

**FC-110****Outcome following resection of synovial sarcoma – Analysis of prognostic factors with a minimal follow up of 5 years**

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Background: Synovial sarcomas (SS) are malignant soft tissue tumors, whereas 77% of patients are younger than 50 years and 30% even younger than 20 years. The prognosis of SS is mostly influenced by individual factors, which are controversially discussed in the recent literature. Aim of this study was an outcome analysis of patients with SS with respect to prognostic factors.

Material and Methods: We retrospectively included all patients who were treated for SS between 1998 and 2009 at the musculoskeletal tumor center. Treatment as well as course of disease and survival were examined with regard to location, age, biology, tumor size, grading and metastases.

Results: In total 52 patients (48% male, 52% female) were analysed with a mean follow up of $11 \pm 3,6$ years. Age at diagnosis was $37,4 \pm 16,0$ years (8-77 years). Histopathological findings revealed monophasic SS in 33 cases (63 %), biphasic SS in 18 (35 %) and dedifferentiated SS in 1 case (2%). 15 patients (29%) were previously operated in external hospitals, none had clear margins. The grading was G1 in 1 patient (2 %), G2 in 19 (36 %) and G3 in 32 patients (62%). Primary metastases were recorded in 3 patients. Most frequent location was the thigh 26,9%. Clear resection margins were achieved in 79% and limb salvage in 77%. Adjuvant radiation was performed in 26 patients (50%). In 40 patients a local recurrence was recorded after a mean of 25,2 months. 16 patients (30,8%) developed distant metastases during the course of disease, only 1 after more than 5 years postoperatively. 5 year survival rates were lowest in patients older than 40 years or with big, metastasized and/or high grade tumors. Complication rate was 25%.

Conclusion: Synovial sarcomas are frequently seen in young patients and children. Almost one third of our patients was insufficiently treated at peripheral hospitals, because a benign entity was suspected. Prognosis was mainly affected by factors such as tumor size, grading, age and resection margins.