

Una iniciativa de:



ACADEMIA ESPAÑOLA  
DE DERMATOLOGÍA  
Y VENEREOLOGÍA



FUNDACIÓN  
PIEL SANA  
ACADEMIA ESPAÑOLA  
DE DERMATOLOGÍA  
Y VENEREOLOGÍA

Con el patrocinio de:



AEDV 35<sup>a</sup>  
edición

# HIGHLIGHTS

*Viena*

30sep - 3oct  
2026

AEDV 35ª edición

# HIGHLIGHTS

*Viena*  
30sep - 3oct  
2026

## DERMATOLOGÍA ESTÉTICA Y LÁSER

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Una iniciativa de



Con el patrocinio de



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# HIGHLIGHTS

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2026

## El láser como inductor de cambios en la expresión génica y remodelado estructural de la piel

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**NO TENGO CONFLICTOS  
DE INTERÉS**

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# HIGHLIGHTS

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30sep - 3oct  
2026

## ESTÉTICA

Una iniciativa de



Con el patrocinio de



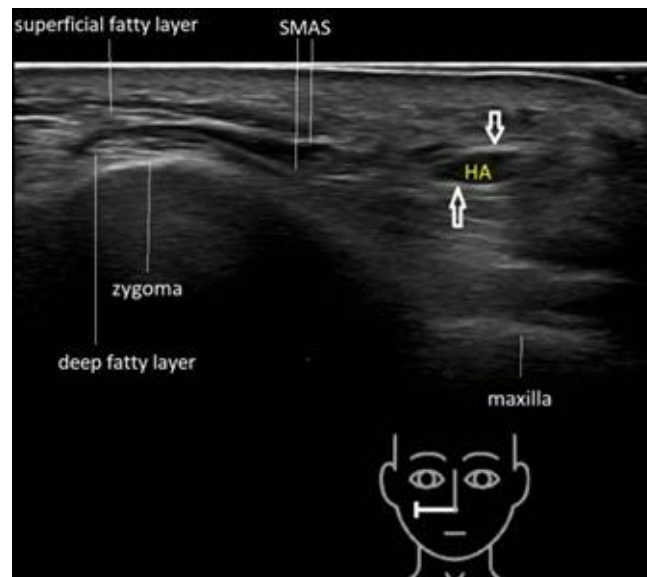
> J Cosmet Dermatol. 2023 Dec;22(12):3246-3251. doi: 10.1111/jocd.16012. Epub 2023 Oct 2.

## Periorbital venous stasis may be involved with filler induced malar edema-A duplex ultrasound-imaging-based case series

L Schelke <sup>1</sup>, O Liplavk <sup>1</sup>, S Cotozana <sup>1,2</sup>, S Shah-Desai <sup>3</sup>, P Velthuis <sup>1</sup>

Affiliations + expand

PMID: 37786282 DOI: [10.1111/jocd.16012](https://doi.org/10.1111/jocd.16012)



Hyaluronic acid filler deposit in the SMAS. The SMAS layer is expanded by filler.

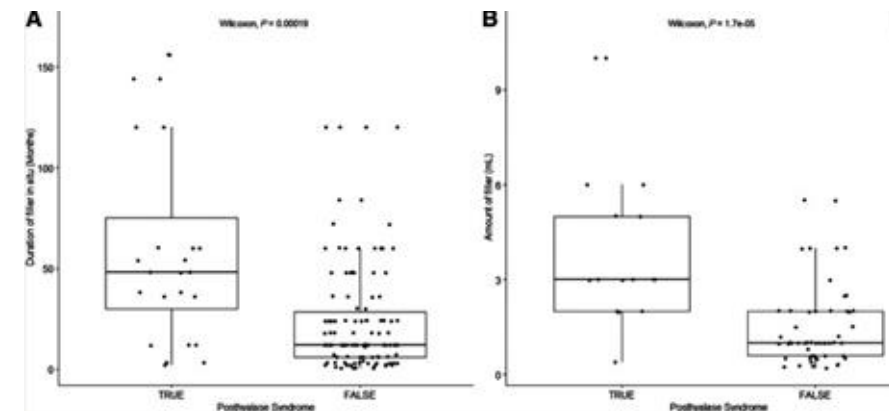
> Plast Reconstr Surg Glob Open. 2024 Apr 23;12(4):e5765. doi: [10.1097/GOX.0000000000005765](https://doi.org/10.1097/GOX.0000000000005765)

## The Posthyaluronidase Syndrome: Dosing Strategies for Hyaluronidase in the Dissolving of Facial Filler and Independent Predictors of Poor Outcomes

Caroline L Wilde <sup>\*,†,§</sup>, Kailun Jiang <sup>\*</sup>, Sieun Lee <sup>‡</sup>, Daniel G Ezra <sup>\*,†</sup>

▶ Author information ▶ Article notes ▶ Copyright and License information

PMCID: PMC11037726 PMID: [38655103](https://pubmed.ncbi.nlm.nih.gov/38655103/)



C: pretratamiento con edema malar. D: post-tratamiento, con hundimiento de la ojera.

> Biomed Res Int. 2020 Aug 4;2020:1501893. doi: 10.1155/2020/1501893. eCollection 2020.

## Effectiveness and Safety of Botulinum Toxin Type A in the Treatment of Androgenetic Alopecia

Yaguang Zhou<sup>1</sup>, Shui Yu<sup>1</sup>, Jimin Zhao<sup>1</sup>, Xinyue Feng<sup>1</sup>, Meinan Zhang<sup>1</sup>, Zigang Zhao<sup>1</sup>

Affiliations + expand

PMID: 32802833 PMCID: PMC7424364 DOI: 10.1155/2020/1501893

TABLE 2: Evaluation of hair counts between two groups at different time.

|                                                       | BTA (n = 30)   | BTA+FNS (n = 33) | P value |
|-------------------------------------------------------|----------------|------------------|---------|
| Hair counts at different time (root/cm <sup>2</sup> ) |                |                  |         |
| 0 (before treatment)                                  | 180.57 ± 29.53 | 178.21 ± 21.33   | 0.715   |
| 3 months (once treatment)                             | 196.83 ± 32.89 | 203.78 ± 28.50   | 0.212   |
| 6 months (twice treatment)                            | 208.84 ± 27.00 | 220.44 ± 27.06   | 0.074   |
| 9 months (three times treatment)                      | 214.73 ± 31.17 | 228.31 ± 30.99   | 0.091   |
| 12 months (four times treatment)                      | 218.26 ± 30.59 | 234.01 ± 27.35   | 0.035   |
| <sup>a</sup> P value                                  | 0.015          | <0.001           |         |
| <sup>b</sup> P value                                  | <0.001         | <0.001           |         |
| <sup>c</sup> P value                                  | <0.001         | <0.001           |         |
| <sup>d</sup> P value                                  | <0.001         | <0.001           |         |

BTA: botulinum toxin type A; BTA+FNS: botulinum toxin type A+finasteride. <sup>a</sup>P value was derived from comparisons between 0 and 3 months; <sup>b</sup>P value was derived from comparisons between 0 and 6 months; <sup>c</sup>P value was derived from comparisons between 0 and 9 months; <sup>d</sup>P value was derived from comparisons between 0 and 12 months.



FIGURE 1: Clinical effectiveness between two groups at different time. BTA: botulinum toxin type A; BTA+FNS: botulinum toxin type A+finasteride.



- Inyección en forma de corona.
- 40 puntos de inyección con 2UI por punto en dos filas, separados 2cm; y 10 puntos centrales. Total 100UI.
- Una aplicación anual.

Meta-Analysis > Indian J Dermatol Venereol Leprol. 2025 Jul-Aug;91(4):448-454. doi: 10.25259/IJDVL\_274\_2024.

## Intradermal injection of botulinum toxin for erythema in rosacea: A scoping review and meta-analysis

Marvin Chia-Han Yeh<sup>1</sup>, Ya-Chu Shih<sup>2</sup>, Yu-Chen Huang<sup>1</sup>

Affiliations + expand

PMID: 39912154 DOI: 10.25259/IJDVL\_274\_2024

> Ann Dermatol. 2025 Jun 11;37(4):228-240. doi: 10.5021/ad.24.171

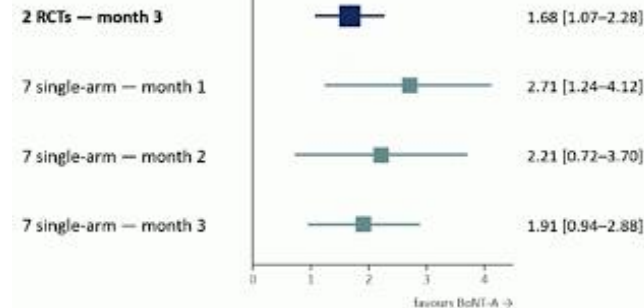
## The Anti-Angiogenic Effect of Microbotox on Rosacea Is Due to the Suppressed Secretion of VEGF by Mast Cells Resulting From Internalization of the MRGPRX2 Receptor

Jing Wan<sup>1</sup>, Yue Le<sup>1</sup>, Meng-Meng Geng<sup>1</sup>, Bing-Qi Dong<sup>1</sup>, Zhi-Kai Liao<sup>1</sup>, Lin-Xia Liu<sup>1</sup>, Tie-Chi Lei<sup>1,\*</sup>

▶ Author information ▶ Article notes ▶ Copyright and License information

PMCID: PMC12318782 PMID: 40736523

### Improvement in erythema, SMD (95% CI)



≤ 0.02 mL

per injection point  
No facial-muscle weakness reported at ≤ 0.02 mL/site; paralysis, smile asymmetry and cheek drop appeared with 0.05 mL.

1 U > 0.5 U

per point, split-face RCT (n = 26)  
Greater CEA and GAIS improvement with 1 U from weeks 2-8, better DLQI; only transient tightness and erythema.

## Rosacea: mechanism and technique

### Why it works — the mast-cell axis



### Technique that keeps it safe

- 1 Depth Superficial intradermal microdroplets — a visible bleb
- 2 Grid Even spacing 0.5–1 cm; 25–30 points per cheek
- 3 Volume ≤ 0.02 mL per point; ~1 U per point
- 4 Avoid Deep or low-medial cheek → zygomatic / smile asymmetry
- 5 Combine BoNT-A + broadband light > BBL alone (split-face RCT)

Meta-Analysis > Med Sci Monit. 2019 Apr 22;25:2950-2958. doi: 10.12659/MSM.916305.

## Intralesional Injection of Botulinum Toxin Type A Compared with Intralesional Injection of Corticosteroid for the Treatment of Hypertrophic Scar and Keloid: A Systematic Review and Meta-Analysis

Minglei Bi<sup>1</sup>, Pengfei Sun<sup>1</sup>, Danyi Li<sup>1</sup>, Zheng Dong<sup>1</sup>, Zhenyu Chen<sup>1</sup>

Affiliations + expand

PMID: 31006769 PMCID: PMC6489528 DOI: 10.12659/MSM.916305



“Conclusions: Systematic review and meta-analysis showed that injection of intralesional botulinum toxin type A was more effective in the treatment of hypertrophic scar and keloid than injection of intralesional corticosteroid or placebo.”

## Comparative Efficacy of Drug Interventions for Keloids A Network Meta-analysis

Hsi-An Yang<sup>a,b</sup>, Wun-Long Jheng<sup>c,d</sup>, Jiaxin Yu<sup>e</sup>, Jhao-Yu Huang<sup>e</sup>, Kai-Yuan Cheng<sup>f</sup>, Jian-Jr Lee<sup>a,f</sup>

Authors and Affiliations >

Annals of Plastic Surgery 92(1S):p S52-S59, January 2024. | DOI: 10.1097/SAP.0000000000003759

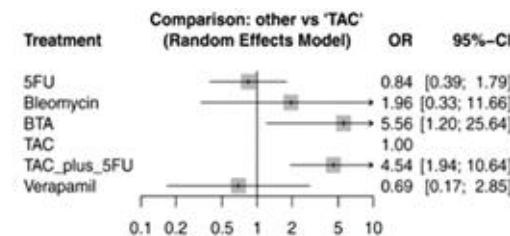


FIGURE 3. Forest plot for the therapeutic efficacy of interventions compared in a pairwise manner.



FIGURE 4. Odds ratios and SUCRA values for therapeutic efficacy. NMA indicates network meta-analysis.



CONSENSUS STATEMENT

Open Access



## Consensus on energy-based devices for keloids and hypertrophic scars: A Latin American Delphi study

Gisele Viana de Oliveira ✉, Patricia Apt Druck, Alvaro Andres Luque Acevedo, Doris Hexsel, Gabriel Teixeira Gontijo, Gabriel Huerta Rivera ... See all authors ▾

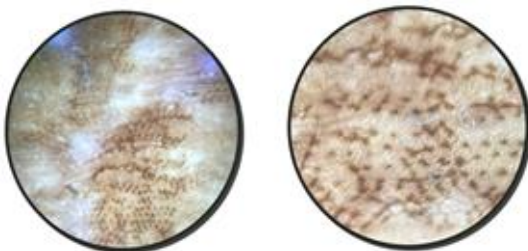
First published: 10 August 2026 | <https://doi.org/10.1111/jdv.70636> | [VIEW METRICS](#)

EA CONGRESS  
BY 2020

A S A P - SOFTEN THE SCAR



BLEOMYCIN AND MICRONEEDLING/ LADO



### ASAP ALGORITHM

— A Structured, Multimodal Approach to Scar and Keloid Management —

**A**  
ASSESSMENT

#### Careful evaluation of the scar and patient

- Scar type, size, symptoms, and chronicity
- Skin phototype (Fitzpatrick I–VI)
- Palmar crease pigmentation
- Degree of skin tanning



**S**  
SOFTEN

#### Soften hypertrophic scars and keloids with prolonged occlusion

- Silicone or hydrocolloid dressings
- Improves hydration, pliability, and treatment response



**A**  
APPROACH

#### Target the lesion with a stepwise, multimodal approach

##### 1. VASCULAR MODULATION

###### First-line therapy

- IPL
- Long-pulsed Nd:YAG
- Pulsed Dye Laser



##### 2. SERIAL INJECTIONS

###### After vascular lasers

- Botulinum toxin
- Triamcinolone (TAC) ± 5-FU
- Bleomycin\* (aggressive or earlobe keloids)
- Verapamil\* (larger hypertrophic scars)



##### 3. ADJUNCT: LLLT

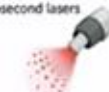
Before each session to enhance anti-inflammatory effects



##### 4. ADVANCED LASERS

In later stages

- Fractional Er:YAG or CO<sub>2</sub> lasers
- Fractional picosecond lasers



\*Use based on scar characteristics, location, and patient tolerance.

**P**  
TREAT  
PIGMENTATION

#### Refine residual pigmentation and texture

**UNEVEN SCARS**  
(texture/overall quality)

- Fractional lasers
- Microneedling
- Fillers

**HYPERPIGMENTED SCARS**

- Chemical peels
- Topical depigmenting agents
- IPL
- Picosecond lasers

**HYPOPIGMENTED SCARS**

- Microneedling or fractional ablative lasers with drug delivery (5-FU, bleomycin, bimatoprost)
- Topical tacrolimus

Individualize. Sequence. Optimize. | Better Scars, Better Outcomes.

> Indian Dermatol Online J. 2024 Aug 19;15(5):787-793. doi: 10.4103/idoj.idoj\_797\_23.  
eCollection 2024 Sep-Oct.

### A Randomized Study to Evaluate the Efficacy of Oral Tranexamic Acid, Modified Kligman's Formula, and Placebo Cream in Melasma

S Prathyosha <sup>1</sup>, K Ananditha <sup>1</sup>, T Narayana Rao <sup>1</sup>, K V T Gopal <sup>1</sup>, P V Krishnam Raju <sup>1</sup>

Meta-Analysis > Clin Exp Dermatol. 2024 Nov 22;49(12):1518-1524.

doi: 10.1093/ced/llae226.

### Assessing the efficacy of oral tranexamic acid as an adjuvant to triple combination topical treatment in melasma: a meta-analysis of randomized controlled trials

Ocílio Ribeiro Gonçalves <sup>1</sup>, Maria Clara Fogaça de Souza <sup>2</sup>, Alice Volpato Rocha <sup>3</sup>, Gabriel Silva Alves <sup>2</sup>, João Luís Reis Freitas <sup>4</sup>, Benjamim Barbosa de Azevedo <sup>1</sup>, Milene Vitória Sampaio Sobral <sup>2</sup>, Amanda Scrobot Handocha <sup>5</sup>, Caroline Baima de Melo <sup>1</sup>

- Dosis estándar: 250 mg/12h
- Mejor resultado en combinación con tratamiento tópico.
- Off label.
- Efectos adversos: Molestias GI, alteraciones menstruales.
- Precaución FR trombosis

### Chemical Peeling own approach

- Sequential Chemical Peeling
- Glycolic acid 20% and Salicylic acid 20% in combination in individual amount
- Every 2 weeks
- 5 – 10 treatments
- Prior home care treatment with Glycolic acid products for a better treatment outcome
- Treatment endpoint in Chemical Peeling: no scaling, nearly no redness
- Combination with Hydroquinone 2 % Cream

Review > J Eur Acad Dermatol Venereol. 2026 May;40(5):760-772. doi: 10.1111/jdv.70185.

Epub 2025 Dec 8.

## Global consensus on the management of melanin hyperpigmentation disorders

Thierry Passeron<sup>1</sup>, Seemal R Desai<sup>2,3</sup>, Marwa Abdallah<sup>4</sup>, Firas Al-Niaimi<sup>5,6</sup>, Ncoza Dlova<sup>7</sup>, Pearl E Grimes<sup>8</sup>, Jorge Ocampo-Candiani<sup>9</sup>, Rashmi Sarkar<sup>10</sup>, Leihong Flora Xiang<sup>11</sup>, Helio Amante Miot<sup>12</sup>

- **Fotoprotección UV + luz visible** como pilar terapéutico.
- **Tratar primero la causa y la inflamación** antes de centrarse únicamente en el pigmento.
- **Tópicos → sistémicos/procedimientos** según gravedad, individualizando por fototipo y profundidad del pigmento.

## POLYPODIUM LEUCOTOMOS · ADJUNCTIVE ORAL THERAPY

**POLYPODIUM LEUCOTOMOS (PL)**  
Natural extract — Calaguala fern  
(Central & South America)  
Potent antioxidant & anti-inflammatory  
Oral supplement — adjunctive therapy

**MECHANISM OF ACTION**  
Photoprotective: inhibits UV-induced reactive oxygen species (ROS)  
May inhibit UV activation of melanocytes  
Anti-inflammatory: reduces cytokine-mediated melanogenesis

**CLINICAL EVIDENCE**  
240 mg BID with sunscreen + HQ 4%: improvement in melasma appearance  
Well tolerated — minimal side effects  
Nestor, Bucay, Callender et al. (2014)

**ROLE IN PIH**  
Emerging data as adjunctive therapy  
Reasonable add-on for motivated patients  
Particularly useful in photo-exacerbated PIH



## ORIGINAL CONTRIBUTION

WILEY

## Predicting the risk of postinflammatory hyperpigmentation: The palmar creases pigmentation scale

Hector Leal-Silva MD, PhD<sup>1,2,3</sup>

<sup>1</sup>Dermatology, UDN, Monterrey, Mexico

<sup>2</sup>Universidad de Monterrey, San Pedro Garza García, Mexico

<sup>3</sup>Universidad del Valle de México, Monterrey, Mexico

Correspondence:  
Hector Leal-Silva, PhD, [hleal@uvm.mx](mailto:hleal@uvm.mx)

### Abstract

**Background:** Postinflammatory hyperpigmentation (PIH) may affect all but has been linked more often to darker skin. While propensity for PIH has not been fully elucidated, there may be a direct correlation with crease pigmentation.



**FIGURE 5** Pigment in a recent abdominal scar matching pigment in the palmar creases of the same subject



**FIGURE 6** Reduced patient after treatment with topical treatment of PIH, matching the palmar creases pigmentation

WILEY



**FIGURE 4** (A) Subject with Fitzpatrick's skin phototype IV (dark brown eyes, and (B) null (Score 0) pigment in the palmar creases



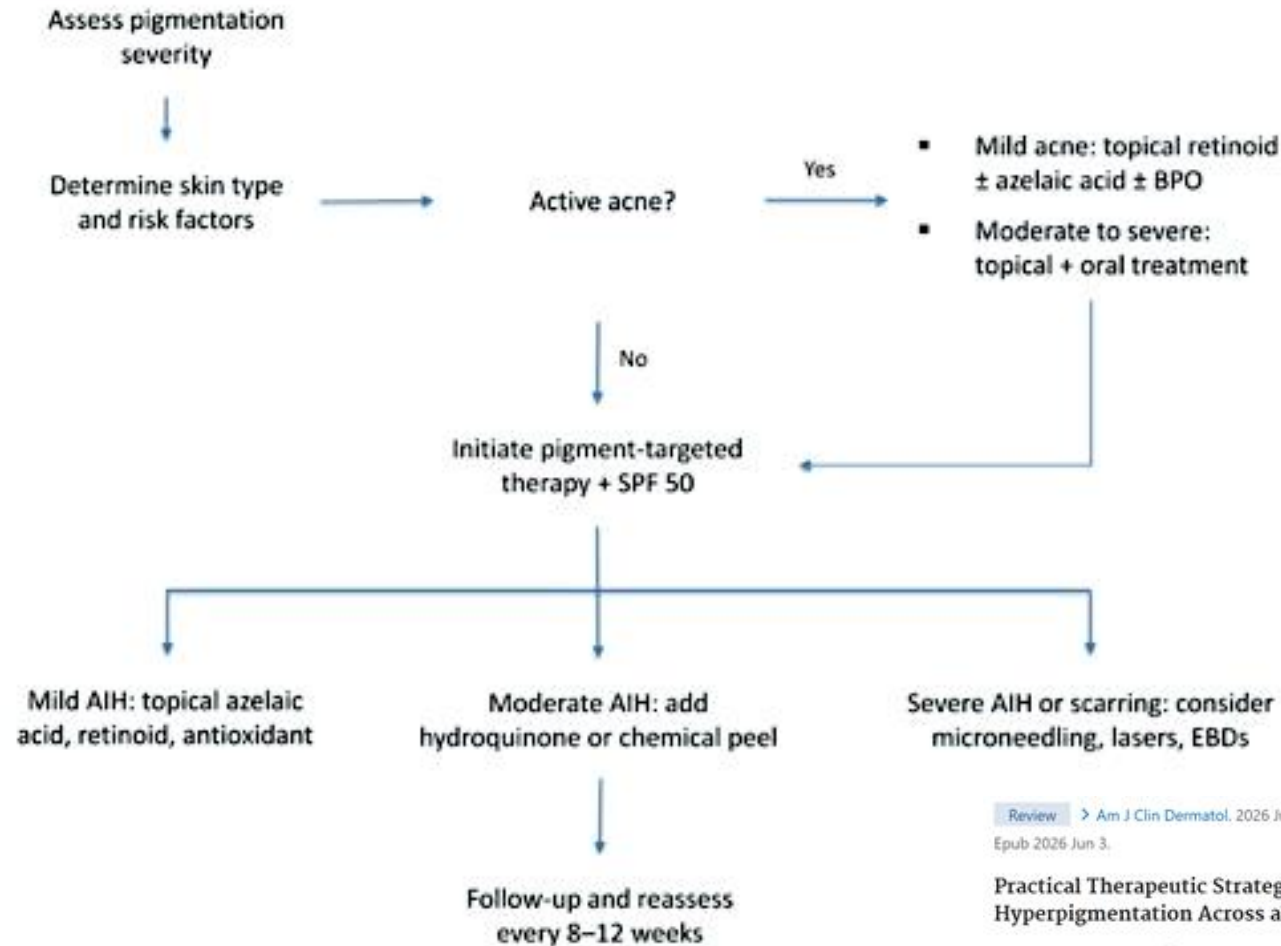
**FIGURE 7** (A) Subject with Fitzpatrick's skin phototype IV (green eyes, and (B) medium (Score 2) pigment in the palmar creases

## EMERGING TOPICALS · CYSTEAMINE · 2-MNG · THIAMIDOL

Nestor M, Bucay V, Callender V et al. J Clin Aesthet Dermatol. 2014;7(3):13-17. [Ref 41]

| HQ-Equivalent                                                                                                                                                                                                                                                                                                                                                                                                                       | Novel Mechanism                                                                                                                                                                                                                                                                                                                                                                   | Breakthrough                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cysteamine 5%</b><br><br><b>Mechanism</b><br><br>Aminothiol - Inhibits tyrosinase + peroxidase - Scavenges dopaquinone - Chelates Cu/Fe ions - Shifts melanin away from eumelanin<br><br><b>Clinical Evidence</b><br><br>Equivalent to HQ 4% (120-day RCT) - Similar to Kligman's TTC; onset at 4 wks - Sig. improvement in acne-PIH + solar lentigines x 12 wks - Fewer side effects vs. HQ (less dryness, atrophy, irritation) | <b>2-MNG</b><br><br><b>Mechanism</b><br><br>Binds melanin precursors (L-DOPA, DHICA, DHI) - Prevents melanin integration - Does NOT induce melanocyte death - Thiopyridine family<br><br><b>Clinical Evidence</b><br><br>Prevented UV darkening days 12-47 - Sig. improvement in PAHPI + lesion darkness for acne-PIH in FST IV-VI (Mauritius cohort) - High subject satisfaction | <b>Thiamidol</b><br><br><b>Mechanism</b><br><br>Potent selective human tyrosinase inhibitor - Identified via HTS of >50,000 compounds - Most potent thiazolyl-resorcinol derivative<br><br><b>Clinical Evidence</b><br><br>40% PIH reduction vs. placebo - Effective: melasma, PIH, solar lentigines - Frey C, Grimes P, Callender VD, et al. J Drugs Dermatol. 2025;24(6):608-616. |

Nautiyal A, et al. Pigment Cell Melanoma Res. 2021;34(6):1000-1014. 26. Washington JE, et al. PRIME Journal. 2026;Mar/Apr. 30. Frey C, et al. J Drugs Dermatol. 2025;24(6):608-616.



## Original Article

### Importance of treating acne sequelae in skin of color: 6-month phase IV study of trifarotene with an appropriate skincare routine including UV protection in acne-induced post-inflammatory hyperpigmentation

Andrew Alexis,<sup>1</sup> James Q. Del Rosso,<sup>2</sup> Seth Forman,<sup>3</sup> Antonio Martorell,<sup>4</sup> John Browning,<sup>5</sup> Vivian Laquer,<sup>6</sup> Seemal R. Desai,<sup>7,8</sup> Jean Philippe York,<sup>1</sup> Rajeev Chavda,<sup>10</sup> Sunil Dhawan,<sup>11</sup> Angela Y. Moore,<sup>12,13</sup> and Linda Stei

#### Trifarotene cream 0.005%

- Phase IV, double blind, vehicle-controlled, 24-week study \123 patients
- Overall disease severity score improved significantly from baseline compared to the vehicle (1.6 vs. 1.0,  $p=0.03$ ) at 12 week
- **Post-Acne Hyperpigmentation Index**
- Demonstrated an 18.9 % reduction compared with 11%.3 reduction with the vehicle ( $p<0.001$ )

Alexis A, Del-rosso, et al. Int J Dermatol 2024,

Review > Am J Clin Dermatol. 2026 Jul;27(4):697-707. doi: 10.1007/s40257-026-01044-z. Epub 2026 Jun 3.

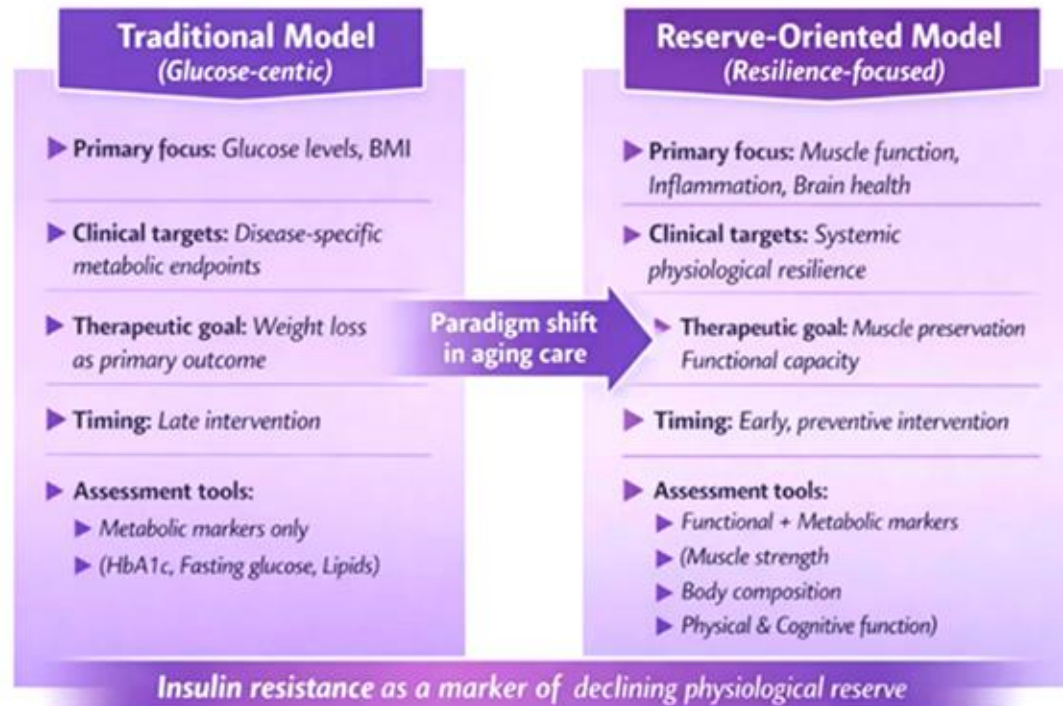
#### Practical Therapeutic Strategies for Acne-Induced Hyperpigmentation Across all Skin Types

Jose L Lopez-Estebanariz <sup>1</sup>, Marta Lopez-Pando <sup>2</sup>, Keila Mitsunaga <sup>3</sup>

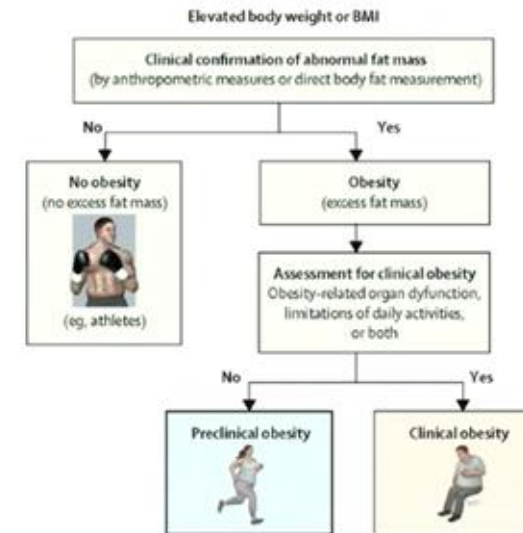
Affiliations + expand

PMID: 42234395

DOI: 10.1007/s40257-026-01044-z



Boccardi V, Sinclair AJ. Rethinking insulin resistance in aging: A reserve-oriented clinical framework. Ageing Res Rev. 2026 Jul;119:103180



The skin may provide an early clinical clue to systemic metabolic dysfunction

*Acanthosis nigricans*  
*Androgen-related disorders/PMOS*  
*PSO, hidradenitis suppurativa*  
*Acrochordones*

Review

>

Endocrine. 2025 Sep;89(3):680-685. doi: 10.1007/s12020-025-04293-w.

Epub 2025 Jun 11.

## GLP-1RA and the possible skin aging

Ioanna A Paschou<sup>1</sup>, Evangelia Sali<sup>2</sup>, Stavroula A Paschou<sup>2</sup>, Konstantinos I Tsamis<sup>3</sup>, Melpomeni Peppas<sup>4</sup>, Theodora Psaltopoulou<sup>2</sup>, Electra Nicolaidou<sup>1</sup>, Alexander J Stratigos<sup>5</sup>

- ↓ Puntuaciones PASI en psoriasis (datos de cohorte observacional, 2024)

• ↓ Estadio de Hurley en HS con ≥10% de pérdida de peso con **agonistas del receptor GLP-1**

• ↓ Gravedad del acné: mejora de la resistencia a la insulina y del entorno hormonal

• ↑ Cicatrización de heridas (GLP-1R en queratinocitos)

• ↓ Inflamación sistémica (PCR, IL-6, TNF-α)

• ↓ Formación de AGE (productos finales de glicación avanzada).

Review

>

Aesthet Surg J. 2024 Oct 15;44(11):NP809-NP818. doi: 10.1093/asj/sjae132.

## Decoding the Implications of Glucagon-like Peptide-1 Receptor Agonists on Accelerated Facial and Skin Aging

Zainab Ridha, Sabrina Guillen Fabi, Raheel Zubar, Steven H Dayan

PMID: 38874170 DOI: 10.1093/asj/sjae132

Free article

Pérdida de grasa facial → apariencia de envejecimiento prematuro (“cara de Ozempic”)

↓ Masa muscular magra si no se mantiene entrenamiento de fuerza

Efluvio telógeno durante fases de pérdida rápida de peso

Reacciones en el lugar de inyección

Déficits nutricionales (proteínas, zinc, biotina) si la dieta es inadecuada

Penfigoide ampolloso: Raro, mecanismo inmunomediado.



AEDV 35ª edición

# HIGHLIGHTS

*Viena*  
30sep - 3oct  
2026

**LÁSER**

Una iniciativa de



Con el patrocinio de



## Next Generation Fractional Technology

### Focal Point Technology™

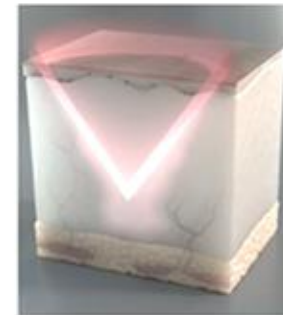
#### ORIGINAL ARTICLE

#### Focal point technology: Controlling treatment depth and pattern of skin injury by a novel highly focused laser

Dieter Manstein, MD, PhD,<sup>a,b</sup> Henry H. Chan, MD, PhD,<sup>b,c,d</sup> Jayant Bhawalkar, PhD,<sup>c</sup> Irina Erenburg, PhD,<sup>b,c</sup> Hyemin Pomerantz, MD,<sup>c,d</sup> Jhony Escobar, BS,<sup>b</sup> Zeina Tannous, MD,<sup>d,e,g</sup> Jane Yoo, MD, MPP,<sup>c,h</sup> Thanh-Nga Tran, MD, PhD,<sup>d,e</sup> Raj Katkam, MS,<sup>c</sup> and R. Rox Anderson, MD<sup>b,d</sup>

Manstein DD, Chan HH, Anderson RR  
J Am Acad Dermatol. 2025 Jan;92(1):78-84.

### Focal Point Technology Overview



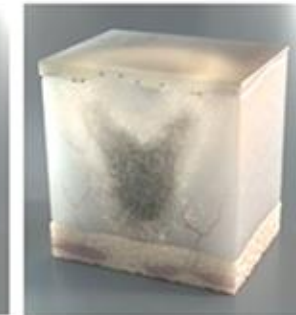
Laser Beam  
Ring Geometry

Patented design of laser deposition enables control of depth and controlled epidermal injury



Coagulation Zone

Laser shape allows epidermal sparing and coagulation "bloom" that can go deep into dermis



Healing  
Pattern

Shape of injury enables inside/out healing with low downtime

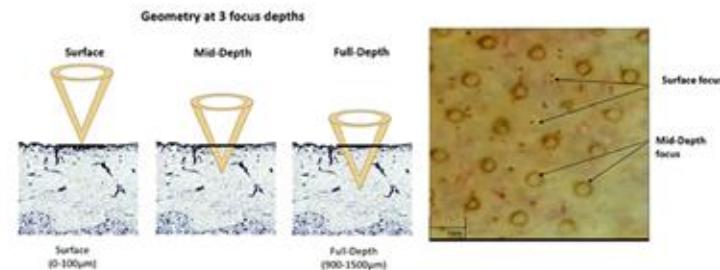


Revitalization

Laser design results in greater density of rejuvenated tissue

#### Focal Point Technology

Has Adjustable 3D Focus and Unique Conical Geometry



#### Focal Point Fractional treatment of Post-traumatic Scar



> PLoS One. 2021 Nov 29;16(11):e0260095. doi: 10.1371/journal.pone.0260095. eCollection 2021.

### Transcriptomic analysis of human skin wound healing and rejuvenation following ablative fractional laser treatment

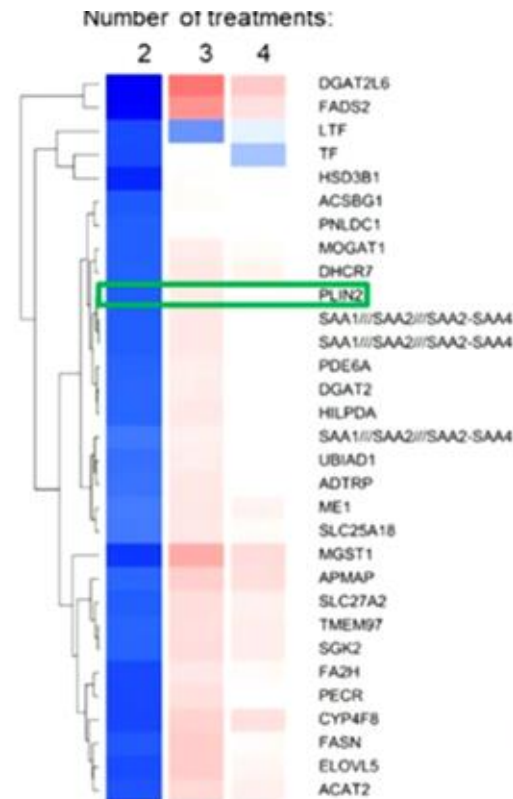
Joseph D Sherrill<sup>1</sup>, Deborah Finlay<sup>1</sup>, Robert L Binder<sup>1</sup>, Michael K Robinson<sup>1</sup>, Xingtao Wei<sup>1</sup>, Jay P Tiesman<sup>1</sup>, Michael J Flagler<sup>1</sup>, Wenzhu Zhao<sup>1</sup>, Catherine Miller<sup>2</sup>, Jean M Loftus<sup>2</sup>, Alexa E Kimball<sup>2</sup>, Charles C Bascom<sup>1</sup>, Robert J Isfort<sup>1</sup>

Affiliations + expand

PMID: 34843523 PMCID: PMC8629261 DOI: 10.1371/journal.pone.0260095

Dramatic changes in gene expression was observed as early as 1 day after fractional laser treatment with changes remaining elevated even after 1 month.

Treatment led to reversal of many aging associated gene expression changes



Clinical Report

### Clinical and molecular effects on mature burn scars after treatment with a fractional CO<sub>2</sub> laser<sup>†‡§</sup>

Le Ou MD, Austin Liu MD, Li Zhou MD, Chundi He MD, PhD, Peter H. Grossman MD, Ronald L. Moy MD, Qing-Sheng Mi MD, PhD, David Ozog MD

First published: 31 July 2012 | <https://doi.org/10.1002/ism.22055> | [VIEW METRICS](#)

> J Eur Acad Dermatol Venereol. 2026 Apr;40(4):e210-e212. doi: 10.1111/jdv.20870. Epub 2025 Jul 21.

### Cellular-resolution spatial transcriptomics of skin remodelling after fractional CO<sub>2</sub> laser treatment

Qing Li<sup>1</sup>, Hung Chan<sup>1,2</sup>, JiaJian Zhou<sup>1</sup>, WenYue Zheng<sup>1</sup>, Bin Yang<sup>1</sup>, ZhenFeng Liu<sup>1</sup>

Affiliations + expand

PMID: 40689597 DOI: 10.1111/jdv.20870

- Biopsias humanas antes y a los días 1, 3 y 7 tras láser fraccionado de CO<sub>2</sub>,
- En epidermis aumentaron genes de **diferenciación y reparación queratinocitaria**: KRT10, FLG2, KRT14 y KRT6C.
- En dermis aumentaron **SPARC y COL6A1**, relacionados con la **organización y remodelado de la matriz extracelular**.
- El CO<sub>2</sub> fraccionado induce una **respuesta coordinada de regeneración epidérmica y remodelado dérmico**.

Randomized Controlled Trial > Lasers Surg Med. 2026 Apr;58(4):321-330. doi: 10.1002/lsm.70120.

Epub 2026 Mar 4.

## Efficacy of Low-Dose Oral Isotretinoin Combined With Fractional Microneedle Radiofrequency Versus Low-Dose Oral Isotretinoin Monotherapy in the Treatment of Moderate-To-Severe Acne Vulgaris: A Randomized Controlled Comparative Study

Wareeporn Disphanurat<sup>1</sup>, Pornpirun Leeyangyuen<sup>1</sup>, Benjaporn Srisantithum<sup>1</sup>

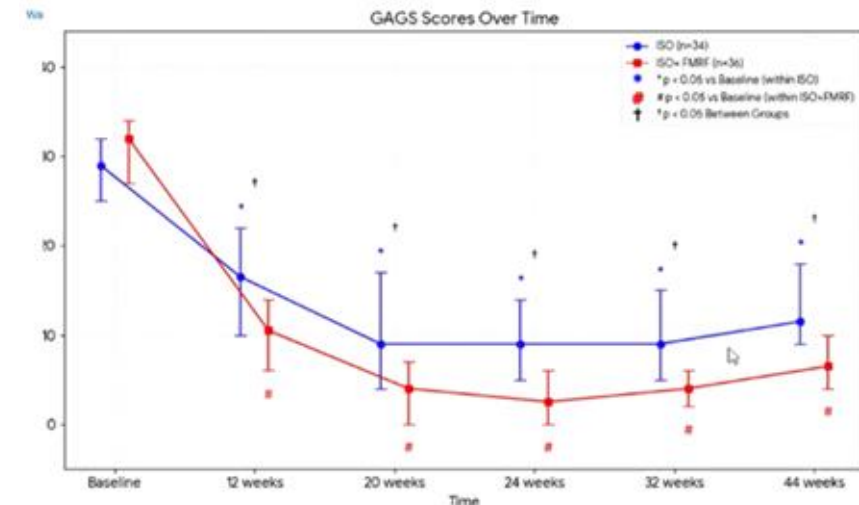
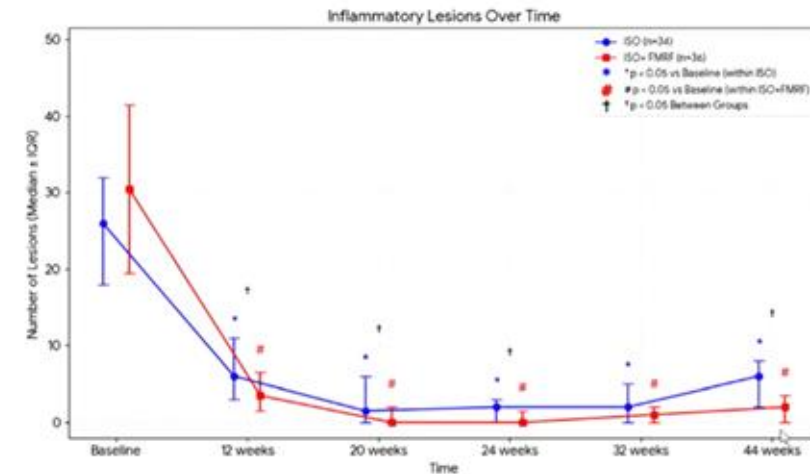
Affiliations + expand

PMID: 41779608 DOI: 10.1002/lsm.70120

### • GAGS (Global Acne Grading Scale)

- 80% reduction RFMN & Isotretinoin group
- 60% reduction Isotretinoin alone group

### • Inflamm & non-inflamm. lesions



• J Clin Invest. 2021 Oct 1;131(19):e150972. doi: [10.1172/JCI150972](https://doi.org/10.1172/JCI150972)

### Randomized controlled trial of fractionated laser resurfacing on aged skin as prophylaxis against actinic neoplasia

Dan F. Spandau <sup>1,2,3</sup>, Roy Chen <sup>4</sup>, Jeffrey J. Wargo <sup>5</sup>, Craig A. Rohan <sup>4,5</sup>, David Southern <sup>2</sup>, Angela Zhang <sup>2</sup>, Mathew Loesch <sup>2</sup>, Jonathan Weyerbacher <sup>2</sup>, Sunil S. Tholeady <sup>3,6</sup>, Davina A. Lewis <sup>2</sup>, Matthew Kuhar <sup>2,7</sup>, Kenneth Y. Tsai <sup>8</sup>, Amber J. Castellanos <sup>4</sup>, Michael G. Kemp <sup>4</sup>, Michael Markey <sup>5</sup>, Elizabeth Cates <sup>4</sup>, Amy R. Williams <sup>4</sup>, Christina Knisely <sup>4</sup>, Sabina Bashir <sup>4</sup>, Ryan Gabbard <sup>4</sup>, Robert Hoonen <sup>4</sup>, Jeffrey B. Travers <sup>4,9,10,11</sup>

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PMCID: PMC8483749 PMID: [36628179](https://pubmed.ncbi.nlm.nih.gov/36628179/)

### UVB-induced Senescence in Human Keratinocytes Requires a Functional Insulin-like Growth Factor-1 Receptor and p53

Davina A. Lewis <sup>1</sup>, Qiaofang Yi <sup>1,2</sup>, Jeffrey B. Travers <sup>1,2,3,4</sup>, Dan F. Spandau <sup>1,3,4</sup>

Editor: J Silvio Gutkind

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PMCID: PMC2291419 PMID: [18216278](https://pubmed.ncbi.nlm.nih.gov/18216278/)

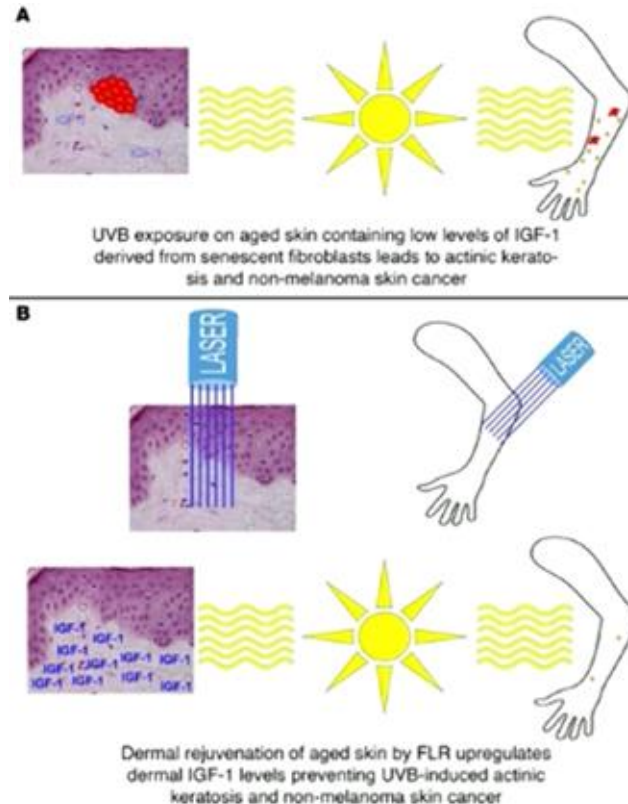
### Fractionated laser resurfacing corrects the inappropriate UVB response in geriatric skin

Dan F. Spandau <sup>1,2,3</sup>, Davina A. Lewis <sup>1</sup>, Ally Khan Somani <sup>1</sup>, Jeffrey B. Travers <sup>1,3,4,5</sup>

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PMCID: PMC3352957 NIHMSID: NIHMS350123 PMID: [22377757](https://pubmed.ncbi.nlm.nih.gov/22377757/)

The publisher's version of this article is available at [J Invest Dermatol](https://www.journalofinvestdermatology.com/)



## 1. Efecto destructivo inmediato

Elimina parte del epitelio fotodañado y queratinocitos premalignos.

## 2. Efecto biológico a largo plazo

Remodela la dermis envejecida y modifica el microambiente:

↓ **fibroblastos senescentes** → ↑ **IGF-1** → **respuesta UV más fisiológica.**

FLR redujo de forma mantenida las QA y los NMSC: 2 en el área tratada vs 24 en la no tratada.

## Actinic Keratoses Combo AFXL and PDT

- >10 RCTs  
AFXL-assisted PDT – 400 ppts
- Immunocompetent and immunosuppressed patients
- AFXL-PDT significantly more efficacious than PDT alone up to 12 months postop
- Lower recurrence rate from combo tx



### JOURNAL ARTICLE

**Efficacy and safety of daylight photodynamic therapy after tailored pretreatment with ablative fractional laser or microdermabrasion: a randomized, side-by-side, single-blind trial in patients with actinic keratosis and large-area field cancerization** [Get access >](#)

[E. Wenande](#) ✉, [W. Phothong](#), [C. Bay](#), [K.E. Karmisholt](#), [M. Haedersdal](#), [K. Togsverd-Bo](#)

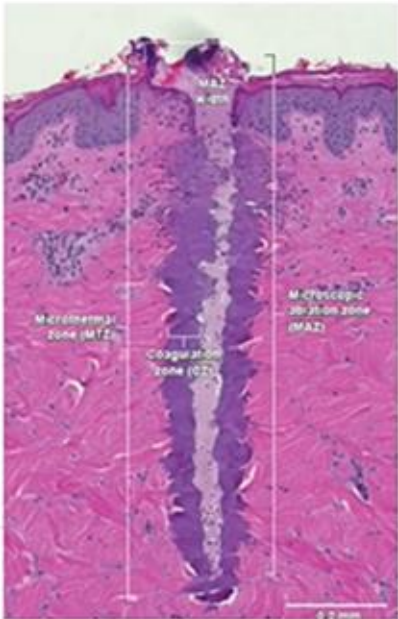
*British Journal of Dermatology*, Volume 180, Issue 4, 1 April 2019, Pages 756–764,

<https://doi.org/10.1111/bjd.17096>

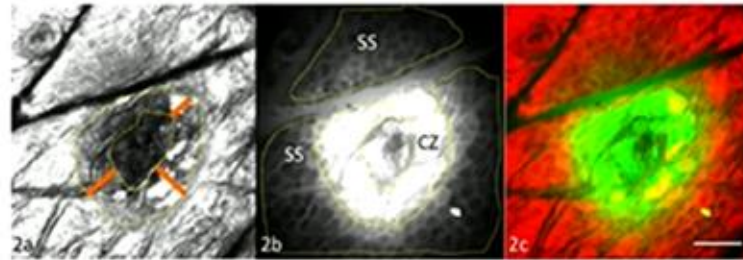
**Published:** 01 April 2019

- **RCT**
- El pretratamiento con **láser fraccionado ablativo + dPDT** logró mayor aclaramiento que microdermoabrasión + dPDT: **81% vs 60%**.
- **Menos nuevas QA** y mejoría superior de **discromía y textura cutánea**.
- **Reacciones locales más intensas**, aunque los pacientes tendieron a preferir AFL-dPDT por su **mayor eficacia y mejor resultado cosmético**.

## Coagulation Zone is not a barrier for drug uptake



- Coagulation zone enhances the uptake of hydrophilic substances applied to the skin
- Potential reservoir for drug uptake



Confocal microscopy

Refs. Haak CS et al. *Lasers Surg Med.* 2017; 49 (6): 582-91  
 Banzhaf CA et al. *Lasers Surg Med.* 2018; 50 (1): 70-7  
 Banzhaf CA et al. *Lasers Surg Med.* 2019; 51: 68-78



## Hypertrophic Scars / Burn Scars

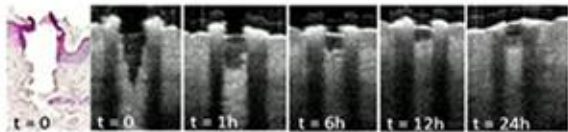


## Laser

- Fx CO<sub>2</sub>, 10,600 nm
- Low laser densities 5-10% coverage

## Drugs

- 5-fluorouracil, 50 mg/ml
- Triamcinolone suspension, 40 mg/ml
- Ratio 9:1



- Highest uptake within 30 min after AFXL
- Enhanced uptake up to 6 hrs after AFXL

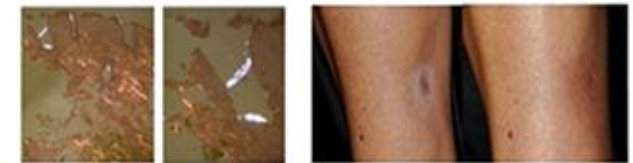
Ref.

Banzhaf CA, Haedersdal M et al. LSM 2019

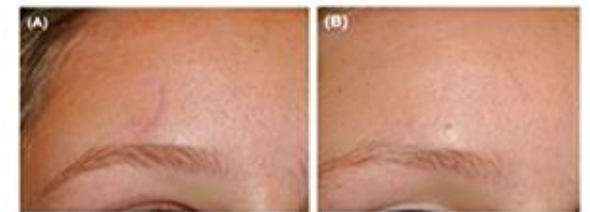
Treatment of Atrophic Scars With Fractionated CO<sub>2</sub> Laser  
Facilitating Delivery of Topically Applied  
Poly-L-lactic Acid

Ali Rkein, MD,\* David Ozog, MD,\* and Jill S. Waibel, MD†

- PLLA biocompatible material, leading to stimulation of host collagen
- 19 pts with atrophic scars
- Uncontrolled prospective study
- Fractional CO<sub>2</sub> laser  
Depth 375-500 microns  
10% density
- 2-5 Txs at 2- to 3- month intervals



Treatment of atrophic scars with fractionated CO<sub>2</sub> laser facilitating delivery of topically applied poly-L-lactic acid.  
Rkein A, Ozog D, Waibel JS.  
Dermatol Surg. 2014 ;40(6):624-31



Ref. Derm Surg 2014; 40 (6): 624-31

> JAMA Dermatol. 2019 Apr 1;155(4):435-441. doi: 10.1001/jamadermatol.2018.5249.

## Pulsed Dye Laser Treatment of Port-Wine Stains in Infancy Without the Need for General Anesthesia

Hana Jeon<sup>1</sup>, Leonard J Bernstein<sup>1,2</sup>, Daniel A Belkin<sup>1,3</sup>, Sabrina Ghalili<sup>1</sup>, Roy G Geronemus<sup>1,3</sup>

Affiliations + expand

PMID: 30865245 PMCID: PMC6459097 DOI: 10.1001/jamadermatol.2018.5249

- El tratamiento precoz con **láser de colorante pulsado (PDL)** en lactantes con malformación capilar fue **seguro y eficaz**.
- **Aclaramiento completo en el 25,9%** de los menores de 1 año.
- Lesiones en **V1** se asociaron con **mayor tasa de aclaramiento**.



## PWB: recurrence after a long treatment break

Baseline

After the initial course

After a long break

After retreatment



Follow-up continues after a satisfactory initial result.

Courtesy of Prof. Bartłomiej Kwiek

Before treatment

After treatment



Courtesy of Dr Julia Sleczyk

## PWB: plateau and long-term maintenance

**55**

patients

**≈9**

sessions to plateau

**>6 months**

breaks linked to redarkening

**Large-spot 532 nm cohort from Klinika Ambroziak**

Further sessions can recover lost improvement. Maintenance should follow the individual course.

Los procedimientos con láser y fuentes de luz van mucho más allá de la ablación.

Mayor protagonismo de estrategias combinadas.

La dermatología estética evoluciona hacia tratamientos más precoces, dirigidos y personalizados.

Una iniciativa de:



ACADEMIA ESPAÑOLA  
DE DERMATOLOGÍA  
Y VENEREOLÓGIA



FUNDACIÓN  
PIEL SANA  
ACADEMIA ESPAÑOLA  
DE DERMATOLOGÍA  
Y VENEREOLÓGIA

Con el patrocinio de:



AEDV 35ª  
edición

# HIGHLIGHTS

*Viena*  
30sep - 3oct  
2026

La Academia Española de Dermatología y Venereología expresa su agradecimiento al patrocinador UCB, por su especial apoyo y contribución con la actividad formativa Highlights 2026.

Una iniciativa de:



ACADEMIA ESPAÑOLA  
DE DERMATOLOGÍA  
Y VENEREOLOGÍA



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DE DERMATOLOGÍA  
Y VENEREOLOGÍA

Con el patrocinio de:



AEDV 35ª  
edición

# HIGHLIGHTS

*Viena*

30sep - 3oct  
2026

# GRACIAS