

SPECIAL REPORT

Doctors on Capitol Hill Discuss Advances in Laser Treatment of Scars, Burns

BY MATTHIAS DONELAN, MD AND JILL WAIBEL, MD

Unprecedented survival rates following severe burns and significant injuries have created a serious deficiency in treatment for millions of patients. Innovations in lasers are bringing new hope to these patients due to their ability to improve scars with pigmentary abnormalities, surface irregularities, abnormal vasculature, hypertrophy, and usually some degree of contraction, often associated with contractures. Patients report improvement in scar appearance, range of motion, and decreased pain and itching associated with these traumatic injuries along with a better quality of life when treated with lasers.

The American Society of Laser Surgery and Medicine (ASLMS) recently joined the American Institute of Medical and Biological Engineering (AIMBE) to host the Biomedical Technology Exhibition at the US House of Representatives. We were fortunate enough to be asked to impart the results of our project entitled “Laser Treatment of Burn and Traumatic Scars” as a live demonstration and PowerPoint presentation.

We used the Lumenis Ultrapulse fractional ablative carbon dioxide laser and the Lumenis IPL M22 to demonstrate the technology. The Lumenis Ultrapulse is the deepest fractional ablative laser on the market and can reach the depths needed to treat severe burn and trauma patients. To illustrate these benefits, we helped Congress and their staff use the laser on an eggplant and showed before-and-after photographs of severely wounded warriors and civilians who demonstrated significant improvement in both pre-clinical and clinical models of scar appearance, improved range of motion, and decreased scar symptoms.

DRAMATIC IMPROVEMENTS SEEN WITH ABLATIVE FRACTIONAL LASERS

Hypertrophic burn and traumatic scars are improved by either ablative or non-ablative fractional lasers, but the most dramatic improvements are seen with ablative frac-



Drs. Donelan and Waibel outside the office of Senator Marco Rubio (R-FL)



Drs. Donelan and Waibel at the AIMBE.

tional lasers. The injury produced by an ablative fractional laser induces a more robust collagen remodeling response than non-ablative lasers. The non-ablative laser only reaches depths of 1.8mm, where the AFL Lumenis ScaarFX reaches depths of 4.0mm, respectively. In addition, tissue ablation appears to induce a modest but immediate photomechanical



Dr. Donelan and Waibel and Ray Choye (Lumenis) with the lasers brought into Congress.



Dr. Waibel's before and after images.



Staffers "treating" eggplant with the Lumenis Ultrapulse CO₂ laser at the AIMBE.

cal release of tension in restrictive scars. Often patients have an increase in range of motion within 24-48 hours after one fractional ablative therapy treatment. Flat or atrophic scars from burns and trauma also respond to fractional laser therapy.

We have found that using lasers decreases the number of more expensive surgeries currently required to treat extensive scarring. After laser resurfacing, scars are more amenable to additional surgery. Despite the promise, access to the technology is an issue. These treatments currently remain unavailable to the general public due to lack of insurance reimbursement. Many physicians have been working to get codes so that laser treatment of burn and trauma scars are covered by insurance. Based on the work of many dermatologists, we currently have a level 3 code. We hope to get a level 1 reimbursement code approved within the next five years. ■

Matthias B. Donelan, MD is Chief of Staff at Shriners Hospitals for Children, Boston and is board certified by the American Board of Plastic Surgery. Jill Waibel, MD, is a Miami-based Dermatologist. She has disclosed that she has done one clinical trial with Lumenis.

CORRECTION

In the August edition, p. 19a, the insert entitled "Nutraseb™ Facial Cream: Designed to Target Seborrheic Dermatitis," Figure 2 (Scale Reducing Properties) was erroneously repeated in place of Figure 3 (Anti-inflammatory Properties). Figure 3 is shown here.

Access the full, up-to-date insert online at PracticalDermatology.com/2017/08/

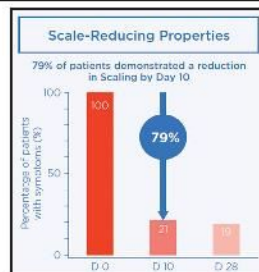


Figure 2

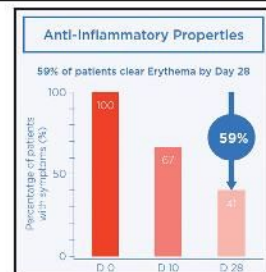


Figure 3