

occurred after 4 months and was the first site of treatment failure. Interestingly, the patient had only a single sentinel node harvested and this most likely represented a false negative result (mean number of sentinel nodes 2.9).

This low rate of axillary recurrence (0.35%) accords with other reports in the literature and compares favourably with ALND. Finite rates of false negativity associated with the SLN biopsy technique do not appear to translate into higher rates of axillary relapse. However, any residual disease within the axillary nodes will be low volume and longer follow up is required to substantiate these early observations.

O-70 The role of sentinel node biopsy in patients with a pre-operative diagnosis of ductal carcinoma in situ

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There is consensus that extensive high grade (HNG) DCIS on imaging which mandates mastectomy or DCIS presenting as a palpable lesion are indications for SLN biopsy.

A retrospective analysis was undertaken of patients who had concomitant SLN biopsy at the time of definitive surgery for DCIS diagnosed on percutaneous needle biopsy (core biopsy [14 gauge] or Mammotome biopsy [11 gauge]). A total of 33 patients were identified between January 2005 and March 2007, the majority of whom (24) had screen-detected HNG DCIS which necessitated mastectomy (median size 53 mm; range 10–110). A minority of patients (9) underwent wide local excision together with SLN biopsy for either (a) micro-invasion or foci suspicious of invasion on needle biopsy (6); (b) papillary DCIS (2); (c) palpable lesion or focal mass lesion on imaging (MMG/US) (1).

Within the mastectomy group, 6 patients (25%) with a pre-operative diagnosis of DCIS (4 high-, 1 intermediate-, 1 low-nuclear grade) were diagnosed with invasive carcinoma on final histology (25%). A total of 4 patients (16%) were SLN positive (3 micrometastases, 1 macrometastases) of whom 3 had invasive disease with foci measuring between 1.5 and 12 mm. Despite intensive pathological examination, no invasive tumour could be found in 1 patient with DCIS (>100mm). Amongst those patients undergoing wide local excision, two-thirds (6/9) were diagnosed with invasion on final histology; only 1 of these cases with invasion was associated with a positive SLN (macrometastases). None of the 5 patients in total with a positive SLN had any further nodal involvement on completion ALND.

We conclude that SLN biopsy appears justified in patients undergoing mastectomy for extensive HNG DCIS and in selected patients with localized HNG DCIS (clinical or pathological suspicion of invasive disease) in whom there is a significant incidence of invasion on definitive histology (>20%); in these patients occasional isolated sentinel node positivity is found.

O-71 Sentinel node biopsy for breast cancer: A ten year experience of >1000 cases from a single surgeon

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Sentinel Node Biopsy (SNB) was first described at the 5th Nottingham Meeting in Sept 1997. Following on from this I went on a SNB course in Amsterdam and brought their technique to Guildford in Dec 1997.

My learning curve consisted of 265 cases of SNB with backup axillary clearance (AXCL). There were 92 true positive cases, 4 false negatives and 3 failed localisations.

In 1999 I kicked off the ALMANAC trial with 40 validation cases and randomised 375 cases between SNB & AXCL until Oct 2003. SNB mapping and dissection included retrieval of internal mammary chain nodes. In ALMANAC, I had a 98% localisation rate. To date there have been 4 axillary recurrences, 2 after SNB and 2 after AXCL. Secondary AXCL after positive SNB is a difficult operation with increased morbidity. During the ALMANAC phases a further 220 patients had SNB alone off trial.

From 2004 to date a further 525 patients have had stand alone SNB using a hybrid of the ALMANAC and NEW START protocols. Screen-detected cancers have a significantly lower rate of SNB + (17.8%) compared to symptomatic cases (32.2%) $P < 0.001$.

SNB works in all cases including after primary chemotherapy, with the exception of prior radiotherapy.

The challenge for the future is the harnessing of accurate and timely intra-operative assessment of the sentinel node.

O-72 Impact of reconstruction with local flaps in breast conserving surgery on the need for mastectomy for breast cancers

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Aim: The aim of this study was to determine the impact of oncoplastic breast reconstruction techniques with local flaps, on rates of breast conservation and mastectomy in patients undergoing surgery for breast cancer. Local recurrence rate was compared between these two periods.

Patients and Methods: The patients were treated between June 2001 and June 2005 following the introduction of breast oncoplastic reconstructive techniques after breast conservation surgery. Reconstruction with a range of oncoplastic local flaps including, local Parenchymal flaps, sub-axillary dermo-cutaneous flaps, various rotational flaps and patients also had symmetrisation by mastopexy on the contra-lateral side if required.

Rates of breast conservation surgery, mastectomies and local recurrence during this period were compared with those prior to June 2001 before the introduction of these techniques. Statistical analysis was carried out using SPSS version 14.

Results: A total of 1073 patients with breast cancer were treated from June 1997 to May 2001. These patients were compared with 1077 patients who were treated between June 2001 and May 2005. In the first time period (1997–2001) 756 mastectomies were undertaken. In the second period (2001–2005) 511 patients underwent mastectomy.

There was a significant reduction in mastectomies between these two periods ($p < 0.01$). No increase in local recurrences/mortality was observed during this period.

Conclusions: The use of local oncoplastic flaps reconstructive surgery has significantly reduced the number of mastectomies for breast cancer. Large tumours and centrally positioned tumours can be treated by conservation surgery with good cosmesis with/without symmetrisation and no increase in local recurrence.

O-73 Impact of immediate breast reconstruction (IBR) on breast cancer recurrence

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Study: To assess the impact of IBR on local recurrence (LR) and distant metastasis (DM) in patients with invasive breast cancer. Results are compared between 459 patients undergoing mastectomy alone (Group A) and 124 receiving IBR (Group B).

Patients and Methods: 1461 consecutive patients (under one surgeon) received treatment between 1 January 1996 and 30 Nov 2006. 583 (40%) received mastectomy of whom 124 (21%) underwent IBR (72 Latissimus Dorsi, 52 Subpectoral). Node positive patients received axillary radiotherapy/clearance. Adjuvant treatments were prescribed according to local protocols.

Results: Median age Group A = 63 years (range 28–91), Group B = 48 (range 23–77). Median follow up 42 months. All figures relate to absolute events at 36/12.

Nottingham Prognostic Index		Group A	Group B
Good	Total patients	51 (20%)	25 (25%)
	Deceased	6	2
	LR	1	1
	No LR CHI=0.27 P=0.6	44	21
	DM	2	2
	No DM CHI=0.5 P=0.5	43	21
Moderate	Total patients	126 (50%)	48 (49%)
	Deceased	12	4
	LR	6	2
	No LR CHI=0.42 P=0.8	106	42
	DM	12	7
	No DM CHI=0.64 P=0.4	103	40
Poor	Total patients	76 (30%)	26 (26%)
	Deceased	24	5
	LR	11	4
	No LR CHI=0.13 P=0.9	46	18
	DM	17	5
	No DM CHI=0.33 P=0.6	49	20

Conclusion: IBR after mastectomy for breast cancer is safe and is associated with no increase in risk of local or distant recurrence either overall or within Nottingham Prognostic Groups.

O-74 Comparison of the incidence of severe capsular contracture following implant-based immediate breast reconstruction with or without postoperative chest wall radiotherapy using 40 Gy in 15 fractions

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Aim: To determine the incidence of capsular contracture requiring revisional surgery in patients receiving post-operative radiotherapy (RT) following mastectomy and immediate breast reconstruction.

Material and Methods: 178 immediate breast reconstruction patients operated on at the Cambridge Breast Unit between January 2001 and December 2005 were identified. The incidence of severe capsular contracture (CC) in patients undergoing implant-based reconstructions, with and without postoperative RT, was recorded. The RT was delivered using a standard UK fractionation scheme of 40 Gray in 15 fractions over 3 weeks. The two groups were compared using the Kaplan-Meier method to perform univariate statistical analysis.

Results: 110 patients had implant-based reconstructions with a median follow up of 30 months. 42 (38%) patients received postoperative RT (68 patients did not). In the RT group, there were 5 instances of severe CC requiring revisional surgery, a crude rate of 11.9%, with an actuarial

rate of 0% at 1 year, 4% at 3 years and 28% at 4 years follow up. In the non RT group, there were no cases of severe CC. This difference is highly significant ($p < 0.01$).

Conclusions: This series showed a significantly higher rate of severe CC in patients who received postoperative RT. This finding has important clinical implications when counselling patients for immediate breast reconstruction.

O-75 Survival in breast cancer after nipple-sparing subcutaneous mastectomy: a prospective study with 13 years follow-up in 216 patients

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Aim: Validation of oncological safety of nipple-sparing subcutaneous mastectomy and of the outcome in patients with locoregional recurrences after this procedure.

Patients and Methods: 216 patients, mean age 52.8 years (range 29–81) with primary unilateral breast cancer, not suitable for partial mastectomy because of large (>3 cm) or multifocal carcinoma, underwent nipple-sparing subcutaneous mastectomy and immediate reconstruction with a prosthesis between December 1988 and September 1994. The nipple-areola complex was spared only in cases of a negative frozen section from underneath it. 40.3% had lymph node metastases, and 47 patients (21.8%) received postoperative radiotherapy. Median follow-up was 13 years. The end-points were locoregional recurrence (LRR) or distant metastases (DM) as first events, disease-free survival (DFS) and overall survival (OS).

Results: LRR occurred in 52 patients (24.1%) and DM in 44 (20.4%). DFS was 51.3% and OS 76.4%. The frequency of LRR was 8.5% among irradiated patients and 28.4% among non-irradiated patients ($p = 0.025$). After the occurrence of LRR, 5 years DFS and OS were 60% and 82%, respectively. OS was the same for patients who suffered LRR as for those who did not. Specificity at frozen section was 98.5%, and 85% of the patients kept their nipple-areola complex intact throughout the follow-up time.

Conclusions: Nipple-sparing subcutaneous mastectomy is an oncologically safe procedure and could be offered to most patients with breast cancer unsuitable for sector resection only. A much lower frequency of LRR could be obtained by further use of radiotherapy. LRR after this operation does not significantly affect overall survival.

O-76 Sentinel node biopsy in operations for recurrent breast cancer

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Sentinel lymph node biopsy (SNB) accurately predicts the status of the axilla in primary breast cancer. The aim was to evaluate SNB in operations for recurrent breast cancer in patients with earlier axillary lymph node dissection (ALND) and adjuvant radiotherapy.

In a prospective series of 50 patients from 2003 to 2006, 47 patients (mean 66, range 43–86 years) were evaluable. ALND was negative in 72% at primary surgery. Adjuvant radiotherapy was given to 24/47 patients.

The analysis comprised of one scintigraphy and one surgery group. Standard technique for SNB included isotope- and Patent blue injection, static images after 2–4 hours and the nodes were formalin-fixed, paraffin-embedded and stained by haematoxylin-eosin.

In the scintigraphy group one or more axillary sentinel nodes (SN) were identified in 24/47 patients (51%), in both axilla in one and outside the axilla in 6/47 patients (12%). In the surgery group SN was identified in 20/44 patients