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THE TREATMENT OF FRESH SCARS WITH FRACTIONAL RESURFACING: A ½ SCAR STUDY**Cameron K. Rokhsar***Albert Einstein College of Medicine, New York, NY*

Background: The treatment of surgical scars continues to be a challenging problem in dermatologic surgery. CO₂ laser resurfacing of scars has been an effective tool in the treatment of surgical scars but is associated with the risk of infection and poor healing. Fractional resurfacing is a new concept where the skin is resurfaced 20–30 percent at one time. Fractional resurfacing has been shown to be effective in the treatment of atrophic acne scars. The utility of fractional resurfacing in the treatment of fresh surgical scars was investigated as a pilot study.

Study Design: Ten subjects with fresh surgical scars on the face and neck were recruited for this study. IRB approval was obtained. The patients had fresh scars from Mohs micrographic surgery, excision of benign and malignant lesions, or repair of lacerations on the face. Half of each scar was treated 5 times, the first treatment occurring within 0–2 weeks of suture removal. Energy level of 20 mj and density of 1500–2000 microthermal zones per cm² were used. The patients were evaluated at 1 and 3 months intervals after the last treatment based on a quartile scale.

Results: All patients reported at least 50% improvements in the portion of the scars treated. The evaluator assessment was in agreement. There was one patient who had suffered from keloidal scarring, whose scarring was exacerbated.

Conclusions: This is the first study on the treatment of fresh surgical scars with fractional resurfacing. Fractional resurfacing appears to be a novel and useful modality in the treatment of fresh scars. There was no incidence of wound dehiscence. Caution is advised when treating keloidal scars.

PSR could be used to effectively treat acne scarring, with a single treatment and minimal downtime.

Study Design/Materials and Methods: 10 patients with acne scarring and Fitzpatrick skin type I–III were included in the study. All patients were treated with 2 passes at high fluence (3.5–4.0 J/cm²). Treatments were performed in an outpatient clinic setting. Improvement was determined by patient questionnaires, blinded evaluation of digital photographs taken prior to treatment and at 3 and 6 months post-treatment, and measurement of scar volume using silicone molds.

Results: On average, 27% improvement in acne scarring was achieved at 1 month of follow-up. Re-epithelialization was complete by 4–6 days after treatment. No serious adverse events were encountered. Common side effects included pruritus and erythema, which generally resolved by day 14.

Conclusions: PSR provides a safe alternative to fractionated, non-ablative, and ablative laser resurfacing for the treatment of acne scarring, with minimal downtime and improvement in scarring following a single treatment.

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MULTICENTER STUDY OF MICROTHERMAL LASER TREATMENT OF ACNE SCARS**Emil Tanghetti,¹ Robert Weiss²**¹*Sacramento, CA*²*Hunt Valley, MD*

Background and Objectives: Acne scarring is a common dermatologic complaint. Several treatment options exist, with varying degrees of success and downtime. Previous studies have shown improvement of mature scars using distributed, microthermal treatment, which causes both discrete coagulation in high-fluence regions and background heating. However, there results are largely anecdotal. The objective of this study is to evaluate the utility of microthermal laser treatment for depressed, hypertrophic and atrophic acne scars.

Methods: A total of 20 subjects at two sites presenting with acne scars were treated using the Affirm Laser (Cynosure, Inc.) using a T-350 array at fluences of 3–5 j/cm², 2–3 passes per treatment, in conjunction with cold air cooling. No other anesthesia was required. Subjects received 3–6 treatments at 2–6 week intervals. Improvement was evaluated photographically and subject perception.

Results and Conclusions: Treatments were well tolerated with no side effects. Subjects noted improvement in acne scars within 3 treatments. Improvement was noted in all scar types treated including depressed and ice-pick scars. Photos exhibited mild to moderate grading in those reporting improvement. The Affirm laser treatment is useful for improving the appearance of acne scars. Treatment methods and proposed mechanisms will be discussed.

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TREATMENT OF ACNE SCARS USING THE PLASMA SKIN REJUVENATION (PSR) SYSTEM**Michele J. Gonzalez, William H. Sturgill, E. Victor Ross, Nathan S. Uebelhoer***Naval Medical Center, San Diego, CA*

Background and Objectives: Acne scarring is a common condition that presents significant therapeutic challenges. The Plasma Skin Rejuvenation (PSR) system is a novel device that utilizes high frequency energy to convert nitrogen gas into a plasma. The plasma is directed onto the skin, delivering thermal energy in a precise manner and without a requirement for eye protection. PSR has previously been shown a safe & effective treatment for facial rhytides. We hypothesized that high fluence