Recap of the 4th Quadrennial World Federation of Neuro-Oncology Meeting

By Nicholas Butowski, MD

AN INTERNATIONAL FORUM FOR SHARING THE LATEST LABORATORY AND CLINICAL RESEARCH

The 4th Quadrennial Meeting of the World Federation of Neuro-Oncology was held in conjunction with the 18th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology on November 21-24, 2013 in San Francisco, CA. The meeting enjoyed record attendance of close to 2100 registrants from 46 different countries.

We congratulate meeting chair, Dr. Mitchel Berger, for composing a comprehensive program which highlighted cutting-edge laboratory and clinical research. Special thanks are also extended to the scientific planning committee which was comprised of members from each of the three leading neuro-oncology societies, including Koich Ichimura & Ryo Nishikawa (ASNO), Riccardo Soffietti & Michael Weller (EANO) and Susan Chang & Russell Pieper (SNO). The meeting provided an enthusiastic environment for the exchange of ideas among clinical and laboratory scientists involved in the research, diagnosis, care and treatment of patients with central nervous system tumors.

The meeting was held in the dynamic city of San Francisco.

Over 2000 registrants attended the WFNO Quadrennial Meeting.

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W.K. Alfred Yung was recognized with a special Public Service Award for his many years of service to the Society as Editor in Chief of Neuro-Oncology.

Education Day
The Education Day on Thursday, November 21 was entitled From Drug Discovery to Clinic and reviewed the various aspects of clinical development of agents that range from preclinical testing, pharmacokinetic and pharmacodynamic considerations, first in man studies, and the challenges of...
As the first quarter of my term as President draws to an end, I would like to take this opportunity to provide an update on several important activities SNO leadership has focused on during this interval.

Without question, our major focus to date has been preparations for the upcoming 2014 SNO meeting (November 13-16, 2014). The meeting venue, the Loews Hotel in South Beach, Miami, Florida, is outstanding with excellent space for an effective meeting set in a beautiful location (maybe too beautiful!). We have also secured extra hotel room space at the adjacent James Hotel (not related to Lebron!) which is immediately next door (70 feet away). Both hotels offer terrific accommodations. I am extremely grateful to Patrick Wen and Gelareh Zadeh as co-chairs of the meeting for their indefatigable energy and commitment to make the agenda for the 2014 meeting exceptional. I am extremely pleased to report that we have received 885 abstract submissions for this year’s meeting. This represents a 30% increase compared to 2012 and is a new record for a non-WFNO year!

In an ongoing effort to improve upon each meeting, Patrick and Gelareh have added new aspects to this year’s meeting. Here are a few highlights:

- Three concurrent sessions/day (new)
- An increased number of sunrise sessions (new)
- Electronic posters which will be viewable via kiosks located around the meeting space (new)
- Dedicated sessions thus far include tumor metabolism, biomarkers, preclinical models, immunotherapy, neuro-imaging, and patient reported outcomes/neurocognition.
- Town Hall session: This year’s “debate” style session will focus on whether molecular characterization should replace histopathologic classification of glial tumors
- Keynote speaker: Craig Thompon, President and Chief Executive Officer, Memorial Sloan Kettering Cancer Center will discuss tumor metabolism.

Building on the success of our 2013 event, this year’s annual meeting will include an optional dinner on Saturday night. The location for this year’s meeting is the Perez Art Museum Miami (the “PAMM”) - a beautiful venue located on the Miami waterfront with an impressive and somewhat eclectic art collection. Members are encouraged to book their reservations for this special evening early as space is limited.

We are also tremendously indebted to the efforts of Chas Haynes, SNO’s Executive Director as well as the SNO administrative staff (Jan Esenwein, Linda Greer, Megan Bell and Elizabeth Haynes). Chas deserves a particularly noteworthy shout-out for his efforts to help raise critically important funds needed to provide ongoing support for SNO and the meeting. Thanks to Chas’ tireless efforts, we have been able to ensure that our meeting and overall efforts have sufficient support to continue to move forward.

I’d like to make you aware of two additional programs supported by SNO that will be run just prior to the Annual Meeting. The first, developed by Marciwj Mrugala, is a ½ day neuro-oncology review course which will occur on November 12, 2014. This course is intended as an update on basics related to our field and is ideally suited for those less experienced in neuro-oncology looking for a good overall review. The second program is a very exciting offering developed by Victor Levin entitled the CNS Anticancer Drug Disovery and Development Conference. This program will run November 12-13, 2014 and will provide a state-of-the-art discussion of drug development for neuro-oncology by bringing together top academia and pharmaceutical researchers focused on drug delivery into the CNS. We hope that both of these programs will be of value to SNO members and our field. If successful, they could be repeated and/or expanded in future years. Information on registration for these meetings can be found on the SNO website. I urge you to register early as space is limited for both programs.

Our next major focus has been on SNO’s journals. Patrick Wen has taken over from Al Yung as the Editor-in-Chief of Neuro-Oncology and has done a remarkable job. This is the quintessential thankless job and the workload is significant and relentless. As all of you have seen, the journal has several new features and modifications which have enhanced its overall value markedly. In addition, Neuro-Oncology Practice has successfully launched
thanks in major part to Susan Chang’s leadership and energy. We are all extremely grateful to the efforts of Patrick, Susan and their respective editorial boards.

Another important effort that is nearing completion is a redevelopment of the SNO website. Eric Sulman and Nic Butowski, along with Chas Haynes, have worked through myriad details during countless teleconference hours to make the revised website of significant benefit to our membership. More than simply a redesign, the new website will feature a communications integrated platform that will enable SNO members to create secure online communities, driving collaboration and engagement across neuro-oncology subspecialties.

SNO has also continued to partner with our sister organizations, EANO and ASNO, to further advance our field internationally. Following ongoing discussions, EANO and ASNO will enter into a formal collaboration with SNO to partner for the future development of our journals, Neuro-Oncology and Neuro-Oncology Practice, as well as a new international e-magazine. We will also continue to support our respective missions through reciprocal travel scholarships to our scientific meetings. Similarly, SNO continues to expand our relationship with ISPNO, and we are playing an important administrative role in their biennial pediatric symposium that will take place in Singapore later this month.

Finally, SNO hosted a follow-up retreat in February 2014, to identify key areas of development and future focus. The top action item identified is the development of a technology plan to better foster collaboration and communication amongst our members. Eric Sulman has agreed to lead a committee dedicated to prioritizing and developing agenda items for this plan.

Enough for now. I strongly urge each of you to reach out and help. SNO is only as productive as the aggregate efforts of its members. We also need your ideas and initiatives to help SNO continue to thrive and grow.

Thank you for all each of you do every day.

Respectfully,

David A. Reardon, M.D.
WFNO Abstract Award Winners

ADULT CLINICAL RESEARCH AWARD  Mark Gilbert
RTOG 0825: Primary outcome results from a phase III randomized, placebo controlled trial evaluating bevacizumab in newly diagnosed glioblastoma
Pictured: Mark Gilbert (L) and Frederick Lang

ADULT CLINICAL RESEARCH AWARD  Olivier L. Chinot
Final efficacy and safety results from AVAglio, a phase III trial of bevacizumab (BEV) plus temozolomide (TMZ) and radiotherapy (RT) in newly diagnosed glioblastoma
Pictured: Olivier Chinot (L) and Frederick Lang

ADULT QUALITY OF LIFE AWARD WINNER  Vinai Gondi
Memory preservation with conformal avoidance of the hippocampus during whole-brain radiotherapy (WBRT) for patients with brain metastases: preliminary results of RTOG 0933
Supported by the Sontag Foundation  Pictured: Kay Verble (L) and Vinai Gondi

ADULT BASIC SCIENCE AWARD WINNER  Jun Fu
CDK2-mediated OLG2 phosphorylation represses p27 expression and promotes brain tumor development
Supported by Merck  Pictured: Jun Fu (L) and James Pluda

ADULT TRANSLATIONAL RESEARCH AWARD WINNER  Colin Watts
An integrated genomic analysis of individual patients with glioblastoma reveals previously unrecognised levels of intra-tumour heterogeneity that reflects cancer evolutionary dynamics
Supported by Genentech  Pictured: Colin Watts (L) and Ryo Nishikawa

PEDIATRIC TRANSLATIONAL RESEARCH AWARD WINNER  Marcel Kool
Genome sequencing of SHH medulloblastoma predicts age-dependent response to smoothened-inhibition and rational therapeutic combinations
Supported by the National Brain Tumor Society  Pictured: Robert Carrie Treadwell (L) and Marcel Kool

PEDIATRIC BASIC SCIENCE AWARD WINNER  Katy Taylor
Recurrent activating ACVR1/ALK2 mutations in diffuse intrinsic pontine glioma.  Supported by the Pediatric Brain Tumor Foundation
Pictured: Robin Boettcher (L) and Katy Taylor

PEDIATRIC EPIDEMIOLOGY AWARD WINNER  Sabine Mueller
Recurrent stroke risk in childhood cancer survivors
Pictured: Sabine Mueller (L) and Ryo Nishikawa

EPIDEMIOLOGY AWARD WINNER  Melissa Bondy
POT1 germline mutations may explain a subset of familial glioma: a report from the Gliogene Consortium  Supported by Novocure
Pictured: Melissa Bondy (L) and Robert Wechsler-Reya

PEDIATRIC CLINICAL RESEARCH AWARD WINNER  Eric Bouffet
Weekly vinblastine in chemotherapy naïve children and adolescent with unresectable or progressive low grade glioma: a Canadian cooperative study
Pictured: Eric Bouffet (L) and Michael Taylor

PEDIATRIC BASIC SCIENCE AWARD WINNER  Rintaro Hashizume
Targeting the histone H3.3-K27M mutation for the treatment of diffuse intrinsic pontine gliomas
Pictured: Rintaro Hashizume (L) and Robert Wechsler-Reya
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The meeting built on the traditional SNO format and presented top-scoring abstracts and meet-the-expert sessions. The Scientific Meeting began Friday, November 22 with sunrise sessions followed by the start of the first general session. The four Sunrise Sessions were on the following topics: 1) Maximal Safe Resection of Glioma - Current Techniques; 2) Pediatric Genomics Update; 3) Innovative QOL Programs in the Clinic Setting; 4) Metabolic Imaging. After the sunrise sessions, the first plenary session started with an official meeting welcome from Dr. Mitchel Berger followed by the Victor Levin Lecture presented by Monika Hegi and Roger Stupp. Dr. Kenneth Aldape then delivered his Presidential Address during which he presented Dr. WK Alfred Yung with the Society’s Public Service Award. This was followed by the EANO Keynote Address by Stefan Pfister, MD, PhD, entitled Translating next generation diagnostics into next generation treatment.

A Young Investigators Luncheon Roundtable was held at noon on Friday at which trainees and early phase independent investigators participated in informal discussions with senior investigators at roundtables organized into a variety of different areas. Lunch was followed by afternoon concurrent sessions including 1) Pathology and Genomic and 2) Adult Clinical Sciences. The next set of concurrent sessions included 1) Angiogenesis and Invasion and 2) Pediatric Clinical Sciences. Friday

Continued on next page
First World Summit of Brain Tumor Patient Advocates Held in San Francisco Concurrently with WFNO

By Denis Strangman

The First World Summit of Brain Tumor Patient Advocates, held in San Francisco in November 2013, brought together 64 brain tumor patient advocates from the main brain tumor charities and not-for-profits from 20 countries around the globe.

The Summit’s purpose was to enable brain tumor patient advocates to share best practice, learn from each other and return to their own countries with new ideas, new contacts and fresh enthusiasm. The two-day Summit, designed to be highly participative and inspirational, involved nearly all of the delegates in either presenting on a wide range of important topics or leading interactive workshop sessions. Invited guest speakers from the United States included leading neuro-oncologist Dr. Susan Chang, from the University of California at San Francisco (UCSF), who gave a keynote presentation on Brain Tumor Therapy Update, and neuro oncologist Dr Virginia Stark-Vance from Texas on Thinking Outside the Box: The Story of Avastin for GBM.

During the sessions, participants identified and shared their challenges, opportunities and best practice in developing and running their own organisations. Also discussed in detail were the issues in their countries preventing brain tumor patients from gaining access to safe, effective, and affordable healthcare from diagnosis through to treatment, as well as care in communities and, as appropriate, palliative care.

The challenges for brain tumor families were also a talking point during the Summit as a number of participants were either current or former caregivers. Issues highlighted during the Summit included the differences in the regulatory processes between countries; the huge challenges for brain tumor patients in third world countries; the variability of reliable annual data about the numbers of brain tumor incidence and prevalence, and differences in the support provided to brain tumor patients, their families, and caregivers from country to country.

We look forward to seeing members of all international neuro-oncology societies at the 19th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology which will take place November 13-16, 2014, at the Loews Hotel in Miami, Florida. More information on the 2014 Annual Meeting can be found the SNO website: www.soc-neuro-onc.org.

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evening, a special “Townhall Meeting” reviewed the results of the recent international randomized phase III trials evaluating the use of antiangiogenic strategies for newly diagnosed and recurrent glioblastoma session.

Saturday Sunrise Sessions featured the following topics: Session 1) WHO Classification of Tumors – Update; Session 2) Overview of GWAS and Potential for International Collaboration; Session 3) Immunological Strategies in Neuro-Oncology; Session 4) Asymmetric Cell Division- Avenues for Research and Clinical Applications; Session 5) Joint AAN Session: Controversies in Neuro-Oncology. After the sessions a mini-symposium on Low Grade Gliomas was held and then followed by the ASNO Keynote Address by Do-Hyun Nam, MD, PhD, entitled Personalized targeted therapeutics based on the genomic characterized patient derived model (Avatar) system. Up next, award winning abstracts were presented, followed by the SNO Keynote address delivered by Frank McCormick, PhD, entitled New Ways of Targeting Ras.

The first of its kind mid-level faculty networking luncheon was held at noon on Saturday with the intent of forming a horizontal mentoring group. After lunch we witnessed the first set of Saturday afternoon concurrent sessions: 1) Cell Biology and Signaling, 2) Molecular Epidemiology and Biomarkers. The second set of concurrent sessions included 1) Pediatric Basic and Translational Research and 2) Neurocognitive Outcomes and Quality of Life. A poster session was organized after the oral sessions concluded for the day. That evening, the SNO Gala Dinner, at San Francisco City Hall, was the social highlight of the meeting that allowed us to recognize the important service of those who made this meeting possible.

The Sunday, November 24th Sunrise Sessions included 1) Brain Metastases; 2) Minimizing Side Effects From Radiation; 3) Tumor Associated Epilepsy; 4) Microglia. The sunrise sessions were followed by concurrent meetings on Metabolic Pathways/Stem Cells and Imaging and RANO Update. The last concurrent sessions were 1) Preclinical Therapeutics and 2) Biologic/Immunologic Therapies followed by the meeting’s adjournment.

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The Society for Neuro-Oncology welcomes Bristol-Myers Squibb and Celldex as our new Platinum Level Supporters!

MARK YOUR CALENDARS!

Special Pre-Conference Sessions
at the 2014 SNO Annual Meeting
Loews Hotel, Miami Beach, FL

CNS Anticancer Drug Discovery and Development Conference
November 12-13, 2014

This special two day conference will focus on the range of issues that have impacted the failure to develop unique drugs for CNS cancers as well as innovative approaches being applied to brain tumor chemotherapy.

Neuro-Oncology Review Course
November 12, 2014

This fast paced, half-day activity will provide high quality education for all those interested in reviewing and enhancing their knowledge in the principles of clinical neuro-oncology.

Visit the SNO website for more information on these special sessions!

www.soc-neuro-onc.org
Annual Neuro-Tumor Club Dinner Meeting Recap

The 20th Annual Neuro-Tumor Club Dinner Meeting took place on April 7, 2014, in San Diego, California. This meeting, for brain tumor researchers attending the AACR Annual Meeting, was organized by the Society for Neuro-Oncology with the support of Genentech, Novocure and the National Brain Tumor Society. Frank Furnari of the Ludwig Institute for Cancer Research, University of California, San Diego, and Shi-Yuan Cheng of Northwestern University, served as co-chairs for the dinner.

The event drew approximately 150 investigators from diverse disciplines relevant to brain tumor research, and was very successful in strengthening existing personal research connections and collaborations, generating new associations and presenting the group with updates in topics important to brain tumor research.

Forty abstracts were received of uniformly high quality. Submissions came from eight countries and were reflective of cutting edge, thought-provoking basic and translational research in the field of neuro-oncology. Trying to reduce this to fourteen talks was difficult given the standard of the submissions. The talks were arranged in four consecutive sessions that encompassed the following topic areas:

- Genomic Phenotyping and Personalized/Combinatorial Therapy
- Tumor Microenvironment, Signaling and Cancer Stem Cells
- Novel Agents, Markers and Immunotherapy
- Animal Models and CNS Metastases

Each topic area was excellently framed by over-views from authority figures in those areas including: Dr. Richard Gilbertson, St. Jude Children’s Research Hospital; Albert Wong, Stanford University; Isabella Taylor, Johns Hopkins University; and Carol Kruse, University of California, Los Angeles.

The dinner took place at the Hotel Solamar, a boutique property located near the 2014 Annual AACR Meeting venue. Attendees’ registration continued right up to the dinner and in the end there were over one hundred and fifty researchers present. The 14 speakers were scheduled over three hours, requiring a tight time-line, which was kept judiciously by all presenters. All speakers managed to finish on time and yet conveyed an astonishing amount of background information and experimental data. The talks were followed by lively discussions. There were many excellent presentations during the night. In the first session, Richard Gilbertson presented data derived from whole genome and RNA sequencing of supratentorialependymomas showing a highly recurrent oncogenic fusion occurring between RELA and an uncharacterized gene, C11orf95, in 70% of these tumors. Expression of the C11orf95-RELA fusion protein in neural stem cells drove their transformation in conjunction with an oncogenic NF-κB transcription signature, raising the possibility of new avenues for therapeutic intervention.

In the next session, Albert Wong showed that the mutant EGF receptor, EGFRvIII, is frequently co-expressed with the stem cell marker, CD133, and that EGFRvIII+/CD133+ tumor cells were highly aggressive. Targeting these double positive cells with a bi-specific monoclonal antibody greatly enhanced survival of tumor-bearing mice. Also in this session, Terry Johns showed that extracellular domain mutants of EGFR found in glioma are more sensitive to the pan-ErbB inhibitor, dacomitinib, when compared to the wild type receptor, and that Ras mutations cause up front resistance to EGFR based therapy. In session three, Chien-Tsun Kuan provided updates on the development of recombinant immunotoxins (RITs) that target wild type EGFR and EGFRvIII on the surface of glioma cells and a new surface marker for gliomas, glycoprotein NMB. He also described new approaches of reducing immunogenicity of these RITs in humans and the next generation of RIT. Elizabeth Maher reported detection of 2HG by MR spectroscopy, which proved to be a robust clinical biomarker in low-grade gliomas. The initial success of using 2HG levels to guide therapies for gliomas, especially for these low-grade gliomas, was highly encouraging.

The final session had four excellent presentations that described studies using various animal models of brain tumors to demonstrate the role of ATRX in glioma progression and response to DNA damage, initial characterization of a new de novo animal model of leptomeningeal metastasis, combination of cellular and gene therapies to treat breast cancer patients with brain metastasis, and deciphering circulating tumor cells from patients with breast cancer metastatic to the brain. The evening concluded with many of the attendees remaining to engage in informal conversation prompted by the presented topics.

The Society thanks Drs. Furnari and Cheng for organizing a stimulating and enjoyable evening. SNO members are encouraged to mark their calendars for the next Neuro-Tumor Club Dinner, scheduled to take place on Monday, April 20, 2015, in Philadelphia, PA.
Call for Abstracts!
The 3rd Biennial Pediatric Neuro-Oncology Basic and Translational Science Conference

Members of SNO are encouraged to submit their original research to this important conference focusing solely on pediatric basic and translational science. The conference will be held in San Diego, California, at the Westin San Diego Hotel, on May 7-8, 2015. Abstracts are due January 23, 2015.

The 2015 meeting will be organized by co-chairs Suzanne Baker, PhD (St. Jude Children's Research Hospital) and David Eisenstat, MD (University of Alberta).

The biennial conference will encourage the sharing of ideas and results, new collaborations, and will provide attendees with a state-of-the-art update in the field of pediatric brain tumor research.

The program will feature informative plenary sessions drawn from the accepted abstracts and an informal poster session, as well as "Meet the Expert Sunrise Sessions", at which attendees can catch up with late breaking areas of research and controversies in the field.

Abstracts will be accepted in the following categories:

- ATRT
- Basic Biology
- Brainstem Tumors
- Ependymoma
- Immunology/Immunotherapy
- Genetics/Epigenetics
- Germ Cell Tumors
- High Grade Gliomas
- Medulloblastomas/PNETs
- Pediatric Brain Tumor Models
- Stem Cells
- Signaling
- Translational Therapeutics

For more information or to submit an abstract, visit www.soc-neuro-onc.org.

SNO Participates in Brain Tumor Clinical Trial Endpoints Workshop

Hosted in February of this year by the Jumpstarting Brain Tumor Drug Development Coalition (Accelerate Brain Cancer Cure, Musella Foundation for Brain Tumor Research & Information, National Brain Tumor Society, and the Society for Neuro-Oncology), experts representing the U.S. Food and Drug Administration (FDA), the National Cancer Institute (NCI), medical imaging companies, contract research organizations, leading biopharmaceutical companies, and medical academic research organizations, addressed how to overcome variables in medical imaging, which currently hinder the ability to accurately assess brain tumor response to investigational therapies, thus slowing drug development for this vulnerable patient population.

The Workshop featured presentations and panel discussions, as well as facilitated audience-panel deliberations on topics such as: current brain tumor imaging protocols in multicenter trials; emerging techniques and technologies in brain tumor imaging; and the use of imaging measurements of tumor progression and tumor response in clinical trials. From these conversations, a final group discussion drove the creation of an action plan for the community to follow in order to improve the accuracy and consistency of imaging data, and to launch a coordinated effort to accelerate brain tumor therapy approvals using imaging as a criteria, including:

1. Refine and standardize aspects of the Response Assessment in Neuro-Oncology (RANO) criteria, which is a leading method of evaluating brain tumor response to therapy. This includes refinement of RANO’s components, which ultimately can codify its role as the sole criteria used to control variability, and ensure accuracy and consistency in brain tumor clinical trials.

2. Establish standards and techniques across the brain tumor imaging field so that accurate data about response to therapies can be gathered, analyzed, managed, and shared across institutions and medical centers in order to ensure the reproducible data needed for registration trials.

The community also agreed that new and emerging technology, tools, and techniques should continually be evaluated for their ability to further improve imaging accuracy. The second Brain Tumor Clinical Trial Endpoints Workshop will be held on October 15, 2014 in Bethesda, MD. For more information on the Jumpstarting Brain Tumor Drug Development Coalition, www.braintumor.org.
Cochrane Collaboration Review Course Grant Recipients

As part of a joint initiative with the Cochrane Collaboration, review training grants have been awarded to the following SNO members: Caroline Chung, Princes Margaret Cancer Center, Toronto, ON (Treatment of radiation brain necrosis after radiotherapy or radiosurgery) Luluel Khan, University of Toronto, Toronto, ON (Radiation dose escalation for high grade glioma) and John Villano, University of Kentucky, Louisville, KY (PCV for refractory high-grade gliomas).

SNO congratulates these successful applicants on this prestigious recognition and opportunity to expand our understanding of CNS tumors!

Congratulations to Incoming 2014 SNO Officers and Board Members

President: David Reardon
Vice President: E. Antonio Chiocca
Secretary-Treasurer: Evanthia Galanis
Pathology Representative: Daniel Brat
Radiation Oncology Representative: Paul Brown
Young Investigator Representative: Manish Aghi
Allied Health Representative: Margaretta Page