

## COMMENTARY

# Bright Future Is Foreseen For the Affirm Laser

Laser treatments result in impressive improvement in perioral and periocular wrinkles and acne scarring; the treatments also are effective for skin tightening

BY RONALD MOY, M.D.

**T**he Affirm with Combined Apex Pulse (CAP) technology (Cynosure) is the latest innovation that uses advanced fractional delivery for the treatment of photoaging, rhytids, acne scarring, skin rejuvenation, pigmentation, redness, and promoting skin tightening. The laser uses a 1440-nm Nd:YAG with an optional xenon pulsed light (XPL) handpiece.

The Affirm laser has proven to be safe and effective for non-ablative rejuvenation treatments. In my practice, the laser has become the most popular fractional technology requested by patients. Laser treatments result in impressive improvement in perioral and periocular wrinkles and acne scarring; the treatments also are effective for skin tightening.

Due to the high absorption of water, the laser uses the ideal wavelength for treating the zone of photodamage/photoaging, which lies 300 microns into the dermis. By comparison, CO<sub>2</sub> laser resurfacing is typically less than 200 microns deep, and conventional dermabrasion technologies only reach as far as 150 microns deep. The Affirm laser requires no pre-treatment anesthetics or dyes. Treatment sessions last 15 minutes.

The Affirm's air cooling device easily attaches to the handpiece so the procedure can be performed rapidly and without an assistant. Only two passes per treatment session are required, with a third sometimes needed when using a lower setting for acne scars.

At the heart of the Affirm is Cynosure's mid-infrared CAP technology. The energy is redistributed through the disposable tip, which comprises approximately 1,000 diffractive elements in a micro-lens array; the energy targets the dermis to simultaneously stimulate and remodel collagen, accounting for the laser's skin-tightening and rejuvenation effects. Treatment produces a pattern of coagulated tissue columns surrounded by uncoagulated tissue. The coagulated columns are produced by high-fluence "apexes" while the uncoagulated columns are produced by the lower background fluences.<sup>1</sup>

## THE PROCEDURE

The Affirm laser is associated with minimal downtime, adverse effects, and discomfort during

treatment. Depending on the patient's skin type, I typically start at fluences between 3.0 J/cm<sup>2</sup> – 4.0 J/cm<sup>2</sup> for most patients. Erythema and edema are transient and heal rapidly. I typically perform a total of five treatments at three-week intervals. Affirm treatments have improved fine, moderate, and deep lines, photodamage, irregular skin contouring, acne, and scars. The most popular uses have been the treatment of wrinkles, sun damage, and acne scars. Complications have included rare blistering, that all blisters healed quickly.

## THE FUTURE

At this year's American Academy of Dermatology, Cynosure introduced the newest upgrade to the Affirm anti-aging platform – a 1320-nm Nd:YAG that will address coagulation resulting in deep tissue tightening. The Cynosure Affirm laser system will now include XPL (560 nm – 950 nm wavelength), and a 1440-nm wavelength that can be used alone or combined in MultiPlex mode with the 1320-nm wavelength. This system now targets all three layers of photo damaged tissue. The shallow (epidermal and elastosis region) elements are targeted with the 1440-nm Nd:YAG. The XPL wavelengths treat the pigmentation and redness that are also part of the photoaging process. From a clinical prospective, a scheduled series of MultiPlex treatments will lead to relatively faster observable superficial skin rejuvenation, followed by a slower improvement in tissue laxity. The advantages include using lower fluences, faster treatment, and effective targeting of all components of the collagen reorganization process.

## CONCLUSION

The Affirm has been an asset to my busy practice. Patients request the Affirm because treated patients have recommended it to each other. I see a bright future for the Affirm in other applications such as the treatment of ethnic skin and the treatment of eyelid wrinkles. The preliminary results for these conditions have been very encouraging.

*Dr. Moy is a board-certified dermatologist and cosmetic surgeon and clinical professor at the David Geffen School of Medicine at the University of California in Los Angeles. He also is Director of Dermatology and Cosmetic Surgery at the California Health and Longevity Institute at the Four Seasons Hotel, Westlake Village, Calif.*

## Reference

1. Weiss RA, Bene N. Clinical evaluation of Affirm Combined Apex Pulse (CAP) for treatment of superficial photoaging and scars [white paper]. Westford, Mass.: Cynosure, Inc.; 2006.