

psychosocial adjustment after surgery. Previous studies by one of our group (AKA) have shown that among other factors, cosmesis after BCS is dependent upon breast size and specimen weight. This study assessed cosmetic outcome relative to the estimated percentage of breast volume lost (EPBVL).

The study group consisted of 151 women who had undergone BCS. All had previously completed a patient satisfaction questionnaire and been assessed subjectively by a panel for cosmetic outcome as part of previous studies. Mammograms were reviewed and breast volume estimated. A validation series of 40 patients who had skin-sparing mastectomy showed cone volume on the oblique mammogram to most accurately predict true breast weight (correlation = 0.9).

Both subjective cosmetic assessment and patient satisfaction correlated strongly with EPBVL ( $p < 0.01$ , Table).

EPBVL	N	Ave Panel Score/10	Very Satisfied	Not Satisfied
<5%	39	8.9	95%	0%
5–10%	59	8.0	69%	5%
10–15%	27	6.9	44%	15%
15–20%	14	5.9	43%	21%
>20%	12	6.1	25%	25%

A prospective study will show if PBVL can be predicted pre-operatively. This may provide better selection criteria for BCS and select those patients in whom breast reshaping or volume replacement should be considered.

#### **O-92. IMMEDIATE BREAST RECONSTRUCTION: THE FACTORS AFFECTING COSMESIS AND PATIENT SATISFACTION**

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It is known that immediate breast reconstruction (IBR) following mastectomy results in greater self-esteem and body image for the patient. Adjuvant treatment following surgery may cause complications that worsen cosmesis and patient satisfaction. This study evaluated the factors that may influence cosmetic outcome and patient satisfaction following mastectomy and IBR.

Patients who had undergone mastectomy and IBR were identified from the EBU database. Records were reviewed for details of the reconstruction performed and adjuvant treatment administered. A postal questionnaire was used to assess patients' psychological morbidity, pain and dissatisfaction and cosmetic outcome (max score 40), as well as overall appearance (scored out of 10).

There were 165 patients identified in whom 87 (53%) to date have returned the questionnaire. 69 (80%) patients rated their overall appearance as good or excellent. The 75 patients (86%) undergoing latissimus dorsi flap reconstruction expressed higher mean scores of satisfaction and overall appearance than the 12 patients receiving tissue expansion, 29.7 vs 22.8 and 7.7 vs 5.8 respectively ( $p < 0.01$ ). Patients receiving radiotherapy (26)

were more critical of their final cosmetic outcome (mean scores 24.6 vs 30.5,  $p < 0.01$ ). Chemotherapy had no effect upon the cosmetic or psychological outcome following IBR.

The type of surgery and adjuvant therapy received significantly influences patients' perceptions of aesthetic outcome following IBR. Psychological morbidity and dissatisfaction scores appear to be independent of the operative technique and adjuvant therapy. Radiotherapy had a detrimental effect upon cosmesis following IBR. All patients considered for IBR should be informed of the detrimental cosmetic effect of post-operative irradiation.

#### **O-93. THE DEVELOPMENT & DETECTION OF LOCAL RECURRENCE FOLLOWING BREAST CONSERVATION THERAPY (BCT)**

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Breast conservation therapy (WLE + radiotherapy) is an accepted alternative to mastectomy for patients with operable breast carcinoma. Whilst survival rates are similar for mastectomy and BCT, local recurrence (LR) rates are higher for the latter. Risk factors for LR following BCT include in situ disease, lymphovascular invasion and young age at diagnosis. The aim of this study was to identify factors relating to LR and whether the diagnosis was evident on mammograms taken prior to detection of recurrent disease.

We identified 937 women treated by BCT between 1981 and 1992. Local recurrence was detected in 82 patients. Records were reviewed retrospectively and data collected regarding patient demographics, treatment received and tumour morphology known to confer risk of LR. The mammograms taken at the time and from 12 months before detection of LR were reassessed blind to the original findings and the time periods the films related to. Records were unavailable for 11 patients. All 71 retrieved patients received radiotherapy following surgery. Adjuvant chemotherapy or tamoxifen was received by 18 and 16 respectively. Mean time to LR was 60.1 months (median = 53). The overall 5 year survival rate was 75% with a 42% 5 year survival following detection of LR. Malignant lymph nodes (73% vs 32%) and involved margins (29% vs 44%) were identified as related to recurrence at time intervals of less than or greater than 60 months respectively. There was no association between presence of DCIS and time to development of LR. Review of the mammograms of 34 patients showed 40% of patients had recurrence potentially diagnosable at least 1 year prior to eventual diagnosis.

BCT is an accepted method of treatment for T1 and T2 tumours. We have shown an association between the time to development of LR and the presence of positive lymph nodes and resection margins. Double reading of surveillance mammograms from BCT patients might improve detection of recurrence.