the outcome were: the number of metastases developing during treatment. Not of significant influence on outcome were: the number of metastases, the disease free interval, unilateral versus bilateral metastases, pre-operative and postoperative adjuvant treatment of the number of thoracotomies performed.

Conclusion: The most important prognostic factor is the type of primary tumour. Excision of lung metastases in children with Ewing or soft tissue sarcoma is not warranted. All other patients who are able to withstand a major operation, should not be denied the chance because the surgical risks appear minimal and the outcome cannot be predicted beforehand.

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METASTATIC AND LOCALLY RECURRENT HEPATOBLASTOMA (HB) PROBLEMS OF DIAGNOSIS AND THE ROLE OF SURGERY—RESULTS FROM THE SIOPEL I STUDY

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In the SIOPEL I Study for Hepatoblastoma and Hepatocellular Carcinoma in children 155 cases of Hepatoblastoma (HB) and 40 cases of Hepatocellular Carcinoma (HCC) were accrued from Jan 1990–Febr 1994.

20% of children with hepatoblastoma and 28% of children with hepatocellular carcinoma presented with lung metastases. According to protocol all were treated by pre-operative chemotherapy with 6 courses of PLADO (Cis Platinum 80 mg^2/over 24 hours and Doxorubin 60 mg^2/over 48 hours) and delayed surgery of the primary tumour.

In **Hepatoblastoma** complete resection of the primary tumour was achieved in 60% of the patients and the overall survival is 68% (compared to 86% in non metastatic patients) at 18 months.

So far in this group 3 patients have had surgery for lung metastases and 2 for local recurrence. 2 of the 3 with lung surgery are alive with NED—1 died (cause at present not known).

1 has had surgery for local recurrence and is alive with slightly raised αFP. The other at present is lost to follow up. The data above will be updated and examined in more detail.

Patients with hepatocarcinoma are also being similarly evaluated.

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SURGICAL TREATMENT OF RECURRENT AND METASTATIC DISEASE IN CHILDHOOD HEPATOBLASTOMA

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Malignant hepatoblastoma is the most common pediatric liver neoplasm occurring predominantly in children between 6 months and 3 years. Prognosis of these patients has been dismal but recently could be improved by the use of effective chemotherapy in multicentric cooperative trials. Yet, children with metastates or recurrent tumour usually have a poor outcome. Our experience is based on 103 children with hepatoblastoma operated on in our department 1977–1987 (group I: 30 pat.) or treated in the nationwide German pediatric liver tumour study HB89 1988–1993 (group II: 73 pat.) The disease-free survival was 37% (11/30) in group I and 74% (54/73) in group II. The patients' data show that primary complete resection of small tumours means an excellent prognosis (26/27 pat. disease-free). In contrast, 7/30 group I patients suffered from early local relapse or metastases after incomplete primary resections and 3/30 died under the operation. Therefore, large metastatic hepatoblastomas should be treated with chemotherapy prior to resection which reduces surgical complications, improves resection rates, and prevents early relapses. Primary chemotherapy containing doxorubicin, cisplatin, and ifosfamide was effective in reducing the tumour in 46/47 patients (98%) and 40 (85%) of them became resectable. Yet, 8/12 hepatoblastomas receiving prolonged chemotherapy developed drug resistance. Therefore, persistent or recurrent tumour require alternative drug regimens. Then, even these patients can be brought into remission after removal of all neoplastic tissue (6 patients in our series). Repeated surgery can be necessary to reach this goal. Lung metastases can be locally excised while recurrent tumour in the liver poses more problems, since it often occurs multifocally disseminated. Liver transplantation might cure these children (2/3 pat. in our series) but is only indicated, if there exists no extrahepatic tumour.

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DNA SCREENING IN MEN FAMILIES AND THERAPEUTIC CONSEQUENCES

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Medullary thyroid carcinoma (MTC) may occur as a part of the inherited cancer syndrome multiple endocrine neoplasia type 2 (MEN 2). MTC is the only malignant and potentially lethal component of the MEN 2 syndrome. The underlying cause of MEN are missense mutations of the RET proto-oncogene located on chromosome 10q11.2. In MEN 2A the mutations affect one of the cystein residues in exon 10, 11 and 13. In these, the most common mutation is a Cys634 to Arg substitution. In MEN 2B families exclusively methionine mutations in codon 918 (exon 16) has been detected. Direct DNA testing for RET proto-oncogene mutations presents the method of first choice in presymptomatic screening in MEN 2 families. Gene carriers should be offered prophylactic thyroidectomy in the childhood. Non-gene carriers may be excluded from further screening.

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NO ABSTRACT

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IDENTIFICATION OF INDIVIDUALS WITH A GENETIC PREDISPOSITION FOR COLON CANCER—HNPCC

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Individuals from families with an inherited predisposition for colorectal cancer comprise a high risk population which would benefit from screening with colonoscopy and/or profylactic surgery. Hereditary non polyposis colon cancer is one of the most common genetic diseases in the Western world. As much as 1 in 200 can be a gene carrier and this syndrome is estimated to account for 5–10% of all colon cancers.

These families are identified by frequent cases affected with colon cancer, often early onset and right sided. The predisposition shows an autosomal dominant mode of inheritance. The predisposed individuals also have an increased risk for cancers in other sites such as uterus, stomach, ovary and breast. Individuals at 50% risk are offered screening with colonoscopy. In families with other frequent tumors available screening for these are offered as well. Gene carriers identified by mutation analysis in any of the genes known to cause disease in these families have almost 100% risk of developing cancer and are offered screening procedures or prophylactic surgery.

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IDENTIFICATION OF CANCER PRONE INDIVIDUALS BY TAKING A FAMILY HISTORY—FROM MAN TO DNA AND BACK

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The Basel Familial Cancer Study Group concentrates on the family history for cancer control. Results of the first 1000 cancer patients interviewed:

29% have one, 10% two, 5% three or more first degree relatives with cancer. 9% have one or more first degree relatives with the same malignancy.

DNA is stored and analyzed from members of conspicuous families. Germlike mutations are identified in colorectal and breast cancer families. Persons affected are entered into preventive pilot studies (endoscopy, sulindac, tamoxifen, psychosocial evaluation). The family history is becoming an important element in national early detection efforts of the Swiss Cancer League.