Methods: Data from women undergoing mastectomy without IBR had been collected as part of the National Mastectomy & Breast Reconstruction Audit between January 2008 & March 2009. This included the reasons why IBR was not undertaken. For some patients there were multiple reasons why IBR was not undertaken. In these cases, the reasons were ranked by 2 clinicians and the primary reason determined. We then examined whether patients received radiotherapy.

Results: In total 81 women underwent simple mastectomy. The mean age was 60.7 years (range 35−88). Overall, 54/81 (67%) women received chest wall radiotherapy. The primary reasons why IBR was not performed are given in the table.

Reason for not performing IBR	n	%
Age of patient	13	16.1
Co-morbidity	21	25.9
Concerns re local recurrence	1	1.2
Mental health issues	1	1.2
Anticipated chest wall radiotherapy	29	35.8
Reconstruction may delay adjuvant therapy	2	2.5
Patient choice	14	17.3

17.3% patients declined the offer of IBR whilst nearly a quarter of patients had significant co-morbidity that precluded IBR. In 16.1% patient age was the primary reason why IBR was not performed. The mean age in this group was 74.3 years (range 65−85). Anticipated chest wall radiotherapy was the commonest reason for not offering IBR. Of these 29 patients, 25 subsequently underwent radiotherapy (86.2%).

Conclusions: The MDT is reasonably accurate at predicting the need for post-mastectomy radiotherapy. Whilst reconstructive surgeons have concerns about irradiating a reconstructed breast, greater accuracy in predicting chest wall radiotherapy will minimise the small number of women who not undergo IBR because of overestimation of radiotherapy need.

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What constitutes an adequate margin in patients undergoing breast conservation surgery for ductal carcinoma in situ?

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Background: There are no national guidelines with regard to extent of clear pathological margin of excision for ductal carcinoma insitu (DCIS) in patients undergoing breast conservation surgery (BCS). In our hospital we look for a pathological margin ⩾10 mm. The EORTC DCIS trial reported a high local recurrence rate of 36% at 5 years in patient with close or involved margins (<1 mm or frankly involved).

The aim of our study was to assess adequate margin of excision with regard to local recurrence in patients undergoing BCS.

Materials and Methods: We retrospectively reviewed case notes of patients undergoing surgical treatment for DCIS between Jan 1975 to June 2008. Extend of clear margin of excision in patients undergoing BCS was divided into three groups (<5 mm, 5−9 mm and ⩾10 mm). Statistical analysis was carried out using SPSS version 16, and a P value of <0.05 was considered significant.

Results: Two hundred and thirty nine women had BCS for DCIS during the above period. The median age was 59 years (40−86) and the median follow-up was 76 months (1–308). One hundred and eighty one patients (76%) had only one operation. Overall 15 patients had 3 surgical procedures (11 completion mastectomy, 4 re-excisions).

Median size of the tumour was 11 mm (1−50). One hundred and ninety three patients had grades recorded (44 low grade, 54 intermediate grade and 95 high grade). Other pathological findings included 75 cases with comedo necrosis and 5 patients with microinvasion.

Overall local recurrence rate of patients undergoing breast conservation surgery was 17% (40/239), of which 65% (26/40) were invasive recurrences. Forty three percent of patients (6/14) with less than 5 mm margin developed local recurrence compared to 12% (3/25) with 5−9 mm margin and 14% (27/188) with ⩾10 mm margin. Four out of 12 patients with unknown margin status developed local recurrence. The local recurrence rate in patients with <5 mm (6/14) margin was significantly higher compared to those with ⩾5 mm (30/213) margin (p value <0.012).

Conclusion: Our study shows that in patients undergoing breast conservation surgery for DCIS, a clear margin <5 mm is associated with significantly higher local recurrence rate.

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Is a modified Wise pattern the ideal oncoplastic approach in breast-conserving therapy? An analysis of 352 cases

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Background: Breast-conserving therapy (BCT) has made it possible to lessen the psychological impact of surgical treatment for breast cancer. Unfortunately, the cosmetic results of surgery are often unsatisfactory. The majority of unsatisfactory results derives from scar retraction and gland deformity caused by tumor resection. With the use of oncoplastic surgery, it is now possible to perform a radical procedure while minimizing post-surgery cosmetic defects.

The aim of the study was to evaluate oncological and cosmetic outcomes in breast cancer patients undergoing BCT with immediate reconstruction using a modified Wise pattern.

Materials and Methods: The study involved a total of 352 patients treated surgically for breast cancer between January 2000 and January 2009. Treatment in all cases consisted of quadrantectomy plus immediate reconstruction of the surgical defect using a Wise pattern technique.

In 301cases (85.5%), a bilateral procedure was performed, while in 31 (8.8%) cases surgery to obtain breast symmetry was delayed and in 20 (5.7%) cases was not undertaken.

Patient age averaged 52 years (range:29−80). Breast size in all cases was medium to large. Patient satisfaction was determined with the use of questionnaires at 6 months from surgery. Evaluation regarded breast size, form, and symmetry as well as positioning of the nipple-areola complex. Each category was rated numerically, from 4 to 1 (4=excellent, 3=good, 2=mediocre and 1=unsatisfactory).

Results: Surgical resection margins were found to be clear in 327 (92.9%) cases. In only 25 cases (7.1%) was there margin involvement, which required more radical surgery. The rate of local tumor recurrence at 57.2 months was 7 (1.98%). Minor complications (superficial infection, seroma) developed in 23 cases. Minor surgery was performed for scar revision or removal in 18 cases. With regard to cosmetic outcome, 103 patients rated their breast reconstruction excellent, 184 good, 47 mediocre and 18 unsatisfactory. The residual surgical scar was that of an inverted T-scar reduction mammoplasty.

Conclusions: By combining techniques of plastic and oncological surgery for the treatment of breast cancer, it is now possible, in selected cases, to obtain both effective tumor control and a good cosmetic outcome. Oncoplastic surgery does not compromise multidisciplinary approaches and can play a fundamental part in extending the indications for conservative treatment.

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Immediate outcomes of oncoplastic surgery − consecutive case study of the first 160 patients in the Portuguese Institute of Oncology-Lisbon

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Introduction: Cosmetic outcomes of conservative breast cancer surgery are influenced by: tumor size, tumor location, breast volume, breast shape and radiotherapy. About 15%of patients have bad cosmetic outcomes, requiring reconstructive surgery.

Oncological and cosmetic outcomes of oncoplastic breast-conserving reconstruction by volume replacement or volume displacement confirmed the clinical utility of this new approach to the surgical management of patients with breast cancer.

Aim: Evaluate the immediate outcomes of oncoplastic breast-conserving surgery.

Patients: Between 21 Jan. 2007 and 10 Nov. 2009, 160 female patients, were submitted to oncoplastic breast-conserving surgery (136 invasive carcinoma, 11 DCIS, 4 papilar tumor, 3 large hamartoma and fibroadenoma and 6 mammographic suspected lesions. Of the 136 patients with invasive carcinoma 10 were submitted to neoadjuvant chemotherapy.

Material and Method: In 48.1% of patients we used Clough KB type I oncoplastic techniques (40 *roundblock*, 33 "*raquette*" mammaplasty, 4 hemi-batwing). The remaining patients were submitted to type II oncoplastic techniques (6 *Grisotti* 6, 32 Vertical mammaplasty with short lateral scar, 31 Inverted, "T" mammaplasty, 11 amputation-type reduction free nipple graft mammaplasty). In 3 patients we used volume replacement: 2 with inframammary adipofascial flap and 1 latissimus dorsae.

Results: Mean operative time was 79.5 minutes (min. 20, max. 200, type I = 61, type II = 98, $p < 0.0001$), mean specimen weight was 243 g

(type I = 81, type II = 401, p < 0.0001), mean specimen volume was 300 cc (type I = 231, type II = 375, p < 0.0001), mean tumor size was 22.3 mm (type I = 20.5, type II = 23.9, p = 0.032). Median post operative stay was 1 day. We had to re-operate 5 patients for close or involved margins (2 mastectomies with immediate reconstruction and 3 therapeutic mammaplasty). Of the 147 patients with carcinoma, successful breast conservative surgery was achieved in 98.6%. There were no major nipple-areolar necrosis. Only 2 patients had complications that required re-intervention (one case with hematoma and suture dehiscence and one case with nipple retraction).

Conclusions: Oncoplastic breast-conserving surgery allowed us to perform successful breast-conserving surgery in high percentage of patients with low percentage of complications. Type 1 mammaplasty are faster and simpler than type 2 to perform but limited to smaller volume excisions.

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Breast-conserving surgery in older patients with invasive breast cancer: an underused treatment

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Background: Breast-conserving surgery is as effective as mastectomy for treatment of early invasive breast cancer. Earlier studies suggest low BCS use in Iran. The aim of this study was to evaluate the surgical treatment of elderly patients in a cancer center in Iran.

Materials and Methods: A cross-sectional retrospective study of elderly breast cancer patients treated in the Cancer Institute, Tehran University of Medical Sciences, was performed. The information of the elderly patients diagnosed with breast cancer in a four year period was retrieved from their files. The type and characteristics of the tumor, the stage of the disease, the type of the operation and the use of sentinel lymph node biopsy were recorded.

Results: The information of 98 breast cancer patients older than 70 were reviewed. The mean age of the patients was 74.2 ± 3.6. The in situ carcinoma was diagnosed in 2 patients. T1 and T2 tumors comprised 20.4% and 51% of patients respectively. Stage I and II disease were found in 16.3 and 46.9% of the study population respectively. Modified radical mastectomy was performed in 69.6% of patients and 22.4% of the study population underwent breast conserving surgery. Simple mastectomy was offered to 8.3% of the patients. The pathologic examination of the lymph nodes revealed that 40.8% of patients had no lymph node involvement but sentinel lymph node biopsy was performed in only 4 patients.

Conclusions: The finding of this study confirms that elderly patients do not receive breast conserving surgery despite being eligible for the treatment. The reasons for the inappropriate management of this group of patients should be investigated.

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The follow-up results of treatment of male breast carcinoma

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Cancer of the male breast is an uncommon oncological disease in Lithuania. The incidence rate in Lithuania is 3.6−4.9 cases per million of men. In 2008 years were registered newly 16 males with breast carcinoma. During the last decade there was no evident change in the frequency rate of disease − usually 10−15 cases were registered each year. Nationally, 1% of breast cancer appears in men. Our purpose of this investigation to evaluate the situation of treatment of male breast cancer in Lithuania.

Material and Methods: The results of the investigation were analysed in 100 male patients treated during the period of 1988–2006 years in two Clinics: Institute of Oncology at Vilnius University and Hospital of Oncology at Kaunas University of Medicine. The average age of the patients was 67.5 years (ranging 31−90 years). The staging of the disease was as follows: in stage I included 13 (13%) pts, in stage IIA − 24 (24%) pts, in IIB − 17 (17%) pts, in IIIA 15 pts (15%), in IIIB − 16 (16%) pts. 15 (15%) patients were treated in stage IV of the disease. Invasive ductal carcinoma was the most frequent type (68 patients), 9 patients had lobular carcinoma and adenocarcinoma was detected in 6 cases. The most common method of the treatment was modified mastectomy by Madden (75 cases). 53 patients received the combined treatment: 23 patients were treated with radiotherapy, 9 patients with chemotherapy, 14 patients received radiotherapy and chemotherapy, 14 patients were treated with tamoxifen.

Results: 5-year overall survival of all male patients with breast carcinoma was estimated at 42.7%. 5-year survival of the patients at stages I and IIA were 71.9% and 79.5%, and at stage IIB it was 53.5%. Low survival rates 15.8% and 11.2% were observed at stage IIIA and stage IIIB of the disease respectively. None of the patients with stage IV of the disease survived 5 years and more. 2-year survival (6.7%) was the best estimate in this group.

Conclusions:

1. The majority of male breast cancer patients are diagnosed at advanced stage of the disease.
2. The overall 5 year survival rate was estimated at 42.7%. The stage of the disease was the major determinant of the patients' survival.

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Seroma following axillary lymphadenectomy for breast cancer

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Introduction: Many factors have been evaluated for the cause of seroma following axillary lymphadenectomy. We report the results of a randomized, prospective trial that compared the rate of formation of postmastectomy wound seroma in two groups of patients undergoing axillary lymphadenectomy: one undergoing axillary lymphadenectomy level I−II, and the other undergoing axillary lymphadenectomy level I−III.

Methods: Retrospective review of records of two sequential groups of patients treated in surgical clinic Nis between 2004 and 2006. Both groups had minimum of 2 years follow-up.

Results: Two hundred and twelve patients were included in Group 1 and 104 in Group 2. The two groups did not differ with respect to seroma formation and wound infection.

	Level I−II	Level I−III
Seroma incidence	53 (25%)	51 (36.43%)
Seroma volume (mean±SD, ml)	157±87	234±135
Clinical infection	5 (2.35%)	4 (2.85%)
Positive drain culture	15 (7.07%)	12 (8.57%)

Conclusions: Seroma formation is more of a nuisance than a complication, but may delay patient recovery and cause unpleasant symptoms. The dissection range did not influence the seroma formation, volume and microbiological culture results.

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Breast cancer risk-reducing surgery in Helsinki

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Background: Approximately 5−10% of all breast cancers are assumed to be related to *BRCA1* or *BRCA2* gene mutations. The cumulative lifetime risk of having breast cancer in *BRCA1* carriers is 65% (44−78%) and in *BRCA2* carriers is 45% (31−56%). And for ovarian cancer the risks are 39% (18−54%) and 11% (2.4−19%). In Helsinki they are offered surveillance according to current guidelines and also possibility for risk-reducing mastectomy and risk-reducing salphingo-oophorectomy.

Material: BRCA1 and BRCA2 genetic testing started in HUCH in 1997. Approximately 690 persons have been tested, 150 BRCA1/2-mutation carrier women have been found and 117 of them have had follow-up in HUCH.

Methods: We studied the patient files of 117 BRCA1/2-mutation carriers for risk-reducing operations.

Results: Of all BRCA1/2-mutation carriers 75 patients have had breast or ovarian cancer or both. Of these 32 had cancer before genetic testing, 42 had genetic testing initiation at cancer diagnosis, and one patient had cancer diagnosis after being tested positive. There were 72 breast cancers, 15 of these were bilateral. Mean age at diagnosis was 43 (range 24−64 years).

Altogether 50 of 117 have had risk-reducing mastectomy. A majority (37 of 50) was with skin-sparing technique, 17 were bilateral and 33 unilateral mastectomies. Altogether 67 breasts were operated. Mean age of surgery was 42 years (range 27−60 years). Risk-reducing salphingo-oophorectomy had been performed on 60 of 117 patients. Only seven mastectomies were performed without breast reconstruction. The reconstruction methods are presented in the table.

Conclusions: In this series, 43% of the BRCA1/2-mutation carriers had risk-reducing mastectomy and 50% had risk-reducing salphingo-oophorectomy.

The majority of the patients undergoing risk-reducing mastectomy had had unilateral breast cancer. Therefore most of the risk-reducing mastectomies were unilateral.