diagnosed BCs in the region). At first visit a checklist with 8 presumed risk factors is used. To patients who have one or more risk factors the composition of an extensive family tree is proposed. Information concerning the family history of BC (age at diagnosis, bilaterality) and the occurrence of other cancers such as ovarian cancer is taken into account. Guided by specific criteria, referral to the Family Cancer Clinic at the UH is suggested. GC and DNA testing for BRCA1 and BRCA2 mutations is offered to selected patients. In this study insight will be gained in the interest of unselected BC patients and their families for GC and DNA testing. In addition the correlation between several risk factors, the probability of hereditary BC and the detectability of DNA mutations is studied. During the first 8 months 304 patients were registered. 132 patients had 1 or more risk factors: 85 of them agreed with the construction of a family tree, 51 fulfilled the criteria for referral to the Family Cancer Clinic and 35 accepted GC. Preliminary results will be presented.

549 POSTER

CIP-1 Protein expression in node-positive breast cancer patients

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CIP-1 is a cyclin dependent kinase inhibitor which negatively controls cell proliferation. Since chemotherapy may affect cell cycle regulation, in this study the hypothesis was tested that increased levels of CIP-1 may be associated with poor response to chemotherapy and with dismal clinical outcome. CIP-1 protein was assessed by immunohistochemistry (IHC) in 26 node-positive breast cancer patients (pts) (≥10 tumor containing axillary nodes or tumor containing infraclavicular node). All 26 pts had been treated with 4 cycles of conventional chemotherapy followed by high-dose chemotherapy supported by bone marrow stem cells. In 1 pt no tumor was left in the paraffin section for IHC. Nuclear staining for CIP-1 was observed in tumor cells in 18/25 of tumors (with usually moderate (+) and sometimes equal intensity (++) compared to internal controls). Nine of the pts with this staining had no evidence of disease (NED) after a median follow-up of 3 yrs, whereas 8 had recurrent disease. Five pts without this staining pattern (intensity 0 or ±) had NED, whereas 2 pts died, one with, and one without disease. Nuclear staining for CIP-1 in an estimated area of >50% of tumor area was observed in 18/25 of tumors. No differences in clinical outcome could be detected: 10 pts with nuclear staining of >50% of tumor area had NED, whereas 8 pts had recurrent disease. Those pts with minimal or absent nuclear staining (≤10% of tumor area) (3 pts) had NED. CIP-1 expression is found in a high percentage of nuclei in breast cancer tumor cells of pts with bad prognosis breast cancer. CIP-1 expression is not associated with clinical outcome in these heavily treated pts, whereas the absence of CIP-1 expression seems to be associated with good prognosis.

550 POSTER

A study of correlation between DNA ploidy pattern and aberration of chromosome 8 detected by fluorescence in situ hybridization in human breast cancer

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Purpose: To compare DNA ploidy pattern (DP) by flow cytometry (FCM) with the aberration of chromosome 8 (Chr.8) by fluorescence in situ hybridization (FISH) in human breast cancer and to study the correlation between them with axillary lymphnodes metastasis.

Methods: Fifty cases of breast cancer which had no chemotherapy and radiation therapy before radical operation were studied. Tissues obtained by operation were divided two sections. The one were sliced and DP were analyzed by propidium iodide staning using FCM (FACScan). The stump sections were made from the others and fixed with acetone, and aberration of Chr.8 were analyzed on 200 cancer cells by FISH using D8Z1/biotin (Oncor) probe which detects centromere of chr.8.

Results: Thirty-three (66%) of 50 had DNA aneuploidy, 17 (34%) had DNA diploidy. The aberration rates of Chr.8 widely ranged from 19 to 75%. There was no significant correlation between DP and aberration rates of chr.8. There was significant correlation only between axillary lymphnodes status and aberration rates of chr.8 ($p = 0.023$). There was no correlation between DP and axillary lymphnodes status.

Conclusion: These results show that breast cancer with high aberration rates of chr.8 tend to involve axillary lymphnodes.

551 POSTER

The antioxidant status of breast cancer patients

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The different changes of AOS have been established at various pathological processes including cancerogenesis and tumor growth. The extent of unsaturation of the tissues and blood lipids, which can be defined by the number of double bounds (C = C) in lipids (NDB), may be considered as an integral parameter for the AOS of a tissue and whole body characterization.

We determined NDB in lipids extracted from blood plasma and erytrocytes before treatment in 113 breast cancer patients (BCP) and 94 healthy women. NDB was measured using the special device -"double bounds analysator – DBA". It was discovered that NDB was significantly higher in the lipids of BCP than in that of controls and correlated with the extent of tumor. The patients with advanced (stage IV) BC had mean value of NDB $3.5 \div 0.3 \times 10^{18}$/mg of lipids, with operable BC – $1.8 \div 0.3 \times 10^{18}$, with benign breast tumors – $0.2 \div 0.05 \times 10^{18}$, in control – $0.4 \div 0.03 \times 10^{18}$. The higher DB level was corresponded to various unfavorable prognostic clinico-morfological factors.

The changes of NDB in blood lipids are considered as a reflection of the tumor-host interrelations. The assay of this parameter in cancer patients may be useful for define tumor extent, for monitoring of patients status and results of treatment, for determination of indications for treatment with antioxidants.

552 POSTER

Presurgery chemotherapy and DNA ploidy of the adenocarcinoma breast cells

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Purpose: To evaluate effectiveness of adenocarcinoma breast (AB) preoperation chemotherapy (PC).

Methods: We studied by FCM the changes of DNA synthesizing cells fraction (SF) (19 cases) and ploidy (29 cases). The biopsies was taken before and after course of PC during surgical operation.

Results: Discovered reduce SF cells after clinically successful treatment in 13 pts with diploid AB. The mean life time this pts was 4 years, 4 pts survived 6 years. In 6 nonresponders to treatment showed the increase the SF cells in all cases. In this group the recurrence onset was detected at 8–18 mo. and the mean life time was less than 2 years. FCM analysis before PC treatment demonstrated in 17 cases DNA content like diploid (D) and in 12 ones aneuploid (A). The analysis after PC showed the diploidy in 12 cases (1 group) and aneuploidy in 8 ones (IY group). 5 D tumors became A ones (II group), 4 A tumors became D ones (III group). 2 pts (16.7%) of the I group have recurrences through 25 and 11 mo. and died through 36 and 20 mo., 10 pts lived 57–80 mo. 3 (65%) pts of the II group have recurrences after 10–12 mo. and died shortly (12–15 mo.), 2 (33%) pts with D tumors becoming tetraploid after PC. They have not recurrences and lived 52–86 mo. In 2 cases (III group) the modification of A population (hyperdiploid) into D led to rapid progression of the disease (10–12 mo.) and pts died through 15–50 mo. The modification A population in any site (IY group, 7 cases) accompanied the disease progression and reduced survival length (6 pts died through 24–49 mo.).

Conclusion: The conservation D or tetraploidy after PC is prognostic factor of the PC efficacy in AB pts in III stage of the decease.

553 POSTER

p-Glycoprotein (pGP) and p53 expression in primary breast cancer

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Purpose: To assess the putative relationship between the expression of multidrug resistance-associated protein (pGP) and p53 protein accumulation in primary breast cancer surgical specimens (n = 40).