

## Skin Revitalization with PicoSure: FOCUS and FLAT, Better Together

with Raminder Saluja, MD

With a growing list of clinical indications supported by well-established tattoo removal protocols, the PicoSure® 755 nm and 532 nm laser workstation from Cynosure more than justifies its presence in any aesthetic practice.

Cynosure continues to be a committed partner providing leading technologies like PicoSure whose proven clinical outcomes are attractive to both patients and clinicians alike. One of the most exciting ways to harness the value of PicoSure is for revitalizing the skin. At pulse durations of trillionths of a second with a variable beam profile, non-ablative PicoSure is a powerful tool for revitalizing all skin types.

An established protocol in many successful practices is to utilize two or more modalities when treating pigmentation (typically with an IPL) and dermal water for collagen stimulation (typically with a nonablative or ablative laser). Numerous devices are available and any aesthetic practice will likely have several platforms to achieve results. Nevertheless, patients are always looking to reduce discomfort, downtime, and overall hassle. Why not target two aspects of visually bothersome photodamage (pigment and rhytides) with one laser platform which delivers an efficacious treatment with minimal downtime that is acceptable to patients in our current age of convenience.

The answer to this dilemma is PicoSure. PicoSure targets melanin in a unique way. Using the 755 nm wavelength with the FOCUS™ Lens Array either solely or in conjunction with the normal FLAT beam profile leads to excellent revitalization results for wrinkles and pigmentation. The unique action of the FOCUS optic causes a twentyfold magnification of the pulse in up to 10% of the treatment spot, while the rest of the area receives low intensity irradiation. The higher intensity microbeams create laser induced optical breakdown zones (LIOBs) in the epidermis. This stimulates neocollagenesis and neolastinogenesis non-ablatively, and thus non-invasively, through a combination of novel pressure injuries and cell signaling initiated by a unique intra-epidermal injury.



Courtesy of R. Saluja, MD

Tx 1: 2200 pulses at 6mm; Tx 2: 4300 pulses at 8mm; Tx 3: 3800 pulses at 6mm

Numbing is optional for this treatment and the assistance of epithelial cooling enhances patient comfort. PicoSure Focus treatment results manifest in 3-5 sessions with shorter treatment durations, which aid in patient comfort and post laser healing. The Focus treatment session duration time can be as little as 10-15 minutes when treating the face or decollatage and 5 minutes for each dorsum of the hand. The low downtime post procedure is especially attractive to the busy patient that needs to return to work, or return to school without a healing delay.

I have treated a wide range of patient skin types for various conditions such as acne scarring, skin revitalization and generalized dyschromia and have adjusted the settings and time between treatment after viewing clinical results and considering histological information we have learned along the way. When treating with PicoSure 755 nm either with the Focus lens optic or Flat lens, we create MENDS (microepithelial necrotic debris), which come to the surface and sloughs off over the next 2-4 weeks. We have found that extending the interval between sessions to four to six weeks allows for more complete healing between sessions, and we believe this is a key contributor to achieving excellent skin revitalization results. This is especially true for darker skin types; that extra time allows the physician to better gauge the effects of treatment on an individual patient's skin and adjust the treatment protocol accordingly.

We have 2 general protocols:

- A. Fitzpatrick Skin type I-III patients
- B. Fitzpatrick Skin type IV and higher patients

When treating patients in Group A, we typically start with the 6 mm Focus Lens delivering  $0.71 \text{ J/cm}^2$  and deliver between 2500-6000 pulses at 10 Hz. The variance has to do with what we are treating. When treating acne scarring/skin revitalization, we are on the higher end of the spectrum. When treating patients with melasma, we are on the lower end of the spectrum.

We evaluate at each visit and adjust pulses/energy accordingly.

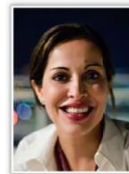
For patients in Group B, we may start with a Flat lens, to gently clear away pigmentation on the initial visit and deliver between 2000-4000 pulses. At subsequent visits, we oscillate with the Focus lens and depending on the patient's background skin coloration, may even start with the 8-10 mm Focus lens to maximally harness the powerful properties of the FOCUS Lens Array but minimize the risk profile. We alternate sessions of each in cases where we need to treat more cautiously, or work with both in the same session, using the FLAT beam profile to treat any PIH while we treat as normal

with the FOCUS lens. We have also found that diminishing the repetition rate down to 5 Hz in conjunction with epithelial cooling, further reduces the risk profile of PIH.

Increasing the time duration between treatment sessions allows us to adequately assess for any pigment alteration in that PIH typically begins to be seen around 3-4 weeks post treatment.

Immediately post skin revitalization treatments with PicoSure, patients will feel warm at the treated area for 30 minutes and will have transient erythema lasting between 1-4 hours on average. Patients with a higher melanin content may have erythema up to 24 hours. Because the epithelium is intact, patients may immediately resume normal activities and their daily routine without the healing delay typically seen with other non-ablative and ablative laser treatments.

Picosure 755 nm with the Focus and Flat lens, individually or in combination, has allowed us to treat a wide range of skin types for multiple indications and has proven to be a valuable asset in our practice.



Raminder Saluja, MD,  
Founder, Saluja Cosmetic and  
Laser Center

Dr Saluja was compensated for her clinical bulletin summary.

PicoSure 755 and 1064 are FDA cleared to treat tattoos and pigmented lesions in skin types I-VI. PicoSure 755 with Focus is FDA cleared to treat pigmented lesions in Skin types I-VI and acne scars and wrinkles in skin types I-IV. PicoSure 532 is FDA cleared to treat tattoos in skin types I-III. Patient results will vary.

©2016 Cynosure, Inc. All rights reserved. Cynosure and PicoSure are registered trademarks and Focus is a trademark of Cynosure, Inc.