(CB) diagnosed DCIS and to assess whether any factors in the CB can predict invasion. Data for 160 consecutive women with DCIS diagnosed by stereo-tactic CB was reviewed. All patients presented with micro-calcification on screening mammography between 1998 and 2000.

The DCIS on CB was of high grade in 77%, with 80% showing comedo necrosis. Micro-invasion (<2 mm focus of IC) was present in 7%. In the operative specimen, IC was found in 33% of cases, with 60% having DCIS only and a further 7% DCIS with micro-invasion. There was no correlation ($p = 0.24$) between core DCIS grade and invasive grade. At first surgical procedure 22% of patients underwent axillary staging, most en-bloc with mastectomy (17%). Mammographic size (median 8.5 mm) correlated significantly with operative DCIS tumour size (median 20.0 mm, $p < 0.01$), but not with operative invasive component size when present ($p = 0.86$). A cohort of 36% of patients required a second surgical procedure. This was indicated for axillary staging alone in 16% and for incomplete excision or close margins in 84%. There was no correlation between the risk of occult IC being present with patient age, mammographic lesion size, CB histological DCIS type, nuclear grade or the presence of comedo necrosis.

Patients diagnosed with DCIS on CB for mammographic micro-calcification should be informed of the 33% risk of occult IC being present and of the 1 in 3 probability that a second surgical procedure will be required (re-excision 34%, mastectomy ± axillary staging 50%, and axillary staging alone 16%).

O-39. INVASIVE CARCINOMAS IN CASES JUDGED TO BE DUCTAL CARCINOMA IN SITU AT TRIPLE ASSESSMENT

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The investigation of a breast abnormality involves triple assessment – clinical examination, imaging, cytology or core biopsy. The aim of this study was to discover the percentage of patients who, at triple assessment (including core biopsy) in which all three modalities indicated DCIS only, actually had an invasive focus on surgical excision.

140 patients had a core biopsy and diagnosis of DCIS without invasion. In 96 of these triple assessment indicated DCIS only (no suspicious clinical signs; imaging showing no lump on ultrasound nor suspicious mass lesion on mammography; core biopsy DCIS only). Of these 46 (48%) had an invasive focus present at surgical excision.

The estimate that DCIS only is present is no better than tossing a coin. Lymph node sampling is advised for all such cases to avoid a second operation in those with invasive disease.

O-40. INVASIVE LOBULAR CARCINOMA: IS IT STILL DIFFICULT TO DIAGNOSE?

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150 patients with a diagnosis of invasive lobular carcinoma (ILC) and 150 patients with a diagnosis of invasive ductal carcinoma (IDC) of no special type diagnosed during the same time period have been compared. Mean ages were similar 59.6 yr IDC vs 59.7 yr ILC. 29% of IDC and 32% of ILC were screen-detected. There were significant differences in mammogram reports. 92.5% of IDC were R4 or R5 vs 76.6% of ILC, $p < 0.0004$. Only 56 IDC and 57 ILC had ultrasound and there were no differences in sensitivity, 91% of IDC and 86% of ILC being U4 or U5. There were differences in FNA categories with 94% of IDC being C4 or C5 vs 72% of ILC, $p < 0.0001$. Core biopsies performed in 49 and 69 patients respectively had similar sensitivities, 90% of IDC and 94% ILC being B4 or B5. T3 (path size) tumours were only identified in the ILC group 17 vs 0, $p < 0.0001$. 96 vs 85 patients for IDC and ILC were node negative (NS).

Delay in diagnosis was more common in ILC patients. 87% of IDC were diagnosed on the day of the clinic and 95% within 6 days vs 55% and 77% for ILC, both $p = 0.02$. Delays over 21 days were seen in 4/150 patients with IDC but in 12/150 patients with ILC, $p = 0.07$. Only 2 patients in the whole group of 300 (both had ILC) had a delay in diagnosis of over 3 months.

This study confirms that even in current practice ILC remains difficult to diagnose. The increasing use of ultrasound and core biopsy to evaluate breast masses should limit delays in diagnosis currently being seen in patients with ILC.

O-41. LYMPHOEDEMA RATE FOLLOWING TREATMENT FOR PRIMARY BREAST CANCER

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There has recently been considerable interest in the need for specialist lymphoedema nurses to be appointed. However, we had noticed in our cancer follow-up clinics that the incidence of lymphoedema appeared to be very low.

Treatment for primary breast cancer (>5 cm) has been surgery and low axillary sampling (ANS). Radiotherapy (RT) or axillary clearance (but not both) is subsequently performed in patients found to be node positive.

The patients are followed-up in the primary breast cancer (PBC) clinic weekly. Follow-up is initially at 3-month intervals up to 2 years and then 1 yearly indefinitely.

Doctors and nurses examining women at routine follow-up in the PBC clinic recorded any complaints of arm swelling or the finding of clinically recognizable swelling, over a 3-month period (19.4.00–26.7.00).

This procedure should reveal all cases of oestrogenic oedema but not oedema due to regional recurrence, who will be attending the advanced clinic.

A total of 1242 patients were examined and lymphoedema found in 5 (0.04%). Of these 5, 3 had undergone axillary clearance, 1 ANS plus radiotherapy and only 1 had ANS alone.

A policy of ANS, with prophylactic treatment for lymph node positivity either by surgery or RT alone, gives a very low rate of lymphoedema.

O-42. COMPARISON OF MARGIN STATUS WITH VAN NUYS INDEX TO PREDICT RECURRENCE OF DUCTAL CARCINOMA IN SITU AFTER BREAST CONSERVING SURGERY

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Aims: Selection of patients for radiotherapy after breast conserving surgery (BCS) for uni-focal ductal carcinoma in situ (DCIS) is determined by recurrence risk. The Van Nuys prognostic index (VNPI combining tumour grade, size and resection margin width) has been claimed in the USA to predict recurrence, therefore we aimed to validate this and compared VNPI with a simpler measure of margin clearance to predict recurrence after BCS for DCIS.

Methods: Clinico-pathological data for 228 patients treated with BCS for DCIS were compared for risk factor of recurrence. Median age of patients was 56 years and the median follow up was 48 months. Patients were placed in 3 groups based on VNPI score. Data was analysed for proximity of margins (close < 1 mm or not) and by Van Nuys sub-groups.

Results: There were 36 ipsilateral recurrences (27 DCIS and 9 invasive cancer).

Variable		n	Recur	%Recur	P value
VNPI	3 & 4	33	0	0	
Groups	5	42	3	7.1	0.001
	6, 7 & 8	152	33	21.7	
Proximity	Close (<1 mm)	73	27	36.9	<0.001
of margin	Not close (>1 mm)	154	9	5.8	
Grade Van Nuys	I or II No necrosis (1)	53	3	5.6	
	I or II Necrosis (2)	31	5	16.1	0.048
	III (3)	144	28	19.4	

Conclusions: Logistical regression shows that close resection margins (<1 mm) is a better predictor than the Van Nuys prognostic index for DCIS recurrence.

O-43. WIDE LOCAL EXCISION WITH 10 MM CLEARANCE WITHOUT RADIOTHERAPY FOR DCIS

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In Breast Conserving Surgery (BCS) for DCIS there are no standard protocols for histopathological margin assessment width required, or for adjuvant radiotherapy. We have used a protocol including a mandatory 10 mm histologically clear margin without radiotherapy for 12 years. In addition to radial blocks, margin assessment was further refined 6 years ago to include shaved radial margins.

From 1988 to 1999, 126 women were treated by BCS. The age range was 31–70 years (mean 55); median follow-up is 86 months. 46 of these patients (34%) had re-excision to obtain a 10 mm clearance.

28 patients have developed local recurrence (LR), (10 DCIS, 9 as invasive with DCIS and 9 pure invasive), 1 patient has died from or with breast cancer, none are alive with distant metastatic disease, 3 have regional recurrence. All 4 previously had invasive LR. 3 patients have developed contralateral cancer.

24 of the LRs occurred in the 46 patients who had undergone re-excision to clear margins. Only 2 LRs (invasive) have occurred in 43 patients treated between 1995–1999 (median follow up 59 months), both had re-excision to clear margins.

The LR rate attributable to our current protocol is 1% per annum which is acceptable. Failure to achieve clear margins at first therapeutic operation may be an indication for mastectomy.

O-44. RECURRENCE AND OUTCOME AFTER TREATMENT OF DUCTAL CARCINOMA IN SITU

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Background: The optimal management of DCIS remains controversial. Local recurrence has been used as a marker of treatment failure. When this occurs it is demoralising and if invasive is a threat to life. The results of salvage surgery after recurrence may become a more important marker of outcome

Methods: A total of 575 patients treated for DCIS in Glasgow were identified from a prospective audit and their records and pathology reviewed.

Results:

	Mastectomy	WLE + DXT	WLE
No of patients	217	136	222
Recurrent DCIS	3	8	37
Invasive recurrence	4	4	17
Distant metastases	3	2	2
Breast cancer deaths	0	0	1
Median follow up (months)	70	76	65
Local disease free survival	98.7%	93%	83%
Distant disease free survival	99%	99%	99%
Breast cancer specific survival	100%	100%	100%

Conclusions: Our data indicate that even with careful selection, WLE alone in the management of DCIS is inadequate in achieving local control. However, irrespective of treatment, most patients treated for DCIS survive, even after invasive recurrence and that salvage surgery is successful in most patients.