



LASERS

## EARLY INTERVENTION WITH PULSE DYE AND CO<sub>2</sub> ABLATIVE FRACTIONAL LASERS TO IMPROVE CUTANEOUS SCARRING POST-LUMPECTOMY - A RANDOMIZED CONTROLLED TRIAL ON THE IMPACT OF INTERVENTION ON THE FINAL COSMESIS

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**BACKGROUND:** Despite impressive advances in scar treatment, the most effective method of treatment is early intervention, with integration of various laser modalities into scar treatment and scar prevention methods. Modalities include those targeting angiogenesis, collagen synthesis and inflammation.

**OBJECTIVE:** This study investigates the clinical effect of combination of Pulse dye laser (PDL) and fractional ablative CO<sub>2</sub> laser (FACL) in preventing aesthetically displeasing scarring as well as improving appearance and symptoms of new post-lumpectomy surgical wounds.

**METHODS:** A prospective randomized, controlled split scar study with PDL plus FACL versus no laser treatment on eighteen subjects. The authors treated the half scar of all patients, utilizing a unique protocol of PDL (Syneron Candela, V-beam, 7mm, 0.45 milliseconds, 5-6 J/cm<sup>2</sup>) 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 Vs the non-treated scar halves were evaluated by 3 investigators (two dermatologists and one plastic surgeon) and by the patients at 6 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 6 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 a 3 combined PDL + FACL, performed in the early stage of wound healing may have the potential to optimize scar formation in full thickness wounds post-lumpectomy

