

Stereotactic and Functional NEWS



Spring 2006

AANS/CNS Section on Stereotactic and Functional Neurosurgery and American Society for Stereotactic and Functional Neurosurgery

Editor: Konstantin Slavin, MD

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The stand-alone biennial meeting of the AANS/CNS Section on Stereotactic and Functional Neurosurgery will be held under the auspices of the ASSFN in Boston June 1–4, 2006. This meeting will be chaired by Rees

Cosgrove, MD, and Emad Eskandar, MD. The scientific program is exciting, controversial and bound to generate lively discussions.

The meeting has been expertly put together by the scientific chairmen, Ron Alterman, MD, and Robert Maciunas, MD. The invited guest of honor will be Ronald Tasker, MD, a pioneer in stereotactic and functional neurosurgery. We

will cover the latest advances and controversies in movement disorders, pain, radiosurgery, and epilepsy surgery. We also will highlight the advances made in the rapidly developing and controversial field of surgery for psychiatric disorders and will have an opportunity to hear the latest emerging technologies in functional neurosurgery as they apply to Alzheimer's disease and brain-machine interfaces, for example.

The scientific program is complemented by an exciting social program that is organized to highlight some of the best that Boston has to offer. Please join us in Boston as we bridge into the future of functional neurosurgery.

*Andres Lozano, MD, PhD, FRCS
Toronto, Canada*

From the Editor



The ASSFN is placing a major emphasis on development of pathways to make clinical and research information widely accessible, mainly due to the significant increase in the volume and quality of this information in our field. The exchange of scientific ideas and results becomes particularly important as the field grows and more neurosurgeons get involved. The two major steps in this direction have included increase in frequency of ASSFN meetings from quadrennial to biennial, and the preparation of a consensus statement on deep brain stimulation for Parkinson's disease.

The last meeting of the ASSFN took place in the fall of 2004 in Cleveland; the well-attended event attracted a significant number of outstanding speakers and presentations. The next meeting will be conducted in Boston June

1–4, 2006, at the magnificent Fairmont Copley Plaza Hotel, located in the heart of Boston.

The sessions will be led and moderated by renowned experts in the field, and the level of scientific debate is expected to be intense as controversial issues will be presented at most sessions, in keeping with the traditions of our society. Moreover, the presence of honored guest Ronald Tasker, MD, one of the fathers of modern functional neurosurgery, will bring wisdom, unique insight and perspective into meeting discussions.

Registration for the meeting and housing arrangements are available online at www.assfn.org. I join our president and the meeting organizers in inviting all neurosurgeons to attend this conference. The meeting happens to be on the same weekend as the graduation ceremonies in most Boston educational institutions; with this in mind, I encourage all registrants to reserve accommodations as early as possible!

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SRS Update

The AANS/CNS Task Force on Stereotactic Radiosurgery is completing a position paper that will define radiosurgery in the 21st century. The key features that will be addressed include the broadening of SRS to apply to treatments given in a limited number of

fractions, and a renewed emphasis on the neurosurgeon's role. The Task Force remains optimistic that our colleagues in radiation oncology will identify this issue as a common cause.

Stereotaxis was invented by Victor Horsley in 1908, and SRS, by Lars Leksell in 1951. We think of stereotaxis as being inherently a neurosurgical technique. But in fact, there is no reason that the notion of 3-D localization and targeting cannot be applied to the entire body. So-named stereotactic biopsies of the breast, lung and liver are performed by surgeons and radiologists. Similarly and inevitably, the concept of stereotactic localization has been adapted by radiation oncologists and vendors of newly developed linear accelerators. The advantages of stereotactic irradiation are obvious—greater conformality, ensuring that the prescription dose is delivered more precisely to the target, and a steeper dose gradient, limiting the radiation delivered to normal structures. Technological advances have made the stereotactic frame unnecessary in many cases. Devices such as the CyberKnife, Novalis, Trilogy, TomoTherapy, and others allow stereotactic irradiation to be performed in multiple or single fractions without the *technical* involvement of a neurosurgeon.

What, then, will the neurosurgical role be in this new world of neurosurgery? Simple—what it always has been, namely, a *cognitive* role. Surely, placement of a frame is a minor part of a radiosurgical procedure. Patient selection, an understanding of alternative treatments (especially open surgery), target selection, a keen understanding of the relevant anatomy, shaping the treatment plan so that maximum efficacy and safety are achieved, overseeing the treatment itself—these are what define the essence of neurosurgery in SRS.

If we as neurosurgeons are to maintain our place in SRS, we cannot define ourselves merely as placers of stereotactic frames. The leading practitioners of SRS have always agreed

that comprehensive, hands-on involvement is mandatory for a neurosurgeon to claim that he has performed the procedure. The previously published Consensus Statement on SRS and vignettes written to define neurosurgical tasks for CPT coding purposes all make this abundantly clear. The new statement being prepared by the AANS/CNS Task Force on SRS will reinforce this.

By understanding the underlying principles of therapeutic radiation in general and SRS in particular, referring appropriate patients for SRS, and being involved in the procedures as described above, neurosurgeons will remain clinical and scientific leaders of SRS. We view SRS as a form of minimally invasive neurosurgery, and our practice should reflect this.

Michael Schuller, MD
Newark, N.J.

Accreditation of Fellowships in Stereotactic and Functional Neurosurgery



In 2001, in response to the growing proliferation of subspecialty fellowships and concern for maintaining high quality neurosurgical training, the Society of Neurological Surgeons, SNS, introduced a program of accreditation for fellowships in neurosurgery. The Committee on the

Accreditation of Subspecialty Training, known as the CAST, was appointed to formulate fellowship educational standards and develop the mechanism of fellowship accreditation. Initially, the accreditation process was applied to subspecialty training programs in spinal, peripheral nerve, and cerebrovascular neurosurgery. More recently, accreditation processes also have been developed for pediatric neurosurgery and neurosurgical oncology. (Out of six fellowship programs that have been granted accreditation in their respective subspecialties, three are in cerebrovascular, two are in spinal, and one is in peripheral nerve surgery.)

The leadership of the ASSFN felt that a similar process should be initiated for fellowship training programs in stereotactic and functional neurosurgery, and a proposal has been drafted for submission to the SNS. This document, similar to those developed for other subspecialties, details a number of requirements for assuring adequacy of training in stereotactic and functional neurosurgery. Once the proposal has been reviewed and accepted by the CAST, fellowship directors may apply to SNS for accreditation of their training programs.

Details of the accreditation process can be found at www.societyns.org/fellowships/index.html, along with program requirements for the subspecialties that currently offer accreditation. We hope that stereotactic and functional neurosurgery will soon be added to this list.

Jaimie M. Henderson, MD
Stanford, Calif.

Announcements

Regional SFN Conference July 7–8 in Shanghai: The first of several World Society of Stereotactic and Functional Neurosurgery-sponsored regional conferences that emphasize education and outreach will be held in Shanghai, China. Local organizers, led by Bomin Sun, MD, are working on an exciting and diverse scientific and social program. Details are available at www.wssf.org.

Position at UW: A board-certified or board-eligible neurosurgeon is sought to specialize in functional neurosurgery and pain management, with significant research and teaching responsibilities, based at the University of Washington Medical Center and commencing July 1, 2006. Letters of inquiry are directed to: John D. Loeser, MD, chairperson, Search Committee, Department of Neurological Surgery, University of Washington Box 356470, Seattle, Wash. 98195.

Membership Update



The year 2005 was transitional for the ASSFN organization. This transition mirrored a shift in the field in general. That is, the success of stereotaxis as a technique has led to its widespread application throughout the field of neurosurgery. Indeed, the evolution in technology, in particular the availability of user-friendly frameless solutions

for navigation, has blurred the boundaries of what defines a stereotactic neurosurgeon. General, spine, tumor, vascular and pediatric neurosurgeons all incorporate stereotactic techniques into their practices. Frameless navigation has become increasingly fused with other navigational techniques including fluoroscopy and endoscopy. Thus, stereotaxis itself is becoming a less dominant feature in defining the membership.

At the same time, the expansion in the availability of approaches to neuromodulation and radiosurgery has increased the interest in surgical manipulation of neural function and purely stereotactic approaches to neuro-oncology. As with stereotaxis, the availability of more user-friendly and reliable devices and methods has attracted more people to the field and expanded the potential patient population. Thus, just as the diffusion of stereotactic techniques and tools has had a centripetal effect on the ASSFN membership, the improvement in neuromodulation and radiosurgical appliances and techniques has increased the demand for stereotactic and functional neurosurgeons. In so doing, it is attracting a new generation of energetic ASSFN members.

In 2005, we began a concerted effort to update our membership information. The American Association of Neurological Surgeons team, headed by Ron Engelbreit, has worked with me to reach out to the membership. Sandy Meyer at the AANS worked diligently with us to establish an updated database of members. In the latter part of 2005, we began to contact the individuals who had elected to allow membership to lapse in order to understand their reasons and to offer these members another chance to reconsider membership.

Becoming a member in the AANS/CNS Section on Stereotactic and Functional Surgery as well as in the ASSFN and the WSSFN is now easier than ever. The online application process is operational at www.MyAANS.org. The system will ask users to register, then to select Member Applications from the tool bar and to choose AANS/CNS Section on Stereotactic and Functional Surgery/ASSFN/WSSFN and proceed with application. In addition, our Web page, www.assfn.org, includes an easy link to a membership application which is easily downloaded as a PDF file or printed directly from the Web page.

Individuals can apply for membership under one of four categories: Active, Resident/Fellow, Senior, or Associate. Active members are automatically subscribed to the Journal of Stereotactic and Functional Neurosurgery with concurrent membership in the World Society for Stereotactic and Functional Neurosurgery, as well as reduced fees for the biennial ASSFN meeting. Members in other categories may elect to subscribe to the journal for a reduced rate. Associate membership is designed for scientists, nurses, and physician assistants (non-neurosurgeons) participating in the field. Individuals over age 65 and retired from active practice are eligible for Senior membership.

Currently, ASSFN has 295 members. Of these, the vast majority are Active members practicing as neurosurgeons. We have three associate members, 30 senior members, and 25 resident members. We expect that the increased application of both neuromodulation and radiosurgery will lead to increased membership in 2006. Further, we anticipate that the evolution of new technologies will fuel this interest. Biological restoration in the form of gene therapies and stem cell based therapies, including advances in basic and translational science, as well as clinical trials will attract interest. Progress toward new targets for neuromodulation, as well as progress in neural prosthetics will similarly drive interest. ASSFN members will remain at the nucleus of this innovation.

*Nicholas Boulis, MD
Cleveland, Ohio*

From the Editor *continued from front page*

Deep brain stimulation for Parkinson's disease has become a standard of care, and multiple peer-reviewed publications attest to the wide acceptance of this approach among neurologists and neurosurgeons. The success of DBS is related to the development of a new collaborative approach to clinical neuroscience. For the first time, neurologists and neurosurgeons are working together to promote this treatment, and they share the responsibility for the procedures and their outcomes. In order to summarize the present knowledge regarding this new treatment in an appropriate forum, the Congress of Neurological Surgeons and the International Movement Disorder Society established a committee that would develop a consensus statement dealing with preoperative, intraoperative and postoperative aspects of DBS for Parkinson's disease. Ali Rezai, MD, and Alim-Louis Benabid, MD, were selected as neurosurgical representatives to the committee. The results of their work (with contribution from multiple participants, including Drs. Lozano, Gross, and many

others) are being published in a special supplement to the journal Movement Disorders in early 2006, and the ASSFN is proud to endorse this consensus statement as a true reflection of the current state of the art. Details of this important project will be provided in the next issue of our newsletter.

*Konstantin Slavin, MD
Chicago, Ill.*



Leadership of the 2006 ASSFN Biennial Meeting in Boston June 1-4 includes (from left) G. Rees Cosgrove, MD, and Emad Eskandar, MD, organizers and local arrangements; and Robert Maciunas, MD, and Ron Alterman, MD, scientific program. Ronald Tasker, MD, is the invited guest of honor.

ASSFN-AANS/CNS Section on Stereotactic and Functional Neurosurgery

5550 Meadowbrook Drive
Rolling Meadows, Illinois 60008



Boston is the site of the
2006 ASSFN Biennial Meeting
June 1-4

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SFN at the 2006 AANS Annual Meeting

Stereotactic and functional neurosurgery is an important component of the 74th AANS Annual Meeting, to be held April 22-27 in San Francisco. The meeting incorporates innovative educational and social programs that emphasize the 2006 Annual Meeting theme, Meeting the Challenges of Neurosurgery: Expanding Resources for a Growing Population.

The AANS/CNS Section on Stereotactic and Functional Neurosurgery will hold its executive committee meeting from 1 p.m. to 2:45 p.m. on Tuesday, April 25. Following the meeting, from 2:45 p.m. to 5:15 p.m., the section will conduct a program moderated by Andres Lozano, MD, and Michael Schuller, MD. The program features an hour-long symposium on normal pressure hydrocephalus moderated by Richard Penn, MD, and Philip Starr, MD, PhD, and followed by presentation of the Philip L. Gildenberg Award and seven papers. In addition, Andres M. Lozano, MD, PhD, will moderate Scientific Session III from 2:45 p.m. to 5:15 p.m. on Monday, April 24. The session will focus on innovations in functional neurosurgery. Innovations developed in the last 12 months will also be presented.

Detailed information is available online at www.aans.org/annual/2006.

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