

The Society of Neurological Surgeons

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Message from the President



Warren R. Selman, MD

I'm back in the saddle again
Out where a friend is a friend
Where the longhorn cattle feed
On the lowly gypsum weed
Back in the saddle again

Gene Autry 1939

Little darling, it's been a long cold lonely winter Little darling, it seems like years since it's been here...

Little darling, the smiles returning to the faces Little darling, it feels like years since it's been here...

George Harrison/The Beatles Abby Road 1969

I suspect that neither Gene Autry nor George Harrison was thinking about the Society of Neurological Surgeons when they penned those words, but both songs seem quite appropriate to describe our recently completed 112th meeting in Austin, Texas. Although it has been more of a metaphorical winter due to Covid, getting back to an in-person meeting and sharing new ideas with

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old friends was a prescription for smiles if ever there was one.

We are indebted to the CNS leadership, Regina Shupak and David Berg, for crafting a way for us to share meeting resources, to Lisa Mastrino for her invaluable help throughout the year, to Karen Garrett and Lauren Oppe for their help in Austin, and last, but by no means least, to Dr. Matt Ewend and his committee for putting together an outstanding program.

The meeting provided an opportunity for members and guests to hear our past Presidents, Drs. Muraszko and Grady, deliver their addresses. Dr. Muraszko's was entitled "The 'Why' -Education and Neurosurgeons Behaving Badly, and Dr. Grady's was "Vita Brevis, Ars Longa." Both were outstanding, timely, and thought provoking. Although annual meetings were cancelled or postponed, the work of the Society continued unabated, and this was highlighted by the reports of our committee chairs. Perhaps no other committee had to pivot more quickly and assume more responsibility than the Medical Student Committee. Under the leadership of Dr. Stacy Wolf, the committee members worked tirelessly to provide us all with a mechanism to move forward with clerkships, evaluations, and interviews, since it is that season. Although initially a response to the pandemic, the outstanding work of this committee has made the interview and evaluation process fairer and more equitable.

Continued on page 2

Message from the President (continued)

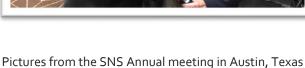
We all owe Dr. Wolfe and her committee an enormous debt of gratitude for their tireless efforts on our behalf.

Our Historian, Dr. Kim Burchiel, completed the 100th Anniversary Membership Volume, with historical notes and biographies of current and past SNS members. This treasure is a wonderful reminder of the distinguished lineage of our Society. Another important publication appeared in the Journal of Neurosurgery (https://doi.org/10.3171/2020.10.JNS203125) from the Representatives of the One Neurosurgery Summit, along with an editorial by the Journal Editor, Dr. James Rutka, highlighting the advances in neurosurgical education and training that have occurred over the past two decades in the United States. These articles provide a concise starting point for our next hundred years of innovation in education and training.

As we look forward to the coming year, please mark your calendars for our 113th meeting in our 102nd year which will take place on May 21 – 24, 2022 in Detroit, Michigan at the Henry Ford Health System. Our host, Dr. Steven Kalkanis and our annual meeting chair, Dr. Judy Huang and her committee are organizing an outstanding program and we all look forward to seeing you in the Motor City.











After 29 months, the Society of Neurological Surgeons (SNS) gathered for the first time in person since the beginning of the pandemic. Fully 256 members, program directors, department chairs and other educational leaders participated in a delayed, October annual meeting in Austin, Texas (80% of our 2019 attendance). Program administrators from ARANS also joined for part of the meeting. Together, we advanced and celebrated the SNS mission of supporting medical student, residency, and fellowship training in neurological surgery and representing U.S. academic departments. A partial listing of SNS activities follows:

- The Austin Annual Meeting was the first to utilize a new SNS Professionalism Policy. Previously, an SNS-chaired task force of One Neurosurgery Summit organizations had created a model professionalism policy to promote a climate of equity, inclusion, and safety for all participants in neurosurgical leadership and education.
- The SNS Junior Resident Courses and the SNS PGY1 Boot Camp Courses were again held this spring and summer utilizing a combination of online lectures and interactive content plus local program simulation resources to fulfill the SNS curriculum. An analysis of the techniques used and impact of virtual courses during the early stages of the pandemic last year was submitted for peer review.
- The One Neurosurgery Summit organizations have continued to meet virtually to coordinate aspects of neurosurgery's pandemic response and to share strategic planning amongst the Summit organizations.
- A special 100th SNS Anniversary Membership Volume, with historical notes and biographies of SNS members current and past, was mailed to members in late September.
- The SNS Committee on Medical Students continues to provide information and issue recommendations regarding sub-internship rotations and the residency interview and match season. The Committee has communicated these recommendations through the SNS website, program emailings, and appearances by Committee leadership and SNS officers in national online forums, webinars, and town halls. A survey of residency directors, administrators, and applicants evaluated changes to residency applications in order to identify best practices for a 2nd pandemic-affected application season this fall. One manuscript describing survey findings was published in the JNS in November and a second is under review.

- The SNS Curriculum Committee continues work on a collaboration with the ABNS to link the national residency curriculum to ABNS primary exam question stems.
- The SNS continues to collaborate on the ACGME PDPQ project as one of three representative specialties in this pilot development of a national residency QI curriculum. The initial 4 participating neurosurgery programs have now expanded in Phase 2 to a group of about 20 programs.
- SNS-CAST fellowship accreditation activities continue, located at the ABNS headquarters office in Rochester, MN. Record numbers of fellowships are now accredited, with major growth in surgical endovascular neurosurgery, critical care, and other areas. CAST has also initiated a new fellowship accreditation pathway for skull base neurosurgery.
- The SNS has launched a task force to assess the impact of the COVID-19 pandemic on U.S. academic neurosurgical departments and training programs.
- Representatives to the One Neurosurgery Summit have published a white paper on the last two decades of advances in U.S. neurosurgical education and training in the *Journal of Neurosurgery*. The article is accompanied by an editorial written by JNS Editor, Dr. Jim Rutka, as well as an editorial response by the lead authors (August, 2021).
- The SNS continues to update and improve our online functionality for both the SNS website (in collaboration with administrative partners, the CNS) and CAST (in collaboration with administrative partners, the ABNS).
- The SNS will next meet at the Henry Ford Health System in Detroit, Michigan, from May 21st to 24th, 2022.

The SNS remains committed to and focused on its mission to support U.S. academic neurosurgery programs in facilitating outstanding education for neurosurgical residents and fellows and encouraging the engagement of medical students interested in a career in neurosurgery, as well as supporting governance best practices in neurosurgical departments and training programs.



May 21-24, 2022 marks the 113th Annual Meeting of the SNS and will be hosted by the Henry Ford Health System in Detroit, MI. Presided by Dr. Warren Selman, the theme of the scientific program will be "Innovation in Education," which is fitting to occur in Detroit, a city with a magnificent history of ground-breaking developments in the music, automotive, and architectural fields.

Building upon the excellent discussions that occurred during the 2021 SNS Meeting in Austin, we are planning an exciting and interactive agenda:

Saturday – Designed for residency program directors and educational leaders, topics will center on training goals and evaluations, including assessments of residency applicants and trainees. Dr. Robert Harbaugh and Corey Parker, MPA will provide valuable inputs from the RRC and ACGME.

Sunday – The local program hosted at Henry Ford Hospital by Dr. Steve Kalkanis, the CEO of Henry Ford Medical Group, will feature how the challenging landscape of healthcare has been navigated by the Henry Ford Health System. Department faculty and institutional leaders will address the influences of value-based care, patient-reported outcomes, and social determinants of health in shaping the strategic priorities of the health system and strengthening its Department of Neurosurgery.

On Sunday afternoon, the focus will turn to the professional development of dedicated educators and residency program faculty. The Grossman Award Lecture will be a highlight.

Monday – Diving further into the "Innovation in Education" theme, more far-reaching considerations of how to navigate collaborations beyond traditional departmental structures and NIH-funded research efforts will be explored. The morning will feature the Presidential Address by Dr. Warren Selman.

In the afternoon, there will be discussion of novel teaching tools and strategies to connect with learners. The Winn Award Lecture will celebrate esteemed accomplishment in research. As the worldwide pandemic has uncovered broad connections, our role in global neurosurgery will be examined from perspectives of both contributor and recipient.

Tuesday – The morning session "The OR of the Future and What Our Residents Need to Learn Now" will contain provocative content designed to spur thought and integration of innovative ideas into our training programs. Updates regarding the mission-critical educational activities of the SNS will be shared.

Along with President Selman and the members of the Scientific Program Committee, Dr. Julie Pilitsis and Dr. Jonathan Miller, we are striving to design a program that engages attendees as we contemplate how to prepare for the future of our field. We look forward to seeing you in Detroit!



SNS in Motown Ellen L. Air, MD, PhD and Steven N. Kalkanis, MD

We are very excited to be welcoming you to the 2022 Annual SNS Meeting May 21-24 in Detroit hosted by the Department of Neurosurgery at Henry Ford Health System. Detroit is the perfect setting with its revitalized downtown home to an ever-growing number of restaurants, offering food from around the world. The central entertainment district is home to three sports venues and numerous theaters creating a hub of activity providing many options to gather and reconnect with colleagues.

We will be hosting the meeting at the well-appointed MGM Grand Hotel and Convention Center. On Saturday night, the opening reception will be held on the roof deck of One Campus Martius overlooking the city. It is perfect to enjoy the incredible panoramic views of Detroit and the river from its 5,500 sq.ft. covered, wraparound terrace. The location is spectacular as it is adjacent to Campus Martius Park and is easily accessible to the many restaurants and bars.

Our Gala Reception will take place Sunday evening in the Grand Atrium and Rivera Court at the Detroit Institute of Art which displays Diego Rivera's masterpieces: the Detroit Industry frescos. Founded in 1885, the Detroit Institute of Art houses one of the largest and most significant collections in the United States. With more than 65,000 works, it is also one of the most diverse collections in the country, ranging from Vincent van Gogh's Self-Portrait (the first Van Gogh painting to enter a U.S. Museum collection) to housing the General Motors Center for African American Art.

Monday evening, we close out the meeting with a black tie dinner at the MGM Grand Hotel Ballroom. What a wonderful way to celebrate being together again after the brief encounters at the 2021 Meeting in Austin!

There are numerous fun things to see and do in Detroit and Southeast Michigan. Perhaps one can enjoy a walk or run along the International Riverfront walk, while capturing views of Canada, or take a cruise down the Detroit River. One can explore the Eastern Market, which includes a bustling Saturday Farmer's Market and many shops offering local products. Do not forget to visit the Henry Ford Museum and Greenfield Village where a walk through the indoor museum is a tour through America's history of innovation. Outside, Greenfield Village is home to an unprecedented collection of places that defined America from Thomas Edison's laboratory to the Wright Brothers Bicycle shop and of course, one should not forget about Motown!

We cannot wait to show you all that Motor City has to offer!







Gala Reception on Sunday for all attendees and Guests in the Grand Atrium and Rivera Court of the Detroit Institute of Arts

One Small Step for Neurosurgery, One Giant Step for Good SNS Professionalism Policy

Deborah L. Benzil, MD; Vice President SNS Ellen L. Air, MD, PhD

Every individual who interacts with neurosurgeons has the right to expect the highest levels of professionalism. Achieving this optimal degree of professionalism requires educational endeavors and policy implementation in order to reverse widespread, traditional behaviors. Unfortunately, issues of discrimination and harassment in health care as well as neurosurgery have been identified prompting the need for change. Thus, in 2018 the One Neurosurgery Summit (AANS, CNS, ABNS, SNS, RRC and AAcNS) convened the Neurosurgery Professionalism Taskforce under the leadership of Drs. James Rutka and Karin Muraszko with representation from all organizations and critical constituents1. Two activities emerged as the focus of the group's work. The first was to assess the depth and breadth of sexual harassment across neurosurgery. The results of this seminal work were published by JNS in 2020. The second was to draft a Professionalism and Harassment Policy-based on available industry standards-to serve as the template for the summit organizations. This model policy, along with important supporting documentation, was jointly published by JNS and Neurosurgery in 2021.

In the spring of 2021, the SNS undertook a review of the model policy in order to establish one that met the specific needs of the SNS meetings and educational programs. The draft policy was reviewed extensively by the membership in an open and lively discussion leading to further modifications. The final policy has several key elements (full policy available here):

- There is zero tolerance for harassment of any type at any event involving the SNS-including all educational programs and meetings. This policy will also be required of any organization that seeks sponsorship from the SNS for their meetings or educational offerings.
- All participants in SNS meetings and educational programs will be required to agree to abide to the policy prior to attendance.
- SNS leadership will complete appropriate educational programs on harassment prevention.
- Procedures for reporting policy violations are in place.
- Necessary <u>Constitution and By-Laws</u> changes were adopted.

The By-laws changes and comprehensive Professional Policy are concordant with and support the SNS Vision "To advance the quality of care of neurosurgical patients by promoting excellence in education and research" and represent an important small step with significant and necessary positive implications.

¹ Full Committee membership: Ellen L. Air, MD, PhD; James R. Bean, MD; Deborah L. Benzil, MD; Linda M. Liau, MD; Catherine A. Mazzola, MD; Karin M. Muraszko, MD; Katie O. Orrico, JD; James T. Rutka, MD, PhD; and Alan Scarrow, MD

Update on SNS Virtual Resident and Intern Boot camps 2021

Dr. Martina Stippler, Director of Neurotrauma, Beth Israel Deaconess Medical Center
Dr. Gregory Zipfel, Chair, Department of Neurological Surgery, Washington University School of Medicine
Dr. Nathan Selden, Chair, Department of Neurological Surgery, Oregon Health & Science Center

The 2021 intern boot camp and PGY resident courses were held virtually this year on May 20-21 and July 23-24, 2021.

The boot camp course this year comprised a panel discussion with chief residents, ICP management, neurosurgical emergency case base discussion, Risk management, and wellness and resilience modules. The consent process discussion was moved from the PGY2 camp based on feedback from prior courses. Similar to last year, residents met with local faculty, supported by the Virtual SNS faculty, to practice and discuss growing and gloving, lumbar drain placement, VP shunt tap, and EVD placement. All of these topics were considered relevant or very relevant by greater than 90% of the participants.

We added a new interactive session for this year's virtual PGY2 resident course that focused on managing interoperative catastrophes. It was very well received and one of our highest scoring sessions. It was considered very relevant by 81% of the participants. The session on difficult conversations and the leadership segment were considered very relevant by 64% and 67%, respectively. The lower score could reflect that residents at this stage of their training may not have had many difficult conversations and underestimate the importance of such training. We will reevaluate the leadership module to make sure it remains relevant for the cohort.

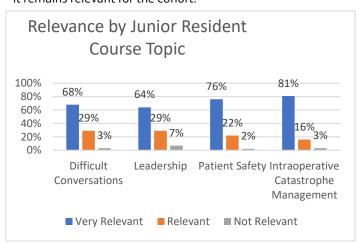


Figure 1: Percentage of interns rating the relevance by junior resident course topic.

A total of 80% of participants completed their pre-course work. Last year, 70% of the residents that did not complete the pre-course assignment cited unawareness of the assignments. With targeted messaging to program directors and residents, this was decreased to only 3.5% this year. The most common reason for not completing the pre-course work this year was time constraint. In all, 62% of participants completed the post-course work, which was comprised of links to podcasts and additional learning sources.

Of all the active teaching techniques we used on Zoom, the polls again received the highest rating. Most (96%) of the residents found them to be good to excellent, followed by the panel discussion. We will make sure to take this feedback into account for the following year.

Below is an example of the word cloud we generated at the start of the panel discussion with the chief residents. To stimulate discussion, we asked the PGY 1 resident to reflect on the year



We now have two years of virtual boot camps under our belts, and valuable lessons have been learned. The faculty time and costs are exponentially higher for in-person events, but the hands-on experience, mentorship, and networking aspects cannot be replicated in a virtual course. Hence, the Committee on resident education under the leadership of Dr. Gregory Zipfel and the CoRE Resident Courses Subcommittee chaired by Dr. Michael Haglund met this fall during the SNS meeting and decided to move ahead for 2022 to an in-person boot camp meeting for the PGY1 residents and to keep the PGY2 resident course virtual. This is also supported by the fact the overall engagement and satisfaction ratings were somewhat lower in the virtual boot camp course compared to the virtual resident course.

The next steps are to review the curricula of both courses and emphasize hands-on training for the intern course, while reserving didactic content focused on professionalism, communication, and patient safety for the PGY2 resident course. Medical education research also has shown that didactic content can be delivered well virtually. We also have shown that we are able to engage the residents virtually with our format and use of active teaching techniques.

I hope with this approach, we can keep the spirit of the resident courses alive while being thoughtful about resources. We want to thank all the faculty who participated in the online courses and hope to see many back for an inperson boot camp in 2022.

NEW 2021 MEMBER PROFILE HIGHLIGHTS

- Kaisorn L. Chaichana, MD is a Professor of Neurosurgery at the Mayo Clinic in Jacksonville, Florida where he offers comprehensive treatments for adult patients with benign and malignant brain tumors. He is the Director of Brain Tumor and Skull Base Surgery at the Mayo Clinic where he specializes in the treatment of patients with primary brain tumors such as gliomas, meningiomas and pituitary tumors, as well as skull base and metastatic brain tumors. He practices the most advanced treatments in minimally invasive surgery, endoscopic surgery, and awake brain mapping. He has published over 180 peer-reviewed publications, 50+ book chapters, edited 3 books, and presented at several international and national conferences. He runs a laboratory that specializes in metastatic brain tumors that has NIH support. He also serves as the neurosurgery residency program director at the Mayo Clinic and has received numerous accolades for his teaching and mentorship.
- Edward F. Chang, MD, PhD is the Joan and Sanford Weill Chair and Jeanne Robertson Distinguished Professor of Neurological Surgery at the University of California, San Francisco. Dr. Chang's clinical expertise is surgical therapies for epilepsy, pain, and brain tumors. He specializes in advanced neurophysiologic brain mapping methods, including awake speech and motor mapping, to safely perform neurosurgical procedures in eloquent areas of the brain. His research focuses on the discovery of cortical mechanisms of high-order neurological function in humans.
 - Dr. Chang's laboratory has demonstrated the detailed functional organization of the human speech cortex and has translated those discoveries towards the development of a speech neuroprosthetic device to restore communication for people living with paralysis.
- Nader S. Dahdaleh, MD is an associate professor of Neurological and Orthopedic surgery at Northwestern University Fienberg School of Medicine. He is also the neurological surgery residency training program director and the director of the Chiari and Craniovertebral junction surgery program. He has special clinical interest in minimally invasive spine surgery, spinal trauma, disorders affecting the craniovertebral junction, spine biomechanics, and gait analysis. He conducts spinal outcomes research and is passionate about resident education. Dr. Dahdaleh is renowned for his expertise in complex cervical spinal surgery and surgery of the craniovertebral junction. He has been invited numerous times to speak and teach courses nationally and internationally. He has over 200 peer-reviewed papers and book chapters and has published in high profile journals including: Nature Neuroscience, Cell, Proceedings of the National Academy of Sciences, American Journal of Human Genetics, Journal of Neurosurgery and Spine.
- Travis M. Dumont, MD is the Program Director at University of Arizona and an Associate Professor of Neurosurgery and Medical Imaging. He is the director and founder of the endovascular neurosurgery program at the University of Arizona which is now part of a Comprehensive Stroke Center at Banner-University of Arizona Medical Center. He serves as faculty for Stroke Neurology and Spine Fellowship programs. His clinical and research interests are multifaceted but remain patient-centered and focused on vascular and spinal disease. He has published many peer reviewed manuscripts and book contributions.
- Aruna Ganju, MD FAANS FACS is an Associate Professor of Neurological Surgery at Northwestern University Feinberg
 School of Medicine. During her tenure as a faculty member, she has served as Medical School (Neurosurgical) Clerkship
 Director, Associate Neurosurgical Residency Program Director, and Residency Program Director. To date, she has served
 as Chair of the American Association of Neurological Surgeons (AANS)/Congress of Neurological Surgeons (CNS) Joint
 Section for Women in Neurosurgery and is currently the Editor of the online socioeconomic publication AANS
 Neurosurgeon. Throughout her career, Dr. Ganju has served as a mentor for students from high school to post-doctoral
 training. She is currently PI of several industry sponsored clinical trials investigating therapeutic modalities for spinal cord
 injury.
- Peter Tze Man Kan, MD MPH FAANS FRCSC is the Professor and Robert L. Moody Sr. Chair of the Department of Neurosurgery at the University of Texas Medical Branch. He also holds the Jennie Sealy Distinguished Chair in Neuroscience. He subspecializes in cerebrovascular surgery, both open and endovascular, and his research interests include clinical trials for new neuroendovascular devices, intravascular imaging, neuroprotection for acute ischemic stroke, and intra-arterial cell-based therapy for malignant brain tumors.

NEW 2021 MEMBER PROFILE HIGHLIGHTS

at KUMC.

- Sean M. Lew, MD is the Director of Epilepsy Surgery for the adult epilepsy program at Froedtert Health and Medical College of
 Wisconsin. His research and clinical interests include epilepsy surgery, craniocervical disorders, stereotactic laser ablation, and
 surgical technique innovation. He is an active member of numerous neurosurgical/epilepsy societies including the CNS, AANS,
 AES, ISPN, and ASPN. Dr. Lew has served as an ad hoc reviewer for numerous journals, including Child Nervous System, Journal
 of Pediatric Epilepsy, Epilepsia, Pediatric Neurosurgery, Seizure, World Neurosurgery, and JNS Spine. He is currently serving as a
 member of the JNS Pediatrics editorial board.
- Michael Lim, MD is a Professor and Chair of Neurosurgery at Stanford University. His surgical interest is in both benign and malignant brain tumors, with a particular interest in gliomas (including ependymoma), meningioma, pituitary tumors and skull base tumors. He has extensive experience in new and innovative neurosurgical techniques including image guided surgery, microsurgery, minimally invasive procedures and endoscopic surgery. Dr. Lim's primary research interest is developing immune-based therapies against brain tumors. His research laboratory is focused on understanding the mechanisms of immune evasion by primary brain tumors. Findings from his laboratory are directed towards translation to novel therapies against brain tumors. In addition to running a laboratory, he currently serves as the principal investigator of several large brain tumor immunotherapy clinical trials based on findings from his laboratory.
- Jules M. Nazzaro, MD is currently a tenured professor in the Department of Neurosurgery at the University of Kansas Medical Center specializing in stereotactic neurosurgery for movement disorders. He also holds secondary joint appointments in the Department of Neurology and in the Department of Molecular and Integrative Physiology.

 He joined the faculty at the Boston Medical Center, Boston University School of Medicine focusing on DBS and movement disorders. He then joined the Department of Neurosurgery at the University of Kansas in 2006 and was Program Director for 10 years beginning in 2010, successfully guiding the program. He remains active in resident education serving as Vice Chair of Education. He has also been instrumental in the development and growth of the Deep Brain Stimulation and Epilepsy programs
- Kiarash Shahlaie, MD, PhD is a Clinical Professor and Vice Chair of Education and Residency Program in the Department of Neurological Surgery at UC Davis. He is an expert in management of skull base and pituitary tumors, trigeminal neuralgia and hemifacial spasm, epilepsy, and movement disorders, and complex traumatic brain and skull base injuries. Dr. Shahlaie serves as Co-Director of the UC Davis Center for Skull Base Surgery, Director of the Traumatic Brain Injury Program, and Chief of Functional Neurosurgery. Dr. Shahlaie has an interest in Minimally Invasive Brain Surgery, which includes endoscopic and keyhole techniques. Dr. Shahlaie is an accomplished clinician-scientist with extensive experience in preclinical and clinical research. Dr. Shahlaie is the Bronte Endowed Chair of Research and an active faculty member of the UC Davis Center for Neuroscience, where his team is focused on developing new deep brain stimulation techniques to improve learning and memory and influence tumor growth. Dr. Shahlaie also directs multiple clinical studies at the UC Davis Medical Center. Dr. Shahlaie is an award-winning instructor at the UC Davis School of Medicine. He has coauthored 93 peer-reviewed articles and 18 book chapters.
- Jim Schuster, MD, PhD is a Professor of Neurosurgery at the University of Pennsylvania, in his twentieth year as a member of the department. He is the Residency Program Director and Chief of the Neurosurgery Service at Penn Presbyterian Medical Center. He is the Director of Neuro-Trauma. His practice is primarily spine focused, with an emphasis and interest in trauma and spinal oncology. He graduated from the University of South Dakota, and subsequently obtained his MD/PhD from Duke University.
- William E. Thorell, MD FAANS has been the Co- Director of the Neurovascular Institute and the Stroke and Neurovascular Center at Nebraska Medicine in Omaha, NE since 2013. Dr. Thorell has twice served as President of the Midwest Neurosurgical Society and is the Lyal Leibrock M.D. Endowed Chair in Neurosurgery at University of Nebraska Medical Center. His primary career focus has been building a regional cerebrovascular program in Nebraska and the surrounding area while teaching neurosurgical principles and cerebrovascular surgery to neurosurgery trainees.