

Nd:YAG and Er:YAG wavelengths. Fotona's latest multi-application laser systems SP Dynamis and SP Spectro are used to perform TwinLight scar revision treatments, as well as a wide-range of other skin resurfacing and rejuvenation applications.

The Fraxel DUAL 1550/1927 from Solta Medical, Inc. (Hayward, California, U.S.), is a dual-wavelength fractional laser system for both deep and superficial resurfacing indications, as well as treating surgical and acne scars. The system's 1550 nm wavelength penetrates deep into the tissue to produce healthy, new skin cells with increased collagen density to smooth the rough skin typical of scar tissue. Its 1927 nm wavelength treats pigmentation often associated with scars and other dyschromia on the entire body, with minimal discomfort.

Sciton's (Palo Alto, California, U.S.) ProFractional™ tunable resurfacing laser (TRL) utilizes an Er:YAG 2940 nm wavelength and proprietary TRL technology, which allows practitioners to adjust the depth of ablation and coagulation independently, enabling customized treatment depending on scar features such as thickness, prominence of the scar and target chromophores. ProFractional ablates narrow diameter channels into the skin, initiating the body's wound healing response and stimulating fibroblasts to produce new collagen and elastin, while leaving the surrounding tissue intact for healing.

Another fractional, non-ablative device, the 1340 ProDeep® laser, from INDUSTRA Technologies (São Carlos, São Paulo, Brazil) delivers energy to subdermal layers to stimulate deep collagen for continuous improvement of atrophic, post-surgical and acne scars. Using the firm's integrated ProDeep technology, this high energy system delivers up to 220 mJ per microscopic treatment zone (mtz) in fractional

beams, which also generates more intradermal heating and increases the laser's effect on deep collagen. Firing at 3, 5 and 10 ms, the 1340 ProDeep's handpiece offers a variety of treatment intensities. Patients experience minimal recovery time, and no side effects, complications or bleeding.

CO2RE, from Syneron Medical Ltd. (Yokneam, Israel), is a robust fractional CO<sub>2</sub> resurfacing system that enables practitioners to effectively target and treat the skin's surface, middle and deep dermal layers; perform traditional resurfacing or laser excision of lesions with a lightweight delivery system. Physicians can minimize the appearance of deep acne scarring by combining CO2RE with RF-based treatments using the eMatrix system (Syneron). eMatrix's Sublative™ fractionated bipolar RF energy places heat into the upper dermis where it creates an increase in both collagen and elastin.

In 2012 Lumenis GmbH (Dreieich-Dreieichenhain, Germany) unveiled the SCAAR FX™ (Synergistic Coagulation and Ablation for Advanced Resurfacing) module expansion of its UltraPulse® CO<sub>2</sub> laser. The SCAAR FX treatment, which is delivered via the DeepFX handpiece, is intended for the treatment of hypertrophic, surgical and acne scars, including contracted tissue of varying thicknesses. With UltraPulse's SCAAR FX, the energy output of up to 150 mJ per spot and shorter pulse durations allows practitioners to reach as deep as 4.0 mm into skin tissue, reducing treatment time and increasing efficacy with minimal side effects, according to the company.

Concurrent with the technological gains made among laser-based aesthetic devices, Dr. Moelleken noted that IPL and pulsed dye lasers have also become increasingly capable, especially when it comes to scar therapy. This technology directs energy to targeted blood



Before Tx



After five Fraxel 1550 treatments  
Photos courtesy of J.R. Webb, M.D.



Male's patient before ProFractional Tx



Male's patient after ProFractional Tx  
Photos courtesy of Sciton