PicoWay - Frequently Asked Questions

1. What is the PicoWay Laser System?

PicoWay is a remarkably innovative dual wavelength picosecond laser from Syneron Candela. PicoWay enables removal of multi-colored tattoos, recalcitrant tattoos and benign pigmented lesions on any skin type. PicoWay's unique mode of action is based on delivering ultra-short picosecond pulses of energy to the tissue. These bursts of energy create a photo-mechanical impact which breaks up the tattoo ink or pigmentation into smaller, more easily eliminated particles.

2. What are the advantages of PicoWay?

PicoWay is the world's first and only dual laser device with proprietary PicoWay technology:

- **Dual wavelengths** – 1064 nm & 532 nm wavelengths in one laser system
- **Treat the widest range of tattoos** – 2 wavelengths to treat most tattoo colors & types, including recalcitrant tattoos
- **Treat dermal and epidermal pigmented lesions** – Large spot sizes enable deep penetration when needed
- **Highest peak power** – For effective energy over the broadest range of spot sizes
- **Shortest picosecond pulses** – 40% shorter picosecond pulses mean effective, yet lower energy for less risk of side effects

3. Why is PicoWay the best picosecond laser on the market?

PicoWay's unique, proprietary mode of action has the highest peak power and shortest pulse duration of any picosecond device on the market for superior efficacy, safety and comfort. PicoWay's ultra-short pulses enable the strong photoacoustic impact needed to fracture pigment particles using lower fluences, for better clearance in fewer treatments. PicoWay's novel design architecture enables PicoWay to be robust, reliable and scalable for future application developments.

4. Why is PicoWay better than traditional Q-switched lasers?

Q-Switch technology requires numerous treatment sessions, causes significant discomfort during treatment and, in many cases, incompletely removes tattoos and pigmented lesions.
Picosecond technology, has ultra-short pulse durations, 100 times shorter than Q-switch lasers, and in the trillionths of a second. These bursts of energy create a photoacoustic impact which breaks up the tattoo ink or pigmentation into smaller, more easily absorbed particles. PicoWay's unique, proprietary mode of action has the highest peak power and the shortest pulse duration of any picosecond device on the market for superior efficacy, safety and comfort. PicoWay is the answer physicians are looking for to combat the reluctance patients may have to treat tattoos or more complex pigmented lesions.

5. What are the indications for PicoWay laser treatment?

PicoWay is indicated for the treatment of tattoos and benign cutaneous pigmented lesions. The decision to treat with laser therapy should be based upon appropriate diagnostic evaluation and consideration of all patient factors.

6. What types of pigmented lesions can be treated?

Pigmented lesions that can be treated with PicoWay include, but are not limited to the following: Laser Skin Toning, Solar or Senile Lentigines, Freckles (Ephelides), Café au lait, Nevus of Ota, Beckers Nevus.

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7. What types of tattoos can be treated?

Many kinds of tattoos can be treated including professional, amateur, traumatic and even recalcitrant tattoos. Recalcitrant tattoos are tattoos that have been proven to be resistant to nanosecond laser treatment.

8. What are the wavelengths for PicoWay?

With the 532 nm and 1064 nm wavelengths for the system, laser irradiation is selectively absorbed by the targeted pigment with minimal effect on the surrounding tissue. This is accomplished by careful selection of the wavelength that yields maximum absorption by the target and minimum absorption by surrounding skin structures. In addition, the laser pulse duration is controlled to be equal to or shorter than the thermal relaxation time of the target, to minimize heat transfer to surrounding tissues. PicoWay's dual wavelengths enable removal of multi-colored tattoos, recalcitrant tattoos and benign pigmented lesions on any skin type.

9. Is the treatment safe for all skin types?

Yes, PicoWay treatment is indicated for all skin types.
Ideally, the wavelength selected for eradication of the tattoo should be highly absorbed by the tattoo pigment and only minimally absorbed by other chromophores in the skin. Absorption of radiation by most pigments in amateur and professional tattoos is strong in the near-infrared region of the spectrum. By contrast, the surrounding melanin has a very broad absorption band throughout the ultra-violet, visible, and near-infrared regions of the spectrum, with absorption of light greatest in the ultraviolet, and least in the near-infrared. Other chromophores in the skin, such as hemoglobin and oxyhemoglobin, should have little to no absorption of light within the selected wavelength. The 532 nm and 1064 nm wavelengths produced by the PicoWay laser have been carefully selected to utilize the difference in absorption for the treatment of tattoo pigments. Treatment of tattoos can therefore be performed with minimal adverse effects on normal skin structures.

10. What is the effect of the pulse duration on the efficacy of tattoo removal?

To be effective, the laser pulse duration should be shorter than the thermal relaxation time of the target absorbing the laser radiation to confine the thermal damage and spare surrounding skin structures. PicoWay's ultra-short picosecond pulse enables the strongest photoacoustic impact needed to fracture pigment particles into smaller particles than other lasers, using lower fluences, for better clearance in fewer treatments. The relaxation time of a target is determined by its size. Fragmenting the absorber into smaller particles enables the phagocytes to more effectively dispose of the fragmented particulates. Because the wavelength and pulse duration of the laser are closely controlled, treatment of pigmented lesions and tattoos can be achieved with minimal energy densities, reducing the possibility of adverse effects on adjacent normal skin structures.