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A study of ethnicity and breast cancer in an urban general hospital

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Background and Aims: Whilst studies in the USA have shown African–American women have a worse disease outcome, little is known about ethnicity and breast cancer in the UK. The aim of this study was to investigate ethnic differences in breast cancer presentation and tumour pathology.

Methods: This is a retrospective study of women with primary invasive breast cancer undergoing surgery between January 2004 and November 2007, presenting to an inner-city hospital with a large ethnic minority population. Exclusion criteria included neoadjuvant chemotherapy & those who did not undergo axillary surgery. Data collected included ethnic origin, age, mode of detection, type of surgery, tumour size. grade, nodal status & oestrogen receptor (ER) expression.

Results: A total of 612 women were identified – 470 (76.8%) were white, 85 (13.9%) were south asian (Indian/Pakistani/Bangladeshi), and 47 (7.7%) were black (black carriban & black african). 10 patients (1.6%) were categorised as other ethnic grouping and were excluded from further analysis.

	White	Asian	Black	p
n	470	85	47	
Age at diagnosis (median – yrs)	62	53	54	p < 0.001
Breast Screening	257	23	10	p < 0.001
symptomatic	213	62	37	
Tumour size (mm)				
Range	1–200	6–100	1–150	
median	20	25	24	p = 0.019
≤20 mm	251	29	21	p = 0.003
>20 mm	219	56	26	
Node negative	305	49	25	p = 0.15
Node positive	165	36	22	
ER positive	387	64	32	p = 0.027
ER negative	82	21	15	
Wide local excision	272	49	23	p = 0.3
Mastectomy	198	36	24	

Median age at diagnosis was significantly lower in the asian & black populations (53 & 54 yrs respectively) compared to whites at 62 yrs (p < 0.001). 55% of cancers diagnosed in the white population were diagnosed through the NHS Breast Screening Programme but only 21% of cancers in the black group were screen detected. Black women had a significantly higher proportion of grade 3 and ER negative tumours. Median tumour size was greater in asian & black women. Axillary node metastases were more frequent in black women although this did not reach statistical significance.

Conclusions: The larger tumour size observed in asian & black women is probably a reflection of the smaller proportion of cancers detected through routine breast screening. However, the greater frequency of high grade and oestrogen receptor negative tumours in black women suggests a difference in tumour biology. The younger age at diagnosis in both asian and black women should be considered when planning screening protocols.

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Documentation in two EUSOMA initially accredited breast units and monitoring of quality indicators within the QT system

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Background: In 2005, the European Society of Breast Cancer Specialists (EUSOMA) initiated a voluntary accreditation process for specialist breast units according to a detailed accreditation protocol. The Comprehensive Cancer Center Aachen serves as the data managing agency for two initially accredited breast units in the Aachen region who acquired initial accreditation in July 2006.

Materials and Methods: Since January 2004, all cases treated by the specialist breast units in Aachen have been recorded in QT (www.cpo.it/qt), which is an EUSOMA approved database.

Results: The specialist breast units are required to export their data to the EUSOMA Network database on a regular schedule (once per year). First results on trends in 16 quality indicators over time in 1033 primary early breast cancers, 105 primary advanced cases and 86 recurrences are presented and discussed with respect to the usefulness of quality indicators to the multidisciplinary team specialists working in the units.

Conclusions: The voluntary accreditation process by EUSOMA and the requirement of regular data audit is likely to provide useful external support to specialist breast units.

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Rising incidence of breast cancer among female cancer survivors: Implications for surveillance

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Background: The number of female cancer survivors has been rising rapidly, resulting in an increasing number of women at risk of second breast cancer. Thus, we assessed the increase in breast cancer incidence among cancer survivors to determine the need for surveillance. Furthermore we assessed the stage distribution of breast cancer among female survivors according to various patients characteristics. Thus those in need of earlier detection can be determined.

Methods: We computed incidence of primary breast cancer in two cohorts of female cancer survivors with a first diagnosis of cancer at ages 30+ in the periods 1975–1979 and 1990–1994. Cohorts were followed for 10 years through a population-based cancer registry.

Results: Over a period of 20 years, the incidence rate of breast cancer among female cancer survivors doubled (rate ratio:1.9, 95% CI: 1.5−2.4). Age-adjustment reduced this increase by 43% (age-standardized rate ratio (RR-adj):1.5, 95% CI: 1.1−2.1). Increases over time were most marked for women who were first diagnosed with a non-breast cancer (RR-adj:2.1, 95% CI: 1.1−3.9), for women with second breast cancer stage II (RR-adj:3.1, 95% CI: 1.2−7.0) and for those diagnosed with a second breast cancer aged 75 years or more (RR-adj:3.6, 95% CI: 2.0−6.3). The proportion of second breast cancer stage II and III among the non-breast cancer survivors was 62% contrasting to only 32% among the breast cancer survivors (p-value = 0.005). Most female survivors who were previously diagnosed with a digestive tract or urogenital cancer had breast cancer stage II and III (63% and 70% respectively). On the other hand ex-hematological cancer patients were generally diagnosed with an early stage breast cancer (66% were subsequently diagnosed with breast cancer stage I).

Conclusions: A marked rise in breast cancer incidence among female cancer survivors was observed, particularly among survivors previously diagnosed with a non-breast cancer and those older than 75 years. Research to optimize follow-up strategies for these women to detect breast cancer at an early stage is warranted.

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Responsiveness of the EQ-5D in primary breast cancer survivors

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Background and Aim: Generic health-related quality of life (HRQoL) measures are often found to be less responsive than disease-specific HRQoL measures. Nevertheless, the generic EQ-5D is a much used measure for the purpose of economic evaluations of health interventions. Obviously, the usefulness of this generic EQ-5D may be limited if it is not sensitive enough to changes in health in the patient population under investigation. The aim of this study was therefore to investigate and compare the responsiveness of the EQ-5D and the disease-specific EORTC QLQ-C30 in primary breast cancer survivors.

Methods: Participants from the MaCare trial investigating four follow-up strategies after primary breast cancer were used for the purpose of this analysis. The EQ-5D and EORTC QLQ-C30 were filled out two weeks and six months after finalizing treatment. Following complete-case analysis, data of 112 participants was used (average age of 56). Responsiveness

was measured by calculating standardized response means (SRM) of correlating domains of the two questionnaires.

Results: Effect sizes of the EQ-5D domains were found to be lower than effect sizes on the EORTC QLQ-C30. Relatively, effect sizes of EQ-5D domains were between one fourth and three fourth of the effect sizes of the EORTC QLQ-C30. Pain on the EQ-5D was an exception and showed more responsive than the corresponding subscale on the EORTC QLQ-C30.

Conclusions: The use of the EQ-5D in breast cancer research is advantageous because it can be used for economic evaluations. Its responsiveness measured by effect size was lower than that of the widely accepted EORTC QLQ-C30. However, effect sizes of the EQ-5D domains were still reasonable and the EQ-5D and EORTC QLQ-C30 showed moderate to strong correlations on many of their domains. We conclude that the EQ-5D measure is a useful instrument to measure HRQoL for the purpose of economic evaluations of follow-up strategies for primary breast cancer survivors.

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Breast cancer risk assessment by Gail model in Iranian patients: accuracy and limitations

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Background: A variety of statistical models have recently been described for measuring breast cancer risk, of which the Gail model is the most accepted one. Differences in genetic backgrounds and environmental exposures could affect the applicability of the Gail model in Iranian population. In this study, breast cancer risk was assessed by the Gail model in breast cancer patients.

Material and Methods: In a cross sectional retrospective study, we collected comprehensive breast cancer risk factor information for 200 breast cancer patients attending Iranian Center for Breast Cancer (ICBC) during 2003−6. Relative risk, 5 year risk and life long risks of breast cancer were calculated using the Gail model.

Results: The mean age of the study population was 48.11 (+12) and 27.9% were older than 40. Forty percent of cases had menarche age of less than 12 and 50.3% had menarche age between 12 and 13 years old. The age at first live birth was greater than 25 in 17.9% and 16.8% of them were nulliparous. At least one previous breast biopsy was reported by 6.2% of patients but no atypical hyperplasia was observed. Nearly 6% of cases had a positive family history of breast cancer in their first degree relatives. The mean 5 years risk, relative risk and life long risk of breast cancer were 0.86% (0.79−0.94% CI95%), 1.44 and 9.06% respectively. Only 11.2% of patients had 5 years risk of greater than 1.67% and chemoprevention was indicated for them. There was not any correlation between relative risk and the age of breast cancer onset.

Conclusions: The Gail model does not adapt well to the study population of Iran. It would be necessary to add other risk factors to the Gail model so as to identify more patients in our area.

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Knowledge and interest of women in an academic breast cancer screening center in Brussels

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Background: Recent studies have revealed a lack of knowledge and a misperception of the risk of breast cancer (BC) in the general population as well as in women at higher risk of BC. This may impact the efficiency of primary prevention strategies.

Material and Methods: 106 consecutive women without a personal history of BC consulting for BC screening in an academic senology unit in Brussels were offered to answer a short questionnaire about their perception of BC risk, knowledge of BC facts based on 10 common statements, and potential acceptance of preventive methods. All women accepted; 100 responses were considered valid and further analyzed.

Results: Mean age was 45. Most women were Caucasian, well-educated, with a professional occupation. Calculations according to the Gail model revealed a mean 5-yr objective risk of BC of 1.24%. Women evaluated their own risk of BC at a mean of 4.2 on an arbitrary scale of 0 to 10, which is close to the a priori stated risk of 5.0 for a population at "mean" risk. However, those women with an objectively higher risk (>1.65% in the Gail model) did not rate themselves at higher risk than those with lower Gail scores (4.3/10 vs 4.1/10 on the arbitrary scale; p=NS). This was linked to an underestimation of the following risks: age, age at menarche, age at first

pregnancy, and parity. On the other hand, a family history of BC and prior breast biopsy were correctly viewed as inducing higher risks. Knowledge about BC facts was fairly good, apart from the usual overestimate of BC mortality and an overrated risk linked to hormonal treatments. Surprisingly, 50% of women would agree to follow a preventive method that could decrease the risk of BC by only 10%, while 98% of women would take on a method with a ⩾50% benefit. However, preventive surgery is not well accepted, receiving only 23% of positive opinions vs 93% for information sessions on lifestyle changes.

Conclusion: This prospective cohort study among 106 well-educated women consulting in an academic BC screening center confirms that women with a higher than average risk of BC according to the Gail model (25% of the group) underestimate their risk, probably because of a lack of knowledge about "secondary" risk factors such as age, age at menarche and parity. In a population consulting for BC screening, the a priori acceptance rate for preventive methods reducing the risk of BC is high, except for surgical measures. These data should help to devise better BC prevention strategies.

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Genetic counseling in breast cancerThe National Cancer Institute of Naples experience

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Background: Genetic factors appear to contribute for at least a fraction of 5−10% of the women with breast cancer. Today the recent molecular biology acquisitions lead us to consider different clinical approaches in the treatment of women with higher risk to develop breast carcinoma.

Material and Methods: Our Institute started in 1994 a perspective program (named "Family Project") for genetic counselling on families with higher incidence of breast cancer. 245 women distributed in 93 families have been entered into this study. The only criteria for admission was the presence of breast cancer in at least 3 components of the family. This group was followed by a clinical-diagnostic protocol including anamnesis, genealogical tree reconstruction and clinical and instrumental examinations (ecography, mammography and FNAB where necessary). Peripheral blood samples were taken from each woman and genomic DNA was extracted to further evaluate putative genetic alterations after obtaining informed consent. The follow-up uses a protocol, which foresees the psychological approach, between the clinical team and the women in study, as a fundamental part of it.

Results: This approach has permitted discovery the appearance of pre-clinical lesions in 10% of cases in the enrolment of follow-up phase in family groups under study.

Conclusions: From the first analysis of breast cancers there is an hereditary component in 13% of all cases studied and these cases have certain characteristics: early age of diagnosis, frequent bilateral tumours, and the association with other tumours in the same person or in the same family.

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Comparison of synchronous with metachronous bilateral breast cancer

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Background: Bilateral breast cancer is relatively rare, but has an important emotional impact on the patient. The reported incidence of bilateral breast cancer is variable, ranging from 4% to 21%, the majority of cancer being metachronous. Our aim was to compared characteristics and survival between women with synchronous and metachronous bilateral breast cancer.

Material and Methods: We retrospectively reviewed the records of 50 consecutive patients with operable bilateral breast cancer and received definitive therapy at our hospital between 1983 and 2004. Bilateral breast cancer was classified as synchronous in patients with a second breast cancer diagnosed within six months after the first breast cancer and as metachronous if the second breast cancer occurred more than six months after the first. Patients who had distant metastasis at the time of primary diagnosis of breast cancer were excluded. Clinical and pathological tumor characteristics analyzed included age, tumor size, stage, histology, hormonal receptor status, recurrence and outcome.