

Texas Southwestern Medical Center, Department of Plastic Surgery, who conducted an off-face study using the re:pair device on hypertrophic scars. Although the study yielded mild results in terms of scar improvement, **the significance of the study**, according to Dr. Burns, is that the re:pair can be safely used off face. "With CO<sub>2</sub> resurfacing, the patient often had a line of demarcation between areas that had been resurfaced vs. areas that had not," says Dr. Burns. "With the re:pair, you can treat off the face down to the neck and décolleté, producing a better overall cosmetic result."

Dr. Burns, who has had four years' experience with the Fraxel re:store device, says that when comparing the two devices, the Fraxel re:pair is superior at treating wrinkles. "In one treatment with the re:pair, you get better improvement in terms of wrinkles than with 5 treatments of the Fraxel re:store at recommended settings." For periorbital wrinkles, he used the Fraxel re:pair at 30mJ and 400 MTZ/cm<sup>2</sup>, and for perioral

wrinkles, he used 30mJ, and performed 4-8 passes at 100 MTZ/cm<sup>2</sup>. "In 3-6 days the patients were healed completely and the improvement in wrinkles was much better."

Just because the re:pair offers greater improvement than the re:store does not mean it is time to shelve the re:store. The Fraxel re:store still has a place in his practice because he

can delegate it to a nurse. The re:pair is an ablative laser, so Dr. Burns feels that it is better left in the hands of a physician. In the end, the cost to the patient is roughly the same; the difference is in the downtime and in the number of treatment sessions. Patients who cannot afford downtime must still opt for the Fraxel re:store.

## MiXto SX

The MiXto SX (pronounced "mix-too") is a product from Lasering Italia, an **Italian firm based in Modena, Italy.**

It is now offered in the U.S. by Lasering USA and via third party distributors. The MiXto was available in Europe and Asia before arriving in the U.S. and has been used extensively by Dr. Cassuto as well as in Singapore by C.L. Goh at the National Skin

Center. Compared to the Lumenis Encore ActiveFX/DeepFX and the Fraxel re:pair, the MiXto is a fairly

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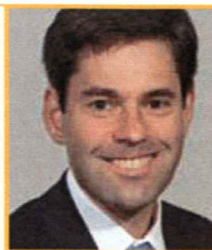
*—John L Burns, M.D.*

simple device. In fractional mode, the MiXto is set to a fixed ablation of 20% of the skin. The other parameters are index, watts (power), and treatment area, which defines the size of the scanning beam. When researching this device, the two things that stood out in my mind are its affordable price tag (\$73,500) and proprietary scanning algorithm, which ensures that each strike of the micro-beam is separated by the longest possible interval. **This fixed scanning pattern** reduces the amount of thermal injury, which reduces patient pain and downtime.



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He did a Residency in Plastic Surgery, Integrated Program from the University of Texas Medical Branch, Galveston, TX, and a Microvascular Reconstructive Surgery Externship at the University of Texas MD Anderson Cancer Center, Houston, TX.



Before MiXto SX Treatment for Acne Scars (Left), and 90 Days After 2 Treatments.  
Photos Courtesy of Daniel Cassuto, M.D.



Before MiXto SX Hand Treatment (Left), and 90 Days After 1 Treatment.  
Photos Courtesy of Daniel Cassuto, M.D.

### WHAT THE EXPERTS SAY:

I interviewed Daniel Cassuto, M.D., a Professor of Plastic Surgery at the University of Catania, Italy, one of the pioneers in the use of this device, who was in the U.S. for a short period of time in October to perform demonstrations on this product. Dr. Cassuto performed a study using MiXto SX for overall skin rejuvenation.<sup>3</sup> "Because of the scanning algorithm that places each spot farthest from the next, the patients felt very little pain, even without topical numbing cream. On

*The patients felt very little pain, even without topical numbing cream. On a pain scale of 1-5, the average pain level was 1.8.*

a pain scale of 1-5, the average pain level was 1.8," says Dr. Cassuto. He likes the fact that he does not need to apply topical numbing creams because these types of preparations can alter the water content of the skin.

Furthermore, Dr. Cassuto says that the design of the device makes it extremely simple to use. There are

only 3 parameters and most treatments are performed at a power of 8-10 watts and an index value of 6-8 watts. The last parameter is the scan size, which can be from 5-20mm, depending on the area of treatment. "There is no blood in this procedure because the tissue is vaporized immediately." Like the Lumenis and Reliant products, this device can also function in regular CO<sub>2</sub> mode to vaporize solid lesions. And, although the fractional component is set to a fixed ablation of 20% of the tissue, Dr. Cassuto can increase the ablation density to 40% by overlapping the scanned spots at a 45 degree angle. Dr. Cassuto has successfully treated Asian Skin Type IV for acne scarring using this device, with no adverse sequelae. He has not yet observed any post-treatment complications since beginning treatment with device.

### CONCLUSION

The Lumenis device seems to be a fairly flexible device that offers different modes of treatment with the largest spot and highest level of volumetric tissue ablation, but it has

interchangeable handpieces that can be cumbersome and requires software to function properly. The Reliant re:pair will give you the highest depth of penetration, best brand recognition, and will be supported by the most research; but it has disposable costs, and the handroller/scanner may not be for everyone. The MiXto device is a very easy-to-use device with a great price tag, but it has the most superficial depth of penetration and its fixed tissue ablation may not offer the flexibility of the other devices.

I am personally very intrigued by this technology. The idea that one



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### LASER SPECIFICATIONS TABLE

	Fraxel re:pair	MiXto SX	Lumenis Encore ActiveFX	Lumenis Encore DeepFX
Wavelength	10600nm	10600nm	10600nm	10600nm
Beam Spot Size	200 Microns	300 Microns	1.2 mm	120 Microns
Power	40 Watts	30 Watts	60 Watts	60 Watts
Type of Emission	Pulsed	C/W Pulsed	C/W Pulsed	C/W Pulsed
Scan Area	N/A	5-20mm <sup>2</sup>	Up to 14mm <sup>2</sup>	
Pulse Energy	5-70mJ/MTZ	5-20 Watts	2-225mJ	2-225mJ
Handpiece	Roller	Scanner	Scanner	Scanner
Ablation Depth	Up to 1.6mm	Up to 500 Microns	Up to 120 Microns	Up to 700 Microns
Disposables	Yes	No	No	No
Price	\$119,000	\$73,500	Contact Mfr.	Contact Mfr.

*Disclaimer: The opinions expressed in this article are based on the author's research. The author has not been financially compensated to endorse any product in this article.*

visit can treat dyschromias, dermal scarring, and achieve skin tightening with low complication profile seems just too good to be true. At one of the meetings I attended recently, E. Victor Ross, M.D., President-Elect of ASLMS, said, "We do not know if deeper is better. Diameter may be the problem, not the depth of penetration." If you are evaluating these devices, you should ask yourself: Is it the depth of the ablation, the density (amount of skin ablated), or the diameter of the ablation that gives the best results? Until we have some good split-face studies and long-term follow-up results with a larger patient pool, we will not know for sure. But for those of you who want to be cutting edge and on the forefront of research, this is the place to be. 

#### FINANCIAL DISCLOSURES

**Dr. David J. Goldberg** received a research grant from Lumenis for his study on ActiveFX.

**Dr. Robert Weiss** is a paid researcher for Lumenis, Cynosure, and Palomar, and is on the Medical Advisory Board for Lumenis.

**Dr. Alexander Ataii** is a paid preceptor for Lumenis.

**Dr. Christopher Zachary** is an unpaid consultant to Sciton and Reliant. He received grant support from Reliant. Reliant also granted educational support, honoraria, and loan or discounted equipment to the University of California, Irvine.

**Dr. John Burns** is a researcher for and will receive equipment from Reliant.

**Dr. Daniel Cassuto** received research funding from Lasering Italy.

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