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## New Frontiers in Acne Therapy

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### Introduction

Acne represents the most common cause for all dermatologist office visits, as it affects approximately 80 percent of the human population. Whether a patient is afflicted physically in terms of pain or psychologically in terms of self-image and confidence, there are many existing therapies that are effective though not curative. The condition of acne involves the increased production of sebum by the sebaceous glands as a result of increased hormonal activity. Treatments for acne are either topical or systemic and may consist of benzyl peroxide, retinoids, salicylic acid, antibiotics, hormone treatments, and isotretinoin. Many of these treatment methods have a temporary effect on the surface of the skin, but do not yield long-term clearance. Additionally, there are drawbacks to some of these treatments, such as frustrating side effects and a demanding treatment regimen, both of which frequently lead to lower compliance levels.

A new treatment option is now available—Smoothbeam™ laser treatment. A diode laser with a 1450 nm wavelength, the Smoothbeam has the ability to target the root cause of acne, and to cause a thermal injury to the sebaceous gland. The epidermis is cooled and protected at the time of treatment using cryogen spray. Compliance issues are eliminated because there is no need to rely on the patient to self-treat. Few treatments are needed, and side effects are minimal.

### Method

Although most of our patients consist of women, we do treat some men, mostly for acne scarring as opposed to active acne. Areas of the body most commonly treated for acne are the face, neck, and upper back, and occasionally elsewhere. A single-pass

technique is used to cover the entire area. Patients are of Fitzpatrick skin types I, II, or III, and the treatment parameters that we use are as follows. When treating acne on both the face and back, a 6 mm spot size is used, with energy fluences of about 12–14 J/cm<sup>2</sup>, and the Dynamic Cooling Device™ (DCD™) is set at 35–40 msec. When treating acne on thinner skin areas such as the neck, the treatment parameters remain the same, but we use a lower energy fluence (about 11 J/cm<sup>2</sup>) and a DCD setting of 30 msec. The cryogen is turned down when treating darker skin types so as to avoid hyperpigmentation that can potentially result from the cryogen burst. The optimal interval between treatments is two to four weeks, and approximately three to five treatments are generally recommended for full clearance. Application of a topical anesthetic prior to treatment is highly recommended. In our practice, we suggest that each patient apply Betacaine® or Elamax® by rubbing it into the surface of the skin 20–30 minutes before treatment. Post-operative suggestions are simple; apply ice as needed and use sunscreen immediately following treatment.

Most patients experience slight erythema and transient, mild edema after the laser treatment, which will subside within 30 minutes. More aggressive treatments may result in some temporary pigment changes in the skin. Subsequent treatments yield a more thorough and immediate clearing of these lesions, which is then followed by an overall reduction in the actual number of lesions. The consistent response to effective Smoothbeam treatments enables us to maintain satisfied patients with expectations that are being met and exceeded. Accutane (isotretinoin) remains our prescription of choice when we are faced with



severe cases of acne. However, due to the side-effect profile of Accutane as well as any history of a contraindication to oral/systemic medications, many patients are now seeking alternative treatment methods. We use Smoothbeam to treat the residual acne scars commonly seen in patients with severe acne.

Smoothbeam is a great asset to our practice because it enables us to treat two pathologies at once. Patients prefer simultaneous treatments, as this is more affordable and less time-consuming than treating each condition separately.

We have had very positive experiences with other methods of combination therapy for acne, acne scarring, and general skin rejuvenation. We regularly use the Smoothbeam in conjunction with chemical peels, microdermabrasion, and Vbeam® pulsed dye laser. The technique that we have found to work best is to treat acne and acne scars with Smoothbeam; then two weeks later treat the same area with one of the alternate methods mentioned above; and then follow up with a Smoothbeam treatment two weeks afterward, continuing this pattern until the desired result is reached. The chemical peels and microdermabrasion treatments are effective in making the pigmentation of the skin uniform, and the intermittent Vbeam treatments serve as a catalyst for collagen remodeling and proactive reduction of erythema.

### Results

The most unique advantage to having Smoothbeam in our practice is the option it presents for treating both acne as well as acne scars. The ability to simultaneously treat patients for multiple conditions is directly correlated to our patient satisfaction

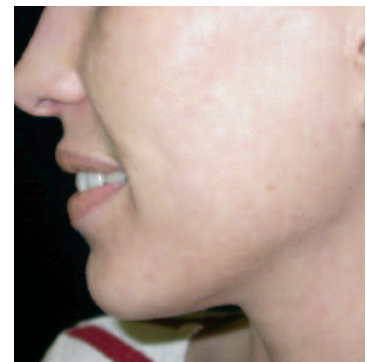
levels. Smoothbeam is a novel approach in that it represents a long-awaited alternative for acne patients who prefer to avoid long-term antibiotic and drug therapies. Smoothbeam has a very low side-effect profile, and is viewed as a solution to the compliance issues that come with topical and systemic treatments. More specifically, we have taken an active role in the periodic treatments, and we do not rely on patients to self-treat or abide by a daily regimen. We have been pleased with the results that we have obtained with Smoothbeam, and look forward to continued success within our practice.

### Conclusion

Acne is a prominent issue for women in their twenties and thirties, which can be exacerbated by stress and hormones as well as their menstrual cycle. This segment of women makes up the majority of the patients whom we treat with Smoothbeam in our cosmetic practice. We have been using Smoothbeam to treat active acne, as well as acne scars, with great success for a year and a half, and we have been extremely pleased with the results. There are numerous advantages to using the Smoothbeam diode laser—one of the most compelling characteristics of this new laser treatment for acne is the low side-effect profile. Our patients may experience a slight redness to the skin, which will subside within a few hours—in addition to this, no downtime exists, and patients are able to return to normal activities immediately following treatment. Another reason that this treatment option is popular is that just three to five treatments are required, and these treatments may be spread out over time, with an interval of about four weeks in between each treatment.



*6 mm, 11 J/cm<sup>2</sup>, 250 ms, DCD: 40, 1tx*



*6 mm, 13 J/cm<sup>2</sup>, 250 ms, DCD: 40, 5tx*

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