CV Section News

Chairman's Message

Editor: Andrew F. Ducruet MD

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With Privilege Comes Great Responsibility
Gregory J. Zipfel, MD, FAANS, FAHA, FACS

Welcome to the CV Section Annual Meeting in Los Angeles, co-hosted by our sister society, SNIS!!! Our annual meeting chair, Brian Jankowitz, co-chair, Stavropoula Tjoumakaris, and SNIS scientific program chair, Ricardo Hanel, have put together an outstanding and thought provoking scientific program with great speakers, important updates, and innovative debates. Two special events to highlight include: 1) The Luessenhop Lecture, which will be given by world-class stroke clinical trialist, cerebrovascular physiologist, and neurointerventional surgeon, Dr. Colin Derdeyn; and 2) Establishment of the Dacey Medal for Outstanding Cerebrovascular Research, which will include an inaugural lecture by its namesake and renowned cerebrovascular neurosurgeon-scientist, Dr. Ralph Dacey. In addition, I will have the privilege of giving the CV Section Chair Talk entitled "With Privilege Comes Great Responsibility". I look forward to seeing all of you at the Millennium Biltmore Hotel in Los Angeles on January 22-23, 2018 for this wonderful meeting.

It is a privilege to also announce our Special Lecturers for the upcoming AANS annual meeting in New Orleans to be held on April 28 – May 2, 2018. The Raymond Donaghy Lecture will be given by Dr. Anil Nanda. Dr. Donaghy is famous for his application of the operative microscope to neurosurgery, including establishing the world's first microsurgery research and training laboratory in 1958. It is therefore appropriate that one of the foremost microsurgical educators and leaders of the current era deliver this year's Donaghy Lecture. The Gazi Yasargil Lecture will be given by Dr. Jacques Morcos. As a lectureship established to honor the legacy and microsurgical prowess of the most acclaimed vascular neurosurgeon of the past century, it is only fitting that one of the best vascular neurosurgeons of the present era provide his unique perspective during this year's Yasargil Lecture. For those of you who know the speaking styles and proficiencies of Drs. Nanda and Morcos, I am sure you will agree that we will be blessed with two of the most eloquent lectures in recent memory. In addition, our annual meeting chair, Stavropoula Tjoumakaris, and co-chair, Scott Simon, have organized two outstanding Cerebrovascular Scientific Sessions with a nod to the annual meeting's theme of Privilege of Service. Additional information for the Cerebrovascular Scientific Sessions at CNS can be found at the following website – http://www.aans.org/Annual-Scientific-Meeting/2018.

Finally, I would like to provide a second update to the CV Section's health and recent activities. First and foremost, the state of the section remains strong and robust. We have nearly 2400 members; we have a very active and effective group of Executive Council members, Standing Committee members, and Ad Hoc Committee members; we have a strong financial position for the future; and we maintain outstanding relationships with our parent organizations, AANS and CNS, and our sister organizations, SNIS and SVIN. Second, the CV section remains active on a number of important issues germane to our specialty and our patients. Examples of this are too numerous to outline in a single newsletter, but a few highlights are important to note.

1) The CV Section has partnered with SNIS to create a joint cerebrovascular registry by merging our QOD-Neurovascular Module with their NeuroVascular Quality Initiative. This is an important step forward for our specialty as it will leverage our societal partnership to enhance capabilities for registry-science in stroke and cerebrovascular disease. A notable example of that relates to our discussions with the FDA in which we hope to establish this joint registry as a tool for post-approval evaluations of acute ischemic stroke devices.

2) The CV Section remains active in its philanthropic efforts towards fostering and promoting cerebrovascular research. The Section will again donate $15,000 to the CNS Foundation to support the CNS Christopher Getch Award and $5,000 to the Brain Aneurysm Foundation to support the BAF Christopher Getch Chair of Research. In conjunction with the NREF, the CV Section also recently received a very generous 5-year contribution from Dr. Arvind Ahuja to establish the L. "Nick" Hopkins NREF Young Clinician Investigator Award. Finally, the CV Section recently received >$50,000 through the NREF to establish the Ralph G. Dacey, Jr. Medal recognizing Outstanding Cerebrovascular Research.

3) The CV Section remains a leader in advocacy efforts for stroke and cerebrovascular patients and our specialty. The latest example came when the FDA announced that a public Neurological Devices Panel for Intracranial Aneurysm Treatment will be held. In conjunction with the Washington Committee, the Section has organized a cross-societal advocacy effort to be present for the Device Panel on March 1, 2018. The section's efforts will be led by Drs. Arthur, Mocco, Schirmer, Siddiqui, Welch, Cockroft, and Harbaugh.

As I hope you can see, the CV section is a vibrant organization that is moving a variety of important initiatives forward through the combined work product of a dedicated and organized group of physicians who are committed to the CV section, to their cerebrovascular colleagues, and to their patients. I look forward to seeing all of you in Los Angeles for our annual meeting!!

TREASURER'S MESSAGE

It's a great time to be Treasurer of the CV Section. The Section is strategically positioned to continue to advance the cerebrovascular initiatives in research and education for its membership. We continue to grow with total assets over $ 1.2 Million, including $250,000 in short term investments and Checking as well as over $900,000 in Long term investments. We stayed under budget with $202,000 in annual expenses and reported an income of $135,000 for 2017. Our strategic alignment with SNIS for co-hosting the Annual Meeting remains remarkably successful.

We continue to support a large number of lectureships and Awards. We are very proud to inaugurate the Nelson L. Hopkins Lectureship in 2017 and hope to have a named Research lectureship in 2018. We standardized resident research Awards giving out 2 each at AANS, CNS and CV Section Annual Meeting. In addition, we are happy to report successful fund raising for the two Dempsey Research Awards for $15,000 each awarded annually.

The most exciting financial development in 2017 was strategic alignment with the NREF for administration of CV Section strategic initiatives. This allows our membership and others to direct donated funds to the CV Section for specified goals. The most salient are the Honor Your Mentor program with $23,000 under the Charles Drake Fund, CV Section Traveling Fellowship started with great effort by Adam Arthur and others with over $100,000 available. Others included specific initiatives for Research, Outcomes and Education. Arvind Ahuja MD, donated $25,000 to the CV Research effort and another $20,000 towards the Hopkins Award.

Finally, it is my hope that we can engender a culture of philanthropy directed to our Section by our officers and membership. I have a request for all our members and specially our leadership to donate generously to the CV Section initiatives by directing funds donated to NREF for the specific categories dedicated to the Sections benefit. Going forward we will include the reports of NREF CV section funds including donors at all our Executive Council Meetings as part of the Treasurer's Report.

Adnan H. Siddiqui, MD, PhD
Treasurer, AANS/CNS Cerebrovascular Section

SECRETARY'S MESSAGE

The AANS/CNS Joint Section on Cerebrovascular Surgery is going into the 2018 year with ongoing vitality and continues to lead in the field of cerebrovascular surgery with engagement from its members, providing value to its members. As before during the past year, the Section has represented the neurosurgical community, not only within the AANS and CNS. Representation to other bodies and collaboration with other stakeholders and societies in the neurovascular space continue to be a focal point: Along with representatives from SNIS and SVIN a number of members of the Section worked on a model for a stroke delivery that was used to respond to a request for applications from the Center for Medicare and Medicaid Innovation (CMMI).

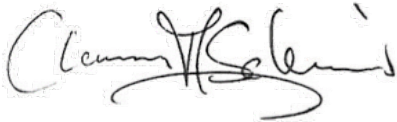
When the FDA recently called for a meeting of Neurological Devices Advisory Panel on Intracranial Aneurysm Treatment, the entire leadership of the section offered to represent our members and patients on this important matter and submitted a request to present and discuss alternatives to prospective randomized controlled trials such as use of registry data and post-market approval data collection efforts that would continue to allow of devices and therapies to benefit patients sooner. In addition, the presentation will address surgical treatment options for unruptured, smaller (<7mm) aneurysms, for appropriately selected higher risk patients including but not limited to younger patients with strong family histories of ruptured aneurysms. This will again highlight the importance of participating in the Quality Outcomes Database cerebrovascular module as a critical tool in the evaluation of tracking and improving outcomes and quality. We now have around 3000 patients enrolled, across multiple centers, with more centers joining every month.

The section is for all ages of practitioners, ranging from trainees who will benefit from another interaction of the fellows' course during the upcoming meeting as part of the established cycle of training courses to the now known CAST training pathway for individuals.

The section created a novel traveling fellowship for established practitioners who are looking to specifically visit a center of excellence for a particular disease or procedure and want to find a way to take time out of their own busy practices to do so. The application was administered through NREF and after receiving a number of interesting applications the inaugural awards, graciously supported by our industry partners, will be presented at the upcoming annual meeting.

On the other end of the spectrum, the section created a new named research medal for a body of collaborative cerebrovascular research. The inaugural recipient will be presented the medal at the annual meeting and give the medal its name.

Last, I want to also highlight on a culture of giving in our section. We created an easy pathway that allows anyone to give money to NREF that is earmarked and reserved for CV section activities. Robust giving will allow us to create the funds for more research and training activities which will directly influence the future of our profession and specialty.



Clemens M. Schirmer, MD, PhD, FAANS, FACS, FAHA

Secretary, AANS/CNS Cerebrovascular Section

MEMBERSHIP UPDATE

William Mack, MD

The membership of the Section is currently 2427. It has, once again, increased over the past year. There are 386 active, 109 senior, 65 international, 39 adjunct, 1808 resident/fellow and 20 medical student members. With success, we continue to reach out to members and encourage dues payments and section activity. The membership team will continue to work with the parent organizations (AANS/ CNS), medical student chapters at universities across the country and the young neurosurgeons committee to recruit new members in neurosurgery and allied specialties. Membership benefits include priority access to seminars and courses at the Annual Meeting, and receipt of the Cerebrovascular Section Newsletter and access to the CV section website.

MEETING UPDATES

CV SECTION ANNUAL MEETING (January 22-23, 2018, Los Angeles, CA)

Ricardo Hanel, Brian Jankowitz

The 2018 SNIS/CV section meeting will be held on Monday and Tuesday, January 22 and 23. The festivities begin Sunday night with the fellows' course, with the meeting to follow at 2 PM on Monday. This will mark the inaugural presentation of the Ralph Dacey Lectureship, to be given by the namesake himself. Colin Derdeyn will deliver the Luessenhop Lecture. The remainder of the program will touch on the treatment of small and giant aneurysms, AVMs, and new frontiers in stroke trials while drawing on the wisdom of dynamic duos and godfathers in the CV world. Hope to see you there.

INTERNATIONAL STROKE CONFERENCE (January 24-26, 2018, Los Angeles, CA)

Judy Huang, Louis Kim, Andrew Ducruet

At the upcoming 2018 International Stroke Conference in LA, the invited symposium "Brain Vascular Malformation and Pregnancy" occurring on Thursday, January 25, 2018, 1:30 pm - 3:00 pm will be moderated by William Mack and feature speakers Mika Niemela, Babu Welch, Christopher Wallace and Helen Kim.

AANS ANNUAL MEETING (April 28-May 2, 2018, New Orleans, LA)

Scott Simon, Stavrapoula Tjoumakaris, Chad Washington

The 2018 AANS CV Section Sessions will be on Monday and Tuesday with the business meeting following Tuesday's session. In addition to the abstract presentations Dr. Kevin Cockroft will present "How Randomized Trials Almost Killed Thrombectomy for Acute Stroke" and Drs. Robert Harbaugh, Elad Levy, and Thomas Brott will present a Point/Counter Point on asymptomatic carotid disease. The Yasargil Lecturer will be Jacques Marcos and the Donaghy Lecturer will be Anil Nanda.

CV SECTION BYLAWS RESOLUTION- OCTOBER 2017

During the AANS / CNS Cerebrovascular Section Executive Committee meeting held during the 2017 AANS Annual Meeting, the Executive Council discussed a recommendation for a change to the CV Section's official Rules and Regulations (bylaws). A decision was made to pursue changing the bylaws to eliminate confusing language surrounding the nomination process for the slate of candidates for office. The process for changing the bylaws is outlined in ARTICLE XIII of the section's Rules and Regulations and reads as follows:

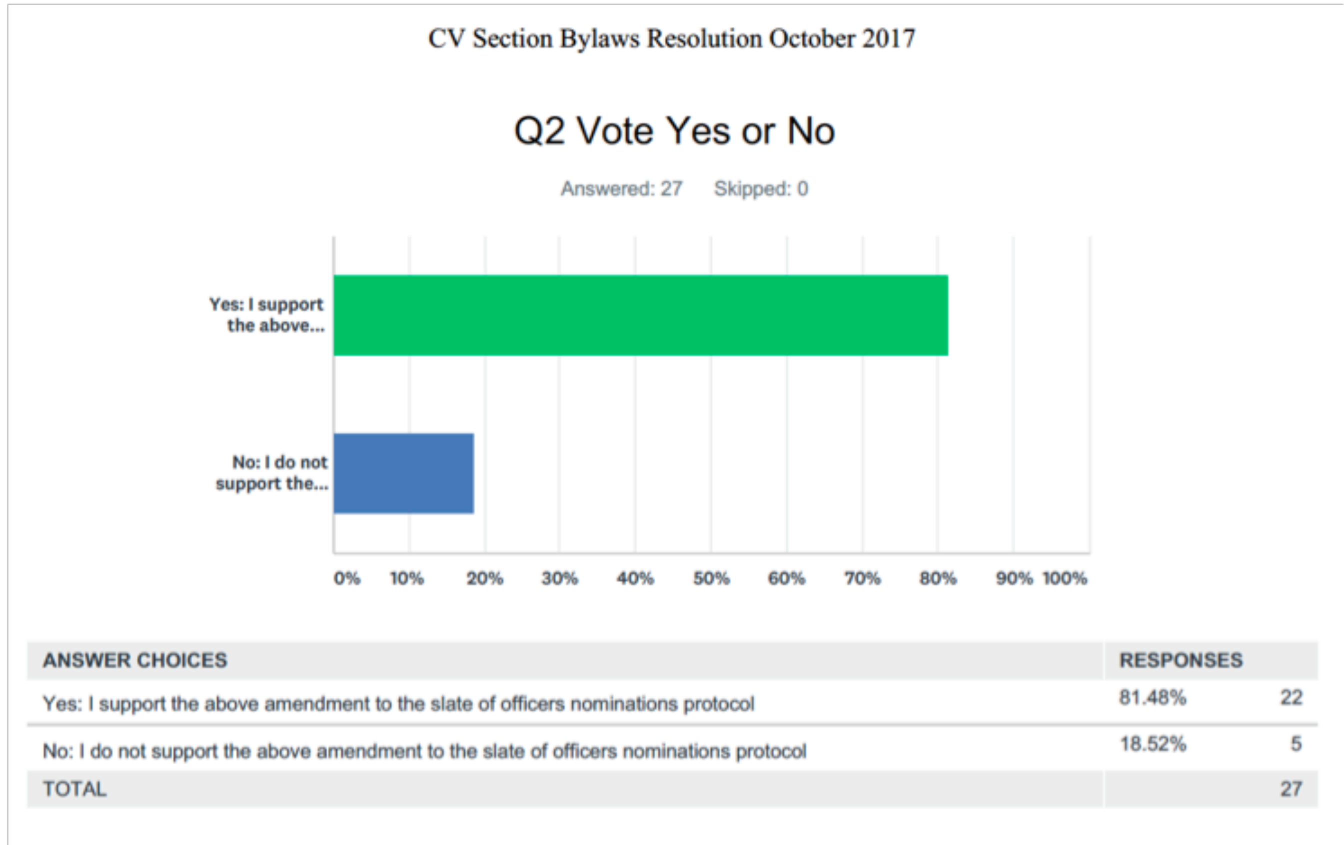
ARTICLE XIII
Amendments

> *The Rules and Regulations of this Section shall take effect immediately from their adoption and shall not be amended except by written resolution signed by at least ten Members and circulated to the Membership at least 40 days prior to the annual meeting, which is held in conjunction with the annual meeting of the AANS or the CNS or prior to an electronic vote in order to allow for discussion. Any amendment shall require affirmation by three-quarters majority vote.*

A written resolution to change the section's Bylaws was drafted and distributed at the Executive Committee meeting held on Sunday October 8th, 2017 at the 2017 CNS Annual Meeting. This resolution was signed by 10 members of the CV Section at that time. A copy of the signed resolution is available at the following website:
http://www.cvsection.org/mm/files/rulesregsdocs/CV%20Res_NomOfficerPos2017.pdf

On October 25, 2017, details regarding the proposed bylaws amendment were circulated to the entire CV Section membership by email. This email included a link to download the signed written resolution as well as a link allowing members to vote YES or NO on whether to affirm the written resolution. The voting deadline was Tuesday, December 5th at 11:59 pm CST allowing more than 40 days for members to consider the resolution.

On December 8th, confirmation of the voting result was obtained from the survey website and is provided below:



ANSWER CHOICES	RESPONSES	
Yes: I support the above amendment to the slate of officers nominations protocol	81.48%	22
No: I do not support the above amendment to the slate of officers nominations protocol	18.52%	5
TOTAL		27

With 81% of voting members affirming the proposed amendment to the Rules and Regulations the threshold of a three-quarters majority vote was reached and therefore this resolution to amend the CV Section's Rules and Regulations has been officially adopted. A copy of the newly revised Rules and Regulations will be available for download on the CV Section's website in the near future. If you have any questions about this change to the CV Section's Bylaws please feel free to contact me by email at: robert.james@ulp.org. I would like to thank my fellow Rules and Regulations Committee members Stacey Wolfe and Alex Spiotta for their assistance during this process.

Robert F. James, MD, FAANS, FACS
Chair, AANS / CNS Cerebrovascular Section Rules and Regulation Committee

Technology Forum: PulseRider Treatment of Bifurcation Aneurysms

W. Christopher Fox, MD

University of Florida

For most of us, developing a working knowledge of the hematologic system came on the fly based the routine use of antiplatelet medication in our patients, which directly contrasts with the perioperative care for patients undergoing craniotomy. The optimization and standardization of dual antiplatelet therapy (DAPT) in patients undergoing neuroendovascular procedures is unclear and many questions remain unanswered.

Coils and stents are thrombogenic by nature; their ability to induce aneurysm thrombosis has led to widespread use of endovascular techniques. DAPT is required to prevent luminal thrombosis and ischemic complications during the endothelial recovery and repair process. The combination of aspirin and clopidogrel is the most common antiplatelet regimen used in patients undergoing neuroendovascular procedures.[1] Kim et al[2] recently reviewed the neuroendovascular experience with DAPT. They summarize that aspirin is initiated 3-21 days prior to procedure, doses range from 81-325 mg and hyporesponsiveness occurs in 2.1-13.5%. Reports of clopidogrel hyporesponsiveness varies widely from 21-53%. There is no consensus of when to start daily clopidogrel prior to elective procedures. Similarly, in patients requiring a loading dose, the ideal dose is unknown and varies from 150-600 mg.

The use of platelet function testing to measure clopidogrel response is controversial given heterogeneity in testing methods, dose and procedure types. In a frequently cited cardiology study,[3] P2Y12 Response Unit (PRU) testing using the VerifyNow assay <208 was associated with a lower risk of thromboembolic events. Other studies have shown increased risk of ischemic complications with a PRU range greater than 150-240 and increased risk of hemorrhagic complications when PRU is less than 60-70.[4,5] In our practice we test patients prior to neuroendovascular procedures using both PRU and thromboelastography with platelet mapping (TEG-PM). We recently reviewed our experience and found that agreement between TEG-PM and PRU regarding the degree of platelet inhibition is poor, as 93% of patients with PRU >194 showed adequate platelet inhibition using TEG-PM.[6] The more one reviews the literature regarding platelet testing, the muddier the landscape becomes.

Questions also remain regarding the antiplatelet medication of choice for clopidogrel hyporesponders, how to modify dose in hyperresponders and ways to address the risk of acute thrombosis in patients not on DAPT who require emergent intervention. In addition to repeat clopidogrel loading doses, alternatives include ticagrelor and prasugrel, neither of which require hepatic activation and therefore are less likely to lead to hyporesponsiveness secondary to individual cytochrome P450 variability. Anecdotally, many neurointerventionalists are more comfortable transitioning to ticagrelor when necessary given the warning against using prasugrel in patients with a history of TIA or stroke. However, both medications should be used with caution and monitored carefully as they may convert hyporesponders to hyperresponders. In addition, in a trial of clopidogrel versus ticagrelor in patients with acute coronary syndromes, the risk of fatal intracranial hemorrhage was statistically significantly higher in patients taking ticagrelor.[7]

In patients requiring emergent flow diversion or stent placement, there is no consensus on the optimal approach. In our practice, if microsurgery is not an option and flow diversion or stent placement is acutely indicated, we have employed the following protocol: aspirin/clopidogrel loading dose given orally or via nasogastric tube after intubation; groin puncture; heparin bolus once microcatheter in position; after 5-minute delay advance and deploy stent; abciximab (50% bolus without continuous infusion) after stent deployment. No prospective studies have been conducted in neurovascular patients to identify the best glycoprotein IIb/IIIa inhibitor, although abciximab tends to have a longer effect on platelets due to irreversible binding, which also prevents abciximab from binding transfused platelets in patients with bleeding complications.[2]

Until recently, despite rapid leaps in technology, the thrombogenicity of endovascular devices has remained essentially constant. The Pipeline Flex Embolization Device with Shield Technology (Medtronic Neurovascular, Irvine, California) is available in Europe. The Pipeline Shield incorporates a surface modification in which a layer of phosphorylcholine (PC) is bound to the device, reducing surface tension and platelet adhesion. PC technology has been used previously in cardiac devices. Limited preclinical studies have shown reduced thrombogenicity compared to other flow diverters, including the Pipeline Flex.8 A series of 50 patients with 50 unruptured aneurysms who underwent treatment with the Pipeline Shied was recently reported.[8] All patients were treated with antiplatelet agents per institutional protocol before surgery. Device deployment was successful in 98% of patients, wall opposition occurred in 96% of patients, and no patients experienced major stroke or neurologic deaths in the 30-day post-procedure period. Longer-term follow-up is ongoing.

Unlike our cardiology colleagues, neurovascular protocols and guidelines are lacking regarding the use of DAPT in our patients. Novel, less thrombogenic stents are on the horizon but it will take time to determine whether it is safe to potentially alter practice patterns related to antiplatelet medication. In the meantime, continued investigation of DAPT in our patients is required to develop optimal strategies to prevent thromboembolic and hemorrhagic perioperative complications and better interpret various platelet testing results.

References

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3. Price MJ, et al: Platelet reactivity and cardiovascular outcomes after percutaneous coronary intervention: a time- dependent analysis of the Gauging Responsiveness with a VerifyNow P2Y12 assay: Impact on Thrombosis and Safety (GRAVITAS) trial. Circulation 124:1132–1137, 2011

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OPPORTUNITIES FOR FUNDING

AANS FELLOWSHIP/GRANTS

http://www.aans.org/Grants%20and%20Fellowships.aspx

CNS FELLOWSHIP/GRANTS

https://www.cns.org/grants-awards/grants-awards-and-fellowships

AMERICAN HEART ASSOCIATION

http://my.americanheart.org/professional/Research/FundingOpportunities/Funding-Opportunities_UCM_316909_SubHomePage.jsp

BRAIN ANEURYSM FOUNDATION

http://www.bafound.org/applying-research-grant

THE ANEURYSM AND AVM FOUNDATION

http://www.taafonline.org/pr_grants.html

JOE NIEKRO FOUNDATION

http://www.joeniekrofoundation.com/research-grants/joe-niekro-research-grant/

JOINT AANS/CNS CV SECTION

http://www.cvsection.org/research/awards-and-grants-217

BE BRAVE FOR LIFE (BENIGN BRAIN TUMORS OR CEREBROVASCULAR DISEASE)

https://bebrave.life/micro-grants/

THE BEE FOUNDATION

http://www.thebeefoundation.org/brain-aneurysm-research-grant/

Calendar

January 22-23, 2018
Cerebrovascular Section Meeting
Los Anageles, CA

January 24-26, 2018
International Stroke Conference
Los Angeles, CA

April 28- May 2, 2018
AANS Annual Meeting
New Orleans, LA

October 6-10, 2018
CNS Annual Meeting
Houston, TX