

## Combination Fractional and Traditional Resurfacing with the QuadraLASE™ Fractional CO<sub>2</sub> Laser

Dr. Gerald Goldberg, MD  
Pima Dermatology  
Tucson, Arizona



Dr. Gerald Goldberg, MD

### Introduction

Over the last 15 years, traditional CO<sub>2</sub> resurfacing has proved to be the gold standard in skin rejuvenation modalities. In selected individuals, it has often yielded exceptional and long-lasting improvement in skin tone, dyschromias and texture. The procedure is often the best choice for patients with deep wrinkles and acne scarring. Very simply, the procedure ablates the epidermis and all superficial lesions, down to 200–250 μ or deeper, and the associated (collateral) thermal injury to the papillary dermis stimulates the development of new collagen leading to collagen remodeling. However, there are, however, several significant downsides to the traditional approach. There is variable clinical downtime from 5 to 14 days depending on the depth of the laser application (i.e., fluence, pulse width, density and number of passes).

The treated area is an open wound requiring careful management and prophylaxis against infection, and social downtime of two to six weeks or more.

In addition, there is a narrower therapeutic window of traditional CO<sub>2</sub> laser on the neck and chest. There have been reports of scarring with both the traditional CO<sub>2</sub> laser and more recent fractional CO<sub>2</sub> modalities. Now, it can be easily and more safely treated with the QuadraLASE fractional CO<sub>2</sub> laser. With fractional application and a shallower effect (i.e., 300 μ spot), resurfacing can be accomplished with a higher level of safety and less risk of scarring and pigment changes.

The QuadraLASE fractional CO<sub>2</sub> laser provides results that approaches traditional CO<sub>2</sub>, yet mitigate many of the downside aspects of that approach. It creates a scanned pattern of laser impacts that leaves a grid of healthy, undamaged epidermis on the treated surface. This simplifies wound care and allows for more rapid skin healing, thus reducing both clinical and social downtime.

One of the benefits of the QuadraLASE CO<sub>2</sub> fractional laser is its versatility. If the patient has very little tolerance for downtime and needs to be healed within five days, a light fractional application (300 μ, low density) can be performed. If the patient wants additional work done on deeper perioral or periorcular rhytids, a more aggressive combination (i.e., 180 μ spot fractional or one to two ablative

passes) in those areas can be implemented. To avoid any significant demarcation between cosmetic units, ablative resurfacing can be done on the face and fractional resurfacing on the neck and chest, as well as ablative resurfacing around the mouth and fractional resurfacing to blend the cheeks. A customized plan can be offered for each individual to deliver the results that best match the patient's needs and expectations.

### Method

In this clinical example, we have a 63-year-old female, Fitzpatrick Type I, with significant actinic damage and deep perioral rhytids. She desires overall facial, neck and chest improvement with special attention to her deeper vertical lip lines.

Two hours prior to treatment, she applied a topical anesthetic (Ela-Max® 5% Lidocaine) to her facial skin. Approximately 30 minutes prior to the procedure, she was given sedation of 50 mg IM Demerol®, 25 mg IM Phenergan® and 10 mg Valium® sublingually. In the areas subject to full resurfacing, subcutaneous Lidocaine 1% with epinephrine was injected using facial blocks.

I used fractional settings of 15 watts, 4 msec dwell time, 20% density with the 300 μ handpiece and two passes of the QuadraLASE for her cheek, nose, forehead and periorcular areas. Two fully ablative passes were used at a setting of 15 watts and 700 μsec dwell time. For the neck and chest a single pass was used at a setting of 15 watts, 4 msec dwell time and 20% density.

The treatment proceeded at the above settings and took about 60 minutes from start to finish.

Immediately after treatment, the patient was provided with moist cooling compresses and instructions in proper wound care. Posttreatment, she applied frequent moist compresses to the skin followed by Elta® moisturizer (a gentle, spreadable, topical ointment similar to Vaseline®). The patient took prophylactic antibiotic and antiviral medication for one week post-operative and oral prednisone for three days post-operative. She was seen several times in the first week post-procedure and again at two weeks, one month, two months and five months.

### Results

The results are clearly demonstrated in the before-and-after photographs. Figure 1 shows significant improvement in the tone and texture of her skin on the face and chest. Figure 2 shows dramatic improvement in her lip lines.

In my opinion, the best patients for the QuadraLASE procedure are those between the ages of 40 and 70 with mild skin laxity, dyschromia and/or textural concerns such as wrinkles and scars. It is critical to determine that the patient is a good candidate for treatment and that his or her expectations for treatment can be met.

Generally, patient outcome is very impressive. Patient satisfaction is very high, and the results appear to be quite durable. For patients willing to endure the transient discomfort and the downtime associated with the treatments, the rewards are substantial.

### Discussion

The ability of the QuadraLASE to deliver both traditional and fractional CO<sub>2</sub> energy makes it one of the most versatile devices in my practice—and one that provides the flexibility I need to precisely tailor the treatment to the individual patient.

From a patient satisfaction standpoint, the combination of traditional and fractional CO<sub>2</sub> treatments is outstanding. Patients have referred their family and friends for treatment, which tells me everything I need to know about how they feel about the results.

Among my patients, there is an increasing call for both fractional ablative and non-ablative treatments in my patients. There has been a resurgence of interest and demand for higher-level results than what they or their friends have experienced with multiple, often expensive, non-ablative laser alternatives. If the patient can tolerate the downtime, I recommend a CO<sub>2</sub> procedure because it offers a more predictable, durable and tangible result in a single treatment than the non-ablative alternatives.

*Dr. Gerald Goldberg is internationally recognized as a dermatologist with unique experience in laser surgery. He has published widely in medical literature and has lectured nationally and internationally on a variety of laser-related topics. Currently, Dr. Goldberg is certified in more than 25 laser modalities; he brings to his patients expertise based on more than 20,000 laser surgeries to date.*



Figure 1 - Pretreatment.



30 days posttreatment.

Figure 2.



Pretreatment.



30 days posttreatment.

Treatment parameters are subject to change. Please consult your sales representative or clinical consultant, or visit [www.candelalaser.com/practice360](http://www.candelalaser.com/practice360) to obtain current information regarding the use of your Candela device.

GentleMAX, Vbeam and AlexTrivantage are registered trademarks and QuadraLASE is a trademark of Candela Corporation; Elta is a registered trademark of Swiss-American Products, Inc.; Valium is a registered trademark of Hoffmann-La Roche Inc.; Demerol a registered trademark of Sanofi-Aventis Group; Phenergan is a registered trademark of Wyeth-Ayerst Laboratories. Vaseline is a registered trademark of Unilever, Inc.. To find out more about Candela and its products, contact your authorized Candela representative or call toll-free worldwide (800) 821-2013. Dial USA country code if calling internationally.

©2009 Candela Corporation. All rights reserved. Printed in the USA. 09/09 0920-XX-XXXX Revision A

**Candela Corporation**  
530 Boston Post Road  
Wayland, MA 01778 USA  
Phone: (508) 358-7637  
Fax: (508) 358-5569  
Toll-Free: (800) 821-2013  
[www.candelalaser.com](http://www.candelalaser.com)



**CANDELA®**