

# Nordlys® System – Treatment of Inflammatory Acne and Rosacea

BY LAURA BIGGIO

**A**cne vulgaris is a common chronic inflammatory skin condition and the eighth most prevalent skin disorder worldwide, with a prevalence of 9.4% [1]. Rosacea is also a common chronic inflammatory skin disorder, with an estimated global prevalence of 5.46% of the adult population [2]. It is characterised by recurrent episodes of flushing, persistent erythema, inflammatory papules / pustules, and telangiectasia [3–5], predominantly affecting the centropacial region (cheeks, chin, nose, and forehead) and the eye region. Both acne and rosacea have multifactorial aetiologies that are not fully understood.

Intense pulsed light (IPL) treatment provides an invaluable tool for treating various dermatological concerns including rosacea and acne vulgaris. The non-invasive and non-ablative nature of IPL makes it an increasingly attractive alternative for patients unwilling to accept the adverse effects associated with other procedures. As the light penetrates the skin, it reaches the primary chromophores in the target tissue (e.g. haemoglobin, melanin, water) and by applying wavelengths that correspond to their respective maximum absorption levels, different structures can be selectively heated and coagulated.

The Nordlys® multi-application system features 1550nm and 1940nm non-ablative fractional lasers, a 1064nm Nd:YAG laser, and advanced Selective Waveband Technology (SWT®) IPL applicators. SWT is a unique narrowband state-of-the-art IPL with an advanced dual-filter technology engineered to cut off potentially harmful wavelengths on both sides of the spectrum. This allows higher absorption in the target chromophore and employing lower energies and delivers real sub-millisecond pulses.

The Nordlys® system includes a variety of SWT® applicators with wavelength ranges of 400–720nm, 530–750nm, 555–950nm, 600–950nm, and 645–950nm, providing a solution to a wide range of aesthetic conditions and various skin types. The Nordlys® system is CW marked for 24 indications\*, ranging from treatment of benign pigmented and vascular lesions, acne, skin resurfacing, and hair



Figure 1: Before and one month after three Nordlys SWT® PR 530 treatments for severe acne rosacea.



Figure 2: Before and one month after three Nordlys SWT® PR 530 treatments for severe acne rosacea.

removal, and is widely used in clinics around the world.

We present two cases with severe acne rosacea and acne vulgaris treated with the Nordlys® system using the PR 530 applicator (530–750nm).

## Case 1

A 41-year-old Caucasian female presented with severe acne rosacea, manifesting redness, pimples, swelling, and small and superficial dilated blood vessels. The patient underwent three monthly treatments with the Nordlys PR 530 handpiece, using a double-pulse technique, 4.5ms pulse duration, 10ms delay, and a fluence of 5–6J/cm². No topical anaesthetic cream was applied. Two weeks prior to each Nordlys® treatment, the patient underwent bio-revitalisation treatment with hyaluronic acid injections. At one month follow-up after the treatment series, clinical

examination showed significant improvement in redness and telangiectasias (Figure 1). The patient expressed very high satisfaction with treatment outcome. Currently, the patient is under follow-up care, receiving bio-revitalisation treatments every two months, with an additional Nordlys SWT® session planned annually.

## Case 2

A 26-year-old Caucasian female patient presented with severe acne vulgaris, characterised by inflamed and raised bumps, post-inflammatory hyperpigmentation, and skin irregularities. The patient underwent a series of three treatments with Nordlys SWT®, salicylic acid peeling, and bio-revitalisation treatment with hyaluronic acid injections. Salicylic acid peeling was performed first and followed two weeks later with bio-revitalisation treatment with hyaluronic acid injections. Then

## CASE REPORT

two weeks after bio-revitalisation, the Nordlys® treatment was administered with the PR 530 handpiece, using a double-pulse technique, 4.5ms pulse duration, 10ms delay, and a fluence of 7J/cm<sup>2</sup>. No topical anaesthetic cream was applied. At one-month follow-up after the treatment series, skin quality was significantly improved and the skin quality and tone improved, revealing brighter, smoother-looking skin (Figure 2). Currently, the patient is under follow-up care, receiving bio-revitalisation treatments every two months, with additional Nordlys SWT® maintenance treatments planned annually.

### Conclusions

The cases presented here illustrate successful treatment of acne rosacea and severe acne vulgaris with Nordlys SWT® IPL treatment combined with other modalities.

In our experience treating with Nordlys SWT®, we don't see as much of the erythema, swelling, and treatment pain associated with

other types of IPL treatments. Continued follow-up care and an annual maintenance session have been planned to maintain and further improve skin quality. These cases highlight the potential of advanced light-based therapies in treating and ameliorating chronic inflammatory skin conditions.

### References

1. Hay RJ, Johns NE, Williams HC, et al. The global burden of skin disease in 2010: an analysis of the prevalence and impact of skin conditions. *J Invest Dermatol* 2014;**134**:1527–34.
2. Gether L, Overgaard LK, Egeberg A, Thyssen JP. Incidence and prevalence of rosacea: a systematic review and meta-analysis. *Br J Dermatol* 2018;**179**(2):282–9.
3. Van Zuuren EJ. Rosacea. *N Engl J Med* 2017;**377**:1754–64.
4. Schaller M, Almeida LMC, Bewley A, et al. Recommendations for rosacea diagnosis, classification and management: update from the global Rosacea Consensus 2019 panel. *Br J Dermatol* 2020;**182**:1269–76.

5. van Zuuren EJ, Arents BWM, van der Linden MMD, et al. Rosacea: New Concepts in Classification and Treatment. *Am J Clin Dermatol* 2021;**22**(4):457–65.

\* U.S. FDA 510(k) premarket notification [K212492] includes a full list of 22 indications for the Nordlys® system and applicators. Nordlys Health Canada Medical Device License (108788) is cleared for 25 indications in Canada. Nordlys® has received CE Mark clearance for 24 indications.

### AUTHOR



**Laura Biggio MD,**  
Laser Clinic Milano, Italy.

**Declaration of competing interests:** None declared.