treatment existed between groups. Affluent patients were more likely to receive adjuvant radiotherapy (OR = 1.94 (95% CI 1.095–3.432); p = 0.022) but less likely to receive tamoxifen than deprived groups (OR = 0.539 (95% CI 0.294–0.986); p = 0.043). None of the pathological factors assessed showed significant association with socio-economic status. No significant effect of deprivation was noted in terms of disease-free survival after DCIS treatment in all patients after univariate survival analysis (log rank 1.559, df = 1. p = 0.212).
Conclusions: Socio-economic deprivation had no significant association with clinical or histopathological variables in DCIS patients. No previous studies have attempted to address this issue specifically relating to DCIS. The reasons for differences in adjuvant therapies were not apparent in the study.

O-27 Breast cancer with basal phenotypic expression: mammographic findings

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Aim: Basal phenotype has been shown to be an independent poor prognostic factor for breast cancer. The aim of this study was to assess differences in the mammographic appearance of screen detected breast carcinoma according to basal phenotype status.
Methods and Materials: 1944 consecutive patients with operable invasive breast cancer diagnosed between 1986 and 1998 underwent immunohistochemical analysis to identify those tumours exhibiting basal phenotype characteristics, using CK5/6 and CK14 markers. 356 of these women with known basal or non-basal phenotype breast cancers were common to a prospectively collected database of screen-detected breast cancers, with 350 having a recorded mammographic abnormality. Both the predominant mammographic appearance and any associated features were reported by experienced film-readers who were blinded to the basal phenotype status. Differences in mammographic appearances were assessed between the two groups using Chi-square.
Results: 41 (12%) screen-detected cancers showed basal phenotypic expression and these were compared to 309 (88%) non-basal tumours. Basal phenotype tumours were statistically more likely to present as an ill-defined mass (25 of 41 (61%) vs 75 of 309 (24%), $p \leqslant 0.001$), or comedo calcification (9 of 41 (22%) vs 30 of 309 (10%), p = 0.019) whereas non-basal phenotype tumours were more likely to present as a spiculate mass (150 of 309 (49%) vs 8 of 41 (20%), $p \leqslant 0.001$).
Conclusion: Screen-detected breast cancers that show basal phenotypic expression differ in their mammographic appearance when compared to non-basal tumours. These findings may explain the prognostic significance of mammographic spiculation and comedo calcification seen in previous studies.

O-28 Audit to set a baseline measurement for clinical breast examination

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Aims/Objectives: To audit the accuracy of Clinical Breast Examination by Breast Nurse practitioners in women complaining of a breast lump. This will then act as a Local Standard for Nurse Practitioners (NP's).
Method: Collect data over 2 months new Referral Clinics in all women complaining of a Breast Lump aged over 25 years.
Clinical decisions from examination investigation: Cat A (highly suspicious: if imaging and needle diagnosis neg will need open biopsy). Cat B (Probably benign. Imaging and needling adequate but benign then discharge). Cat C. Doubtful if true lump (if imaging NAD discharge even if needling inadequate).
Results: The results for 469 women are presented in the table.

	Consultant Breast Surgeon			Nurse Practitioners		
		Final Diagnosis			Final Diagnosis	
	Clinical Decision n	CA n (%)	Normal/ Benign n (%)	Clinical Decision n	CA n%	Normal n%
CAT A	7	5 (71)	2 (29)	29	21 (72)	8 (28)
CAT B	31	2 (6)	29 (94)	121	4 (3)	117 (97)
CAT C	23	1 (4)	22 (96)	17	1 (6)	16 (94)
Normal	52	0 (0)	52 (100)	135	1 (0.7)	134 (99)
Total	113			302		

Conclusions: There is close concordance between the results of consultants and NP's Nether NP's nor Consultants performed well enough in decisions that lumps were Cat C. Standards have been set: A minimum of 70% of Cat A lumps expected to be cancer. 70% of all Symptomatic Invasive Breast Cancers to be clinically categorised as Cat A lumps, 1% as Cat C.

O-29 Effect of dietary energy restriction on gene expression in normal breast and subcutaneous adipose tissues of overweight women at increased breast cancer risk

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Pre-menopausal weight gain increases the risk of post-menopausal breast cancer and pre-menopausal weight loss reduces the risk. This study therefore aimed to investigate the effects of dietary energy restriction (DER) on gene expression in normal breast tissue.
Breast and abdominal subcutaneous fat biopsies were performed in 19 healthy but overweight or obese women at moderately increased risk of breast cancer (lifetime risk 1:6 to 1:3). Initial biopsies were taken in the first 7 days of their menstrual cycles. Ten women were randomly allocated to DER (liquid diet, 3656 kJ (864 kcal)/ day) and nine women asked to continue their normal eating patterns. All participants then underwent repeat biopsies in the first 7 days of their next menstrual cycle. RNA was extracted and hybridised to Affymetrix GeneChips.
On average, 7.0 kg were lost and BMI dropped by –2.6 kg/m^2 ($p < 0.0001$ Mann-Whitney) in the DER group compared to in the control group. Levels of insulin, triglycerides, high and low density lipoproteins were lower and sex hormone binding globulin was significantly higher in the DER group. Significance analysis of microarrays was used to identify genes associated with DER. The most highly differentially expressed transcripts in both tissues represented reductions in stearoyl coA desaturase, fatty acid desaturase, and aldolase C. No genes were significantly changed in breast or adipose tissue in women that continued with their normal diet. Other DER-regulated genes in the breast are known to have roles in pro- or anti-neoplastic pathways. DER restriction mimetics or glycolytic enzyme inhibitors may be useful chemoprophylactic agents.