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## POSTERS

## Reconstructive surgery

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**Oncological significance of the inframammary fold**

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**Introduction:** The amount of breast tissue within the IMF is controversial. Preservation of the IMF during mastectomy facilitates breast reconstruction and has led to conservation of the IMF, contrary to traditional descriptions of total mastectomy. The aim of this study was to analyse the clinical significance of IMF tissue content.

**Method:** A total of 50 IMF specimens were studied from 42 patients who underwent mastectomy between January 2001 to December 2002. The amount of breast tissue within each IMF was evaluated.

**Results:** The median age of the patients was 46 (33–86) years. The median body mass index was 23.4 (18.1–38.3) kg/m<sup>2</sup>. The median IMF volume resected was 2 (0.23–9.72) cm<sup>3</sup> which was 0.81 (0.1–2.97)% of the breast volume. Ten specimens contained breast tissue (20%) and one contained breast tissue and an inframammary lymph node (2%). Three specimens containing breast associated fibrofatty tissue had lymph nodes (6%). One of the specimens with a lymph node within the IMF contained metastasis in a patient who had a mastectomy for invasive ductal carcinoma. The presence of breast tissue or lymph nodes within the IMF is unrelated to patient age, body mass index, and percentage volume of IMF tissue or size of the breast.

**Conclusion:** Our finding that breast tissue and intramammary lymph nodes are present in 28% of IMF specimens requires re-consideration of the safety of preserving the IMF at mastectomy. When an immediate breast reconstruction is performed, the superficial fascial system should be reconstructed after excision of the IMF tissue in order to recreate the inframammary crease.

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**Cosmetic outcome of prophylactic mastectomy followed by immediate breast reconstruction using a subpectorally placed silicone prosthesis in women at risk of hereditary breast cancer or with a proven BRCA1 or BRCA2 germ-line mutation**

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**Aim:** Women with a proven BRCA1 or BRCA2 germ-line mutation or with a 50% risk of carrying the mutation, have an increased risk of developing breast cancer during their life. Regular surveillance, chemoprevention or prophylactic mastectomy (PM) are options to detect breast cancer at an early stage or to reduce the risk of developing breast cancer. We describe the cosmetic outcome of high risk women who have chosen for PM followed by immediate breast reconstruction (IBR) using a subpectorally placed silicone prosthesis and investigate factors influencing cosmesis.

**Methods:** At different time intervals after PM photographs were taken of the reconstructed breasts. A panel of six persons (2 surgeons, 1 oncologist, 2 psychologists and 1 medical student) assessed the photographs by giving them a score ranging from 1 (very poor) to 10 (excellent). Seven cosmetic items were defined, i.e. symmetry, shape of the breast, position of the inframammary fold, aspect of the nipple reconstruction, aspect of the scar, aspect of skin surplus, cosmetic result in general.

**Results:** The mean patient age at PM was 40 years (range 23–58 years). Most women (67%) were germline mutation carriers. Twenty-three women were treated in history for unilateral breast cancer; 12 by breast conservation therapy and 11 by mastectomy. Most women (n=78) underwent bilateral PM with IBR, 11 women underwent unilateral mastectomy with IBR for breast cancer and contralateral PM with IBR, and 11 women underwent unilateral PM with IBR and contralateral secondary breast reconstruction. Early complications (within 6 weeks after PM and IBR) were seen in 27% of the women. One third of the women had a nipple reconstruction. Fifty-four percent of the women were non-smokers.

The photographs of 98 women were evaluated with a mean time of 3.1 year after PM and IBR. The mean scores were for symmetry 6.5, for aspect of the inframammary fold 6.9, for aspect of the nipple 6.6, for aspect of the scar 6.6, for skin surplus 7.2 and for cosmesis in general 6.8.

Cosmesis was significantly improved by young age at PM with IBR (p=0.003), nipple reconstruction (p=0.03), absence of early complications (p=0.04), a negative history for breast cancer (p=0.007), and no previous radiation of the breast (p=0.05). Smoking and time interval of cosmetic assessment after PM and IBR had no significant influence on cosmesis.

**Conclusion:** The cosmetic result of prophylactic mastectomy and immediate breast reconstruction using a subpectorally silicone prosthesis is acceptable. Young age at reconstruction, nipple reconstruction, absence of early complications and no previous radiotherapy of the breast had a significant positive effect on the cosmetic score.

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**Immediate breast reconstruction in the UK: choice of reconstruction prior to radiotherapy and the evaluation of aesthetic outcome**

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**Introduction:** Aesthetic outcome after immediate breast reconstruction (IBR) may be influenced by the type of reconstruction, use of radiotherapy (RT) and duration of follow-up. Evidence is lacking on long-term aesthetic outcome dependent on RT and choice of technique. Variability in methods of assessing outcome and their application precludes comparative audit or research.

**Methods:** We performed a survey of 325 consultant breast surgeons through BASO to evaluate the types of reconstruction offered, the timing and types of reconstruction in relation to radiotherapy, whether aesthetic outcome was assessed and how this was undertaken, and their acceptance of a proposed scoring system for aesthetic outcome.

**Results:** Of the 81 respondents, 75% performed IBR. 47% and 59% of surgeons rarely or never assessed the breast or donor site. No preference for autogenous breast reconstruction versus an implant-based procedure in the likelihood of RT was apparent. Furthermore, 32% still offered a subpectoral implant prior to radiotherapy. 79% wished to formalize assessment methods and 90% favoured our proposed method.

**Conclusion:** There is marked variation between breast units in the types of reconstruction offered, timing relative to radiotherapy, and aesthetic evaluation undertaken after surgery. No consensus exists with regard to assessment, suggesting the need for a universal system for cosmetic evaluation.

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**The influence of immediate breast reconstruction with the use of the Becker prosthesis on body posture estimation at women after mastectomy for cancer**

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**Purpose:** The estimation of influence of immediate breast reconstruction with the use of the Becker expander prosthesis on a change of parameters of body posture at women with a breast cancer after radical mastectomy.

**Material and Methods:** The examination was conducted on 42 women with I and II stage of a breast cancer, operated on between 2001–2002 in the Oncological Surgery Department in Leszno Hospital. 21 women had radical mastectomy conducted with Patey's method (group A) whereas 21 others were subjected to radical mastectomy with immediate breast reconstruction with the use of the Becker expander prosthesis (group B). Both groups were compared in a range of age, weight, the degree of the disease progression and coexisting diseases. A comparative group (group C) was represented by 21 healthy women, not treated surgically. All women were subjected to one photogrametric estimation of body posture (three dimensional computer photometry – CQ Electronic System) 6 months after the surgical treatment. The statistical analysis of the obtained results was carried out with the use of Mann-Whitney' and Friedman's non-parametric tests.

**Results:** The comparison of results of photometric measurements in groups A and C showed statistically characteristic difference (p<0.05) in a range of: UK – the max. deviation in the spinous processes from vertical position, TT – the difference in the height of waist triangle, TS – the difference between width of triangles waist, UL – the difference in the height of lower angles of shoulder-blades (inclination), LBW – the difference in the height of shoulder position. Greater changes in body posture were ascertained at woman after mastectomy in comparison with the group of healthy women. The comparison of results of measurements in groups B and C showed lack of statistically essential differences (p>0.05). The comparison of groups A and B showed statistically essential differences (p<0.05) in a range of: UK – the max. deviation in the spinous processes from vertical position, KNT – the angle of pelvis inclination and UL – the