

## **Regional hyperthermia in high-risk soft tissue sarcomas**

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## **Regional hyperthermia in high-risk soft tissue sarcomas**

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Purpose: On the basis of the definition of high-risk soft tissue sarcomas and prognostic factors, the most recent developments with special emphasis on regional hyperthermia combined chemotherapy are reviewed.

Findings: The most important prognostic factors (e.g. size, grade, depth and resection margins) for localized soft tissue sarcomas have been defined to predict the probability of sarcoma-specific death providing a useful tool for patient stratification and clinical trial eligibility determination that are also relevant in the outcome of paediatric patients with adult type soft tissue sarcomas. Clinical research on innovative preoperative treatment strategies has essentially focused on the combination of preoperative radiochemotherapy or chemotherapy alone. The reported results are based upon retrospective analysis or nonrandomized phase II studies with small sample size. For the use of regional hyperthermia (RHT) therapy, phase II studies have advocated a possible benefit of the use of regional hyperthermia in combination with chemotherapy targeting the heating field to the region of tumour burden. The results of a completed European Organization for Research and Treatment of Cancer–European Society of Hyperthermic Oncology intergroup randomized phase III trial for the most common types of adult high-risk soft tissue sarcomas demonstrate a significant benefit in the clinical outcome of patients receiving regional hyperthermia therapy.

Summary: Regional hyperthermia combined with preoperative and postoperative chemotherapy offers a new appropriate treatment option for high-risk soft tissue sarcomas.