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### ABSTRACTS – ORAL PAPERS

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#### **Outcomes from a large series of extremity soft tissue sarcomas :What is the influence of surgical margins?**

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#### **Introduction**

The outcomes from combined treatment with radiotherapy and surgery for soft tissue sarcomas have encouraged an increasing trend to limb salvage surgery. This may necessitate narrower surgical margins in order to preserve a functional limb, as the tumours often have a close relationship to major vital structures. The aim was to examine the outcomes from a large series of extremity STS, analyse prognostic factors for survival and locally recurrent disease and specifically examine the role of surgical margins on outcomes.

#### **Methods**

A consecutive series of 2445 patients treated between 1963 and 2007 were identified, allowing a minimum of 1 year follow up. All patient records were reviewed and data analysed included demographic details, diagnosis, type of surgery, size of tumour at resection, presence of locally recurrent disease or metastases, patient survival, surgical margins, tumour grade and location of the tumour. Factors were compared using survival curves with the Log rank and cox regression methods. Cox regression analysis for prognostic factors was only performed on those who had presented without having had any previous treatment (1639 patients).

#### **Results**

1639 patients (67%) had not had any previous treatment and 770 patients (32%) had a previous surgical intervention or unplanned excision with 36 patients (2%) being previously treated with adjuvant therapy prior to referral. The most common diagnoses were Liposarcoma (292 patients, 12%), Synovial sarcoma (242 patients, 10%) and Leiomyosarcoma (239 patients, 10%). Locally recurrent disease occurred in 350 patients (14%). It was more likely if there had been intralesional margins (39%,  $p<0.0001$ ), this was an independent prognostic factor for both poorer patient survival and development of local recurrent disease on cox regression analysis. LR rates between wide and 'marginal' resections (15% vs 17%) were not statistically significant different, nor were survival rates. Independent prognostic factors for survival were high grade tumours ( $p<0.0001$ , HR=4.7), primary amputation ( $p=0.0001$ , HR=3.8), intermediate grade tumours ( $p<0.0001$ , HR=3.1), intralesional margins ( $p=0.008$ , HR=1.5), deep location ( $p=0.007$ , HR=1.4), age at diagnosis ( $p<0.0001$ , HR=1.15), size of tumour ( $p=0.001$ , HR=1.1) and no locally recurrent disease ( $p=0.0001$ , HR=0.58). The world literature will be reviewed regarding classification of margins for STS.

#### **Conclusions**

Outcomes for local recurrence and survival do not depend upon traditionally classified 'wide' margins. We recommend that the UK adopts the UICC classification of surgical margins.