

# CLINICAL RESULTS OF NON-ABLATIVE FRACTIONAL PHOTOTHERMOLYSIS\* FOR HOME-USE TREATMENT OF PHOTODAMAGED SKIN

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**Background and Objectives:** Fractional photothermolysis (FP) has been proven to be effective in the hands of professionals for the treatment of a broad range of skin conditions, including pigmented lesions, fine wrinkling and textural changes. In this study, we have investigated the safety, efficacy and acceptability of repeated, low-density in-home treatments for photodamaged skin.

**Study Design/Materials and Methods:** Multiple sequential clinical studies were conducted employing a twice weekly treatment regimen for a period of 8-16 weeks. Studies involved both investigator-conducted and self-administered full-facial treatments and treatment of off-face, sun-exposed areas. Improvement was assessed by study subjects and investigators. Objective improvement was assessed by independent blinded evaluators based on clinical photographs. Histological analysis was performed on both ex-vivo skin and on biopsies taken from treated areas according to the study regimen.

**Results:** Independent evaluator assessment demonstrated statistically significant improvement in overall appearance, pigmented lesions, dyschromia, textural irregularities and fine lines of all treated body areas. Near-optimal results were reached after 8 weeks of treatment and effects were still apparent 1 month and 3 months following the final treatment. Subject perception of treatment outcomes was positive. The treatment was well-tolerated, with a very low incidence of side effects and with limited downtime. Histological results revealed that thermal damage, epidermal regeneration, pigment removal and neocollagenesis were consistently observed and were similar to treatments with professional nonablative FP devices.

**Conclusions:** It is demonstrated that self-administered, low-density FP treatments lead to objective and visible improvement of photodamaged and photoaged skin with minimal discomfort and downtime.

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\* Confidential commercial information such as laser specifications (including output wavelength) will be presented by the lead author during the presentation.