

positive breast cancers and have occurred predominantly in the MPG2 and PPG.

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O-26 DOES THE ADDITIONAL PROGNOSTIC BENEFIT OF SCREENING IN EARLY BREAST CANCER (EBC) APPLY TO ALL PATIENTS?

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Introduction: Screen detection may confer prognostic benefit independent of disease stage in EBC leading to suggestions that mode of presentation should be considered when deciding adjuvant therapy. We aim to determine if this additional prognostic benefit is seen in all patients.

Methods: Data from 3 centres in Glasgow of consecutive women aged between 50 and 65 years with EBC diagnosed between 1995 and 2001 were examined. Patients were grouped by mode of presentation into screen detection and symptomatic. Breast cancer specific survival was the end-point. Multivariate analysis including interaction between mode of presentation and pathology was performed with further subgroup analysis if the interaction was significant.

Results: Women (1534) were included with a median follow-up of 5.5 years. Mode of presentation was screening in 1007 (65.6%) women. After adjustment for pathology screen detection had no significant survival benefit: HR 0.73 (0.50–1.08, $p = 0.116$). Mode of presentation had an independently significant interaction with both nodal status and ER status ($p = 0.003$ and $p = 0.01$ respectively). Further analysis demonstrated that screening was an independent predictor of survival in the 1–3 node positive group (HR 0.33 (0.15–0.73), $p = 0.006$); the ER positive group (HR 0.53 (0.31–0.89), $p = 0.017$) and in the moderate NPI group only (HR 0.54 (0.31–0.94), $p = 0.030$).

Conclusions: These results provide evidence of a significant interaction between mode of presentation and pathology. Further research is needed before incorporating mode of presentation into decisions regarding adjuvant therapy.

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O-27 EPITHELIAL PROLIFERATION (Ki67) IS PROGNOSTIC IN SYMPTOMATIC BUT NOT SCREEN DETECTED BREAST CANCERS (SDBC)

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Epithelial proliferation has been used to determine therapy in the St. Gallen guidelines (Ki67 $\geq 30\%$ indicates the need for chemotherapy). UK screen detected breast cancers (SDBC) (aged 50–65 years) have an overall 97.2% 5 year relative survival compared to 77.6% for symptomatic cancers.

To determine the value of Ki67 in post-menopausal breast cancer in women aged 50–65 years, we have studied Ki67 in 1270 women with either symptomatic cancers ($n = 412$) or SDBC ($n = 858$). Mean Ki67 in SDBC was 21.4 (SD 10.3) and 34.2 (SD 16.2) in symptomatic cancers ($p = \leq 0.001$). For each 10 unit increase in Ki67, increases in distant relapse occurred (RR 1.43: 95%CI; 1.32–1.55). Twelve per cent of symptomatic and 2% of SDBC had died within 5 years.

Out of 458 women with Ki67 ≤ 20 , 27 died within 10 years (93.2% survival) compared to 143 out of 775 with Ki67 $\geq 20\%$ (79% survival) ($p = \leq 0.001$).

Ki67 was prognostic for symptomatic cancers of distant relapse ($p = 0.01$) and mortality ($p = 0.01$) but was only predictive of recurrence ($p = 0.01$) and not mortality in SDBC. In SDBC, Ki67 values in the 2% who died did not differ from those alive at 5 years and use of cut-off score of Ki67 of $\geq 20\%$ would have potentially selected 35% of women for chemotherapy and a Ki67 of $\geq 30\%$ would have potentially selected 12% of women.

Epithelial proliferation is prognostic, but not predictive, of chemotherapy benefit in SDBC.

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O-28 FACTORS ASSOCIATED WITH A COMPLETE PATHOLOGICAL RESPONSE FOLLOWING NEO-ADJUVANT CHEMOTHERAPY FOR BREAST CANCER

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Background: Chemotherapy for treatment of breast cancer has been increasingly used in neo-adjuvant setting to facilitate pre-operative reduction in tumour size to make amenable to surgery or to facilitate breast-conserving surgery in the place of mastectomy. A complete pathological response to chemotherapy is associated with a greater overall and disease free survival.

Purpose: This study aimed to identify molecular markers, disease and treatment factors associated with complete pathological response to neo-adjuvant chemotherapy in breast cancer.

Methods: Fifty-six patients who received neo-adjuvant chemotherapy at our institution between January 2006 and January 2010 with complete histological information and definitive surgery at the time of data collection were identified. Age, type, grade, category of cancer, molecular markers including ER, PR, HER2, imaging size, nodal status, chemotherapy regimen and pathological response were recorded. Chi squared and Fisher Exact test were used for statistical analysis.

Results: Eleven patients (19.6%) undergoing neo-adjuvant chemotherapy had a complete pathological response and 6 patients

(10.7%) had >90% reduction in tumour size. 6 of the 11 with cPR were HER2 positive, 3 triple negative and 2 luminal type (ER+ve, PR+ve, HER2–ve).

71.4% of ERBB2 tumours (ER–ve HER2+ve), all with trastuzumab included in their chemotherapy regimen, had cPR. This molecular subtype was significantly more likely to achieve cPR than luminal subtype ($p < 0.05$). Oestrogen negative tumours were more likely to respond than oestrogen positive tumours ($p < 0.05$).

Conclusions: This study suggests that Her 2positive, ER–ve high grade ductal tumours are the most chemosensitive. The results support the use of trastuzumab in the neo-adjuvant setting. Data collection is ongoing.

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O-29 CAN ER/PR AND HER2 RECEPTOR STATUS PREDICT COMPLETE PATHOLOGICAL RESPONSE AFTER NEO-ADJUVANT CHEMOTHERAPY IN PATIENTS WITH BREAST CANCER?

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Aim: The complete pathological response (CPR) rate of the breast following neo-adjuvant chemotherapy (NAC) in patients with breast cancer varies from 13% to 29%. The aim of this study was to establish the incidence of CPR in our unit and investigate if CPR could be predicted using oestrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER2) status.

Method: Patients with breast cancer diagnosed between January 2006 and October 2009 who had NAC followed by surgery were included in the study.

Results: (See Table 1) Altogether 38 patients had NAC followed by surgery. Mean clinical size of the tumour was 72 mm. The commonest chemotherapy regime was Epirubicin-CMF. 8/10 HER2 positive patients received neo-adjuvant trastuzumab. Overall 18% (7/38) of patients achieved CPR of the breast and 16% (6/38) achieved CPR of breast and axilla. The rate of CPR of the breast was highest in triple negative patients (36%) and ER negative patients (32%). Post NAC axillary nodes were negative in 45% of patients ($n = 17$).

appears to be relevant when predicting CPR, with triple negative tumours having the highest chance of CPR (36%).

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O-30 BASAL-LIKE PHENOTYPE IS A PROGNOSTIC MARKER OF LOCALLY ADVANCED BREAST CANCER BUT NOT A PREDICTIVE MARKER OF RESPONSE TO NEOADJUVANT ANTHRACYCLINE CHEMOTHERAPY

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The basal-like breast cancer is associated with aggressive behaviour and poor prognosis. In this study we examined the impact of two different definitions of basal phenotype (BP) on its prognostic significance in locally advanced primary breast cancer (LAPC) treated by neoadjuvant anthracycline combination chemotherapy.

Method: This study included 120 patients diagnosed with LAPC from 1999 to 2007 at Nottingham University Hospital. IHC was used for evaluation of a number of markers including ER, PR, HER2, EGFR, and CK5/6, and CK14. BP was defined in 2 ways as either any positive expression of CK5/6 and/or CK14 or double negative expression for ER and HER2 plus positive expression for CK5/6 and/or EGFR. BP and triple negative (TN) status were correlated with pCR, PFS and OS.

Result: BP was positive in 46.3% and 24.8% of the cases according to the 1st and 2nd definitions. Twenty-nine percent of the patients were TN. Median follow-up was 62 months. Both definition did not correlate with pCR to chemotherapy while TN correlated with pCR ($p = 0.004$). RFS and OS were not significantly different when the 1st definition of BP was used but were significant with the 2nd definition ($p = 0.016$ and <0.001). TN patients had poor RFS and OS but it was only significant for OS ($p = 0.007$).

Conclusion: BP in this patient population is an important prognostic but not predictive marker of pCR to anthracycline neoadjuvant chemotherapy.

The predictive and prognostic value of TN and BP are different, further studies to clarify the clinical utilities in LAPC are necessary.

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Table 1

	ER+	ER–	HER2+	HER2–	ER+HER2+	ER+HER2–	ER– PR-HER2+	ER–PR-HER2–(triple–)
	Total ($n = 38$)		Total ($n = 38$)		Total ($n = 38$)			
Number and % of patients	19 (50%)	19(50%)	10 (26%)	28 (74%)	5 (13%)	14 (37%)	5 (13%)	14 (37%)
Rate of CPR	5%	32%	10%	21%	0	7%	20%	36%

Conclusions: Complete pathological response of the breast was seen in 18% of patients. ER, PR and HER2 receptor expression