face-lift (81%), abdominoplasty (71%), rhinoplasty (55%), and liposuction (47%). The most common breast procedures are breast reduction (60%), mastopexy (51%) and breast augmentation (52%). However, 96.5% of responders report the lack of an official TXA protocol in their department or clinic. The majority of respondents give TXA as an IV bolus after/before skin incision (68%). Other modes include a bolus followed by topical TXA (31%), a bolus followed by maintenance infusion (5%), infusion alone (18%), or topical alone (14%). Oral administration and other combination regimens were also fully reported and are described in detail.

The majority of respondents use a standard IV bolus dose ranging from 0.5 gr to 10 gr, regardless of weight, with the most popular dose being 1 gr (47%). The most common TXA solution concentration used for topical administration is 1 mg/ml (42%).

Respondents who use TXA routinely reported reduced perioperative blood loss (54%), improved surgical field (53%) and precision (29%) and easier postoperative recovery with less ecchymosis and edema and/or faster return to social activity (75%) following TXA administration. No thrombotic events were reported (0%). No correlation was found between respondent characteristics and the dose or mode of administration of TXA in aesthetic procedures (p>0.05).

CONCLUSION: This is the first study to provide a broad view of TXA’s utility of use in aesthetic plastic surgery, as well as a contemporary appraisal of administration protocols. The results emphasize the efficacy and well-documented safety profile of TXA and its important role in a variety of aesthetic procedures, in addition to its use in craniofacial and orthognathic surgery. The authors encourage plastic surgeons to report their TXA protocols and emphasize the need for further prospective studies with a large sample size and standardized blood loss measures to establish guidelines for optimum TXA administration in different plastic and reconstructive surgery procedures.

**Surgical Scars Touchups - Pulse Dye and CO2 Lasers Are Your Friends.** a Randomized Controlled Trial

**Presenter: Or Friedman, MD**

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**BACKGROUND:** Breast cancer surgery and reconstruction is currently considered the “gold standard” of treatment. Therefore plastic surgery consultation has become an inherent part of the breast cancer patient management, significantly improving aesthetic and functional results. Nonetheless, surgical scars may be aesthetically unpleasant, serve as a focus of pain, pruritis, and considerable psychological distress. The most effective method of scar treatment is early intervention. Current standard practice for abnormal scar formation consists of the frequent use of moisturizers, silicone gel, silicone sheet occlusion, pressure therapy and sun avoidance. Integration of various laser modalities into scar treatment and scar prevention methods are gaining popularity and show impressive results. Vascular lasers, mainly the pulsed dye laser (PDL, 585–595 nm), have been shown to affect angiogenesis, collagen synthesis, and inflammation. While Fractional ablative CO2 LASER (FACL) have been shown to improve scar height, texture, and pliability efficiently. We set out to study the safety and efficacy of combined PDL and CO2 LASER therapy on the pre-scar surgical site.

**OBJECTIVE:** This study investigates the clinical effect combined PDL and FACL in preventing aesthetically displeasing scarring as well as improving appearance and symptoms of surgical post-mastectomy surgical wounds.

**METHODS:** A prospective randomized, controlled split scar study of PDL and FACL versus non-laser treatment control. Eighteen subjects planned for lumpectomy were enrolled. On each patient, the surgical scar was randomly assigned to treatment and non-treatment halves. Treatment consisted of a unique protocol of PDL (Syneron Candela, V-beam, 7mm, 0.45 milliseconds, 5–6 J/cm²) followed immediately by FACL (Lumenis, Encore, Deep Fx, line pattern, 15–20 milliseconds 5%) at a monthly interval for three consecutive treatments, starting 2–4 weeks following surgery. The treated and untreated scar segments were evaluated by three blinded investigators (two dermatologists and one plastic surgeon) and by the patients at six months post last treatment, utilizing the Patient and Observer Scar Assessment Scale (POSAS). The participants also rated overall satisfaction using a four-point scale.

**RESULTS:** The mean POSAS scores at six months post-treatment were significantly lower (better cosmesis) for the treated half compared with the untreated half (p<0.01). Satisfaction rates were significantly higher in the treated half (p=0.005).
CONCLUSION: This study indicates that combined PDL and FACL, performed in the early stage of wound healing may have the potential to optimize scar formation of surgical scars.

A Prospective, Multi-Center, Randomized, Evaluator-Blinded, Split-Hand Study to Evaluate the Effectiveness and Safety of Large-Gel Particle Hyaluronic Acid with Lidocaine for the Correction of Volume Deficits in the Dorsal Hand

Presenter: Amir Moradi, MD

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STUDY OBJECTIVE: To evaluate the effectiveness and safety of large-gel particle hyaluronic acid with lidocaine (HAL) compared to no treatment for the correction of volume deficits in the dorsal hand.

DESIGN: Prospective, multi-center, randomized, evaluator-blinded, split-hand study

METHODS: Subjects (N = 115), aged ≥22 years with a volume deficit in the hand, received treatment on Day 0 with large-gel particle hyaluronic acid with 0.3% lidocaine (HAL) in one hand in a randomized fashion. The fellow untreated hand served as the primary comparator. HAL was applied subcutaneously using either 29G x ½-inch thin-walled needles or 25G x 1½-inch blunt tip cannulas. Treatments were administered to all subjects at Day 0 and at Month 6, including optional touch-ups 4 weeks after the first injection. The primary effectiveness endpoint was based on ≥1 point of improvement with treatment versus no treatment in the Merz Hand Grading Scale (MHGS) at Week 12. Other assessments included Central Independent Photographic Reviewers (CIPR) evaluations of hand photographs, Global Aesthetic Improvement Scale (GAIS), Subject Satisfaction questionnaires, and safety (including passive and active range of motion).

RESULTS: For the first treatment, the mean injection volume was 2.2 mL and in most cases (87.7%) a topical anesthetic was not used. Subjects demonstrated a significantly higher responder rate for HAL (85.3%) compared with no treatment (22.0%) at 12 weeks (P<.0001). Significantly more responders were observed in the treated hand at 16, 20, and 24 weeks. CIPR assessments showed consistently greater improvements in the treated hands compared with the untreated hand from Week 12 to Week 24 (range 74.8% to 89.5%). Most subjects and treating investigators (93.3% to 100%) reported improvements across all timepoints in the GAIS. There was no impairment in hand function after treatment. Fourteen (12.3%) subjects experienced 31 adverse events related to the product and/or injection procedure. Most were mild in severity and none were serious.

CONCLUSION: Large-gel particle hyaluronic acid with lidocaine, injected with either sharp needle or blunt-tip cannula, is safe, well-tolerated, and superior to no treatment for the correction of volume deficits in the dorsal hand.

Evaluation of High Intensity Focused Fractional Radiofrequency Microneedling (HI-FRM) and Fractional Laser (FL) for Combination Treatment in Wrinkles, Texture, and Pigmentation of the Face and/or Neck

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BACKGROUND/OBJECTIVE: Normal aging leads to change in skin collagen structure and reduced elasticity that can result in wrinkles, texture and pigmentation changes. With a variety of aesthetic treatment options available, combination treatment approaches has led to greater patient satisfaction and better quality of care. The purpose of this study is to evaluate the clinical outcomes of HI-FRM and FL combination treatment for improving wrinkles, texture and pigmentation of the face and/or neck.

METHODS: 22 subjects were enrolled (2 screen failures); 20 subjects received combination treatments. The treated cohort was comprised of non-Hispanic, Caucasian females with mean age of 56 years (range 38–72) and mean BMI of 24 (range 19–28). The majority of subjects presented