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Latest From the ANF

Bonnie Weigert, MD
AANEM/ANF President 2021

American Association of Neuromuscular & Electrodiagnostic Medicine | Winter 2021
TABLE OF CONTENTS

PRESIDENT’S PERSPECTIVE.......................................................... 1

MEETINGS
 AANEM Adds a New Virtual Learning Opportunity...................... 3
 Groundbreaking ALS Research Presented at Virtual AM.............. 4
 Share Your Research in NM and EDX Medicine........................... 5

EDUCATION
 AANEM Has Everything for Your Education and CME Requirements........................................ 7

NEWS SCIENCE EDITORIAL BOARD
 Innovations in NM and EDX Science........................................ 8

MUSCLE & NERVE JOURNAL HIGHLIGHTS
 Muscle & Nerve Editorial Board Adds Social Media Manager.... 11
 Don’t Miss the Latest AANEM Monographs.............................. 12
 Check Out Muscle & Nerve’s Top 10 Articles of 2020................. 12

MEMBERSHIP
 Member Spotlight........................................................................ 13
 AANEM Connect.......................................................................... 15
 NM Medicine Fellowship Portal and Virtual Fellowship Fair........ 16

ADVOCACY
 AANEM Leads Effort to Introduce EDX Legislation in U.S. House 17
 COVID-19 Vaccine: Guidance for Patients with NMDs.............. 18
 Advocacy Contributors................................................................ 19

PRACTICE
 2021 Medicare Physician Fee Schedule.................................... 20
 2021 CPT Code Changes........................................................... 22

PROFESSIONAL STANDARDS
 ABEM Certification Opportunities for 2021-2022....................... 23
 Electrodiagnostic Laboratory Accreditation Program............... 24
 Congrats to All Labs Accredited or Reaccredited in 2020...... 25

AMERICAN NEUROMUSCULAR FOUNDATION
 Meet the ANF’s New Public Board Member............................. 27
 ANF Funded Research Projects.................................................. 28
 Patient Perspectives..................................................................... 30
 ANF Contributors....................................................................... 33

CALENDAR OF EVENTS.............................................................. 35
MEETINGS
AANEM offers several educational events throughout the year. Our Annual Meeting, new Spring Virtual Conference, and the UltraEMG provide learning and networking opportunities for those involved in NM and EDX medicine. Attend our meetings to build professional relationships and keep current in your practice.

EDUCATION
Keep up-to-date in your practice and meet your education and maintenance of certification requirements with exclusive AANEM products developed by our experts.

NEWS SCIENCE EDITORIAL BOARD (NSEB)
The NSEB reviews more than 30 medical journals to identify important, newsworthy items in the field and summarizes pertinent manuscripts to share with AANEM colleagues. The NSEB consists of physicians from varied backgrounds, practice settings, etc.

MUSCLE & NERVE JOURNAL HIGHLIGHTS
Muscle & Nerve is a monthly, peer-reviewed, interdisciplinary publication of original scholarly contributions centered on studies of the muscle, the NM junction, and peripheral motor, sensory, and autonomic neurons.

MEMBERSHIP
As a member of AANEM, you are an important part of a prestigious community of healthcare professionals dedicated to strengthening the field of NM medicine and providing the highest quality patient care. AANEM provides you with the tools you need to stay current in your field such as access to relevant research and educational information and opportunities for networking and community-building across primary specialties.

ADVOCACY
AANEM’s advocacy efforts aim to improve the quality of patient care. We monitor state and federal issues, work to ensure appropriate reimbursement, create position statements to educate lawmakers and insurance companies, and fight against fraud and abuse.

PRACTICE
AANEM offers several resources to help you run your practice such as coding and billing information as well as details surrounding government healthcare programs and rules (MACRA, EHR, MIPS, etc). AANEM also provides position statements on key topics and evidenced-based guidelines to help you deliver quality patient care.

PROFESSIONAL STANDARDS
AANEM’s Professional Standards department helps medical professionals attain and maintain certifications demonstrating knowledge in their field and commitment to patient care. This is achieved through preparation and successful completion of the American Board of Electrodiagnostic Medicine (ABEM) exam, maintaining certifications through continuing medical education, and the Continuous Certification program (formerly MOCP). Technologists may earn certification through successful completion of the Certified Nerve Conduction Technologist (CNCT) exam; there is also a process for CNCT certification maintenance. AANEM acknowledges laboratories for achieving and maintaining established levels of quality, performance, and professionalism through the EDX Laboratory Accreditation program.

AMERICAN NEUROMUSCULAR FOUNDATION
The American Neuromuscular Foundation provides funds to help develop the next generation of researchers to advance the science and practice of NM and EDX medicine with the ultimate goal of improving the lives of patients with NM diseases.
**PRESIDENT’S PERSPECTIVE**

Bonnie Weigert, MD, 2021 AANEM/ANF President

Dr. Weigert, what are your goals as AANEM President?

I think my biggest goals as AANEM President are all based in continuing the strong work of the organization, despite the new obstacles we face. We need to continue to provide the best education, whether at the in-person meeting or with alternative means. I am particularly focused on encouraging resident and fellow participation as they are quite literally the future of the organization. I am also optimistic that we can build our support for research by expanding the fundraising efforts of the American Neuromuscular Foundation.

Tell us about the plenary topic for the 2021 AANEM Annual Meeting and why you chose it.

The Plenary for 2021 is entitled “New Worlds, New Ways.” Building on the plenary programs of the past several meetings which have focused on the new groundbreaking treatments for multiple neuromuscular diseases, we hope to look at the clinical progress of those treatments and the ethical challenges they present. Is it a “Brave New World” as some might fear, or the “shining, shimmering, splendid” Disney version? And with the pandemic, hopefully looking forward at how we can better address care for our neuromuscular patients, along with the disparities in healthcare and for those who provide it.

Why should people attend the 2021 AANEM Annual Meeting in Aurora, Colorado?

Other than the obvious benefit of being in a room with other people which seems quite novel these days, I think people should attend the 2021 meeting because of all the opportunities for hands on learning, small group discussion at the Ask the Expert sessions and Special Interest Groups, and the ability to network with colleagues, along with all of the great educational content.

Tell us about your background with the AANEM.

I have enjoyed all of the committees I have worked with as a part of AANEM. I started out on the Workshop Committee and I highly recommend it – you literally meet EVERYONE (just make sure you have really comfortable shoes). I did really enjoy being an oral board examiner. I think it made me a better teacher. And most recently I have been very happy with the work we have done on the “Women in Neuromuscular Medicine” Special Interest Group. We have gotten great participation and I think there is a definite need for it.

What benefits has AANEM membership provided you?

I think the biggest benefit that AANEM membership has given me is education, not just in clinical practice and newer techniques like ultrasound, but also billing and coding, practice management, etc. A close second would be the colleagues I have met from all over the world and the ideas and mentoring they have shared with me. I would also like to express my sincere gratitude for our Executive Director, Shirlyn Adkins, and the entire AANEM staff. They are all incredibly hardworking and amazing at what they do. I wouldn’t be in this role without their help, guidance and support through the years and I certainly couldn't approach any of this work without them.

*Continued on next page*
The past year has been a challenging one, and we will likely continue to face challenges brought on by the COVID-19 pandemic for months, even years to come. Do you have a message you would like to share as we continue to navigate this difficult time?

My recent experience has been that in many aspects of our daily lives, we get the “win” only when we keep trying and we use our creativity to find new ways. We can cancel, close, and give up or we can keep trying and keep trying we must!

“I think the biggest benefit that AANEM membership has given me is education, not just in clinical practice and newer techniques like ultrasound, but also billing and coding, practice management, etc.”

- Bonnie Weigert, MD

Get to Know Dr. Weigert

- AANEM member since 1999.
- Currently an Associate Professor of Physical Medicine and Rehabilitation, University of Wisconsin. Board Certified in PM&R and EMG. Served as assistant or sole Residency Program Director for 21 years.
- Received undergraduate degree from Butler University, majoring in chemistry and dance.
- Graduated from medical school at the University of Cincinnati.
- Served 2 terms on the Board of the Performing Arts Medicine Association and as Co-Program chair for their 2014 annual symposium.
AANEM Adds a New Virtual Learning Opportunity in EDX and NM Medicine

To help members and nonmembers better care for their patients, AANEM is offering a new virtual educational meeting with access to added content. Make plans now to attend the first ever AANEM Spring Virtual Conference on March 2-5, 2021. This is another chance for you to learn from leaders in EDX and NM medicine, all from the safety, comfort, and convenience of your home or office.

The conference will include dozens of sessions on a wide variety of topics, including *Infection and Immunization in NM Disorders with Emphasis on COVID-19*, *Transitioning the Child to Adult NM Care*, and *Telemontology and Technology in NM*. There will also be basic sessions on topics including *NCS: Axonal, Demyelinating or Anomaly*, *EDX of Radiculopathy*, and *EMG Study Design*.

“We are excited to offer this spring conference and believe it may be a new option we offer every year if it is well received,” noted AANEM Executive Director, Shirlyn A. Adkins, JD. “The pandemic has changed the way everyone views online education and we heard from many members who enjoyed the virtual meeting concept. This won’t replace the annual meeting, since many members still want to meet in person and network in a live setting, but a virtual format provides an alternative for those who just aren’t able to make the in-person meeting.”

If you can’t attend the Spring Conference or you would like access to the materials for a 3-year period of time, you can purchase the Spring Conference Collection:

**Members:**
- $350  Physicians
- $150  Residents/Fellows
- $150  Technologists/Collaborators/Researchers/APPs
- Free  TPP Residents/Fellows

**Nonmembers:**
- $450  Physicians
- $185  Residents/Fellows
- $185  Technologists/Collaborators/Researchers/APPs

If you can’t attend the Spring Conference or you would like access to the materials for a 3-year period of time, you can purchase the Spring Conference Collection:

**Members:**
- $100  Pre-Meeting
- $250  Post-Meeting

**Nonmembers:**
- $100  Pre-Meeting
- $350  Post-Meeting

For a full schedule of sessions and to register for the AANEM Spring Virtual Conference, go to [aanem.org/Meetings](http://aanem.org/Meetings).
2020 Annual Meeting Features Record Attendance and Groundbreaking ALS Research

A record-breaking 1,666 people attended the 67th AANEM Annual Meeting, which took place from October 7-10, 2020. For the first time, the AANEM Annual Meeting was held virtually because of the COVID-19 pandemic. Attendees were able to learn from leaders in NM and EDX medicine, all from the comfort, safety, and convenience of their home or office.

Attendees representing 58 countries from around the world, and almost every US state and territory, logged on to the virtual meeting platform to attend dozens of sessions, industry forums, the exhibit hall, and the poster hall. There were also virtual networking events and a networking directory where attendees could connect with their peers and colleagues in private chat rooms.

“I am very proud of what the AANEM accomplished for the 2020 virtual meeting. The staff and the speakers all pitched in to make it a success,” said AANEM Executive Director Shirlyn Adkins, JD. “No one knew exactly how it was going to work, but it turned out great in the end. I missed seeing everyone in person. Nothing beats walking down the hall and saying hi to everyone I know or having a drink at the end of a long day together. I can’t wait for that to happen!”

The 2020 plenary topic was Emergent Therapies in Neuromuscular Disease. During her plenary speech at the 2020 Annual Meeting, Merit Cudkowicz, MD, MSc, presented the findings from a groundbreaking new study on amyotrophic lateral sclerosis (ALS). The CENTAUR trial shows a drug called AMX0035 resulted in longer survival for people with ALS. More than a dozen AANEM members were authors on this study, including Dr. Cudkowicz, who served as senior author.

“The CENTAUR study was designed to give both short-term and long-term efficacy data. We found AMX0035 slowed progression and prolonged life. We are thrilled to design and lead this study from the HEALEY Center at Mass General and to work so closely with people with ALS, Amylyx and the Northeast ALS Consortium,” said Dr. Cudkowicz.

Another AANEM member, Sabrina Paganoni, MD, PhD, is the principal investigator of the CENTAUR trial.

“This is hopeful news for the ALS community,” said Dr. Paganoni. “The results published in Muscle & Nerve suggest that treatment with AMX0035 is associated not only with functional benefits, as previously reported, but also with a long-term survival benefit. This new publication adds to the long-term safety data that we recently presented at the AANEM Annual Meeting. Altogether, this data provides substantial evidence supporting the role of AMX0035 for the treatment of ALS. The next steps will depend on ongoing conversations with regulatory authorities.”

The next AANEM Annual Meeting is scheduled to be held in Aurora, Colorado from October 13-16, 2021. The current plan is to hold the meeting in person, but the AANEM continues to monitor the rapidly changing COVID-19 pandemic and will adjust the meeting plans accordingly.

THANK YOU

We are grateful to the American Board of Psychiatry and Neurology for a $100,000 educational grant that allowed us to subsidize the registration fees and offer members and nonmembers the same low price for the AANEM 2020 Virtual Annual Meeting.
Share Your Research in NM and EDX Medicine

Submit an abstract for the 2021 AANEM Annual Meeting

The AANEM Annual Meeting is the best place to share your scientific research on NM or EDX medicine. Abstracts are being accepted through March 15, 2021, for the 2021 meeting in Aurora, Colorado. All accepted abstracts will be published in Muscle & Nerve.

AANEM’s foundation, the American Neuromuscular Foundation, supports its educational and research goals by funding several annual awards that give you the opportunity to be recognized for your research.

Golseth Young Investigator Award
This award is given to the best research paper submitted by a young physician to the AANEM Annual Meeting. The award winner must be the first and presenting author on the research project.

Best Abstract Award
This award is given to the first and presenting author of the best research paper submitted to the AANEM Annual Meeting.

Technologist Best Abstract Award
This award is given to the first and presenting author of the best research paper submitted by a technologist who has conducted and shared research to advance the science of neuromuscular and musculoskeletal diseases.

President’s Research Initiative Award
This award is given to up to 10 individuals who submit the best abstracts on the topic chosen by the AANEM President each year. Award winners must be the first and presenting author.

Residency and Fellowship Member Award
This award is given to residency and fellowship members who are first and presenting authors on abstracts presented at the Annual Meeting. You must be a resident or fellow and an AANEM member at the time of submission.

Medical Student Research Award
This award is given to up to 10 medical student members who are the first author and designated presenter on abstracts presented at the AANEM Annual Meeting.

Full abstract submission guidelines are available on the AANEM website at [www.aanem.org/abstracts](http://www.aanem.org/abstracts).

Travel scholarships for the 2021 AANEM Annual Meeting are available for physicians practicing in economically developing countries. The deadline to apply for these scholarships is March 15, 2021.

For more information, visit [www.neuromuscularfoundation.org/travelscholarships](http://www.neuromuscularfoundation.org/travelscholarships).

If you have any questions, please call AANEM at 507.288.0100.

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AANEM Has Everything You Need for Your Education & CME Requirements

Teachable Moments
Our Teachable Moment series covers a wide range of NM medicine topics in short 2-3 minute videos. They are free to members and we currently have Teachable Moments available in the following topics:

- Fibrillation Potentials and Regular Firing Pattern
- Electrodiagnostic Findings of True Neurogenic Thoracic Outlet Syndrome
- SFEMG Normal Jitter
- Spike Form Fibrillation Potentials and Positive Sharp Waves

Self-Assessment Exams
AANEM Self-Assessment Examinations (SAEs) provide training program directors with the opportunity to compare the knowledge of their residents and fellows with others throughout the country. Each year in May, the AANEM offers two newly created SAEs that are proctored on-site at hundreds of institutions.

Key Self-Assessment Exam Dates
- February 16, 2021: Early bird registration deadline
- April 6, 2021: Registration deadline for proctored examination.
- May 3-10, 2021: Proctored exam dates

We also have SAEs from previous years and topical mini-SAEs for purchase. They can be used by individuals as well as training programs to assess knowledge of EDX and NM medicine.

Annual Meeting Collection
Did you miss the 2020 AANEM Virtual Annual Meeting? No worries! You can still purchase the Annual Meeting Collection. This will give you access to all of the meeting content for 3 years and provide you access to 77.5 CME credits and 27 self-assessment credits.

To learn more about these products and all of the other education products available to you, visit aanem.org/education.
Summary: This article reports the findings of a retrospective analysis of 69 patients with symptoms of brachial plexopathy of various etiologies to investigate the degree of agreement between magnetic resonance imaging (MRI) and electrodiagnostic testing (EDX). Of the 69 patients reviewed, 12 were excluded due to diagnoses of other diseases during the assessment, or due to lack of evidence to support the diagnosis on either test (EDX or MRI).

EDX was in all cases performed by a board certified physiatrist or neurologist specialized in peripheral nervous system disorders (the board certification and years of experience were not reported). MRI was reviewed by a musculoskeletal radiologist who was blinded to the patient clinical information.

Results were classified into location along the plexus (preganglionic root, post ganglionic root, trunk, division, cord, and distal branches). An experienced physiatrist made the determination regarding similarities between EDX and MRI based on comparison of anatomic location(s) identified on each test. Patients were then divided into three groups (complete match, partial match, or mismatch).

Results indicated an overall complete or partial match in 63.2% of cases. A mismatch, where either only one modality identified the diagnosis, or where the modalities did not overlap at all in terms of location of lesion, was noted in 36.8% of cases.

In the cases of a mismatch, 16 were due to brachial plexitis, and in 8 of these cases, only 1 modality revealed an abnormality (6 of the 8 were only apparent on EDX, 2 of the 8 were only apparent on MRI). All 4 of the trauma cases identified as mismatch were only apparent on EDX.

Conclusions drawn from this study were that, overall, MRI and EDX presented in agreement with each other in the evaluation of brachial plexopathy. However, only 1 test demonstrated the lesion in 12 cases. Time intervals between tests was offered as a potential factor that could cause discrepancy. Each test has its own advantages and disadvantages, and can provide unique information. Discrepancies existed in a fairly significant number of cases, either partially or completely. The testing methods were determined to be complementary in the work up of suspected brachial plexopathy.

Comments: EDX should continue to be a valuable and necessary component to the work up of patients with brachial plexus pathology, even in the event that an MRI has already been performed and localization has been identified. This is especially true in cases where the MRI is negative and clinical suspicion is high, as well as milder cases and trauma.
COVID-19 and Neuromuscular Disorders
Amanda C. Guidon, MD, and Anthony A. Amato, MD Neurology® 2020; 94:959-969. doi:10.1212/WNL.0000000000009566

Submitted by Bryan DeSouza, MD

Summary: Drs. Guidon and Amato provide a timely review of the COVID-19 pandemic’s potential effects on patients with NM disorders. They cover the broad spectrum of how the pandemic affected the delivery of neuromuscular care to education and research. This article reviews potential NM complications of COVID-19, assessment and mitigation of COVID-19-related risk for patients with preexisting neuromuscular disease, guidance for management of immunosuppressive and immunomodulatory therapies, practical guidance in neuromuscular care, telemedicine, education, and its effect on neuromuscular research.

Comments: This article provides a methodical approach to the evaluation and management of our patients with guidance in immunosuppressive and immunomodulatory therapies. It strongly emphasizes the need for a team-based and multidisciplinary collaboration for care.

Nerve Ultrasound Improves Detection of Treatment-Responsive Chronic Inflammatory Neuropathies
Ingrid J.T. Herraets, MD,* H. Stephan Goedee, MD, PhD,* Johan A. Telleman, MD,* Ruben P.A. van Eijk, MD, J. Thies van Asseldonk, MD, PhD, Leo H. Visser, MD, PhD, Leonard H. van den Berg, MD, PhD, and W. Ludo van der Pol, MD, PhD Neurology 2020;94:1-10

Submitted by Bryan DeSouza, MD

Summary: The authors had previously shown brachial plexus and median nerve enlargement were reliably discoverable via ultrasound in patients with inflammatory neuron. Authors evaluated diagnostic accuracy of nerve ultrasound (NUS) in a prospective study including 100 consecutive patients, with the aim of determining whether ultrasound as well as nerve conduction studies (NCS) can aid in detecting treatment-responsive patients. Patients included were under suspicion of chronic inflammatory neuropathies (CIN), including CIDP and variants (Lewis Sumner syndrome, and multifocal motor neuropathy).

One hundred consecutive patients referred for suspected CIN were evaluated by NUS, standardized NCS and other diagnostic tests. A diagnosis of CIN variants was established upon fulfillment of clinical criteria, NCS, NUS, and or treatment response criteria was met. NUS criteria was determined as enlargement, that is increased in cross section of a nerve was found at 1 or more of the measured sites set at proximal median nerve and brachial plexus.

The cohort was divided into 4 groups based on NCS and NUS findings, and monitored over 1 year save group 3 whom were excluded.

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<th>NCS</th>
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<td>Group 1</td>
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A diagnosis of chronic inflammatory neuropathy was established in 38 patients. Sensitivity and specificity of NUS and NCS were 97.4% and 69.4% and 78.9% and 93.5%, respectively. Investigators found that 8/38 patients with normal NCS yet abnormal NUS responded to treatment.

They concluded that NUS was highly sensitive, discovering an additional 21.1% of CIN that subsequently responded to treatment.

Comments: The importance of this study cannot be overstated, given NUS is an emerging technique with an increased sensitivity over NCS. NUS also offers greater patient comfort, as a noninvasive evaluation method, and may incur decreased costs and shorter exam time. If these results can be replicated in Class I or II studies, then ultrasound may be incorporated in the EFNS/PNS diagnostic criteria for CIDP. Clinicians should then strongly consider adding this technique to their practice. The ability to detect additional cases of CIN that would otherwise be missed, and more importantly, offer treatment and an improved quality of life to several patients whom may otherwise go undiagnosed.
Neurologic Manifestations of Hospitalized Patients With Coronavirus Disease 2019 in Wuhan, China
Ling Mao; Huijuan Jin; Mengdie Wang; Yu Hu; Shengcai Chen; Quanwei He; Jiang Chang; Candong Hong; Yifan Zhou; David Wang; Xiaoping Miao; Yanan Li, MD, PhD; Bo Hu, MD, PhD JAMA Neurology 2020; 77 (6): 683-690

Submitted by Niranjan Singh, MD

Summary: This is a retrospective analysis of 214 patients from Wuhan, China, with COVID-19, 126 patients (58.9%) had non-severe infection and 88 patients (41.1%) had severe infection according to respiratory status. Overall, the manifestation of symptoms where classified into central nervous system-dizziness, headache, impaired consciousness, stroke, ataxia and seizure, peripheral nervous system-taste impairment, smell impairment, vision impairment and nerve pain, and skeletal muscle injury manifestation. Overall, 36.4% (78 patients) have had some sort of neurologic manifestation – peripheral nervous system involvement 8.9%, impairment of taste 5.6%, smell 5.1%, vision 1.4%, nerve pain 2.3%, skeletal muscle injury 10.7%, and headache 13.1%. In patients with more severe infections, neurologic manifestations included acute stroke 5.7%, impaired consciousness 14.8%, and skeletal muscle injury 19.3%.

Comments: The finding that many patients presented early with neurologic symptoms, such as anosmia, ageusia, and myopathy, along with less severe respiratory symptoms suggests that neurologists may be confronted by patients presenting with new-onset neurologic symptoms. Reports have emphasized anosmia as a common early feature of COVID-19 illness, as in many upper respiratory tract infections. This small series may not reflect the entire spectrum of neurologic disease in COVID-19 disease.

Save the Date for the New APP Webinar Series!

Every Wednesday from May 19 – June 23
Attendees will learn how to perform a detailed NM exam and when to order an EDX study.

Help us spread the word to your APP colleagues!
Muscle & Nerve Editorial Board Adds Social Media Manager Role

Mohamed Kazamel, MD, has been selected to join the Muscle & Nerve Editorial Board. Dr. Kazamel will be responsible for managing Muscle & Nerve's social media accounts, gaining followers, and growing the journal's presence across all platforms.

“To me and many other neuromuscular neurologists and physiatrists, Muscle & Nerve has been the most important journal in the field of neuromuscular medicine,” said Dr. Kazamel. “This will be a great opportunity to take on a position where I can use a different and more contemporary channel to widen the audience base of the journal and help its readers see the journal material in a more efficient way.”

Social media continues to change the way people communicate, including the medical community. Dr. Kazamel believes platforms like Twitter are an invaluable resource right now, in the midst of the COVID-19 pandemic.

“Social media has been useful in spreading general medical information and awareness to a large audience faster than any other channel, especially when it comes to the younger generation,” Dr. Kazamel said.

Dr. Kazamel also says social media is a great way for those in the medical community to connect with one another. “It offers an opportunity for journal readers to comment and exchange thoughts on published articles in a more convenient and informal way from their computers or smartphones,” he said.

As he takes on this new role, Dr. Kazamel is focused on improving the visibility of the important research published in Muscle & Nerve.

“I hope to help bring the Muscle & Nerve material to its audience in a faster and more convenient way,” Dr. Kazamel said. “I am excited for the opportunity to serve on the Muscle & Nerve Editorial Board through this new channel.”

Dr. Kazamel is an associate professor of neurology at the University of Alabama at Birmingham (UAB), where he directs the UAB Autonomic Testing Laboratory. He is also assistant director of the Shin J. Oh Muscle and Nerve Histopathology Laboratory. Dr. Kazamel graduated from medical school at the University of Mansoura, Egypt. He completed his neurology residency at UAB, followed by a NM medicine fellowship at Mayo Clinic in Rochester, Minnesota.
Don’t Miss the Latest AANEM Monographs!

Need CME? Our AANEM Monographs offer free CME for members! Monographs are peer-reviewed, topic-specific articles. The authors and topics are selected by the AANEM Monograph Committee. Our three latest monographs featured below were published in recent issues of Muscle & Nerve and can also be found online with seven other monographs at education.aanem.org.

**Myasthenia Gravis and Pregnancy**
Kavita M. Grover, MD, DDS, MD
Naganand Sripathi MBBS, MD

Myasthenia gravis (MG) is an autoimmune disorder with bimodal age of presentation, occurring in young women of reproductive age and at an older age in men. Occasionally, MG is diagnosed during pregnancy. Management of MG includes symptomatic treatment with cholinesterase inhibitors and immunosuppressive therapy for controlling the disease activity. Treatment of MG in women of reproductive age, who may be contemplating pregnancy, requires discussion regarding the choice of medication as well as the understanding of risks/adverse effects involved with various treatments. During the peripartum period, it is essential to ensure careful monitoring of the disease state along with the well-being of the mother and fetus and to coordinate neonatal monitoring overseen by a multidisciplinary team comprising a high-risk maternal fetal medicine specialist, a neurologist / physiatrist familiar with these complex issues, and a neonatologist.

**Evaluation of Persons With Suspected Lumbosacral and Cervical Radiculopathy: Electrodiagnostic Assessment and Implications for Treatment and Outcomes (Parts 1 and 2)**
Timothy R. Dillingham, MD, MS
Thiru M. Annaswamy, MD, MA
Christopher T. Plastaras, MD

The electrodiagnostic (EDX) examination with needle electromyography (EMG) is the most important means of testing for radiculopathy. This test has modest sensitivity but high specificity and complements imaging of the spine. In this second of a two part review, the implications of electrodiagnostic findings for diagnosis and clinical management of persons with radiculopathy are reviewed. An EMG confirmed lumbosacral radiculopathy is associated with better clinical outcomes for persons undergoing aggressive conservative management. A positive EMG test portends a better clinical response to epidural corticosteroid injections. If a person undergoes spine surgery, a positive pre-operative EMG for radiculopathy is also associated with better outcomes.

**Diabetic Neuropathies**
Kamakshi Patel, MD, MPH
Holli Horak, MD, Ezgi Tiryaki, MD

Diabetic neuropathies are the most common type of neuropathies seen in clinical practice. These neuropathies can range clinically from asymptomatic to manifesting symptoms caused by motor, sensory, and autonomic nerve dysfunction. These neuropathies can affect the peripheral nervous system, pain receptors, cardiovascular, urogenital, and gastrointestinal systems. This monograph presents an overview of the different types of diabetic neuropathies, their presentations, diagnostic tools, and strategies for management.

Check Out Muscle & Nerve’s Top 10 Articles of 2020!

These are the top 10 most downloaded articles published in Muscle & Nerve in 2020. They can be found at onlinelibrary.wiley.com.

- COVID-19 in patients with myasthenia gravis
- COVID-19-associated myositis with severe proximal and bulbar weakness
- Spinal muscular atrophy care in the COVID-19 pandemic era
- The care of patients with Duchenne, Becker, and other muscular dystrophies in the COVID-19 pandemic
- Long-term survival of participants in the CENTAUR trial of sodium phenylbutyrate-taurursodiol in amyotrophic lateral sclerosis
- Management challenges for chronic dysimmune neuropathies during the COVID-19 pandemic
- Clinical features of LRP4/agrin-antibody–positive myasthenia gravis: A multicenter study
- Guillain-Barré syndrome in a patient with minimal symptoms of COVID-19 infection
- Addressing heterogeneity in amyotrophic lateral sclerosis CLINICAL TRIALS
Why did you join AANEM?
After starting my NM medicine fellowship at Mayo Clinic, joining the AANEM was highly recommended by my mentors. I remember everyone sharing their stories about the AANEM 2014 Annual Meeting, which was in Savannah, Georgia. I thought I’d want to take part in this. I looked up the next year’s meeting and found out it was in Hawaii. I signed up right away!

Why have you continued your membership with AANEM over the years?
The AANEM had a lot to offer me as a fellow and later on as a junior faculty. I feel the more you give the AANEM, the more it gives back to you. The association encourages active participation, and is always open to new ideas. You never feel like just a drop in the ocean. As a result, the AANEM has a distinctive friendly “family” vibe. You realize you become a part of the association and their family, and you can’t walk away.

How has your AANEM membership impacted your career?
Despite being an early-career physician, the AANEM allowed me to broaden my professional network, present my research, and actively participate in different committees. Through the AANEM, I got to know people from different institutions, whom I look forward to seeing at the annual meeting. This also resulted in several opportunities including presentations at other institutions, research collaboration, and exchange of ideas. Most importantly, the AANEM is the go-to place to learn about cutting-edge science in the field of NM and EDX medicine, whether it is through the AANEM website, podcasts, or the annual meeting. Last, learning how EMG is done at other institutions also enriched my EMG practice, and further developed my EMG and ultrasound techniques.

What AANEM resources/products have you used over the years and how have they benefited you?
AANEM podcasts are probably the one resource that I used the most. I started listening to them in fellowship. I would put it on while driving or on the airplane while traveling. Over 20 or 30 minutes, you get an overview of a particular topic with great practical take-home messages from guests who are experts in their field. I even took notes and made cheat sheets during my fellowship, for example for myositis autoantibodies, hereditary causes of rhabdomyolysis, exome databases, and others.

What advice would you give to new AANEM members or those considering joining?
There is something for everyone at AANEM. But in particular, I would like to address in-training residents and early career physicians. What the AANEM has to offer you is incomparable to any other association. You will get opportunities to actively participate regardless of your institutional affiliation, academic rank, or career stage. When you join, do not hesitate to come forward with new ideas, or volunteer yourself for committee roles. You will be heard. You will be given an opportunity to thrive and give back. You will receive career advice from leaders in the field of NM and EDX Medicine.

What are you looking forward to at the AANEM 2021 Annual Meeting?
I really hope we get to have an in-person meeting this year if deemed to be safe. We will have to see how things pan out with the pandemic. If not, the AANEM 2020 virtual annual meeting was very successful. I have full confidence in the AANEM
leadership to deliver an outstanding annual meeting as usual, whether it is virtual or in person.

What is something your fellow AANEM members may not know about you?
I keep track of upcoming conferences 3 years in advance. I make sure to include international conferences. I look up places to eat, attractions, and short day trips at least 3 months in advance. I love to just rent a car and go on a day trip especially in a new country. If you drove in Lebanon, you can drive anywhere! I enjoy taking “jumping photos”. I like to tweet about all of the above and especially food (@elienaddaf3).

Why did you join AANEM?
As a trainee, I wanted to access learning tools to improve my basic EDX and NM knowledge. I found the self-assessment exams useful for gauging my progress for boards preparation. When I attended my first annual meeting I was impressed by the breadth of topics and also the teaching styles of the presenters.

Why have you continued your membership with AANEM over the years?
The AANEM annual meeting has been an excellent resource for staying up to date with the latest in NM diagnostics and clinical trials data.

How has your AANEM membership impacted your career?
I knew early in my career that I was interested in NM ultrasound, the use of which was still evolving. Serving on the NM Ultrasound Committee and leading workshops and talks on this topic have had a meaningful impact on my career. These activities have allowed me to collaborate with experts from across the country, grow my skillset, develop ways to train the next generation, and generate interesting research.

What AANEM resources/products have you used over the years and how have they benefited you?
The self-assessment exams were invaluable for boards preparation. As a fellowship director, I now use the resources from the Training Partnership Program (TPP) when designing our fellowship curriculum. Membership in the TPP also helped our residents understand the scope of our field and even made it easy for them attend the virtual AANEM Annual Meeting!

What advice would you give new AANEM members or those considering joining?
Join a committee! It’s a great way to learn about a topic, understand the inner workings of the organization, and get to know fellow members.

What drew you to the field of NM medicine?
I originally chose this field because I wanted to help patients adapt to their NM challenges. Now our conversations have changed entirely. We can now measure progress in research and therapeutics not in terms of decades, but often just a few years or even months. It’s an amazing time to be part of this specialty. I feel lucky to be part of this new era in NM medicine and neurodiagnostics. In the last 10 years alone, our tools for evaluation and options for treatment have expanded dramatically. All of the great work featured at AANEM gives me great optimism when caring for my patients.

What is something your fellow AANEM members may not know about you?
I love to sing karaoke, though I have limited vocal range! Also, in medical school I had a hard time choosing between Neurology and PM&R residency. Luckily, through AANEM I get to stay in touch with both fields.
AANEM Connect: A Valuable Resource Right at Your Fingertips

As a member of AANEM, you have access to one of the best resources possible: your fellow AANEM members. AANEM Connect is an online forum that allows members to ask questions of one another and engage in conversations. It is secure and private. Unlike other physician discussion boards, there is no one looking at the responses other than AANEM members.

“It’s a great tool to be able to ask questions and get new insights, as well as share the knowledge you have from your experience,” said AANEM member April Yuki, MD.

Yuki is the sole neurologist in a private multispecialty practice. She started using AANEM Connect about 6 months ago, and says it has been an excellent resource.

“As a solo neurologist, it’s nice to have a place to connect with others doing similar work,” said Dr. Yuki.

Gautam Malhotra, MD, started using Connect shortly after it was launched in January 2019. He says the opportunity to learn from and interact with leaders in the fields of neuromuscular and electrodiagnostic medicine is invaluable.

“When I first started using it, I anticipated that I would only be reading and lurking out of fear of revealing my own ignorance publicly,” said Dr. Malhotra. “However, the community is quite respectful, encouraging, and nonjudgmental in their comments and feedback. It has been fascinating seeing our living legends and thought leaders give their own responses to even the most basic questions posed on the forum. I often share my own answers as an opportunity to test the validity of the material I am teaching to my trainees.”

Dr. Malhotra encourages other members to take advantage of this opportunity to connect with AANEM members from around the world.

“Don’t be afraid to chime in even if you are keenly aware that you are in the presence of giants. How else can we improve ourselves but to reveal our own ignorance? And what might seem like a basic question may actually be something that many of us have wrestled with as well,” he said.

AANEM Executive Director, Shirlyn A. Adkins, JD, noted that the “giants” in the field Dr. Malhotra mentioned were asked to monitor AANEM Connect and to provide answers so that members would know that the answers they were being provided were valid answers.

“We wanted to make sure that the members felt comfortable that the answers provided were one that they could count on,” said Adkins.

If you are not utilizing AANEM Connect you are missing a great member benefit.
On January 1, 2021, the AANEM launched the NM Medicine Fellowship Portal. The new portal makes it easier than ever for physicians interested in a NM fellowship to apply, and for Training Program Directors to make offers. "The portal allows programs to showcase their strengths and educational opportunities, and creates a convenient hub for applicants to review and compare their options," said Dr. Zachary London, chair of the NM Medicine Fellowship Portal Committee.

The system grew out of conversations NM Training Program Directors were having about how to create a system that was fair to both the residents and the programs seeking to attract candidates in NM medicine.

"Having a uniform application management system will streamline the process for both applicants and programs," Dr. London said.

The portal includes NM fellowships from 52 institutions all across the United States. Residents have been able to submit applications since January 1. Institutions will be able to start reviewing applications on March 1.

"One of the goals of the portal is to help standardize the fellowship application timeline for NM medicine and participating CNP programs," said Dr. London. "Knowing that their applications will not be reviewed until March 1 of PGY3 year, residents will have time to fully explore different outpatient-focused fields like NM medicine or neurophysiology before rushing into a decision about what fellowship to pursue. I think that will attract more residents to our field and allow them to have valuable clinical and research experiences before their interviews start."

Offer letters will start going out on June 1.

"By releasing offers for positions no sooner than June 1, the portal will also make sure that applicants have enough time to explore all programs in which they may be interested in before having to pick one. They will not be rushed into accepting an offer at a program on the day of their interview," Dr. London said.

Dr. London believes the NM Medicine Fellowship Portal will have a positive impact for both residents and training programs, and will pave the way for other fields.

"This was a long time coming. It is the right thing to do for our residents, for our programs, and for our field. The AANEM has exhibited exceptional initiative and leadership, creating a model that other fields in neurology will undoubtedly seek to emulate," said Dr. London.

The AANEM also offered a Virtual Fellowship Fair where residents had the opportunity to learn more about the fellowships. Of the 52 programs listed on the NM Medicine Fellowship Portal, 49 participated in the Virtual Fellowship Fair.

Thank you to the following institutions that are participating in the Virtual Fellowship Fair:

- University of Washington School of Medicine
- Oregon Health and Science University Hospital
- Stanford Health Care
- University of California (San Francisco)
- Loma Linda University
- UCLA David Geffen School of Medicine/UCLA Medical Center
- University of California (Irvine)
- University of California Medical Center (San Diego)
- Methodist Hospital Program (Houston)
- University of Kansas School of Medicine
- Vanderbilt University Medical Center
- University of Mississippi School of Medicine
- University of Alabama Medical Center
- Mayo Clinic College of Medicine & Science
- University of Minnesota Medical School
- University of Iowa Hospitals and Clinics
- McGaw Medical Center of Northwestern University
- University of Chicago
- University of Illinois College of Medicine at Chicago
- University of Pennsylvania Health System
- Sidney Kimmel Medical College at Thomas Jefferson University/TJUH
- University of Michigan Health System
- Penn State Milton S. Hershey Medical Center
- University of Florida, College of Medicine
- University of Miami/Jackson Health System
- University of North Carolina Hospitals
- Case Western Reserve University/Hospital Cleveland Medical Center
- Cleveland Clinic
- Ohio State University Hospital Program
- University of Cincinnati Medical Center
- Icahn School of Medicine at Mount Sinai Hospital
- Montefiore Medical Center/Albert Einstein College of Medicine
- Weill Cornell Medical College/New York Presbyterian Hospital (Cornell Campus)
- NYU Grossman School of Medicine Program
- University of Rochester
- The University of Vermont Medical Center
- University of Virginia Medical Center
- Virginia Commonwealth University Health System
- Duke University Medical Center
- Johns Hopkins University Program
- Wake Forest University Baptist Medical Center
- Emory University School of Medicine Program
- Beth Israel Deaconess Medical Center
- Brigham and Women’s Hospital
- University of Connecticut School of Medicine
- Yale-New Haven Medical Center
- University of Colorado
- University of Utah Health Program
- Barrow Neurological Institute at St. Joseph’s Hospital and Medical Center
AANEM Leads Effort to Introduce EDX Legislation in US House

After years of coordinated efforts working with both the US Congress and Centers for Medicare and Medicaid Services (CMS) to address EDX testing quality issues, AANEM was proud to announce the introduction of HR 8780 in the House of Representatives in November 2020. This bipartisan bill was led by Cong. Greg Walden (R-OR) and Cong. Lisa Blunt Rochester (D-DE) and addresses ongoing problems with EDX fraud and abuse, as well as poor quality EDX testing, by unqualified providers, many of whom are using substandard EDX equipment.

The bill was modeled after the approach taken by both mammography and sleep labs who faced similar battles with fraud and abuse in their areas of medicine. While these groups instituted complex accreditation requirements, AANEM’s was to simplify the requirements as much as possible while still maintaining assurance that the provider is qualified and the testing is legitimate. In essence, the legislation only requires that the provider demonstrate a minimum of 3 months of EDX training during either a residency or fellowship program to perform the needle EMG portion of the exam, oversee the NCS, and that the provider is using legitimate equipment. The legislation in its current form would require providers to become accredited from a yet-to-be-determined accrediting body or bodies, but that requirement wouldn’t go into effect until 2 years after the bill is passed giving interested labs time to achieve accreditation. AANEM currently has an extensive EDX Lab Accreditation program and is hopeful that AANEM will be chosen as an accrediting body.

Several patient and professional organizations joined in support of the legislation at the end of 2020 and AANEM is working with those organizations and others to grow support for the effort and fine tune the language of the bill in preparation for the bill’s re-introduction in 2021. The legislation, which AANEM had hoped to introduce at the beginning of 2020, wasn’t introduced until near the end of the congressional session due to the focus of the legislature on COVID-19 Public Health Emergency for much of 2020.

“Congressman Walden decided not to run for re-election in 2021. Therefore, AANEM’s main focus at the beginning of 2021 will include securing a new Republican co-lead to re-introduce HR 8780 in the 117th Congress.

AANEM Advocacy Advisors to the AANEM Board of Directors, Drs. Peter Grant and Vince Tranchitella, played an integral role in bringing this effort to fruition.

“Our goal was not to try and pass the legislation at the last minute in 2020, but we wanted to introduce it as Congressman Greg Walden, the then-ranking member of the House Energy & Commerce committee, worked diligently with AANEM over the past few years to craft the legislation and we wanted his name on the initial bill to ensure recognition of all his office had done to help AANEM and its members,” explained AANEM Health Policy Director, Millie Suk, JD, MPP.

“We are pleased that Congress has finally introduced a bill addressing quality in electrodiagnostic medicine. The AANEM has worked tirelessly over the past 15 years, with the core value that every patient who needs electrodiagnostic testing should receive the right tests, at the right time, performed and interpreted by a physician who is properly trained in electrodiagnostic medicine,” said Dr. Tranchitella.
COVID-19 Vaccine: AANEM Publishes Guidance for Patients with NMDs

As we continue to navigate the COVID-19 pandemic, the AANEM strives to provide you with the most up-to-date and useful information. At the end of 2020, with announcement of the impending approval of not one but two vaccines against COVID-19, AANEM staff faced a sudden influx of phone calls and emails from members, nonmember physicians, and even some NM patients inquiring about the safety of such vaccines for NM patients. The AANEM Quality & Patient Safety Committee quickly took up the task of researching the data available on the COVID-19 vaccines, as well as looking at the safety and efficacy of vaccines in general in this patient population. “Doctor – Should I get the COVID-19 vaccine? Infection and Immunization in Individuals with Neuromuscular Disorders” was accepted for publication by *Muscle & Nerve* and posted on the AANEM website in mid-January. It can be found on the AANEM COVID-19 Resources webpage: https://www.aanem.org/Practice/COVID-19-Guidance. Below is a copy of the abstract for reference:

**ABSTRACT**

The clinical course of NM disorders (NMDs) can be affected by infections, both in immunocompetent individuals, and in those with reduced immunocompetence due to immunosuppressive/immunomodulating therapies. Infections and immunizations may also trigger NMDs. There is a potential for reduced efficacy of immunizations in patients with reduced immunocompetence. The recent vaccination program for Coronavirus Disease-2019 (COVID-19) raises several questions regarding the safety and efficacy of this vaccine in individuals with NMDs. In this Practice Statement, we address the role of vaccine-preventable infections in NMDs and the safety and efficacy of immunization in individuals with NMDs, with emphases on vaccination against COVID-19.

**Additional COVID-19 Resources:**
- COVID-19 and Neuromuscular Disorders webinar
- Telehealth webinar
- Guidance of Resumption of Routine EDX Testing webinar
- *Muscle & Nerve* Special COVID-19 issue
- PPE Guidance for All Patient Interactions During COVID-19
- COVID-19 Pandemic: How Some AANEM Members are Handling Patient Care
- Resources for Small Practices During COVID-19

To access all of our COVID-19 resources, go to www.aanem.org/Practice/COVID-19-Guidance.
Thank you to the many contributors to the AANEM Advocacy Fund. Your donations help give a voice to those who are fighting NM diseases, whether it be in the halls of Congress or at home as a patient. (Contributions listed were received between August 21, 2019 and January 8, 2021.)
Tuesday, December 1 marked the release of the CMS Final Rule of the 2021 Physician Fee Schedule. If you haven't had the opportunity to read the 2100+ page document plus addendum, here is a brief summary of some of the items that could affect you and your practice:

- **Conversion Factor.** The Medicare conversion factor was set to be cut by 10.2% in the 2021 Medicare Physician Fee Schedule final rule. This reduction was largely due to the introduction of a new Evaluation and Management (E/M) complexity code, changes in E/M coding and billing, and budget neutrality rules. This reduced conversion factor was likely to have a substantial negative impact on many physicians, including most AANEM members. The AANEM, along with the AMA and nearly every physician membership organization across the nation, reached out to Congress, imploring them to avert such drastic cuts to physician practices, especially in the midst of the COVID-19 public health emergency (PHE). On December 21, 2020 the final COVID-19 relief legislation of 2020 was passed by Congress. This 2020 omnibus bill mitigated some of the impact that the new E/M codes were slated to have on reimbursement by delaying the implementation of the E/M increased complexity add-on code G2211 as well as providing an additional $3 billion in funding to raise Medicare reimbursement up 3.75% from the previous announced conversion factor. After this legislation, the conversion factor for Calendar Year (CY) 2021 is $34.8931. This is a decrease of $1.1965 from 2020, but a $2.4846 increase from the amount initially finalized in the 2021 Fee Schedule.

- **Work Relative Value Units (RVU's)** for all EDX and NM codes monitored by AANEM remain unchanged.

- **Practice Expense (PE) RVU's** – modest adjustments were made to the PE of the NCS and needle EMG codes. Even with the reduction in the 2021 conversion factor, AANEM members will see positive payment increases to the needle EMG codes and only slight reductions to the reimbursement for the NCS codes.

- **Telehealth**
  - CMS finalized its proposals to permanently add several codes to the Medicare telehealth list and certain home visit services. CMS also kept over 150 additional services on the Medicare telehealth list until the end of the calendar year in which the PHE ends to allow more time to study the benefit of providing these services via telehealth.
  - CMS finalized its proposal to allow direct supervision to be provided using real-time, interactive audio and video technology through either the end of the calendar year in which the PHE for COVID-19 ends or December 31, 2021.

- **Evaluation and Management (E/M) Codes.** CMS implemented a new coding and payment structure for the office and outpatient E/M codes that was finalized in the 2020 Medicare Physician fee schedule.
  - E/M services will receive a significant increase starting in 2021.
  - Due to budget neutrality, the increase in payment for E/M services resulted in an across-the-board cut to all other services which was somewhat mitigated by the 2020 Omnibus legislation.

- **Scope of Practice** – CMS finalized that a teaching physician can use two-way audio/video communications technology to provide direct supervision to a resident through the later end of the COVID-19 PHE or December 31, 2021.
  - A teaching physician may also review the services provided with the resident, during or immediately after the visit, remotely through interactive, audio/video real-time communications technology.

- **Supervision of Diagnostic Tests by Certain NPPs.** CMS finalized a significant amendment to permanently allow NPS, CNSs, PAs, CRNAs, and CNMs to supervise diagnostic tests that these clinicians were already permitted to perform according to their state scope of practice laws on a permanent basis. AANEM is not aware of any such scope of practice laws that explicitly permit these types of clinicians to perform EDX testing.
### 2020-2021 Relative Value Unit (RVU) Comparison-Nerve Conduction Studies and Needle EMG

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
<th>Year</th>
<th>Work RVUs</th>
<th>Non-Facility PE RVUs</th>
<th>Malpractice RVUs</th>
<th>Total Non-Facility RVUs</th>
<th>Non-Facility Reimbursement (in dollars)</th>
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For a more detailed summary of the changes to RVUs for codes specific to EDX and NM medicine, members may log onto the Member-Only Coding Resources found on the AANEM website under Practice. For questions, please contact the AANEM policy department at policy@aanem.org.
2021 CPT Code Changes

Last September the American Medical Association (AMA) released the 2021 CPT code changes that went into effect January 1, 2021. There were some major updates to the outpatient evaluation and management codes and guidelines along with some minor changes and additions to other codes relevant to EDX and NM medicine. AANEM’s Online Coding Guide (available for purchase in the Marketplace at www.aanem.org) has been updated to reflect these changes. The 2021 guide also includes new coding tips and updated frequently asked questions.

Changes that may impact AANEM members —

• **Outpatient Visit Evaluation and Management (E/M) Codes:** There has been extensive E/M guideline additions, revisions, and restructuring for 2021. Here are some of these changes:
  o The code descriptors for codes 99202-99205 and 99211-99215 have been revised.
  o There is an addition of a shorter prolonged service add-on code, 99417, that is used to report additional physician and/or qualified healthcare professional time in 15-minute increments. This code will be reported only with the codes with the longest time ranges (99205 and 99215) and is used only when time is the basis for code selection.
  o Deletion of code 99201.
  o Elimination of history and/or physical examination as a component for code selection.
  o Allowing the use of Medical Decision Making (MDM) or time for code level selection.
  o Changes in the definitions of MDM and time when used to report these codes.

For answers to some of your most frequently asked questions on these changes, including a link to AMA’s educational tools and summary, you can visit the AANEM website at: https://www.aanem.org/News-Express/Practice/Changes-to-Office-Visit-Evaluation-and-Management.

• **Introduction/Injection of Anesthetic Agent (Nerve Block):** The descriptors for the Introduction/Injection of Anesthetic Agent (Nerve Block) codes 64455, 64479, 64480, 64483, and 64484 were editorially revised as child codes to code 6400 as they contained similar language.

• **Auditory Evoked Potentials:** Four new codes (92650-92653) have been added to report auditory evoked potentials (AEP). Two existing codes (92585 and 92586) previously used to report AEP have been deleted to accommodate these four new codes. New parenthetical notes have been added to explain when the new codes should be reported in place of deleted codes 92585 and 92586.

• **Category III Codes:** In accordance with CPT guidelines for archiving Category III codes, codes 0228T-0231T used to report transforaminal epidural injections performed with ultrasound guidance have been deleted.

For questions about upcoming code changes, please contact the AANEM policy department at policy@aanem.org.
ABEM Certification Opportunities for 2021-2022

Certified Nerve Conduction Technologist (CNCT)

Spring Exam
• Registration Opened: February 1, 2021
• Registration Deadline: March 31, 2021
• Exam: April 22-24, 2021

Certified Nerve Conduction Technologist (CNCT)

Fall Exam
• Registration Opens: August 1, 2021
• Registration Deadline: September 30, 2021
• Exam: November 4-6, 2021

This credential shows the professional community and the public that the CNCT technologist has achieved competency in the performance of NCS.

ABEM Initial Certification Exam
• Registration Opens: October 1, 2021
• Registration Deadline: November 30, 2021
• Exam: March 2022 (exact dates to be determined)

ABEM certification signifies that a physician has passed the most comprehensive examination in EDX medicine. This certification is recognized nationally and internationally and demonstrates a physician’s dedication to providing a high level of quality in EDX medicine.

Neuromuscular Ultrasound Certificate of Added Qualification (NM US CAQ)
• Registration Opens: June 1, 2021
• Registration Deadline: July 31, 2021
• Exam: September 13-17

NM US CAQ is an additional certification available to ABEM certified physicians.

Continuous Certification
The ABEM encourages Diplomates to continue to assimilate new knowledge and techniques and develop their clinical skills with the Continuous Certification Program (formerly MOCP). Beginning in January of 2021, the ABEM moved to a longitudinal assessment program, thus you may see the words Continuous Certification referenced when referring to the new requirements. The Continuous Certification program sets high standards for quality medical care and professional accountability.

Dates are subject to change. Visit www.abemexam.org for more information and official exam dates.

Congratulations to ABEM’s Newest CNCT-Certified Technologists!

The following technologists successfully passed the November 2020 CNCT Exam:
• Samia Alimoussa, CNCT
• Tham Yu Hui Alvina, CNCT
• Zaghia Boumenir, CNCT
• Burak Bulat, CNCT
• Jalaya Clay, CNCT
• Alexander Colon, CNCT
• Kyle Crawford, CNCT
• Maria Dover, CNCT
• Ruby Hwang, CNCT
• Ang Yu Hui Jacelyn, CNCT
• Courtney Long, CNCT
• Mason Minnerly, CNCT
• Shira Norizan, CNCT
• Alexander Randall, CNCT
• Katlan Shealy, CNCT
• Joseph Shin, CNCT
• Morgan Tegtmeier, CNCT

Congratulations to ABEM’s Newest NM US CAQ-Certified Diplomates!

The following physicians successfully passed the NM US CAQ:
• Eduardo Cortez-Garcia, MD
• Nelson Hwynn, MD
• Amit Jhaeveri, MD
• Shawn Jorgensen, MD
• Todd Jorgenson, MD
• John Norbury, MD
• Erik Ortega, MD
• Atul Patel, MD
• Bhaskar Roy, MD
• Susan Shin, MD
• Olivia Tong, MD
The AANEM EDX Laboratory Accreditation Program is a voluntary, peer-review process that acknowledges laboratories for achieving and maintaining the highest level of quality, performance, and integrity based on professional standards. It is a structured mechanism to assess, evaluate, and improve patient care.

Why should you seek accreditation for your lab?

- Demonstrates clinical excellence in EDX medicine
- Proves a laboratory’s commitment to providing the highest quality health care and a safe environment for patients
- Provides patients, referral sources, and payers with a credible measure to differentiate the laboratory’s quality of care
- Demonstrates to EDX trainees (residents and fellows) that your laboratories provide the best quality EDX environment in which to learn

Chrissa McClellan, MD, Lab Medical Director, MU Health

“If you are in academic medicine, and you are training residents and/or fellows to perform electrodiagnostic studies, I highly recommend you accredit your lab to demonstrate to trainees that you do quality work.”

What prompted you to accredit your lab initially?
I work at a large academic medical center in Mid-Missouri. I noticed that there were no other AANEM accredited labs in our service area, so I thought it was an opportunity to prove to referring providers that we hold ourselves to national standards. I am the director of the electrodiagnostic curriculum for PM&R residents, so I also felt that in order to provide them with the best training, we needed to pursue this accreditation.

What value or benefits have you seen from accreditation?
I have been using our lab accreditation as a tool for resident recruitment, and I have received positive feedback. I’ve also highlighted our accreditation status when marketing our lab to referring providers outside of our large academic medical center and increased our referrals.

How did going through the accreditation process help you shore up or improve processes and procedures?
We now have robust continuous quality improvement measures in place. The two residents on electrodiagnostic rotations meet monthly with all electrodiagnostic faculty for an EMG case review. During that time, faculty and residents discuss difficult electrodiagnostic cases, and give everyone performance improvement feedback, ensuring accurate diagnosis. This has resulted in resident involvement in quality improvement projects.

What did you learn by going through the accreditation process?
I learned about how much fraud and abuse is in the electrodiagnostic community. Perhaps it is because I have only practiced in an academic medical center, but I was completely oblivious to this. During the process they asked for proof of very basic things, like whether we had qualified physiatrists, an electronic medical record, safety manuals, and a waiting room. After exploring this further, I realized that people are performing and billing electrodiagnostic services without providing some of these most basic needs.

What was the most challenging portion of the application?
The most challenging part of the application was getting the Chair of my PM&R department to approve funding for the accreditation. We do not struggle to get referrals for electrodiagnostics in our large academic medical center, so it was not felt to be very valuable initially. After more discussion about how it would improve quality for electrodiagnostic training in residency, then it was approved. The actual application was quite easy, since we already have much of these policies and procedures in place.

Did anything about the accreditation process surprise you? If so, what?
I was very surprised about how thorough the process is, yet how quickly you find out whether you are approved or not. It seems like a very daunting process, but many of the requirements we were already doing, so it was just a matter of going through the formal process.

Why should others accredit their laboratory?
If you are in academic medicine, and you are training residents and/or fellows to perform electrodiagnostic studies, I highly recommend you accredit your lab to demonstrate to trainees that you do quality work.
Congratulations to All Labs Accredited or Reaccredited in 2020!

The following labs have earned their accreditation or reaccreditation in 2020. All labs listed below completed accreditation or reaccreditation prior to December 1, 2020.

**Accredited Labs with Exemplary Status**
- Electrodiagnostic Center at St. Elizabeth's Medical Center
- EMG Laboratory, Department of Neurology, Rush University Medical Center
- Hauenstein Neurosciences EMG Laboratory
- Maine Medical Partners Neurosurgery & Spine
- Neurodiagnostic Laboratory- National University Hospital
- Neurology Consultants of Arizona
- Neuromuscular Neurology- Advocate Lutheran General Hospital
- Progressive Neurology and Sleep Center
- Roseman University of Health Sciences Electrodiagnostic Laboratory
- Summit Medical Group Neuroscience Center
- Swedish Neurosciences Institute Cherry Hill Electrodiagnostic Laboratory
- UCHealth Neurology

**Reaccredited Labs with Exemplary Status**
- Children's Mercy Kansas City
- CHS Neurosciences Institute - Charlotte
- Clinical Neurophysiology Laboratory, SSM Health St. Louis University Hospital
- Kalamazoo Nerve Center, PLLC
- New York Spine and Wellness Center Electrodiagnostic Laboratories
- Ohio State University PM&R
- St. Josephs Outpatient EMG Lab
- University of Illinois Hospital and Health Science System, EMG Laboratory
- Wake Forest Baptist Health EMG Lab
- Winchester Neurological Consultants
Renowned Expertise Meets Famous Quality of Life

Located in one of the nation’s most sought after destinations, Baptist Neurological Institute, Northeast Florida’s premier program for treatment of neurological conditions of the brain and spine, is actively seeking a **NEUROMUSCULAR PHYSICIAN (NEUROLOGIST)** to join the rapidly-growing and highly-distinguished clinical team.

**Responsibilities**
- Provide clinical oversight specific to best practices and gold standards of care in the evaluation and treatment of neuromuscular disease
- Collaborate closely with colleagues and providers across the care team and continuum
- Achieve optimal patient outcomes consistent with clinical objectives aimed at maximizing patient health and functional capacities
- Perform medical monitoring and effective surveillance to inhibit and prevent complication

**World Famous Quality of Life**
Northeast Florida serves as home to some of the Sunshine State’s best cost of living and the nation’s most sought after quality of life.

Immediately within reach are world-famous destinations and recreation for individuals and families of all ages.
- Top ranked schools
- No state income tax
- Recently ranked by *Forbes Magazine* as the second most desirable city for relocation in the United States

**Renowned Program**
- Baptist Neurological Institute provides the full spectrum of services across inpatient and outpatient settings at all Baptist Medical Center hospital locations and neuroscience clinics throughout Northeast Florida.
- Baptist Neurological Institute is one of the largest private health system integrated neurology groups in the Southeast United States.

Interested applicants are invited to inquire or submit their CV to [PhysicianCareers@bmcjax.com](mailto:PhysicianCareers@bmcjax.com)
Meet the American Neuromuscular Foundation’s New Public Board Member

The American Neuromuscular Foundation (ANF) is excited to introduce its first public board member, Barry McLeish. McLeish will spearhead the effort to help ANF become a driving force in NM research.

McLeish has decades of experience working with nonprofits. He had served in several different roles, including national marketing director, for a large nonprofit for 14 years. McLeish then spent 15 years as the international vice president for a nonprofit consulting group.

“The ANF is excited to add our first public board member,” said Shirlyn A. Adkins, JD, ANF’s executive director. “Our goal is to cure neuromuscular diseases. We believe that working with Mr. McLeish, we can move closer to making this goal a reality.”

It’s not just McLeish’s professional background that makes him an ideal candidate for this position. He also has a personal connection. McLeish’s wife is a pediatric rehabilitation doctor who works with young people who have spinal muscular atrophy (SMA) and muscular dystrophy, two devastating NM diseases.

“I’ve known for some time about this group of patients and the need to make a difference on their behalf,” McLeish said.

McLeish is also close friends with Dr. Bonnie Weigert, MD, longtime AANEM member and AANEM’s/ANF 2021 president. Dr. Weigert urged McLeish to apply for the role with the ANF. It’s a new challenge McLeish is excited to take on.

“I am more than looking forward to working with the ANF,” McLeish said. “I view it as an opportunity to support the doctors and scientists working on behalf of the patients the ANF serves.”

McLeish completed his undergraduate degree in communication arts at the University of Wisconsin. He has a master’s degree in human and organization development. He has also published 6 nonprofit texts, one which was used in the Harvard graduate school. Currently, McLeish is an adjunct professor at Edgewood College in Madison, Wisconsin.
Alexander Chamessian, MD, PhD, is the recipient of an ANF Development Grant. Dr. Chamessian’s project is called “Determining the Pathogenicity of Autoantibodies in Idiopathic Small Fiber Neuropathy.” Small fiber neuropathy (SFN) is a group of disorders that involves preferential damage to and dysfunction of small diameter sensory and autonomic nerve fibers.

“The symptoms of SFN can be very distressing and disabling to patients,” said Dr. Chamessian. “The principal symptom of SFN is pain characterized as burning, stabbing, electric shocks, or pins-and-needles. This pain can be constant and often intensifies at night.”

There are many known causes of SFN, including diabetes, nutritional deficiencies, and certain autoimmune diseases. However, in many patients, the cause of SFN is never identified. Those cases are labeled “idiopathic” or “cryptogenic,” meaning the cause is unknown.

“Some patients with idiopathic SFN possess distinctive autoantibodies that are seldom present in people without neuropathy,” Dr. Chamessian said. “The clinical significance of these autoantibodies is unclear. We know these molecules are abnormal, but we do not know whether they are cause or effect for SFN in these individuals.”

The goal of Dr. Chamessian’s research project is to determine the role of some of the SFN-associated autoantibodies.

“‘The findings from this work could lead to new insights about how and why some cases of SFN develop, and hopefully lead to new directions in the treatment of people suffering from this terrible disease,’” said Dr. Chamessian.

Dr. Chamessian believes the ANF Development Grant will play a pivotal role in shaping his future as a physician-scientist, and the future of SFN patients.

“I am so grateful for the opportunity afforded to me by the American Neuromuscular Foundation, and I am confident that this award will be career-altering,” he said. “I sincerely believe that our work will ultimately lead to real, substantial benefits to patients with SFN, which makes all the hard work ahead totally worth it.”

Dr. Chamessian is a resident physician-scientist in the PM&R program at Washington University School of Medicine and a post-doctoral fellow at the Washington University Pain Center. He is a graduate of the Duke University School of Medicine.

Dr. Alexander Chamessian Receives ANF Development Grant

R. James Cotton, MD, PhD, is the recipient of the ANF Clinical Research Fellowship to provide insights and answers about the safety and effectiveness of the neurological application of neurotoxins.

Dr. Cotton’s research project is focused on spasticity, a common clinical problem that impacts people with some neurologic conditions, including stroke, spinal cord injury, and traumatic brain injury. Not only can spasticity be painful, but it can also reduce a person’s range of motion, making it more difficult for them to do many activities. It can also make it harder for caregivers to help the patient with tasks like putting on a shirt or jacket. The goal of Dr. Cotton’s research project is to develop an easy-to-use bedside tool to measure spasticity using wearable sensors.

Dr. R. James Cotton Receives ANF Clinical Research Fellowship

Continued on next page

American Neuromuscular Foundation Funded Research Projects

About the American Neuromuscular Foundation
The ANF is a nonprofit organization dedicated to STRENGTHENING the global effort to CURE neuromuscular disease. The foundation funds important research and helps support education through awards and fellowship funding. One hundred percent of donations are used to support these initiatives. Administrative costs of the foundation are paid for by the AANEM.
“I will then use this to quantitatively track changes in spasticity as a result of neurotoxin treatment, and hopefully develop a predictive model for how well a muscle will respond to those injections,” said Dr. Cotton.

“The ANF grant will support me in extending this platform for the quantification of spasticity and how it responds to the neurotoxin injections.”

Dr. Cotton says receiving the ANF Clinical Research Fellowship will help him continue to pursue his passion for developing new technologies to help people with disabilities.

“Dr. Cotton is a highly intelligent, creative, and dynamic clinician-investigator, with an exceptionally strong drive to conduct research, and a unique desire to apply his knowledge and skill to neurorehabilitation,” said Elliot J. Roth, MD, the Chair of the Department of PM&R at the Northwestern University Feinberg School of Medicine.

Dr. Cotton says receiving the ANF Clinical Research Fellowship will help him continue to pursue his passion for developing new technologies to help people with disabilities.

“The ANF grant will support me in extending this platform for the quantification of spasticity and how it responds to the neurotoxin injections,” Dr. Cotton said.

Dr. Cotton recently completed his residency in PM&R and is now an Assistant Professor in the Department of PM&R at Northwestern University and the Shirley Ryan AbilityLab. He is a graduate of Baylor College of Medicine.

A Word from Shelly Jones, CAE, CPPM – Meeting, Corporate & Foundation Director

Why are funded research projects so critical to the ANF?
The research ANF funds is how new indicators and treatments are discovered. It is a crucial part of detecting, diagnosing, and hopefully curing these rare diseases.

Has the COVID-19 pandemic had an impact on the funded research projects?
COVID-19 has interrupted several of the research projects due to the inability to conduct in-person study visits. However, the ANF is allowing extensions for the projects that need it in order to allow all of the projects to be completed.

What are the goals future goals for the funded research projects?
The future goals include increasing the number of research projects we are funding and co-funding. We believe that increased research will result in better treatments and hopefully cures for those impacted by muscle and nerve disorders.

Why should someone consider donating to the ANF?
The ANF is committed to advancing NM research both through independently funding research and through collaboration with other funding sources. Please consider supporting this important research and help strengthen the global effort to cure NM disease. DONATE at neuromuscularfoundation.org/Donate.

Donate to Further Scientific Research in NM and EDX Medicine

The American Neuromuscular Foundation is funding incredible research projects and we want to keep that momentum going. Your donation to the American Neuromuscular Foundation helps us fund future development grants and clinical research fellowships in NM and EDX medicine. So many patients depend on this research and are hoping for breakthrough treatments and cures. Give to a cause important to you. Donate at www.neuromuscularfoundation.org/donate.
Growing Up With FSHD: A Young Woman’s Effort to Raise Awareness About the Rare Neuromuscular Disease

When Lexi Pappas was 11 years old, she started showing symptoms of facioscapulohumeral muscular dystrophy (FSHD). Her scapula, more commonly known as the shoulder bone, began protruding, resulting in pain and embarrassment for the middle schooler. However, these symptoms didn’t come as a surprise to Lexi or her parents. FSHD runs in their family. FSHD is an inherited disorder of muscles. Symptoms include gradually increasing face, shoulder, abdomen, hip, upper arm, and lower leg muscle weakness. The weakness may become more generalized as the disease progresses. This weakness is not equal on both sides of the body. The onset may be anytime from childhood to adulthood, but usually appears in the teen years.

“Over time, things have just gotten more difficult,” Lexi said. “Walking up the stairs, bending over, getting out of a chair becomes more difficult. I guess it’s just more of a part of my life now.”

FSHD has had a significant impact on Lexi’s life. One impact that was particularly frustrating for Lexi was not being able to participate in sports because of her mobility restrictions and weakness. Despite those frustrations, Lexi hasn’t let FSHD stop her from having a bright, meaningful future.

During her senior year of high school and her college years, Lexi filmed, edited, and published a documentary called “Growing Up With FSHD.” The documentary details what it’s like to live with FSHD and to be a young adult with a disability.

“I wanted to do something to make an impact on the FSHD world, and that documentary has led to almost everything I’ve done now,” she said.

Now 26, Lexi has turned the opportunities she was given following the documentary’s release into a career of video production and activism work.

“Growing up, I always wanted to be in video, I just never really knew I could,” said Lexi. “And then it kind of all fell into place.”

Lexi runs a YouTube channel full of candid videos. Through her video production work, she has also dabbled in comedy and nonprofit editing. One of Lexi’s main goals is to continue telling important stories through documentaries.

“I would love to make documentaries about different rare diseases or different disabilities, and actually tell other peoples’ stories,” she said. “Video is such a great way to spread awareness and capture the real story without all the medical jargon.”

One aspect of FSHD that can be especially difficult for Lexi to deal with is the toll it takes on her social life.

“The biggest struggle for me is knowing that I can’t do things like just being able to walk around a city and see the different attractions or join a kickball league at work,” she said. “I hope that FSHD doesn’t affect my career, but it definitely is going to affect having kids.”

While FSHD doesn’t shorten a person’s lifespan, babies born to a parent who has FSHD have a 50% chance of inheriting the disease. Pain is the most common complaint with FSHD, but hearing loss, inflammation and other symptoms may be present as well. Lexi went to physical therapy early on, but there was a long stretch of time where she wasn’t seeing doctors for FSHD, since the visits weren’t offering her much help.

“I’ve talked to a lot of other people and they have found relief from certain things, but I have never really found any pain relief from medications,” Lexi said.

In 2015, Lexi decided to undergo scapula fusion surgery as a preventative measure. While Lexi could still lift her arms up at the time of the surgery, she couldn’t hold them up and wanted to ensure future mobility. Since then, Lexi has started seeing a medical professional annually to monitor her condition. She even got her first official diagnosis this past year, making her

Patient Perspectives

These patients have shared a window into their day-to-day lives, living with a NM disease. They live their lives with the hope that researchers will one day find cures or treatments for their diseases.
the first in her family to be formally tested for and diagnosed with FSHD.

“Not only did the diagnosis offer some peace of mind, but I was starting to worry ‘Oh my goodness, what if I have a different kind of muscular dystrophy?’”

As Lexi continues to navigate her life with FSHD, there will inevitably be more challenges along the way. Regardless of what the future holds, Lexi is determined to keep raising awareness about FSHD, as well as other rare diseases and disabilities.

The mission of the American Neuromuscular Foundation is to provide funds to the next generation of researchers to advance the science and practice of neuromuscular and electrodagnostic medicine. Your donation helps provide patients like Lexi with hope for a cure. Even a small donation makes a big difference. Visit www.NMFoundation.org to donate and join the global effort to cure NM disease!

Team O for the Win: A Young Boy’s Battle Against Duchenne Muscular Dystrophy

Owin Petersen is 4 years old. Like most other kids his age, he likes to do puzzles and zoom around on his beloved tricycle. His parents describe Owin as their happy, loving, and giggly boy.

Owin was adopted by Paul and Trisha Petersen when he was 2. They noticed he was missing developmental milestones typical for his age. When he was 2 1/2, Owin was diagnosed with Autism Spectrum Disorder (ASD), a developmental disorder that can cause significant social, communication, and behavioral challenges.

“We were trekking along on this journey thinking, ‘Okay, if this is the worst of what he is handed, we can do this no problem,’” Paul wrote in a 2019 Facebook post. “And that’s when we got slapped upside the head.”

The Petersens started regularly seeing a genetic specialist who confirmed that Owin had ASD. The specialist also gave Owin a creatine kinase (CK) level test, which showed signs of muscular damage. Further testing revealed that Owin had Duchenne muscular dystrophy (DMD).

“We both did exactly what the doctor said not to do, and we started researching everything,” said Paul.

DMD is the most common muscular dystrophy, affecting one in 3,500 boys. Boys with DMD usually show symptoms by age 3, and it eventually leads to the degeneration of muscles and progressive weakness. The typical diagnosis of DMD means that these young boys, like Owin, will likely lose the ability to walk by their teenage years. Respiratory difficulties caused by DMD usually becomes life threatening by the late teens or early 20s.

“I can’t even explain the feeling of hopelessness,” says Paul. Despite that feeling, the Petersens held tightly to the last shred of hope.

“And then we started seeing more of the research and headway that they’ve made,” Paul said. “So you’re somewhat hopeless, but can still have hope.”

While there is no cure for DMD yet, corticosteroids may help kids walk independently for longer and slow the progression of the disease. Owin takes a corticosteroid called deflazacort daily to help strengthen his muscles. The Petersens have increased their interaction with medical professionals, including neurologists, psychologists, and dieticians. Owin typically has about three to four appointments a week, including therapy and infusions.

The duality of Owin’s diagnosis of DMD and ASD will continue to impact him profoundly for the rest of his life. The Petersens know that as Owin gets older, they will need to make more adjustments to their family’s plans and lifestyle. But one thing that won’t change is the hope they continue to hold on to.

“In our heart of hearts, we still try to have a ton of hope that there are different things on the horizon for DMD,” Paul said. “I still hope that he can do anything that he wants.”

Luckily, the Petersens have an extensive network of family and friends, in addition to all of the people who follow their frequently-updated Facebook blog, “Team O for the Win.”

“One of the things that scared me toward the beginning of this was I was reading on some of those DMD group pages on Facebook that families would start acting differently or standoffish,” said Paul. “It’s something we luckily haven’t
seen yet. Everyone has been pretty supportive.”

Clinical trials and experimental treatments are underway in the world of DMD research. Owin continues to capture the attention and hearts of his eight siblings, and his parents are excited to continue watching him grow up, and savor all the time that they have with him.

The mission of the American Neuromuscular Foundation is to provide funds to the next generation of researchers to advance the science and practice of neuromuscular and electrodiagnostic medicine. Your donation helps provide patients like Lexi with hope for a cure. Even a small donation makes a big difference. Visit www.NMFoundation.org to donate and join the global effort to cure NM disease!
### Legacy Gift ($50,000+)

- Sukhijwan Singh

### Gold Gift ($1,000 to $2,499)
- James Albers, MD, PhD
- Anthony Chiodo, MD, MBA
- Earl Craig, MD
- Ghalzila Hayat, MD
- Lisa Hobson-Webb, MD
- Holli Florak, MD
- Ileana Howard, MD
- Robert Irwin, MD
- Jun Kimura, MD
- Francis Lagattuta, MD
- James Leonard, MD
- Christina Marciniak, MD
- Jennifer Martinez-Thompson, MD
- Janice Massey, MD
- Michael Mrochek, MD
- Pushpa Narayanaswami, MBBS, DM
- William Pease, MD
- Perry Richardson, MD
- Devon Rubin, MD
- Jeffrey Brault, DO
- Gregory Carter, MD, MS
- Adam Comer, MD
- Eduardo De Sousa, MD, FAAN
- Kathrynn Stolp, MD, MS
- Tanya Lehky, MD
- Richard Lewis, MD
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- Dianna Quan, MD
- Zachary Simmons, MD
- Mary Spire, MD
- Channarayapama Sridhara, MD
- Nathan Staff, MD, PhD
- Vincent Tranchitella, MD
- Bryan Tsao, MD
- Loreta VanEvery, MD
- Faren Williams, MD
- Amy Zarrin, MD, PhD

### Platinum Gift ($2,500 to $9,999)
- John Kincaid, MD
- William Pease, MD
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- Shelly Jones, CAE, CPPM
- William Jones, MD
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- Chaic Karam, MD
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- Jedediah Robinson, MD, MS
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- Veronica Rodriguez, MD
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- Mohammad Saed, MD, MS
- Mohammad Salajegh, MD
- Marcy Schlinger, DO
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- Todd Silverman, MD
- Jose Simon Canellas, MD
- David Simpson, DO, MS
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- Robert Smith, MD, PhD
- Henry Spindler, MD
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- Andrea Swenson, MD
- Eroboghene Uwogu, MD
- W. Alaric VanDam, MD
- Ella and Glenn VanLaningham
- John Vlattas, MD
- Louis Weimer, MD
- Jerry Weissman, MD
- Zachary Wilson, DO
- Jiwon Yang
- Lan Zhou, MD, PhD
- Meng Zhou-Wang, MD
- Richard Zuschlag

### Silver Gift ($50 to $249)
- Asmaa Alderbas, PhD
- Shawn Bird, MD
- Geoffrey Braut, DO
- Gregory Carter, MD, MS
- Adam Comer, MD
- Eduardo De Sousa, MD, FAAN
- Bryan DeSouza, MD
- Timothy Dillingham, MD, MS
- Peter Donofrio, MD
- Gary Gallagher, MD
- Peter Grant, MD
- Taylor Harrison, MD
- James Howard, MD
- Charles Jablonski, MD
- Vern Juel, MD
- John Kincaid, MD
- Tanya Lehky, MD
- Richard Lewis, MD
- Yucheng Li, MD, PhD
- William Litchy, MD
- Ann Little, MD
- Michael Munin, MD
- John Norbury, MD
- Dianna Quan, MD
- Zachary Simmons, MD
- Mary Spire, MD
- Channarayapama Sridhara, MD
- Nathan Staff, MD, PhD
- Vincent Tranchitella, MD
- Bryan Tsao, MD
- Loreta VanEvery, MD
- Faren Williams, MD
- Amy Zarrin, MD, PhD

### Bronze Gift ($50 to $249)
- Shelly Jones, CAE, CPPM
- William Jones, MD
- Peter Kang, MD
- Chaic Karam, MD
- Nandita Keole, MD
- Vira Kesner, MD, PhD
- Mary Kneiser, MD
- Justin Kwan, MD
- Jeffrey Lemberg, MD
- Kerry Levin, MD
- Donna Moore, MD
- Jamie Morrell
- Matthew Murnane, MD
- Kishore Narra, MD
- Kristi Nord, MD
- Tracy Park, MD
- Binpinchandra Patel, MBBC
- Jane Pearson
- David Polston, MD
- Kevin Puzio, MD
- David Polston, MD
- Caroline Quarty, MD, FRCPC
- Patrick Radecki, MD
- Jackie Rago
- Amani Ramahi, MD
- Jedediah Robinson, MD, MS
- Denny Rodriguez, MD
- Veronica Rodriguez, MD
- Gulmohor Roy, MD, MPH
- Mohammad Saed, MD, MS
- Mohammad Salajegh, MD
- Marcy Schlinger, DO
- Luay Shaya, MD
- Todd Silverman, MD
- Jose Simon Canellas, MD
- David Simpson, DO, MS
- Christine Smith, MD
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- Henry Spindler, MD
- William Steeler, MD
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- Ramaswami Sundar, MD
- Andrea Swenson, MD
- Eroboghene Uwogu, MD
- W. Alaric VanDam, MD
- Ella and Glenn VanLaningham
- John Vlattas, MD
- Louis Weimer, MD
- Jerry Weissman, MD
- Zachary Wilson, DO
- Jiwon Yang
- Lan Zhou, MD, PhD
- Meng Zhou-Wang, MD
- Richard Zuschlag

### Gift (up to $49)
- Albert Ackil, MD
- Joanne Annakora
- John Bissell, MD
- Annie Daniel, MD
- Gilberto de Andrade, MD, MSc
- Jose DeSousa, MD
- David Dickoff, MD
- Robert Friedman, MD
- Jonathan Goldstein, MD
- Michael Graves, MD
- Roger Horan, MD
- Mario Introna
- Mossadig Jaffri, MD
- W. LeBas, MD
- Ricardo Mallorca, MD
- Matthew McClure, MD
- Jose Miro, MD
- Earnest Murray, MD
- Aurelio Muzaurieta, Jr., CNCT, R.NCS.T, RVT
- Akihiro Nishida
- Alecia Quiroga, MD
- James Ragland, MD
- Jose Ruiz Rodriguez
- Conor Ryan, MD
- Manijeh Ryan, MD
- Reiner Henson See, MD
- Elena Shanina, MD, PhD
- Benjamin Sucher, DO
- Suryanarayan Vishubhakat, MD
- John Wilson, DO
- Simon Zimnowodzki, MD
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Toni Haggerty, Senior Director of Business Development | Neurology Reviews | thaggerty@mdedge.com | 856-296-5705
<table>
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<td>NM &amp; EDX SAE early reg closes</td>
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<td>ANF and IFCN annual meeting award application deadline</td>
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<td>2021 AANEM Annual Meeting early-bird registration opens</td>
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<td>AMA House of Delegates Annual Meeting – Chicago, IL</td>
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<td>Please watch the website for official exam dates: <a href="http://www.aanem.org">www.aanem.org</a></td>
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A community dedicated to improving the lives of patients with neuromuscular diseases.

The biggest benefit that AANEM membership has given me is education, not just in clinical practice and newer techniques like ultrasound, but also billing and coding, practice management, etc. A close second would be the colleagues I have met from all over the world and the ideas and mentoring they have shared with me.

~ Bonnie Weigert, MD

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