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From the Chair



*Frederick G. Barker,
MD, FAANS
Chair, Section on Tumors*

Greetings,
It is my honor to serve as chair of the American Association of Neurological Surgeons (AANS)/Congress of Neurological Surgeons (CNS) Section on Tumors for the next two years, through the 2014 AANS Annual Scientific Meeting. Andrew T. Parsa, MD,

PhD, FAANS, serves as Secretary-Treasurer during this period.

I would like to thank Frederick F. Lang Jr., MD, FAANS, for his outstanding leadership over the last two years as section chair. Highlights of Dr. Lang's term include a very successful Satellite Symposium in New Orleans in conjunction with 2013 AANS Annual Scientific Meeting; the initiation of an important and much-needed revamping of the Section on Tumors' website; formalization of the Section on Tumors' relationship with our official journal, the *Journal of Neuro-Oncology (JNO)*; and the strengthening of our ongoing development efforts. Let me outline how I hope the Section on Tumors will be able to build on these accomplishments and highlight some of the new members of its executive committee, who have generously committed to donating their efforts over the next two years to make the Section on Tumors run effectively.

The Section's most visible function of many members is the educational programming presented at the AANS and CNS Annual Scientific Meetings. For each meeting, the Section recruits one or two program officers to assemble

the special seminars and coordinate abstract grading, while ensuring that many of the behind-the-scenes activities run smoothly. Officers coordinating these programs over the next two years will include Ian Parney, MD, PhD; Jennifer Moliterno Günel, MD; John S. Kuo, MD, PhD, FAANS; Clark Chen, MD, PhD, FAANS; and Michael Sughrue, MD. Additionally, the Section on Tumors plans to hold its first joint meeting with the European Association of Neurosurgical Societies (EANS) in Tel Aviv, Israel, this November. Jeffrey Weinberg, MD, FAANS; and Zvi Ram, MD, will coordinate this event. The next Section on Tumors biennial satellite meeting will occur in spring 2015 with the AANS, and will be coordinated by Orin Bloch, MD; and Gavin Dunn, MD. Jonas Sheehan, MD, FAANS, will take on the important role of coordinating the Section on Tumors educational offerings at CNS and AANS annual scientific meetings outside our assigned afternoon time slots, which previously has included our popular Tumor Update practical course. I hope that over the next two years we can establish closer relations with the AANS and CNS educational committees to provide guidance in offering other practical courses, as well as lunch and breakfast seminars. These previously have been put together by the AANS and CNS without our direct input.

Another important aspect of the annual meetings is the selection and award of the many Section prizes. Manish Aghi, MD, FAANS, will be handling this in 2013-2015. Kaisorn Chaichana, MD; and Ian Dunn, MD, FAANS, liaisons to the Young Neurosurgeons Committee, will coordinate Young Neurosurgeons receptions at the annual meetings.

Over the last several years, the Section on Tumors has taken on increasingly complex roles in education outside the annual meetings. This originated years ago with the Self-Assessment in Neurological Surgery (SANS) program, which now will be chaired by Sarah Fouke, MD, FAANS, with the assistance of Viviane Tabar, MD, FAANS. Under the leadership of Frederick Lang, MD, FAANS; Ennio Chiocca, MD, PhD, FAANS; and others, Matrix education guidelines have been established at the request of the Society of Neurological Surgeons (SNS). These guidelines will require regular updates. Dr. Lang contributed to the SNS' Milestones Project, which is a biopsy evaluating ongoing resident education. The SNS also has requested our assistance with population of its proposed Web portal supplying the underpinnings for the Matrix program, and the group will expect us to help develop guidelines for NCAST-approved subspecialty fellowships during residency. I have asked Mark Linskey, MD, FAANS, to coordinate all of these diverse and potentially overlapping Section functions in the new role of Extramural Education Chair.

The Clinical Trials subcommittee is a relatively new group of the Section's executive committee, launched by Jeffrey Bruce, MD, FAANS, and carried on during Dr. Frederick Lang's term.

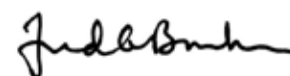
Both Dr. Andrew Parsa and I see the promotion of tumor-related clinical trials as one of the Section's most important potential roles for its members. Dr. Ian Parney will be leading this subcommittee in 2013-2015, with members Daniel Cahill, MD, PhD, FAANS, of the Radiation Therapy Oncology Group, and Alliance's Brad Elder, MD, representing the two national cancer cooperative groups currently hosting active brain tumor committees. This committee will highlight existing clinical trials (through this newsletter and at our annual meeting programs), and expand on available educational options in clinical trial design, development, conduct and interpretation at our annual meetings. Medical Neuro-oncology liaison Susan Chang, MD; and Society for Neuro-Oncology (SNO) liaison Michael Vogelbaum, MD, PhD, FAANS, will work closely with this subcommittee. The Section on Tumors collaborates with many other aspects of organized neurosurgery as another of its important functions. Andrew Sloan, MD, FAANS, will continue to chair our Washington Committee representation with the assistance of Brian Nahed, MD. Steven Kalkanis, MD, FAANS, will continue his successful leadership as Guidelines subcommittee chair, assisted by Jeffrey Olson, MD, FAANS. Rich Anderson, MD, will serve as Pediatric liaison; Laurence Rhines, MD, FAANS, will continue as Spine liaison; the Radiosurgery liaison will be Jason Sheehan, MD, PhD, FAANS; and Michael Link, MD, FAANS, will serve as Skull Base liaison. Isabelle Germano, MD, FAANS, will head the International subcommittee with the assistance of Ricardo Komotar, MD. Many of our international representatives from previous terms will continue to serve, with some important new additions being recruited.

An area that almost certainly will see rapid changes over the next two years will be development. The Section on Tumors has relied on the generosity of corporate sponsors to supplement membership dues in funding Section activities, such as our Young Neurosurgeon receptions and research fellowships. With increasing government

oversight and vanishing corporate donations, this function quickly has become a major challenge, threatening to overmatch our past pattern of patchwork development efforts with relatively light central oversight. This term, the executive committee will expand to include a development subcommittee devoted to keeping us competitive in this important arena, led by William Curry, MD, FAANS; and Allen Waziri, MD, with the assistance of Orin Bloch, MD; Christopher Farrell, MD; Michael Lim, MD, FAANS; Daniel Prevedello, MD; Nader Sanai, MD; and Isaac Yang, MD.

The Section's lifeblood is its membership. Randy Jensen, MD, PhD, FAANS, will be Membership chair for the upcoming term. One of Dr. Frederick Lang's signal accomplishments was starting the redesign of the Section's website. This project will continue under Dr. Lang, Christopher McPherson, MD, FAANS; and Dr. Jeffrey Weinberg with a goal of launching the new site in time for the AANS Annual Scientific Meeting in the spring. Aaron Cohen-Gadol, MD, FAANS, will continue as Community Collaboration chair. Helping us communicate with members in a more formal fashion, the *JNO* will continue as our official journal, with Linda Liao, MD, PhD, FAANS, serving as Section liaison and editor. Anthony D'Ambrosio, MD, FAANS, as historian, will be coordinating a special *JNO* supplement to celebrate our upcoming 30th anniversary as the world's oldest organization devoted to brain tumor study and treatment. Dr. Jennifer Moliterno Günel will edit the newsletter.

Finally, Jason Heth, MD, FAANS, will strive to keep our efforts legal as bylaws chair. Dr. Frederick Lang will work on replacements for nominating committee chairman. It should be a great two years; we are looking forward to it.



2013 CNS Meeting Preview

The Section on Tumors has several events planned for the upcoming 2013 Congress of Neurological Surgeons Annual Meeting. The highest-scoring original science abstracts from the Section will be presented in a platform session from 2-3:30 p.m. on Monday, Oct. 21, 2013, and in the Neurosurgical Forum from 3:30-5 p.m. Additional high-scoring abstracts from Section members will be presented in the plenary sessions on Sunday, Oct. 20, 2013. On Tuesday, Oct. 22, 2013, the Section on Tumors will sponsor a set of special afternoon events. This will include both the Ab Guha Award lecture from Henry Brem, MD, FAANS, and a symposium on novel imaging in brain tumor surgery, featuring Linda Liao, MD, PhD, FAANS, who will discuss metabolic imaging; Sarah Nelson, PhD, whose focus will be magnetic resonance imaging (MRI) spectroscopy; Jinsong Wu, MD, who will cover high-field, intra-operative MRI; and James Rutka, MD, PhD, FAANS, who will present on nanoparticle delivery to brain tumors via MRI-guided focused ultrasound. We look forward to seeing you in San Francisco!

Medical Neuro-oncology Report: Update on Anti-angiogenic Treatment for Glioblastoma

Susan M. Chang, MD

Glioblastoma is a highly vascularized malignancy, and targeting angiogenesis is a therapeutic approach that has been studied for several years. At the annual meeting of the American Society of Clinical Oncology (ASCO) earlier this year, there were several reports on the results of anti-angiogenic strategies for glioblastoma. The monoclonal antibody bevacizumab (BEV) targets vascular endothelial growth factor and received FDA accelerated approval in the recurrent glioblastoma setting in 2009, following single-arm studies demonstrating response rates and six-month progression-free survival rates that show improvement when compared to historical controls. Colleagues from the Netherlands presented a three-arm Dutch multicenter randomized phase II study of BEV; BEV and standard chemotherapy with lomustine; and lomustine alone for patients with first recurrence of GBM having progressed after standard radiation and temozolomide. One hundred forty-eight eligible patients were treated. The primary endpoint was nine-month overall survival, which was 59 percent in the combination arm, and 38 percent and 43 percent respectively in the single-agent arms. Although this study included a concurrent control, it was not powered to demonstrate superiority among the arms but did have a preliminary efficacy signal regarding benefit, and further investigations are planned.

There were two randomized, double-blinded, placebo-controlled phase III trials of the use of BEV in the upfront glioblastoma multiforme (GBM) setting reviewed at the meeting. The AVAglio study (supported by Roche) randomized 921 patients to standard radiation and temozolomide versus BEV with standard treatment. The median PFS was 10.6 months for the experimental arm versus 6.2 months for the standard. There was no improvement in overall survival (16.8 months in experimental arm versus 16.7 months in standard). No new safety findings were observed. The NIH-supported cooperative group, the Radiation Therapy Oncology Group (RTOG), also presented the results of RTOG 0825 that had a similar design as the AVAglio study, except crossover was allowed for the patients in the placebo arm to receive BEV at the time of progression. There were 978 patients registered to the study; however, 637 were randomized because of inadequate tissue and findings of blood on imaging. Primary outcome results were similar to the AVAglio study with no difference in overall survival between the arms (15.7 months in BEV arm versus 16.1 months in standard) and median PFS of 10.7 months in the BEV

arm versus 7.3 months in the placebo arm. Based on the RTOG statistical study design, this did not meet the pre-specified criteria for declaring significance.

The phase III CENTRIC study evaluated the role of cilengitide, a selective α_v , β_3 and $\alpha_v\beta_5$ integrin inhibitor in 545 newly diagnosed GBM patients with methylation of MGMT gene promoter. There was no improvement in PFS or OS in the study arm compared to controls.

There will be a town hall meeting at the upcoming World Federation of Neuro-Oncology meeting, to be held Nov. 20-24, 2013, in San Francisco. These studies will be among discussion topics as well as trial endpoints other than survival that may serve as a surrogate for clinical benefit and the role of anti-angiogenic agents in the care of patients with glioblastoma at the time of initial diagnosis and at recurrence.

History of the Section

Anthony L. D'Ambrosio, MD, FAANS

The AANS/CNS Section on Tumors was first established in 1984, making 2014 our 30th anniversary year! To celebrate, the *Journal of Neuro-Oncology* is reserving its September 2014 supplement for a special 30th Anniversary Section on Tumors publication.

This exciting publication will include the evolution of neuro-oncology over the last decade. Also, the piece will include articles that go beyond science to discuss political and socio-economical influences and obstacles in neuro-oncology and research. The 30th anniversary supplement will offer commentaries from our leadership regarding the progress that has been made in the field, the importance of research and trials, and what current experts must attend to in order to ensure the future of the discipline. This publication will act as a call to arms, so to speak, to encourage and educate our medical students and young scientists to pursue careers in neuro-oncology.

All Section members will be invited to submit article ideas. In addition, specific authors will be invited to contribute original articles on important and timely topics as requested by the Section on Tumors' executive committee. By Nov. 1, 2013, the supplement outline will be finalized, and contributing authors will be confirmed.

Finally, a brochure outlining the history of the Section on Tumors' Biennial Satellite Symposium is in development. The brochure will include a listing outlining the date, location and leadership for every symposium dating back to the first meeting in 1994. This publication will be made available for download from the section website.

Section on Tumors Awards

Manish K. Aghi, MD, FAANS

The Section on Tumors' Awards Committee will recognize seven award winners at the 2013 Congress of Neurological Surgeons (CNS) Annual Meeting in October 2013. Most of the awards are limited to Section members and provide additional incentive for membership. The award winners for the CNS meeting will be recognized at the Section on Tumors session, held Monday, Oct. 21, 2013, from 2-5:30 p.m. The awards program encourages the submission of the highest quality of work in neuro-oncology.

Synthes Skull Base Award

Presented at the annual scientific meetings of the CNS and the American Association of Neurological Surgeons (AANS), the Synthes Skull Base Award is given to an attending neurosurgeon, resident or fellow in the Section who submits the best abstract related to skull base surgery. The winner for the 2013 AANS Annual Scientific Meeting was Sergei Terterov, MD, of the University of California, Los Angeles, for his presentation, titled "Long Term Outcomes and Survival Analysis for Intracranial Chordoma." The 2013 CNS Annual Meeting winner is Hideyuki Kano, MD, PhD, of the University of Pittsburgh for the presentation, "Chondrosarcoma Radiosurgery: Report of the North American Gamma Knife Consortium." Franco DeMonte, MD, FAANS, chair of the Skull Base Committee, was largely responsible for obtaining this award through a generous contribution from the Synthes Corp. The award includes a \$1,000 honorarium.



Sergei Terterov, MD, right, accepts the Synthes Skull Base Award from Nicholas B. Levine, MD, FAANS.

Preuss Award

The Preuss Award, sponsored by the Preuss Foundation, is given at each of the AANS and CNS meetings to a young scientist investigating brain tumors who is within 10 years of training and has submitted the best basic science research paper. The 2013 AANS winner was Michael C. Oh, MD, of the University of California, San Francisco, for his presentation, titled "Overexpression of Functional Calcium-Permeable Glutamate Receptors in Glioblastoma Derived Brain Tumor Initiating Cells." The 2013 CNS winner will be Peter Fecci, MD, of the Massachusetts General Hospital, for his presentation, "Of Mice and Men: Matched Observations of Lymphopenia, Splenic Retraction, and the Bone Marrow as Harbor for Lost T-cells in Mice and Patients with Glioblastoma." This award offers a \$1,000 honorarium.



Michael C. Oh, MD, right, accepts the Preuss Award from Nicholas B. Levine, MD, FAANS.

National Brain Tumor Society Mahaley Award

The National Brain Tumor Society Mahaley Award is given at each of the AANS and CNS meetings to a neurosurgery resident, fellow or attending physician who submits the best clinical study in neuro-oncology. At the 2013 AANS Annual Scientific Meeting, the award was presented to Andrew Sloan, MD, FAANS, of Case Western Reserve University School of Medicine for his paper, titled "Targeting Glioma Stem Cells in GBM: A Phase 0/II Study of Hedgehog Pathway Inhibitor GDC-0449." At the 2013 CNS meeting, the award will be presented to Russell R. Lonser, MD, FAANS, author of "Natural History of Central Nervous System Hemangioblastomas in von Hippel-Lindau Disease." The award carries a \$1,000 honorarium.



Andrew E. Sloan, MD, right, receives the National Brain Tumor Society Mahaley Award from Frederick Lang, MD, FAANS.

Integra Foundation Award

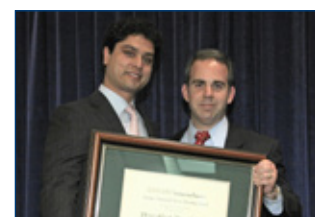
The Integra Foundation Award, sponsored by the Integra Foundation, is given at each of the AANS and CNS meetings for the best research or clinical paper submitted investigating benign brain, spinal or peripheral nerve tumors. At the 2013 AANS Annual Scientific Meeting, the winner was Jonathan George Thomas, MD, of MD Anderson Cancer Center for his presentation, "Ionizing Radiation Augments Glioma Tropism of Mesenchymal Stem Cells." And at the 2013 CNS meeting, the winner will be Arman Jahangiri for his presentation, titled "Rate and Time Course of Improvement in Endocrine Function After Over 1000 Pituitary Operations." The award carries a monetary honorarium of \$1,000.



Jonathan G. Thomas, MD, right, receives the Integra Foundation Award from Frederick Lang, MD, FAANS.

Springer Journal of Neuro-Oncology Award

The Journal of Neuro-Oncology Award is sponsored by Springer Publishers, and is presented at both the annual AANS and CNS meetings to a highly ranked abstract in either clinical or basic science as related to neuro-oncology. The 2013 AANS Annual Scientific Meeting recipient was Phiroz Erach Tarapore, MD, of University of California, San Francisco, for his



Phiroz Tarapore, MD, left, receives the Journal of Neuro-Oncology Award from Christopher McPherson, MD, FAANS.

presentation, “Magnetoencephalographic Imaging of Resting-State Functional Connectivity Predicts Postsurgical Neurological Outcome in Brain Gliomas.” The 2013 CNS recipient will be Jinsong Wu, MD, of Shanghai’s Huashan Hospital for the paper, titled, “3.0T iMRI Guided Resection in Cerebral Glioma Surgery: Interim Analysis of a Prospective, Randomized, Triple-blind, Parallel-Controlled Trial.” Winners receive a \$500 award and a framed certificate.

Stryker Neuro-Oncology Award

The Stryker Neuro-Oncology Award is given to a high-ranking brain tumor clinical or basic science abstract submitted by a resident or medical student. The award is presented at the CNS and AANS annual meetings, and the senior author of the paper must be a member of the AANS/CNS Section on Tumors. The 2013 AANS recipient of this award was Eric Michael Thompson, MD, for the presentation, “Inhibition of SUR1 Decreases the Vascular Permeability of Cerebral Metastases.” Ranjith Babu, MS, of Duke University will be the 2013 CNS recipient for the paper, “Spinal Cord Astrocytomas: A Modern 20-year Experience at a Single Institution.” A monetary component of \$1,000 is included along with an award certificate.



Eric M. Thompson, MD, right, receives the Stryker Neuro-Oncology Award from Frederick Lang, MD, FAANS.

Leksell Radiosurgery Award

This award, presented at each AANS meeting, is for the best paper on stereotactic radiosurgery related to brain tumors. The award comes with a monetary component of \$2,000. At the 2013 AANS Annual Scientific Meeting, the award was given to Hideyuki Kano, MD, PhD, from University of Pittsburgh for his presentation, titled “The Role of Stereotactic Radiosurgery for Intracranial Hemangioblastomas: An International Multicenter Study.”



Hideyuki Kano, MD, PhD, right, accepts the Leksell Radiosurgery Award from Nicholas B. Levine, MD, FAANS.

Brainlab Community Neurosurgery Award

The Brainlab Community Neurosurgery Award is awarded at the annual meetings of the AANS and CNS. This award is given to a neurosurgeon practicing in a nonacademic setting with the best abstract related to central nervous system tumors. Previous AANS/CNS Section on Tumors chairs Michael McDermott, MD, FAANS; and Ronald Warnick, MD, FAANS, were instrumental in securing this award given through the generosity of Brainlab. Jason P. Sheehan, MD, PhD, FAANS, of the University of Virginia

received the award at the 2013 AANS Annual Scientific Meeting for his presentation, “Gamma Knife Radiosurgery for the Management of Nonfunctioning Pituitary Adenomas: A Multicenter Study.” No abstract was selected for this award at the 2013 CNS meeting, but abstracts will continue to be considered as part of the 2014 AANS Annual Scientific Meeting. The award carries a \$1,000 honorarium.



Jason P. Sheehan, MD, PhD, FAANS, right, receives the Brain Lab Community Neurosurgery Award from Frederick Lang, MD, FAANS.

American Brain Tumor Association Young Investigator Award

Sponsored by the American Brain Tumor Association, the Young Investigator Award is given at each AANS and CNS annual meeting to a young faculty member involved in neuro-oncology research who has demonstrated outstanding potential for future basic science research.

The applicant must have been out of training for fewer than six years. The 2013 AANS winner was Nicholas F. Marko, MD, of MD Anderson Cancer Center for his presentation, titled “Personalized Probabilistic Prediction of Postoperative Complication Risks for Craniotomy.” No abstract was selected for this award at the 2013 CNS meeting, but abstracts will continue to be considered as part of the 2014 AANS Annual Scientific Meeting. A \$2,000 honorarium accompanied this award.



Nicholas F. Marko, MD, receives the ABTA Young Investigator Award from Ricardo J. Komotar, MD.

Ronald L. Bittner Award

The Ronald Bittner Award is endowed by Mrs. E. Laurie Bittner in memory of her husband, Ronald L. Bittner. It is awarded to the Best Abstract Paper submitted to the AANS Annual Scientific Meeting on Brain Tumor Research by a resident or junior faculty member. This award includes a \$1,000 honorarium. At the 2013 AANS Annual Scientific Meeting, the award was given to Orin Bloch, MD, of University of California, San Francisco, for his presentation, “Glioma-Induced Immunosuppression Shortens Progression-Free Survival in a Trial of Immunotherapy for Glioblastoma.”



Orin Bloch, MD, delivers his presentation, which won the Ronald L. Bittner Award.

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Membership

Randy Jensen, MD, PhD, AANS

Membership in the American Association of Neurological Surgeons (AANS)/Congress of Neurological Surgeons (CNS) Section on Tumors currently includes more than 2,000 members with a large resident and fellow contingent and a growing international group as part of our organization. In addition to increasing our active members, we are looking to increase our resident and international membership. To do so, in November, we will partner with the European Association of Neurological Surgeons (EANS) to co-host its annual meeting, to be held Nov. 11-14, 2013, in Tel Aviv, Israel. This will allow many of the members of the EANS to rub shoulders with attendees from the Section on Tumors. Furthermore, we will continue our recent tradition of collaboration with the Young Neurosurgeons Committee by hosting receptions at each of the national meetings of the AANS and CNS. We expect each of these events to bring new opportunities for collaboration, education and social interaction with residents, fellows, younger neurosurgeons and our many colleagues from around the world with interest in neurosurgical oncology.

2013 AANS Meeting Highlights

Christopher M. McPherson, MD, FAANS

The 2013 American Association of Neurological Surgeons (AANS) Annual Scientific Meeting was a great success for the Section on Tumors. The Section sessions were well-received with excellent attendance at all sessions. The first session included the first Neurosurgical Face-off: “Acoustic Neuromas: Radiosurgery versus Surgical Resection,” moderated by Frederick Lang, MD, FAANS, and featured Jason Sheehan, MD, PhD, FAANS, presenting the case for radiosurgery, while John Golfinos, MD, FAANS, presented the case for surgical resection. It was an enlightening and lively debate with good audience participation. In addition, Antonio Chiocca, MD, PhD, FAANS, provided the Ronald L. Bittner Lecture, titled, “Viruses: Cause or Treatment of Malignant Glioma?”

The Tumor I Section symposium, Management of Challenging Brain Tumors, garnered much interest with a packed house. This session featured case-based clinical presentations by the experts sharing pearls and challenges to managing some of the most difficult brain tumors. Dr. Lang presented on insular tumors; Jeffrey Bruce, MD, FAANS, shared his expertise on pineal region tumors; Alessandro Olivi, MD, FAANS, discussed lateral ventricular and thalamic tumors; and James Rutka, MD, PhD, FAANS, talked about the management of fourth ventricular and brainstem tumors.

On Wednesday, May 1, 2013, Theodore Schwartz, MD, FAANS; Franco De Monte, MD, FAANS; and Randy Jensen, MD, PhD, FAANS, provided insight into the “Future of Skull Base Surgery” in the Tumor II Section symposium. In addition, the innovative work presented in the oral posters enriched all of the scientific sessions.

We thank all of our speakers and participants for their valuable contribution to the 2013 AANS Annual Scientific Meeting program.

Awards *continued from page 5*

The Abhijit Guha Award

The Abhijit Guha Award and Lecture are jointly sponsored by the Section on Tumors and the Society for Neuro-Oncology (SNO), and is given annually, alternating between the SNO and Section meetings. The first annual award was given to James Rutka, MD, PhD, FAANS, at the SNO meeting in 2012, and the second award will be given at the CNS meeting in 2013, with the official announcement of the recipient pending at present.

The AANS/CNS Section on Tumors would like to thank the award sponsors for helping to encourage submission of the highest quality work in neuro-oncology. Congratulations to the award winners.

2013 Satellite Symposium Report

Nader Sanai, MD and Isaac Yang, MD
2013 Scientific Program Co-Chairs
AANS/CNS Section on Tumors

The AANS/CNS 10th Biennial Satellite Tumor Symposium was held April 26-27, 2013, in conjunction with the 2013 AANS Annual Scientific Meeting in New Orleans. The event was attended by more than 267 specialists in neurosurgery, neuro-oncology and radiation oncology, more than any previous satellite meeting in Section history. The program, which included a special symposium on meningiomas sponsored by the Society for Neuro-Oncology,



James Rutka, MD, PhD, FAANS, delivering his keynote address.

provided a forum for discussion of leading-edge innovations in brain and spine tumor research. Keynote lectures by Eric Holland, MD, PhD, on the “Molecular Targeting of Gliomas Using Mouse Models,” and Linda Liau, MD, PhD, FAANS, on “Imaging Paradigms to Characterize

Tumor Genetics,” were particularly well-received. They were followed by two fully subscribed evening seminars focusing on presentations, titled “Advances in Immunotherapy” and “Surgical Adjuncts to Optimize Tumor Resection.” Throughout the two-day program, oral and poster presentations highlighted emerging basic science and clinical work conducted by members of the AANS/CNS Section on Tumors, as well as members of the Society for Neuro-oncology.

At the conclusion of the Symposium, a special reception was held to commemorate the 10th anniversary of the inception of this flagship Section on Tumors meeting. Conference attendees, Section members and honored guests all attended this memorable event, which was emceed by then-Section Chair Frederick F. Lang,



Reception held in the ballroom of the Hilton Hotel, New Orleans.



Frederick Lang, MD, FAANS, presenting James Rutka, MD, PhD, FAANS, the Charles B. Wilson Award.

MD, FAANS, who presented a wonderful historical perspective on the Section, its past biennial symposia and the neurosurgeons who made them possible. Importantly, James T. Rutka, MD, PhD, FAANS, was presented with the 2013 Charles B. Wilson Award for his lifetime of distinguished work on behalf of the AANS/CNS Section on Tumors. Previous honorees include Peter Black, MD, PhD, FAANS (2007); Mark Rosenblum, MD, FAANS (2004); and Raymond Sawaya, MD, FAANS (2000). In his acceptance speech, Dr. Rutka remarked, “The 10th Anniversary of the Satellite Symposium is a cause for major celebration, as over the past 20 years, the Section on Tumors has consistently delivered an inspirational scientific program, which always provides presentations and special topic sessions on the cutting edge of technology and innovation in the field.”

Clinical Trials

Each issue of the Section on Tumors Newsletter will feature a more in-depth look into two clinical trials, one sponsored by the Alliance for Clinical Trials in Oncology and the other by the Radiation Therapy Oncology Group. The focus will be on those trials that may be of particular interest to neurosurgeons.

Alliance for Clinical Trials in Oncology: Featured Trial

J. Bradley Elder, MD

The AANS/CNS Section on Tumors recently has implemented collaboration with the Alliance for Clinical Trials in Oncology to facilitate cooperative efforts between neurosurgeons and neuro-oncologists at the national level to more efficiently support neuro-oncology clinical trials.

Trial: A Phase II Randomized Trial Comparing the Efficacy of Heat Shock Protein-Peptide Complex-96 (HSPPC-96) (NSC #725085, ALLIANCE IND # 15380) Vaccine Given With Bevacizumab Versus Bevacizumab Alone in the Treatment of Surgically Resectable Recurrent Glioblastoma Multiforme (GBM); PI: Andrew T. Parsa, MD, PhD, FAANS.

(Background and description adapted from clinical trial protocol, courtesy of Dr. Parsa)

HSPPC-96 is an autologous tumor-derived vaccine under clinical investigation for the treatment of a variety of cancer types. It is composed of the 96-kDa heat shock protein gp96 in complex with autologous tumor-derived peptides. This peptide component is tumor- and patient-specific and immunogenic. When injected into the host, antigen presenting cells such as macrophages, dendritic cells or Langerhans cells, take up HSPPC-96 via heat shock protein receptors, including CD91. The cells then migrate to lymph nodes, where the tumor-specific peptides are re-presented to naive T cells, eliciting both a CD8+ and CD4+ T-cell response, potentially targeting all relevant tumor antigens.

The interaction of HSPPC-96 with antigen presenting cells also leads to activation of various components of innate immunity, including cytokine and chemokine release by macrophage and dendritic cells, maturation of dendritic cells and activation of natural killer cells. The success of therapy with HSPPC-96 in clinical trials will depend on the presence of adequate numbers of functional antigen-presenting cells in patients, and their generation of cytotoxic T cells with long-lasting immunity against metastatic or recurrent tumor.

HSPPC-96 has been investigated in clinical trials for a variety of malignancies, including renal cell carcinoma, gastric cancer and melanoma. Dr. Parsa has completed the phase I portion of a phase

I/II trial, evaluating HSPPC-96 vaccine in patients with recurrent high-grade glioma. Results indicated that vaccine production was feasible and that the vaccine was well-tolerated with no serious adverse events attributable to investigational therapy. Despite a significant amount of disease aggressiveness in this population (more than 50 percent of the patients had ≥ 2 recurrences), overall median survival approached 42 weeks post-resection. The majority (11/12) of patients survived beyond the historical median control time of 26 weeks, seven of 12 patients survived beyond 36 weeks, and four of 12 patients survived beyond 48 weeks.

The phase I results supported initiation of this phase II trial, which is being sponsored by the Alliance. In this trial, patients with a first or second recurrence of grade IV glioma who have undergone a surgical resection followed by standard Temodar and radiation are candidates for the trial if a second surgery is indicated for their recurrent tumor. Exclusion criteria include prior treatment with anti-angiogenic agents targeting the VEGF pathway (e.g. bevacizumab), prior investigational immunotherapy or prior use of Gliadel wafers. Patients must have KPS ≥ 70 and have at least nine grams of resected tumor available for vaccine manufacture. Patients meeting these criteria are then randomized to receive bevacizumab (Avastin) alone (experimental arm three) or in combination with the HSPPC-96 vaccine (experimental arms 1 and 2). HSPPC-96 for clinical use is individually prepared from specimens of the patient's own tumor, using multistep chromatography involving affinity and non-affinity matrices. This vaccine is an autologous, tumor-derived, heat shock protein peptide complex vaccine, which is injected intradermally. In experimental arms one and two, vaccine injections occur weekly for four weeks, beginning four to six weeks after surgery, followed by injections every two weeks for 12 total injections. Bevacizumab is given concomitantly with the vaccine in experimental arm one. In experimental arm two, bevacizumab is given once tumor progression is identified radiographically. Experimental arm three is administration of bevacizumab using the same schedule as experimental arm one.

The primary outcome measure is overall survival. Secondary outcome measures are progression-free survival, objective tumor response using Revised Assessment in Neuro-Oncology (RANO) criteria and treatment-related adverse events. Further information regarding this clinical trial can be obtained from Dr. Parsa or clinicaltrials.gov.

Clinical Trials (continued)

Radiation Therapy Oncology Group: Featured Trial

Daniel Cahill, MD, PhD, FAANS and Michael Vogelbaum, MD, PhD, FAANS

The Radiation Therapy Oncology Group (RTOG) is a National Cancer Institute-funded cancer clinical cooperative group with 10 brain tumor clinical trials currently open for recruitment (<http://www.rtog.org/ClinicalTrials/ProtocolTable.aspx>).

Trial: RTOG 0913 Phase I/II study of the concurrent administration of everolimus (Afinitor) with temozolomide(TMZ) and radiation(XRT), followed by adjuvant everolimus/TMZ.

After central pathological review of glioblastoma, patients are randomized on the phase II component of the trial to receive either standard-of-care combined-concurrent TMZ/XRT (the “Stupp

regimen”), or the study regimen including everolimus. Everolimus targets the PI3K/AKT/mTOR signaling pathway, which is activated frequently in glioblastoma.

The key contribution of neurosurgeons for patient enrollment in this trial comes in the upfront surgical planning for patients prior to the initial procedure that makes the diagnosis of glioblastoma. Trial candidacy needs to be considered even at this early stage, as the pathologic tissue blocks resulting from this procedure are required to have sufficient tissue (~1cm cubic) for molecular correlative studies for the patient to be enrolled. Thus, even for patients where a complete resection is not possible, more tissue is needed than is acquired through a routine needle-based stereotactic biopsy.

This trial has accrued well, and is nearing completion of enrollment.

Young Neurosurgeons Committee

Jennifer Moliterno Gunel, MD

During the respective annual meetings held by the American Association of Neurological Surgeons (AANS) and Congress of Neurological Surgeons, the Young Neurosurgeons Committee and the Section on Tumors host a joint reception to allow for medical students, residents, fellows and board-eligible neurosurgeons interested in neurosurgical oncology to interact with more senior members of the field. The most recent reception, held during the AANS Annual Scientific Meeting at the New Orleans Marriott, was one of our best attended and featured a presentation by Linda Liau, MD, PhD, FAANS, from the University of California, Los Angeles. Dr. Liau spoke eloquently about keys to success for any aspiring surgeon-scientist, including a very thoughtful guide to pursuing research funding. She added humor and a personal touch by relaying her own exceptional experiences and we are very grateful to her. The next YNC/Tumor Section reception will be held at the CNS annual meeting with details to follow.



Linda Liau, MD, PhD, FAANS, advising young neurosurgeons about research funding opportunities.

International Reports

Special Report from Neuro-oncological Surgery in Argentina

Alejandra T Rabadán, MD

Since its initiation in 2005, the Section of Neuro-oncology of the Argentine Society of Cancerology (SAC) has continued to support annual interdisciplinary activities comprised by neurosurgery, clinical oncology, radiation therapy, radiology and basic sciences. Each year, various events such as post-graduate courses, symposiums and meetings occur in an effort to foster the development of neuro-oncology. More information about these programs can be found on www.socargcancer.org.ar.

From the medical care point of view, great strides have been made so that quality neurosurgical oncology care, as well as care rendered from other related disciplines such as radiology and clinical oncology, can be accessed easily by patients in Argentina. Chemotherapy, for instance, is now widely available for patients. While radiation therapy and radiosurgery have a long tradition in Argentina, these resources have been modernized in recent years. Although the majority of radiation therapies centers are private, the public health organizations have agreements with them, thus allowing patients access to the appropriate type of radiation therapy. Palliative care is another important specialty that has grown considerably over the last several years. Nonetheless, the most problematic issue remains the scarcity of neuropathologists in the region. In that sense, the contribution of Gustavo Sevlever, MD, who recently organized a fellowship in neuropathology at the Institute Fleni of Buenos Aires, offers an extremely valuable contribution.

Another issue in our region has been the lack of regional statistics on brain tumors. To rectify this, we have joined new collaborations enthusiastically, such as the South American Glioma Network (SAGN), under the leadership of Dr. Ricardo Ramina, MD (Brazil). In Argentina, the Argentine Association of Neurosurgery (AANC) and the SAC Section of Neuro-oncology also support and participate in the Argentine Interhospitals Neuro-oncological Registry (RAHON), which was first initiated in 2012 under the leadership of Mercedes García Lombardi, MD, and others. Details about RAHON can be found at www.rahon.org.

We have joined both the Neuro-oncological Section of the Latin American Federation of Neurosurgical Societies (FLANC) and the Neuro-oncological Section of the SAC into the International Brain Tumor Alliance (ITBA). We appreciate the support of Denis Strangman, MD, as ITBA President. The result of this collaboration was the first annual Brain Tumor Awareness Day, which took place on Oct. 30, 2012, in Buenos Aires. Our purpose was to educate the community about early detection of brain tumors, and to give information about the modern diagnostic methods and treatments. In the same week, we collaborated with other similar meetings via Skype with members of Brazil and Colombia. This year, Brain Tumor Awareness Day will be held on

Oct. 24, 2013, and will focus on the impact of intraoperative MRI in the prognosis of gliomas. Guest speakers from Argentina and several Latin American countries will be present.

Also this year, the Skull Base Section of FLANC will join with SAC and the sponsorship of the AANC to host the International Symposium titled “Controversies in Skull Base Meningiomas,” featuring guest speakers from Brazil and Argentina. It will be held in Oct. 24, 2013, in Buenos Aires.

FLANC also is organizing the CLAN 2014 meeting, to be held on Isla Margarita in Venezuela from May 10-17, 2014. Isabelle Germano, MD, FAANS, will be a guest participant. Planning for the 2015 Section of Neuro-oncology meeting in Buenos Aires is underway.

Through these efforts, we hope to continue to improve education and the use of specialized resources with the ultimate goal of providing an equitable neurosurgery practice for the people of Argentina through enhanced research and training.

Turkey

Uğur Türe, MD

The 27th Annual Scientific Congress of the Turkish Neurosurgical Society was held April 12-16, 2013, in Antalya, Turkey. More than 1,300 participants registered for the Congress, including neurosurgical nurses. For the first time, a pre-meeting cadaveric dissection course was held and featured instructor Ossama Al-Mefty, MD, FAANS, from Boston, who delivered a 3D demonstration of the various skull base approaches for the removal of skull base tumors. New developments and trends in the field of neuro-oncology were revisited during the plenary sessions.

The 4th Istanbul Microneurosurgery course was held in Istanbul on June 13-22, 2013. Part one, which took place during the first four days of the event, was a hands-on microvascular anastomosis course. Later in the course during part two, participants were guided through a hands-on white matter dissection of the human brain. Through demonstrations and discussions during the “Live Surgeries in 3D” sessions, attendees focused on how knowledge of white matter tracts can help with the removal of intrinsic brain tumors.

Japan

Fumio Yamaguchi, MD, PhD

On May 15, 2013, the Ministry of Health, Labor and Welfare has approved 5-aminolevulinic acid (5-ALA) for manufacture and marketing as a diagnostic agent used during the surgical resection of malignant glioma. 5-ALA will be sold as “AGLIO®” by SBI Pharmaceuticals Co., Ltd. and “ALABEL” by Nobelpharma Co., Ltd. 5-ALA is already sold by medac GmbH in more than 20

European countries including Germany and the U.K. This action will contribute to improving resection rates in the surgical resection of brain tumor, and will become useful as a new treatment option. In the urological field, 5-ALA mediated photodynamic diagnosis for urothelial cancer has provided advanced medical care. Its clinical trial has been completed in Japan.

Future meetings for neurosurgery and neuro-oncology in Japan include the following:

- The 72nd Annual Meeting of the Japan Neurosurgical Society. Oct. 16-18, 2013, Yokohama, Japan – <http://www.jns2013.jp/>
- The 31st Annual Meeting of the Japan Society for Neuro-Oncology. Dec. 8-10, 2013, Miyazaki, Japan – <http://jsno31.umin.jp/>
- The 24th Annual Meeting of the Japan Society for Hypothalamic and Pituitary Tumors. Feb. 21-22, 2014, Fukuoka, Japan – <http://jshpt24.umin.ne.jp/>
- The 23rd Conference on Neurosurgical Techniques and Tools (CNTT 2013). Apr. 18-19, 2014, Fukuoka, Japan – <http://cntt2014.umin.ne.jp/>
- The 34th Annual Meeting of the Japanese Congress of Neurological Surgeons. May 16-18, 2014, Osaka, Japan – <http://www.jcns2014.jp/>
- The 32nd Annual Meeting of the Japan Society of Brain Tumor Pathology. May 23-24, 2014, Tokushima, Japan – <http://btp32.umin.jp/index.html>

2013 China Neurosurgery Report

Yonggang Wang, MD

The 2013 Chinese Neuro-Oncology Annual Meeting was held May 17-19, 2013, in the city of Xiamen. More than 500 neurosurgeons from all over the China attended this meeting. The featured topics included both clinical and basic science research on neuro-oncology.

The 8th annual meeting of the Chinese Congress of Neurological Surgeons was held on June 1-2, 2013, in the city of Chongqing. As one of the two major Chinese national neurosurgical meetings, more than 1,000 neurosurgeons from all over China attended this meeting. Many international neurosurgical experts were also invited to give wonderful lectures.

In addition, the 10th biennial conference of the Chinese Neuroscience Society, which was held in Beijing from Sept. 19-22, 2013, featured presentations from around the world. More information can be found on this program at <http://www.cns.org.cn/en/enindex.asp>.

Forthcoming meetings in China include the following:

- 2013 Chinese Neurosurgical Society Annual Meeting. Oct. 11-13, 2013, Xi'an, China: <http://www.cnsmeeting.com/2013/cn/>
- 7th Asian Epilepsy Surgery Congress. Oct. 25-26, 2013, Beijing: <http://www.sbnk.cn/sblt/index.html>
- 3rd China International Multidisciplinary Skull Base Surgery Conference. Nov. 8-10, 2013, Beijing: <http://jsno.umin.jp/>

International Report – England

Nitin Mukerji, MSc, MD, FRCSEd

The British Neuro-Oncology Society (BNOS) recently held its annual meeting at the University of Durham in Northeast England, hosted by the neurosurgical unit at James Cook University Hospital. The meeting brought together physicians from all specialties looking after patients with brain tumors as well as specialist nurses, without whose help it is impossible to provide good care. The education day program included specific sessions on obtaining funding, and sessions where clinicians had a taste of basic science research. Basic scientists were led through the pathway of care for patients with malignant brain tumors.

A special report released at the meeting highlighted the disproportionate amount of research funding allocated for brain tumors (one percent) despite brain tumors being the chief cause of death in younger populations and accounting for more than 20 years of life lost in the average patient, making brain tumors the most lethal cancer by this measure. Recommendations were made to streamline the funding process and to ensure progressive work in the laboratory. The clinical sessions were well attended by delegates from the United Kingdom and abroad. Much of the ongoing laboratory and clinical research was discussed along with plans for recruitment to trials. The next BNOS meeting will take place in Liverpool in 2014. Another well-attended meeting in the UK was the Society of British Neurological Surgeons, which was held Sept. 25-27, 2013, in Essex. More information about the meeting can be found at <http://www.sbn.org.uk/index.php/conferences/romford-autumn-2013/>.

North American Skull Base Society Update

Michael Link, MD, FAANS

The 24th Annual North American Skull Base Society (NASBS) Meeting will take place in beautiful San Diego on Feb. 14-16, 2014. A Practical Dissection Workshop will precede the meeting on Feb. 12-13, 2014. This year's president, Ehab Hanna, MD, from the MD Anderson Cancer Center in Houston, has given the meeting the theme of Skull Base: Defining Value-Based Care. The program includes 12 breakfast seminars, 20 concurrent sessions/panels and daily plenary sessions that include keynote lectures, several symposia, round tables, debates and presentations. This year's pre-meeting practical course offers a unique opportunity to compare open and endoscopic approaches to various regions of the skull base. Another unique feature this year is the offering of two separate tracks. In the first track, attendees will have the opportunity to follow the prosection by the faculty and apply it through hands-on cadaver dissection with the guidance of expert instructors. The second option, offered for the first time, will be to watch the faculty prosection and then attend several lectures by experts in the field describing the various surgical techniques with video demonstrations. San Diego offers a spectacular venue this time of the year, and surely will be enjoyable to all attendees and their families.

The abstract submission site is open. Please visit www.nasbs.org for more information and to submit your abstract today. We look forward to seeing you in San Diego!

Report from the Liaison to the Society for NeuroOncology

Michael Vogelbaum, MD, PhD, FAANS

The 2013 World Federation of NeuroOncology (WFNO) meeting will be held during the Society of Neuro-oncology Annual Meeting, Nov. 21-24, 2013, at the San Francisco Marriott. The WFNO meeting is held every four years, and was last held in the United States in 2001. In addition to the usual program, which consists of an education day, sunrise educational sessions, plenary and concurrent original science oral presentations, poster sessions and special invited lectures, this year's WFNO meeting also will feature a course on how to develop and run clinical trials, which will be led by Susan Chang, MD.

Specific highlights of the invited program include sunrise sessions focused on topics, such as "Maximal Safe Resection of Glioma," "Immunological Strategies in Neuro-Oncology, a Plenary Session Focused on Low-grade Glioma," and keynote lectures by Frank McCormick, PhD; and Stefan Pfister, MD.

The abstract reviews have been finalized, and this will be one of the largest brain tumor meetings ever. A record number of abstracts were received (about 50 percent more than the previous record of submissions), and the scientific program has been adjusted to include more oral presentations than before. Based upon the number of abstracts submitted, SNO expects there to be more than 1,800 attendees at the meeting. Those who are thinking of attending are encouraged to book their hotels and flights as soon as possible, as there are a number of other events in San Francisco that weekend and other nearby hotels are expected to be booked fully. Also, for the first time, the meeting banquet will require purchase of a ticket, the number of which is limited.

Additional information and registration materials can be found on the SNO website, www.soc-neuro-onc.org.

Guidelines

Steven N. Kalkanis MD, FAANS

The Section on Tumors' Guidelines Committee has had a very busy summer; we are looking forward to the release and publication of two major guidelines projects in the next few months, and we will also be generating new guidelines topics at our fall meeting to continue to address critical knowledge and practice gaps in our professions.

The progressive/recurrent glioblastoma guidelines project, expertly led by Jeffrey Olson, MD, FAANS, along with Timothy Ryken, MD, FAANS, and with major support from Laura Mitchell and the Congress of Neurological Surgeons' (CNS) National Guidelines Committee, recently completed the formal review process in organized neurosurgery and has just received final approval and endorsement from the AANS/CNS Joint Guidelines Committee (JGC). We would like to thank the senior authors of each of the major chapters for spearheading such a multifaceted and comprehensive analysis of the current and near-future state of recurrent glioblastoma multiforme (GBM) treatment, including Dr. Ryken, Dr. Olson, Daniel Brat, MD, PhD; Samuel Ryu, MD; Patrick Wen, MD; Lakshmi Nayak, MD; John Buatti, MD; and Johnathan Morris, MD, as well as many others in our writing groups from the Section and also from our multidisciplinary collaborations in radiation oncology, medical oncology, neuro-oncology, neuroradiology, and neuropathology.

This guideline initiative focuses on the difficult questions asked in tumor boards across the country: What is the best way to treat GBM at recurrence? Specific chapters address the following questions in the clinical management and treatment of progressive GBM: Outcome Assessment and Neurocognition; Role of Neuroimaging (progression vs. radiation change); Role of Biopsy; Role of Repeat Cytoreductive Surgery; Role of Radiotherapy Techniques

(re-irradiation, stereotactic radiosurgery, brachytherapy); Role of Chemotherapy; and Future Innovations. We anticipate publication in the Journal of Neuro-oncology in early 2014, and we would especially like to acknowledge editor Linda Liau, MD, PhD, FAANS, for agreeing to expedite the publication of these guidelines once approved by the JGC and our national parent organizations, the American Association of Neurological Surgeons and the CNS.

Our newest effort, also spearheaded by Dr. Olson, focuses on the clinical practice guidelines for low-grade glioma. Along with Dr. Olson, this effort is being co-led by Mark Linskey, MD, FAANS; Dr. Ryken and I, with many of our Section on Tumors executive committee members also playing a leading role in the various chapters: Role of Imaging (Sarah Jost Fouke, MD, FAANS), Role of Biopsy (Brian Ragel, MD, FAANS), Role of Surgical Resection (Manish Aghi, MD, FAANS), Neuropathology and Molecular Markers (Daniel Cahill, MD, PhD, FAANS), Role of Radiation (Ian Parney, MD, PhD), Role of Chemotherapy (Mateo Ziu, MD), Options for Recurrent Low-grade Glioma (Brian Nahed, MD) and Emerging Therapies for LGG (Andrew Sloan, MD, FAANS). The initial writing stage has already been completed, and the project currently is going through the first review stages, with an anticipated submission date to the JGC by the end of this calendar year.

The multidisciplinary pituitary adenoma management guideline, now being led by Dr. Aghi, along with Chirag Patil, MD; and Zack Litvack, MD, continues in the writing stage with final drafts expected this spring.

We welcome all participants, and anyone interested in working on guidelines projects is strongly encouraged to contact me at skalkan1@hfh.org.

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