

Treatment of advanced soft tissue and osteogenic sarcomas with continuous infusion of ifosfamide and mesna

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Preclinical studies in mice suggest that continuous infusion of ifosfamide with mesna (dose relationship 1:1 mg/kg) might yield a better therapeutic index than push injections (Klein et al., Cancer Treat Rev 10 (Suppl), 83 (1983); Klein et al., Cancer 54 (Suppl), 1193 (1984)). In clinical phase II studies we treated 28 patients – 18 male, 10 female; 20 patients pretreated by cytostatics; median age 50 years – with advanced soft tissue and osteogenic sarcomas. Ifosfamide was administered as single agent or in combination with DTIC or *cis*-platinum. Mesna was injected simultaneously with ifosfamide. The daily dose of ifosfamide and mesna was split into four parts, each infused

over a period of 6 h. Treatment with mesna was continued for 48 h after termination of ifosfamide infusion in order to protect kidneys and urinary bladder, as clinical investigations had shown that the metabolite 4 OH-ifosfamide is still excreted by the kidneys up to 48 h after the end of the ifosfamide infusion. Thirteen patients responded. Two patients (liposarcoma, neurogenic sarcoma) achieved complete remission, lasting 24+ and 17+ months, respectively. The other responders suffered from lipo-, chondro-, fibro-, and leiomyosarcomas and a pleuramesothelioma. Side-effects of this protocol are not severe and consist in nausea, vomiting, alopecia and leukopenia.