Red Faces - An Overview of Rosacea and Seborrhea

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Some materials courtesy

Richard Usatine, M.D.

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Disclosure Statement:

- Co-Author,
  - Dermatologic and Cosmetic Procedures in Office Practice. Elsevier, Inc., Philadelphia. 2012.
  - Cutaneous Cryosurgery Fourth Edition CRC press 2014

Objectives

- Recognize different types of rosacea
- Distinguish rosacea from other causes of red rashes on the face
- Formulate treatment plans for rosacea

Pathophysiology

- Exact etiology unknown
- Familial predisposition
- Nonspecific inflammation
- Dilation around follicles
- Hyper-reactive capillaries (telangiectasias)
- Diffuse hypertrophy of the connective tissue and sebaceous glands

Demodex and Rosacea

- Overgrowth of *Demodex* mite is a possible cause of rosacea
  - one RCT* showed permethrin crm bid to be equally effective to metronidazole gel over 60 day treatment period

**Kocak M, et al. Permethrin 5% cream vs metronidazole 0.75% gel for treatment of papulopustular rosacea: Dermatology 2002;205:265-70.*

Triggers - Not cause of disease

- Alcohol may accentuate erythema
- UV light / Sun exposure
- Heat
- Spicy foods
- Strenuous exercise
- Emotional stress

- Oge' LK, Muncie HL, Phillips-Savoy AR. Rosacea: Diagnosis and Treatment. Am Fam Physician. 2015 Aug 1;92(3):187-96.

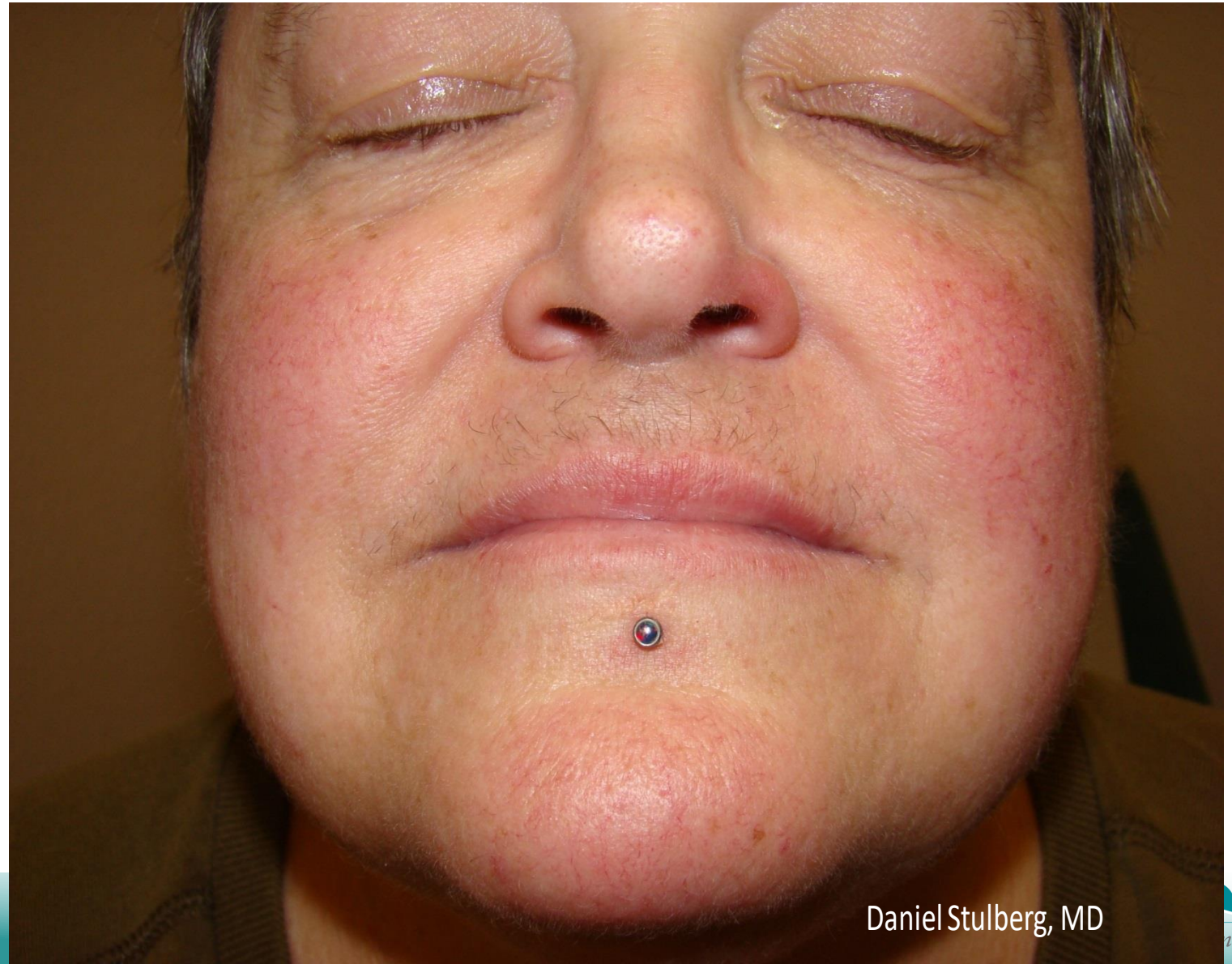
Subtypes of Rosacea

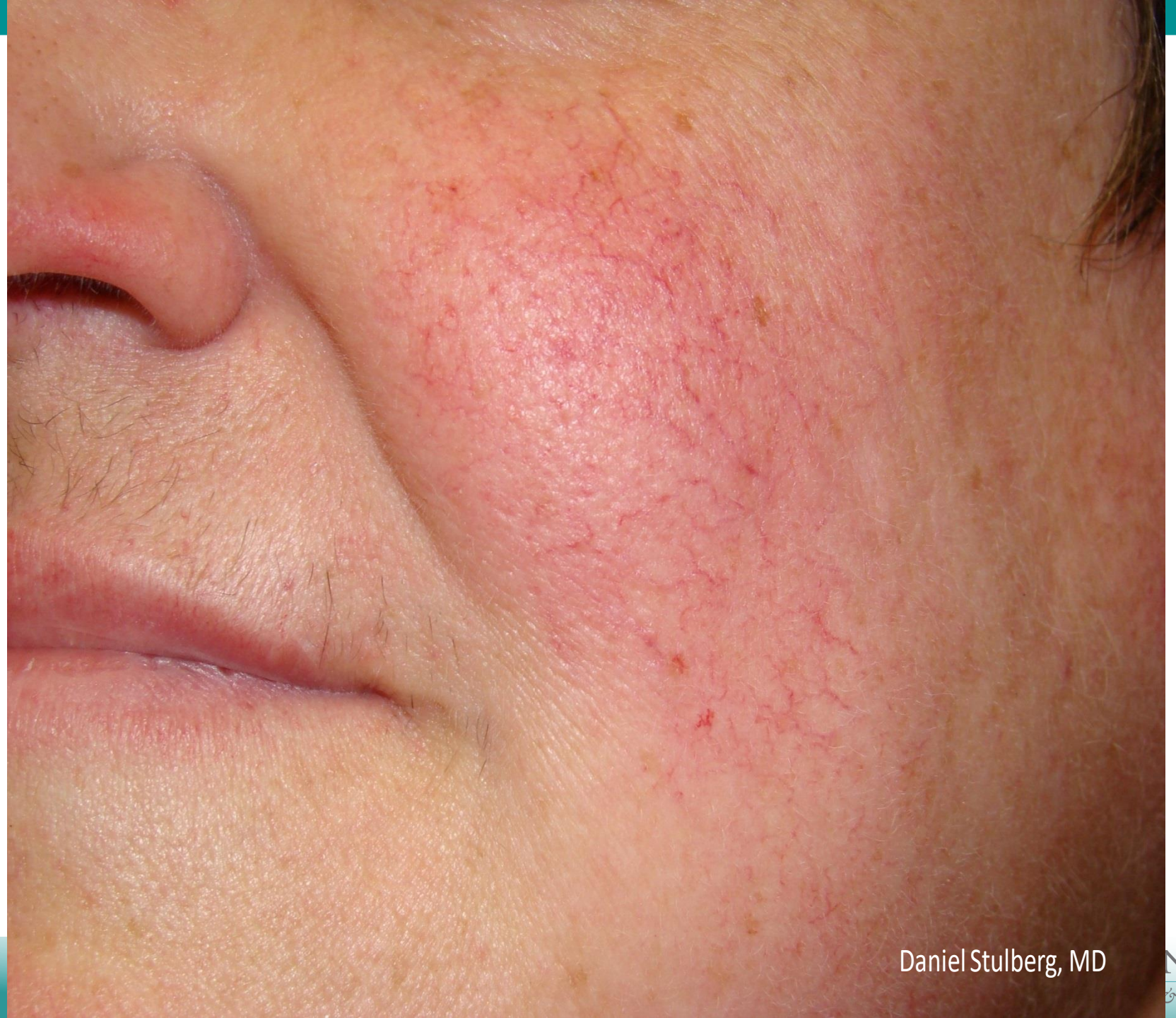
1. Erythematotelangiectatic
2. Papulopustular
3. Phymatous
4. Ocular rosacea

http://www.rosacea.org/class/index.php April 2016 still current

Standard classification of rosacea: *J Am Acad Dermatol.* 2002;46:584-587.

Erythematotelangiectatic

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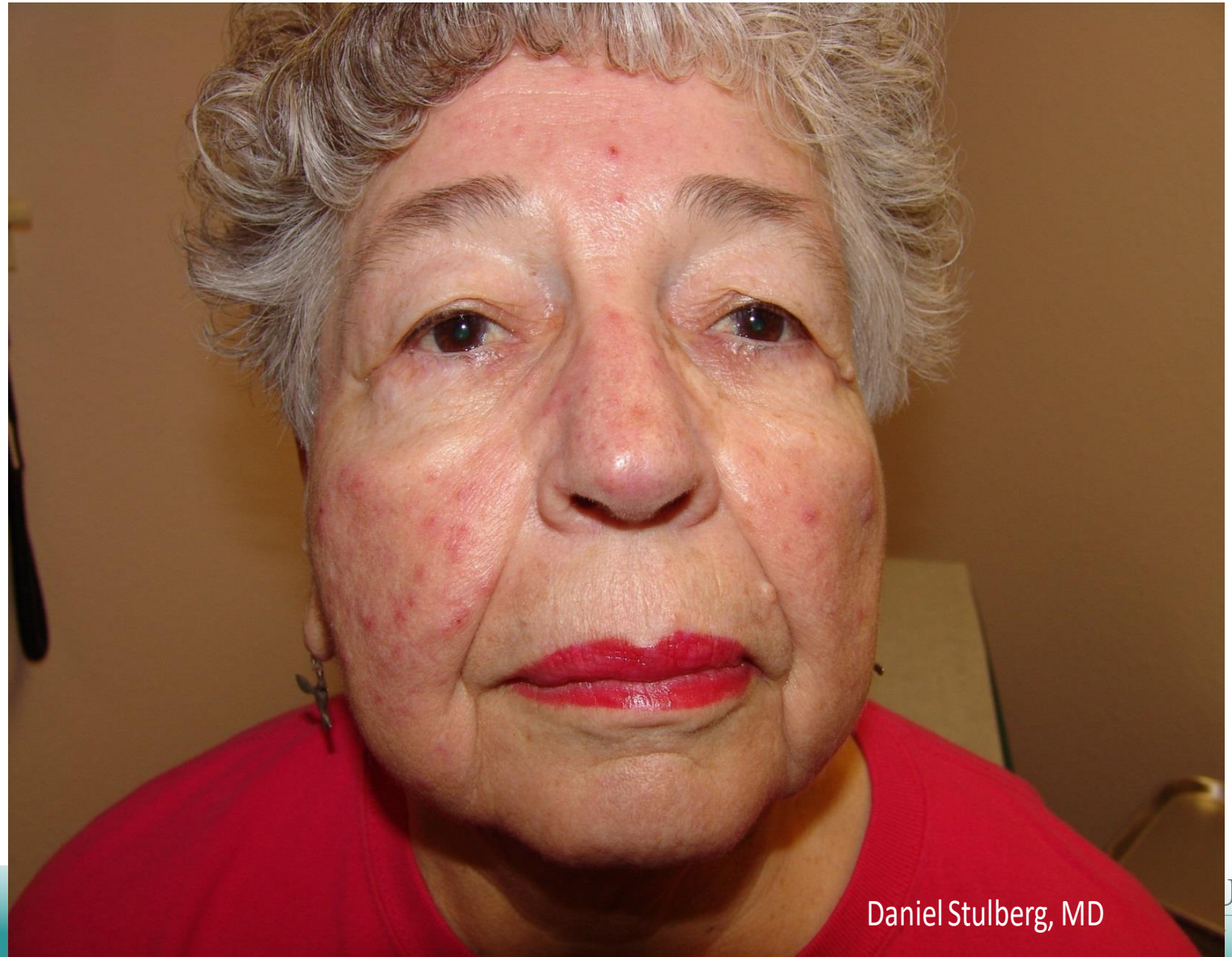
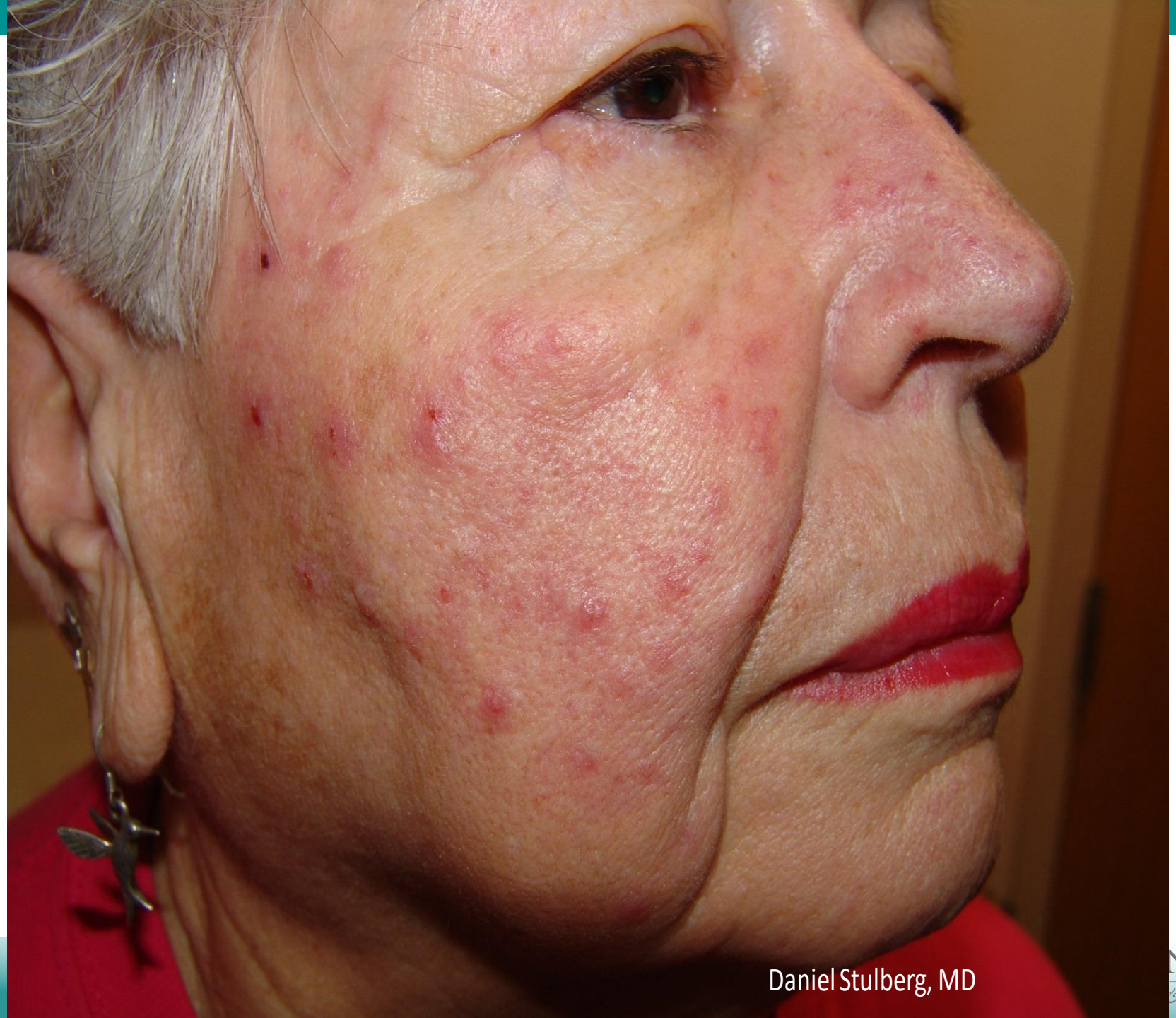
Papulopustular – Most Common

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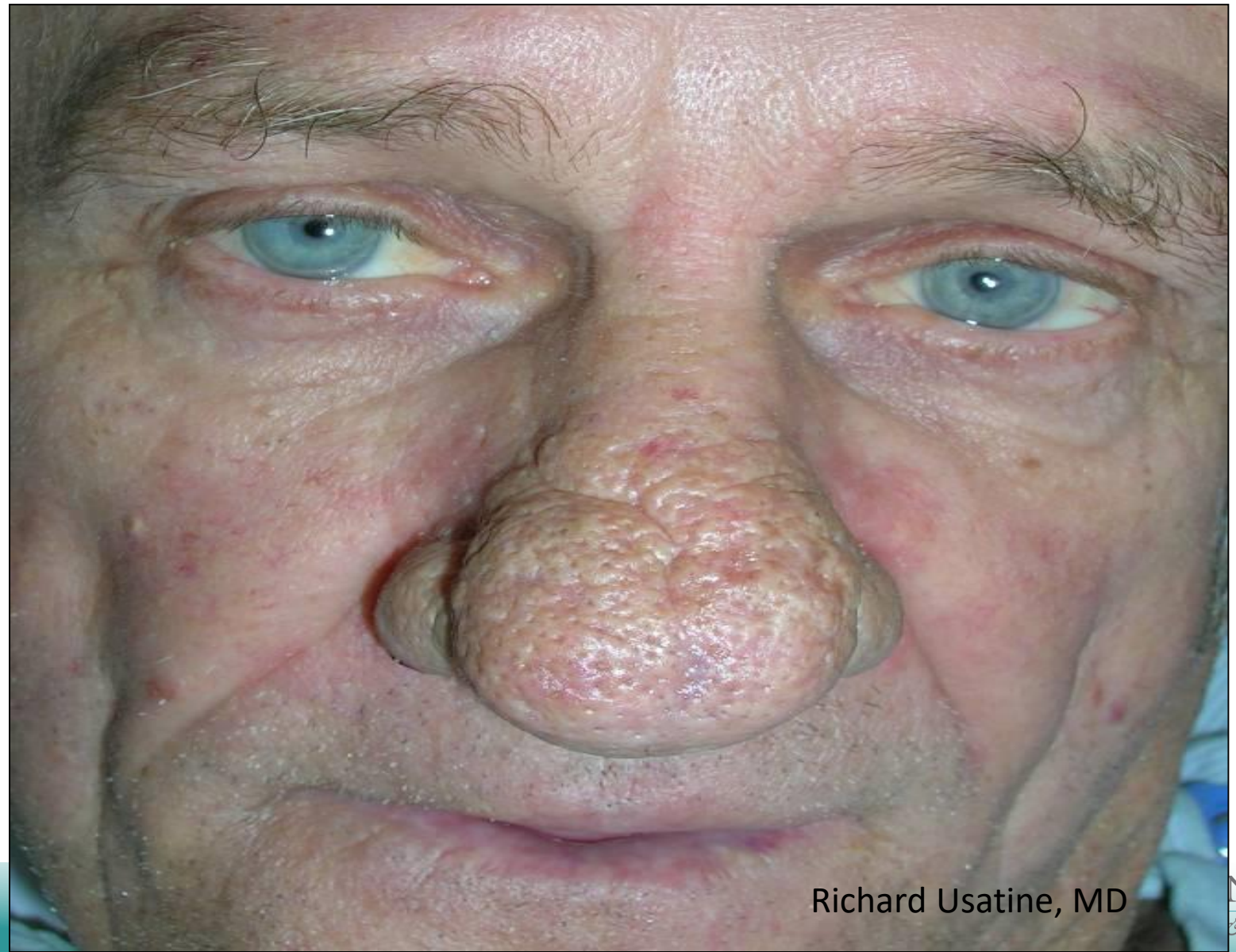
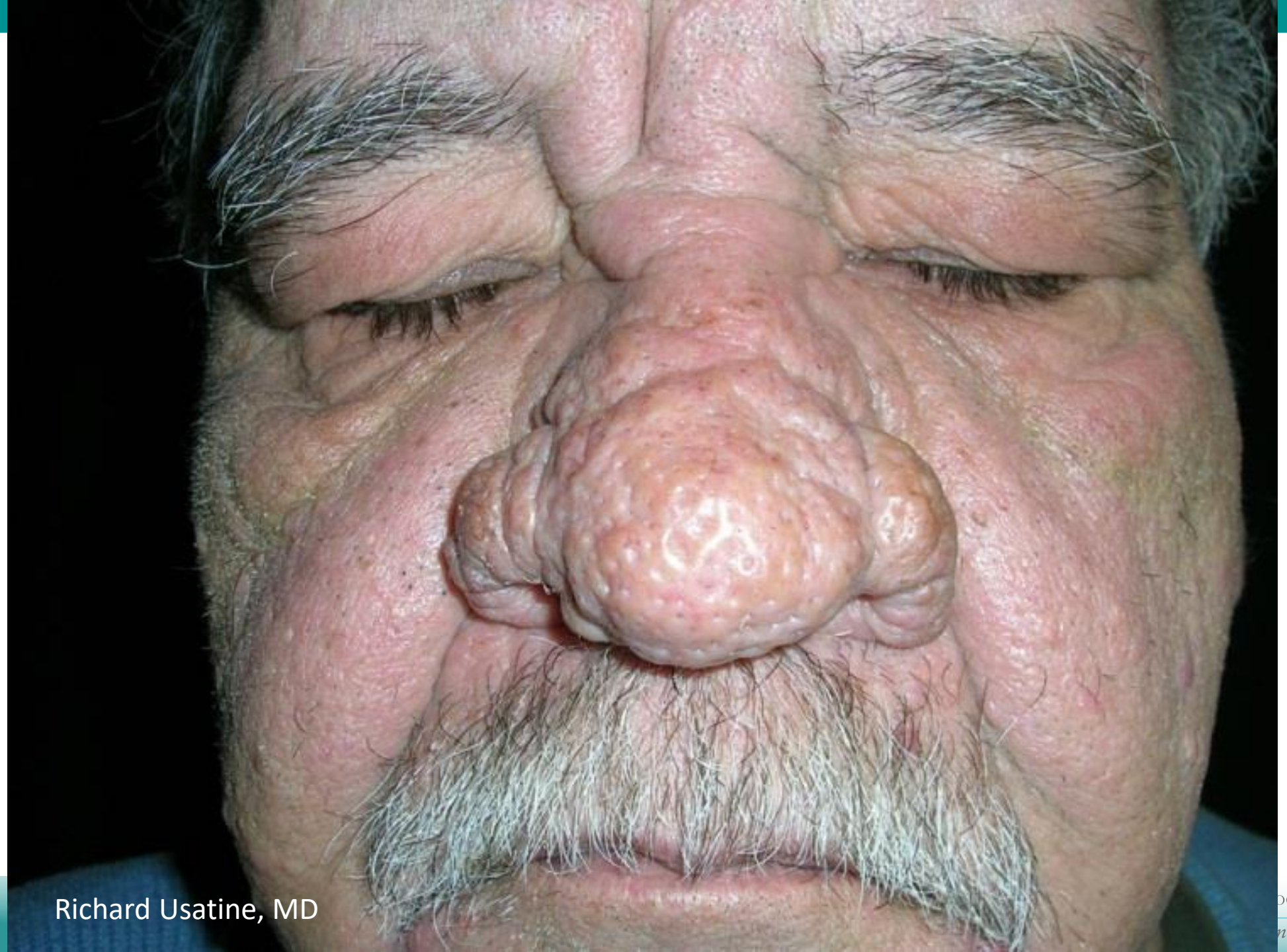
Phymatous





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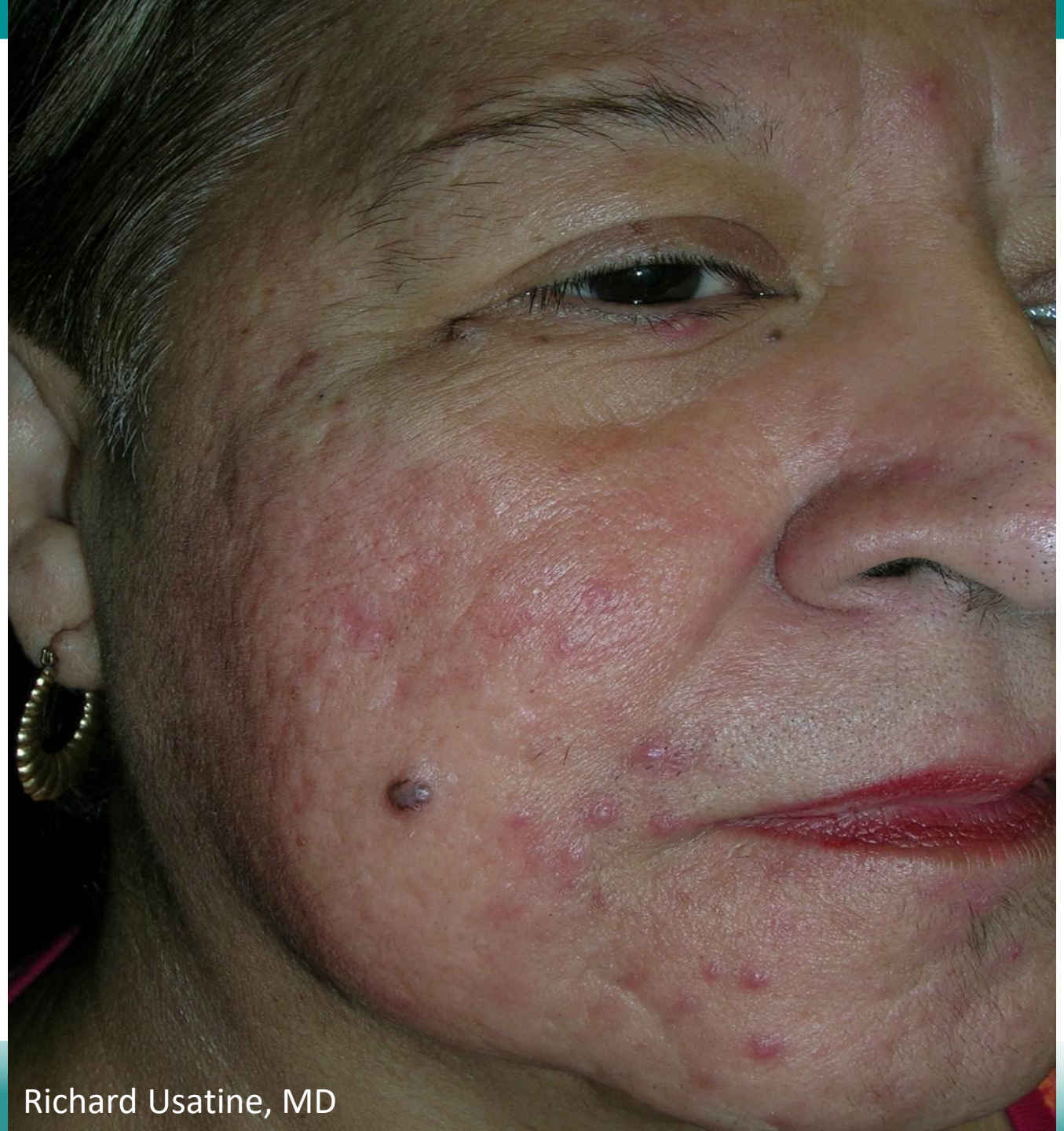

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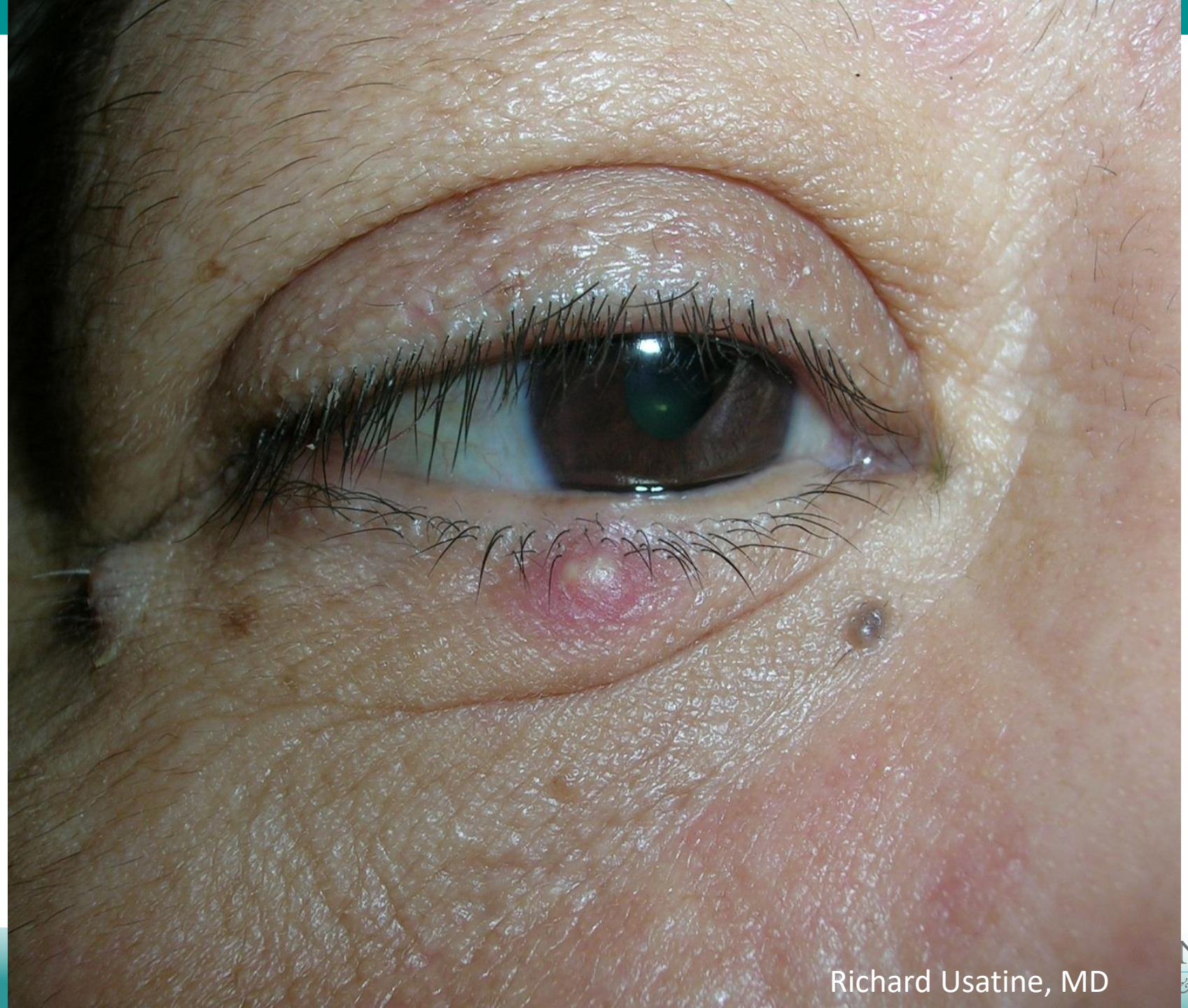
Ocular Rosacea

Ocular Rosacea

- Common:
  - Hordeolum and chalazion
  - Blepharitis
  - Conjunctivitis
  - Chronic edema

- Rare: keratitis, corneal neovascularization, corneal ulceration or rupture



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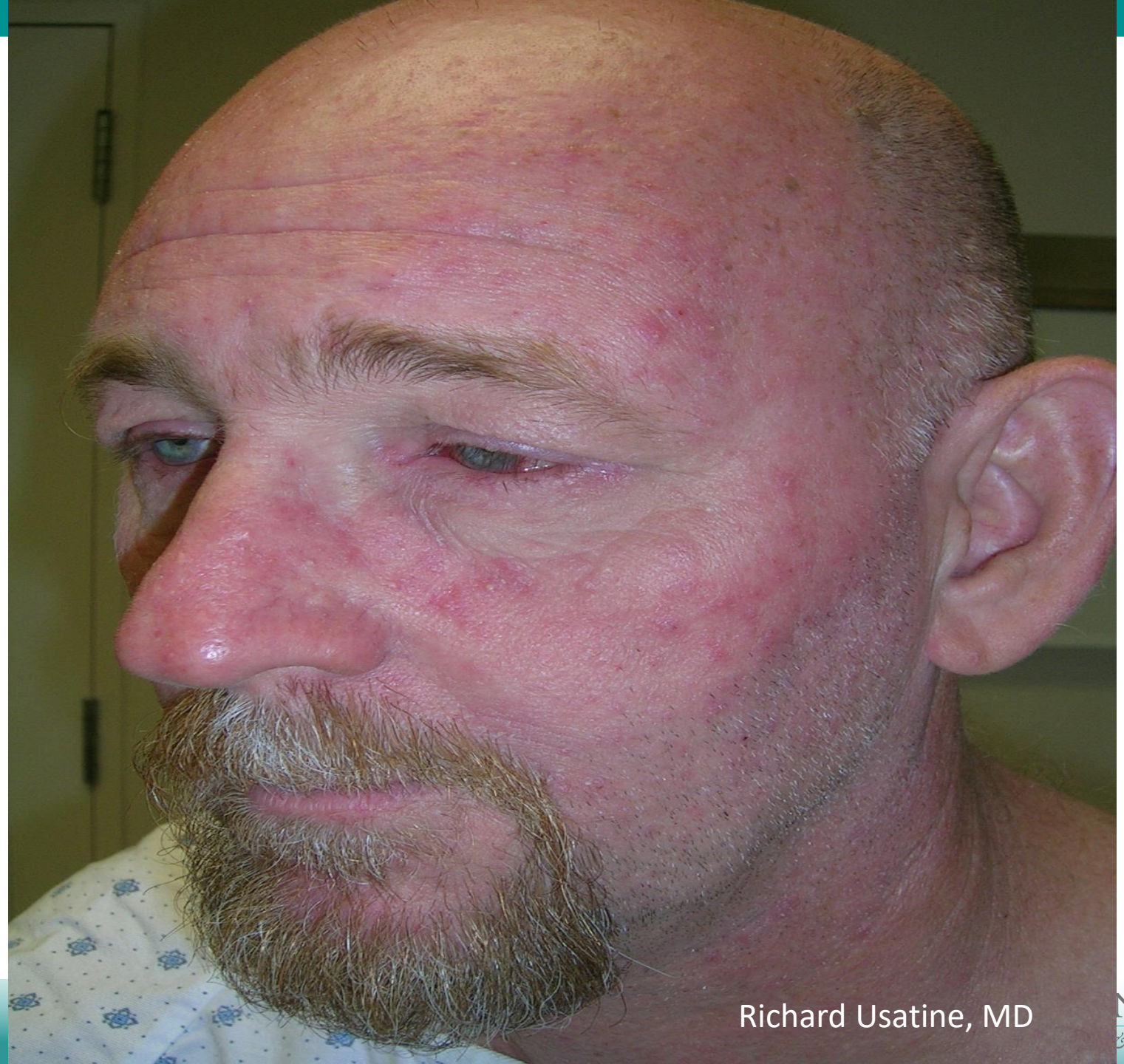
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11 year old
Rosacea

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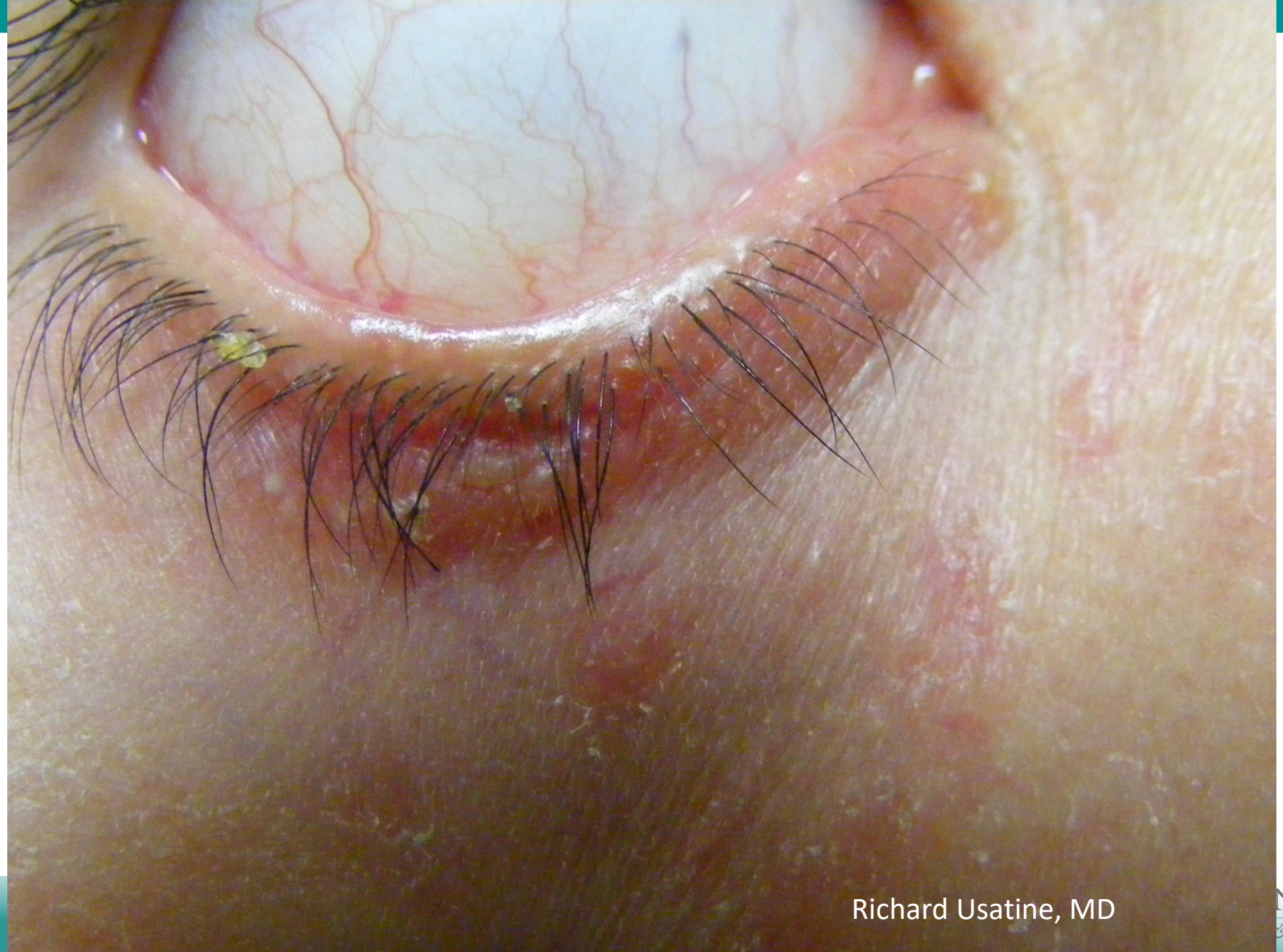
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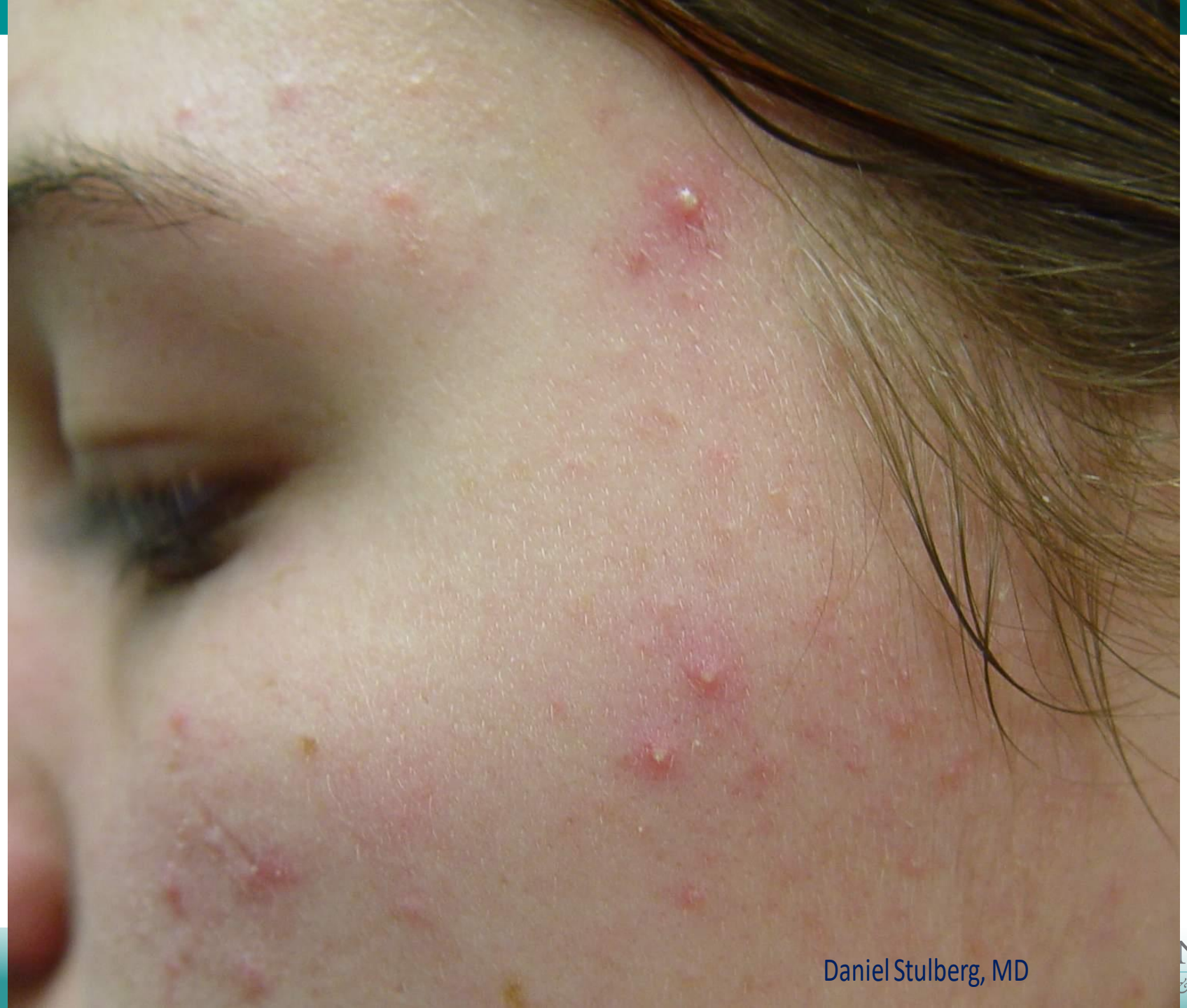
Corneal Neovascularization

Ocular Rosacea

- Common in persons with rosacea
- Ask about ocular symptoms
  - Dry eyes
  - burning, stinging
  - Itching
  - light sensitivity
  - foreign body sensation
  - Tearing
  - blurry vision
  - styes

Differential Diagnosis

- Acne
- Seborrheic dermatitis
- Lupus
- Sarcoidosis – AKA Lupus pernio



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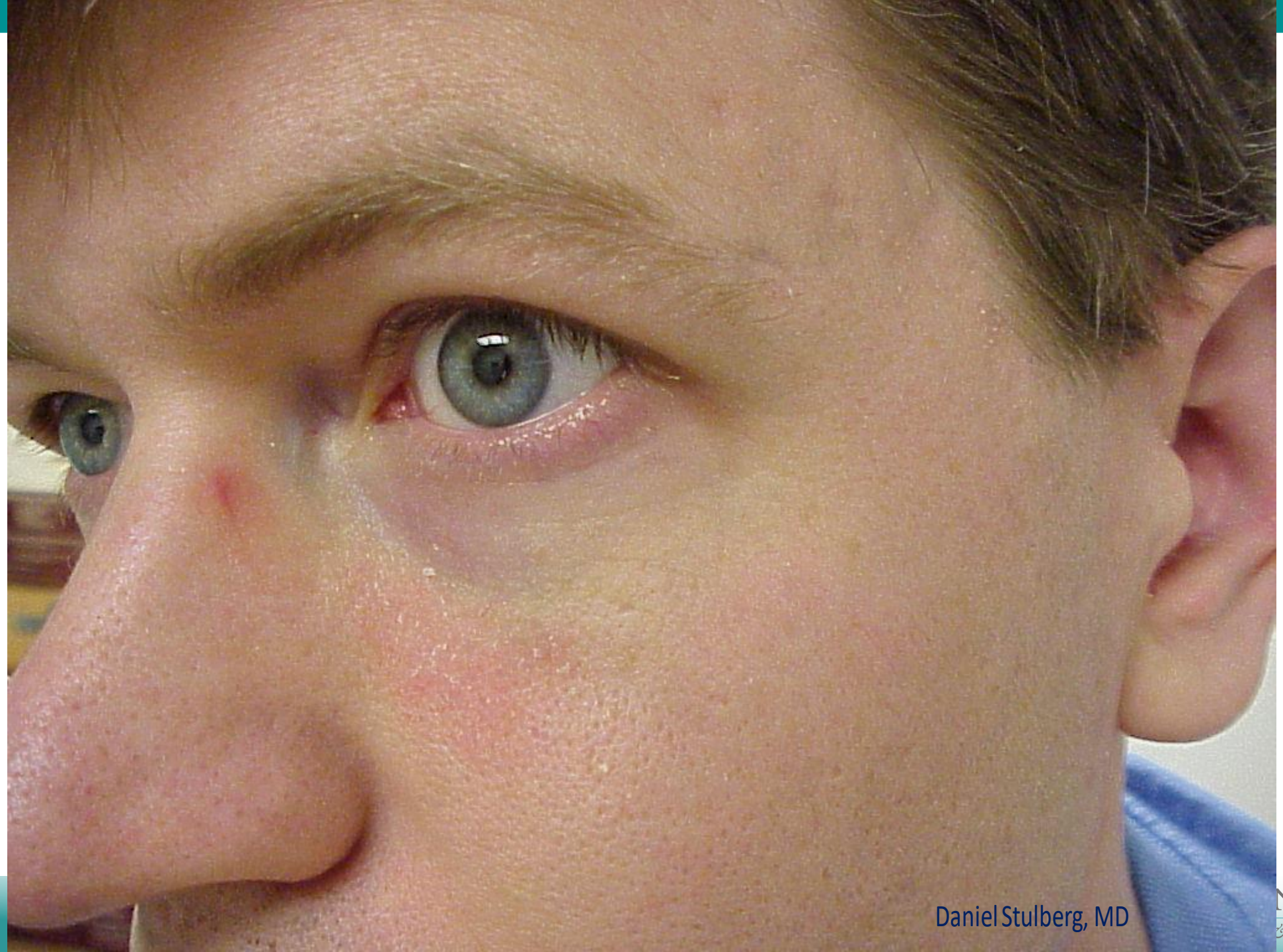

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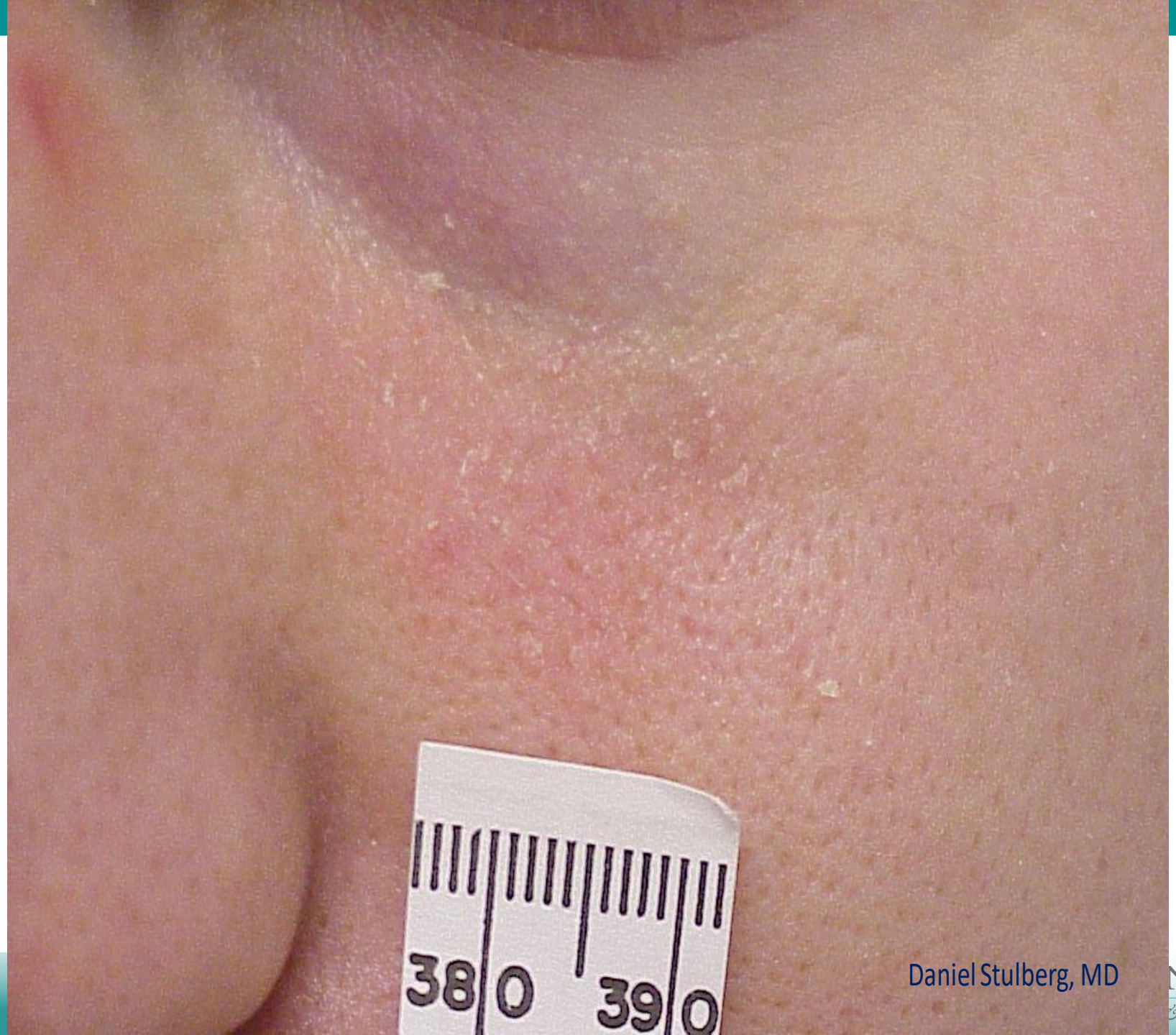

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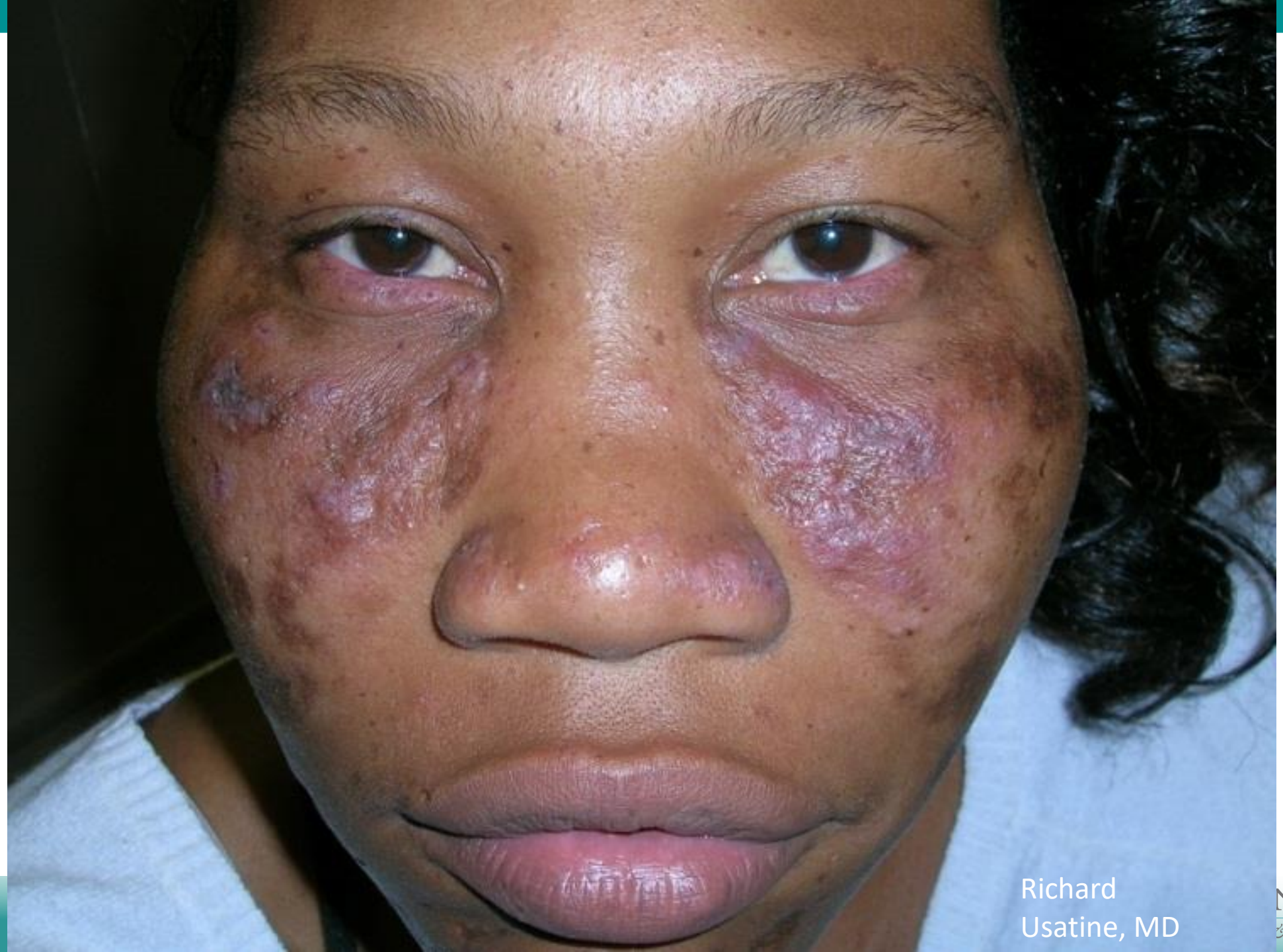

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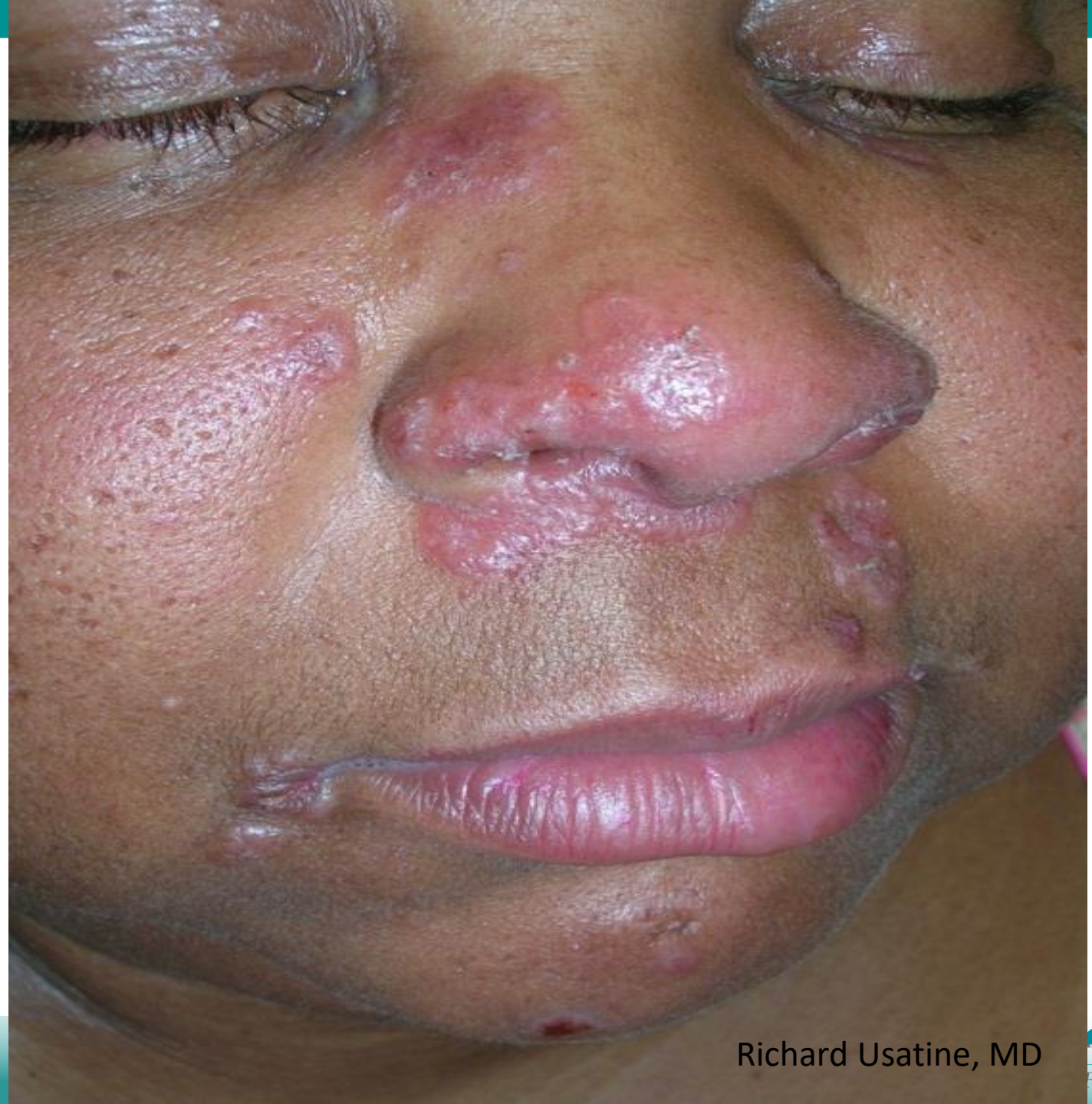

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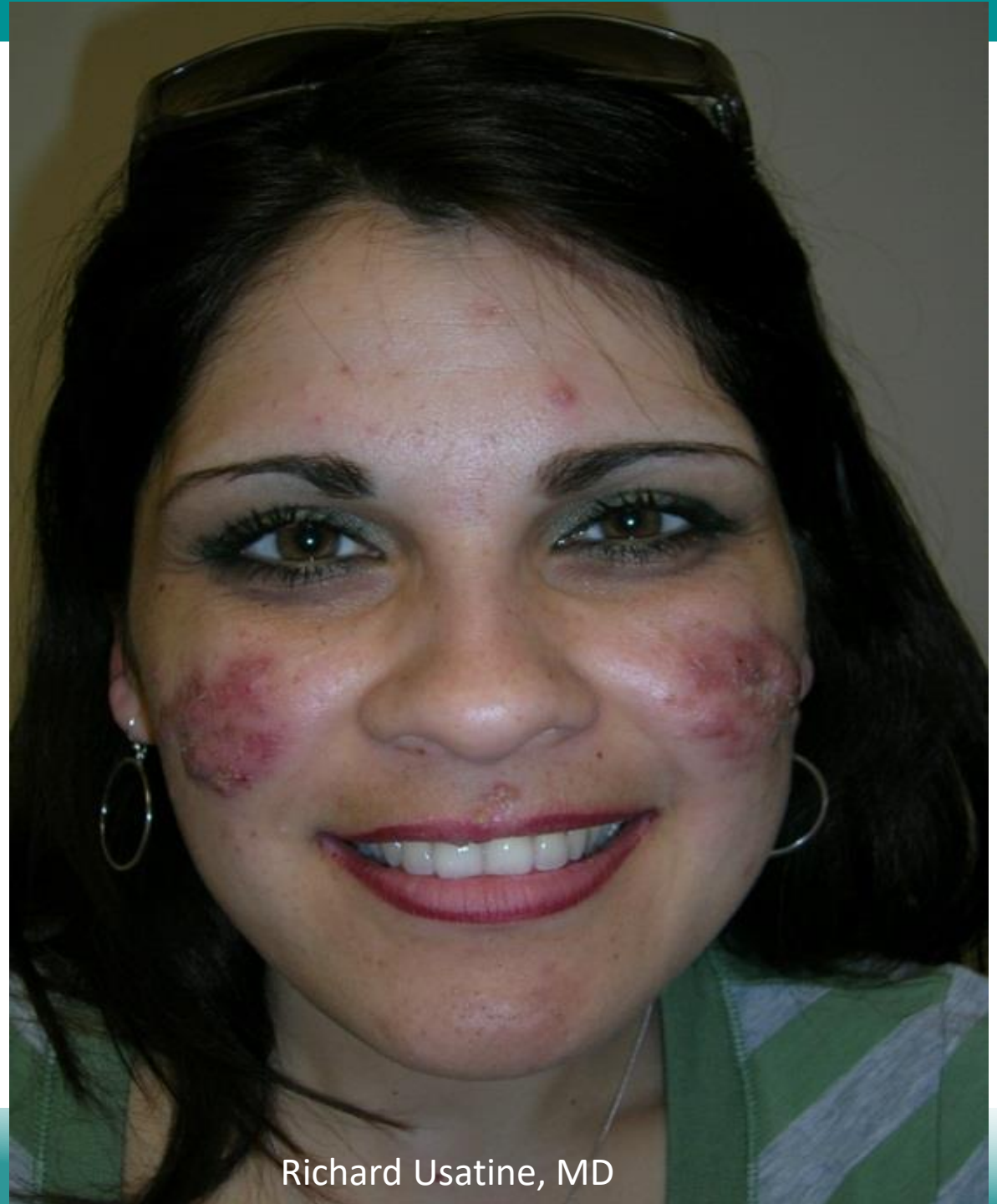
Variants of Rosacea?

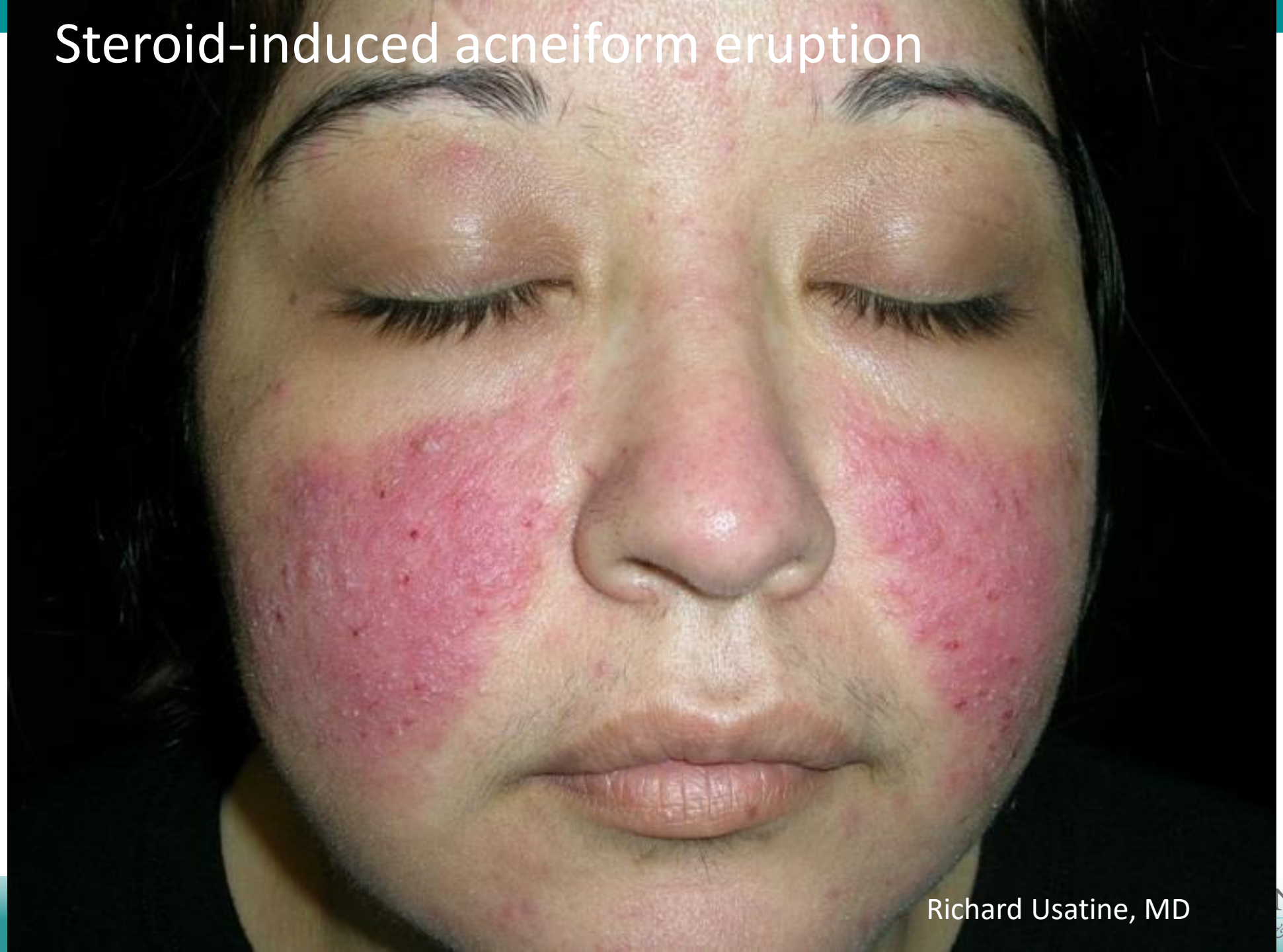
- Pyoderma faciale (rosacea fulminans)
- Steroid-induced acneiform eruption
- Perioral dermatitis

- Now considered separate entities



Pyoderma faciale
(rosacea fulminans)

Steroid-induced acneiform eruption



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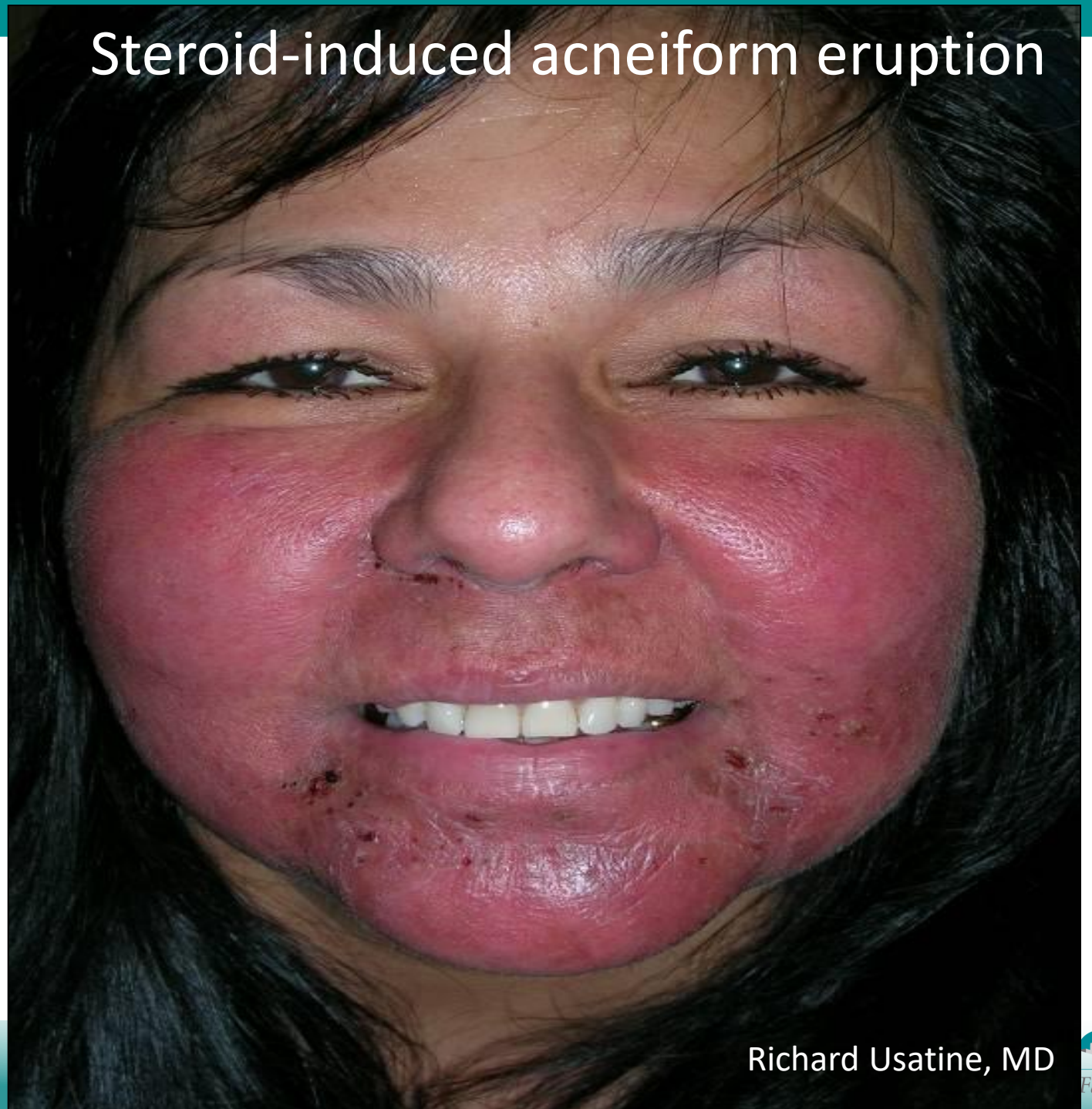
Steroid-induced acneiform eruption



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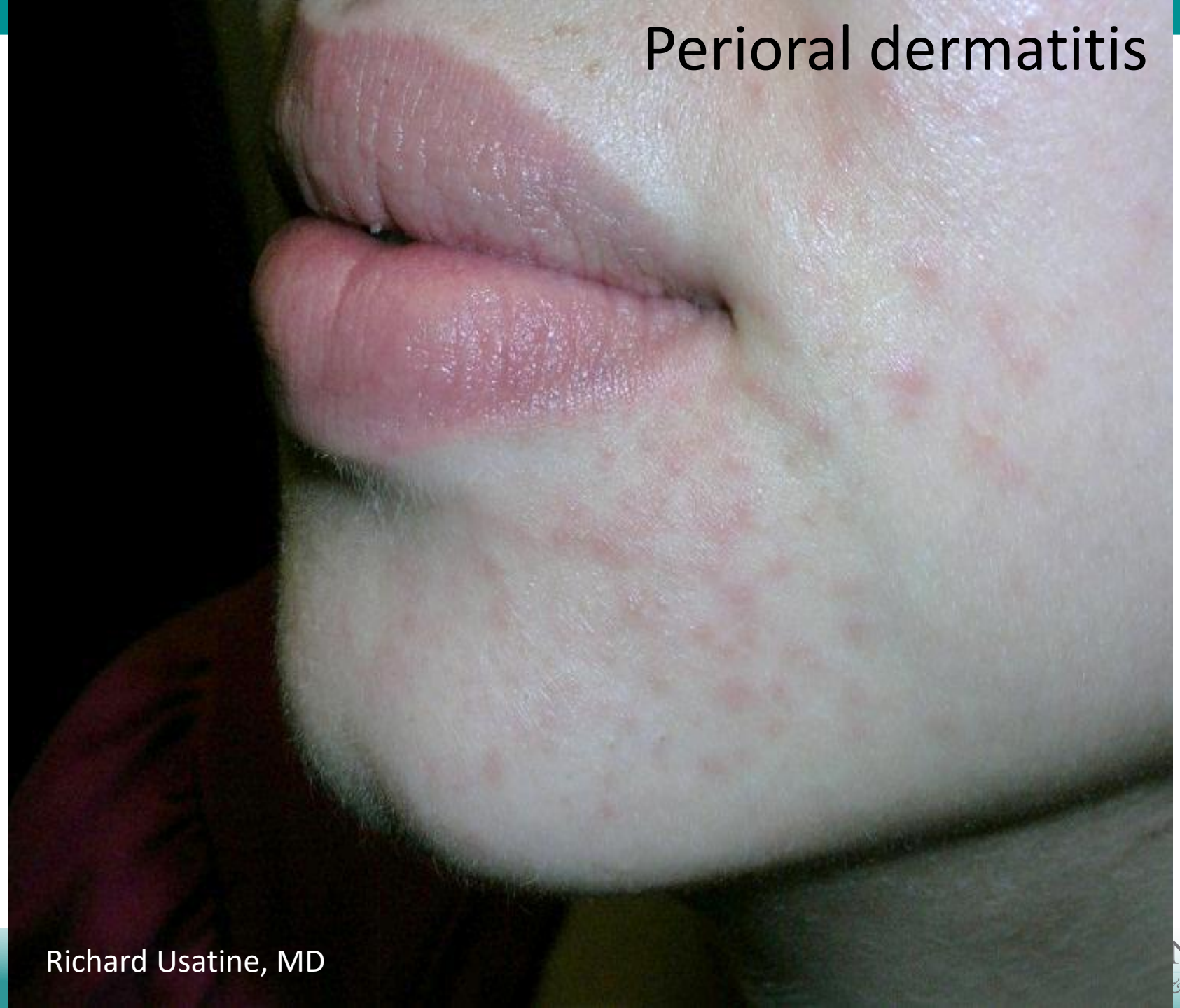
Perioral dermatitis



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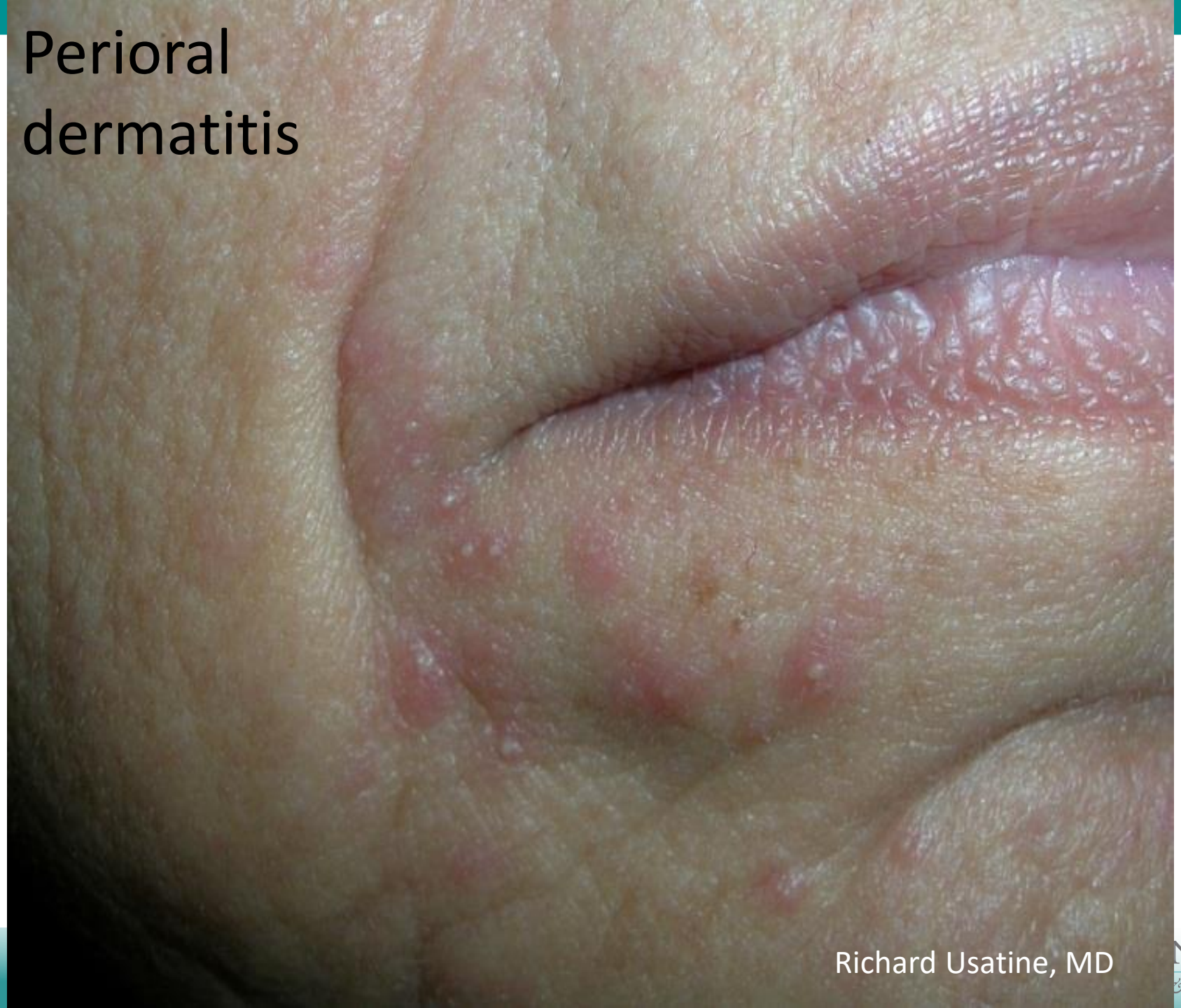
Perioral dermatitis



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Treatment

Behavioral

- Avoid precipitants
  - hot and humid weather
  - alcohol
  - hot beverages
  - spicy foods
  - sun
  - use mild soaps – (Dove)
- Use sunscreen SPF 30 and a hat

Medications - EBM Cochrane Database

- High quality evidence supporting
  - Azelaic acid
  - Topical ivermectin
  - Brimonidine
  - Doxycycline
  - Isotretinoin
- Moderate quality evidence supporting
  - Topical metronidazole
  - Oral tetracycline
- Low-quality evidence
  - Low dose minocycline 45mg
  - Laser
  - Intense pulsed light therapy
  - Cyclosporine ophthalmic for ocular rosacea
- No statistically significant difference in effectiveness between the 100-mg and 40-mg dose doxycycline with less side effects.

van Zuuren EJ, Fedorowicz Z, Carter B, et al. Interventions for rosacea. *Cochrane Database Syst Rev.* 2015;(3):CD003262.

EBM - Treatments

Rosacea treatment	**Odds ratio for improvement (medication vs placebo)**
Azelaic acid topical	1.32 (least effective)
Metronidazole topical	1.98
Tetracycline oral	4.04 (most effective)

van Zuuren E, et al. *Cochrane Database Syst Rev 2015*

Papulopustular - 1st line Topicals

- Topical metronidazole once to twice daily
  - Gel, cream or lotion 0.75% $157
  - Noritate 1% cream
- Azelaic acid applied bid – Reduces free radicals in WBC's
  - 15% gel (Finacea) 50g - $297
  - 20% cream (Azelex) 50g - $684
- Ivermectin 1% (Sklice, Soolantra) topical add on tx QD $332
  - Anti parasite and anti inflammatory

Papulopustular – 2nd and 3rd Line Topicals

- 2nd Line
  - Sulfacetamide 10% with sulfur 5% BID
  - Erythromycin 2% gel BID
  - Clindamycin 1% gel BID
- 3rd line
  - Tretinoin QHS
  - Oxymetazoline 0.05% Q 6 hrs
  - Permethrin (Elimite) topical

- Oge' LK, Muncie HL, Phillips-Savoy AR. Rosacea: Diagnosis and Treatment. Am Fam Physician. 2015 Aug 1;92(3):187-96.

Papulopustular & Ocular Rosacea - Oral Meds

1st line

- Doxycycline
  - 40 mg qd (Oracea) $736/Month – Sub-antimicrobial
  - 20mg BID Generic - $82

2nd line

- Minocycline - 50-100 mg qd-bid $46, $36 capsules
- Peds >12 YO 1mg/kg qd
- Erythromycin (best choice for pediatric rosacea)
  - 500 mg bid (adult dose)
  - 30-50 mg/kg/day divided bid-qid (kids)
- Tetracycline, Azithromycin, Metronidazole

3rd line

- Ivermectin topical
- Low dose Isotretinoin 0.3mg/kg 6-8 months Medical Letter 2/16

Oge' LK, Muncie HL, Phillips-Savoy AR. Rosacea: Diagnosis and Treatment. Am Fam Physician. 2015 Aug 1;92(3):187-96.

Erythema and Telangiectasias

- Standard meds don't work as well for this
- Brimonidine (Mirvaso -FDA approved 2013) $434
  - Alpha-2 adrenergic agonist
- Indicated for persistent facial erythema of rosacea
- Apply topically to face once daily
- Oxymetalozone crm 1% (Rhofade -FDA approved 2017) $475
  - Alpha 1a adrenergic agonist
- OTC alternative is oxymetalozone (Afrin) applied topically
- Electrosurgery
- Laser

Ocular Rosacea

- Oral tetracyclines
- Lid hygiene
- Warm compresses
- Topical ophthalmic cyclosporine 0.05% (Restasis) is more effective than artificial tears for the treatment of rosacea-associated lid and corneal changes.*
- Opthy C/S

*Efficacy of topical cyclosporine for the treatment of ocular rosacea. *Adv Ther* 2009;26:651-659. Odds ratio 4.1 severity score - Cochrane 2015

Oge' LK, Muncie HL, Phillips-Savoy AR. Rosacea: Diagnosis and Treatment. Am Fam Physician. 2015 Aug 1;92(3):187-96.

Treatment – Others

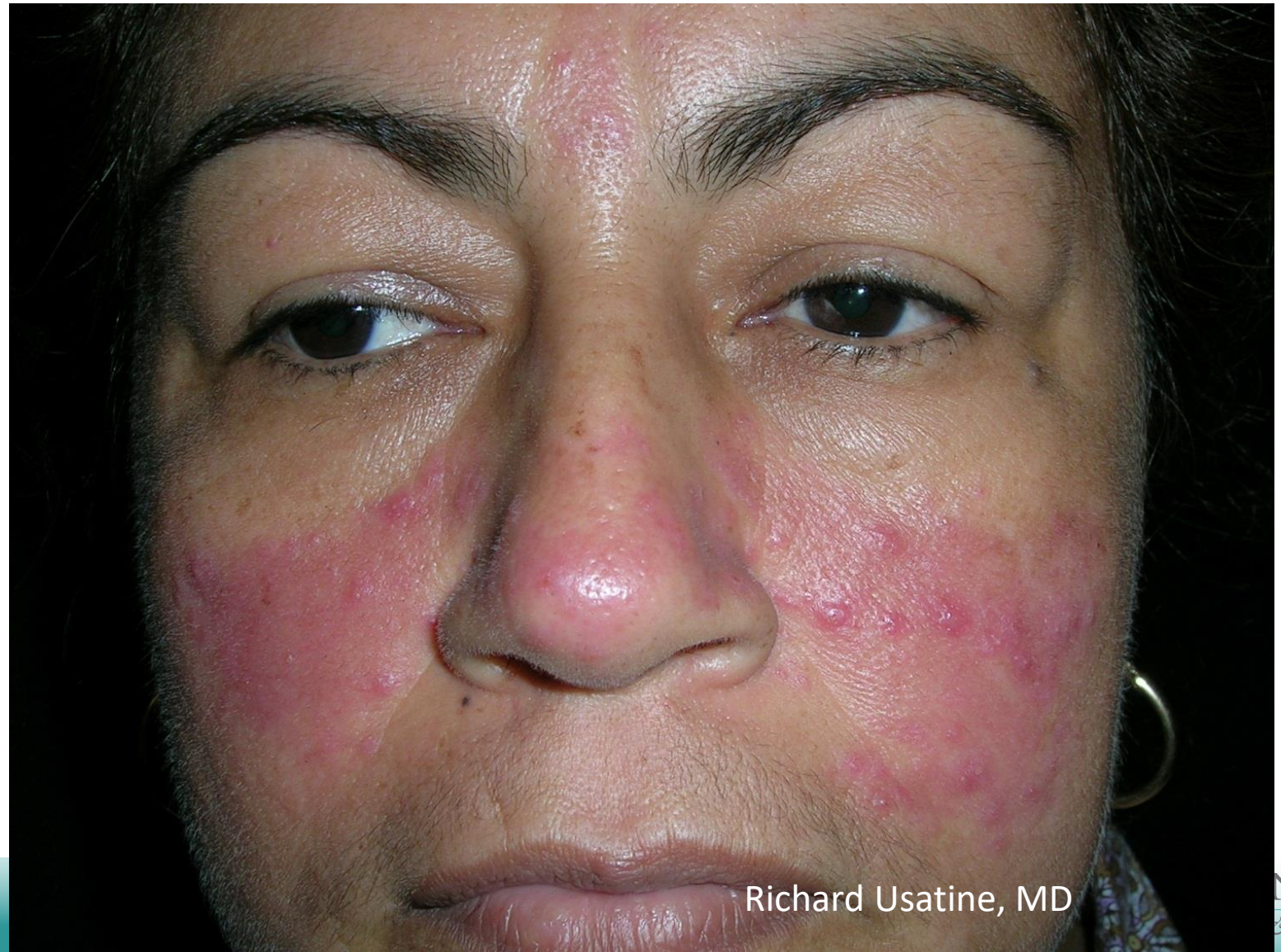
- Pulsed dye laser
- Intense pulsed light
- Nd:Yag laser
- Surgical treatment of phymatous change

Resistant Cases - Isotretinoin (Accutane)

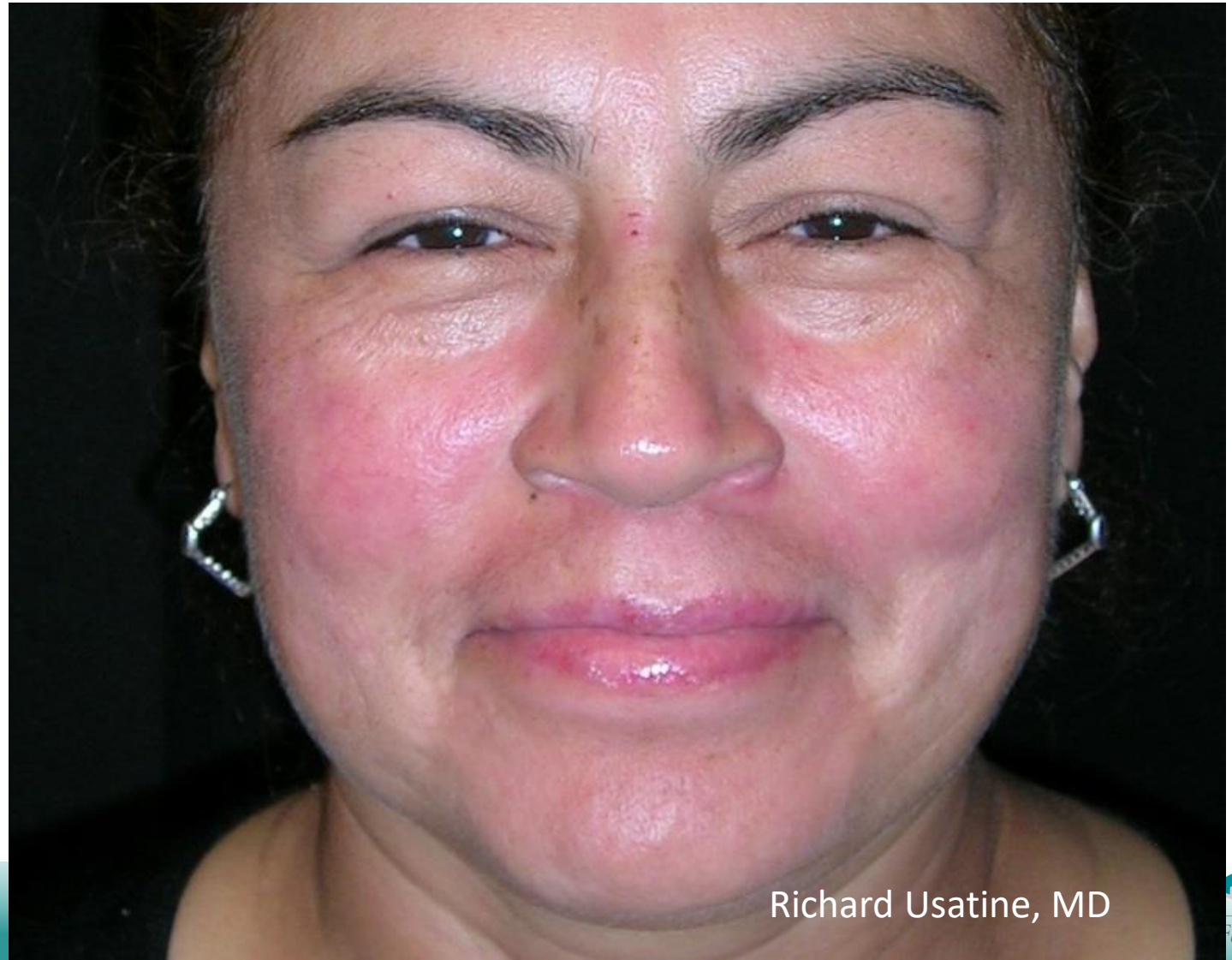
- Severe papulopustular disease refractory to antibiotics and topical treatments can be treated with oral isotretinoin at a low dose of 0.3 mg/kg per day.

- Systemic isotretinoin in the treatment of rosacea - doxycycline- and placebo-controlled, randomized clinical study. *J Dtsch Dermatol Ges.* 2010;8:505-515.

Before Isotretinoin (Accutane)

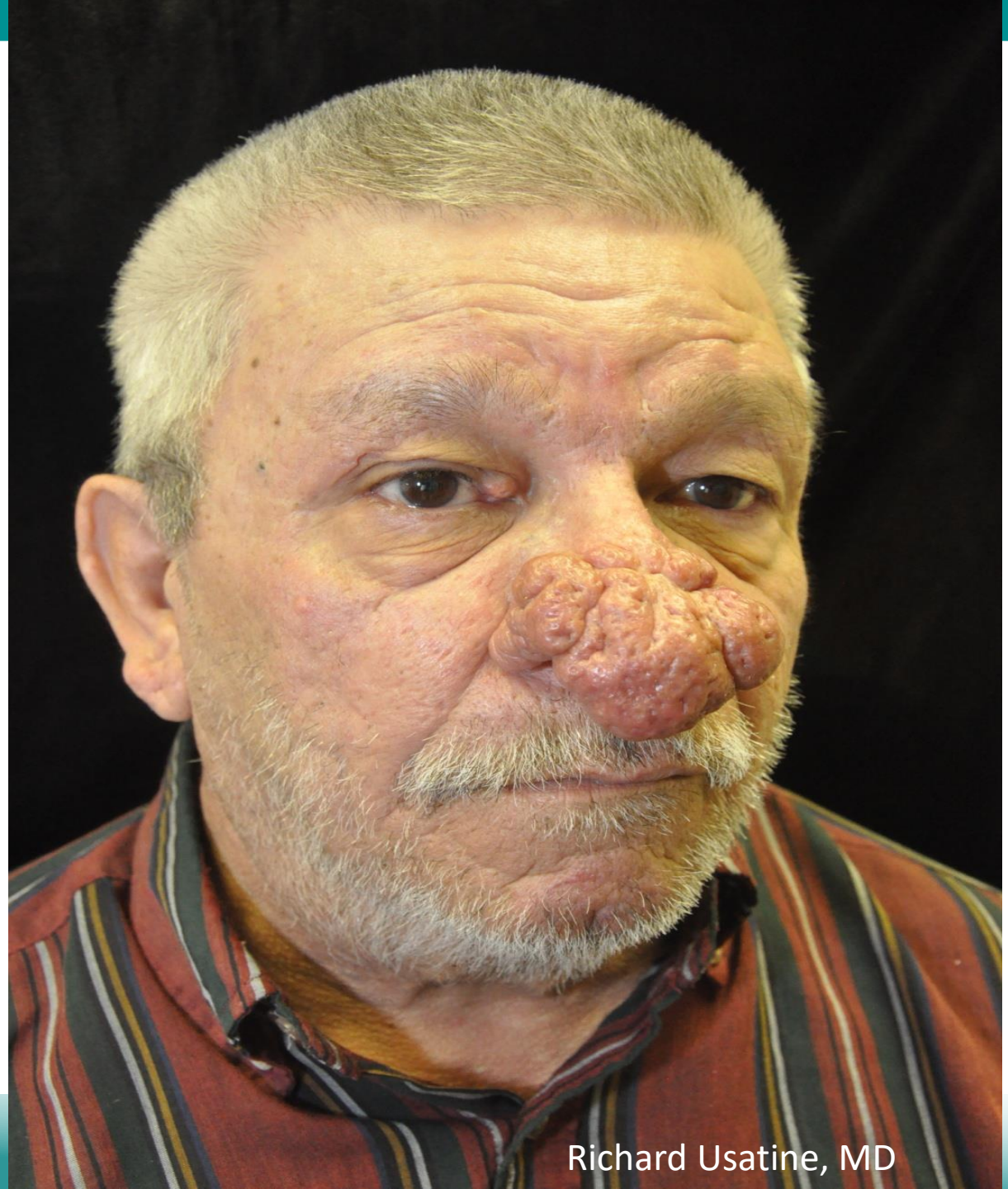


After Isotretinoin (Accutane)



Rhinophymatous

- Surgery



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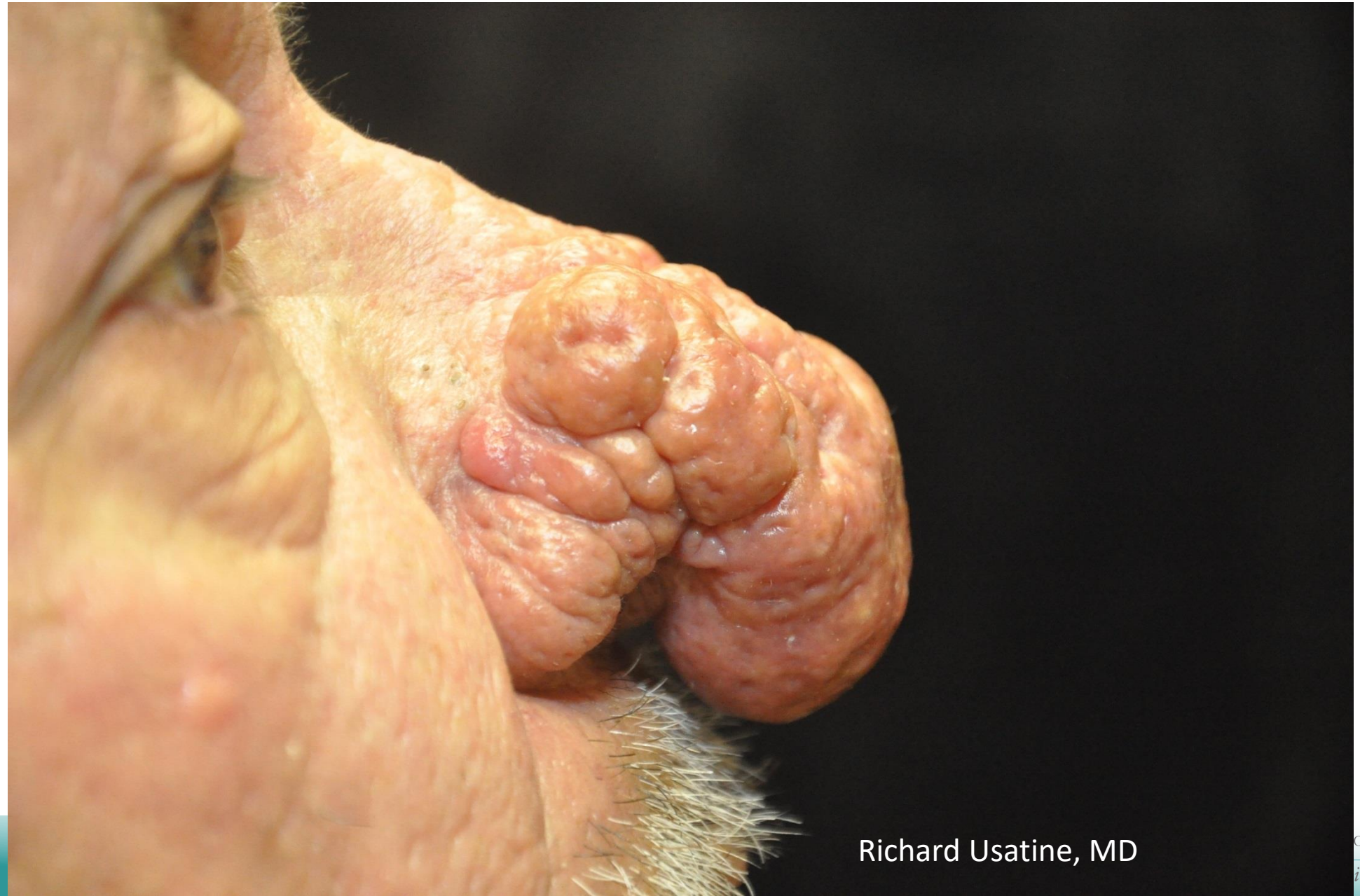
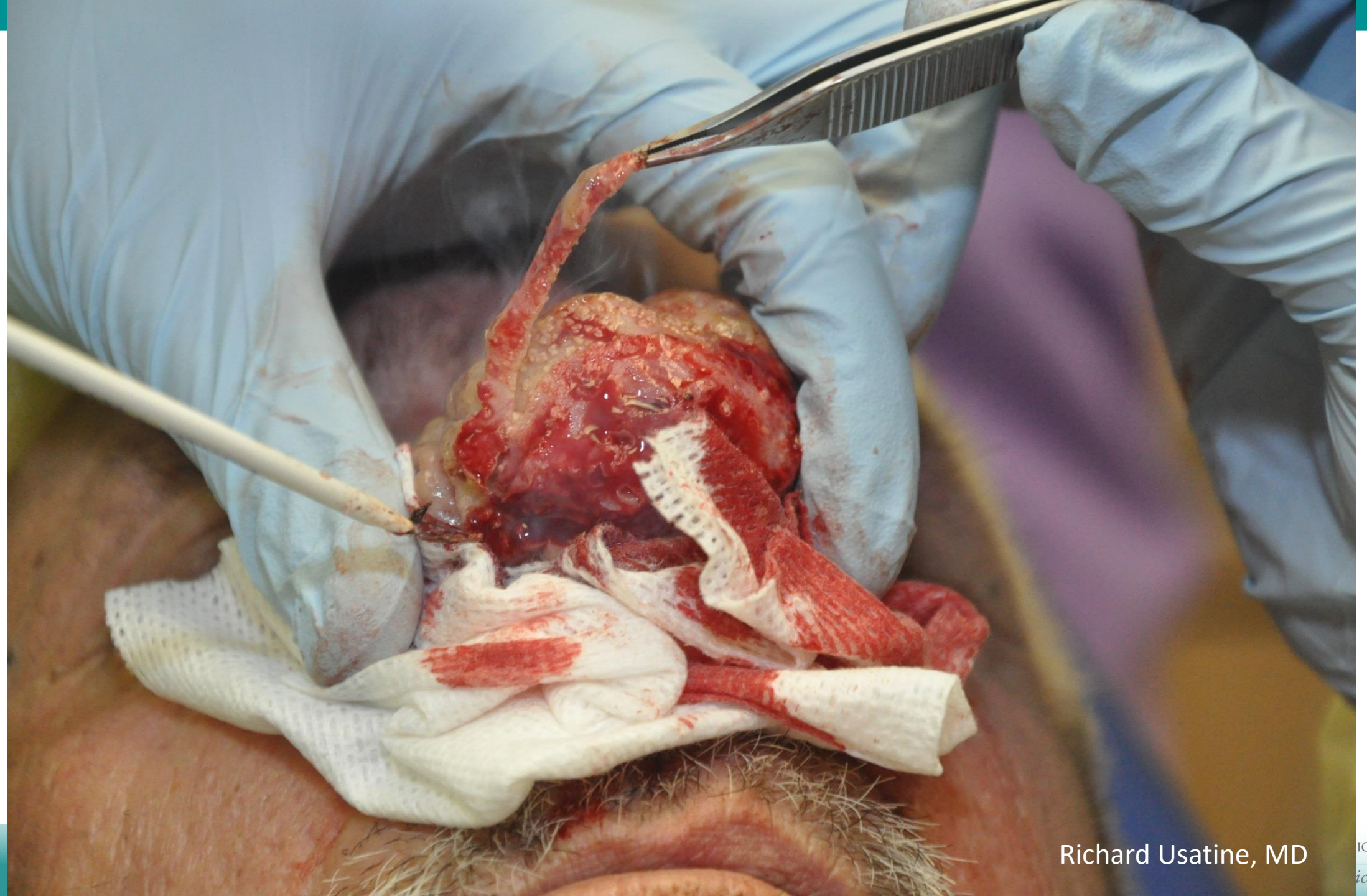
Electrosurgery with Radiofrequency Device





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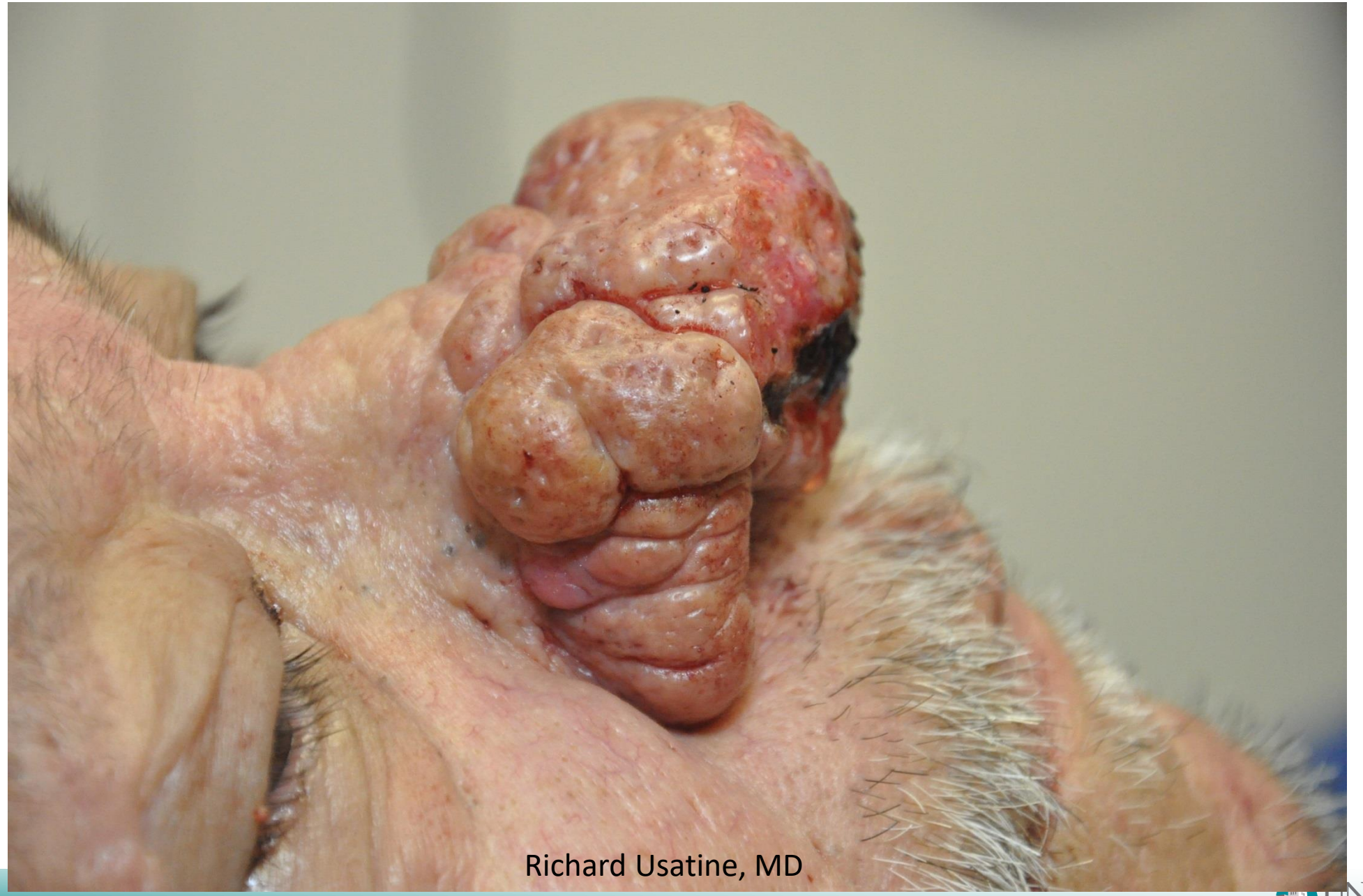

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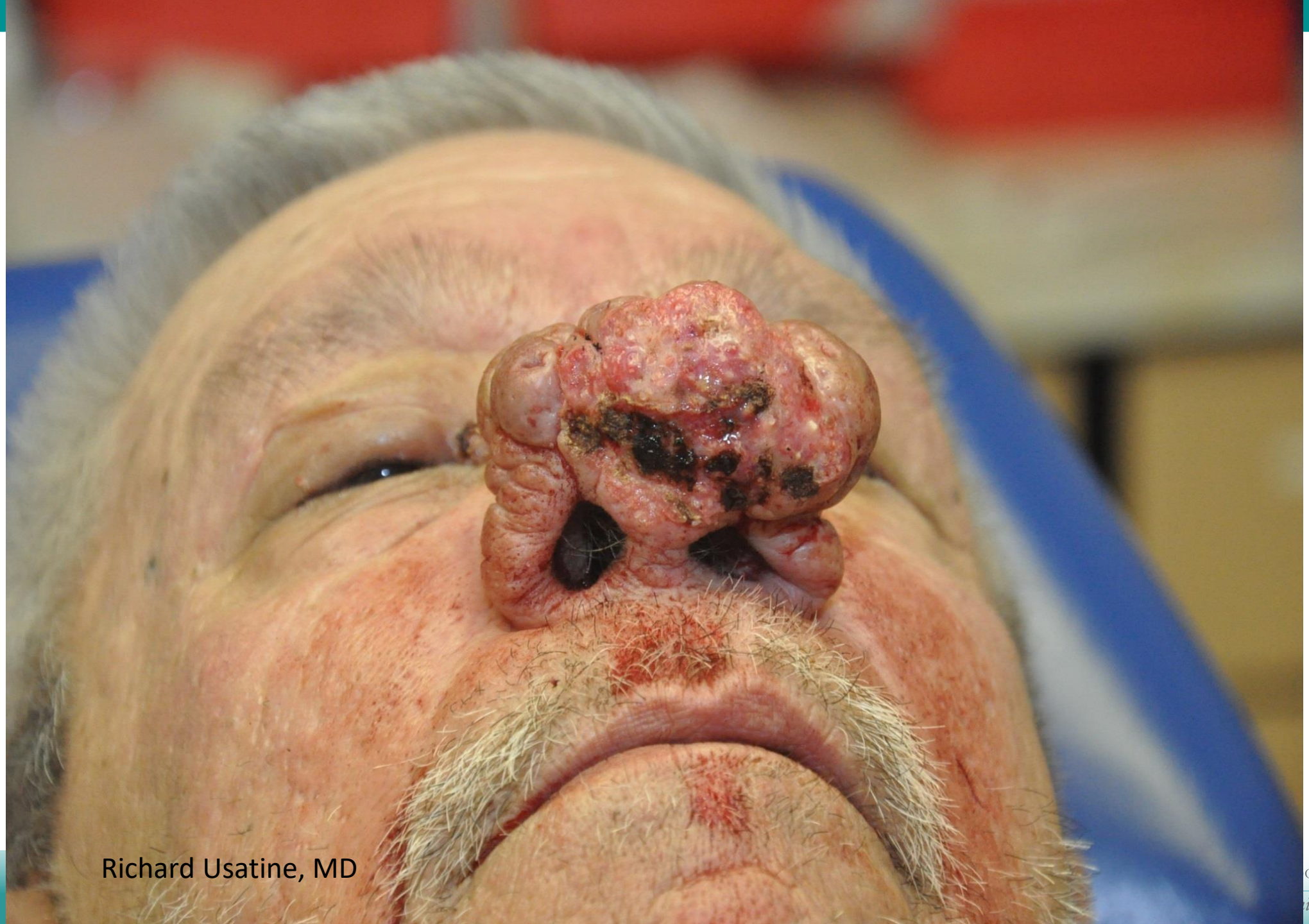

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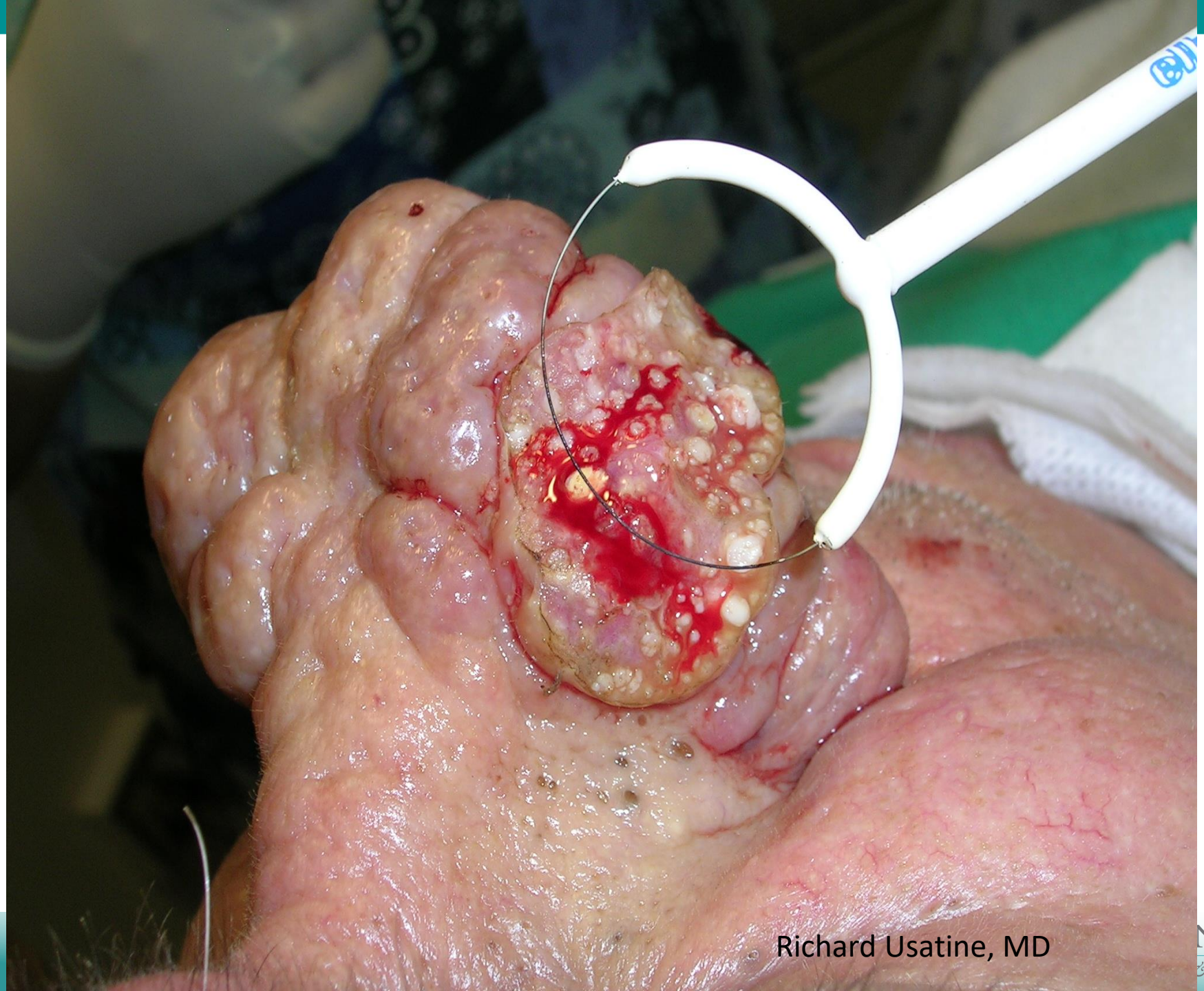

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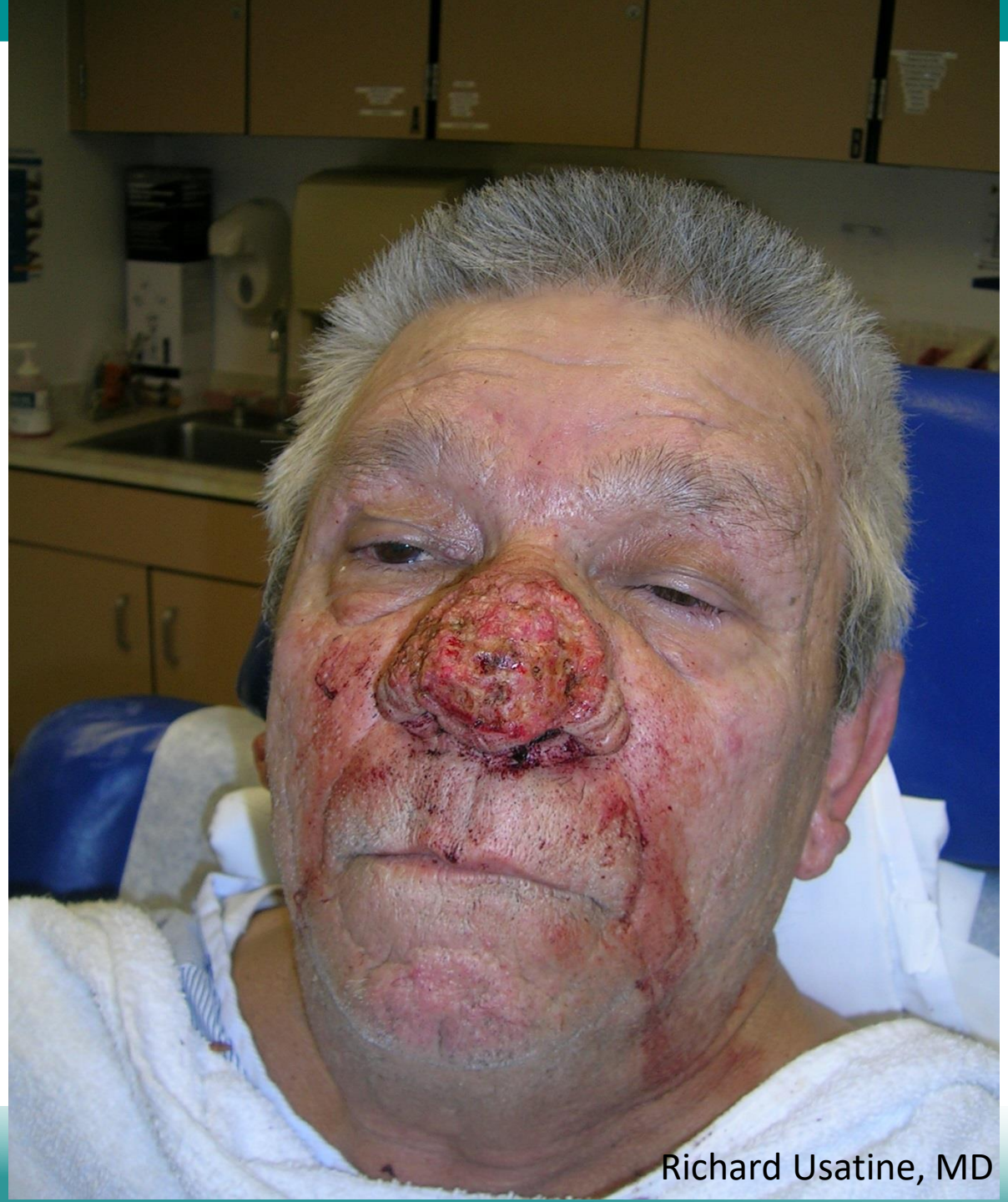
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Best Practice Recommendations

- Brimonidine and oxymetalozone only help with erythema
- Topical metronidazole and azelaic acid first line for erythematotelangiectatic and papulo pustular
- Sub-antimicrobial dosing for doxycycline
- Cyclosporine and opthy for ocular
- Surgical for phymatous

Seborrhea/ Seborrheic Dermatitis

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Learning Objectives

Demonstrate the ability to diagnose the variable presentations of seborrhea

Discuss causes and exacerbating factors for seborrhea

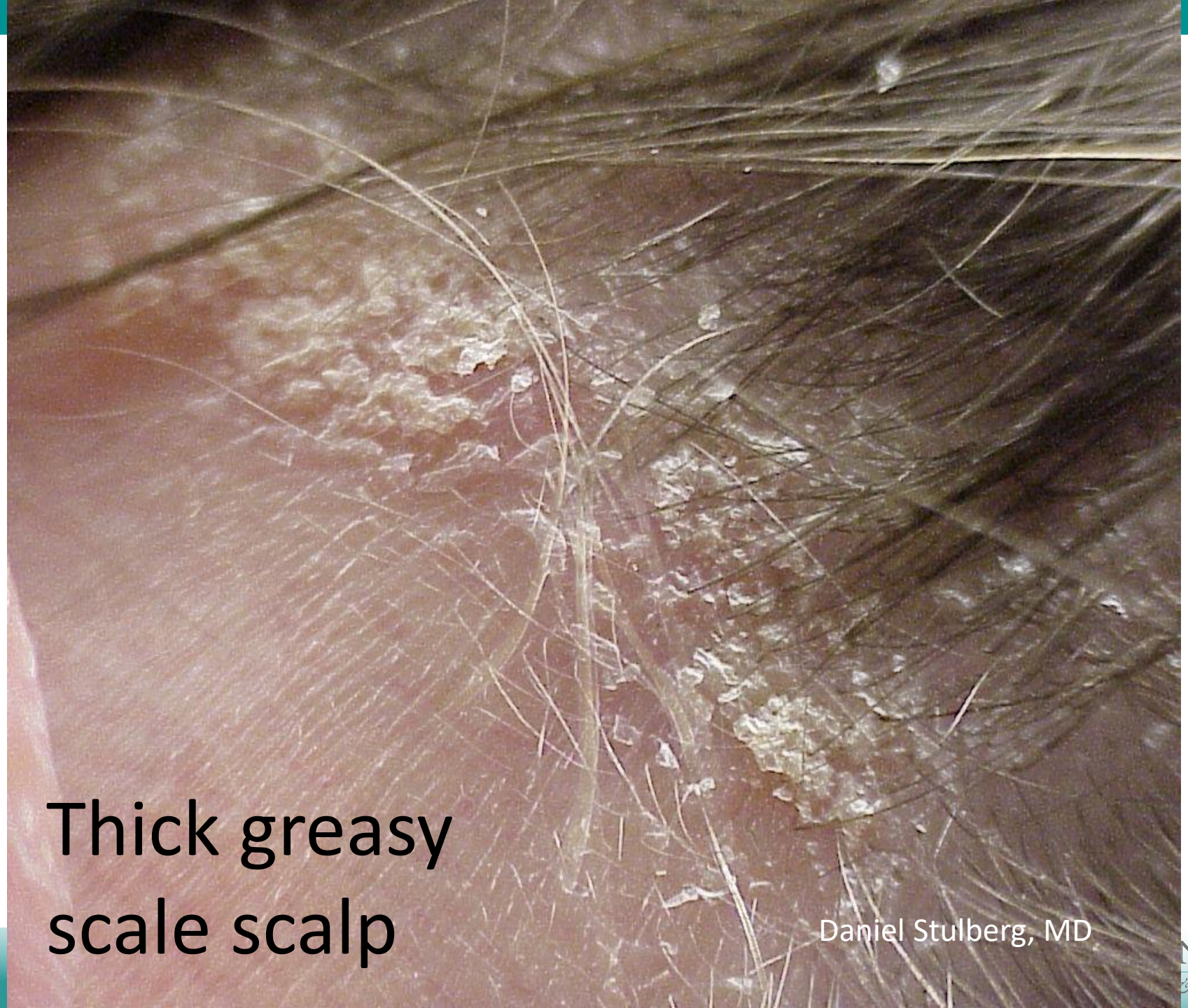
Describe the most effective treatments for seborrhea

Seborrhea / seborrheic dermatitis

- AKA
  - Dandruff
  - Pityriasis capitis
  - Seborrheic eczema

Hallmarks

- Waxy scale
- Erythema
- Midface
- Scalp
- Beard
- Trunk occasionally
- Higher risk in elderly, Parkinson's, HIV, stroke patients



Thick greasy scale scalp

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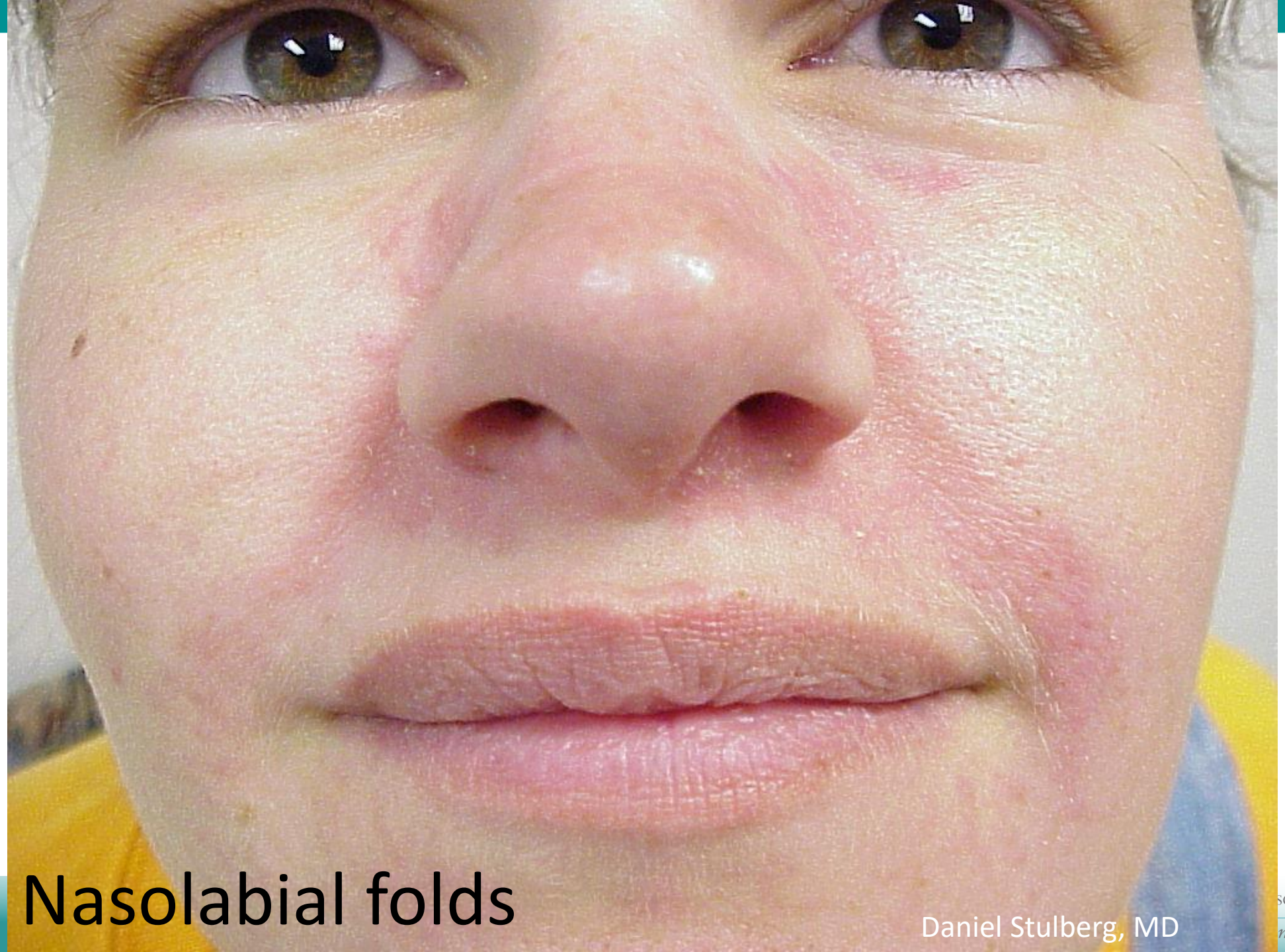

Nasolabial folds

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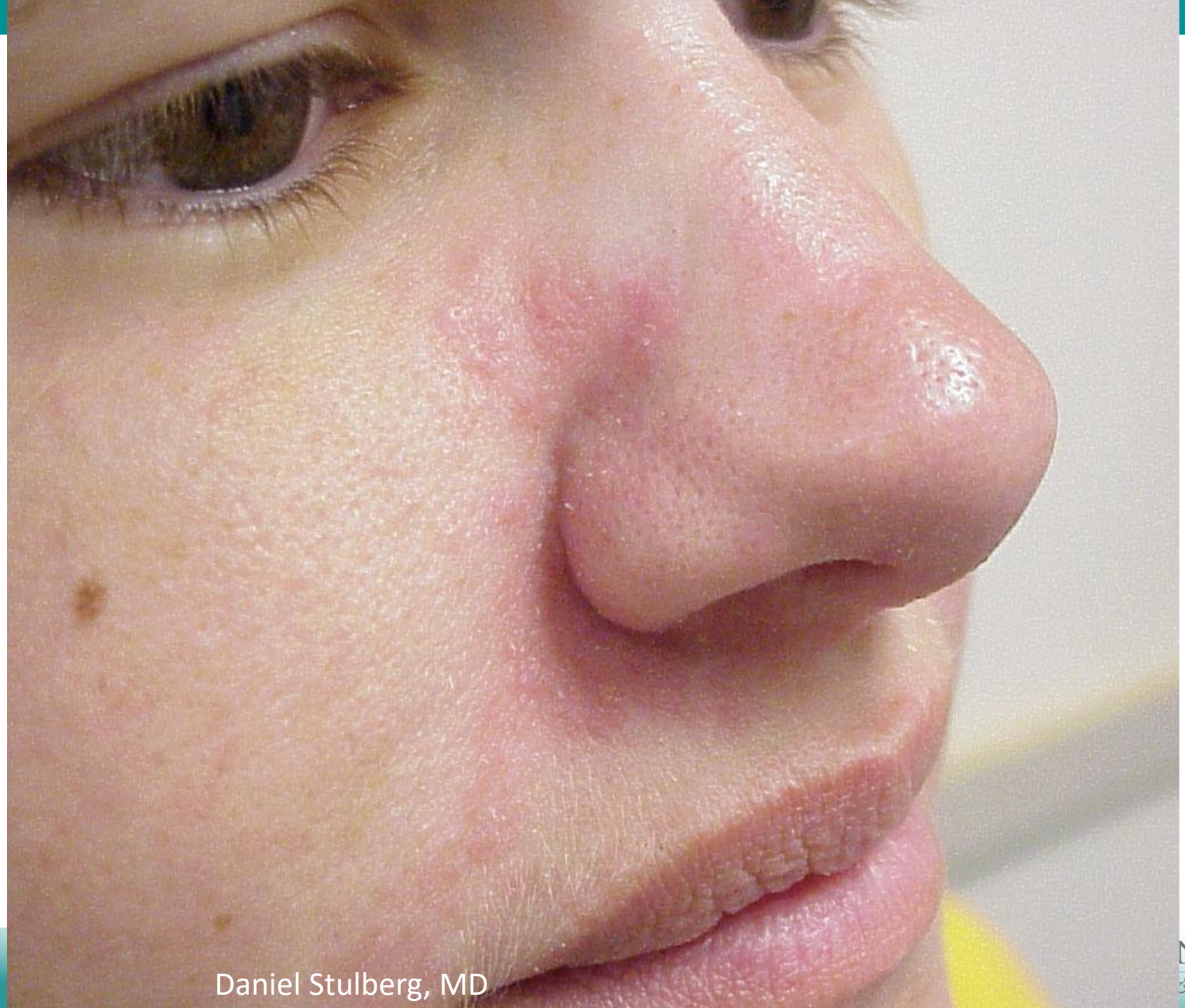

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Scalp to confirm

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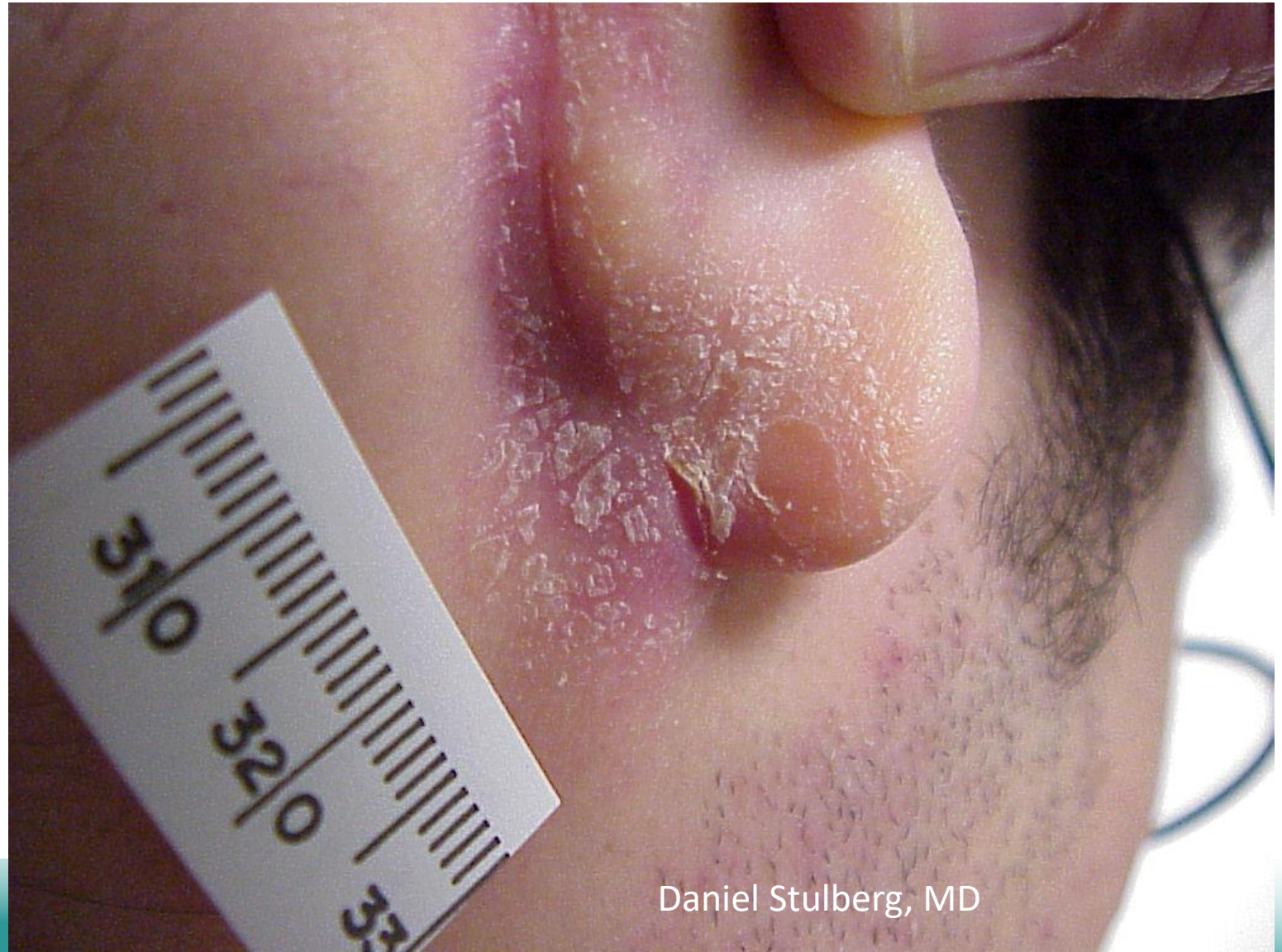
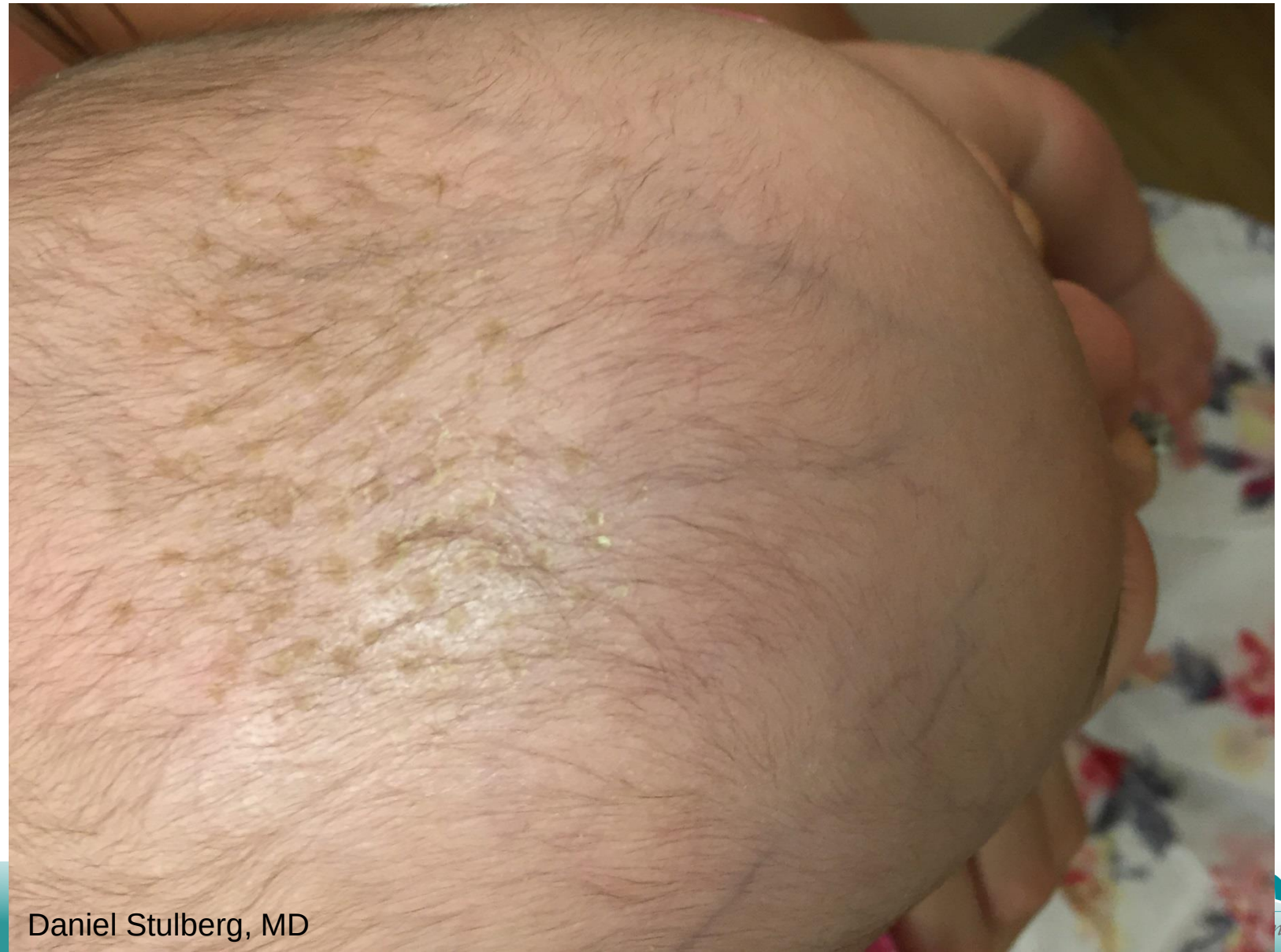
Seborrhea Behind the Ear



Seborrhea in the nasolabial fold with hyperpigmentation

Courtesy Richard Usatine

Cradle Cap



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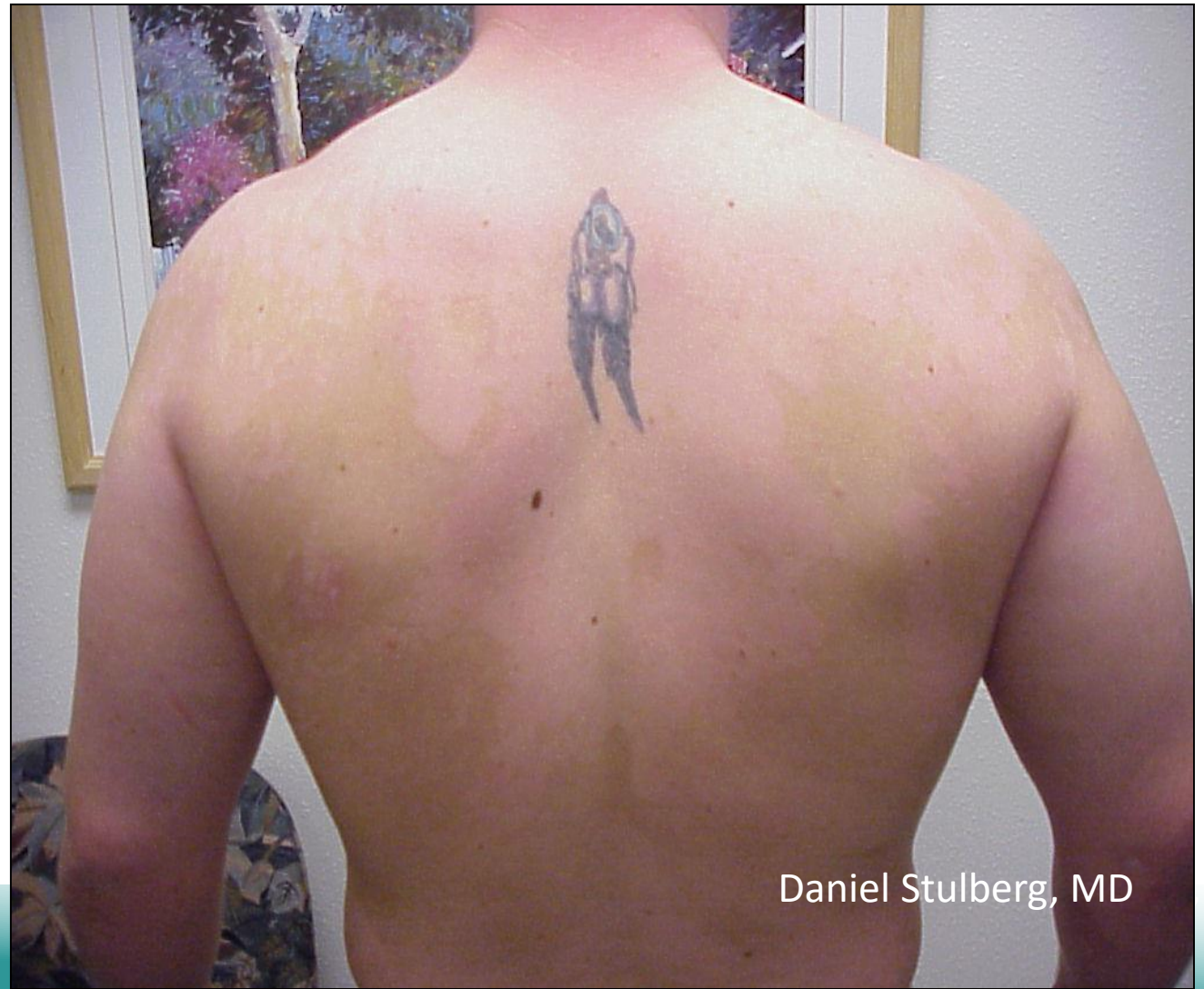
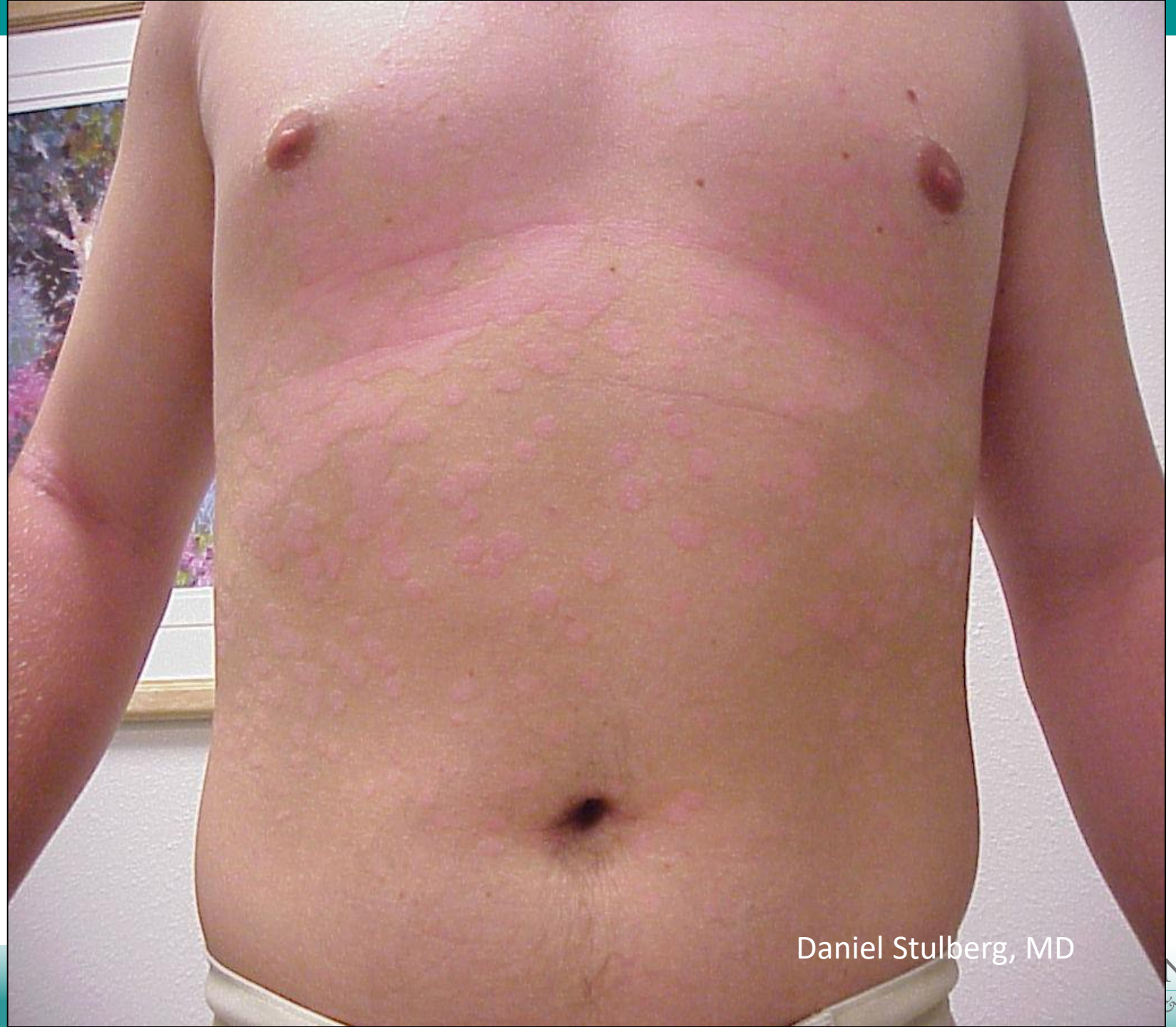
Cousin

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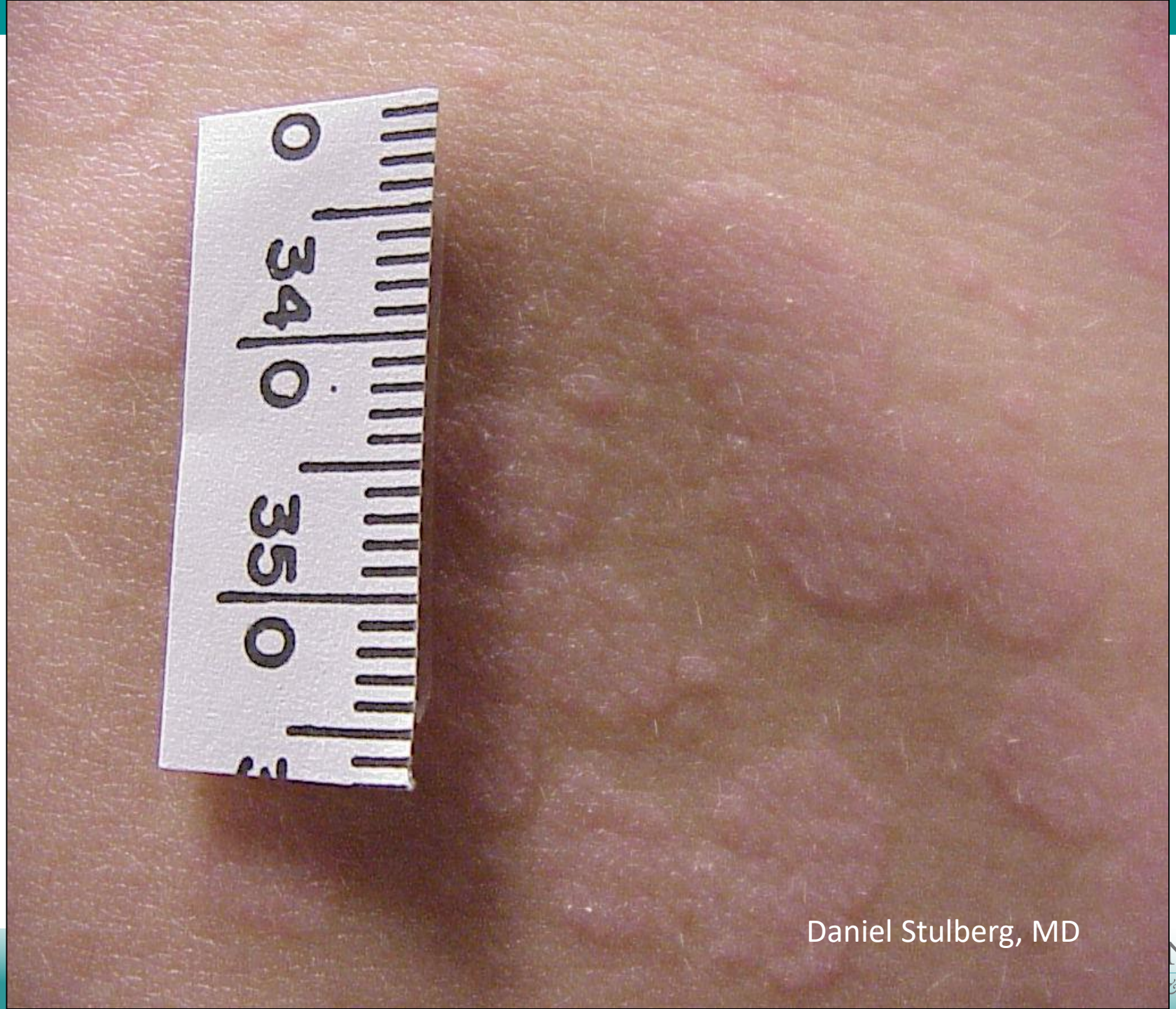

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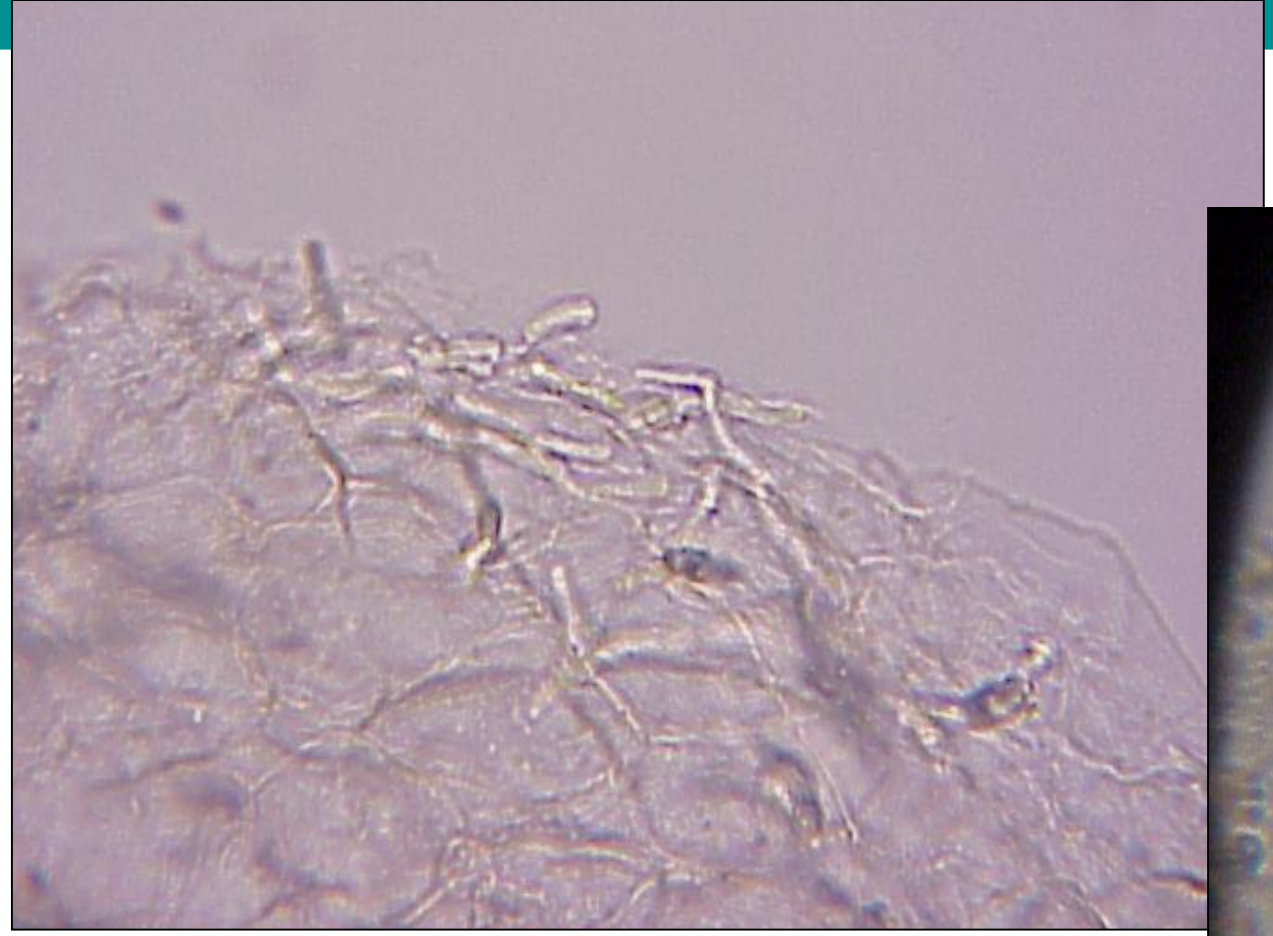

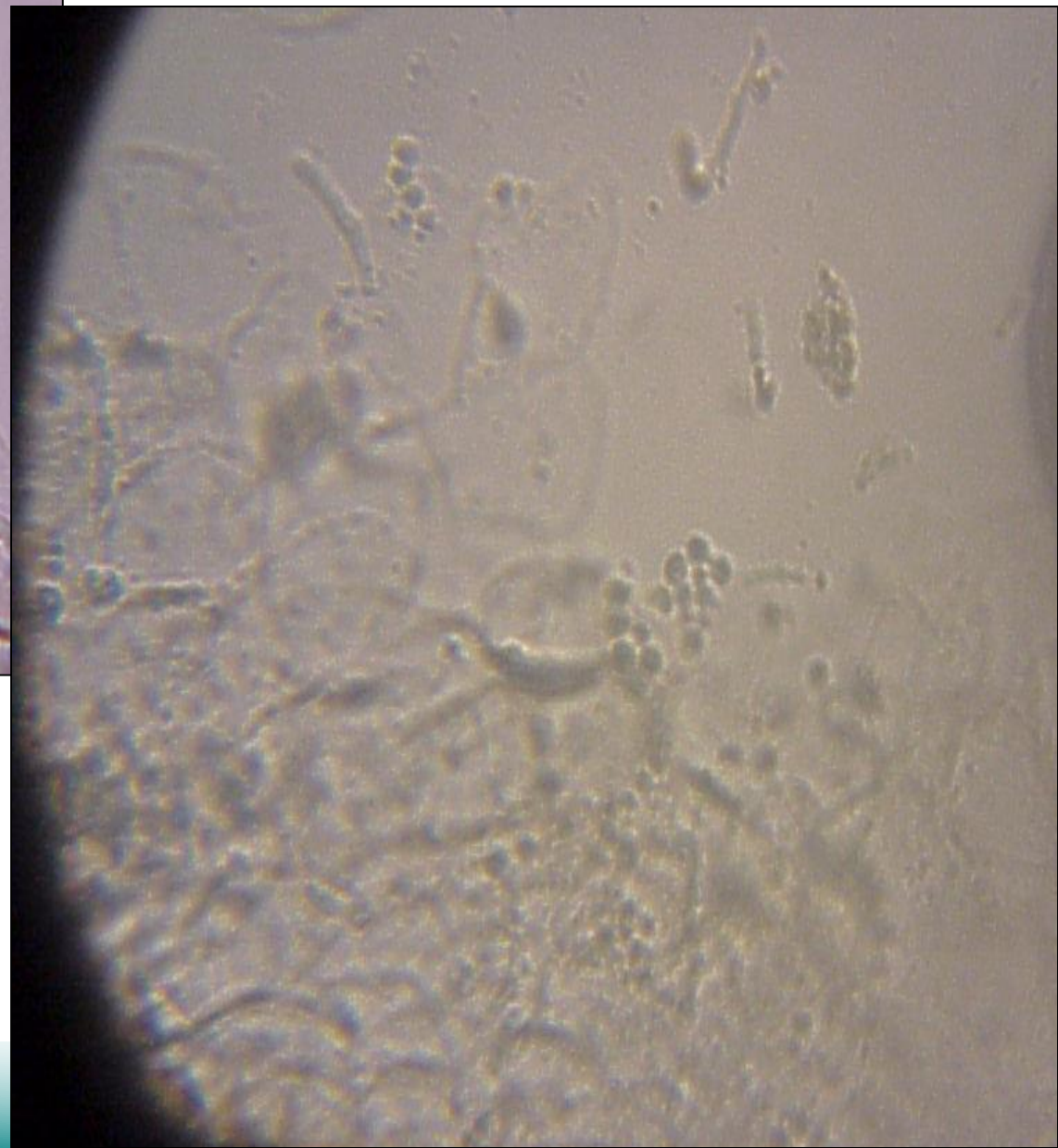

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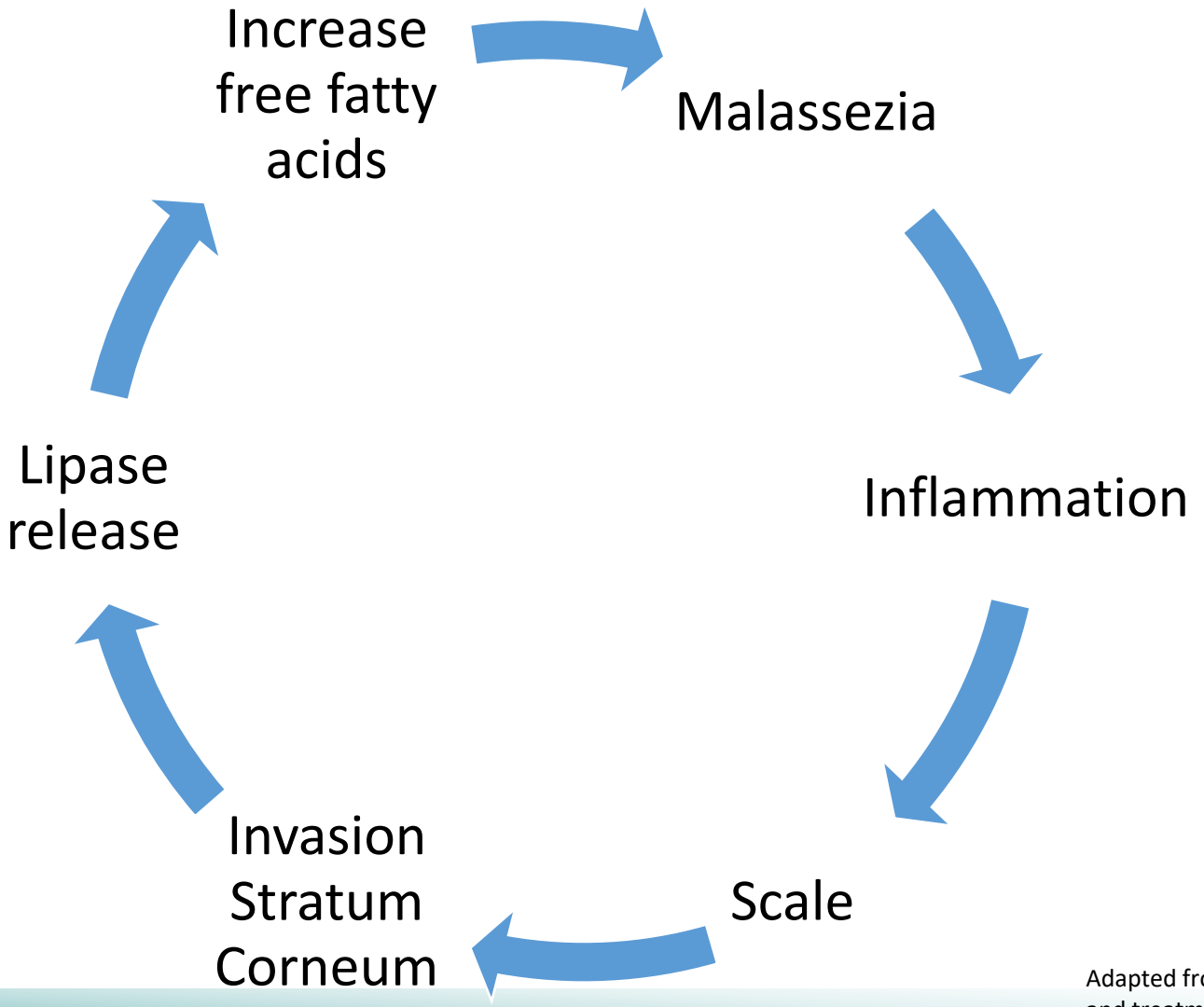
Seborrheic Dermatitis

- Common inflammatory skin disorder
- Found in sites dense with sebaceous glands that support growth of the lipophilic yeast Malassezia furfur
- Also called Pityrosporum ovale or orbiculare – same organism as in tinea versicolor

Etiology (Cont.)

- Normal or low levels Malassezia
- Not sebum overproduction
- More related to inflammatory response

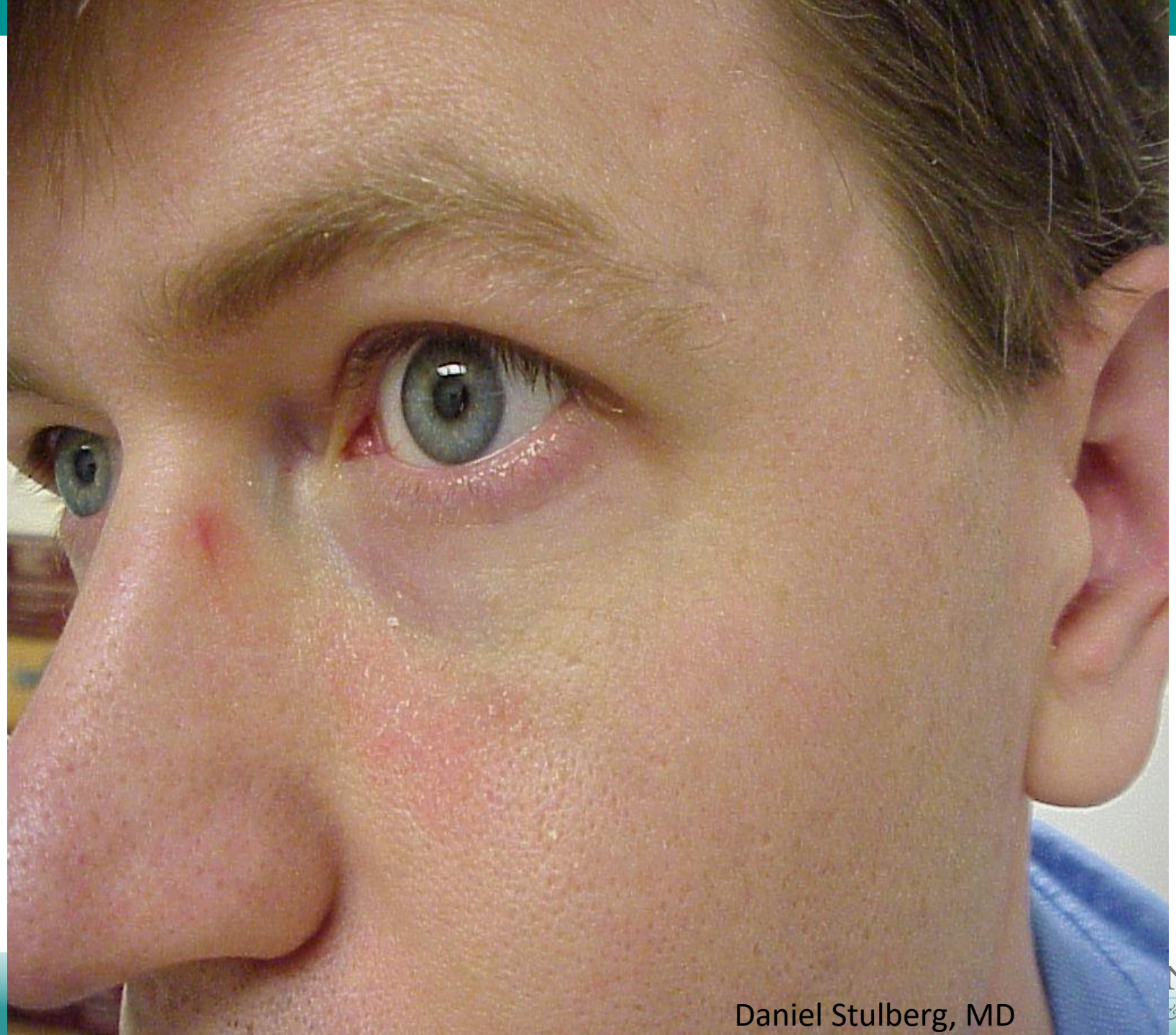
Pathophysiology



Adapted from Clark GW, Pope SM, Jaboori KA. Diagnosis and treatment of seborrheic dermatitis. Am Fam Physician. 2015 Feb 1;91(3):185-90.

Seborrheic Dermatitis

- Some conditions predispose to SD
  - HIV
  - Parkinson's
  - CVA
- Treatment will be two-pronged
  - diminish yeast overgrowth
  - fight inflammation



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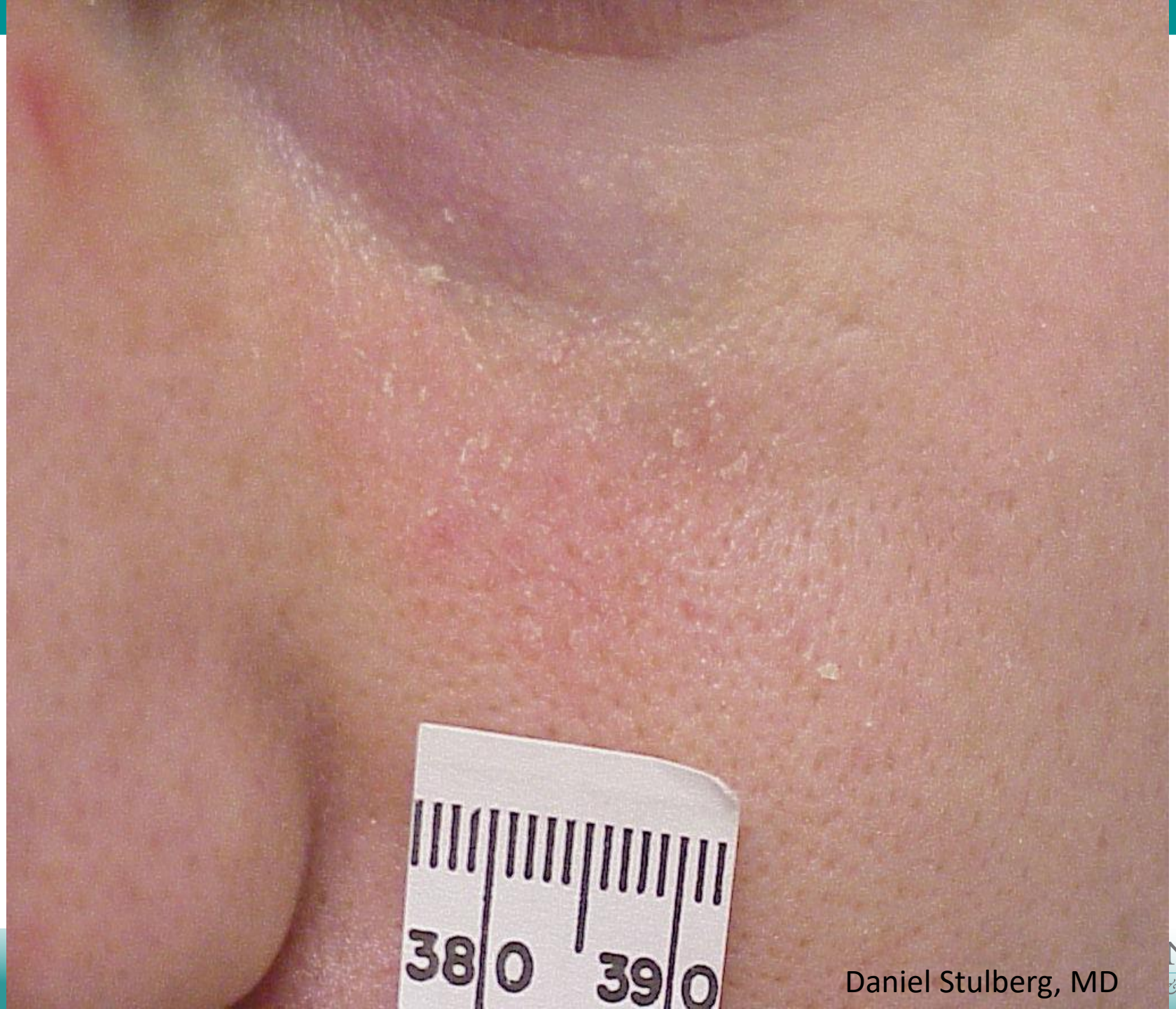

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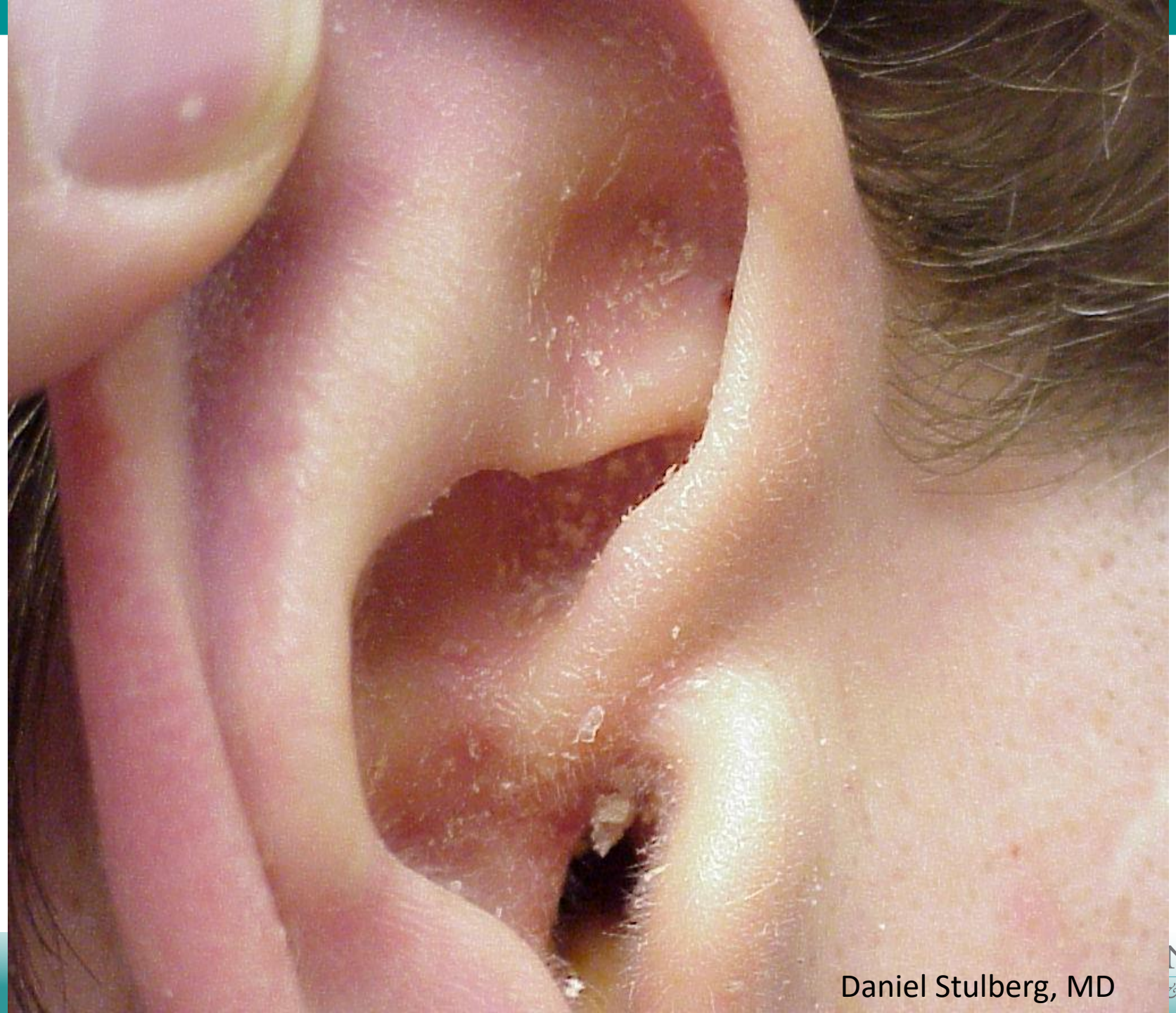

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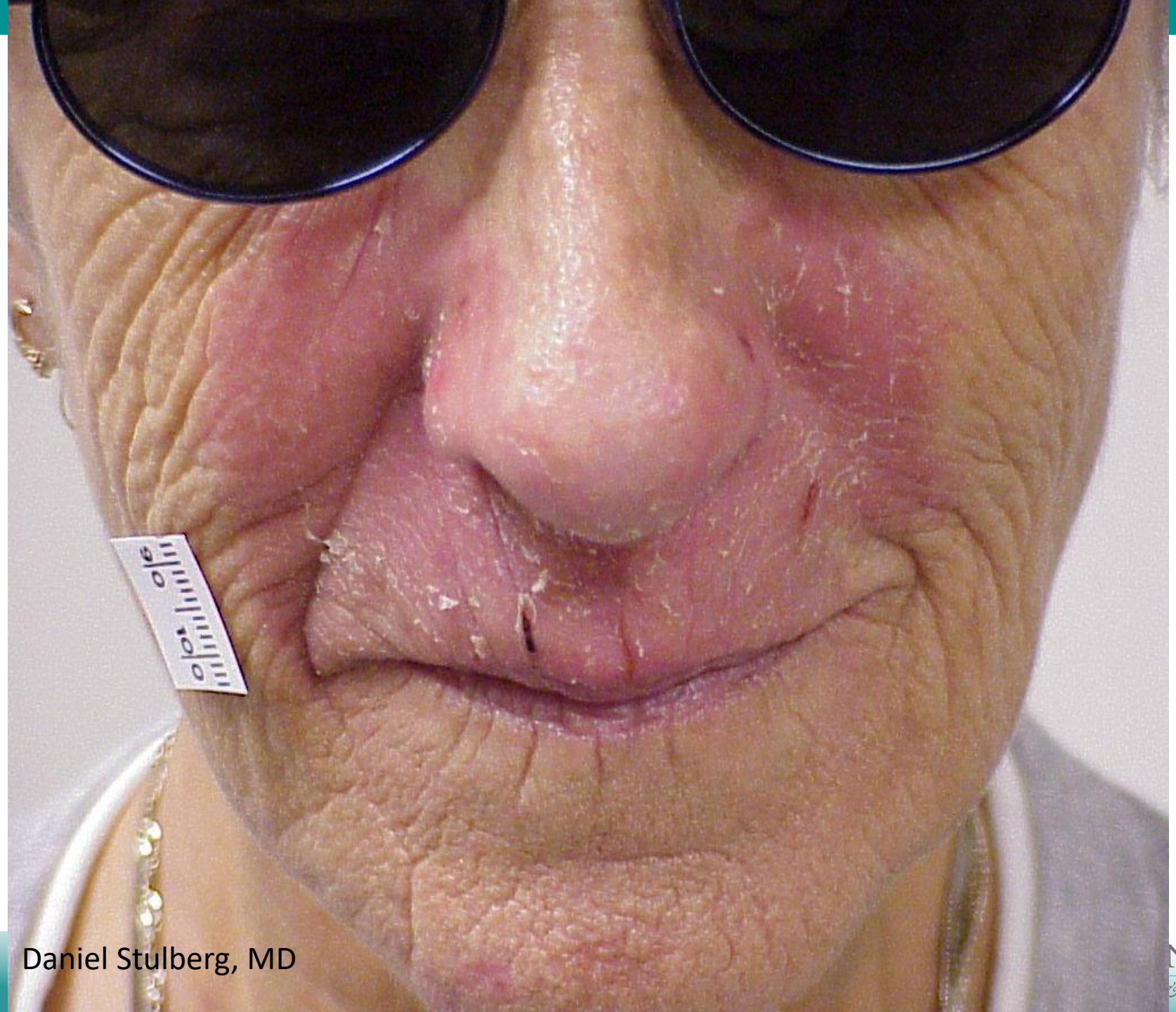

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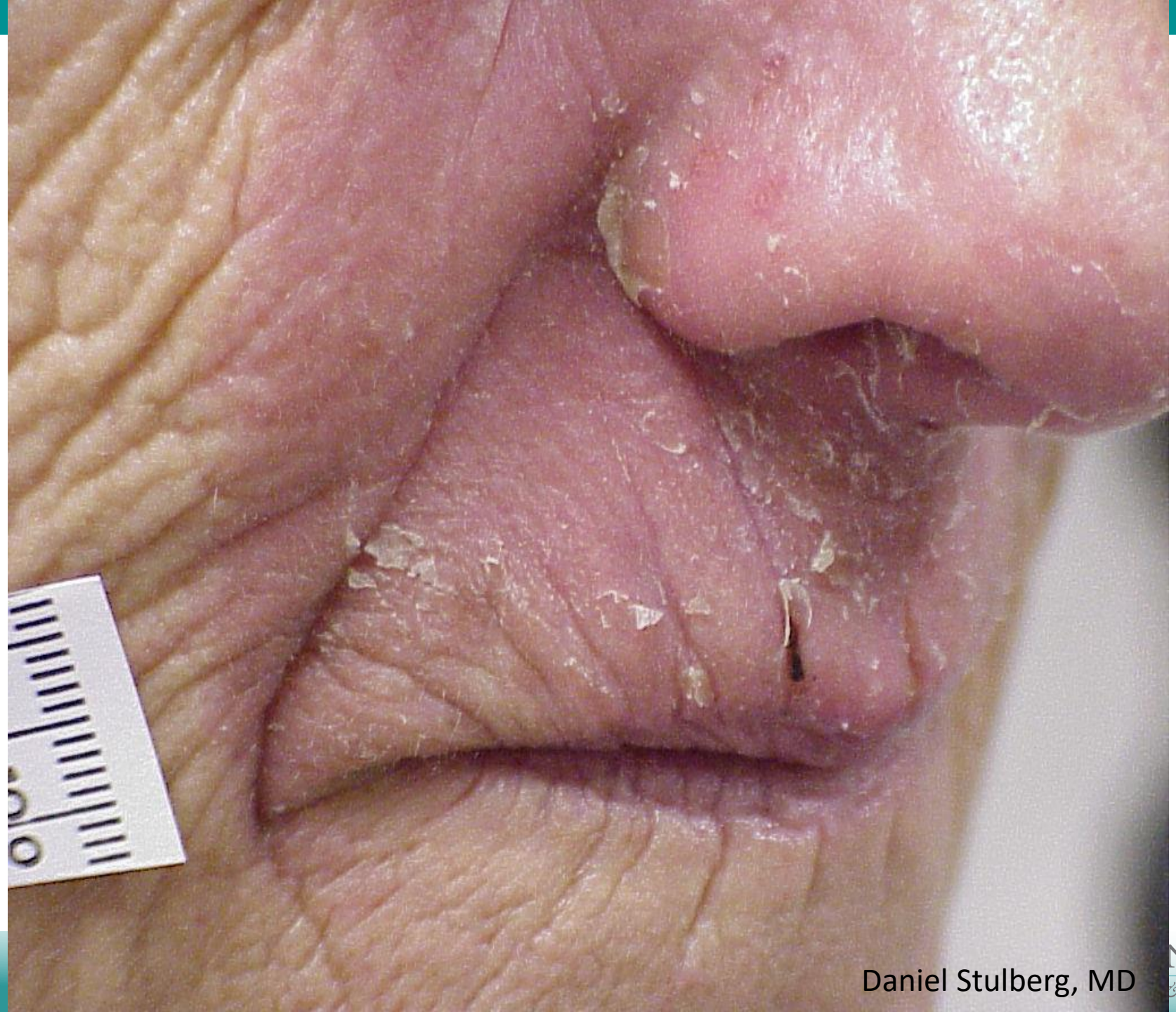

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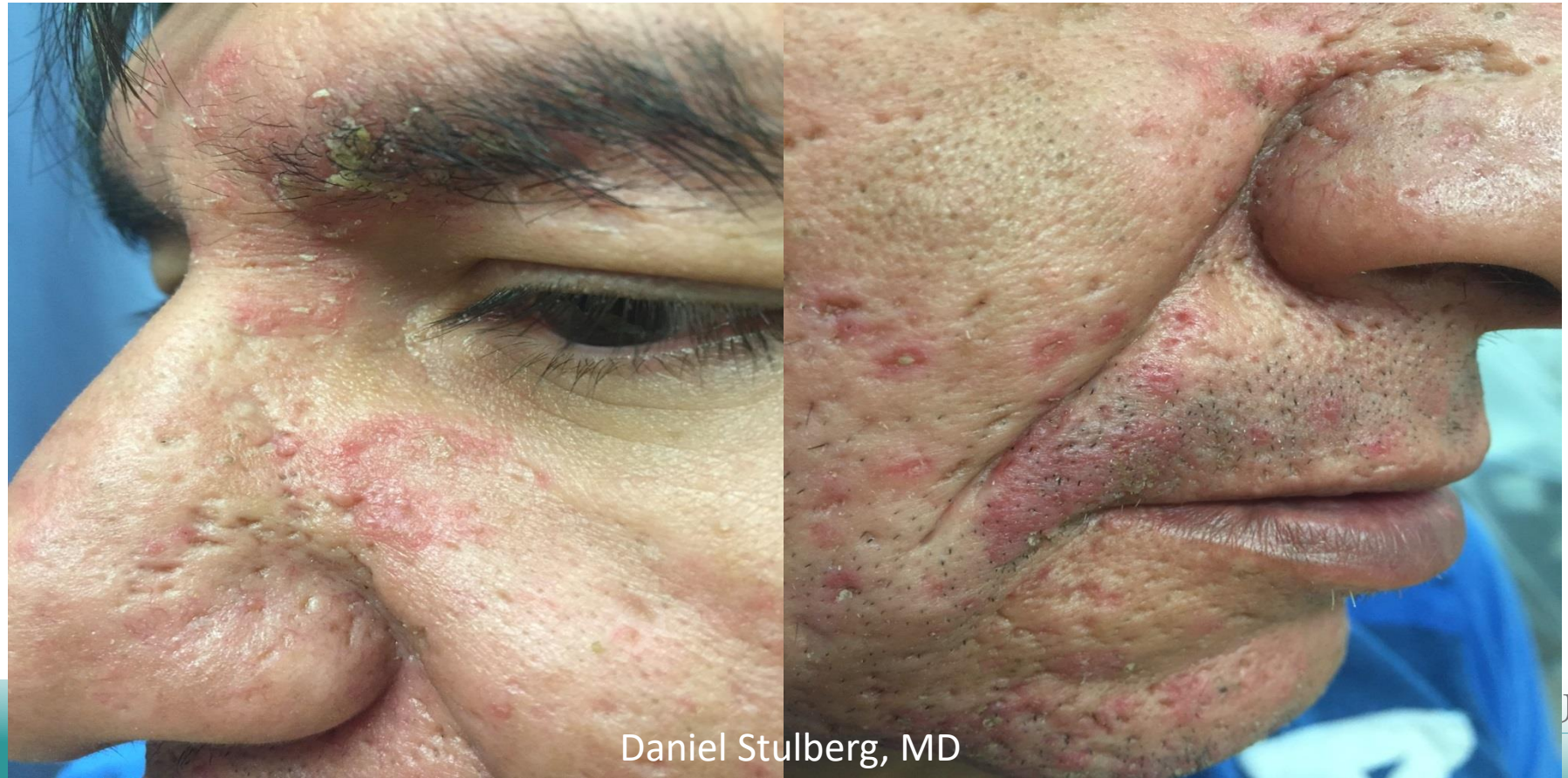
HIV and Seborrheic Dermatitis

- Common HIV-related opportunistic event
- May be an initial marker of immunodeficiency
- Improves with anti-viral therapy



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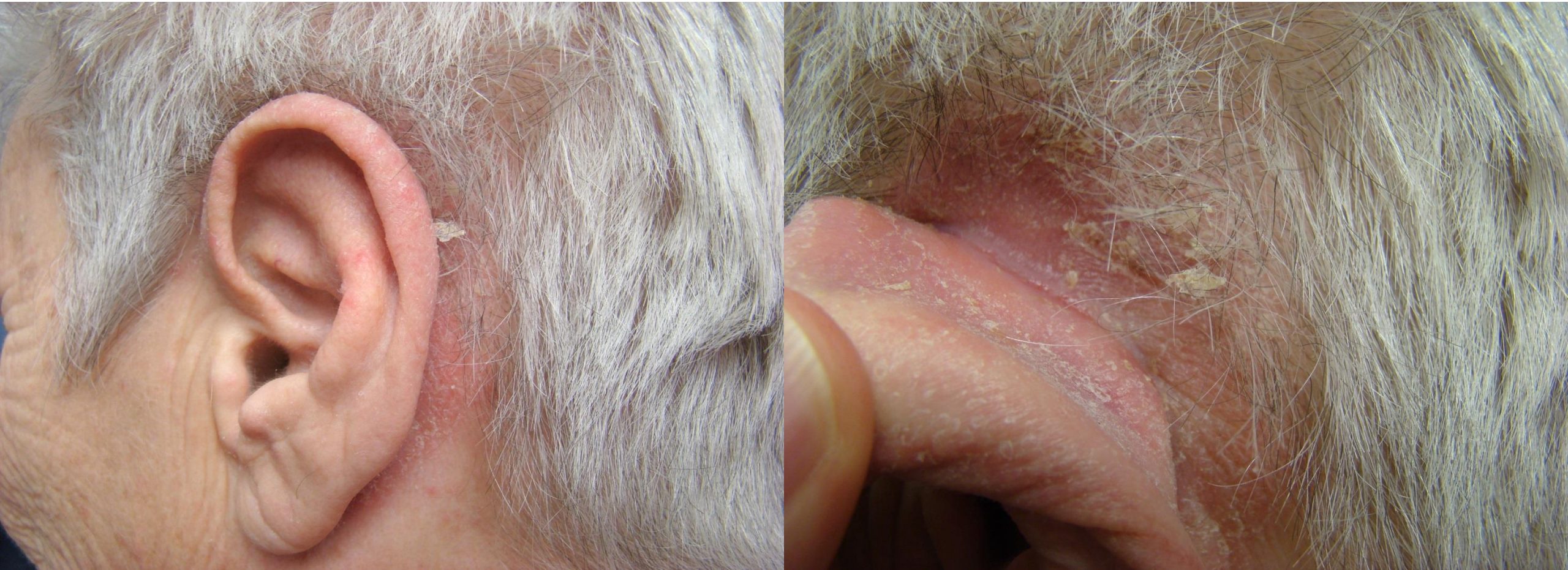
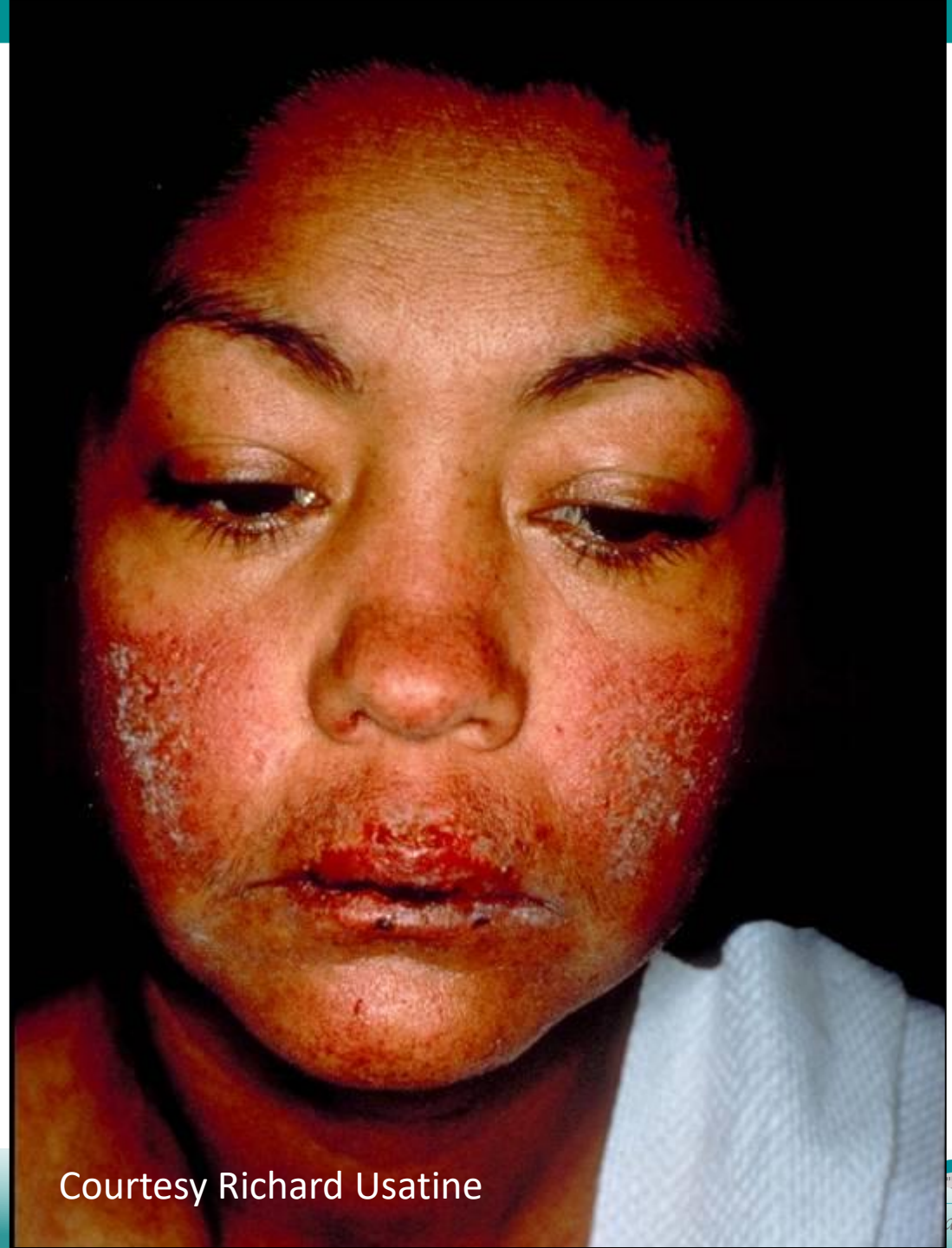
History of CVA

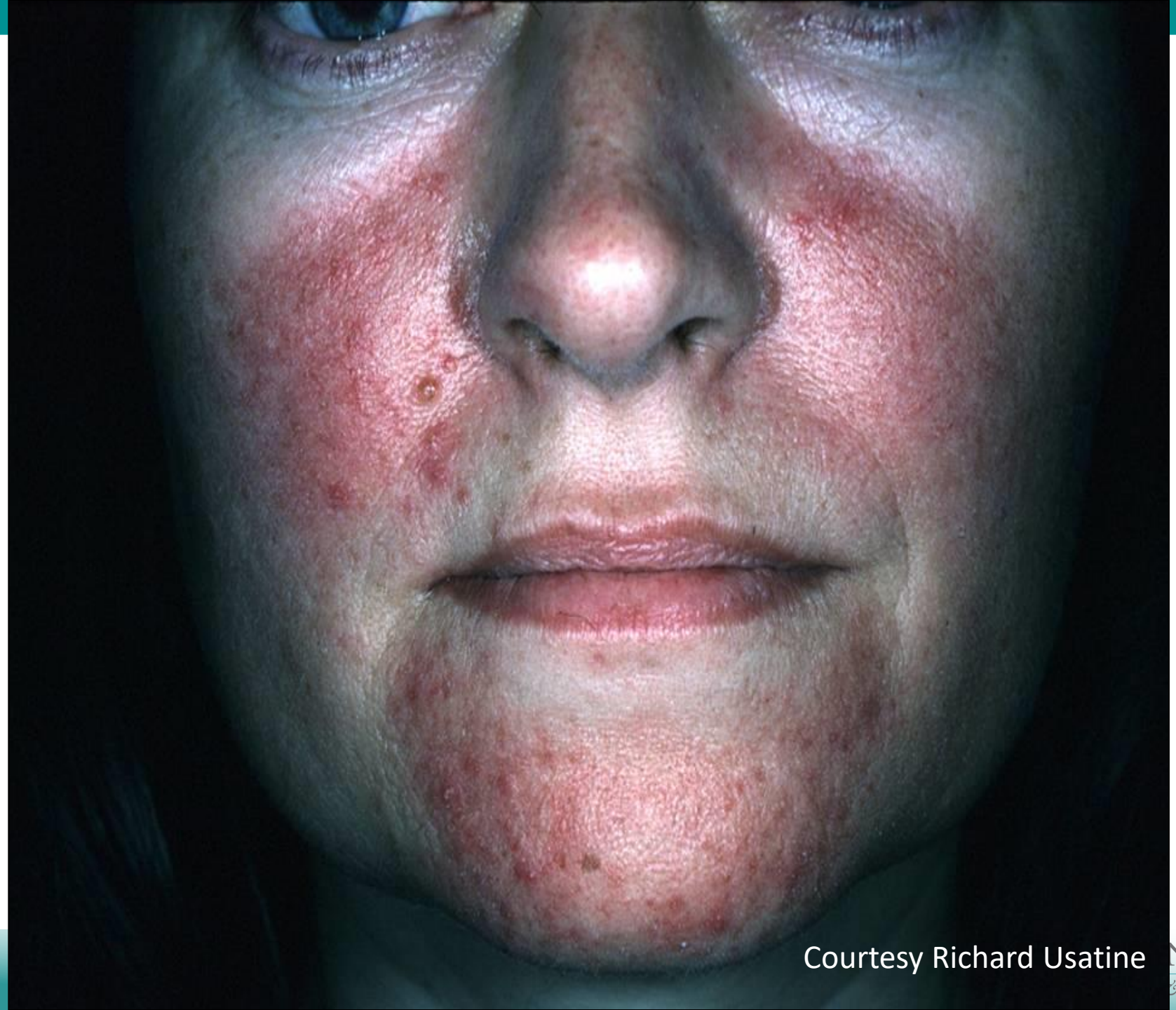


Differential diagnosis

Lupus spares the nasolabial fold



Courtesy Richard Usatine



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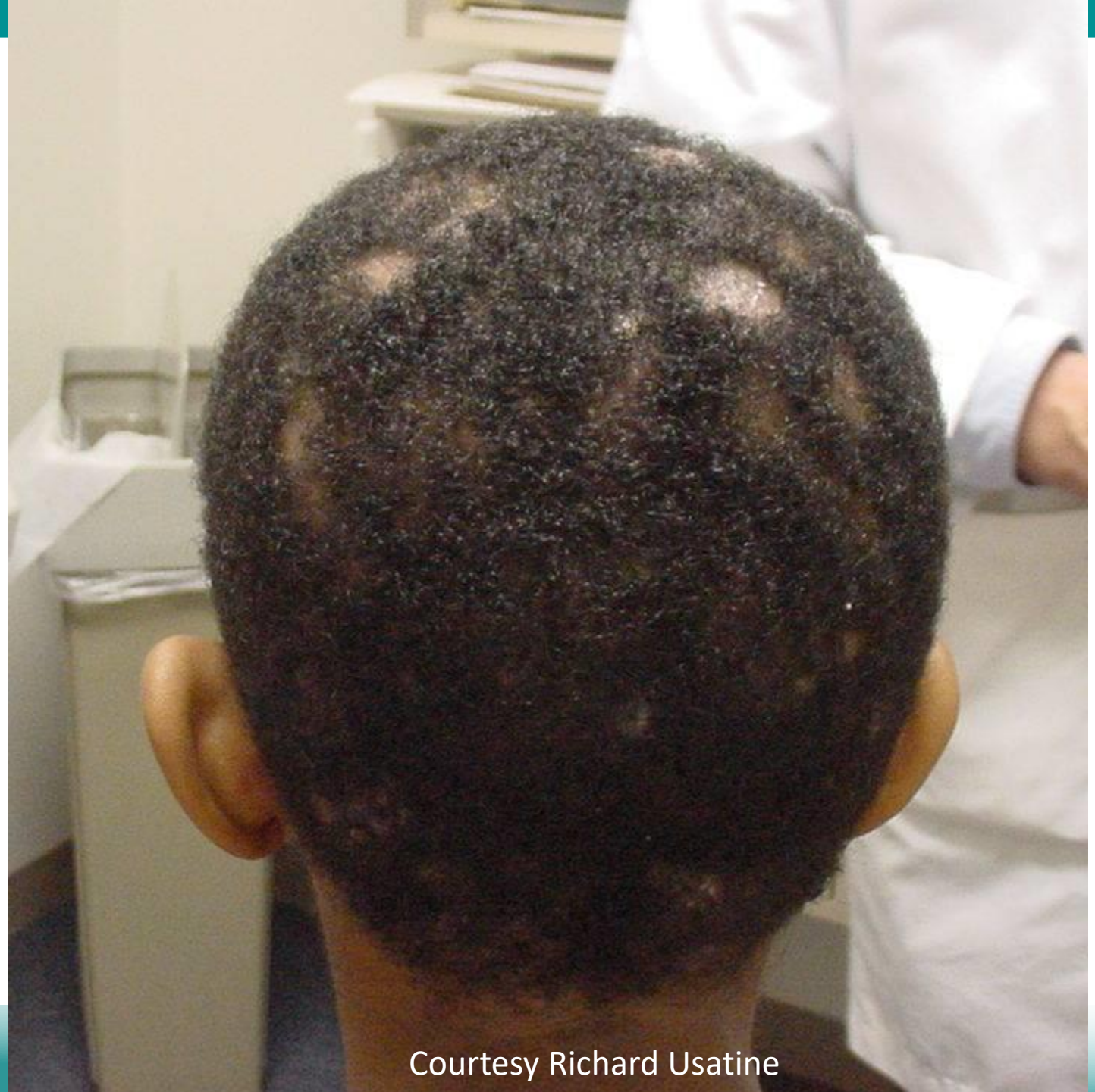

Courtesy Richard Usatine

The company you keep…

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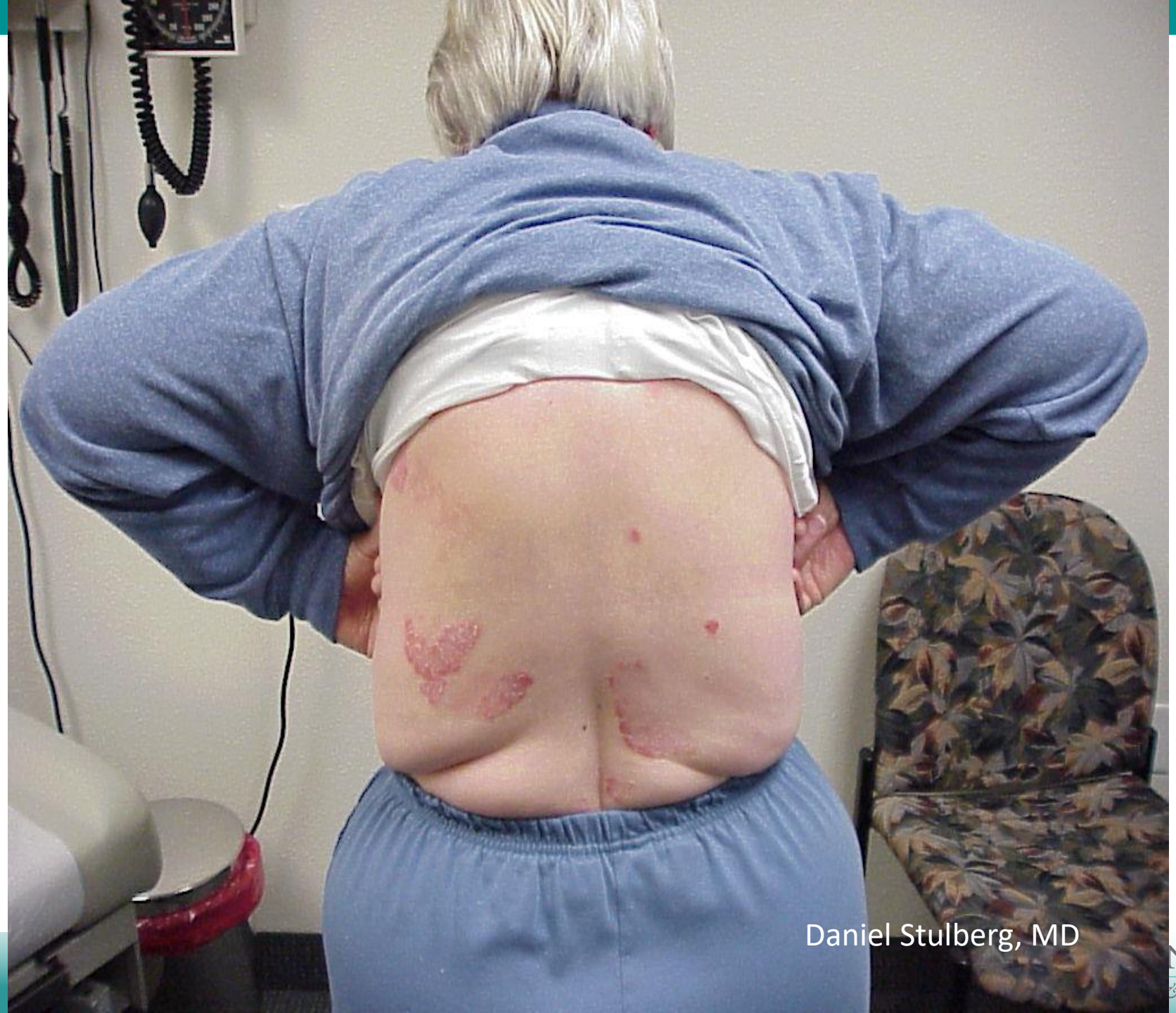
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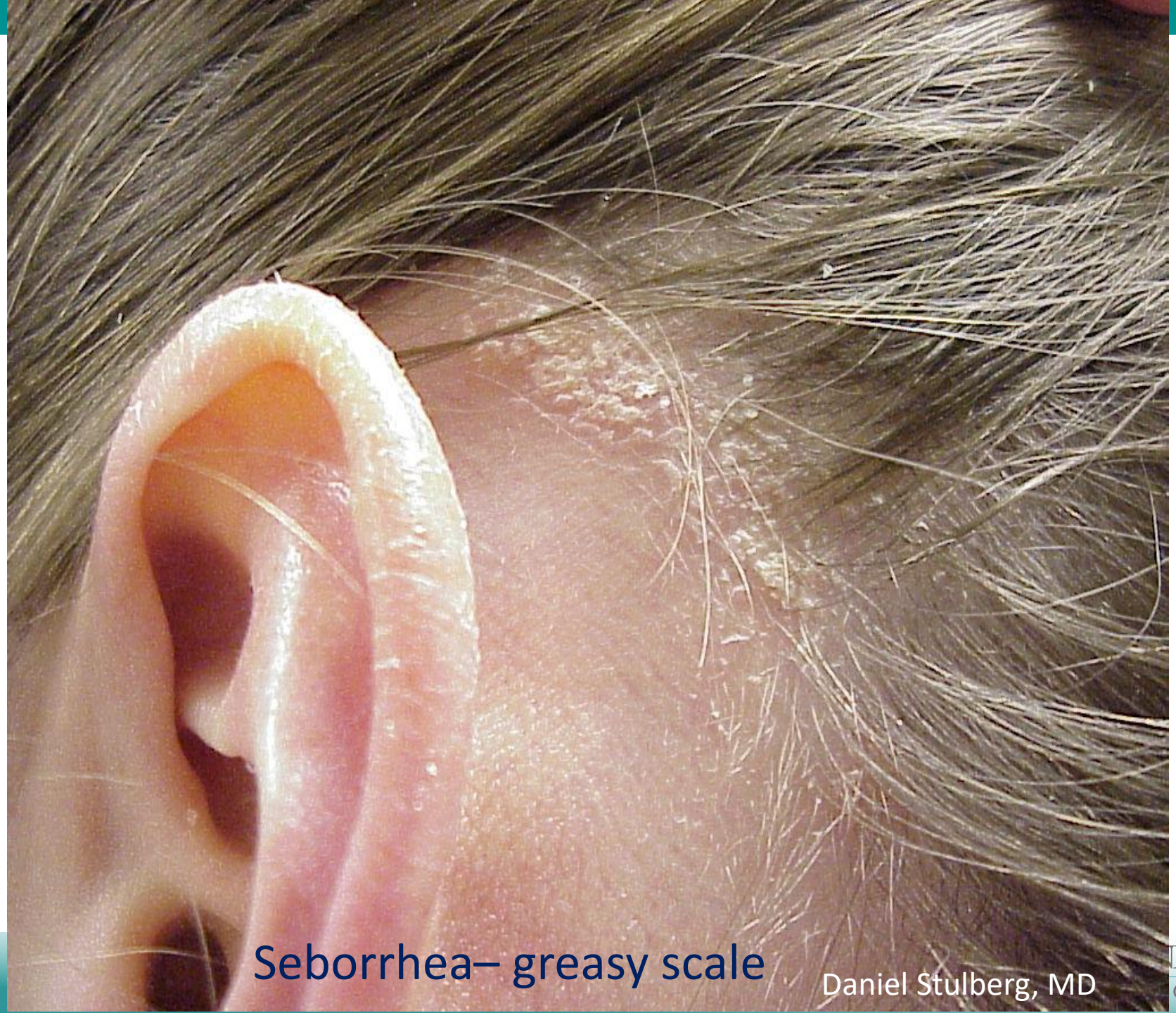


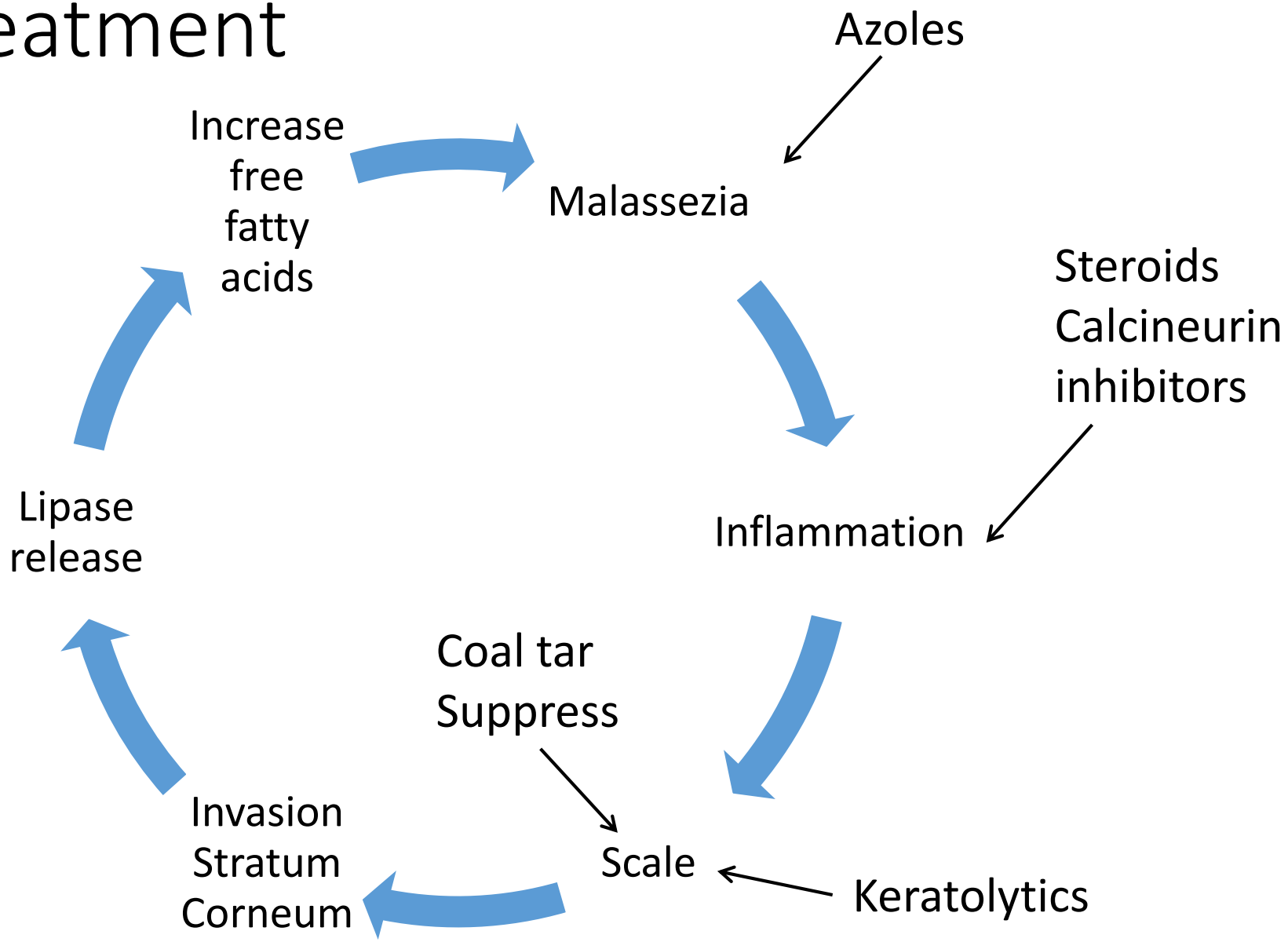
Seborrhea– greasy scale

Daniel Stulberg, MD

Treatment - Three Prong Approach

- Treat fungus - Antifungals
- Treat inflammation
  - Steroids
  - Non steroidal – Calcineurin inhibitors
- Treat scale – Keratolytics, coal tar

Treatment



Adapted from Clark GW, Pope SM, Jaboori KA. Diagnosis and treatment of seborrheic dermatitis. Am Fam Physician. 2015 Feb 1;91(3):185-90.

Treatment - Antifungal

- Antifungals -
  - Skin: Ketoconazole (Nizoral) or ciclopirox (Loprox) cream or any OTC azole antifungal
  - Scalp: Ketoconazole shampoo, Selenium sulfide, Zinc pyrithione

Azole - Antifungals

- Ketoconazole – Nizoral
  - (FDA for Seborrheic Dermatitis)
- Ciclipirox – Loprox gel, crm, lotion, soln
  - (FDA for Seborrheic Dermatitis)
- Miconazole – Monistat (FDA for Tinea)
- Econazole – Spectazole (FDA for Tinea)
- Clotrimazole – Lotrimin (FDA for Tinea)
- Sertaconazole – Ertaczo (FDA for Tinea)

Efficacy - Cochrane Review - Antifungals

- Ketoconazole = Ciclopirox (Loprox)
- Clotrimazole & miconazole comparable to steroids
- Ketoconazole = Steroids

- *Okokon EO, Verbeek JH, Ruotsalainen JH, Ojo OA, Bakhoya VN. Topical antifungals for seborrhoeic dermatitis. Cochrane Database of Systematic Reviews 2015, Issue 5.*

Prescription Shampoos

- Both ketoconazole 2% shampoo and selenium sulfide 2.25% shampoo are effective in the treatment of moderate to severe dandruff.*
- Ketoconazole 2% shampoo is highly effective, not only in clearing scalp seborrheic dermatitis and dandruff, but also in preventing relapse of the disease when used prophylactically once weekly.*
- Ciclopirox 1% twice weekly, leave on 3 min.

**Br J Dermatol* 1995; 132:441–445.

Ketoconazole (KET) vs Zinc Pyrithione (ZPT)

- KET 2% shampoo was superior to ZPT 1% shampoo when used twice weekly
- 73% improvement in the total dandruff severity score compared with 67% for ZPT 1% at week 4
- NNT = 17
- A multicenter RCT. *Skin pharmacology and applied skin physiology. 15(6):434-41, 2002.* In Cochrane Reviews.

Treatment - Inflammation

- Topical Steroids
  - 1% HC cream or lotion on face BID
  - Desonide cream or lotion on face BID-TID
  - Lotion preferred on hair covered area
  - If severe on scalp - may use fluocinonide (Lidex) or clobetasol solution
  - Fluocinonide solution is affordable in 60 ml bottles – use once daily

Steroids on Face?

- Hydrocortisone to start – Group 7
- Desonide 0.05% lotion – studied twice weekly for 3 weeks with 88% clearing - Group 5

  - Efficacy, cutaneous tolerance and cosmetic acceptability of desonide 0.05% lotion (Desowen) versus vehicle in the short-term treatment of facial atopic or seborrhoeic dermatitis. *The Australasian journal of dermatology. 43(3):186-9, 2002 Aug.*

OTC Shampoos - Antifungal

- Head and Shoulders 1% zinc
  - 29 to 38 cents per ounce
- Head and Shoulders (Intensive Treatment)
  - 1% selenium
  - 49 cents per ounce
- Selsun Blue 1% selenium
  - 82 cents per ounce
- Nizoral 1% ketoconazole
  - $3 per ounce
  - Prices on Walgreens.com

Keratolytic OTC Shampoos - Used in Psoriasis Also

- Salicylic acid shampoos – Exfoliant
  - 3% Salicylic Acid
  - Neutrogena T/Sal Therapeutic Shampoo
  - $1.55 per oz

- Tar shampoos – Soften scale and exfoliate
  - Neutrogena T/Gel Shampoo
  - 0.5% coal tar - $1.36 per oz
  - Walgreens T+Plus Gel Shampoo
  - 2.5% coal tar – 62 cents per oz

  - Prices on Walgreens.com

Cradle Cap Infantile SD

- Self limited

- Daily or frequent hair washing (even baby shampoo may be sufficient)
- Mineral oil for scale as needed
- Selenium based shampoo – burns the eyes less than Zinc based
- Salicylic acid based shampoo (Mustela Foam Shampoo with salicylic acid - OTC)
- 1% hydrocortisone cream or lotion if needed

Cochrane Review

- Topical Steroids – effective
- Mild steroids = Strong steroids in effect
- Azole antifungals = steroids short term results
- Calcineurin inhibitors – small studies effective more side effects than steroids
- Topical Lithium salts - small studies more effective than azoles

- *Kastarinen H, Oksanen T, Okokon EO, Kiviniemi VV, Airola K, Jyrkkä J, Oravilahti T, Rannanheimo PK, Verbeek JH. Topical anti-inflammatory agents for seborrhoeic dermatitis of the face or scalp. Cochrane Database of Systematic Reviews 2014, Issue 5.*

Alternatives

EBM – Metronidazole Gel

- Works for seborrheic dermatitis on face
- Marked difference between metronidazole gel and placebo

- *Parsad D, et al. Topical metronidazole in seborrheic dermatitis. A double-blind study. Dermatology 2001;202:35-7.*
- **InfoRetriever**
- **Consider for patient with rosacea and seborrhea (RU). It is costly - $172 (goodrx.com)**

Oral Terbinafine

- Oral terbinafine 250mg daily for 4 weeks ($4)
- Effective for moderate to severe seborrheic dermatitis
- Relief maintained 8 weeks after completing treatment

- Cochrane review of A multicentre, randomized, investigator-blinded, placebo-controlled trial. *The British journal of dermatology. 144(4):854-7, 2001 Apr*

Tea tree oil shampoo

- 41% severity improvement
- 23% improvement with decreased itching

- JAAD December 2002

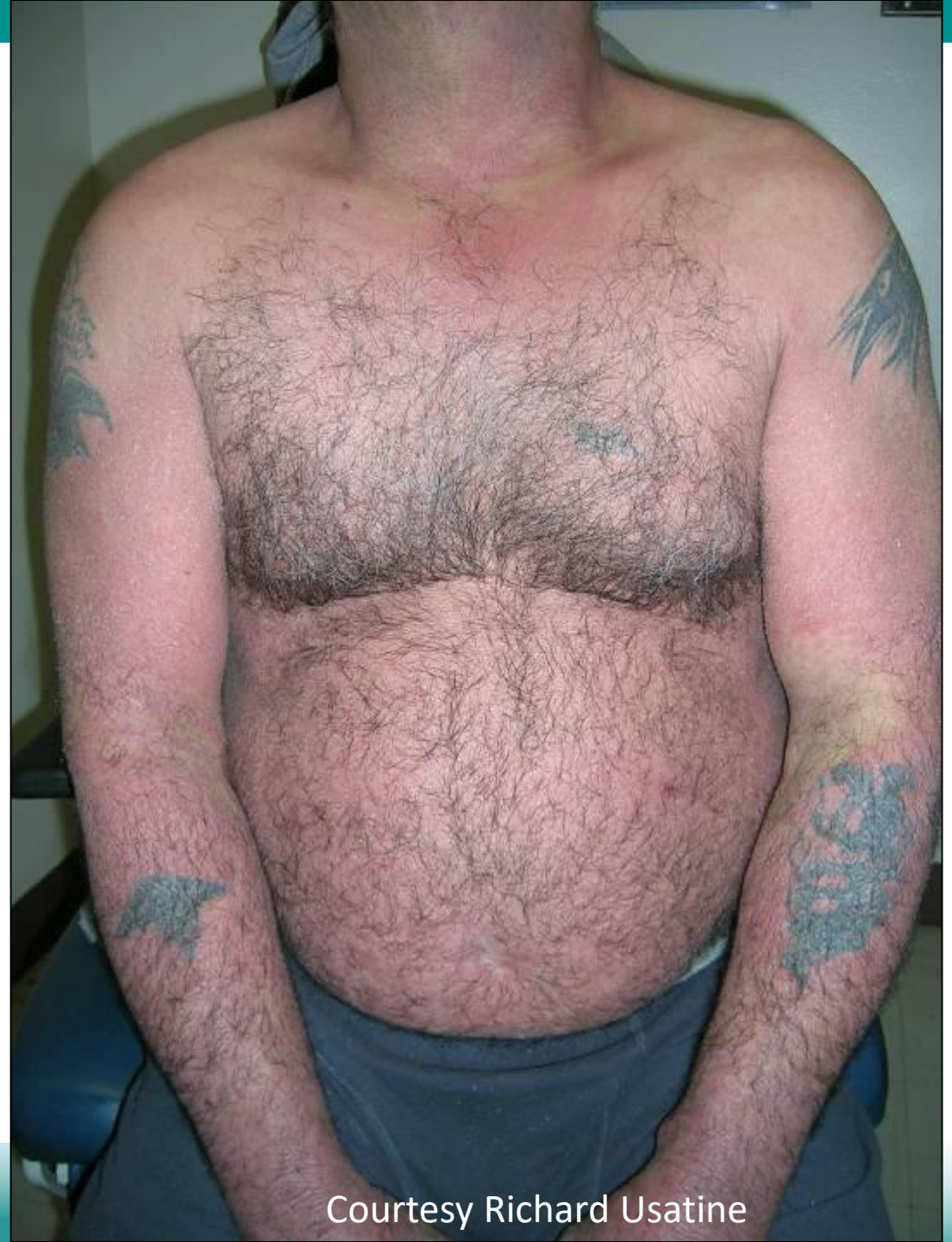
Shaving

- ? Ultraviolet light affect
- Narrow beam UVB x 8 wks
  - 18 patients
  - Six complete clearance
  - 12 significant improvement
  - 100% relapse ~ 21 days
- British Journal dermatology November 2000

Rare Complication: Erythrodermic Seborrhea

Total body redness

Biopsy stat for cause



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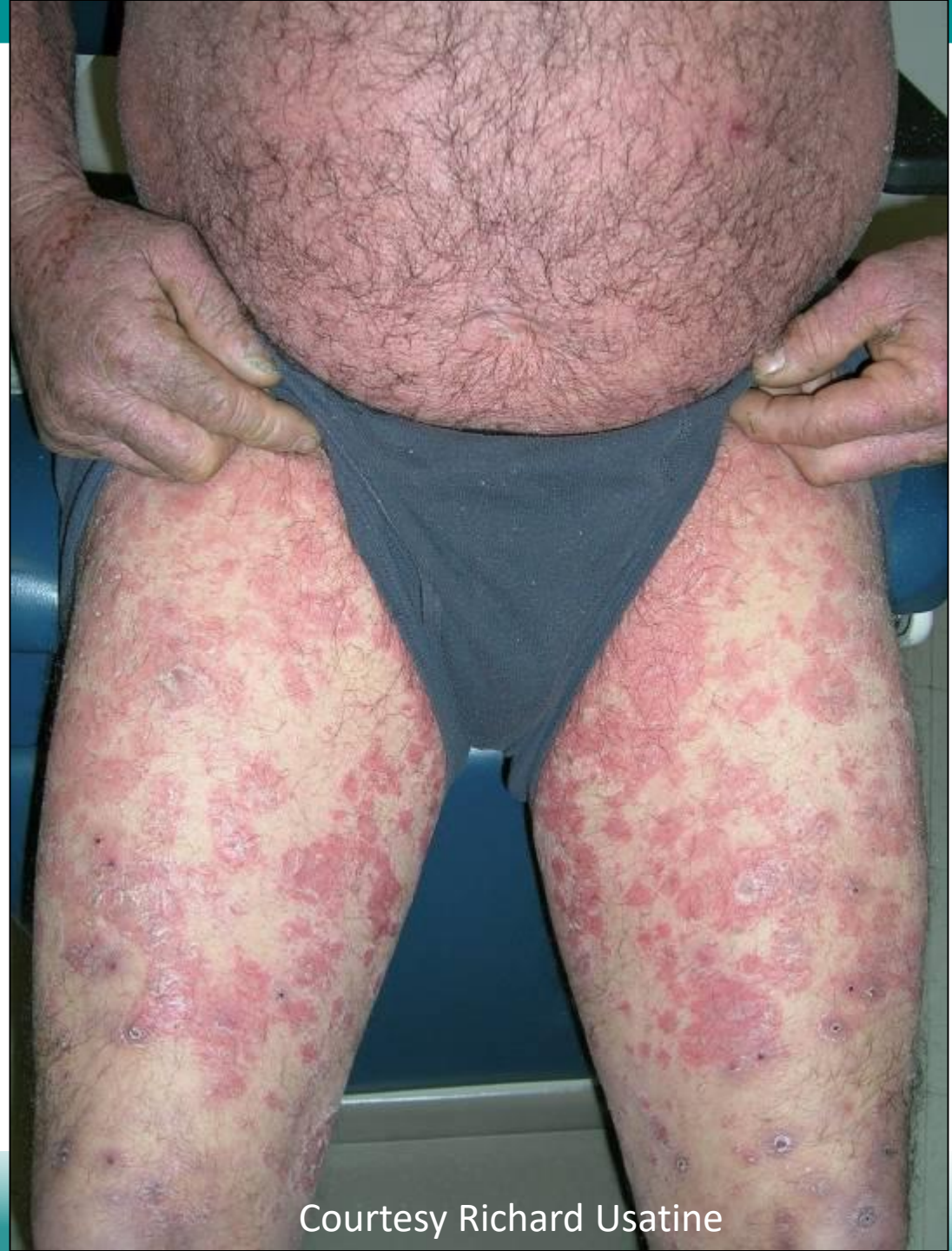
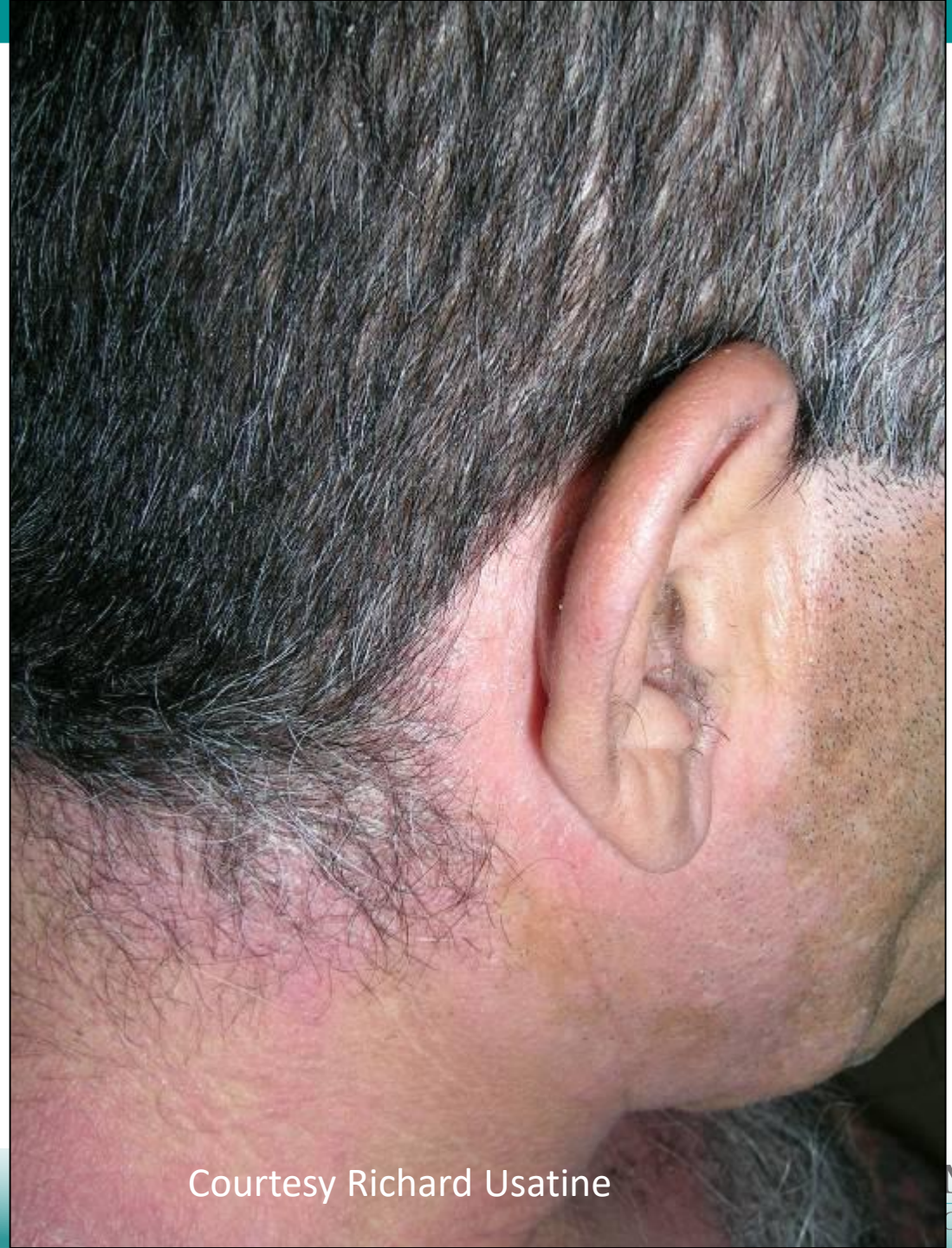


Courtesy Richard Usatine

Erythrodermic Seborrhea

Treat with topical triamcinolone and wet pajamas

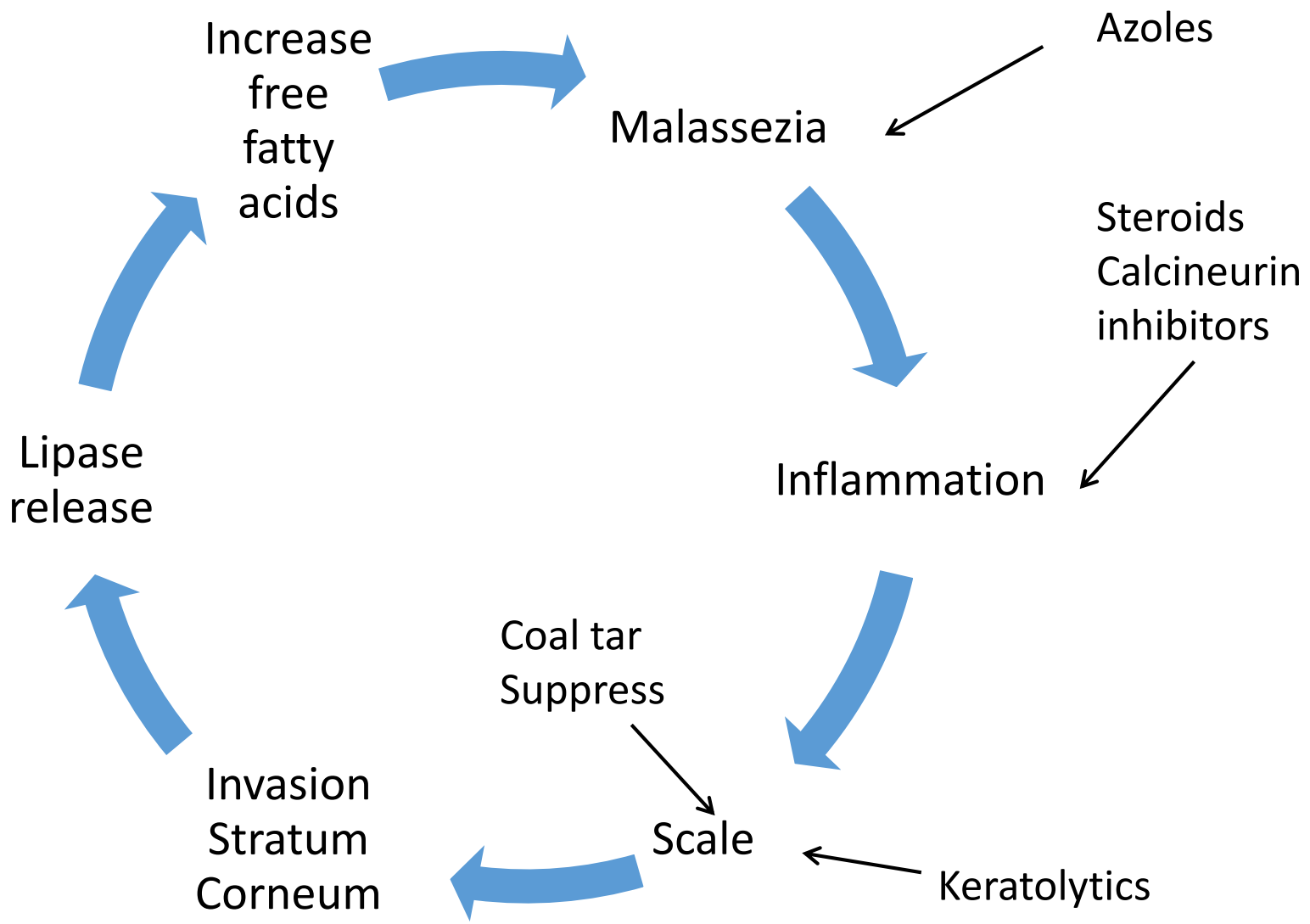


Courtesy Richard Usatine

Conclusions

- Seborrheic dermatitis is found where Pityrosporum grows
- Treat fungus – antifungals
- Treat inflammation – topical steroids or non-steroidals
- Frequent hair washing with antifungal or keratolytic shampoos

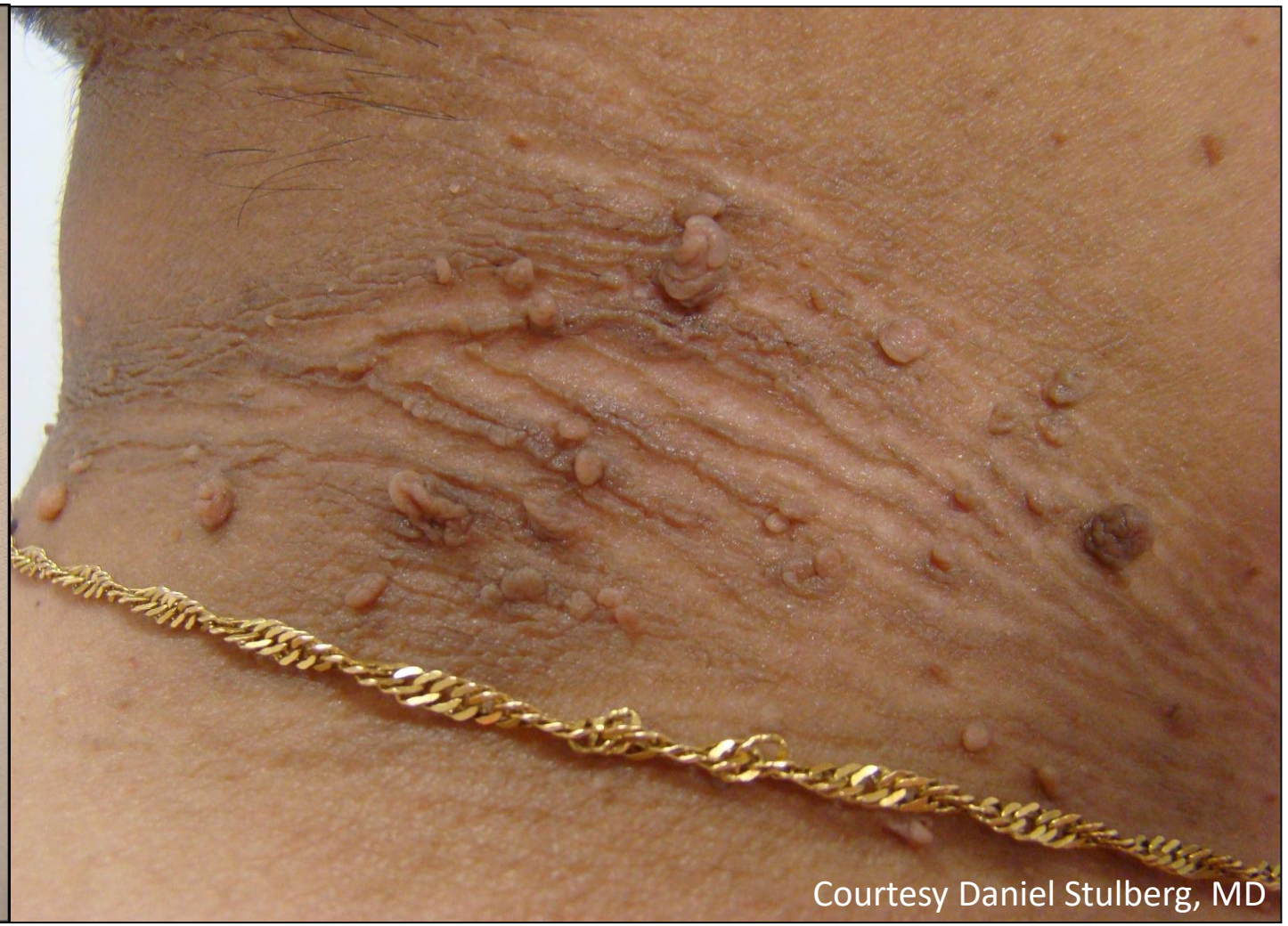
Summary & Consider Pt Pref RE Products



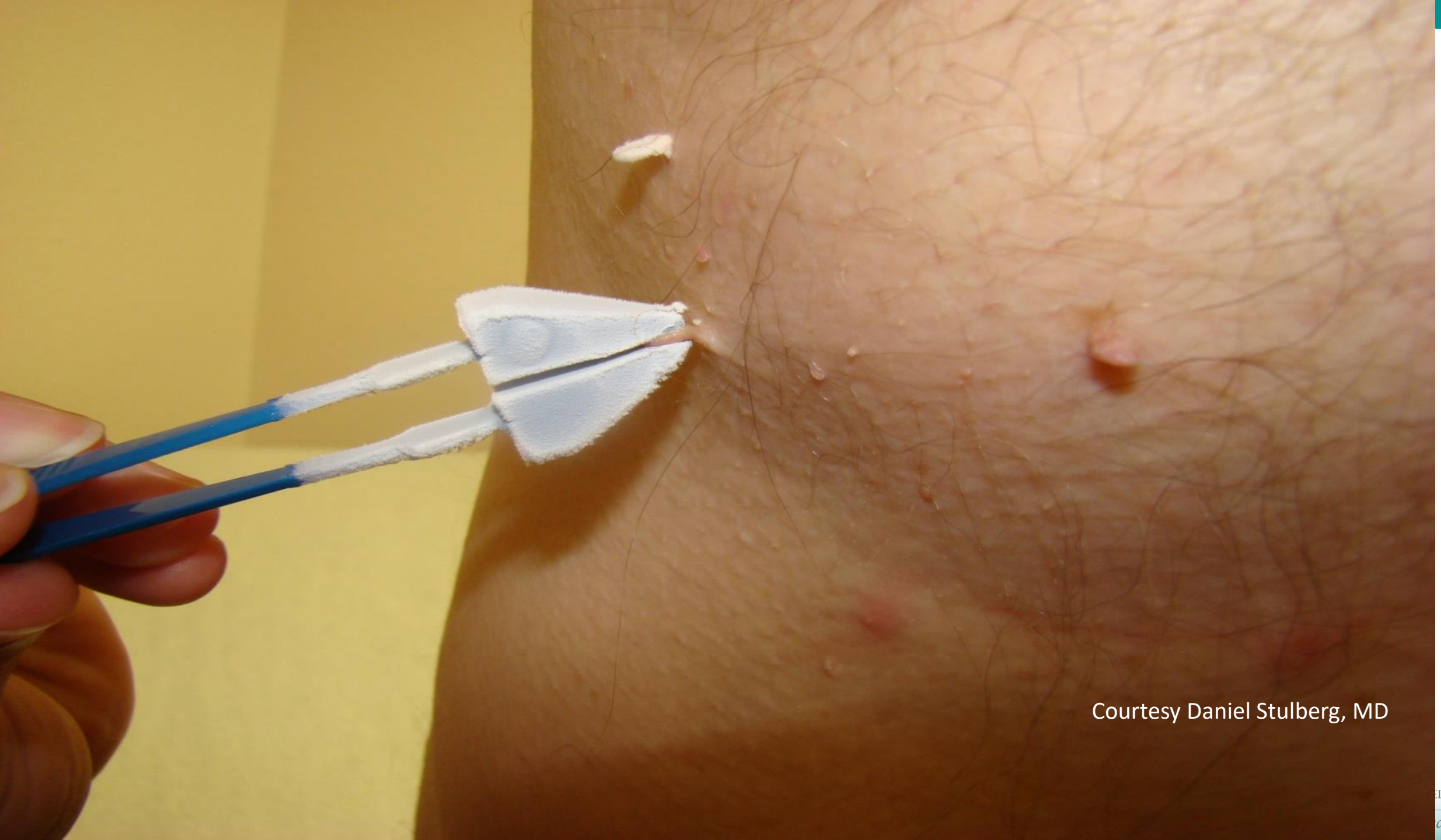
Clark GW, Pope SM, Jaboori KA. Diagnosis and treatment of seborrheic dermatitis. Am Fam Physician. 2015 Feb 1;91(3):185-90.

Cryotweezers for Acrochordons


Courtesy Daniel Stulberg, MD


Courtesy Daniel Stulberg, MD

Cryotweezers $200-230



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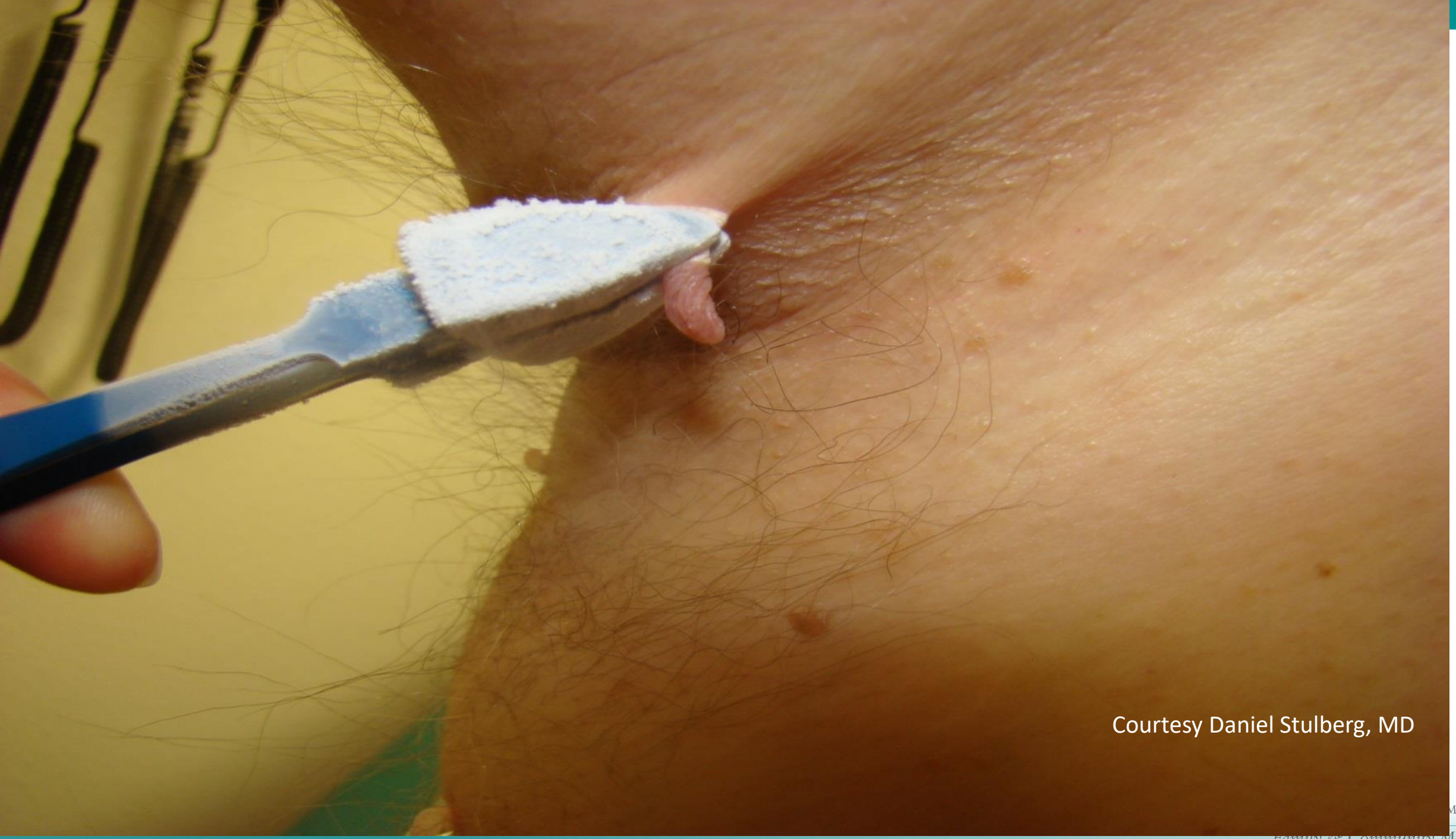

Courtesy Daniel Stulberg, MD

Thank you to all of our preceptors!!!!

- I am available breakfast & break
  - Question's
  - Feedback
  - New volunteers
  - eLearning for Medical Educators

Tips for Having Learners in Your Practice

Scheduling

- Wave
  - 2 patients at same time 9am
  - Preceptor sees/completes pt 9-9:15
  - Student sees pt 9am
  - Student presents 9:15 preceptor sees pt
  - Next 2 pts @ 9:30
  - Total 4 pts/hr same as a Q 15 min sched

Guiding a Learner through a Hands on Exam or Procedure

- Resident is going to do this exam or procedure
  - You are going to feel the student's hand touch…
  - Next you will feel her doing X
  - Code word or phrase to stop the learner if needed

Time Saving Steps

- Exam in tandem instead of sequential
- Precept in room –Esp for time based coding face to face time
- Teach to student for pt benefit
- Teach to pt for student benefit
- Learning issue to help you in practice if need info on guideline or new med, etc.

Documenting

- Students CAN
  - PMH, ROS
- Students CANNOT
  - HPI, Exam, A/P
- Residents CAN
  - Do exams and entire hx and A/P
  - Preceptor needs teaching statement "Case disc w Dr. X, Pt seen and examined agree as outlined above or "my exam" or your assessment briefly

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Teaching Techniques for Active Learners

One Minute Preceptor

- Get a commitment – What is your Dx?
- Probe for underlying reasoning
- Teach general principles
- Provide positive feedback
- Correct mistakes

Activated Demonstration

- The learner presents the case
- The preceptor sees the patient while the learner watches
- The preceptor "activates" the learner to watch a particular aspect of the encounter
- Discussion during or afterwards

GRIPE - Chronic Care Encounters/Health Maintenance

- Guidelines and Goals
- Reflect on the patient – meeting goals
- Interventions
- Preventive, Pain, Palliation- if needed
- Effective feedback

Courtesy Dean A. Seehusen MD, MPH

SNAPPS – Learner Driven More Advanced Learner

- Summarize the H&P
- Narrow down the differential diagnosis
- Analyze the differential
- Probe the preceptor about difficulties
- Plan patient management
- Select an issue for self-directed learning

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UNM School of Medicine announces *eLearning for Medical Educators*

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CME-accredited (category 1), self-paced, interactive online modules for community preceptors

Teaching with Limited Time While Providing Patient Care in the Outpatient Setting

Available now

Providing Feedback and Evaluating Learners

Anticipated Sept. 1, 2017

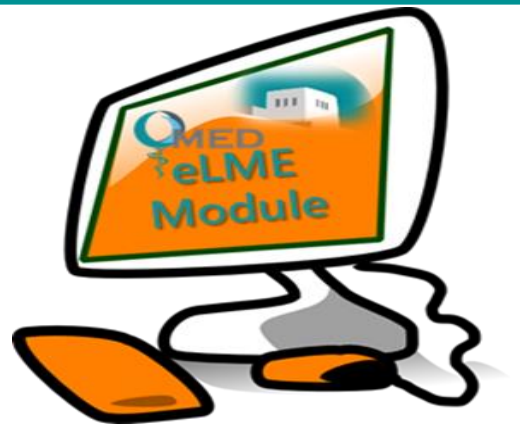
Contact:

Office for Medical Educator Development

HSC-OMED@salud.unm.edu

OMED

Learning through example, interactive engagement, and drawing on experience



Self-reflection: **How do I teach?**

Learn: **Interactive lesson with video examples and self-assessments**

Self-reflection: **How can I improve my teaching?**

Learning Check: **Demonstrate learning for CME credits**

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