population size ranged from 32 to 1165 patients. All studies were of level 2 or level 3 evidence. Pain was assessed using either a variety of patient surveys or the need for a pain specialist referral. Prevalence of post-mastectomy pain ranged from 17% to 64%. The mean prevalence of pain after mastectomy alone using a random-effects model is 35.6% (30.3%-41.3%). Prevalence of post-mastectomy reconstruction pain varied from 19% to 49%. Mean prevalence of pain after mastectomy with reconstruction using the random-effects model is 38.8% (32.0% - 46.0%). Our ANOVA analysis of all included manuscripts showed no significant difference between mean prevalence of chronic pain after mastectomy alone versus mastectomy and reconstruction (p= 0.54).

CONCLUSION: Our meta-analysis establishes that post-mastectomy reconstruction does not significantly increase PMPS incidence. However, because this neuropathic pain often persists after reconstructive surgery, it is incumbent on the plastic surgeon to counsel patients on PMPS. Moving forward, prospective studies on the effects of reconstruction type are warranted. Additionally, adjunct procedures at the time of reconstruction, such as intercostal neuroectomies and fat grafting, should be investigated for efficacy in treating PMPS and improving post-mastectomy reconstruction outcomes.

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Stacked Lateral Thigh Perforator Flap (LTP) As a Novel Option for Autologous Breast Reconstruction

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INTRODUCTION: The Deep Inferior Epigastric Artery Perforator (DIEP) flap is the gold standard in autologous breast reconstruction. When challenges such as insufficient tissue or prior surgeries exclude the abdomen as a potential donor site, alternate donor sites, including the buttock and thigh, as well as the use of stacked flaps can be considered. The Lateral Thigh Perforator Flap (LTPF) is an emerging candidate for autologous breast reconstruction, based on consistent and reliable septocutaneous vessels arising from the ascending branch of the lateral circumflex artery and the donor site location obviates the need for intraoperative repositioning. The flap is limited by the volume of soft tissue available for use as a single donor flap. An option to mitigate insufficient volume from a single flap is stacking two independent flaps as a single reconstruction unit. We present our experience performing stacked LTP flaps for unilateral breast reconstruction.

METHODS: This is a retrospective review of patients undergoing unilateral breast reconstruction using stacked LTP flaps performed between June 2015 and November 2015. Data points were documented for each patient including: demographics, mastectomy resection weights, flap dimensions and weights, indications, complications, and surgical. Immediate post-operative complications including: flap failure, infection, wound dehiscence, seroma, hematoma, and donor site morbidity were recorded for each patient.

RESULTS: Eight patients underwent delayed, unilateral breast reconstruction with stacked LTP flaps for a total of 16 flaps. Stacked flaps were anastomosed to anterograde and retrograde internal mammary vessels in all patients. The mean patient age was 47.3 years (range: 45–64 years); mean BMI was 26.2 kg/m² (range: 20.9–32.6 kg/m²). Two patients were current smokers while 5 patients noted significant alcohol use. Mastectomy specimen weights were only recorded for 5 of 8 patients, yielding an average mastectomy weight of 576.8 gm (range 221–826 gm). Mean flap weight was 333.1 gm (range 218–410 gm); and mean stacked weight of 636.9 gm (range 481–779 gm). The primary indications for using the LTP flap included insufficient abdominal wall tissue in 4 patients, absent deep inferior epigastric vessels secondary to prior surgical procedures unrelated to their reconstructions in 1 patient, and failed TRAM flaps in 3 patients.
Two patients developed a seroma at the donor site. There was no partial flap loss and no evidence of fat necrosis noted in follow-up examinations. Only one patient underwent a subsequent flap revision. Flap survival was 100% with no return to the OR in the immediate post-operative period.

**DISCUSSION:** When the patient requires or prefers to have an autologous breast reconstruction, the stacked LTP flap should be considered an effective and viable option if the patient’s body habitus consists of excess lateral hip adiposity. The LTP flap has an anatomically reliable vascular supply that allows for a straightforward dissection, provides adequate volume and shape, and decreases operative time as 3 surgical teams can work simultaneously. The addition of the stacked LTP flap to the perforator flap collection allows the reconstructive surgeon to tailor breast reconstruction to the patient while focusing on body habitus and minimizing donor site deformity.

**Uncovering Synergistic Predictors of Complications in Microvascular Breast Reconstruction: A Retrospective Cohort Study**

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**PURPOSE:** Microvascular breast reconstruction is a complex procedure that can be associated with high complication rates. While a number of individual predictors of post-operative complications have been identified, few studies have explored interaction between risk factors. Understanding the synergistic effects of multiple risk factors is crucial to accurate and personalised pre-operative risk prediction.

**METHODS:** We conducted a retrospective cohort study of patients who underwent microvascular breast reconstruction at our institution between 2009 and 2017. All intra- or post-operative complications were recorded. An exploratory multivariable logistic regression model identified independent predictors of complications. Interactions between individual variables were then assessed using the Relative Excess Risk Index (RERI) and Synergy Index (SI).

**RESULTS:** Nine hundred and twelve patients were included in the study and 26.1% experienced at least one intra- or post-operative complication. Obesity (OR 1.54, p=0.01), immediate reconstruction (OR 1.49, p=0.03), and comorbidities (OR 1.43, p=0.03) were identified as independent predictors of complications. Obesity and comorbidities had significant synergistic interactions with immediate reconstruction (RERI 0.86, SI 2.35, p=0.0002; RERI 0.54, SI 1.78, p=0.001), bilateral reconstruction (RERI 0.12, SI 1.15, p=0.002; RERI 0.59, SI 3.16, p=0.01) and previous radiotherapy (RERI 0.62, SI 4.43, p=0.01; RERI 0.11, SI 1.23, p=0.04). Smoking had a synergistic interaction with immediate breast reconstruction (RERI 1.99, SI 4.36, p=0.03).

**CONCLUSION:** Patient and treatment related variables interact in a synergistic manner to increase the risk of complications for microvascular breast reconstruction. In light of the known multifaceted repercussions of complications, individualized comprehensive risk assessment should guide surgical decision making and patient counselling.

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**Laser-Assisted Indocyanine Green Angiography Reduces Fat Necrosis in DIEP Flap Breast Reconstruction**

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