O-118. Breast carcinomas with basal/myoepithelial differentiation: a review of morphology and immunophenotypical analysis

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This study assessed the morphological characteristics and immunohistochemical (IHC) profile of breast carcinomas with basal and myoepithelial phenotype. We examined 1870 cases of invasive breast carcinoma, using tissue microarrays and IHC, to identify tumours showing basal/myoepithelial phenotype. Tumours were classified into 2 groups; 1) tumours with basal phenotype [expressing ck5/6 and/or ck14]; 2) tumours with myoepithelial phenotype (expressing actin and/or p63). Group 1 was further divided into two subgroups; A) dominant basal pattern [10–50% of cells are positive]; B) basal characteristics [≤50% of cells are positive]. GrouplA tumours constituted 10%; grouplB 8.6% and group2 constituted 13.7% of the cases. The majority of these tumours were grade 3. There were positive associations with the adenoid cystic growth pattern, loss of tubular formation, marked cellular pleomorphism, poorer NPI, development of distant metastasis. Associations were found with loss of expression of hormone receptors, neuroendocrine markers, BRCA1 and Fhit proteins and positive expression of p53, EGFR, p-cadherin. No association with vascular invasion was found. The commonest histological types were ductal/no special type, medullary like, mucinous and adenoid cystic growth pattern. The most common morphological characters of group 1 were bigger size, high-grade comedo-type necrosis and adenoid cystic pattern, positive lymph node disease and development of tumour recurrence. Group2 was noticed in younger age group and associated with central necrosis/fibrosis, basaloid cell change, positive e-cadherin, cerbb4. Group1 showed a strong negative association with both overall survival (OS) (Log Rank(LR) = 22.5, $p < 0.001$) and disease free interval (DFS) (LR = 30.1, $p < 0.001$) while group 2 showed an association with as (LR = 5, $p = 0.02$) but not with DFS. Multivariate analysis showed that basal but not myoepithelial phenotype has an independent value in predicting outcome.

O-119. A review of the pathological features of 86 LCIS cases – to determine diagnostic accuracy

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Background: Pathologically Lobular carcinoma in situ (LCIS) can cause diagnostic dilemmas.

Aims: To find ways of improving the accuracy of pathological diagnosis of LCIS.

Methods: 59 screening centres in England provided data on all cases of screen detected LCIS. Original blocks and slides were requested on all cases. Histological assessment involved H&E stain, E-cadherin, Cytokeratin 5/6 and 34B E12, and a mucin stain. We investigated differences in survival rates.

Results: 366 cases of LCIS were identified, of which the pathology has been reviewed on 86 so far. 66 were found to be LCIS, 15 DCIS, 1 ADH, 3 sclerosing adenosis and 1 invasive carcinoma. Of these 86, 72 diagnoses were made confidently on H&E stain alone and confirmed with immunohistochemistry, the remaining 14 diagnoses were classified as equivocal on H&E stain and the diagnosis relied more on immunohistochemistry. The immunohistochemistry results are listed in Table 1.

Table 1

	E-Cadherin		CK 5/6		34B E12		Mucin	
	Dcis	Lcis	Dcis	Lcis	Dcis	Lcis	Dcis	Lcis
Negative	0	61	15	63	10	7	8	4
Equivocal	1	3	0	0	3	8	3	5
Positive	14	0	0	1	2	49	3	55
Unknown	0	2	0	2	0	2	0	2

Tumour free survival in women with radial scars was 3.52/1000 women years compared with 20.97/1000 women years for those without radial scars; RR 0.17 (CI95 0.02=-1.25; $p = 0.08$).

Conclusions: In the majority of cases LCIS can be detected solely on H&E stain. To improve diagnostic accuracy of LCIS, E-cadherin, 34B E12, and mucin stains should be considered.

O-120. Measurement of large scale genomic instability is an excellent prognostic tool in ductal carcinoma in situ

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Gross genomic aberrations are increasingly seen as a cause rather than a consequence of carcinogenesis. Early evidence suggest such aberrations may serve as accurate prognostic and moreso predictive markers in precancerous lesions such as DCIS. Additionally, identification of high risk patients may be useful in the selecting candidates for chemoprevention trials or additional adjuvant therapy.

75 patients with an initial diagnosis of DCIS were used in this study, 50 with no evidence of relapse and 25 who developed a recurrence. Genomic instability was measured by a novel method of DNA ploidy and nucleotyping employing texture analysis, image cytometry and computational analysis.

Results demonstrated that nucleotyping with this novel technique showed an excellent prediction of recurrence in these patients.

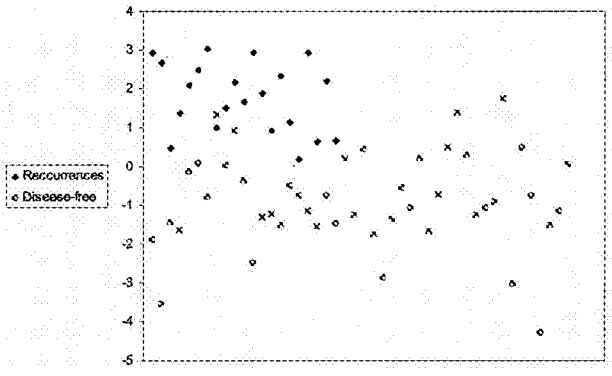

Figure 1: Plot of the discriminant function of all patients showing a very good discrimination between disease-free patients and patients with recurrent breast cancer.