Conclusion: The results of our study although based on a small number of breast cancer patients pointed out that high level of PAI-1 may be predictive for a better response to HT whereas low level of PAI-2 may be predictive for a better response to ChT.

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Reading the prognosis of the individual according to the exact NPI value

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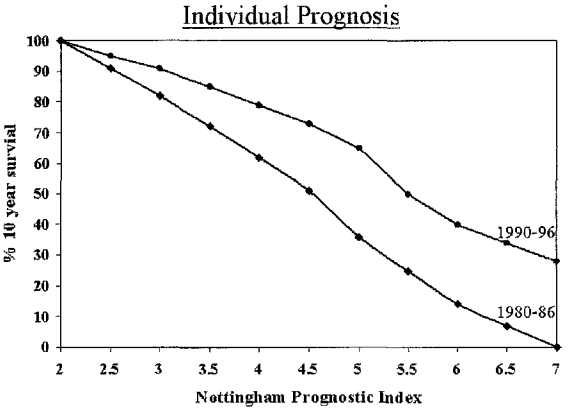
The NPI has until now been used to group women to initially 3 and later 5 prognostic groups, with any two adjacent groups separated by 10–20% in their 10 year survival predictions. This is usually satisfactory for making therapeutic decisions. The prognosis is inversely related to the NPI level. The survival figures for 8 NPI values at which are clustered enough patients, has been plotted. From the resultant graph the 10 year survival prediction for any individual may be read to one decimal point NPI value. Figure 1 shows lines based on 1980–86 (pre-adjuvant therapy) and 1990–96 (adjuvant local and systemic treatments used selectively): Two important uses lie (1) in the design of a computer programme which applies the relative risk reductions from the EBCTCG overview to the individual prognosis without adjuvant therapy from the 1980–86 line, to estimate the expected absolute gain from an adjuvant therapy for the individual and (2) to calculate life expectancy in legal cases.



435 POSTER

Tumor angiogenesis as a prognostic indicator in node-negative breast carcinoma

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The biological aggressiveness of breast carcinomas may be related to prognosis. We investigated the significance of tumor angiogenesis in a retrospective study which included 137 primary node-negative breast cancer patients (median age: 54 years, range: 31–78). The duration of follow-up ranged from 87 to 200 months for cases who alived and 2–152 months for those deceased. Angiogenesis was assessed by counting vessel density with hematoxylin-eosin staining, based on the method published previously (Acta Sterol 1998; 17: 1–8). Histological slides were evaluated to identify "hotspots" of angiogenesis at 100× magnification. Microvessel profiles count were performed at ×400 magnification, using a grid eyepiece graticule; within each "hotspots" (area of field=0.490mm^2) were counted. In the same manner we counted microvessels in fields in mean area. The highest single field and the highest average for a "hotspots" value were recorded for each case and the same for fields in mean area. Patients were stratified into high and low microvessel groups (respectively: >6 and 0–5 profiles per field) and their survival compared. As a results we can state: 1) microvessel counts did not corrrelate with primary tumor features, such as histological type, grade, and size; 2) no relationship was found between vascularity in "hotspots" and relapse-free survival; 3) significant correlation was found between vascularity in "hotspots" for older and post-menopausal patients and overall survival ($p<0.05$); 4) no relationship was found between vascularity mean area and overall survival. Our results probably reflects the heterogeneity which exists between different tumours in their ability to induce angiogenesis. Additionally, the study gives some evidence that angiogenesis is possibly related to patient age and menopausal status.

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Sister chromatid exchange and micronuclei frequency in early-stage breast cancer patients: preliminary results of a prospective observational study

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Background and study aim: Spontaneous chromosomal instability has been correlated with a risk of developing cancer. We evaluated sister chromatid exchange (SCE) and micronuclei (MN) frequency in peripheral blood lymphocytes of early-stage breast cancer patients to see if it can be considered a disease biomarker.

Materials and Methods: In 20 evaluable pts, aged 38 to 81 years (median 57.5), SCE and MN were measured both before and four weeks after conservative surgery. While, in those 10 pts who had previously received chemotherapy (CT), testing was done immediately before radiotherapy (RT). Further controls were done 8 weeks after RT on all pts and at 6 months in 9 cases. All pts will be studied regularly during follow-up. There were 15 ductal infiltrant carcinomas (13 G2, 2 G3), 1 medullary carcinoma, 1 adenocarcinoma and 3 intraductal carcinomas with microinfiltration. Median tumor size was 12 mm (range 7–27 mm). In 16 and 11 cases estrogen and progestinic receptors were positive, respectively. Five pts had axillary positive nodes and in three of these cases they were four or more. Ten pts underwent adjuvant chemotherapy (CMF or FEC). Hormonotherapy was prescribed to 14 cases. RT was delivered to the breast ± sovraclavicular nodes; single dose was 1.8–2 Gy, total dose 50.4–50 Gy; a 10 Gy boost was delivered to the tumor bed. Student's *t* test compared SCE and MN basal values to both those from a healthy control group of 7 women and those values obtained from treatment/follow-up times.

Results:

SCE and MN mean values

	Basal	Post surgery	Before RT*	Post RT	6 months after RT
SCE	8.2±0.9	7.8±1.2	10.8±2.9	8.6±1.3	8.7±1.1
MN	23.2±10.7	24.1±10.1	23.1±14.2	64±17	40.6±27.4

*Only in pts previously receiving chemotherapy.

SCE value reduction after surgery, though not statistically significant, (p 0.07) seems to be a result of tumor removal while the SCE increase after chemotherapy (p 0.04) is most likely to be a result of cytotoxic damage. MN increase after RT ($p<0.01$) is most likely due to genotoxic damage. A statistically significant difference (p 0.04) was observed between SCE basal and control group values.

Conclusions: The frequency of SCE as a cancer biomarker was confirmed by the difference obtained comparing basal testing to control group values. Results here suggest that SCE and MN must be an index of damage due to CT and RT, respectively. In the future, this study will seek to determine if SCE and MN frequency measurements during follow-up are disease progression predictors.

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Opportunities of an individual approach to postoperative treatment in breast cancer patients

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Background: In breast cancer treatment the surgical method is the basic. However frequently it is supplemented with use of various ways of antineoplastic therapy, for example, chemotherapy. With this purpose we investigated activity of Thymidine kinase (TK) – the recognized marker of proliferation. Thymidine phosphorylase (TP) is used as the indicator of sensitivity to same chemopreparations. Activity of Adenosinedeaminase (ADA) connected with differentiation and apoptosis of a cell on which effect some preparations.

Materials and methods: Activity of TK, TP and ADA is invstigated in blood serum, bioptate of tissues and in lymphocytes of breast cancer