

# AESTHETIC

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## Lux1540 Fractional Laser for Skin Resurfacing Now Available in Europe

The patented fractional resurfacing capability of the Lux1540™ Fractional Laser handpiece from Palomar Medical Technologies (Burlington, Massachusetts, U.S.), has greatly improved skin resurfacing, according to clinical researchers. According to E. Victor Ross, M.D., "The Lux1540 is the best alternative for rejuvenation of the neck and chest and for treatment of acne scars." This handpiece, which is part of the StarLux® Laser and Pulsed Light Platform, delivers an array of high precision microbeams, which create columns of coagulation as far as 1.5 mm into the dermis.

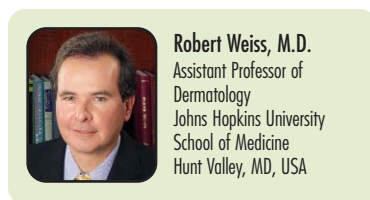


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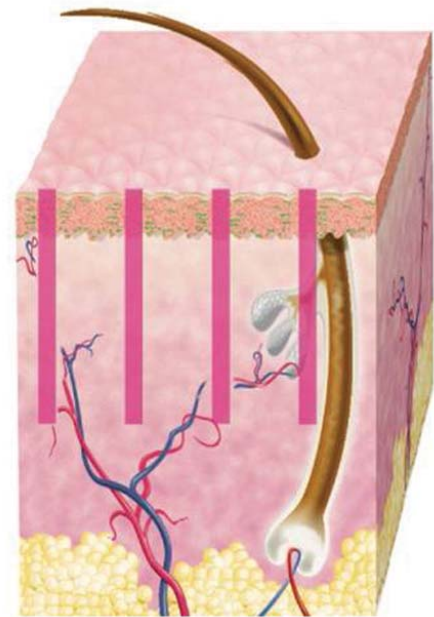
The Lux1540 was recently cleared by the FDA for skin resurfacing. It allows for deeper penetration than previous technologies through the use of a fractional approach. These deep columns of coagulated tissue initiate a natural healing process that accelerates the formation of new, healthy tissue to fill in the damaged treatment zones; the deeper the columns, the greater the volume of new tissue. Coagulated cellular debris is either transdermally eliminated or replaced with new collagen as the skin is rejuvenated.

“The Lux1540 has brought the fractional technology to a new level. It is the best non-ablative skin resurfacing technology, offering great efficacy, speed and virtually painless treatment,” attests Pier Luca Bencini, M.D., of the Institute of Laser Surgery and Dermatology in Milan, Italy.



“I’m most impressed with the ease of application to the patient’s skin compared to other fractional devices,” said Robert Weiss, M.D., an associate professor of dermatology at Johns Hopkins University School of Medicine in Baltimore, Maryland, U.S. “There is no messy blue dye and most patients can be treated without topical anesthetic. There is also no cost of disposables.”

The predictability of an array of microthermal zones, rather than an irregular scan, is another advantage of the Lux1540. “This leads to much less patient discomfort because the heat is distributed more evenly,” Dr. Weiss



said. “There should also be increased efficacy compared to other mid 1500 nm devices.”

Dr. Weiss and his associates are conducting a clinical trial for Palomar for treating acne scars and wrinkles with the Lux1540 handpiece. The treatment protocol is the same for both indications: three sessions, one month apart. “For acne scars, we are seeing significant improvement. The improvement in wrinkling has also been significant. Patients are very pleased. The handpiece allows you to treat right up to the lower eyelid for wrinkles under the eye. This is very difficult to accomplish with scanning fractional technology.” Dr. Weiss also finds it very easy to completely cover the skin. “You can readily see the treated areas because of the slight redness, so there are no skipped areas.”

Lux1540 protects the skin by delivering its microbeams in individual short pulses, with active contact cooling. This is significantly more comfortable than systems that deliver beams over a longer period of time. Furthermore, the handpiece features two heads for different treatment approaches. The 10 mm

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spot size head delivers fluences up to 70 mJ per microbeam (mB) and creates a 100 mB/cm<sup>2</sup> array of columns for deep coagulation. In contrast, the 15 mm spot size head delivers fluences up to 15 mJ/mB and creates a 320 mB/cm<sup>2</sup> array of narrow columns for relatively shallow coagulation.

"In the study, we are only using the 10 mm spot," Dr. Weiss explained.

"However, we anticipate treatment with the 15 mm spot for patients with more superficial wrinkles or scars. Overall, I think it is remarkable that one platform can offer so

many choices. You should be able to treat virtually any cosmetic skin problem. Fractional technology also allows you to treat all skin types, even up to Fitzpatrick skin type VI, and patient discomfort is minimal."



Eye before Tx



Eye after Tx



**E. Victor Ross, M.D.**  
Director of the Laser and  
Cosmetic Dermatology  
Center at Scripps Clinic  
San Diego, CA, USA

"It's wonderful to be able to treat some cosmetic indications that traditionally I've had to treat with ablative technology," added Dr. Ross, director of the Laser and Cosmetic Dermatology Center at the Scripps Clinic in San Diego, California, U.S. "For example, with acne scarring, I previously needed to use an ablative technology or something invasive to end up with any real improvement. There was nothing

available that would return the patient back to normal within one or two days." Similarly, when treating wrinkles, "with older technology, the patient might have been down for five, seven or 12 days. With the Lux1540 handpiece, the patient is swollen for only one or two days and has minimal downtime.

"In my opinion, fractional resurfacing has proven to be the gold standard for the treatment of many skin conditions. This includes fine rhytides, acne scars and melasma," said Vic Narurkar, M.D., a dermatologist in private practice in San Francisco, California, U.S. "In fact, in my practice, fractional resurfacing has virtually replaced ablative resurfacing because we are achieving consistent results, without all the risks associated with ablative procedures, assuming there is proper patient selection."



**Vic Narurkar, M.D.**  
Dermatologist  
Private Practice  
San Francisco, CA, USA

Dr. Narurkar is currently involved in clinical trials assessing the efficacy of the Lux1540 in combination with the LuxG™ Pulsed Light handpiece, which also works with the StarLux Platform. "If someone has more superficial damage, such as telangiectasis or lentigines, we address that with the LuxG handpiece. But when you need to go deeper for resurfacing or for rhytides or acne scars, you can use the 1540 nm handpiece. We now have a platform that allows us to change handpieces to address the different etiologies."

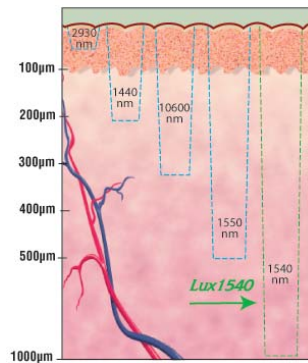
Stanley Kovak, M.D., of the Chicago (Illinois, U.S.) area, states that the Lux1540 is his handpiece of choice for mild-to-moderate

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dynamic wrinkle and acne scars. "We typically schedule three to five sessions, depending on the severity of the acne scars, at about two week intervals. Often, we see at least 50% improvement at three to four months after completion of a series." For any indication, Dr. Kovak prefers to treat with a 40% to 50% overlap. "Often my full-face treatments are done within 30 minutes, start to finish."

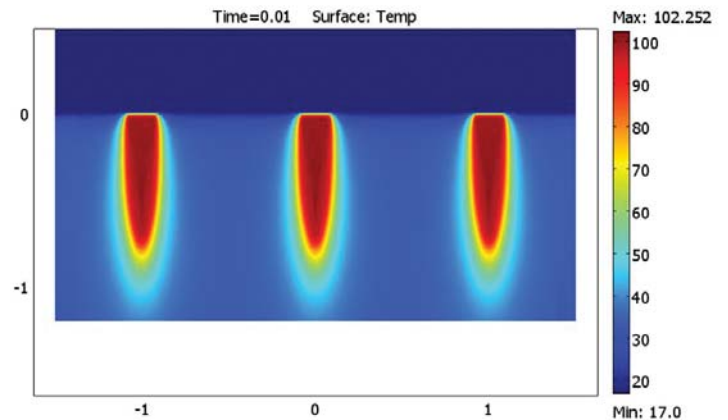
"I have used both the Palomar Lux1540 Fractional laser and a competing fractional laser during the past year, commented Thomas Pröbstle, M.D., of the University of Heidelberg, Germany. "I have found the StarLux system easier to use, requiring much less patient preparation and anesthesia. My patients prefer the Lux1540, from the comfort point of view. It seemed to me that in a few patients who received both treatments, the Lux1540 results were better in clinical outcome," he concluded.



"The StarLux platform is an integral part of my skin rejuvenation program," says David Vasily, M.D., of Aesthetica Cosmetic and Laser Center, Bethlehem, Pennsylvania, U.S. "The approach of layering technologies like LuxIR, Lux1540 and LuxG gives my patients the best opportunity to improve their skin laxity, wrinkles, texture and dyschromia issues. The Lux1540 technology is a great addition to the StarLux platform. My study on melasma has shown very promising results on this difficult to treat condition."

The Lux1540 handpiece is compatible with the new StarLux® 500 Laser and Pulsed Light System. This system offers 70% more power than previously available, promising faster treatments and higher peak power for greater efficacy.

StarLux 500 was one of a roster of new technologies introduced by Palomar at the *American Academy of Dermatology's* (AAD) annual meeting in February 2007. Another new technology is the LuxDeepIR™ Fractional Infrared handpiece, which offers fractional skin tightening through soft tissue coagulation. This unique fractional treatment combines columns of infrared light



with aggressive cooling to generate islands of coagulated tissue, beginning at 1 mm into the dermis (thus preserving the epidermis and upper dermis), and extending as far as 4 mm into the dermis and fat layer.

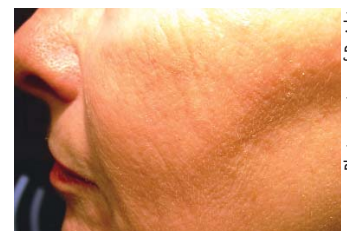
Creation of new tissue in the coagulated areas reduces the appearance of skin laxity and cellulite, for a tighter, smoother and long lasting result. Since the LuxDeepIR allows adjustment of pulse durations and energy levels, the practitioner can vary the depth of penetration at different anatomical sites, and customize their treatments to the needs of the patient. This allows more control and flexibility for the best results.

Other new StarLux Platform devices introduced at AAD include the LuxW™ Pulsed Light handpiece for optimized removal of pigmented lesions and the LuxYs™ Pulsed Light handpiece for permanent reduction of lighter, finer hair.

Palomar has recently opened a European office in Amsterdam (The Netherlands), under the direction of Robert Fielitz. For more information please contact this office at [rfielitz@palomarmedical.com](mailto:rfielitz@palomarmedical.com).



Before Tx



After Tx

Photos courtesy of Dwight Scarborough, M.D.