AAN Reaches New Membership Milestone

The AAN has grown to 30,000 members. This milestone is a result of continuous efforts to increase the value of AAN membership while promoting the highest quality patient-centered care to neurologists and neuroscience professionals worldwide. Members now include students, trainees, neurologists, researchers, nurse practitioners, physician assistants, business administrators, and other non-neurologist clinicians.

“Reaching the 30,000 member mark is a significant accomplishment for the AAN,” said President Terrence L. Cascino, MD, FAAN. “I think it is a testament to the immense value our organization provides to neurology professionals who care deeply about their patients and their careers and seek the resources, programs, services, and advocacy the Academy provides to help them do their best. I’m very proud of our volunteer members and staff who make this possible. This is a tribute to their fine work.”

New Experiential Learning Areas Break out of the Traditional Classroom

The 2016 Annual Meeting will feature novel ways to connect and thrive through Experiential Learning Areas. These new areas will be open Friday through Thursday of the meeting, be positioned throughout the convention center, and offer dynamic and interactive learning opportunities designed to continue the learning outside of a traditional classroom.

Learn How MACRA Will Affect You

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) is coming and will impact your practice. This legislation enacts a complete overhaul of the CMS payment system, changing it from fee-for-service to pay-for-performance and beyond. This one-hour webinar will help you understand how MACRA will affect you.

What Is MACRA?—Critical Preparation for CMS Reimbursement
February 9 | 12:00 p.m.–1:00 p.m. ET
Deadline to Register: February 8

Directors: Lyell K. Jones, MD, FAAN, and William S. Henderson, FACMPE

- Understand the essential aspects of MACRA and its effect on CMS payment systems
- Differentiate the two major payment systems in MACRA: Merit-based Incentive Payment System (MIPS) and alternative payment models (APM)

Continued on page 13
NEWS BRIEFS

The AAN has developed a standardized pre-return visit questionnaire for epilepsy that members can incorporate into their practices’ patient portals. It incorporates AAN guidelines and quality measures, and has been vetted by clinical experts. Visit AAN.com/practice/electronic-health-records.

A 10-percent discount on AAN membership is now available for Full Individual members of the European Academy of Neurology (EAN). The EAN is offering the same discount for AAN members. Members wishing to take advantage of this discount should contact memberservices@AAN.com.
Answering the Needs of Neurologists in Solo and Small Practices

During my earlier service on various AAN committees, I represented the experiences and viewpoints of a neurologist in practice in a large institution, the Mayo Clinic. Over the years, my knowledge and understanding of the unique challenges faced by neurologists in small and solo practices has been broadened and deepened by AAN members and fellow leaders. I’ve come to know and admire many of them quite well, not only because of their deep devotion to their patients, but also because of the extraordinary circumstances and pressures they face in their daily work. Those of us in medium or larger institutions have our own issues, certainly, but we are supported by organizational structures that are easy to take for granted.

Solo and small practice neurologists have been struggling for a long time. The AAN has been doing what it can to help these members, whether through advocacy in Washington, DC, to bring down SGR and get appropriate CMS reimbursement for your work, or providing free education resources for maintenance of certification and helping with the transition to ICD-10.

Still, there are very specific issues that need to be addressed, so last fall I launched the Solo and Small Practice Task Force at the AAN to take a deeper dive into these issues. This is necessary in order to determine what specific tools and resources are needed and to ensure that the voice of members in solo and small practice is heard loud and clear within the Academy.

The task force is chaired by our Vice President James C. Stevens, MD, FAAN, who is in private practice in Fort Wayne, IN. The other members of the task force listed below include neurologists in solo, small practices, practice administrators, and others who understand the unique needs and challenges of maintaining a small practice in these times of increased regulations, new payment and practice models, lack of adequate reimbursement, and reporting requirements.

Dr. Stevens’ vision for the group is pretty straightforward:

- Review known data about solo and small group practitioners within the AAN.
- Identify their major issues.
- Determine how the AAN can help on those major issues. Identify what it already has to offer and what needs to be developed.
- Brainstorm methods for more effective communication with this member segment.

Make recommendations on how this segment can be better heard by the AAN (e.g., committee, section representation).

The task force will provide a final report to the Board of Directors by June 2016.

We Need to Hear from You

The members of the AAN’s Board and committees and I are always open to hearing about your situation or your suggestions on how the Academy can improve its services. Personal anecdotes enable empathy to a problem, but data lead to a wider cognition. We rely on both. So you can provide valuable input by completing our surveys, whether mailed to you or as pop-ups on AAN.com.

Continued on page 25 ›
Meet Your Leader

Heidi B. Schwarz, MD, FAAN

This is the sixth in a series of profiles of members of the Board of Directors for the AAN and AAN Institute.

Heidi B. Schwarz, MD, FAAN, is a practicing general neurologist and professor of clinical neurology at the University of Rochester Medical Center in Rochester, NY. She has served in many roles at the AAN, including as a member of the Meeting Management Committee, chair of the Practice Committee, and member of several AAN sections.

What moved you to join the Board of Directors?

I joined the Board by virtue of my position as the chair of the Practice Committee. However, I have been involved with the AAN in various capacities including the advanced practice provider work group, the payment alternative work group, the value of the neurologist initiative, and most recently, the burnout task force. My involvement with the AAN has definitely enriched my professional experience and broadened my knowledge and sensitivity to issues that neurologists and our patients face on a regular basis.

What experiences and viewpoints do you bring to this role?

In addition to serving as the vice chair of the Practice Committee for several years under the mentorship of Jonathan Hosey, I have practiced in a variety of settings including private general neurology practice, academic medicine, and employed physician status. I also have done clinical research including in the field of telemedicine. I have had the great fortune of working with many excellent clinicians and leaders (such as Berch Griggs and Bob Gross) and have had opportunities to train and learn from neurology residents and medical students. I have been involved in teaching mindfulness in the setting of medical education for several years. All of these experiences have broadened my perspective on neurology and life in general. I also feel that being a woman in leadership at the AAN has helped to broaden the perspective of the organization.

From your experiences as an AAN leader, what is one of the more common misperceptions members may have about the Academy?

I have a sense that many of our members feel that the leadership of the AAN is not concerned about those in private practice, solo practice, or general neurologists. Since the leadership is often composed of mainly older and academic neurologists, I can understand this misperception, but the current leadership is truly committed to understanding the needs of these members and trying to help them navigate the changes in medicine. They are the lifeblood of this organization.

In your view, how does the AAN benefit the field of neurology most?

For many years, our claim to fame was guideline development and systematic reviews, which are highly valued by our members because of our rigorous standards. More recently, we have been actively involved in developing quality measures to meet the changing needs of reimbursement for our members (and to be sure that no one else developed them for us). However, I think many members underestimate the advocacy that the AAN does with both legislation and payers for our membership as well as our patients.

How should members evaluate the success of the AAN and the Board of Directors in supporting their careers and neurology in general?

Everyone’s situation is unique, so I think it is hard to make a blanket statement about how the AAN can meet the needs of our members. I do feel that the AAN needs to provide the tools to allow each member to function to their fullest capacity. This may represent well researched guidelines and quality measures; resources to improve practice structure and productivity; educational resources; supports to prevent burnout; advocacy regarding reimbursement, government regulations; and models to navigate the change to value-based care and career development at various stages of life. This is a tall order, but all of these are active initiatives at the AAN.

How do you deal with the challenges of balancing the demands of your work and personal life?

I think that balance, like happiness, is rather an elusive state. There are several choices that I have made that have helped including working part time, focusing on aspects of neurologic care that I find most rewarding, learning to say no, having a rich network of personal and professional connections, and taking time for myself. However, my family keeps me grounded and my two daughters are a great source of pride for me.

For more information on Schwarz and other AAN leaders, visit AAN.com/membership/board-of-directors.
The AAN recognizes the critical role that Advanced Practice Providers (APP) play in the care and treatment of neurology patients. To this end, the 2016 AAN Annual Meeting will offer a number of courses and events specifically geared toward APPs.

**Courses**
The 2015 Annual Meeting offered an APP Track consisting of suggested courses of interest. Because APPs may be interested in an even wider variety of topic areas and course options, we’ve customized the 2016 program search to allow APPs to browse by “recommended audience,” allowing for an even more robust course selection. Browse programs online at AAN.com/view/SearchAM.

**Networking Events**
- **APP Networking Reception**
  Saturday, April 16
  5:30 p.m. to 7:00 p.m.
- **APP Lunch Networking Sessions**
  Sunday, April 17, and Monday, April 18
  11:45 a.m. to 1:00 p.m.

---

"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-C

---

**Experiential Learning Area: Navigating Your Career: All Aboard!**
Learn about career development at every stage, and hear from successful neurologists and advanced practice providers on how to establish and maintain effective partnerships.

**Special Discounts**
APPs can save with deep member-only discounts on Annual Meeting registration by joining the AAN as an NP/PA or non-neurologist clinician member. Learn more at AAN.com/view/AMAdvancedProviders.

---

**Are You a First-time Annual Meeting Attendee? Check Out These Helpful Tips**
Whether you come for a few days or stay for all seven, we want to help you get the most out of your first Annual Meeting experience. Take advantage of these helpful resources designed specifically to help familiarize you with, and successfully navigate your way through, the largest gathering of neurologists.

- Attend one of the AAN Annual Meeting Orientation Sessions designed to cover a basic overview of the Annual Meeting. Sessions will be held daily from 8:30 a.m. to 8:50 a.m. in the Learning Lab of the Vancouver Convention Centre. While there you can learn about:
  - Programs and events that are included free with your badge
  - Information on networking opportunities
  - Valuable AAN resources designed to help medical students, residents, and fellows
  - Tips on can’t-miss social and networking events
- Visit the convenient on-site information booth in the Vancouver Convention Centre.
- Stop by the Learning Lab, your one-stop shop for learning about valuable AAN resources and special programs.
- Download the AAN Annual Meeting Mobile App.
- Join the Annual Meeting LinkedIn group page.
Indication
Tecfidera® (dimethyl fumarate) is indicated for the treatment of patients with relapsing forms of multiple sclerosis.

Important Safety Information
TECFIDERA is contraindicated in patients with known hypersensitivity to dimethyl fumarate or any of the excipients of TECFIDERA. TECFIDERA can cause anaphylaxis and angioedema after the first dose or at any time during treatment. Patients experiencing signs and symptoms of anaphylaxis and angioedema (which have included difficulty breathing, urticaria, and swelling of the throat and tongue) should discontinue TECFIDERA and seek immediate medical care.

A fatal case of progressive multifocal leukoencephalopathy (PML) occurred in a patient who received TECFIDERA. PML is an opportunistic viral infection of the brain caused by the JC virus (JCV) that typically only occurs in patients who are immunocompromised, and that usually leads to death or severe disability. The symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes. At the first sign or symptom suggestive of PML, withhold TECFIDERA and perform an appropriate diagnostic evaluation.

TECFIDERA may decrease lymphocyte counts; in clinical trials there was a mean decrease of ~30% in lymphocyte counts during the first year which then remained stable.

Four weeks after stopping TECFIDERA, mean lymphocyte counts increased but not to baseline. Six percent of TECFIDERA patients and <1% of placebo patients had lymphocyte counts <0.5x10^9/L. TECFIDERA has not been studied in patients with pre-existing low lymphocyte counts.

There was no increased incidence of serious infections observed in patients with lymphocyte counts <0.8x10^9/L or 0.5x10^9/L in controlled trials, although one patient in an extension study developed PML in the setting of prolonged lymphopenia (lymphocyte counts predominantly <0.5x10^9/L for 3.5 years). In controlled and uncontrolled clinical trials, 2% of patients experienced lymphocyte counts <0.5x10^9/L for at least six months. In these patients, the majority of lymphocyte counts remained <0.5x10^9/L with continued therapy. A complete blood count including lymphocyte count should be obtained before initiating treatment, after 6 months, every 6 to 12 months thereafter and as clinically indicated. Consider treatment interruption if lymphocyte counts <0.5x10^9/L persist for more than six months and follow lymphocyte counts until lymphopenia is resolved. Consider withholding treatment in patients with serious infections until resolved. Decisions about whether or not to restart TECFIDERA should be based on clinical circumstances.

TECFIDERA may cause flushing (e.g. warmth, redness, itching, and/or burning sensation). 40% of patients taking TECFIDERA reported flushing which was mostly mild to moderate in severity. Three percent of patients discontinued TECFIDERA for flushing and <1% had serious flushing events that led to hospitalization. Taking
With TECFIDERA, half as many patients relapsed in the 2-year DEFINE* trial†

**PROPORTION OF PATIENTS RELAPSED‡**

- PLACEBO 46% (n=408)
- TECFIDERA 27% (n=410)

<table>
<thead>
<tr>
<th>Time on Study (Weeks)</th>
<th>Proportion of Patients Relapsed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BL</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>48</td>
<td>40</td>
</tr>
<tr>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>72</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td></td>
</tr>
</tbody>
</table>

**RELATIVE RISK REDUCTION**

1,2

P<0.0001

TECFIDERA is contraindicated in patients with known allergy to dimethyl fumarate.

TECFIDERA with food may reduce flushing. Alternatively, administration of non-enteric coated aspirin prior to dosing may reduce the incidence or severity of flushing. TECFIDERA may cause gastrointestinal (GI) events (e.g., nausea, vomiting, diarrhea, abdominal pain, and dyspepsia). Four percent of TECFIDERA patients and <1% placebo patients discontinued due to GI events. The incidence of serious GI events was 1%. The most common adverse reactions associated with TECFIDERA versus placebo are flushing (40% vs 6%) and GI events: abdominal pain (18% vs 10%), diarrhea (14% vs 11%), nausea (12% vs 9%). Elevations in hepatic transaminases have been reported. A transient increase in mean eosinophil counts was seen during the first two months. TECFIDERA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Encourage patients who become pregnant while taking TECFIDERA to enroll in the TECFIDERA pregnancy registry by calling 1-866-810-1462 or visiting www.TECFIDERApregnancyregistry.com.

For additional important safety information, please see adjacent Brief Summary of full Prescribing Information.

* Determination of the Efficacy and Safety of Oral Fumarate in Relapsing-Remitting MS, a 2-year, randomized, double-blind, placebo-controlled study in 1234 patients with relapsing-remitting multiple sclerosis (RRMS).1,2
† Included patients who had experienced at least 1 relapse over the year preceding the trial or had a brain magnetic resonance imaging (MRI) scan demonstrating at least 1 gadolinium-enhancing (Gd+) lesion within 6 weeks of randomization and had an Expanded Disability Status Scale (EDSS) score ranging from 0 to 5.1
‡ Relapses were defined as new or recurrent neurologic symptoms not associated with fever or infection that lasted for at least 24 hours and were accompanied by new objective neurologic findings.2
§ Based on number of prescriptions from IMS NPA™ Weekly Data (September 27, 2013 to July 3, 2015).


For more information, visit TECFIDERAHCP.COM

© 2015 Biogen. All rights reserved. 10/15 TEC-US-0808

---

170K PATIENTS TREATED GLOBALLY³

TECFIDERA has been prescribed in the US more than any other oral therapy for RMS³

5+ YEARS OF CLINICAL AND REAL-WORLD EXPERIENCE⁵⁻³

TECFIDERA is contraindicated in patients with known allergy to dimethyl fumarate³
TECFIDERA® (dimethyl fumarate) delayed-release capsules, for oral use

Brief Summary of Full Prescribing Information

1 INDICATIONS AND USAGE

TECFIDERA is indicated for the treatment of patients with relapsing forms of multiple sclerosis.

2 DOSAGE AND ADMINISTRATION

2.1 Dosing Information

The starting dose for TECFIDERA is 120 mg twice a day orally. After 7 days, the dose should be increased to the maintenance dose of 240 mg twice a day orally. TECFIDERA should be swallowed whole and intact. TECFIDERA should not be crushed or chewed and the capsule contents should not be sprinkled on food. TECFIDERA can be taken with or without food.

Temporary dose reductions to 120 mg twice a day may be considered for individuals who do not tolerate the maintenance dose. Within 4 weeks, the recommended dose of 240 mg twice a day should be resumed. Discontinuation of TECFIDERA should be considered for patients unable to tolerate return to the maintenance dose. The incidence of flushing may be reduced by administration of TECFIDERA with food. Alternatively, administration of non-enteric coated aspirin (up to a dose of 325 mg) 30 minutes prior to TECFIDERA dosing may reduce the incidence or severity of flushing [see Clinical Pharmacology (12.3)].

2.2 Blood Test Prior to Initiation of Therapy

Obtain a complete blood cell count (CBC) including lymphocyte count before initiation of therapy [see Warnings and Precautions (5.3)].

3 DOSAGE FORMS AND STRENGTHS

TECFIDERA is available as hard gelatin delayed-release capsules containing 120 mg or 240 mg of dimethyl fumarate. The 120 mg capsules have a green cap and white body, printed with “BG-12 120 mg” in black ink on the body. The 240 mg capsules have a green cap and a green body, printed with “BG-12 240 mg” in black ink on the body.

4 CONTRAINDICATIONS

TECFIDERA is contraindicated in patients with known hypersensitivity to dimethyl fumarate or to any of the excipients of TECFIDERA. Reactions have included anaphylaxis and angioedema [see Warnings and Precautions (5.1)].

5 WARNINGS AND PRECAUTIONS

5.1 Anaphylaxis and Angioedema

TECFIDERA can cause anaphylaxis and angioedema after the first dose or at any time during treatment. Signs and symptoms have included difficulty breathing, urticaria, and swelling of the throat and tongue. Patients should be instructed to discontinue TECFIDERA and seek immediate medical care should they experience signs and symptoms of anaphylaxis or angioedema.

5.2 Progressive Multifocal Leukoencephalopathy

A fatal case of progressive multifocal leukoencephalopathy (PML) occurred in a patient with MS who received TECFIDERA for 4 years while enrolled in a clinical trial. PML is an opportunistic viral infection of the brain caused by the JC virus (JCV) that typically only occurs in patients who are immunocompromised, and that usually leads to death or severe disability. During the clinical trial, the patient experienced prolonged lymphopenia (lymphocyte counts <0.5x10^9/L for 3.5 years) while taking TECFIDERA [see Warnings and Precautions (5.3)]. The role of lymphopenia in this case is unknown. The patient had no other identified systemic medical conditions resulting in compromised immune system function and had not previously been treated with natalizumab, which has a known association with PML. The patient was also not taking any immunosuppressive or immunomodulatory medications concomitantly.

At the first sign or symptom suggestive of PML, withhold TECFIDERA and perform an appropriate diagnostic evaluation. Typical symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes.

5.3 Lymphopenia

TECFIDERA may decrease lymphocyte counts. In the MS placebo controlled trials, mean lymphocyte counts decreased by approximately 30% during the first year of treatment with TECFIDERA and then remained stable. Four weeks after stopping TECFIDERA, mean lymphocyte counts increased but did not return to baseline. Six percent (6%) of TECFIDERA patients and <1% of placebo patients experienced lymphocyte counts <0.5x10^9/L (lower limit of normal 0.91x10^9/L). The incidence of infections (60% vs 58%) and serious infections (2% vs 2%) was similar in patients treated with TECFIDERA or placebo, respectively. There was no increased incidence of serious infections in TECFIDERA patients with lymphocyte counts <0.8x10^9/L or 0.5x10^9/L in controlled trials, although one patient in an extension study developed PML in the setting of prolonged lymphopenia (lymphocyte counts predominantly <0.5x10^9/L for 3.5 years) [see Warnings and Precautions (5.2)]. In controlled and uncontrolled clinical trials, 2% of patients experienced lymphocyte counts <0.5x10^9/L for at least six months. In these patients, the majority of lymphocyte counts remained <0.5x10^9/L with continued therapy. TECFIDERA has not been studied in patients with pre-existing low lymphocyte counts.

Before initiating treatment with TECFIDERA, a CBC including lymphocyte count should be obtained. A CBC including lymphocyte count should also be obtained after 6 months of treatment, every 6 to 12 months thereafter, and as clinically indicated. Consider interruption of TECFIDERA in patients with lymphocyte counts <0.5x10^9/L persisting for more than six months. Given the potential for delay in lymphocyte recovery after discontinuation of TECFIDERA, consider following lymphocyte counts until lymphopenia is resolved. Withholding treatment should be considered in patients with serious infections until the infection(s) is resolved. Decisions about whether or not to restart TECFIDERA should be individualized based on clinical circumstances.

5.4 Flushing

TECFIDERA may cause flushing (e.g., warmth, redness, itching, and/or burning sensation). In clinical trials, 40% of TECFIDERA treated patients experienced flushing. Flushing symptoms generally began soon after initiating TECFIDERA and usually improved or resolved over time. In the majority of patients who experienced flushing, it was mild or moderate in severity. Three percent (3%) of patients discontinued TECFIDERA for flushing and <1% had serious flushing symptoms that were not life-threatening but led to hospitalization. Administration of TECFIDERA with food may reduce the incidence of flushing. Alternatively, administration of non-enteric coated aspirin (up to a dose of 325 mg) 30 minutes prior to TECFIDERA dosing may reduce the incidence or severity of flushing [see Dosing and Administration (2.1) and Clinical Pharmacology (12.3)].

6 ADVERSE REACTIONS

The following important adverse reactions are described elsewhere in labeling: Anaphylaxis and Angioedema (5.1), Progressive multifocal leukoencephalopathy (5.2), Lymphopenia (5.3), Flushing (5.4) [see Warnings and Precautions].

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in clinical practice. The most common adverse reactions (incidence ≥10% and ≥2% more than placebo) for TECFIDERA were flushing, abdominal pain, diarrhea, and nausea.

Adverse Reactions in Placebo-Controlled Trials

In the two well-controlled studies demonstrating effectiveness, 1529 patients received TECFIDERA with an overall exposure of 2244 person-years [see Clinical Studies (14)]. The adverse reactions presented in the table below are based on safety information from 769 patients treated with TECFIDERA 240 mg twice a day and 771 placebo-treated patients.

Table 1: Adverse Reactions in Study 1 and 2 reported for TECFIDERA 240 mg BID at ≥22% higher incidence than placebo

<table>
<thead>
<tr>
<th>Reaction</th>
<th>TECFIDERA N=769</th>
<th>Placebo N=771</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flushing</td>
<td>40%</td>
<td>6%</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>18%</td>
<td>10%</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Nausea</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>Vomiting</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Pruritus</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Rash</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Albumin urine present</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Erythema</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>Dyspepsia</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Aspartate aminotransferase increased</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Lymphopenia</td>
<td>2%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
Gastrointestinal
TECFIDERA caused GI events (e.g., nausea, vomiting, diarrhea, abdominal pain, and dyspepsia). The incidence of GI events was higher early in the course of treatment (primarily in month 1) and usually decreased over time in patients treated with TECFIDERA compared with placebo. Four percent (4%) of patients treated with TECFIDERA and less than 1% in placebo patients discontinued due to gastrointestinal events. The incidence of serious GI events was 1% in patients treated with TECFIDERA.

Hepatic Transaminases
An increased incidence of elevations of hepatic transaminases in patients treated with TECFIDERA was seen primarily during the first six months of treatment, and most patients with elevations had levels <3 times the upper limit of normal (ULN). Elevations of alanine aminotransferase and aspartate aminotransferase to ≥3 times the ULN occurred in a small number of patients treated with both TECFIDERA and placebo and were balanced between groups. There were no elevations in transaminases ≥3 times the ULN with concomitant elevations in total bilirubin >2 times the ULN. Discontinuations due to elevated hepatic transaminases were <1% and were similar in patients treated with TECFIDERA or placebo.

Eosinophilia
A transient increase in mean eosinophil counts was seen during the first 2 months of therapy.

Adverse Reactions in Placebo-Controlled and Uncontrolled Studies
In placebo-controlled and uncontrolled clinical studies, a total of 2513 patients have received TECFIDERA and been followed for periods up to 4 years with an overall exposure of 4603 person-years. Approximately 1162 patients have received more than 2 years of treatment with TECFIDERA. The adverse reaction profile of TECFIDERA in the uncontrolled clinical studies was consistent with the experience in the placebo-controlled clinical trials.

8 USE IN SPECIFIC POPULATIONS
8.1 Pregnancy
Pregnancy Category C
There are no adequate and well-controlled studies in pregnant women. In animals, adverse effects on offspring survival, growth, sexual maturation, and neurobehavioral function were observed when dimethyl fumarate (DMF) was administered during pregnancy and lactation at clinically relevant doses. TECFIDERA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

In rats administered DMF orally (25, 100, 250 mg/kg/day) throughout organogenesis, embryofetal toxicity (reduced fetal body weight and delayed ossification) were observed at the highest dose tested. This dose also produced evidence of maternal toxicity (reduced body weight) in rabbits administered DMF (25, 75, and 150 mg/kg/day) throughout organogenesis. Embryolethality and decreased maternal body weight were observed at the highest dose tested. The plasma AUC for MMF at the no-effect dose is approximately 5 times that in humans at the RHD.

Oral administration of DMF (25, 100, and 250 mg/kg/day) to rats throughout organogenesis and lactation resulted in increased lethality, persistent reductions in body weight, delayed sexual maturation (male and female pups), and reduced testicular weight at the highest dose tested. Neurobehavioral impairment was observed at all doses. A no-effect dose for developmental toxicity was not identified. The lowest dose tested was associated with plasma AUC for MMF lower than that in humans at the RHD.

Pregnancy Registry
There is a pregnancy registry that monitors pregnancy outcomes in women exposed to TECFIDERA during pregnancy. Instruct patients that if they are pregnant or plan to become pregnant while taking TECFIDERA they should inform their physician. Advise patients that if they are pregnant or plan to become pregnant while taking TECFIDERA they should inform their physician. Patients who are pregnant or plan to become pregnant while taking TECFIDERA should be enrolled in the pregnancy registry by calling 1-866-810-1462 or visiting www.TECFIDERApregnancyregistry.com.

8.2 Pediatric Use
Safety and effectiveness in pediatric patients have not been established.

8.5 Geriatric Use
Clinical studies of TECFIDERA did not include sufficient numbers of patients aged 65 and over to determine whether they respond differently from younger patients.

17 PATIENT COUNSELING INFORMATION
Advise the patient to read the FDA-approved patient labeling (Patient Information)

Dosage
Inform patients that they will be provided two strengths of TECFIDERA when starting treatment: 120 mg capsules for the 7 day starter dose and 240 mg capsules for the maintenance dose, both to be taken twice daily. Inform patients to swallow TECFIDERA capsules whole and intact. Inform patients not to crush, chew, or sprinkle capsule contents on food. Inform patients that TECFIDERA can be taken with or without food [see Dosage and Administration (2.1)].

Anaphylaxis and Angioedema
Advise patients to discontinue TECFIDERA and seek medical care if they develop signs and symptoms of anaphylaxis or angioedema [see Warnings and Precautions (5.1)].

Progressive Multifocal Leukoencephalopathy
Inform patients that progressive multifocal leukoencephalopathy (PML) has occurred in a patient who received TECFIDERA. Inform the patient that PML is characterized by a progression of deficits and usually leads to death or severe disability over weeks or months. Instruct the patient of the importance of contacting their doctor if they develop any symptoms suggestive of PML. Inform the patient that typical symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes. [see Warnings and Precautions (5.2)].

Lymphocyte Counts
Inform patients that TECFIDERA may decrease lymphocyte counts. A blood test should be obtained before they start therapy. Blood tests are also recommended after 6 months of treatment, every 6 to 12 months thereafter, and as clinically indicated [see Warnings and Precautions (5.3), Adverse Reactions (6.1)].

Flushing and Gastrointestinal (GI) Reactions
Flushing and GI reactions (abdominal pain, diarrhea, and nausea) are the most common reactions, especially at the initiation of therapy, and may decrease over time. Advise patients to contact their healthcare provider if they experience persistent and/or severe flushing or GI reactions. Advise patients experiencing flushing that taking TECFIDERA with food or taking a non-enteric coated aspirin prior to taking TECFIDERA may help. [see Adverse Reactions (6.1)].

Pregnancy and Pregnancy Registry
Instruct patients that they are pregnant or plan to become pregnant while taking TECFIDERA they should inform their physician. Patients who are pregnant or plan to become pregnant while taking TECFIDERA should be enrolled in the pregnancy registry by calling 1-866-810-1462 or visiting www.TECFIDERApregnancyregistry.com.

For more information see Use in Specific Populations (8.1).

41347-06

Manufactured by:
Biogen
Cambridge, MA 02142

TECFIDERA is a trademark of Biogen.
© 2015 Biogen
04/2015
Conferences


If you’re going to Vancouver, then you’ll want to be sure and include NeuroSAE® Annual Meeting Edition in your plans. Available free to AAN members, this convenient online program helps you assess your knowledge in major clinical areas of neurology and provides course suggestions by subspecialty area to help you build your ideal itinerary for the Annual Meeting. With more than 230 education courses now included free with your registration, there’s never been a better time to take advantage of this exclusive AAN member benefit.

Using NeuroSAE Annual Meeting Edition is easy:

1. Take the online pre-test by April 14, 2016, to assess your knowledge. Upon completion, you’ll receive feedback and course suggestions by subspecialty area to help you build your Annual Meeting itinerary.

2. Register and attend the 2016 Annual Meeting in Vancouver, BC, Canada, Friday, April 15, to Thursday, April 21.

3. After attending the meeting, gauge your improvement by completing the online post-test. Earn a score of 70 percent or higher and receive a detailed score report and 10 FREE self-assessment CME credits.

Access the exam at AAN.com/view/NeuroSAEAM.

Call for Entries

Online video contest

Share Your Story for a Chance to Win $1,000

Submit a video about how brain disease—such as Alzheimer’s disease, stroke, concussion, epilepsy, ALS, Parkinson’s disease, MS, and others—has affected you or a loved one’s life.

The Neuro Film Festival aims to raise awareness about why more funding is needed for brain disease research.

DEADLINE: March 1, 2016
NeuroFilmFestival.com

Presented by:

NeuroSAE®
What’s New at the 2016 Annual Meeting?

No More Course Fees!*
One low registration price now gets you access to most of the AAN’s 230+ education courses, with no pre-registration for individual courses required. Registration is your ticket to most everything the Annual Meeting has to offer—all week long and at no additional cost to you.

Stress-Free Scheduling!
Sample a wider variety of programs than ever before! Education courses will now take place in 2-hour increments. Poster sessions will begin on Saturday and run through Thursday. And plenary sessions will take place every day with no conflicting courses.

Innovative Research Every Day!
The popular Scientific Program includes a variety of sessions covering hot topics, critical issues, and latest scientific highlights in addition to an anticipated 2,700+ cutting-edge abstracts presented in poster and platform sessions throughout the week.

Experiential Learning!
Everyone has a different learning style, and the state-of-the-art Vancouver Convention Centre—host to major events such as the 2010 Winter Olympics and acclaimed TED conference—will allow us to deliver innovative and exciting content like never before with dynamic and interactive learning areas available all week long.

The Days!
While previous Annual Meetings have traditionally run Saturday through Saturday, the 2016 meeting will begin on a Friday and end on a Thursday. This new, condensed timeframe creates opportunities for exciting changes while still allowing you to completely customize your schedule to your interests and needs.

REGISTER TODAY! AAN.com/view/AM16

VANCOUVER, BC, CANADA
NEW DAYS | FRIDAY, April 15—THURSDAY, April 21, 2016

*Skills Workshops, Maintenance of Certification Exam Preparation Course, Between Venus and Mars: How Great Leadership Adopts Traits from the Best of Both Genders, Improving Your Leadership Skills: A Practical Approach, Women in Leadership, Research Career Development Symposium, The Most Important Tool in Your Black Bag: Gallup StrengthsFinder™ Assessment I & II, Continuum® Test Your Knowledge: A Multiple-choice Question Review I & II, Genomic Neurology Workshop: Developing Practical Knowledge of Tools and Concepts Through Case Studies I & II, and Bedside Evidence-based Medicine: How to Find and Deconstruct Articles in Order to Take Care of Patients I & II are not included in the Annual Meeting Registration price. These courses require pre-registration, may have a separate registration fee, and are subject to closure due to reaching maximum capacity.
Useful Tips for Traveling to Canada

These useful tips will help you plan your trip to Canada. For additional information, visit AAN.com/view/AMinfo.

Travel Documents/Passports and Entry Requirements
Visitors must have valid travel documents/passports to enter Canada to provide proof of their citizenship. Document requirements vary depending from which country you are traveling, 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.

Vancouver International Airport
The Vancouver International Airport is approximately nine miles from the Vancouver Convention Centre.

Currency
Canada’s currency is the Canadian dollar; currency exchange is available at banks and kiosks throughout the city and at the airport.

- For denominations under five dollars, the currency is coins
- US dollars are accepted in most Vancouver establishments; however you will receive change in Canadian funds and exchange rates will differ from merchant to merchant
- Cash machines/ATMs are available in most banks, hotels, and shopping centers; please note that ATMs at the airport only accept ATM cards with the MasterCard logo on them

IMPORTANT NOTE: Don’t forget to call your bank and credit card companies to let them know you will be traveling to Canada.

Customs and Immigration
Upon entering Canada, you will be required to go through customs and immigration. Before you land, your flight crew will distribute a Travelers’ Customs Declaration Card for you to complete; Declaration Cards are also available at the airport upon your arrival. For more information, visit Travel.gc.ca/returning/customs.

Health Insurance
Be sure to check with your health insurance provider about policy coverage away from home—particularly if you’re insured by an HMO and/or Medicare/Medicaid.

Luggage
Restrictions for carry-on baggage and weight and size limits for checked baggage are different for international flights than for domestic flights. Be sure to check with your individual carrier as to weight and measurement restrictions and associated costs for overages.

Measurements
Canada uses the metric system for weights and measures. If you choose to drive in Canada, be aware the speed limits are posted in kilometers per hour instead of miles per hour.

Medication
If you are entering Canada 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 Canadian 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.

Mobile Phone Service
Contact your service provider directly to inquire if service is available and/or the applicable rates.

Time Zone
Vancouver is in the Pacific Time Zone. In April it will be the same time zone as Los Angeles, two hours behind Chicago, three hours behind New York, eight hours behind London, and 16 hours behind Tokyo.

Volunteer and Save Even More on Annual Meeting Registration

Don’t miss these unique opportunities to get involved at the Annual Meeting—as well as save even more on registration fees!

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 give discounts or registration 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 Neuromuslogic Intraoperative Monitoring Skills Workshop on Friday, April 15, the EMG Skills Workshop: Basic on Tuesday, April 19, and the Neumorscular Ultrasound Skills Workshop on Thursday, April 21. 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 Laurie Dixon at ldixon@aan.com or (612) 928-6154.
Practicing in the Real World of Neurology

Pulst: What can visitors to this area expect to learn while there?

Neil A. Busis, MD, FAAN: Our goal is to provide tools and resources to help neurologists practicing in the United States succeed and demonstrate their value in the real world of US health care as it is today and as it will be in the future.

Pulst: What are the Real World of Neurology’s featured daily topics?

Busis: We will feature neurology business strategies and resources to help ensure success in a variety of practice settings including solo/small practice neurology. Topics include ICD-10-CM diagnosis coding, the move from volume to value including the Physician Quality Reporting System (PQRS), the Value-based Payment Modifier (VBPM), the upcoming changes mandated by MACRA (Medicare Access and CHIP Reauthorization Act of 2015), advance care planning, and telemedicine.

Pulst: What type of tools and resources will you be demonstrating?

Busis: There will be something for any practicing US neurologist in this Experiential Learning area, regardless of subspecialty or practice setting. Subject matter experts will be available in the “Ask The Expert” booth to answer questions and provide one-on-one support. We will have an interactive display on MACRA, which significantly changes the way Medicare will pay physicians in the near future. Attendees will learn about provisions of the legislation and explore how alternative payment models and the merit-based incentive program apply to their practices.

Health & Wellness: Taking Care of Yourself So You Can Take Care of Others!

Pulst: What is the primary goal of the Health & Wellness area?

Jessica Robinson-Papp, MD: We hope the area will inspire, motivate, and educate attendees about the importance of taking care of their mental and physical health, and to learn about the importance of both exercise and good nutrition—both for personal well-being and as part of treatment programs for their patients.

Pulst: What kind of an experience can visitors expect to have at this area?

Robinson-Papp: Visitors can stop by any time Friday through Thursday of the meeting to grab a healthy snack, participate in yoga sessions starting at 7:00 a.m. daily, and take part in step challenges starting on Friday. Attendees can relax and unwind by taking part in the technology-free meditation area—and even receive free massages. We will also be giving out free AAN water bottles, serving as a pick-up location for Run/Walk t-shirts both prior to and after the Tuesday morning event, post final Run/Walk and step challenge results, offer a mothers’ nursing room, and provide a convenient place for attendees to charge electronics—while recharging themselves!
New AAN/Optum Study Supports Value of Neurologic Care

Last year, the AAN joined forces with researchers at health care consulting firm Optum, Inc., to attempt to demonstrate the value of care provided by neurologists to patients with neurologic diseases using claims data. The results of this work funded by the Academy were published as “Neurologist Ambulatory Care, Health Care Utilization and Costs in a Large Commercial Dataset” in the January 26, 2016, print issue of Neurology®.

The study shows that care by a neurologist for chronic neurologic conditions may cost more up front, but it can help reduce emergency department visits, hospitalizations, and medical problems such as infections and fractures. Specifically, when neurologists take care of patients with neurologic conditions* in an ambulatory care setting at least once a year:

- Patients are less likely to require acute care—e.g., emergency department (ED) treatment and critical care—for their condition and related comorbid diseases.
- Patients with Parkinson’s disease (PD) and multiple sclerosis (MS) have less than half the likelihood of hospitalization for fracture than patients who do not see a neurologist. They also have fewer hospitalizations for pneumonia and urinary tract infections and fewer ED visits.
- Patients with epilepsy have fewer ED visits for epilepsy, head trauma, or fracture than patients who do not see a neurologist. They are less likely to be admitted to a hospital from the emergency room for these conditions and have fewer overall admissions in general.
- Patients with PD, MS, and stroke are less likely to move to skilled nursing facilities, and are less likely to require home health care in PD. This is important because costs for post-acute care services represent a large portion of the geographic variation in Medicare spending.
- Patients are much more likely to receive disease-specific care, including dopaminergic therapy for PD, immunomodulatory therapy for MS, and anticoagulation for atrial fibrillation associated with stroke.

The AAN has shared this paper with payers and will continue to reinforce these messages in our interactions with them. Findings from this study also should bolster the role of neurologists in the eyes of payers:

- When neurologists are involved in the care of patients with neurologic conditions, these patients use fewer acute services.
- Payers should take the actions mentioned in this document in order to encourage the use of neurologists to lower costs for certain neurologic patients.

The AAN/Optum study had some limitations. Because claims data do not capture clinical outcomes, it was necessary to use proxy measures (e.g., number of hospitalizations) to get at the quality of provided care. Analysis compared neurologist involvement with non-involvement, including episodes where no physician care was identified. These episodes invariably had less expense than those with neurologist involvement. Potential savings were identified due to avoidable care but those were not quantified in the study. Finally, researchers were not able to evaluate economic implications of neurologic disorders due to absenteeism, lost wages and benefits, losses to productivity, and caretaker costs.

The AAN’s Value of Neurology Work Group that took on this project was chaired by Joel M. Kaufman, MD, FAAN, and included Jeffrey R. Buchhalter, MD, FAAN; Eric M. Cheng, MD, MS; Daniel B. Hoch, MD, PhD, FAAN; Mark C. Homonoff, MD; John Ney, MD, MPH; Laura B. Powers, MD, FAAN; and Heidi B. Schwarz, MD, FAAN.

* Conditions studied were: Alzheimer’s disease, amyotrophic lateral sclerosis, autism, developmental delay, stroke (defined by a stroke hospitalization), dementia, epilepsy, migraine headache, multiple sclerosis, and Parkinson’s disease.

Learn How MACRA Will Affect You  
Continued from cover

- Compare the current measures of value and quality like Meaningful Use, value-based modifiers, and Physician Quality Reporting Systems to the new composite score used by MIPS
- Calculate the potential changes and differences in reimbursement based on the new systems, MIPS and APM
- Earn 1 AMA PRA Category 1 Credit™ per webinar (physician) or a certificate of completion (non-physician)
- Access presentation slides and recording

New 2016 Member Pricing!

AAN members benefit from reduced pricing in 2016: only $99 per webinar (save $50 each from 2015 fee) or subscribe to the complete 2016 webinar series for only $189 (save $10 from 2015 subscription).

Coming March 8: Get Caught Up: The ICD-10-CM Crosswalk Is Now a Cross-run

To view the complete schedule and register for any webinar, visit AAN.com/view/pmw16.
QUIETING MS Quietly*
for your patients with relapsing MS

AUBAGIO® (teriflunomide) 14mg tablets
AUBAGIO is available in 14 mg and 7 mg tablets.

* AUBAGIO is effective across key measures of disease activity: sustained disability progression (14 mg only), annualized relapse rate, and MRI activity. Common adverse events with AUBAGIO led to treatment discontinuation rates ≤3.3% in the pooled clinical trials.1,2

MS = multiple sclerosis.

INDICATION
AUBAGIO® (teriflunomide) is indicated for the treatment of patients with relapsing forms of multiple sclerosis.

IMPORTANT SAFETY INFORMATION
WARNING: HEPATOTOXICITY AND RISK OF TERATOGENICITY
Severe liver injury including fatal liver failure has been reported in patients treated with leflunomide, which is indicated for rheumatoid arthritis. A similar risk would be expected for teriflunomide because recommended doses of teriflunomide and leflunomide result in a similar range of plasma concentrations of teriflunomide. AUBAGIO is contraindicated in patients with severe hepatic impairment and in patients taking leflunomide. Concomitant use of AUBAGIO with other potentially hepatotoxic drugs may increase the risk of severe liver injury. Obtain transaminase and bilirubin levels within 6 months before initiation of AUBAGIO therapy. Monitor ALT levels at least monthly for 6 months after starting AUBAGIO. If drug-induced liver injury is suspected, discontinue AUBAGIO and start an accelerated elimination procedure with cholestyramine or charcoal. Patients with pre-existing liver disease may be at increased risk of developing elevated serum transaminases when taking AUBAGIO.

Based on animal data, AUBAGIO may cause major birth defects if used during pregnancy. Pregnancy must be excluded before starting AUBAGIO. AUBAGIO is contraindicated in pregnant women or women of childbearing potential who are not using reliable contraception. Pregnancy must be avoided during AUBAGIO treatment or prior to the completion of an accelerated elimination procedure after AUBAGIO treatment.

Please see additional Important Safety Information and Brief Summary of Full Prescribing Information, including boxed WARNING regarding hepatotoxicity and use in pregnancy, on the following pages.
AUBAGIO® (teriflunomide) efficacy was established in TEMSO and reinforced with TOWER and TOPIC.

INDICATION

AUBAGIO® (teriflunomide) is indicated for the treatment of patients with relapsing forms of multiple sclerosis.

IMPORTANT SAFETY INFORMATION

WARNING: HEPATOXICITY AND RISK OF TERATOGENICITY

Severe liver injury including fatal liver failure has been reported in patients treated with leflunomide, which is indicated for rheumatoid arthritis. A similar risk would be expected for teriflunomide because recommended doses of teriflunomide and leflunomide result in a similar range of plasma concentrations of teriflunomide. AUBAGIO is contraindicated in patients with severe hepatic impairment and in patients taking leflunomide. Concomitant use of AUBAGIO with other potentially hepatotoxic drugs may increase the risk of severe liver injury. Obtain transaminase and bilirubin levels within 6 months before initiation of AUBAGIO therapy. Monitor ALT levels at least monthly for 6 months after starting AUBAGIO. If drug-induced liver injury is suspected, discontinue AUBAGIO and start an accelerated elimination procedure with cholestyramine or charcoal. Patients with pre-existing liver disease may be at increased risk of developing elevated serum transaminases when taking AUBAGIO.

Based on animal data, AUBAGIO may cause major birth defects if used during pregnancy. Pregnancy must be excluded before starting AUBAGIO. AUBAGIO is contraindicated in pregnant women or women of childbearing potential who are not using reliable contraception. Pregnancy must be avoided during AUBAGIO treatment or prior to the completion of an accelerated elimination procedure after AUBAGIO treatment.

Warnings and Precautions

Patients with pre-existing acute or chronic liver disease, or those with serum ALT >2 times the upper limit of normal (ULN) before initiating treatment, should not normally be treated with AUBAGIO. In clinical trials, if ALT elevation was >3 times the ULN on 2 consecutive tests, patients discontinued AUBAGIO and underwent accelerated elimination. Consider additional monitoring if co-administering AUBAGIO with other potentially hepatotoxic drugs; monitor patients who develop symptoms suggestive of hepatic dysfunction (eg, unexplained nausea, vomiting, abdominal pain, fatigue, anorexia, or jaundice and/or dark urine).

Before starting therapy, use of reliable contraception must be confirmed, and the patient counseled on risks to the fetus. Patients with delayed onset of menses or other reason to suspect pregnancy should immediately see their physician for pregnancy testing. Patients who become pregnant or wish to become pregnant should discontinue treatment, followed by accelerated elimination until plasma concentrations of <0.02 mcg/mL are verified, a level expected to pose minimal risk to the fetus. Women who become pregnant while taking AUBAGIO may enroll in the AUBAGIO pregnancy registry by calling 1-800-745-4447, option 2.

Teriflunomide is eliminated slowly from the plasma—it takes an average of 8 months, or up to 2 years, to reach plasma concentrations <0.02 mcg/mL. Elimination may be accelerated by administration of cholestyramine or charcoal, but this may cause disease activity to return in patients who were responding to AUBAGIO.

Decreases in white blood cell counts, mainly of neutrophils and lymphocytes, and platelets have been reported with AUBAGIO. Obtain a complete blood cell
to quieting* relapsing MS

AUBAGIO 14 mg is the only oral MS therapy with 2 pivotal Phase III trials that show a significant reduction in the risk of sustained disability accumulation.

AUBAGIO 7 mg did not demonstrate a significant reduction in risk of sustained disability progression in either trial.

**TEMSO:** A double-blind, placebo-controlled trial in patients with relapsing forms of MS (N=1088). Patients were randomized to receive AUBAGIO 14 mg (n=359), AUBAGIO 7 mg (n=366), or placebo (n=363) once daily for 108 weeks.

**TOWER:** A double-blind, placebo-controlled trial in patients with relapsing forms of MS (N=1169). Patients were randomized to receive AUBAGIO 14 mg (n=372), AUBAGIO 7 mg (n=408), or placebo (n=389) once daily with results for up to 40 months of treatment.

**TOPIC:** A double-blind, placebo-controlled clinical trial in patients with relapsing MS (N=618). Patients were randomized to receive AUBAGIO 14 mg (n=216), AUBAGIO 7 mg (n=205), or placebo (n=197) once daily for 108 weeks. Patients had a first clinical event consistent with acute demyelination occurring within 90 days of randomization with 2 or more T2 lesions at least 3 mm in diameter characteristic of MS.

**Study 4:** A randomized, double-blind, placebo-controlled trial in patients with relapsing forms of MS (N=179). Patients were randomized to receive AUBAGIO 14 mg (n=57), AUBAGIO 7 mg (n=61), or placebo (n=61) once daily for 36 weeks.

Adverse Reactions: The most frequent adverse reactions (≥10% and ≥2% greater than placebo) with AUBAGIO 7 mg and 14 mg and placebo, respectively, were headache (18% and 16% vs 15%), ALT increased (13% and 15% vs 9%), diarrhea (13% and 14% vs 8%), alopecia (10% and 13% vs 5%), and nausea (8% and 11% vs 7%).

Drug Interactions: Monitor patients when teriflunomide is coadministered with warfarin, or with drugs metabolized by CYP1A2, CYP2C8, substrates of OAT3 transporters, substrates of BCRP, or OATP1B1/1B3 transporters.

Use in Specific Populations: AUBAGIO is detected in human semen. To minimize any possible fetal risk, men not wishing to father a child and their female partners should use reliable contraception. Men wishing to father a child should discontinue therapy and undergo accelerated elimination, with verification of plasma concentrations <0.02 mcg/mL. Nursing mothers should not use AUBAGIO.

Please see Brief Summary of Full Prescribing Information, including boxed WARNING regarding hepatotoxicity and use in pregnancy, on the following pages.

AUBAGIO is available in 14 mg and 7 mg tablets.

**Adverse Reactions:**

- Headache
- ALT increased
- Diarrhea
- Alopecia
- Nausea

**Drug Interactions:**

- Coadministered with warfarin
- Substrates of OAT3 transporters
- Substrates of BCRP
- OATP1B1/1B3 transporters

**Use in Specific Populations:**

- Men not wishing to father a child should use reliable contraception
- Men wishing to father a child should discontinue therapy and undergo accelerated elimination
- Nursing mothers should not use AUBAGIO

**Adverse Reactions:**

- Headache (18% and 16% vs 15%)
- ALT increased (13% and 15% vs 9%)
- Diarrhea (13% and 14% vs 8%)
- Alopecia (10% and 13% vs 5%)
- Nausea (8% and 11% vs 7%)

**Drug Interactions:**

- Coadministered with warfarin
- Substrates of OAT3 transporters
- Substrates of BCRP
- OATP1B1/1B3 transporters

**Use in Specific Populations:**

- Men not wishing to father a child should use reliable contraception
- Men wishing to father a child should discontinue therapy and undergo accelerated elimination
- Nursing mothers should not use AUBAGIO

**Adverse Reactions:**

- Headache (18% and 16% vs 15%)
- ALT increased (13% and 15% vs 9%)
- Diarrhea (13% and 14% vs 8%)
- Alopecia (10% and 13% vs 5%)
- Nausea (8% and 11% vs 7%)
Help your patients manage their RMS with AUBAGIO® (teriflunomide) and MS One to One®

One step to get started: the AUBAGIO Start form is both a prescription for AUBAGIO and enrollment for support offered by MS One to One.

For more information, visit www.AubagioHCP.com or call 1-855-MSOne2One (1-855-676-6326).

AUBAGIO is effective across key measures of disease activity: sustained disability progression (14 mg only), annualized relapse rate, and MRI activity. Common adverse events with AUBAGIO led to treatment discontinuation rates ≤3.3% in the pooled clinical trials.1,2

Please see Important Safety Information on previous pages and Brief Summary of Full Prescribing Information, including boxed WARNING regarding hepatotoxicity and use in pregnancy, on the following pages.

AUBAGIO®
(teriflunomide), tablets, for oral use

Brief Summary of Prescribing Information

WARNING: HEPATOTOXICITY AND RISK OF TERATOGENICITY

Hepatotoxicity

Severe liver injury including fatal liver failure has been reported in patients treated with leflunomide, which is indicated for rheumatoid arthritis. A similar risk would be expected for teriflunomide because recommended doses of teriflunomide and leflunomide result in a similar range of plasma concentrations of teriflunomide. Concomitant use of AUBAGIO with other potentially hepatotoxic drugs may increase the risk of severe liver injury. Obtain transaminase and bilirubin levels within 6 months before initiation of AUBAGIO therapy. Monitor ALT levels at least monthly for six months after starting AUBAGIO [see Warnings and Precautions (5.1)]. If drug induced liver injury is suspected, discontinue AUBAGIO and start an accelerated elimination procedure with cholestyramine or charcoal [see Warnings and Precautions (5.3)]. AUBAGIO is contraindicated in patients with severe hepatic impairment [see Contraindications (4.1)]. Patients with pre-existing liver disease may be at increased risk of developing elevated serum transaminases when taking AUBAGIO.

Risk of Teratogenicity

Based on animal data, AUBAGIO may cause major birth defects if used during pregnancy. Pregnancy must be excluded before starting AUBAGIO. AUBAGIO is contraindicated in pregnant women or women of childbearing potential who are not using reliable contraception. Pregnancy test should be performed prior to starting AUBAGIO treatment or prior to the completion of an accelerated elimination procedure after AUBAGIO treatment [see Contraindications (4.2), Warnings and Precautions (5.2), and Use in Specific Populations (8.1)].

1 INDICATIONS AND USAGE

AUBAGIO® is indicated for the treatment of patients with relapsing forms of multiple sclerosis.

2 DOSAGE AND ADMINISTRATION

The recommended dose of AUBAGIO is 7 mg or 14 mg orally once daily. AUBAGIO can be taken with or without food.

Monitoring to assess safety

- Obtain transaminase and bilirubin levels within 6 months before initiation of AUBAGIO therapy. Monitor ALT levels at least monthly for six months after starting AUBAGIO [see Warnings and Precautions (5.1)].
- Obtain a complete blood cell count (CBC) within 6 months before the initiation of treatment with AUBAGIO. Further monitoring should be based on signs and symptoms of infection [see Warnings and Precautions (5.4)].
- Prior to initiating AUBAGIO, screen patients for latent tuberculosis infection with a tuberculin skin test or blood test for mycobacterium tuberculosis infection [see Warnings and Precautions (5.6)].
- Check blood pressure before start of AUBAGIO treatment and periodically thereafter [see Warnings and Precautions (5.7)].

4 CONTRAINDICATIONS

4.1. Severe Hepatic Impairment

Patients with severe hepatic impairment [see Warnings and Precautions (5.1)].

4.2. Patients Who are Pregnant or Women of Childbearing Potential Not Using Reliable Contraception

AUBAGIO may cause fetal harm when administered to a pregnant woman. In animal studies, teriflunomide is shown to be selectively teratogenic and embryolethal in multiple species when administered during pregnancy at doses less than or equal to the oral human maximum tolerated dose. In animal studies, teriflunomide has been shown to be selectively teratogenic and embryolethal in multiple species when administered during pregnancy at doses less than or equal to the oral human maximum tolerated dose.

5 WARNINGS AND PRECAUTIONS

5.1. Hepatotoxicity

Severe liver injury including fatal liver failure and dysfunction has been reported in some patients treated with leflunomide, which is indicated for rheumatoid arthritis. A similar risk would be expected for teriflunomide because recommended doses of teriflunomide and leflunomide result in a similar range of plasma concentrations of teriflunomide. Patients with pre-existing liver disease may be at increased risk of developing elevated serum transaminases when taking AUBAGIO. Patients with pre-existing acute or chronic liver disease, or those with serum alanine aminotransferase (ALT) greater than two times the upper limit of normal (ULN) before initiating treatment, should not normally be treated with AUBAGIO. AUBAGIO is contraindicated in patients with severe hepatic impairment [see Contraindications (4.1)].

In placebo-controlled trials, ALT greater than three times the ULN occurred in 67/1045 (6.4%) and 62/1002 (6.2%) of patients receiving AUBAGIO 7 mg and 14 mg, respectively, and 38/997 (3.8%) of patients receiving placebo during the treatment period. These elevations occurred mostly within the first year of treatment. Half of the cases returned to normal without drug discontinuation. In clinical trials, if ALT was greater than three times the ULN on two consecutive tests, AUBAGIO was discontinued and patients underwent an accelerated elimination procedure [see Warnings and Precautions (5.3)]. Of the patients who underwent discontinuation and accelerated elimination in controlled trials, half returned to normal or near normal values within 2 months.

One patient in the controlled trials developed ALT 32 times the ULN and jaundice 5 months after initiation of AUBAGIO 14 mg treatment. The patient was hospitalized for 5 weeks and recovered after plasmapheresis and cholestyramine accelerated elimination procedure. AUBAGIO-induced liver injury in this patient could not be ruled out.

Obtain serum transaminase and bilirubin levels within 6 months before initiation of AUBAGIO therapy. Monitor ALT levels at least monthly for six months after starting AUBAGIO. Obtain transaminase and bilirubin on AUBAGIO therapy, particularly in patients who display symptoms suggestive of hepatic dysfunction, such as acute nausea, vomiting, abdominal pain, fatigue, anorexia, or jaundice and/or dark urine. If liver injury is suspected to be AUBAGIO-induced, discontinue AUBAGIO and start an accelerated elimination procedure [see Warnings and Precautions (5.3)] and monitor liver tests weekly until normalized. If AUBAGIO-induced liver injury is unlikely, but some other probable cause has been found, resumption of AUBAGIO therapy may be considered.

5.2 Use in Women of Childbearing Potential

There are no adequate and well-controlled studies evaluating AUBAGIO in pregnant women. However, based on animal studies, teriflunomide may increase the risk of teratogenic effects or fetal death when administered to a pregnant woman [see Contraindications (4.2)]. Women of childbearing potential must not be started on AUBAGIO until pregnancy is excluded and it has been confirmed that they are using reliable contraception. Before starting treatment with AUBAGIO, patients must be fully counseled on the potential for serious risk to the fetus. The patient must be advised that if there is any delay in onset of menses or any other reason to suspect pregnancy, they must notify the physician immediately for pregnancy testing and, if pregnancy is suspected, the patient must discuss the risk to the fetus. It is possible that rapidly lowering the plasma concentration of teriflunomide by instituting an accelerated elimination procedure may decrease the risk to the fetus from AUBAGIO [see Warnings and Precautions (5.3)].

Upon discontinuing AUBAGIO, it is recommended that all women of childbearing potential undergo an accelerated elimination procedure. Women receiving AUBAGIO treatment who wish to become pregnant must discontinue AUBAGIO and undergo an accelerated elimination procedure. Women receiving AUBAGIO treatment who wish to become pregnant must undergo an accelerated elimination procedure. Women receiving AUBAGIO treatment who wish to become pregnant must undergo an accelerated elimination procedure. Women receiving AUBAGIO treatment who wish to become pregnant must undergo an accelerated elimination procedure.

5.3 Procedure for Accelerated Elimination of Teriflunomide

Teriflunomide is eliminated slowly from the plasma. Without an accelerated elimination procedure, it takes on average 8 months to reach plasma concentrations less than 1 mg/L, although because of individual variations in drug clearance, it may take as long as 2 years. An accelerated elimination procedure could be used at any time after discontinuation of AUBAGIO. Elimination can be accelerated by either of the following procedures:

- Administration of cholestyramine 8 g every 8 hours for 11 days. If cholesteramine 8 g three times a day is not well tolerated, cholestyramine 4 g three times a day can be used.
- Administration of 50 g oral activated charcoal powder every 12 hours for 11 days.

If either elimination procedure is poorly tolerated, treatment days do not need to be consecutive unless there is a need to lower teriflunomide plasma concentration rapidly.

At the end of 11 days, both regimens successfully accelerated teriflunomide elimination, leading to more than 98% decrease in teriflunomide plasma concentrations. Use of the accelerated elimination procedure may potentially result in return of disease activity if the patient had been responding to AUBAGIO treatment.

5.4 Bone Marrow Effects/Immunosuppression Potential/Infections

White Blood Cell (WBC) count decrease

A mean decrease in white blood cell (WBC) count of approximately 15% (mainly neutrophils and lymphocytes) and in platelet count of approximately 10% was observed in placebo-controlled trials with 7 mg and 14 mg of AUBAGIO compared to baseline. The decrease in mean WBC count occurred during the first 6 weeks and WBC count remained low during treatment. In placebo-controlled studies, neutrophil count < 1.5×10^9/L was observed in 12% and 16% of patients receiving AUBAGIO 7 mg and 14 mg, respectively, compared with 7% of patients receiving placebo; lymphocyte count <0.8×10^9/L was observed in 10% and 12% of patients.
receiving AUBAGIO 7 mg and 14 mg, respectively, compared with 6% of patients receiving placebo. No cases of serious pancoeytopenia were reported in premarketing clinical trials of AUBAGIO but rare cases of pancytopenia, agranulocytosis, and thrombocytopenia have been reported in the postmarketing setting with leflunomide. A similar risk would be expected for AUBAGIO [see Clinical Pharmacology (12.1) in the full prescribing information]. Obtain a complete blood cell count (CBC) within 6 months before the initiation of treatment with AUBAGIO. Further monitoring should be based on signs and symptoms suggestive of bone marrow suppression.

Risk of Infection / Tuberculosis Screening

Patients with active acute or chronic infections should not start treatment until the infection(s) is resolved. If a patient develops a serious infection consider suspending treatment with AUBAGIO and using an accelerated elimination procedure. Reassess the benefits and risks prior to resumption of therapy. Instruct patients receiving AUBAGIO to report symptoms of infections to a physician. AUBAGIO is not recommended for patients with severe immunodeficiency, bone marrow disease, or severe, uncontrolled infections. Medications like AUBAGIO that have immunosuppressive potential may cause patients to be more susceptible to infections, including opportunistic infections.

In placebo-controlled studies of AUBAGIO, no overall increase in the risk of serious infections was observed with AUBAGIO 7 mg (2.2%) or 14 mg (2.7%) compared to placebo (2.2%). However, one fatal case of Klebsiella pneumonia sepsis occurred in a patient taking AUBAGIO 14 mg for 1.7 years. Fatal infections have been reported in the post-marketing setting in patients receiving leflunomide, especially Pneumocystis proven pneumonia and aspergillosis. Most of the reports were confounded by concomitant immunosuppressant therapy and/or comorbid illness which, in addition to rheumatoid disease, may predispose patients to infection. In clinical studies with AUBAGIO, cytomegalovirus hepatitis reactivation has been observed.

In clinical studies with AUBAGIO, cases of tuberculosis have been observed. Prior to initiating AUBAGIO, screen patients for latent tuberculosis infection with a tuberculin skin test or with a blood test for Mycobacterium tuberculosis infection. AUBAGIO is not recommended for patients with positive tuberculin skin test or with a positive tuberculosis therapy and the safety of AUBAGIO in individuals with latent tuberculosis infection is unknown. For patients testing positive in tuberculosis screening, treat by standard medical practice prior to therapy with AUBAGIO.

Vaccination

No clinical data are available on the efficacy and safety of live vaccinations in patients taking AUBAGIO. Vaccination with live vaccines is not recommended. The long half-life of AUBAGIO should be considered when contemplating administration of a live vaccine after stopping AUBAGIO.

Malignancy

The risk of malignancy, particularly lymphoproliferative disorders, is increased with the use of some immunosuppressive medications. There is a potential for immunosuppression with AUBAGIO. No apparent increase in the incidence of malignancies and lymphoproliferative disorders was reported in the AUBAGIO clinical trials, but larger and longer-term studies would be needed to determine whether there is an increased risk of malignancy or lymphoproliferative disorders with AUBAGIO.

5.5 Peripheral Neuropathy

In placebo-controlled studies, peripheral neuropathy, including both polyneuropathy and mononeuropathy (e.g., carpal tunnel syndrome), occurred more frequently in patients taking AUBAGIO than in patients taking placebo. The incidence of peripheral neuropathy confirmed by nerve conduction studies was 1.4% (118 patients) and 1.9% (171 patients) of patients receiving 7 mg and 14 mg of AUBAGIO, respectively, compared with 0.4% receiving placebo (4 patients). Treatment was discontinued in 0.7% (8 patients) with confirmed peripheral neuropathy (3 patients receiving AUBAGIO 7 mg and 5 patients receiving AUBAGIO 14 mg) and recovered following treatment discontinuation. Not all cases of peripheral neuropathy resolved with continued treatment. Peripheral neuropathy also occurred in patients receiving leflunomide.

Age older than 60 years, concomitant neurotoxic medications, and diabetes may increase the risk for peripheral neuropathy. If a patient taking AUBAGIO develops symptoms consistent with peripheral neuropathy, such as bilateral numbness or tingling of hands or feet, consider discontinuing AUBAGIO therapy and initiating an accelerated elimination procedure [see Warnings and Precautions (5.3)].

5.6 Skin Reactions

Rare cases of Stevens-Johnson syndrome and toxic epidermal necrolysis have been reported in patients with rheumatoid arthritis receiving leflunomide. A similar risk would be expected for AUBAGIO [see Clinical Pharmacology (12.3) in the full prescribing information]. If a patient taking AUBAGIO develops any of these conditions, stop AUBAGIO therapy and perform an accelerated elimination procedure [see Warnings and Precautions (5.3)].

5.7 Increased Blood Pressure

In placebo-controlled studies, the mean change from baseline to the end of study in systolic blood pressure was +2.3 mmHg and +2.7 mmHg for AUBAGIO 7 mg and 14 mg, respectively, compared to placebo (−0.6 mmHg). The mean change from baseline in diastolic blood pressure was +1.4 mmHg and +1.9 mmHg for AUBAGIO 7 mg and 14 mg, respectively, and −0.3 mmHg for placebo. Hypertension was an adverse reaction in 3.1% and 4.3% of patients treated with 7 mg or 14 mg of AUBAGIO compared to placebo. Check blood pressure before start of AUBAGIO treatment and periodically thereafter. Elevated blood pressure should be appropriately managed during treatment with AUBAGIO.

5.8 Respiratory Effects

In clinical trials, disease and worsening of pre-existing interstitial lung disease have been reported during treatment with leflunomide. A similar risk would be expected for AUBAGIO [see Clinical Pharmacology (12.3) in the full prescribing information].
patients; 4% of AUBAGIO-treated patients had hypophosphatemia with serum phosphorus levels at least 0.3 mmol/L but less than 0.6 mmol/L, compared to 0.8% of placebo-treated patients. No patient in any treatment group had a serum phosphorus below 0.3 mmol/L.

7 DRUG INTERACTIONS
Effect of AUBAGIO on CYP2C8 substrates
Teriflunomide is an inhibitor of CYP2C8 "in vivo". In patients taking AUBAGIO, exposure of drugs metabolized by CYP2C8 (e.g., paclitaxel, pioglitazone, repaglinide, rosiglitazone) may be increased. Monitor these patients and adjust the dose of the concomitant drug(s) metabolized by CYP2C8 as required [see Clinical Pharmacology (12.3) in the full prescribing information].

Effect of AUBAGIO on warfarin
Co-administration of AUBAGIO with warfarin requires close monitoring of the international normalized ratio (INR), because AUBAGIO may decrease peak INR by approximately 25%.

Effect of AUBAGIO on oral contraceptives
AUBAGIO may increase the systemic exposures of ethinylestradiol and levonorgestrel. Consideration should be given to the type or dose of contraceptives used in combination with AUBAGIO [see Clinical Pharmacology (12.3) in the full prescribing information].

Effect of AUBAGIO on CYP1A2 substrates
Teriflunomide may be a weak inducer of CYP1A2 "in vivo". In patients taking AUBAGIO, exposure of drugs metabolized by CYP1A2 (e.g., aldesleukin, duloxetine, theophylline, tizanidine) may be reduced. Monitor these patients and adjust the dose of the concomitant drug(s) metabolized by CYP1A2 as required [see Clinical Pharmacology (12.3) in the full prescribing information].

Effect of AUBAGIO on organic anion transporter 3 (OAT3) substrates
Teriflunomide inhibits the activity of OAT3 in vivo. In patients taking AUBAGIO, exposure of drugs which are OAT3 substrates (e.g., cefaclor, cimetidine, ciprofloxacin, penicillin G, ketoconazole, furosemide, metoclopramide, zidovudine) may be increased. Monitor these patients and adjust the dose of the concomitant drug(s) which are OAT3 substrates as required [see Clinical Pharmacology (12.3) in the full prescribing information].

Effect of AUBAGIO on BCRP and organic anion transporting polypeptide B1 and B3 (OATP B1/B3) substrates
Teriflunomide inhibits the activity of BCRP and OATP B1/B3 "in vivo". For a patient taking AUBAGIO, the dose of rosuvastatin should not exceed 10 mg once daily. For other substrates of BCRP (e.g., mitoxantrone) and drugs in the OATP family (e.g., metoclopramide, rifampin), especially HMG-Co reductase inhibitors (e.g., atorvastatin, fluvastatin, pravastatin, simvastatin), consider reducing the dose of these drugs and monitor patients closely for signs and symptoms of increased exposure to the drugs, while patients are taking AUBAGIO [see Clinical Pharmacology (12.3) in the full prescribing information].

8 USE IN SPECIFIC POPULATIONS
8.1 Pregnancy
Pregnancy Category X [see Contraindications (4.2) and Warnings and Precautions (5.2)].

When teriflunomide (oral doses of 1, 3, or 10 mg/kg/day) was administered to pregnant rats throughout the period of organogenesis, high incidences of fetal malformation (primarily craniofacial, and axial and appendicular skeletal defects) and embryofetal death were observed at doses not associated with maternal toxicity. Adverse effects on embryofetal development were observed following dosing at various stages throughout organogenesis. Maternal plasma exposure at the no-effect level (1.0 mg/kg/day) for embryofetal developmental toxicity in rats was less than that in humans at the maximum recommended human dose (MRHD, 14 mg/day).

Administration of teriflunomide (oral doses of 1, 3.5, or 12 mg/kg/day) to pregnant rabbits throughout organogenesis resulted in high incidences of fetal malformation (primarily craniofacial, and axial and appendicular skeletal defects) and embryofetal death at doses associated with minimal maternal toxicity. Maternal plasma exposure at the no-effect dose (1.0 mg/kg/day) for embryofetal developmental toxicity in rabbits was less than that in humans at the MRHD.

In studies in which teriflunomide (oral doses of 0.05, 0.1, 0.3, 0.6, or 1.0 mg/kg/day) was administered to rats during gestation and lactation, decreased growth, eye and skin anomalies, and high incidences of malformation (limb defects) and postnatal death were observed in the offspring at doses not associated with maternal toxicity. Maternal plasma exposure at the no-effect dose for pre- and postnatal developmental toxicity in rats (0.10 mg/kg/day) was less than that in humans at the MRHD.

In animal reproduction studies of leflunomide, embryolethality and teratogenic effects were observed in pregnant rat and rabbit at or below clinically relevant plasma teriflunomide exposures (AUC). In published reproduction studies in pregnant mice, leflunomide was embryolethal and increased the incidence of malformations (craniofacial, axial skeletal, heart, and great vessel). Supplementation with exogenous uridine reduced the teratogenic effects in pregnant mice, suggesting that the mode of action (inhibition of mitochondrial enzyme dihydroorotate dehydrogenase) is the same for therapeutic efficacy and developmental toxicity. At recommended doses in humans, teriflunomide and leflunomide result in a similar range of plasma concentrations of teriflunomide.

Use in Males
AUBAGIO is detected in human semen. Animal studies to specifically evaluate the risk of fertility loss in males have not been conducted. To minimize any possible risk, men not wishing to father a child and their female partners should use reliable contraception. Men wishing to father a child should discontinue use of

AUBAGIO and undergo an accelerated elimination procedure to decrease the plasma concentration of teriflunomide to less than 0.02 mg/L (0.02 mcg/mL) [see Warnings and Precautions (5.3)].

8.2 Lactation
AUBAGIO is detected in breast milk. Because of the potential for serious adverse reactions in nursing infants from AUBAGIO a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

8.3 Nursing Mothers
Teriflunomide was detected in rat milk following a single oral dose of teriflunomide. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from AUBAGIO a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

8.4 Pediatric Use
Safety and effectiveness in pediatric patients have not been established.

8.5 Geriatric Use
Clinical studies of AUBAGIO did not include patients over 65 years old.

8.6 Hepatic Impairment
No dosage adjustment is necessary for patients with mild and moderate hepatic impairment. The pharmacokinetics of teriflunomide in severe hepatic impairment have not been evaluated. AUBAGIO is contraindicated in patients with severe hepatic impairment [see Contraindications (4.1) and Warnings and Precautions (5.1), and Clinical Pharmacology (12.3) in the full prescribing information].

8.7 Renal Impairment
No dosage adjustment is necessary for patients with mild, moderate, and severe renal impairment [see Clinical Pharmacology (12.3) in the full prescribing information].

10 OVERDOSAGE
There is no experience regarding teriflunomide overdose or intoxication in humans. Teriflunomide 70 mg daily up to 14 days was well tolerated by healthy subjects. In the event of clinically significant overdose or toxicity, cholesteryamine or activated charcoal is recommended to accelerate elimination [see Warnings and Precautions (5.3)].

Genzyme Corporation
500 Kendall Street
Cambridge, MA 02142

A SANOFI COMPANY

October 2014a

TER-BPLR-SA-OCT14

Revised: October 2014a
Behind the Scenes: Building a Measurement Set for MS

Last fall, the AAN published a quality measurement set for multiple sclerosis. To help members better understand the general process of developing quality measures and their important role in a neurologist’s practice, we invited Alexander D. Rae-Grant, MD, to share his work group’s experience with the MS measures.

You were the co-leader for the multiple sclerosis measurement set. What was the good, the bad, and the ugly about the development process?

“First of all, on behalf of the multiple sclerosis quality measures work group, I have to say the staff at the AAN was fabulous in supporting this project. Academy staff member Amy Bennett and her team provided a seamless structure for us to come up with useful measures in a reasonable timeline with the least amount of inefficiency and fluster possible. We could never have done this without them and the overarching support of the AAN. It was a great pleasure to work with the multidisciplinary team on this project, and the level of engagement in the process was truly outstanding.

“The bad and ugly were no more or less than one might have predicted. The public comments were sometimes quite pointed, but always had a point. We were told the measures were too broad and too narrow. We heard that we didn’t represent particular constituents, and that we over-represented others. We heard that the measures were too onerous, and that they didn’t go far enough. So it’s probably safe to say we satisfied no one completely in this process, which means we probably achieved the goals that were set for us by the Academy.”

The multiple sclerosis measurement set has process and outcome measures. What is the difference between the two? For the MS depression outcome measure there was a process measure as well. Why aren’t process measures developed for all the outcome measures?

“Quality measures come in all sorts of shapes and sizes, and part of what determines useful quality measures for a particular area of medicine is set by the kinds of problems, decisions, timelines, and outcomes related to that problem. MS is unique in that these issues vary dramatically across a population, and we wanted to encompass measures at all points of the disease spectrum for this heterogeneous group.

“Process measures are focused on what we do in care. Are we using appropriate diagnostic strategies? Do we screen for problems such as cognitive impairment and depression? Do we counsel about exercise? In a condition such as MS, there are a number of process activities which the work group felt should be monitored due to their importance to the MS population.

“Outcome measures are focused on what actually happens. In acute surgical settings, outcome measures can be somewhat obvious; were there postoperative infections; did the patient die in the 30-day postoperative period? For MS, outcomes are not as easy, particularly recognizing that none of our medicines completely eradicate ongoing disease activity or disability. However the work group decided that we needed to include outcome measures to focus attention not just on what we do (process), but how the people we treat are doing (outcome). There were many outcome measures that we did not adopt this time around, often due to the problem of defining these outcomes and measuring them in a reasonably time effective manner (relapses is an obvious example). This doesn’t mean they are bad outcome measures, just that at present these did not make our list for various reasons.

“Depression is extremely common in the multiple sclerosis population and one that is correlated with negative quality of life and social measures. In addition, the work group noted that this may be an area where there is a gap in care both in terms of screening and treatment, one which rose to the level of needing both an outcome and a process measure.”

Are you worried that collecting outcome data will result in providers being penalized, knowing the long-term outcomes for patients with MS are not positive?

“The last thing this work group or the Academy want to do is to punish providers for giving comprehensive, caring, and collaborative care. Dealing with people going through a long term, difficult, and multifaceted illness is taxing, tiring, and at times traumatic. The work group discussed in detail concerns about how these measures might be used by external agencies. We sweated about such concerns. However, the work group and AAN decided that it would be far better for providers of MS care to be measured using yardsticks that people who know about MS developed rather than something cooked up by a faceless, nameless bureaucrat in some small
The AAN develops both guidelines and quality measures. What is the difference between these two? How are guidelines used in the development of measures?

“Guidelines are developed using systematic reviews of the available literature to guided diagnosis and treatment of medical issues. Guidelines tell us what the best evidence is, and try as much as possible to get to the ‘truth’ of what works for our patients and what doesn’t. Quality measures are grounded in guidelines and best evidence to provide a way to measure what we are doing in care. The guideline process and quality measure process are two sides of a coin. At the end of the day, treating the right patient with the right tools at the right time is core to both of these processes.”

What are some tips for those wishing to implement these measures?

“The work group and staff worked hard with this measure set to find measures that covered the span of the condition while being measurable (particularly in the electronic medical record), readily extractable from the chart, and time efficient. In implementation, systematizing how these are measured would go a long way to making them easier to use. For example, in some clinics some of these measures may be self-reported, and some may be measured by support staff, taking the burden off the provider. For some measures, such as cognitive impairment testing, very simple items can be used rather than the most complex, time consuming items. In addition, some items occur annually, so a reminder system for this measure would help the provider know when a measure is due.”

Listen to FREE MS Quality Measures Webinar

Listen to a recording of the free webinar on the AAN’s recently released multiple sclerosis quality measures. Visit AAN.com/view/quality for instant access to the recording.

Podcast Central

Your Guide to New and Recent AAN Podcasts

Neurology® Podcasts

Visit Neurology.org to listen to Neurology podcasts and earn 0.5 AMA PRA Category 1 CME Credits™ by answering the multiple-choice questions in the online podcast quiz. *Important Note: Interviews based on articles from Neurology® Clinical Practice, Neurology® Genetics, and Neurology® Neuroimmunology & Neuroinflammation are excluded from the CME program.

Available by February 1

- Neurology: Pregnancy outcomes in aquaporin-4 positive neuromyelitis optica
  Melanie Dale Ward, HS, and Maria Isabel S. Leite, MD, DPhil

- Neurology: Predictors for atrial fibrillation detection after cryptogenic stroke: Results from CRYSTAL AF
  Bryan Eckerle, MD, and Vincent N. Thijs, MD, PhD

- Neurology: Overdiagnosis of idiopathic intracranial hypertension
  Jennifer Bickel, MD, and Valerie Biousse, MD

- Neurology: Clinical Practice: Anti-GAD antibody syndrome with concomitant cerebellar ataxia, stiff-person syndrome and limbic encephalitis
  Alex Menze, MD, and Sara Schaefer, MD
Capitol Hill Report presents regular updates on legislative and regulatory actions and how the Academy ensures that the voice of neurology is heard on Capitol Hill. It is emailed to US members twice monthly and is posted at AAN.com/view/HillReport. Below are some recent highlights.

As a direct result of AAN advocacy, Cigna has reversed its previous non-coverage of responsive neurostimulation (RNS) for the treatment of patients with medically refractory partial onset seizures effective December 15, 2015. Based upon AAN subject expert member input, the payer will now cover RNS for patients when certain criteria are met.

We are extremely pleased that Congress passed the Patient Access and Medicare Protection Act, which will help ensure flexibility in applying for the Meaningful Use hardship exemption for the 2015 electronic health record reporting period that will affect 2017 payment adjustments. The bill, S. 2425, includes a provision that automatically grants every physician who applies by March 15, 2016, with a hardship exemption in order to avoid penalties being assessed in 2017. The AAN has continuously called upon the Centers for Medicare & Medicaid Services to offer a broad array of hardship exemptions for providers and we are glad to see that Congress is listening to the concerns of our members. Stay informed about the electronic health record incentive program at AAN.com.

Singh Wins Viste Patient Advocate of the Year Award

Mamta Bhushan Singh, MBBS, MD, DM, has been named the 2016 Kenneth M. Viste, Jr., MD, Patient Advocate of the Year. She has been awarded the honor for her efforts in improving neurologic care, particularly for people living with epilepsy, in her native India.

In his nominating letter, Jerome H. Chin, MD, PhD, MPH, cited his experience accompanying Singh on a volunteer trip with the Lifeline Express medical train to provide free epilepsy evaluation, treatment, and education to a rural underserved population. “Dr. Singh evaluated more than 150 epilepsy patients during two 10-hour days. Most of the patients, both children and adults, had never seen a neurologist. I returned to India in December 2013 to join Dr. Singh on another Lifeline Express project. Dr. Singh has been providing pro bono epilepsy care with the Lifeline Express one weekend every month since 2009. Her passion and demonstrated commitment to reducing the treatment gap for epilepsy in India make her an outstanding and deserving nominee for this award.”

Singh was a member of the AAN’s 2008 class of the Donald M. Palatucci Advocacy Leadership Forum (PALF), and was named PALF Advocate of the Year in 2009. She served as an advisor to the program in 2010.

Singh will receive the award at the Annual Meeting in Vancouver during a reception for PALF graduates.
Research Awards

New Issue of Neuroimmunology and Neuroinflammation Journal Available

Among the papers on cutting-edge research published in the latest open access journal Neurology® Neuroimmunology and Neuroinflammation are these three standouts:

- Sandfly virus seroconversion associated with neurological presentation
- MS patients under daclizumab therapy mount normal immune responses to influenza vaccination
- Lockjaw in stiff-person-syndrome with autoantibodies to glycine receptors

Neurology: Neuroimmunology and Neuroinflammation publishes rigorously peer-reviewed open access reports of original research and in-depth reviews of topics affecting the full range of neurologic diseases. Clinical trials, instructive case reports, and small case series also are featured. The publication is indexed in Google Scholar, DOAJ, and CrossRef, and is searchable in PMC. Visit NN.neurology.org to read the latest issue and learn more.

To submit a paper to Neurology: Neuroimmunology and Neuroinflammation, visit Submit.NN.neurology.org.

President’s Column

Answering the Needs of Neurologists in Solo and Small Practices

Continued from page 3

In March, we will launch our fourth annual Neurology Compensation and Productivity Survey of AAN members. I’m happy to say that last year’s participation rate increased by 59 percent, to 1,350 members. We must continue to grow this number. Yes, this is broader than solo and small practices, but this is the only US survey dedicated exclusively to the neurology profession. The survey compiles standards on physician compensation, productivity, and practice management efficiencies. The higher the response rate to this survey—especially from members in solo and small practice—the more the data can be analyzed and interpreted, which ultimately leads to greater advancement for the field of neurology. We’ve continued to refine the data collection process to improve the user experience and ensure the resulting data is informative and actionable. And confidentiality is maintained; your information is not reported on individually but only in aggregate. Those who complete the survey will receive complimentary access to the report on the survey results, which they can use to make beneficial adjustments to their practices based on the experiences of others.

Our survey on neurologist burnout will conclude on March 8. If you have received this survey, please take the time to complete it and send it back. Burnout is a critical problem and we want to be sure the experiences and needs of solo and small practice neurologists are accurately represented.

Resources You Can Use Now

The Academy provides a wide range of tools and resources that can help your practice, including a variety of 2016 Practice Management Webinars on essential, timely topics that help your practice—with newly reduced pricing. You can find information about the webinars and other items such as coding FAQs and E/M templates, quality measures, Medicare information, and more at AAN.com/practice. Throughout 2016, we will be developing additional information about MACRA and alternative payment models to help you navigate this new round of changes.

And I look forward to sharing the report from the Solo and Small Practice Task Force and how the AAN will use this information to improve the professional lives of our solo and small practice members.

Solo and Small Practice Task Force

James C. Stevens, MD, FAAN, Chair
David A. Evans, MBA
William H. Fleming III, MD
Allen L. Gee, MD, PhD, FAAN
Steven J. Holtz, MD, FAAN
Elaine C. Jones, MD, FAAN
Brad C. Klein, MD, MBA, FAAN
Jerome Lisk, MD
Michael E. Markowski, DO
Mark R. Purath
Traci A. Purath, MD
Roderick C. Spears, MD
Paul A. Sykes, MD, PhD
Bradford Lynn Talcott, MD, PhD

Fort Wayne, IN
Dallas, TX
Houston, TX
Cody, WY
Pleasant Hill, CA
Bristol, RI
Willow Grove, PA
Pasadena, CA
Hyannis, MA
Greenfield, WI
Greenfield, WI
Bervyn, PA
Birmingham, AL
Idaho Falls, ID

Terrence L. Cascino, MD, FAAN
President, American Academy of Neurology
tcascino@aan.com
Epilepsy Emergencies, Comorbidities, and More Covered in *Continuum*

Epilepsy topics such as emergencies, management of comorbidities, diagnosis and treatment of nonepileptic seizures, and many more are covered in the latest issue of *Continuum: Lifelong Learning in Neurology®*. Participants can earn up to 14 hours of AMA PRA Category 1 Credit™ (12 of which apply to MOC Self-Assessment credit).

“This issue provides a comprehensive yet focused overview of the most important topics that challenge neurologists caring for patients with epilepsy,” said Guest Editor Lara Jehi, MD, of the Cleveland Clinic. “The authors are experts in their respective fields, fully aware of the intricacies of clinical care and the current research developments pertaining to their assigned topics. The reader will surely benefit from a unique educational experience.”

Articles include:
- Diagnosis of Epilepsy and Related Episodic Disorders, by Erik K. St. Louis, MD, MS, FAAN; Gregory D. Cascino, MD, FAAN
- Management of a First Seizure, by Gregory K. Bergey, MD, FAAN
- Febrile Seizures, by Ajay Gupta, MD
- Infantile, Childhood, and Adolescent Epilepsies, by Elaine Wirrell, MD
- Adult Focal Epilepsies, by Christopher T. Skidmore, MD
- Diagnosis and Treatment of Nonepileptic Seizures, by David K. Chen, MD; W. Curt LaFrance, Jr, MD, MPH, FAAN, FANPA, DFAPA
- Antiepileptic Drugs, by Bassel W. Abou-Khalil, MD, FAAN
- Management of Drug-Resistant Epilepsy, by Dileep R. Nair, MD
- Epilepsy Emergencies, by Stephen Hantus, MD
- Management of Epilepsy Comorbidities, by Joseph I. Sirven, MD, FAAN
- Managing Epilepsy in Women, by Elizabeth E. Gerard, MD; Kimford J. Meador, MD, FAAN
- Autoimmune Epilepsy, by Nicolas Gaspard, MD, PhD
- Special Issues in Epilepsy: The Elderly, the Immunocompromised, and Bone Health, by Chad Carlson, MD; Christopher T. Anderson, MD
- Ethical Considerations in Balancing Parental Autonomy With Protecting a Child With Epilepsy From Harm, by Jill Miller-Horn, MD, MS
- Cultural Barriers to Medication Adherence in Epilepsy, by Georgia Montouris, MD; Anna D. Hohler, MD, FAAN
- Diagnostic Coding for Epilepsy, by Korwyn Williams, MD, PhD; Marc R. Nuwer, MD, PhD, FAAN; Jeffrey R. Buchhalter, MD, PhD, FAAN

*Continuum®* is published six times per year. Subscribe to *Continuum* by contacting Lippincott Williams & Wilkins at (800) 361-0633, (301) 223-2300 (international), or LWW.com/continuum. Junior members who are transitioning to Active or Associate memberships can receive a 50-percent discount on the already low member rate for *Continuum* subscriptions.

---

**UCNS Behavioral Neurology & Neuropsychiatry Certification, Recertification Exam Applications Available**

Applications are now available for initial certification and recertification in Behavioral Neurology & Neuropsychiatry from the United Council for Neurologic Subspecialties. The deadline to apply for the computer-based exams is May 16, 2016, and both will be offered the week of November 14 through 18, 2016.

Diplomates certified in 2006 and 2007 must apply for recertification in 2016.

The fee for the 200-multiple-choice-question initial exam is $1,700; the fee for the 150-multiple-choice-question recertification exam is $1,500.

To apply, visit UCNS.org/go/subspecialty/behavioral/certification. Specific information on recertification, including CME requirements, and instructions on how to report and track your CME using the UCNS CME tracking system is also available on the UCNS website. For additional information, contact Todd Bulson at tbulson@ucns.org or (612) 928-6067.

---

*Lara Jehi, MD*
Include These Free AAN Member Resources in Your 2016 CME Plans

Looking for ways to earn important CME credits in 2016? Look no further, because as a valued AAN member, you have free* access to the AAN’s suite of online learning programs. These programs can be accessed from virtually anywhere—home or office—and allow you to meet your CME needs, as well as take the necessary steps toward fulfilling your maintenance of certification (MOC) requirements, as mandated by the American Board of Psychiatry and Neurology (ABPN).

Only current AAN members qualify for these free benefits, so if you haven’t already done so, be sure to renew your 2016 AAN membership today.

**NeuroSAE**

Designed to help neurologists meet the ABPN self-assessment and lifelong learning component (part 2) for MOC. Content outline is based on the one used by the ABPN for the cognitive expertise component (part 3) of MOC. NeuroSAE offers eight self-assessment CME per exam.

- NEW! Eighth Edition
- NEW! Vascular: Second Edition
- NEW! 2016 Annual Meeting Edition
- Clinical Neurophysiology Edition
- Epilepsy Edition
- Seventh Edition
- Sixth Edition
- Medical Student: Second Edition

Learn more at AAN.com/view/NeuroSAE.

**NeuroLearn**

The Academy’s convenient suite of exclusive online education courses designed to address relevant clinical and practice topics while offering up to two CME credits per course.

- NEW! Cervical Spondylotic Myelopathy | 2.0 CME
- NEW! Interpreting Diagnostic Tests in Clinical Practice (Second Edition) | 1.0 CME
- NEW! Interpretation of the Normal Adult EEG: Normal Patterns and Common Artifacts | 2.0 CME
- Sick & Tired: Recognizing and Treating Fatigue in Persons with Multiple Sclerosis (Second Edition) | 1.0 CME
- Fibromyalgia: What’s the Deal? (Second Edition) | 2.0 CME
- How to Become a More Effective Teacher: The Art and Neuroscience of Teaching | 2.0 CME
- Interpretation of Autoimmune Neurological Antibody Profiles | 1.0 CME
- Paraproteinemia and Neuropathy | 1.0 CME
- Become an Effective Advocate for Your Patients and Specialty | 1.0 CME
- Sleep and the Practicing Neurologist: Mechanisms and Management | 2.0 CME
- Recurrent Ischemic Stroke Prevention | 2.0 CME
- The Brachial Plexus | 1.0 CME

Learn more at AAN.com/view/NeuroLearn.

**NeuroPI**

Designed by the AAN to help neurologists meet the ABPN Part 4 performance in practice requirement for MOC. This online program guides participants step-by-step through a performance improvement project of their choice. The module is structured as a three-part Performance Improvement CME program that, upon completion, awards 20 CME credits per module.

- NEW! Parkinson’s Disease: Safety Issues, Autonomic Dysfunction, Therapy and Treatment Options: Second Edition
- NEW! Dementia: Second Edition
- NEW! Acute Stroke Care: Second Edition
- NEW! Muscular Dystrophy
- Acute Stroke Care
- ALS: Assessment and General Management Issues
- ALS: Specific Management Issues
- Distal Symmetric Polyneuropathy
- Epilepsy Care
- Multiple Sclerosis Symptoms Assessment
- Obstructive Sleep Apnea: Second Edition
- Parkinson’s Disease Symptoms Assessment

Learn more at AAN.com/view/NeuroPI.

*Free access is limited to one course per program at a time.*
The path Hristelina Ilieva, MD, PhD, took to her Clinical Research Training Fellowship in ALS Research has been long, but not necessarily circuitous.

A native of Bulgaria, Ilieva completed medical school and started residency there, then went to Japan for her PhD, where she worked on a murine model of familial ALS. She then conducted postdoctoral research in the lab of Don W. Cleveland, PhD, of the University of California, San Diego. “Dr. Ilieva’s work in that lab really changed the field of neurodegeneration altogether,” said Jeffrey D. Rothstein, MD, PhD, of Johns Hopkins School of Medicine, who is serving as Ilieva’s mentor in her current fellowship, which is cosponsored by the American Brain Foundation and The ALS Association. “She was part of the team that rigorously demonstrated that non-neuronal cells are active participants in ALS through a series of truly elegant transgenic rodent and molecular genetic studies.”

But Ilieva realized that her true passion was focused on clinical research. So she completed a full neuroscience residency at Methodist Hospital in Houston, TX, under the direction of Stanley H. Appel, MD, FAAN. From there, Ilieva joined Johns Hopkins, where she is completing the clinical research training fellowship. Her research is analyzing cerebrospinal fluid of people with the C9ORF72 mutation, which is the most common subtype of familial ALS.

“I hope to answer the question of how different glial cells and neurons are affected in C9ORF72-linked ALS,” Ilieva said. “Viewed as a predominantly neuronal disease, in ALS, dysfunction of glial cells may contribute to disease and open potential doors for intervention. ALS can present in different ways and be driven by different genes, but identification of common pathways may lead to feasible and realistic breakthroughs for a wider variety of patients.”

The fellowship provides Ilieva with two years of protected time to focus on research, with an annual salary of $55,000 plus $10,000 per year for tuition to support education in clinical research methodology.

Rothstein said in his letter recommending her for the fellowship, “ALS, as a field, lacks young, highly trained clinician scientists, and Dr. Ilieva represents the perfect intersection of strong science and strong clinical training.”

Donations to the American Brain Foundation support Clinical Research Training Fellowships. To support future promising research like Ilieva’s, visit AmericanBrainFoundation.org.
Do You Qualify for the Esteemed FAAN Designation?

The AAN is seeking applications and nominations for its prestigious class of membership: the highly regarded Fellow of the American Academy of Neurology (FAAN) member category. The FAAN designation will:

- Set you apart both within the Academy and in many other circumstances throughout your professional career
- Provide the recognition you deserve for your exemplary contributions to the field of neurology
- Offer exclusive eligibility to serve on the AAN Board of Directors, a unique opportunity that could allow you to have a significant impact on the future direction of the AAN and the field of neurology

To apply, nominate a colleague, or learn about qualifications, visit AAN.com/view/FAAN today. For more information, contact AAN Member Services at memberservices@aan.com or (800) 879-1960.

Congratulations New FAANs!

The AAN congratulates the following members who were named Fellows between September and December, 2015.

Mohammad Abu-Hegazy, MD, FAAN
Naveed Ahmed, MD, FAHA, FAAN
Elizabeth Armas, MD, FAAN
Juan Francisco Barreto-Montalvo, MD, PhD, FAAN
Mark D. Bej, MD, FACNS, FAAN
Gary H. Belt, MD, FAAN
David Q. Beversdorf, MD, FAAN
Nicolas I. Bohnen, MD, PhD, FAAN
Jeffrey Cohen, MD, PhD, FAAN
Patricia K. Crumrine, MD, FAAN
George B. Creel, MD, FAAN
Michael M. Dowling, MD, PhD, FAAN
Daniel R. Fain, MD, FAAN
Gautam Ganguly, MD, FAAN
Eduardo Garcia, MD, FAAN
Erich W. Garland, MD, FAAN
Anthony P. Geraci, MD, FAAN
Nir Giladi, MD, FAAN
Jennifer G. Goldman, MD, MS, FAAN
Justin C. Graff, MD, FAAN
Devanshi Gupta, MD, FAAN
Deborah Hall, MD, PhD, FAAN
Cara E. Harth, MD, FAAN
Susan T. Herman, MD, FAAN
Larry C. Hollenbeck, MD, FAAN
Yolanda Holler-Managan, MD, FAAN
Sarah Jane Hon, DO, FAAN
Michael J. Howell, MD, FAAN
Hung-Tsang Hsieh, MD, PhD, FAAN
David Y. Huang, MD, PhD, FAAN
Vallabh Janardhan, MD, FAAN
Lyell K. Jones, MD, FAAN
S. Andrew Josephson, MD, FAAN
Ismael Abdul Latif Khatri, MD, MBBS, FAAN
Sami Khella, MD, FAAN
Brad C. Klein, MD, MBA, FAAN
Leslie C. Lee, MD, FAAN
Enrique C. Leira, MD, MS, FAAN
Demetrios M. Maraganore, MD, FAAN
Michael E. Markowski, DO, FAAN
Blanca L. Marky, MD, FAAN
Tracey A. Milligan, MD, FAAN
Jennifer Rose Molano, MD, FAAN
Shyam S. Moudgil, MD, FAAN
Tejandan Mulpur, MD, FAAN
Hatem M. Murad, MD, MRCP, FAAN
Edward J. Novotny, Jr., MD, FAAN
Michael J. Polydefkis, MD, FAAN
Nandhagopal Ramachandiran, MD, FAAN
Jessica Robinson Papp, MD, FAAN
Ramon L. Rodriguez, MD, FAAN
Amy E. Sanders, MD, FAAN
Mario A. Saporta, MD, PhD, FAAN
Nina F. Schor, MD, PhD, FAAN
Raj D. Sheth, MD, FAAN
Parthasarathy Thirumala, MD, FAAN
Jaime Toro, MD, FAAN
Edwin Trevathan, MD, FAAN
Cary L. Twyman, MD, FAAN
Jay A. Van Gerpen, MD, FAAN
Aleksandar Videnovic, MD, MSc, FAAN
David B. Wheeler, MD, PhD, FAAN
Paul Wright, MD, FAAN
Robert A. Yapundich, MD, FAAN
Dileep R. Yavagal, MD, FAAN

Trainees

Resident Sought for Continuum Editorial Board

AAN member residents are encouraged to apply to serve on the Continuum® Editorial Board. The Continuum Editorial Board provides oversight of Continuum: Lifelong Learning in Neurology®, the official CME journal of the AAN, and the companion product, Continuum® Audio.

One resident will be selected to serve a one-year term on the board beginning in May 2016. The member is expected to attend two Editorial Board meetings during the term, one in the fall and one at the AAN Annual Meeting in 2017. Residents should be in PGY3 or PGY4 at the time of application.

To apply, candidates should submit a one-page letter of interest, CV, and a letter of recommendation from their program director or department chair to Andrea Weiss, Executive Editor, Education and News Publications, at aweiss@aan.com by March 1, 2016.
Neuromuscular / General Neurologist / PM&R / Neurorehabilitation Specialist / Neurohospitalist: We are a private practice neurology group in North San Diego County consisting of seventeen physicians practicing in a number of different disciplines. We have six offices in the region and practice at Scripps Memorial Hospital Encinitas, Palomar Pomerado Hospital in Escondido and Poway California as well as Tri City Medical Center in Oceanside. We will soon be opening a brand new office in Carlsbad, CA. This practice has been in existence since 1977 and is well positioned in the community to provide neurological services. Most partners have academic appointments at UCSD as volunteer faculty. We have a busy clinical trials practice. Our practice has grown out of a desire to combine the benefits of private practice with elements of research and academics. Our desire is to attract several highly qualified, energetic, and motivated BC/BE physicians as we expand our practice. Neuromuscular Specialist, Neurohospitalists, Physical Medicine and Rehabilitation Specialist, General Neurologist, Neurorehabilitation specialist. Call is shared at four local hospitals. Practice has been a paperless office with an EHR for many years. Competitive salary and benefits package. Partnership option available. Please visit our website at www.neurocenter.com. Interested candidates should submit CV to tibbs@neurocenter.com as well as rossies@neurocenter.com; Please visit our website: www.neurocenter.com. Please be sure to include in email with CV your name as well as position of interest (i.e. CV John Smith Neuromuscular). Neurology Position with Central Maine Medical Center: Maine: Central Maine Medical Group is seeking a BE/BC neurologist to join an established adult neurology practice primarily associated with Central Maine Medical Center. A focused interest in stroke, muscle disease, headache/migraine, epilepsy, or movement disorder would be a welcome addition, but is not required. Our diagnostic capabilities include: 1.5 T MRI, CT angi, EMG, Evoked Potentials, EEG, and 24-72 Hour Ambulatory EEG. We also have an active Teleneurology service that is affiliated with Massachusetts General Hospital. Central Maine Medical Center is the flagship hospital of Central Maine Healthcare. The medical center has 250 inpatient beds and offers a broad range of services that include, among many, neurosurgery, a Level II trauma center, cardiovascular medicine, vascular and cardiac surgery, and medical and radiation oncology. The Central Maine Medical Group comprises of approximately 350 providers, approximately half of which are in primary care. The group delivers care across almost 2500 square miles at numerous outpatient sites and four hospitals. A competitive salary and an attractive benefits package are enhanced by the scenic beauty and abundant outdoor adventure found in Maine. Interested candidates, please send CV to Gina Mallozzi, Central Maine Medical Center, 330 Main Street, Lewiston, ME 04240, Fax: (207) 795-5696, email: MallozGi@cmhc.org, or call: (800) 445-7431. Not a J1 Opportunity. Multiple Sclerosis Specialist: Ochsner Health System and The Ochsner Neuroscience Institute is seeking a BC/BE Neurologist with fellowship training in Multiple Sclerosis. Our MS Center offers a multi-disciplinary approach to patient care, and has been recognized by the National MS Society as a Comprehensive Center for MS Care. This is a great opportunity to practice neurology in a collegial, patient-focused, and academic environment. Academic appointments are available at any of our affiliated institutions, including Tulane, LSU, and the University of Queensland. Both newly trained and experienced physicians are encouraged to apply. The Department of Neurology has a complement of 32 neurologists system-wide with subspecialty representation in stroke, neurocritical care, interventional neurology, neuromuscular disease, movement disorders, epilepsy, MS, headache, cognitive disorders, sleep, traumatic brain injury, and sports medicine. We are a Top 25 Neuroscience Center in the latest US News and World Report rankings. Ochsner Health System is Louisiana’s largest non-profit, academic, healthcare system. Coordinated clinical and hospital patient care is provided across the region by Ochsner’s 25 owned, managed and affiliated hospitals and more than 50 health centers. Ochsner is the only Louisiana hospital recognized by U.S. News & World Report as a “Best Hospital” across six specialty categories. Ochsner employs over 1,000 physicians in over 90 medical specialties and subspecialties, and conducts over 90 clinical research studies. For more information, please visit www.ochsner.org. CVs will be reviewed by Richard M. Zuwilier, MD, System Chair of Neurology. Email: profrecruiting@ochsner.org or call (800) 488-2240. Ref. # MSNEUR1. Ochsner is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, sexual orientation, disability status, protected veteran status, or any other characteristic protected by law. Stroke Neurologists and Neurohospitalists needed to join our Neuroscience Group West Palm Beach, FL: Tenet Florida’s Advanced Neuroscience Network includes over 40 physicians (neurologists in multiple specialties, interventional neurologists, neurosurgeons), 10 award winning hospitals and multiple full service outpatient centers across Miami-Dade, Fort Lauderdale and Palm Beach counties. Our team provides comprehensive neurological & ancillary services and features some of the leading neurologists in South Florida. Many professionals and programs come together under the Advanced Neuroscience Network with the goal of providing the highest quality care possible. We are seeking additional neurologists interested in stroke/vascular disease and neuro-hospitalist opportunities. Residents and Fellows are welcome to apply. I am currently conducting a nationwide, confidential search for a qualified candidate. For further information, please submit CV to: Lane Mtnick, Florida Region Physician Recruiter, Tenet Health System (561) 288-5511 office, Lane.Mtnick@tenethealth.com; www.advancedneuronetwork.com; www.tenetfloridaphysicianservices.com Neurologists: Well-established, quality oriented neuroscience group seeks to add additional neurologists. Opportunity for subspecialists and general neurologist. We are a multidisciplinary neuroscience group providing a strong team oriented environment and opportunities for professional growth. Our locations offer easy access to the cultural institutions of Boston, as well as outstanding private and public school opportunities. Send CV to Howard Gardner, MD, Medical Director, New England Neurological Associates, P.C., RIVERWALK, 354 Merrimack Street, Lawrence, MA 01843, or email to htf@neneuro.com. Visit us on the web at www.neneuro.com. Fellowship in Neuroimaging: Winchester Neurological Consultants, Inc., in conjunction with Virginia Commonwealth University and Winchester Medical Center, is offering a clinical Neuroimaging Fellowship for BC/BE neurology graduates that can be completed in one or two years. Located approximately an hour from Washington, DC, our United Council of Neurologic Subspecialties fully accredited fellowship offers extensive training in the performance and interpretation of diagnostic inpatient and outpatient MRI, CT, Doppler, TCD, and myelography, utilizing four state of the art MRI scanners and four multi-slice CT units. Responsibilities include supervision and interpretation of imaging, assisting with acute stroke protocols, and direct patient care. Availability: immediate. Research interests are encouraged. Salary is $60,000.00 per year plus benefits. There is also an opportunity to combine the imaging fellowship with a NeuroHospitalist Fellowship over a two year training period with a salary of $80,000.00 per year. CV’s should be emailed to gsteile@winchesterneurolgical.com. AANnews® Classified Advertising The AAN offers a complete package of print, online, and in-person recruitment advertising opportunities. Visit AAN.com/careers for all AAN options, rates, and deadlines. Ad copy for the April 2016 print edition of AANnews must be submitted by March 1, 2016. The same deadline applies to changes/cancellations. The American Academy of Neurology reserves the right to decline, withdraw, or edit advertisements at its discretion. Every care is taken to avoid mistakes, but the responsibility for clerical or printer errors does not exceed the cost of the ad. Find Your Next Job Fill Your Open Job The hottest jobs meet the top candidates at the AAN Neurology Career Center.
SAVE THE DATE!

AAN Annual Meeting
FRIDAY, APRIL 15–THURSDAY, APRIL 21
Vancouver, BC, Canada

FEBRUARY 2016

SUN MON TUE WED THU FRI SAT
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29

FEBRUARY 1
Application Available: UCNS Behavioral Neurology & Neuropsychiatry Certification and Recertification Examinations
UCNS.org/go/subspecialty/behavioral/certification

FEBRUARY 5
Application Deadline: 2016 Medical Student Summer Research Scholarships

FEBRUARY 9
(Register by February 8)
AAN.com/view/pmw16

FEBRUARY 24
Hotel Reservation Deadline: AAN Annual Meeting
AAN.com/view/AM16

MARCH 2016

SUN MON TUE WED THU FRI SAT
1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31

MARCH 1
Video Submission Deadline: 2016 Neuro Film Festival
NeuroFilmFestival.com

MARCH 4
Application Deadline: 2016 Medical Student Prize for Excellence
http://bit.ly/1qwzVWw

MARCH 8
Webinar: Get Caught Up: The ICD-10-CM Cross-walk Is Now a Cross-run
(Register by March 7)
AAN.com/view/pmw16

MARCH 22
Webinar: Documentation into Dollars: Evaluation/Management
(Register by March 21)
AAN.com/view/pmw16

MARCH 24
Early Registration Deadline: AAN Annual Meeting
AAN.com/view/AM16

APRIL 2016

SUN MON TUE WED THU FRI SAT
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30

APRIL 15–21
AAN Annual Meeting
Vancouver Convention Centre
Vancouver, BC, Canada
AAN.com/view/AM16

APRIL 15
AAN Annual Meeting
Vancouver Convention Centre
Vancouver, BC, Canada
AAN.com/view/AM16

MARCH 1
Video Submission Deadline: 2016 Neuro Film Festival
NeuroFilmFestival.com

MARCH 4
Application Deadline: 2016 Medical Student Prize for Excellence
http://bit.ly/1qwzVWw

MARCH 8
Webinar: Get Caught Up: The ICD-10-CM Cross-walk Is Now a Cross-run
(Register by March 7)
AAN.com/view/pmw16

MARCH 22
Webinar: Documentation into Dollars: Evaluation/Management
(Register by March 21)
AAN.com/view/pmw16

MARCH 24
Early Registration Deadline: AAN Annual Meeting
AAN.com/view/AM16

APRIL 15–21
AAN Annual Meeting
Vancouver Convention Centre
Vancouver, BC, Canada
AAN.com/view/AM16

NEUROLOGY® WRITECLICK®:
Join the Discussion!

Comment on Neurology® journal articles and read what others are saying at Neurology.org.
COMING SOON

Zinbryta™
(daclizumab)