

## Abstract DSPR forårsmøde 2021

### Title

Multi stage ala nasi repair with an expanded and prelaminated forehead flap: a case report

### Authors and affiliations

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### Background

Composite defects of the alar wall are a challenge for the reconstructive surgeon, due to its trilaminar construction: the skin coverage, the supportive cartilage frame, and the mucosal lining. The ultimate goal is to maintain facial symmetry and thus satisfactory cosmetic appearance and, most importantly, to maintain normal nasal function and respiration.

### Presentation of case

An 18-year-old male presented with a fast growing tumor of the right ala nasi. We excised the tumor and histology report revealed a keratoacanthoma with clear margins. After excision the full thickness defect measured 3x2 cm. For reconstruction we used an expanded prelaminated forehead flap, where we placed a tissue expander in the frontal region and prelaminated the flap with ribcage cartilage. For inner lining we used a turnover flap from the adjacent right lateral sidewall. The donor site was closed directly. The patient was satisfied with the final cosmetic appearance. Six months post-op there was no sign of relapse and there was minimal donor site morbidity.

### Conclusion.

An expanded forehead flap is a safe option with minimal complications, no long-term shrinkage and great patient satisfaction. Here, we present a case with a large challenging full thickness alar defect and our take on a three-stage reconstruction.

## Body contouring surgery improves long-term satisfaction with appearance and health-related quality of life after bariatric surgery: BODY-Q results from a Danish cohort study

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**Background** Patient-reported outcomes are crucial in bariatric surgery (BaS) and body contouring surgery (BC) since patients' goals include improvement in appearance and health-related quality of life (HR-QOL). The BODY-Q is a patient-reported outcome measure developed to measure change in satisfaction with appearance and HR-QOL in BaS and BC patients. The aim of this study was to examine BODY-Q scores over the entire weight loss journey, and to investigate the impact of BC after BaS.

**Method** Patients completed the BODY-Q pre/post-BaS and BC at four hospital departments in Denmark between 2015 and 2019. Cross-sectional scores were analyzed by phase of weight loss journey using one-way ANOVA. Scores for patients who provided longitudinal assessments were analyzed using repeat measures ANOVA and paired T-test. The impact of BC was examined over time after BaS, using an Independent T-test from pre BaS through >7 years post BaS.

**Results** The study included 1527 patients who provided 2285 BODY-Q assessments. The cross sectional analysis by phase of weight loss journey showed higher scores post-BaS, lower scores pre-BC and highest level scores post-BC. The longitudinal analysis showed higher post-surgery mean scores compared to pre-surgery scores for both BaS and BC. The analysis over time after BaS revealed lower mean scores in patients who did not receive BC.

**Conclusion** Our results provide evidence of the positive impact of BaS and BC on patients' lives and underline the importance of considering BC to finalize the weight loss journey as it helps to maintain improvements in appearance and HR-QOL.

## Comparison of upper extremity lymphedema after sentinel lymph node biopsy and axillary lymph node dissection: Patient-reported outcomes in 3044 patients diagnosed with lymphedema after breast cancer treatment

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**Background** A limited number of studies have examined the impact of type of axillary lymph node surgery on the health-related quality of life (HRQOL) or incidence of breast cancer-related lymphedema (BRCL) from the patient's perspective. The objective of this study was to assess the impact of sentinel lymph node dissection (SLND) and axillary lymph node dissection (ALND) on the HRQOL in women diagnosed with BRCL, using the validated, UE-lymphedema specific PROM, the LYMPH-Q Upper extremity (UE) module.

**Methods** Adult women diagnosed with BRCL were identified from the Danish National Health Data Authority database for the period January 2008 to January 2020. Women were invited to participate in the study using a secure electronic mailbox and provide consent for participation in the online survey and chart review. Women who agreed were directed to an online REDCap survey that included questions about demographics, cancer diagnosis and treatment, and BRCL. Following this, women were asked to complete four LYMPH-Q UE module scales measuring symptoms, function, distress, and arm appearance. Information pertaining to axillary surgery was obtained from an online pathology repository. Multivariable linear regression, adjusted for statistically significant confounding variables, was used to examine differences in the SLND and ALND groups on the LYMPH-Q UE scale scores.

**Results** 3044 women with BRCL were included in the analysis. The mean age of the participants was  $63.7 \pm 10.6$  years (range, 23-100 years), and the mean follow-up duration was  $8.6 \pm 5.15$  years (range, 0-36 years). The majority of participants underwent ALND ( $n=2805$ , 92.1%), and 7.9% ( $n=239$ ) received SLND. The mean number of lymph nodes removed in the SLND group was  $2.2 \pm 1.4$ . A statistically significant difference between the SLND and ALND groups was found for type of breast procedure, cancer stage, and years since the first surgery. The prevalence of infection and seroma was higher in the ALND group. No statistically significant difference was found in the two groups on the LYMPH-Q UE scale scores.

**Conclusion** There is no difference in the long-term HRQOL of women undergoing SLND or ALND when assessed using LYMPH-Q UE module scales.

## **Age and Body Mass Index affect patient satisfaction following reduction mammoplasty: a multicenter study using BREAST-Q**

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### **Background**

Reduction mammoplasty effectively improves quality of life for women with macromastia. However, little is known whether surgical- or patient-related factors affect satisfaction.

### **Objective**

To investigate factors associated with altered patient satisfaction following reduction mammoplasty.

### **Methods**

A cross-section study was performed by sending the BREAST-Q Reduction module to all patients, whom had undergone reduction mammoplasty between January 2009 and December 2018 at two tertiary Danish hospitals. Demographics, pre-, per- and postoperative details were gathered from electronic medical records.

### **Results**

393 patients returned the questionnaire and were eligible for the study. Increasing age at the time of surgery was associated with higher satisfaction with breasts ( $p < 0.001$ ), nipples ( $p < 0.001$ ), headache ( $p < 0.05$ ), psychosocial well-being ( $p < 0.001$ ), and outcome ( $p < 0.05$ ). Increased BMI at the time of surgery negatively affected satisfaction with breasts ( $p < 0.05$ ) and psychosocial well-being ( $p < 0.05$ ). Increase in BMI after surgery was further associated with lower satisfaction with breasts ( $p < 0.05$ ), nipples ( $p < 0.05$ ), sexual well-being ( $p < 0.05$ ), and more pain in the breast area ( $p < 0.05$ ). Postoperative scar revision and wound infection was more common following inferior pedicle technique than superomedial technique ( $p < 0.05$ ) and negatively affected satisfaction with outcome ( $p < 0.05$ ) and pain in the breast area ( $p < 0.05$ ).

### **Conclusion**

Patients should be motivated to optimize their weight prior to reduction mammoplasty to achieve optimal satisfaction. Furthermore, reduction mammoplasty can benefit obese patients by facilitating subsequent weight loss for additional satisfaction. Age was associated with improved patient satisfaction and this should be considered when operating on younger patients. Postoperative complications affect patient's satisfaction and the superomedial technique seems to be a better choice than the inferior pedicle technique in medium-large breasts.

## **Accuracy of up-front 18F-FDG PET/CT in T1-T2 oral squamous cell carcinoma patients with a palpable, node-negative neck – a prospective cohort study.**

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**Objectives:** The precision of up-front 18F-fluorodeoxyglucose positron emission tomography/computed tomography (PET/CT) in detecting cervical lymph node metastases is unknown in patients with T1-T2 oral squamous cell carcinoma with a palpable, node-negative neck. We investigated the sensitivity, specificity, accuracy, positive predictive value, and negative predictive value of up-front PET/CT in this patient group and compared the performance to magnetic resonance imaging (MRI).

**Materials and methods:** In this prospective cohort study, 76 patients with T1-T2 oral squamous cell carcinoma and a palpable, node-negative neck underwent an up-front PET/CT at Odense University Hospital from September 2013 to February 2016. Sentinel node biopsy and elective neck dissection (END) were used as gold standard for histopathological verification of the PET/CT. The results were compared to MRI.

**Results:** The sensitivity, specificity, accuracy, positive predictive value, and negative predictive value for PET/CT was 77%, 60%, 67%, 59%, and 77%, respectively. In comparison with MRI PET/CT had a statistically significant higher sensitivity and a lower specificity.

### **Conclusion:**

Up-front PET/CT improves sensitivity for detecting cervical lymph node metastases in patients with T1-T2 oral squamous cell carcinoma and a palpable, node-negative neck, but should not stand alone for N-staging.

## **Advanced translation and cultural adaption of the LYMPH-Q Upper Extremity Module from English to Danish.**

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**Background:** Lymphedema of the upper extremity is a common side-effect of breast cancer treatment impacting both the appearance and function of the affected arm resulting in a diminished overall quality of life. To better quantify the impact that breast cancer-related arm lymphedema (BCRL) has on health-related quality of life (HR-QOL) a disease-specific patient-reported outcome measure (PROM) is needed. The LYMPH-Q Upper Extremity Module was recently developed for patients with BCRL. The aim of this study was to perform an advanced translation and culturally adapt the LYMPH-Q Upper Extremity Module for use in Denmark.

**Methods:** The LYMPH-Q Upper Extremity Module was translated into Danish according to the guidelines of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) and the World Health Organization (WHO). The process included two forward and one back translation, an expert panel meeting, and cognitive debriefing interviews with patients. The focus of the translation was to develop a Danish version that used appropriate patient-friendly language while maintaining the meaning of the items, instructions and response options.

**Results:** The two forward translations resulted in minor differences in terminology. These discrepancies were discussed among the translators and a harmonized Danish version 1 was achieved. Comparison of the back translation to the original English version identified 14 items/instructions/response options that required re-translation. Subsequently, experts helped to identify and resolve the language for 10 items/instructions/response options that did not maintain the same meaning as the English version. Participants in the cognitive debriefing interviews did not reported any difficulties with understanding the items/instructions/response options.

**Conclusion:** The translation and cultural adaption process led to the development of a conceptually equivalent Danish version of the LYMPH-Q Upper Extremity Module.

1 **Article type:** Case Report

2 **Title:** Resection and reconstruction of idiopathic scrotal elephantiasis: Surgical approach and  
3 quality of life assessment

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8 **Funding sources:** None

9  
10 **Conflicts of Interest:** None declared.

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12 **Manuscript word count:** 800

13 **References:** 5

14 **Figures:** 2

15 **Tables:** 1

16  
17  
18 **Abstract**

19 Scrotal elephantiasis (SE) is a condition considered rare in western industrialized countries but  
20 common in filaria prone regions. Medical and conservative therapies are ineffective against  
21 idiopathic SE, and surgical intervention is mandatory to treat this disabling condition.

22 Nevertheless, it remains unclear whether surgical intervention improves quality of life among  
23 patients. Herein, we report a case of a 41-year-old man with idiopathic SE who underwent acute  
24 scrotal resection and reconstruction, secondary to infection and hemorrhage from his enlarged  
25 scrotum. The aim of this study was to describe operative approach and to assess patient  
26 satisfaction after surgical intervention.

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## AUTOLOGOUS FAT GRAFTING AS TREATMENT FOR POST-MASTECTOMY PAIN SYNDROME - RESULTS FROM THE FIRST PLACEBO CONTROLLED RANDOMIZED CLINICAL TRIAL

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### **Abstract**

#### **Background**

Post-mastectomy pain syndrome is a common and disabling side effect of breast cancer treatment. Medical treatment seems to be insufficient for a considerable proportion of patients. Fat grafting has shown promise in relieving pain from PMPS, but no randomized clinical trial comparing fat grafting to a sham operation has been performed to date. Our objective was to compare the effect of fat grafting compared to a sham operation for treating post-mastectomy pain syndrome.

#### **Methods**

We conducted a single-center double-blinded randomized clinical trial with two arms between October 2017 - September 2020. We assessed forty-five patients suffering from PMPS for inclusion. The intervention group received scar-releasing rigotomy and fat grafting to the area of pain. The control group received scar-releasing rigotomy and a placebo of saline solution. The primary outcome was the degree of pain measured using the numerical rating scale (NRS). The secondary outcomes were the degree and quality of neuropathic pain (Neuropathic Pain Symptom Inventory) and Quality of Life (Short Form-36). Follow-up was six months.

#### **Results**

Thirty-five participants completed follow-up: eighteen participants in the intervention group and seventeen in the control group. We detected no statistically significant changes in average and maximum pain or neuropathic pain. Regarding the quality of life, the control group reported a statistically significant improvement in emotional problems parameters, whereas the intervention group reported a deterioration. We observed no serious adverse effects.

#### **Conclusions**

We did not find evidence to support that fat grafting is superior to a placebo when treating post-mastectomy pain syndrome.



## Normative Data for Interpreting the BODY-Q

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**Background:** Bariatric surgery has proven to be the most effective long-term weight loss method in morbidly obese patients. However, massive weight loss often results in various extremes of excess skin, where subsequent body contouring surgery is needed. BODY-Q is a patient-reported outcome instrument used to evaluate outcomes in patients undergoing bariatric- and body contouring surgery. It consists of 27 independently functioning scales, measuring three domains: appearance, health-related quality of life (HRQoL) and experience of care. To measure the improvement of patients' appearance and HRQoL after surgical interventions it is important to have a comparative basis in the background population. Normative values for the BODY-Q have not been established therefore limiting current data interpretation.

**Aim:** The aim of this study was to assess BODY-Q scores of the background population in the European countries where the BODY-Q has been translated to the spoken language for comparative normative data.

**Methods:** Participants were recruited through the survey-platform Prolific and Amazon Mechanical Turk (MTurk). Prolific and MTurk are websites that collect panelists from the entire world to fill out questionnaires. The BODY-Q was sent out to panelists in the European countries where the questionnaire is translated to the spoken language of the respective country. Following countries were included: Denmark, Netherlands, Sweden, England, Finland, Belgium, France, Poland, Italy and Germany. Inclusion criteria were men and women aged 18 years or older. The analysis included descriptive statistics of patient demographics (age, gender, body mass index (BMI) race, educational level, marital status, employment status and comorbidities). The mean scores of all scales for each country were compared with ANOVA multiple comparison.

**Results:** The results of this project is currently under analysis. The BODY-Q was completed by 2,001 panelists/respondents from the included European countries. Denmark (n = 159), Netherlands (n = 208), Sweden (n = 209), England (n = 206), Finland (n = 206), Belgium (n = 179), France (n = 213), Poland (n = 211), Italy (n=204) and Germany (n =206). The mean respondent age ranged between 24±7 years and 36±14 years. Mean BMI varied between 23.28±4.77 and 26.02±5.85. Three respondents had previously undergone body contouring surgery, none of the respondents had undergone bariatric surgery. The mean scores of scales for each country and total scores will be presented orally May seventh.

**Conclusion:** This study contributes with comparative, normative data for interpreting earlier and future BODY-Q data in the European countries where BODY-Q is translated. This study shows, how the background populations' scores can differ between countries and cultures and hence the need for normative data for each country for the future use of the BODY-Q.

**DSPR forårsmøde 2021**

**Forfattere:** Mona Sharghbin, Thomas Vestermark Thomsen, Mikkel Børsen Rindom, Lars Bjørn Stolle.

**Institution arbejdet udgår fra:** Plastik- og Brystkirurgi, Aarhus Universitets Hospital

**Titel:** 30 dages morbiditet efter Vertikal Rectus Abdominis Myokutan lapplastik (VRAM-lap) ved bækkenkirurgi

*Baggrund:* Rekonstruktion med vertikal rectus abdominus muskulokutan lapplastik (VRAM-lap) er ofte nødvendig efter kirurgisk behandling af avanceret kræft i det lille bækken. Formålet med dette studie er at kortlægge komplikationsrater og sammenholde disse med patientkarakteristika i det umiddelbare postoperative forløb indtil 30 dage efter indgreb med en stilet VRAM-lap.

*Metode:* Vi lavede et retrospektivt studie baseret på journalgennemgang med inklusion af samtlige patienter, der fik foretaget en VRAM-lap i 2015 og 2016 på Aarhus Universitetshospital. Patientkarakteristika herunder demografi, komorbiditet, rygerstatus, BMI samt indikation, behandling og kirurgiske data blev sammenlignet blandt patienter *med* og *uden* komplikationer. Endvidere opgjordes overlevelse efter et og tre år.

*Resultater:* Vi identificerede 67 patienter. Overvægt ( $BMI \geq 32 \text{ kg/m}^2$ ) korrelerer signifikant med postoperative komplikationer ( $p = 0,03$ ). Der var ikke en signifikant korrelation mellem postoperative komplikationer og hhv. rygning, tidligere kirurgisk behandling, stråling, kemoterapi eller anden komorbiditet. 42% af patienterne udviklede komplikationer, men der var ingen lap-tab. Overlevelsen efter hhv. et og tre år var 92% and 73%, respektivt.

*Konklusion:* VRAM-lappen er en velegnet metode til at rekonstruere efter avanceret kræft i bækkenet trods neoadjuverende stråle- eller kemoterapi med en acceptabel risiko for postoperative komplikationer. Disse resultater er vigtige, når patienter skal rådgives forud for en operation med VRAM-lap.

Ord: 203/300

## **Lymphedema is more than lymph edema: The impact of cellulitis on breast cancer-related lymphedema tissue composition**

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### **Background**

Cellulitis is a common complication in Breast Cancer-Related Lymphedema (BCRL). The excess amount of fat and lean mass in BCRL is a vital factor in patient stratification, prognosis, and treatments. However, it is not known whether cellulitis affects the excess fat and lean mass in BCRL and the principal characteristics of BCRL bio composition is still poorly understood.

### **Objective**

This prospective study was designed to fundamentally understand the heterogenous bio composition of BCRL.

### **Methods**

For this study, we consecutively assessed 206 patients with unilateral BCRL between January 2019 and February 2020. All patients underwent Dual Energy X-Ray Absorptiometry scans, bioimpedance spectroscopy, comprehensive history of potential risk factors and a clinical exam. Multivariate linear and beta regression models were used to determine the strength of association and margins effect

### **Results**

Sixty-nine patients (33%) had at least one previous episode of cellulitis. Notably, a previous episode of cellulitis was associated with 20 percentage points more excess fat and 10 percentage points more excess lean mass compared to patients without cellulitis ( $p < 0.05$ ). Also, each 1 unit increase in the patients BMI was associated with a 0.03 unit increase in the fat mass proportion of the lymphedema arm

### **Conclusion**

Cellulitis in BCRL is associated with more excess arm fat and lean arm mass. Also, the proportion of BCRL that is fat mass is dependent on the patients BMI.

# Subcutaneous injection of a strong base: 7 weeks ongoing necrosis with conservative treatment

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## Introduction

Alkali burns damages the skin through denaturation of proteins, dissolving of fat, and the result is a liquifying necrosis. The treatment for alkali burns of the skin has traditionally been several hours of flushing with water to dilute the base so the tissue damage is minimized.

Subcutaneous injection of a strong base eliminates the treatment potential of prolonged flushing of the skin with water, and presents a dilemma of either choosing a conservative "wait-and-see" approach, or excising tissue in hope of limiting the tissue damage, with the risk of excising too much tissue.

## Case

We present a case where a 46-year-old woman injected herself with 2ml of a strong base, pH 13,5, in the right cubital fossa, with the aim of suicide. Treatment of such an injury is not previously described in the literature. We chose a conservative approach where we performed successive revisions of the burn for as long as there was progression of tissue damage, this process lasted 47 days. 60 days after the injection of the base, the patient was operated, and the defect was closed with local skin flaps. 1 month postoperatively the patient has affected sensibility of the lateral antebrachium. There is no loss of function of the arm/hand.

## Conclusion

Subcutaneous injection of a strong base presents a clinical challenge of choosing between observation or initial excision of healthy tissue containing remaining base.

The patient in this case suffered a significant alkali burn in the right cubital fossa after injecting herself with 2ml strong base. Conservative treatment resulted in several revisions and flap reconstruction in general anesthesia 60 days after the injury, only with minor sequela.

# Obese patients are being under treated with antibiotics in the emergency department.

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## Background

Due to pharmacodynamic and pharmacokinetic changes, obese patients are in risk of being underdosed with antibiotics. This leads not only to risk of failure in treating infection, but also a risk of developing antibiotic resistance. An earlier study has shown that physicians frequently fail to increase the antibiotic dosage of these patients. At Region Hovedstaden, regional guidelines exist on correct dosage of antibiotics for obese patients, including formula for calculating a dosage weight that is based on sex, weight, height, and the antibiotic class being prescribed. In this study, we investigated the physician adherence to these guidelines, when prescribing antibiotics to obese patients in an emergency department (ED).

## Method

We performed a retrospective study, where we included all patients admitted to the ED, Herlev Hospital, in 2020 with a BMI >30, that were treated with IV antibiotics and had an eGFR >50. We looked at dosages for betalactams, aminoglycosides, azoles and fluorquinolones, as these are the only classes included in the regional guidelines.

We calculated the dosing weight (dW) for each patient and excluded all patients with a dW < 80 kg as this is the lower limit of when the guidelines recommend increasing the antibiotic dose. In the case of Piperacillin-Tazobactam, we set the lower limit to dW 100 kg because the guidelines recommend normal dosage for patients with a dW of 80-100. We further analyzed how many patients were given a correct or incorrect dose, based on the regional guidelines and calculated the fraction of correctly prescribed doses, where increasing the dose was indicated according to the guidelines.

## Results

We found indication for increased dosage in 319 patients. A total of seven patients (2.2%) had received a correct dose, while 312 (97.8%) had not received a correct dose.

## Conclusion

We found that only 2,2% of prescriptions adhered to local guidelines for increased dosage. Further studies are needed to uncover the reason for not following these guidelines and on how to improve adherence to the guidelines.

## **Title: Effect of Body Mass index on recipient site outcomes after autologous breast reconstruction**

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### **1. Background**

The aim of the study was to investigate Body Mass Index effect on postoperative complications at the recipient site among women who have had autologous breast reconstruction, and determine whether there is a threshold regarding BMI where autologous breast reconstruction may not be recommended.

### **2. Materials and Methods**

A systematic search was performed on PubMed and EMBASE. All studies reporting recipient site complications after autologous breast reconstruction, using either LD, DIEP, TRAM and SIEA flaps were included. BMI was stratified according to WHO classification and furthermore defined as obese (BMI  $\geq 30$ ) and non-obese (BMI  $< 30$ ). Data regarding postoperative outcome was combined for pooled analyses. The latest search was performed on December 8<sup>th</sup>, 2020.

### **3. Results**

Seventeen studies met the inclusion criteria, and a total of 6522 patients and 9130 flaps were included. Pooled analyses showed statistically significant higher minor- and major complication- and loss of reconstruction rates when comparing the obese group to the non-obese group. Stratifying BMI according to WHO showed significantly higher OR for minor complications for all 3 groups of obesity when compared to the normal weight group. The risk of loss of reconstruction was significantly higher for the class III obese group when compared to the normal weight.

### **4. Conclusion**

The obese population has an increased risk of both minor- and major complications and loss of reconstruction compared to the non-obese population. Despite the increased minor complication OR for the obese group, autologous breast reconstruction may still be the best option for this population, however, BMI 40 is the recommended surgical threshold, where the risk of loss of reconstruction is eightfold increased.

Words: 268

## Melanoma of the ear – A retrospective study of 89 cases

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### Abstract:

**Background:** Melanoma of the ear is a rare occurrence that accounts for approximately 6% of melanomas of the head and neck. Melanoma of the ear constitutes a surgical challenge as the ear is of functional and aesthetical importance. Surgical guidelines in Denmark suggest removing cartilage if tumor thickness exceeds 1mm, however the decision should be individually assessed. Thus, the ideal surgical treatment of melanoma of the ear is still unclear. In this study we aimed to investigate how melanoma of the ear has been treated surgically at Aarhus University hospital, and if removal of cartilage had any impact on disease outcome.

**Method:** We conducted a retrospective study based on all medical journals of melanoma of the ear diagnosed at Department of Pathology, Aarhus University Hospital Denmark from 1983 till 2020.

**Results:** We identified 89 eligible cases of which 46 had cartilage removed. 17/89 had recurrence (6 had T-site recurrence, 8 had N-site recurrence and 3 had M-site recurrence).

Recurrence was related to sex, age, tumor thickness and sentinel node biopsy. Patients with recurrence had thicker melanomas (2.29; 95% CI 1.28; 3.31) than patient with no recurrence (1.26; 95% CI 0.84; 1.68) (mean difference 1.03; 95% CI 0.06; 2.00,  $p=0.037$ ). The relative risk of recurrence was 2.77 (95% CI 0.68-11.22) in men compared to women. Only men died of melanoma of the ear. No pathology reports described in transit metastasis, or tumor growing through perichondrium.

**Conclusions:** This is the largest study of melanoma of the ear in Scandinavia. It supports earlier findings that the risk of recurrence and death is higher among men and increases with tumor thickness. The results propose the possibility of preserving cartilage in cases of tumor thickness <4mm. This would greatly improve both functional and aesthetic outcomes without risking disease outcome. However further prospective studies are needed.

**Forfattere:** Linnea Bøgeskov Schmidt, Ida Felbo Pold

**Institution arbejdet udgår fra:** Plastikkirurgisk Afdeling, Herlev Gentofte Hospital

**Titel:** Komplikationer til penisforstørrende kirurgi.

### **Baggrund:**

Mandens penis har gennem historien været et symbol på maskulinitet og op mod 45% af den mandlige befolkning ville ønske, at deres penis var større. På internettet falbydes forskellige behandlinger mhp. penisforstørrelse, herunder piller, strækapparater, vakuumpumper og operation. Der findes kun evidens for kirurgi, som dog betragtes som kontroversielt grundet dårlige resultater og væsentlige risici.

### **Kasuistik:**

En 62-årig mand oplevede efter radikal prostatektomi reduktion i længden på hans penis, og fik derfor foretaget en penisforstørrende operation i Tyrkiet. Ved operationen blev ligamentum suspensorium delt mhp. penisforlængelse og et fedt-dermis-transplantat, høstet fra højre natis, blev sutureret omkring corpus cavernosum mhp. penisfortykkelse. Ifølge operationsbeskrivelsen var penis 10,5 cm lang udstrakt præoperativt og 13,5 cm postoperativt. 10 dage postoperativt blev patienten set i plastikkirurgisk regi i Danmark med central defekt af cicatricen på ballen og to større fuldhudsnekroser med henflydende subkutant fedt på penisskaftet. Patienten blev behandlet med antibiotika og gentagne sårrevisioner i generel anæstesi, med spaltning af huden på penis til symfyseniveau og oprensning af større nekroser. Defekten blev herefter behandlet med vakuumassisteret lukning og dækket med et fuldhudstransplantat. Ved afsluttet behandling var penis ca. 9 cm lang udstrakt og kosmetisk uskøn, men med bevaret erektil funktion.

### **Diskussion/Konklusion:**

Kosmetisk kirurgi på mandlige kønsorganer er ikke ulovligt i Danmark, men anses for kontroversielt, med stor risiko for dårlige resultater og en lang række komplikationer. I praksis udføres penisforstørrende operationer ikke i Danmark, men tilbydes via danske klinikker på søsterhospitalet i de øvrige nordiske lande. De fleste mænd, der opsøger kosmetisk intimkirurgi har en normal størrelse penis, men et forvrænget kropsbillede, en undertype af body dysmorphic disorder (BDD). BDD er en psykiatrisk diagnose, hvor kosmetisk kirurgi af den affekterede kropsdel ofte ikke har effekt på patientens symptomer. Penisforstørrende kirurgi bør frarådes og patienterne tilbydes psykologisk eller sexologisk behandling.



# Low yield of routine PET-CT after 6 and 12 months in sentinel node negative melanoma patients after incomplete sentinel node retrieval

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## Abstract

**Introduction:** Routine 18F-fluorodeoxyglucose positron emission tomography-computed tomography scans (PET-CT) 6 and 12 months after likely incomplete sentinel node (SN) retrieval in SN negative melanoma patients were introduced nationally in 2016. Additionally, some departments add routine ultrasound (US) of the regional lymph nodes in these patients. The aim of this study was to investigate how frequently those scans detected a melanoma metastasis in the nodal basin suspected to harbor one or more left SN(s).

**Methods:** One hundred one SN negative patients stage IA-IIIB having a potentially incomplete SN procedure at two Danish university hospitals in 2016-2019 and routine PET-CT after 6 and/or 12 months were included.

**Results:** The most common location of left SNs was the iliac region (62.7%) from a lower extremity melanoma, and most patients were female (60.4%). None of the ninety-six 6-month PET-CTs showed melanoma metastases in the region, where a SN was left, or elsewhere. Two of the ninety-six 12-month PET-CTs were positive for melanoma metastases; one patient had an iliac metastasis in the lymph node region, where a SN was left, and dissemination to retroperitoneal lymph nodes; the other had a distant melanoma metastasis in Th9. Routine US was also performed at irregular time points in 33 of the patients and did not detect any locoregional melanoma metastases. Respectively, three and four non-melanoma cancers were (re)discovered at the 6- and 12-month PET-CTs. Median follow-up was 34 months, and three patients had melanoma recurrence after their 12-month PET-CT in the form of satellite, in-transit, or distant metastases, which were detected 16, 19, and 36 months, respectively, after the SN procedure.

**Conclusion:** Our study shows that routine surveillance with PET-CT 6 and 12 months after incomplete SN retrieval has a very low yield in intermediate-risk SN negative patients. The true SN was likely removed in the first place, and recurrence in this patient group is infrequent and probably appears later than 12 months after the SN procedure.

**Title:** Prophylactic treatment of breast implants with a solution of gentamicin, vancomycin and cefazolin antibiotics for women undergoing breast reconstructive surgery: Protocol for a randomized, double-blind, placebo-controlled trial (The BREAST-AB trial)

### **Authors**

Mathilde N. Hemmingsen<sup>1</sup>; Andreas Larsen<sup>1</sup>; Tim K Weltz<sup>1</sup>; Mathias Ørholt<sup>1</sup>; Vibeke Koudahl<sup>2</sup>; Lena F. Carstensen<sup>3</sup>; Camilla Bille<sup>4</sup>; Volker-Jürgen Schmidt<sup>5</sup>; Lisbet Rosenkrantz Hölmich<sup>6</sup>; Tine Engberg Damsgaard<sup>1</sup>; Peter Vester-Glowinski<sup>1</sup>; Mikkel Herly<sup>1</sup>

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### **Abstract**

#### *Introduction*

Postoperative infection is one of the most severe complications following implant-based breast reconstruction, affecting 5-10% of the women. Currently, many surgeons apply antibiotics directly on the breast implant to eliminate bacterial contamination during the surgery, but the treatment has never been investigated in a randomized, placebo-controlled trial.

#### *Methods and analysis*

The BREAST-AB trial is an investigator-initiated, multicenter, randomized, placebo-controlled, double-blind trial of local treatment with gentamicin, vancomycin and cefazolin in women undergoing implant-based breast reconstruction. The trial drug consists of 80 mg gentamicin, 1000 mg vancomycin and 1000 mg cefazolin dissolved in an infusion bag containing 500 mL of isotonic saline. The placebo solution consists of isotonic saline. The trial drug will be used to wash the dissected implant pocket and soak the implant prior to insertion in the implant pocket. The

primary outcome is all-cause explantation of the breast implant within 180-days after the breast reconstruction surgery. Key secondary outcomes include revision surgery with incision of the fibrous capsule and superficial surgical site infection that leads to antibiotic treatment. The trial started in January 2021 and we expect to include the last patient in January 2024. The trial is registered at ClinicalTrials.gov (NCT04731025) and at the EU Clinical Trials Register (EudraCT 2020-002459-40).

#### *Ethics and dissemination*

The trial was approved by the Regional Ethics Committee (H-20056592) on January 1<sup>st</sup>, 2021 and the Danish Medicines Agency (EudraCT 2020-002459-40) on August 2<sup>nd</sup>, 2020. The main article will include the primary and secondary outcomes and will be submitted to peer-reviewed international journals.

## Abstrakt til DSPR Maj 2021

### Forfattere:

Carla Kruse, Michael P. Møller

### Institution arbejdet udgår fra:

Plastikkirurgisk afdeling, Herlev hospital

### Titel:

Sarkom med stor intrakraniell komponent fejltolket som lipom og forsøgt fjernet i lokalbedøvelse

### Formål/Baggrund:

Det drejer sig om en 51-årig mand, som henvises til ekstirpation af, hvad man initialt vurderer til at være et lipom i regio parietalis. Indledningsvis forsøges tumoren fjernet ved privat praktiserende plastikkirurg, men grundet øget blødning, henvises patienten til definitiv kirurgi på en plastikkirurgisk afdeling. Præoperativt måler tumoren klinisk 3x2cm og er tilkommet over 6 måneder. Der foretages ikke præoperativ billediagnostik og patienten skrives op til extirpation i lokal anæstesi. Peroperativt finder man en tumor der er adhærent til periost og centralt penetrerer både periost, os frontalis samt lamina externa. Dertil er tumorens konsistens ikke forenelig med lipom. Den mest superficielle del af tumoren dislocerer under operationen, denne sendes til histologisk undersøgelse, og efter kontakt til neurokirurgisk vagthavende sutureres defekten og der bestilles akut CT af cerebrum. Patienten er upåvirket under hele forløbet og har på intet tidspunkt vist neurologiske udfald. Postoperativt viser både CT og MR af cerebrum en ekstra aksial proces beliggende parietalt på venstre side, målende cirka 4,0 x 2,0 cm og ligger klos på kalvariet med en stor osteolytisk knogledefekt på cirka 2,4 x 2,3 cm. Helkrops PET-CT viste ingen tegn på metastasering. Patienten henvises til neurokirurgisk afdeling med henblik på vid excision samt efterfølgende stråleterapi smat protonstråling.

### Diskussion/Konklusion:

Lipomer er hyppigt forekommende benigne tumores. Ved tvivl om diagnose, udbredning eller malignitetssuspicio kan man udrede med billediagnostik. Diagnosen "lipom" kan ofte korrekt stilles på klinikken alene, men af og til kan man tage fejl.

Denne case omhandler en patient med en tumor i regio parietalis, der blev forsøgt fjernet i lokalbedøvelse på mistanke om subkutant lipom.

Tumor viste sig overraskende at være et højmalignt sarkom, som gennembrød kraniet og havde en større intra- og ekstrakraniell komponent. Da man peroperativt erkendte kraniedefekt og intrakraniell udbredning måtte strategien tilpasses.

## Title

Deskinning in Inverted-T Mastopexy, Augmentation Mastopexy and Breast Reduction: A Retrospective Cohort Study

## Authors

Andreas Larsen, Mathilde N. Hemmingsen, Frederik L. Aaberg, Mathias Ørholt, Tim K. Weltz, Peter Stemann Andersen, Faranak Sarmady, Jens Jørgen Elberg, Peter Vester-Glowinski, Mikkel Herly

## Background

Most surgeons choose to de-epithelialize when performing a mastopexy or breast reduction to minimize the risk of nipple-areola-complex (NAC) necrosis. Preservation of the dermis and thus the subdermal plexus is thought to be crucial for the survival of the NAC. However, this has never been scientifically proven. Deskinning involves resection of both the epidermis and dermis and is a timesaving alternative to de-epithelialization. In this study, we present data from patients undergoing total deskinning of the Wise pattern.

**Methods:** From September 2012 to March 2020, a single surgeon performed all inverted-T mastopexies and breast reductions using the deskinning technique. All breast reductions were based on a superomedial glandular pedicle. The patients were included retrospectively, and data were collected by reviewing the patients' medical records.

**Results:** In total, 408 consecutive patients were included. Of these, 134 patients underwent mastopexy, 140 patients underwent mastopexy in combination with implant surgery and 142 patients underwent breast reduction. The median resection weight for patients undergoing a breast reduction was 287 g (IQR 197-399 g). No complete NAC-necrosis occurred during the follow-up period. Unilateral partial NAC necrosis occurred in three patients (2.1%) who underwent mastopexy in combination with implant surgery and in two patients (1.4%) who underwent breast reduction.

**Conclusion:** The rate of NAC necrosis after a mastopexy or breast reduction using the deskinning technique was comparable with the rate of NAC-necrosis reported in the literature using the de-epithelialization technique. Our findings support that the use of deskinning is a safe and a time-efficient method for patients undergoing inverted-T mastopexy and breast reduction using a superomedial pedicle.

## More sentinel lymph node biopsies for thin melanomas after transition to AJCC 8<sup>th</sup> edition do not increase positivity rate - a Danish population-based study of 7,148 patients

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<sup>2</sup>Department of Clinical Medicine, Faculty of Health and Medical Sciences, Copenhagen University, Copenhagen, Denmark

### Abstract

**Background** The T1 category was revised in the 8<sup>th</sup> edition of the American Joint Committee on Cancer melanoma staging system (AJCC8) with T1b to be based on Breslow thickness (BT) and ulceration, whereas mitotic rate (MR), as used in AJCC7, was excluded. We sought to evaluate the outcome of sentinel lymph node biopsy (SLNB) in patients with T1 melanomas before and after the implementation of AJCC8 and to determine predictors of sentinel lymph node positivity (+SLN) in patients with T1 melanomas.

**Methods** Patients diagnosed with T1 melanomas (BT $\leq$ 1 mm) during 2016-2017 as per AJCC7 (n=3,414) and 2018-2019 as per AJCC8 (n=3,734) were identified in the national Danish Melanoma Database.

**Results** More SLNBs were performed in the AJCC8 T1 cohort compared to the AJCC7 T1 cohort (22.2% vs. 16.2%,  $P<0.001$ ) with no significant difference in +SLN rates (4.7% vs. 6.7%,  $P=0.118$ ). In the AJCC7 +SLN subgroup, no melanomas were ulcerated, 94.6% had MR $\geq$ 1, 67.6% were  $\geq$ 0.8 mm and 32.4% would be T1a according to AJCC8. In the AJCC8 +SLN subgroup, 10.3% were ulcerated, 74.4% had MR $\geq$ 1, 97.4% were  $\geq$ 0.8 mm and 23.1% would be T1a according to AJCC7. On multivariable analysis younger age and MR $\geq$ 1 were the only significant predictors of +SLN.

**Conclusion** The AJCC8 has caused more SLNBs for T1 melanomas, without increase in +SLN rate and none of the AJCC8 T1b criteria were significant predictors of +SLN. We suggest that mitosis should again be considered an indication for SLNB in thin melanomas and younger age should encourage SLNB.

# Cellular Therapies in Plastic Surgery – Practical Challenges of Producing an Applicable Cellular Product

Authors:

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## Introduction

The use of mesenchymal stem cells (MSCs) in both reconstructive and regenerative surgery have been increasing over the past decade. However the results of both clinical and laboratory studies has been inconsistent, leading to both skepticism and wonder among clinicians and surgeons.

The inconsistent data however, might not only be attributed to different study-models, as no clear conviction or standardized protocols for cell-handling has been established. Many variables are to consider when working with cells in general, and especially cells meant for human transplantation. This lead to the investigation of how to maintain a high ex-vivo cell-viability during storage and transportation, in cells intended for surgical application.

## Materials and Methods

A systematic review on the optimal conditions for MSCs regarding resuspension, short-term storage and cryopreservation was performed. Studies on human and animal cells in general were included. The review was performed with intend for application in surgical practice, with the main objective being the highest possible pre-injective viability of cells transported, stored, cultured and/or frozen under xeno-free conditions.

## Results

Viability of MSCs were found to be maintained at higher levels (>80%) for up to 6 hours, when kept in saline at refrigerated temperatures.

Highest viability after freeze-thaw was in most cases found under “common” methodology, using slow-freezing in a solution of growth medium, serum and 10% dimethyl sulfoxide (DMSO).

A few studies reported equally high survival-rates when freezing in xeno-free solutions.

## Discussion

The utilization of cell-centred therapies calls for more thorough investigation of clinical safety and effect, but the handling of cells outside of the operating theatre must not be neglected as a considerable factor in terms of therapeutic outcomes.

The establishment of generalized guidelines and protocols for cell handling will hopefully in the future allow for the accessibility to highly effective and safe off-the-shelf stem cell-products for direct clinical application. Hence, some points to consider in such guidelines should for instance be on the freeze-thaw technique, injection vehicle and storage condition in and out of the operating room.



# Cellular Therapies in Plastic Surgery – Could Optimized Stem Cell Handling be a Key Factor for Consistent and Effective Therapeutic Effect?

Authors:

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## Introduction

Different cellular therapies have been investigated for plastic surgical applications, mainly the stromal vascular fraction and autologous stem cells. Inconsistent results, however, have been reported, which raises the important question; Do stem cells and other cellular therapies work consistently and are they worth the cost and effort?

As cellular therapies primarily consist of living cells, maintaining the cells in a viable state until they are administered, may be crucial for obtaining desired clinical efficacy. Parameters for determination of stem cell viability, however, are underreported in current pre-clinical and clinical studies. To determine the importance of stem cell handling for stem cell count and viability, a series of laboratory analysis was performed.

## Materials and Methods

Laboratory analysis in cryo-storage, thawing, reformulation, transportation temperature and time for human adipose tissue-derived stem cells was conducted. Multi-colour flow cytometry was used to characterized stem cells; CD31, CD34, CD45, CD73, CD90 and CD105. 7AAD was used to determine viability and precise stem cell count.

## Results

- Optimizing the thawing buffer (alfa-MEM+ 5% human platelet lysate), a 50% loss of the stem cells was avoided and viability of remaining cells was increased from 85% to 95%.
- Optimizing the vehicle agent and storage temperature (alfa-MEM+ 5% human platelet lysate at 4°C), a 75% stem cell loss during 4 hours of storage was avoided and viability was increased from 75% to 95%.
- Optimizing the final concentration of stem cells in vehicle agent ( $5 \times 10^6$ /mL), a 40% stem cell loss was avoided and viability of the remaining cells was increased from 80% to 90%.
- For all tests stem cells were characterized as normal mesenchymal stem cells; CD31<sup>-</sup>, CD34<sup>+</sup>, CD45<sup>-</sup>, CD73<sup>+</sup>, CD90<sup>+</sup> and CD105<sup>+</sup>.

## Discussion

The laboratory analysis indicates that stem cell handling greatly impacts both viability of stem cells as well as minimizing cell losses from laboratory till administration in the operating room. An unoptimized cell handling could at worst result in a 92,5% loss of the stem cells from thawing of the cells till administration. The importance of proper stem cell handling, however, is not reflected in current literature as crucial parameters is left unreported. Without this information it is difficult to determine the efficacy of cellular therapies. It is possible that some of the variance in efficacy could be a consequence of different cell handling protocols. A standardized guideline for cell handling reporting would increase comparability between studies and could lead to optimized cell handling protocols increasing efficacy of cellular therapies.

## **Risk factors for atypical fibroxanthoma recurrence and conversion to undifferentiated pleomorphic sarcoma: A meta-analysis of individualized participant data**

### **Authors:**

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### **Affiliation:**

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### **Importance:**

Atypical fibroxanthoma (AFX) is a rare mesenchymal tumor with the potential to both recur and convert to the more invasive undifferentiated pleomorphic sarcoma (UPS). Previous studies have been too small to assess risk factors of both recurrence and conversion to UPS.

### **Objective:**

The objective of this meta-analysis is to evaluate risk factors of AFX recurrence and conversion to UPS.

### **Data Sources:**

A literature search was performed in the Pubmed, EMBASE and Cochrane databases. All authors of eligible citations were contacted to obtain complete individualized datasets of the included patients.

### **Study Selection:**

Studies reporting on at least 5 patients with histopathologically and/or immunohistochemically verified AFX were included. Only studies who reported on recurrence or conversion to UPS were included.

### **Data Extraction and Synthesis:**

Two independent authors extracted data on the risk factors; age at presentation, sex, tumor size, excision margin, type of surgery, previous skin cancer and immunosuppression.

### **Main outcomes and Measures:**

The risk factors of recurrence or conversion to UPS were assessed with Kaplan-Meier plots and hazard ratios were calculated with both uni- and multivariate cox regression adjusted for clustering of the included studies.

### **Results:**

A total of 668 patients with AFX from 16 studies were included. The overall 5-year risk of recurrence was 9% (95% CI 6-11) and the overall 5-year risk of conversion to UPS was 4% (95% CI 0-9). Age at presentation above 77 years was significantly associated with an increased risk of recurrence, HR 3.39 (95% CI 1.92-5.98) when adjusting for type of surgery and excision margin. Excision margin > 10 mm also significantly reduced the risk of recurrence ( $p < 0.05$ ). There was no difference between wide local excision and Mohs' Micrographic Surgery.

### **Conclusions and Relevance:**

The risks of AFX recurrence and metastasis are relatively low (9% and 2% resp.). The most important risk factor was age at presentation above 77 years old ( $p < 0.001$ ) and excision margin > 10 mm ( $p < 0.05$ ). We suggest that patients are followed for a minimum of 24 months and AFX should be excised with > 10 mm excision margin. Furthermore, patients > 77 years old should be followed more intensively.