We found no statistical effect on the relative risk of type of psychopathology, years of follow-up, age after first admission and alcohol abuse.

Conclusion: We found no support for the hypothesis of an increased risk of breast cancer among women with admission into psychiatric department with affective or neurotic disorder.

98 ORAL

Breast cancer and risk factors: A comparative study between a low and a high risk population

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Aims: To study breast cancer risk factors in two epidemiologically different populations caracterised by low and high incidence rates for breast cancer. To define minor and major risk factors and determinants. To evaluate futur epidemiological changes and options in public health interventions in breast cancer.

Materiel and Method: A comparative epidemiologic study was performed between Geneva, Switzerland and Shanghai, China. We included 2000 women, 1000 in each group. We study minor risk factors, i.e reproductive (menarche, menopause, age at first pregnancy), hormonal (oral contraception, hormonal substitution), live style (diet) factors; major risk factors (family or personal history of benign breast diseases or cancer) were also studied.

Results: Mean age is 50 in each group, respectively Geneva and Shanghai. Results about minor risk factors demonstrated an early menarche and late menopause (before 40 y.o.) in Geneva (13 vs 15 y.o; 22.9 vs 31.6%). Nulliparity and first pregnancy age (before 25 y.o.) is most frequent in Geneva (14.2 vs 6.7%; 31.4 vs 53.7%) Contraceptive and hormonal substitution are unusual in Shanghai (10 vs 1.2%; 11 vs 0%). Fatty diet and obesity is more frequent in Geneva (5 vs 0.3%). Personal and family history of breast cancer is very high in Geneva (2.2 vs 2.2%; 10.3 vs 0.9%)

Conclusion: These results confirm well known minor and major breast cancer risk factors. Diversity of involved risk factors and future epidemiological changes-specially in diet and hormonal use-make difficult futures predictions and public health interventions.

99 ORAL

Worse survival of patients with endometrial cancer following tamoxifen treatment for breast cancer: A study with 309 second tumors

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Purpose: We conducted a nationwide case-control study to assess the effect of tamoxifen on the risk and prognosis of endometrial cancer.

Methods: Through the population-based Netherlands Cancer Registry and two older, hospital-based registries we identified 310 cases with endometrial cancer after breast cancer and 861 matched controls with breast cancer in whom endometrial cancer had not developed. Detailed information on breast cancer treatment, risk factors and prognostic factors of endometrial cancer was obtained through a review of the medical records.

Results: Tamoxifen had been used by 36% of the cases and 29% of controls (RR 1.5 [95% CI 1.1–1.9]). The median time between diagnosis of breast cancer and endometrial cancer was 40 (4–235) months. There was a strong increase in risk of endometrial cancer with longer duration of tamoxifen use ($p < .001$): RR 2.0 (95% CI 1.2–3.2) for 2–5 years of use and 6.9 (95% CI 2.4–19.4) for ≥ 5 years of use compared to never use. FIGO stage 3 and 4 endometrial cancers occurred more frequently in long-term (≥ 2 yrs) tamoxifen users than in nonusers (17.4% vs 5.4%, $p = .006$). Eleven of 110 tamoxifen-treated women and 10 of 200 non-users died of endometrial cancer after median follow-up of 30 months. Three-year actuarial endometrial cancer-specific survival was significantly worse for long-term tamoxifen users (≥ 2 yrs) than for non-users (80% vs. 94%; $p = .002$). Cox proportional hazard analyses showed that the worse survival of long-term users was related to their less favourable FIGO stage. Additional immunohistochemical analyses of the tissue blocks of all endometrial cancers are currently being performed to evaluate whether advanced FIGO stage after long-term tamoxifen use reflects specific molecular genetic alterations.

100 POSTER

Serum and nipple aspirate levels of vitamin A and vitamin E and lack of an association with breast cancer

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Purpose: Epidemiological evidence suggests that diets low in antioxidants could lead to an increased risk of breast cancer. Vitamin A and E are two antioxidants that have been shown experimentally to inhibit the development of mammary tumours. Our aim was to determine the levels of vitamin A and E in serum and nipple aspirates of women attending the South Manchester Breast Clinic and the association with breast cancer.

Methods: One-hundred and six women were studied, with a median age of 44 years (range 16–82). Forty-four patients had breast cancer and 62 had either benign or no detectable breast disease. Serum and/or nipple aspirate samples were collected from each patient and paired nipple aspirate and serum data were available for 35 women. Vitamin levels were measured by HPLC.

Results:

Median levels (mg/ml)	Serum (benign patients)	Serum (cancer patients)	Nipple aspirate (benign breast)	Nipple aspirate (malignant breast)	Serum (non smokers)	Serum (smokers)
Vit A	0.5	0.50	0.29	0.25	0.50	0.50
(IQ range)	*(0.40–0.62)*	*(0.40–0.57)*	*(0.13–0.44)*	*(0.17–0.40)*	*(0.41–0.59)*	*(0.34–0.57)*
Vit E	11.3	12.35	12.20	11.10	11.70	10.8*
(IQ range)	*(9.3–12.6)*	*(9.–15.08)*	*(6.40–21.4)*	*(5.50–16.40)*	*(9.8–14.3)*	*(8.75–12.45)*

* $p < 0.05$

Serum vitamin A and E rose significantly with age and with the menopause (pœ 0.01) Nipple aspirate antioxidant levels were unaffected by smoking ($p > 0.2$) and breast cancer had no affect upon nipple aspirate or serum antioxidant levels.

Conclusion: We have found no evidence of an association between breast cancer and level of Vitamin A and E.

101 POSTER

Individual breast cancer risk in premenopausal women

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Purpose: There is an increasing demand for prediction of individual women's risk for breast cancer. We delineated an equation to estimate premenopausal women's breast cancer risk for a period of one year, based on the absolute risk and the excess risk from identified risk factors.

Methods: We tested this method in 1681 women who underwent mammography in a private clinic. After calculating the individual risk for each of the patients, we divided them in quartiles. We also divided the population in arbitrary risk levels: low, intermediate, and high. Then, we compared the number of cases expected with the number of cases diagnosed.

Results: The breast cancer incidence was higher in the highest quartile of risk (3.5%) as compared to the lowest (1.0%) ($P = 0.02$). The breast cancer incidence was also higher in arbitrary high risk level group (5.1%) as compared to the low risk (1.5%) ($P = 0.01$). The relative risk of presenting the disease was 3.25 in the highest quartile of risk compared to the lowest ($P < 0.05$), and was 3.26 in the high risk level compared to the low risk ($P = 0.01$). There was a significant correlation in the expected/observed ratio between subgroups ($r = 0.99$; $P < 0.001$).

Conclusion: This new method might be useful in the evaluation of individual breast cancer risk in premenopausal women.

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Individual breast cancer risk assessement in postmenopausal women

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Purpose: There is an increasing demand for prediction of individual women's risk for breast cancer. We delineated an equation to estimate