

# PICO Genesis™: A Novel Treatment for Both Global Facial Revitalization and Discrete Benign Pigmented Lesions

## Clinical Bulletin

### Introduction

Substantial published evidence supports the safety and effectiveness of picosecond (ps) lasers in the treatment of benign pigmented lesions (BPL), photo-aging, and photo-damage. The shorter pulse duration of the picosecond 1064 nm and 532 nm lasers used in the enlighten™ laser system provides a significant therapeutic response for a range of BPL and photo-damage indications with comparable or better results in fewer treatments than its longer pulsed counterparts<sup>1</sup>. Superficial lesions require few treatments at lower energies and can be treated effectively with the 532 nm wavelength. Deeper, dermal lesions and lesions on darker skin types (types IV, V and VI on the Fitzpatrick scale) are treated effectively with the 1064 nm laser, with more treatments required than for epidermal lesions, but fewer than for longer, nanosecond (ns) pulsed lasers.

### PICO Genesis Procedure

The PICO Genesis procedure is a novel laser-toning application of the enlighten™ laser system that safely and effectively

removes discrete hyperpigmented lesions of the epidermis and deeper dermal layers and globally treats photo-aging and photo-damage by making diffuse or mottled pigment uniform. This approach to skin revitalization applies short pulses in the picosecond range and low energies to minimize down time following treatment. Additional benefits of this protocol include virtually no pain experienced by the patient and no additional consumables needed.

**Table 1. Table 2.**

“PICO Genesis has been a great addition to my practice not only because we see great results, but also because it expands the versatility with my enlighten laser. Being able to treat skin as well as tattoos with enlighten increases my return on investment. My patients love the treatment and see excellent results. My staff loves that the treatment is easy to perform and that they have high patient satisfaction.”

- Dr. Tahl Humes

**Table 1.** BPL spot-treatment parameter settings

Skin Type	Lesion Color	Wavelength (nm)	Pulse Width (ps)	Fluence (J/cm <sup>2</sup> )
I - III	Dark	532	750	0.4 - 0.8
	Light			0.6 - 1.0
IV - VI	Dark	1064	750	4 - 9
	Light			7 - 10

**Table 2.** Global treatment parameter settings

Skin Type	Spot size	Wavelength (nm)	Pulse Width (ps)	Fluence (J/cm <sup>2</sup> )	Repetition Rate (Hz)	# of Pulses*
I - VI	8mm	1064	750	0.5 - 1.1	10	3,000 - 5,000

\*Depending on size of treatment area (fewer pulses may be required when using higher fluence)

## Marketing Bulletin

Figure 1.



### Clinical Outcomes

**Patient 1** received two treatments with the PICO Genesis procedure. The first treatment was applied with the 1064 nm wavelength laser at a fluence of 1.0 J/cm<sup>2</sup>, with 6000 pulses at 10 Hz with a 750 ps pulse width. The second treatment was similar to the first, with 6000 pulses at 10 Hz, using the 1064 nm wavelength laser at a fluence of 1.2 J/cm<sup>2</sup>. The patient experienced significant improvement in skin tone and appearance with noticeable pigment clearing in discrete BPLs. **Figure 1.**

“ The use of Picosecond lasers e.g. enlighten is a safe and reliable procedure which is also a step forward in treating sensitive and dark skin types. Small spot sizes enable us to focus on single lesions like lentiginos. Large spot sizes and frequency up to 10Hz allows us to work on a full face approach for facial revitalization.”

- Dr. Heike Heise

**Patient 2** received two treatments with the PICO Genesis procedure that resulted in excellent pigment clearing and skin revitalization. Two to five passes were

Figure 2.



**Figure 2.**

**Patient 3** received one treatment with the 532 nm wavelength laser, a 3 mm spot size, 1.2 J/cm<sup>2</sup> fluence, and 750 ps pulse width for individual BPLs. Globally, she was treated with the 1064 nm wavelength at that same treatment, with an 8 mm spot size, 0.6 J/cm<sup>2</sup> fluence at the 750 ps pulse width. The single treatment achieved significant clearing of the patient's discrete BPL as well as improved skin appearance.

There was **limited to zero downtime** for the three patients and **none of the patients reported pain**. An additional benefit for the patients was there was no **additional tip or handpiece cost** to them for this procedure. **Figure 3.**

### Conclusions

This novel PICO Genesis application of the enlighten system provides a broad range of treatment parameters and is safe for all skin types. The picosecond pulse width provides gentle treatment of discrete lesions combined with global facial revitalization.

Figure 3.



This feature, combined with the widest range of energies at multiple wavelengths, improves upon the nanosecond pulsed laser-toning of the past by boosting patient satisfaction while maintaining an excellent safety profile.

“ PICO Genesis is a non-invasive, non-ablative, low downtime laser treatment for reduction in pigmentation concerns. The complexion improvement is apparent after the first treatment, and skin tone is more even and more youthful. Pico Genesis is an easy treatment to perform with quick subtle results.”

- Dr. Manu Aggarwal

<sup>1</sup> Ross, EV, Naseef, G, Lin, C, Kelly, M, Michaud, N, Flotte, T, Raythen, J, Anderson RR: Comparison of Responses of Tattoos to Picosecond and Nanosecond Q-Switched Neodymium:YAG lasers. Arch Dermatol 134:167-171, 1998

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