

A Handheld Broadband UV Phototherapy Module for the Treatment of Patients With Psoriasis and Vitiligo

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Short pulses of UV light in the 300- to 380-nm wavelength have been proven to effectively treat dermatoses, such as psoriasis and vitiligo. Lasers with handheld phototherapy modules that can direct UV light to more specific treatment areas may offer patients and clinicians a highly effective alternative treatment to full-body lightbox UV phototherapy as a standard therapy or to complement topical, injectable, or oral therapies for the treatment of psoriasis and vitiligo.

Lasers that emit short pulses of UV light in the 300- to 380-nm wavelength have been proven effective for the treatment of dermatoses, such as psoriasis and vitiligo.¹⁻⁸ Laser platforms with handheld broadband UV phototherapy modules may offer a new and highly effective alternative treatment to full-body lightbox UV phototherapy as a standard therapy or to complement topical, injectable, or oral therapies for the treatment of psoriasis and vitiligo.

Successful clinical outcomes have been reported treating patients with even the most difficult psoriasis and vitiligo with targeted UV phototherapy using the Harmony XL handheld broadband UV phototherapy module (Alma Lasers, Inc, Buffalo Grove, Illinois).⁹ The multiuse platform with handheld broadband UV module uses high-power spectral irradiance in the UVB and UVA1 wavelengths with a highly targeted and localized

light beam that allows us to treat both large and small areas without exposing healthy surrounding skin to unnecessary radiation. This article discusses the authors' experience with a particular laser platform and handheld broadband UV phototherapy module (Harmony XL) in the treatment of patients with psoriasis and vitiligo (Figures 1-6).

LIMITATIONS OF OTHER TREATMENT MODALITIES

Before targeted laser technology, clinicians had to treat psoriasis and vitiligo with full-body exposure of UVB (Goeckerman regimen) or psoralen plus UVA (PUVA) therapy, which typically required several months of treatment up to 3 times per week. With these treatments it was not possible to focus on isolated skin areas, so healthy skin also was affected. While clinical results were acceptable, the wavelength used in PUVA therapy is very wide, which increases the risk of developing melanoma, especially for patients with vitiligo who require numerous treatment sessions.

One of the first laser technologies brought into practice was the excimer laser. Using lasers enabled us to focus high-intensity UV light on isolated and more resistant areas of affected skin as well as perform whole body treatments with UV lightboxes. But these laser units were extremely large, required a dedicated treatment

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