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IBTA Observations from the

2009 Joint Meeting of the Society for Neuro-Oncology (SNO) and the AANS (American Association of Neurological Surgeons)/CNS Section on Tumors, New Orleans, USA, 22-24 October 2009

By Kathy Oliver, Co-Director, International Brain Tumour Alliance (IBTA)

This summary of miscellaneous items from the scientific sessions at the SNO/AANS-CNS Section on Tumors conference is based on the writer's notes and the abstracts of the presentations and posters which appear in "**Neuro-Oncology**" the official journal of the Society for Neuro-Oncology, Volume 11, Issue 5, October 2009. The abstracts in their entirety are available online on a pay-per-article or pay-per-issue basis here: <http://neuro-oncology.dukejournals.org/cgi/content/full/11/5/563>

This was an historic meeting.

For the first time ever, the **Society for Neuro-Oncology (SNO)** and the **AANS/CNS Section on Tumors** joined together to present the latest developments in neuro-oncology and brain tumour surgery.

The combination of these two societies at this two-and-a-half-day conference in New Orleans resulted in the attendance of over 1200 delegates from around the world and no fewer than 600 abstracts.

"Sunrise Sessions" began at 7.00 am and on the Thursday night of the congress a number of satellite symposia ran until 9.30 pm. A particularly moving aspect of this year's conference was a tribute at the start of the opening session to **Mike Traynor**, President and Co-Founder of the Pediatric Brain Tumor Foundation, who passed away in September after a short illness. A short silence was observed in Mike's memory. (The IBTA has written a tribute to Mike which can be read here: <http://www.theibta.org/MTraynor.pdf>). Mention was also made of **Dr Samuel Hassenbusch** who passed away from a brain tumour in 2008 and of whom more is said later in this report.

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Of course, conferences such as these provide an excellent networking forum and an opportunity to meet and talk with colleagues from the various brain tumour patient and caregiver groups. Representatives from a number of American brain tumour support organisations were at SNO and it was good to have the opportunity to see them again.



New Orleans delegates (left to right): Al Musella, Dr Loice Swisher, Kathy Oliver (IBTA)



Reunion at AANS/SNO (left to right): Kathy Oliver (IBTA), Deneen Hesser (American Brain Tumor Association), Kay Verble (The Sontag Foundation), Elizabeth Wilson (American Brain Tumor Association) and Rob Tufel (Ben and Catherine Ivy Foundation).



Representatives of the National Brain Tumor Society at SNO (left to right): Harriet Patterson, Carrie Treadwell, David Hurwitz.

It was also good to see **Professor Abhijit (Ab) Guha** at the AANS/SNO meeting. Professor Guha (former Chair of SNO), had many friends around the world concerned for his health after he developed a challenging illness. Professor Guha is much better now and it was great to see him back in action in New Orleans. SNO's current Chair, **Dr Susan Chang**, attended the conference and kindly mentioned at one of the plenary sessions the IBTA's 2009 publication "The First Documented, Modern-Day Brain Tumour Surgery for a Glioma" which took place in 1884 in London. The 25th of November 2009 marked the 125th anniversary of this event.



Professor Ab Guha (centre) with (left to right): Kathy Oliver, Kay Verble, Elizabeth Wilson and Deneen Hesser.



Right: Dr Susan Chang, Chair of SNO.

As is always the case with major conferences such as this, the timetable is very hectic. At these meetings, there is so much to discover - the latest results of clinical trials, the predictions for future successes, and opinions on optimal treatment possibilities.

It was necessary on the Education Half Day (Thursday) to choose between two excellent and very tempting sessions which ran side-by-side – one education session addressed the question of “Personalised Medicine: Is it the Future or Now?” and the second education session considered the topic of “Enhancing Quality of Life Throughout the Illness Trajectory”.

As personalised, targeted medicine based on individual data relies heavily on technology to realise its potential, this session included topics on technology supporting personalised surgical care and radiation oncology as well as presentations on the role of molecular markers in clinical decision-making and guiding the development of clinical trials.

The “Quality of Life” session was planned jointly by **Terri Armstrong** (Associate Professor, Department of Integrative Nursing Care, The University of Texas M D Anderson Cancer Center), **Kimberly M Wallgren** (CERN Foundation – Collaborative Ependymoma Research Network) and **Jennifer Brusstar** (Tug McGraw Foundation). It featured a range of thought-provoking talks.

The QOL session began with a video-taped message from Tim McGraw (Tug McGraw Foundation). Following this there were talks by two caregivers: Kimberly Wallgren spoke movingly of her father’s brain tumour experience and Jason Hassenbusch described his father’s brain tumour journey.

Having treated brain tumour patients for two decades, and in what must be one of the most ironic and cruel twists of fate, neurosurgeon **Dr Samuel Hassenbusch** (The University of Texas M D Anderson Cancer Center, Houston) was himself diagnosed with a glioblastoma multiforme brain tumour in May 2005 and passed away from the disease in February 2008.

A very moving and inspirational book about Dr Hassenbusch – “Physician, Heal Thyself: A Brain Cancer Surgeon’s Journey Through Brain Cancer” – was available at the conference (ISBN: 978-0-9821409-1-8).

One of the aspects of the brain tumour journey which is so vitally important to patients and their families is the way that communication takes place between themselves and their healthcare team. This can be a challenging area for both parties. From the medical professionals’ standpoint, it is necessary to provide honest and truthful information and to develop trust and rapport with the patient while doing so. From the patient and caregiver’s perspective, it is important to hear hope being voiced by medical teams and for everyone to be able to sustain hope during what can be an utterly devastating journey where hope is sometimes difficult to find. As is often expressed by patients and caregivers: “Fighting a brain tumour is hard enough without someone denying us hope.”

So the presentation at the Quality of Life education session by **Dr Walter F Baile** (University of Texas M D Anderson Cancer Center) delivered some crucially important messages on “Good News or Bad: Communicating with Your Patient”. Dr Baile, Professor of Behavioural Science, runs the “I*Care” (Interpersonal*Communication and Relationship Enhancement) programme at MD Anderson and his presentation reflected the “Dos and Don’ts” for doctors of mastering the art of successfully and sensitively communicating with brain tumour patients and their families.

Two other noteworthy presentations from this session were on “The Other Healthcare Professional: Training the Caregiver” by **Harriet Patterson** of the National Brain Tumor Society, and “Promoting Comfort and Choice at the End of Life” by **Dr Sherry Fox** of the Cullather Quality of Life Center in Richmond, Virginia.

Caregiver burden in the brain tumour journey is significant and Harriet Patterson pointed out that over 40% of family caregivers provide some type of nursing role. Family caregivers, she said, are “key extensions of the healthcare team...the eyes and ears that are there first.”

NBTS runs over 50 Caregiver Training Programs across the US. These programmes provide “anticipatory guidance” and cover such areas as symptom management, coping with cognitive changes, turning/lifting/moving, community resources, legal issues, quality of life and end of life.

Dr Sherry Fox tackled the very difficult subject of end-of-life care in a presentation which was both informative and inspiring. It was important, she said, to plan effective management of end-of-life care and anticipate the supportive needs of patients approaching that stage. Symptom management at end-of-life is more difficult if there is no discussion beforehand. The end of life symptom burden for brain tumour patients is different from other cancer patients because seizures, headaches and confusion play a role as well as issues surrounding nutrition (for patients who have trouble swallowing), hydration and steroids.

A presentation by **Jeffrey Wefel** on “Chemobrain? Impact of Tumor and Treatment on Neurocognitive Function: What we Know, Where to Go” rounded off the QOL education session.

It would be impossible to detail in this report all of the scientific news from this year's AANS/SNO conference. The abstracts from the AANS/SNO meeting have been published in "**Neuro-Oncology**" the official journal of the Society for Neuro-Oncology, Volume 11, Issue 5, October 2009. These are available online on a pay-per-article or pay-per-issue basis at <http://neuro-oncology.dukejournals.org/cgi/content/full/11/5/563>

A 52-minute online overview discussion of the neuro-oncology aspects of the New Orleans meeting can be viewed at the GliomaEd.com website here: <http://www.gliomaed.com/programs.asp?ProductID=76> .

The programme is presented by **Dr Mark R. Gilbert** (Professor, Department of Neuro-Oncology, The University of Texas MD Anderson Cancer Center, Houston); **Dr Marc Chamberlain** (Professor, Departments of Neurology and Neurological Surgery, University of Washington, Seattle) and **Dr Minesh P. Mehta** (Professor, Department of Human Oncology, University of Wisconsin School of Medicine and Public Health, Madison)

This online video is divided into five sections: 1. Highlights of Antiangiogenics; 2. Antiangiogenics in Newly Diagnosed; 3. Overview of Randomized Control Trials; 4. Brain Metastases; and 5. New Treatments for Glioma."

The SNO abstracts are organised into 14 section titles: Cell biology/Signalling; Epidemiology; Experimental Therapeutics (Preclinical); Genetics/Genomics; Immunology/Immunotherapy; Medical Oncology; Models (Preclinical); Neurocognitive; Pathology/Prognostic Markers; Quality of Life/Symptom Management; Radiation Oncology; Radiology; Stem Cells; Surgical Oncology.

There were many studies (over 70) presented in New Orleans on aspects of **cell biology and signalling** which modulate glioma invasion and which may provide attractive therapeutic targets for glioma therapy. Manipulation of pathways by combinations of pharmacologic agents is a promising avenue for brain tumour treatment.

Some interesting studies on **epidemiology** included those on the health experience of jet engine manufacturing workers (Abs 85, 86, 88); survival trends of patients with primary central nervous system lymphoma (PCNSL – Abs 82) and factors influencing the care of trauma patients who had incidentally-identified CNS tumours (Abs 90). There was an interesting study on the differences in GBM survival by race and sex (Abs 93 - Conclusion: "Race does not appear to affect survival in patients diagnosed with GBM, even after adjusting for the type of treatment and other prognostic variables. Married patients who undergo total surgical resection and radiation have significantly increased survival").

On the other hand, one study (Abs 81) concluded that "ethnic, economic and insurance disparities may exist in receiving radiation after a GBM diagnosis.

Immunotherapy and immunology were covered at SNO with no less than 37 abstracts on such topics as dendritic cell vaccines and immunotherapy trials targeting human cytomegalovirus antigens in GBM. (Abs 208.)

Medical Oncology presentations and posters focussed on a range of therapeutic approaches.

But by far, the greatest area of discussion centred around the use of **antiangiogenic therapies** in both **newly diagnosed and recurrent disease**.

Dominating the conference were over 20 studies involving **bevacizumab** across a range of tumour types and involving a variety of treatment combinations. (It should be noted, however, that bevacizumab is not the only antiangiogenic agent currently being studied in the brain tumour community – there are also ongoing, international, trials for **cediranib** and **cilengitide**)

A number of papers related to the Phase 2 BRAIN study involving bevacizumab were presented at AANS/SNO.

One exploratory analysis of the results of the BRAIN study (Abs 271), “**Corticosteroid Use in Patients with Glioblastoma at First or Second Relapse Treated with Bevacizumab in the BRAIN Study**” concluded: “OR rate and 6-month PFS with BEV treatment were clinically compelling. A majority of patients had decreased corticosteroid use. Patients with OR or PFS > 6 months had the associated benefit of corticosteroid reduction.”

Decreasing steroid dependence has significance for brain tumour patients from a clinical perspective because in being able to do so, many of the morbidities associated with corticosteroid use are reduced.

This has been hailed as a very noteworthy finding, also underlining the importance of including studies such as this in clinical trials. Indeed, one of the major themes to come out of this year’s AANS/SNO meeting was the consideration of the importance of neuro-cognitive function and quality of life.

Another presentation (Abs 270) described **Patterns of Progression in Patients with GBM, at First or Second Relapse, Treated with Bevacizumab Alone or in Combination with Irinotecan**. The conclusion was that “The majority of BEV-treated patients did not experience a change in tumor pattern at the time of progression. Patients with a progression-pattern shift from local to diffuse had similar efficacy outcomes compared with patients with a pattern of local progression.”

A third presentation linked to the BRAIN study was on “**Neurocognitive Function in Patients with Glioblastoma at First or Second Relapse Treated with Bevacizumab Alone or in Combination with Irinotecan**”.

While, of course, both patients and doctors alike hope that many new answers come out of conferences such as these, sometimes the opposite is the case and this was true of this year’s AANS/SNO meeting. There seemed to be more questions than answers.

It will be crucial to determine – hopefully in international, Phase 3 randomised trials for bevacizumab and other antiangiogenic treatments – the correct responses to a number of quandaries as were discussed at AANS/SNO and also mentioned in the online summary mentioned above:

- Are these agents best used in the upfront, newly diagnosed scenario or should they only be used as salvage therapy?
- What timeframe should elapse between surgery and the use of antiangiogenic therapies?
- What truly is the extent of toxicity from these agents, and could the degree of any possible toxicity be related to the timing of their administration? On this topic, the concept of risk versus benefit plays a major role and this also impacts on the choice of use in the newly diagnosed or recurrent setting. Does use of bevacizumab, for example, in the newly diagnosed setting need to be more circumspect when it is becoming evident that more and more patients (albeit still a relatively tiny number) are living longer? As was generally pointed out in the online summary of the conference, if patients have the potential of longer term survival, would it be putting them at undue risk to give them a treatment which could potentially result in a toxicity which could possibly preclude additional therapy?
- Is there a sub-population of patients who would obtain optimal benefit from antiangiogenic therapies?
- What is the appropriate end point for trials involving antiangiogenic agents?
- How should treatments best be sequenced or combined to optimise therapy?
- Does progression after these therapies portend a very aggressive form of the disease?
- And very importantly, how best can the responses to antiangiogenic therapies be measured and quantified?

Evidence of pseudo progression, radiation necrosis and pseudo response, together with other challenges such as inter-observer variability and the difficulty of measuring complex tumour shapes, are aspects which have already alerted clinicians to the fact that existing radiological assessments, based on the “Macdonald Criteria” have their limitations. This was discussed at AANS/SNO (Abs 255) via an update of the work of the **Response Assessment in Neuro-Oncology (RANO)** group. This is an ongoing international multidisciplinary collaboration working to develop new criteria to assess the impact of novel therapies on malignant glioma. [See reference to the same subject by Dr Laperriere at the COSA conference – reported earlier – who forecast that “The main thrust of the new recommendations will be to take into account not only the gadolinium images (the old standard), but also the non-gadolinium images on assessing response.]

Some of the other agents discussed at AANS/SNO were **enzastaurin** (in combination with temozolomide and radiotherapy – a Phase 2 study, Abs 248); **trabedersen/AP12009** (Abs 250); **sunitinib**, **erlotinib**, **gefitinib**, **vandetanib**, **etoposide** and **others** (see AANS/SNO abstracts).

A laboratory study on the anti-epilepsy drug (AED) **levetiracetam** and MGMT (Abs 269) reported that: "...levetiracetam (LEV) is the most potent MGMT inhibitor among several AEDs with diverse MGMT regulatory actions." The study on human glioblastoma cells concluded that "...the choice of AED in patients with malignant gliomas may have an underrecognized [sic] impact in clinical practice and research trial design."

The **Quality of Life/Symptom Management** stream at AANS/SNO provided a range of presentations and posters which assessed the information and support needs of brain tumour patients and caregivers at various stages of their journey. One study looked at Internet usage by patients and caregivers in the first four months post diagnosis. It found that patients and caregivers "are using the Internet consistently and frequently to obtain information on disease and treatment options." (Abs 392).

Some of the other topics covered in this stream were a study on measuring the impact of age at diagnosis on quality of life (Abs 408); "Patient and Caregiver Congruence in Symptom Report and Association with Patient Neurocognitive Status" (Abs 386); and "Assessing Information Needs, Support Needs and Likelihood to Use Services Among Brain Tumour Patients and Caregivers" (Abs 390) which considered responses to a survey from 709 brain tumour patients and 702 family caregivers. The study reported that half of the respondents had difficulty obtaining information about cognitive changes, clinical trials and fatigue.

The **Award for Excellence in Quality of Life Research** was presented to **Dr Andrea Pace** (Regina Elena National Cancer Institute, Rome, Italy) for his study on "Palliative Home Care for Brain Tumour Patients: Results and Cost/Utility Analysis of Six Years of a Pilot Project" (Abs 388). The aim of the model created for this study – a palliative home care pilot project for malignant brain tumour patients who had been discharged from hospital – was to provide for patients' care and rehabilitation requirements at home, quality of life and end of life care at home.

There were also sessions at AANS/SNO on radiation oncology, radiology, pediatric basic science, pathology/prognostic markers, stem cells and surgical oncology.

Additionally, **three satellite symposia** were held:

1. Case-Based Discussion of Emerging Evidence: Comprehensive Treatment Planning for Patients with High Grade Gliomas (supported by Schering-Plough Pharmaceuticals, now Merck in the US and Canada and MSD in the rest of the world – see: http://www.merck.com/newsroom/news-release-archive/corporate/2009_1104.html)
2. The Future Treatment of High Grade Glioma (supported by Ark Therapeutics)
3. Expanding Glioblastoma Research with Targeted Integrin Inhibitors (supported by EMD Serono)

The following general themes seem to have run through the AANS/SNO conference this year:

- the importance of personalised medicine defined by subgroups of brain tumour patients with specific and individual genetic/molecular characteristics;
- the desire and crucial need to find the best way to use antiangiogenic therapies and to examine strategies which can provide a combination partner (i.e. an additional) agent for these therapies;
- the absolute necessity of collaboration between all the different research and treatment specialities in order to bring efforts and results forward in as timely a way as possible
- a greater understanding is needed of agents that are showing promising activity in brain tumour treatment
- there is a strong and determined commitment from the scientific community to achieve optimal treatment for each brain tumour patient

Next year, the **2010 Society for Neuro-Oncology conference** will be held from 18 – 21 November at Le Centre Sheraton, Montreal, Canada.

The **2011 Society for Neuro-Oncology conference** will be held from 17 – 20 November at the Hyatt Regency, Orlando, Florida.

IMPORTANT NOTE: This collection of layman's personal observations made during the AANS/SNO conference in October, 2009 is based on notes taken during this meeting. Readers are advised to verify the information and consult original published source material. The comments in these notes are not in any way meant to constitute medical or other advice or recommendations. These notes have been compiled in good faith. They are in no way intended to be a complete record of what took place and are based on personal notes taken without the backup of any recordings of speakers. No verification (research or otherwise) of matters included in these notes has been undertaken by or on behalf of the author. The author does not accept responsibility for any inaccuracies or mis-information, errors, mis-quotes or omissions in or arising from these notes. Regardless of information appearing in notes such as these, medical professionals should always be consulted before any decision is considered or made or any course of treatment is undertaken. This report is intended for general information only.