Conclusions: Our findings suggest that miR-34a is involved in docetaxel resistance, which may act by targeting BCL2 and cyclinD1.

doi:10.1016/j.ejcsup.2010.06.055

O-55 TRANSLATIONAL LANDSCAPE OF EPITHELIAL MESENCHYMAL TRANSITION IN MOLECULAR CLASSES OF INVASIVE BREAST CANCER

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Epithelial Mesenchymal Transition (EMT), as defined by loss of epithelial characteristics and gaining a more mesenchymal-like phenotype, has been largely reported in vivo. However, the actual occurrence of events defining EMT is rarely fully observed in vivo. We aimed to explore the translational landscapes of EMT in breast cancer (BC) with relevance to potential triggering pathways and BC molecular subtypes. Clustering analysis was performed on a well-defined clinically annotated series of invasive non-lobular BC (n = 431) prepared as tissue microarray (TMAs). A large panel of biomarkers including cadherins, TGFβ1, PIK3CA, pAkt, cytokeratins, Erb-family members and hormone receptors, has been studied. Differential expression of EMT markers was observed between molecular BC subtypes (Luminal1 and 2, HER2+, and basal-like (BLBC), where BLBC expressed lower E-cad than luminal BC. Notably, PIK3CA, pAkt, and E-cad/N-cad switch were associated with shorter recurrence time (p = 0.022 and p = 0.016, respectively) and high membrane S1P1 expression was also associated with shorter time to recurrence (p = 0.008). High cytoplasmic S1P1 and S1P3 expression were associated with shorter disease specific survival (p = 0.036 and p = 0.019). These results support a model in which the interaction between SK1, S1P1 and/or S1P3 and ERK-1/2 might drive breast cancer progression and this therefore warrants further investigation.

doi:10.1016/j.ejcsup.2010.06.057


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A retrospective study was carried out comparing three cohorts of consecutive patients diagnosed with DCIS via the NHSBSP in the East Midlands region. Diagnostic, treatment and follow-up outcome data was collected by individual patient case notes review, and where necessary by contacting general practitioners. Kaplan–Meier survival analysis was performed using SPSS.

Histological excision margins were increasingly clear over time 88% (88/93), 91.5% (94/97) and 98% (00/03). The overall local recurrence free survival rate was identical for both earlier periods with 92% at 5 years but improved to 96.1% over 2000/03. 40–56% of all local recurrences were invasive, 13/23 (88/93), 14/26 (94/97), and 8/21 (00/03). Use of tamoxifen within the three cohorts was similar (44–46%) and made no significant difference to rates of local or contralateral recurrence free survival. Significant differences in local recurrence rates by operation type were observed (see Table 1).

Conclusion: Local recurrence rates after breast conserving surgery for screen detected DCIS have reduced over time. This is likely to be related to higher rates of non-operative diagnosis, combined with improved histological assessment (grading and
margin status), more aggressive surgery and increasing use of radiotherapy.

doi:10.1016/j.ejcsup.2010.06.058

O-58 FACTORS INFLUENCING LOCAL CONTROL IN PATIENTS UNDERGOING BREAST CONSERVATION SURGERY FOR DUCTAL CARCINOMA IN SITU

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Background: The aim of our study was to assess various risk factors for local recurrence (LR) in patients undergoing breast conservation surgery (BCS) for ductal carcinoma in situ (DCIS).

Materials and methods: Retrospective case note review between January 1975 and June 2008. In our hospital a margin of ≥10 mm is considered acceptable. Patients were divided into three groups based on pathological margin (<5 mm, 5–9 mm and ≥10 mm). Cox regression model for multivariate analysis of local recurrence was used with variables with significant P values (<0.05) in the univariate analysis carried out using SPSS version 16.

Results: Overall 239 women had BCS for DCIS during the above period. The median age was 59 years (40–86) and the median follow-up was 76 months (1–308). Pathological findings included median size of 11 mm (1–50), 75 cases with comedo necrosis and 5 patients with microinvasion (<1 mm). Overall 193 patients had grades recorded (44 low grade, 54 intermediate grade and 95 high grade).

Overall LR rate was 17% (40/239), of which 65% (26/40) were invasive recurrences. Thirty-one patients were ≤50 years and 32% (10/31) developed LR compared to 14% (30/213) margin. On multivariate analysis age ≤50 years, <5 mm pathological margin and microinvasion were independent poor prognostic factors for local recurrence.

Conclusion: Our study shows that younger age (<50 years), a clear margin <5 mm and associated microinvasion are poor prognostic factors for LR in patients undergoing breast conservation surgery for DCIS.

doi:10.1016/j.ejcsup.2010.06.059

O-59 SINGLE CENTRE EXPERIENCE OF 500 PATIENTS WITH INTRA-OPERATIVE RT-PCR BREAST SENTINEL NODE ANALYSIS

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Introduction: Tumour specific mRNA markers detected by real time reverse transcriptase-polymerase chain reaction (RT-PCR) have been used to detect breast cancer metastases in sentinel lymph nodes. We present our experience of 500 consecutive cases in a single centre.

Methods: All clinically and radiologically node negative patients who underwent sentinel node biopsy (SLNB) were included in the study over a 24-month period. SLNB was performed according to New Start guidelines. Intraoperative analysis was performed on alternate slices at 2 mm intervals, with the remaining slices sent for standard histological analysis. The GeneSearch assay (Veridex LLC, Warren, NJ) was used to detect the expression of mammaglobin (MG) and cytokeratin 19 (CK). Patients were considered SLNB positive if one or more sentinel lymph nodes were positive for either MG or CK.

Results: Sentinel lymph nodes (912) were analysed with an average of 1.8 nodes per patient. The cohort was representative