OXYGENATION STATUS IN PRIMARY SQUAMOUS CELL CARCINOMAS OF HEAD AND NECK
Department of Radiation Oncology
1Department of ENT surgery, Technische Universität München, Klinikum rechts der Isar, 81675 München, Germany
45 patients with primary head and neck tumors were investigated pretherapeutically. In 30 patients the tumors were located at the floor of the mouth, the tongue or the tonsil. In these cases PO2 measurements were performed in general anesthesia during endoscopic procedure. In 15 patients large neck nodes (N2/N3) were investigated pretherapeutically and during split course radiochemotherapy. In general, the median PO2 distribution ranged between 2.4 and 46.6 mmHg and showed marked tumor to tumor heterogeneity. The follow up investigations during split course radiochemotherapy (n = 15) showed a significant increase of the median PO2 after the pause. The observed changes of tumor oxygenation during therapy will be discussed in detail with regard to their clinical relevance.

HYPERTHERMIA-ENHANCED EFFECTIVENESS OF CISPLATIN IN UNTREATED VERSUS IRRADIATED RAT SOLID TUMOURS
C. van Breukelen, R. C. Rietbrock, J. B. A. Kipp, P. J. M. Bakker, C. H. N. Vienhof
1Department of Radiotherapy
2Medica Oncology, Academic Medical Centre, PO Box 22700, 1100 DE Amsterdam, The Netherlands
Hyperthermia (HT) enhances cytotoxicity of cisplatin (CDDP). If this enhancement is different in untreated versus irradiated tumours is not known. Therefore this animal study investigates the efficacy of combined CDDP and HT in untreated tumours compared to tumours regrowing after irradiation.

Purpose of the study: To perform the first clinical study with an extendable endoprosthesis that can be extended non-invasively for children with a malignant bone tumor in the leg.

Method: A 14-year old boy had an osteosarcoma at the distal metaphysis of the femur. The patient was first treated successfully by chemotherapy (cisplatin, doxorubicin, ifosfamide and high dose methotrexate). The operation followed a few weeks after chemotherapy (cisplatin, doxorubicin, ifosfamide and high dose methotrexate). A 14-year old boy had an osteosarcoma at the distal metaphysis of the femur. The patient was first treated successfully by chemotherapy (cisplatin, doxorubicin, ifosfamide and high dose methotrexate). The operation followed a few weeks after chemotherapy (cisplatin, doxorubicin, ifosfamide and high dose methotrexate). In 75% of the cases, radiation therapy was performed using standard techniques and doses of at least 45 Gy. Bifractionated radiotherapy (dose 45 Gy) was used for patients treated between 1989 and 1992 (25%).

Treatment evaluation was performed on 1st March, 1995. Median follow-up is 66 months. 24% of the patients relapsed locally, and 47%