

CNS Tumor Board: Clinical Investigators Provide Perspectives on Current Cases from Their Practices

TARGET AUDIENCE

This activity is intended for neuro-oncologists, neurosurgeons and other neuro-oncology specialists involved in the treatment of primary and metastatic central nervous system (CNS) cancers.

OVERVIEW OF ACTIVITY

Brain tumors are a diverse group of neoplasms arising from different cells within the CNS or from systemic tumors that have metastasized to the CNS. Primary brain tumors include a number of histologic types with markedly different tumor growth rates and are divided into anaplastic gliomas (anaplastic astrocytoma, anaplastic oligodendroglioma and anaplastic oligoastrocytoma) and glioblastoma multiforme (GBM) based on their histopathologic features. Despite treatment, the median survival for anaplastic oligodendroglioma is 2 to 3 years, and patients with GBM can succumb to their disease within a year of the onset. Thus, clinical education regarding standard and evolving best-practice therapeutic management of these neoplasms is essential to improving patient outcomes. To bridge the gap between research and patient care, these proceedings from a case-based CME symposium during the 17th annual meeting of the Society for Neuro-Oncology use the perspectives of leading neuro-oncologists and neurosurgeons to apply evidence-based concepts to routine practice. By providing information on the latest research developments in the context of expert perspectives, this activity assists medical oncologists with the formulation of state-of-the-art clinical management strategies, which in turn facilitates optimal patient care.

LEARNING OBJECTIVES

- Ensure delivery of appropriate treatment for primary brain cancer through facilitation of a multidisciplinary care plan.
- Use clinical and molecular markers to assess disease prognosis and guide treatment selection, when appropriate, for patients with high-grade gliomas.
- Apply the results of clinical research to the evidence-based use of chemotherapy and adjuvant chemoradiation therapy for patients with gliomas.
- Communicate the benefits and risks of bevacizumab with chemotherapy to patients with newly diagnosed or recurrent GBM.

- Recognize techniques to distinguish true disease progression from radiologic pseudoprogression among patients with treated brain tumors.
- Describe the scientific rationale and recent research results that support ongoing investigation of novel treatments for patients with brain cancer.
- Evaluate the current treatment algorithms for low-grade gliomas and CNS lymphoma and their impact on long-term patient outcomes.

ACCREDITATION STATEMENT

Research To Practice is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

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This CME activity consists of a video component. To receive credit, the participant should watch the video, complete the Post-test with a score of 75% or better and fill out the Educational Assessment and Credit Form located on our website at ResearchToPractice.com/SNO12/CME.

CONTENT VALIDATION AND DISCLOSURES

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FACULTY — The following faculty (and their spouses/partners) reported real or apparent conflicts of interest, which have been resolved through a conflict of interest resolution process:

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RESEARCH TO PRACTICE STAFF AND EXTERNAL

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Hardware/Software Requirements:

A high-speed Internet connection
A monitor set to 1280 x 1024 pixels or more
Internet Explorer 7 or later, Firefox 3.0 or later, Chrome, Safari 3.0 or later
Adobe Flash Player 10.2 plug-in or later
Adobe Acrobat Reader
(Optional) Sound card and speakers for audio

Last review date: February 2013

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Select Publications

Mehta

Aldade K et al. **RTOG 0525: Molecular correlates from a randomized phase III trial of newly diagnosed glioblastoma.** *Proc ASCO* 2011;Abstract LBA2000.

Brandes A et al. **MGMT promoter methylation status can predict the incidence and outcome of pseudoprogression after concomitant radiochemotherapy in newly diagnosed glioblastoma patients.** *J Clin Oncol* 2008;26(13):2192.

Chinot OL et al. **AVAglio: A phase III trial of bevacizumab added to standard radiotherapy and temozolomide in patients with newly diagnosed glioblastoma.** *Proc ASCO* 2011;Abstract TPS136.

Gilbert M et al. **RTOG 0525: A randomized phase III trial comparing standard adjuvant temozolomide (TMZ) with a dose-dense (dd) schedule in newly diagnosed glioblastoma (GBM).** *Proc ASCO* 2011;Abstract 2006.

Hegi ME et al. **MGMT gene silencing and benefit from temozolomide in glioblastoma.** *N Engl J Med* 2005;352(10):997-1003.

Kumar AJ et al. **Malignant gliomas: MR imaging spectrum of radiation therapy- and chemotherapy-induced necrosis of the brain after treatment.** *Radiology* 2000;217(2):377-84.

Stupp R et al. **Effects of radiotherapy with concomitant and adjuvant temozolomide versus radiotherapy alone on survival in glioblastoma in a randomised phase III study: 5-year analysis of the EORTC-NCIC trial.** *Lancet Oncol* 2009;10(5):459-66.

Stupp R et al. **Radiotherapy plus concomitant and adjuvant temozolomide for glioblastoma.** *N Engl J Med* 2005;352(10):987-96.

Cloughesy

Batchelor TT et al. **AZD2171, a pan-VEGF receptor tyrosine kinase inhibitor, normalizes tumor vasculature and alleviates edema in glioblastoma patients.** *Cancer Cell* 2007;11(1):83-95.

Cancer Genome Atlas Research Network. **Comprehensive genomic characterization defines human glioblastoma genes and core pathways.** *Nature* 2008;455(7216):1061-8.

Friedman H et al. **Bevacizumab alone and in combination with irinotecan in recurrent glioblastoma.** *J Clin Oncol* 2009;27(28):4733-40.

Lai A et al. **Phase II study of bevacizumab plus temozolomide during and after radiation therapy for patients with newly diagnosed glioblastoma multiforme.** *J Clin Oncol* 2011;29(2):142-8.

Chamberlain

Friedman H et al. **Bevacizumab alone and in combination with irinotecan in recurrent glioblastoma.** *J Clin Oncol* 2009;27(28):4733-40.

Lamborn KR et al. **Progression-free survival: An important end point in evaluating therapy for recurrent high-grade gliomas.** *Neuro Oncol* 2008;10(2):162-70.

Wick W et al. **Phase III study of enzastaurin compared with lomustine in the treatment of recurrent intracranial glioblastoma.** *J Clin Oncol* 2010;28(7):1168-74.

Wong ET et al. **Outcomes and prognostic factors in recurrent glioma patients enrolled onto phase II clinical trials.** *J Clin Oncol* 1999;17(8):2572-8.

Weingart

Chaichana KL et al. **Recurrence and malignant degeneration after resection of adult hemispheric low-grade gliomas.** *J Neurosurg* 2010;112(1):10-7.

Shaw EG et al. **Supratentorial gliomas: A comparative study by grade and histologic type.** *J Neurooncol* 1997;31(3):273-8.

Batchelor

Abrey et al. **Report of an international workshop to standardize baseline evaluation and response criteria for primary CNS lymphoma.** *J Clin Oncol* 2005;23(22):5034-43.

Correa D et al. **Cognitive functions in primary central nervous system lymphoma: Literature review and assessment guidelines.** *Ann Oncol* 2007;18(7):1145-51.

Ferreri AJ et al. **High-dose cytarabine plus high-dose methotrexate versus high-dose methotrexate alone in patients with primary CNS lymphoma: A randomised phase 2 trial.** *Lancet* 2009;374(9700):1512-20.

Illerhaus G et al. **High-dose chemotherapy with autologous stem-cell transplantation and hyperfractionated radiotherapy as first-line treatment of primary CNS lymphoma.** *J Clin Oncol* 2006;24(24):3865-70.

Kasenda B et al. **Prognosis after high-dose chemotherapy followed by autologous stem-cell transplantation as first-line treatment in primary CNS lymphoma — A long-term follow-up study.** *Ann Oncol* 2012;23(10):2670-5.

Mead GM et al. **A Medical Research Council randomized trial in patients with primary cerebral non-Hodgkin lymphoma: Cerebral radiotherapy with and without cyclophosphamide, doxorubicin, vincristine, and prednisone chemotherapy.** *Cancer* 2000;89(6):1359-70.

Rubenstein JL et al. **Intensive chemotherapy and immunotherapy, without brain irradiation, in newly diagnosed patients with primary CNS lymphoma: Results of CALGB 50202.** *Proc ASH* 2010;Abstract 763.

Thiel E et al. **High-dose methotrexate with or without whole brain radiotherapy for primary CNS lymphoma (G-PCNSL-SG-1): A phase 3, randomised, non-inferiority trial.** *Lancet Oncol* 2010;11(11):1036-47.