



# Fractional lasers

*Retinoids, varying wavelengths optimize results*

## QuickREAD

While fractional lasers appear to be offering some of the best results currently in treating signs of aging in the skin and reducing the downtime associated with the procedures, work is continuing on ways to optimize the results that can be obtained. Varying wavelengths and depths as well as combining the laser treatments with retinoids are providing doctors better answers for their patients.

BY KAREN NASH  
STAFF CORRESPONDENT

**Sacramento, Calif.** — In the continuing hunt for methods to better repair the aging appearance of the skin, fractional lasers are offering promising results, especially when used in conjunction with retinoids, says Emil A. Tanghetti, M.D., F.A.A.D.

Dr. Tanghetti says that cosmetic dermatologists are looking at new ways to wound the skin, and in the wounding to create the opportunity for skin to repair and rejuvenate itself.

"The advantage of the fractional-type devices is that they can wound the skin in a way that is not as ablative, and which allow much less downtime associated with the treatments," Dr. Tanghetti tells *Dermatology Times*.

It's not that the lasers are completely nonablative.

"They do a little bit of ablation, a little bit of damage, if you will, and as the damage is repaired, it leads to new collagen development and replaces some of the damaged tissue," he says.

Dr. Tanghetti, manager of the Center for Dermatology and Laser Surgery, says retinoids complement that process.

"I use the retinoids all the time with the fractional lasers, because the

"The advantage of the fractional-type devices is that they can wound the skin in a way that is not as ablative, and which allow much less downtime associated with the treatments."

— Emil A. Tanghetti, M.D., F.A.A.D.  
Sacramento, Calif.

retinoids enhance repair, in my opinion. They even enhanced repair for more ablative lasers such as the CO<sub>2</sub> laser, whether it's used with hydroquinone for melasma or for photo-aging," he says.

Before the development of the fractionated lasers, Dr. Tanghetti says the CO<sub>2</sub> laser was a primary laser of choice for anti-aging treatments.

"The issues with the CO<sub>2</sub> laser included longer downtime, and, probably the most troubling, were side effects which included the potential for prominently mottled pigmentation which is difficult to deal with. Researchers are trying to use the CO<sub>2</sub> now in a fractional manner to see if those problems are mitigated. That data is still forthcoming; however, so it's really premature to speculate."

Research and testing are also continuing on the fractional lasers.

"We are still tweaking the fractional devices to optimize the results. We are going deeper and are using other wavelengths. For instance, we are doing a study right now using a fractional 1440, which is the Affirm

(Cynosure) laser with Multiplex, which means we put 1320 in there in a fractional way.

"We are developing new ways to deliver the light and new wavelengths to use with it," he says.

Dr. Tanghetti, a clinical professor at the University of California, Davis, says current research brings a number of contributors to the table.

"First of all, industry is developing the new, innovative technologies. Secondly, investigators and doctors in the field are working on finding new techniques and optimizing existing techniques. It's an interesting partnership," he says.

Add to that the pharmacological agents.

"It's naïve to think that any one of them is going to be the Holy Grail in treating photoaging. My guess is that the answer will include a little bit of everything."

Dr. Tanghetti finds that using multiple wavelengths works well.

"We also have to optimize our cooling. That would be helpful. The cooling with all of these devices is critical, and physicians need to be very cognizant of that.

"Also, it's important to be aware of using different energy levels with different skin types. We recommend that doctors test the devices on a nonfacial area to determine where they are optimized and where prob-

"We are still tweaking the fractional devices to optimize the results."

— Emil A. Tanghetti, M.D., F.A.A.D.  
Sacramento, Calif.

lems occur, before using the device on a cosmetically sensitive area. Those parameters are usually developed by early users of new devices," he says.

Even though fractional machines may be similar in nature, each requires its own acclimatization.

"What you cannot do is extrapolate from one device to another, because each is different. Every device would have guidelines, because they are all different — the wavelengths are different, the absorption for pigment and water are different, the depth of wounding is different, the cooling techniques are different; therein lie the variables, and putting those all together are specific to the particular machine," he says.

"We are developing new ways to deliver the light and new wavelengths to use with it."

— Emil A. Tanghetti, M.D., F.A.A.D.  
Sacramento, Calif.

Dr. Tanghetti advises, "Go slow. Test. Be Cautious." He does not advocate trying to use all of the current devices, which include the Affirm, the Fraxel (Reliant) and the Palomar.

"It's hard to work with every device, because they are expensive. You can't be a master of all unless you are willing to park a lot of expensive equipment in your office. Even then, the tendency will be to use one of them more than the others, because of a personal comfort level."

It's important for doctors to do their homework and look at peer-reviewed data, especially that which is presented at the American Society of Laser Medicine and Surgery. Dr. Tanghetti says that that information will be presented in an unbiased manner.

"It's difficult to look at company materials and make a decision, because they have their own marketing interests," he says. DT



Dr. Tanghetti