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Congress Report: American Society of Clinical Oncology 2012 Meeting

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Interesting new data were reported during the ASCO 2012 Meeting from June 1–5, 2012, in the field of gliomas, antiangiogenic agents, and primary CNS lymphomas (PCNSLs).

Cairncross et al (abstract # 2008b) and **van den Bent** (# 2, plenary session) presented the updated analyses of the RTOG 9402 and EORTC 26951 phase-III trials comparing radiation alone versus radiation + PCV in newly diagnosed anaplastic oligodendroglial tumours. Both studies showed that the addition of PCV (either neoadjuvant or adjuvant) to radiation significantly improves both PFS and OS in the subgroup of patients with 1p/19q co-deletion, while having no impact in non-co-deleted tumours. This means that radiotherapy alone is no more the standard treatment for 1p/19q co-deleted tumours, and different scenarios regarding chemotherapy, such as drug choice (PCV, temozolomide) and sequence with radiotherapy (before, concurrent, after) are now open.

Wick et al (# 2000) analyzed the role of MGMT promoter methylation within the German phase-III trial on elderly patients with malignant astrocytomas (NOA-08). This trial showed that temozolomide is not inferior to radiotherapy as initial treatment, and MGMT promoter methylation is a strong predictive factor significantly correlated with increased survival in patients with MGMT-methylated tumours receiving temozolomide.

Gilbert et al (# 2003) and **Wu et al** (# 2004) discussed pros and cons of new trial designs (factorial and bayesian type), while **Alexander et al** (# 2005) analyzed the relationship between PFS and OS in a large US database.

The papers on antiangiogenic therapies in glioblastomas were aimed to answer 2 important questions: (1) who benefits mostly from anti-VEGF agents (bevacizumab, cediranib) and (2) why do these treatments fail? With regard to the first question, **Gerstner et al** (# 2009) analyzed the patients in a phase-I–II trial on newly diagnosed glioblastomas treated with cediranib and reported that patients with an early increase of perfusion after treatment have improved survival, and baseline plasma SVEGFR1 levels appear to be a potential biomarker of efficacy. **Emerson et al** (# 2010) and **de Groot et al** (# 2011) reported preliminary data suggesting as mechanisms of resistance to anti-VEGF agents an increase of macrophages and myeloid cell infiltration, respectively. Thus, targeting macrophages or pathways involved in myeloid cell infiltration could be investigated in future clinical trials.

Two interesting studies on low-grade gliomas were reported. A multicentre phase-II trial of the AINO (Italian Association of Neuro-Oncology; **Rudà et al,** # 2037) showed that among grade-II oligodendroglial tumours the use of dose-dense temozolomide as initial treatment after surgery significantly improves the control of epilepsy, but not the response rate on MRI as compared to histological controls. Moreover, there is no difference in response between MGMT-methylated and -unmethylated tumours.

Theeler et al (# 2022) reported the largest retrospective series (from the MD Anderson Cancer Center) so far on pilocytic astrocytomas of the adult: from the analysis it emerged that hemispheric tumours in adults behave more aggressively than in paediatric patients and the response to radiotherapy is limited.

A major problem in PCNSLs is the need to reduce the late neurotoxicity from whole-brain radiotherapy (WBRT) without compromising treatment results. Two phase-II studies from the Memorial Sloan-Kettering Cancer Center (**Curry et al,** # 2006; **Omuro et al,** # 2008) reported interesting preliminary results in patients achieving a complete response after induction of chemotherapy with methotrexate-based regimens by reducing WBRT or high-dose chemotherapy with stem cell rescue as a consolidation therapy. **Roth et al** (# 2007) further analyzed the data of the G-PCNSL-SG1 German trial and concluded that elderly patients in complete response after induction of chemotherapy require maintenance treatment.

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