P = 0.001). Similar results are reported by surgeons regarding symmetry assessment.

Conclusions: Extra-projection devices have set the pace for the contemporary goal of reconstructive surgery. Our new approach creates a medium-size breast, highly projected, with a little to moderate ptosis. Myocutaneous flaps loose their role in large breast reconstruction and they can be offered only to radio-treated patients. The best results are obtained in patients who undergo contra-lateral augmentation.

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Individualized implementation strategy of breast cancer surgery in 24 hours admission: successful without loss of quality of care as perceived by patients

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Breast cancer surgery in a day care or 24 hours setting is an accepted and safe protocol but not yet common practice though the whole of Europe yet. Goals of this study were to develop an ultra short (admission, surgery, and discharge the same day or within 24 hours) admission programme for patients operated on for breast cancer, and to implement this programme at several institutions. Fundamental aspect of the programme is an adequate recovery in the home situation. To achieve these goals tailor made implementation strategies were applied. Quality of care was measured through the patients' eyes to test whether it had decreased in the measurement after as compared to the measurement previous to implementation.

The study design was pre-post uncontrolled, and was performed in four early adopter hospitals in the Netherlands. The intervention concerned the ultra short admission programme as developed by the University Hospital Maastricht. The implementation strategies involved several aspects such as regular multidisciplinary meetings combined with outreach visits. They were dependent on and adjusted to the needs of each hospital, and were based on results of diagnostic analyses which had been performed before the intervention. Clinical outcome measures concerned the percentages of patients treated in ultra short admission, number of complications, number of ER visits, number of readmissions, and number of reoperations. These data were collected six months before and six months after the implementation period of also six months. Also, patients were asked to assess quality of care through the QUOTE breast cancer in both measurements.

Although ultra short admission was already common practice in one of the hospitals, the percentage of patients treated in ultra short admission had increased in the other three hospitals: hospital 1: 5% during the pre and 74% during the post measurement; hospital 2: 24% during the pre and 74% during the post measurement; hospital 3: 94% during the pre en 95% during the post measurement: hospital 4: 40% during the pre and 85% during the post measurement. Mean number of visits to the emergency room, complications, readmissions, and reoperations were comparable for both measurements (P > 0.05). Results of the QUOTE breast cancer showed no clear decrease in the post as compared to the pre measurement. However, in an ultra-short admission setting extra attention should be paid to information about drains, prostheses, and exercises following surgery.

Using a hospital-specific approach for implementation, this study shows that introducing an ultra short admission programme for breast-cancer surgery is possible without a decrease in quality of care, as formulated and assessed by breast-cancer patients.

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Late complications of 100 breast reconstructions using permanent expander

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Background: Breast reconstruction with the use of permanent expanders may be an attractive alternative due to relative technical simplicity, but complications may result in an unacceptable final effect. We evaluate late complications in a group of patients with postoperative follow-up longer that 2 years.

Material and Methods: A group of 100 patients, aged 30−71 (mean 50), with complete data on post-operative course, were assessed for late complications after breast reconstruction performed with the use of saline-filled permanent expander. The follow-up period ranged between 2 and 5 years.

Results: Late inflammatory process (observed several months or even years after initial surgery) resulting in removal of an implant, occurred in 9 cases. Such process, treated successfully with antibiotics, with implant salvage, occurred in additional 3 cases. Thus, late inflammation (infection) of various intensity was noted in 12% of patients.

Implant deflation requiring exchange for a new device was observed in 8%.

Severe capsular contracture and improper implant positioning, requiring capsulotomy or capsulectomy occurred in 9 cases. The same condition concomitant with implant exchange was observed in additional 4. Thus, a total number of implants removed reached 21 (21% of all cases).

Only 5 patients of the whole group had radiotherapy before reconstruction. This low number does not allow to draw definite conclusions, but it's noteworthy that 3 of them had their implants removed due to extensive scarring.

Conclusion: The frequency of severe late complications after breast reconstruction with the use of permanent expanders is considerably high, and deserves further detailed studies.

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Factors affecting aesthetic outcome in screen detected breast cancer

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Background: Breast cancer treatment mandates that the therapeutic outcome is acceptable to patients. Aesthesis is a critical measure of outcome in breast cancer survivors. Many factors influence aesthetic outcome following breast cancer surgery, and these may be influenced by surgical planning. To explore this we examined outcome in patients following breast conserving surgery.

Materials and Methods: We identified 100 patients following completion of treatment from the National Breast Screening Program. We utilised a previously validated questionnaire and further developed this to measure aesthetic outcome. Patients were invited to score their treatment plan and outcome. This was then correlated with surgical variables.

Results: When asked to score their treatment 1−10 (poor-excellent) the mean score was 8.2 with a median of 9. For aesthetic outcome (score 1−5, very dissatisfied – completely satisfied) the mean score was 4.6. However, we identified re-excision of margins, wide margins and excision of skin for breast conservation as independently poor indicators of aesthetic outcome ($p < 0.05$).

Conclusion: Patients detected through population based screening score highly for overall satisfaction following therapy. Aesthetic outcome is also good; however several surgical factors do correlate with a poorer aesthetic result.

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Latissimus dorsi flap for total or partial breast reconstruction – the experience of the European Institute of Oncology

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Background: Total or partial breast reconstruction is currently considered a keystone step on breast cancer multidisciplinary care. Latissimus dorsi flap (LDF) for breast reconstruction is a good option when reconstruction is not feasible with an implant only.

Material and Methods: From October 1995 to February 2007, 132 patients underwent a LDF breast reconstruction. All patients underwent surgery at the IEO. Immediate reconstruction was performed by a double team. Delayed reconstruction was performed by the plastic surgery team only. When necessary, breast implant was inserted behind the flap. Data were gathered from our electronic patient medical records.

Results: Mean follow up was 24.5 months. Total breast reconstruction was performed on 113 (86%) patients, and partial reconstruction on 19 patients (14%).

All patients who underwent breast conservative treatment (BCT) received adjuvant radiotherapy, and the frequency of re-operation for local recurrence and/or reshaping was 0%.

Indications for LDF in the mastectomy group were: local recurrence after BCT in 80 patients (71%), locally advanced breast cancer in 4 patients (3%) and mastectomy without radiotherapy in 29 patients (26%).

Extended LDF was used in 32 cases (24%), 23 after mastectomy and 9 after BCT. In 87/113 (77%) of total breast reconstructions, an implant was used behind the flap.

Re-operation rate for capsular contracture was 4.4% in the group that had mastectomy after BCT with radiotherapy, and 5.5% in the group that had mastectomy only.

Conclusions: Latissimus dorsi flap is safe for immediate or delayed breast reconstruction. Its use in BCT did not interfered with the oncological follow up. The rate of re-operation due to capsular contracture is low, even when radiation therapy is delivered.

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Superior pedicle mammaplasty with a deepithelialized inferior breast pedicle for immediate reconstruction of quadrantectomy defects in patients with breast cancer or tissue defects

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Background: Superior or inferior based pedicle mammaplasties are commonly used in oncoplastic breast cancer surgery.

We describe a combination of these techniques with a superior based pedicle mammaplasty peformed and an inferior based (either de-epithelialized or with a skin island) pedicle used to reconstruct a defect caused by tumor resection.

Methods: 76 patients underwent a superior based pedicle mammaplasty and defect reconstruction with an inferior pedicle. Indication for surgery were primary (n = 66) or recurrent (n = 6) breast cancers of the ipsilateral (n = 70) or the medial quadrants of the contralateral (n = 2) breast, corrections of defects following cosmetic mammaplasties (n = 3) or reconstruction of defects resulting from tissue necrosis following cancer surgery (n = 1).

Results: 5/76 patients had to undergo a secondary mastectomy (4 with immediate reconstruction) due to involved margins (n = 3, all were DCIS high grade) or multicentric carcinoma (n = 2), one patient had a local re-excision for involved margins.

2 patients developed a fatty tissue necrosis, no local recurrences were found after a mean follow-up of 38 months.

Conclusions: The technique of a superior pedicle mammaplasty combined with immediate reconstruction of the quadrantectomy defect by an inferior pedicle allows the use of oncoplastic mammaplasty techniques even in patients with smaller breasts, reconstrcution of defects high up in the upper medial or upper lateral quadrant (even when resected skin has to be reconstructed) and the coverage of defects an the thoracic wall and the medial quadrants of the contralateral breast.

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Oncoplastic techniques in Asian women with small breasts

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Backgrounds: Oncoplastic surgery, combined oncologic extirpation of the tumor with plastic surgical reconstruction of breast shape and symmetry, is a new surgical procedure for the treatment of breast cancer and increasingly being used for breast-conserving surgery (BCS). It provides the opportunity to improve the final cosmetic results and to extend the indications for conservative treatment with oncologic safety.

Material and Methods: After BCS was preceded, different oncoplastic techniques were selected depending on the location and size of the tumor within the breast as well as the size of breast itself. Partial mastectomy with round block technique, with glandular flap and with bilateral reshaping using reduction mammoplasty technique, tennis racket operation, J mammoplasty and modified inverted T reduction mammoplasty were chosen. In order to improve the cosmetic outcome, repositioning of the nipple areola complex (NAC) or reshaping of the contralateral breast may be considered additionally.

Results: Patients undergone oncoplastic surgery have been highly satisfied with the cosmetic results. There was no significant postoperative complication during the follow up periods. In addition, oncoplastic techniques extend the indication for BCS to tumor at high risk for a poor aesthetic result because of their location within the breast such as central region or lower quadrant.

Conclusions: Even though small breast, we can apply oncoplastic techniques to these patients. The combination of plastic surgery techniques with oncologic surgery (oncoplastic surgery) is new concept in breast cancer treatment. In selected cases, this approach has allowed us to perform wide resections and obtain good oncologic control with favorable cosmesis. In conclusion, oncoplastic surgery is expected as new cornerstone for the reconstructive method for breast cancer.

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Quilting effect for the prevention of seroma formation following immediate LDMCF reconstruction after quadrantectomy

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Background: Latissimus dorsi myocutaneous flap (LDMCF) is a commonly used technique for breast reconstruction following breast conserving surgery. However, this technique has a high incidence of donor site seroma. The aim of this study is to evaluate the effect of donor site quilting on seroma formation.

Material and Methods: A retrospective review of 95 patients who underwent immediate breast reconstruction with LDMCF from May of 2006 through February of 2007 was performed. The patients included in this study were divided into Group A which was comprised of patients in which only a closed suction drain was used and Group B which was comprised of patients in which quilting and a closed suction drain was used. The outcome measures were age, body mass index (BMI), mastectomy volume, lengths of drainage, total volume of postoperative seroma, length of hospital stay and incidence of postoperative aspiration.

Results: In Group B, total amount of seroma ($p < 0.05$), duration of drain and length of hospital stay were significantly reduced. However, the incidence of postoperative aspiration was not different between Group A and Group B ($p = 0.06$).

Conclusions: The quilting technique reduces the volume of postoperative seroma and it may be a useful method the prevention of seroma after LDMCF.

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Central lumpectomy with resection of the nipple-areolar complex for retroareolar or central breast cancers

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Background: This study was conducted to evaluate the outcome of breast-conserving therapy by means of a breast conserving surgery including nipple-areolar resection and postoperative radiation therapy in patients with retroareolar or central breast cancers.

Materials and Methods: A total of 14 patients with retroareolar or central breast cancers, aged 39 to 63 years, treated between May 2004 and January 2008 were identified. Ipsilateral breast recurrence, survival, and cosmesis were analyzed. Treatment was comprised of a complete excision of the nipple-areolar complex including the underlying breast tissue with tumor free margins by intraoperative frozen sections, followed by external beam irradiation to the whole breast (50 gray in 25 fractions) and tumor bed (10 gray in 5 fractions). We used wedge closure, advanced flap, or Grisotti-flap closure for the reconstruction of the surgical defect. The mean follow-up period was 24.6 (2 to 48) months.

Results: At histologic examination, 9 had invasive ductal carcinoma (IDC); in the remaining 5 had ductal carcinoma in situ (DCIS). Only 1 had atypical ductal hyperplasia at intraoperative frozen surgical resection margin; remaining 13 were free from the tumor. The mean tumor size was 1.6 cm (range, 1−3 cm) and the distance from the nipple was 0−1 cm by pathology report. Of 14 patients, 4 (28.6%) were axillary node positive. A total of 8 of 9 patients with IDC received adjuvant cytotoxic chemotherapy according to the lymph node status (CMF or anthracycline with or without taxane), followed by radiation therapy. 13 (92.9%) of 14 patients with hormone-receptor positive were given tamoxifen or anastrozole according to menopausal status. With a mean follow up of 24.6 months, all 14 patients are alive and free of disease. Cosmetic results are good to excellent in 13 (92.9%) patients, as judged by both the patients and the surgeons.

Conclusion: Our study suggests that retroareolar or central breast cancers can be successfully treated with breast conserving therapy including nipple-areolar resection and postoperative radiation therapy, and with acceptable cosmesis.