

# Young Neurosurgeons NEWS



Summer 2017

Young Neurosurgeons Committee

Editor: Edjah Nduom, MD

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## YNC SPRING 2017 CHAIR'S MESSAGE



The theme of the 2017 American Association of Neurological Surgeons (AANS) Annual Meeting was *Neurosurgery: A World of Innovation*. The meeting was a resounding success and it gave us an opportunity to discuss

innovation as a specialty in the beautiful confines of Los Angeles.

In many ways, innovation is an apt theme for the Young Neurosurgeons Committee (YNC) in 2017. The YNC has been a center for innovation for organized neurosurgery, and I hope to further that legacy in my two-year term as chair. Under the excellent leadership of the outgoing chair, Krystal Tomei, MD, MPH, the YNC has continued a recent effort by the AANS to bring medical student members into the fold. This membership class now has over 1,700 members in over 60 chapters across North America. This influx of youth and enthusiasm has brought new energy and ideas to the AANS. We want to harness that energy going forward.

We also hope to immediately introduce a few new initiatives to the YNC:

We are starting a new partnership with Neurosurgery Blog to feature content written by our medical student and resident members. Most of the neurosurgeons and future neurosurgeons in our generation are used to absorbing content on the go in short bites. While the newsletter will continue as a publication twice a year, we are

hoping that this new format will introduce the YNC to even more of our young neurosurgeons.

We are also reaching out to the AANS/CNS Joint Sections to assess their interest in having medical student members embedded in their committees. We have piloted this across a few sections, and so far, this has been met with widespread enthusiasm.

It is a great honor to take the lead of the YNC. As I said in Los Angeles, the YNC was specifically designed to be the proving ground for leadership in the AANS. If you are reading this newsletter, then we are trying to find ways to bring you into the fold and give you an opportunity to become a leader by working for the AANS. You do not need a title to create innovations for neurosurgery and make a name for yourself. If you want to be a part of moving neurosurgery forward, please contact us, and we will work together toward the betterment of our specialty.

I look forward to working with you all, as our generation of neurosurgeons moves into the leadership of our great profession. This is your committee, so please make yourselves comfortable and reach out to us!

Sincerely,

Edjah Kweku-Ebura Nduom, MD  
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# Secretary's Message



Hello, and welcome to the Spring/Summer 2017 newsletter! In this issue, we highlight YNC news from the 2017 AANS Annual Scientific Meeting and provide updates on issues important to young neurosurgeons. We are thrilled to publish an interview with the immediate past president of the AANS, H. Hunt Batjer, MD, FAANS, reviewing his experience with organized neurosurgery and

his thoughts on why it is important to be involved nationally. For residents and students, there is a timely article reviewing the new Accreditation Council of Graduate Medical Education (ACGME) work-hours rule changes for interns for the academic year 2017-2018. For medical students, there is an article on using social media to positively interact with academic neurosurgery.

Thank you for reading, and please give us feedback on anything you would like to see in the newsletter via email at [jjohnson.neuro@gmail.com](mailto:jjohnson.neuro@gmail.com) or Twitter direct message @youngneuros. Watch out for Young Neurosurgeons' posts in the Neurosurgery Blog @neurosurgery in upcoming weeks!

Warmest regards,

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## 2017 AANS Annual Scientific Meeting Highlights

April 22-26; Los Angeles Convention Center; Los Angeles



### Neurosurgical Top Gun:

Timur Urakov, MD, was overall top gun winner for a second time!

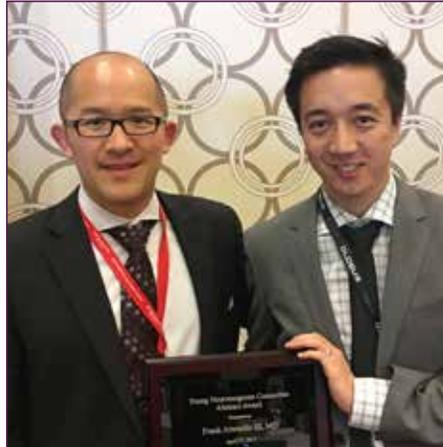


### Young Neurosurgeons Research Forum:

Roberto C. Heros, MD, FAANS(L), presented at the YNC Research Forum.



**Young Neurosurgeons Luncheon:**  
Richard G. Ellenbogen MD, FAANS,  
presented at the YNC Luncheon.



**YNC Medical Abstract Award Winner:**  
Frank Joseph Attenello III, MD



**MISSION Fellowship Graduate:**  
Nancy A. Abu-Bonsrah with Khoi Duc  
Than, MD



Mitchel S. Berger, MD, FAANS, presented  
at the Young Neurosurgeons Tumor  
Section.



# YNC Interview With The Past AANS President: Hunt Batjer (Part 1)

“Service in Organized Neurosurgery” – An Interview with AANS past-president H. Hunt Batjer, MD, FAANS, professor and chair, Department of Neurosurgery at UT Southwestern.

Benjamin C. Kennedy, MD, conducted this interview at the 2017 AANS Annual Scientific Meeting. It has been lightly edited for flow.



## **Benjamin Kennedy (BK): Why did you get involved in organized neurosurgery?**

**Hunt Batjer (HB):** First of all, I love neurosurgery. I love the surgical aspect. I love outpatient neurosurgery. I love the patients and the challenges that go with that. I grew up in a program that focused on technical excellence, a thumbprint on our field by Duke Samson, MD. In 1982, I was a junior faculty when William Kemp Clark, MD, my chair and the AANS president-elect at that time, invited me to lunch with Charlie Plante, Katie Orrico’s predecessor (Washington Committee). At lunch, Dr. Clark was saying to Charlie, “If I were a senator, I would have very little interest in talking to a lobbyist because I know they are going to blindly represent the interests of their employers. I wouldn’t waste the lunch.” Plant said to Dr. Kemp, “Kemp, you don’t understand. When Congress asks me to weigh in on a matter, they’re going to get my very best researched opinion. Sometimes you’re going to like it, and sometimes you’re not.” That was very influential to me, and I really loved what he was talking about because it spoke to the stature of our field. We are small. We are a rounding error when you look at American medicine, but we are not a rounding error when you look at influence in American medicine. So, I got involved early on for reasons that are not completely clear, but I just had the feeling it was important to be involved.

## **BK: How did you get involved in organized neurosurgery, and what was your path?**

**HB:** After being an attending for about five years at UT

Southwestern and really working hard clinically, Dr. Samson came by my office, stuck his head in and said, “You gotta start publishing what you’re doing.” So I started publishing what I was doing. I think through that, I was on the podiums at meetings. My start for the Congress of Neurological Surgeons (CNS) was as a sergeant-at-arms. The first time I went, I had a plenary session, and Charles Byron Wilson, MD, FAANS(L), was giving a big plenary talk, and he had two carousels of slides. I was in charge of projecting his slides and inadvertently dropped them. I couldn’t see anything in the dark projector room, and clank clank, put them on the thing, and Dr. Wilson pulled up the first slide, and it was, you know, might have been his conclusion slide upside-down and backwards. Amazingly, he was able to give a flawless talk without the slides. I went down at the end of it, and I said “Dr. Wilson, I’m really sorry, there was a problem with the carousel...” And he said “I would love to kill you.” So that was my welcome to the CNS, and I eventually got on the Executive Committee, and I liked that; I think I learned a lot. I think every job you take in neurosurgery you learn tremendously from. And I was struck later, through that CNS executive experience, I got to understand the politics of our multi-organizational specialty. I was a couple of meetings into that experience, and I was struck by the enormity of the amount of work that has to be done.

At this point, I have worked for both of neurosurgery’s membership organizations (AANS and CNS) and have been on the leadership boards for neurosurgery academies such as the Residency Review Committee (RRC), Senior Society, ACGME Board and our Neurosurgery Summit: CNS/AANS/Board/RRC/Washington Office summit. Those are things that are really terrific, and I have been privileged to help represent the field. You have to think about these things in a certain context: Why do you do it? Why would anyone want to do it? At one point, I ended up with just too much. Too many roles over too short a time. It was terrible on

*continued on page 5*



my practice, on my family, department. You spend way too much time in airplanes. I think there are several dimensions to that. I know when I was growing up in neurosurgery, I was keeping an eye out, and the people who were representing us on Capitol Hill and on various important interfaces, those representatives were not practitioners. They did not stand at the scrub sink and that part always bothered me. I tried to get Dr. Samson to come forward, I said, "You're one of the smartest people in our field, and you're a terrific neurosurgeon, and that's who needs to be going to meet Charlie Plant and Katie Orrico on the Hill." And he didn't want to do it. So, I think there's a certain calling or a responsibility that some people feel and others do not. It is important to get a buy-in from your family when you take on a big role, because it affects them a great deal and it can hurt them if they don't accept that mission. Your children will not see you as often as they would without those responsibilities.

You also have to get a buy-in from your neurosurgery partners to make sure that they accept that you're doing something on behalf of our specialty and the public, and as Frederick A. Boop, MD, FAANS, acknowledged, he just said, "I want to thank all my partners at Semmes-Murphy for all the work that they did this past year for me while I was gone." In exchange, you expand your horizon, you learn aspects of life that you were never involved in: regulatory affairs, what is the history of Graduate Medical Education (GME) funding, how did it end up this way? What is the indirect cost allocation for the NIH; what are the upcoming budgetary issues; what is that going to mean to our academic medical centers, to training, to research? What are the winds blowing towards? What is the Centers for Medicare & Medicaid (CMS) really trying to do? Who's driving them? You know they're trying to do something that will damage us, but why and how? And how are we going to stay ahead of that? How can we improve access to neurosurgical care? What about the Veteran's Administration (VA)? Is there a way we can somehow help with that? I was president of the Senior Society and AANS in consecutive years, and I remember having a lot of balls in the air and a lot of different arenas, and there's a certain gratification in that, in that you feel like you have a grip on the big picture. But that grasp of having your arms around a lot wears you out. Because 24-7, 365, in the country or out of this country, over the ocean, it's the same. It means 250-300 emails a day. And it never stops. I have not taken a vacation in five years. Because my vacation time has been national work away from my department time, so there is a fatigue factor that sets in. But there's nothing more rewarding than doing things that are in the best interest of the people we treat and the people who treat them. I think we have to maintain our individuality as a field and highlight our unique commitment to patients often with horrible diseases. In many of the severe disease processes that we treat, the margin of error is zero. You've got a 75-year-old with a bad cranial base tumor, just the slightest judgmental error, technical error or anything goes wrong, and they're ruined. And that's a big responsibility that people need to understand. That's not part of the life experience for many physicians, but it is ours, and we need to honor it and help others understand it.

**BK: What advice do you have for students, residents, fellows and young neurosurgeons who, like you, are inspired by what organized neurosurgery can do and want to get involved?**

**HB:** Take every small job, and do a great job of it. Somebody whom I have great affection for is Paul C. McCormick, MD, FAANS. I remember back in the 1990s, it was crystal clear that if you need a hard job done perfectly, call Paul. He's one of the busiest guys on the block but always did things exceedingly well. There is no job too small for any of us to take on and do a great job. It's just like a patient with a minor problem. Are you going to do a shoddy job with that patient, and then do a great job when a patient has a horrible problem? No, you're going to do a great job with everybody. And I think that mentality translates well. Do a great job with small jobs and do them well, and you'll be recognized and pushed along. So, I think if you get nominated for a job, have a culture of saying yes, just as you do to your referring doctors. Also, think that if somebody is intimate with an organization or task force, who knows what that organization is trying to do, they may have come up with your name for a very good reason because you have something to bring to the table on that problem. That's why your name surfaced. Eventually, if you do excellent work, it is rewarded and positions of increasing responsibility open up for you and can have increasing opportunities within the field.

One experience that organized neurosurgery uniquely prepared me for was my national experience with concussion. As you move through your professional career, you will get more and more efficient at doing the clinical aspect of your life. You can do more over fewer hours. At some time, there is a tipping point in your career. You have mastered the things that you really care about clinically, you have walked away from some aspects of neurosurgery you are not as experienced in, you are not as good at as some of your partners are – so why should you be doing it? You've narrowed your focus, gotten very good at it and you get stale. What I've found, having experienced exactly that, is value in opening up new horizons of learning, of experience, of personal connections. In your 50s, you say I either need a hot girlfriend, a hot car or do something stupid professionally, so I did something stupid professionally: took on the NFL and concussions. It's a daunting problem that covers hundreds of millions of people worldwide - in world soccer, for example. Think of it: that's a quarter of a billion people playing high-level sports. It's not just about the 1,000 professional athletes in this country. It is about the millions of kids in this country and the hundreds of millions of kids in other countries playing sports that put them at risk of having a concussion - that's an interesting unpaid job. It was a new challenge to try to make a difference, learn a whole new set of navigation techniques, working with the NFL Players' Association, New York Times, Congress, all the detractors and all the enemies that you inherit by being Affiliated – it was a very interesting eight years of my life, and I learned a ton from it, and I have a whole different set of colleagues and contacts in the sports industry and athletics that I wouldn't have had otherwise.

# Interview With Manish N. Shah, MD, Winner Of The YNC Public Service Citation

“Service is its own reward” – An Interview with Public Service Citation Recipient, Manish N. Shah, MD.

By Nitin Agarwal, Neurosurgery Resident at University of Pittsburgh.

Manish N. Shah, MD, an assistant professor within the Division of Pediatric Neurosurgery at the McGovern Medical School at UTHealth, was awarded the YNC Public Service Citation award at the 2017 AANS Annual Scientific Meeting. Nitin Agarwal, MD, conducted this interview at the meeting.

**Nitin Agarwal (NA): Congratulations on winning the YNC Public Service Citation. What was the focus of your public service work?**

**Manish Shah (MS):** The project is called Medishare, which started over a decade ago at the University at Miami with Barth A. Green, MD, FAANS(L), who started doing work with Haiti at the hospital Bernard Mevs, the premier trauma center for the capital of Haiti. Soon after, the consortium went to Haiti to treat hydrocephalus, mostly secondary to infection, on a monthly basis. There is a high infection rate with ventriculoperitoneal shunts. Therefore, the therapeutic strategy focused on performing Endoscopic Third Ventriculostomy (ETV) with Choroid Plexus Coagulation (CPC). My first trip, in 2011, included a three-day mission whereby we operated on 24 children and held a clinic for 60-70 people. Miss Maggie, the only hydrocephalus nurse for the entire country of Haiti, arranged transportation to the clinic for patients as well as facilitated the acquisition of imaging with a portable computed tomography (CT) scan.

**NA: Who was your inspiration for public service work?**

**MS:** My mentor and a brilliant physician scientist, David Delmar Limbrick Jr., MD, PhD, FAANS, won this award five years ago, and he has inspired me to continue my own scientific pursuits in imaging epilepsy and cerebral palsy as well as this service project. My partner, David I. Samberg, MD, leads these trips, and it is my privilege to accompany him and treat these patients. Additionally, my father and mother, a pediatrician, have always done medical service camps. Charitable contributions have been a focus in my family.

**NA: What is the ongoing impact of this project?**

**MS:** The children of Haiti have no hope otherwise. There is no pediatric neurosurgeon in the country of Haiti. However, we are



very cost effective. We bring our own supplies as well as toys and clothing obtained from donations. Further, our residents and nurses involved are immersed in this experience. This project also augments their training experience with increased exposure to complex anatomy and endoscopic surgical techniques. In fact, one of the residents from the institutions affiliated with this work has been inspired to perform public service work in Kenya with A. Leland Albright, MD.

**NA: What advice would you give to trainees with a predilection for public service?**

**MS:** I have always enjoyed medical and resident education, and it is a privilege to discuss this project. Getting involved with The Foundation for International Education in Neurological Surgery (FIENS) will give trainees early exposure to international service work. It is wonderful to see the new generation of neurosurgical residents devoted to service. There is an unlimited global need.

**NA: What do you envision for the future of this public service program?**

**MS:** The most exciting development in the course of my five trips is that there is a Haitian general surgery resident, with exceptional surgical skills, who is being trained to become the first hydrocephalus surgeon for the country.

## CHANGES TO THE ACGME RESIDENT WORK HOURS RULE: A YOUNG NEUROSURGEON'S PERSPECTIVE

In July 2017, the ACGME is poised to enact a new duty-hours rule for interns across specialties. The new rule would increase the intern work-hour limit to 24-hour continuous call time and four hours of additional flexible time for performing transitions of care for patients. Currently, interns are restricted to taking 16 hours of continuous call with an 80-hour maximum logged hours averaged over a four-week period. Although medical students do not have explicit hour restrictions, the hours generally mirror those of the intern work-hour restrictions and may change as well with the change in intern work hours. The original hour limits were based on the notion that allowing long shifts causes resident fatigue, which can lead to more medical errors and poorer patient outcomes.

The literature supporting restricted work hours is based largely on observational studies, but the consequences of having these restrictions have been significant. There has been an increase in the use of nurse practitioners (NPs) and physician assistants (PAs) to perform what had been “the work of residents” — i.e., day-to-day care of patients, including diagnosing and treating patients, managing disposition, coordinating therapies and managing social issues. As a result of work hour restrictions, residents must participate in more sign-outs and handoffs in order to transition patient care between shifts of physicians. The consequences of exceeding work-hour limits are arguably a source of stress, in particular, for surgical residents, who are required to complete many different forms of training, including floor work, intensive care unit (ICU)-related patient care and hands-on learning via procedures and hands-on learning in the operating room. With the current work restrictions, a resident can admit a patient overnight but may not be able to participate in that patient's subsequent operation or ICU procedures, even if that resident is the best informed about that patient's condition. Instead, significant time is spent every day handing off patient care from resident to resident. For example, at the University of Utah, care of 50 or more complex neurosurgery patients can be transitioned each day. Each patient may have multiple “to-dos” that need to be addressed if not finished in the prior shift, and oncoming residents are often less familiar with each patient's medical history and active issues making management less. These handoffs, it has been argued, decrease the quality of patient care delivered and the continuity of care that residents have with patients. This issue is certainly controversial: studies supporting hour restrictions point to sleep-deprived residents having worse performance on objective measures of attention and concentration as well as even increased car accidents after call.

Importantly, the results of the Flexibility in Duty-hours for Surgical Trainees (FIRST) trial published in the *New England Journal of Medicine* in February 2016 have contributed objective data towards this question. This multicenter, non-inferiority study showed there was no significant difference in rate of patient death

or serious complications between groups of patients cared for by residents with and without the current work-hour restrictions. Although residents in the flexible hours group reported less rest, they also reported fewer active patient issues being handed off and fewer instances where they needed to leave the operating room during an operation because they had reached the work-hour limit. These findings were corroborated by a report from the Society of Neurological Surgeons (SNS) that reviewed 10 years of data, including citations from the ACGME Residency Review Committee and performance by trainees on components of the American Board of Neurological Surgery (ABNS) certification process. The results demonstrated the difficulty in isolating outcomes to duty-hour changes, but they indicated that duty hours are likely a minor variable in a large number of factors that occur within neurosurgical training. The report also determined that the evolution in training programs during the 10 years after duty-hour restrictions came into effect make a thorough comparison with training before duty-hour restrictions highly complex. Finally, the report concluded that while it is likely possible to train neurosurgery residents well within 80/88-hour restrictions, there appears to be evidence of decay in professional commitment by trainees, and further reductions in hour allotments would be intolerable to neurosurgical training.

One of the incoming interns at the University of Utah considers the change to once again allow 24-hour shifts for first year doctors important for improving patient care and promoting feelings of patient ownership: “We don't want our jobs to feel like shift work and want to be more involved in our patients' care.” Her medical student colleagues have talked about being excited to be more involved in their patients' day-to-day progress instead of reading a hand-off report. Furthermore, they wonder, “Why not practice for the real job — especially if that job is going to be a neurosurgical resident?” As two current residents — one at the end and one at the beginning of neurosurgical training — with evolving viewpoints during our journeys, we agree that assuming personal responsibility for patient care is an integral part of neurosurgical training and practicing that early on would optimize neurosurgical resident training. Although having a reasonable cap on work hours remains important for resident quality of life, particularly for longer residencies in the surgical subspecialties, being able to tailor one's education is also important. In short, the new ACGME intern work hours rule is welcomed by our group and we anticipate it will both improve the educational experience of neurosurgical interns and improve patient care by reducing handoffs.

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Resident  
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## Using Social Media to Interact With Academic Neurosurgery

Social media is playing an increasingly prominent role within academic neurosurgery. While there are many types of social media, this article outlines how medical students can create a presence on Twitter and LinkedIn and positively interact with academic neurosurgery.

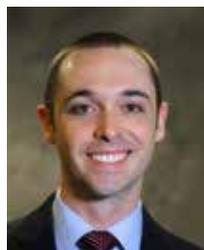
One of the first steps towards creating a professional online presence as a medical student is to create a high-quality LinkedIn profile. LinkedIn is a social media outlet that operates primarily as an online method of displaying the user's accomplishments in the form of an online resume or curriculum vitae (CV) to allow for professional networking. For your profile picture, use a professional photograph of you dressed in business attire. It is helpful to use the same profile photo across all your social media platforms for ease of recognition. Regularly maintain your LinkedIn site to ensure that it is current and up-to-date. Introducing yourself and interacting with surgeons and organizations you do not already know is difficult on LinkedIn. Therefore, once you have a high-quality LinkedIn profile, you are ready to begin interacting with the online academic world of neurosurgery through Twitter.

When creating a Twitter account, you can link one website to your profile. By embedding a high-quality LinkedIn account on your Twitter account, you allow the people you interact with on Twitter to learn much more about your accomplishments by directing them to your online CV on LinkedIn. Many of the major neurosurgical journals, neurosurgical associations and neurosurgical academic centers have a Twitter account and actively post content. Medical students should "follow" these entities, as well as prominent individual neurosurgeons with Twitter accounts. To select what accounts to follow, a common trick is to follow large neurosurgery organizations like the AANS (@AANSNeuro) or the Young Neurosurgeons Committee (@youngneuros) and then look to see who they are following and who is following them.

There are many benefits of using social media to interact with academic neurosurgery as medical students. The first, and potentially the most important, is it can help you stay current with the neurosurgical literature. Academic journals frequently tweet about new research articles or important historical articles. Having a steady stream of interesting research articles delivered

directly to your Twitter feed can help you engage with articles you may not have found on your own. As you read interesting articles you can like and retweet those articles. The more you like and retweet things that interest other people, the more likely they are to follow you and begin engaging with you. The second benefit of using social media is the ability it allows you to interact and network with neurosurgeons outside of your home institution. It is very common in Twitter to reach out to people you do not know, retweet or reply to their posts. You are able to engage in academic conversations with neurosurgeons you may never have been able to contact otherwise. Your high-quality LinkedIn profile will allow these Twitter users to learn more about you. Relationships can be started during these "Twitter conversations" that can then continue at annual AANS and CNS meetings. Lastly, medical students are benefited by starting early to establish a professional online presence so that when residency interviews begin, they can control what will appear on potential Google searches. Finally, keep all content on these social media profiles professional. If you have strong personal opinions you wish to share with your friends and non-professional followers, I strongly recommend maintaining separate professional and personal social media accounts with close attention paid to security settings on your private accounts.

As you become more proficient with Twitter and other forms of social media, there are multiple ways to continue increasing its effectiveness, including hosting journal clubs, disseminating your own research through the use of Twitter and visual abstracts (#VisualAbstracts) and finding collaboration in both the research and clinical realm. This article represents a basic methodology for those who are new to these social media platforms and describes how to take the first steps into the social media domain of academic neurosurgery. Finally, I hope this article encourages those who are skeptical to understand the potential benefits of engaging with neurosurgery via social media.



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# Spring 2017 Section Updates

## Summaries From the 2017 AANS Annual Scientific Meeting By Walavan Sivakumar, MD

### Sections Updates

**Cerebrovascular (CV):** Details regarding funding for various resident, fellow and young attending clinical and basic research grants supported by the section can be found on the joint section website. A two-day symposium will be held immediately prior to the next International Stroke Conference (ISC) in February 2018, which will overlap with the Annual CV Section Meeting.

Website: <http://www.cvsection.org/>

**History:** The History Section is welcoming young neurosurgeons to get involved by sending new ideas, helping with the annual history video and planning of the next meeting.

Website: <http://www.aans.org/en/Membership/AANSCNS-Sections/History-Section>

**Pain:** The Pain Section hosted its biennial meeting in Chicago, in May 2017. It focused on new advances in neuromodulation for pain as well as reviving the art of neuroablative techniques that only a few centers in the U.S. currently offer. Funding was available for a limited number of residents to attend. The Oakley Fellowship will be open soon for the next cycle of applications. This is a traveling fellowship for young neurosurgeons (PGY-4 and above) to have the opportunity to spend up to three months away from their home program to learn specialized pain techniques.

Website: <http://painsection.org/>

**Pediatrics:** Information regarding research awards for fellows and early career faculty members can be found on the joint section website. The Joint Section on Pediatric Neurosurgery will host their annual meeting Nov. 28-Dec. 1, in Houston.

Website: <http://pedsneurosurgery.org/>

**Spine and Peripheral Nerve:** The Spine Section will host their annual meeting March 14-17, 2018, in Orlando, Fla. (Restoring Alignment in an Era of Global Change). The fast-abstract concept, allowing medical students and residents to give two-minute talks on approved abstracts, was well received at the 2017 meeting in Las Vegas and allowed for a growth of attendance from young neurosurgeon attendees.

Website: <http://www.spinection.org/>

**Stereotactic and Functional:** The American Society for Stereotactic and Functional Neurosurgery (ASSFN) is continuing to formulate guidelines on functional neurosurgery fellowships in conjunction with the Self-Assessment in Neurological Surgery (SANS) initiative and is modifying residency milestone requirements. The next biennial meeting will occur June 2-5, 2018, in Denver. Registration is free to U.S. residents, but space will be limited. Functional neurosurgery fellowships as well as functional job listings will be posted on the website.

Website: <http://www.assfn.org/>

**Neurotrauma:** The section recently awarded its Codman Resident Neurotrauma Research Award and will begin accepting application for 2018 shortly. The section is also working with the National Neurotrauma Society on NIH grants aimed at preventing pediatric head trauma. Available fellowship information in Neurotrauma and Critical Care Fellowships is posted on the website. The 2017 AANS/CNS National Neurotrauma Symposium was held July 7-12, 2017, in Snowbird, Utah.

Website: <http://www.neurotraumasection.org/>

**Tumor:** The Tumor Section named its first Andrew Parsa Fund award winner. This will be used to sponsor mentored research in neuro-oncology for young neurosurgeons. The Young Neurosurgeon Reception at the 2017 AANS Annual Scientific Meeting went extremely well, with honored guest and former AANS president, Mitchel S. Berger, MD, FAANS(L), who spoke about his career in neurosurgery and neuro-oncology and gave advice for the young neurosurgeons in attendance. Information regarding all of the upcoming meetings is posted on the website.

Website: <http://www.tumorsection.org/>

**Women in Neurosurgery (WINS):** Look for WINS-sponsored programming on education and membership at national meetings in the next two years, starting with the CNS Annual Meeting in October 2017 in Boston. The first ever WINS retreat took place July 7-9, 2017, in Snowbird, Utah, in conjunction with the National Neurotrauma Society Meeting.

Website: <http://www.neurosurgerywins.org/>

## **“Essays in Medical Ethics”**

*Giovanni Maio*

This is a departure from our more routine texts that are focused on the practice of neurosurgery and related practices. Many of the issues discussed by Dr. Maio would not interest the average neurosurgeon clinically, but most would be of interest at least socially. Such discussions include chapters on cosmetic surgery and its place in medical treatment, the ethics of prenatal diagnostics for pregnant women and the use of fertility treatments to help women become pregnant. There are other covered topics that intersect with our daily practices, such as chapters on brain death and subsequent organ transplantation, essays on euthanasia and the proper place for living wills in the care of patients. Dr. Maio takes a somewhat conservative approach that some might regard as being anti-science, but his well-reasoned approach would provide a wonderful jumping off point for discussions. As we aim to produce well-rounded physicians through our training programs, such texts provide a certain context and depth of discussion to ethical conversations that would make a great training tool.

## **“Physical Examination of the Spine”**

*Todd J. Albert, MD, and Alexander R. Vaccaro, MD*

Drs. Albert and Vaccaro present the second edition of their text providing comprehensive instruction on spine examination. Both orthopaedic surgeons, their text is aimed primarily at spinal surgery trainees and practicing physicians who feel that they might need a refresher. Their focus is slightly different than that of the average neurosurgeon – for example, the text does not at all present the examination one would need to investigate a diagnosis of carpal tunnel syndrome, which many neurosurgeons would consider performing during an examination for cervical pathology. That said, for the purposes of a medical student or early residency trainee trying to gain some insight into the exam before formal instruction and observation in the clinic, the many diagrams and detailed descriptions could prove quite useful.

## **“Neurosonology and Neuroimaging of Stroke”**

*Jose M. Valdueza, MD; Stephan J. Schreiber, MD; Jens-Eric Roehl, MD; Florian Connolly, MD; and Randolph Klingebiel, MD*

The authors have put together a truly fascinating text that approaches neuroimaging of stroke from an angle with which most neurosurgeons are not entirely familiar. Ultrasonography is used by many neurosurgeons as an adjunctive tool during surgery to examine soft tissues, and many pediatric neurosurgeons are familiar with its use for ventriculography, but most neurosurgeons do not routinely evaluate diagnostic ultrasound images in their practice. Despite the difficulties in standardizing these examinations, the

authors present the case that the ability to dynamically evaluate and tailor exams for patients brings a unique advantage to neurosonology that other modalities do not have. The text covers many different pathologies and presents imaging from what we would consider routine imaging and contrasts that to what is available using an ultrasound machine. They then present 45 cases of various stroke pathologies that they diagnosed, in part, using neurosonology, so that the reader has an understanding of how these are applied clinically. There are also videos available online. This would be interesting reading for any clinician looking to expand their diagnostic repertoire in the challenging areas of vascular neurosurgery and stroke.

## **“Chordomas: Technologies, Techniques, and Treatment Strategies”**

*M. Necmettin Pamir, MD, IFAANS; Ossama Al-Mefty, MD, FAANS; Luis A.B. Borba, MD, IFAANS*

Chordomas are an extremely rare lesion, with only approximately 300 diagnosed in the U.S. each year. This means that many neurosurgeons do not encounter these lesions frequently. It is critical that they be treated appropriately at their initial presentation, and so it is very important that resources are available to help neurosurgeons in the community understand how to approach these cases. This text is intended to be a comprehensive text that covers the entire gamut of chordoma research, and they do pack quite a bit of information into the textbook, making it an excellent reference for a trainee interested in these lesions. That said, the text does tend to focus on skull base chordomas, which are not the most common presenting location of these tumors. There is one chapter on surgery for spinal chordomas and another on the radiographic appearance of these lesions, but most of the chapters tend to focus on skull base lesions. This text is an excellent start, but it would be great to see more balance in a follow-up text on these difficult to treat neoplasms.

## **“Differential Diagnosis in Neuroimaging: Spine”**

## **“Differential Diagnosis in Neuroimaging: Brain and Meninges”**

## **“Differential Diagnosis in Neuroimaging: Head and Neck”**

*Steven P. Meyers, MD, PhD*

Quick reference texts are an excellent resource for trainees preparing for the boards and for neurosurgeons in practice, particularly for lesions that are not encountered frequently. In these texts, Dr. Meyers has aimed to create a handy quick reference guide that one can use to broaden the differential for any given lesion based on its anatomical location. The chapters have introductory

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text that set the background for the various lesions that will then be discussed, and then the various lesions have information presented in tabular format, covering the imaging findings and accompanying comments with clinical vignettes about the lesions. Taken together, the three texts provide a very comprehensive reference source for any neurosurgeon to refer to when one wants to make sure that they have all the bases covered while forming a differential diagnosis.

### **“Neurosurgical Operative Atlas: Spine and Peripheral Nerves”**

*Christopher E. Wolfla, MD, FAANS, and Daniel K. Resnick, MD, FAANS*

The third edition of *Neurosurgical Atlas: Spine and Peripheral Nerves* is a very timely text, given the continued progress of our specialty in advancing this field. The editors have compiled a truly impressive collection of authors for this text who cover the various subspecialties within the field of spine surgery and peripheral nerve surgery. As these operations form the foundation of the practices for most neurosurgeons, it is critically important that such texts help teach residents how to approach these cases and provide a detailed reference for practicing surgeons who want to review an approach to a case that they see infrequently. The book covers both intended audiences quite well, with notes covering patient selection, operative positioning, the approach and possible complications, along with many illustrative cases to put these approaches in context. The purchase of the book also comes with a set of operative videos on the associated website, and minimally invasive approaches are also well covered. Overall, this is an excellent reference for any neurosurgeon in training or practice.

### **“Thieme Atlas of Anatomy: Head, Neck and Neuroanatomy”**

*Michael Schuenke, Erik Schulte, Udo Schumacher*

For any trainee looking to further their understanding of the structures related to our practice of medicine, this is an excellent reference text. This volume provides much more detail to neuroanatomy than is provided by general anatomical texts, but it presents the information in a format that is quite familiar to medical students and residents from their broader anatomical training. There are numerous beautiful illustrations throughout the book, and the authors have also added several relevant diagnostic radiographic images, so that a trainee can place the diagrams they have seen in their appropriate clinical context. It also includes an online self-testing tool at [www.winkingskull.com](http://www.winkingskull.com). For a medical student interested in neuroanatomy or a resident looking to brush up on neuroanatomy in preparation for the boards, this second edition is a great place to start.

### **“The Greenberg Rapid Review: A Companion to the 8th Edition”**

*Leonard I. Kratzler, MD, FAANS(L); Jonathan G. Hobbs, MD*

Neurosurgical trainees are constantly in search of a new way to quickly review material between duties in the hospital, and this text provides an excellent companion to the *Greenberg Handbook of Neurosurgery* with which most, if not all, neurosurgical trainees are quite familiar. This review text presents questions together with their answers as a tool for trainees to quickly be able to move back and forth between studying their *Handbook* and testing their knowledge to quickly reinforce their learning and assess the effectiveness of their reading. In this way, the authors have helped transform the Greenberg manual from an oft-used quick reference guide to an actual study guide that can be used to tackle the large volume of information required of a trainee in this field. It is an excellent companion to what is already an essential volume for those interested in a career in neurosurgery.

### **“AOSpine Masters Series: Volume 7, Spinal Cord Injury and Regeneration”**

*Luiz Roberto Vialle, MD, PhD; Michael G. Fehlings, MD, PhD, FAANS; and Norbert Weidner*

The *AOSpine Masters Series* is designed to provide a quick reference for the practicing physician or trainee to see a compilation of the evidence on how to treat a given pathology. Towards that end, the series consists of relatively brief pathology-based texts that cover the pathologies that may be seen by a spine surgeon in practice. Each chapter in this volume focuses on a different aspect of spinal cord injury, covering everything from the use of methylprednisolone in acute spinal cord injury to the future of neuroprotection and CSF biomarkers of recovery. Each chapter also includes a set of pearls and five must-read references on the covered topic. For those neurosurgeons interested in spinal neurotrauma, this is an excellent way to start learning more about the field.

### **“Pediatric Neuroradiology: Clinical Practice Essentials”**

*Asim F. Choudhri, MD*

For those who are interested in the practice of pediatric neurosurgery, this is an excellent quick reference text to help with interpreting diagnostic imaging that one might encounter. The text contains over 780 diagnostic images together with anatomical illustrations that help the reader identify the pathology and normal structures seen on the images presented. The text is organized broadly into a general introduction to the topic followed by Brain, Head and Neck and Spine imaging sections. Each of these sections is then broken up into chapters that are mostly organized by pathology, though a few center on specific anatomical locations.

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The diagrams are clear and well-annotated, and the text is a welcome reference for those who are building a career in pediatrics.

**“AOSpine Masters Series, Volume 8: Back Pain”**

*Luiz Roberto Vialle, MD, PhD; Jeffrey C. Wang, MD; Claudio Lamartina, MD*

Reviewed by: Christopher Salvatore Graffeo, MD

This latest addition to the *AOSpine library* takes a novel approach to the pedagogy of spine surgery by placing a simple, ubiquitous symptom – back pain – at its center, and organizing key lessons in a rational, clinically-minded and easy-to-absorb fashion. Above all, this is a practical text, and the underlying goal of equipping spine surgeons to evaluate and treat back pain is laudable and well-achieved. Several chapters stand out as particularly refreshing in their willingness to tackle challenging, difficult-to-engage topics such as how to manage patients with a history of multiple operations or the so-called “failed back surgery syndrome.” Still, others incorporate a discussion of essential secondary issues, including the socio-economic underpinnings of spine surgery and the medical-legal realities of back pain management. Although the figures are sparse and want for more thoroughly articulated legends, the images themselves are typically well-selected and illustrate key points well. Perhaps more importantly, each chapter ends with a helpful review of its central tenets, with a focused Chapter Summary, Pearls and Pitfalls and five highlighted “must-read references.” Collectively, these provide an insightful, concise and easily reviewed quick-reference that will make this textbook invaluable to any student of back pain.