79 %. Median time to LR was 17 months (range= 1.5-24). First MRI analysis showed increased T1 and T2 GTV in 47 % of lesions. Of these, 47% ultimately developed LR. All patients with LR but one presented increased GTV at 3-6 months (median 28%, range= 1; 290%) associated with reduced T/S signal ratio (median -0.16, range= -0.04; -0.7). In patients with no LR at last follow up, 21% presented increased GTV (median 4%, range= 1; 57%) always associated with increased T/S ratio (median 0.7, range: 0.5; 1.34). Decreased GTV was observed in 79% of lesions with no LR (median -13%, range= -2; -55%). Conclusion: Early volume changes seem to correlate with subsequent local failure. Patients with what may be small increases in tumor volume on the first post-SBRT MRI should be followed more closely for LR. Early T2 signal changes do not appear to correlate with LC.

CP10

Radiosurgery for recurrent glioblastoma multiforme: A single institution experience

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Purpose: Patients presenting with recurrent glioblastoma multiforme (GBM) are challenging cases in neuro-oncology. Radiosurgery (SRS) can be considered as a treatment option at recurrence. Methods: Eighteen patients with recurrent GBM were treated with SRS at our institution between 2006 and 2013. Two-thirds of patients were male, median age at diagnosis was 52 years old. All patients had been treated previously with surgery followed by adjuvant radiation therapy of 60 Gy with concurrent temozolomide (TMZ) as first-line therapy. The majority (72%) presented with a local recurrent lesion in the same area as their presenting tumor. Median treatment volume was 7.3 cc, median marginal dose was 18 Gy prescribed at the 50% isodose line. Twelve patients received concurrent chemotherapy, mostly rescue TMZ (9). Results: Survival at 6 months was 82%. Median time to progression, local or distant, was 3 months. The local recurrence rate was 50% at 3 months, and 76% at 6 months. Only one patient developed significant toxicity with surgically resected radiation necrosis following SRS. Interestingly, this patient has now been free of recurrence for more than 3 years. Conclusions: As most second-line therapies, this series suggests that SRS, alone or in combination with temozolomide, is associated with brief rates of local disease control. However, since it is a well-tolerated procedure, its combination with other chemotherapy agents could be explored in the future for recurrent GBM.

CP11

The factors associated with pituitary adenoma (PA) growth rate remain unclear

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Objective: To establish whether the preoperative growth and extension pattern of PA can predict postoperative growth rate and recurrence in addition to whether PA growth rate correlates with proliferation and growth factor expression Patients:153 consecutive patients who underwent surgery for pituitary adenoma from 1999-2011 at Toronto Western Hospital were identified. Main Outcome measures: PA growth rate was measured both pre- and postoperatively and its association to patient demographics, MRI and histolopathological parameters was determined. Results: The preoperative growth rate was associated with age(p=0.0001), suprasellar growth(p=0.003), the presence of a cyst/hemorrhage(p=0.004), the MIB-1(p=0.005), FGFR4 positivity(p=0.047), and p27 negativity(p=0.007). Following surgery, there were 34.6% residual volumes, which were associated with older age(p=0.038) and also with growth patterns including anterior, posterior, suprasellar, and CSextension(p=.001). 41.6% of these residual grew and postoperative growth rate was calculated. Pre- and postoperative growth rates were correlated(r= 0.497, p=0.026). Postoperative growth rate was associated with age(p=0.015) and gender(p=0.017). Conclusions: Our data suggest that the growth rate of PAs are influenced by various patient and tumor-specific characteristics including the age and sex of the patient, the specific subtype of PA, its hormonal activity, its immunohistochemical profile including the MIB-1 LI status, and its preponderance for different growth directions relative to the pituitary fossa. Furthermore, the pre- and postoperative PA growth rates were correlated suggesting that postoperative PA growth rates can be predicted, in part, by preoperative growth rates thus better informing postoperative outcome.

CP12

Radiologic and histopathologic characteristics and their predictive role in clinical outcome of patients underwent resection of intracranial meningiomas

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Introduction: Meningiomas are common intracranial neoplasms with a great variability in clinical and biological behavior.