SNO Announces New Editor-in-Chief for Neuro-Oncology

The Society for Neuro-Oncology is pleased to announce the appointment of Kenneth Aldape, MD as the Editor-in-Chief of our flagship journal, *Neuro-Oncology*. Dr. Aldape succeeds Patrick Wen, who stepped down as Editor-in-Chief after being elected by the membership of SNO to serve as the Society’s president.

SNO received a number of extremely strong submissions to its Call for Applications, which were reviewed by an *ad hoc* search committee comprised of David Schiff (Chair), Paul Brown, Antonio Chiocca, Patrick Wen, Gelareh Zadeh and Chas Haynes (*ex officio*). Ultimately, the committee concluded that Dr. Aldape was the candidate best suited to lead the journal and unanimously voted in favor of him becoming Editor-in-Chief.

Dr. Wen said of the announcement: “I am thrilled that Ken has assumed the role of Editor-in-Chief. He has done an outstanding job serving for many years as one of the Executive Editors, so shifting into this new position should be a seamless process. I am looking forward to seeing the journal reach new heights under his leadership!”

*Neuro-Oncology* is an international, peer-reviewed journal, dedicated to providing superior and rapid publication of original research articles, editorials, reviews, and letters on all aspects of the field of neuro-oncology. Established in 1999 and published monthly by Oxford University Press since 2010, *Neuro-Oncology* is ranked 9th among all ranked clinical neurology journals, and 19th among other oncology journals. In addition to SNO, the journal is also affiliated with the Japan Society for Neuro-Oncology (JSNO) and the European Association of Neuro-Oncology (EANO).

Commenting on his appointment, Dr. Aldape said: “It is a great honor to be named to this role. Under Patrick’s guidance, as well as previous outstanding editorial leadership from Darell Bigner and Alfred Yung, the journal has grown in quality and reputation to become the premier journal in our field. I am humbled and honored to be a part of this and hope to build on their outstanding efforts to grow the journal to even greater heights. I am excited and looking forward to working with all members of the neuro-oncology community, including members of SNO, as well as EANO and JSNO, as we build the journal together.” Continued Dr. Aldape: “One of the programs we would like to initiate is a series of ‘position papers’ on topics of great interest and/or controversy which are important to the science and care of patients with central nervous systems tumors, but for which more work is needed to generated data-driven decisions. I hope to reach out to members of the *Neuro-Oncology* community to ask for contributions of your expertise for this important initiative.”

More information on *Neuro-Oncology* can be found by [clicking here](#).
From the President

Dear Members and Friends of SNO,

It is my pleasure to share the mid-year SNO newsletter with you.

In this issue, the Society is pleased to announce that Kenneth Aldape has been named as the new Editor-in-Chief of our flagship journal, Neuro-Oncology. I would like to thank David Schiff for ably leading the Editor-in-Chief search committee, which was tasked with selecting what is one of the most important positions within our field.

Monica Venere provides an overview of SNO's involvement in the 2018 Head to the Hill event organized by the National Brain Tumor Society. We are honoured that the NBTS again included a SNO delegation comprised of board members, young investigators, and staff in this important event on Capitol Hill.

Albert Kim and Roy Strowd share a recap and photographs from our most recent meeting in San Francisco, which was by far the largest conference in our history. And while it will be a challenge to top last year, this year’s meeting co-chairs, Frank Furnari, Daphne Haas-Kogan and Vinay Puduvalli, are hard at work organizing what I expect will be our best meeting ever. The 2018 meeting in New Orleans will have clinical trials as its main theme. In particular, Education Day, organized by co-chairs Brian Alexander, Ingo Mellinghoff, Joohee Sul, and Martin Taphoorn, will provide information on how to conduct better studies and improve accrual to trials.

SNO remains committed to supporting and fostering the field of neuro-oncology around the world, and an article in this issue by Gelareh Zadeh, Jason Huse, and Chas Haynes outlines the exciting creation of the Society for Neuro-Oncology in Sub-Saharan Africa. Similarly, you will also read about the outstanding work that is being done by the Society for Neuro-Oncology in Latin America by Marcos Maldauan and Olavo Feher.

Launched earlier this year, the SNO Online Education Center was developed to promote advancement in neuro-oncology education by providing online recordings from prominent speakers in the field. Under the guidance of Erik Sulman, we plan to expand this online resource to include a broad range of topics and speakers that will enhance the scientific and clinical expertise of neuro-oncology professionals worldwide.

I would especially like to thank Jennie Taylor, Albert Kim, Monica Venere, Alvina Acquaye, and Terri Armstrong for their work investigating the stunning increase in the price of Lomustine noted in this issue. Certainly this development will have a serious impact on our patients, and the SNO Public Policy Committee is actively considering an appropriate response.

I would also like to welcome Michelle Monje Deisseroth as the Pediatric Representative to the SNO Board of Directors. Mark Kieran, the outgoing representative, is moving to a new position within industry, and while we are very sorry to lose the participation of one of the most talented pediatric neuro-oncologists in the field, I have every confidence that Michelle will do an outstanding job representing SNO’s pediatric interests.

Lastly, I would mention that SNO is engaged in a number of new projects and initiatives that I look forward to sharing with you in the next issue of this newsletter in October, and also in person at our annual meeting in November.

Respectfully,

Patrick Y. Wen
SNO President
SNO Members Participate in Head to the Hill 2018

Monica Venere

SNO young investigators, staff, and members of the Board of Directors joined nearly 200 participants coming from 38 states to take part in the National Brain Tumor Society’s (NBTS) annual Head to the Hill advocacy event held in Washington, D.C. on May 6-8. This marks the third consecutive year of involvement and sponsorship of members by SNO in what has become an impactful mechanism to garner congressional support for legislation that is directly relevant to the brain tumor community.

The event started with a welcome reception for participants Sunday night that included an invitation to share in the Collaborative Ependymoma Research Network (CERN) Foundation’s annual butterfly release to commemorate Ependymoma Awareness Day. The following day brought patients, survivors, caregivers, researchers, and physicians together for a full day of advocacy training. Broken up by State, advocates were coached on folding their personal stories into the congressional asks. The 2018 asks included:

- An increase in fiscal year 2019 appropriations for the National Institutes of Health (NIH) to $39.3 billion and the National Cancer Institute (NCI) to $6.375 billion
- Full funding for the Cancer Moonshot and other NIH priorities within the 21st Century Cures Act
- $80 million in appropriations for the Peer Reviewed Cancer Research Program (PRCRP) within the Department of Defense (DOD)
- Continued inclusion of pediatric brain tumors and brain cancer as topics eligible for funding within the DOD PRCRP
- Members of the Senate to sign the Childhood Cancer STAR Act appropriations letter to support full funding of the bill once it passes the House (the Senate unanimously passed the STAR Act in March)
- Members of the House of Representatives to support swift passage of the STAR Act (80% of the House is currently signed on as co-sponsors)
- Speaking to the group during the training on brain tumor research at the NIH's Neuro-Oncology Branch (NOB) were former SNO Vice Presidents Drs. Terri Armstrong and Mark Gilbert. The day ended for the SNO delegation with a SNO Head to the Hill Social hosted by Dr. Armstrong.

The final day of the event began with a Capitol Hill Kick-off Breakfast, which included talks by David Arons (CEO, NBTS), the Honorable Chris Van Hollen (US Senator, Maryland), the Honorable Jack Reed (US Senator, Rhode Island), and Matt Tifft (NASCAR Xfinity series driver, Richard Childress Racing, brain tumor survivor and advocate). Advocates then dispersed into their State groups to meet with Senate offices as well as the offices for the House Representative for the respective district of each attendee. SNO delegates provided a unique voice to the congressional meetings by contributing the perspective from those working within neuro-oncology fields to the NBTS 2018 asks.

SNO thanks the NBTS for the opportunity to be part of this event and collaborate on the common goal of advancing medical research for brain tumors.

Advocacy in Action: Congress Passes the Childhood Cancer Survivorship, Treatment, Access & Research (STAR) Act of 2018!

The STAR Act passed in the House of Representatives on May 23, after having passed in the Senate on March 22. Passage of the STAR Act was one of the key legislative asks made by the 2017 Head to the Hill effort.

SNO congratulates the NBTS and all those whose advocacy efforts contributed to the passage of the most comprehensive childhood cancer legislation ever passed by Congress!
Recap of the 22nd Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology

Albert H. Kim, Roy E. Strowd, and Patrick Wen

The 22nd Annual Scientific Meeting of the Society for Neuro-Oncology (SNO) occurred November 16–19, 2017 in San Francisco, California. This year’s meeting enjoyed record attendance, with 2484 attendees at the main meeting representing 50 countries. Over 1046 attendees participated in the SNO Education Day. Abstract submissions for this year’s meeting reached a new record, with 1275 total submissions representing a significant increase from the 1024 submissions in 2016.

The Cancer Moonshot Project was featured broadly across the meeting, including keynote presentations from Dr W. K. Alfred Yung, who highlighted areas where neuro-oncology plays a pivotal role within the 10 Blue Ribbon Panel priority areas for accelerating progress in cancer. Dr Walter Koroshetz provided an update on neuro-oncology initiatives at the National Institute of Neurological Disorders and Stroke (NINDS), including translational funding opportunities in the NINDS Brain Initiative. Other keynote speakers discussed seminal findings that microRNAs can drive cancer (Dr Carlo Croce) and new computational technologies can decode mutational signatures across cancers (Dr Ludmil Alexandrov), and Dr Jennifer Doudna discussed the discovery of the CRISPR/Cas9 system.

The meeting featured impactful addresses from Dr Susan Chang, the Victor Levin Award Recipient, and Dr Webster Cavenee, the Lifetime Achievement Award Recipient, and a memorial tribute was held to honor Jan Esenwein with the dedication of the new Jan Esenwein Public Service Award. The following summarizes just a few of the many important updates and advances presented at this year’s meeting.

Update on SNO Education Day

Thematically, the SNO Education Day focused on 3 Cancer Moonshot recommendations: overcome therapeutic resistance, minimize side effects of cancer treatments, and develop new cancer technologies. Dr Trever Bivona opened the discussion with a keynote address on the direct and indirect mechanisms through which epidermal growth factor receptor (EGFR) mutant non–small cell lung cancers evade targeted therapies. The morning sessions focused on phosphatidylinositol-3 kinase inhibitor evasion pathways, the role of intratumoral heterogeneity in generating resistant tumoral subclones, extrachromosomal DNA as a mechanism for oncogene amplification, the challenges of harnessing the immune response to brain tumors, and the role of macrophages and microglia in low-grade gliomas. The afternoon focused on mechanisms of resistance to specific therapies, including temozolomide (TMZ), bevacizumab, radiation, checkpoint blockade, and translational approaches to overcome these mechanisms of resistance, including poly(ADP-ribose) polymerase inhibitors and other novel approaches. A complementary track was opened with a keynote address by Dr Donald Abrams examining the importance of integrative approaches to current cancer treatments, taking into account the potential impact of diet and alternative therapies. This track of educational sessions focused on brain tumor survivorship and care plans, the importance of patient-reported outcomes, quality of life measures in meningioma...
patients, nutrition and the ketogenic diet, chemotherapy-induced ototoxicity, and patient sleep-wake disturbances. Drs Gregory Armstrong and Nino Chiocca concluded the sessions with a highlight of the role of patient-reported outcomes in long-term survivors of pediatric cancers, and Dr Chiocca reflected on the need for mechanistic understandings of drug resistance to overcome therapeutic failures.

**Late-Breaking Abstracts: Initial Results of the Phase II Study of Depatux-m**

Two late-breaking abstracts failed to meet their primary endpoints but did offer subgroup analyses that will be the subject of future phase III studies. Initial results were presented of the phase II EORTC-1410-BTG study of depatux-m, a tumor-specific antibody–drug conjugate consisting of the antibody ABT-806 bound to monomethyl auristatin F toxin. This open-label study randomized 260 patients with confirmed EGFR-amplified glioblastoma at first recurrence to depatux-m, depatux-m with TMZ, or either lomustine or TMZ monotherapy. No survival difference was observed between the placebo and depatux-m monotherapy groups. Median survival of 9.6 months (1-y overall survival [OS] 39.7%) was longer in the depatux-m/TMZ arm compared with 8.2 months (1-y OS 28.2%) in the placebo arm, with a hazard ratio (HR) for death of 0.71 (95% CI: 0.50–1.02). Although the primary endpoint was not met, a trend toward survival advantage with the depatux-m/TMZ combination was observed in patients with EGFR-amplified first recurrent glioblastoma. This will be further investigated in the phase III setting.

Phase IIb results were presented of the multicenter randomized placebo controlled trial of an autologous formalin-fixed tumor vaccine (AFTV) for patients with newly diagnosed glioblastoma. Prior studies have demonstrated clinical activity and in vivo immunoactivation of AFTV vaccines derived from paraffin-embedded tissue. In this phase IIb study, adults with newly diagnosed extensively resected glioblastoma were randomized to AFTV versus placebo. Median OS was not different between the AFTV treated (25.6 mo) and placebo-treated patients (31.5 mo, HR 1.19, 95% CI: 0.57 2.47, P = 0.64). However, in a subgroup analysis, 3-year OS did trend toward favoring AFTV treatment for tumors with negative p53 immunostaining (79% vs 43%, P = 0.072) and patients receiving total resection (81% vs 46%, P = 0.067). These subgroups will be further evaluated in the planned phase III study.

**Results of the CeTeG/NOA-04 Phase III Trial**

Dr Ulrich Herrlinger, one of 2 recipients of the Adult Clinical Research Awards, presented initial efficacy results of this phase III trial of lomustine (CCNU) and TMZ in O6- methylguanine-DNA methyltransferase (MGMT) promoter methylated newly diagnosed glioblastoma. This study investigated the combination of CCNU/TMZ in 129 newly diagnosed MGMT methylated glioblastomas following resection or biopsy. The primary outcome was 2-year landmark survival. Patients were randomly assigned 1:1 to experimental treatment with CCNU (100 mg/m2/d, D1) and TMZ (100 mg/m2/d, D2–6) administered every 6 weeks without concurrent TMZ during radiotherapy or control treatment with standard concurrent chemoradiotherapy followed by 6 cycles of adjuvant TMZ. CCNU/TMZ was more toxic, with 36% unable to escalate adjuvant TMZ to 200 mg/m2/d and only 39% completing all 6 planned cycles of therapy compared with only 3.2% of TMZ-only-treated patients not escalating adjuvantly and 60% completing all 6 cycles. Median OS was

Continued on page 5
prolonged from 31.4 months with TMZ alone to 37.9 months with CCNU/TMZ (HR 0.60, 95% CI: 0.35–1.0, P = 0.064). Two-year landmark survival was improved from 65% (95% CI: 57–82%) to 71% (95% CI: 61–83%). Despite meeting its primary endpoint of improvement in OS, progression-free survival (PFS) was not different between the 2 groups (P = 0.41). Potential explanations for this discrepancy between PFS and OS were presented, including higher frequency of pseudoprogression in the experimental arm. Salvage therapies did not clearly contribute to this discrepancy, and further discussion is anticipated to clarify how these data should inform clinical practice.

**Update on Targeted Therapy in Isocitrate Dehydrogenase Mutated Gliomas**

Results from the phase I study of AG-120, a first-in-class mutant isocitrate dehydrogenase 1 (IDH1) inhibitor for patients with recurrent or progressive IDH1 mutant glioma, were presented by Dr Ingo Mellinghoff, recipient of an Adult Clinical Research Award. Updates were provided for the cohort of non-enhancing gliomas, including results of an exploratory imaging analysis investigating treatment-induced changes in tumor growth rate by volumetric analysis. In this cohort of 35 patients with non-enhancing disease (n = 11 from dose escalation; n = 24 from dose expansion), the majority of tumors were World Health Organization grade II (n = 24), though grade III (n = 8) and grade IV tumors (n = 1) were included. The agent continues to show a favorable safety and toxicity profile. The overall response rate was 6% (n = 2), though 83% of patients had stable disease (n = 29). Median duration on AG-120 was 14.7 months (range 1.4–25 mo) and 63% remained on AG-120 for ≥1 year. Exploratory imaging analysis using volumetric quantification of T2/fluid attenuated inversion recovery (FLAIR) disease to assess tumor growth rate prior to and following treatment with AG-120 suggested a plateauing or reduction in tumor growth rate with treatment. Further refinement of the methodology used for growth rate imaging analysis continues and could potentially be an important contribution of this study.

**The Role of IDH Mutation in Alternative Telomere Lengthening**

Dr Joydeep Mukherjee, one of 2 recipients of the Adult Basic Research Award as well as recipient of the Andrew Parsa Young Investigator Award, presented mechanistic data on the role of mutant IDH in cooperating with loss of alpha thalassemia/mental retardation syndrome X-linked protein (ATRX) to drive alternative lengthening of telomeres and rescue gliomas from telomere-induced cell death. Telomere maintenance is critical for cell survival. In the absence of telomerase reverse transcriptase (TERT) activation, human tumors like gliomas utilize the recombination-based alternative lengthening of telomeres (ALT) pathway to maintain telomere integrity. Prior studies have shown that ATRX loss and p53 mutation alone are insufficient to drive an ALT cellular phenotype. Dr Mukherjee and colleagues showed that mutant IDH1 or ATRX loss alone are insufficient to drive the ALT phenotype. However, the combination of mutant IDH1 expression and loss of ATRX resulted in tumorigenic cells with an ALT phenotype, which was mediated by downregulation of RAP1 (repressor/activator protein 1) and XRCC1 (X-ray repair cross complementing protein 4), genes important in the telomere capping shelterin complex and fusion of dysfunctional telomeres through alternative nonhomologous end joining. These IDH1-mutant, ATRX-deficient cells were driven to use ALT to resolve telomeric dysfunction and escape cell death. These data suggest that agents which alter the linkage between mutant IDH and DNA repair pathway preference may have therapeutic potential in IDH mutant gliomas.

**Molecular Characterization of Aggressive Meningiomas Identifies Forkhead Box M1 as a Prognostic Marker**

Data on the comprehensive genomic characterization of aggressive meningiomas was presented by Dr David Raleigh, recipient of the other Adult Basic Research Award. This timely work builds on recent data suggesting that meningioma location and histologic variants are associated with specific mutational profiles in these tumors. In this report of data from the University of California San Francisco Meningioma Database, whole-exome sequencing, DNA methylation arrays, RNA-sequencing, Nanostring, and immunohistochemistry were performed on a discovery and validation set of aggressive grades I–III meningiomas to elucidate new drivers of meningioma aggressiveness. Similar to prior studies, whole-exome sequencing demonstrated poorer survival in tumors with increased somatic mutation burden. Interestingly, the proto-oncogene FOXM1 (Forkhead box protein M1) appeared to be an important driver of aggressiveness. RNA-seq identified FOXM1 expression to be associated with higher proliferation rates and poorer OS. High FOXM1 mRNA expression was also associated with decreased local recurrence-free survival (P = 0.004). FOXM1 promoted cell proliferation gene expression in part by potentiating beta-catenin activity. Through this integrated genomic analysis, FOXM1 was identified as a novel...
biomarker of aggressiveness, with implications for drug development.

**Selected Abstracts**

**Molecular Profiling Is Critical in Pediatric Embryonal Trials**

The Children's Oncology Group trial ACNS0332 was a phase III trial randomizing children with high-risk medulloblastoma or primitive neuroectodermal tumors to carboplatin during radiation therapy and/or isotretinoin during maintenance. The trial closed prematurely; data were provided on DNA methylation analysis for 60 patients and showed frequent molecular discrepancies with histologic diagnosis, including high-grade gliomas (n = 18), atypical teratoid rhabdoid tumors, and ependymomas that were not intended for the study. Outcomes were significantly poorer for these molecularly classified high-grade gliomas, underscoring the importance of molecular classification in future studies of supratentorial embryonal tumors.

**Post-hoc Analysis of IDH1/2 Mutation and 1p/19q Codeletion Status in RTOG 9802**

Molecular analysis was presented of tissue from the phase III randomized study of radiation with or without procarbazine/lomustine/vincristine (PCV) chemotherapy for high-risk low-grade gliomas. Of the initial study population, 39% had available samples for testing (n = 97). Progression-free survival was significantly longer with the addition of PCV for IDH mutant/codeleted and IDH mutant/non-codeleted but not IDH non-mutated/non-codeleted gliomas. Similar results were observed for OS, though the benefit in IDH mutant/codeleted tumors did not result in statistical significance due to the generally favorable survival profile in this group.

**Bevacizumab for Progressive Neurofibromatosis 2–Associated Vestibular Schwannomas**

Results were presented from the RARE-19 study, a phase II multicenter study of dose-intensified bevacizumab induction followed by maintenance. Of the 22 patients with progressive vestibular schwannomas who were enrolled, hearing response (primary endpoint) was observed in 42% and radiographic response in 21%, which was similar to previous studies using lower doses. Premature ovarian insufficiency was observed and requires further exploration as these data are integrated into clinical practice.

**Intracavitary Toca 511 for Recurrent High-Grade Glioma**

Updated results from 2 of 3 ongoing open-label, phase I trials investigating ascending doses of the retroviral replicating vector Toca 511 were presented. The intracavitary study (NCT01470794) enrolled recurrent high-grade glioma patients who underwent intracavitary injection followed by oral Toca 5-fluorocytosine (FC) with or without bevacizumab or lomustine. Responses have been favorable, with 3 complete responses and 2 partial responses in the Toca only arm, 1 complete response in the Toca/bevacizumab arm, and a median duration of response in all patients of 25.2 months.

**Intravenous Toca 511 for Recurrent High-Grade Glioma**

Data from the intravenous study (NCT01985256) were also presented. This study enrolled recurrent high-grade glioma patients who received pre-resection intravenous Toca 511 followed by intracavitary injection at resection and subsequent oral Toca FC. Following intravenous administration, the investigators demonstrated that cytosine deaminase protein was detectable and quantifiable in resected gliomas and that Toca 511 can infect and spread independently of T-cell infiltration in the tumor microenvironment.

**Novel Small-Molecule Inhibitor of OLIG2**

Data were presented on a small-molecule inhibitor, CT-179, which was shown to modulate the transcription of oligodendrocyte transcription factor (OLIG2) target genes and result in inhibition of cell growth, induction of apoptosis, and G2/M arrest of glioma stemlike cells in vitro.

**Volumetric Analysis of Postsurgical Residual Tumor in Patients on the RTOG 0825 Study**

Volumetric analysis was presented of residual enhancing and non-enhancing tumor for patients in this randomized phase III study of bevacizumab for newly diagnosed glioblastoma. Discordance was noted between post-hoc volumetric assessment of complete resection and physician determination in the study. Smaller residual tumor volume following resection was associated with improved outcomes. Patients with greater residual T2/FLAIR volumes had poorer OS when treated with bevacizumab (HR 1.42, P = 0.02).

This recap of the 22nd Annual Meeting of the Society for Neuro-Oncology originally appeared in the Society's official journal, *Neuro-Oncology*. 

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SNO News
Pediatric Basic Research
Global reduction in H3K27me3, similar to H3K27M mutant gliomas, is a molecular surrogate for pediatric posterior fossa-group A ependymomas
Sriram Venetti

(Not pictured)
Pediatric Basic Science
Large scale tumor mutational burden analysis of pediatric tumors provides a diagnostic tool for germline predisposition and reveals novel candidates for immune checkpoint inhibition
Brittany B. Campbell

Applied Neuro-Oncology
Neurocognitive functioning in EORTC Brain Tumor Group randomized phase II TAVAREC trial (EORTC 26091, NCT01164189) on temozolomide with or without bevacizumab in 1p/19q intact recurrent grade II and III gliomas
Martin Klein

Pediatric Clinical Research
Neurocognitive outcome in children with sensorineural hearing loss following treatment for malignant embryonal brain tumors
Iska Moxon-Emre

Pediatric Clinical Research
Phase III trial of CCNU/temozolomide (TMZ) combination therapy vs. standard TMZ therapy for newly diagnosed MGMT-methylated glioblastoma patients: the CeTeG/NOA-09 trial
Ulrich Herrlinger

Adult Clinical Research
Phase III trial of CCNU/temozolomide (TMZ) combination therapy vs. standard TMZ therapy for newly diagnosed MGMT-methylated glioblastoma patients: the CeTeG/NOA-09 trial
Ulrich Herrlinger

Adult Clinical Research
Long-term impact of radiation dose and volume on intellectual functioning (IQ) for children diagnosed with medulloblastoma: A report from the Children’s Oncology Group (COG) 
Leanne Embry

Andrew Parsa Young Investigator Award for Basic Research, supported by the National Brain Tumor Society
Mutant IDH1 co-operates with ATRX loss to drive the alternative lengthening of telomere (ALT) phenotype in glioma
Jaydeep Mukherjee

Adult Basic Research, supported by the Brain Tumour Charity
Comprehensive genomic characterization of aggressive meningiomas identifies molecular signatures that predict clinical outcomes
David Raleigh

Adult Clinical Research, supported by the American Brain Tumor Association
AG-120, a first-in-class mutant IDH1 inhibitor in patients with recurrent or progressive IDH1 mutant glioma: updated results from the phase 1 non-enhancing glioma population
Ingo Mellinghoff

Applied Neuro-Oncology, supported by the Sontag Foundation
Cognitive Functions and Variants in Genes Associated with Aging and Inflammation in Brain Tumor Patients
Denise Correa

Applied Neuro-Oncology
Neurocognitive functioning in EORTC Brain Tumor Group randomized phase II TAVAREC trial (EORTC 26091, NCT01164189) on temozolomide with or without bevacizumab in 1p/19q intact recurrent grade II and III gliomas
Martin Klein
SNO Launches Online Education Center

SNO is pleased to introduce the SNO Online Education Center, which was developed to promote advancement in neuro-oncology research and education by providing online recordings from prominent speakers in the field.

The audio and slides from presentations contained in the SNO Online Education Center were captured during the 2017 Annual Meeting of the Society for Neuro-Oncology and are grouped into the following categories:

- Clinical Trial Overview – 7 talks
- Basic Science – 9 talks
- Immunology/Immunotherapy – 5 talks
- Brain Metastasis – 1 talk
- Pediatrics – 2 talks
- Lower Grade Gliomas – 2 talks
- Elderly Care in Glioblastoma – 4 talks
- 2017 SNO Review Course – 7 talks

It is our hope to continue to expand this online learning center with a broad range of topics and speakers that will enhance the scientific and clinical expertise within the field of neuro-oncology.

To view the access the talks in the SNO Online Education Center, click here.

In Memoriam

It is with great sadness that the Society share the news of the passing of two influential SNO members who greatly impacted our field.

Larry Kun

Larry Kun died Sunday, May 27, 2018, after a short battle with melanoma. He was 72. Dr. Kun dedicated 32 years of his life to the mission of St. Jude Children’s Research Hospital, founding the Department of Radiation Oncology in 1984, the Department of Radiological Sciences in 2004 and then rising to the position of clinical director and executive vice president in 2013.

After his retirement from St. Jude in 2016, Dr. Kun moved to Texas to be closer to his family where he joined the faculty of the UT Southwestern Medical Center in Dallas. Dr. Kun served on the SNO Board of Directors from 2001 to 2003.

Charles (Charlie) Wilson

Charles (Charlie) Wilson, passed away on February 24, 2018, in Greenbrae, California. He was 88. Dr. Wilson was a visionary physician–scientist, an extraordinarily gifted surgeon, and a mentor to many working in the field of neuro-oncology today. He taught neurosurgery at Louisiana State University and, in 1963, joined the University of Kentucky, where he started its division of neurosurgery. He joined UCSF in 1968 as chairman of its neurosurgery division and soon expanded the brain tumor research he had begun in Kentucky. He remained at UCSF for 28 years and was the founding director of the UCSF Brain Tumor Research Center.

Dr. Wilson received SNO’s Lifetime Achievement Award, the Society’s highest honor, in 2008 at the SNO Annual Meeting in Lake Las Vegas, Nevada.

Drs. Kun and Wilson will be remembered during the 2018 Annual SNO Meeting in New Orleans, Louisiana, in November.
community’s awareness of this issue as well as its impact on patient care. Here we will present the results of the survey.

A total of 480 SNO community members responded to the survey, with 88% of responders involved in direct patient care. The majority, 62%, were adult neuro- or medical oncologists and 14% other allied health professions – including pediatric neuro-oncologists, nurses, representatives from industry, and pharmacists – amongst others. Roughly two-thirds (62%) of the responders were from the United States and 38% outside of the US. Lomustine was prescribed weekly by 23% of responders and at least twice per month in 31%. Indications for use were highly variable with 76% using it for glioblastoma; 64% for anaplastic oligodendrogliomas; 55% for anaplastic astrocytoma, and numerous providers using it for medulloblastoma. It was used as part of the PCV (procarbazine, CCNU, vincristine) regimen in 67% of responders followed by single agent use in 63%.

A total of 56% of responders were NOT aware of the increased price before receiving the survey (Figure 1). Of those who were aware, 18% were informed from media; 15% from patients; and 14% from clinician or staff at other institutions. Several commented that though they were aware of the cost increase, they did not realize the extent.

Of the responders who were aware of the price increase, 64% reported more time spent securing insurance approval, and 53% of patients complained about the increased cost of copay. Insurance denials were noted by 34%, and increased cost translated into a need to change therapy in over one-third of cases (36%) (Figure 2). Challenges individual practitioners reported included having to import lomustine from a different country, experiencing significant delays in starting treatment, changing to BCNU because of reimbursement, and excluding patients from clinical trial participation.

Overall the survey indicated broad impact to the SNO community and especially our patients. Moving forward, SNO will work with patient advocacy groups and others to explore to ways to address this issue, including advocating for changes at the congressional level. We welcome any suggestions and advice from the SNO membership.

References:
SNOLA 2018 Conference Overview

Marcos V. C. Maldaun and Olavo Feher

The second edition of the conference of the Society for Neuro-Oncology Latin America, named *The State of the Art in Neuro-Oncology*, was held this last March in the city of Sao Paulo, Brazil.

The 1020 attendees experienced three days of high quality neuro-oncology knowledge exchange given the more than 40 international speakers who were present as well as a diversity of attendees from all around Latin America.

More than discussing the future technologies and standard of care treatments now available including immunotherapy around the world, a goal of ours was to collaboratively engage into making this first world countries’ reality also a possibility for our Latin American patients. Therefore, interim meetings were organized within the conference with willing specialists that are to become even stronger advocates within this area, being fortified by the backup given by our society.

Also thinking about improving patient care, we have launched the SNOLA Consortium program, a first trial of ours to implement clinical trials in a continent that so many to care for. Our 2018 timeline has been established with the mission to accomplish the birth of a Latin American data base of institutions that are capable of carrying out trials.

Finally, the new board of directors for the years of 2018-2020 was disclosed, having Dr. Olavo Feher (president), Dr. Robson Ferrigno (Vice-President), Dr. Samir Hanna (First Treasurer), Dr. Camilla Yamada (Second Treasurer), and Dr. Marcelo Schuster (Secretary), ahead of this new and intense journey for the following years of great accomplishments.

We are glad to announce that our next and third official meeting will be held in Buenos Aires, Argentina, and Rio de Janeiro expects all neuro-oncologists around the world for the 2023 WFNOS Interim Meeting under our organisation.

See you all in the near future and thanks to all of those who support us in every step we take in advancing neuro-oncology in Latin America. For more information on SNOLA’s activities, please visit www.snola.org/br.

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Groups Join Together to Support Creation of Society for Neuro-Oncology in Sub-Saharan Africa

Chas Haynes, Jason Huse, and Gelareh Zadeh

A planning meeting for supporting the development of the field of neuro-oncology in sub-Saharan Africa was held in London on October 18-19, 2017 and was organized through the collaborative efforts of the Society for Neuro-Oncology (SNO), the International Brain Tumor Alliance and the Zimbabwe Brain Tumor Association, in association with Mark Bernstein, the Greg Wilkins-Barrick Chair of International Surgery at the University Health Network, University of Toronto, Canada.

This meeting was an important step towards the establishment of a sustainable neuro-oncology community across sub-Saharan Africa. Since the conclusion of the meeting in London, a Steering Committee of stakeholders from sub-Saharan Africa have taken steps toward developing a formal constitution (charter) for the creation of the Society for Neuro-Oncology in Sub-Saharan Africa (SNOSSA). The Steering Committee is also organizing a two-day inaugural SNOSSA conference to be held in Abuja, Nigeria, in conjunction with the Continental Association of African Neurosurgical Societies in July of this year.

The Society for Neuro-Oncology and the Greg Wilkins-Barrick Chair of International Surgery, along with sister groups including the European Association of Neuro-Oncology, look forward to supporting the members of SNOSSA in their effort to improve the care of patients with brain tumors in this important region of the world.
2018 SNO Committees

SNO Audit Committee
Chair: Gene Barnett

SNO Awards Committee
Chair: Manish Aghi

SNO Bylaws Committee
Michael Lim

SNO Communications Committee
Co-Chairs: Albert Kim, Jennie Taylor

SNO Fellowship Match Committee
Co-Chairs: John de Groot, Scott Plotkin

SNO Future Sites Committee
Co-Chairs: James Perry, Susan Chang, Michael Vogelbaum

SNO Guidelines and Reported Outcomes Committee
Chair: Tracy Batchelor, Co-Chair: Susan Chang

SNO International Outreach Committee
Co-Chairs: Jason Huse, Mustafa Khasraw

SNO Annual Meeting Committee
2018 Scientific Meeting Co-Chairs:
Frank Furnari, Daphne Haas-Kogan, Vinay Puduvalli
Education Day Co-Chairs:
Brian Alexander, Ingo Mellinghoff, Joohee Sul, Martin Taphoorn

SNO Membership Committee
Macarena de la Fuente

SNO Public Policy Committee
Co-Chairs: Jann Sarkaria, Monica Venere, E. Antonio Chiocca

SNO Website and Technology Committee
Chair: Erik Sulman

SNO Young Investigators Committee
Co-Chairs: Monica Venere, Milan Chheda, Eudocia Lee

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