

## **FRACTIONAL NONABLATIVE 1540 nm LASER RESURFACING FOR ATROPHIC ACNE SCARS: A RANDOMIZED CONTROLLED TRIAL**

Lene Hedelund, Karen V. Winther, Ditte M. Beyer,  
Peter Nymann, Merete Hædersdal  
*Bispebjerg Hospital, Copenhagen, Denmark*

**Background:** In a randomized controlled trial to examine efficacy and safety of 1540 nm nonablative fractional laser treatment for acne scars.

American Society for Laser Medicine and Surgery Abstracts 87

**Study:** Ten adult patients (mean age, 41.5 years) with acne scars were included. Intraindividual test areas of similar sizes and appearances within the same contralateral anatomical regions were randomized to i) three monthly laser treatments with StarLux 1540 nm fractional handpiece, Palomar Inc. and ii) no treatment. Blinded on-site clinical evaluations were performed before treatment, 4 and 12 weeks after final treatment. Primary endpoints were change in scar texture (0–10 categorical scales) and safety. Secondary endpoints were change in skin color and patient satisfaction.

**Results:** Preoperative scar texture was moderately atrophic and uneven in treated and untreated sites (6.5 (4.5–8),  $P^{1/4}1$ ).

Postoperative laser-treated skin texture appeared significantly more even and smooth compared to untreated control sites (4 weeks: 4.5 (2–6.5),  $P^{1/4}0.0156$ ; 12 weeks (4.5 (2.5–6.5),  $P^{1/4}0.0313$ ). Patients were satisfied with treatments (week 12: 5.5 (1–7)) and 5/10 patients evaluated acne scars to be moderately or significantly improved. No significant differences were found in skin redness and pigmentation. Patients experienced moderate pain (5 (3–7)), erythema, oedema, bullae, epithelial exfoliation and dryness of treated skin. No patients had scars. No adverse effects were seen in untreated control areas.

**Conclusion:** Nonablative 1540 nm fractional laser is a safe and effective treatment of acne scars.