

visualization rates and surgical retrieval rates that are similar to the yield of the SN procedure in patients with palpable breast cancers.

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POSTER

Managing patients with invasive lobular carcinoma: Does the type of surgery matter? Do we need to extend the follow up period?

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Background: Breast conservation surgery (BCS) in patients with invasive lobular carcinoma (ILC) is still controversial due to its different clinicopathological features. Most units report local recurrence (LR) and discharge patients after a relatively short follow up.

Aim of the study: To study the clinical outcome of patients treated for ILC after long term follow up.

Patients and Methods: 348 patients treated between 1989 and 1996 were reviewed. 113 patients were excluded (incomplete data in 91 and primary hormonal therapy in 22 patients). 235 patients were statistically analyzed.

Results: 79 patients (33.6%) had BCS (group I), which was followed by re-excision due to positive margins in 23 patients (29%), and 156 patients (66.3%) had mastectomy (group II). Compared to group II, tumours in group I were smaller (mean size 17 v 37 mm, $p=0.001$), multifocal (20 v 14 tumours, $p=0.003$) and more positive margins (23 v 24, $p=0.0009$). 33 patients (21%) in group II and all patients in group I had radiotherapy ($p=0.0001$).

48 patients (20%) developed LR after a median follow up of 133 months (Range 24–196), (27 in group I and 21 in group II, $p=0.0005$). Cox regression analysis of LR showed that the type of surgery, margins, adjuvant radiotherapy and chemotherapy affected LR ($P=0.0005$, 0.02, 0.04 and 0.05 respectively).

The overall survival was 78.2%. Cox regression analysis showed that only the patients age affected survival ($P=0.003$).

Conclusion: Local recurrence can be a late event in patients treated for ILC and extended follow up may be considered. Mastectomy offers a better local control.

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POSTER

High dose chemotherapy with marrow or stem cell transplantation versus conventional chemotherapy for breast cancer: an overview of randomized trials

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Background: A number of trials have compared high dose chemotherapy followed by bone marrow or stem cell transplantation (HDC) with conventional chemotherapy (CC) for the treatment of metastatic, as well as, high risk early breast cancer but results have been largely inconclusive. We performed a meta-analysis to estimate the risks and benefits of HDC. **Methods:** We searched the MEDLINE database, the online proceedings of the American Society of Clinical Oncology and the San Antonio Breast Cancer Symposium to identify trials randomizing patients with breast cancer, to either HDC or CC. Data on breast cancer related outcomes, treatment adverse effects, and overall survival were abstracted from published reports. Pooled risk ratios (RR), or odds ratios (OR) when appropriate, and their confidence intervals were calculated. Values lower than one indicated a benefit from HDC. Continuity correction, proportional to the relative size of the opposite of the study, was used for studies with zero events in one arm. Results are presented in accordance with the QUOROM guidelines.

Results: A total of 20 studies were considered eligible: 14 evaluated HDC for high risk early breast cancer (5,598 women; HDC: 2,798, CC: 2,800) and 6 for metastatic disease (851 women; HDC: 438, CC: 413). In the adjuvant setting, HDC did not improve overall survival (RR, 1.01; 95% CI, 0.93 to 1.09) despite a small but statistically significant improvement in disease free survival (DFS; RR, 0.90; 95% CI, 0.83 to 0.98). Interestingly, the increase in DFS was limited to women with ≥ 10 involved axillary lymph nodes (RR, 0.89; 95% CI, 0.82 to 0.98), while women with 4–9 involved nodes did not derive any benefit (RR, 0.92; 95% CI, 0.81 to 1.06). HDC was associated with a clear increase in severe neutropenia (OR, 1.68; 95% CI, 1.26 to 2.26), febrile neutropenia (OR, 5.16; 95% CI, 1.30 to 20.45), deaths due to sepsis (OR, 6.83; 95% CI, 1.95 to 23.98), and all cause treatment mortality (OR, 4.42; 95% CI, 2.06 to 9.52). There was a trend towards an increased incidence of leukemia in patients allocated to HDC (OR, 1.91; 95% CI, 0.88 to 4.16). For metastatic disease, HDC was associated with a small, marginally non-statistically significant, improvement in overall

survival (RR, 0.90; 95% CI, 0.80 to 1.01). The rates of complete response (RR, 1.50; 95% CI, 0.87 to 2.58), partial response (RR, 1.09; 95% CI, 0.93 to 1.29) and stable disease (RR, 0.82; 95% CI, 0.42 to 1.62) did not differ between treatment arms. Treatment related deaths were increased among patients with metastatic breast cancer randomized to the HDC group (OR, 3.62; 95% CI, 1.14 to 11.43).

Conclusion: Although there is some evidence supporting a limited beneficial effect of HDC for high risk early and metastatic breast cancer, such treatment is associated with an unacceptable increase in the incidence of life-threatening and fatal adverse events. An individual patient data meta-analysis could better define if certain patient subgroups derive enough benefit to justify the increased risk of HDC. For the time being, HDC cannot be advocated outside the clinical trial setting.

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POSTER

Comparison of breast irradiation in prone and supine position in early stage breast cancer patients

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Introduction: External beam radiotherapy for breast cancer patients is necessary after breast conserving therapy. Volume of breast tissue which needs to be irradiated is close to critical structures such as lung, heart; therefore an alternative prone position could be used to improve dose homogeneity during radiotherapy. The purpose of this study was to compare dose distribution within target and normal tissue volumes between two radiotherapy plans in prone and supine position in women with large and small breasts.

Material and Methods: 20 early breast cancer patients in clinical stage T1–2N0 were treated with breast conserving therapy and were dedicated for further radiotherapy. Planning CT was performed in a prone and supine position and two treatment plans for each patient were developed using conventional tangents technique. Dose volume histograms were produced and plans were compared with regard to dose volumes parameters.

Results: There was no difference between mean doses to the target volume (50.8 ± 0.57 Gy for supine position and 50.6 ± 0.76 Gy for prone position), but higher minimum dose in this volume was achieved in the prone position (35.5 ± 2.7 vs. 40.3 ± 2.4 Gy). The percentage of ipsilateral lung receiving 10 Gy was $16 \pm 3.1\%$ for supine position and only $9 \pm 7.87\%$ for prone position, 20 Gy ($13 \pm 2.8\%$ and $4 \pm 3.7\%$ respectively). Furthermore, the maximum and mean dose to the ipsilateral lung and heart was lower in prone position compare to supine position.

Conclusion: Irradiation of patients in prone positions compared to supine positions improved dose distribution within target volume. Using plans generated in prone position we were able to reduce the dose to the organ at risk especially ipsilateral lung and heart.

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POSTER

Usefulness of imprint cytology and frozen section examination of the sentinel lymph node in patients with breast cancer

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Background: The accuracy of sentinel lymph node biopsy in patients with breast cancer should be both accurate and rapid, but unfortunately the false negative rate ranges between 10% and 20%. The aim of this study was to evaluate the usefulness of intraoperative imprint cytology and frozen section examination together in improving the sensitivity of sentinel lymph node procedure in patients undergoing curative surgery for primary breast cancer.

Patients and Methods: A series of 86 consecutive women (median age 53 years, range 34–70) with breast cancer confirmed by fine-needle aspiration biopsy, core biopsy or open biopsy and clinically negative nodes (T1N0) underwent sentinel lymph node procedure using a combined radioisotope and blue dye method. One or more sentinel lymph node were identified in all patients. A total of 126 axillary node were processed by both intraoperative imprint cytology and frozen section examination, and the results were compared against the final pathology.

Results: Permanent hematoxylin-eosin specimens revealed 44 (34.9%) metastasized axillary nodes, and confirmed breast cancer in all patients.

The sensitivity, specificity, positive predictive value, negative predictive value and accuracy were the following: 88.6%, 86.4%, 86.7%, 93.9%, and 91.3% for intraoperative imprint cytology; 86.4%, 100%, 100%, 93.2%, and 95.2% for frozen section examination; 97.7%, 100%, 100%, 98.8%, 99.2% for intraoperative imprint cytology and frozen section examination together. **Conclusions:** Although the difference is not significant ($p=NS$, chi-squared test) the combination of intraoperative imprint cytology and frozen section examination may improve both the sensitivity and accuracy of sentinel lymph node procedure, with a very low (<1%) false-negative rate, and should be suggested in all patients undergoing surgery for breast cancer in whom the sentinel lymph node procedure is required.

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POSTER

The value of sentinel lymph node biopsy in DCIS(M) of the breast

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Background: Ductal carcinoma in situ (DCIS) refers to the preinvasive stage of breast carcinoma and should not give axillary metastases. It's diagnosis, however, is subject to sampling errors. The role of sentinel lymph node biopsy (SLNB) in management of DCIS or DCISM (with micro-invasion) remains unclear. The purpose of this study was to review our experience with SLNB in DCIS and DCISM.

Materials and Methods: A review of 51 patients with a diagnosis of DCIS ($n=45$) or DCISM ($n=6$), who underwent SLNB and a definitive breast operation between January 1999 and December 2006, was performed.

Results: In 10 of 51 patients (19.6%) definitive histology revealed an invasive carcinoma. SLN (micro)metastases were detected in 5 out of 51 (9.8%) patients, of whom 2 had a preoperative diagnosis of grade III DCIS and 3 of DCISM. Three patients (75%) had micrometastasis (<2 mm) only. In 2 patients, histopathology demonstrated a macrometastasis (>2 mm). All 5 patients underwent axillary dissection. No additional positive axillary lymph nodes were found.

Conclusions: In case of a preoperative diagnosis of grade III DCIS or a grade II DCIS with comedo necrosis and DCIS with micro-invasion a SLNB procedure has to be considered because in almost 20% of the patients an invasive carcinoma is found after surgery. In this case the SLNB procedure becomes less reliable after a lumpectomy or ablation has been performed. SLN (micro)metastases were detected in nearly 10% of the patients. The prognostic significance of individual tumour cells remains unclear.

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POSTER

Does the estrogen receptor status influence survival of pCR breast cancer (BC) patients (pts) after primary chemotherapy (CHT)? Results of a multicenter study

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Background: Existing studies show that the BC pts who benefit the most from neoadjuvant CHT are those who achieve a pathological complete response (pCR). We previously demonstrated that no difference exists between pts with no residual disease (pT0) and those with microscopic residual (pTm) in the breast, according to Sataloff's Classification. Recent data have suggested that ER-ve status may be predictive of pCR, but few data are available concerning the clinical outcome of pCR pts according to hormone receptor status.

Patients and Methods: We analysed 45 out of 308 pts with initial clinical T2-3 (18 pts, 40%) and T4 (27 pts, 60%) BC, who achieved pCR, according to Sataloff's classification (pT0+ pTm), following different kinds of neoadjuvant CHT in the period 08/1989-08/2006. Median age was 47 years (29-68), 29 pts (64%) have ER-negative tumours, 35 (77.7%) PR-negative. All pts received anthracycline-based neoadjuvant CHT, even standard (47%, q21) or intensified (53%, q14). Median number of administered cycles was 5 (2-6).

Table 1

	ER-ve	ER+ve	p
DFS %	89.7	62.5	0.01
OS %	93.1	68.8	0.02

Results: At a median follow up of 91 months (1-205), DFS was 89.7% in ER-ve pts and 62.5% in ER+ve ($p=0.01$). OS was 93.1% and 68.8% in ER-ve and ER+ve pts, respectively ($p=0.02$). Results are reported in Table 1.

Conclusion: Even if limited by the small number of pts, our results seem to suggest that, when ER-ve pts achieve pCR following neoadjuvant chemotherapy, they obtain a significant improvement in their clinical outcome. Correlation between ER and PgR status are currently under evaluation. Larger series are expected to confirm our results.

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POSTER

In early breast cancer, obesity is no contraindication for sentinel lymph node biopsy under local anaesthesia without sedation

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Background: Sentinel lymph node biopsy is the standard of care for staging the axilla in invasive breast cancer. Obesity has been identified as a factor with an inverse relationship to success. We studied whether obesity was a detrimental factor in lymphatic mapping under local anaesthesia without sedation, a procedure which has been standard of care in our teaching hospital.

Methods: We reviewed sentinel lymph node mapping in a consecutive series of 359 sentinel lymph node procedures under local anaesthesia between November 2000 and April 2003. We used a combined technique (radioisotope and blue dye) to detect SLN's. Failure was defined as the inability to identify any nodes either by blue dye or by handheld gammaprobe. Body-mass index (BMI) was measured for each patient by height and weight data (kg/m²). Clinical stage T1N0 to T3N0 were included.

Results: The median age was 59 years; range 29-97 yrs. The median BMI in our population was 25; range 18-50. 59 Patients (16%) had a BMI >30. Overall, only one failure was observed, which was encountered in a 83 years old woman with a BMI of 30. So the overall success rate was 99.99%.

Conclusion: Obesity has no significant effect on sentinel node identification under local anaesthesia without sedation.

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POSTER

Immediate reconstruction with latissimus dorsi flap in breast conservative treatment

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Background: Although breast conserving surgery is the treatment of choice for small breast cancer, 25% of patient who underwent breast conservation have a poor cosmetic result. The use of latissimus dorsi flap not only allows to avoid an unfavorable aesthetic outcome but can extend the indications to conservative treatment even if the tumor size/breast size ratio is inappropriate. Aim of the study is to evaluate the oncological and cosmetic result of this procedure.

Materials and Methods: Since 2001 to 2005, 60 cases of latissimus dorsi flap were used in immediate reconstruction of breast conservative treatment. The median follow up was 51.3 months (range 71-20). Patients age ranged from 33 to 62 years. The tumor size average was 33.64 mm (54-18). In 10 cases the flap was totally deepithelialized and used for exclusive glandular replacement. In these cases the evaluation of the flap status was performed with MRI. The aesthetic outcome was evaluated by the surgeon, the nurse and the patient itself: the score ranged from poor to very good.

Results: No local relapses, in the routine follow up, was diagnosed in this series of patients. The margins of resection were involved in 4 cases (6.6%): 2 cases underwent to mastectomy and 2 were treated with radiotherapy boost. The cosmetic score was for 20 patient very good, for 25 good, for 10 satisfactory and 5 poor. The use of deepithelialized flap improve the cosmetic results (10 cases to 10 rated very good). No major complications, immediate and late, were observed.

Conclusion: These data support the use of latissimus dorsi flap following breast conserving surgery. This technique is oncologically safe, allows very satisfactory levels of reconstruction and represents a good, but selective, integration between oncological and reconstructive procedures.