twin head laser

Sydney facial plastic surgeon **Dr Alan Evans** explains a new multi-purpose ablative laser treatment. Christine Doggett reports.

Some years ago, Sydney facial plastic surgeon Dr Alan Evans stopped using the original aesthetic CO_2 laser, which applied Computer Pattern Generator technology to even out the laser beam over the whole face. 'This old style laser was a very aggressive treatment, causing burning and peeling of the skin with a prolonged recovery period,' he says. 'Furthermore, the aggressive nature of the treatment meant there were increased risks of complications. I decided to stop using it until technology advanced to a level where skin problems could be better targeted and the treatment would be safer with a quicker recovery time.'

The UltraPulse Encore laser technology, which was introduced in 1998, revolutionised the aesthetic laser industry and provided the improved procedure Dr Evans was looking for. The arrival in 2005 of the world's first fractional CO_2 laser with the ActiveFX resurfacing head allowed the operator to refine treatment, applying laser more lightly and, as a result, skin to heal more quickly.

'The operator has complete control over the many possible settings,' Dr Evans explains. 'I can tailor the treatment to what the patient wants. During consultation, the patient can advise if their work or social situation allows them a long or shorter recovery time and the degree of redness acceptable to them. This allows us to decide together how to achieve the desired outcome – whether the application will be deep or heavy, light or superficial.'

Patients can return to work and normal activities after as little as five days, according to Dr Evans. The procedure also permits repeated treatments until the desired results are achieved, unlike earlier CO_2 lasers, which were used only as single treatments due to their aggressive effects.

Dr Evans has been using the ActiveFX resurfacing procedure for almost two years and both he and his patients are very happy with the results. 'My philosophy is to do minimal harm, so I am excited to be able to offer a less aggressive technology which produces very good results, and can be repeated with minimal down time,' he says. 'Patients get an instant result and the risk of complication is low.'

The ActiveFX is ideal for treating the superficial top layers of the skin for sun-related damage such as sunspots, pigmented lesions, dyspigmentation and telangiectasia or broken capillaries. It is also successful in the treatment of solar keratoses and scaly, crusted spots which may be pre-malignant. 'Fine lines are reduced and the process evens out the complexion very well, with the skin looking refreshed,' Dr Evans says.

In order to reduce the appearance of deeper wrinkles, heavier settings on the ActiveFX head must be used. While this is possible, the deeper settings result in more redness and skin loss, and therefore delayed healing.

'I'm excited by the arrival of the new upgraded microfractional CO_2 DeepFX head, which is an additional attachment in CO_2 technology and offers a whole new dimension to laser resurfacing,' Dr Evans says. 'The DeepFX causes minimal superficial skin damage but delivers heat to the deep, deep layers of the skin by sending an extremely fine laser beam deeper into the tissues. The operator can control the depth and adjust the settings appropriately.'

The DeepFX treatment offers many advantages for treating deeper wrinkles, smoker's lines and different types of scarring including acne and traumatic scars.

The UltraPulse high-energy short pulse ablates tissue more quickly and results in new collagen formation. By combining the two heads – ActiveFX and DeepFX – a range of problems can be addressed in one treatment and dramatic results achieved in both the superficial and deep skin layers. Down time is reduced and usually only one pass and one treatment is required. This combination is called TotalFX.

Fractional procedures ablate discrete columns of tissue, deposit heat and promote regeneration throughout the underlying layers of the skin. ActiveFX and DeepFX fractional laser treatments are single-pass procedures that ensure even coverage and eliminate the possibility of overlap. Each laser pulse ablates a column of tissue, causing volumetric skin reduction. The ablation removes surface discolorations and deposits heat deep in the dermis. The deep heating causes immediate collagen contraction and long-term collagen remodelling.

'Careful assessment of the individual patient and their needs and desired outcomes allows me to customise treatments for each patient, based on their indications and needs by selecting the density of tissue to be treated,' Dr Evans explains. 'I can use ActiveFX for indications with epidermal components, and DeepFX for deep dermal stimulation. For example, a younger patient with sun damage may require only the ActiveFX treatment. A middle-aged or older patient may be more interested in reducing the deeper wrinkles using the DeepFX procedure. But the trend is to use both modalities – TotalFX – in the majority of patients, controlling the settings to deliver the appropriate level of superficial or deep treatment.' **acsm**

BEFORE

AFTER ActiveFX treatment

BEFORE

AFTER ActiveFX treatment

BEFORE

AFTER DeepFX treatment

BEFORE

AFTER DeepFX treatment