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>Awards Luncheon</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>OPEN HOUR</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>I9–10 Integrated Neuroscience</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>C107–112</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Platform Blitz Sessions</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>Emerging Science</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Highlights in the Field Sessions</td>
</tr>
<tr>
<td>6:00 p.m.</td>
<td>C100–C106</td>
</tr>
<tr>
<td>7:00 p.m.</td>
<td>Industry Therapeutic Updates</td>
</tr>
<tr>
<td>8:00 p.m.</td>
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### Thursday April 23

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:00 a.m.</td>
<td>C113–C118</td>
</tr>
<tr>
<td>7:00 a.m.</td>
<td>P6 Poster Session VI</td>
</tr>
<tr>
<td>8:00 a.m.</td>
<td>Frontiers in Neuroscience Plenary Session</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>C119–124</td>
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<tr>
<td>10:00 a.m.</td>
<td>Invited Science: Epilepsy</td>
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<tr>
<td>11:00 a.m.</td>
<td>C119–124</td>
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<tr>
<td>12:00 p.m.</td>
<td>OPEN HOUR</td>
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<tr>
<td>1:00 p.m.</td>
<td>I1–12 Integrated Neuroscience</td>
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<tr>
<td>2:00 p.m.</td>
<td>Scientific Platform Sessions</td>
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<tr>
<td>3:00 p.m.</td>
<td>Invited Science: Epilepsy</td>
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<tr>
<td>4:00 p.m.</td>
<td>C119–124</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td>Highlights in the Field Sessions</td>
</tr>
<tr>
<td>6:00 p.m.</td>
<td>C125–130</td>
</tr>
<tr>
<td>7:00 p.m.</td>
<td>Continental Therapeutic Updates</td>
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<td>8:00 p.m.</td>
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<td>Time</td>
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</table>

**Additional Events**

- Clinical Trials Plenary Session
- Neurology Year in Review Plenary Session
- Invited Science: Epilepsy
- Frontiers in Neuroscience Plenary Session
- Contemporary Clinical Issues Plenary Session
- Emerging Science
- Highlights in the Field Sessions
- Controversies in Neuroscience Plenary Session
- Paid Programs/Events
- Programs/Events Included with Registration
- OPEN HOUR

---

**Celebration Party**

Celebrate the end of a great meeting at a special early-evening happy hour event!

- Enjoy music, drinks, and socializing with colleagues
- Make plans to explore beautiful Washington, DC, afterwards
Understanding the Program Listings

To help simplify the Annual Meeting, all education programs are labeled as courses regardless of day or time offered or duration of program.

Program Types

- **C** Course
- **I** Integrated Neuroscience Session (scientific session combining invited speakers, data blitz presentations, and poster discussion; included with meeting registration)
- **P** Poster Session (a hall of posters on a variety of topics)
- **S** Scientific Platform Session (didactic session featuring abstracts)

New Course Feature Icons

- **F** The program is included with your registration
- **$** A registration fee is required
- **O** The program is one of the AAN Leadership Development sessions
- **APP** The course is part of the Advanced Practice Provider track
- **CR** The course is part of the Clinical Research track
- **SIF** The course is part of a Subspecialty in Focus track

Program Tracks

To assist in your course planning, we’ve designed program tracks consisting of pre-selected courses of interest geared towards advanced practice providers, academic neurologists, or those with subspecialty interests. Refer to the Meeting Program Schedule for specific times.

**Advance Practice Provider Track**
The APP track consists of suggested courses for neurologic advanced practice providers to provide a “deep dive” into general neurology.

- **APP C5** Resident Basic Science I: Neuropathology
- **APP C13** Resident Basic Science II: Neuroanatomy
- **APP C30** Resident Basic Science III: Neuropharmacology
- **APP C37** Neurology Update I
- **APP C38** Genetics in Neurology
- **APP C43** Advanced Practice Provider Symposium
- **APP C68** Neuroimaging for the General Neurologist: Brain
- **APP C124** Neuroimaging for the General Neurologist: Spine and Peripheral Nerve
- **APP C143** Neurology Update II

**Clinical Research Track**
This track offers suggested programs geared towards academic neurologists early in the development of a clinical research career or who are considering one.

- **CR C9** Research Career Development Symposium: How to Be Successful in Academic Neuroscience
- **CR C170** Clinical Research: Introductions and Methods
- **CR C172** Clinical Research: Drug Development and Clinical Trials
- **CR** Futures in Clinical Research Luncheon April 20, 12:00 p.m.–2:00 p.m.
- **CR** Futures in Clinical Research Luncheon Mentoring Sessions April 21, 12:00 p.m.–2:00 p.m.
- **CR I10** The Dynamic Brain in Health and Disease: Plasticity and Reprogramming
- **CR I11** The Promise of Novel Biomarker Approaches in Advancing Treatment

**Subspecialty in Focus Tracks**
The Subspecialty in Focus Track is a series of six special, intensive topic-specific tracks designed for subspecialists, combining an education course with an Integrated Neuroscience Session.

- **SIF C63** Cerebrovascular Disease Includes: C7 and I2
- **SIF C160** Neuro-ophthalmology/Neuro-otology Includes: C16 and I1
- **SIF C52** Movement Disorders Includes: C52 and I3
- **SIF C28** Neuro-infectious Disease/Neuro-oncology Includes: C28 and I4
- **SIF C83** Child Neurology/Sports Neurology Includes: C83 and I5
- **SIF C63** Epilepsy Includes: C63 and I6
### Saturday, April 18, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:00 a.m.–11:00 a.m.</td>
<td>C1  Status Epilepticus</td>
</tr>
<tr>
<td>8:00 a.m.–12:00 p.m.</td>
<td>C2  Small Fiber Neuropathies: Sensory, Autonomic and Both</td>
</tr>
<tr>
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<td>C3  Deep Brain Stimulation Management</td>
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<tr>
<td></td>
<td>C4  Neuromyelitis Optica: Scientific and Clinical Update</td>
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<tr>
<td></td>
<td>C5  Resident Basic Science I: Neuropathology</td>
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<tr>
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<td>C6  The Practice of Neurology: Issues in Coding and Reimbursement</td>
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<tr>
<td></td>
<td>C7  Controversies in the Management of Incidental and Asymptomatic Cerebrovascular Lesions</td>
</tr>
<tr>
<td></td>
<td>I1  New Windows into the Brain: Technological Advances in Frontline Neurologic Diagnosis via the Visual and Oculomotor Systems</td>
</tr>
<tr>
<td>8:00 a.m.–4:00 p.m.</td>
<td>C8  Clerkship and Program Directors Conference</td>
</tr>
<tr>
<td>8:00 a.m.–5:00 p.m.</td>
<td>C9  Research Career Development Symposium: How to Be Successful in Academic Neuroscience</td>
</tr>
<tr>
<td>1:00 p.m.–5:00 p.m.</td>
<td>C10 Critical Care EEG Monitoring</td>
</tr>
<tr>
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<td>C11 Neuromuscular Junction Disorders</td>
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<td>C12 Neurologic Complications of Medical Disease</td>
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<td></td>
<td>C13 Resident Basic Science II: Neuroanatomy</td>
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<td>C14 Advanced Neurologic Coding</td>
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<td>C15 Severe TBI: From ICU to Rehabilitation</td>
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<td></td>
<td>C16 Pitfalls &amp; Pearls: Avoiding Common Diagnostic Errors in Neuro-ophthalmology &amp; Neuro-otology</td>
</tr>
<tr>
<td></td>
<td>I2  Management of Asymptomatic Cerebrovascular Lesions</td>
</tr>
<tr>
<td>3:00 p.m.–5:00 p.m.</td>
<td>C17  The Neurology of Social Behavior</td>
</tr>
<tr>
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<td>C18 Therapy of Movement Disorders: A Case-based Approach</td>
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<td></td>
<td>C19 Mitochondrial Disorders in Neurology</td>
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<tr>
<td></td>
<td>C20 Canalith Repositioning for Benign Paroxysmal Positional Vertigo</td>
</tr>
<tr>
<td></td>
<td>C21 Challenging Headache Cases</td>
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### Sunday, April 19, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>6:30 a.m.–8:00 a.m.</td>
<td>C22  Neuro Flash: Epilepsy</td>
</tr>
<tr>
<td></td>
<td>C23  Neuro-oncologic Emergencies</td>
</tr>
<tr>
<td></td>
<td>C24  Balance and Gait Disorders</td>
</tr>
<tr>
<td></td>
<td>C25  Cognitive Psychology of Neurologic Errors: Chalk Talk</td>
</tr>
<tr>
<td>8:00 a.m.–11:00 a.m.</td>
<td>C26  Controversies in Neuroethics</td>
</tr>
<tr>
<td></td>
<td>C27  Controversies in Multiple Sclerosis Therapy</td>
</tr>
<tr>
<td>8:00 a.m.–12:00 p.m.</td>
<td>C28  Infectious, Paraneoplastic, Autoimmune? Diagnosis and Treatment of Rapidly Progressive Encephalopathies</td>
</tr>
<tr>
<td></td>
<td>C29  Primer of Behavioral Neurology</td>
</tr>
<tr>
<td></td>
<td>C30  Resident Basic Science III: Neuropharmacology</td>
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<tr>
<td></td>
<td>C31  Sports Concussion and Other Mild Concussive Injuries</td>
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<td>C32  Teleneurology and Technologies</td>
</tr>
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<td></td>
<td>C33  Hot Topics in Sleep Neurology</td>
</tr>
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<td></td>
<td>C34  Child Neurology I</td>
</tr>
<tr>
<td></td>
<td>I3  Dopamine-mediated Neural Plasticity in Motor and Non-motor Circuits</td>
</tr>
<tr>
<td>8:00 a.m.–5:00 p.m.</td>
<td>C35  Clinical Epilepsy</td>
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<td>C36  Peripheral Neuropathy</td>
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<td>C37  Neurology Update I</td>
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<tr>
<td></td>
<td>C38  Genetics in Neurology</td>
</tr>
<tr>
<td>8:30 a.m.–12:00 p.m.</td>
<td>C171 Opioids and Marijuana in Your Practice</td>
</tr>
<tr>
<td>9:00 a.m.–5:00 p.m.</td>
<td>C39  Leadership for Women (must apply)</td>
</tr>
<tr>
<td>10:00 a.m.–12:00 p.m.</td>
<td>C40  You Make the Call—An Interactive, Multimedia, Case-based Approach to Learning EMG</td>
</tr>
<tr>
<td></td>
<td>C41  Therapy of Stroke</td>
</tr>
<tr>
<td>1:00 p.m.–2:30 p.m.</td>
<td>S1  Section Topic Controversies</td>
</tr>
<tr>
<td>1:00 p.m.–4:00 p.m.</td>
<td>C42  Therapy of Headache</td>
</tr>
<tr>
<td></td>
<td>C43  Advanced Practice Provider Symposium</td>
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<tr>
<td>1:00 p.m.–5:00 p.m.</td>
<td>C172  Clinical Research: Drug Development and Clinical Trials</td>
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<td>C44  Practical Psychopharmacology for Neurologists</td>
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<td>C45  Neuro-otology</td>
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# Annual Meeting Program Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>3:00 p.m.–5:00 p.m.</td>
<td>C53  Palliative Care for the Practicing Neurologist</td>
</tr>
<tr>
<td>6:00 p.m.–10:00 p.m.</td>
<td>C51  Diagnostic Dilemmas in Multiple Sclerosis</td>
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<td>C52  Dopaminergic and Nondopaminergic Influences on the Changing Landscape of Parkinson’s Disease</td>
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<tr>
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<td>C54  How to Run a Practice: Business Strategies for Neurology Private Practices, Academic Centers, and the Future</td>
</tr>
<tr>
<td>7:30 a.m.–8:30 a.m.</td>
<td>C56  Approach to Sleep Symptoms: Sleepy or Sleepless</td>
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<td>C57  Diagnostic Dilemmas in Multiple Sclerosis</td>
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<td>C58  How to Run a Practice: Business Strategies for Neurology Private Practices, Academic Centers, and the Future</td>
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<tr>
<td>8:00 a.m.–8:30 a.m.</td>
<td>C59  State Society Leadership Roundtable</td>
</tr>
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<td>C60  Palliative Care for the Practicing Neurologian</td>
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<tr>
<td>8:00 a.m.–11:00 a.m.</td>
<td>C61  Clinical E-Pearls</td>
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<td>C62  Interpretation of Polysomnography for the Practicing Neurologist</td>
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<tr>
<td>8:00 a.m.–12:00 p.m.</td>
<td>C63  Treating the New-onset Epilepsy Patient</td>
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<td>C64  Clinical EMG I</td>
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<td>C65  Botulinum Toxins: Practical Issues and Clinical Uses for Neurologists</td>
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<td>C66  Multiple Sclerosis Overview I: Basic and Translational Science</td>
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<td>C67  Infections of the Nervous System I: Common Infections</td>
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<td>C68  Neuroimaging for the General Neurologist: Brain</td>
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<td>C69  Introduction to Primary Headache Disorders</td>
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<td>C70  Bedside Evidence-based Medicine: How to Find and Deconstruct Articles in Order to Take Care of Patients</td>
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<tr>
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<td>C71  Neuro-oncology: Primary Brain Tumors</td>
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<tr>
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<tr>
<td>8:30 a.m.–12:00 p.m.</td>
<td>C73  Clinical Reasoning: From a Novice to an Expert</td>
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<td>9:00 a.m.–5:00 p.m.</td>
<td>C74  Clinical Reasoning: From a Novice to an Expert</td>
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<td>C75  Neuroimaging for the General Neurologue: Brain</td>
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<td>9:00 a.m.–5:00 p.m.</td>
<td>C76  Advanced Leadership for Women (must apply)</td>
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<td>C77  Update on Ataxias</td>
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**Monday, April 20, 2015**

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<tr>
<td>6:30 a.m.–8:00 a.m.</td>
<td>C55  Neuro Flash: Approach to Acute CNS Infections</td>
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<tr>
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<td>C56  Vascular Cognitive Impairment and Dementia: Current Status and Future</td>
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<tr>
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<td>C57  Therapy of Epilepsy</td>
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<td>C58  Neurological Disorders of Famous Composers</td>
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<td>C59  Leadership in Neurology: Be a Champion for Your Patients and Protector of Your Specialty with Payers, Policymakers, and the Public</td>
</tr>
<tr>
<td>6:30 a.m.–8:30 a.m.</td>
<td>C60  Resident and Fellow Career Breakfast: The Early Years (registration required)</td>
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<td>C61  Clinical E-Pearls</td>
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<td>C62  Interpretation of Polysomnography for the Practicing Neurologist</td>
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<td>C77  Update on Ataxias</td>
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1:00 p.m.–5:00 p.m.

1:00 p.m.–3:00 p.m.

1:30 p.m.–3:00 p.m.

2:00 p.m.–4:30 p.m.

3:00 p.m.–6:30 p.m.

4:00 p.m.–6:45 p.m.

4:30 p.m.–6:30 p.m.

5:00 p.m.–6:30 p.m.

5:30 p.m.–6:30 p.m.

6:30 p.m.–9:00 p.m.

1:00 p.m.–2:30 p.m.

9:00 a.m.–12:00 p.m.

Tuesday, April 21, 2015

6:30 a.m.–8:00 a.m.

7:30 a.m.–11:00 a.m.

11:30 a.m.–5:00 p.m.

1:00 p.m.–2:45 p.m.
Annual Meeting Program Schedule

1:00 p.m.–4:00 p.m.
1 C94 EEG in Children: Developmental Maturation, Variants, Epilepsy Syndromes, and Identification of Surgical Candidates ............. 44

1:00 p.m.–5:00 p.m.
1 C95 Sports Concussion Skills Pavilion ................. 70
1 C96 Evaluation and Management of Autonomic Disorders ....................... 74
1 C97 Neurologic Issues in Pregnancy ....................... 50
1 C98 Myelopathies ........................................ 84
1 C99 Neuro-ophthalmology and Neurovestibular Exam Lab Skills Pavilion ........................................ 81
1 17 The Global Burden of Neurological Infections: Epidemiology, Treatment, and Prevention
1 18 Advances in ALS and Other Motor Neuron Diseases

3:00 p.m.–6:30 p.m.
1 P3 Poster Session III

3:15 p.m.–5:00 p.m.
1 Scientific Platform Sessions

5:30 p.m.–6:30 p.m.
1 Hot Topics Plenary Session
Features translational research related to clinical issues of importance. Four outstanding physician-scientists provide summaries of their recent research findings and describe the clinical implications of the results.
Lecturers and topics will be identified in February 2015.

7:00 p.m.–10:00 p.m.
1 Industry Therapeutic Updates
Industry-sponsored, non-CME programs will be offered and are open to attendees at no charge. They will provide an opportunity for pharmaceutical companies, device companies, or other neurologic-related organizations to share information regarding their current therapies and projects in the pipeline in accordance with standards set for industry by the FDA.

Wednesday, April 22, 2015

6:30 a.m.–8:00 a.m.
1 C100 Mild Cognitive Impairment: Implications for Clinicians ......................... 30
1 C101 Hyperkinetic Movement Disorders: Diagnosis and Treatment ................... 62
1 C102 Syndromes of Autonomic Dysfunction in Children and Adolescents ............... 39
1 C103 Global Health Challenges: Neurology in Developing Countries ................ 56
1 C104 Pseudotumor Cerebri ................................ 81
1 C105 Neurohospitalist 2.0: Next Steps in the Evolution .......................... 94
1 C106 Neuro Flash: Acute Stroke Management ................................. 35

7:30 a.m.–11:00 a.m.
1 P4 Poster Session IV

9:00 a.m.–12:00 p.m.
1 Contemporary Clinical Issues Plenary Session
Highlights issues most critical to practicing neurologists, including abstracts related to new therapeutic developments, clinical applications of basic and translational research, and innovative technical developments. Commentary and discussion follow each presentation.
Lecturers and topics will be identified in February 2015.

11:30 a.m.–5:00 p.m.
1 Exhibit Hall

“The AAN meeting is so useful for physician assistants, but unfortunately not a lot of PAs attend. I work so closely, hand-in-hand, with my three physicians. I’m excited to bring back new research which is helpful in explaining the evidence behind the clinical decisions we make for our patients. We have to stay informed, educated, and be eloquent in how we explain the evidence behind the clinical decisions.”

2014 Meeting Attendee
Elizabeth Kearney, PA
Asheville, NC
12:00 p.m.–1:30 p.m.
Awards Luncheon

2:00 p.m.–3:45 p.m.
Scientific Platform Sessions

2:00 p.m.–6:00 p.m.

C107 History of Neurology: The History of Neurologic Disease from Cortex to Peripheral Nerve ........................................ 100
C108 Autism Spectrum Disorders—What We Know and Where We Are Going ........................................ 39
C109 Functional Neurologic Disorders ........................................ 51
C110 Differential Diagnosis of Neurologic Infections ........................................ 56
C111 Neuromuscular Ultrasound Skills Pavilion ........................................ 75
C112 Skills for Stroke Emergent Treatment Skills Pavilion ........ 35
I9 Treating Dementia in an Age of Mixed Disease
I10 CR The Dynamic Brain in Health and Disease: Plasticity and Reprogramming

3:00 p.m.–6:30 p.m.
P5 Poster Session V

4:00 p.m.–5:45 p.m.
Scientific Platform Sessions

6:00 p.m.–7:00 p.m.
Highlights in the Field Sessions

7:00 p.m.–10:00 p.m.

Industry Therapeutic Updates
Industry-sponsored, non-CME programs will be offered and are open to attendees at no charge. They will provide an opportunity for pharmaceutical companies, device companies, or other neurologic-related organizations to share information regarding their current therapies and projects in the pipeline in accordance with standards set for industry by the FDA.

Thursday, April 23, 2015

6:30 a.m.–8:00 a.m.

C113 Neuro Flash: Neuro-ophthalmology ......................... 82
C114 Morning Report: Behavioral Neurology ......................... 31
C115 Morning Report: Lumbar Radiculopathy, Lumbar Spinal Stenosis, Low Back Pain, and Post-Laminectomy Syndrome ......................... 86
C116 Prognostication in the Era of Hypothermia ......................... 36
C117 REM Sleep Behavior Disorder ......................... 102
C118 What Neurologists Really Need to Know About Normal Pressure Hydrocephalus ......................... 31

7:30 a.m.–11:00 a.m.
P6 Poster Session VI

9:00 a.m.–12:00 p.m.

Frontiers in Neuroscience Plenary Session
Focuses on translational research related to clinical issues of importance. Six physician scientists outline their recent research findings, along with the clinical implications.

Presenters:

Transmission of α-Synuclein in Parkinson’s Disease: Pathogenesis and Implications for Therapy
Virginia M-Y Lee, PhD
University of Pennsylvania
Philadelphia, PA

Antemortem Signatures of Neurodegenerative Proteinopathies
Keith A. Josephs Jr., MD
Mayo Clinic
Rochester, MN

Developing Antisense Oligomers as a Genetic Therapy for Duchenne Muscular Dystrophy
Francesco Muntoni, MD
University College London Institute of Child Health
London, United Kingdom

Immune Mechanisms in Neurologic Diseases
Howard L. Weiner, MD
Brigham and Women’s Hospital
Boston, MA

Towards a New Connectional Anatomy of the Human Brain
Marco Catani, MD
King’s College London
London, United Kingdom

Epilepsy: How Genetic Insights Are Transforming Clinical Practice
Ingrid Scheffer, AO, MBBS, PhD, FRACP, FAHMS, FAA
Melbourne Brain Centre
Heidelberg, Victoria, Australia

11:30 a.m.–3:00 p.m.
Exhibit Hall

1:00 p.m.–2:45 p.m.
Scientific Platform Sessions

1:00 p.m.–5:00 p.m.

C119 Borderlands of Neurology and Internal Medicine: Chalk Talk ......................... 51
C120 Emergency Neurology ......................... 71
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| 3:15 p.m.–5:00 p.m. |  
Scientific Platform Sessions |
| 5:30 p.m.–6:30 p.m. |  
Highlights in the Field Sessions |
| 5:30 p.m.–7:00 p.m. |  
**Controversies in Neurology Plenary Session**  
The program features experts discussing the most current and controversial issues in neuroscience. It is set up as a debate format in which two speakers argue one side of a single topic, followed by a rebuttal. Each round concludes with a 10-minute question and answer period.  
Topics and lecturers will be identified in February 2015. |
| 6:00 p.m.–9:00 p.m. |  
C125  
Case Studies: Dementia  
C126  
Case Studies: Unusual Diagnostic and Management of Cases in Neuromuscular Disease  
C127  
Case Studies: Unusual Movement Disorders  
C128  
Case Studies: Multiple Sclerosis  
C129  
Test Your Knowledge: A Case-based Approach to Neuroimaging  
C130  
Case Studies: Neurologic Consultations in Cancer Patients |
| 6:30 a.m.–8:00 a.m. |  
C131  
Neuro Flash: Child Neurology  
C132  
Differential Diagnosis of Dementia: Linking Clinical Syndromes to Biomarkers  
C133  
The Interface Between Infection and Cerebrovascular Disease  
C134  
The Dystonias: Diagnosis, Treatment, and Update on Causes  
C135  
Neurotoxicology |
| 8:00 a.m.–12:00 p.m. |  
C136  
Assessment of Rapidly Progressive Dementias and Related Neurologic Conditions  
C137  
Multiple Sclerosis Therapy I: Symptom Management  
C138  
Continuum® Test Your Knowledge: A Multiple-Choice Question Review  
C139  
Stroke In Young Adults  
C140  
Sleep for the Practicing Neurologist |
| 1:00 p.m.–3:00 p.m. |  
C148  
Therapy of Neuromuscular Disease  
C149  
Improving Accuracy of Dementia Diagnosis: Case Studies with Both Imaging and Neuropathology  
C150  
Principles of Genomic Medicine: Clinical Exome Sequencing in Neurologic Disease  
C151  
Multiple Sclerosis Therapy II: Disease-modifying Treatment |
| 1:00 p.m.–4:00 p.m. |  
C141  
Movement Disorders  
C142  
Clinical EEG  
C143  
Neurology Update II  
C144  
Neuro-ophthalmology  
C145  
Neurologic Intensive Care  
C146  
Spine Neurology: Assessment and Management of Common Spine Disorders  
C147  
EMG Skills Workshop: Basic |
| 12:00 p.m.–1:30 p.m. |  
**Clinical Trials Plenary Session**  
This midday seminar covers important clinical topics identified from other society meetings that affect patient care. The latest updates within several clinical trials conducted over the course of the last year will be presented with an open panel discussion at the conclusion.  
Topics and lecturers will be identified in February 2015. |

**Friday, April 24, 2015**

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| 7:15 a.m.–8:15 a.m. |  
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C140  
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C142  
Clinical EEG  
C143  
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C144  
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C145  
Neurologic Intensive Care  |
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C147  
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C148  
Therapy of Neuromuscular Disease  
C149  
Improving Accuracy of Dementia Diagnosis: Case Studies with Both Imaging and Neuropathology  
C150  
Principles of Genomic Medicine: Clinical Exome Sequencing in Neurologic Disease  |
| 3:00 p.m.–5:00 p.m. |  
C151  
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C152  
Neurology Update III  
C153  
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C154  
Neurologic Intensive Care  
C155  
Spine Neurology: Assessment and Management of Common Spine Disorders  |
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C156  
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C157  
Neurologic Intensive Care  
C158  
Spine Neurology: Assessment and Management of Common Spine Disorders  
C159  
EMG Skills Workshop: Basic  
C160  
Therapy of Neuromuscular Disease  |
| 7:00 p.m.–9:00 p.m. |  
C161  
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C162  
Neuro-ophthalmology  
C163  
Neurologic Intensive Care  
C164  
Spine Neurology: Assessment and Management of Common Spine Disorders  
C165  
EMG Skills Workshop: Basic  |
| 9:00 p.m.–11:00 p.m. |  
C166  
Neurology Update V  
C167  
Neuro-ophthalmology  
C168  
Neurologic Intensive Care  
C169  
Spine Neurology: Assessment and Management of Common Spine Disorders  
C170  
EMG Skills Workshop: Basic  |
| 11:00 p.m.–1:00 a.m. |  
C171  
Neurology Update VI  
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C176  
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C177  
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C178  
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C179  
Spine Neurology: Assessment and Management of Common Spine Disorders  
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EMG Skills Workshop: Basic  |
| 3:00 a.m.–5:00 a.m. |  
C181  
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C184  
Spine Neurology: Assessment and Management of Common Spine Disorders  
C185  
EMG Skills Workshop: Basic  |
Planning for the 2015 AAN Annual Meeting—and earning 10 FREE Self-Assessment CME credits—has never been easier:

1. Take the convenient online pre-test by April 17, 2015, to assess your knowledge and receive recommendations for Annual Meeting courses and areas to improve
2. After attending the meeting, successfully complete the online post-test to receive your CME

An AAN Member Exclusive—FREE to Members Only!

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### Saturday, April 25, 2015

#### 6:30 p.m.–6:00 p.m.

- **Neurology Year in Review Plenary Session**
  
  This plenary session will feature six speakers, each focusing on the latest research that has happened in the last year within a specific subspecialty topic.
  
  Topics and lecturers will be identified in February 2015.

#### 6:30 p.m.–8:00 p.m.

- **Closing Party**
  
  Join us at the Closing Party to end the week with music from a DJ and enjoy some light appetizers.

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### 6:30 a.m.–8:00 a.m.

- **E154** Attention Deficit Hyperactivity Disorder Across the Lifespan
- **E155** Physical Exercise and Cognitive Training in Neurological Disorders
- **E156** Neuro Flash: Sleep Medicine
- **E157** Paroxysmal Movement Disorders
- **E158** Neuro Flash: MRI and Multiple Sclerosis

#### 8:00 a.m.–11:00 a.m.

- **E159** Eye Movement Disorders: A Systematic Approach to the Evaluation of Diplopia

#### 8:00 a.m.–12:00 p.m.

- **E160** Non-Alzheimer’s Dementia
- **E161** Clinical Approach to Muscle Disease
- **E162** Nonmotor Manifestations of Parkinson Disease
- **E163** Autoimmune Neurology
- **E164** Chronic Migraine Education Program
- **E165** Consultations in the Medical Surgical ICU
- **E166** How to Analyze Spells by Video-EEG

#### 10:00 a.m.–12:00 p.m.

- **E167** Preventing a First Stroke: What Every Neurologist Needs to Know
- **E168** Controversies in Brain Death Determination
- **E169** Multiple Sclerosis Essentials
## Annual Meeting Programs by Topic

To help simplify the Annual Meeting, all education programs are now referred to as courses regardless of day, time offered, or duration of program.

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“I attended the Global Health Challenges: Neurology in Developing Countries. It was eye opening to learn about the global burden of disease and, specifically, the difficulties in treating epilepsy in developing countries. It won’t affect my current practice, but reminds me of the need to think outside of the small world in which I practice. It also reignited an interest in participating in short-term medical mission work like I was able to do in medical school.”

2014 Meeting Attendee

David B. Watson, MD
Morgantown, WV
Annual Meeting Programs by Topic

**Movement Disorders**

- C3 Deep Brain Stimulation Management
- C18 Therapy of Movement Disorders: A Case-based Approach
- C24 Balance and Gait Disorders
- I3 SIF Dopamine-mediated Neural Plasticity in Motor and Non-motor Circuits
- C52 SIF Dopaminergic and Nondopaminergic Influences on the Changing Landscape of Parkinson’s Disease
- C54 Cognitive-Motor Disorders: Chalk Talk
- C65 Botulinum Toxins: Practical Issues and Clinical Uses for Neurologists
- C77 Update on Ataxias
- C79 Overview of Parkinson’s Disease and Movement Disorders
- C85 Clinical Usefulness of Botulinum Toxin and Treatment of Dystonia Skills Pavilion
- C90 Approach to the Shaky Patient
- C101 Hyperkinetic Movement Disorders: Diagnosis and Treatment
- I11 SIF The Promise of Novel Biomarker Approaches in Advancing Treatment
- C127 Case Studies: Unusual Movement Disorders
- C131 Neuro Flash: Child Neurology
- C134 The Dystonias: Diagnosis, Treatment, and Update on Causes
- C141 Movement Disorders
- C157 Paroxysmal Movement Disorders
- C162 Nonmotor Manifestations of Parkinson Disease

**MS and CNS Inflammatory Disease**

- C4 Neuromyelitis Optica: Scientific and Clinical Update
- C27 Controversies in Multiple Sclerosis Therapy
- C51 Diagnostic Dilemmas in Multiple Sclerosis
- C66 Multiple Sclerosis Overview I: Basic and Translational Science
- C80 Multiple Sclerosis Overview II: Clinical Advances
- C88 Morning Report: Multiple Sclerosis
- I11 CR The Promise of Novel Biomarker Approaches in Advancing Treatment
- C128 Case Studies: Multiple Sclerosis
- C137 Multiple Sclerosis Therapy I: Symptom Management
- C151 Multiple Sclerosis Therapy II: Disease-modifying Treatment
- C158 Neuro Flash: MRI and Multiple Sclerosis
- C169 Multiple Sclerosis Essentials

**Neuro Trauma, Critical Care, and Sports Neurology**

- C10 Critical Care EEG Monitoring
- C15 Severe TBI: From ICU to Rehabilitation
- C31 Sports Concussion and Other Mild Concussive Injuries
- C47 Sports Neurology: Non-Concussion Overview
- I5 SIF Pediatric Neurotrauma: From Coma to Concussions
- C82 Emergency Room Neuro-ophthalmology
- C83 SIF Concussion Assessment and Management in the Youth Athlete
- C95 Sports Concussion Skills Pavilion
- C120 Emergency Neurology
- C145 Neurologic Intensive Care
- C165 Consultations in the Medical Surgical ICU

“I live in Zambia and there are only two neurologists in Zambia for 13 million people. It’s a very small community! Coming here, I get to meet the people face-to-face that I’ve emailed, spoken to, and trained with over the years. We are talking about collaboration and building our global health programs. This AAN meeting—it’s neurology on steroids!”

2014 Meeting Attendee

Omar Siddiqi, MD
Lusaka, Zambia
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Capitol City CELEBRATION

Sunday, April 19  6:00 p.m.–10:00 p.m.

Join your friends and colleagues for an exciting evening filled with entertainment, including:

**Neurobowl®**  6:00 p.m.–8:00 p.m.

This popular event is one of the Annual Meeting’s premier happenings. Neurobowl® showcases the best and brightest in neurology competing for the coveted Neurobowl® trophy in an entertaining game-show format.

**Main Stage Music: Doctor’s Orders**  8:00 p.m.–10:00 p.m.

This energetic ten-piece variety band based in the Washington, DC/Baltimore area will have you on your feet with its diverse repertoire covering everything from Top 40 to 70’s to 80’s to standards. Fronted by dynamic singer/saxophonist Kyle Johnson and Miriamm Wright—of Peaches and Herb fame—“the chemistry of the band is obvious from the first chord,” says guitarist Bill McCarron. “It’s not like it’s really a conscious effort on our part, we just have a blast playing together.” No doubt, you’ll have a blast listening to them.

**The Dr. Phil Pearl Children’s Hospital Jazz Band**  8:30 p.m.–9:30 p.m.

Swing out to your favorite jazz standards while enjoying a scrumptious dessert. This four-piece ensemble, led by AAN member Phillip Pearl, MD, FAAN, will have your toes tapping and fingers snapping to some of the most enduring tunes of our time.
**Course Descriptions**

**Aging, Dementia, Cognitive, and Behavioral Neurology**

**C15**
Saturday, April 18, 2015
1:00 p.m.–5:00 p.m.  4 hours

**Severe TBI: From ICU to Rehabilitation**

**Topics:** Neuro-rehabilitation; Aging, Dementia, Cognitive, and Behavioral Neurology; Neuro Trauma, Critical Care, and Sports Neurology

**Director:** Holly E. Hinson, MD, Portland, OR

Full Program Description on Page 83

**C17**
Saturday, April 18, 2015
3:00 p.m.–5:00 p.m.  2 hours

**The Neurology of Social Behavior**

**Topic:** Aging, Dementia, Cognitive, and Behavioral Neurology

**Director:** Katherine P. Rankin, PhD, San Francisco, CA

Program Description:
Technological innovation during the past decade has enabled significant advances in social cognitive neuroscience. Our understanding of the neural circuits underpinning socioemotional behaviors such as empathy, self-awareness, warmth, and reading others’ intentions is more precise than ever before. Faculty will provide an overview of how specific neural networks normally function to support social behavior, and will show how this new information can improve our ability to understand the kinds of neurologically based behavioral dysfunction that result from disease and injury. Disturbances of socioemotional behavior in clinical neurology will be discussed using data from patients with diseases that particularly impair social functions, such as frontotemporal dementia, autism, ADHD, sociopathy, and Williams syndrome.

Upon Completion:
Participants should be able to understand that social behavior and cognition rely on specific neurologic systems in the brain, have a sense of the basic organization and general neuroanatomy of social behavior, and be aware of specific neurologic conditions that particularly impair social functioning.

Lecture/Faculty:
- Socioemotional Brain Network Function in Health and Disease
  Katherine P. Rankin, PhD, San Francisco, CA
- Sensory Processing and Social Cognition in Neurodevelopmental Disorders
  Elysa Marco, MD, San Francisco, CA
- Socioemotional Circuits in Neurologic Disease
  Katherine P. Rankin, PhD, San Francisco, CA

Core Competencies: Medical Knowledge, Patient Care

Teaching Style: Didactic, Audience Participation, Case-Based

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

**C29**
Sunday, April 19, 2015
8:00 a.m.–12:00 p.m.  4 hours

**Primer of Behavioral Neurology**

**Topic:** Aging, Dementia, Cognitive, and Behavioral Neurology

**Director:** Bradford Dickerson, MD, Boston, MA

Program Description:
Identification of structure-function relationships in the brain has been an important goal of behavioral neurology. Many new methodologies, studying both healthy controls and neurologically impaired individuals, have recently provided new insights into the networks of brain regions that underlie specific tasks or functions. Faculty will illustrate the contributions of a variety of modalities toward understanding the neural correlates of executive function, social behavior and comportment, language, memory, and visual processing and spatial attention. A cognitive neuroscience perspective will inform discussion of the component processes and brain systems subserving these behaviors. An efficient approach to the evaluation of patients with cognitive and behavioral disorders including dementia will be reviewed.

Upon Completion:
Participants should be able to describe strengths and weaknesses of a variety of approaches (e.g., neuroimaging methods) toward identifying structure-function relationships, and should be able to describe some recent insights into the neural bases of executive function, social behavior, language, memory, and visual cognition. Participants should be able to describe the component processes of these cognitive abilities using a contemporary cognitive neuroscience perspective. Participants should increase their sophistication in understanding the neurobehavioral assessment of patients with behavioral and cognitive neurologic disorders, including dementias.

Lecture/Faculty:
- An Overview of Brain Networks Emphasizing Frontal Systems and Behavior
  Faculty
- Parietal Brain Systems: From Neuroscientific Discovery to the Clinic
  Bradford Dickerson, MD, Boston, MA
- Disorders of Written and Spoken Language
  Faculty
- Episodic Memory and Amnestic Disorders
  Faculty

Core Competencies: Medical Knowledge, Patient Care

Teaching Style: Didactic, Audience Participation, Case-Based

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

**Membership Pays!**

Only AAN Members Save 40% or more on Annual Meeting registration. Be sure to join or renew your membership prior to registration. Visit AAN.com/membership
Practical Psychopharmacology for Neurologists

**Topics:** Aging, Dementia, Cognitive, and Behavioral Neurology; General Neurology

**Director:** Laurence J. Kinsella, MD, FAAN, St. Louis, MO

**Program Description:**
Which dementias are exacerbated by antipsychotics/sedatives? Are antipsychotics contraindicated in all patients with dementia? Which agents are likely to worsen motor function in Parkinson’s disease? Following an overview lecture, a neurologist moderator will pose questions about common clinical dilemmas to two psychiatrists. Faculty will respond by providing current, evidence-based data and practical tips about managing psychiatric issues in neurologic practice. Scenarios relevant to neurologists will be discussed, such as which antipsychotics are least likely to exacerbate motor symptoms in patients with Parkinson’s disease or Lewy body dementia.

**Upon Completion:**
Participants should become familiar with the management of common clinical scenarios such as drug-induced motor fluctuations, behavior management in dementia, depressed mood, anxiety/irritability, and aggression in neurologic patients, as well as have a greater understanding of when a psychiatry referral might be needed. Although the program will focus on practical clinical knowledge, pearls relevant to Neurology Board preparation will also be included.

**Lecture/Faculty:**
- Survival Guide to Psychopharmacology: Adult
  Leigh Jennings, MD, St. Louis, MO
- Case Studies in Practical Psychopharmacology I
  George Grossberg, MD, St. Louis, MO
  Leigh Jennings, MD, St. Louis, MO
  Laurence J. Kinsella, MD, FAAN, St. Louis, MO
- Survival Guide to Psychopharmacology: Geriatrics
  George Grossberg, MD, St. Louis, MO
- Case Studies in Practical Psychopharmacology II
  George Grossberg, MD, St. Louis, MO
  Leigh Jennings, MD, St. Louis, MO
  Laurence J. Kinsella, MD, FAAN, St. Louis, MO
- Audience Cases / Written Questions

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Audience Participation, Didactic

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist

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Cognitive-Motor Disorders: Chalk Talk

**Topics:** Aging, Dementia, Cognitive, and Behavioral Neurology; Movement Disorders

**Director:** Kenneth M. Heilman, MD, FAAN, Gainesville, FL

**Program Description:**
This course will use a teaching technique of a “chalkboard-style” classroom, with shorter lectures followed by a one-on-one question and answer with faculty.

The neural innervation of muscles of our upper limbs allows us to perform almost an infinite number of movements. To perform our activities of daily living, as well as instrumental activities, the nerves and muscles that implement movements of the upper limbs must be guided by programs developed by the brain. There are two major forms of action programs: ‘when’ or intentional programs and ‘how’ or praxic programs. While some people think that disorders of the systems that mediate cognitive-motor activities are rare, they are very common and can be seen with diseases such as stroke, degenerative disorders, and even traumatic brain injury. The faculty will discuss disorders of the ‘how’ system or apraxic disorders, and disorders of the ‘when’ system or action-intentional disorders, as well as how these disorders can be a major source of disability in patients with diseases of their brain.

The various forms of apraxic disorders, such as limb-kinetic, ideomotor, ideation and conceptual, will be discussed, along with the forms of action-intentional disorders, such as akinesia, abulia, hypokinesia, impersistence, perseveration, and defective response inhibition. The definition, as well as the mean by which these can be assessed, will be discussed and demonstrated. The pathophysiology of these disorders and the diseases that can cause these disorders will also be covered, along with management and treatment.

**Upon Completion:**
Participants should learn the means by which using clinical tests they can assess patients for the different forms of apraxia and action-intentional disorders; learn about the diseases that may produce these disorders as well as the pathophysiology that may account for these cognitive-behavioral disorders; and be introduced to some of the means by which these disorders can be managed and treated.

**Lecture/Faculty:**
- Limb Apraxia
  Kenneth M. Heilman, MD, FAAN, Gainesville, FL
- Action-intentional Disorders
  Kenneth M. Heilman, MD, FAAN, Gainesville, FL
- Questions, Answers, and Discussion
  Kenneth M. Heilman, MD, FAAN, Gainesville, FL

**Core Competency:** Medical Knowledge, Patient Care

**Teaching Style:** Didactic

**CME Credits:** 2

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Occupational Therapists and Neuropsychologists, Advanced Practice Provider
Course Descriptions

Vascular Cognitive Impairment and Dementia: Current Status and Future

**Topic:** Aging, Dementia, Cognitive, and Behavioral Neurology  
**Director:** David S. Knopman, MD, FAAN, Rochester, MN  
**Program Description:** Faculty will provide an overview of the clinical, epidemiological, imaging, and neuropathological basis of vascular cognitive impairment. Faculty will focus on the opportunities for prevention offered by epidemiological studies, opportunities for improved diagnosis with new imaging techniques, and the challenges that remain for diagnosis and treatment.

**Upon Completion:** Participants should be able to discuss issues related to the diagnosis of vascular dementia and its overlap with dementia related to nonvascular causes; discuss the epidemiology of VCI and dementia, in particular vascular risk factors; and describe how imaging techniques contribute to the diagnosis of vascular cognitive impairment.

**Lecture/Faculty:**
- Introduction to Vascular Cognitive Impairment  
  David S. Knopman, MD, FAAN, Rochester, MN  
- Imaging of Cerebrovascular Disease Relevant to Cognitive Impairment  
  Kejal Kantarci, MD, Rochester, MN  
- Vascular Cognitive Impairment: The Big Picture  
  David S. Knopman, MD, FAAN, Rochester, MN

**Core Competencies:** Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

**Teaching Style:** Interactive, Case-Based, Didactic

**CME Credits:** 7.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

Mild Cognitive Impairment: Implications for Clinicians

**Topic:** Aging, Dementia, Cognitive, and Behavioral Neurology  
**Director:** David J. Gill, MD, Rochester, NY  
**Program Description:** The diagnosis of mild cognitive impairment (MCI) often represents prodromal Alzheimer’s disease or other dementia. However, diagnosis, prediction of outcome, and treatment of patients with mild cognitive impairment presents many challenges. Faculty will address the diagnosis, pathophysiology, role of biomarkers, and treatment of mild cognitive impairment. A number of cases will be presented to illustrate controversies and management issues.

**Upon Completion:** Participants should understand the basic biology of MCI and be familiar with the recommended diagnostic strategy, appropriate use of biomarkers, and management of patients with MCI.

**Lecture/Faculty:**
- Clinical Diagnosis of Alzheimer’s Disease Incorporating Biomarkers  
  John C. Morris, MD, FAAN, St. Louis, MO  
- Neuropsychological Evaluation to Aid in Dementia Diagnosis  
  Jennifer J. Manly, PhD, New York, NY  
- Neuroimaging to Aid in Dementia Diagnosis  
  Eric M. McDade, DO, Pittsburgh, PA  
- Non-Alzheimer Dementias  
  Brandy R. Matthews, MD, FAAN, Indianapolis, IN  
- Rapidly Progressive Dementias  
  Beau M. Anes, MD, PhD, MS, St. Louis, MO  
- Chronic Traumatic Encephalopathy/Traumatic Brain Injury  
  Ann C. McKee, MD, Boston, MA  
- Pathobiology and Genetics of Alzheimer’s Disease  
  David M. Holtzman, MD, FAAN, St. Louis, MO  
- Dementia Therapy  
  Steven E. Arnold, MD, Philadelphia, PA

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

**Teaching Style:** Case-Based, Didactic

**CME Credits:** 7.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

Dementia Overview

**Topic:** Aging, Dementia, Cognitive, and Behavioral Neurology  
**Director:** John C. Morris, MD, FAAN, St. Louis, MO  
**Program Description:** Knowledge in the area of dementia is rapidly evolving. Faculty will present the clinical and molecular biology of Alzheimer’s disease; an overview of frontotemporal dementia and dementia with Lewy bodies; rapidly progressive dementia; chronic traumatic encephalopathy; and dementia from clinical, neuropsychological, neuroimaging, and fluid biomarker perspectives. Dementia management also will be reviewed.

**Upon Completion:** Participants should be familiar with the differential diagnosis of dementia; recognize the clinical features and practical approaches of the different dementias; understand the basis for amyloid and/or tau as a therapeutic target in Alzheimer’s disease; the molecular basis of different dementias; and the genetic components of the dementias.

This program will utilize an Audience Response System.

**Lecture/Faculty:**
- Clinical Overview of Mild Cognitive Impairment  
  Ronald C. Petersen, PhD, MD, Rochester, MN  
- Prediction of Outcome and Treatment of Mild Cognitive Impairment  
  David J. Gill, MD, Rochester, NY

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Didactic

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist
C114 Thursday, April 23, 2015
6:30 a.m.–8:00 a.m. 
1.5 hours

Morning Report: Behavioral Neurology

Topic: Aging, Dementia, Cognitive, and Behavioral Neurology
Director: Brandy R. Matthews, MD, FAAN, Indianapolis, IN

Program Description:
Accurate diagnosis and appropriate treatment in behavioral neurology requires the development of specialized localization skills, similar to other subspecialties in neurology. Clinical cases of cognitive and behavioral decline will be presented as though in the clinical setting using actual patient video, with course participants guiding the clinical history and focused exam, generating a differential diagnosis, reviewing relevant data, and formulating a treatment plan via the audience response system. Faculty will highlight salient features in the cases and describe important techniques in the history and exam to optimize time spent with similar patients. Current evidence regarding diagnostic tools, accuracy of diagnosis, and treatments will also be discussed. Cases will represent atypical Alzheimer’s disease.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be familiar with evaluation and differential diagnosis in behavioral neurology, including bedside mental status screening, neuroimaging, and genetic testing in patients who present for evaluation of cognitive decline.

Lecture/Faculty:
- Brains Behaving Badly
  Brandy R. Matthews, MD, FAAN, Indianapolis, IN

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care

Teaching Style: Case-Based, Didactic, Audience Participation

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist

C125 Thursday, April 23, 2015
6:00 p.m.–9:00 p.m. 
3 hours

Case Studies: Dementia

Topic: Aging, Dementia, Cognitive, and Behavioral Neurology
Director: Neill R. Graff-Radford, MD, FAAN, Jacksonville, FL

Program Description:
Faculty will discuss the presentation, diagnosis, and management of a variety of dementing disorders. Sample cases will be presented and the audience will be encouraged to discuss controversial aspects of the diagnosis and management of these cases. Participants are encouraged to suggest cases of their own prior to the course to Neill Graff-Radford, graffradford.neill@mayo.edu and some may be selected for the course.

Upon Completion:
Participants should be able to describe the key clinical and neuroimaging features that distinguish INPH from other causes of dementia and gait impairment in the elderly such as cerebrovascular disease or degenerative disorders; describe how to use key diagnostic modalities, such as lumbar puncture or continuous CSF drainage, to identify patients likely to respond to shunt surgery; and describe principles of longitudinal management of patients with shunts, including shunt programming and assessment of possible shunt failure.

Lecture/Faculty:
- Assessment of Patients with Suspected INPH
  Michael A. Williams, MD, FAAN, Baltimore, MD
- Surgical Treatment and Longitudinal Management of INPH
  Michael A. Williams, MD, FAAN, Baltimore, MD

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

Teaching Style: Didactic

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C118 Thursday, April 23, 2015
6:30 a.m.–8:00 a.m. 
1.5 hours

What Neurologists Really Need to Know About Normal Pressure Hydrocephalus

Topic: Aging, Dementia, Cognitive, and Behavioral Neurology
Director: Michael A. Williams, MD, FAAN, Baltimore, MD

Program Description:
Idiopathic normal pressure hydrocephalus (INPH) is a disorder of the elderly that comprises the three most common symptoms of aging: gait impairment, dementia, and incontinence. The only effective treatment is surgical implantation of a shunt, which makes proper selection of patients for surgery a high-stakes decision. Faculty will review key clinical and radiographic features that suggest the need for specific INPH testing; outline contemporary diagnostic approaches to INPH, including lumbar puncture, continuous CSF drainage, and advanced neuroimaging techniques; and review the longitudinal management of INPH patients with shunts, including the use of programmable shunts by neurologists to improve INPH symptoms or address shunt complications. This course will focus on practical management knowledge and skills.
Program Description:
Diagnosing the underlying pathology of dementing disorders is still grounded in the clinical history and neurological examination. However, new imaging and biofluid biomarkers for the most common cause of dementia, Alzheimer’s disease, are poised to move from research settings to the clinic. Revised diagnostic criteria for Alzheimer’s disease suggest that biomarkers may be incorporated into the clinical evaluation to increase diagnostic confidence. Faculty will review conditions posing diagnostic difficulty in the differential diagnosis of dementia, such as distinguishing cognitively healthy aging from incipient dementia and discriminating Alzheimer mimics from Alzheimer’s disease, and discuss the potential role of biomarkers in improving diagnostic accuracy. Interaction between faculty and participants will be encouraged.

Upon Completion:
Participants should understand the basis for the clinical diagnoses of Alzheimer’s disease in relation to dementing disorders that often mimic its presentation and should also understand the potential clinical utility of biofluid and imaging biomarkers for Alzheimer’s disease.

Lecture/Faculty:
- Alzheimer’s Biomarkers
  Jeffrey M. Burns, MD, Kansas City, KS
- Case Studies
  Jeffrey M. Burns, MD, Kansas City, KS

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic, Audience Participation, Case-Based
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Non-Neurologist

Program Description:
Participants should be familiar with the differential diagnoses and work-up of common and uncommon conditions that may present as RPDs, including Creutzfeldt-Jakob disease (CJD), autoimmune and paraneoplastic encephalopathy, viral encephalitis, and their many imitators.

Lecture/Faculty:
- Conventional Infections Causing Rapid Dementia
  Allen J. Aksamit, Jr., MD, FAAN, Rochester, MN
- CJD and Related Disorders
  Michael D. Geschwind, MD, PhD, San Francisco, CA
- Autoimmune Encephalopathies
  Steven Vernino, MD, PhD, FAAN, Dallas, TX
- Rapidly Progressive Degenerative Dementia
  Bradley F. Boeve, MD, Rochester, MN

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style: Case-Based, Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

Program Description:
Patients with rapidly progressive dementias (RPDs) or related neurologic conditions that develop over weeks to months require a different assessment approach than patients with slowly progressive dementias. RPDs present unique diagnostic challenges for physicians. An expedited evaluation is typically necessary since treatable conditions can be fatal or irreversible if not diagnosed quickly. Diagnostic algorithms for RPDs are not well established. Faculty will present an approach to the differential diagnosis of RPDs, including case presentations focusing on neurodegenerative, autoimmune, infectious, neoplastic, toxic/metabolic, and other conditions that need to be considered.

Lecture/Faculty:
- Introduction and Process
  James B. Leverenz, MD, FAAN, Cleveland, OH
- Clinical Approach to a Patient with Dementia (Case Scenario I)
  Edward J. Zamrini, MD, Salt Lake City, UT
C154  Saturday, April 25, 2015  6:30 a.m.–8:00 a.m.  1.5 hours

Attention Deficit Hyperactivity Disorder Across the Lifespan

Topics:  Aging, Dementia, Cognitive, and Behavioral Neurology; Child Neurology and Developmental Neurology

Director:  Martha Bridge Denckla, MD, Baltimore, MD  

Program Description:  
Attention deficit hyperactivity disorder (ADHD) occurs in 5%–10% of children and 2%–4% of adults and can cause significant dysfunction. Full or partial ADHD persists into adulthood in at least 40% of involved children. Symptomatic adults can have dysfunction in multiple environments (home, work, recreation) and comorbid conditions such as tics, anxiety disorders, and mood disorders. ADHD features are also consequences of acquired conditions such as traumatic brain injury and CNS infection. Persistence and later onset of features suggest that both pediatric and adult neurologists should be knowledgeable about the presentation and features of ADHD.

Upon Completion:  
Participants should understand the neurobiological nature of ADHD from childhood through adulthood, the rationale for a multimodal treatment method, the "official" clinician’s guidelines to diagnosis, and pharmaco Rx.

Lecture/Faculty:  
- ADHD: Diagnosis and Assessment  
  Max Wiznitzer, MD, FAAN, Cleveland, OH
- ADHD: Neurobiology and Research  
  Martha Bridge Denckla, MD, Baltimore, MD
- ADHD: Treatment Options and Issues  
  Max Wiznitzer, MD, FAAN, Cleveland, OH

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care

CME Credits:  1.5

Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist

C160  Saturday, April 25, 2015  8:00 a.m.–12:00 p.m.  4 hours

Non-Alzheimer’s Dementia

Topic:  Aging, Dementia, Cognitive, and Behavioral Neurology

Director:  Gil Dan Rabinovici, MD, San Francisco, CA  

Program Description:  
While Alzheimer’s disease (AD) is the most common cause of dementia, dementia with Lewy bodies and vascular disease are also very common in the elderly, whereas frontotemporal dementia is as common as AD in patients with a young age-of-onset. Furthermore, a subset of patients with progressive cognitive decline may have a potentially reversible infectious or inflammatory cause. It is critical for neurologists to identify the cause of dementia, particularly in patients with reversible causes, but also in patients with neurodegenerative diseases, where therapies that are efficacious in one disease may be harmful in another.

Faculty will focus on enhancing knowledge and skills in the evaluation, identification, and comprehensive management of the most common non-AD dementias, including parkinsonian dementias, vascular dementia, frontotemporal dementia, and infectious and inflammatory encephalopathies. Clinical features will be emphasized, as will the diagnostic roles of established and emerging neuroimaging techniques and fluid biomarkers.

Upon Completion:  
Participants should understand the differential diagnosis, clinical, laboratory, and neuroimaging evaluation, and basic management of common subtypes of non-AD dementia.

Lecture/Faculty:  
- Frontotemporal Dementia and Primary Progressive Aphasia  
  Gil Dan Rabinovici, MD, San Francisco, CA
- Parkinsonian Dementias  
  Keith A. Josephs, Jr., MD, Rochester, MN
- Vascular Cognitive Disorders  
  Sandra E. Black, MD, FAAN, Toronto, ON, Canada
- Rapidly Progressive Dementias (Autoimmune, Infectious, and More)  
  Michael D. Geschwind, MD, PhD, San Francisco, CA

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

Teaching Style:  Didactic, Interactive, Audience Participation, Case-Based

CME Credits:  3.75

Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Psychiatrist

Really love the use of interactive teaching techniques in the #meded sessions at #AANAM this year. Well done!
Recommended Audience: Neurologist, Non-Neurologist, Advanced Practice Provider

CME Credits: 3

Teaching Style: Evidence-based, Cutting Edge, and Practical Management of Acute Ischemic Stroke

Director: Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA

Program Description:
The management of patients with acute or recent cerebral ischemia continues to evolve rapidly. Keeping abreast of advances in the field is a challenge. Several recent clinical trials will have substantial impact on stroke therapy. However, some published data are conflicting, or leave lingering questions, leading to controversy regarding optimal management. Faculty will present a succinct, up-to-date, evidence-based approach to the comprehensive management of acute cerebral infarction, including current recommendations regarding reperfusion therapies and vascular risk reduction following acute or recent cerebral ischemia. When an approach is unclear or unproven, faculty will discuss their experience with a particular strategy.

The presentations will provide concise, useful information that may be directly applied to the participant’s practice. Discussions will include common yet challenging scenarios in stroke management. The session will provide ample opportunity for participants to ask questions or present their own cases to the faculty.

Upon Completion:
Participants should be knowledgeable about the optimal management of acute cerebral infarction, including general medical strategies, thrombolytic treatment, endovascular therapy, and surgical approaches, as well as their relevant therapeutic windows; and develop a logical framework for promptly implementing various vascular risk reduction strategies after acute or recent cerebral ischemia, including selection of antithrombotic agents, lipid modifiers, antihypertensive therapies, and revascularization procedures.

Lecture/Faculty:
- Evidence-based, Cutting Edge, and Practical Management of Acute Ischemic Stroke
  - Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA
- Ischemic Stroke Prevention: An Update
  - Tanya N. Turan, MD, Charleston, SC

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C41 Sunday, April 19, 2015 10:00 a.m. – 12:00 p.m. 2 hours

Therapy of Stroke

Topic: Cerebrovascular Disease and Interventional Neurology

Director: Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA

Program Description:
The management of patients with acute or recent cerebral ischemia continues to evolve rapidly. Keeping abreast of advances in the field is a challenge. Several recent clinical trials will have substantial impact on stroke therapy. However, some published data are conflicting, or leave lingering questions, leading to controversy regarding optimal management. Faculty will present a succinct, up-to-date, evidence-based approach to the comprehensive management of acute cerebral infarction, including current recommendations regarding reperfusion therapies and vascular risk reduction following acute or recent cerebral ischemia. When an approach is unclear or unproven, faculty will discuss their experience with a particular strategy.

The presentations will provide concise, useful information that may be directly applied to the participant’s practice. Discussions will include common yet challenging scenarios in stroke management. The session will provide ample opportunity for participants to ask questions or present their own cases to the faculty.

Upon Completion:
Participants should be knowledgeable about the optimal management of acute cerebral infarction, including general medical strategies, thrombolytic treatment, endovascular therapy, and surgical approaches, as well as their relevant therapeutic windows; and develop a logical framework for promptly implementing various vascular risk reduction strategies after acute or recent cerebral ischemia, including selection of antithrombotic agents, lipid modifiers, antihypertensive therapies, and revascularization procedures.

Lecture/Faculty:
- Evidence-based, Cutting Edge, and Practical Management of Acute Ischemic Stroke
  - Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA
- Ischemic Stroke Prevention: An Update
  - Tanya N. Turan, MD, Charleston, SC

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C7 Saturday, April 18, 2015 8:00 a.m. – 12:00 p.m. 4 hours

Cerebrovascular Disease and Interventional Neurology

Director: Seemant Chaturvedi, MD, FAAN, FAHA, Miami, FL

Program Description:
The past 10 years, the rate of neuroimaging has soared. Included in this category is both brain and neurovascular imaging. The increase in imaging has led to marked increase in the number of identified patients with asymptomatic or incidental neurovascular conditions. At the current time, there exists considerable controversy in the management of unruptured aneurysms and AVMs. In addition, the surgical treatment of asymptomatic carotid stenosis is receiving renewed scrutiny due to advances in medical therapy. Faculty will review the management of these asymptomatic vascular conditions, along with a discussion of the cost impact of neuroimaging and treatment of asymptomatic neurovascular conditions.

This program is offered in partnership with the American Heart Association/American Stroke Association and the AAN Stroke and Vascular Neurology Section.

Upon Completion:
Participants should become aware of the most recent clinical trial and population-based data pertaining to asymptomatic neurovascular conditions, such as unruptured aneurysms and AVMs, and asymptomatic carotid stenosis. Participants should also have an appreciation for which conditions, such as unruptured aneurysms and AVMs, and asymptomatic and incidental neurovascular conditions. At the current time, there exists considerable controversy in the management of unruptured aneurysms and AVMs. In addition, the surgical treatment of asymptomatic carotid stenosis is receiving renewed scrutiny due to advances in medical therapy. Faculty will review the management of these asymptomatic vascular conditions, along with a discussion of the cost impact of neuroimaging and treatment of asymptomatic neurovascular conditions.

Lecture/Faculty:
- What Is the Latest on Intracranial Arteriovenous Malformations?
  - Hooman Kamel, MD, New York, NY
- Current Status of Asymptomatic Carotid Stenosis Treatment Options
  - Seemant Chaturvedi, MD, FAAN, FAHA, Miami, FL
- Unruptured Intracranial Aneurysms: When and How Should We Treat?
  - Dileep R. Yavagal, MD, Miami, FL
- Costs of Imaging and Treating Stroke: Are We Breaking the Bank?
  - James F. Burke, MD, Ann Arbor, MI

Core Competencies: Medical Knowledge, Patient Care

Teaching Style: Case-Based, Didactic

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C74 Monday, April 20, 2015 8:00 a.m. – 5:00 p.m. 9 hours

Cerebrovascular Disease

Topic: Cerebrovascular Disease and Interventional Neurology

Director: Philip B. Gorelick, MD, MPH, FAAN, Grand Rapids, MI

Program Description:
The evaluation and management of patients with cerebrovascular disorders continues to evolve rapidly and become more complex. Keeping abreast of advances in the field is a challenge. Several recent clinical trials will have substantial impact on stroke therapy. However, some published data are conflicting, or leave lingering questions, leading to controversy regarding optimal management. Faculty will present a succinct, up-to-date, evidence-based approach to the comprehensive management of acute cerebral infarction, including current recommendations regarding reperfusion therapies and vascular risk reduction following acute or recent cerebral ischemia. When an approach is unclear or unproven, faculty will discuss their experience with a particular strategy.

The presentations will provide concise, useful information that may be directly applied to the participant’s practice. Discussions will include common yet challenging scenarios in stroke management. The session will provide ample opportunity for participants to ask questions or present their own cases to the faculty.

Upon Completion:
Participants should be knowledgeable about the optimal management of acute cerebral infarction, including general medical strategies, thrombolytic treatment, endovascular therapy, and surgical approaches, as well as their relevant therapeutic windows; and develop a logical framework for promptly implementing various vascular risk reduction strategies after acute or recent cerebral ischemia, including selection of antithrombotic agents, lipid modifiers, antihypertensive therapies, and revascularization procedures.

Lecture/Faculty:
- Evidence-based, Cutting Edge, and Practical Management of Acute Ischemic Stroke
  - Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA
- Ischemic Stroke Prevention: An Update
  - Tanya N. Turan, MD, Charleston, SC

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C74 Monday, April 20, 2015 8:00 a.m. – 5:00 p.m. 9 hours

Cerebrovascular Disease

Topic: Cerebrovascular Disease and Interventional Neurology

Director: Philip B. Gorelick, MD, MPH, FAAN, Grand Rapids, MI

Program Description:
The evaluation and management of patients with cerebrovascular disorders continues to evolve rapidly and become more complex. Keeping abreast of advances in the field is a challenge. Several recent clinical trials will have substantial impact on stroke therapy. However, some published data are conflicting, or leave lingering questions, leading to controversy regarding optimal management. Faculty will present a succinct, up-to-date, evidence-based approach to the comprehensive management of acute cerebral infarction, including current recommendations regarding reperfusion therapies and vascular risk reduction following acute or recent cerebral ischemia. When an approach is unclear or unproven, faculty will discuss their experience with a particular strategy.

The presentations will provide concise, useful information that may be directly applied to the participant’s practice. Discussions will include common yet challenging scenarios in stroke management. The session will provide ample opportunity for participants to ask questions or present their own cases to the faculty.

Upon Completion:
Participants should be knowledgeable about the optimal management of acute cerebral infarction, including general medical strategies, thrombolytic treatment, endovascular therapy, and surgical approaches, as well as their relevant therapeutic windows; and develop a logical framework for promptly implementing various vascular risk reduction strategies after acute or recent cerebral ischemia, including selection of antithrombotic agents, lipid modifiers, antihypertensive therapies, and revascularization procedures.

Lecture/Faculty:
- Evidence-based, Cutting Edge, and Practical Management of Acute Ischemic Stroke
  - Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA
- Ischemic Stroke Prevention: An Update
  - Tanya N. Turan, MD, Charleston, SC

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider
abreast of advances in the field has become a particular challenge for clinicians, and even for stroke specialists. Faculty will broadly cover the evaluation and management of a variety of cerebrovascular disorders, including the management of acute ischemic stroke, intracerebral hemorrhage, and subarachnoid hemorrhage. Secondary prevention of stroke after initial stroke will be reviewed in detail, including issues in selection of antithrombotic agents and optimal management of risk factors. Management of intracranial and extracranial large artery occlusive disease will also be summarized, including surgical and endovascular options. Other perspectives related to stroke in women and less common causes of stroke will be addressed. This program is redesigned annually to keep it current and to select the faculty best able to discuss recent advances. Ample time will be available for discussion and questions from attendees.

Upon Completion:
Participants should be familiar with the latest recommendations and controversies regarding the evaluation and management of patients with all stroke types, including acute ischemic stroke, intracerebral hemorrhage, and subarachnoid hemorrhage; be able to initiate optimal secondary prevention strategies after ischemic stroke, including selection of the optimal antithrombotic agent using the most recently published data and appropriate aggressive risk factor management; be able to manage intracranial and extracranial large artery occlusive disease, selecting the best surgical or endovascular option; and be able to recognize differences in risk factors and stroke etiologies in women.

Lecture/Faculty:
- Contemporary Management and Updates for Acute Stroke Disorders: Ischemic Stroke
  James C. Grotta, MD, FAAN, Houston, TX
- Contemporary Management and Updates for Acute Stroke Disorders: Intraparenchymal Hemorrhage
  Venkatesh Ayagari, MD, Dallas, TX
- Contemporary Management and Updates for Acute Stroke Disorders: Subarachnoid Hemorrhage
  Roberta Novakovic, MD, Dallas, TX
- Contemporary Management and Updates in Stroke Prevention: Stroke in Women
  Cheryl Bushnell, MD, MHS, Winston Salem, NC
- Contemporary Management and Updates in Stroke Prevention: Major Cardiac Causes of Stroke
  Graeme Hankey, MBBS, FR, Perth, Australia
- Contemporary Management and Updates in Stroke Prevention: Carotid Endarterectomy, Angioplasty/Stenting, and Medical Management for Symptomatic and Asymptomatic Extra- and Intracranial Occlusive Disease
  Seemant Chaturvedi, MD, FAAN, FAHA, Miami, FL
- Case Studies in Stroke Prevention and Treatment
  Muhammad Farooq, MD, Grand Rapids, MI

Core Competencies:
- Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive

CME Credits: 7.5

Recommended Audience: Advanced Practice Provider, Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C105 Wednesday, April 22, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Neurohospitalist 2.0: Next Steps in the Evolution

Topics: Practice, Policy, and Ethics; Cerebrovascular Disease and Interventional Neurology

Director: David J. Likosky, MD, SFHM, Kirkland, WA

Full Program Description on Page 94

C106 Wednesday, April 22, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Neuro Flash: Acute Stroke Management

Topic: Cerebrovascular Disease and Interventional Neurology

Director: Lawrence R. Wechsler, MD, FAAN, Pittsburgh, PA

Program Description:
Advances in therapeutics have made acute stroke a highly treatable neuroemergency. IV tPA therapy remains the only FDA-approved treatment for acute stroke. Faculty will review new approaches to IV therapy designed to further improve outcomes from thrombolytic therapy including telestroke and combined therapy with tPA and adjuvant agents.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be familiar with new approaches to evaluation of acute stroke and combination therapies that show promise in improving outcomes from thrombolysis.

Lecture/Faculty:
- Telestroke 2014
  Lawrence R. Wechsler, MD, FAAN, Pittsburgh, PA
- Beyond IV tPA
  Joseph P. Broderick, MD, FAAN, Cincinnati, OH

Core Competency: Patient Care

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C112 Wednesday, April 22, 2015
2:00 p.m.–6:00 p.m.  4 hours

Skills for Stroke Emergent Treatment

Skills Pavilion

Topic: Cerebrovascular Disease and Interventional Neurology

Director: Enrique C. Leira, MD, MS, Iowa City, IA

Program Description:
Managing acute stroke patients has become a complex skill in an era of emergency acute interventions, and requires skills that go beyond factual knowledge, such as adequate avoidance of pitfalls, organizational skills, and management of human factors. The faculty has experience in crew resource management (CRM, engineering) and all aspects of stroke care such as managing a stroke alert system in a busy emergency department.
and giving telephonic advice to physicians in community hospitals and through telemedicine. Faculty will review, through case examples and simulated videos, key points to successfully manage these situations by promoting awareness of pitfalls and the importance of CRM and human factors to successful stroke care.

Upon Completion:
Participants should be more comfortable in taking stroke call and deliver better care by having increased knowledge about some of the common pitfalls in contemporary stroke care and having increased awareness of the human factor issues in the current stroke care environment.

Lecture/Faculty:
- Principles of Crew Resource Management (CRM)
  Enrique C. Leira, MD, MS, Iowa City, IA
- Common Pitfalls and CRM with Stabilization in the Emergency Department
  William Joseph Meurer, MD, Ann Arbor, MI
- Common Pitfalls and CRM with a Code Stroke Response
  Enrique C. Leira, MD, MS, Iowa City, IA
- Common Pitfalls and CRM with Telestroke
  Faculty

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Audience Participation
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Advanced Practice Provider

C116 Thursday, April 23, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Prognostication in the Era of Hypothermia

Topic: Cerebrovascular Disease and Interventional Neurology
Director: Romergryko G. Geocadin, MD, FAAN, Baltimore, MD

Program Description:
Therapeutic hypothermia and targeted temperature management improve survival and quality of life of patients resuscitated from cardiac arrest. In 2006, the AAN published practice parameters on prognostication of cardiac arrest survivors not treated by moderate hypothermia. With the introduction of therapeutic hypothermia, it became evident that the course of recovery and overall outcome of comatose patients after cardiac arrest resuscitation is altered. Faculty will review the neuroprotective mechanisms and the clinical application of therapeutic hypothermia and temperature-targeted therapies for acute brain injury. Faculty will discuss the established prognostic paradigm and show how therapeutic hypothermia and temperature management can alter the results of neurologic evaluation and modify the clinical course and neurologic outcome. Faculty will also discuss emerging prognostic tests such as neuroimaging and multimodality monitoring, possible benefits of targeted temperature management in other acute brain injury leading to changes in prognostic considerations, and explore the possible impact on the determination of death by neurologic criteria. Recent research and ongoing developments in targeted temperature management and therapeutic hypothermia will also be covered.

Upon Completion:
Participants should learn recent advances in the use of therapeutic hypothermia and targeted temperature management for acute brain injuries, especially after resuscitation from cardiac arrest; how these therapeutic interventions can alter the neurologic recovery and affect the previously established prognostic paradigms; and emerging prognostication modalities and their application in patients subjected to targeted temperature management. Participants should also be familiar with the potential impact of therapeutic hypothermia in the determination of death by neurologic criteria; and be made aware of ongoing research, limitations of recent studies, and existing consensus statements and practice guidelines related to prognostication and temperature management.

Lecture/Faculty:
- Therapeutic Hypothermia and Targeted Temperature Management in Brain Injury After Cardiac Arrest Resuscitation
  Romergryko G. Geocadin, MD, FAAN, Baltimore, MD
- Prognostication in Hypothermia and Non-hypothermia Treated Patients
  David M. Greer, MD, FAAN, New Haven, CT
- Therapeutic Hypothermia and Death by Neurologic Criteria
  David M. Greer, MD, FAAN, New Haven, CT
- Therapeutic Hypothermia: Ongoing Research and Future Direction
  Romergryko G. Geocadin, MD, FAAN, Baltimore, MD

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C133 Friday, April 24, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

The Interface Between Infection and Cerebrovascular Disease

Topics: Cerebrovascular Disease and Interventional Neurology; Global Health and Infectious Disease
Director: Mitchell S. V. Elkind, MD, MS, FAAN, New York, NY

Program Description:
Cerebrovascular disease is a complex condition that can have many etiologies. Infections of the brain, blood vessels, heart, and other organs may serve as risk factors for cerebrovascular disease, including ischemic or hemorrhagic strokes. Faculty will discuss the relationship of several important infections with stroke. Topics will include endocarditis, infectious vasculitides, and HIV infection, and case presentations will be used to teach clinical messages. The emphasis will be on evidence-based, practical clinical points, including use of appropriate diagnostic testing to diagnose causes of vasculitis, the role of cerebral angiography and valve surgery in patients with endocarditis, the risks and benefits of antithrombotic therapies in patients with endocarditis, and the prevention of stroke in patients with HIV.

Upon Completion:
Participants should become familiar with the risk of stroke in patients with acute or chronic infections; learn how to prevent strokes and other cerebrovascular diseases in patients with acute or chronic infections; and be able to overcome the challenge of balancing the benefits of...
HIV-control strategies against the potential risk of stroke associated with these interventions.

Lecture/Faculty:
- Introduction: Infection and Stroke
  Mitchell S. V. Elkind, MD, MS, FAAN, New York, NY
- Cerebrovascular Disease in HIV/AIDS
  Reza Behrouz, DO, Columbus, OH
- Bacterial Endocarditis and Cerebrovascular Disease
  Scott L. Silliman, MD, Jacksonville, FL
- Infectious Cerebral Vasculitides
  Sebastian Koch, MD, Miami, FL

Core Competency: Patient Care
Teaching Style: Case-Based, Interactive, Didactic
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C139  Friday, April 24, 2015
8:00 a.m.–12:00 p.m.  4 hours

Stroke In Young Adults

Topics: Cerebrovascular Disease and Interventional Neurology; Child Neurology and Developmental Neurology

Director: Jason S. Mackey, MD, Indianapolis, IN

Program Description:
Faculty will review the causes of stroke in young adults aged less than 45. Emphasis will be on ischemic stroke, but when appropriate hemorrhagic stroke will also be discussed. Risk factors for stroke are different in this population, and faculty will focus on those with accumulating data and clinical relevance. The latest data on migraine as a risk factor for stroke and its association with cardiovascular risk factors, gender, and oral contraceptives will be discussed. The causes, diagnostic evaluation, and treatment of young adults with stroke will be covered in four discussions. The first includes cardiac causes, such as paradoxical embolism from right-to-left shunts (e.g., patent foramen ovale), valvular disease, and endocarditis. The second will include vascular causes, such as premature atherosclerosis, dissection, vasculitis, fibromuscular dysplasia, and angiopathies. Third, the hematologic causes of stroke will be covered, including prothrombotic states. The fourth will include migraine and stroke risk.

Upon Completion:
Participants should be able to describe the risks of stroke in young adults with migraine; describe the common cardiac, vascular, and hematologic causes of stroke in young adults; and formulate plans for diagnosis and treatment in young adult patients with stroke.

Lecture/Faculty:
- Stroke and Migraine
  Sarah Song, MD, Chicago, IL
- Cerebral Arteriopathies
  Aneesh B. Singhal, MD, FAAN, Boston, MA
- Hypercoagulable Causes of Stroke in the Young
  Jason S. Mackey, MD, Indianapolis, IN
- Cardiac Sources of Embolic Stroke in Young Adults
  Rahul Karamchandani, MD, Cincinnati, OH

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Non-Neurologist

C167  Saturday, April 25, 2015
10:00 a.m.–12:00 p.m.  2 hours

Preventing a First Stroke: What Every Neurologist Needs to Know

Topic: Cerebrovascular Disease and Interventional Neurology

Director: Larry B. Goldstein, MD, FAAN, FAHA, Durham, NC

Program Description:
The program will rotate topics in primary stroke prevention based on emerging data that is relevant to the patients of practicing neurologists. Topics will include interventions for asymptomatic carotid stenosis, new treatments for atrial fibrillation, and hypertension control, among others. A unique aspect to the program is an evidence-based discussion of effective provider/patient communication techniques.

Upon Completion:
Participants should be able to identify stroke risk factors in patients seen in general neurology practice, discuss recent advances in primary stroke prevention, understand the importance of communication preventive messages in routine patient encounters, and discuss techniques to enhance patient communication.

Lecture/Faculty:
- Update on Primary Stroke Prevention
  Larry B. Goldstein, MD, FAAN, FAHA, Durham, NC
- Optimizing Physician-Patient Communication
  Larry B. Goldstein, MD, FAAN, FAHA, Durham, NC

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Professionalism
Teaching Style: Didactic
CME Credits: 2
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

LyellJ:
Neurologists need to know the alphabet soup of #CMS quality reporting (PQRS, MU, ACO, now VBPM). All impact payment! #AANAM
## Course Descriptions

### Child Neurology and Developmental Neurology

<table>
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<tr>
<th>Code</th>
<th>Date</th>
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<tr>
<td>C34</td>
<td>Sunday, April 19, 2015</td>
<td>8:00 a.m.–12:00 p.m.</td>
<td>4 hours</td>
<td>Child Neurology I</td>
<td>Jonathan W. Mink, MD, PhD, FAAN, Rochester, NY</td>
<td>$</td>
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<tr>
<td>C83</td>
<td>Monday, April 20, 2015</td>
<td>1:00 p.m.–5:00 p.m.</td>
<td>4 hours</td>
<td>Concussion Assessment and Management in the Youth Athlete</td>
<td>Karen Barlow, MD, Calgary, AB, Canada</td>
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#### C34: Child Neurology I
- **Topic:** Child Neurology and Developmental Neurology
- **Director:** Jonathan W. Mink, MD, PhD, FAAN, Rochester, NY
- **Program Description:**
  The care of neurologic disorders requires proper diagnosis, classification, and treatment. Ongoing improvement in classification and treatment continues, aided by a better understanding of the pathophysiologic and molecular mechanisms underlying these disorders. Individuals who participate in the care of children with neurologic disorders must understand and incorporate these advances and insights into their therapies. Faculty will review these matters with particular reference to an update on diagnosis and treatment of movement disorders, diagnosis and therapy of acute disseminated encephalomyelitis and pediatric MS, and headaches in children and adolescents. Attention will be paid to practice parameters (evidence-based medicine), if available. Both basic and advanced information will be reviewed.

#### Upon Completion:
Participants should be able to incorporate newer diagnostic and therapeutic approaches to the management of these categories of neurologic disease occurring in children and adolescents and should be aware of the practice parameters that apply.

- **Lecture/Faculty:**
  - Diagnosis and Treatment of Movement Disorders in Children
  - Diagnosis and Therapy of ADEM and Pediatric MS
  - Headaches in Children and Adolescents

- **Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

#### C83: Concussion Assessment and Management in the Youth Athlete
- **Topics:** Child Neurology and Developmental Neurology, Neuro Trauma, Critical Care, and Sports Neurology; Subspecialty in Focus
- **Director:** Karen Barlow, MD, Calgary, AB, Canada
- **Program Description:**
  An increasing public awareness of the potential consequences of concussion and repeat concussions has brought mild TBI/concussion to the forefront, including President Obama’s recent Youth Concussion Summit and the release of recent mild TBI guidelines for pediatrics. It is critically important for adult and child neurology practitioners to be at the forefront of understanding for concussion in all its manifestations. Through interactive case-presentations, faculty will focus on the practical knowledge and skills for the management of common and uncommon clinical scenarios encountered in the field of concussion in children and adolescents. Each case will be followed by an overview and update...
on the topic retaining a strong evidence-based focus. This course will integrate with the morning INS session, 15 Neurotrauma: From Coma to Concussions.

This program is offered in partnership with the Child Neurology Society and the AAN Child Neurology and Sports Neurology Sections.

Upon Completion:
Participants should become familiar with the differential diagnoses and work-up of common and uncommon concussion and post-concussive problems presenting in childhood, and get an update on new guidelines and expert opinions in the field.

Lecture/Faculty:
- Evidence-based Approach to Youth Sports Concussion
  Meeryo Choe, MD, Los Angeles, CA
- Management of Post-concussive Headache
  Karen Barlow, MD, Calgary, AB, Canada
- Management of Post-concussive Mood Disorders
  Jeffrey Max, MBChB, San Diego, CA
- Return to Cognitive Activity and Play After Youth Concussion
  Gerard A. Gioia, MD, Rockville, MD

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C94 Tuesday, April 21, 2015
1:00 p.m.–4:00 p.m. 3 hours

EEG in Children: Developmental Maturation, Variants, Epilepsy Syndromes, and Identification of Surgical Candidates

Topics: Epilepsy/Clinical Neurophysiology (EEG); Child Neurology and Developmental Neurology

Director: Jeffrey R. Buchhalter, MD, FAAN, Calgary, AB, Canada

Full Program Description on Page 44

C102 Wednesday, April 22, 2015
6:30 a.m.–8:00 a.m. 1.5 hours

Syndromes of Autonomic Dysfunction in Children and Adolescents

Topics: Child Neurology and Developmental Neurology; General Neurology

Director: Imad T. Jarjour, MD, FAAN, Houston, TX

Program Description:
Various syndromes of acute recurrent or chronic autonomic dysfunction are becoming increasingly common or recognized in children and adolescents and encountered by neurologists. While these conditions are rarely life-threatening, they can be disabling and affect quality of life. Acute paroxysmal autonomic syndromes include syncope, autonomic seizures, autonomic storms, and the autonomic features of epilepsy. Chronic multisystem manifestations include orthostatic intolerance, gastrointestinal and cardiovascular autonomic symptoms, migraine, cognitive dysfunction, sweating problems, sleep disorders, and widespread pain. Faculty will cover the pathophysiology of these syndromes, as well as recognition, diagnostic evaluation, and management of these complex and challenging neurological conditions.

Upon Completion:
Participants should become familiar with the pathophysiology of autonomic dysfunction in children and adolescents and the current recommended diagnostic evaluation of syncope, autonomic seizures, postural tachycardia syndrome, chronic orthostatic intolerance, and the autonomic manifestations of paroxysmal events; how to recognize the simple versus more serious forms of syncope; clinical pearls to assist the general neurologist and child neurologist with interpretation of autonomic function tests; and the management guidelines of autonomic dysfunction and comorbid conditions. Interactive case presentations will demonstrate the diagnostic and management strategies for a variety of the autonomic dysfunction syndromes in children and adolescents.

Lecture/Faculty:
- Acute, Paroxysmal Autonomic Syndromes: Syncope, Autonomic Seizures, Autonomic Storms
  Manikum Moodley, MD, Cleveland, OH
- Chronic Multisystem Autonomic Syndromes: Postural Tachycardia Syndrome, Autonomic Neuropathy
  Imad T. Jarjour, MD, FAAN, Houston, TX

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Audience Participation, Interactive

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C108 Wednesday, April 22, 2015
2:00 p.m.–6:00 p.m. 4 hours

Autism Spectrum Disorders—What We Know and Where We Are Going

Topic: Child Neurology and Developmental Neurology

Director: Max Wiznitzer, MD, FAAN, Cleveland, OH

Program Description:
Autism spectrum disorders have an increasing impact on the medical and educational communities and affected families. Early recognition efforts have had a modest effect in improving identification and increasing earlier implementation of intervention services. Medical interventions include management of comorbid conditions, such as aggression, ADHD, and seizures, but have not succeeded in significantly ameliorating the core features of the disorder. The understanding of the basic brain processes that influence normal socialization and, when awry, evolve into the socialization and communication deficits and repetitive behaviors in ASD is still evolving but is crucial to guide research and potential interventions. A better understanding of why ASD occurs is needed to guide more accurate and early recognition and potential treatments.

Faculty will address the basic science, clinical, and translational studies that have guided our knowledge and are influencing the future direction of efforts to evaluate and treat ASD. This includes novel methods for
Course Descriptions

Child Neurology and Developmental Neurology

early identification of at-risk individuals, effect of age and developmental level on the type of intervention, what factors can potentially predict outcome and guide resource allocation, evolution of and deleterious and positive influences on ASD-associated brain pathways, ASD lifespan issues affecting adulthood and its transition (including neurological/neuropsychiatric disorders and their impact on daily living activities, employment, leisure time, and care options), and transitional research that may guide future pharmacological treatments.

Upon Completion:
Participants should be able to understand the diagnostic criteria for and comorbidities of autism spectrum disorders (ASD) and how they guide research and intervention; know the genetic basis and associated body pathways for ASD and how they affect brain structure and function and potentially influence present and future research and intervention; and recognize issues and medical problems that impact individuals with ASD during the transition to adult and throughout the rest of the lifespan.

Lecture/Faculty:
• Autism Spectrum Disorders: Symptom Structure, Diagnosis, Comorbidities and Resilience
  John Constantino, St. Louis, MO
• Autism Spectrum Disorders: Genetics and Neurobiology
  Daniel H. Geschwind MD, PhD, Los Angeles, CA
• Autism Spectrum Disorders: Structural and Functional Neuroimaging
  Susan Y. Bookheimer, PhD, Los Angeles, CA
• Autism Spectrum Disorders: Management over the Lifespan: Present and Future
  Max Wiznitzer, MD, FAAN, Cleveland, OH

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Child Neurologist, Advanced Practice Provider

C139  Friday, April 24, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Stroke In Young Adults
Topics: Cerebrovascular Disease and Interventional Neurology; Child Neurology and Developmental Neurology
Director: Jason S. Mackey, MD, Indianapolis, IN

Full Program Description on Page 37

C154  Saturday, April 25, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Attention Deficit Hyperactivity Disorder Across the Lifespan
Topics: Aging, Dementia, Cognitive, and Behavioral Neurology; Child Neurology and Developmental Neurology
Director: Martha Bridge Denckla, MD, Baltimore, MD

Full Program Description on Page 33

Neuro Flash: Child Neurology
Topics: Child Neurology and Developmental Neurology; Movement Disorders
Director: Erika Fullwood Augustine, MD, Rochester, NY

Program Description:
This program is designed to update the practicing child neurologist and others who care for children with neurologic disorders. Updates on the following subjects of interest will be discussed: new treatments for pediatric epilepsies, hot topics in pediatric sleep disorders, and recent discoveries in the genetics of dystonia.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be familiar with recent advances in the diagnosis and management of pediatric epilepsies, sleep disorders, and movement disorders. These disorders can pose diagnostic and therapeutic challenges, but are frequently encountered in the care of children and young adults.

Lecture/Faculty:
• Pediatric Sleep Disorders
  Sejal V. Jain, MD, Cincinnati, OH
• Update on Primary Dystonias
  Erika Fullwood Augustine, MD, Rochester, NY
• New Antiepileptics for Pediatric Epilepsies
  Sejal V. Jain, MD, Cincinnati, OH

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice
Teaching Style: Audience Participation, Case-Based, Didactic, Interactive
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Child Neurologist, Advanced Practice Provider

C131  Friday, April 24, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Epilepsy/Clinical Neurophysiology (EEG)

Status Epilepticus
Topic: Epilepsy/Clinical Neurophysiology (EEG)
Director: Frank W. Drislane, MD, FAAN, Boston, MA

Program Description:
While generalized convulsive status epilepticus (GCSE) is relatively easily diagnosed, recognition of nonconvulsive SE is often poor, especially in children and neonates, and possibly even more among medically and neurologically ill patients in ICUs. Diagnosis of SE requires knowledge of many clinical syndromes. Faculty will review many different etiologies and presentations of status epilepticus (SE), including convulsive, nonconvulsive, and myoclonic SE, and the very different forms of SE in children; neonates and children have different SE syndromes and must be evaluated and treated differently. Information will be presented on the proper interpretation of EEGs in the diagnosis of SE, including during
prolonged EEG monitoring, such as in the ICU. Management of SE has become more complicated than simply choosing “the” drug for convulsive SE. Detailed description will be given of the remarkably varied treatments that are emerging for the most refractory SE cases, both in children and in adults with critical illness.

Upon Completion:
Participants should be able to: diagnose status epilepticus in urgent and unusual presentations, in infants, children, and adults; integrate clinical and EEG findings to make a correct diagnosis; recognize and treat cases of nonconvulsive status, avoiding both under-recognition and over-treatment; have a command of the utility and practicalities of EEG monitoring in the management of SE in very ill ICU patients; and utilize several more ‘aggressive’ treatments effectively for the most refractory SE cases.

Lecture/Faculty:
- Different and Unusual Forms of Status Epilepticus
  Frank W. Drislane, MD, FAAN, Boston, MA
- Status Epilepticus in Infants and Children
  James J. Riviello, Jr, MD, New York, NY
- EEG Monitoring in the ICU for Diagnosis and Management of Status Epilepticus
  Suzette M. LaRoche, MD, FAAN, Atlanta, GA
- Treatment of Refractory Status Epilepticus
  Stephan Schuele, MD, FAAN, Chicago, IL

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation
CME Credits: 3
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C10  Saturday, April 18, 2015  1:00 p.m.–5:00 p.m.  4 hours
Critical Care EEG Monitoring
Topics: Epilepsy/Clinical Neurophysiology (EEG); Neuro Trauma, Critical Care, and Sports Neurology
Director: Aatif M. Husain, MD, Durham, NC

Program Description:
Faculty will cover continuous EEG (cEEG) monitoring in critically ill patients. Information about the appropriate patient type to monitor, how long to monitor, and technical considerations will be presented. Interpreting cEEG monitoring can be different than interpreting other types of EEG data. Recognizing artifacts and differentiating them from seizures will be reviewed. The significance of many EEG patterns is uncertain in this patient population. These patterns will be reviewed, covering nuanced interpretation. Treatment of seizures detected on cEEG is not the same as managing status epilepticus. Appropriately aggressive treatment options will be discussed. Various ways to evaluate cEEG data quantitatively will be presented, along with how to use these programs in practice. Use of cEEG monitoring for other indications also will be reviewed. Providing a cEEG service involves a lot of resources and commitment from the hospital. Information needed for presenting a practice management/enhancement plan to hospital administration will be covered. Medicolegal aspects of cEEG monitoring will be discussed, along with misconceptions about liability and practical information about how to mitigate risk.

C22  Sunday, April 19, 2015  6:30 a.m.–8:00 a.m.  1.5 hours
Neuro Flash: Epilepsy
Topic: Epilepsy/Clinical Neurophysiology (EEG)
Director: Joseph I. Sirven, MD, FAAN, Phoenix, AZ

Program Description:
Epilepsy is a complex neurological condition with numerous diagnostic and therapeutic options available for its diagnosis and management. However, novel treatments continue to be approved and it is often difficult to assess when these new therapies should be employed in the daily management of acute and chronic seizures. This past year alone, three new drugs were approved as well as one new stimulation device. Moreover, there are hot button issues such as cannabis use, driving laws, immunological causes of epilepsy, and acute management of seizure emergencies that continue to engender concern as to how best to navigate these clinical issues.

Through a “Headline Morning news” approach, we will highlight important epilepsy clinical information that you need to know. Through a rapid fire, multi topic case based approach, faculty will provide salient and timely updates on numerous epilepsy topics including new treatments and when to use them, how to treat seizure emergencies, the evidence-base for the risks and benefits of marijuana in epilepsy patients and diagnosing and treating immune causes of epilepsy.

This program will utilize an Audience Response System.
Course Descriptions

Epilepsy/Clinical Neurophysiology (EEG)

Upon Completion:
Participants should be able to: list or identify all currently available medication and device treatments for epilepsy; understand the management of acute seizure emergencies; know when to consider immune-based diagnosis and treatments for epilepsy; know how to counsel on driving laws for epilepsy; and understand where current thought stands on the use of cannabis for epilepsy.

Lecture/Faculty:
- Case 1
  Joseph I. Sirven, MD, FAAN, Phoenix, AZ
- Case 2
  Matthew T. Hoerth, MD, Phoenix, AZ
- Case 3
  Joseph I. Sirven, MD, FAAN, Phoenix, AZ
- Case 4
  Matthew T. Hoerth, MD, Phoenix, AZ
- Case 5
  Joseph I. Sirven, MD, FAAN, Phoenix, AZ
- Case 6
  Matthew T. Hoerth, MD, Phoenix, AZ

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Audience Participation, Case-Based, Didactic, Interactive

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C35  Sunday, April 19, 2015  8:00 a.m.–5:00 p.m.  9 hours

Clinical Epilepsy

Topic: Epilepsy/Clinical Neurophysiology (EEG)
Director: Page B. Pennell, MD, Boston, MA

Program Description:
Faculty will comprehensively cover aspects of diagnosing and managing patients with seizure disorders through the longitudinal course of caring for a person with epilepsy, a chronic but dynamic condition. The latest ILAE classification scheme will be reviewed. In addition to primary goals of accurate diagnosis and selection of appropriate first-line medications, faculty will also address common complicated patient scenarios, including pregnancy in women with epilepsy, anxiety and mood disorders, and pharmacoresistance. Second-line AED therapy choices will be presented as well as diet, surgery, and device-based therapies. The diagnosis, work-up, and treatment of status epilepticus will be discussed in detail from presentation in the ER to refractory status epilepticus, including NORSE. Key lessons from the pediatric epilepsy clinic will be presented, including the available genetic testing for different epilepsy syndromes. Faculty will review the latest advances in each topic. Issues most useful to clinical practice will be emphasized by using a case-based approach. Video case presentations will be used to illustrate how to classify and localize seizures.

Upon Completion:
Participants should be able to efficiently and thoroughly evaluate a patient presenting with seizures; accurately apply the latest approved classification system for epilepsy; choose appropriate first- and second-line treatments; recognize, evaluate, and treat status epilepticus in the emergency room to the ICU setting; manage epilepsy during pregnancy to achieve the best possible maternal and newborn outcomes; recognize and know how to evaluate common psychiatric comorbidities; know when and how to order genetic testing; decide on the appropriate options for treating pharmacoresistant epilepsy; and understand how to accurately classify and localize seizures by semiology-video review.

Lecture/Faculty:
- Diagnostic Tricks and Tracks for Seizures
  Tracey A. Milligan, MD, Boston, MA
- Individualizing AED Choices
  Jacqueline French, MD, FAAN, New York, NY
- Status Epilepticus: Diagnosis and Treatment Across the Clinical Spectrum
  Suzette M. LaRoche, MD, FAAN, Atlanta, GA
- Genetics and Lifetime Lessons from the Pediatric Clinic
  Katherine C. Nickels, MD, Rochester, MN
- Epilepsy and Pregnancy: Planning and Treatment Strategies
  Page B. Pennell, MD, Boston, MA
- Mood and Anxiety Disorders in Epilepsy: What Neurologists Should Know
  Andres M. Kanner, MD, Miami, FL
- If Antiepileptic Drugs Don’t Work: Surgery, Diet, and Devices
  Elson L. So, MD, FAAN, Rochester, MN
- Name That Seizure: Video-EEG Show-and-Tell
  Selim R. Benbadis, MD, Tampa, FL

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 7.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C57  Monday, April 20, 2015  6:30 a.m.–8:00 a.m.  1.5 hours

Therapy of Epilepsy

Topic: Epilepsy/Clinical Neurophysiology (EEG)
Director: Carl W. Bazil, MD, PhD, FAAN, New York, NY

Program Description:
Faculty will address practical, day-to-day issues in treating patients with epilepsy, whether they are easily controlled on their first medication or medically refractory. The availability of many anticonvulsant drugs (AEDs) continues to add to the challenge of prescribing the best choice for individual patients. New information can change the use of older AEDs, and clinicians need to learn the pros and cons of the newest drugs as well. Treatment of status epilepticus is also evolving with newer agents.

Nonpharmacological treatments are also important, particularly for the 40 percent of patients who are refractory to drug treatment. Epilepsy surgery should be considered in appropriate patients. Some may be appropriate for newer, less invasive surgical techniques. In others, devices may be alternatives allowing better control when drugs are not enough.
Upon Completion:
Participants should have greater familiarity with the properties of currently available AEDs, including the newest agents; how to choose the best first drug; and additional issues for refractory patients. Participants should also understand the role of newer AEDs in the treatment of refractory status epilepticus. The reasoning for early consideration of epilepsy surgery should be better understood, and participants should know how to identify and counsel the best candidates, in whom surgery is likely to be curative. Participants should also gain a better understanding of newer, less invasive approaches to epilepsy surgery.

Lecture/Faculty:
- Pharmacological Treatment of Epilepsy
  Brien J. Smith, MD, FAAN, Grand Rapids, MI
- Non-pharmacological Treatment of Epilepsy
  Carl W. Bazi, MD, PhD, FAAN, New York, NY

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

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C63 Monday, April 20, 2015
8:00 a.m.–12:00 p.m.  4 hours

SFP Treating the New-onset Epilepsy Patient

Topics: Epilepsy/Clinical Neurophysiology (EEG); Subspecialty in Focus

Director: Gregory L. Krauss, MD, Baltimore, MD

Program Description:
Treating patients with new-onset epilepsy requires a good deal of clinical judgment, including appreciation of pediatric epilepsy syndromes, causes of epilepsy throughout the life cycle and the optimal selection and use of antiepileptic drugs for patients with new-onset seizures. Through video EEG illustrations, a review of new epidemiology data, and systematic reviews of clinical trial data, faculty will show how to optimally identify, evaluate, and treat new-onset epilepsy. Faculty will focus on infant and pediatric syndromes, the elderly, seizure risks and outcomes at different ages, and objective data on optimal treatments for patients with new-onset epilepsy.

This program is offered in partnership with the American Epilepsy Society and the AAN Epilepsy Section.

Upon Completion:
Participants should be able to recognize key seizure types and epilepsy syndromes in children, adults, and the elderly; and to appreciate causes of seizures at different ages and risks for seizure recurrence in determining treatment needs. Participants should be able to accurately screen patients at different ages for epilepsy and identify different etiologies and understand their influence on recurrence. Participants should also be aware of clinical trial data on choosing treatments and practical points in managing patients with new-onset epilepsy.

Lecture/Faculty:
- Population Study of First Seizures and Need for Treatment
  Gregory K. Bergey, MD, FAAN, Baltimore, MD

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C75 Monday, April 20, 2015
8:00 a.m.–5:00 p.m.  9 hours

Neurophysiologic Intraoperative Monitoring Skills Workshop

Topic: Epilepsy/Clinical Neurophysiology (EEG)

Director: Gloria Galloway, MD, FAAN, Columbus, OH

Program Description:
Neurophysiologic intraoperative monitoring (NIOM) uses evoked potentials (EP), electromyography (EMG), and electroencephalography (EEG) to reduce morbidity in many types of surgeries. In this skills workshop, didactic instruction, case presentations, and live demonstrations of various types of EPs appropriate for the novice as well as more complex case discussions for the advanced practitioner will provide participants with an understanding of how NIOM is currently performed and interpreted. Variations to practice and controversies may also be included where appropriate. Current regulatory and billing concerns will also be discussed.

Upon Completion:
Participants should be knowledgeable about the types of NIOM that can be performed, technical limitations of monitoring, interpretation principles, and logistics of providing this service in their practice settings.

Lecture/Faculty:
- Somatosensory Evoked Potentials
  Aatif M. Husain, MD, Durham, NC
- Motor Evoked Potentials
  Ronald G. Emerson, MD, FAAN, New York, NY
- Brainstem Auditory Evoked Potential Monitoring
  Alan D. Legatt, MD, PhD, FAAN, Bronx, NY
- NIOM in Vascular Disorders
  Jaime R. Lopez, MD, San Francisco, CA
- EEG, Electroctorticography and Cortical Localization
  Marc R. Nuwer, MD, PhD, FAAN, Los Angeles, CA
- Demonstration Sessions (SEP, MEP, and EMG)
  Gloria Galloway, MD, FAAN, Columbus, OH
  Aatif M. Husain, MD, Durham, NC
  Stanley A. Skinner, MD, Minneapolis, MN
- Case Studies in Vascular Disorders
  Jaime R. Lopez, MD, San Francisco, CA
- Case Studies in Posterior Fossa Surgery
  Alan D. Legatt, MD, PhD, FAAN, Bronx, NY
Course Descriptions

- Coding and Reimbursement in NIOM
  Marc R. Nuwer, MD, PhD, FAAN, Los Angeles, CA

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Interdisciplinary Practice, System-Based Practice

Teaching Style: Lecture, Case-Based, Interactive, Didactic

CME Credits: 7.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Technologists

C94  Tuesday, April 21, 2015
1:00 p.m.–4:00 p.m.  3 hours

EEG in Children: Developmental Maturation, Variants, Epilepsy Syndromes, and Identification of Surgical Candidates

Topics: Epilepsy/Clinical Neurophysiology (EEG); Child Neurology and Developmental Neurology

Director: Jeffrey R. Buchhalter, MD, FAAN, Calgary, AB, Canada

Program Description:
Diagnosis and treatment of seizure disorders is a major component of neurology practice in children and adolescents. Correct analysis and interpretation of pediatric EEG is critical to making an accurate diagnosis and plan of care for treatment of seizures. Faculty will focus on basic and advanced pediatric EEG interpretation. Faculty will encourage audience participation and present brief case vignettes commonly seen in the office and epilepsy monitoring units (videos when appropriate) followed by EEG tracings.

Upon Completion:
Participants should develop core skills in reading EEG in children and adolescents; be familiar with major developmental landmarks and physiologic variants during EEG maturation (often misdiagnosed as epileptiform abnormalities), neonatal seizures, EEG findings in classical epilepsy syndromes, and early selection of epilepsy surgery candidates; and learn medical management of classic pediatric epilepsy syndromes as well as decision-making steps in the selection of pediatric surgical candidates.

Lecture/Faculty:
- EEG Developmental Landmarks, Neonatal Seizures, Physiologic Variants in Awake and Sleep, and Artifacts
  Sanjeev V. Kothare, MD, New York, NY
- EEG in Classic Pediatric Epilepsy Syndromes: Making Correct Management Decisions
  Jeffrey R. Buchhalter, MD, FAAN, Calgary, AB, Canada
- Selecting Candidates for Epilepsy Surgery: Unique Age-related EEG Findings in Partial Epilepsy in Children
  Tobias Loddenkemper, MD, Boston, MA

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Interdisciplinary Practice

Teaching Style: Lecture, Case-Based, Interactive, Didactic

CME Credits: 3

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C122  Thursday, April 23, 2015
1:00 p.m.–5:00 p.m.  4 hours

Epilepsy Skills Pavilion

Topic: Epilepsy/Clinical Neurophysiology (EEG)

Director: William O. Tatum, IV, DO, FAAN, Tampa, FL

Program Description:
In an era of technological advances in the diagnosis and management of seizures and epilepsy, an often-lost art is the importance of the clinical hands-on component with the patient. Often the ability to synthesize clinical history, neurological examination, electroencephalographic data, and seizure semiology is not stressed. Yet it is key to the management of seizures and epilepsy. This workshop will combine case studies using an audience response system with small group workstations allowing attendees to deal with seizure and epilepsy diagnosis and treatment including EEG, video EEG interpretation, and decisions regarding surgical management. Small groups will be guided through the diagnostic and therapeutic process with a faculty facilitator emphasizing clinical pearls in the history, examination, and diagnostic evaluation. Skills pertaining to common errors in EEG interpretation, pitfalls in utilizing video-EEG monitoring, the approach to pediatric epilepsy diagnosis and management, addressed common issues in the out-patient clinic, and hands-on management of the patients with status epilepticus using the simulation illustrated with the “Sim man” will be emphasized.

Upon Completion:
Participants should be familiar with the essential skills required for effective emergency management of seizures in the hospital and bedside; the rapid identification of commonly misdiagnosed EEG patterns and seizure semiology patterns in order to make accurate diagnoses; and be able to effectively address common reasons for patients with seizures and epilepsy who present to clinic. Participants should be able to understand newly emerging definitions and terminology in patients with seizures as well as integrate newer forms of treatment including new antiseizure drugs and formulations, surgical techniques, and neurostimulation techniques for both the pediatric and adult patient with epilepsy.

Lecture/Faculty:
- ICU/ER Simulation
  Matthew T. Hoerth, MD, Phoenix, AZ
  Joseph F. Sirven, MD, FAAN, Phoenix, AZ
- EMU
  Joseph F. Drzakowski, MD, FAAN, Phoenix, AZ
- Epilepsy Clinic
  William O. Tatum, IV, DO, FAAN, Tampa, FL
- EEG Lab
  Elizabeth Waterhouse, MD, FAAN, Richmond, VA
- Pediatric EMU
  Raj D. Sheth, MD, Jacksonville, FL

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Interdisciplinary Practice, System-Based Practice

Teaching Style: Lecture, Case-Based, Didactic, Interactive, Didactic, Audience Participation, Simulation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Neurosurgeon, Pediatric Neurologist
Clinical EEG

Topic: Epilepsy/Clinical Neurophysiology (EEG)
Director: Susan T. Herman, MD, Boston, MA

Program Description:
Faculty will provide an overview of the principles underlying the practice of clinical EEG, including routine EEG in adults and children, long-term monitoring in epilepsy, and continuous EEG monitoring in critically ill patients. Faculty will discuss the basic neurophysiology of EEG and the technical aspects of digitally recording, displaying, and analyzing EEG potentials. Faculty will provide in-depth reviews of current electroclinical diagnosis in neonates, children, and adults, focusing particularly on developmental abnormalities, encephalopathy, and epilepsy. Presentations will focus on common pitfalls in use and interpretation of EEG, and on recent advances in EEG such as quantitative EEG analysis and automated spike and seizure detection. The final session will be an interactive review of EEG unknowns.

Upon Completion:
Participants should be able to: select the most appropriate EEG techniques for diagnosis of epilepsy and other neurologic disorders; recognize commonly encountered and clinically important EEG and long-term monitoring findings in children and adults; avoid common pitfalls, such as misinterpretation of artifacts and normal variants; and apply the results of EEG studies to clinical care of patients with epilepsy and other neurologic disorders.

Lecture/Faculty:
- Normal Adult EEG and Benign Variants
  Selim R. Benbadis, MD, Tampa, FL
- Recording Concepts and Artifacts
  Susan T. Herman, MD, Boston, MA
- Abnormal EEG: Focal and Generalized
  John M. Stern, MD, FAAN, Los Angeles, CA
- Normal and Abnormal Neonatal and Pediatric EEG
  Tammy Tsuchida, MD, PhD, Washington, DC
- Intercital and Ictal EEG in Adults
  Michael R. Sperling, MD, FAAN, Philadelphia, PA
- EEG Unknowns 1
  Faculty
- Intercital and Ictal EEG in Infants and Children
  Tobias Loddenkemper, MD, Boston, MA
- Ambulatory and Video-EEG Monitoring
  Katherine H. Noe, MD, PhD, Phoenix, AZ
- Continuous EEG in the Critically Ill
  Sarah E. Schmitt, MD, Philadelphia, PA
- EEG Unknowns 2: Interactive Session
  Faculty

Core Competencies:
- Medical Knowledge, Patient Care
- Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style:
- Case-Based, Didactic, Interactive, Audience Participation, Video Examples

CME Credits:
- 6.5

Recommended Audience:
- Trainee, General Neurologist, Specialist Neurologist, EEG Technologist

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How to Analyze Spells by Video-EEG

Topic: Epilepsy/Clinical Neurophysiology (EEG)
Director: Joseph F. Drazkowski, MD, FAAN, Phoenix, AZ

Program Description:
The accurate diagnosis of epileptic seizures and nonepileptic paroxysmal events that imitate seizures relies heavily on their accurate characterization and description. The clinical history is integral to understanding the nature of the spells but may lack accuracy in some cases. Video-EEG recording may be considered if there is doubt regarding their underlying nature. Review of video-EEG recordings of spells of known etiology is helpful in instructing clinicians on what questions to ask in history taking and what to observe when a spell is witnessed or recorded. Setting up a video-EEG unit requires specialized technical and physician resources.

Upon Completion:
Participants should be able to recognize the value of video-EEG recordings in complementing the initial evaluation for the diagnosis of paroxysmal neurologic events. Participants should be able to understand the salient features of different types of paroxysmal events in adults and children that may be mistaken for epilepsy; understand how seizure semiology may be helpful for lateralization and localization in complex spells; and understand the technological and physician resources needed to run a video-EEG unit.

Lecture/Faculty:
- Establishment and Operation of a Video EEG Unit
  Robert E. Hogan, MD, St. Louis, MO
- Seizure Semiology: Clues for Localization and Lateralization
  Krzysztof Bujarski, MD, Lebanon, NH
- Video EEG in the Diagnosis of Paroxysmal Spells in Children
  Elaine C. Wirrell, MD, Rochester, MN
- Video EEG in the Diagnosis of Paroxysmal Spells in Adults
  Joseph F. Drazkowski, MD, FAAN, Phoenix, AZ

Core Competencies:
- Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style:
- Case-Based, Didactic, Interactive, Audience Participation, Video Examples

CME Credits:
- 3.75

Recommended Audience:
- Trainee, General Neurologist, Non-Neurologist
### General Neurology

#### C12
**Saturday, April 18, 2015**
1:00 p.m.–5:00 p.m.

**4 hours**

**Neurologic Complications of Medical Disease**

**Topic:** General Neurology  
**Director:** Neeraj Kumar, MD, Rochester, MN

**Program Description:**
Neurology frequently interfaces with other subspecialties of internal medicine. Neurologists frequently encounter neurologic disease in patients with known systemic disorders; not infrequently neurologic disease is the presenting manifestation of medical illness. Faculty will cover autoimmune neurology, “medical neurology,” neurology of medical emergencies, and neurologic derangements seen in the setting of acid-base and electrolyte disturbance. The speakers will use illustrative cases and attempt to highlight update issues against the backdrop of an overview.

**Upon Completion:**
Participants should be able to diagnose and manage neurologic manifestations of a broad spectrum of non-neurologic diseases and systemic manifestations of neurologic illness.

**Lecture/Faculty:**
- Autoimmune Neurology: Overview and Update  
  Sean J. Pittock, MD, Rochester, MN  
- Systemic Neurology 1  
  Neeraj Kumar, MD, Rochester, MN  
- Systemic Neurology 2  
  Neeraj Kumar, MD, Rochester, MN  
- Neurology and Medical Emergencies  
  Sara E. Hocker, MD, Rochester, MN  
- Neurology of Acid-base and Electrolyte Disturbance  
  Martin A. Samuels, MD, MACP, FAAN, Boston, MA

**Core Competencies:** Medical Knowledge, Patient Care  
**Teaching Style:** Case-Based, Didactic  
**CME Credits:** 3.75  
**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

Full Program Description on Page 88

#### C19
**Saturday, April 18, 2015**
3:00 p.m.–5:00 p.m.  

**2 hours**

**Mitochondrial Disorders in Neurology**

**Topic:** General Neurology  
**Director:** Salvatore DiMauro, MD, New York, NY

**Program Description:**
Mitochondrial dysfunction accounts for an ever-increasing number of neurologic disorders (mitochondrial encephalomyopathies). Faculty will discuss basic concepts of mitochondrial biogenesis and the dual (and often overlapping) role of mitochondrial DNA (mtDNA) and nuclear DNA (nDNA) in causing these frustratingly heterogeneous clinical disorders. The increasing application of new-generation exome sequencing is revealing novel pathogenic mechanisms and subverting traditional classifications of mitochondrial diseases. In practical terms, faculty will cover the impact of new scientific knowledge on the diagnostic approach to mitochondrial diseases and to our still limited therapeutic options.

**Upon Completion:**
Participants should be familiar with recent progress in mitochondrial genetics; gain a better understanding of the relationships, which are not always straightforward, between mutations in either genome (mtDNA or nDNA) and clinical presentations; learn useful clues to the correct diagnosis; glean ideas about pathogenesis (energy shortage, oxidative stress), and get a realistic understanding of palliative and experimental therapy.

**Lecture/Faculty:**
- Genetics and Pathogenesis of Mitochondrial Encephalomyopathies  
  Salvatore DiMauro, MD, New York, NY  
- Clinical Presentations of Neurologic Patients  
  Michio Hirano, MD, FAAN, New York, NY  
- Representative Case Descriptions  
  Michio Hirano, MD, FAAN, New York, NY

**Core Competencies:** Medical Knowledge, Patient Care, Practice-Based Learning and Improvement  
**Teaching Style:** Case-Based, Didactic  
**CME Credits:** 2  
**Recommended Audience:** Trainee, General Neurologist, Advanced Practice Provider

#### C25
**Sunday, April 19, 2015**
6:30 a.m.–8:00 a.m.  

**1.5 hours**

**Cognitive Psychology of Neurologic Errors: Chalk Talk**

**Topics:** General Neurology; Research Methodology, Education, and History  
**Director:** Louis R. Caplan, MD, FAAN, Boston, MA

**Program Description:**
This course will use a teaching technique of a “chalkboard-style” classroom, with shorter lectures followed by a one-on-one question and answer with faculty.

Medical errors are inherent to the practice of medicine. Analysis of past errors is a powerful strategy for improving the way physicians...
systematically arrive at diagnoses. Faculty will present case examples of types of diagnostic errors and discuss with the attendees how these can be avoided. Using illustrative case histories, faculty will discuss how experienced and conscientious practitioners can be misled in their diagnostic reasoning through cognitive pitfalls such as “availability heuristic,” “anchoring heuristic,” “framing effect,” and others. Faculty will discuss each case with the audience with the aim of identifying cognitive pitfalls and ways of avoiding them.

Upon Completion:
Participants will become familiar with the major pitfalls in diagnosis and be able to apply this information to their daily practice.

Lecture/Faculty:
- Diagnostic Errors in General Neurology
  Robert C. Griggs, MD, FAAN, Rochester, NY
- Diagnostic Errors in Stroke
  Louis R. Caplan, MD, FAAN, Boston, MA

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Audience Participation

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C37  Sunday, April 19, 2015  8:00 a.m.–5:00 p.m.  9 hours

**APP Neurology Update I**

**Topic:** General Neurology

**Director:** Joseph E. Safdieh, MD, FAAN, New York, NY

**Program Description:**
One of the primary goals of the AAN is to help its members stay up-to-date on the latest developments in the diagnosis and management of neurologic disorders. This course will provide updates on stroke, headache, concussion, Alzheimer’s disease, multiple sclerosis, sleep, spinal cord disorders, and neuro-infectious disease.

*This program complements C143: Neurology Update II, but covers independent topics.*

Upon Completion:
Participants should have knowledge of the most current recommendations for the diagnosis, management, and therapy of patients with the disorders discussed. Participants should be able to put recent developments in context to provide optimal patient care.

Lecture/Faculty:
- Update in Sleep Neurology
  Jennifer Rose Molano, MD, Cincinnati, OH
- Update in Multiple Sclerosis
  Stephen Krieger, MD, New York, NY

Learn more about this track and new APP membership discounts at AAN.com/view/APPTrack

$ C5  Resident Basic Science I: Neuropathology  
Saturday, April 18, 2015, 8:00 a.m.–12:00 p.m.

$ C13  Resident Basic Science II: Neuroanatomy  
Saturday, April 18, 2015, 1:00 p.m.–5:00 p.m.

$ C30  Resident Basic Science III: Neuropharmacology  
Sunday, April 19, 8:00 a.m.–12:00 p.m.

$ C37  Neurology Update I  
Sunday, April 19, 8:00 a.m.–5:00 p.m.

$ C38  Genetics in Neurology  
Sunday, April 19, 8:00 a.m.–5:00 p.m.

F C43  Advanced Practice Provider Symposium  
Sunday, April 19, 1:00 p.m.–4:00 p.m.

The role of the Advanced Practice Provider (APP) in the care of neurological patients is increasingly critical. Through a review of the neurological examination and its application to common neurological problems, including headache, movement disorders, and patient cases seen in a neurology office, faculty will provide a framework for the APP to evaluate patients and formulate the appropriate diagnosis.

$ C68  Neuroimaging for the General Neurologist: Brain  
Monday, April 20, 8:00 a.m.–12:00 p.m.

$ C124  Neuroimaging for the General Neurologist: Spine and Peripheral Nerve  
Thursday, April 23, 1:00 p.m.–5:00 p.m.

$ C143  Neurology Update II  
Friday, April 24, 8:00 a.m.–4:00 p.m.
Course Descriptions

General Neurology

- Update in Concussion
  Jeffrey S. Kutcher, MD, Ann Arbor, MI
- Update in Myelopathies
  Tracey Cho, MD, Boston, MA
- Update in Stroke
  Alan Segal, MD, New York, NY
- Update in Headache
  Dara G. Jamieson, MD, New York, NY
- Update in Acute Viral Encephalitis
  Kenneth L. Tyler, MD, FAAN, Aurora, CO
- Update in Alzheimer’s Disease
  Richard S. Isaacson, MD, FAAN, New York, NY

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic
CME Credits: 7.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

Genetics in Neurology

Topic: General Neurology
Director: Joanna C. Jen, MD, PhD, Los Angeles, CA

Program Description:
Recent technological advances in genetics have led to greatly accelerated gene discovery in neurologic disorders to improve diagnosis and provide new insights to disease mechanisms that we hope to lead to treatment. Faculty will provide updates regarding critical areas in neurogenetics, encompassing a broad spectrum of neurologic disorders that differ in their clinical manifestation, age of onset, neuroanatomical susceptibility, and genetic mechanism. Faculty will also cover important ethical and methodological issues concerning genetic testing for neurogenetic disorders, challenges in data interpretation, and translation of neurogenetics into clinical practice.

Upon Completion:
Participants should obtain a broad overview of neurogenetic advances, familiarity with available tools in diagnostics, current understanding of disease mechanisms underlying hereditary developmental and degenerative neurologic disorders, treatment strategies, and expert opinions on practical and still-evolving approaches to neurogenetic disorders.

Lecture/Faculty:
- Introduction
  Joanna C. Jen, MD, PhD, Los Angeles, CA
- Genetics of Leukodystrophies
  Marjo Van Der Knaap, MD, PhD, Amsterdam, Netherlands
- Genetics of Movement Disorders
  Christine Klein, MD, Luebeck, Germany
- Genetics of Epilepsy
  Beige Minassian, MD, Toronto, ON, Canada
- Genetics of Myopathies
  Kenneth H. Fischbeck MD, FAAN
- Genetics of ALS
  Matthew Harms, MD, Saint Louis, MO
- Technical, Clinical, and Ethical Challenges of Genetic Variant Interpretation
  Maria Jesus Sobrido, MD, PhD, La Coruna, Spain
- Discussion/Case Studies
  Faculty

Core Competency: Medical Knowledge
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation
CME Credits: 7.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

Opioids and Marijuana in Your Practice

Topics: Practice, Policy, and Ethics, General Neurology
Director: William C. Davison, MD, FAAN, Glenview, IL

Full Program Description on Page 89

Practical Psychopharmacology for Neurologists

Topics: Aging, Dementia, Cognitive, and Behavioral Neurology, General Neurology
Director: Laurence J. Kinsella, MD, FAAN, St. Louis, MO

Full Program Description on Page 29

Clinical E-Pearls

Topic: General Neurology
Director: Robert M. Pascuzzi, MD, FAAN, Indianapolis, IN

Program Description:
Despite advances in imaging, neurophysiology, and molecular biology, much of the practice of neurology still hinges on the clinical assessment. Most neurologists were drawn to the field by the elegance, challenge, and excitement of bedside neurology. The purpose of this program is to improve bedside skills by introducing a series of clinical “pearls.” Faculty will use cases combined with video and photographs to demonstrate advanced bedside skills.

Upon Completion:
Participants should have additional skills to bring to the bedside in the evaluation of patients with neuromuscular disease, encephalopathy, acute hospital presentations, stroke, and movement disorders; have a better appreciation of the vital and unfaltering role of the neurological examination; and be reconnected with the elegance, challenge, and thrill of bedside neurology.

Lecture/Faculty:
- e-Pearls of Movement Disorders
  Kapil D. Sethi, MD, FRCP (UK), FAAN, Augusta, GA
- e-Pearls from the Borderland of Medicine and Neurology
  Martin A. Samuels, MD, MACP, FAAN, Boston, MA
• e-Pearls in Neuromuscular Medicine  
  Robert M. Pascuzzi, MD, FAAN, Indianapolis, IN
• e-Pearls and e-Pitfalls in CNS Infections  
  Karen L. Roos, MD, FAAN, Indianapolis, IN

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Professionalism
Teaching Style:  Case-Based, Interactive
CME Credits:  3
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist

C66  Monday, April 20, 2015  
8:00 a.m.–12:00 p.m.  4 hours

Multiple Sclerosis Overview I:  Basic and Translational Science

Topics:  MS and CNS Inflammatory Disease; General Neurology  
  Emmanuelle Waubant, MD, FAAN, San Francisco, CA

Full Program Description on Page 66

C68  Monday, April 20, 2015  
8:00 a.m.–12:00 p.m.  4 hours

APP  Neuroimaging for the General Neurologist: Brain

Topic:  General Neurology  
  Laszlo Mechtler, MD, Buffalo, NY

Program Description:  Neuroimaging places in the hands of neurologists powerful tools for clinical diagnosis and research. Rapid progress in the field yields better techniques but also a more complex decision tree regarding what technique is indicated in a given clinical situation, and an ever-expanding range of image patterns characteristic of each disease. Up-to-date information on these advances is key to neurologists who request neuroimaging studies. It is even more important to the large and growing number of neurologists who use image information for clinical decision-making. This course will serve as an update and overview of the role of neuroimaging in clinical neurology. Faculty will provide an organized approach in the evaluation of neurologic disorders with emphasis on imaging. Neurologic disorders will include brain tumors, neurocutaneous syndromes, pediatric diseases, CNS infections, pituitary disorders, and neurologic emergencies.

Upon Completion:  Participants should be able to describe an organized approach to ordering and incorporating neuroimaging studies and sequences in the clinical practice of neurology. The most frequent imaging patterns in patients with brain tumors, pituitary disease, neurocutaneous syndromes, infectious diseases of the CNS, and neurologic emergencies will be reviewed.

Lecture/Faculty:
• Neuroimaging of Brain Tumors  
  Laszlo Mechtler, MD, Buffalo, NY
• Pediatric Neuroimaging  
  Jennifer McVige, MD, Amherst, NY
• Found Down: Acute Neurologic Emergencies  
  James G. Smirniotopoulos, MD, Bethesda, MD

C73  Monday, April 20, 2015  
8:00 a.m.–5:00 p.m.  9 hours

Therapy in Neurology

Topic:  General Neurology  
  Steven L. Lewis, MD, FAAN, Chicago, IL

Program Description:  Therapeutic options for neurologic diseases continue to expand. Faculty will discuss current treatment options and strategies for many of the disorders commonly encountered in neurologic practice. Topics covered will include the treatment of cerebrovascular diseases, demyelinating diseases, epilepsy, headaches, movement disorders, neuromuscular diseases, neuroinfectious diseases, and disorders seen in the neurocritical care unit.

Upon Completion:  Participants should be able to apply current therapeutic options and strategies for patients with cerebrovascular diseases, demyelinating diseases, epilepsy, headaches, movement disorders, neuromuscular diseases, neuroinfectious diseases, and disorders seen in the neurocritical care unit.

Lecture/Faculty:
• Therapy of Epilepsy  
  Erik Kent St. Louis, MD, FAAN, Rochester, MN
• Therapy of Cerebrovascular Disease  
  Seemant Chaturvedi, MD, FAAN, FAHA, Miami, FL
• Therapy of Demyelinating Disease  
  Stephen Krieger, MD, New York, NY
• Therapy in Neurocritical Care  
  Alejandro A. Rabinstein, MD, FAAN, Rochester, MN
• Therapy of Neuromuscular Disease  
  Zachary N. London, MD, Ann Arbor, MI
• Therapy of Movement Disorders  
  Faculty
• Therapy of Headache  
  David W. Dodick, MD, Phoenix, AZ
• Therapy of Neuroinfectious Diseases  
  Karen L. Roos, MD, FAAN, Indianapolis, IN

Core Competencies:  Medical Knowledge, Patient Care
Teaching Style:  Didactic
CME Credits:  7.5
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist
Important Drug Interactions for Neurologists and Psychiatrists

**Topic:** General Neurology

**Director:** Laurence J. Kinsella, MD, FAAN, St. Louis, MO

**Program Description:**
Drug interactions have had far-reaching consequences for residency training. Libby Zion, an 18-year-old New Yorker, died in 1984 of an interaction between meperidine and phenelzine as well as concurrent cocaine use. The Bell Commission, blaming resident overwork and fatigue, recommended limiting resident workloads to no more than 80 hours a week, which is now the law. But would today’s well-rested resident or practicing neurologist have been able to save Libby Zion? Faculty will emphasize important drug interactions pertinent to neurologic practice and offer an algorithm for the prediction of relevant drug-drug interactions. A series of case studies will be provided to cement these concepts.

Faculty will present an overview of drug interactions, with a special emphasis on pharmacogenomics and testing, and present a drug interaction card for bedside/office use. Given the popularity of dietary supplements, faculty will discuss a top 10 list of drug-diet interactions the neurologist is likely to see in practice. Faculty will also cover the mechanism of drug interactions and how they can be predicted.

**Upon Completion:**
Participants should be able to understand the risks of seizures and various antiepileptic drug regimens during pregnancy; recommend safe options for symptomatic and prophylactic treatment of headaches during pregnancy; recommend safe options for imaging in pregnancy; understand the work-up, management, and treatment of the pregnant patient with stroke; understand the challenges in trying myasthenia gravis in pregnancy; and understand the management and treatment of women with multiple sclerosis preconception through pregnancy and the postpartum period.

**Lecture/Faculty:**
- Epilepsy and Pregnancy Considerations
  Kimford J. Meador, MD, FAAN, Stanford, CA
- Headache During Pregnancy: A Practical Approach
  Mary Angela O’Neal, MD, Boston, MA
- Stroke/Vascular Disorders in Pregnancy and the Puerperium
  Faculty
- Myasthenia Gravis and Pregnancy
  Janice M. Massey, MD, FAAN, Durham, NC
- Multiple Sclerosis and Pregnancy
  Riley Bove, MD, Boston, MA

**Core Competencies:**
- Interpersonal and Communication Skills
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement

**Teaching Style:**
- Case-Based
- Didactic
- Audience Participation

**CME Credits:**
3.75

**Recommended Audience:**
- Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**C97**

**Tuesday, April 21, 2015**
1:00 p.m.–5:00 p.m.  4 hours

**Neurologic Issues in Pregnancy**

**Topic:** General Neurology

**Director:** Mary Angela O’Neal, MD, Boston, MA

**Program Description:**
Providing optimal neurologic care and counseling to women during the reproductive years requires special attention to issues related to pregnancy and contraception. The most recent information regarding different neurologic illnesses and pregnancy will be presented in the areas of epilepsy, headache, stroke, neuromuscular disorders, and multiple sclerosis. In addition faculty will cover common changes in pregnancy that affect the nervous system, vasculature, and drug clearance. Imaging guidelines in pregnancy will be reviewed. The course design is evidence-based, and cases will be utilized to highlight key challenges that neurologists face while treating women during this vulnerable period. There will be time for questions and discussion.

**Upon Completion:**
- Understand physiological changes in pregnancy that affect the nervous system, its vasculature, and drug clearance
- Be able to understand the risks of seizures and various antiepileptic drug regimens during pregnancy
- Recommend safe options for symptomatic and prophylactic treatment of headaches during pregnancy
- Recommend safe options for imaging in pregnancy
- Understand the work-up, management, and treatment of the pregnant patient with stroke
- Understand the challenges in treating myasthenia gravis in pregnancy
- Understand the management and treatment of women with multiple sclerosis preconception through pregnancy and the postpartum period

**Lecture/Faculty:**
- Epilepsy and Pregnancy Considerations
  Kimford J. Meador, MD, FAAN, Stanford, CA
- Headache During Pregnancy: A Practical Approach
  Mary Angela O’Neal, MD, Boston, MA
- Stroke/Vascular Disorders in Pregnancy and the Puerperium
  Faculty
- Myasthenia Gravis and Pregnancy
  Janice M. Massey, MD, FAAN, Durham, NC
- Multiple Sclerosis and Pregnancy
  Riley Bove, MD, Boston, MA

**Core Competencies:**
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement

**Teaching Style:**
- Case-Based
- Didactic
- Audience Participation

**CME Credits:**
1.5

**Recommended Audience:**
- Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**C102**

**Wednesday, April 22, 2015**
6:30 a.m.–8:00 a.m.  1.5 hours

**Syndromes of Autonomic Dysfunction in Children and Adolescents**

**Topics:**
- Child Neurology and Developmental Neurology
- General Neurology

**Director:** Imad T. Jarjour, MD, FAAN, Houston, TX

**Full Program Description on Page 39**

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**C103**

**Wednesday, April 22, 2015**
6:30 a.m.–8:00 a.m.  1.5 hours

**Global Health Challenges: Neurology in Developing Countries**

**Topics:**
- Global Health and Infectious Disease
- General Neurology

**Director:** James H. Bower, MD, MSc, Rochester, MN

**Full Program Description on Page 56**
C109 Wednesday, April 22, 2015 2:00 p.m.–6:00 p.m.  4 hours

Functional Neurologic Disorders

Topic:  General Neurology
Director:  Janis Miyasaki, MD, FAAN, Edmonton, AB, Canada $

Program Description:
This course will use a novel teaching technique of the Gallery Walk. Participants will rotate among speakers covering Movement Disorders, Epilepsy, Multiple Sclerosis, and Disclosing the Diagnosis. In each section, faculty will review briefly the work-up and establishing the diagnosis but spend the majority of time on disclosing the diagnosis and further management of the patient.

Upon Completion:
Participants should have new language for disclosing the diagnosis and a “script” to help them disclose the diagnosis to patients and families. An approach that is practical and feasible in their practice should be formulated at the end of the session.

Lecture/Faculty:
- Introduction to Functional Neurologic Disorders  
  Janis Miyasaki, MD, FAAN, Edmonton, AB, Canada
- Gallery Walk: Epilepsy, Movement Disorders, Multiple Sclerosis, and Disclosing the Diagnosis  
  Syed N. Ahmed, MD, FRCP, Edmonton, AB, Canada
  Mark Edwards, MBBS, London, United Kingdom
  Alberto J. Espay, MD, FAAN, Cincinnati, OH
  John O. Fleming, MD, Madison, WI

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism
Teaching Style:  Case-Based, Interactive, Audience Participation
CME Credits:  3.75
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C119 Thursday, April 23, 2015 1:00 p.m.–5:00 p.m.  4 hours

Borderlands of Neurology and Internal Medicine: Chalk Talk

Topic:  General Neurology
Director:  Martin A. Samuels, MD, MACP, FAAN, Boston, MA $

Program Description:
This course will use a teaching technique of a “chalkboard-style” classroom, with shorter lectures followed by a one-on-one question and answer with faculty.

One of the most important aspects of neurology is its interfaces with multiple other medical specialties within the general field of internal medicine. Much of the practice of neurology consists of interacting with specialists over the care of patients who fall into this borderland between neurology and the rest of medicine. Some of these areas are neurocardiology, neurohematology, neurogastroenterology, neurooncology, and the neurologic aspect of electrolyte disturbances. This long-standing course is offered this year in an innovative format. Cases will be presented which highlight important aspects of neurological medicine. The attendees will participate actively in solving the cases and then will be exposed to the thinking that underlies the solution. The participants will be able to interact with the course director, who is board certified in both neurology and internal medicine.

Upon Completion:
Participants should be able to recognize neurogenic electrocardiographic abnormalities; diagnose and treat the common disorders of electrolytes and pH that cause neurologic symptoms; analyze the important neurologic complications of various hematologic disorders; identify and treat the major neurologic problems seen in organ transplantation patients; and understand the nervous system’s manifestations of gastrointestinal and hepatic disorders.

Lecture/Faculty:
- Borderlands of Neurology and Internal Medicine  
  Martin A. Samuels, MD, MACP, FAAN, Boston, MA

C120 Thursday, April 23, 2015 1:00 p.m.–5:00 p.m.  4 hours

Emergency Neurology

Topics:  Neuro Trauma, Critical Care, and Sports Neurology; General Neurology
Director:  Laurie Gutmann, MD, FAAN, Iowa City, IA $

Full Program Description on Page 71

C124 Thursday, April 23, 2015 1:00 p.m.–5:00 p.m.  4 hours

AP Neuroimaging for the General Neurologist: Spine and Peripheral Nerve

Topic:  General Neurology
Director:  Joshua Klein, MD, PhD, Boston, MA $

Program Description:
This program is designed to increase clinician comfort and competence in reviewing neuroimaging studies of the spine and peripheral nerves. The goal is to provide a practical and systematic approach that will allow for recognition of congenital, degenerative, inflammatory, infectious, neoplastic, and vascular lesions.

Upon Completion:
Participants should be able to systematically review images of the adult and pediatric spine and detect congenital, degenerative, inflammatory, infectious, neoplastic, and vascular abnormalities.

Lecture/Faculty:
- Approach to Spine and Peripheral Nerve Imaging, Including Degenerative Disease and Trauma  
  Joshua Klein, MD, PhD, Boston, MA
Course Descriptions

- Pediatric Spine Imaging
  Erin Schwartz, MD, Philadelphia, PA
- Imaging of Spinal Infections and Inflammation
  Jennifer Lyons, MD, Boston, MA
- Vascular Imaging of the Spine
  Ashutosh P. Jadhav, MD, Pittsburgh, PA
- Imaging of Spinal Tumors
  Jorg Dietrich, MD, PhD, Boston, MA

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Neurology Allied Practitioner

C129 Thursday, April 23, 2015 6:00 p.m.–9:00 p.m. 3 hours

Test Your Knowledge: A Case-based Approach to Neuroimaging
Topic: General Neurology
Director: Joseph C. Masdeu, MD, PhD, FAAN, Houston, TX

Program Description:
Neuroimaging places in the hands of neurologists powerful tools for clinical diagnosis and patient management. Attendees will have an opportunity to test and improve their knowledge of neuroimaging by: attending an explanation on how to read brain imaging studies; comparing their responses to those of the group and panel when reviewing different neuroimaging cases; and reviewing carefully a set of different neuroimaging cases discussed by the faculty with ongoing audience participation. Audience participation will be facilitated and enhanced by the option of working in teams.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be able to describe an organized approach to reading neuroimaging studies, as well as helpful imaging clues to identify the diagnosis of common and unusual disorders.

Lecture/Faculty:
- Test Your Knowledge: Neuroimaging Cases: Part I
  Joseph C. Masdeu, MD, PhD, FAAN, Houston, TX
- A Checklist Approach to Neuroimaging Studies
  James G. Smirniotopoulos, MD, Bethesda, MD
- Neuroimaging Cases: Part II
  Joshua Klein, MD, PhD, Boston, MA
- Neuroimaging Cases: Part III
  Joshua Klein, MD, PhD, Boston, MA
  Joseph C. Masdeu, MD, PhD, FAAN, Houston, TX
  James G. Smirniotopoulos, MD, Bethesda, MD

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement
Teaching Style: Case-Based, Interactive, Audience Participation
CME Credits: 3
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C135 Friday, April 24, 2015 6:30 a.m.–8:00 a.m. 1.5 hours

Neurotoxicology
Topic: General Neurology
Director: Alan R. Berger, MD, Jacksonville, FL

Program Description:
Faculty will discuss the cardinal tenets of neurotoxic neuropathy, which could be used to identify whether a toxin is likely responsible for the patient’s neuropathy. Select neurotoxins will be highlighted, illustrating the role of body burden or blood level testing, utility of electrodiagnostic testing, and what clues the history and physical exam could shed in detecting a toxic etiology. Illustrative case studies will be used to highlight the role of the cardinal tenets in identifying naturally occurring versus toxic peripheral neuropathies.

Upon Completion:
Participants should understand how to use the cardinal tenets of neurotoxic disease to help differentiate a potential toxic neuropathy from one naturally occurring; understand how pseudotox neuropathies can mimic true neurotoxic disease and how to differentiate between them; and understand the role and limitation of blood levels and body burden, how to best use the electrodiagnostic data, and how some select neurotoxins produce neuropathic disease.

Lecture/Faculty:
- Cardinal Tenets of Neurotoxicology
  Alan R. Berger, MD, Jacksonville, FL
- Is This a Toxic Peripheral Neuropathy?
  Michael T. Pulley, MD, PhD, Jacksonville, FL

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care
Teaching Style: Didactic, Interactive
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C138 Friday, April 24, 2015 8:00 a.m.–12:00 p.m. 4 hours

Continuum® Test Your Knowledge: A Multiple-Choice Question Review
Topic: General Neurology
Director: Aaron E. Miller, MD, FAAN, New York, NY

Program Description:
This course is designed to help neurologists stay current in clinical practice. The format uses case-based, multiple-choice questions and brief didactic presentations exclusively. With the aid of the audience response system, faculty will engage participants in clinical problem solving. The multiple-choice questions and supporting materials are derived from recent issues of Continuum: Lifelong Learning in Neurology®. Faculty will use the question-based format as a springboard for discussion of timely and important topics and developments across the spectrum of neurology. Core topics in neurology and current literature searches are stressed.

This program will cover four subjects, each presented by a pre-eminent expert in the field who has also demonstrated superior skills at presenting
material of this type to large audiences. Topics include: peripheral nervous system, cerebrovascular disease, neuro-ophthalmology, and neurology of systemic disease.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be able to increase and refresh their knowledge of core topics in neurology through presentation of common and not-so-common clinical problems. The four core topics include: peripheral nervous system, cerebrovascular disease, neuro-ophthalmology, and neurology of systemic disease. Participants should also learn to work through difficult clinical presentations both logically and successfully.

Lecture/Faculty:
- Cerebrovascular Disease
  Adam Kelly, MD, Rochester, NY
- Neurology of Systemic Disease
  Joseph E. Safdieh, MD, FAAN, New York, NY
- Neuro-ophthalmology
  Janet C. Rucker, MD, New York, NY
- Peripheral Nervous System
  Michelle L. Mauermann, MD, Rochester, MN

Core Competency: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

Teaching Style: Didactic
CME Credits: 6.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

Program Description:
This course will provide self-assessment CME credits, which are now required by the ABMS and ABPN for Maintenance of Certification.

C149
Improving Accuracy of Dementia Diagnosis: Case Studies with Both Imaging and Neuropathology

Friday, April 24, 2015
1:00 p.m.–4:00 p.m.  3 hours

Director: James B. Leverenz, MD, FAAN, Cleveland, OH

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C143
Neurology Update II

Friday, April 24, 2015
8:00 a.m.–4:00 p.m.  8 hours

Topic: General Neurology
Director: Barney J. Stern, MD, FAAN, Baltimore, MD

Program Description:
One of the primary goals of the AAN is to help its members stay up-to-date on the latest developments in the diagnosis and management of neurologic disorders. This course will provide updates on stroke, neurocritical care, epilepsy, neuro-oncology, movement disorders, multiple sclerosis, and neuromuscular diseases.

This program complements C37: Neurology Update I, but covers independent topics.

Upon Completion:
Participants should have knowledge of the most current recommendations for the diagnosis, management, and treatment of patients with the disorders discussed. Participants should be able to put recent developments in context so as to provide optimal patient care.

Lecture/Faculty:
- Stroke
  Amie W. Hsia, MD, Washington, DC
- Neurocritical Care
  Kevin N. Sheth, MD, New Haven, CT
- Epilepsy
  Jennifer L. Hopp, MD, FAAN, Baltimore, MD
- Neuro-oncology
  Faculty
- Dizziness and Vertigo
  David E. Newman-Toker, MD, PhD, FAAN, Baltimore, MD
- Movement Disorders
  Melissa Armstrong, MD, Baltimore, MD
- Multiple Sclerosis and NMO
  Robert K. Shin, MD, Baltimore, MD
- Neuromuscular Disorders
  Justin Y. Kwan, MD, Baltimore, MD

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style: Didactic
CME Credits: 6.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C150
Principles of Genomic Medicine: Clinical Exome Sequencing in Neurologic Disease

Friday, April 24, 2015
1:00 p.m.–4:00 p.m.  3 hours

Topic: General Neurology
Director: Brent L. Fogel, MD, PhD, Los Angeles, CA

Program Description:
Faculty will discuss the concept of genomic medicine and its use in clinical practice. Available diagnostic testing designed to comprehensively assess the human genome for disease-causing mutations will be discussed, with an emphasis on exome sequencing. Types of mutations identified will be described and presented in the context of their role in neurogenetic disease. The indications for the clinical use of this technology will be discussed for various common neurologic diseases (e.g., movement disorders, epilepsy, neurodevelopmental disorders, metabolic disease). Ethical challenges including informed consent, appropriate genetic counseling, the reporting of incidental findings, and the detection of variants of unknown significance will be discussed and strategies presented to resolve such issues. Expected results from such testing will be discussed and strategies presented for effective clinical interpretation.
Course Descriptions

General Neurology

Upon Completion:
Participants should be able to understand the principles of genomic medicine and the basics of common genomic diagnostic testing methodologies; effectively educate, counsel, and consent patients and their families regarding genomic diagnostic testing; understand, interpret, and communicate genomic diagnostic testing results to patients; and appreciate the ethical challenges inherent in genomic medicine and identify strategies to address them in clinical practice.

Lecture/Faculty:
- The Impact of Clinical Exome Sequencing on the Diagnosis of Neurologic Disease
  Brent L. Fogel, MD, PhD, Los Angeles, CA
- Interpretation of Exome Sequencing Results in the Clinic
  Hane Lee, PhD, Los Angeles, CA
- Medicolegal and Ethical Issues in Clinical Exome Sequencing
  Wayne Grody, MD, PhD, Los Angeles, CA
- Case Presentations and Discussion
  Brent L. Fogel, MD, PhD, Los Angeles, CA
  Hane Lee, PhD, Los Angeles, CA

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic
CME Credits: 3
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Genetic Counselor

C158 Saturday, April 25, 2015 6:30 a.m.–8:00 a.m.  1.5 hours
Neuro Flash: MRI and Multiple Sclerosis
Topics: MS and CNS Inflammatory Disease; General Neurology
Director: Robert T. Naismith, MD, St. Louis, MO
Full Program Description on Page 68

C163 Saturday, April 25, 2015 8:00 a.m.–12:00 p.m.  4 hours
Autoimmune Neurology
Topic: General Neurology
Director: Maarten Jan Titulaer, MD, PhD, Rotterdam, Netherlands

Program Description:
Faculty will describe the full range of neural autoantibodies and their relevant clinical disorders (neurological, psychiatric, neuropsychiatric and oncological), from encephalitis to the neuromuscular junction. Clinical pearls aiding diagnosis of autoimmune and paraneoplastic neurologic disorders will be presented, including differential diagnosis, investigations and treatment. There will be special emphasis on pitfalls in antibody studies, and tumor screening.

Upon Completion:
Participants should be able to understand the autoantibody nomenclature; recognize autoimmune neurologic disorders; know the neurologic and cancer associations of the autoantibodies; know the pitfalls in antibody testing; know the appropriate oncological evaluations for paraneoplastic neurologic disorders; and know some treatment regimens for autoimmune neurologic disorders.

Lecture/Faculty:
- Autoimmune Neurology: Concepts Overview
  Andrew McKeon, MD, Rochester, MN
- Autoimmune Encephalitis Related to Cell Surface and Synaptic Antigens
  Josep O. Dalmau, MD, PhD, Barcelona, Spain
- Treatment Vignettes
  Josep O. Dalmau, MD, PhD, Barcelona, Spain
  Andrew McKeon, MD, Rochester, MN
- Neuronal Nuclear and Cytoplasmic Antibodies: Paraneoplastic Disorders
  Sean J. Pittock, MD, Rochester, MN
- Autoimmune Synaptic Disorders and Channelopathies of the Peripheral Nervous System
  Maarten Jan Titulaer, MD, PhD, Rotterdam, Netherlands
- Treatment Vignettes
  Sean J. Pittock, MD, Rochester, MN
  Maarten Jan Titulaer, MD, PhD, Rotterdam, Netherlands

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist

C168 Saturday, April 25, 2015 10:00 a.m.–12:00 p.m.  2 hours
Controversies in Brain Death Determination
Topics: Practice, Policy, and Ethics; General Neurology
Director: Owen B. Samuels, MD, Atlanta, GA
Full Program Description on Page 95

Global Health and Infectious Disease

C28 Sunday, April 19, 2015 8:00 a.m.–12:00 p.m.  4 hours
Infectious, Paraneoplastic, Autoimmune? Diagnosis and Treatment of Rapidly Progressive Encephalopathies
Topics: Global Health and Infectious Disease; Neuro-oncology; Subspecialty in Focus
Director: Jeffrey Marc Gelfand, MD, San Francisco, CA

Program Description:
Faculty will highlight advances and emerging concepts in encephalitis, an exciting and rapidly expanding area of neurology. The goal is to provide rational, practical, and actionable approaches for diagnosis and treatment of infectious, autoimmune, and paraneoplastic encephalopathies. The program is specifically designed to integrate perspectives across
subspecialties.

This program is offered in partnership with the Society for Neuro- oncology and the AAN Neuro-infectious Disease and Neuro-oncology Sections.

Upon Completion:
Participants should become familiar with the differential diagnosis of infectious, autoimmune, and paraneoplastic encephalopathies, the rational use of antibody testing and infectious disease diagnostics in encephalitis, and strategies for using immunosuppression as empiric treatment for autoimmune and paraneoplastic encephalitis.

Lecture/Faculty:
- Diagnosis and Management of Acute Viral Encephalitis
  Kenneth L. Tyler, MD, FAAN, Aurora, CO
- Paraneoplastic Encephalitis
  Sean J. Pittock, MD, Rochester, MN
- Autoimmune Encephalitis
  Josep O. Dalmau, MD, PhD, Barcelona, Spain
- Immunosuppression for Treatment of Autoimmune and Paraneoplastic Encephalopathies
  Jeffrey Marc Gelfand, MD, San Francisco, CA

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C67 Monday, April 20, 2015 8:00 a.m.—12:00 p.m. 4 hours

Infections of the Nervous System I: Common Infections

Topic: Global Health and Infectious Disease
Director: Joseph R. Zunt, MD, Seattle, WA

Program Description:
Infections of the nervous system can be diverse in their appearance and challenging to diagnose and treat. Faculty will cover a range of important conditions, emphasizing the features of different CNS infections and the suggested approach for diagnosis and treatment of common and uncommon infections. Syndromic approach to diagnosis and case discussions with audience questions will be encouraged.

This program complements C81: Infections of the Nervous System II: Advanced and Emerging Infections, but covers independent topics.

Upon Completion:
Participants should improve their competence in the recognition, differentiation, and management of common and uncommon infections of the nervous system.

Lecture/Faculty:
- Overview of Spinal Fluid Testing for Infection
  Allen J. Aksamit, Jr, MD, FAAN, Rochester, MN
- Meningitis and Brain Abscess
  Karen L. Roos, MD, FAAN, Indianapolis, IN
- Chronic Meningitis: Simplifying a Diagnostic Challenge
  Kelly Baldwin, MD, Danville, PA
- Clinical Approach to Encephalitis
  Tracey Cho, MD, Boston, MA

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Interactive
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C81 Monday, April 20, 2015 1:00 p.m.—5:00 p.m. 4 hours

Infections of the Nervous System II: Advanced and Emerging Infections

Topic: Global Health and Infectious Disease
Director: Joseph R. Zunt, MD, Seattle, WA

Program Description:
This program will provide an overview of advanced and emerging infections of the nervous system.
infections of the central nervous system. Faculty will provide updates on the appropriate approach to diagnosis and management of a variety of CNS infections.

This program complements C67: Infections of the Nervous System I: Common Infections, but covers independent topics.

Upon Completion:
Participants should become familiar with current diagnostic algorithms and treatment recommendations for a wide variety of advanced and emerging infections affecting the central nervous system.

Lecture/Faculty:
- Neurologic Complications of HIV Infection  
  Michael R. Wilson, MD, San Francisco, CA
- Nervous System Lyme Disease  
  John J. Halperin, MD, FAAN, New York, NJ
- Varicella Zoster Virus Infections of the Nervous System  
  Donald H. Gilden, MD, FAAN, Aurora, CO
- Neurocysticercosis  
  Joseph R. Zunt, MD, Seattle, WA

Core Competencies:  
Medical Knowledge, Patient Care

Teaching Style:  
Case-Based, Didactic, Interactive

CME Credits:  
3.75

Recommended Audience:  
Trainee, General Neurologist, Specialist Neurologist

C103  
Wednesday, April 22, 2015  
6:30 a.m.–8:00 a.m.  1.5 hours

Global Health Challenges: Neurology in Developing Countries

Topics:  
Global Health and Infectious Disease; General Neurology

Director:  
James H. Bower, MD, MSc, Rochester, MN

Program Description:
North American medical students, residents, and neurologists are increasingly interested in global health. Yet our training and knowledge are best suited for practicing in a developed country. Faculty will describe the unique practice of neurology in two developing nations, India and Zambia. Practical challenges that North Americans are likely to face as they work in Africa will also be presented in a frank and open manner.

Upon Completion:
Participants should be able to understand a unique approach to treating epilepsy patients in a resource-limited environment; appreciate the contemporary issues revolving around investigating and treating the neurologic complications of HIV in Zambia; and gain practical knowledge on some likely difficulties they may face performing clinical work or research in a developing nation.

Lecture/Faculty:
- HIV Neurology in Zambia  
  Omar Siddiqi, MD, Lusaka, Zambia
- Caring for Those with Epilepsy in India  
  Mamta Bhusan Singh, MBBS, MD, DM, New Delhi, India
- Real Life Challenges: Clinical and Research Difficulties for Americans in Africa  
  James H. Bower, MD, MSc, Rochester, MN

Core Competencies:  
Medical Knowledge, Patient Care

Teaching Style:  
Case-Based, Didactic, Interactive

CME Credits:  
3.75

Recommended Audience:  
Trainee, General Neurologist, Specialist Neurologist

C110  
Wednesday, April 22, 2015  
2:00 p.m.–6:00 p.m.  4 hours

Differential Diagnosis of Neurologic Infections

Topic:  
Global Health and Infectious Disease

Director:  
Allen J. Aksamit, Jr., MD, FAAN, Rochester, MN

Program Description:
Differential diagnosis of patients with possible neurologic infections will be presented to discuss: differential diagnosis, imaging, spinal fluid interpretation, PCR testing, opportunistic infections, mimicking disorders, need for brain biopsy. Specific topics will include coverage of encephalitis, meningitis, myelopathy, and focal cerebral infection.

Upon Completion:
Participants should have a better ability to: give a more precise differential diagnosis of neurologic infection; recognize specific imaging clues identifying specific diagnosis; and interpret and understand the limitations of PCR and other microbiologic tests.

Lecture/Faculty:
- Infectious Brainstem Encephalitis  
  Russell E. Bartt, MD, FAAN, Denver, CO
- Infectious Causes of Weakness  
  Karen L. Roos, MD, FAAN, Indianapolis, IN
- Stroke Resulting from Infectious Disease  
  Joseph R. Berger, MD, FAAN, Philadelphia, PA
- Para-infectious Neurologic Syndromes  
  Israel Steiner, MD, Petah Tivqa, Israel
- Limbic Encephalitis in HSCT  
  Allen J. Aksamit, Jr., MD, FAAN, Rochester, MN
- Participant-submitted Case Faculty

Core Competencies:  
Medical Knowledge, Patient Care

Teaching Style:  
Case-Based, Interactive, Audience Participation

CME Credits:  
3.75

Recommended Audience:  
Trainee, General Neurologist, Specialist Neurologist

C133  
Friday, April 24, 2015  
6:30 a.m.–8:00 a.m.  1.5 hours

The Interface Between Infection and Cerebrovascular Disease

Topics:  
Cerebrovascular Disease and Interventional Neurology; Global Health and Infectious Disease

Director:  
Mitchell S. V. Elkind, MD, MS, FAAN, New York, NY

Full Program Description on Page 36
Challenging Headache Cases

Topic: Headache
Director: Deborah I. Friedman, MD, FAAN, Dallas, TX

Program Description:
It’s one thing to read the practice parameters, but how does one apply them to the complex headache patients encountered in the real world? What do you do when no guidelines exist? Faculty will challenge the audience—and themselves—with tough cases encountered in their practices. Faculty will work through cases using evidence-based guidelines as applicable, and explaining the thought processes behind the selection of various therapies. The program will simulate real life; there may be more than one “right answer” and likely some friendly debate as panelists relate their perspectives. The cases will be posted in advance for attendees to review. The discussion and references will be available after the program.

Upon Completion:
Participants should be able to diagnose a variety of headache disorders, including those with mixed features; develop a rationale for treatment, incorporating multidisciplinary therapeutic regimens; consider drug effects, side effects, and interactions in patient therapy; identify comorbidities that influence treatment decisions; and integrate these factors into the therapeutic plan.

Lecture/Faculty:
- Case Presentations and Interactive Discussion
  Deborah I. Friedman, MD, FAAN, Dallas, TX
  Todd D. Rozen, MD, FAAN, Wilkes Barre, PA

Core Competencies:
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement

Teaching Style:
- Case-Based, Interactive, Audience Participation

CME Credits: 3
Recommended Audience:
- Trainee, General Neurologist
- Specialist Neurologist, Non-Neurologist

Hot Topics in Headaches and Related Disorders

Topic: Headache
Director: Peter Goadsby, MD, PhD, San Francisco, CA

Program Description:
Faculty will address a range of issues relevant to clinical practice that are developing or have emerged in recent years. Faculty will cover important changes in the understanding of migraine pathophysiology. New therapeutics and delivery systems will be covered as they apply to clinical practice. Childhood headache will be discussed in the context of misdiagnosis and evolution of thinking in these disorders. The trigeminal autonomic cephalalgias, particularly cluster headache, will be covered in terms of pathophysiology and new treatments.

Upon Completion:
Participants should be aware of the new data on each of the topics discussed and have an opportunity to dialogue with the presenter on each of the topics.

Lecture/Faculty:
- Shifting Paradigms in Migraine Pathophysiology
  Robert E. Shapiro MD, PhD, FAAN, Burlington, VT
- 2015: What Is New and Newer in Migraine Treatment?
  Ana Recober-Montilla, MD, Philadelphia, PA
- Common Misconceptions and New Concepts in Childhood Headache
  Amy Gelfand, MD, San Francisco, CA
- Emerging Concepts and Therapies in Trigeminal Autonomic Cephalalgias
  Peter Goadsby, MD, PhD, San Francisco, CA

Core Competencies:
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement
- Systems-Based Practice
Course Descriptions

C69  Monday, April 20, 2015
8:00 a.m.–12:00 p.m.  4 hours
Introduction to Primary Headache Disorders

Topic: Headache
Director: Todd D. Rozen, MD, FAAN, Wilkes Barre, PA

Program Description:
Primary headache disorders are those that are not attributable to another underlying secondary condition like a brain tumor or vascular malformation. The most well-recognized primary headache subtypes include migraine, tension-type, and cluster headache, but the number of primary headache disorders is vast and actually increasing in the new International Headache Classification-3rd edition (beta version). Faculty will focus on the primary headache syndromes and delve into their epidemiology, clinical presentations, and treatment utilizing case-based scenarios. The lectures will focus on migraine, tension-type headache, and the trigeminal autonomic cephalalgias, but ample time will be dedicated to lesser known but important primary headache conditions including: new daily persistent headache, hypnic headache, primary stabbing headache, primary cough headache, primary exercise headache, primary headache associated with sexual activity, nummular headache, and primary thunderclap headache.

Upon Completion:
Participants should be familiar with how to diagnose and treat various primary headache disorders. They should become familiar with the International Classification of Headache Disorders, 3rd edition (beta version), as well as updated evidence-based treatment guidelines for migraine and other primary headache disorders.

Lecture/Faculty:
- Migraine
  Lawrence C. Newman, MD, FAAN, New York, NY
- Tension-type Headache, Hypnic Headache, Primary Stabbing Headache, and Nummular Headache
  Deborah I. Friedman, MD, FAAN, Dallas, TX
- New Daily Persistent Headache, Primary Cough Headache, Primary Exercise Headache, Primary Headache Associated with Sexual Activity, and Primary Thunderclap Headache
  Todd D. Rozen, MD, FAAN, Wilkes Barre, PA
- Trigeminal Autonomic Cephalalgias (Cluster Headache, Paroxysmal Hemicrania, Hemicrania Continua, Short-lasting Unilateral Neuralgiform Headache Attacks)
  Christopher J. Boes, MD, FAAN, Rochester, MN

C152  Friday, April 24, 2015
1:00 p.m.–4:00 p.m.  3 hours
The Intractable Headache Patient

Topic: Headache
Director: Charles C. Flippen, II, MD, FAAN, Los Angeles, CA

Program Description:
Headache is one of the most common neurological complaints. Neurologists are frequently challenged by the patient with chronic daily headache who has failed multiple attempts toward treatment and in many instances has resorted to overusing abortive medication. The evaluation and management of the intractable headache patient is not usually addressed in medical school or residency program curricula. There are no consensus treatment paradigms/guidelines for the management of this special population of headache sufferers. This course will use a case-based discussion of the intractable chronic migraine, medication overuse, and chronic cluster headache and use of adjunct interventional pain procedures. Attendees will rotate through three stations. Each station will be led by a moderator who will present a case representing one of the three core topics.

Upon Completion:
Participants should be able to recognize and treat medication overuse headache, including using proper detoxification strategies, employing specific outpatient and inpatient treatment strategies for the difficult-to-treat headache patient, having the clinical skills to treat patients with intractable migraine headaches, and understanding when the use of adjunct interventional methods advances patient care.

Lecture/Faculty:
- The Intractable Headache Patient
  Robert Cowan, MD, FAAN, Pasadena, CA
- Intractable Cluster Headache
  Todd D. Rozen, MD, FAAN, Wilkes Barre, PA
- Interventional Techniques for Intractable Headache
  Morris Levin, MD, FAAN, San Francisco, CA

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

C164  Saturday, April 25, 2015
8:00 a.m.–12:00 p.m.  4 hours
Chronic Migraine Education Program

Topic: Headache
Director: Richard B. Lipton, MD, FAAN, Bronx, NY

Program Description:
The course highlights recent epidemiological data on the scope and distribution of episodic and chronic migraine with an emphasis on new classification criteria, impact of migraine, screening for unmet needs, and treatment contraindications. Additional presentations will include recent insights into the mechanisms of the disorder, setting
the stage for improving treatment outcomes for this most disabling of headache disorders. The course is designed to provide a comprehensive understanding of this disorder with an emphasis on diagnosing and treating acute and chronic migraine.

Upon Completion:
Participants should be better able to: correctly apply the new classification criteria (ICHD-3 [beta]) to patients with migraine; apply differential diagnostic criteria for patients with chronic migraine and episodic migraine using diagnostic algorithms; understand the scope, burden, and distribution of migraine in the population as well as the risk factors that predispose to it; screen/identify headache patients with risk factors (e.g., for stroke), contraindications to standard medications, and unmet treatment needs; identify strategies for the optimal acute treatment of migraine; distinguish current patterns in the diagnosis and treatment of chronic migraine and episodic migraine, and the substantial unmet medical need for this condition; describe emerging insights into the pathophysiology of chronic migraine; and identify common comorbidities in patients with chronic migraine.

Lecture/Faculty:
- Differential Diagnosis of Chronic Migraine
  Faculty
- Modifiable Risk Factors and Prognosis
  Richard B. Lipton, MD, FAAN, Bronx, NY
- Neurobiology of Chronic Migraine
  Peter Goodasy, MD, PhD, San Francisco, CA
- Panel Discussion and Case Presentation
  Faculty
- Behavioral and Psychological Approaches to Effective CM Management
  Dawn C. Buse, PhD, Bronx, NY
- Preventive Pharmacotherapy
  Stephen D. Silberstein, MD, FAAN, Philadelphia, PA
- Advances in Acute Treatment
  Lawrence C. Newman, MD, FAAN, New York, NY
- Neuromodulation and Emerging Treatments
  Matthew S. Robbins, MD, Bronx, NY
- Discussion and Cases
  Faculty

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Audience Participation, Case-Based, Didactic

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**Movement Disorders**

**C3** Saturday, April 18, 2015
8:00 a.m.–12:00 p.m. 4 hours

**Deep Brain Stimulation Management**

**Topic:** Movement Disorders

**Director:** Jill L. Ostrem, MD, San Francisco, CA

**Program Description:**
Deep brain stimulation (DBS) is widely used to treat advanced, medication-resistant movement disorders, including essential tremor, Parkinson’s disease, and dystonia. An understanding of the DBS device, proper patient selection, and optimized postoperative management is essential to achieve successful outcomes with DBS, maximize patient benefits, and minimize adverse effects or complications. Each of these key issues will be discussed, with an emphasis on practical information for the clinician. The program will include case-based presentations where possible. Emerging use of DBS will also be covered. Attendees will be encouraged to discuss patient cases regarding patient candidacy, management of DBS, or other questions in the breakout session with individual faculty members.

Upon Completion:
Participants should be able to: describe the rationale for the use of DBS and the patients for whom the treatment is most indicated; have a general understanding and appreciate the principles of initial DBS stimulator activation and programming; recognize the issues involved in the short- and long-term management of movement disorder patients treated with DBS; and be informed about novel and emerging use of DBS.

Lecture/Faculty:
- Overview of Deep Brain Stimulation, Current Indications, and Patient Selection
  Leonard Verhagen Metman, MD, PhD, Chicago, IL
- The Art and Science of Basic Deep Brain Stimulation Programming
  Michael Pourfar, MD, New York, NY
- Management of the Deep Brain Stimulation Patient, Case Examples, and Troubleshooting
  Jill L. Ostrem, MD, San Francisco, CA
- Novel and Emerging Uses of Deep Brain Stimulation
  Michael S. Okun, MD, FAAN, Gainesville, FL

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Nurse Practitioner, Registered Nurse

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**hugh_kearney:**

Excellent Update in Neurology course today, including features on #MS #epilepsy and #stroke #AANAM
Upon Completion:
Participants should be familiar with the changes in nondopaminergic mechanisms that underlie certain motor and nonmotor aspects of PD and should be aware of changing approaches to clinical trial design these mechanisms will require.

Lecture/Faculty:
- The Changing Landscape of Parkinson's Disease: A Clinical View
  Kathleen M. Shannon, MD, Chicago, IL
- Motor Disability in Parkinson's Disease: Nondopaminergic Mechanisms and Targets
  Susan Fox, MD, Toronto, ON, Canada
- Cognition and Behavior in Parkinson's Disease: Nondopaminergic Mechanisms and Targets
  Alice Cronin-Golomb, Boston, MA
- Clinical Trials Across the Lifespan of Parkinson's Disease: Challenges and Opportunities
  Christopher Goetz, MD, FAAN, Chicago, IL

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

Movement Disorders on the Changing Landscape of Parkinson's Disease

C52  Sunday, April 19, 2015
1:00 p.m.–5:00 p.m.  4 hours

Program Description:
Movement disorders specialists are adept at managing dopaminergic aspects of the disease. As PD progresses, the contribution of nondopaminergic influences to motor and nonmotor disability changes, resulting in poorer functional status and quality of life. Faculty will review nondopaminergic targets and mechanisms of motor, behavioral, and cognitive function in PD. Identification of candidate nondopaminergic agents will pose challenges to clinical trial conduct, requiring new outcome measures and trial designs.

This program is offered in partnership with the International Parkinson and Movement Disorders Society and the AAN Movement Disorders Section.

Upon Completion:
Participants should be familiar with practical treatment options for dealing with the entire course of Parkinson's disease, as well as be familiar with available treatments for essential tremor, tardive dyskinesia, and Huntington's disease.

Lecture/Faculty:
- Therapy of Movement Disorders: A Case-based Approach
  Stewart A. Factor, DO, FAAN, Atlanta, GA
- Stephen G. Reich, MD, FAAN, Baltimore, MD

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Geriatrician, Rehabilitation Specialist, Nursing Home Specialist

Therapy of Movement Disorders: A Case-based Approach

C18  Saturday, April 18, 2015
3:00 p.m.–5:00 p.m.  2 hours

Upon Completion:
Participants should also gain techniques to improve their exam of gait and balance, and learn to use the current classification of gait and balance disorders in a clinically useful manner. Participants should also learn to recognize several common gait and balance disorders.

Lecture/Faculty:
- Clinical Assessment of Gait and Balance Disorders
  John G. Nutt, MD, FAAN, Portland, OR

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 3
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Geriatrician, Rehabilitation Specialist, Nursing Home Specialist

Balance and Gait Disorders

C24  Sunday, April 19, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

Program Description:
Mobility is a prized ability. Disorders of balance and gait impair mobility, reduce independence, lead to falls and fall-related injuries, reduce the quality of life, and are associated with reduced survival. The neurologist needs to be able to recognize the clinical patterns of balance and gait disorders in order to diagnose and intervene effectively.

Faculty will review the clinical exam of gait and balance and the latest classification for gait and balance disorders, then discuss video examples of various gait and balance disorders. Audience observations and questions about the video examples will be encouraged.

Upon Completion:
Participants should better appreciate the clinical importance of gait and balance disorders. Participants should also gain techniques to improve their exam of gait and balance, and learn to use the current classification of gait and balance disorders.
C54  Sunday, April 19, 2015  
3:00 p.m.–5:00 p.m.  2 hours  

Cognitive-Motor Disorders: Chalk Talk  

**Topics:** Aging, Dementia, Cognitive, and Behavioral Neurology; Movement Disorders  
**Director:** Kenneth M. Heilman, MD, FAAN, Gainesville, FL  

**Full Program Description on Page 29**  

C65  Monday, April 20, 2015  
8:00 a.m.–12:00 p.m.  4 hours  

Botulinum Toxins: Practical Issues and Clinical Uses for Neurologists  

**Topic:** Movement Disorders  
**Director:** Diego Torres-Russotto, MD, Omaha, NE  

**Program Description:**  
Faculty will provide practical tips on the use of botulinum toxin (BoNT) injections, a widely accepted treatment for many disorders. Faculty will discuss the pharmacology of BoNT, highlighting differences in the available serotypes and preparations. The practical use of BoNT for treatment of dystonia, spasticity, hemifacial spasm, sialorrhea, and headaches will be presented, along with the evidence supporting use in each disorder. Relevant anatomy will be outlined using diagrams and videos. The program will include didactic lectures and case discussions.  

**Upon Completion:**  
Participants should be able to explain the mechanism of action of BoNT; describe the differences between various serotypes and brands; list the neurologic disorders in which BoNT is shown to be effective and the level of evidence that supports its use in these disorders; describe the anatomy of those regions commonly treated with BoNT; discuss the adverse effects that have been associated with BoNT injections into specific body regions; and apply the knowledge gained from this session to clinical cases.  

**Lecture/Faculty:**  
- Botulinum Toxin General Principles  
  Cynthia L. Comella, MD, FAAN, Chicago, IL  
- Chemodenervation for Cervical Dystonia: A Practical Approach  
  Cynthia L. Comella, MD, FAAN, Chicago, IL  
- Chemodenervation for Spasticity in Adults: A Practical Approach  
  Brad A. Racette, MD, FAAN, St. Louis, MO  
- Chemodenervation for Spasticity in Children: A Practical Approach  
  Brad A. Racette, MD, FAAN, St. Louis, MO  
- Chemodenervation for Blepharospasm, Hemifacial Spasm, and Sialorrhea: A Practical Approach  
  Diego Torres-Russotto, MD, Omaha, NE  
- Chemodenervation for Headaches: A Practical Approach  
  David W. Dodick, MD, Phoenix, AZ  
- How to Establish a Successful Chemodenervation Practice  
  Diego Torres-Russotto, MD, Omaha, NE  
- Panel Discussion  
  Faculty  

**Core Competencies:** Medical Knowledge, Patient Care  
**Teaching Style:** Case-Based, Didactic, Practical Tips Through Case Reviews  

C77  Monday, April 20, 2015  
10:00 a.m.–12:00 p.m.  2 hours  

Update on Ataxias  

**Topic:** Movement Disorders  
**Director:** Stefan M. Pulst, MD, FAAN, Salt Lake City, UT  

**Program Description:**  
The causes of ataxia are diverse, extensive, and often downright confusing. Faculty will review the most common causes of acquired and genetic forms of ataxia, current understanding of the pathogenic mechanisms, and emerging approaches to therapy.  

**Upon Completion:**  
Participants should be familiar with the causes of acquired and inherited ataxia, the current use of genetic testing, diagnostic approaches used to evaluate ataxia, and the newest breakthroughs in the field. Many of these advances reflect the genetic basis of numerous ataxias. Participants should be able to discuss a rational work-up of the sporadic and familial ataxia patient.  

**Lecture/Faculty:**  
- Dominant Ataxias - Recessive Ataxias  
  Massimo Pandolfo, MD, FAAN, Brussels, Belgium  
  Stefan M. Pulst, MD, FAAN, Salt Lake City, UT  

**Core Competencies:** Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice  
**Teaching Style:** Case-Based, Didactic, Interactive  
**CME Credits:** 2  
**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Movement Disorder Specialist  

C79  Monday, April 20, 2015  
1:00 p.m.–5:00 p.m.  4 hours  

Overview of Parkinson’s Disease and Movement Disorders  

**Topic:** Movement Disorders  
**Director:** Nutan Sharma, MD, PhD, FAAN, Boston, MA  

**Program Description:**  
The clinical practice of movement disorders remains rooted in clinical diagnosis and empirical therapy. However, every year there is growth in the preclinical and clinical sciences that informs the approach to diagnosis and treatment. Faculty will review important and exciting new information on Parkinson’s disease and parkinsonism, essential tremor, and dystonia. Faculty will provide fresh insights on these important disorders, presenting new findings in the context of established knowledge.  

**Upon Completion:**  
Participants should be familiar with recent and emerging knowledge about common movement disorders and be aware of the most up-to-date treatments and new strategies for common dilemmas in clinical practice.
Course Descriptions

Lecture/Faculty:
- Pathophysiology and Treatment of Tremor
  Rodger J. Elble, MD, PhD, FAAN, Springfield, IL
- Parkinson's Disease
  Claire Henchcliffe, MD, PhD, FAAN, New York, NY
- Dystonia
  Nutan Sharma, MD, PhD, FAAN, Boston, MA

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice
Teaching Style: Case-Based, Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Non-Neurologist, Advanced Practice Provider

C85  Monday, April 20, 2015  1:00 p.m.–5:00 p.m.  4 hours
Clinical Usefulness of Botulinum Toxin and Treatment of Dystonia Skills Pavilion

Topic: Movement Disorders
Director: Vanessa K. Hinson, MD, PhD, Charleston, SC

Program Description:
Faculty will present a hands-on approach to treating neurologic disorders with botulinum toxins, with an emphasis on cervical dystonia, hemifacial spasm, blepharospasm, limb dystonia, and spasticity. Emphasis will be placed on clinical evaluation, injection technique, muscle selection including dosage of the different types of toxins, and needle placement. Participants will rotate in small groups through demonstration sessions featuring Electronic Virtual Injection Simulator mannequins, demonstrations of ultrasound techniques for muscle localization and videos with case discussions. Ample time will be allotted for questions and interactive discussions.

Participants registering for this program must also register and attend C65: Botulinum Toxins: Practical Issues and Clinical Uses for Neurologists.

Upon Completion:
Participants should be able to describe the injection techniques for treatment of cervical dystonia, limb dystonia, blepharospasm, hemifacial spasm, and spasticity; describe the typical dosages used for each disorder with each of the different types of botulinum toxin; and describe the typical muscles injected for each indication.

Lecture/Faculty:
- Introduction and Practical Differences Between the Available Botulinum Toxins
  Vanessa K. Hinson, MD, PhD, Charleston, SC
- Rotation #1: Toxin Reconstitution and Cervical Dystonia
  Cynthia L. Comella, MD, FAAN, Chicago, IL
- Rotation #2: Limb Injections and Use of Ultrasound Guidance
  Michael H. Rivner, MD, FAAN, Augusta, GA
- Rotation #3: Facial and Jaw Injections
  Gonzalo Revuelta, DO, Charleston, SC
- Rotation #4: Video-based Case Discussions
  Barbara P. Karp, MD, Bethesda, MD

C90  Tuesday, April 21, 2015  6:30 a.m.–8:00 a.m.  1.5 hours
Approach to the Shaky Patient

Topic: Movement Disorders
Director: Vicki Shanker, MD, New York, NY

Program Description:
Tremor is a common presentation in the neurologist's office and may be normal (i.e., enhanced physiologic tremor) or pathologic. Although phenomenologically there are several differences among a parkinsonian tremor, essential tremor, and dystonic tremor, these entities are often confused, leading to early misdiagnosis and delay in care. Faculty will review key distinguishing characteristics of these common disease entities and provide clinical pearls to the movement examination. Uncommon tremors, such as orthostatic and psychogenic tremors, will be presented and discussed. Video clips will be reviewed to reinforce these principles.

Upon Completion:
Participants should be able to recognize the clinical features of a parkinsonian tremor, essential tremor, and dystonic tremor as well as less common tremor conditions, and be able to apply clinical techniques to distinguish these disease entities in the office.

Lecture/Faculty:
- Introduction in the Clinical and Diagnostic Approach to Tremor
  Vicki Shanker, MD, New York, NY
- Tremor in Parkinson’s Disease
  Faculty
- Tremor in Dystonia
  Faculty
- Tremor in Essential Tremor
  Vicki Shanker, MD, New York, NY
- Uncommon Tremors: Psychogenic and Beyond
  Vicki Shanker, MD, New York, NY

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care
Teaching Style: Didactic, Audience Participation, Video Review
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Non-Neurologist

C101  Wednesday, April 22, 2015  6:30 a.m.–8:00 a.m.  1.5 hours
Hyperkinetic Movement Disorders: Diagnosis and Treatment

Topic: Movement Disorders
Director: Oksana Suchowersky, MD, FAAN, Edmonton, AB, Canada

Program Description:
Hyperkinetic movement disorders can have many etiologies, including structural, metabolic, and genetic. Recognition of phenomenology is key to making the diagnosis. Recent advances in genetic testing for...
some of these disorders has facilitated diagnosis, which has important implications for management and genetic counseling. In this video-rich program, faculty will discuss the differential diagnosis and evaluation of tics, dystonia, chorea, and myoclonic syndromes. The latest advances in therapy of hyperkinetic movement disorders will be reviewed based on current practice and evidence-based guidelines.

Upon Completion:
Participants should be able to recognize the various types of hyperkinetic movement disorders; discuss the differential diagnosis of patients with hyperkinetic movement disorders; and understand the approaches to management of patients with these disorders.

Lecture/Faculty:
- Chorea
  Oksana Suchowersky, MD, FAAN, Edmonton, AB, Canada
- Dystonia
  Alberto J. Espay, MD, FAAN, Cincinnati, OH
- Tics
  Oksana Suchowersky, MD, FAAN, Edmonton, AB, Canada
- Myoclonus
  Alberto J. Espay, MD, FAAN, Cincinnati, OH

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C127 Thursday, April 23, 2015 6:00 p.m.–9:00 p.m. 3 hours
Case Studies: Unusual Movement Disorders

Topic: Movement Disorders
Director: Anthony E. Lang, MD, FAAN, Toronto, ON, Canada

Program Description:
This course has a long tradition of case presentations by both the faculty and members of the audience, highlighting diagnostic challenges. Participants are invited to bring interesting cases for presentation (cases from the faculty will also be shown for the purposes of making specific teaching points or if there are insufficient cases from the audience), known diagnoses will be prioritized. The faculty will first emphasize an interactive discussion regarding visual recognition of the clinical phenomenology followed by a discussion of differential diagnoses, investigations, and management. Attendees hoping to present cases should contact the director, Anthony Lang, MD, FAAN, by email (lang@uhnres.utoronto.ca) to discuss the potential case presentation.

Upon Completion:
Participants should become familiar with unusual movement disorders and be able to formulate better differential diagnoses for them. Where relevant, participants should also be able to initiate appropriate diagnostic investigation and management of these disorders.

Lecture/Faculty:
- Unusual Movement Disorders: Case Studies
  Kailash P. Bhatia, MD, FAAN, London, United Kingdom
  Alberto J. Espay, MD, FAAN, Cincinnati, OH
  Anthony E. Lang, MD, FAAN, Toronto, ON, Canada

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement
Teaching Style: Case-Based, Audience Participation
CME Credits: 1
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C131 Friday, April 24, 2015 6:30 a.m.–8:00 a.m. 1.5 hours
Neuro Flash: Child Neurology

Topics: Child Neurology and Developmental Neurology; Movement Disorders
Director: Erika Fullwood Augustine, MD, Rochester, NY

Full Program Description on Page 40

C134 Friday, April 24, 2015 6:30 a.m.–8:00 a.m. 1.5 hours
The Dystonias: Diagnosis, Treatment, and Update on Causes

Topic: Movement Disorders
Director: Daniel Tarsy, MD, FAAN, Boston, MA

Program Description:
Dystonia is one of the least understood and most often misdiagnosed movement disorders. Using video demonstrations, faculty will address the clinical spectrum and classification of the dystonias; current concepts regarding the underlying causes; strategies for diagnostic evaluation; and medical and surgical treatment strategies.

Upon Completion:
Participants should be familiar with the varied clinical manifestations of the dystonias; the classification of the dystonias; the many causes for dystonia and a diagnostic approach; current understanding of the etiology and pathogenesis of dystonia; and treatment options.

Lecture/Faculty:
- Clinical Features and Classification of the Dystonias
  Daniel Tarsy, MD, FAAN, Boston, MA
- Treatment of the Dystonias
  Samuel A. Frank, MD, Boston, MA

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Video Demonstrations
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C141 Friday, April 24, 2015 8:00 a.m.–4:00 p.m. 8 hours
Movement Disorders

Topic: Movement Disorders
Director: Susan Fox, MD, Toronto, ON, Canada

Program Description:
The field of movement disorders depends highly on clinical skills, including recognition of and differentiation among different types of movement...
**Course Descriptions**

**Movement Disorders**

Upon Completion:
Participants should be able to recognize and classify the most common abnormal involuntary movements; generate an appropriate differential diagnosis for different movement disorders; and articulate a basic strategy for the symptomatic treatment of Parkinson’s disease, parkinsonism, chorea, tremor, dystonia, common hereditary and sporadic degenerative ataxias, Tourette syndrome, and other movement disorders.

**Lecture/Faculty:**
- Update on Tics and Tourette Syndrome  
  Joseph Jankovic, MD, FAAN, Houston, TX
- Tremor  
  Elan D. Louis, MD, MS, FAAN, New York, NY
- Chorea  
  Ruth H. Walker, MB, ChB, PhD, FAAN, Bronx, NY
- Parkinson’s Disease Clinical and Video Review  
  Nikolaus McFarland, MD, PhD, Gainesville, FL
- Common Hereditary and Sporadic Degenerative Ataxias  
  Tetsuo Ashizawa, MD, FAAN, Gainesville, FL
- Dystonia  
  Elena Moro, MD, Grenoble, France
- Atypical and Secondary Parkinsonism  
  Shilpa Chitnis, MD, PhD, Dallas, TX

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

**Teaching Style:** Case-Based, Interactive

**CME Credits:** 6.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

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**C157**  
**Saturday, April 25, 2015**  
6:30 a.m.–8:00 a.m.  
1.5 hours

**Topic:** Movement Disorders  
**Director:** Kailash P. Bhatia, MD, FAAN, London, United Kingdom

**Program Description:**
Recent advances in the genetics and phenotype-genotype correlations of paroxysmal dyskinesias have greatly impacted the practice of clinicians dealing with paroxysmal movement disorders. Through presentations of both primary (idiopathic) genetically confirmed cases of different forms of paroxysmal dyskinesias as well as secondary forms, the faculty will facilitate a discussion with the audience to learn to recognize, investigate, and manage these difficult cases. Each case will be followed by an overview and update on the topic.

**Upon Completion:**  
Participants should be familiar with the different forms of primary and secondary paroxysmal movement disorders including the differential diagnosis and work-up, as well as genetic testing and also tests for secondary forms of paroxysmal dyskinesia. Participants should be familiar with new breakthroughs in the field.

**Lecture/Faculty:**
- Primary Paroxysmal Dyskinesias  
  Kailash P. Bhatia, MD, FAAN, London, United Kingdom
- Secondary Paroxysmal Dyskinesias  
  Kapil D. Sethi, MD, FRCP (UK), FAAN, Augusta, GA

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Interactive, Audience Participation

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

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**C162**  
**Saturday, April 25, 2015**  
8:00 a.m.–12:00 p.m.  
4 hours

**Topic:** Movement Disorders  
**Director:** Charles H. Adler, MD, PhD, FAAN, Scottsdale, AZ

**Program Description:**
This program will cover the nonmotor features that are now known to predate motor Parkinson’s disease (PD) as well as those that affect quality of life as PD progresses. PD is a systemic disorder and there will be discussion of the pathological basis for nonmotor features. Data will be presented showing which findings predate motor PD and how these may be used to identify individuals at higher risk for developing PD. This includes the evidence that patients with REM sleep behavior disorder may be used to identify individuals at higher risk for developing PD. Methods to assess patients for nonmotor symptoms, including questionnaires and examination methods, will be discussed. Emphasis will be placed on cognitive, psychiatric, sleep, and autonomic symptoms and signs. Treatment options for the various nonmotor features will be discussed at length. As quality of life has been shown to be very impacted by nonmotor features of PD, this course will raise awareness of a topic that has not received nearly enough attention by PD and non-PD neurologists.

**Upon Completion:**  
Participants should be able to identify nonmotor features of PD that predate motor signs; discuss methods for assessing nonmotor features including questionnaires and examination methods, and describe current treatment options for nonmotor features of PD.

**Lecture/Faculty:**
- Extraneurial Pathology and Premotor Detection of Parkinson’s Disease  
  Charles H. Adler, MD, PhD, FAAN, Scottsdale, AZ
- Diagnosis and Impact of Nonmotor Complications of Parkinson’s Disease  
  Janis Miyasaki, MD, FAAN, Edmonton, AB, Canada
- Mild Cognitive Impairment and Dementia in Parkinson’s Disease  
  Jennifer G. Goldman, MD, Chicago, IL
- Diagnosis and Treatment of Sleep and Autonomic Issues in Parkinson’s Disease  
  Stewart A. Factor, DO, FAAN, Atlanta, GA

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**Course Descriptions**

**Movement Disorders**

Upon Completion:
Participants should be able to recognize and classify the most common abnormal involuntary movements; generate an appropriate differential diagnosis for different movement disorders; and articulate a basic strategy for the symptomatic treatment of Parkinson’s disease, parkinsonism, chorea, tremor, dystonia, common hereditary and sporadic degenerative ataxias, Tourette syndrome, and other movement disorders.

**Lecture/Faculty:**
- Update on Tics and Tourette Syndrome  
  Joseph Jankovic, MD, FAAN, Houston, TX
- Tremor  
  Elan D. Louis, MD, MS, FAAN, New York, NY
- Chorea  
  Ruth H. Walker, MB, ChB, PhD, FAAN, Bronx, NY
- Parkinson’s Disease Clinical and Video Review  
  Nikolaus McFarland, MD, PhD, Gainesville, FL
- Common Hereditary and Sporadic Degenerative Ataxias  
  Tetsuo Ashizawa, MD, FAAN, Gainesville, FL
- Dystonia  
  Elena Moro, MD, Grenoble, France
- Atypical and Secondary Parkinsonism  
  Shilpa Chitnis, MD, PhD, Dallas, TX

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

**Teaching Style:** Case-Based, Interactive

**CME Credits:** 6.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

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**C157**  
**Saturday, April 25, 2015**  
6:30 a.m.–8:00 a.m.  
1.5 hours

**Topic:** Movement Disorders  
**Director:** Kailash P. Bhatia, MD, FAAN, London, United Kingdom

**Program Description:**
Recent advances in the genetics and phenotype-genotype correlations of paroxysmal dyskinesias have greatly impacted the practice of clinicians dealing with paroxysmal movement disorders. Through presentations of both primary (idiopathic) genetically confirmed cases of different forms of paroxysmal dyskinesias as well as secondary forms, the faculty will facilitate a discussion with the audience to learn to recognize, investigate, and manage these difficult cases. Each case will be followed by an overview and update on the topic.

**Upon Completion:**  
Participants should be familiar with the different forms of primary and secondary paroxysmal movement disorders including the differential diagnosis and work-up, as well as genetic testing and also tests for secondary forms of paroxysmal dyskinesia. Participants should be familiar with new breakthroughs in the field.

**Lecture/Faculty:**
- Primary Paroxysmal Dyskinesias  
  Kailash P. Bhatia, MD, FAAN, London, United Kingdom
- Secondary Paroxysmal Dyskinesias  
  Kapil D. Sethi, MD, FRCP (UK), FAAN, Augusta, GA

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Interactive, Audience Participation

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

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**C162**  
**Saturday, April 25, 2015**  
8:00 a.m.–12:00 p.m.  
4 hours

**Topic:** Movement Disorders  
**Director:** Charles H. Adler, MD, PhD, FAAN, Scottsdale, AZ

**Program Description:**
This program will cover the nonmotor features that are now known to predate motor Parkinson’s disease (PD) as well as those that affect quality of life as PD progresses. PD is a systemic disorder and there will be discussion of the pathological basis for nonmotor features. Data will be presented showing which findings predate motor PD and how these may be used to identify individuals at higher risk for developing PD. This includes the evidence that patients with REM sleep behavior disorder may be used to identify individuals at higher risk for developing PD. Methods to assess patients for nonmotor symptoms, including questionnaires and examination methods, will be discussed. Emphasis will be placed on cognitive, psychiatric, sleep, and autonomic symptoms and signs. Treatment options for the various nonmotor features will be discussed at length. As quality of life has been shown to be very impacted by nonmotor features of PD, this course will raise awareness of a topic that has not received nearly enough attention by PD and non-PD neurologists.

**Upon Completion:**  
Participants should be able to identify nonmotor features of PD that predate motor signs; discuss methods for assessing nonmotor features including questionnaires and examination methods, and describe current treatment options for nonmotor features of PD.

**Lecture/Faculty:**
- Extraneurial Pathology and Premotor Detection of Parkinson’s Disease  
  Charles H. Adler, MD, PhD, FAAN, Scottsdale, AZ
- Diagnosis and Impact of Nonmotor Complications of Parkinson’s Disease  
  Janis Miyasaki, MD, FAAN, Edmonton, AB, Canada
- Mild Cognitive Impairment and Dementia in Parkinson’s Disease  
  Jennifer G. Goldman, MD, Chicago, IL
- Diagnosis and Treatment of Sleep and Autonomic Issues in Parkinson’s Disease  
  Stewart A. Factor, DO, FAAN, Atlanta, GA

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Neuromyelitis Optica: Scientific and Clinical Update

**Topic:** MS and CNS Inflammatory Disease  
**Director:** Sean J. Pittock, MD, Rochester, MN  
**Program Description:**
Neuromyelitis optica (NMO; aka optic spinal multiple sclerosis) is a devastating disease characterized by recurrent episodes of optic neuritis and transverse myelitis, which may result in blindness and paraplegia. It is frequently misdiagnosed as multiple sclerosis. An autoantibody specific for the astrocytic water channel aquaporin-4 (AQP4) is a clinically validated serum biomarker that distinguishes relapsing NMO from multiple sclerosis. This discovery represents a seismic shift from historic emphasis on the oligodendrocyte and myelin to the astrocyte.

Faculty will provide an up-to-the-minute review of the evolving clinical and radiologic spectrum of NMO and its spectrum of disorders (NMOSD), compare tools for diagnosis, discuss novel immunopathologic insights, and provide a practical approach to treatment. Current controversies will be discussed and core teaching points illustrated using clinical case presentations.

**Upon Completion:**
Participants should have a comprehensive understanding of the clinical, radiologic, and pathologic characteristics of NMO; be aware of the growing number of NMO-IgG testing methodologies; be able to discuss the current controversies relating to NMO/MS/opticospinal MS diagnosis and classification; and be familiar with management of the acute NMO attack and approaches to prevent relapses.

**Lecture/Faculty:**
- Aquaporin-4 Autoimmunity: An Overview  
  Sean J. Pittock, MD, Rochester, MN
- NMO and Its Spectrum Disorders: An International Perspective  
  Kazuo Fujihara, MD, Sendai, Japan
- Case Presentations I  
  Faculty
- Pathology of NMO—Providing Important Pathogenic Insights  
  Bogdan F. Popescu, MD, PhD, Saskatoon, SK, Canada
- A Practical Guide to the Treatment of NMO Spectrum Disorders  
  Dean M. Wingerchuk, MD, FAAN, Scottsdale, AZ
- Case Presentations II  
  Faculty

C27  
**Saturday, April 19, 2015**  
8:00 a.m.–11:00 a.m.  
3 hours

**Controversies in Multiple Sclerosis Therapy**

**Topic:** MS and CNS Inflammatory Disease  
**Director:** Mark Keegan, MD, Rochester, MN

**Program Description:**
Disease-modifying therapies for relapsing-remitting multiple sclerosis (RRMS) are considered to be most effective when started early in the course of the disease. Whether initiation should begin in all patients with clinically isolated syndromes given the expected short-term clinical benefit versus possible long-term clinical outcomes remains controversial. What are the possible ‘stopping criteria’ for FDA-approved immunomodulatory therapies or should they be maintained for life? With the advent of new oral medications for MS, has this made traditional injectable therapies obsolete? Should patients seropositive for JC virus be maintained on natalizumab or be transitioned to other therapies? Should patients be routinely prescribed medications aimed at improving walking speed? Definitive evidence-based criteria may remain uncertain, but faculty will discuss and debate the merits, the available evidence, and their own clinical experience that can assist participants in making these important treatment decisions.

This program will utilize an Audience Response System.

**Upon Completion:**
Participants should be familiar with relative pros and cons of a number of controversies in MS evaluation and therapy.

**Lecture/Faculty:**
- Resolved: Patients with Clinically Isolated Syndrome Should Always Be Treated with MS Therapies  
  Pro: Robert J. Fox, MD, FAAN, Cleveland, OH  
  Con: Brian G. Weinshenker, MD, FAAN, Rochester, MN
- Resolved: Injectable Therapies Can Be Abandoned as First-line MS Treatments  
  Pro: Mark Keegan, MD, Rochester, MN  
  Con: Brian G. Weinshenker, MD, FAAN, Rochester, MN
- Resolved: JCV-positive MS Patients Should Discontinue Natalizumab Therapy  
  Pro: Mark Keegan, MD, Rochester, MN  
  Con: Robert J. Fox, MD, FAAN, Cleveland, OH
- Resolved: Once Started, MS Therapies Should Be Continued for Life  
  Pro: Robert J. Fox, MD, FAAN, Cleveland, OH  
  Con: Brian G. Weinshenker, MD, FAAN, Rochester, MN
- Resolved: Patients with MS-related Gait Difficulties Should Be Given a Trial of Dalfampridine Therapy  
  Pro: Brian G. Weinshenker, MD, FAAN, Rochester, MN  
  Con: Mark Keegan, MD, Rochester, MN

**Core Competencies:** Medical Knowledge, Patient Care
Course Descriptions

**C51**

**Diagnostic Dilemmas in Multiple Sclerosis**

**Topic:** MS and CNS Inflammatory Disease  
**Director:** Brenda Banwell, MD, Philadelphia, PA

**Program Description:**  
Idiopathic inflammatory demyelinating diseases of the CNS and acute and chronic myelopathies present both diagnostic and therapeutic challenges. This case-based course will present the spectrum of CNS diseases, including their mimickers, and focus on clinical presentations, imaging, and investigations that assist in diagnosing and treating these cases.

**Upon Completion:**  
Participants should be familiar with the broad spectrum of CNS demyelinating diseases, inflammatory, other myelopathies, and the differential diagnosis of mimickers of these conditions.

**Lecture/Faculty:**  
- Overview of Inflammatory Demyelinating Disorders  
  Brenda Banwell, MD, Philadelphia, PA  
- Genetic Mimickers of MS- Inherited White Matter Disorders  
  Adeline Vanderver, MD, Washington, DC  
- Antibody-mediated Encephalopathies  
  Faculty  
- When Transverse Myelitis Is Not MS  
  Benjamin M. Greenberg, MD, Dallas, TX

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Didactic, Audience Participation

**CME Credits:** 3

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

**Sunday, April 19, 2015**  
1:00 p.m.–5:00 p.m. 4 hours

**C80**

**Multiple Sclerosis Overview II: Clinical Advances**

**Topic:** MS and CNS Inflammatory Disease  
**Director:** Mark S. Freedman, MD, FAAN, Ottawa, ON, Canada

**Program Description:**  
Key to ultimate MS management is first and foremost to make an accurate diagnosis. That requires a working knowledge of conditions that could present like MS, the so called “MS mimics”.

Next, there is a tendency to rely too much on the MRI not only for diagnosis, but also for following the response to treatment. How to use the MRI most effectively will be discussed.

Choosing a disease modifying medication needs to be individualized for each patient. That requires a full knowledge of not only the potential benefits of a particular agent but also the risks. Assessing the risk of progression in a patient is required in order to decide if a more risky treatment is warranted. In order to know if a particular agent is in fact having the desired effect, a strategy is required for monitoring treatment response. Some cases will be used for illustration.

Finally, management of MS patients goes well beyond the choice of DMDs, and requires one to address the common day to day symptoms of MS that often are the greatest contributors to loss of quality of life.

**This program complements C80: Multiple Sclerosis Overview II: Clinical Advances, but covers independent topics.**

**Upon Completion:**  
Participants should understand why it is so important to make a correct diagnosis before initiating specialized MS treatment. They should learn of the more common “mimics” and how to differentiate them from MS. They should appreciate how to use more effectively imaging in assisting diagnosis and monitoring treatment response, as well as its significant limitations. Participants should learn to better use their clinical skills to evaluate patient risk for imminent progression and their response to family members of patients, understand modifiable environmental factors that may contribute to disease worsening, and understand immune dysfunction in MS and how it relates to approved medications for MS.

**Lecture/Faculty:**  
- Neuropathology of MS  
  Bogdan F. Popescu, MD, PhD, Saskatoon, SK, Canada  
- Risk Factors for MS  
  Emmanuelle Waubant, MD, FAAN, San Francisco, CA  
- Neuroimmunology of MS  
  Michael K. Racke, MD, Columbus, OH  
- Immunotherapeutics of MS: Mechanisms of Action  
  Lawrence Steinman, MD, Stanford, CA

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Didactic

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

**Monday, April 20, 2015**  
1:00 p.m.–5:00 p.m. 4 hours

**C66**

**Multiple Sclerosis Overview I: Basic and Translational Science**

**Topics:** MS and CNS Inflammatory Disease; General Neurology  
**Director:** Emmanuelle Waubant, MD, FAAN, San Francisco, CA

**Program Description:**  
Key to ultimate MS management is a good understanding of MS pathology, risk factors, immune dysfunctions, and mechanisms of action of drugs used to prevent MS relapses. Faculty will discuss the current understanding of MS neuropathology, risk factors for MS and those that alter disease course, immune mechanisms at play in MS, and mechanisms of action of the various FDA-approved medications for MS.

This program complements C66: Multiple Sclerosis Overview I: Basic and Translational Science, but covers independent topics.

**Upon Completion:**  
Participants should understand disease mechanisms involved in pathology changes seen in MS, understand possible prevention strategies for MS in
treatment. They should also learn how to deal with the most common symptomatic problems affecting patients day to day.

Lecture/Faculty:
- Making an Accurate Diagnosis of MS: What Are the Mimics You Don’t Want to Miss?  
  Heather Jean MacLean, MD, Ottawa, ON, Canada
- The Use of MRI in Clinical Practice  
  Daniel Pelletier, MD, San Francisco, CA
- Treatment Optimization for Relapsing MS  
  Mark S. Freedman, MD, FAAN, Ottawa, ON, Canada
- Overview of MS Symptomatic Management  
  Stephen Krieger, MD, New York, NY

Core Competencies: Medical Knowledge, Patient Care  
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation  

CME Credits: 3.75  
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C88 Tuesday, April 21, 2015  
6:30 a.m.–8:00 a.m.  
1.5 hours

Morning Report: Multiple Sclerosis  
Topic: MS and CNS Inflammatory Disease  
Director: Nancy L. Sicotte, MD, FAAN, Los Angeles, CA

Program Description: Multiple sclerosis remains a diagnostic and management challenge to the clinician. Faculty will present a complex case of multiple sclerosis with focused questions directed to attendees. Attendees will use the audience response system to enhance the discussion of all the issues pertinent to this patient.

Upon Completion: Participants should be familiar with the differential diagnoses, work-up, and treatment of MS and related conditions, including interpretation of MRI studies for MS and other disorders that affect the brain and spinal cord.

Lecture/Faculty:  
- Cases and Discussion  
  Robert A. Bermel, MD, Cleveland, OH
  Claire Riley, MD, New York, NY

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement  
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation  

CME Credits: 3  
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C137 Friday, April 24, 2015  
8:00 a.m.–12:00 p.m.  
4 hours

Multiple Sclerosis Therapy I: Symptom Management  
Topic: MS and CNS Inflammatory Disease  
Director: Barbara S. Giesser, MD, FAAN, Los Angeles, CA

Program Description: Symptom management in persons with MS is crucial to optimize function, avoid complications, and improve quality of life. However, common MS symptoms may be under-reported by patients and under-recognized by physicians. To bridge these gaps, the diagnosis and treatment of the most common and often “invisible” MS symptoms, i.e., fatigue, cognitive dysfunction, depression, and genitourinary dysfunction will be presented. A comprehensive approach to treating disorders of mobility will be discussed. Additionally, current information will be presented about lifestyle choices that patients with MS can make to impact their disease.

This program complements C151: Multiple Sclerosis Therapy II: Disease-modifying Treatment, but covers independent topics.

Upon Completion: Participants should be able to: diagnose and treat primary and secondary fatigue in persons with MS, recognize common sleep disorders in persons with MS, screen for and manage depression and cognitive dysfunction in persons with MS, elicit a history of genitourinary dysfunction and treat, and be able to describe a comprehensive approach to disorders of mobility in persons with MS. Additionally, participants will be able to counsel patients upon lifestyle choices that may improve their symptoms and ability to function.

Lecture/Faculty:  
- Wellness and Lifestyle Strategies  
  Barbara S. Giesser, MD, FAAN, Los Angeles, CA
Course Descriptions

- Fatigue and Sleep Disorders
  Jonathan L. Carter, MD, Scottsdale, AZ
- Depression and Cognitive Dysfunction
  Michelle Cameron, MD, Portland, OR
- Neurogenic Bladder and Bowel
  Elizabeth Crabtree-Hartman, MD, San Francisco, CA
- Symptoms Affecting Mobility
  Andrew K. Dorsch, MD, Los Angeles, CA

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C151 Friday, April 24, 2015
1:00 p.m.–4:00 p.m.  3 hours

Multiple Sclerosis Therapy II:
Disease-modifying Treatment

Topic: MS and CNS Inflammatory Disease
Director: Bruce A. C. Cree, MD, PhD, MCR, San Francisco, CA

Program Description:
Disease-modifying treatments in MS are one of the most rapidly evolving areas of therapeutic intervention in neurology. As new treatments become available, the options for patients and their prescribing physicians increases. Many of the newer therapies have complex risk:benefit profiles and require increased expertise on behalf of the prescriber for safe and effective administration. This course will focus exclusively on current and emerging disease-modifying therapies for MS. Proper utilization of these drugs and risk assessment will be discussed. Specific case studies will be utilized to cover the most frequent issues arising from MS treatment strategies. Please note that symptom management in MS will not be discussed in this course.

This program complements C137: Multiple Sclerosis Therapy I: Symptom Management, but covers independent topics.

Upon Completion:
Participants should be familiar with the indications and risks associated with approved disease-modifying agents in multiple sclerosis, and be better able to identify the appropriate patient populations for the newer agents.

Lecture/Faculty:
- Current Therapies: Do We Have Enough Data for a Treatment Algorithm?
  Robert T. Naismith, MD, St. Louis, MO
- Emerging Therapies: Novel Treatments Coming Soon to Your Specialty Pharmacy
  Bruce A. C. Cree, MD, PhD, MCR, San Francisco, CA
- Rebuilding the Nervous System: Is Demyelination in Our Future?
  Robert T. Naismith, MD, St. Louis, MO
- Discussion: Case-based Approach to Treatment
  Bruce A. C. Cree, MD, PhD, MCR, San Francisco, CA

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice
Teaching Style: Case-Based, Didactic, Interactive
CME Credits: 3

C169 Saturday, April 25, 2015
10:00 a.m.–12:00 p.m.  2 hours

Multiple Sclerosis Essentials

Topic: MS and CNS Inflammatory Disease
Director: Stephen Krieger, MD, New York, NY

Program Description:
Faculty will use a series of illustrative cases to bring participants up-to-date on current diagnosis and management of multiple sclerosis and other demyelinating disorders. The use of an audience response system will enable participants to exercise their own judgment at multiple decision points.
nodes as each case unfolds and compare their own choices with those of their peers and the faculty. Cases have been carefully selected to represent real situations regularly encountered in the practice of two expert MS clinicians.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be familiar with current issues related to the diagnosis and treatment of patients with multiple sclerosis and related demyelinating disorders and should recognize areas of both consensus and controversy in the field.

Lecture/Faculty:
- Challenging Cases and Audience Response System Questions
  Stephen Krieger, MD, New York, NY
  Aaron E. Miller, MD, FAAN, New York, NY

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Interactive, Audience Participation, Case-Based

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

### Neuro Trauma, Critical Care, and Sports Neurology

**C10**
Saturday, April 18, 2015
1:00 p.m.–5:00 p.m.
4 hours

**Critical Care EEG Monitoring**

Topics: Epilepsy/Clinical Neurophysiology (EEG); Neuro Trauma, Critical Care, and Sports Neurology

Director: Aatif M. Husain, MD, Durham, NC

$ = Registration fee required

Full Program Description on Page 41

**C15**
Saturday, April 18, 2015
1:00 p.m.–5:00 p.m.
4 hours

**Severe TBI: From ICU to Rehabilitation**

Topics: Neuro-rehabilitation; Aging, Dementia, Cognitive, and Behavioral Neurology; Neuro Trauma, Critical Care, and Sports Neurology

Director: Holly E. Hinson, MD, Portland, OR

$ = Registration fee required

Full Program Description on Page 83

**C31**
Sunday, April 19, 2015
8:00 a.m.–12:00 p.m.
4 hours

**Sports Concussion and Other Mild Concussive Injuries**

Topic: Neuro Trauma, Critical Care, and Sports Neurology

Director: David W. Dodick, MD, Phoenix, AZ

$ = Registration fee required

Program Description:
Faculty will cover in detail the latest evidence on multiple aspects of concussion. The program will emphasize sports concussion but include information relevant for evaluation and management of non-sports concussive injury. Physiologic changes in the brain resulting from concussive injury will be covered. Diagnostic testing including neuroimaging, neuroelectrodiagnostic testing, vestibular and visual assessments, and emerging biomarkers will be reviewed. An updated and critical assessment of the neurological examination focused for concussion as well as essentials of clinical management of concussion will be discussed. Decision-making related to return to play (for athletes), return to school, return to work, and return to life after concussion will be included. Recommendations on education and communication strategies to affect changes in behavior and insight among athletes, trainers, and coaches will be covered. Sports and non-sports concussion cases will be used to synthesize information.

Upon Completion:
Participants should be able to: accurately and appropriately diagnose concussion; institute appropriate and clinically useful diagnostic tests when indicated; provide state-of-the-art management of concussed athletes and individuals; make safe and appropriate return to play, school, work, and life decisions; and educate athletes, non-health care professionals, and other health care practitioners on key issues related to concussion.

Lecture/Faculty:
- Neurobiology of Concussion: Clinical and Management Implications
  Christopher Giza, MD, Los Angeles, CA
- Evaluation of Suspected Concussion
  Steven Galetta, MD, FAAN, New York, NY
- The Role of Neuroimaging in Concussion Diagnosis and Management
  David W. Dodick, MD, Phoenix, AZ
- Concussion in Athletes: After Injury Management
  Faculty
- Sports Concussion: Prognosis and Long-Term Risks
  Anthony G. Alessi, MD, FAAN, Norwich, CT

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Audience Participation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Sports Medicine Physician, Advanced Practice Provider

**C47**
Sunday, April 19, 2015
1:00 p.m.–5:00 p.m.
4 hours

**Sports Neurology: Non-Concussion Overview**

Topic: Neuro Trauma, Critical Care, and Sports Neurology

Director: Brian W. Hainline, MD, FAAN, Indianapolis, IN

$ = Registration fee required

Program Description:
There is a growing hunger for and need of more in-depth discussion of both concussion and non-concussion sports neurology concerns, especially since the public is looking more and more to the neurologist for sport injuries. This program will include in-depth discussion of cervical spine and low back injury and peripheral nerve entrapment in sports. Faculty will explore the significance of emerging data regarding sport-
related headache and discuss the neuropsychiatric benefit of sport and exercise, including its importance in clinical practice.

Upon Completion:
Participants should be able to: diagnose and manage cervical spine injuries in sports; diagnose and manage lumbar spine injuries in sports; diagnose and manage peripheral nerve entrapment injuries in sports; diagnose and manage sport-related headache; and understand exercise physiology and its application to clinical neurology.

Lecture/Faculty:
- Sport-related Cervical Spine Injury
  Kevin E. Crutchfield, MD, Baltimore, MD
- Sport-related Headache
  Tad Dean Seifert, MD, Louisville, KY
- Sport-related Low Back Injury
  Brian W. Hainline, MD, FAAN, Indianapolis, IN
- Sport-related Peripheral Nerve Injury
  Peter Warinner, MD, Wellesley, MA
- Neuropsychiatric Benefit of Sport and Exercise
  Brian W. Hainline, MD, FAAN, Indianapolis, IN

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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### Emergency Room Neuro-ophthalmology

**Topics:** Neuro-ophthalmology/Neuro-otology; Neuro Trauma, Critical Care, and Sports Neurology

**Director:** Janet C. Rucker, MD, New York, NY

**Full Program Description on Page 80**

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### Concussion Assessment and Management in the Youth Athlete

**Topics:** Child Neurology and Developmental Neurology; Neuro Trauma, Critical Care, and Sports Neurology; Subspecialty in Focus

**Director:** Karen Barlow, MD, Calgary, AB, Canada

**Program Description:**
An increasing public awareness of the potential consequences of concussion and repeat concussions has brought mild TBI/concussion to the forefront, including President Obama’s recent Youth Concussion Summit and the release of recent mild TBI guidelines for pediatrics. It is critically important for adult and child neurology practitioners to be at the forefront of understanding for concussion in all its manifestations. Through interactive case-presentations, faculty will focus on the practical knowledge and skills for the management of common and uncommon clinical scenarios encountered in the field of concussion in children and adolescents. Each case will be followed by an overview and update on the topic retaining a strong evidence-based focus.

This program is offered in partnership with the Child Neurology Society and the AAN Child Neurology and Sports Neurology Sections.

Upon Completion:
Participants should become familiar with the differential diagnoses and work-up of common and uncommon concussion and post-concussive problems presenting in childhood, and get an update on new guidelines and expert opinions in the field.

Lecture/Faculty:
- Evidence-based Approach to Youth Sports Concussion
  Meeryo Choe, MD, Los Angeles, CA
- Management of Post-concussive Headache
  Karen Barlow, MD, Calgary, AB, Canada
- Management of Post-concussive Mood Disorders
  Jeffrey Max, MBBCh, San Diego, CA
- Return to Cognitive Activity and Play After Youth Concussion
  Gerard A. Gioia, MD, Rockville, MD

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider
Neurologic Intensive Care

**Topic:** Neuro Trauma, Critical Care, and Sports Neurology

**Director:** Alejandro A. Rabinstein, MD, FAAN, Rochester, MN

**C145**  
**Friday, April 24, 2015**  
8:00 a.m.–4:00 p.m.  
8 hours

**Program Description:**  
Neurocritical care has grown dramatically in the last decade with neurologists becoming increasingly involved in the intensive care management of patients with neurologic disorders. Neurocritical care is now a required part of neurology resident curricula. Faculty will provide an overview of management for a range of neurocritical care disorders, focusing on the role of the neurologist as a neurointensivist. Faculty will highlight topics including subarachnoid hemorrhage, acute ischemic stroke, intracerebral hemorrhage, neuromuscular respiratory failure, status epilepticus, brain trauma, and the challenges of prognostication. Faculty will cover the acute management of neurocritical care issues, focusing on evidence-based care and what is most recent in the field in research, clinical strategies, and future directions. Questions from participants will be encouraged.

**Upon Completion:**  
Participants should be familiar with the management of a variety of acute neurocritical care disorders, with an emphasis on the fundamental principles of primary and secondary brain injury, and gain an enhanced understanding of both pathophysiology and practical care issues. The lectures will include information on diagnosis, treatment, and prognosis. Participants should also gain insight into the application and interpretation of new monitoring techniques for the various conditions discussed.

**Lecture/Faculty:**  
- Critical Care of Ischemic Stroke  
  Julian Bösel, MD, Heidelberg, Germany
- Contemporary Management of Intracerebral Hemorrhage  
  Jennifer A. Frontera, MD, Cleveland, OH
- Neurocritical Care of Subarachnoid Hemorrhage  
  Alejandro A. Rabinstein, MD, FAAN, Rochester, MN
- Recovery from Traumatic Brain Injury  
  Kristine H. O’Phelan, MD, Miami, FL
- Acute Neuromuscular Respiratory Failure  
  Eelco F. M. Wijdicks, MD, FAAN, Rochester, MN
- Treatment Options for Refractory Status Epilepticus  
  Thomas P. Bleck, MD, FAAN, Chicago, IL
- Prognostication and Withdrawal of Life Support Therapy: When Is It Time to Let Go?  
  Stephan A. Mayer, MD, New York, NY

**Core Competencies:**  
- Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

**Teaching Style:** Didactic

**CME Credits:** 6.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurolgist, Advanced Practice Provider

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**Emergency Neurology**

**Topics:** Neuro Trauma, Critical Care, and Sports Neurology; General Neurology

**Director:** Laurie Gutmann, MD, FAAN, Iowa City, IA

**C120**  
**Thursday, April 23, 2015**  
1:00 p.m.–5:00 p.m.  
4 hours

**Program Description:**  
Neurologists often encounter serious brain- and life-threatening conditions in the hospital, the emergency department, and the outpatient setting. These situations require a high level of clinical suspicion, as well as rapid and effective diagnostic and therapeutic plans of action, in order to attempt to prevent neurologic injury, suffering, or death. Faculty will discuss four categories of emergency neurologic conditions: acute cerebrovascular emergencies; recognition and management of neuroinfectious disease emergencies; neuro-ophthalmologic emergencies; and the management of seizures in the emergency department or intensive care unit setting.

**Upon Completion:**  
Participants should have an updated approach to the immediate investigation, diagnosis, and management of patients presenting with acute cerebrovascular emergencies; be able to identify and treat pediatric neurological emergencies; recognize and initiate the management of neuromuscular symptoms and findings that are clues to serious life-threatening problems; understand the problems and potential solutions to neurological emergency research trial; and recognize, evaluate, and treat the various types of seizures that are most likely to present in the emergency department or intensive care unit.

**Lecture/Faculty:**  
- Cerebrovascular Emergencies  
 1. Faculty
- Pediatric Neurologic Emergencies  
- Innovations in Treatment of Status Epilepticus  
 3. Nathan B. Fountain, MD, Charlottesville, VA
- Neuromuscular Emergencies  
 4. Laurie Gutmann, MD, FAAN, Iowa City, IA
- Emergency Neurology: Trials and Tribulations  
 5. Robin A. Conwit, MD, FAAN, Lutherville, MD

**Core Competencies:**  
- Medical Knowledge, Patient Care, Systems-Based Practice

**Teaching Style:** Didactic, Case-Based

**CME Credits:** 3.75
Consultations in the Medical Surgical ICU

Topic: Neuro Trauma, Critical Care, and Sports Neurology
Director: Nicholas Joseph Silvestri, MD, Buffalo, NY

Program Description:
Neurological complications in ICU patients often have a substantial negative impact on their outcome. Neurologists are being asked increasingly to evaluate patients in the surgical and medical ICUs. They are often called to assess unusual neurological manifestations of other primary diseases, evaluate the consequences of critical care therapy, offer a prognosis, or determine brain death.

Faculty will provide the core elements of modern neurologic critical care and suggested approach to the management of some of the most commonly encountered (and less common) problems. Topics will include: approach to neurologic problems in the ICU, including failure to awaken after cardiac arrest, brain death, neuromuscular considerations in the ICU, difficulty-to-wean off artificial ventilation, delirium and encephalopathy, CNS infections, epilepsy and issues related to management of stroke patients, such as management of increased intracranial pressure and herniation, hemicraniectomy, and when/if to resume anticoagulation in ICH patients requiring warfarin. Interactions between faculty and participants will be encouraged.

Upon Completion:
Participants should have a comprehensive understanding of the general critical care of neurologic patients and common (and important less common) neurological problems encountered in the ICU setting; be able to incorporate evidence-driven data into their recommendations; and be able to evaluate causes of unresponsiveness in the ICU and provide opinion regarding prognosis.

Lecture/Faculty:
- Failure to Awaken After Surgery, Coma, and Brain Death
  David M. Greer, MD, FAAN, New Haven, CT
- Encephalopathy and Delirium in the ICU
  Michel T. Torbey, MD, MPH, Columbus, OH
- Critical Care Aspects of Stroke Management
  Magdy H. Selim, MD, PhD, Boston, MA
- Seizures and Epilepsy in the ICU
  Julie Roth, MD, Providence, RI
- Neuromuscular Disorders in the ICU
  Nicholas Joseph Silvestri, MD, Buffalo, NY

Core Competencies:
- Interpersonal and Communication Skills
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement
- Professionalism
- Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

Neuromuscular and Clinical Neurophysiology (EMG)

C2 Saturday, April 18, 2015 8:00 a.m.–12:00 p.m. 4 hours

Small Fiber Neuropathies: Sensory, Autonomic and Both

Topic: Neuromuscular and Clinical Neurophysiology (EMG)
Director: Roy L. Freeman, MD, Boston, MA

Program Description:
Small fiber and autonomic neuropathies are common but often unrecognized conditions that affect the peripheral, somatic, and autonomic nervous systems. Through the presentation of didactic material and cases of varying complexity, faculty will facilitate a discussion with participants of the pathophysiology, differential diagnosis, diagnostic evaluation, and therapy of these conditions.

Upon Completion:
Participants should become familiar with the pathophysiology, semiology, differential diagnosis, diagnostic approaches (including skin biopsy and autonomic testing), laboratory evaluation, and treatment of small fiber somatic and autonomic neuropathies.

Lecture/Faculty:
- Small Fiber Sensory Neuropathies
  Christopher H. Gibbons, MD, FAAN, Boston, MA
- Treatment of Painful Peripheral Neuropathy
  Ralf Baron, MD, Kiel, Germany
- Small Fiber Autonomic Neuropathies
  Roy L. Freeman, MD, Boston, MA
- Treatment of Autonomic Dysfunction
  Horacio C. Kaufmann, MD, FAAN, New York, NY

Core Competencies:
- Medical Knowledge
- Patient Care

CME Credits: 3.75

Recommended Audience: General Neurologist, Specialist Neurologist

Neuromuscular Junction Disorders

C11 Saturday, April 18, 2015 1:00 p.m.–5:00 p.m. 4 hours

Topic: Neuromuscular and Clinical Neurophysiology (EMG)
Director: Robert M. Pascuzzi, MD, FAAN, Indianapolis, IN

Program Description:
Faculty will provide current perspectives on the diagnosis, pathogenesis, and care of patients with myasthenia gravis, MuSK myasthenia, Lambert-Eaton syndrome (LEMS), as well as less common disorders of neuromuscular transmission. Case presentations demonstrate a practical approach to identification, evaluation, and management of common and more challenging patients in the clinical setting.

Upon Completion:
Participants should be familiar with the diagnosis and management of patients with myasthenia gravis and related disorders; learn to critically select therapies; and be able to distinguish myasthenia gravis, MuSK...
Peripheral Neuropathy

**Topic:** Neuromuscular and Clinical Neurophysiology (EMG)

**Director:** Michael E. Shy, MD, Iowa City, IA

**Program Description:**
Peripheral neuropathy is a common disorder with many potential causes. The information presented in this program will guide the selection of diagnostic tests and therapeutic interventions, permitting effective management of patients with both common and uncommon neuropathies.

**Upon Completion:**
Participants should be able to combine a peripheral neuropathy evaluation algorithm with specific knowledge about a range of common and uncommon neuropathies to select appropriate diagnostic tests and treatment options.

**Lecture/Faculty:**
- The Peripheral Nervous System in Health and Disease
  Steven Scherer, MD, Philadelphia, PA
- CIDP and Its Variants: Improving Diagnostic Accuracy and Therapeutic Effectiveness
  Richard A. Lewis, MD, FAAN, Los Angeles, CA
- An Approach to Understanding and Treating Diabetic Neuropathy
  Eva Feldman, MD, PhD, FAAN, Ann Arbor, MI
- Case Presentations
  Faculty
- Chemotherapy-induced Neuropathies: Approach and Management
  Guido Cavaletti, MD, Milan, Italy
- Approach and Evaluation of Patients with Inherited Neuropathies
  Michael E. Shy, MD, Iowa City, IA
- The Role of Next Generation Sequencing in Diagnosing and Identifying Therapeutic Targets in Genetic Neuropathies
  Stephan Zuchner, MD, Miami, FL
- Case Presentations
  Faculty

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**Core Competencies:**
Medical Knowledge, Patient Care

**Teaching Style:**
Didactic, Case-Based

**CME Credits:**
3.75

**Recommended Audience:**
Trainee, General Neurologist, Specialist Neurologist

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**C40**  
**You Make the Call—An Interactive, Multimedia, Case-based Approach to Learning EMG**  
**Sunday, April 19, 2015**  
**10:00 a.m.–12:00 p.m.**  
**2 hours**

**Topic:** Neuromuscular and Clinical Neurophysiology (EMG)

**Director:** Devon I. Rubin, MD, FAAN, Jacksonville, FL

**Program Description:**
Interpretation of EMG studies relies on a physician’s ability to accurately identify and interpret normal and abnormal spontaneous activity in muscle and the changes in motor unit potentials (MUP) that occur with neuromuscular diseases. Learning to accurately and efficiently identify EMG waveforms is a skill that requires time and practice to master. Once these skills are learned, EMG diagnostic efficiency and accuracy can be enhanced with appropriate improvement in interpretation of EMG studies.

Faculty will teach methods to learn to identify and interpret EMG waveforms using an interactive, multimedia, “unknown case” presentation approach. The audience will choose from a variety of categories representing different types of recorded EMG examples, and will be asked to “make the call” (interpret the waveforms). Through discussion of the cases, the methods of auditory pattern recognition used in waveform identification will be taught. Each case will be followed by a brief discussion of the significance of the EMG waveform and additional examples of similar waveforms will be demonstrated. Recognition of common and uncommon spontaneously firing EMG waveforms and a variety of MUP parameter abnormalities, including recruitment, duration, phases, stability, and firing patterns will be taught.

**Upon Completion:**
Participants should be able to demonstrate the ability to recognize the auditory firing patterns of EMG waveforms; learn to identify common and uncommon abnormal spontaneous EMG waveforms and correlate them with underlying neuromuscular diseases; recognize and understand the significance of abnormal recruitment changes in motor unit potential in diseases; understand and recognize morphologic MUP changes according to the temporal course of a neuromuscular disease; and correlate abnormal EMG findings with clinical neuromuscular diseases.

**Lecture/Faculty:**
- Overview of “How to Make the Right Call” - Pattern Recognition Skills in EMG Waveform Identification
  Devon I. Rubin, MD, FAAN, Jacksonville, FL
- You Make the Call! Interactive Audience Quiz of Unknown EMG Waveforms
  Devon I. Rubin, MD, FAAN, Jacksonville, FL

**Core Competencies:**
Medical Knowledge, Patient Care

**Teaching Style:**
Case-Based, Interactive, Audience Participation

**CME Credits:**
2

**Recommended Audience:**
Trainee, General Neurologist, Specialist Neurologist
**Course Descriptions**

**Clinical EMG I**

**Topic:** Neuromuscular and Clinical Neurophysiology (EMG)

**Director:** William S. David, MD, PhD, FAAN, Boston, MA

**Program Description:**
Faculty will provide a systematic review of the basic principles of electromyography and nerve conduction studies. Discussions will include the physiological underpinnings of nerve conduction studies, including common patterns of abnormality and their significance, video presentations of both voluntary and involuntary EMG activity with an emphasis on pattern recognition, interpretation and clinical significance, and a review of the electrophysiological approach to patients with neuromuscular junction disorders.

This program complements C78: Clinical EMG II, but covers independent topics.

**Upon Completion:**
Participants should understand the physiological concepts underlying nerve conduction studies and needle electromyography; be able to distinguish high-quality electrical data from artifact; and refine their skill in waveform recognition.

**Lecture/Faculty:**
- Basic Nerve Conduction Studies: Techniques and Patterns of Normality / Abnormality
  John C. Kincaid, MD, FAAN, Indianapolis, IN
- Basics of Needle Electromyography: Involuntary Activity
  Devon I. Rubin, MD, FAAN, Jacksonville, FL
- Basics of Needle Electromyography: Voluntary Activity
  Paul E. Barkhaus, MD, FAAN, Milwaukee, WI
- Clinical Electrophysiological Assessment of the Neuromuscular Junction: RNS and SFEMG
  William S. David, MD, PhD, FAAN, Boston, MA

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Audience Participation, Didactic, Interactive, Case-Based

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

**Evaluation and Management of Autonomic Disorders**

**Topic:** Neuromuscular and Clinical Neurophysiology (EMG)

**Director:** Paola Sandroni, MD, PhD, FAAN, Rochester, MN

**Program Description:**
Availability of noninvasive autonomic testing is expanding neurologic practice into the diagnosis and management of disorders of the autonomic nervous system. Faculty will provide an overview of practical clinical approaches to some common autonomic syndromes such as orthostatic hypotension, orthostatic intolerance, autonomic neuropathies, and disorders of sweating. Emphasis will be on patient care, highlighting ways in which the neurologist can provide useful consultations and effectively manage patients with autonomic disorders. Interesting clinical cases and scientific updates will be presented.

Audience case presentation at the panel discussion time will be encouraged. If you have signed up for the course, please submit a case you wish to discuss to Paola Sandroni at psandroni@mayo.edu.

**Upon Completion:**
Participants should be able to enhance their ability to formulate a differential diagnosis, organize a work-up, and offer a treatment plan for patients with common varieties of autonomic dysfunction.

**Lecture/Faculty:**
- Introduction and Overview of Autonomic Testing
  Paola Sandroni, MD, PhD, FAAN, Rochester, MN
Neuromuscular Ultrasound Skills Pavilion

**Topic:** Neuromuscular and Clinical Neurophysiology (EMG)

**Director:** Lisa Hobson-Webb, MD, Durham, NC

**Program Description:**
This skills workshop will introduce participants to the field of neuromuscular ultrasound (NMUS) and cover the basic principles of ultrasonography and current applications. NMUS techniques will be presented through both video and live demonstration sessions. Participants will also have the opportunity to gain limited hands-on experience with ultrasound systems under the guidance of a faculty member. Specific information will be presented on the role of NMUS in the diagnosis and management of entrapment neuropathies, and its use in guided procedures and in the diagnosis of muscular disorders.

**Upon Completion:**
Participants should understand the basic principles of neuromuscular ultrasonography, including its advantages and limitations, and the role of ultrasound in the diagnosis of entrapment neuropathies; become familiar with the techniques required to use ultrasound in the guidance of neuromuscular procedures, and the methods required to use muscle ultrasound; and learn to integrate electrodiagnostic and sonographic information through case presentations.

**Lecture/Faculty:**
  - Andrea Boon, MD, Rochester, MN
  - Lisa Hobson-Webb, MD, Durham, NC
  - Craig M. Zaidman, MD, St. Louis, MO

**Core Competencies:**
- Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

**Teaching Style:**
- Interactive, Audience Participation, Case-Based, Didactic

**CME Credits:**
- 3.75

**Recommended Audience:**
- Trainee, General Neurologist, Specialist Neurologist

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Case Studies: Unusual Diagnostic and Management of Cases in Neuromuscular Disease

**Topic:** Neuromuscular and Clinical Neurophysiology (EMG)

**Director:** Anthony A. Amato, MD, FAAN, Boston, MA

**Program Description:**
The practice of neuromuscular medicine has been impacted by recent advances in immunology, molecular biology, and genetics. Through the presentation of both common disorders with unusual diagnostic or management issues as well as rarer and more challenging cases, faculty will facilitate a discussion of diagnosis, laboratory workup, and treatment of a wide array of neuromuscular conditions. Each case will include an overview and an update on the particular clinical entity, including evolving concepts and approaches to therapy.

This program will utilize an Audience Response System.
Course Descriptions

Neuromuscular and Clinical Neurophysiology (EMG)

Upon Completion:
Participants should be familiar with the differential diagnosis, evaluation, treatment, and management of common and uncommon neuromuscular disorders, and gain an enhanced awareness of rare or unusual neuromuscular phenotypes.

Lecture/Faculty:
- Interesting Neuromuscular Cases
  Anthony A. Amato, MD, FAAN, Boston, MA
  Anne M. Connolly, MD, St. Louis, MO
  P. James B. Dyck, MD, FAAN, Rochester, MN

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

Teaching Style: Case-Based, Interactive, Audience Participation

CME Credits: 3

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C147 Friday, April 24, 2015 8:00 a.m.–4:00 p.m.  8 hours

EMG Skills Workshop: Basic

Topic: Neuromuscular and Clinical Neurophysiology (EMG)
Director: Ezgi Tiryaki, MD, Minneapolis, MN

Program Description:
The program consists of four two-hour sessions covering: motor nerve conduction studies; sensory nerve conduction studies; nerve conduction techniques such as repetitive nerve stimulation, F waves, and H reflexes; and needle EMG. In small, hands-on group sessions, faculty will first demonstrate and then supervise attendees performing these techniques. The presentations will also cover the clinical utility and technical pitfalls of these techniques. Attendees rotate through each of the sessions.

Upon Completion:
Participants should be familiar with basic electrodiagnostic skills for the evaluation of common neuromuscular problems. The course is designed for practicing neurologists who wish to update basic skills in these important techniques and residents in training who either are rotating or have rotated through the EMG lab in their training program.

Lecture/Faculty:
- Motor Nerve Conduction Studies
  Jun Kimura, MD, FAAN, Iowa City, IA
- Late Responses and Repetitive Nerve Stimulation
  Mark A. Ross, MD, FAAN, Scottsdale, AZ
- Needle Electromyography
  James M. Gilchrist, MD, FAAN, Boston, IL
- Sensory Nerve Conduction Studies
  Holli Ann Horak, MD, FAAN, Tucson, AZ

Core Competencies: Interpersonal and Communication Skills, Practice-Based Learning and Improvement

Teaching Style: Interactive

CME Credits: 6.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C148 Friday, April 24, 2015 1:00 p.m.–3:00 p.m.  2 hours

Therapy of Neuromuscular Disease

Topic: Neuromuscular and Clinical Neurophysiology (EMG)
Director: Clifton L. Gooch, MD, FAAN, Tampa, FL

Program Description:
Many neuromuscular diseases are eminently treatable. Some are curable and others controllable, but even patients with terminal disorders can see substantial improvements in quality of life and survival with proper therapy. Faculty will provide up-to-date and concise guidelines for the acute and chronic management of motor neuron disease, peripheral neuropathy, myasthenia gravis, and muscle disease.

Upon Completion:
Participants should be familiar with the contemporary acute and chronic management of motor neuron disease, peripheral neuropathy, myasthenia gravis, and muscle disease.

Lecture/Faculty:
- Treatment of Motor Neuron Disease
  Clifton L. Gooch, MD, FAAN, Tampa, FL
- Treatable Neuropathies
  Clifton L. Gooch, MD, FAAN, Tampa, FL
- Treatment of Myasthenia Gravis
  Marinos C. Dalakas, MD, FAAN, Philadelphia, PA
- Treatable Autoimmune Myopathies
  Marinos C. Dalakas, MD, FAAN, Philadelphia, PA

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style: Didactic

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C161 Saturday, April 25, 2015 8:00 a.m.–12:00 p.m.  4 hours

Clinical Approach to Muscle Disease

Topic: Neuromuscular and Clinical Neurophysiology (EMG)
Director: Andrew Mammen, MD, PhD, Baltimore, MD

Program Description:
Faculty will discuss the clinical and laboratory approach to patients with myopathies.

Upon Completion:
Participants should be familiar with the differential diagnoses and how to evaluate and treat patients with different myopathies.

Lecture/Faculty:
- Acquired Myopathies
  Andrew Mammen, MD, PhD, Baltimore, MD
- Inclusion Body Myositis
  Steven A. Greenberg, MD, Boston, MA
- Muscular Dystrophies
  Matthew P. Wicklund, MD, FAAN, Hershey, PA
- The Distal Myopathies
  Ami K. Mankodi, MD, Bethesda, MD
Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

Neuro-oncologic Emergencies

C23  Sunday, April 19, 2015 6:30 a.m.–8:00 a.m.  1.5 hours

Recommended Audience: CME Credits: Teaching Style: Core Competencies: Lecture/Faculty: Upon Completion: Program Description:
- Neuro-oncology
- Nimish Arin Mohile, MD, Rochester, NY
- Julie E. Hammack, MD, FAAN, Rochester, MN

Neuro-oncology encompasses several emergent conditions that require immediate recognition and therapeutic management in order to preserve and improve patient outcomes. Faculty will present cases involving the most common and critical neuro-oncologic emergencies and describe the optimal diagnostic approach, therapies, and prognosis.

Six patient cases will be presented. The audience response system will be used to evaluate current knowledge and engage interaction in response to multiple-choice questions regarding clinical presentation, differential diagnosis, therapeutic management, and patient outcomes. Faculty will present cases of cancer patients who present with myelopathy, cauda equina syndrome, acute encephalopathy, increased intracranial pressure, limbic encephalitis, and stroke-like symptoms. For each case, faculty will discuss a broad differential diagnosis with an emphasis on the most emergent conditions and treatments.

Upon Completion:
Participants should become familiar with evidence-based emergent management of metastatic epidural spinal cord compression, be familiar with identification and management of increased intracranial pressure in brain tumor patients, develop a differential diagnosis for acute mental status changes in a cancer patient, understand the possible differentials for new neurologic complications in bone marrow transplant patients, and understand the management of stroke in cancer patients.

Lecture/Faculty:
- Neuro-oncologic Emergencies
  Julie E. Hammack, MD, FAAN, Rochester, MN
  Nimish Arin Mohile, MD, Rochester, NY

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Interactive
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist

C28  Sunday, April 19, 2015 8:00 a.m.–12:00 p.m.  4 hours

Infectious, Paraneoplastic, Autoimmune? Diagnosis and Treatment of Rapidly Progressive Encephalopathies

Topics: Global Health and Infectious Disease; Neuro-oncology; Subspecialty in Focus
Director: Jeffrey Marc Gelfand, MD, San Francisco, CA

Program Description:
Faculty will highlight advances and emerging concepts in encephalitis, an exciting and rapidly expanding area of neurology. The goal is to provide rational, practical, and actionable approaches for diagnosis and treatment of infectious, autoimmune, and paraneoplastic encephalopathies. The program is specifically designed to integrate perspectives across subspecialties.

This program is offered in partnership with the Society for Neuro-oncology and the AAN Neuro-infectious Disease and Neuro-oncology Sections.

Upon Completion:
Participants should become familiar with the differential diagnosis of infectious, autoimmune, and paraneoplastic encephalopathies, the rational use of antibody testing and infectious disease diagnostics in encephalitis, and strategies for using immunosuppression as empiric treatment for autoimmune and paraneoplastic encephalitis.

Lecture/Faculty:
- Diagnosis and Management of Acute Viral Encephalitis
  Kenneth L. Tyler, MD, FAAN, Aurora, CO
- Paraneoplastic Encephalitis
  Sean J. Pittock, MD, Rochester, MN
- Autoimmune Encephalitis
  Josep O. Dalmau, MD, PhD, Barcelona, Spain
- Immunosuppression for Treatment of Autoimmune and Paraneoplastic Encephalopathies
  Jeffrey Marc Gelfand, MD, San Francisco, CA

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C71  Monday, April 20, 2015 8:00 a.m.–12:00 p.m.  4 hours

Neuro-oncology: Primary Brain Tumors

Topic: Neuro-oncology
Director: Erin M. Dunbar, MD, Atlanta, GA

Program Description:
Faculty will provide high-impact reviews on common primary brain tumors in adults including “benign tumors” (e.g., meningiomas, schwannomas), low-grade gliomas, high-grade gliomas, and others, each with a focus on their practical management. This will include up-to-date classification, diagnosis, treatment, palliative (supportive) care, management of...
Course Descriptions

C84  Neurologic Complications of Systemic Cancer

Program Description:
Advances in the treatment of systemic cancer have changed the types of neurologic complications that are seen. Faculty will present an update of the most common and challenging neurologic complications of cancer and how to diagnose and treat them.

This program complements C71: Neuro-oncology: Primary Brain Tumors and C130: Case Studies: Neurologic Consultations in Cancer Patients, but covers independent topics.

Upon Completion:
Participants should be familiar with the differential diagnosis and treatment of common neurologic complications seen in patients with cancer, such as neurocognitive complications, clinical trials, and emerging medical concepts. The course will include interactive presentations, an interdisciplinary tumor board on common dilemmas, plenty of time for Q/A, and a well-referenced, high-yield syllabus available for download.

This program complements C84: Neurologic Complications of Systemic Cancer and C130: Case Studies: Neurologic Consultations in Cancer Patients, but covers independent topics.

Lecture/Faculty:
- Benign Brain Tumors: In Good Times and in Bad
  Scott R. Plotkin, MD, Boston, MA
- Low-grade Gliomas: Not Just A Neurosurgeon’s Dilemma Anymore
  Michael A. Vogelbaum, MD, PhD, FAANS, FACS, Cleveland, OH
- High-grade Gliomas: Progress Taming the Beast
  Jaishri Blakeley, MD, Baltimore, MD
- Practical Tumor-directed and Symptom-directed Approaches to Primary Brain Tumors
  Erin M. Dunbar, MD, Atlanta, GA
- Tumor Board: Cases Highlighting Common Dilemmas and Audience Questions
  Faculty

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

Teaching Style:  Case-Based, Didactic, Interactive, Audience Participation

CME Credits:  3.75

Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C130  Case Studies: Neurologic Consultations in Cancer Patients

Program Description:
Neurologists are often called upon to weigh in on management issues related to patients with brain tumors or systemic cancer. At times, the neurologic problem may predate the diagnosis of cancer and the neurologist is instrumental in directing a targeted evaluation. At other times, the neurologist sees a patient during therapy for an acute toxicity and must identify the spectrum of complications associated with that regimen or seek an alternate explanation for the patient’s neurologic problem. Finally, the neurologist may evaluate patients long after cancer treatment and must recognize the late sequelae of treatment including cerebrovascular and cognitive problems as well as the development of secondary neoplasms. Neurologists are also involved in palliation of numerous symptoms in patients with cancer involving the nervous system and should be familiar with the pharmacologic possibilities to mitigate pain, delirium, urinary dysfunction, and seizures.

Through discussion of cases, faculty will address some of the most common reasons for consultation in cancer patients and provide a practical approach to answering these questions. In a mock “tumor board,” faculty will discuss cases with interaction with participants. Discussion will include palliative measures and limitation of aggressive care in appropriate circumstances.

This program complements C71: Neuro-oncology: Primary Brain Tumors and C84: Neurologic Complications of Systemic Cancer, but covers independent topics.

Lecture/Faculty:
- Metastatic Complications of Cancer
  Eudocia Q. Lee, MD, Boston, MA
- Diagnosis and Management of Encephalopathy in Cancer Patients
  Joon H. Uhm, MD, FRCP(C), Rochester, MN
- Neurocognitive Complications of Cancer and Cancer Therapies
  Isabel Arrillaga-Romany, MD, Boston, MA
- Peripheral Nervous System Complications in Cancer Patients
  David Schiff, MD, FAAN, Charlottesville, VA
- Management of Medical and Neurologic Complications in Cancer Patients
  Patrick Y. Wen, MD, FAAN, Boston, MA

Core Competencies:  Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

Teaching Style:  Didactic

CME Credits:  3.75

Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist
This program will utilize an Audience Response System.

Upon Completion:
Participants should be able to recognize syndromes such as CLIPPERS and central neurogenic hyperventilation and MRI abnormalities that suggest lymphoma and interpret CSF findings. They should understand the evidence on which the increasing use of memantine during cranial radiation is based. They should recognize the neurotoxicities of new therapies such as selumetinib, CART 19, Wilms tumor vaccine and older therapies such as methotrexate and ifosfamide. They should understand the evidence for the entity of chemobrain and be able to recognize SMART syndrome. They should have a sense of the types of ongoing neurologic surveillance appropriate for long-term cancer survivors.

Lecture/Faculty:
- Before Cancer Treatment: Neurologic Syndromes Suggesting a Cancer Diagnosis and the Neurologist’s Role in Mitigating Therapeutic Toxicities
  David Schiff, MD, FAAN, Charlottesville, VA
- During Cancer Treatment: Acute Toxicities of Cytotoxic and Directed Agents, Metabolic and Nutritional Syndromes
  Patrick Y. Wen, MD, FAAN, Boston, MA
- After Cancer Treatment: Neurologic Syndromes in Long-term Cancer Survivors
  Amy A. Pruitt, MD, Philadelphia, PA
- Tumor Board: Cases Covering: When to (Re)Operate; When Not to (Re)Operate; When to Consider Chemotherapy for Cerebral Metastases (Lung, Breast, Melanoma Examples); Palliative Care; Audience-provided Cases
  Faculty

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 3
Recommended Audience: Trainee, General Neurologist

C16 Saturday, April 18, 2015 1:00 p.m.–5:00 p.m.  4 hours

Pitfalls & Pearls: Avoiding Common Diagnostic Errors in Neuro-ophthalmology & Neuro-otology

Topics: Neuro-ophthalmology/Neuro-otology; Subspecialty in Focus
Director: David E. Newman-Toker, MD, PhD, FAAN, Baltimore, MD

Program Description:
This course will focus on common diagnostic errors with neurologic disorders presenting neuro-ophthalmic and neuro-otologic manifestations. These will include common errors in assessing patients presenting dizziness, headaches, diplopia, and anisocoria. Faculty will also highlight the economics of neurologic diagnosis, diagnostic error, and the important role of emerging technologies in delivering improved diagnostic “value” in a new health care era of bundled payments and accountable care.

This program is offered in partnership with the North American Neuro-ophthalmology Society and the AAN Neuro-ophthalmology/Neuro-otology Section.

Upon Completion:
Participants should be able to list common pitfalls in neuro-ophthalmic and neuro-otologic diagnosis, describe novel bedside clinical approaches to diagnose neurologic emergencies, and discuss the interrelationships between diagnostic error, diagnostic test overuse, and diagnostic value.

Lecture/Faculty:
- Pitfalls and Pearls in Acute Headache Diagnosis
  Beau Benjamin Bruce, MD, Atlanta, GA
- Pitfalls and Pearls in Acute Diplopia, Anisocoria Diagnosis
  Janet C. Rucker, MD, New York, NY
- Pitfalls and Pearls in Acute Dizziness Diagnosis
  Kevin A. Kerber, MD, Ann Arbor, MI
- Diagnostic Value: Balancing Misdiagnosis and Test Overuse in the New Landscape of Health Care Delivery and Finance
  David E. Newman-Toker, MD, PhD, FAAN, Baltimore, MD
- Interactive Case Session and Panel Discussion
  Faculty

Core Competency: Medical Knowledge
Teaching Style: Audience Participation, Case-Based, Didactic
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist

C20 Saturday, April 18, 2015 3:00 p.m.–5:00 p.m.  2 hours

Canalith Repositioning for Benign Paroxysmal Positional Vertigo

Topic: Neuro-ophthalmology/Neuro-otology
Director: Ronald J. Tusa, MD, PhD, Atlanta, GA

Program Description:
Benign paroxysmal positional vertigo (BPPV) is the most common cause of vertigo. Recent availability of video eye movement monitors has facilitated diagnosis, while recent improvements in understanding have facilitated treatment. Using videos of eye movements, the faculty will illustrate diagnosis of BPPV involving the posterior canal, horizontal canal, and anterior canal. The physical maneuvers favored by the faculty will be illustrated in detail and available evidence concerning efficacy will be reviewed.

Upon Completion:
Participants should be capable of office-based diagnosis and treatment of positional vertigo.

Lecture/Faculty:
- Incidence, Clinical History, and Mechanisms of BPPV
  Terry D. Fife, MD, FAAN, Phoenix, AZ
- Treatment of Posterior Canal BPPV
  Ronald J. Tusa, MD, PhD, Atlanta, GA
- Examination of Paroxysmal Positional Nystagmus
  Terry D. Fife, MD, FAAN, Phoenix, AZ
- Variants of BPPV and Distinction from Central Causes
  Ronald J. Tusa, MD, PhD, Atlanta, GA
Course Descriptions

Neuro-ophthalmology/Neuro-otology

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

Teaching Style: Case-Based, Didactic, Demonstrations

CME Credits: 2

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

C82 Monday, April 20, 2015 1:00 p.m.–5:00 p.m. 4 hours

Emergency Room Neuro-ophthalmology

Topics: Neuro-ophthalmology/Neuro-otology; Neuro Trauma, Critical Care, and Sports Neurology

Director: Janet C. Rucker, MD, New York, NY

Program Description:
In the patient with acute visual loss, disc edema, diplopia, dizziness, and anisocoria, it is important to recognize certain entities as a timely diagnosis improves chances of a favorable outcome. Faculty will highlight such neuro-ophthalmic emergencies, focusing on evaluation and management. Didactic lectures, case examples, and open discussion with the faculty will provide the audience with both basic knowledge and updates on current controversies.

Upon Completion:
Participants should be familiar with the clinical features and initial management of neuro-ophthalmic conditions that present in the emergency department, including giant cell arteritis, pituitary apoplexy, aneurysmal third nerve palsy, cerebral venous thrombosis, arterial dissection, and brainstem ocular motor disorders.

Lecture/Faculty:
- Papilledema
  Valerie A. Purvin, MD, Indianapolis, IN
- Nystagmus and Saccadic Intrusions
  Eric R. Eggenberger, DO, FAAN, East Lansing, MI
- Acute Diplopia
  Janet C. Rucker, MD, New York, NY
- Discussion and Cases Faculty
- Anisocoria
  Aki Kawasaki, MD, PhD, Lausanne, Switzerland
- Acute Unilateral Vision Loss
  Valerie A. Purvin, MD, Indianapolis, IN
- Discussion and Cases Faculty

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

Teaching Style: Audience Participation, Interactive, Didactic, Case-Based

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C89 Tuesday, April 21, 2015 6:30 a.m.–8:00 a.m. 1.5 hours

Now You See It, Now You Know It—Pathognomonic Neuro-ophthalmology Findings

Topic: Neuro-ophthalmology/Neuro-otology

Director: Wayne T. Cornblath, MD, FAAN, Ann Arbor, MI

Program Description:
This program consists of images and videos of pathognomonic neuro-ophthalmology findings (i.e., opsoclonus, blepharospasm, Kayser-Fleischer rings) that are presented as an unknown with the audience
using the audience response system to choose the correct diagnosis. This is followed by one or two slides of additional information and other examples of the condition. The format is designed to present a large number of findings to be able to make a diagnosis without an in-depth discussion of the specific disease.

Upon Completion:
Participants should be able to recognize neuro-ophthalmology findings that are encountered in general neurology practice in order to quickly arrive at a diagnosis.

Lecture/Faculty:
- Now You See It, Now You Know It: Pathognomonic Neuro-ophthalmology Findings
  Wayne T. Comblath, MD, FAAN, Ann Arbor, MI
  Eric R. Eggenberger, DO, FAAN, East Lansing, MI

Core Competencies:
- Medical Knowledge
- Patient Care

Teaching Style:
- Case-Based, Interactive, Audience Participation

CME Credits:
- 1.5

Recommended Audience:
- Trainee, General Neurologist, Specialist Neurologist, Advanced Practice Provider

C99  Tuesday, April 21, 2015
1:00 p.m.–5:00 p.m.  4 hours

**Neuro-ophthalmology and Neurovestibular Exam Lab Skills Pavilion**

**Topic:** Neuro-ophthalmology/Neuro-otology

**Director:** Christopher Glisson, DO, Grand Rapids, MI

**Program Description:**
This is a hands-on mini-lab to convey neuro-ophthalmology and neuro-otology examination skills. The lab consists of stations to address individual components of the exam, including visual acuity (near and Snellen acuity), color vision, fields (confrontation and Amsler grid including techniques to diagnose functional patients), pupils (RAPD and anisocoria), ocular alignment (prism cover, general prism use, red Maddox rod), assessment of pursuits and saccades, nystagmus examination (Frenzel lens), ophthalmoscopy (direct and panoptic ophthalmoscopes), assessment of the vestibular ocular reflex (head thrust and ophthalmoscopy), Hallpike testing, and repositioning treatments. Participants will visit each station for individualized instruction and troubleshooting with an expert on these essential examination skills.

**Completion:**
Participants should understand the techniques used in performing the neuro-ophthalmic and neurovestibular exams, including afferent, pupil, efferent, and vestibular components.

**Lecture/Faculty:**
- Introduction to the NO-NO Examination
  Christopher Glisson, DO, Grand Rapids, MI
- Ophthalmoscopy: An Important Skill for all Neurologists
  Fiona Evann Costello, MD, Calgary, AB
- Pupil Examination (Anisocoria, RAPD)
  Faculty
- Slit Lamp Examination (Anterior Chamber, Retina and 3D View of Optic Nerve)
  Faculty
- Acuity and Color Vision (Near Acuity, Functional Vision Loss, Dyschromatopsia)
  Eric R. Eggenberger, DO, FAAN, East Lansing, MI
  John Pula, MD, Chicago, IL
- Neuro-Vestibular Examination (VOR Gain and Suppression, Dix-Hallpike Test, Canalith Repositioning Treatment)
  Jorge C. Kattah, MD, FAAN, Peoria, IL
  Kevin A. Kerber, MD, Ann Arbor, MI
- Ocular Motility (Alignment, Ductions, Prisms, Red-Maddox Rod)
  Wayne T. Comblath, MD, FAAN, Ann Arbor, MI
  Janet C. Rucker, MD, New York, NY
- Visual Field Testing (Amsler Grid, Functional Vision Loss)
  Christopher Glisson, DO, Grand Rapids, MI

**Core Competencies:**
- Interpersonal and Communication Skills
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement

**Teaching Style:**
- Didactic, Interactive, Audience Participation

**CME Credits:**
- 3.75

**Recommended Audience:**
- Trainee, General Neurologist

C104  Wednesday, April 22, 2015
6:30 a.m.–8:00 a.m.  1.5 hours

**Pseudotumor Cerebri**

**Topic:** Neuro-ophthalmology/Neuro-otology

**Director:** Kathleen B. Digre, MD, FAAN, Salt Lake City, UT

**Program Description:**
Using a case-based format, faculty will explore the principles of diagnosis, evaluation, and treatment of pseudotumor cerebri syndrome, including idiopathic intracranial hypertension. Although the pathogenesis of the disorder is uncertain, prompt diagnosis and treatment can prevent permanent visual loss. Faculty will review the clinical presentation and potential “secondary causes” of pseudotumor cerebri, as well as laboratory testing, visual field testing, and treatment options in adults and children. Faculty will review information regarding intracranial venous stenting, and the results of the recently completed Idiopathic Intracranial Hypertension Treatment Trial. Clinical cases will be incorporated to illustrate various aspects of diagnosis and management.

**Upon Completion:**
Participants should be able to recognize the common clinical manifestations of pseudotumor cerebri; select the appropriate laboratory, neuroimaging, ophthalmic, and other studies needed to diagnose and follow patients with this disorder; list commonly encountered secondary causes of pseudotumor cerebri; understand the indications, benefits, and limitations of currently used medical, interventional, and surgical treatments; and identify challenges in the diagnosis and treatment of pseudotumor cerebri.

**Lecture/Faculty:**
- Pseudotumor Cerebri Basics
  Kathleen B. Digre, MD, FAAN, Salt Lake City, UT
- Treatment of Pseudotumor Cerebri
  Deborah I. Friedman, MD, FAAN, Dallas, TX
- Case Presentations: Test Your Knowledge
  Faculty
Course Descriptions

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 1.5
Recommended Audience: General Neurologist, Non-Neurologist

C113 Thursday, April 23, 2015 6:30 a.m.–8:00 a.m. 1.5 hours

Neuro Flash: Neuro-ophthalmology

Topic: Neuro-ophthalmology/Neuro-otology
Director: Valerie Biousse, MD, Atlanta, GA

Program Description:
Faculty will provide an interactive update on current hot topics in clinical neuro-ophthalmology, including what is new in the diagnosis and management of both afferent and efferent neuro-ophthalmic disorders such as vascular disorders of the retina, papilledema, optic neuritis, neuromyelitis optica, ischemic optic neuropathy, hereditary optic neuropathies, pupillary abnormalities, aneurysmal third nerve palsies, ocular myasthenia gravis, nystagmus, and new technologies in neuro-ophthalmology such as the expanding use of optical coherence tomography and fundus photography in clinical diagnosis, clinical trials, and epidemiological studies.

Upon Completion:
Participants should be familiar with some of the current hot topics in clinical and investigational neuro-ophthalmology.

Lecture/Faculty:
• Hot Topics in Neuro-ophthalmology
  Valerie Biousse, MD, Atlanta, GA
  Nancy J. Newman, MD, FAAN, Atlanta, GA

Core Competencies: Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style: Didactic, Audience Participation
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C144 Friday, April 24, 2015 8:00 a.m.–4:00 p.m. 8 hours

Neuro-ophthalmology

Topic: Neuro-ophthalmology/Neuro-otology
Director: Valerie Biousse, MD, Atlanta, GA

Program Description:
Faculty will present a comprehensive review of clinical neuro-ophthalmology. Numerous case presentations will be followed by related short reviews. Topics include the differential diagnosis of visual loss and visual field defects, the examination of the ocular fundus, optic neuropathies and papilledema, pupillary disorders, nystagmus, and various ocular motility disorders. Practical clinical and management issues will be emphasized. This course is designed to enhance interaction between participants and faculty. The morning session will mostly focus on afferent disorders and the afternoon session will mostly focus on efferent disorders, although cases will encompass a large number of clinical problems.

This program will utilize an Audience Response System.

Upon Completion:
Participants should become familiar with the diagnosis, evaluation, and treatment of common neuro-ophthalmic problems.

Lecture/Faculty:
• Case 1
  Valerie Biousse, MD, Atlanta, GA
• Vision Loss
  Nancy J. Newman, MD, FAAN, Atlanta, GA
• Case 2
  Valerie Biousse, MD, Atlanta, GA
• Optic Neuropathies
  Nancy J. Newman, MD, FAAN, Atlanta, GA
• Case 3
  Valerie Biousse, MD, Atlanta, GA
• Management of Optic Neuritis
  Steven Galetta, MD, FAAN, New York, NY
• Case 4
  Valerie Biousse, MD, Atlanta, GA
• Case 5
  Valerie Biousse, MD, Atlanta, GA
• Papilledema and Management of Idiopathic Intracranial Hypertension
  Kathleen B. Digre, MD, FAAN, Salt Lake City, UT
• Case 6
  Valerie Biousse, MD, Atlanta, GA
• Cases and Quiz
• Case 7
  Valerie Biousse, MD, Atlanta, GA
• Anisocoria
  Steven Galetta, MD, FAAN, New York, NY
• Case 8
  Valerie Biousse, MD, Atlanta, GA
• Diptopia
  Mark L. Moser, MD, FAAN, Philadelphia, PA
• Cases, Discussion, and Quiz
• Case 9
  Valerie Biousse, MD, Atlanta, GA
• Treatment of Nystagmus
  Matthew J. Thurtell, MD, Iowa City, IA
• Cases, Discussion, and Quiz

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation
CME Credits: 6.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist
Eye Movement Disorders: A Systematic Approach to the Evaluation of Diplopia

**C159** Saturday, April 25, 2015 8:00 a.m.–11:00 a.m. 3 hours

**Topic:** Neuro-ophthalmology/Neuro-otology

**Director:** Marc Dinkin, MD, New York, NY

**Program Description:**
Correct localization is the primary objective in the evaluation of diplopia. Faculty will present a systematic approach to localizing diplopia, with special emphasis on vertical diplopia and diagnostically challenging cases. Basic and advanced concepts will be included. Interactive video-based case examples presented as unknowns will facilitate audience discussion and immediate application of new skills to diagnose diplopia localizing to extraocular muscle, neuromuscular junction, cranial nerve, nuclear, and supranuclear locations. Topic discussions will include pearls, pitfalls, and pathognomonic signs in localization.

**This program will utilize an Audience Response System.**

**Upon Completion:**
Participants should be able to localize diplopia, especially vertical diplopia, via basic and advanced examination skills and to recognize the wide range of clinical diagnoses of patients with diplopia via participation in evaluating diagnostically challenging case presentations.

**Lecture/Faculty:**
- Diplopia Localization: Examination Skills
  *Marc Dinkin, MD, New York, NY*
- Diplopia Localization: Extraocular Muscles
  *Marc Dinkin, MD, New York, NY*
- Diplopia Localization: Neuromuscular Junction
  *Janet C. Rucker, MD, New York, NY*
- Diplopia Localization: Cranial Nerves
  *Marc Dinkin, MD, New York, NY*
- Diplopia Localization: Supranuclear
  *Janet C. Rucker, MD, New York, NY*
- Discussion and Unknown Case Presentations
  *Faculty*

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

**Teaching Style:** Didactic, Interactive, Audience Participation, Case-Based

**CME Credits:** 3

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist

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**Severe TBI: From ICU to Rehabilitation**

**C15** Saturday, April 18, 2015 1:00 p.m.–5:00 p.m. 4 hours

**Topics:** Neuro-rehabilitation; Aging, Dementia, Cognitive, and Behavioral Neurology; Neuro Trauma, Critical Care, and Sports Neurology

**Director:** Holly E. Hinson, MD, Portland, OR

**Program Description:**
Traumatic brain injury (TBI) is one of the most common, disabling neurologic disorders; two percent of the US population lives with disability from TBI. Severe TBI presents a number of difficult clinical and research challenges in diagnosis and treatment, including early diagnosis and management to limit secondary injury and prognosis. This course will focus on severe TBI from acute treatment in the ICU to rehabilitation of severe brain injury. Faculty will discuss the mechanisms of brain damage after TBI, with emphasis on secondary brain injury, as well as best practices for acute management; prognostication after severe TBI; present the latest structural and functional neuroimaging methods including diffusion tensor imaging; describe emerging research in biomarkers with an emphasis on neuroinflammation; and address current controversies of diagnosis and treatment.

**Upon Completion:**
Participants should be familiar with the variety of mechanisms and pathophysiologic events associated with TBI and how to minimize secondary brain injury with up-to-date acute management procedures emphasizing relevant guidelines; and be comfortable using scoring systems and imaging techniques to aid in prognostication after severe TBI.

**Lecture/Faculty:**
- Management of Severe TBI in the ICU
  *Holly E. Hinson, MD, Portland, OR*
- Advanced Neuroimaging in Severe TBI
  *Brian Edlow, MD, Boston, MA*
- Emerging Concepts in TBI: From the Battlefield to the Clinic
  *Josh L. Duckworth, MD, Bethesda, MD*
- Evidence-based Rehabilitation in Severe TBI
  *David L. Brady, MD, St. Louis, MO*

**Core Competencies:** Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

**Teaching Style:** Didactic, Case-Based

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

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Course Descriptions

Brain Computer Interfaces: Frontiers in Neurology and Neuroscience

**Program Description:**
Brain-Computer Interfaces (BCI) offer to seamlessly integrate artificial electronics with the nervous system. Such technology will result in innovative therapies and rehabilitation methods for motor disability after spinal cord injury, stroke, advanced ALS, limb loss, and other injuries. Moreover, BCI technology has the great potential to result in novel treatment for a range of other neurologic disorders (e.g., epilepsy and movement disorders). There has been tremendous progress into the development of BCIs over the past decade. This includes the rapid development of technology in animal models. Moreover, pilot clinical trials have demonstrated the proof-of-concept that BCIs can improve function in patients with disability. Faculty will introduce the concept of BCIs, describe present and future clinical applications, identify issues critical to success, and explore how neurologists and their patients can get involved in these exciting developments.

**Upon Completion:**
Participants should be familiar with the rapidly emerging field of BCIs. In addition, they should be able to educate patients who will ultimately benefit from the research and development in this field.

**Lecture/Faculty:**
- Recent Advances in Brain-Computer Interfaces
  Karunesh Ganguly, MD, PhD, San Francisco, CA
- Clinical Translation of Neural Prosthetics
  Leigh R. Hochberg, MD, PhD, FAAN, Boston, MA

**Core Competency:**
Medical Knowledge

**Teaching Style:**
Didactic

**CME Credits:**
3.75

**Recommended Audience:**
Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**Myelopathies**

**Program Description:**
Spinal cord disorders, either in isolation or in combination with other central or peripheral nervous system symptoms and signs, are encountered by both general and subspecialty neurologists. Rapid scientific advances have enhanced and broadened our understanding of a wide spectrum of these disorders. This course will cover recognition, classification, diagnostic investigation, and management of myelopathies and myeloneuropathies syndromes. Faculty will discuss vascular myelopathies, inflammatory and immune-mediated myelopathies, metabolic and toxic myelopathies, and the diagnostic approach to myeloneuropathy syndromes. Faculty will include case-based learning points and will focus on practical clinical information and a comprehensive update on recent developments.


**Upon Completion:**
Participants should be familiar with the wide spectrum of myelopathies and myeloneuropathies and develop a practical and systematic approach toward the investigation and management of these disorders; and be aware of the recent advances related to spinal dural arteriovenous fistulas, neuromyelitis optica, multiple sclerosis and other autoimmune disorders, copper deficiency, and other metabolic and toxic disorders.

**Lecture/Faculty:**
- Vascular Myelopathies
  Jose Bailer, MD, FAAN, FACP, FAHA, Chicago, IL
- Toxic and Metabolic Myelopathies and Approach to Myeloneuropathy
  Dean M. Wingerchuk, MD, FAAN, Scottsdale, AZ
- Inflammatory Myelopathies - Part 1
  Dean M. Wingerchuk, MD, FAAN, Scottsdale, AZ
- Inflammatory Myelopathies - Part 2
  Benjamin M. Greenberg, MD, Dallas, TX
- Discussion and Case Presentations

**Core Competencies:**
Medical Knowledge, Patient Care, Practice-Based Learning and Improvement

**Teaching Style:**
Case-Based, Didactic, Interactive, Audience Participation

**CME Credits:**
3.75

**Recommended Audience:**
Trainee, General Neurologist, Specialist Neurologist

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**Spine Neurology: Assessment and Management of Common Spine Disorders**

**Program Description:**
Neurologists alone can integrate information about spine anatomy (from imaging) with information about nervous system physiology (function) from the neurologic exam to localize a site of nervous system injury and develop a differential diagnosis. However, few neurologists are
comfortable with interpreting spine imaging studies because of a lack of training. In the future, neurologists will have a specific role in systems of care to provide neurologic expertise as part of a health care team, and will need to understand how to improve their clinical effectiveness for populations of patients with back pain.

This course will focus on practice gaps for the neurologist providing care for patients with back and neck pain. The initial medical and neurologic assessment of patients with spine pain will be followed by practical interpretation of common spine neuroimaging studies. Spine emergencies arising from common spine disorders will be presented and the indications, risks, and outcomes of surgical intervention for common spine disorders (e.g., radiculopathy, compressive myelopathy, lumbar spinal stenosis, and spinal instability) will be discussed by an experienced neurosurgeon. From a public health perspective, the overutilization of prescription narcotics and spine surgery is costly. As we pivot to provide care both for individual patients and populations of patients with spine disorders, understanding the limits and costs of our management tools is increasingly important. The issue of narcotic overuse will be discussed by a leading national expert (Dr. Richard Deyo) on spine care with a public health perspective.

This program complements C98: Myelopathies and C115: Morning Report: Laminectomy Syndromes, but covers independent topics.

This program will utilize an Audience Response System.

Upon Completion:
Participants should be able to: apply initial medical assessment tools and templates for potential serious causes of spine pain using ‘red flags’ from the history and exam; interpret spine imaging findings in patients with common spine disorders; know the indications, contraindications, and outcomes of spine surgery for common spine disorders; identify and manage common spine emergencies; understand the public health issues regarding the overutilization of management options, including narcotics; and begin to define a specific role for the neurologist as part of a health care team managing patients with back and neck pain.

Lecture/Faculty:
- Initial Medical Assessment and Management
  John W. Engstrom, MD, FAAN, San Francisco, CA
- Spine Imaging for the Neurologist
  John W. Engstrom, MD, FAAN, San Francisco, CA
- Urgent Spondylotic Spine Disorders
  J. D. Bartleson, MD, FAAN, Rochester, MN
- Common Spine Surgery
  H. Gordon Deen, MD, Jacksonville, FL
- Overutilization of Opiates: A Public Health Perspective
  Richard Deyo, MD, MPH, Portland, OR
- Practical Use of Spine Injections
  Faculty
- Case Presentations
  Faculty

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Interactive
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

### C155

**Saturday, April 25, 2015**
6:30 a.m.–8:00 a.m.  1.5 hours

**Physical Exercise and Cognitive Training in Neurological Disorders**

**Topic:** Neuro-rehabilitation

**Director:** A. M. Barrett, MD, West Orange, NJ

**Program Description:**
Physical exercise and cognitive training interventions in aging and neurologic disorders represent hot topics in the community and have the potential to provide multiple benefits. Faculty will describe the basic science behind these interventions and explain available methods. This will be followed by evidence-based critical approach to these treatment modalities to enhance clinical competence of the participants for choosing appropriate methods for different indications.

**Upon Completion:**
Participants should be able to understand scientific principles and methods of physical exercise and cognitive training interventions in neurologic disorders (competence) and evaluate different physical exercise and cognitive training interventions critically for safety and benefits, and choose best method for their patients (competence/performance/patient outcomes).

**Lecture/Faculty:**
- Physical Exercise and Cognitive Training in Stroke and Multiple Sclerosis
  A. M. Barrett, MD, West Orange, NJ
- Physical Exercise and Cognitive Training in Aging, Dementia, and Parkinson’s Disease
  Ergun Y. Uc, MD, Iowa City, IA
- Case Presentation and Audience Discussion
  Faculty

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 1.5
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

### C53

**Sunday, April 19, 2015**
3:00 p.m.–5:00 p.m.  2 hours

**Palliative Care for the Practicing Neurologist**

**Topics:** Pain and Palliative Care; Practice, Policy, and Ethics

**Director:** Robert G. Holloway, MD, MPH, FAAN, Rochester, NY

**Program Description:**
Palliative care is important in neurologic practice, representing some of the most ethically challenging and morally complex patients and families we see. Faculty will provide pearls of palliative care practice for patients with advanced neurologic illness in both the inpatient and outpatient setting. The focus will be on optimal symptom control and the most common issues that confront the practicing neurologist.
Course Descriptions

Core Concepts in Pain Management

**Topic:** Pain and Palliative Care  
**Director:** Lynne P. Taylor, MD, FAAN, Seattle, WA

**Program Description:**  
Acute and chronic neuropathic pain are leading reasons for neurologic consultation in the outpatient setting. Faculty will review the current evidence for pain assessment and treatment. Central considerations will be explored such as how to: manage neuropathic pain by selecting optimal combinations of opioid and non-opioid analgesic medications. Faculty will review interventional techniques for pain control as well as the use of motor cortex and deep brain stimulation for the treatment of intractable neuropathic pain. Facial pain, trigeminal neuralgia, perineal pain, pain associated with MS, and complex regional pain syndrome will be further explored.

**Upon Completion:**  
Participants should become familiar with the current standards and latest evidence for the assessment and treatment of acute and chronic pain. Participants’ familiarity with novel therapies for the treatment of common pain problems should be improved.

**Lecture/Faculty:**  
- Neuropathic Pain: The Scope of the Problem  
  Lynne P. Taylor, MD, FAAN, Seattle, WA  
- Treatment Matching for Neuropathic Pain: An Evidence-based Review of Key Medical and Interventional Approaches  
  John Markman, MD, FAAN, Rochester, NY  
- Motor Cortex and Deep Brain Stimulation for the Treatment of Intractable Neuropathic Pain  
  Paola Sandroni, MD, PhD, FAAN, Rochester, MN  
- Common Neuropathic Pain Conditions: Trigeminal Neuralgia, MS, and Central Post-stroke Pain  
  Lynne P. Taylor, MD, FAAN, Seattle, WA

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

**Teaching Style:** Case-Based, Didactic, Audience Participation, Case-Based

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Non-Neurologist, Individuals With Low Back Pain

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**C121 Thursday, April 23, 2015 1:00 p.m.–5:00 p.m.  4 hours**

**Core Concepts in Pain Management**

**Topic:** Pain and Palliative Care  
**Director:** Lynne P. Taylor, MD, FAAN, Seattle, WA

**Program Description:**  
Acute and chronic neuropathic pain are leading reasons for neurologic consultation in the outpatient setting. Faculty will review the current evidence for pain assessment and treatment. Central considerations will be explored such as how to: manage neuropathic pain by selecting optimal combinations of opioid and non-opioid analgesic medications. Faculty will review interventional techniques for pain control as well as the use of motor cortex and deep brain stimulation for the treatment of intractable neuropathic pain. Facial pain, trigeminal neuralgia, perineal pain, pain associated with MS, and complex regional pain syndrome will be further explored.

**Upon Completion:**  
Participants should become familiar with the current standards and latest evidence for the assessment and treatment of acute and chronic pain. Participants’ familiarity with novel therapies for the treatment of common pain problems should be improved.

**Lecture/Faculty:**  
- Neuropathic Pain: The Scope of the Problem  
  Lynne P. Taylor, MD, FAAN, Seattle, WA  
- Treatment Matching for Neuropathic Pain: An Evidence-based Review of Key Medical and Interventional Approaches  
  John Markman, MD, FAAN, Rochester, NY  
- Motor Cortex and Deep Brain Stimulation for the Treatment of Intractable Neuropathic Pain  
  Paola Sandroni, MD, PhD, FAAN, Rochester, MN  
- Common Neuropathic Pain Conditions: Trigeminal Neuralgia, MS, and Central Post-stroke Pain  
  Lynne P. Taylor, MD, FAAN, Seattle, WA

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Systems-Based Practice

**Teaching Style:** Case-Based, Didactic, Audience Participation, Case-Based

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Non-Neurologist, Individuals With Low Back Pain
Spine Neurology: Assessment and Management of Common Spine Disorders

Topics: Neuro-rehabilitation; Pain and Palliative Care
Director: John W. Engstrom, MD, FAAN, San Francisco, CA

Upon Completion:
Participants should have a deeper understanding of the methods by which effective clinical reasoning can be fostered in their trainees, and how to identify and remediate errors in critical thinking and professionalism. It is equally important for educators to develop expertise in how learners learn, and to craft learning experiences that increase the efficiency of learning, and reduce the likelihood of errors or lapses in professionalism.

Full Program Description on Page 84

The Practice of Neurology: Issues in Coding and Reimbursement

Topic: Practice, Policy, and Ethics
Director: Bruce H. Cohen, MD, FAAN, Cleveland, OH

Program Description:
Faculty will provide an introduction to coding, billing, and practice management as it pertains to coding. Major topics include Evaluation and Management CPT coding, ICD-9 and ICD-10 coding, the proper use of the EMR to justify coding choices, and office management and billing. The history of medical economics as it relates to reimbursement will also be presented. The syllabus is a handy primer for reference with useful, printable lists for the office. This course is appropriate for residents, advanced practice providers, office managers, and those neurologists who are new to coding and reimbursement issues.

Upon Completion:
Participants should be able to understand the elements necessary to analyze their billing and coding selections based on the medical care they have delivered and documented. Participants should understand the spectrum of basic practice management, establish a financial analysis and monitoring system, and understand the billing process and benchmarks. Participants should understand the legalities of proper and improper use of electronic medical records and how to incorporate the new federally mandated patient safety initiatives into the medical record. Participants should understand the background of reimbursement, the current situation and shifting sands of documentation standards and reimbursement, and predictions on the landscape of medical economics in the next several years.

Lecture/Faculty:
- ICD-10: The Time Is Really Near
  Laura B. Powers, MD, FAAN, Knoxville, TN
- The Basics of Office and Hospital E&M
  Bruce H. Cohen, MD, FAAN, Cleveland, OH
- Office Management: Keys to A Successful Practice
  William S. Henderson, FACMPE, Albany, NY
- Using the Electronic Medical Record: Proper Documentation and Compliance Issues
  Allison L. Weathers, MD, FAAN, Chicago, IL
- Discussion/Questions and Answers
  Faculty

Core Competencies:
- Interpersonal and Communication Skills
- Medical Knowledge
- Patient Care
- Practice-Based Learning and Improvement
- Professionalism
- Systems-Based Practice

Teaching Style:
- Case-Based
- Didactic

CME Credits: 3.75

Recommended Audience:
- Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Practice Manager, Billing Specialist, Nurse Practitioner, Advanced Practice Provider

Clerkship and Program Directors Conference

Topic: Practice, Policy, and Ethics
Director: Blair Ford, MD, FAAN, New York, NY

Program Description:
The conference will be devoted to critical thinking and professionalism: how physicians learn the skill of clinical reasoning, how to identify and correct cognitive biases in critical thinking, how to teach and promote professionalism, and how to recognize and correct lapses in professionalism. It is equally important for educators to develop expertise in how learners learn, and to craft learning experiences that increase the efficiency of learning, and reduce the likelihood of errors or lapses in professionalism.

Upon Completion:
Participants should have a deeper understanding of the methods by which effective clinical reasoning can be fostered in their trainees, and how to identify and remediate errors in critical thinking and professionalism.

An important goal of the conference is for program directors and clerkships directors to acquire new educational ideas, teaching material and skills that they can use with their trainees in their home institutions.

Lecture/Faculty:
- Clinical Diagnostic Reasoning: A Critical Reformulation
  Faculty
- How Neurologists Think: What I Learned from My Mistakes in the Interface Between Neurology and Medicine
  Faculty
- Finches and Firetrucks: Education Strategies to Promote Clinical Reasoning
  James M. Noble, MD, New York, NY
- Effects of the Digital Age and the Electronic Medical Record on Medical Learning
  Blair Ford, MD, FAAN, New York, NY
- Identifying and Remediating Lapses in Professionalism
  Catherine Lucey, MD, San Francisco, CA
  Ann N. Poncelet, MD, San Francisco, CA
- Lunch and Posters
Course Descriptions

Advanced Neurologic Coding

Topics: Practice, Policy, and Ethics; General Neurology  
Director: Peter D. Donofrio, MD, FAAN, Nashville, TN

Program Description:
Faculty will discuss how codes are created, valued, assigned monetary value and reimbursed annually by CMS. The audience will learn about advanced office visit coding and coding for many types of CPT procedures. The course will conclude with a discussion of coding for infusions such as IVIG, chemotherapeutic agents, and drugs used to treat demyelinating disease.

Upon Completion:
Participants should have a greater understanding of the proper codes to be used for patient encounters in the hospital and outpatient clinic as well as the codes to use when billing for neurologic procedures and infusions.

Lecture/Faculty:
- How CPT, RUC, CMS, and SGR Work for Determining Codes and Their Payments  
  Marc R. Nuver, MD, PhD, FAAN, Los Angeles, CA
- E&M Coding: Billing for Time, Complex Coordination of Care and Transitional Care Management  
  Bruce H. Cohen, MD, FAAN, Cleveland, OH
- CPT Procedure Coding for NCS, EMG, SFEMG, Repetitive Nerve Stimulation, and Nerve and Muscle Ultrasound  
  Peter D. Donofrio, MD, FAAN, Nashville, TN
- CPT Procedure Coding for EEG, EMU, EPs, DBS, Botox, and Others  
  Neil A. Busis, MD, FAAN, Pittsburgh, PA
- Coding for Infusions  
  Joseph V. Fritz, PhD, Amherst, NY

Core Competencies: Medical Knowledge, Patient Care, Systems-Based Practice

Teaching Style: Audience Participation, Didactic, Case-Based, Interactive

CME Credits: 3.75

Recommended Audience: General Neurologist, Specialist Neurologist

C26  
Sunday, April 19, 2015  
8:00 a.m.–11:00 a.m.  
3 hours

Controversies in Neuroethics

Topic: Practice, Policy, and Ethics
Director: Jerome E. Kurent, MD, MPH, FAAN, Charleston, SC

Program Description:
Faculty will describe and discuss selected ethical issues related to providing care for patients with life-limiting neurologic disease. The vital role of the neurologist in providing ethically based care for patients with end-stage neurologic disease will be emphasized. Ethical issues will be discussed related to the diagnosis of brain death, physician-assisted suicide, palliative sedation, futility in the care of patients with end-stage dementia, refusal or oral hydration and nutrition for patients with dementia, and use of fMRI data during court testimony.

Upon Completion:
Participants should have an increased ability to resolve medical-ethical dilemmas confronting the neurologist in providing ethical care for patients with life-limiting neurologic disease; increased understanding of the role of advance directives for the patient with dementia; and have an enhanced knowledge of perceived medical futility.

Lecture/Faculty:
- Is Brain Death the Equivalent of Human Death?  
  James L. Bernat, MD, FAAN, Lebanon, NH
- Should States Legalize Physician-assisted Suicide?  
  Jerome E. Kurent, MD, MPH, FAAN, Charleston, SC
- Should Patients with Advanced Dementia Be Permitted to Refuse Oral Hydration and Nutrition by Advance Directive?  
  Winston Chiong, MD, San Francisco, CA
- How Is Futility Defined in the Care of Patients with End-stage Dementia?  
  James L. Bernat, MD, FAAN, Lebanon, NH
- Should Brain fMRI Data Be Used as Evidence in Court Testimony?  
  Winston Chiong, MD, San Francisco, CA
- Why Is Palliative Sedation Controversial?  
  Jerome E. Kurent, MD, MPH, FAAN, Charleston, SC

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Didactic, Interactive, Audience Participation, Case-Based

CME Credits: 3

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Ethicists, Policy Makers, Advanced Practice Provider
Take Your Commitment to Your Profession to the Next Level

2015 AAN Leadership Programs

Whether you want to be a mentor or an advocate, to guide or inspire others, you need to cultivate the skills to be an effective leader.

Monday, April 20, 2015, 1:00 p.m.–5:00 p.m.

Improving Your Leadership Skills: A Practical Approach

Leadership has been defined as “having a sound vision and convincing others to follow you.” This course will assist you in implementing the vision and offer practical tips and case examples on how to persuade others to follow.

Directors: Terrence L. Cascino, MD, FAAN, Rochester, MN
Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL

See more information on page 93.
An overview of regulatory and legal concerns surrounding opioids and medical marijuana, including a review of best practices and existing guidelines will be discussed. Safe prescription practices, including how to identify warning signs of abuse or misuse and treating addiction, if identified, will be reviewed.

The 2015 Safety and Quality Award recipients will be presented awards highlighting projects demonstrating exemplary efforts to address patient safety and/or improve health care quality in practice. This event was formerly titled the Patient Safety Colloquium.

Upon Completion:
Participants should have an understanding of when to recommend and prescribe opioids. Participants should have an understanding of the legal issues surrounding medical marijuana. Participants should be able to identify warning signs of abuse or misuse as well as steps to treat addiction if warranted. Participants should have state-specific resources for providers considering prescribing opioids. Participants should have an understanding of how medical marijuana issues can be addressed in practice.

Lecture/Faculty:
- Legal Implications of Recommending Medical Marijuana
  Kevin Riach, JD, Minneapolis, MN
- Regulatory Overview of Opioids
  Faculty
- Considerations for Recommending Medical Marijuana in Practice
  Anup Patel, MD, Columbus, OH
- Safely Prescribing Opioids in Practice
  Gary M. Franklin, MD, MPH, FAAN, Seattle, WA

Core Competency: Interpersonal and Communication Skills, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Didactic

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Medical Providers, Advanced Practice Provider

C39  Sunday, April 19, 2015  9:00 a.m.–5:00 p.m.  8 hours

Leadership for Women

Topics: Practice, Policy, and Ethics; Research Methodology; Education, and History

Directors: Allison Brashear, MD, MBA, FAAN, Winston Salem, NC
  Barbara L. Hoese, President, Pentecore Coaching, Minneapolis, MN

C43  Sunday, April 19, 2015  1:00 p.m.–4:00 p.m.  3 hours

Advanced Practice Provider Symposium

Topic: Practice, Policy, and Ethics

Director: Cynthia L. Comella, MD, FAAN, Chicago, IL

Program Description:
The role of the Advanced Practice Providers (APP) in the care of neurological patients is increasingly critical. Through a review of the neurological examination and its application to common neurological problems, including headache, movement disorders, and patient cases seen in a neurology office, faculty will provide a framework for the APP to evaluate patients and formulate the appropriate diagnosis.
This program will utilize an Audience Response System.

Upon Completion:
Participants should have a knowledge of the neurological examination, and apply that skill to the differential diagnosis and work-up of common neurological problems including headache, dizziness, movement disorders including Parkinson disease. Participants should be able to analyze a patient with an unknown neurologic diagnosis and provide an approach to the evaluation and differential diagnosis.

Lecture/Faculty:
- The Five-minute Neurological Examination
  Ralph F. Józefowicz, MD, FAAN, Rochester, NY
- Headaches: Diagnosis is the Key to Management
  Heidi B. Schwarz, MD, FAAN, Rochester, NY
- Movement Disorders: It Is All in What You See
  Cynthia L. Comella, MD, FAAN, Chicago, IL
- Discussion: Cases and Pearls
  Faculty

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Didactic, Interactive, Audience Participation
CME Credits: 3
Recommended Audience: Non-Neurologist, Nurse Practitioner, Physician Assistant, Advanced Practice Provider

C48 Sunday, April 19, 2015 1:00 p.m.–5:00 p.m. 4 hours

How to Run a Practice: Business Strategies for Neurology Private Practices, Academic Centers, and the Future
Topic: Practice, Policy, and Ethics
Director: Brad C. Klein, MD, Willow Grove, PA

Program Description:
Neurology practices are struggling for survival due to higher overhead and shrinking reimbursements for cognitive specialists. Higher malpractice premiums and office expenses, lower payments per patient, the rising cost of compliance with government regulations, and time-consuming insurance documentation requirements are the trend. Overlooking the true cost of services and procedures can result in financial drains to neurologic practice and unexpected losses. Faculty will give an overview of basic financial tools and how to apply sound business strategies to neurology practice issues. Faculty will cover the critical processes necessary to quantitatively evaluate a practice’s income and expenses, particularly in-depth analysis of revenue cycle and practice efficiencies. Faculty will also cover the steps involved in negotiating insurer contracts, determination if expansion of services and/or providers will result in sustainable financial growth, avoidance of internal fraud, and strategic planning for future financial models, such as accountable care organizations.

Upon Completion:
Participants should be able to understand practice revenues, expenses, and cash flow; identify revenue cycle problems; establish and use key performance indicators for their practices; enhance workflow to maintain fiscal health; utilize benchmarking to enhance their practice; know and address basic legal issues in setting up and running a practice; understand how to choose and use technology at point of care; evaluate the economics of outsourcing versus providing in-house services; utilize financial analysis to determine if technology and other capital investments will provide a return on investment; know how to determine which payers are creating an administrative drain on their practices; identify possible fraud internally within the practice; and understand how to evaluate and implement new financial reimbursement and risk-sharing management models such as accountable care organizations.

Lecture/Faculty:
- Introduction and Welcome
  Brad C. Klein, MD, Willow Grove, PA
- Understanding Your Revenues, Expenses, and Benchmarks to Increase Your Income
  Gregory J. Esper, MD, Atlanta, GA
- Revenue Cycle Management: How to Make Money in Your Practice and Be a Doctor
  Brad C. Klein, MD, Willow Grove, PA
- Future of Medicine: Preparing Your Practice for Value-based Care and Population Management
  Gregory J. Esper, MD, Atlanta, GA
- Insurance Contracts and How to Negotiate
  Brad C. Klein, MD, Willow Grove, PA

Core Competencies: Patient Care, Practice-Based Learning and Improvement
Teaching Style: Didactic, Interactive
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Administrator

C53 Sunday, April 19, 2015 3:00 p.m.–5:00 p.m. 2 hours

Palliative Care for the Practicing Neurologist
Topics: Pain and Palliative Care; Practice, Policy, and Ethics
Director: Robert G. Holloway, MD, MPH, FAAN, Rochester, NY

Full Program Description on Page 85

C59 Monday, April 20, 2015 6:30 a.m.–8:00 a.m. 1.5 hours

Leadership in Neurology: Be a Champion for Your Patients and Protector of Your Specialty with Payers, Policymakers, and the Public
Topic: Practice, Policy, and Ethics
Director: Elaine C. Jones, MD, FAAN, Bristol, RI

Program Description:
Evolution of the healthcare landscape requires neurologists to learn new skills to and take advantage of the opportunities that accompany health system reform. Faculty will underscore the importance for neurologists to become active leaders for their patients and profession. This course will teach the basics of interacting with insurers, policy makers, and the public via the media. The course is designed to assist participants in identifying points of influence and effective advocacy methods they can employ. Learning the fundamentals of effective communication, media interviews, sound bite development and relationship building will assist participants in getting their message heard. Faculty will cover how individual members can position neurology and themselves as leaders and effective advocates with payers, regulators, and other policy makers.

Upon Completion:
Participants will be able to act as leaders in advocating for changes that benefit neurology patients and the profession; learn about resources inside and outside of the Academy to help them with these goals; understand the importance of forming lasting relationships with policy makers; learn how and when to utilize local media outlets; and understand how to effectively develop key messages for media interviews. Participants will develop skills in engaging these groups.

**Lecture/Faculty:**
- Legislative Relations  
  Elaine C. Jones, MD, FAAN, Bristol, RI
- Insurer Relations  
  Joel M. Kaufman, MD, FAAN, Providence, RI
- Media Relations  
  Anthony G. Alessi, MD, FAAN, Norwich, CT

**Core Competencies:**  
Interpersonal and Communication Skills, Professionalism

**Teaching Style:**
Didactic, Interactive, Audience Participation

**CME Credits:**
1.5

**Recommended Audience:**  
Trainee, General Neurologist, Specialist Neurologist, International Neurologist, Advanced Practice Provider

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**Course Descriptions**

**Resident and Fellow Career Breakfast: The Early Years**

**Topic:**  
Practice, Policy, and Ethics

**Director:**  
Kelly Baldwin, MD, Danville, PA

**Program Description:**

There is limited seating for the breakfast and it is only open to residents and fellows. Registration is required.

With the rapidly changing practice environment for recently graduated trainees, faculty will present a tangible guide to ease the transition to clinical or academic practice for recently graduated trainees or those currently training in neurology. Faculty will discuss real-life situations affecting physicians in academic, private, and group practice. A recent graduate will present her perspective on the transition to a career in neurology, including how to balance personal interests with a successful career. Faculty will discuss the current changes in health care in the US and the effects on neurology. Generous time for questions and answers will be provided.

**Upon Completion:**

Participants should be familiar with the variation of practice models and have the necessary tools for a successful transition from training to practice.

**Lecture/Faculty:**
- What to Expect: A New Graduate’s Perspective  
  Kelly Baldwin, MD, Danville, PA
- Choosing a Career in Private Practice  
  Sarah M. Benish, MD, Edina, MN
- Choosing a Career in Academic Medicine  
  Rebecca K. Lehman, MD, Charleston, SC
- Contract Negotiation: You Don’t Get What You Deserve, You Get What You Ask for  
  Jonathan P. Hosey, MD, FAAN, Danville, PA

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**Bedside Evidence-based Medicine: How to Find and Deconstruct Articles in Order to Take Care of Patients**

**Topic:**  
Practice, Policy, and Ethics

**Director:**  
Gary S. Gronseth, MD, FAAN, Kansas City, KS

**Program Description:**

The primary goal of this program is to demystify evidence-based medicine (EBM) concepts and equip participants with the knowledge and tools needed to translate evidence (a published article, a research presentation, clinical trial data) into action (a specific bedside intervention). The program will consist of a series of very short didactic presentations each followed by a small group exercise. Each participant will be assigned to a small group led by a faculty member. Each group will complete exercises illustrating steps in the EBM process including: formulating evidence-answerable questions, efficiently searching the literature to find high-quality evidence, assessing a study’s risk of bias, interpreting a study’s results for significant and meaningful effects, synthesizing the results of several studies, and using more than evidence to make patient-centered decisions. **Class size will be limited.**

To illustrate EBM concepts participants will review the evidence pertinent to a current controversial topic. The topic will be taken from a guideline currently being developed by the AAN’s Guideline Development Subcommittee. The results of the deliberations of the participants will inform the final guideline. The contributions of the participants to the guideline’s development will be acknowledged in an appendix accompanying the published guideline.

**Upon Completion:**

Participants should understand the principles of evidence-based medicine and critical review, and how these apply to the bedside practice of neurology; be able to deconstruct published articles addressing diagnostic, prognostic, and therapeutic questions, assess their accuracy and rigor, and make appropriate evidence-based clinical decisions at the bedside based on their assessment; dramatically reduce their susceptibility to being misled by bias and the misuse of statistical procedures; and feel comfortable developing, investigating, and publishing the findings of their own clinical research questions.

**Lecture/Faculty:**
- Introduction and Developing Evidence-answerable Questions  
  Melissa Armstrong, MD, Baltimore, MD
- Michael Glantz, MD, FAAN, Boston, MA
- Gary S. Gronseth, MD, FAAN, Kansas City, KS
- Steven R. Messe, MD, FAAN, FAHA, Philadelphia, PA
Tamara M. Pringsheim, MD, Calgary, AB, Canada

- Efficiently Finding Evidence
- Selecting the Best Evidence
- The Risk of Bias
- Interpreting Effects and Evidence Synthesis
- Making Decisions: More Than Evidence

Core Competencies: Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C76 Monday, April 20, 2015
9:00 a.m.–5:00 p.m.  8 hours

Advanced Leadership for Women

Topics: Practice, Policy, and Ethics; Research Methodology, Education, and History

Directors: Lisa M. DeAngelis, MD, FAAN, New York, NY
Barbara L. Hoese, President, Pentecore Coaching, Minneapolis, MN

Program Description:
In the current health care environment, leaders are tasked with greater challenges than ever before. Faced with funding gaps and decreasing reimbursements alongside an ever-increasing need for neurologic research and care, leaders need to balance these competing demands while achieving significant results. With this course, the Academy continues to address the need to prepare women for greater leadership roles in both the Academy and their chosen profession. Designed to be experiential in its approach, the course will especially focus on women’s ways of leading to create success today and in the future.

Upon Completion:
Participants should be able to engage in conversations to address gender biases and proactively work to create gender neutral cultures; learn strategies for addressing typical leadership challenges faced by women in the workplace; equip women to lead and implement change in both a personal and organizational context; and identify and mentor future women leaders.

Lecture/Faculty:
- Leadership Styles: Practicing Leadership Presence; Showing up: How to Be Seen as a Leader; Balancing Competing Demands: Being a Woman While Being “in Charge”; Addressing Subtle Gender Inequities: What Works — and What Doesn’t
  Lisa M. DeAngelis, MD, FAAN, New York, NY
  Barbara L. Hoese, President, Pentecore Coaching Minneapolis, MN
- Leading Change as a Woman Leader; Balancing Ideating and Implementation; Building Change Alliances; Over-communicating
  Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL
- Characteristics of a Good Leader
  Terrence L. Cascino, MD, FAAN, Rochester, MN
- Planning 101
  Terrence L. Cascino, MD, FAAN, Rochester, MN
- Change Management
  Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL
- Critical Conversations
  Terrence L. Cascino, MD, FAAN, Rochester, MN
- Secrets of Being an Effective AAN or Institutional Leader
  Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL

Core Competency: Interpersonal and Communication Skills, Professionalism

Teaching Style: Interactive, Interactive, Didactic, Didactic

C86 Monday, April 20, 2015
1:00 p.m.–5:00 p.m.  4 hours

Improving Your Leadership Skills:
A Practical Approach

Topics: Practice, Policy, and Ethics; Research Methodology, Education, and History

Directors: Terrence L. Cascino, MD, FAAN, Rochester, MN
Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL

Program Description:
Leadership has been defined as “having a sound vision and convincing others to follow you.” This course will assist you in implementing the vision and offer practical tips and case examples on how to persuade others to follow. Course reading materials will be provided.

Upon Completion:
Participants should learn to apply knowledge to roles as a leader in the hospital, community, state medical society, professional organizations, and political action.

Lecture/Faculty:
- Characteristics of a Good Leader
  Terrence L. Cascino, MD, FAAN, Rochester, MN
- Planning 101
  Terrence L. Cascino, MD, FAAN, Rochester, MN
- Change Management
  Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL
- Critical Conversations
  Terrence L. Cascino, MD, FAAN, Rochester, MN
- Secrets of Being an Effective AAN or Institutional Leader
  Ralph L. Sacco, MD, MS, FAHA, FAAN, Miami, FL

Core Competency: Interpersonal and Communication Skills, Professionalism

Teaching Style: Interactive, Interactive, Didactic, Didactic

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist
**Course Descriptions**

**C174**  
**All You Need to Know About Health Information Technology to Avoid Taking a HIT**  
**Topic:** Practice, Policy, and Ethics  
**Director:** David A. Evans, MBA, Dallas, TX  
**Program Description:**  
This free course will provide an overview of technological advancements and areas of specific uses in the practice of neurology. Presentations will focus on case studies that provide a unique look at the role of HIT in transitioning from private practice to university-based from the perspective of a practicing neurologist and a practice administrator. Participants will also hear a neurologist’s perspective on population management as well as from the perspective of a payer. In addition to providing multiple perspectives on important topics the course will also outline the latest in tele/mobile health, how to best utilize your patient portal and it will end with an interactive session that will highlight the latest advances in technology-related areas that are of interest to neurologists.  
**Upon Completion:**  
Participants should be able to: understand the role of HIT during transitions; enhance population management through use of technology; understand aspects of using a patient portal, telemedicine, and mobile health applications in their practice; and identify new advances in HIT.  
**Lecture/Faculty:**  
- Crossing the Great Divide: A Case Study in All Things HIT in Transitioning from Private Practice to University-based, Neurologist’s Perspective  
  Neil A. Busis, MD, FAAN, Pittsburgh, PA  
- Crossing the Great Divide: A Case Study in All Things HIT in Transitioning from Private Practice to University-based, Practice Administrator’s Perspective  
  William S. Henderson, FACMPE, Albany, NY  
- Population Management, Neurologist’s Perspective  
  Robert M. Kropp, MD, FAAN, Saint Petersburg, FL  
- Population Management, Payer Perspective  
  Eric Anderson, MD, Decatur, GA  
- Using Teleneurology and Mobile Health in Practice  
  S. Andrew Josephson, MD, San Francisco, CA  
- Patient Portal: Utilizing the Portal and Other Third Party Systems for Patient Intake, Scheduling, Questionnaires, etc, All Pre-visit Related  
  David A. Evans, MBA, Dallas, TX  
- Patient Portals: Proper Use and Abuse—Rights and Responsibilities  
  Daniel B. Hoch, MD, PhD, FAAN, Boston, MA  
  Allison L. Weathers MD, FAAN, Chicago, IL  
- Interactive Session—Overview of the Latest Apps, Programs/Systems, and Other Technology-related Areas of Interest to Neurologists  
  David J. Likosky, MD, SFHM, Kirkland, WA  

**C105**  
**Neurohospitalist 2.0: Next Steps in the Evolution**  
**Topics:** Practice, Policy, and Ethics; Cerebrovascular Disease and Interventional Neurology  
**Director:** David J. Likosky, MD, SFHM, Kirkland, WA  
**Program Description:**  
The inpatient neurology landscape presents a number of challenges as hospitals scramble to cover services and neurologists decide how and if they can meet that demand. The neurohospitalist model is evolving rapidly. Faculty will discuss the ways that neurohospitalists are practicing nationally as they address current challenges. Faculty will also discuss what we are likely to see in the next few years as practices develop and refine in response to the upcoming changes in health care. Discussion and audience questions and participation will be encouraged.  
**Upon Completion:**  
Participants should be able to describe the current state of neurohospitalist practice, challenges inherent in our present system, and strategies to meet the upcoming changes in health care.  
**Lecture/Faculty:**  
- Current State of Neurohospitalist Practice  
  S. Andrew Josephson, MD, San Francisco, CA  
  David J. Likosky, MD, SFHM, Kirkland, WA  
- Future Challenges of Inpatient Neurology and How to Meet Them  
  S. Andrew Josephson, MD, San Francisco, CA  
  David J. Likosky, MD, SFHM, Kirkland, WA  
**Core Competencies:** Patient Care, Systems-Based Practice  
**CME Credits:** 1.5  
**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist  
**C153**  
**Practical Legal Issues for Neurologists**  
**Topic:** Practice, Policy, and Ethics  
**Director:** Michael A. Williams, MD, FAAN, Baltimore, MD  
**Program Description:**  
Malpractice liability is a frequent worry for many neurologists. Faculty will focus on important and practical legal issues in the realm of malpractice liability and expert witness testimony. The course will review a medical malpractice case from the perspectives of the plaintiff’s attorney, the defense attorney, and an expert witness.  
**Upon Completion:**  
Participants should be able to discuss in general terms the effects that legal requirements have on their practice, including recognition of potential medical malpractice, when to contact an attorney, and the logistics of a malpractice case, including documentation, deposition, trial, and out-of-court settlement. Participants should be able to describe the purpose of expert witness testimony, the qualifications of an expert witness according to the AAN, and activities that are considered expert witness testimony according to the AAN.
Controversies in Brain Death Determination

**Topic:** Practice, Policy, and Ethics; General Neurology

**Director:** Owen B. Samuels, MD, Atlanta, GA

**Program Description:**
In 2008 the President’s Council on Bioethics issued a white paper amending the ethical framework behind the equation of brain death and death. Many challenges to this ethical framework have been offered both in the scientific and lay press.

Despite the publication of updated evidence-based guidelines for the determination of brain death in both pediatric and adult patients, significant variation remains in practice in both the clinical determination of brain death and the use of ancillary testing. Newer treatment paradigms such as therapeutic hypothermia have highlighted the limitations of clinical brain death testing.

Faculty will review current evidence-based guidelines for the determination of brain death in pediatric and adult populations, objectively critique those guidelines, and discuss areas of uncertainty and controversy. This will include an exploration of the ethical framework of brain death and death determination, an examination of the appropriate use of ancillary testing, and a review of potential pitfalls and confounders in clinical brain death determination.

**Upon Completion:**
Participants should become familiar with current guideline recommendations for the determination of brain death in adults and children; understand current clinical and ethical controversies; understand proper performance of and interpretation of clinical brain death examinations and ancillary testing; and recognize potential confounding variables in brain death determination.

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**Lecture/Faculty:**
- Inside the Plaintiff Attorney’s Mind
  Bruce Klores, JD, Washington, DC
- Inside the Defense Attorney’s Mind
  Faculty
- Inside the Expert Witness’ Mind
  Michael A. Williams, MD, FAAN, Baltimore, MD
- Case Resolution and Faculty Discussion
  Faculty

**Core Competencies:** Interpersonal and Communication Skills, Patient Care, Professionalism, Systems-Based Practice

**Teaching Style:** Case-Based, Didactic

**CME Credits:** 3

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**Research Methodology, Education, and History**

**C5**

Saturday, April 25, 2015
10:00 a.m.–12:00 p.m. 2 hours

**APP Resident Basic Science I: Neuropathology**

**Topic:** Research Methodology, Education, and History

**Director:** J. Clay Goodman, MD, FAAN, Houston, TX

**Program Description:**
Neuropathology is a rapidly and continuously evolving discipline encompassing basic, translational, and clinical neuroscience. A thorough understanding of the basics of neuropathology permits much deeper insight into mechanisms and manifestations of neurologic disease and provides a basis for more complete understanding of neuroimaging and laboratory studies. Faculty will provide a fast-paced, visually oriented overview of central nervous system neuropathology including tumors, demyelinating diseases, infections, cerebrovascular disease, toxic/metabolic conditions, neurodegenerative disease, neurotrauma, and developmental abnormalities.

*This program complements C13: Resident Basic Science II: Neuroanatomy and C30: Resident Basic Science III: Neuropharmacology, but covers independent topics.*

**Upon Completion:**
Participants should be able to understand cellular and gross neuropathology in relationship to neurologic disease mechanisms, diagnosis, progression, laboratory studies, and imaging.

**Lecture/Faculty:**
- Basic Neuropathology I: Increased Intracranial Pressure, Tumors, and Demyelinating Disorders
  J. Clay Goodman, MD, FAAN, Houston, TX
- Basic Neuropathology II: Infections, Vascular, Toxic/Metabolic, Neurodegenerative Disorders, Trauma, and Development
  J. Clay Goodman, MD, FAAN, Houston, TX

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Didactic

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider
Course Descriptions

Research Career Development Symposium: How to Be Successful in Academic Neuroscience

Saturday, April 18, 2015
8:00 a.m.–5:00 p.m.  9 hours

C9

Topic: Research Methodology, Education, and History
Directors: Conrad Weihl, MD, PhD, St. Louis, MO
Jaishri Blakeley, MD, Baltimore, MD

Program Description:
This program will provide information to early-stage neurologists (senior residents, fellows, and junior faculty) who are embarking on an academic career in neurologic research with a focus on acquiring a career development award. This program will focus on grants from NIH, major foundations, and the American Brain Foundation through a morning of lectures and small group mentoring sessions in the afternoon.

Attendees will receive information critical to their transition from residency or clinical fellowship to investigative independence in academic neurology. To facilitate the mentoring sessions, attendees are asked to identify their interest in basic or clinical research and their specific area of interest/disease state and come prepared with specific topics they would like to discuss with NINDS leadership and leaders in neurology from around the country.

Upon Completion:
Participants should have the essential information about: the core components of a successful K award application and other career development grants; developing and maintaining productive mentor-mentee relationships; guidelines for development of a successful research career (finding the right question); strategies for successful scientific writing; and suggestions for addressing the competing demands that are common at the start of an academic career.

Lecture/Faculty:
- Keynote Address: Academic Neuroscience in the Modern Era
  Justin C. McArthur, MBBS, MPH, FAAN, Baltimore, MD
- Researcher Stories: K08 and K23 Awardees
  Myla Goldman, MD, Charlottesville, VA
  Stephen J. Kolb, MD, PhD, Columbus, OH
- Essential Features of a K Application
  Stephen J. Korn, PhD, Rockville, MD
- “Kiss of Death” K Features
  Gregory K. Bergey, MD, FAAN, Baltimore, MD
- Working with your Chair, Department and Mentors
  Robert L. MacDonald, MD, PhD, FAAN, Nashville, TN
- Lunch/Informal Mentorship Discussions
  Jaishri Blakeley, MD, Baltimore, MD
  Stephen J. Korn, PhD, Rockville, MD
  Walter J. Koroshetz, MD, FAAN, Bethesda, MD
  Conrad Weihl, MD, PhD, St. Louis, MO
- Breakout Sessions A and B
  Jaishri Blakeley, MD, Baltimore, MD
  Myla Goldman, MD, Charlottesville, VA
  Peter K. Todd, MD, PhD, Ann Arbor, MI
  Conrad Weihl, MD, PhD, St. Louis, MO

Clinical Research Track

This track offers suggested programs geared towards academic neurologists early in the development of a clinical research career or who are considering one.

Learn more at AAN.com/view/CRRTrack
• Pulling It All Together  
  Jaishi Blakeley, MD, Baltimore, MD  
  Conrad Weihl, MD, PhD, St. Louis, MO

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Didactic, Interactive, Audience Participation, Small Groups

CME Credits: 7.5

Recommended Audience: Trainee, Clinician Scientist Applying for Mentored Career Development Awards

C13  
Resident Basic Science II: Neuroanatomy

Saturday, April 18, 2015  
1:00 p.m.–5:00 p.m.

4 hours

Program Description: 
This course will present an organized and succinct overview of neuroanatomy. First, regional neurosciences will consider the organization and relationships of the specific regional zones of the nervous system. Second, systemic neurosciences will consider the functional systems, including the motor and sensory systems. These regional and systemic approaches reflect the need to obtain a firm background for the localization of problems in the nervous system (regional) and for accurate assessment of the nervous system in the neurological examination (systemic).

This program will cover regional neuroanatomy, including the telencephalon, diencephalon, brain stem, spinal cord, and peripheral nervous system; the motor system, including lower motor neurons, the corticospinal tract, the extrapyramidal system, the corticobulbar tract, cerebellum, and basal ganglia; and the sensory system, including somatosensory, trigeminal sensory, taste and visceral sensation, the auditory system, the vestibular system, and the visual system.

This program complements C5: Resident Basic Science I: Neuropathology and C30: Resident Basic Science III: Neuropharmacology, but covers independent topics.

Upon Completion:  
Participants should be more familiar with basic pharmacological concepts, including the vocabulary, the basic organization and connections, and the hierarchical relationships between major structures in the central and peripheral nervous systems. Participants should be able to better localize lesions along the neuraxis, which is the key to neurologic diagnosis.

Lecture/Faculty:
• Regional Neuroanatomy  
  Ralph F. Józefowicz, MD, FAAN, Rochester, NY
• Systemic Neuroanatomy I: Motor System  
  Ralph F. Józefowicz, MD, FAAN, Rochester, NY
• Systemic Neuroanatomy II: Sensory System  
  Ralph F. Józefowicz, MD, FAAN, Rochester, NY
• Systemic Neuroanatomy III: Special Senses  
  Ralph F. Józefowicz, MD, FAAN, Rochester, NY

Core Competency: Medical Knowledge
Teaching Style: Didactic
CME Credits: 3.75
Recommended Audience: Trainee, Advanced Practice Provider

C25  
Cognitive Psychology of Neurologic Errors: Chalk Talk

Sunday, April 19, 2015  
6:30 a.m.–8:00 a.m.

1.5 hours

Program Description: 
Neurology now has an “embarrassment of riches” when it comes to pharmacological treatment. As our understanding of the basic neurobiology of disease progresses, this pharmacopeia continues to expand and to involve novel agents. Faculty will review basic pharmacological principles important for medication selection as well as facilitate an expanded understanding of the treatment of epilepsy, movement disorders, and sleep disorders. Presentations will include discussion of drug targets and mechanisms punctuated by illustrative cases.

This program complements C5: Resident Basic Science I: Neuropathology and C13: Resident Basic Science II: Neuroanatomy, but covers independent topics.

Upon Completion:  
Participants should be more familiar with basic pharmacological concepts relevant to the clinical practice of neurology as well as an approach to medication selection for patients with epilepsy, movement disorders, and sleep disorders based on an understanding of pharmacological mechanisms of action and pharmacokinetics.

Lecture/Faculty:
• Overview of Neuropharmacology  
  Atul Maheshwari, MD, Houston, TX
• Pharmacological Tests of Anticonvulsant Drugs  
  Atul Maheshwari, MD, Houston, TX
• Pharmacological Treatment of Movement Disorders  
  Joohi Jimenez Shahed, MD, Houston, TX
• Pharmacological Treatment of Sleep Disorders  
  Matt T. Bianchi, MD, PhD, Boston, MA

Core Competency: Medical Knowledge
Teaching Style: Case-Based, Didactic, Audience Participation
CME Credits: 3.75
Recommended Audience: Trainee, General Neurologist, Non-Neurologist, Advanced Practice Provider
Course Descriptions

**C170**
**Sunday, April 19, 2015**
*8:00 a.m.–12:00 p.m.*
4 hours

**Clinical Research: Introduction and Methods**

**Topic:** Research Methodology, Education, and History  
**Director:** Walter A. Rocca, MD, MPH, Rochester, MN

**Program Description:**
The complex building of current clinical research continues to stand on three methodological pillars—the clinical trial, the cohort study, and the case-control study. These three methods, along with their combinations and modifications, enable us to investigate any possible cause-effect relationship across 1) biological, personal, or social factors or events, 2) symptoms, diseases, or conditions, and 3) treatments, procedures, or interventions. This program provides a brief introduction to the three methods with emphasis on their complementarities and their relative strengths and weaknesses.

**Upon Completion:**
Participants should have a better understanding of how evidence is generated and disseminated in clinical neurology. Participants should improve their ability to design, conduct, and interpret studies, and to write and read scientific papers and grant applications.

**Lecture/Faculty:**
- Introduction to Study Design  
  Walter A. Rocca, MD, MPH, Rochester, MN  
- Clinical Trial Design  
  E. Ray Dorsey, MD, MBA, Rochester, NY  
- Cohort Studies  
  Stephen K. Van Den Eeden, PhD, Oakland, CA  
- Case-Control Studies  
  Walter A. Rocca, MD, MPH, Rochester, MN

**Core Competency:** Interpersonal and Communication Skills, Medical Knowledge, Professionalism

**Teaching Style:** Didactic

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**C172**
**Sunday, April 19, 2015**
*1:00 p.m.–5:00 p.m.*
4 hours

**Clinical Research: Drug Development and Clinical Trials**

**Topic:** Research Methodology, Education, and History  
**Director:** Wendy R. Galpern, MD, PhD, FAAN, Bethesda, MD

**Program Description:**
Translating scientific discoveries into effective therapeutics is a lengthy, costly, and challenging process, particularly in neuroscience. Academic, industry, and regulatory representatives will address challenges and opportunities in the treatment of neurological disorders and discuss decision points in the drug development process from discovery through clinical trials. Faculty will facilitate a discussion with the attendees on how to advance laboratory findings to novel therapies.

**Upon completion:**
Attendees should have an increased understanding of the steps involved in drug discovery and development as well as the challenges inherent to each stage. Additionally, attendees will learn about clinical trial design considerations and regulatory perspectives.

**Lecture/Faculty:**
- Target Selection and Drug Discovery  
  Peter Lansbury, PhD, Boston, MA  
- Early Stage Development: Decisions and Challenges  
  Steven M. Paul, MD, New York, NY  
- Late Stage Development: Decisions and Challenges  
  Ira Shoulson, MD, FAAN, Washington, DC  
- Clinical Trial Design Considerations  
  Christopher Coffey, PhD, Iowa City, IA  
- Regulatory Perspectives  
  Wilson W. Bryan, MD, Rockville, MD

**Core Competency:** Medical Knowledge

**Teaching Style:** Didactic, Interactive, Audience Participation

**CME Credits:** 3.75

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

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**C39**
**Sunday, April 19, 2015**
*9:00 a.m.–5:00 p.m.*
8 hours

**Leadership for Women**

**Topic:** Practice, Policy, and Ethics; Research Methodology, Education, and History  
**Directors:** Allison Brashear, MD, MBA, FAAN, Winston Salem, NC; Barbara L. Hoese, President, Pentecore Coaching, Minneapolis, MN

**Program Description:**
The relationship between great musical masters and neurological disease will be examined through short portraits and pathographies, along with samples of recorded and live music. Presentations will discuss the influence of those disorders on composers’ creativity. The faculty invite you to join them in a memorable gathering of people who share the same passion and enthusiasm for both neurology and music.

**Upon Completion:**
Participants should be able to identify neurological illnesses that have occurred in famous composers; discuss the relationship between the medical disorder and musicianship; examine vignettes of great musicians and discover the history of neurology; and enhance music appreciation by discussions of the artist’s biopathographies.

**C58**
**Monday, April 20, 2015**
*6:30 a.m.–8:00 a.m.*
1.5 hours

**Neurological Disorders of Famous Composers**

**Topic:** Research Methodology, Education, and History  
**Director:** Phillip L. Pearl, MD, FAAN, Boston, MA

**Program Description:**
The relationship between great musical masters and neurological disease will be examined through short portraits and pathographies, along with samples of recorded and live music. Presentations will discuss the influence of those disorders on composers’ creativity. The faculty invite you to join them in a memorable gathering of people who share the same passion and enthusiasm for both neurology and music.

**Upon Completion:**
Participants should be able to identify neurological illnesses that have occurred in famous composers; discuss the relationship between the medical disorder and musicianship; examine vignettes of great musicians and discover the history of neurology; and enhance music appreciation by discussions of the artist’s biopathographies.

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2015 AAN Annual Meeting Registration and Advance Program
Lecture/Faculty:
- Vascular Disease in Great Composers
  Tomislav Breitenfeld, MD, MS, Zagreb, Croatia
- Breaking Barriers in Neuro-mythology; Beethoven's Deafness, Schumann's Madness, Porter's Pain, Gershwin's Uncinate Seizures
  Phillip L. Pearl, MD, FAAN, Boston, MA

Core Competency:  Medical Knowledge
Teaching Style:  Audience Participation, Didactic, Interactive, Live performance, Case-Based
CME Credits:  1.5
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Musicians, Advanced Practice Provider

Program Description:
The symposium will address clinical reasoning at all levels of the health care system from novice (patient) to expert. The methodologies by which providers engage in clinical reasoning will be explored, including the different approaches used by providers starting their careers and those who are experts in their field. An abbreviated method of clinical reasoning will be discussed, along with medical errors and how they occur using a system known as 'root cause analysis' first developed by NASA. Guest speaker Dr. Dan Morrow will discuss 'Heath literacy, cognition, and patient medication adherence: Implications for patient/provider communication.' Participants will have an opportunity for questions and answers with the speakers. In addition, awards will be bestowed upon physicians who have made significant contributions to neurology education. Participants are encouraged to attend the antecedent poster session.

Upon Completion:
Participants should be able to identify the core processes involved in learning and clinical decision-making. Barriers to optimizing learning and clinical decision-making will be discussed. Educational modeling and the use of Crew Resource Management (CRM) techniques will be proposed as a means of overcoming these barriers. Methodologies such as continuous process improvement will be advocated as a means of further refining these approaches. Participants should also be able to implement these techniques for their students as well as for themselves.

Lecture/Faculty:
- Presentation of A.B. Baker Award for Lifetime Achievement in Neurologic Education to Eduardo Benarroch
  Daniel L. Menkes, MD, FAAN, Royal Oak, MI
- Reflections From a Trajectory on Neurologic Education
  Eduardo E. Benarroch, MD, Rochester, MN
- Presentation of A.B. Baker Teacher Recognition Awards
  Daniel L. Menkes, MD, FAAN, Royal Oak, MI
- From Naive to Expert: A Metacognitive Perspective of the Art and Science of Clinical Reasoning
  Peter R. Bergethon, MD, Boston, MA
- How Can We Teach Clinical Reasoning with Prevention of Medical Errors as an Outcome?
  Daniel L. Menkes, MD, FAAN, Royal Oak, MI
- Health Literacy, Cognition, and Patient Medication Adherence: Implications for Patient/Provider Communication
  Phillip L. Pearl, MD, FAAN, Boston, MA

Core Competencies:  Interpersonal and Communication Skills, Patient Care, Systems-Based Practice
Teaching Style:  Interactive, Case-Based, Didactic
CME Credits:  3.5
Recommended Audience:  Educators

C173  Monday, April 20, 2015  8:30 a.m.–12:00 p.m.  3.5 hours
Clinical Reasoning: From a Novice to an Expert

Topic: Research Methodology, Education, and History
Director: Daniel L. Menkes, MD, FAAN, Royal Oak, MI

Program Description:
The symposium will address clinical reasoning at all levels of the health care system from novice (patient) to expert. The methodologies by which providers engage in clinical reasoning will be explored, including the different approaches used by providers starting their careers and those who are experts in their field. An abbreviated method of clinical reasoning will be discussed, along with medical errors and how they occur using a system known as 'root cause analysis' first developed by NASA. Guest speaker Dr. Dan Morrow will discuss 'Heath literacy, cognition, and patient medication adherence: Implications for patient/provider communication.' Participants will have an opportunity for questions and answers with the speakers. In addition, awards will be bestowed upon physicians who have made significant contributions to neurology education. Participants are encouraged to attend the antecedent poster session.

Upon Completion:
Participants should be able to identify the core processes involved in learning and clinical decision-making. Barriers to optimizing learning and clinical decision-making will be discussed. Educational modeling and the use of Crew Resource Management (CRM) techniques will be proposed as a means of overcoming these barriers. Methodologies such as continuous process improvement will be advocated as a means of further refining these approaches. Participants should also be able to implement these techniques for their students as well as for themselves.

Lecture/Faculty:
- Presentation of A.B. Baker Award for Lifetime Achievement in Neurologic Education to Eduardo Benarroch
  Daniel L. Menkes, MD, FAAN, Royal Oak, MI
- Reflections From a Trajectory on Neurologic Education
  Eduardo E. Benarroch, MD, Rochester, MN
- Presentation of A.B. Baker Teacher Recognition Awards
  Daniel L. Menkes, MD, FAAN, Royal Oak, MI
- From Naive to Expert: A Metacognitive Perspective of the Art and Science of Clinical Reasoning
  Peter R. Bergethon, MD, Boston, MA
- How Can We Teach Clinical Reasoning with Prevention of Medical Errors as an Outcome?
  Daniel L. Menkes, MD, FAAN, Royal Oak, MI
- Health Literacy, Cognition, and Patient Medication Adherence: Implications for Patient/Provider Communication
  Phillip L. Pearl, MD, FAAN, Boston, MA

Core Competencies:  Interpersonal and Communication Skills, Patient Care, Systems-Based Practice
Teaching Style:  Interactive, Case-Based, Didactic
CME Credits:  3.5
Recommended Audience:  Educators

C173  Monday, April 20, 2015  8:30 a.m.–12:00 p.m.  3.5 hours
Clinical Reasoning: From a Novice to an Expert

Topic: Research Methodology, Education, and History
Director: Daniel L. Menkes, MD, FAAN, Royal Oak, MI

Program Description:
The symposium will address clinical reasoning at all levels of the health care system from novice (patient) to expert. The methodologies by which providers engage in clinical reasoning will be explored, including the different approaches used by providers starting their careers and those who are experts in their field. An abbreviated method of clinical reasoning will be discussed, along with medical errors and how they occur using a system known as 'root cause analysis' first developed by NASA. Guest speaker Dr. Dan Morrow will discuss 'Heath literacy, cognition, and patient medication adherence: Implications for patient/provider communication.' Participants will have an opportunity for questions and answers with the speakers. In addition, awards will be bestowed upon physicians who have made significant contributions to neurology education. Participants are encouraged to attend the antecedent poster session.

Upon Completion:
Participants should be able to identify the core processes involved in learning and clinical decision-making. Barriers to optimizing learning and clinical decision-making will be discussed. Educational modeling and the use of Crew Resource Management (CRM) techniques will be proposed as a means of overcoming these barriers. Methodologies such as continuous process improvement will be advocated as a means of further refining these approaches. Participants should also be able to implement these techniques for their students as well as for themselves.
questions to be used for their research projects; identify possible qualitative tools that can be used to investigate their questions; and describe when those tools are most appropriate.

Lecture/Faculty:
- Debate: Is Qualitative Research Soft Science?
  Ann N. Poncelet, MD, San Francisco, CA
  Mitchell S. V. Elkind, MD, MS, FAAN, New York, NY
- Applying Qualitative Research Methods to Neurology Education: An Interactive Workshop
  Janet P. Hafler, PhD, New Haven, CT

Core Competencies: Interpersonal and Communication Skills, Medical Knowledge, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

Teaching Style: Case-Based, Didactic, Interactive, Audience Participation

CME Credits: 2.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist

C91 Tuesday, April 21, 2015 6:30 a.m.–8:00 a.m. 1.5 hours

Career Development for Clinician Educators

Topic: Research Methodology, Education, and History
Director: Allison Brashear, MD, MBA, FAAN, Winston Salem, NC

Program Description:
There is growing recognition of the need for clinician educators in academic neurology departments but few resources offering guidance to individuals interested in this career path. Faculty will address such topics as which departmental responsibilities to seek (e.g., residency program director, clerkship director, preclinical course director), other activities to pursue (e.g., multimedia educational resource development, clinical articles, book chapters, education research, participation in national organizations), how to be effective in those activities, and how to document educational productivity. The format will be lecture and case-based vignettes.

Upon Completion:
Participants should understand which activities and responsibilities in an academic neurology department are most likely to be productive for career development as a clinician educator, how to negotiate for those assignments and for the resources necessary to fulfill them, and how to document accomplishments and productivity.

Lecture/Faculty:
- Want to Be a Clinician Educator? Planning and Execution
  Joseph E. Safdieh, MD, FAAN, New York, NY
- Want to Be a Clinician Educator? Working with Your Chair
  Allison Brashear, MD, MBA, FAAN, Winston Salem, NC
- Vignettes on How to Get Started as an Educator
  Allison Brashear, MD, MBA, FAAN, Winston Salem, NC
  Joseph E. Safdieh, MD, FAAN, New York, NY
- Vignettes on How to Work with Your Chair to Get Funded, Promoted, and Involved in National Activities
  Allison Brashear, MD, MBA, FAAN, Winston Salem, NC
  Joseph E. Safdieh, MD, FAAN, New York, NY

Core Competencies: Medical Knowledge

Teaching Style: Didactic

CME Credits: 3.75

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C107 Wednesday, April 22, 2015 2:00 p.m.–6:00 p.m. 4 hours

History of Neurology: The History of Neurologic Disease from Cortex to Peripheral Nerve

Topic: Research Methodology, Education, and History
Director: Christopher J. Boes, MD, FAAN, Rochester, MN

Program Description:
The history of neurologic disorders dates back many centuries. A working knowledge of the history of disease enhances the education of students, residents, and colleagues. Faculty will provide a focused history of several important disorders of the nervous system involving cortex to peripheral nerve, including Alzheimer’s disease, epilepsy, stroke, encephalitis lethargica, and peripheral neuropathy. The speakers will review the history of the disorder by discussing giants in the field, significant advances in understanding of the disorder, and the history of disease treatment. Archival video and audio will supplement the presentations when available. Participants will gain a critical perspective on contemporary neurology by learning how physicians diagnosed and treated neurologic disease in the past. This historical information can be used readily on rounds, to help trainees appreciate important points in the history, exam, case synthesis, and treatment plan.

Upon Completion:
Participants should be able to discuss the history of the Alzheimer’s disease, epilepsy, stroke, encephalitis lethargica, and peripheral neuropathy; describe how physicians diagnosed and treated neurologic disease in the past; and demonstrate how history contributes to the ways we think about and classify neurologic diseases.

Lecture/Faculty:
- The History of Alzheimer’s Disease
  Victor W. Henderson, MD, FAAN, Stanford, CA
- The History of Epilepsy
  Edward J. Fine, MD, FAAN, Buffalo, NY
- The History of Stroke
  Peter J. Koehler, MD, PhD, FAAN, Heerlen, Netherlands
- The History of Encephalitis Lethargica
  Christina L. Vaughan, MD, MHS, Charleston, SC
- The History of Peripheral Neuropathy
  Douglas J. Lanska, MD, FAAN, Tomah, WI

Core Competency: Medical Knowledge

Teaching Style: Didactic

CME Credits: 1.5

Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist
Sleep

C33  Sunday, April 19, 2015
8:00 a.m.–12:00 p.m.  4 hours

Hot Topics in Sleep Neurology

Topic:  Sleep
Director:  Michael H. Silber, MB, ChB, FAAN, Rochester, MN

Program Description:
The understanding of sleep disorders is advancing rapidly. Due to the intimate relationship between sleep and brain disorders, neurologists managing patients with sleep disorders should familiarize themselves with new hot topics in sleep medicine. Faculty will explore five areas in which there is exciting progress in understanding and managing sleep disorders. Faculty will cover the role of the multiple sleep latency test in the diagnosis of hypersomnias, recent progress on solving the age-old riddle of why we sleep, the relationship between auto-immune disorders and sleep pathologies, current concepts of parasomnias, and the management of complex restless legs syndrome.

Upon Completion:
Participants should have greater understanding of the role of the multiple sleep latency test, and the management of complex restless legs syndrome. Participants should understand better the reasons why we sleep. They should develop insights into diagnosis and management of parasomnias and auto-immune sleep disorders.

Lecture/Faculty:
- The Role of the Multiple Sleep Latency Test
  Michael H. Silber, MB, ChB, FAAN, Rochester, MN
- Why Do We Sleep?
  Phyllis C. Zee, MD, PhD, Chicago, IL
- Autoimmune Disorders and Sleep
  Alex Iranzo, MD, Barcelona, Spain
- Management of Complex Restless Legs Syndrome
  Michael H. Silber, MB, ChB, FAAN, Rochester, MN
- Current Concepts of the Parasomnias
  Alon Y. Avidan, MD, MPH, FAAN, Los Angeles, CA

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style:  Case-Based, Didactic
CME Credits:  3.75
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C62  Monday, April 20, 2015
8:00 a.m.–11:00 a.m.  3 hours

Interpretation of Polysomnography for the Practicing Neurologist

Topic:  Sleep
Director:  Alon Y. Avidan, MD, MPH, FAAN, Los Angeles, CA

Program Description:
Neurologists increasingly order sleep studies, which requires familiarity with the type of studies available and when and how to order specialized studies. The objective of this course is to review the key sleep study findings in patients referred importance sleep disorders comorbid in neurological patients. Faculty will discuss the interpretation of sleep tests, including in-laboratory polysomnography, portable sleep studies, multiple sleep latency tests, actigraphy, and other specialized sleep testing for patients with nocturnal seizures and parasomnias. Faculty will focus on indications for sleep testing; interpretation of tests; and key electrographic findings in major sleep disorders encountered in neurology practice, including sleep apnea, narcolepsy, movement disorders of sleep and complex nocturnal behaviors. A clinical case-based method will be used, with examples of sleep recordings and video illustrations to help illustrate and reinforce the important concepts in sleep neurology.

C49  Sunday, April 19, 2015
1:00 p.m.–5:00 p.m.  4 hours

Approach to Sleep Symptoms: Sleepy or Sleepless

Topic:  Sleep
Director:  Raman K. Malhotra, MD, St. Louis, MO

Program Description:
Sleep medicine is an integral part of clinical neurology, and neurologists should play a pivotal role in the evaluation and management of patients with sleep complaints. Many patients with neurologic diseases also have sleep disorders that present as excessive daytime sleepiness, insomnia, or disrupted sleep at night. Addressing the underlying sleep disorder not only improves quality of life, but many times improves the underlying neurologic condition. Faculty will provide knowledge needed to recognize and manage key sleep disorders, including obstructive sleep apnea, narcolepsy, idiopathic hypersomnia, insomnia, restless legs syndrome, and circadian rhythm disorders.

Upon Completion:
Participants should be able to develop strategies for diagnosis and assessment of patients with sleep complaints (hypersomnia, insomnia) likely to be encountered by neurologists. They should become familiar with commonly used screening tools and diagnostic tests (multiple sleep latency tests, actigraphs, out-of-center testing, attended overnight sleep studies) used in sleep medicine. Participants should be able to manage and treat common sleep disorders, such as restless legs syndrome, narcolepsy, insomnia, sleep apnea, and circadian rhythm disorders.

Lecture/Faculty:
- Evaluation of the Sleepy Patient
  Michael Eric Yurcheshen, MD, Rochester, NY
- Management of the Sleepy Patient
  Raman K. Malhotra, MD, St. Louis, MO
- Evaluation of the Sleepless/Restless Patient
  Phyllis C. Zee, MD, PhD, Chicago, IL
- Treatment of the Sleepless/Restless Patient
  Charlene Gamaldo, MD, Baltimore, MD

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style:  Case-Based, Didactic
CME Credits:  3.75
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C49  Sunday, April 19, 2015
1:00 p.m.–5:00 p.m.  4 hours

Approach to Sleep Symptoms: Sleepy or Sleepless

Topic:  Sleep
Director:  Raman K. Malhotra, MD, St. Louis, MO

Program Description:
Sleep medicine is an integral part of clinical neurology, and neurologists should play a pivotal role in the evaluation and management of patients with sleep complaints. Many patients with neurologic diseases also have sleep disorders that present as excessive daytime sleepiness, insomnia, or disrupted sleep at night. Addressing the underlying sleep disorder not only improves quality of life, but many times improves the underlying neurologic condition. Faculty will provide knowledge needed to recognize and manage key sleep disorders, including obstructive sleep apnea, narcolepsy, idiopathic hypersomnia, insomnia, restless legs syndrome, and circadian rhythm disorders.

Upon Completion:
Participants should be able to develop strategies for diagnosis and assessment of patients with sleep complaints (hypersomnia, insomnia) likely to be encountered by neurologists. They should become familiar with commonly used screening tools and diagnostic tests (multiple sleep latency tests, actigraphs, out-of-center testing, attended overnight sleep studies) used in sleep medicine. Participants should be able to manage and treat common sleep disorders, such as restless legs syndrome, narcolepsy, insomnia, sleep apnea, and circadian rhythm disorders.

Lecture/Faculty:
- Evaluation of the Sleepy Patient
  Michael Eric Yurcheshen, MD, Rochester, NY
- Management of the Sleepy Patient
  Raman K. Malhotra, MD, St. Louis, MO
- Evaluation of the Sleepless/Restless Patient
  Phyllis C. Zee, MD, PhD, Chicago, IL
- Treatment of the Sleepless/Restless Patient
  Charlene Gamaldo, MD, Baltimore, MD

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style:  Case-Based, Didactic
CME Credits:  3.75
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C49  Sunday, April 19, 2015
1:00 p.m.–5:00 p.m.  4 hours

Approach to Sleep Symptoms: Sleepy or Sleepless

Topic:  Sleep
Director:  Raman K. Malhotra, MD, St. Louis, MO

Program Description:
Sleep medicine is an integral part of clinical neurology, and neurologists should play a pivotal role in the evaluation and management of patients with sleep complaints. Many patients with neurologic diseases also have sleep disorders that present as excessive daytime sleepiness, insomnia, or disrupted sleep at night. Addressing the underlying sleep disorder not only improves quality of life, but many times improves the underlying neurologic condition. Faculty will provide knowledge needed to recognize and manage key sleep disorders, including obstructive sleep apnea, narcolepsy, idiopathic hypersomnia, insomnia, restless legs syndrome, and circadian rhythm disorders.

Upon Completion:
Participants should be able to develop strategies for diagnosis and assessment of patients with sleep complaints (hypersomnia, insomnia) likely to be encountered by neurologists. They should become familiar with commonly used screening tools and diagnostic tests (multiple sleep latency tests, actigraphs, out-of-center testing, attended overnight sleep studies) used in sleep medicine. Participants should be able to manage and treat common sleep disorders, such as restless legs syndrome, narcolepsy, insomnia, sleep apnea, and circadian rhythm disorders.

Lecture/Faculty:
- Evaluation of the Sleepy Patient
  Michael Eric Yurcheshen, MD, Rochester, NY
- Management of the Sleepy Patient
  Raman K. Malhotra, MD, St. Louis, MO
- Evaluation of the Sleepless/Restless Patient
  Phyllis C. Zee, MD, PhD, Chicago, IL
- Treatment of the Sleepless/Restless Patient
  Charlene Gamaldo, MD, Baltimore, MD

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style:  Case-Based, Didactic
CME Credits:  3.75
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider

C49  Sunday, April 19, 2015
1:00 p.m.–5:00 p.m.  4 hours

Approach to Sleep Symptoms: Sleepy or Sleepless

Topic:  Sleep
Director:  Raman K. Malhotra, MD, St. Louis, MO

Program Description:
Sleep medicine is an integral part of clinical neurology, and neurologists should play a pivotal role in the evaluation and management of patients with sleep complaints. Many patients with neurologic diseases also have sleep disorders that present as excessive daytime sleepiness, insomnia, or disrupted sleep at night. Addressing the underlying sleep disorder not only improves quality of life, but many times improves the underlying neurologic condition. Faculty will provide knowledge needed to recognize and manage key sleep disorders, including obstructive sleep apnea, narcolepsy, idiopathic hypersomnia, insomnia, restless legs syndrome, and circadian rhythm disorders.

Upon Completion:
Participants should be able to develop strategies for diagnosis and assessment of patients with sleep complaints (hypersomnia, insomnia) likely to be encountered by neurologists. They should become familiar with commonly used screening tools and diagnostic tests (multiple sleep latency tests, actigraphs, out-of-center testing, attended overnight sleep studies) used in sleep medicine. Participants should be able to manage and treat common sleep disorders, such as restless legs syndrome, narcolepsy, insomnia, sleep apnea, and circadian rhythm disorders.

Lecture/Faculty:
- Evaluation of the Sleepy Patient
  Michael Eric Yurcheshen, MD, Rochester, NY
- Management of the Sleepy Patient
  Raman K. Malhotra, MD, St. Louis, MO
- Evaluation of the Sleepless/Restless Patient
  Phyllis C. Zee, MD, PhD, Chicago, IL
- Treatment of the Sleepless/Restless Patient
  Charlene Gamaldo, MD, Baltimore, MD

Core Competencies:  Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice
Teaching Style:  Case-Based, Didactic
CME Credits:  3.75
Recommended Audience:  Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist, Advanced Practice Provider
This program will utilize an Audience Response System.

Upon Completion:
Participants should be able to: gain familiarity with the rationale for polysomnography in the assessment and evaluation of patients with hypersomnia, insomnia, and abnormal nocturnal behaviors and movements; select appropriate sleep studies in the investigation of key sleep disorders, and become familiar with the key electrographic criteria for sleep apnea, narcolepsy, motor disorders of sleep, and parasomnias; describe and differentiate among the key sleep-related respiratory disorders, parasomnias and sleep-related movement disorders likely to be encountered by a neurologist; enhance competency in the interpretation of the polysomnography and multiple sleep latency testing in the evaluation of narcolepsy and become familiar with the use of actigraphy in the monitoring of sleep-wake schedule disorders; strengthen clinical skills in the recognition and classification of abnormal behaviors and movements during the night through video and polysomnographic examples highlighting unique semiology; and appreciate some of the criteria listed in the International Classification of Sleep Disorders, the American Academy of Sleep Medicine (AASM) Manual for the Scoring of Sleep in the diagnosis of key sleep disorders including sleep apnea, narcolepsy, motor disorders of sleep, and parasomnias.

Lecture/Faculty:
- Testing and Tools to Evaluate Sleep Apnea and Insomnia
  Raman K. Malhotra, MD, St. Louis, MO
- Objective Testing in Narcolepsy and its Confounders
  Douglas B. Kirsch, MD, Charlotte, NC

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Interactive, Audience Participation
CME Credits: 3
Recommended Audience: Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist

REM Sleep Behavior Disorder

Topic: Sleep
Director: Alon Y. Avidan, MD, MPH, FAAN, Los Angeles, CA

Program Description:
Neurologists frequently encounter patients who present with dream enactment behavior in the setting of rapid eye movement (REM) sleep behavior disorder (RBD). Unfortunately, formal training for neurologists in sleep medicine is sometimes limited, leading to inadequate recognition, evaluation, and management of this disorder, contributing to misclassification and delayed treatment. Recent data reveals that in the majority of cases, RBD may be a biomarker of an evolving alpha-synucleinopathies and diagnosis of this parasomnia is important to establish a risk, and in some cases, confirm diagnosis.

The purpose of this program is to provide practicing neurologists with the tools needed to recognize, diagnose and treat RBD, respecting both the clinical and scientific perspectives of the disease, while maintaining sensitivity to the psychosocial impact from a patient’s perspective.

The unique aspect of this educational session is the integration of a patient with RBD and his bed partner. Discussion will focus on the initial presentation of violent dream enactment and impact on quality of life. Participants will be able to appreciate the measures that patients with RBD sometimes endure due to injurious nighttime activity. The innovative integration of a live patient in this seminar will offer attendees a newfound perspective in employing interview techniques of patients with RBD and their family members. We hope to engage course participants in developing their techniques of patient and family counseling, especially with respect to prognostic implications.

Upon Completion:
Participants should be able to: improve their confidence in recognizing the presenting signs and symptoms of REM sleep behavior disorder; using the patient perspective, be better equipped with strategies for improved recognition of the impact of RBD, becoming aware of an initial attempt to cope with aggressive dream enactment to successful amelioration of the episodes with specific therapy; utilize the case presentation to enhance competency in RBD diagnostic criteria, differential diagnosis, pathophysiology, and evidence-based therapy, especially with respect to safety intervention and prognostic implication; and describe the prognostic value of RBD, discuss the condition with patients and family members, and disclose its implication in a supportive manner.

Lecture/Faculty:
- Introduction to the Course and Patient Format
  Alon Y. Avidan, MD, MPH, FAAN, Los Angeles, CA
- REM Sleep Behavior Disorder: Patient Interview, Clinical Features, Diagnosis, and Treatment
  Alon Y. Avidan, MD, MPH, FAAN, Los Angeles, CA
- Pathophysiology and Current Understanding of RBD
  Bradley F. Boeve, MD, Rochester, MN

Core Competencies: Medical Knowledge, Patient Care
Teaching Style: Case-Based, Didactic, Interactive

“I’ve been here many times. I am a general neurologist and the courses are great refreshers. I choose a different clinical focus each year I come to get the most of my time.”

2014 Meeting Attendee

Nina De Klippel, MD
Sint-Truiden, Belgium
C140  
Friday, April 24, 2015  
8:00 a.m.–12:00 p.m.  
4 hours

Sleep for the Practicing Neurologist

**Topic:** Sleep  
**Director:** Michael J. Howell, MD, Minneapolis, MN

**Program Description:**  
Sleep occupies one-third of our lives and serves to revitalize brain function. Sleep disorders are common among patients with neurologic disease and provide clinicians with unique therapeutic opportunities. Faculty will focus upon practical aspects of clinical sleep medicine in a general neurology practice. These include: sleep disorders among patients with multiple sclerosis; the reciprocal relationship between sleep-disordered breathing and cerebrovascular disease; and the diagnostic challenges and new therapeutic opportunities in the management of patients with hypersomnia. Recent discoveries into the evolution and function of sleep will be presented. These insights provide a novel perspective on the role of sleep and circadian rhythms in brain disease and imply a upcoming revolution in neurotherapeutics.

**Upon Completion:**  
Participants should learn about the evolution of sleep and circadian rhythms over the last 4.5 billion years and be able to describe recent discoveries in the function of NREM and REM sleep. Participants should also recognize the role that obstructive sleep apnea and restless legs syndrome play in multiple sclerosis-related fatigue; define the utilities and the limitations of the standard clinical evaluation for hypersomnia as well as learn about new therapeutic strategies for the sleepy patient. Participants should also have an up-to-date review of the dual relationship between stroke and sleep disorders.

**Lecture/Faculty:**  
- Beyond Fatigue: Sleep Disorders in Multiple Sclerosis  
  Tiffany Braley, MD, Ann Arbor, MI  
- On Somnolence: A Neurologist’s Guide to the Evolution and Function of Sleep  
  Michael J. Howell, MD, Minneapolis, MN  
- Hypersomnolence: New Insights and Novel Therapies  
  Lynn-Marie Trotti, MD, Atlanta, GA  
- The Resting Brain: An Update on Sleep and Stroke  
  Pablo R. Castillo, MD, Jacksonville, FL

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

**Teaching Style:** Case-Based, Didactic, Audience Participation

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Sleep Physician

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C156  
Saturday, April 25, 2015  
6:30 a.m.–8:00 a.m.  
1.5 hours

**Neuro Flash: Sleep Medicine**  
**Topic:** Sleep  
**Director:** Charlene Gamaldo, MD, Baltimore, MD

**Program Description:**  
Using an audience-response system, faculty will feature interactive format for presenting new trends and updates on the evaluation, treatment, and ongoing management considerations of sleep conditions commonly encountered in the general neurology practice. Neurologists frequently encounter patients who report disturbed sleep. Because few neurologists receive formal training in sleep medicine, sleep problems can be among the most challenging to diagnose and treat. Using a news flash style format, short cases and clinical challenges will be presented as the basis for updating participants on new developments in sleep medicine.

**Upon Completion:**  
Participants should be able to update their knowledge of management strategies, diagnostic tools, and therapeutic options for common sleep disorders (insomnia, RLS, insufficient sleep, sleep apnea, etc.).

**Lecture/Faculty:**  
- Sleep Well = Live Longer (Updates on Short- and Long-term Impact of Poor Sleep)  
  Charlene Gamaldo, MD, Baltimore, MD  
- Gadgets in Evaluation and Treatment (HST, Auto Pap, Hypoglossal Nerve Stimulator, Behavioral Techniques, Apps, Telemedicine, Etc.)  
  Rachel Marie E. Salas, MD, Baltimore, MD  
- Sleep Gimmicks (Truth Behind Latest Diagnostic and Treatment Devices)  
  Charlene Gamaldo, MD, Baltimore, MD

**Core Competencies:** Interpersonal and Communication Skills, Medical Knowledge, Patient Care, Practice-Based Learning and Improvement, Professionalism

**Teaching Style:** Case-Based, Interactive, Audience Participation

**CME Credits:** 1.5

**Recommended Audience:** Trainee, General Neurologist, Specialist Neurologist, Non-Neurologist
NEW! **Introducing I Talks**

INCLUDED WITH YOUR ANNUAL MEETING REGISTRATION!

I Talks is your destination for a lively, supplemental new Annual Meeting learning experience through a variety of lectures, presentations, group discussions, and hands-on activities using advanced multimedia formats that bring learning to life!

Look for these exciting 1-2 hour presentations taking place throughout the week in the new “Innovation Room” in the Walter E. Washington Convention Center.

Learn more at [AAN.com/view/ITalk](http://AAN.com/view/ITalk)

New presentations will added throughout the meeting, so check back often!
Saturday

Web, Apps and Social Media: There’s an AAN Tool for That—
This highly interactive session will help attendees learn:
- How to download, navigate, and use the AAN Annual Meeting app
- How to update and customize AAN.com
- About useful content on AAN.com
- What a QR code is, how to download a QR code scanner, and how to use a QR code to download content
- About social media apps like Twitter, how to download and set up an account, why some physicians find it useful, how to use it to interact with the AAN Annual Meeting attendees, etc.
- How to download and use the Neurology® app for tablet devices

Sunday

EMG Resources—This 30 minute session, led by Devon I. Rubin, MD, FAAN, will demonstrate two new downloadable EMG interactive products.

BRAINS Session—Hosted by the Business and Research Administrators in Neurology Society, this two-hour interactive session will facilitate discussions on how to most effectively incorporate Advance Practice Providers in your practice. Speakers will also assist attendees in deciphering quality metrics, explaining how it can be used to your benefit when negotiating with payers.

First Timers Session—Tailored for first-time Annual Meeting attendees, this 30-minute session will include an overview of the meeting, what’s included with your registration fee, networking opportunities, and tips on how to use the meeting app.

Neurology Leadership and Innovation in High Value Care: A Series of Cases—This two-hour session will highlight findings from the AAN’s recent studies in the value of neurology; learn how neurologists are succeeding in transitioning to high quality, lower cost care; and strategize for the future of health care payment and delivery.

Quality Improvement—This dynamic 30-minute presentation will explain quality measures, how data and measures can drive improvement in practice, where a provider gets started on implementing QI in practice, and what to do with patient experience scores. The session will also include an opportunity for attendees to interact and troubleshoot with expert physicians and staff.

Monday

AAN Business Meeting—All AAN members are invited to attend the meeting to take part in Academy business. Join your colleagues and vote on the 2015-2017 Board of Directors.

Is AAN Member Participation in Physician-Assisted Suicide Ethical?—This session, presented by the Ethics, Law and Humanities Committee, will address the definition, ethical framework, and current legal landscape of Physician-Assisted Suicide.

Conquering ICD-10—As of October 1, 2015, the ICD-10 code set will be required for all transactions involving reimbursement from the Center for Medicare and Medicaid Services, as well as third-party payers. This session will address the importance of ICD-10, coding basics for the most common neurologic disorders, electronic resources, and preparation of office business procedures to accommodate ICD 10.

AAN’s Registry: Data Powering Neurology’s Future—This one-hour session will serve as the first opportunity to inform members of the AAN’s registry initiative. The speaker will provide an overview of the AAN’s new registry, including its purpose, value to members, value to the AAN, timeline, and next steps, and attendees will have an opportunity to view a demo and ask questions.

Wednesday

First Timers Session—Tailored for first-time Annual Meeting attendees, this 30-minute session will include an overview of the meeting, what’s included with your registration fee, networking opportunities, and tips on how to use the meeting app.

Emerging Science—Join the Science Committee as they present the Emerging Science abstracts in a data blitz format.

Additional programs may include:
- Tips on giving multimedia presentations
- PowerPoint
- How to affectively lobby
- Tips on giving scientific presentations

Check back often at AAN.com/view/ITalk for schedule updates!
Highlights for Students, Residents, and Fellows

The AAN Annual Meeting is an ideal setting for students, residents, and fellows to gain exposure to a variety of interests and career disciplines, as well as network with leading neurologists and neurology professionals from around the world.

Registration

FREE for Medical Students
Annual Meeting Registration is FREE to medical students, graduate students, and PhD candidates who present a student ID card or are AAN members.

Only $100 for Junior Residents and Junior Fellows
Annual Meeting Registration is only $100 (a $740 savings from nonmember neurologist registration!) before the March 27, 2015, early registration deadline.

Registration Packages
This year, we have three registration options available to attendees. As students and juniors, you receive deep discounts on registration options. Choose the package that works for you!

- Meeting Registration—education courses available for an additional fee
- Silver Registration Package*—includes all your education courses at one flat rate
- Gold Registration Package*—includes Silver Registration Package plus Annual Meeting On Demand

See details and pricing on page 8.

* Skills Workshops, Skills Pavilions, and Leadership Courses excluded from Silver and Gold Registration Package pricing. Attendee must identify courses to be included as part of Silver and Gold Registration Package. Courses are subject to closure due to reaching maximum capacity. Attendee is only permitted to select courses that he/she plans to be in the room for. Attendee will not be able to register for courses with conflicting time schedules.

Opportunities to Save Money

Rush Line Tickets
Check in at the Registration Booth located in the Convention Center each morning for FREE tickets to Education Programs for that day. A minimum of two tickets will be held for each program, available on a first-come, first-served basis.

Get 50% Off Education Program Registration
Junior members who register for two Education Programs at full price will receive 50% off the cost of a third Education Program of equal or lesser value.

Volunteer Opportunities
Serve as a program monitor or a workshop volunteer to gain free access to the specific program (see page 47).

2015 Medical Student, Residents, and Fellows Guide
A detailed guide highlighting all events and opportunities of interest to Students, Residents, and Fellows will be available in December 2014.

Looking for Interesting and Unique Things to Do While in the DC Area?

Continued from page 5

National Museum of Women in the Arts
Founded in 1987, the National Museum of Women in the Arts is the only major museum in the world solely dedicated to recognizing women’s creative contributions. Learn more at nmwa.org.

Octagon Museum
Built between 1798 and 1801 by John Tayloe III at the suggestion of George Washington, the house was offered to President Madison and his family in 1814 as temporary quarters after the White House was burned in the War of 1812. The Treaty of Ghent was signed here in February 1815, thus ending the war between Great Britain and the US. Since 1898 the Octagon has served as the national headquarters for the American Institute of Architects. Learn more at aia.org/conferences/the-octagon.

Smithsonian National Postal Museum
Housed in the historic 1914 City Post Office Building next door to Union Station, the Smithsonian National Postal Museum occupies 100,000 square feet of the building with 35,000 square feet devoted to exhibition space. The Museum also houses a 6,000-square-foot research library, a stamp store, and a museum shop. Learn more at PostalMuseum.si.edu.

Georgetown
Take a stroll along the quaint cobblestone streets of this bustling historic neighborhood. Founded in 1751—predating Washington, DC—the area is a paradise for history and historic architecture lovers, shoppers, and foodies alike. Learn more at Georgetowndc.com.
The 2015 Scientific Program covers the spectrum of neurology—from updates on the latest diagnostic and treatment techniques to prevention strategies. Choose from more than 2,300 poster and platform presentations to build your ideal Annual Meeting science experience. All programs listed below are included with your registration fee. Note: All dates, times, and program information are tentative. The full Scientific Program will be available in February 2015.

Saturday, April 18, 2015
8:00 a.m.–12:00 p.m.
1. F1 New Windows into the Brain: Technological Advances in Frontline Neurologic Diagnosis via the Visual and Oculomotor Systems
1:00 p.m.–5:00 p.m.
2. F12 Management of Asymptomatic Cerebrovascular Lesions

Sunday, April 19, 2015
8:00 a.m.–12:00 p.m.
3. F13 Dopamine-mediated Neural Plasticity in Motor and Non-motor Circuits
1:00 p.m.–2:30 p.m.
4. S1 Section Topic Controversies
1:00 p.m.–5:00 p.m.
5. F14 Infectious, Paraneoplastic, and Autoimmune Encephalopathies: Advances in Clinical Diagnosis and Emerging Insights about Pathogenesis

Monday, April 20, 2015
8:00 a.m.–12:00 p.m.
6. F15 Pediatric Neurotrauma: From Coma to Concussions
1:00 p.m.–2:30 p.m.
7. S2 Section Topic Controversies
1:00 p.m.–5:00 p.m.
8. F16 Future Therapies: How We Will BeTreating, Preventing, and Curing Epilepsy in the Year 2025
3:00 p.m.–6:30 p.m.
9. P1 Poster Session I

Tuesday, April 21, 2015
7:30 a.m.–11:00 a.m.
10. P2 Poster Session II
9:00 a.m.–12:00 p.m.
11. Presidential Plenary Session

Thursday, April 23, 2015
7:30 a.m.–11:00 a.m.
12. P6 Poster Session VI
9:00 a.m.–12:00 p.m.
13. Frontiers in Neuroscience Plenary Session
1:00 p.m.–2:45 p.m.
14. Scientific Platform Sessions
1:00 p.m.–5:00 p.m.
15. I11 The Promise of Novel Biomarker Approaches in Advancing Treatment
1:00 p.m.–5:00 p.m.
16. Obesity and Neurological Disorders
3:00 p.m.–6:30 p.m.
17. P7 Poster Session VII
3:15 p.m.–5:00 p.m.
18. Scientific Platform Sessions
5:30 p.m.–6:30 p.m.
19. Highlights in the Field Sessions
5:30 p.m.–7:00 p.m.
20. Controversies in Neurology Plenary Session

Friday, April 24, 2015
12:00 p.m.–1:30 p.m.
21. Clinical Trials Plenary Session
4:30 p.m.–6:00 p.m.
22. Neurology Year in Review Plenary Session
Connect at Social Events

There’s no better way to combine an evening of great fun and entertainment with unparalleled networking than to attend the Capitol City Celebration, Closing Party—or both. Whether you attend the Annual Meeting at the beginning of the week, or the end, these parties are not-to-be-missed.

Capitol City Celebration

Sunday, April 19
6:00 p.m.–10:00 p.m.

Neurobowl® 6:00 p.m.–8:00 p.m.
This popular event hosted by AAN former president Thomas R. Swift, MD, FAAN, is one of the Annual Meeting’s premier happenings. Neurobowl showcases the best and brightest in neurology competing for the coveted Neurobowl trophy in an entertaining game-show format.

Main Stage Music: Doctor’s Orders 8:00 p.m.–10:00 p.m.
This energetic 10-piece variety band based in the Washington, DC/Baltimore area will have you on your feet with its diverse repertoire covering everything from Top 40 to ‘70s to ‘80s to standards. Fronted by dynamic singer/saxophonist Kyle Johnson and Miriamm Wright—of Peaches and Herb fame—“the chemistry of the band is obvious from the first chord,” says guitarist Bill McCarron. “It’s not like it’s really a conscious effort on our part, we just have a blast playing together.” No doubt, you’ll have a blast listening to them.

Closing Party

Friday, April 24 6:30 p.m.–8:00 p.m.
Celebrate the end of a great meeting with the Closing Party! Each registered meeting attendee will receive one free ticket to this event. Guest tickets are available through registration for $50.

Exhibit Hall Opening Reception

Monday, April 20 4:30 p.m.–6:30 p.m.
Attend the opening reception to mingle with fellow attendees and preview the latest products and services available in the neurologic industry. Light hors d’oeuvres and beverages will be served. The exhibits will be open at this time.

Run/Walk

Tuesday, April 21 6:30 a.m.–8:30 a.m.
Support research in neurology and join us for a 5k run or one mile walk along the Washington, DC, waterfront. Both occasional and seasoned runners—and walkers—will enjoy this beautiful trek for a good cause. All proceeds will go to the American Brain Foundation to help support research. The race is open to all meeting attendees and their families. Water and refreshments will be available following the race. The registration fee is $40.

Bus service to and from the race site will be provided. For registration and details, visit AAN.com/view/RunWalk or contact Andrew Halverson at ahalverson@aan.com or (612) 928-6117.
Reunion/In Conjunction With Meetings

Reconnect with your peers and program directors, and network with your fellow alumni at various department reunion meetings occurring throughout the Annual Meeting. These In Conjunction With (ICW) Meetings, formerly known as Affiliate Meetings, are designed for functions that include Annual Meeting attendees but are not planned by or sponsored by the AAN.

If your department is interested in hosting its alumni meeting during the 2015 Annual Meeting, reserve your meeting today at AAN.com/view/ICW or by contacting Nancy Poechmann at npoechmann@aan.com or (612) 928-6103.

Awards Luncheon

Wednesday, April 22 12:00 p.m.–1:30 p.m.

Join AAN leaders as they honor the recipients of the 2015 AAN and American Brain Foundation Awards. From enterprising high school students to world-renowned researchers, this program recognizes some of the top accomplishments in neuroscience research. Past keynote speakers on the importance of neurologic diseases include Ben Utecht, Billy McLaughlin, Dame Julie Andrews, Cuba Gooding Jr., Leeza Gibbons, and Michael J. Fox.

Tickets are available for $60 through registration. Buy a ticket and show your support for award recipients.

Reserve a Department Table and Be Recognized

Bring your department together and gain exposure for your team at the Awards Luncheon by reserving a department table. Give your residents and fellows the chance to sit together with department faculty and chairs in a place of honor among the top minds in the neurology/neuroscience academic community. To reserve a table, download the reservation form at AAN.com/view/AM15. For questions, contact Laurie Dixon at ldixon@aan.com or (612) 928-6154. Registration for departments for the Awards Luncheon will open in January 2015.

Celebrate the end of a great meeting at a special early-evening happy hour event!
- Enjoy music, drinks, and socializing with colleagues
- Make plans to explore beautiful Washington, DC, afterwards

Closing Party

Friday, April 24
6:00 p.m.–8:00 p.m.
Enhance your Annual Meeting experience with these educational products.

1. AAN Annual Meeting On Demand is a **CME accredited** comprehensive digital library with more than 500 hours* of presentations from the 2015 AAN Annual Meeting educational programs (including the Syllabi On CD and Neurology Update On Demand library). Watch presenters’ slides while listening to fully synchronized audio as if you were actually attending each session.

**Features of AAN Annual Meeting On Demand include:**

- Online access to content within 24 hours of live presentations.
- NEW: CME credit available.
- The most advanced search engine in the industry delivers a direct link to the specific presentations and slides containing your search terms. That means less time searching and more time learning.
- Our Recently Viewed feature allows you to revisit presentations and pick up exactly where you left off.
- Downloadable MP3 files provide the option of listening to any (or all) lectures while driving, traveling, or any occasion where audio is most convenient.
- A complimentary portable hard drive is included for offline viewing when internet is not convenient or available.

2. **Neurology Update On Demand** offers a paired-down library of approximately 70 hours* of presentations focused on the latest updates in the field of neurology. Sessions in this online-only catalog will be available within 24 hours of the live presentation.

3. **Syllabi On CD** serves as a quick reference tool with syllabi summaries of more than 160 programs presented during the 2015 Annual Meeting.

* Total hours of presentations available subject to speaker permissions.
For Annual Meeting Attendees:

**New Registration Option: Gold Registration Package**

One price secures you access to all education courses** at the Annual Meeting and includes a copy of AAN Annual Meeting On Demand. With so many options during the meeting and concurrent sessions, the Gold Registration Package is the best value for attendees who want to maximize their time during the meeting.

* Junior pricing also applies to Non-Neurologist members.

** Skills Workshops, Skills Pavilions, and Leadership Programs are excluded from the Gold Registration Package. Attendees must identify courses to be included as part of Gold Registration Package. Courses are subject to closure due to reaching maximum capacity. Attendee is only permitted to select courses that he/she plans to be in the room for. Attendee will not be able to register for courses with conflicting time schedules.

Select the Gold Registration Package when you register for the meeting!

**On Demand Add On:**

If you decide not to choose the Gold Registration Package, you can still add any On Demand product or Syllabi On CD to your registration.

**Order Online:** [AAN.com/view/Register](http://AAN.com/view/Register)

On Demand attendee discounts expire April 25, 2015.

Not attending the 2015 meeting?

If you are not attending the 2015 Annual Meeting, you can still pre-order On Demand products prior to the meeting and receive a special discount.

**Order Online:** [AANonDemand.com/PreMeeting](http://AANonDemand.com/PreMeeting)

**Order by Phone:** (800) 501-2303 or (818) 844-3299

Pre-meeting discounts expire April 25, 2015.

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**Attendee Pricing**

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**Non-Attendee Pricing**

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General Information

Accreditation/CME/Core Competencies

Accreditation
The American Academy of Neurology Institute (AANI), the education subsidiary of the American Academy of Neurology, is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education (CME) for physicians.

AMA Credit Designation
The AANI designates this live activity for a maximum of (*) AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

* See individual program descriptions in this booklet for the maximum number of credits per program.

CME/Participation Records
AANI has mechanisms in place to record, and when authorized by the participating physician, verify participation in the CME activity. To receive CME for the Annual Meeting live program, participants must: (1) register for the program(s); (2) attend the program(s); (3) submit the evaluation form for the program(s). CME is given only when all three steps are completed. AAN member CME and participation transcripts are available approximately four to six weeks following the close of the meeting via the AAN’s NeuroTracker AAN.com/view/NeuroTracker. Nonmembers’ CME credits and participation transcripts will be sent via email.

Core Competencies
The AANI develops its activities/educational interventions in the context of the desirable physician attributes. Specifically, the AANI develops its educational interventions in the contents of the Accreditation Council for Graduate Medical Education (ACGME) Core Competencies which include:

- Patient Care
- Medical Knowledge
- Interpersonal and Communication Skills
- Practice-Based Learning and Improvement
- Professionalism
- Systems-Based Practice

For more information on the definitions of the ACGME core competencies, please consult the following webpage: ACGME.org/outcome/comp/compmin.asp

Once again, this year’s Annual Meeting CME offerings, at the program and lecture level, are identified according to these competencies. Through identifying individual programs by competencies, attendees can easily identify and attend programs that meet each core competency.

AMA CME Definition/Educational Content of Certified CME
The AMA HOD and the Council on Medical Education have defined continuing medical education as follows: CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession. The content of CME is the body of knowledge and skills generally recognized and accepted by the profession as within the basic medical sciences, the discipline of clinical medicine and the provision of health care to the public. (HOD policy #300.988)

Certified CME is defined as:
1. Nonpromotional learning activities certified for credit prior to the activity by an organization authorized by the credit system owner, or
2. Nonpromotional learning activities for which the credit system owner directly awards credit

Accredited CME providers may certify nonclinical subjects (e.g., office management, patient-physician communications, faculty development) for AMA PRA Category 1 Credit™ as long as these are appropriate to a physician audience and benefit the profession, patient care, or public health.

CME activities may describe or explain complementary and alternative health care practices. As with any CME activity, these need to include discussion of the existing level of scientific evidence that supports the practices. However, education that advocates specific alternative therapies or teaches how to perform associated procedures, without scientific evidence or general acceptance among the profession that supports their efficacy and safety, cannot be certified for AMA PRA Category 1 Credit™.

Content Validation
The AANI, as an ACCME accredited provider, is responsible for validating the clinical content of CME activities that it provides. Specifically, 1. All the recommendations involving clinical medicine in a CME activity must be based on evidence that is accepted
within the profession of medicine as adequate justification for their indications and contraindications in the care of patients. 2. All scientific research referred to, reported, or used in CME in support or justification of a patient care recommendation must conform to the generally accepted standards of experimental design, data collection, and analysis.

**Disclaimers/Disclosures**

**AAN/AANI Education/Scientific Disclaimer**

The primary purpose of the Annual Meeting is to meet the educational needs of its members and address practice gaps by providing practice-oriented and scientifically based educational activities that will maintain and advance competence and performance in the field of neurology.

A diversity of opinions exists in the medical field and the views of the Annual Meeting faculty do not represent those of the AAN/AANI or constitute endorsement by the AAN/AANI. The AAN/AANI disclaims any and all liability for the claims that may result from the use or non-use of information, publications, therapies, and/or services discussed at the Annual Meeting.

**Relationship Disclosure and Conflict of Interest Resolution**

According to AANI and ACCME policies, everyone who is in a position to control the content of an education activity must disclose financial relationships with any commercial interest to the provider. An individual who refuses to disclose relevant financial relationships is disqualified from being a planning committee member, a teacher, or an author of CME, and cannot have control of, or responsibility for, the development, management, presentation or evaluation of the CME activity. In addition, the AANI must implement a mechanism to identify and resolve all conflicts of interest prior to the education activity being delivered to learners. The resolution of conflict is handled by the Education and Science Committees. Disclosures for everyone in the position to control Annual Meeting content can be found on the AAN Annual Meeting website. In addition, education and science faculty disclosures can also be found in the syllabi, slides, handouts, and/or are given verbally from the podium.

**Unlabeled Use Disclosure**

The AANI requires all Annual Meeting presenters to disclose if a therapy/product is not labeled for the use being discussed or if the therapy/product is still investigational. Unlabeled use disclosures can be found in the program materials.
General Information

Education Grants
Some Annual Meeting education and scientific programs are supported in part by educational grants from commercial entities. Disclosure of the educational grant is done through acknowledgment statements on the program materials, signs outside of the room, and verbally from the podium. Although educational grants are received, all programs are developed and implemented solely by the Education Committee and Science Committee. The terms, conditions, and purposes of the commercial support are documented in a written agreement between the AANI and commercial supporter. The AAN uses grant funds to support and enhance existing, as well as new, education programs.

Services

Child Care Information
A variety of child care options are available in Washington, DC. Check with the concierge at your hotel on or before your arrival to make your arrangements.

Luggage Check
No luggage check is available at the Walter E. Washington Convention Center. Check with your concierge at your hotel to make your arrangements.

Metro Passes
Any AAN contracted hotel outside of a one-mile radius of the Walter E. Washington Convention Center will receive a complimentary metro pass in lieu of free shuttle service. Guests at these hotels will receive a metro pass, map, and further instruction upon hotel check-in. Shuttle services will still be available for the Capitol City Celebration.

Internet Kiosks
The Internet kiosks provide attendees with computer workstations and Internet access. Check email, search the AAN website, or complete online evaluations to obtain CME credit.

Wireless Connection
Wireless Internet hotspots will be available at the Walter E. Washington Convention Center.

Business Center
The Walter E. Washington Convention Center has a business center that offers administrative and office services, including copy machines, faxes, and shipping services. The business center is located on the lobby level of the Walter E. Washington Convention Center.

First Aid Station
A First Aid station is located on the lobby level of the Walter E.

No Busing for 2015
Instead we are offering...
In place of bus service, the AAN is providing metro passes to Annual Meeting attendees staying at any AAN contracted hotel outside a one-mile radius of the Walter E. Washington Convention Center.

When booking your hotel, visit the transportation tab to check the quickest route and form of transportation for you!
Learn more at AAN.com/view/BookHotel.

Shuttle service will be made available for the Capitol City Celebration.
Volunteer Opportunities

Education and Scientific Program Monitors

Monitors are needed for all education program offerings and scientific platform sessions to assist directors, faculty, session co-chairs, and staff as required. The AAN will waive all monitors’ Annual Meeting registration and education program fees as well as grant CME credit for the monitored program. Space is available on a first-come, first-served basis. For an application form or more information, contact Laurie Dixon at ldixon@aan.com or (612) 928-6154.

Skills Workshop Volunteers

Volunteers are needed to participate in the Neurophysiologic Intraoperative Monitoring Skills Workshop on Monday, April 20, Neuromuscular Ultrasound Skills Pavilion on Wednesday, April 22, and the EMG Skills Workshop: Basic on Friday, April 24. Skills workshop subjects will receive a waived meeting registration and workshop fee as well as payment of $40 per noninvasive session and $60 per invasive session. Space is available on a first-come, first-served basis. For more information, contact Ashley Hubbard at education@aan.com.

Weather/Attire

The climate in Washington, DC, in April is generally warm and pleasant. In April, temperatures usually range from 60 degrees to 70 degrees Fahrenheit. The AAN promotes business casual attire for the duration of the Annual Meeting. Consider bringing a light jacket or sweater to Annual Meeting activities since meeting room temperatures and personal comfort levels vary.
Why Book a Hotel Room Through the AAN?

Booking your room through the official AAN housing company assures you are getting a room at the hotel that best fits your needs. You are also helping the AAN maintain consistent and competitive registration fees. The reason is simple. When a city is selected as the site for the AAN Annual Meeting, contracts are signed with several hotels reserving a specific number of rooms to be available for meeting attendees. If these rooms are not sold, the AAN is liable financially. Penalties incurred affect the overall costs of the Annual Meeting and what the AAN charges for registration, exhibit space, and other services.

Discounted hotel rates are available until March 18, 2015, or until the block is filled. After this date, reservations and rates are subject to availability.

Save on Hotel Reservations

Take advantage of the AAN’s special hotel rates to make your trip more affordable. Annual Meeting hotel reservations are processed by Convention Management Resources (CMR).

AAN Online Hotel Reservations
AAN.com/view/BookHotel

The AAN makes it easy and convenient to book your hotel rooms for the 67th Annual Meeting. Booking online allows you to:
- Take advantage of the AAN’s special hotel rates
- View room descriptions, photos, and availability
- Access maps of hotel proximity to Annual Meeting locations

Telephone Reservations

All correspondence, questions, and inquiries should be directed to CMR at:

Phone: US/Canada (800) 676-4226
       International (415) 979-2283

Hours: Credit card reservations only
       Monday–Friday
       6:00 a.m.–6:00 p.m. (PT)

Deposits

- All hotels require a credit card guarantee or a check deposit of $300 (US dollars) per room and $500 (US dollars) per suite. Deposits will be credited towards your first night’s room and tax.
- No hotel reservation will be processed without a credit card guarantee or a deposit.
- Deposits are refundable up to seven days prior to arrival, after which there will be no refunds.
- Credit cards will be charged for one night’s room and tax if you fail to arrive on the confirmed date of arrival or if you fail to cancel your reservation at least seven days prior to arrival.

Confirmation, Changes, and Cancellations

- You will receive your hotel confirmation from CMR. This is the only confirmation you will receive.
- Please check your arrival and departure dates on the confirmation carefully.
- After March 18, 2015, contact CMR to book a room. After this date, however, rooms are subject to availability.

Note: Some hotels may charge a penalty for changes made to your departure date after you have checked in.

Group Accommodations
Deadline: March 9, 2015

Blocks of 10 or more sleeping rooms are considered a group. Email your written request to aanhousing@cmrus.com and you will be contacted by an AAN Housing Consultant.

Additional Tax/Assessments

- Rates do not include the 15.5% hotel tax.
- An $8 per night assessment fee is included to offset the expense of the meeting.
Travel Information

Reservations and Discounts

The official travel agency for the Annual Meeting is Association Travel Pros. For 2%–10% discounted airline tickets to the Annual Meeting, contact them at:

Phone: (877) 309-4330
Email: mytravelagent@innovativetvl.com

Hours: Monday–Friday, 8:30 a.m.–5:30 p.m. CT
Closed weekends and holidays

A $25 service fee will be assessed per ticket for reservations made via phone. You may also book online with all airline meeting discounts applied at www.aantvlmeetings.com. A $10 service fee will apply to online bookings.

Direct Through Airlines

You may also contact your preferred airline directly. You must reference the AAN Annual Meeting and provide the appropriate airline discount codes listed below.

<table>
<thead>
<tr>
<th>Airline</th>
<th>Discount Codes</th>
<th>Phone Number</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta</td>
<td>NMK82</td>
<td>(800) 328-1111</td>
<td>Delta.com</td>
</tr>
<tr>
<td>United</td>
<td>ZTDX158803</td>
<td>(800) 521-4041</td>
<td>United.com</td>
</tr>
</tbody>
</table>

Discounts are subject to availability, so book well in advance. Normal mileage and status upgrades apply for all airline programs. A service fee will be charged for reservations made via phone.

Travel Website

For travel forms and information updates, visit the AAN Annual Meeting website at AAN.com/view/AM15.

Travel Tips

Travel Documents/Passports and Entry Requirements

Non-US visitors must have valid travel documents/passports to enter Washington, DC, to provide proof of their citizenship. Document requirements vary depending on your country of origin, citizenship, the reason for your visit, and the length of your stay, and may include passport or a birth certificate, photo ID, and/or a visa.

For more information, or to request a Letter of Announcement for the 2015 Annual Meeting, visit AAN.com/view/AMinfo.

Airports That Service Washington, DC

The Washington, DC, area is served by three different airports.

The Ronald Reagan Washington National Airport (National Airport) is located the closest to the Walter E. Washington Convention Center at approximately 6.5 miles distance; the Dulles International Airport (Chantilly, Virginia) is located approximately 28 miles from the convention center; and Baltimore/Washington International Thurgood Marshall Airport is located approximately 32 miles from the convention center. Pricing and direct flight service may vary between the airports.

Currency

Washington, DC’s currency is the US dollar; currency exchange is available at banks and kiosks throughout the city and at the airport. Cash machines/ATMs are available in most banks, hotels, and shopping centers. For denominations under one dollar, the currency is coins.

Customs and Immigration

From an international point of arrival, upon arriving in Washington, DC, you will be required to go through a US Customs and Border Protection (CBP) inspection. Before you land, your flight crew will distribute an Immigration and Customs Declaration Form for you to complete; forms are also available at the airport upon your arrival.

You will need to present this form, along with your passport, visa (if any), and return tickets to the CBP officer.

Measurements

Washington, DC, uses the United States customary system for weights and measurements. If you choose to drive in Washington, DC, be aware the speed limits are posted in miles per hour.

Medication

If you are entering Washington, DC, with prescription drugs and syringes: keep the medication in its original, labeled container; include medical certificate with syringes showing they are for medical use and have them declared to US Customs officials; bring an extra prescription in case your medication is lost and/or to attest to your need to take such prescriptions; and carry the generic name of prescription medicines.

Time Zone

Washington, DC, is in the Eastern Time Zone. In April it will be the same time as New York, one hour ahead of Chicago, three hours ahead of Los Angeles, five hours behind London, and 13 hours behind Tokyo.

For more information, visit AAN.com/view/AMinfo.
<table>
<thead>
<tr>
<th>Hotel Name &amp; Address</th>
<th>Rate</th>
<th>Distance to Convention Center</th>
<th>Metro Pass Comped</th>
<th>Internet Cost per Day</th>
<th>Number of Restaurants</th>
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<td>14 Blocks</td>
<td>N</td>
<td>$12.00</td>
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<tr>
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<td>No Charge</td>
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<td>N</td>
<td>No Charge</td>
<td>1</td>
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<tr>
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<td>No Charge</td>
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<td>$9.95</td>
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<td>Y</td>
<td>No Charge</td>
<td>1</td>
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<tr>
<td>13 Fairfield Inn &amp; Suites Washington, DC / Downtown</td>
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<td>N</td>
<td>No Charge</td>
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<tr>
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<tr>
<td>15 Hamilton Crowne Plaza</td>
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<td>N</td>
<td>$12.95</td>
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<tr>
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<tr>
<td>17 Hyatt Place Washington DC/US Capitol</td>
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<td>No Charge</td>
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<td>19 Hilton Garden Inn Washington DC</td>
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<tr>
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<td>26 JW Marriott Washington DC</td>
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<td>$12.95</td>
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<tr>
<td>Hotel Name &amp; Address</td>
<td>Rate</td>
<td>Distance to Convention Center</td>
<td>Metro Pass Comped</td>
<td>Internet Cost per Day</td>
<td>Number of Restaurants</td>
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<tr>
<td>----------------------------------------------------------</td>
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</tr>
<tr>
<td>Loews Madison Hotel 1177 15th St NW</td>
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<td>$13.95</td>
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<tr>
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<td>$12.95</td>
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<tr>
<td>Marriott Metro Center 775 12th St NW</td>
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<td>$12.95</td>
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<tr>
<td>Morrison-Clark Inn 1015 L St. NW</td>
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<td>N</td>
<td>No Charge</td>
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<tr>
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<td>No Charge</td>
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<tr>
<td>Renaissance Washington, DC Downtown 999 9th St. NW</td>
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<td>$12.95</td>
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<tr>
<td>Renaissance Washington DC Dupont Circle Hotel 1143 New Hampshire Ave. NW</td>
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<td>$16.95</td>
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<tr>
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<td>Y</td>
<td>$10.95</td>
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<tr>
<td>Washington Court Hotel 525 New Jersey Ave. NW</td>
<td>$319</td>
<td>12 Blocks</td>
<td>Y</td>
<td>$10.99</td>
<td>1</td>
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<tr>
<td>Washington Marriott Georgetown 1221 22nd St NW</td>
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<td>$12.95</td>
<td>1</td>
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<tr>
<td>Washington Plaza Hotel 10 Thomas Cir. NW</td>
<td>$295</td>
<td>4.5 Blocks</td>
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<td>No Charge</td>
<td>1</td>
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<tr>
<td>Westin Washington DC City Center 1400 M St. NW</td>
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<tr>
<td>Willard InterContinental Washington 1401 Pennsylvania Ave</td>
<td>$359</td>
<td>12 Blocks</td>
<td>N</td>
<td>$10.95</td>
<td>1</td>
</tr>
</tbody>
</table>

Walter E. Washington Convention Center
801 Mt Vernon Pl NW
Washington, DC 20001
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John Nye, MD
Marianna V. Spanaki-Varelas, MD, PhD
Meeting Information and Contacts

**Hotel Reservation Deadline:**
March 18, 2015

**Early Registration Deadline:**
March 27, 2015

**Registration, Hotel, and Travel Reservations:**
AAN.com/view/AM15

**Meeting Registration and Housing**
Phone:
Credit card reservations only
US/Canada  (800) 676-4226
International  (415) 979-2283
Hours: Monday–Friday
6:00 a.m.–6:00 p.m. PT
Email:
Registration:  aanreg@cmrus.com
Housing:  aanhousing@cmrus.com

**Travel Reservation Services**
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Association Travel Pros
Phone: (877) 309-4330
www.aantvlmeetings.com
Hours:
Monday–Friday, 8:30 a.m.–5:30 p.m. CT
Closed weekends and holidays
Email:  mytravelagent@innovativetvl.com

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AAN, AAN Institute and American Brain Foundation
Christine E. Phelps
Deputy Executive Director, AANI/
American Brain Foundation
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Senior Director, Education,
Science, and Conferences
Senior Director, Corporate Relations
Kevin Heinz
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Administrator, Registration
and Logistics

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Manager, Housing and Special Events

**In Conjunction With Events**
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Senior Manager, Industry Affairs
Alberta Zais
Senior Manager,
Corporate and Strategic Partnerships

**Compliance Issues**
Susan Rodmyre
Senior Director, Education

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**Resident and Student Activities**
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Manager, Graduate Education
Cheryl Alementi
Program Manager, Undergraduate Education

**Practice and Public Policy Issues**
advocacy@aan.com
Rod Larson
Chief Health Policy Officer

For direct email and phone contacts,
please contact Member Services at:
memberservices@aan.com
Toll Free: (800) 879-1960 or
International: (612) 928-6000
2015 AAN Women in Leadership Program

Whether you want to be a mentor or an advocate, to guide or inspire others, you need to cultivate the skills to be an effective leader. Based on overwhelming popularity, the 2015 AAN Annual Meeting will feature two leadership courses designed for women. Space is limited and you must apply to take the program. Choose the course that’s right for you!

Sunday, April 19, 2015, 9:00 a.m.–5:00 p.m.

Leadership for Women

Women who are early- to mid-career interested in learning from successful female members in the field of neurology, including members of the AAN Board of Directors, about how to lead at senior levels should apply today for Leadership for Women. Selected recipients will receive complimentary registration for this course.

Directors:  
Allison Brashear, MD, MBA, FAAN | Winston Salem, NC  
Barbara Hoese, President | Pentecore Coaching, Minneapolis, MN

Space is limited and the application deadline is March 13, 2015.  
Apply now at AAN.com/view/WomenLead

Monday, April 20, 2015, 9:00 a.m.–5:00 p.m.

Advanced Leadership for Women

Women who are mid-career and currently in a leadership role looking to grow their current leadership capacity should apply today for the Advanced Leadership for Women. Selected recipients will receive complimentary registration for this course.

Directors:  
Lisa M. DeAngelis, MD, FAAN | New York, NY  
Barbara Hoese, President | Pentecore Coaching, Minneapolis, MN

Space is limited and the application deadline is March 13, 2015.  
Apply now at AAN.com/view/AdvLead

Supported by:

Novartis Pharmaceuticals

American Academy of Neurology®
Register Today for the 67th AAN Annual Meeting
April 18–April 25, 2015 · Washington, DC

- Hotel Reservation Deadline: March 18, 2015
- Early Registration Deadline: March 27, 2015

AAN.com/view/AM15

Future Annual Meeting Dates and Locations

- 68th AAN Annual Meeting
  Vancouver, BC, Canada
  April 16–23, 2016

- 69th AAN Annual Meeting
  Boston, MA
  April 22–29, 2017

- 70th AAN Annual Meeting
  Los Angeles, CA
  April 7–14, 2018

AAN Member Services: (800) 879-1960

Use #AANAM and follow the AAN