

clinical application of trans-nipple Z-plasty with intercede insertion to filling focal defect of breast after breast conserving surgery.

Methods: From Sep. 2010 to Sep. 2011, 15 female patients with breast mass which is smaller than 1 cm undergone lumpectomy by trans-nipple incision. And the encapsulated absorbable adhesion barrier(interceed®) pocket which was sewn with poliglecaprone suture(monocryl®) was turned inside out, ten to fifteen pieces of 5 cm-monocryl suture were put into the pocket. Then the compound was inserted to focal defect of breast and double skin technique was performed. The cosmetic outcomes were estimated by four-point scoring system by patient herself.

Results: After tumor resection with 2 cm of safety margin, margin status was evaluated by frozen biopsy in malignancy cases. Mean volume loss of breast was 31.1g and mean tumor size was 1.3 cm. Tumor types were invasive carcinoma in 8 cases, carcinoma in situ in 2 cases and benign lesion in 5 cases. Although the drainage tube was not inserted, there was no significant complication such as seroma or infection. After 4 weeks, the interceed compound showed fibrotic change in ultrasound. The cosmetic outcome was excellent in 10 cases, good in 3 cases and fair in 2 cases.

Conclusion: Trans-nipple Z-plasty with intercede insertion technique would be useful volume replacement technique for focal deformity without significant complication after breast surgery.

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Poster

A New Development in Sentinel Lymph Node Biopsy in Breast Cancer Using a Combination of Molecular and Histological Methods

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Background: Sentinel lymph node biopsy (SLNB) has become a standard surgical method for clinically node-negative breast cancer. In addition to histological diagnosis using frozen sections, new intraoperative diagnostic performance of OSNA assay (one-step nucleic acid amplification test that amplifies CK19 mRNA) is expected to detect lymph node metastases more precisely, even in molecular level. However, significance and validity of OSNA assay with or without histological method has not been studied enough, and the significance of positive sentinel lymph node only by OSNA method (pNmol+) need to be evaluated.

Methods: Comparing 243 case of sentinel node biopsy(SNB) using a combination of molecular and histological technique in clinical node-negative breast cancer, we examined the necessity of axillary lymph node dissection(ALND), and assessed the significance of ALND in only molecular node positive (pNmol+) in early staged breast cancer. The excised SLNs were cut into 2 mm slices and alternate slices were prepared for OSNA and histological exam.

Results: The concordant rate with molecular technique (OSNA method) and histological technique was 91.5%, and the sensitivity and specificity of OSNA was 90.3% and 93.3% respectively. The positive rate of OSNA was 19.6% compared with 13.8% for histological method. OSNA method had higher positive rate compared with that of histological method. Of all OSNA-negative cases in SNL, only one case was admitted micrometastasis in non-SNL, and when OSNA-positive/histology-negative (pNmol+) cases, dissected axillary lymph node has no metastases(macro nor micro) (0/13).

Conclusions: Because of a high sensitivity of OSNA assay, it may cause an increasing number of unnecessary intraoperative ALND, but on the other hand, the OSNA assay can decrease the number of women who require a second surgery for ALND. There may be a possibility of omitting the unnecessary procedure for ALND by further investigation of pNmol+, and we may be able to predict the state of metastases of non-SNL by using a combination of molecular and histological method.

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Poster

Free Omental Flap for Partial Breast Reconstruction After Breast Conserving Surgery

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Background: The latissimus dorsi flap is one of the most commonly used techniques for partial breast reconstruction, but has the disadvantages of donor-site morbidity and deformity. Laparoscopically harvested omental flap (OF) may compensate for these disadvantages. Since April 2002, we have performed more than 140 cases of immediate partial breast reconstruction (IPBR) with the OF. The OF can be used as a pedicled flap or a free flap for volume replacement. Here, we report our initial experiences of IPBR using a free omental flap (FOF).

Material and Methods: Between August 2004 and May 2010, IPBR with the FOF was performed for 10 breast cancer patients. A 6 to 8 cm-long skin incision was made along the axillary line, and sentinel lymph node biopsy or axillary dissection was performed. A skin over a tumor-bearing quadrant was undermined through the same axillary incision with or without a periareolar incision, and a wide excision (>30% of the breast tissue) was carried out, excising the tumor with at least 2 cm margins. The OF was laparoscopically harvested, and the gastroepiploic artery and vein

(RGAV) were clipped and resected at their roots. A 4 cm-long transverse skin incision was made on the lower abdominal wall, and the FOF was extracted from the abdominal cavity. Then microanastomoses were done between the RGAV and the thoraco-dorsal vessels. After anastomoses were completed, the FOF was gently pushed through the small axillary incision onto the pectoralis muscle of the partial mastectomy defect, and volume replacement was completed.

Results: Three of 10 patients were underwent nipple-sparing mastectomy. Only one complication, which was postoperative hematoma formation, occurred during the follow-up periods. Laparoscopy-associated complications such as bowel obstruction and incisional hernia did not occur. Neither local nor systemic recurrence has occurred to date in any patients.

Cosmetic results were mostly satisfactory. The scars along the axillary line were small and unremarkable. Donor-site scars in the abdominal wall were also minimal. Cosmetic failure occurred only in one patient due to postoperative hematoma formation and a subsequent reoperation. No size reduction of the OF was noted during follow-up periods, even after radiation therapy.

Conclusions: The FOF is a safe procedure with minimal donor-site morbidities and deformities, and can be an additional option for IPBR after BCS.

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Poster

Preoperative Digital Infrared Thermal Imaging and Sentinel Lymph Node Biopsy in the Detection of Regional Lymph Node Metastases in Breast Cancer – Preliminary Results

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Background: Sentinel lymph node biopsy (SLNB) has become a standard treatment in staging axillary lymph nodes in early breast cancer. Thermography measurements allow changes in tumour angiogenesis to be evaluated and may assist in detecting occult axillary metastases. The aim of this study was to compare SLNB and Digital Infrared Thermal Imaging (DITI) in detecting occult axillary metastases.

Material and Methods: 12 patients with breast cancer and clinically negative axilla were enrolled in the study. DITI was carried out before surgery. At least one sentinel node was identified in all patients. Patients underwent axillary lymph nodes dissection (ALND) in cases of positive SLNB. The results of DITI were compared with histopathology of SLNB and ALND.

Results: 5 of the 12 patients (41%) had metastases in axillary nodes. In 4 of DITI positive 5 patients SLN was found to be metastatic. In two patients whose SLN has micrometastasis DITI had been able to show axilla as positive. Sensitivity of DITI for detection of axillary lymph node metastases in this small series was 80%; and the specificity was 85%.

Conclusions: DITI appears to allow accurate identification of status of SLN. In patients, whose axilla is DITI positive for metastasis, to perform axillary dissection without SLNB, which is time-consuming and invasive procedure, will require a expanded study to determine its accuracy and usefulness.

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Poster

The Main Role of Oncoplastic Surgery in Breast Conservative Treatment – Our Experience On 1024 Patients

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Objective: To assess the oncological outcome in women with breast carcinoma who were treated with breast conservative therapy (BCT) using oncoplastic techniques.

Summary: Immediate reconstruction in conservative treatment represents a significant innovation in BCT, founding the basis of oncoplastic approach. This study evaluates one thousand and twenty-four patients treated with an oncoplastic approach consisting in an integration of oncologic and reconstructive techniques in breast cancer conservative treatment with the aim to improve long term quality indicators and cosmetic results.

Methods: The data were collected from 1999 to 2010 and concerned patients who underwent oncoplastic surgery at the Breast Unit, Careggi University Hospital in Florence. All therapeutic options were agreed on by a multidisciplinary group made up of a breast surgeon, an oncoplastic surgeon, a plastic surgeon, a pathologist, an oncologist, a radiologist, a radiotherapist and a psycho-oncologist. All data were recorded with SQTM® software (CPO-Piemonte). Statistical analysis was performed with SPSS software. All tests were two-sided.

Results: Median follow up was 57.2 months (range 18–110). Complete tumor excision was obtained in 909 patients (88.8%). Focally involved

margins were found in 67 patients (6.5%) and close margins (<2 mm) in 48 of them (4.7%). In 79 patients (7.7%) a second operation was carried out at an average time of 38.5 days from the first one (range 26–45). Forty-five patients (4.7%) experienced local relapse, fifty-two of them (5%) developed distant metastasis.

Conclusion: The use of oncoplastic techniques allows extensive resections for conservative treatment of breast cancer with good oncological and cosmetic outcomes. This approach might be useful in extending the indications for conservative therapy. Thanks to an oncoplastic approach we were able to treat with conservative surgery even those patients who due to tumor volume or multifocality lesions would in the past have had to undergo a mastectomy.

Table 1. Prognostic factors for development of local recurrence, metastases

	Local recurrence (49)	Metastases (52)
G	2.161 (1.418–3.291) P = 0.001	1.402 (0.907–2.165) Ns
Vascular invasion	7.219 (3.794–13.7) P = 0.000	2.842 (1.560–5.180) P = 0.001
ER/PgR	0.343 (0.022–5.36) Ns	3.528 (1.833–6.792) P = 0.000

*Regression coefficient (Exp (B)), 95% confidence intervals (CI) and p-value obtained from multivariate Cox proportional hazards regression model. No association was found with dimension's lesions, plurifocality, age.

543 **Initial Experience with the Use of Porcine Acellular Dermal Matrix for Breast Reconstruction**

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Background: This study identifies criteria and assesses outcomes for pts undergoing immediate implant reconstruction with Stratattice® (Acellular Dermal Matrix) after mastectomy.

Methods: We identified 3 groups of pts (n = 10).

1. Patients with small/moderate size breasts undergoing skin/nipple sparing mastectomy and one stage subpectoral implant reconstruction. Porcine acellular dermal matrix was used as inferior sling. (n = 5).
2. Patients with large/ptotic breasts who had skin reducing mastectomy with expander/expander-implant placement. Acellular dermal matrix was used alongside dermoglandular flap during first stage (n = 4).
3. Patients with poor soft tissue implant coverage requiring revisional surgery due to capsular contracture/suboptimal expansion (n = 1).

Patients were assessed during clinical review, pre and post operative photographs.

Results: Mean follow up was 4 months. There were no cases of implant loss or skin flap necrosis. One patient had implant rippling due to thin skin cover. One patient had seroma which was drained percutaneously. One other patient had transient skin flap redness which subsided spontaneously.

Patient satisfaction was very high (90%). All patients rated highly in objective assessment at pre and postoperative photographs.

Conclusion: 50% of our patients successfully underwent single stage breast reconstruction which is cost effective. This is a small series with a short follow up, however early results seem to be encouraging. Long term follow up is needed to establish application of acellular dermal matrix in breast reconstructive surgery.

544 **Improved Syringe Stopper for Fat Harvesting in Breast Lipofilling for Defects in Breast Conserving Surgery**

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Introduction: Fat harvesting is a safe and well established procedure. Several methods of harvesting are described, varying from hand-held syringes to central vacuum apparatus. It is imperative, during harvesting, that adipocytes are not damaged, as they are considered to act as stem cells. Results on survival of adipocytes, after harvesting with syringe and suction machines, vary. Whichever method is used, a pressure below -700 mmHg is considered unacceptable as this leads to destruction of >10% cells aspirated.

Aim: To present a new and simple technique aiding fat harvest.

Methods: An improvised syringe device was used to replace the suction unit for fat harvesting in a breast lipofilling procedure. The device consists of a metal cannula attached to a 60 ml Luer-lock syringe. The plunger is fully retracted and a pressure of -695 mmHg is achieved. The plunger is

held in place using a smaller plunger from a 10 ml syringe, maintaining a constantly negative pressure.

Results: The fat harvesting syringe can be held comfortably and the process repeated until a sufficient amount is harvested (>200 cc).

In vitro tests demonstrate an acceptable negative pressure (down to -700 mmHg) using this technique.

Conclusion: This method provides a simple and cheap alternative for fat harvesting.

545 **Re-Excision of Margins – is it Necessary in all Patients? Outcomes of a Two-year Study**

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Background: Close margins are considered a risk factor for local recurrence of breast cancer. Histology of re-excised margins usually reveals no residual disease. Literature review suggests that the assessment of microscopic margins may be misleading.

Surgical management of close margins varies widely with no standardised methods. Re-excisions may have adverse effect on aesthetic outcomes.

Aim: To ascertain the residual disease in specimens of re-excised margins.

Materials and Methods: A retrospective study of patients who underwent re-excision of margins in a screening breast unit was undertaken over two-year period. Patient demographics, operations and histological results were analysed.

Results: Forty patients had re-excision surgery, with a median age of 61 (28–84).

Table 1

Number of Re-Excision Operations	Number of Patients	Percentage
1	30	75%
2	7	17.5%
3	3	7.5%

Table 2

Residual Pathology	Number of Patients	Percentage
Invasive Cancer	8	20%
High Grade DCIS	6	15%
Other – requiring no re-excision	7	17.5%
Nil	19	47.5%

A third of patients 14 (35%) benefitted from re-excision, the majority 26 (65%) gained no benefit from further surgery. Aesthetic assessment was not undertaken.

Conclusion: Although close margins in invasive disease and high-grade DCIS require re-excision, patients with no residual disease may avoid further surgery. Currently, no standardisation method exists and further studies are essential to manage these patients appropriately.

546 **A Randomized Trial Comparing Sentinel Lymph Node Biopsy Vs. No Axillary Surgical Staging in Patients with Small Breast Cancer and a Negative Preoperative Axillary Assessment**

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Background: Data from a prospective randomized trial which compared axillary dissection vs. no further axillary surgery in presence of positive