SNO Announces Launch of New Open Access Journal, Neuro-Oncology Advances

In partnership with the European Association of Neuro-Oncology (EANO), the Society for Neuro-Oncology is proud to announce the launch of SNO’s third official journal, Neuro-Oncology Advances, which will be published by Oxford University Press. The new publication will be fully open access, meaning the papers in the journal will be freely available online. The first ten articles are currently in process.

The President of SNO, Patrick Wen, and the President of EANO, Martin van den Bent, are thrilled that this collaboration will “enable the publishing of ground-breaking research from all disciplines that are interested in advancing outcomes of brain, spine and peripheral nerve tumours” and are especially pleased to be able to provide a trustworthy, quality open access venue for the neuro-oncology community.

Serving as Editor-in-Chief of the new journal is Gelareh Zadeh, Medical Director of the Krembil Neuroscience Centre at the Toronto Western Hospital. Dr. Zadeh noted that she is “delighted to be leading a team of Executive and Associate Editors who are dedicated to ensuring Neuro-Oncology Advances offers a unique opportunity for collaboration throughout the community.”

Neuro-Oncology Advances is a fully open access journal offering the same high editorial standards and service to authors as SNO’s other journals, Neuro-Oncology and Neuro-Oncology Practice. The editorial scope of the new journal will be broader than its sister journals, offering a wider platform for the neuro-oncology community, including but not limited to, neurologists, neurosurgeons, radiation oncologists, medical oncologists, neuropathologists, neuro-radiologists, and research scientists, together with educators and patient advocates.

In order to ensure a seamless communication between the publications, Ken Aldape, the Editor-in-Chief of Neuro-Oncology will also serve as an Executive Editor of Neuro-Oncology Advances. Dr. Aldape noted that he “looks forward to working with Dr. Zadeh to drive this forum for the dissemination of research focused on the advancement of the crucial areas of neuro-oncology and brain metastases.”

For more information, or to submit to Neuro-Oncology Advances, please visit www.editorialmanager.com/noa or contact the Editorial Team: neuro.onc.advances@gmail.com.

Increased Impact Factor Announced!

Neuro-Oncology’s Impact Factor has risen to 10.091. To celebrate, we have selected the most cited articles which contributed to the new Impact Factor, and made them freely available to explore online.

For journal news and updates, follow SNO on Twitter: @NeuroOnc, and follow the Neuro-Oncology Advances hashtag #NOAJournal. More information on Neuro-Oncology can be found by clicking here. More information on the new journal, Neuro-Oncology Advances, can be found by clicking here. More information on Neuro-Oncology Practice can be found by clicking here.

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SNO Participates in the National Brain Tumor Society’s 2019 Head to the Hill Event
Linda Greer and Nidhi Shah

On May 6 and 7, the National Brain Tumor Society hosted their annual Head to the Hill Advocacy Event in Washington DC. SNO was pleased to once again send a delegation of members to join over 300 patients, caregivers and advocates in meetings with members of Congress and/or Congressional Staffers.

A very well-organized full day of training took place where all participants learned strategies on how to best communicate very specific legislative “asks” for funding and support in the 2020 congressional budget year. The head of the Neuro-Oncology Branch of the NIH, Dr. Mark Gilbert, along with colleagues Drs. Terri Armstrong and Edjah Nduoum, provided much needed information and background about their work and the importance of the NIH as the single largest funder of brain tumor research in the world.

The goal of Head to the Hill for 2019 was to bring attention to legislators of the need to increase funding to the NIH and the NCI, support ongoing appropriations for the Childhood STAR Act and the Peer Reviewed Cancer Research Program within the Department of Defense and encourage the program to include pediatric brain tumors and brain cancer as topics eligible for funding. An important addition to this year’s “asks” was to encourage the implementation of the new Palliative Care & Hospice Education and Training Act (PCHETA), which would create incentives and put systems in place to provide training and bring awareness to the importance of palliative and hospice care.

The day continued with moving stories and tributes to those affected by brain cancer, remembering those who had been lost, and encouragement from those continuing the fight on their behalf. Many patients and survivors spoke and all in the room were touched by their stories and courage.

Day two began early as the entire group, dressed in matching green tee-shirts, were bussed to the front of the Capitol Building. Small groups of 4-5, divided by state and congressional district, spread out across the campus with several meetings scheduled for each group, all carefully detailed on individual worksheets. Each person had a short time to share their personal connection with brain cancer and then to discuss the specific funding and support requests. Some groups were fortunate to meet with their elected legislator, while others met with selected staffers who were well-versed in the medical funding arena.

SNO Executive Director, Chas Haynes, spoke to the participants about the continued partnership between the Society and the NBTS and the important role each organization plays in raising awareness of the need for ongoing support of clinical and research programs around the country.

The SNO delegation was made up of members Christine Cordova (NIH), Broderick Crawford (Walden University), Linda Greer (SNO), Aleksandra Gruslova (UT Health Sciences Center), J. Bryan Iorgulescu (Brigham and Women’s...
SNO was honored to send a delegation to the National Brain Tumor Society’s 2019 Head to the Hill event, pictured above on the steps of the Capitol. Women in Neuro-Oncology (WiN) Committee Continues to Grow
Katy Peters

The primary mission of WiN is to support women through education, mentorship, funding, and the collection of resources and metrics. WiN evolved from a working group of its founding members: Alyx Porter MD, Priya Kumthekar MD, Katy Peters MD, PhD, Erin Dunbar MD and Priscilla Brastianos MD, who acknowledged a critical unmet need for neuro-oncologists to support each other within this dynamic and evolving sub-specialty. These leaders represent the constellation of practicing neuro-oncologists; academic to private, leadership to administration, clinician to educator, and investigator to industry.

Nidhi Shah summed up her experience at the event in this way: “Advocating alongside fighters, survivors, and caregivers of patients suffering from brain tumors was a true honor and humbling experience. Hearing the stories from affected family members and patients provided an emotional insight into the world of cancer furthering emboldening my passion for practicing neuro-oncology.” This was a sentiment shared by the entire SNO delegation. We heard numerous times during the day that having physicians and researchers participate in Head to the Hill strengthened the effort and added a perspective that complemented the impact of patient, caregiver, and advocate stories.

SNO looks forward to continuing its involvement with this important event and hopes to increase the number of participants for next year. SNO thanks the NBTS for organizing this very special opportunity.

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Within this subcommittee, strategies will be developed to support the diverse and evolving needs of our members. The accomplishments of women will be recognized and promoted. Innovative solutions to the dilemmas faced by our members will be implemented.

To join the committee, indicate your interest by ticking the box on your new SNO member application or during renewal. For additional information, contact womeninneurooncology@gmail.com or click here.
Summary of the 2018 Society for Neuro-Oncology Annual Meeting and Education Day

Roy E. Strowd, Albert H. Kim and Priya Kumthekar

The 23rd Annual Scientific meeting of the Society for Neuro-Oncology (SNO) occurred on November 15-18, 2018 in New Orleans, LA. The meeting saw another near record year of total attendance with 2,339 attendees from 49 countries. Over 1,190 abstracts were submitted with 90 abstracts highlighted as interactive E-talks. The meeting featured impactful addresses from Dr. Nino Chiocca, the Victor Levin Award Recipient, and Dr. Linda Liau, the Abhijit Guha Award Recipient. The meeting also featured the presentation of awards to Chas Haynes who was the recipient of the Jan Esenwein Public Service Award, David Arons who was the recipient of the Community Service Award, and Gregory Cairncross for the SNO Lifetime Achievement Award.

This year’s meeting featured many important updates including:

**Hippocampus-sparing whole-brain radiotherapy preserves neurocognitive function in patients with brain metastases:** Gondi et al. presented updated results from a Phase 3 study comparing whole brain radiotherapy (WBRT) with memantine (an NMDA receptor antagonist) with or without hippocampal sparing in adult patients with brain metastases.1 The study’s primary endpoint was time to neurocognitive function failure, defined as a decline in one of the following cognitive tests: Hopkins Verbal Learning Test– Revised, Controlled Oral Word Association, or Trail Making Test. With a follow-up period of 8 months, the adjusted hazard ratio for hippocampal avoidance was 0.74, indicating a 26% relative reduction in cognitive function failure for patients with brain metastases treated with hippocampal avoidance.

**Improved OS in EGFR amplified recurrent GBM treated with Depatux-M and temozolomide (TMZ):** Van den Bent et al. presented updated survival data for this phase 2 study (EORTC 1410/Intellance 2) of 240 total patients with EGFR-amplified glioblastoma at first recurrence.2 Patients were enrolled into one of three arms: combination of Depatux-M and TMZ compared to TMZ monotherapy or lomustine monotherapy. At the time of data freeze, there were 220 observed deaths/events and the updated results showed improved overall survival in patients with EGFR-amplified recurrent GBM treated with the combination of Depatux-M and TMZ compared to TMZ or lomustine alone (HR 0.66, 0.47-0.93, p=0.016) and 1-year OS rates of 40% compared to 28%.

**Mechanisms of IDH mutation associated oncogenesis includes altered amino acid and redox metabolism:** Dr. William Kaelin, one of the keynote lecturers, discussed dual mechanisms underlying IDH mutation in diffuse gliomas. Dr. Kaelin highlighted the existence of both a “hit-and-run” phenomenon as well as ongoing oncometabolite-driven processes that may represent a dependency of IDH mutant gliomas on glutaminase. Recent data from the Kaelin lab was presented showing that the accumulation of the oncometabolite R-2-hydroxyglutarate ((R)-2HG), the product of mutant IDH enzymes, inhibits the activity of BCAT1/2 transaminases and leads to a dependence on glutaminase. In this model, glutaminase inhibitors were found to augment radiation therapy in mice harboring IDH mutant brain tumors. These data highlight the complex mechanisms underlying IDH mutation and the need for mechanistic understanding to drive translational drug development.

Continued on next page.
Advances in the management of pediatric brain tumors: In her plenary presentation, Dr. Maryam Fouladi provided an update on the management of pediatric brain tumors, showing major advancements in the management of rare molecular subtypes with targeted agents. Results from the phase 1 study of the MEK inhibitor selumetinib (AZD6244) showed 2-year PFS of 69±10% with a 44% response rate in BRAF mutated low-grade gliomas. Recent results from the phase 1/2 study of larotrectinib for NTRK-positive pediatric solid tumors included intracranial gliomas, offering hope for these rare but molecularly actionable tumors. Lastly, recent studies of mismatch repair deficient solid tumors have shown favorable responses to immune checkpoint therapy, supporting further study of immune-based approaches to this genetically driven pediatric syndrome.

Predictors of response to immunotherapies and mechanisms of immune evasion: Mutational profiles were reported for the subset of long-term responders from the phase 1 study of intratumoral PVSRIPO vaccination. In contrast to expected findings seen in other solid tumors, lower mutational burden and not high mutational burden was associated with long-term response. Friedrich et al. from the German Cancer Research Center presented on the impact of IDH mutation and the immune microenvironment finding that macrophages and microglia in IDH mutated gliomas display immunosuppressive phenotypes. Furthermore, reprogramming of myeloid cells by (R)-2-HG led to suppression of T-cell proliferation. Further work is needed to understand the mechanisms presented in both of these plenary presentations and understand how to use these data to improve outcomes of glioma patients treated with immunotherapies.

SNO Updates and Membership Survey Results: Dr. Gelareh Zadeh presented results from the 2018 SNO Member Survey of approximately 2,500 SNO members. In response to calls to improve sharing of information on SNO leadership and strategic initiatives, a 1.5 hour lunchtime member session will begin at the annual meeting in 2019 along with new features to the SNO website. A new open application for educational content at the annual meeting will begin in 2019 to expand opportunities for membership engagement.

We look forward to seeing you at the next Annual Meeting of the Society for Neuro-Oncology, scheduled for November 20-24, 2019 in Phoenix, AZ.

References
SNO 23rd Annual Meeting
Abstract Award Winners

Pediatric Basic Research Award
Martin Van Den Bent
Two-year results of the INTELLANCE 2/EORTC trial 1410 randomized phase II study on Depatux–M alone, Depatux–M combined with temozolomide (TMZ) and either TMZ or lomustine in recurrent EGFR amplified glioblastoma (NCT02343406)

Adult Clinical Research Award
Ingo Mellinghoff
Phase 1 study of AG-881, an inhibitor of mutant IDH1 and IDH2; results from the recurrent/ progressive glioma population

Adult Basic Research Award
Candice Poon
Single-cell level comparison of histopathology and single-cell RNA-seq databases between IDH-MUT and –WT glioblastomas reveals distinct innate immune microenvironments that can be exploited for therapeutic gain

Adult Basic Research Award
Farshad Nassiri
Development and validation of a DNA methylome-based predictor of meningioma recurrence and meningioma recurrence score

Pediatric Basic Research Award
Nathan Dahl
Super elongation complex-mediated transcriptional dependency in H3K27M-mutant diffuse midline gliomas

Applied Neuro-Oncology Practice Award
Vinal Gondi
Preservation of neurocognitive function (NCF) with hippocampal avoidance during whole-brain radiotherapy (WBRT) for brain metastases: preliminary results of phase III trial NRG Oncology CC001

Pediatric Basic Research Award
Haase Santiago
Elucidating molecular pathogenic mechanisms of the histone H3.3 G34R mutation in pediatric high-grade gliomas

Adult Basic Research Award
Candice Poon
Single-cell level comparison of histopathology and single-cell RNA-seq databases between IDH-MUT and –WT glioblastomas reveals distinct innate immune microenvironments that can be exploited for therapeutic gain

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Pediatric Basic Research Award
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Adult Basic Research Award
Candice Poon
Single-cell level comparison of histopathology and single-cell RNA-seq databases between IDH-MUT and –WT glioblastomas reveals distinct innate immune microenvironments that can be exploited for therapeutic gain

Adult Basic Research Award
Farshad Nassiri
Development and validation of a DNA methylome-based predictor of meningioma recurrence and meningioma recurrence score

EANO/SNO Travel Scholarship Award
Matthias Friedrich
The oncometabolite R-2-Hydroxyglutarate suppresses the innate immune microenvironment of IDH-1-mutated gliomas via aryl hydrocarbon receptor signaling

SNO 23rd Annual Meeting
Poster Award Winners

Orin Bloch
Peripheral Myeloid Cell pd-l1 Is a Biomarker for High-grade Intracranial Malignancy

Luz Cumba Garcia
Mirna Signature Derived from GBM Plasma Exosomes as a Diagnostic Biomarker

William Accomando
Immunologic Trends Associated with Patient Outcomes in a Phase 1 Clinical Trial of Toca 511 and Toca FC in Recurrent High Grade Glioma

Yang Liu
Microenvironment-derived Mitochondria Prime Glioma Chemoresistance by Augmenting NAD+ Metabolism and Parp-dependent DNA Repair

Edbert Lu
Overcoming Immune Evasion in Glioblastoma

Yang Liu
Healthcare Costs for High-grade Gliomas: A Population-based Study

Yu Long
VEGF Blockade Enhances T Regulatory Cell Function by Dysregulating Glutamate Transport in GBM

Mahmoud Alghamri
IDH1 Mutation Regulate Myeloid Cells Plasticity Mediating Anti-Glioma Immunotherapy

Joseph Flores-Toro
The Combination of CCR2 Antagonist and PD-1 Blockade Prolongs Survival in Immune Checkpoint Inhibitor Resistant Gliomas

Tianzhi Huang
MST4 Phosphorylation of ATG4B Regulates Autophagic Activity, Tumorigenicity, and Radioresistance in Glioblastoma

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The 24th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology

November 21-24, 2019
Marriott Desert Ridge
Phoenix, Arizona

Registration Now Open!

www.soc-neuro-onc.org
The fifth biennial Pediatric Neuro-Oncology Basic and Translational Research Conference took place at the iconic St. Francis Hotel in San Francisco from May 3-4, 2019.

There was excellent participation with 470 clinician-scientists, basic and translational scientists, post-doctoral and clinical fellows, graduate students and other research students, drawing investigators from over 22 countries to the event. Overall, this represented a robust increase in attendance over the previous meeting held in 2017 in New York.

Both days of the conference began with three concurrent Sunrise Sessions that were well attended by conference registrants. The Sunrise Sessions on Thursday addressed “New Therapeutic Avenues for Pediatric High Grade Glioma” chaired by Michelle Monje, “Rare Pediatric Brain Tumors” chaired by Marcel Kool and David Malkin chaired a sunrise session on “Predisposition Syndromes”.

After a welcome message from Co-Chairs Drs. Jabado and Mueller, the Thursday plenary session commenced with 3 talks discussing challenges and opportunities diagnosing pediatric brain tumors in the molecular era which was followed by a panel discussion with great participation of the audience. This session was followed by 2 award winning abstract presentations. The day continued with sessions on medulloblastoma and embryonal tumors. The first afternoon session focused on clinical trial designs in pediatric neuro-oncology.

We had three speakers discussing new trial designs and opportunities from a statistical design as well as from an industry perspective. This was again followed by a panel discussion with very active audience participation. Thursday ended with a session on H3K27 mutant gliomas.

That evening the poster session was held with research displayed in the following categories: ATRT, Basic Biology, Brainstem Tumors, DIPG, Ependymoma, Genetics/Epigenetics, Germ Cell Tumors, High Grade Glioma, Immunology/Immunotherapy, Low Grade Glioma, Medulloblastoma, Pediatric Brain Tumor Models and Translational Therapeutics on the 32nd floor.
of the hotel with wonderful views of San Francisco. The poster session was very well attended.

The second day of the conference started with three concurrent Sunrise Sessions on Single Cell Sequencing in Pediatric Brain Tumors (Chair Mariella Filbin), Model Systems for Pediatric Brain Tumors (Chair Bjoern Schwer) and Liquid Biopsy: Application in Pediatric Brain Tumor (Chair Javad Nazarian). The plenary session started with an introduction of Bill Tiller, new CEO of the Pediatric Brain Tumor Foundation (PBTF), followed by a low grade glioma session. This was followed by a session on immunotherapy. After lunch there were 3 award winning abstract presentations followed by a session on high grade gliomas. The meeting ended with 3 plenary talks on immunotherapy by Robert Wechsler-Reya, Nick Vitanza and Hideho Okada followed by a plenary discussion. The meeting concluded with remarks from the scientific chairs Sabine Mueller and Nada Jabado as well as an announcement on the upcoming ISPNO meeting in Japan.


The conference was a fantastic success and is a testament to all the exciting research that is being conducted in the field. With our increased understanding of the biology, we strongly believe that we will make further advancements in the care of these patients. A highlight of this meeting was that the overall program structure left room for discussions and attendees actively engaged in these. Further, this year’s meeting focused slightly more on some aspects of clinical translation which was well received and aimed to build a bridge between the basic scientists and the clinicians with the ultimate goal to develop better therapies faster.

The Society is especially grateful to the PBTF for their lead sponsorship of this event, to the SNO staff, and to the University of Texas MD Anderson Cancer Center for facilitating CME accreditation for the conference participants.
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SNO News
The SNO News is published two times per year and is distributed to members and friends of the Society for Neuro-Oncology.

Editors: Albert Kim and Jennie Taylor
SNO Communications Chairs

Associate Editor: Chas Haynes
SNO Executive Director

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