

# Lasers and Aesthetic Procedures in Pediatric Patients

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# Disclosures

- Galderma
- Incyte
- Boehringer Ingelheim
- AbbVie
- Pfizer
- Lilly
- Sun
- Sanofi
- Regeneron

# Objectives

- Provide reasons to integrate simple and effective cosmetic treatments for common concerns such as acne, acne scarring, iatrogenic scars, and surgical scars
- Discuss off label use of HA fillers for treatment of sclerotic conditions
- Review simple cosmetic additions for treatment of medical conditions

# Vascular lasers for acne

- PDL, long pulse Nd:Yag, and KTP lasers help reduce inflammation through thermal mechanisms
- These lasers are common enough in practice and non-ablative and can be used safely with minimal risk to help improve acne while patients are on all topical and oral therapies
- Why lose your patients to the medical spa and add risk?

# The Efficacy of Pulsed Dye Laser Treatment for Acne Vulgaris: A Systemic Review and Meta-Analysis

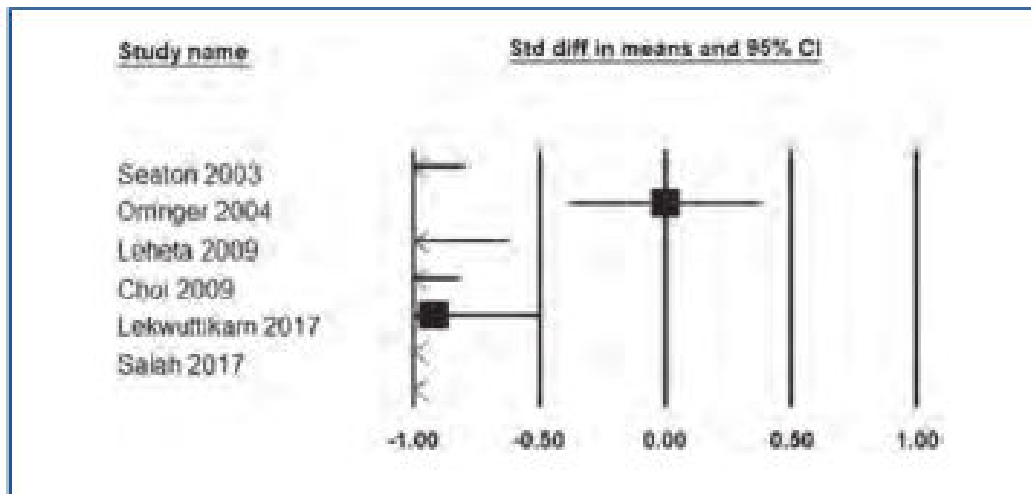
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Affiliations — collapse

## Affiliations

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PMID: 34923532 DOI: [10.1097/DSS.0000000000003345](https://doi.org/10.1097/DSS.0000000000003345)



**Figure 2.** The overall standard mean difference of acne severity score change before and after pulsed dye laser (PDL) treatment.

- 1-2 treatments did not offer benefit
- More than 4 treatments and/or those with longer pulse durations were more effective

## Role of the 585-nm pulsed dye laser in the treatment of acne in comparison with other topical therapeutic modalities

Tahra M Leheta<sup>1</sup>

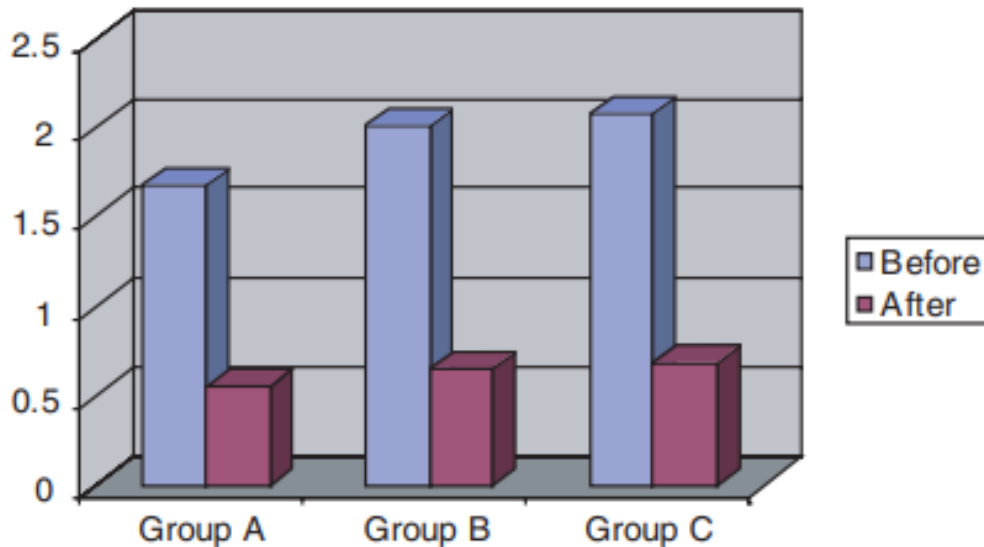


Figure 2. Acne severity score before and after treatment among the three groups.

585 nm, pulse duration of 350 s, spot size of 7 mm, and fluence of 3 J/cm<sup>2</sup>. Treatment was performed every 2 weeks for six sessions

# PDL for acne and erythema

- Spot size: 7mm
- Energy: 7-9J/cm<sup>2</sup>
- Pulse duration: 10ms (favor subpurpuric pulse duration)
- Cooling: 30/10
- \*\*Be mindful that at 585-595nm wavelength, melanin is a competitive chromophore so be mindful in patients beyond FSTIV
- Treat every 2-3 weeks





TABLE 1. Characteristics of Patient, Scar, and Treatment

Case no.	Sex	Age, years	FST	Scar subtype	Anatomic location	Physical exam	No. of FALR treatments	Total energy per treatment (kJ)	Percent coverage	Short-term erythema	Scarring, hyper- or hypopigmentation	Additional treatments
1	M	4	I	Traumatic	Cheek	Atrophic, erythematous	5	0.02–0.07	30%	Y	N	N
2	F	4	I	Surgical	Forehead	Atrophic, erythematous	3	0.02–0.03	40%	N	N	N
3	M	8	IV	Surgical	Forehead	Atrophic, erythematous	2	0.02–0.03	30%	Y	N	PDL ×2, IL-botulinum toxin
4	F	14	II	Traumatic	Nose	Atrophic, hypertrophic	3	0.03–0.33	30–50%	Y	N	PDL ×7, IL-TAC, and 5-FU ×4
5	F	14	II	Skin graft	Lateral canthus	Atrophic	3	0.12	50%	Y	N	N
6	F	12	IV	Surgical	Lateral cheek	Atrophic	2	0.04	50%	N	Hyperpigmentation <sup>a</sup>	1927 nm thulium, low-energy, low-density PDL ×2 <sup>b</sup>
7	F	6	III	Traumatic	Forehead	Atrophic, hypertrophic, erythematous	1	0.04	50%	N	N	
8	M	11	II	Traumatic	Chin	Atrophic, erythematous	2	0.08	50%	Y	N	PDL ×13
9	F	14	III	Traumatic	Oral commissure, nose, and cheek	Atrophic, hypertrophic	8	0.15–0.29	50%	Y	N	IL-TAC and 5-FU ×2
10	M	9	II	Surgical	Nose	Atrophic	2	NA	40%	N	N	N

5-FU, 5-fluorouracil; FALR, fractional ablative CO<sub>2</sub> laser resurfacing; FST, Fitzpatrick skin type; IL-TAC, intralesional triamcinolone; PDL, pulsed dye laser.

<sup>a</sup>Hyperpigmentation was noted and treated with low-energy, low-density 1927-nm thulium laser.

<sup>b</sup>Erythematous aspect of the scar treated with PDL prior to resurfacing.

Lederhandler MH, Bloom BS, Pomerantz H, Geronemus RG. Case Series of Fractional Ablative Laser Resurfacing of Pediatric Facial Traumatic and Surgical Scars. *Lasers Surg Med.* 2021 Jan;53(1):50-54.

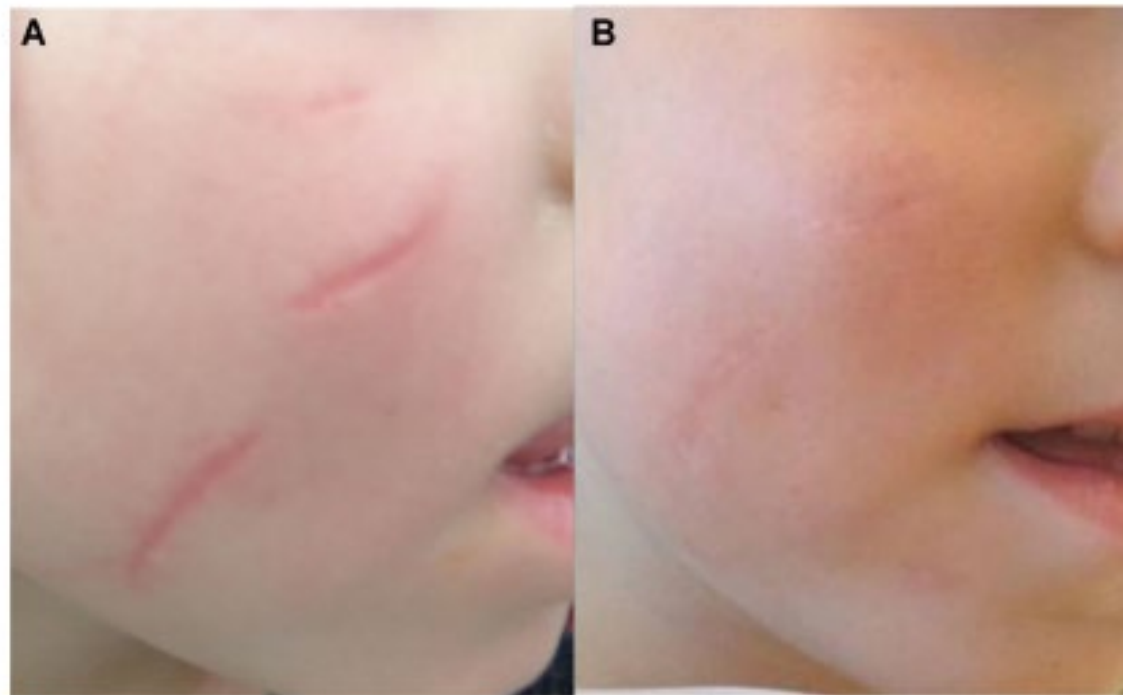


Fig. 1. Case 1. Fitzpatrick skin type I patient with erythematous, atrophic traumatic scars on the cheek prior to initial treatment (A) and with greatly improved texture and color prior to fifth treatment (B) with fractional ablative CO<sub>2</sub> laser.

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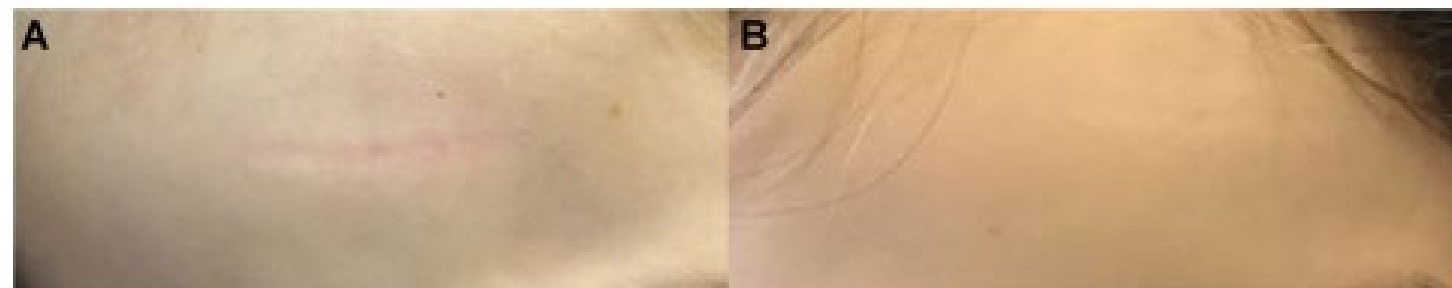


Fig. 2. Case 2. Fitzpatrick skin type I patient with an erythematous, atrophic surgical scar on the forehead prior to initial fractional ablative CO<sub>2</sub> laser resurfacing (FALR) treatment (A), and 4.5 months after third FALR treatment with improvement in texture and color (B).

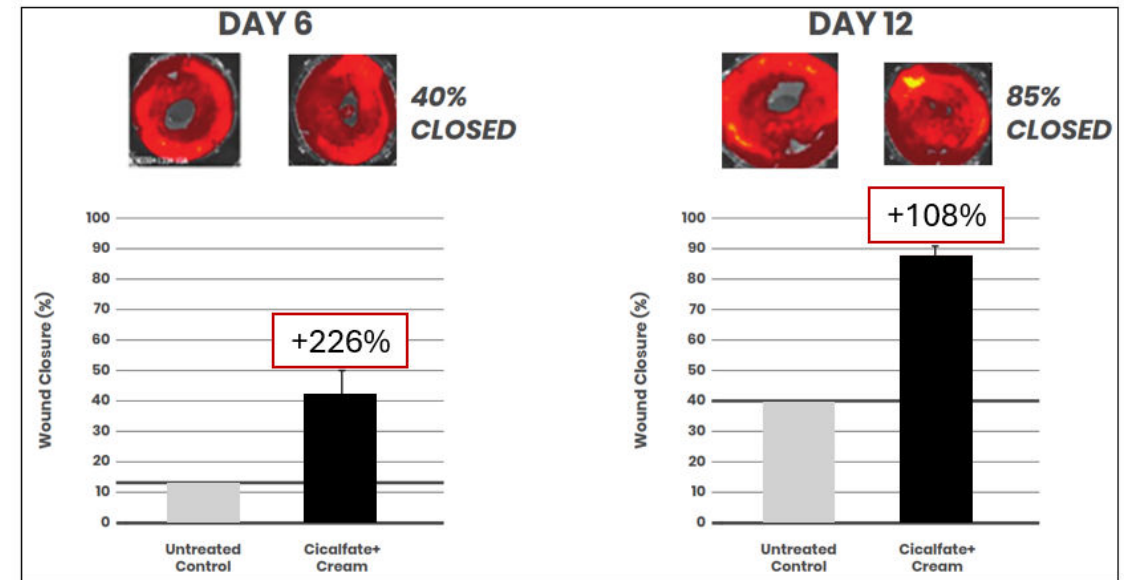
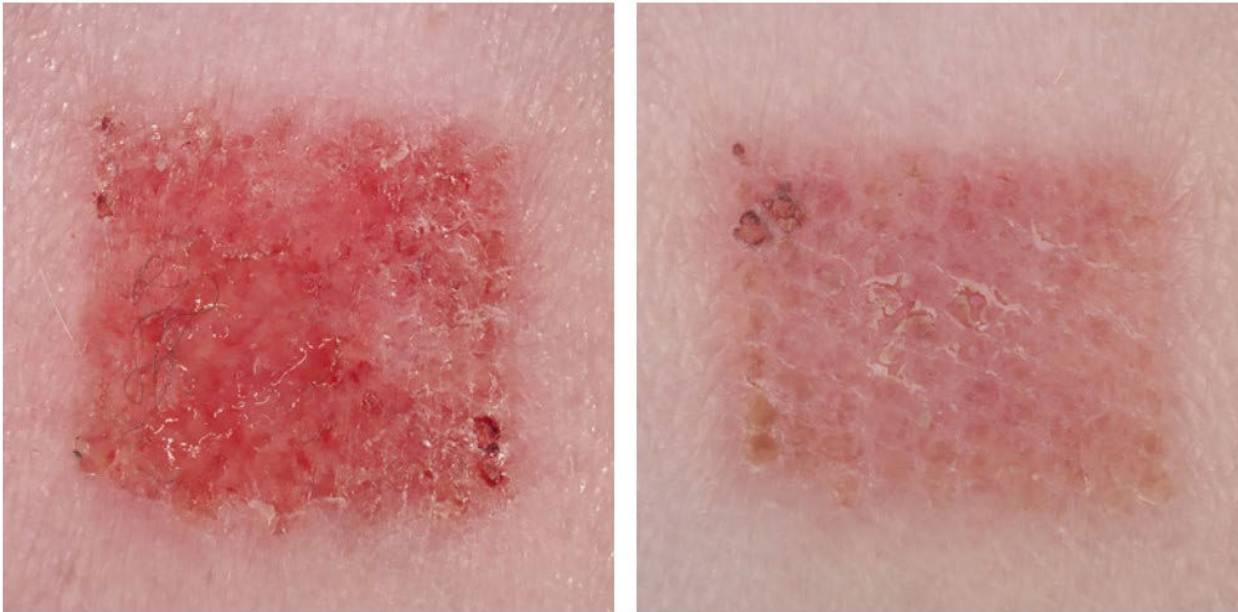
# Tips for treating surgical scars

- Treat at the time of suture removal
- 2940nm laser is less traumatic on the skin's normal color and is my preferred laser wavelength for POC
- Lower energies work best for scars with more frequent treatments
- Treat at 4-week intervals
- Do NOT overpromise, and consult it may take 5+ treatments

# Aquaphilus dolomiae ferment filtrate (ADE-G2)

**The Real-World Effectiveness and Tolerability of a Soothing Cream Containing the Postbiotic *Aquaphilus dolomiae* Extract-G2 for Skin Healing**

Visible Improvement in 2 days<sup>1</sup>



# Do we NEED to start with procedures for acne scars?

Randomized Controlled Trial

> JAMA Facial Plast Surg. 2019 Mar 1;21(2):125-132.

doi: 10.1001/jamafacial.2018.1404.

## Topical Tazarotene Gel, 0.1%, as a Novel Treatment Approach for Atrophic Postacne Scars: A Randomized Active-Controlled Clinical Trial

T P Afra<sup>1</sup>, Muhammed Razmi T<sup>1</sup>, Tarun Narang<sup>1</sup>, Sunil Dogra<sup>1</sup>, Ashok Kumar<sup>2</sup>

Table 2. Quantitative Acne Scar Severity Scores at Baseline and Follow-up.

Parameter Assessed	Treatment Group, Median (IQR)	
	Microneedle	Tazarotene
Quantitative severity score		
Baseline	7.0 (6.0-10.8)	8.0 (6.0-9.8)
At 3 mo	5.0 (3.0-9.8)	5.0 (4.0-8.8)
At 6 mo <sup>a</sup>	4.5 (3.0-6.0)	5.0 (3.0-6.0)
Change in severity score		
From baseline to 3 mo <sup>b</sup>	2.0 (0.8-3.0)	1.8 (2.0-3.0)
P value	<.001 <sup>c</sup>	<.001 <sup>d</sup>
From baseline to 6 mo <sup>e</sup>	3.0 (2.0-4.0)	2.5 (2.0-4.0)
P value	.001 <sup>f</sup>	.001 <sup>g</sup>



**A** Baseline, right side



**B** Baseline, left side



**C** Microneedling therapy



**D** Tazarotene therapy





# Filler, not just for the Real Housewives

- HA fillers are non-inflammatory and can be helpful for volume (particularly fat loss) from autoimmune processes
- Amenable option for morphea, LP, Parry Rhomboid and lipoatrophy syndromes
- The KEY is to avoid treating during active disease
- ROT: Treat after 2 years after onset (if stable) or 2 years after stability (if onset unknown)
- I add weekend prednisolone 1mg/kg for 3 months after treatment



May 29, 2019

# Hyaluronidase Treatment of Scleroderma-Induced Microstomia

Olivia G. Melvin, BA<sup>1</sup>; Katherine M. Hunt, MD<sup>2</sup>; Elizabeth S. Jacobson, MD<sup>3</sup>

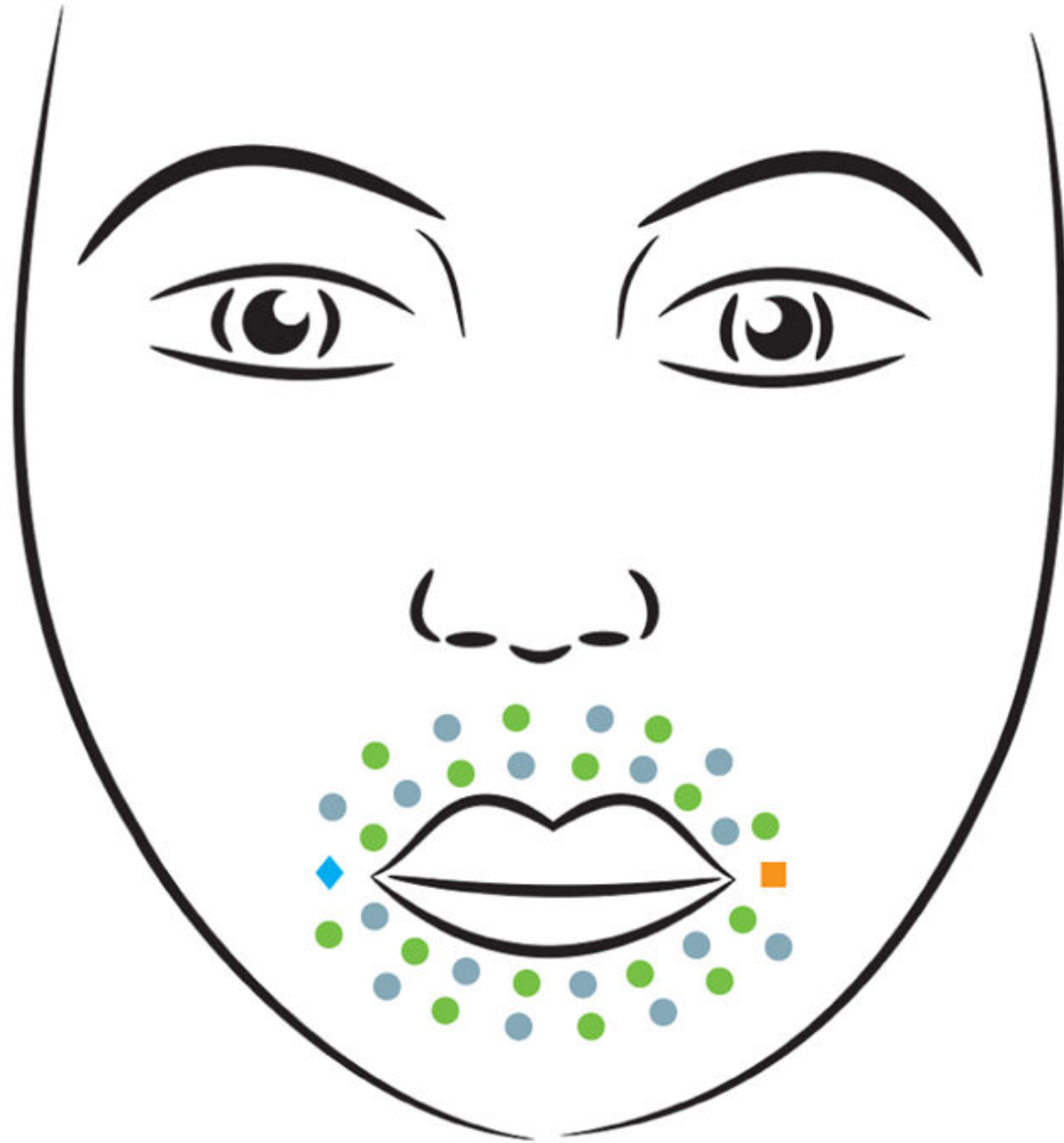
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**A** Pretreatment image



**B** Posttreatment image





◆ Visit 1, 20 IU (0.1 mL undiluted)  
■ Visit 2, 50 IU (0.25 mL undiluted)

● Visit 3, 200 IU (diluted in 6 mL of saline)  
● Visit 4, 200 IU (diluted in 10 mL of saline)

# Conclusions

- Keep YOUR patient- they are going to seek help outside, why not from YOU! You treat the hard stuff, sacrifice getting paid, learn to maximize your patient!
- Offer PDL for acne patients on therapy to help reduce erythema and resultant scarring
- Consider tazarotene 0.1% for those with atrophic acne scars
- Treat or refer surgical scars EARLY for the best outcomes
- HA fillers can be LIFE changing for patients with sclerotic diseases