

Combined Fractional Ablative and Nonablative Laser Resurfacing Treatment: A Split-Face Comparative Study

Joel L. Cohen MD^a and E. Victor Ross MD^b

^aAbout-Skin Dermatology and DermSurgery, Englewood, CO

^bScripps Clinic, Carmel valley, San Diego, CA

ABSTRACT

Background: Fractional ablative and nonablative lasers are useful tools for facial rejuvenation; however, ablative lasers require a period of downtime during reepithelialization. A procedure that combines both ablative and nonablative lasers may deliver good cosmetic results and reduce downtime or other side effects of treatment.

Objective: The purpose of this study was to compare a combined fractional ablative and nonablative laser procedure to ablative-only procedures for facial rejuvenation.

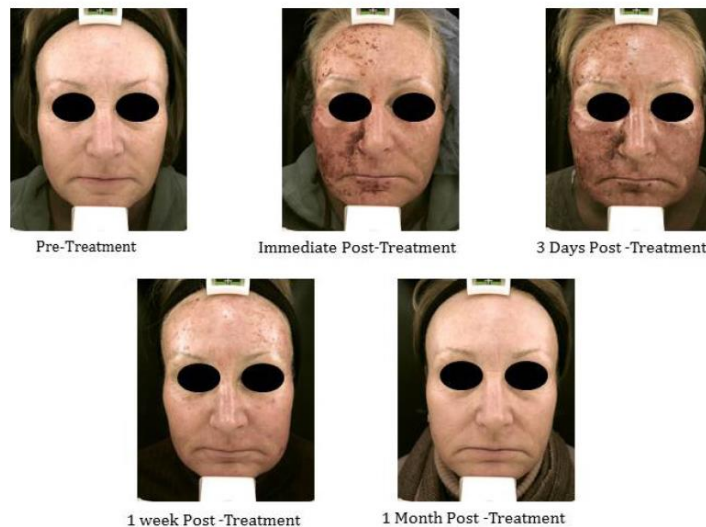
Methods: A total of 8 subjects in 2 study groups received a single, split-face, facial rejuvenation procedure in this study. In group A, we compared a combined procedure using a fractional nonablative 1,440-nm neodymium-doped yttrium aluminum garnet (YAG) laser and a fractional ablative 2,940-nm erbium (Er)-doped YAG laser on one side of the face, and a combined confluent/fractional ablative Er:YAG laser on the other. In group B, we compared the same 1,440/2,940 treatment as group A on one side of the face, and a fractional ablative CO₂ laser on the other. Subjects were followed for 3 months to assess side effects and improvement in Fitzpatrick Wrinkle Score and pigmentation.

Results: Improvement in wrinkles and pigment were seen with all techniques in both groups, and results were equivalent. Areas treated with combined fractional nonablative and ablative technique demonstrated fewer immediate side effects.

Conclusion: Facial rejuvenation using a combination treatment of fractional ablative 2,940 and nonablative 1,440 lasers provides improvement in wrinkles and pigment similar to conservative purely ablative approaches. These purely ablative approaches include the Er:YAG laser used in a sequential confluent fractional manner, or fractional CO₂ laser alone. Reduced side effects make the combined procedure an attractive option for facial rejuvenation.

J Drugs Dermatol. 2013;12(2):175-178.

FIGURE 3. A 54-year-old white female subject in group A receive 1,440/2,940-nm combined treatment on her left side and erbium-doped yttrium aluminum garnet 2,940 nm alone on her right side.



Notice that although there is improvement in both,
The initial downtime was less with combined laser treatment.