



# Treatment of Melasma in Asian Skin with Fotona StarWalker

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Introduction:

Melasma, a prevalent pigmentary disorder, notably affects individuals with Asian skin, often emerging in their late 20s. The prevalence of melasma in this demographic underscores the demand for targeted interventions. However, effective management remains a challenge, characterized by a prolonged time for improvement and a propensity for relapses. Traditional treatment modalities, including photoprotection, microneedling, chemical peeling, and topical depigmenting agents, exhibit varying degrees of success, necessitating a nuanced approach. The careful use of laser therapy in melasma treatment is imperative, given the risk of exacerbating the condition. Asian skin's unique characteristics demand precision in laser parameters to strike a balance between inducing a photoacoustic effect for optimal results and avoiding excessive heat generation. This case study highlights the intricacies of treating melasma in individuals with Asian skin, emphasizing the need for tailored care and cautious laser application to navigate the challenges and mitigate potential risks associated with worsening the condition.

Laser	Fotona StarWalker MaQX			
	Step 1	Step 2	Step 3	Step 4
Wavelength	1064 nm	1064 nm	1064 nm	1064 nm
Handpiece	R28d	R28d	R28d	FS20A
Spot size / Fiber tip	6–8 mm	4 mm	4 mm	9 x 9 mm
Energy / Fluence	1.6–2.3 J/cm <sup>2</sup>	12 J/cm <sup>2</sup>	2.0–3.0 J/cm <sup>2</sup>	20–26 mJ/px
Mode / Pulse	MaQX-1 / Q-Switched	FRAC3	MaQX-1 / Q-Switched	MAQX10
Frequency	10 Hz	4 Hz	12 Hz	1.5 Hz
Passes / Repeats	2–4	4–8	2–4	2
Cooling	Yes	Yes	Yes	Yes
Sessions	6 sessions every 4 weeks			



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CLINICAL CASE:

This is a case of a 72-year-old female with melasma affecting her malar area for 30 years, who had not undergone any prior treatments. Commencing in December 2022, she embarked on a series of six Fotona StarWalker laser sessions until June 2023, with intervals of 30 days between each session. Adhering to the melasma protocol by Drs. Velez (editor’s note: based on LA&HA CB04, 2019; J Drugs Dermatol. 2021; PMID: 33538564), the treatment resulted in significant improvement in pigmentation and also enhanced skin quality. The treatment consisted of four steps, performed with the Nd:YAG laser (StarWalker; Fotona), following a sequence of parameters listed above.

**Step 1:** A spot size of 6–8 mm was used for broad, low-intensity toning to safely reduce diffuse epidermal and superficial dermal pigmentation with minimal inflammation.

**Step 2:** FRAC3 was applied to achieve deeper melanin remodeling, reduction of subclinical inflammation, and modulation of the vascular component known to aggravate melasma.

**Step 3:** The 4 mm spot is reserved for focal areas of resistant pigmentation, where higher peak fluence is required to break down localized melanin clusters without exposing the entire face to unnecessary energy.

**Step 4:** FS20A assists by promoting epidermal turnover, enhancing superficial melanin clearance, and improving epidermal barrier stability, which is a critical factor in preventing relapse.

After the treatment, the patient was advised to avoid sun exposure and use sunscreen daily. The patient was satisfied with the improvement.



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