efficacy and visual outcomes of a large series of patients with choroidal melanoma (CM) treated with RuBT, and compare the results to those of the preceding protocol in which RuBT was combined with transpupillary thermotherapy (Ru/TTT).

Material and Methods: Outcomes of 449 consecutive CM patients with tumour prominence <8 mm and basal diameter <16 mm treated with RuBT from 2004 to 2011 were analysed. 253 (56.3%) were treated according to the current RuBT protocol (from 2008 onwards) with 130 Gy specified at the tumour apex and minimum and maximum doses to the scleral surface of 300 Gy and 1000 Gy, respectively. 196 (43.6%) were treated using the preceding Ru/TTT protocol with either 400 or 600 Gy to the scleral surface followed by TTT, or 600-800 Gy without TTT for peripheral tumour location. The brachytherapy dose was standardized to a dose rate of 100 Gy per 24 h using a correction factor (2-10% dose correction). Local failure was defined as residual prominence with signs of activity on fluorescence angiography, or regrowth after complete remission.

Results: Median follow-up was 40.1 months; 25.9 months for RuBT and 67.5 months for Ru/TTT; hence 3-year results were analysed. Patients treated with RuBT had smaller and less centrally located tumours and better median visual acuity (VA). VA deteriorated more rapidly in Ru/TTT patients; at 1 year the loss of vision relative to the VA before treatment was -0.1 for RuBT patients vs -0.25 for Ru/TTT, while at 3 years the relative VA decline was similar (-0.30 vs. -0.28). Local failure was detected within 3 years in 4.3% of RuBT patients compared to 11.2% of Ru/TTT patients, for 3-year cumulative incidence rates of 6.4% vs 11.2% (p=0.09). Treatment for local failure consisted of repeated RuBT; TTT; or enucleation. Enucleation was performed in 2.4% of RuBT patients vs. 10.2% of Ru/TTT; of these, 1.6% vs 6.1% were done for recurrence and 0.8 vs 4.1% for complications. Three-year cumulative incidence of distant metastases was 4.8% vs 6.6% for RuBT vs Ru/TTT (p=0.37), and of death 0.5 vs 3.7%. In univariate analyses, most important risk factors for local recurrence and metastases were tumour prominence, tumour diameter and stage, while in multivariate analysis only diameter remained significant for local recurrence. In view of the short follow-up of RuBT, updated results will be presented.

Conclusion: Both protocols for eye-conserving treatment of patients with choroidal melanoma provided excellent rates of local tumour control and eye preservation, with the RuBT protocol confirmed to be best standard of care with 97% eye preservation and significantly longer preservation of visual acuity.

Poster: Clinical track: Sarcoma

PO-0764

Perioperative brachiterapy boost in high grade soft tissue sarcomas

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Purpose or Objective: The standard primary treatment for soft tissue sarcoma (STS) is radical surgical resection, preceded or followed by radiotherapy. The purpose of this retrospective study was to assess the efficacy and safety of perioperative brachytherapy (BT) plus postoperative external beam radiation therapy (EBRT) +/- chemotherapy (CT).

Material and Methods: The primary aim of the study was evaluating local control (LC) and overall survival (OS) in a large patients population of treated with combined modality therapy. Secondary objectives were to identify prognostic factors for local recurrence (LR). BT was delivered with Pulsed Dose Rate. Total dose was 20 Gy (0.80 Gy/pulse). EBRT was delivered with 3D-technique by using multiple beams technique. The prescribed dose was 46 Gy (2Gy/fraction). Neoadjuvant and adjuvant chemotherapy was prescribed to patients with potentially chemo-sensitive histological subtypes. Univariate analysis was performed with the log-rank test and multivariate analysis with Cox's proportional hazard model.

Results: From 2000 to 2011, 107 patients (median age 54 years; range 13-85) with high grade primary or recurrent STS were treated with surgery, perioperative BT and adjuvant EBRT +/- CT. Five year LC and OS were 82.2% and 87.8%, respectively. A higher LC was recorded in patients treated for primary tumor, lower limbs, and negative margins STS.

Conclusion: The combination of BT and EBRT was able to achieve high LC and OS rates. A particular risk factor recorded was the disease site. These results warrant further prospective studies to define the role of BT boost in adjuvant therapy of resected STS.

PO-0765

Management of primary cardiac and great vessel sarcomas, The RMH experience 2000-2015.

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Purpose or Objective: Primary cardiac and great vessel sarcomas are a challenging group of cancers with poor prognosis. No consensus management guidelines exist and definitive treatment favours surgery, reserving adjuvant radiotherapy (RT)/chemotherapy (CT) for high-risk patients.

Material and Methods: Retrospective analysis of patients identified from a prospectively collected database Sarcoma Unit, 2000-2014.

Results: 33 patients(19 males) were identified with either primary cardiac(73%) or great vessel sarcomas; median age of 46.9 (range 13-83). Presenting symptoms included dyspnoea(55%), pain(21%), cough/haemoptysis(11%), heart failure(24%), emboli(18%) or pulmonary HTN(12%). Diagnosis was on biopsy(42%) or following resection(58%). Atrial tumours accounted for 58% of cases. Surgery was performed in 66%, with R0(12%),R1(24%) ,R2(24%), or unknown (6%) margins. High grade tumours were seen in 17(52%) cases. Commonest histological subtypes were angiosarcoma (32%), and spindle cell (17%). Localised disease was observed in 18 (55%) cases. Median follow-up was 379 days.
Group A, Radiotherapy: 15 patients received RT (6 males), 10 had operable tumours. 8 patients also received CT. Median time to first treatment was 57.9 days. Patients received 60 Gy/30#(n=4), 59.4 Gy/33#(n=3), 58 Gy/30#(n=1), 50.4 Gy/28#(n=3), 45 Gy/25#(n=1), 35 Gy/15#(n=1), or 20 Gy/5#(n=1). 85% reported toxicity (oesophagitis, cough or fatigue). 8 (53%) patients developed a local recurrence (LR) and 13 patients developed metastatic disease (DM). 2 were long term survivors. Median time to DM for right sided lesions was 116 days, left sided, 1226 days. Overall survival was 2.1 years (R side) and 3.4 years (L side). Median OS was 803 days.
Goup B, Chemotherapy: 13 patients received CT(10 males), 7 had operable tumours. Median time to first treatment was 44 days. Regimens were mainly alkylating/anthracycline/taxane based. 3 patients stopped early (toxicity). 10 patients had LR(77%) and 10 patients developed DM. 2 were long term survivors. Median OS was 296 days.
Group C, Surgery: