

had ER positive tumors in 76.5% vs. 47.3% in other group, PR positive tumors in 46.8% vs. 52.3% in other, HER 2/neu negative tumors in 76.9% vs. 56.2% in other. Patients with a positive margins at the initial resection showed higher lobular histology rate (15.3% vs. 6.4%), incidence of multiple ipsilateral tumors (23.1% vs. 15.4%), presens of intraductal component (76.9% vs. 65.1%), but these differences between two groups were not statistically significant. 73.1% of all patients were tested for the two common founder mutations in BRCA1(4153delA and 5382insC). There was 1 BRCA1(5382insC) mutation-positive patient in the other group and no mutation-positive patients in the positive margin group. Mean follow-up time was 19.9(11–37) months, and there were no local recurrences during the follow-up period in the tumor positive margin group.

Conclusion: The overall percentage of positive margins in the Pauls Stradins Clinical University Hospital Breast Unit is within the predefined targets. Lobular histology, multiple ipsilateral tumors and presens of intraductal component have shown a tendency of higher risk for inadequate margins of excision.

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Poster

Skin-sparing Mastectomy and Immediate Breast Reconstruction is a Safe Option in the Management of Early Stage Breast Cancer Patients

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Introduction: Skin sparing mastectomy (SSM) followed by immediate breast reconstruction (IBR) is a surgical approach that allows a mastectomy while preserving the natural envelope of the breast. SSM is used for prophylaxis for high-risk patients and BRCA carriers. It is also a surgical option for patients with large in situ lesions such as DCIS not accessible to breast-conservation or to invasive breast cancer associated with extensive in situ disease.

The present study will evaluate the oncological safety, outcome and post-operative complications.

Material and Method: Between January 2001 and December 2007, a total of 1500 patients with breast cancer were treated, out of them 132 were treated by SSM and IBR in our senology unit. We retrospectively reviewed patient and tumor characteristics, type of cancer surgery, reconstruction and immediate post-operative complications. We evaluated local and systemic recurrence rates, as well as survival with a median follow-up of 28 months (range 0–97).

Results: Mean age at diagnosis was 51 years (range, 28–77). Most of the patients (>60%) were treated for early-stage breast cancer either invasive ductal (50%) or invasive lobular (10%) that required a SSM. However 40% of them were diagnosed with extensive ductal carcinoma in situ (DCIS). More than 76% of patients were estrogen +/- progesterone receptors positive.

Oncologic surgery consisted in a SSM including sentinel lymph node biopsy or level I-II axillary lymph node dissection as needed. Periareolar or horizontal incisions were preferred. Neoadjuvant chemotherapy was administered in 12 patients (9%).

Immediate reconstruction was performed using exclusively breast implants in the majority of patients (102 patients, 77%) or in association with autogenous tissue by latissimus dorsi musculocutaneous flap in 16 patients (12%). Exclusive autogenous tissue reconstruction was performed in 14 patients (11%) including latissimus dorsi musculocutaneous flap in 8 patients (57%), and transverse rectus abdominis myocutaneous in 6 patients (43%). Adjuvant treatments consisted at least in hormonal therapy in most patients. However 25 patients (19%) received additional adjuvant chemotherapy. Radiation therapy was mandatory after surgery for 6 patients (5%). The AJCC/TNM pathologic stages were respectively 0 (n=42, 32%), I (n=63, 48%) and II (n=28, 21%). Five patients experienced recurrences, respectively local only in 2 (1.5%), local followed by systemic recurrence in 2 (1.5%) or systemic in 1 (0.8%).

Two patients died from their disease and 2 died from other causes.

Immediate post-operative complications were relatively low (7%). 7 patients required subsequent surgery with breast implants removal due to cutaneous necrosis in 4 of them, infection in 2 and hematoma evacuation in 1. 1 patient had a dehiscence wound and 1 had cutaneous necrosis who were treated with local dressing. 1 patient presented vascular complication related to a pedicle thrombosis that required an emergency re-anastomosis.

Conclusion: SSM associated with IBR is a safe surgical technique and does not increase the risk of local or systemic recurrence. It is associated with low morbidity in particular morbidity related to reconstructive surgery. This approach can be proposed to selected early stage breast cancer patients.

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Poster

Axillary Recurrence in Breast Cancer Patients Following Negative Sentinel Lymph Node Biopsy

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Background: Sentinel lymph node biopsy (SLNB) is an accepted standard of care with level 1 evidence supporting its safety and efficacy in patients with clinically node negative breast cancer. There is a finite false negative rate which is minimised by dual localisation techniques but rates of regional recurrence are low. Published rates of axillary recurrence range from 0–1.4% but a systematic review reported an average rate of 0.3% at a median follow-up of 34 months for this group of patients. We report on axillary recurrence amongst a cohort of SLNB negative patients followed up for almost 5 years.

Material and Methods: A retrospective analysis was undertaken to examine axillary recurrence amongst a group of 302 clinically node negative patients undergoing SLNB for symptomatic and screen detected invasive breast cancer between 1.1.2004 and 31.12.2006. Patients were treated in a single centre which did not routinely practice pre-operative axillary ultrasound at the time. Dual localisation techniques with blue dye (Patent Blue) and isotope (Technetium^{99m} nanocolloid) used for SLNB. All patients were classified as SLNB negative on H&E step-sections but included some patients with deposits of isolated tumour cells on either H&E or immunohistochemistry (\leq 0.2 mm). Exclusions included 5 patients with a previous history of breast cancer, 10 patients who had died without recurrence and 15 patients with DCIS (or microinvasion) only on final histology. This left 272 patients for analysis, the majority of whom received some form of systemic therapy. Neo-adjuvant patients with a negative SLNB pre-treatment were included as these did not proceed to axillary dissection (ALND) after chemotherapy. The median age was 61 years with a range of 24–88 years and median tumour size was 14 mm (range 1.5–40 mm). 80% of patients underwent breast conserving surgery and had good prognosis tumours (grade I & II; ER positive). Follow-up was measured from the time of surgery to the last documented contact with the patient.

Results: At a median follow-up of 59 months (range 10–89 months) there has been only one case of axillary recurrence (1/272). This occurred after 4 months and was the first site of treatment failure. Interestingly, only a single sentinel node was harvested and this case may have represented a false negative case (mean number of sentinel nodes = 2.62). This patient remains well at 46 months following ALND and chemo endocrine therapy for regional recurrence. 12 patients have developed distant disease without evidence of locoregional recurrence after a median time interval of 41 months (range 12–70 months). 1 patient had isolated chest wall recurrence 12 months after mastectomy and subsequently died with bone metastases at 28 months.

Conclusion: This low rate of axillary recurrence (0.37%) accords with other reports and compares favourably with ALND. Finite rates of false negativity associated with SLNB do not appear to translate into higher rates of axillary relapse with prolonged follow up. Incorporation of axillary ultrasound will de-select some patients for SLNB and further reduce any residual axillary tumour burden.

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Poster

Intraoperative Radiological Evaluation of Margins in Breast Conserving Surgery: Analysis of 140 Cases

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Background: In breast conserving surgery (BCS), the surgeon's primary objective is to obtain negative histological margins, which are known to be a major prognostic factor for tumour recurrence. Intraoperative evaluation of margins status (MS) relies on histological examination (HE). However, HE can be time consuming and may need a specific organisation (pathologist in the operating room, transport of the lumpectomy to the pathology unit).

In order to propose an alternative to intraoperative HE, we have lead a prospective study and analyzed the concordance between the MS obtained with HE and the MS obtained using the FAXITRON™ (FX), a dedicated X-ray imaging device set up in the operating room.

Patients and Methods: One hundred and forty patients (mean age = 63) treated with BCS were included. The treated lesions were ductal carcinoma in situ DCIS (11%), invasive ductal carcinomas IDC (60%), invasive lobular carcinomas ILC (16%) and a combination of histological subtypes (13%). The breast lesions were palpable in 43% of the cases. All the lesions were visible on the preoperative mammograms.

For all the patients, we performed an X-ray of the lumpectomy specimen with the FX and measured the radiological margins surrounding the cancer. The lumpectomy was then sent for intraoperative HE and we made complementary resections when required by the pathologist.

For each patient, we compared the size of the surgical margins evaluated by FX and by HE.

Results: The FX provided an x-ray image of the lumpectomy in 90 seconds. It allowed an evaluation of the margins status in 96% of the cases.

The pathologist asked for complementary resections in 17% of the cases from which 65% were already performed after the FX procedure. MS evaluation with the FX was corroborated by the intraoperative HE in 94% of the cases.

Furthermore, when the margins, measured using the FX, were equal or superior to 5 millimetres, the margins measured by HE were negative in 100% of IDC cases and in 90% of the DCIS and ILC cases.

Conclusion: The evaluation of MS with the FX allows the achievement of negative margins in 94% of the cases when compared to HE. The accuracy of the FX depends on the histological subtype of the cancer. A better selection of the patients might enhance the accuracy of the FX procedure.

Moreover, the procedure lasts only 90 seconds which allows important time-saving. If our data are confirmed the FX procedure might be able to replace intraoperative HE in some specific indications.

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Poster

Analysis of Immediate Breast Reconstruction with the Use of Titanized Polypropylene Mesh (TiLOOP® Bra)

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Background: Breast cancer surgery has taken a turn over the past decades. New surgical strategies have generated advanced methods concerning oncologic safety combined with improved cosmetic results. A number of publications outlined that the application of tissue-supporting materials result in improved cosmetic outcome.

Even the AGO guidelines have added the application of tissue-supporting extraneous materials to the section of reconstructive breast surgery in the year 2011.

Material and Methods: The authors prospectively studied the feasibility, rate of complication and cosmetic outcome of 87 performed combined skin-sparing mastectomy and immediate prosthetic breast reconstruction with the usage of TiLoopBra mesh.

Data such as body mass index, nicotine abuses, diabetes mellitus and others were taken into account. Also rate of postoperative infection, hematoma, seroma, time of drainage and antibiotic therapy were assessed.

Results: 87 patients with a median age of 45.6 years (26 to 76) were evaluated. 82.8% of the patient collective had a oncologic operative indication.

The average prophylactic antibiotic therapy was applied 3.6 days and median drainage duration were 4.7 days.

Mastectomy weight averaged 307.8g (181–820g); implant volumes ranged between 125 and 680 cm³ (median 327 cm³).

We recorded an infection rate of 10.3% (only light superficial skin infections), postoperative hematoma rate of 17.2% and 9.2% of postoperative seroma.

Conclusions: This analysis showed that the application of titanized polypropylene mesh in immediate reconstructive surgery results in an excellent cosmetic result with greater flexibility in forming the former breast shape. It is a safe procedure with a low rate of complications.

Additional follow-up data are now required to assess further data on the cosmetic outcome, patients satisfaction and oncologic safety.

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Poster

First Experiences with the Implementation of a Two Component Polypropylen-vicryl Mesh (SERAGYN® BR) as Tissue-supporting Extraneous Material in Plastic Reconstructive Surgery

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Background: Because of excellent experiences, the application of acellular dermis and other tissue-supporting meshes in plastic reconstructive breast surgery is approved by guidelines of the gynecologic oncologic committee (AGO) in Germany.

Since March 2011 a partially absorbable two component mesh is available. The basic fiber consists of an absorbable PGA-CL and after resorption 6 singular, parallel layed polypropylene filaments remain permanently. The material components are suitable for plastic reconstructive breast surgery.

Material and Methods: From March 2011 to September 2011 we performed 12 subcutaneous mastectomies with immediate reconstruction via implant placement and application of the SERAGYN two component mesh (n = 14) in breast cancer patients (median age = 49 years).

Results: Mastectomy weight averaged 329g (120–580g); implant volumes ranged between 125 and 515 cm³ (median 335 cm³). Implant location was mainly sub pectoral, in 3 cases the implant was covered by mesh only.

We recorded no mesh arrosion, no wound infection and no unscheduled second operations.

The mean time of drainage summed up to 8 days, in one patient a maximum of 11 days and still a puncture of seroma after drainage removal was necessary.

Conclusions: Because of the combination of the different materials and special texture of the large-pored, partially absorbing meshes a stability of shape and softness of the reconstruction can be achieved.

Convincing also are low rates of complications and good cosmetic results.

However the still small number of cases and the short follow up limits the validity of this conclusion. Currently a prospective, multicentre analysis will merge the experiences of the different study centers.

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Poster

Skin Sparing Mastectomy: Evaluation of Oncological Safety in 82 Cases Treated in Brazilian National Cancer Institute

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Background: The surgical treatment of breast cancer has evolved from radical mastectomy to breast conservative therapy. Today we have another therapeutic dilemma: how to manage the Skin Sparing Mastectomy (SSM) offering patients better aesthetic results with oncologic safety.

Methods: We analyzed data on 82 consecutive skin sparing mastectomies (SSM) with immediate reconstruction with tissue expander, prosthesis or autologous tissue performed in a Brazilian National Cancer Institute (INCA) in 2001–2008. SKIN-sparing mastectomy (SSM) were performed only for breast cancer treatment (n=82) and no one case was included with prophylaxis, risk reduction or contralateral breast symmetrization.

Results: Mean patients age was 46.8 years (range 19 to 67 years) and mean follow up time was 49.9 months (range 20 to 106 months – SD 18.6). 36 patients were stage 0 (43.9%), 21 stage I (25.6%), 24 stage II A and B (29.3%) and in 1 patient stage 3 (1.2%). On pathologic review, 22 patients (26.82%) had in situ ductal carcinoma (DCIS), 51 invasive ductal carcinoma (IDC) (62.19%) and 7 (8.53%) invasive lobular carcinoma (ILC) and special type of carcinomas in two cases (2.43%). Seventy (85.4%) of patients presented with sentinel node negative and twelve (14.6%) presented with positive axillary nodes. Adjuvant treatment was delivered based on status on the estrogen and progesterone receptor, tumor diameter and node status. Patients with 4 or more axillary positive lymph node received adjuvant radiotherapy. There were 3 local relapses and 2 deaths among the group. The disease free survival (DFS) was 101.7 months (SD 2.4) and overall Survival (OS) 98.5 months (SD 4.12). The local relapses and deaths occurred among the group of invasive carcinoma, and no patient with positive lymph node had local relapse or death, probably reflecting more targeting adjuvant systemic therapy.

Conclusion: These data demonstrates that SSM is oncologically safe and can be performed with all types of breast reconstruction.

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Poster

Sentinel Node Biopsy Analysis Using Intraoperative One-Step Nucleic-Acid Amplification (OSNA): Are We Really Saving Patients a Second Operation?

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Sentinel Node Biopsy (SNB) has become standard practice for staging the axilla in clinically node negative breast cancer patients. SNB positive patients undergo a delayed axillary dissection after routine histological assessment of the sentinel node. OSNA is a novel molecular method for detecting lymph node involvement, using a standardised automated machine, requiring minimal pathologist input.

However, it has been argued that the benefit from a single-step procedure is negated somewhat by those patients who require further breast surgery – margin re-excision or completion mastectomy. The aim of this study was