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学位論文の題名	<p>Clinical outcomes of radio-hyperthermo-chemotherapy for soft tissue sarcoma compared to a soft tissue sarcoma registry in Japan: a retrospective matched-pair cohort study (温熱併用放射線化学療法 of 悪性軟部肉腫に対する治療成績：骨軟部治療登録データベースを用いた matched-pair コホート研究)</p> <p>Cancer Med. 2018 Apr;7(4):1560-1571</p>
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【introduction】 Regional hyperthermia is considered to enhance the antitumor effects of chemotherapy and radiotherapy. In this study, we confirmed the efficacy of concomitant radiotherapy, hyperthermia, and chemotherapy (RHC) for neoadjuvant treatment of malignant soft tissue sarcoma (STS).

【Materials and methods】 From 1994 to 2013, we performed RHC in 150 patients. This study was limited to 60 patients using the following exclusion criteria: salvage for recurrence or unplanned excision, trunk location, metastasis at initiation, non-STS, and no definitive surgery. As a control group, we collected data from 11,031 patients in the Bone and Soft Tissue Tumor Registry in Japan (BSTT). We performed multivariate logistic regression analysis, and propensity scores were created for comparisons between groups. The primary outcome of this study was to compare oncologic outcomes (5-year local control rate [LC] and overall survival rate [OS]).

【Results】 In the RHC group, two local recurrences (3.3%) occurred, and no patients underwent amputation. Margins of definitive surgery were not identical between groups [wide margins (60.0% vs. 85.3%), marginal margins (28.3% vs. 10.5%), and intralesional margins (7.4% vs. 4.2%), RHC and BSTT groups, respectively, $P < 0.001$]. After adjustment, the difference in OS was not significant between groups (HR = 1.26, $P = 0.532$); however, a statistically significant difference in LC was observed (HR = 4.82, $P = 0.037$).

【Conclusion】 RHC resulted in a high LC at 5 years compared to the BSTT group, and amputation was averted in the RHC group, despite the wider margins in the BSTT group. This indicates that less invasive surgery might be achieved with effective neoadjuvant therapy.