

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

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

(45%), which was 87% of SN visualized at scintigraphy. SN had tumour cells in 7 patients (35%), which influenced the treatment.

SNB can identify SN at a high rate in recurrent breast cancer if scintigraphy visualizes nodes and the findings may influence further planning of treatment. SNB should be considered as an important option in recurrent breast cancer.

O-77 Incidental malignant breast disease in routine breast reduction specimens

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Breast reduction surgery is a relatively common procedure in the UK. The finding of clinically unsuspected malignancy complicates subsequent management, particularly regarding assessment of margins and lesion size. We have performed a retrospective audit of breast reductions performed at Addenbrookes Hospital. Between 2000–2006 978 reductions were performed, 40% (389) in patients over 40. 61 patients had had previous breast cancer, almost all in the over 40 age group (57/61 patients).

In the remaining 917 cases, previously unsuspected in situ or invasive breast cancer was found in 3 patients, all over 50 years of age (3/135; 2%). One woman in the 40–50 year age group presented with malignant axillary lymphadenopathy shortly after surgery; retrospective histological review revealed a single focus of lymphovascular invasion. No unsuspected cancers were found in patients under 40. Lesions associated with an increased risk of malignancy (lobular in situ neoplasia, atypical ductal hyperplasia or flat epithelial atypia) were found in a further 13 women, 10 over 40 years of age.

In total, 4.4% of women aged over 50 had unsuspected invasive or in situ carcinoma or a high risk lesion, compared to 4.0% of women aged 40–50 and <1% of women aged <40.

Based on these findings, screening mammography may be appropriate in women over the age of 40 prior to breast reduction surgery. Breast reduction specimens from women over 40 should be sampled more thoroughly. In younger women, where the chances of finding an incidental carcinoma are negligible, fewer blocks may be sufficient.

O-78 Microvascular breast reconstruction: lessons learnt following our first 255 flaps

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Introduction: Autologous reconstruction is recognized as the "gold standard" and presently remains the preserve of specialist Plastic Surgery Centres. It can be performed rapidly and safely; patient satisfaction is high and it has economic advantages over implant-based procedures.

Over the last five years we performed 255 microvascular reconstructions, consisting of DIEP flap, muscle-sparing TRAM and superior gluteal artery perforator (S-GAP) flaps. The purpose of this study was to review outcome and developments in techniques that have led to increasing success.

Patients and Methods: Between 2001 and today, 222 patients underwent microvascular reconstruction (189 unilateral, 33 bilateral, 180 immediate, 75 delayed), requiring 255 flaps. A retrospective review was made of each case, including anastomotic technique and post-operative recovery.

Results: The overall number of cases has been rising every year, with 30 microvascular reconstructions in the first 3 months of 2007. Furthermore, an increasing demand

of bilateral microvascular breast reconstructions could be observed. Of the two hundred and fifty five flaps, a total of 10 flaps were lost, 8 in the first 3 years. Two (S-GAP) out of 145 flaps (1.4%) were lost over the last three years. Ten flaps were re-explored, 4 successfully. Important advances included team operating, the use of a venous coupler and venous salvage techniques.

Conclusion: In our experience autologous breast reconstruction is a very successful procedure both in regard of patient satisfaction and outcome. Flap survival, patient recovery and complications were all greatly improved with experience and use of innovative techniques. This paper supports the need to provide these techniques in committed centres.

O-79 Skin-sparing mastectomy with immediate reconstruction: To leave or to take the nipple-areolar complex (NAC)

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Background: Nipple-preserving mastectomy and immediate reconstruction has further improved the aesthetic outcome of skin-sparing mastectomy. Formal indications are still not published and besides tumour location evaluated preoperatively, intra-operative frozen section is chosen by some groups to help in the final decision to remove or leave the NAC complex.

Methods: Forty one cases of skin-sparing envelope mastectomy and immediate reconstruction with intention to preserve the NAC were evaluated. In all cases the pre-operative evaluation showed by imaging (Mammography and ultrasound) a distance of at least 10 mm to the nipple-areolar complex. Cases selected were mainly extensive DCIS, multifocal invasive disease and a tumour/breast size relation or location favouring a worst cosmetic result with conservative treatment. Intra-operative evaluation of the retroareolar region, was done in all cases to decide the preservation or resection of the NAC complex. The methods of reconstruction used were variable and described as implant-only reconstruction (5; 12%), latissimus dorsi muscle with implant (32; 78%), and TRAM flap (4; 10%).

Results: In the studied sample there were 17 (41.5%) cases of extensive DCIS, 8 (19.5%) cases of multifocal invasive disease and 16 (39%) cases where tumour/breast size relation or location led to a mastectomy option. The frozen section analysis revealed invasion in the retroareolar position in 7 (17, 3%) cases, 5 (71%) of extensive DCIS. There were no false-negative results in the final report. Additional partial or complete removal of the NAC complex was undertaken in 4 cases (9.8%) due to necrosis (only 1 needed complete ablation and replacement).

Conclusion: In patients who are intended to undergo nipple-preserving envelope mastectomy, intra-operative frozen section examination of the retroareolar region is important to help in the final decision even when imaging pre-operative methods show a safe distance to the NAC complex. In our series it precluded a second intervention in 7 (17.3%) cases.

O-80 CCND1 amplification and cyclin D1 expression in breast cancer and their relation with proteomic subgroups and patient outcome

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Introduction: Despite strong evidence regarding the role of CCND1 amplification and protein overexpression in