

Sciton's Tunable Resurfacing Laser Offers a Comprehensive Resurfacing Solution

By Bob Kronemeyer, Associate Editor

Five physicians of varying specialties shared their enthusiasm for the Tunable Resurfacing Laser (TRL) from Sciton, Inc. (Palo Alto, Calif.) at a roundtable in April 2008, held at the annual meeting of the *American Society for Laser Medicine and Surgery (ASLMS)* in Kissimmee, Fla.

Light resurfacing with the MicroLaserPeel; deep resurfacing; and fractional resurfacing with ProFractional and ProFractional-XC are the four versatile and highly effective modules of the TRL. The 2940 nm Er:YAG laser provides a treatment depth of up to 50 µm with the MicroLaserPeel, up to 330 µm of ablation plus coagulation with deep resurfacing and up to 1.5 mm with the ProFractional technology, all in a single pass.

J. David Holcomb, M.D., a facial plastic surgeon in Sarasota, Fla., prefers the 2940 nm wavelength versus the 10,600 nm wavelength of CO₂ lasers because "it more efficiently ablates tissue; there is a narrow zone of residual thermal damage (ablation mode) and an independent coagulation mode for greater tissue heating." In addition, re-epithelialization generally occurs faster with the 2940 nm wavelength and post-resurfacing erythema "is less severe, with a shorter duration. There is also a decreased likelihood of complications (e.g., hypopigmentation, scarring) and an extended range of skin types that can be treated, depending on the application."



J. David Holcomb, M.D.
Facial Plastic Surgeon
Sarasota, FL

Resurfacing with TRL uses a short pulse for tissue vaporization and a longer pulse to create the thermal zone. The user is able to independently and precisely select ablation and coagulation depths (ablation: 0 to 200 µm; coagulation: 0 to 130 µm in a single

pass). Furthermore, the laser can emulate any existing ablative resurfacing modality, including Er:YSGG, CO₂ and anything in between. Such a versatile system eliminates the need to invest in multiple technologies and allows the user to tailor treatments to individual patients' needs.

Treatment results range from effective to profound for the following indications: light and deep resurfacing, lumps and bumps, scar and acne scar revision, wrinkles, dyspigmentation, actinic keratoses and general skin rejuvenation.



Denise Baker, M.D.
Cosmetic OB/GYN
Brandenton, FL

TRL "is my magic wand," said Denise Baker, M.D., a cosmetic OB/GYN in Bradenton, Fla. "Treatment can be as light as a feather or a 'bunker buster' for some of my acne patients. This laser has allowed me to give patients a second chance or completely change their lives. In certain cases, the laser is as therapeutic as the best psychotropic drug out there."

"I have been very impressed with the results I have achieved with only one TRL treatment," stated Robert Langdon, M.D., a dermatologist who practices in Guilford, Conn.



Robert Langdon, M.D.
Dermatologist
Guilford, CT

The MicroLaserPeel component of TRL treats mild wrinkles, scars, keratoses and dyspigmentation. The mid to deep epidermal peel (10 to 50 microns in one pass) requires only topical anesthesia and patients can return to work in three to four days. According to users, the treatment is ideal for patients desiring a

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Acne before Tx

After three BBL/ALA and two ProFractional treatments

Photos courtesy of Denise Baker, M.D.

“Sequential MicroLaserPeel plus ProFractional is the best of both worlds. There are quicker results, more textural improvement — compared to fractional alone — and no increased healing time.”



Before Tx

After TRL resurfacing Tx

Photos courtesy of J. David Holcomb, M.D.

procedure more aggressive than microdermabrasion but less aggressive than deep skin resurfacing.

Dr. Baker demonstrated the dramatic effects of MicroLaserPeel treatments by sharing photos of her 59 year old husband's hands (one hand treated, the other not). "This is a man who grew up in Florida and was an outdoor kid. He still carries the signs of his past on his hands," she said. The untreated hand reflected her husband's true age, while the treated hand looked as if it belonged to someone in their 30s.

Bruce Katz, M.D., a clinical professor of dermatology at the Mount Sinai School of Medicine in New York City, N.Y., is impressed with MicroLaserPeel's computer automated treatment because of its uniformity, flexibility, predictability, safety and speed.



Bruce E. Katz, M.D.
Clinical Professor of Dermatology
Mount Sinai School of Medicine
New York, NY

ProFractional, and the newly launched ProFractional-XC, are used for removing visible signs of skin damage and rejuvenating the dermal collagen matrix to improve wrinkles, fine lines, scars (acne, post-traumatic, surgical), tone and texture of the skin. This procedure is also quick, comfortable and has minimal downtime. The ProFractional module "fractionally delivers energy into the skin and creates clean channels of ablated tissue in the dermal layer, injuring collagen and stimulating a wound healing response through fibroblast activity," explained Dr. Katz. "Fibroblasts stimulate new collagen production which rejuvenates the collagen matrix and plumps the skin from the inside out. As a result, we achieve noticeable improvement in skin tone and texture, wrinkles, acne scars and pigmentation."

Dr. Katz noted that ProFractional has a variable treatment depth of 25 to 1,500 microns. "Due to very efficient water absorption, you can precisely control treatment depth," he said. "Microscopic charges deposited into the dermal tissue cause a wound healing response and new collagen production. There is no evidence that bulk tissue heating is needed to stimulate this type of response. Treatment is virtually pain free since no transient heat migrates outwardly from micro-ablated channels into the surrounding tissue."

Jason Pozner, M.D., a plastic surgeon and medical director of Sanctuary Medical Aesthetic Center and Sanctuary Plastic Surgery in Boca Raton, Fla., believes that ProFractional provides better results in fewer treatments than non-ablative fractional technologies and with less post treatment redness and a shorter healing time than CO₂ fractional technology. However, "sequential MicroLaserPeel plus ProFractional is the best of both worlds," he noted. "There are quicker results, more textural improvement — compared to fractional alone — and no increased healing time."



Jason N. Pozner, M.D.
Medical Director
Sanctuary Medical Aesthetic Center
and Sanctuary Plastic Surgery
Boca Raton, FL

ProFractional-XC, the latest addition to TRL, offers a dramatic increase in treatment speed and the option to add a controlled amount of thermal coagulation to the ablated channels, as well as the stunning treatment outcomes and quick healing that is characteristic of the original ProFractional device. ProFractional-XC is targeted toward experienced users in busy practices. It further expands the versatility and capability of the Tunable Resurfacing Laser.