ratios than metastases from the breast (p=0.023); post-treatment, a
trend of >25% improvement in both cystic and solid components
of tumours was seen in lung primaries (p=0.239). Colorectal brain
brain metastases demonstrated the best treatment response of the
cystic component, significantly higher than breast metastases (p=
0.007), but not lung. Deep tumours not only had lower cystic
volumes pre-GKS than superficial tumours (nonsignificantly), but
also had significantly lower post-GKS cystic volumes (p=0.041).
The results of the study show that factors such as primary tumour
location and deep/superficial location of metastasis can be used to
predict response of cystic tumours to GKS.

**CP7**

doi:10.1017/cjn.2014.86

Epidemiology of malignant pontine gliomas (MPG) in the paediatric population in Canada: A study of the Canadian paediatric brain tumour consortium (CPBTC)

Samina Afzal1, Anne-Sophie Carret2, Adam Fleming3, Valérie Larouche4, Shayna Zelcer5, Donna L. Johnston6, Maria Kostova7, Chris Mpofu8, Douglas Strother9, Lucie Lafay-Cousin10, David Eisenstat11, Chris Fryer11, Juliette Hukin11, Ute Bartels12, Eric Bouffet12

1Division of Pediatric Hematology/Oncology, IWK Health Centre, Halifax, Nova Scotia; 2Division of Pediatric Hematology/Oncology, St Justine Hospital, Montreal, Quebec; 3Division of Pediatric Hematology/Oncology, Children’s Hospital of Montreal, Montreal, Quebec; 4Division of Pediatric Hematology/Oncology, Centre Hospitalier Universitaire de Quebec, Quebec City, Quebec; 5Division of Pediatric Hematology/Oncology, Children’s Hospital of Western Ontario, London, Ontario; 6Division of Pediatric Hematology/Oncology, Children’s Hospital of Eastern Ontario, Ottawa, Ontario; 7Division of Pediatric Hematology/Oncology, Kingston General Hospital, Kingston, Ontario; 8Division of Pediatric Hematology/Oncology, Saskatoon Children’s Hospital, Saskatoon, SK; 9Section of Pediatric Oncology and Blood and Marrow Transplantation, University of Calgary, Calgary, Alberta; 10Division of Pediatric Hematology/Oncology, Stollery Children’s Hospital, Edmonton, Alberta; 11Division of Pediatric Hematology/Oncology, British Columbia Children’s Hospital, Vancouver, BC; 12Division of Pediatric Hematology/Oncology, Hospital for Sick Children, Toronto, Ontario

**CP9**

doi:10.1017/cjn.2014.88

Quantitative MRI changes post-stereotactic ablative radiotherapy of the spine

H Bahig, D Simard, L L’tourneau, D Roberge, D Donath, P Wong, E Filion, D Beliveau-Nadeau, R Doucet, P Nicholson, L Masucci

Centre Hospitalier de l’Université de Montréal, Montreal, Quebec

Purpose: To assess early MRI volumetric and signal intensity changes after spine stereotactic body radiotherapy (SBRT) and to correlate these changes to local control (LC). Materiel and methods: T1 and T2-weighted non-contrast MR images of 30 spinal lesions treated with SBRT were analyzed. T1 and T2-based gross tumor volumes (GTV) were contoured on pre-treatment and follow-up MRIs. A Matlab program was developed to analyze T2 signal changes using the spinal cord as reference signal intensity. Volume and T2-signal alterations on first follow-up MRI (3-6 months) were correlated with LC. Local recurrence (LR) was proven pathologically. Results: At a median follow-up of 15.2 months, LC and disease-specific survival were 74% and

**CP8**

doi:10.1017/cjn.2014.87

Treatment of recurrent central nervous system inflammatory myofibroblastic tumor with crizotinib

Philip Wong1, David Roberge1, France Berthelet2, Michel W. Bojanowski3, Jean-Paul Bahary4, Laura Masucci4, Karl Bélanger4 and Marie Florescu4

CHUM, University of Montreal, Quebec: 1 Dept. de Radio-Oncologie, 2 Dept. de Pathologie, 3 Dept. de Neurochirurgie, 4 Dept. de Hemato-Oncologie

Inflammatory myofibroblastic tumors (IMT) are rare entities with a wide range of local aggressiveness, and low metastatic potential. Complete surgical excision is the main treatment for IMTs arising from the central nervous system (CNS). However, local recurrence rates are high, especially in IMT expressing ALK. Approximately 50% of IMTs express ALK, which is likely secondary to chromosome 2p23 rearrangements. Case: A 26 year-old male was initially diagnosed with a left-tentorial IMT following 3 months of headaches, mood changes and lateral vision deficits. After a partial resection of the tumor, progression of the residual disease was observed 2 months later on MRI. He underwent a gross total resection followed by adjuvant radiotherapy (60Gy in 30 fractions). The disease recurred 9 months later at the left-parietal lobe. A third operation was performed, but imaging revealed multi-focal recurrence 6 month post-operatively. As immunohistochemical studies showed strong cytoplasmic staining for ALK, the patient was given a trial of crizotinib, an ALK inhibitor. Two months later, partial response was achieved. The patient remains in partial remission after 7 months of crizotinib. Apart from diarrhea, slight renal failure and blurred vision, crizotinib was well tolerated. Conclusions: This is the first reported case of a CNS ALK-positive IMT responding to crizotinib. The response seen in our patient supports a trial with crizotinib in patients having exhausted conventional treatments for relapsing CNS IMTs. As no consistent ALK translocations are observed in IMT, exome sequencing is being done to identify the specific ALK aberration in this tumor.

Suppl 2 – S16