Dermatology for the Non-Dermatologist

CCFMG
Central California Faculty Medical Group

University | Centers of Excellence

In affiliation with UCSF Fresno

Dermatology for the Non-Dermatologist

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Board-Certified Dermatologist and Board-Certified Mohs Surgeon

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Agenda

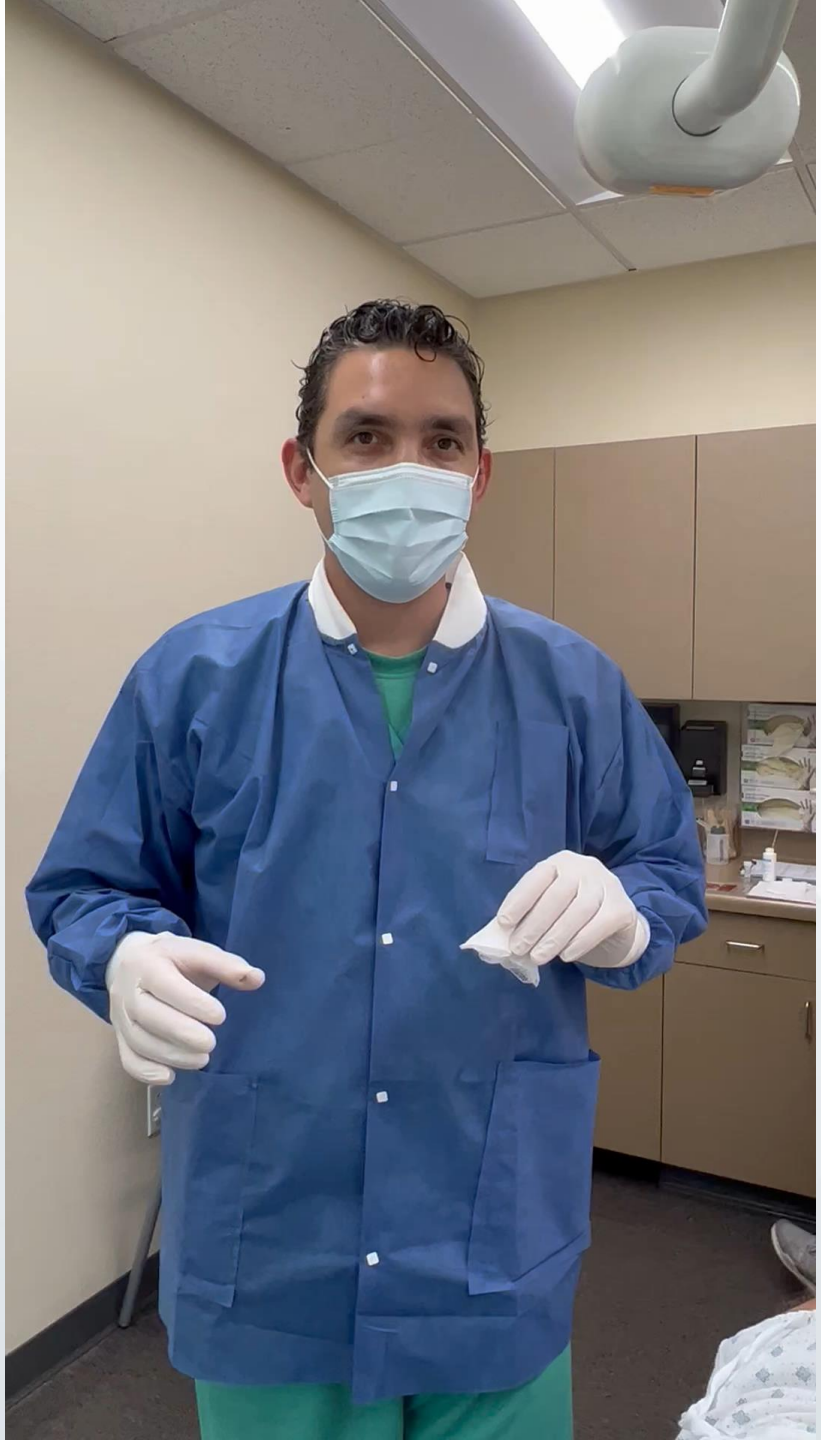
- Our practice
- Shave and punch biopsy techniques
- Biopsy cases
- Surgical cases

University Dermatology Associates

- Accepting new patients
- Most insurances (including MediCal)
- Ages 0-120 (pediatric MediCal in FHCN)
- 2 Board-Certified Dermatologists and 2 PA’s
- General Derm, Surgical derm, Mohs, Research, cosmetics
- PDL (laser), PDT, UVA, UVB

Shave biopsy

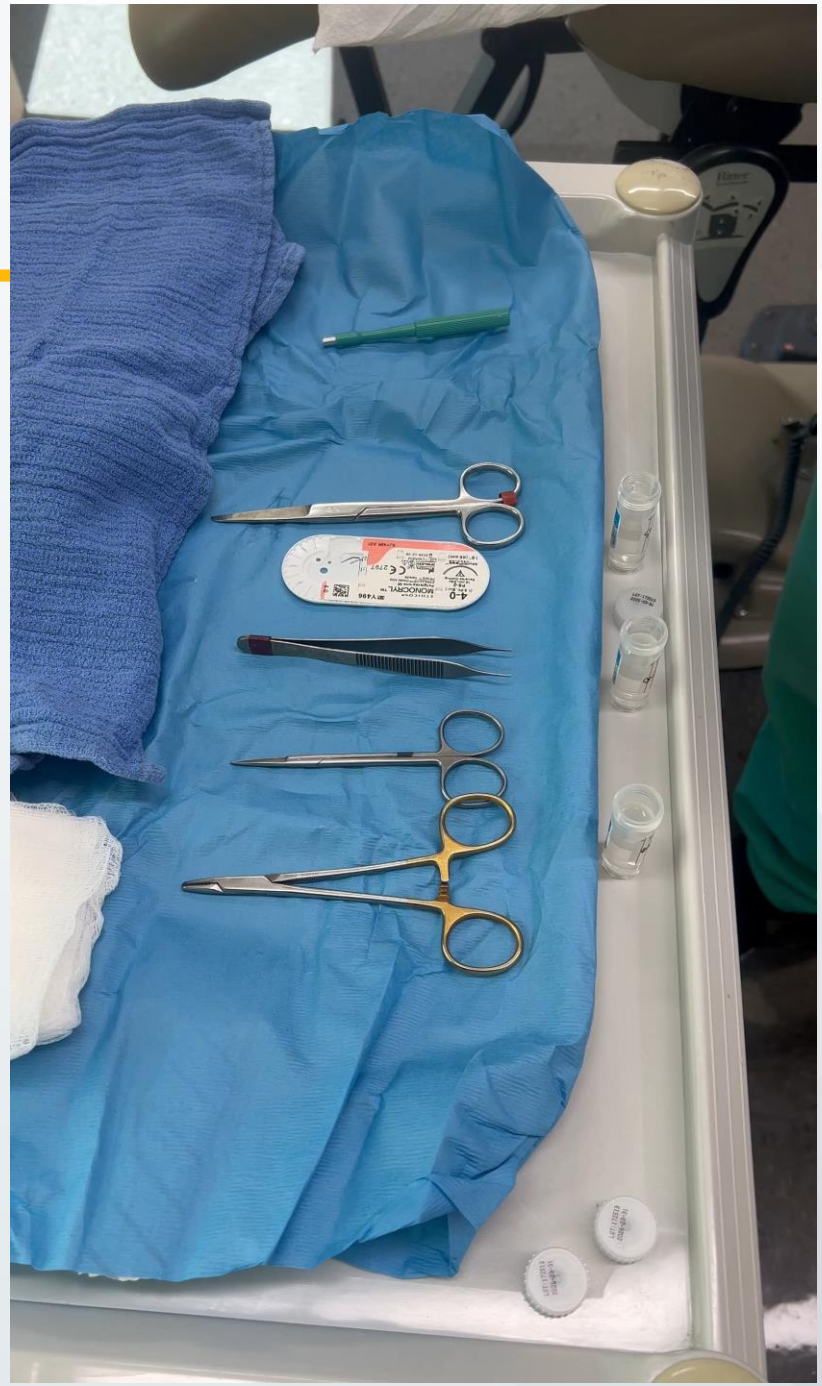
- Marker
- Camera
- Lidocaine
- Razor blade
- Q-tip
- Aluminum Chloride
- Band-Aid



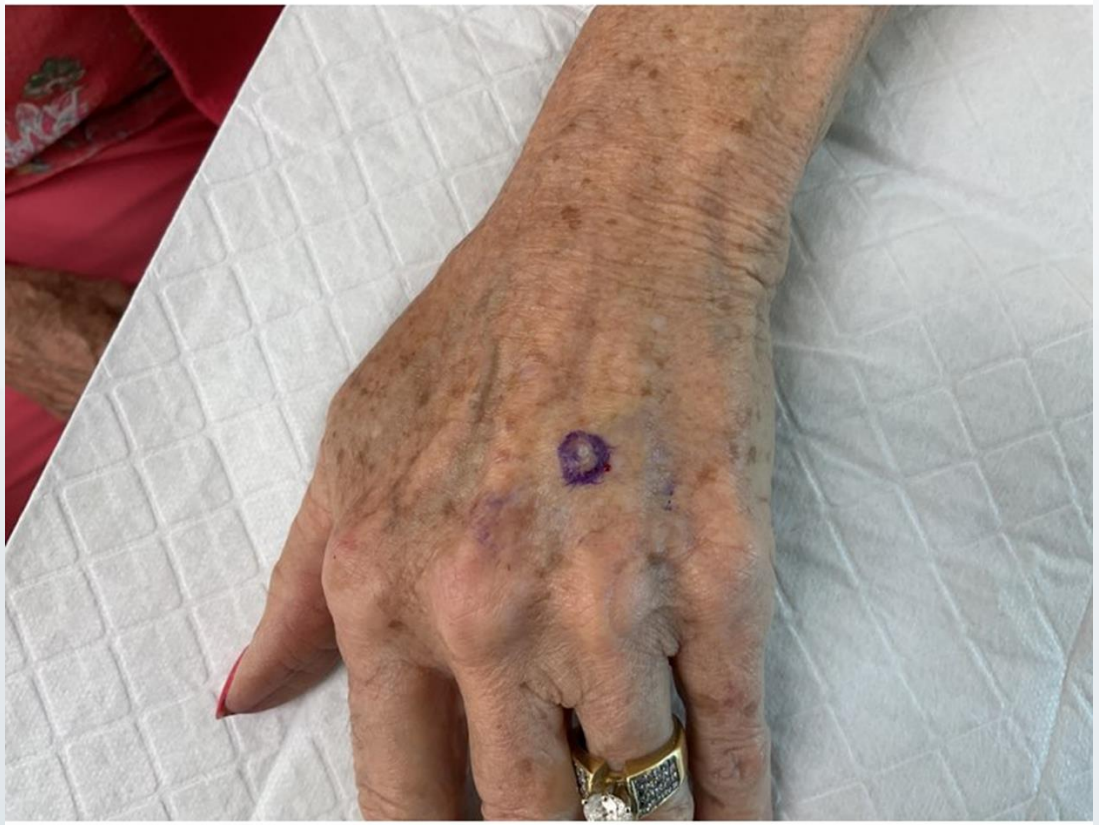
- Very simple, cheap
- Usually no complications
- 99% no need for cauterization
- Be careful with blood thinners, low platelets, abnormal liver, A-V fistulas.

Punch biopsy

- More difficult
- More tools (instruments)
- Need to know where to perform



Biopsy cases



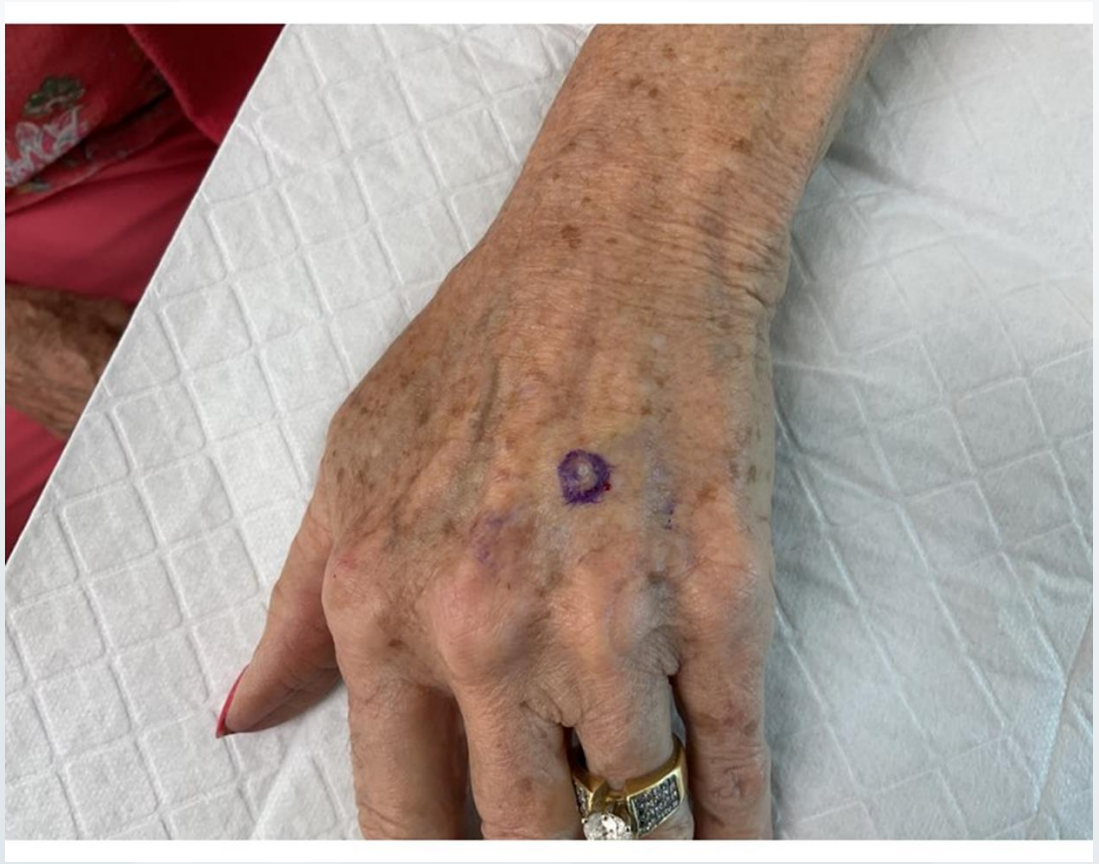
RECEIVED: 06/01/2023
REPORTED: 06/02/2023
9:31:56AM

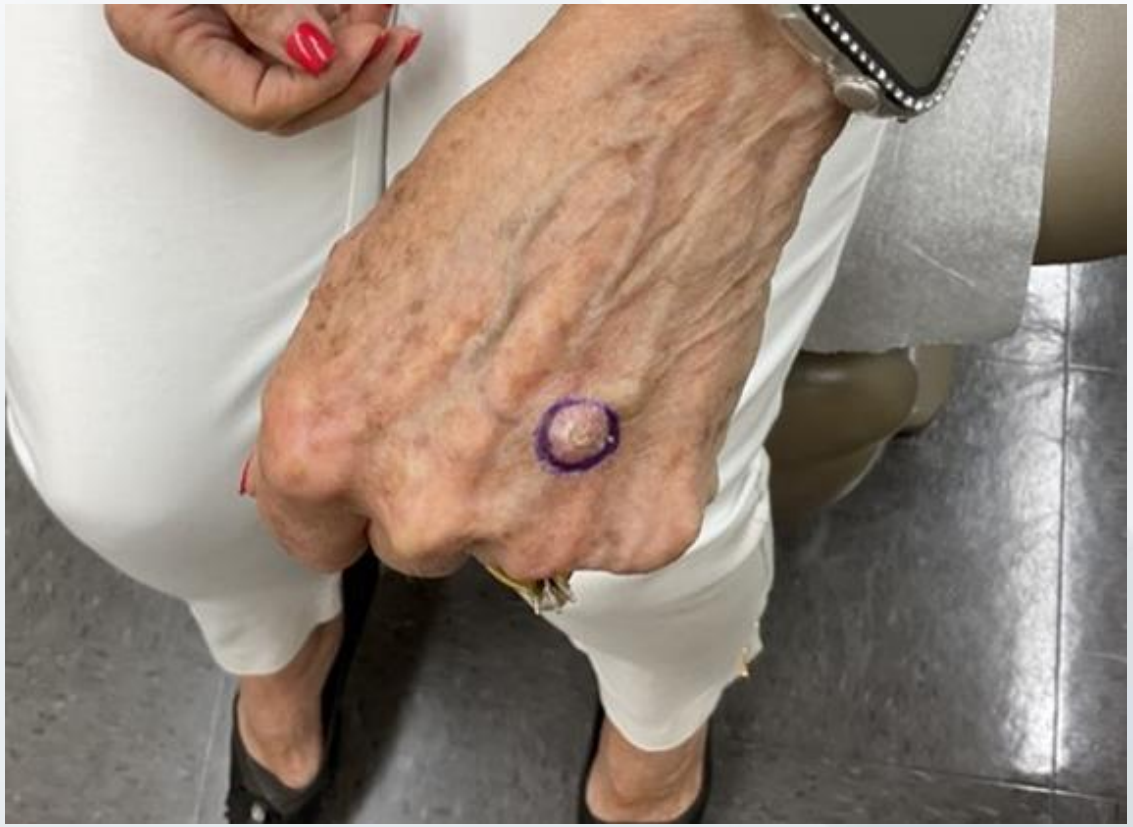
PHYSICIAN: LUIS DEHESA, MD
Reference #: 44425

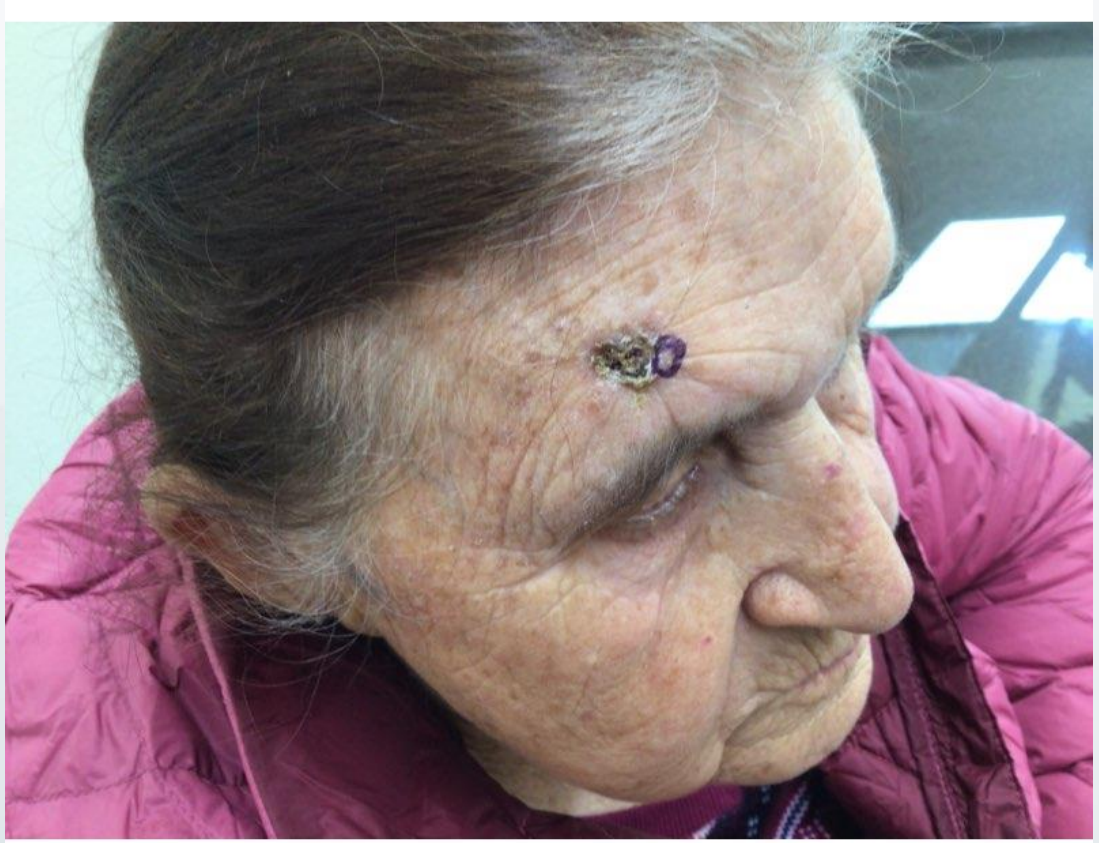
CLINICAL DATA: FIBROTIC, FIRM NODULE; NEOPLASM OF UNCERTAIN BEHAVIOR, SCC VS. ISK

DIAGNOSIS: **VERRUCOUS ACTINIC KERATOSIS (L57.0)**
(LEFT RADIAL DORSAL HAND)

NOTE: Actinic keratosis has been transected across the deep tissue edge, limiting assessment for a possible component of invasive carcinoma. Rebiopsy is warranted if a lesion persists at this site.







Right central forehead

CLINICAL DATA:

Procedure:	Biopsy by shave method H and E.
Morphology:	Fibrotic, firm nodule.
DDX:	Neoplasm of uncertain behavior.
Notes:	Rule out basal cell carcinoma.

FINAL DIAGNOSIS (Microscopic):

Right central forehead:

Hypertrophic actinic keratosis.

Present at peripheral and deep margins.

SPECIMEN SUBMITTED:
Right inferior forehead

CLINICAL DATA:

Procedure:	Biopsy by shave method H and E.
Morphology:	Papule.
DDX:	Neoplasm of uncertain behavior vs basal cell carcinoma.

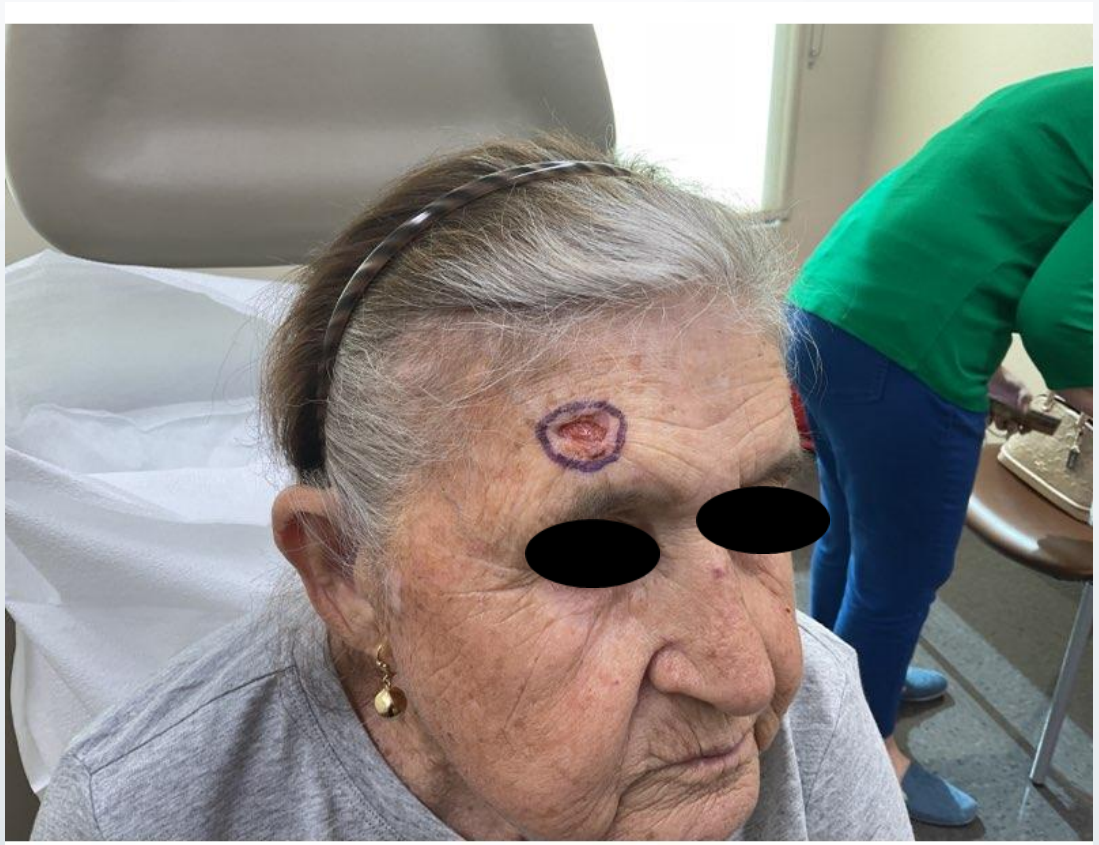
5/8/23

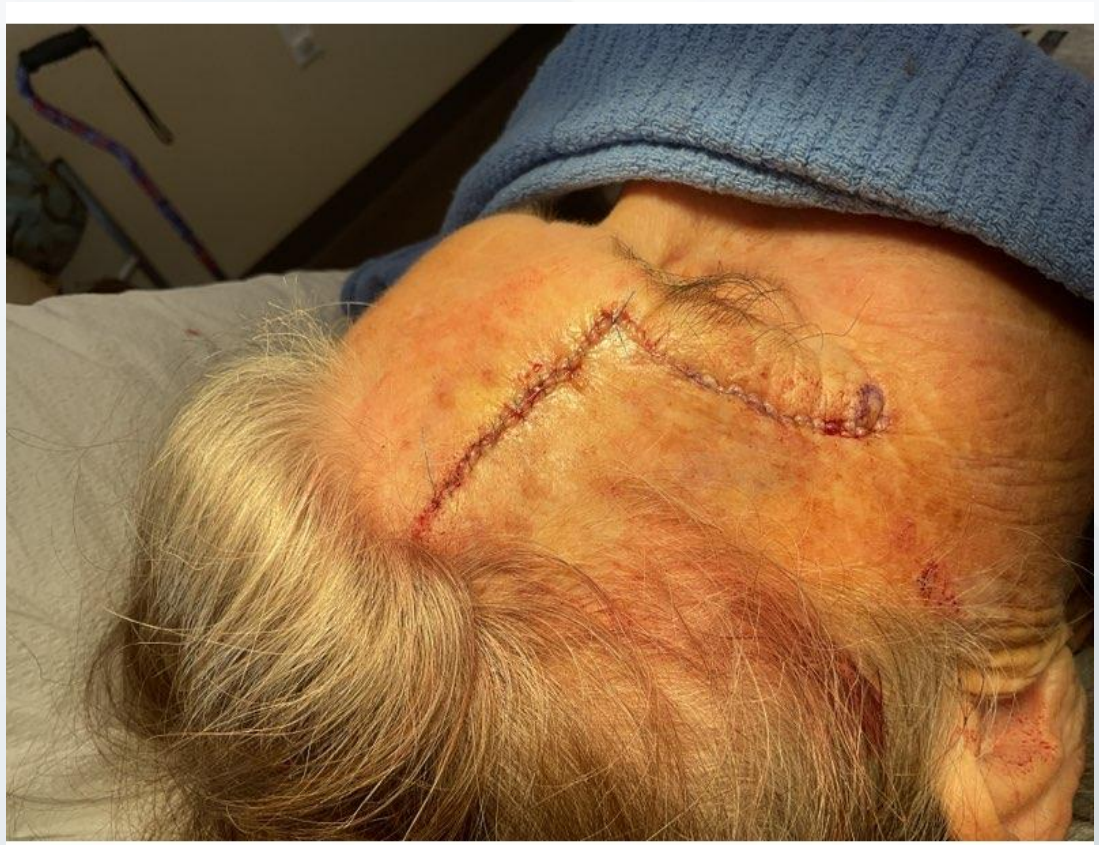
FINAL DIAGNOSIS (Microscopic):

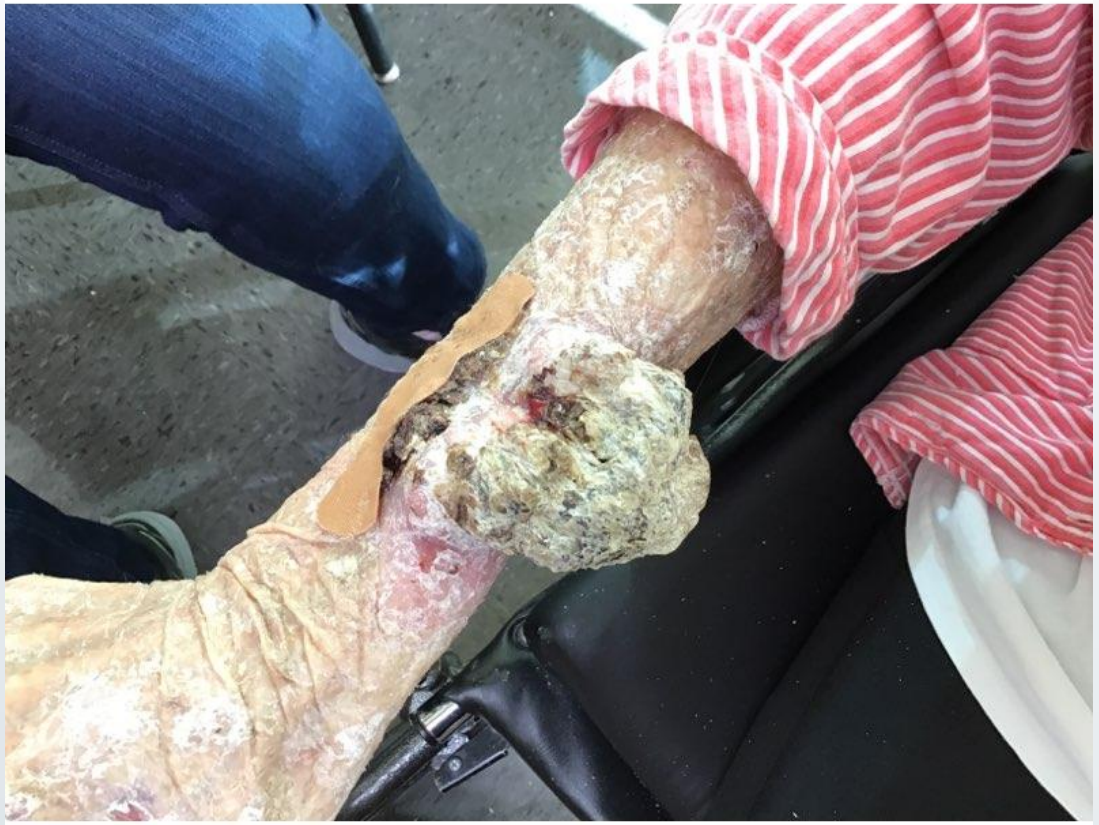
Right inferior forehead:

Basal cell carcinoma, atypical type (with squamous features), extending to the base.

Mohs.







Patient No.: 23-031-0000999

Facility: UNIVERSITY DERMATOLOGY
Facility MRN: 232026

6. Right proximal dorsal forearm:
Hypertrophic actinic keratosis.
Present at peripheral and deep margins.

– Re-biopsy.

DERMATOPATHOLOGY CONSULTATION

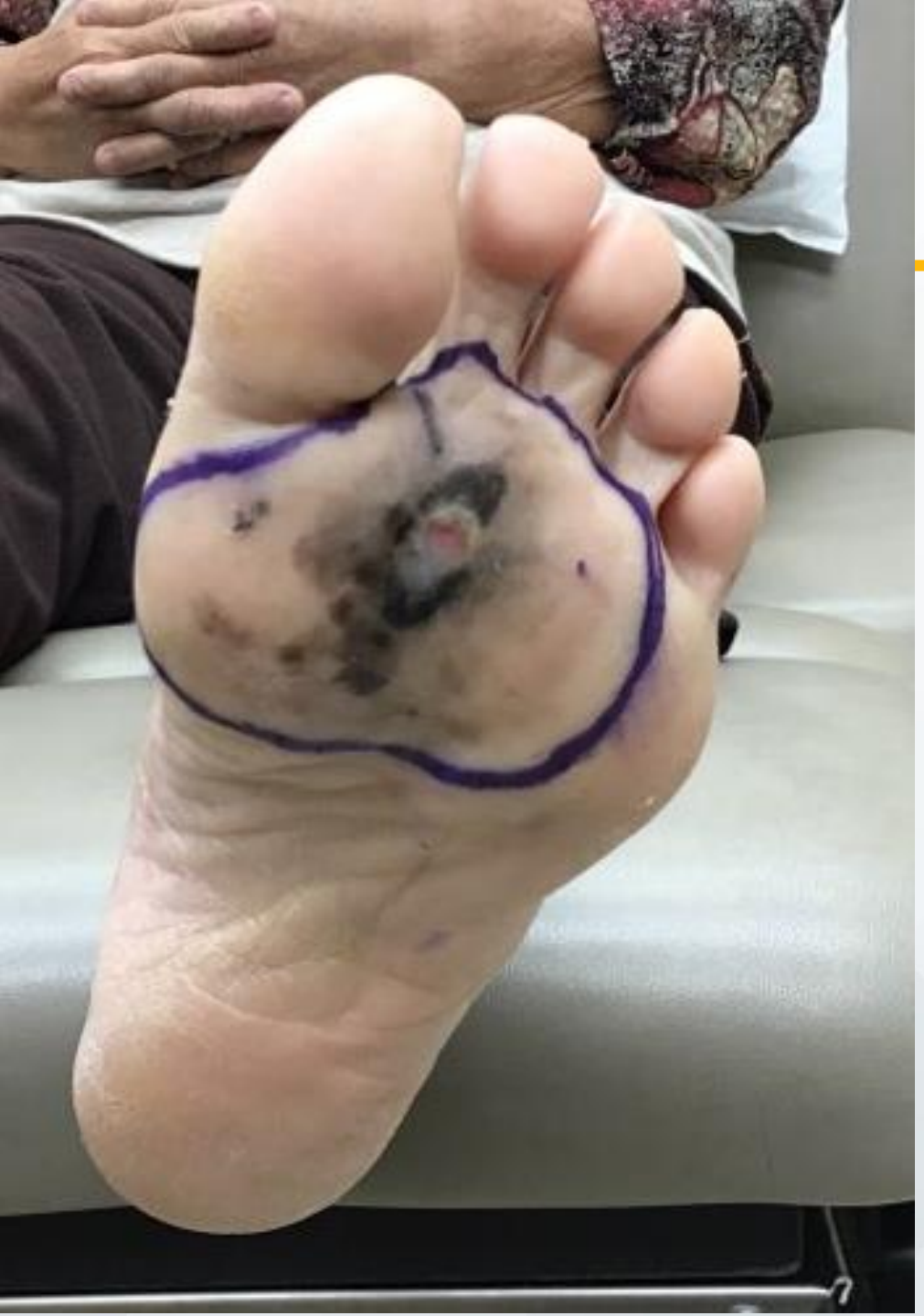
SPECIMEN SUBMITTED:
Right proximal dorsal forearm

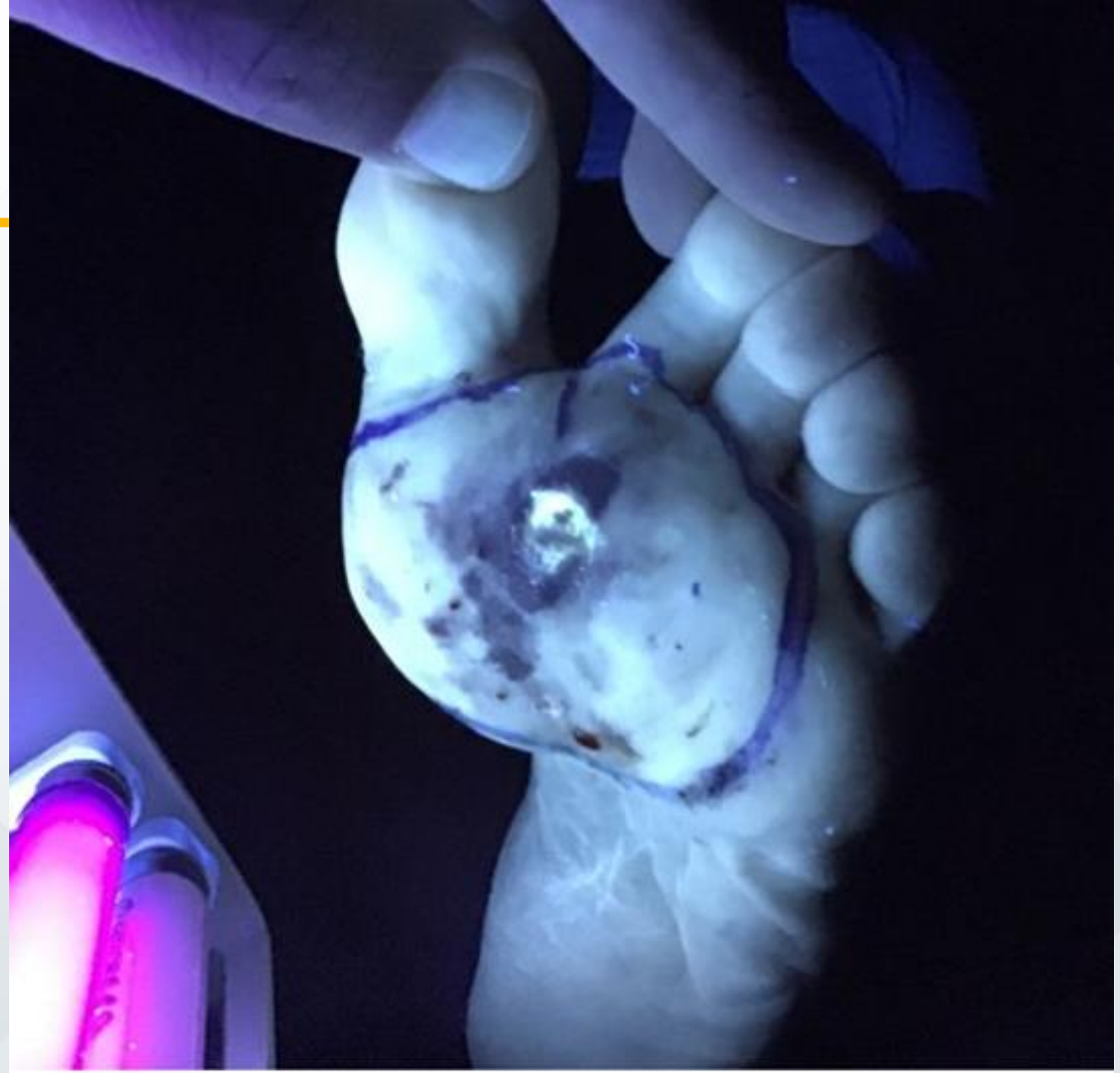
CLINICAL DATA:
Procedure: Biopsy by shave method H and E.
Morphology: Fibrotic, firm nodule.
DDX: Neoplasm of uncertain behavior.
Notes: Rule out squamous cell carcinoma.

3/6/23

FINAL DIAGNOSIS (Microscopic):
Right proximal dorsal forearm:
Invasive squamous cell carcinoma, keratoacanthoma type.
Present at deep margin.

– Mohs.

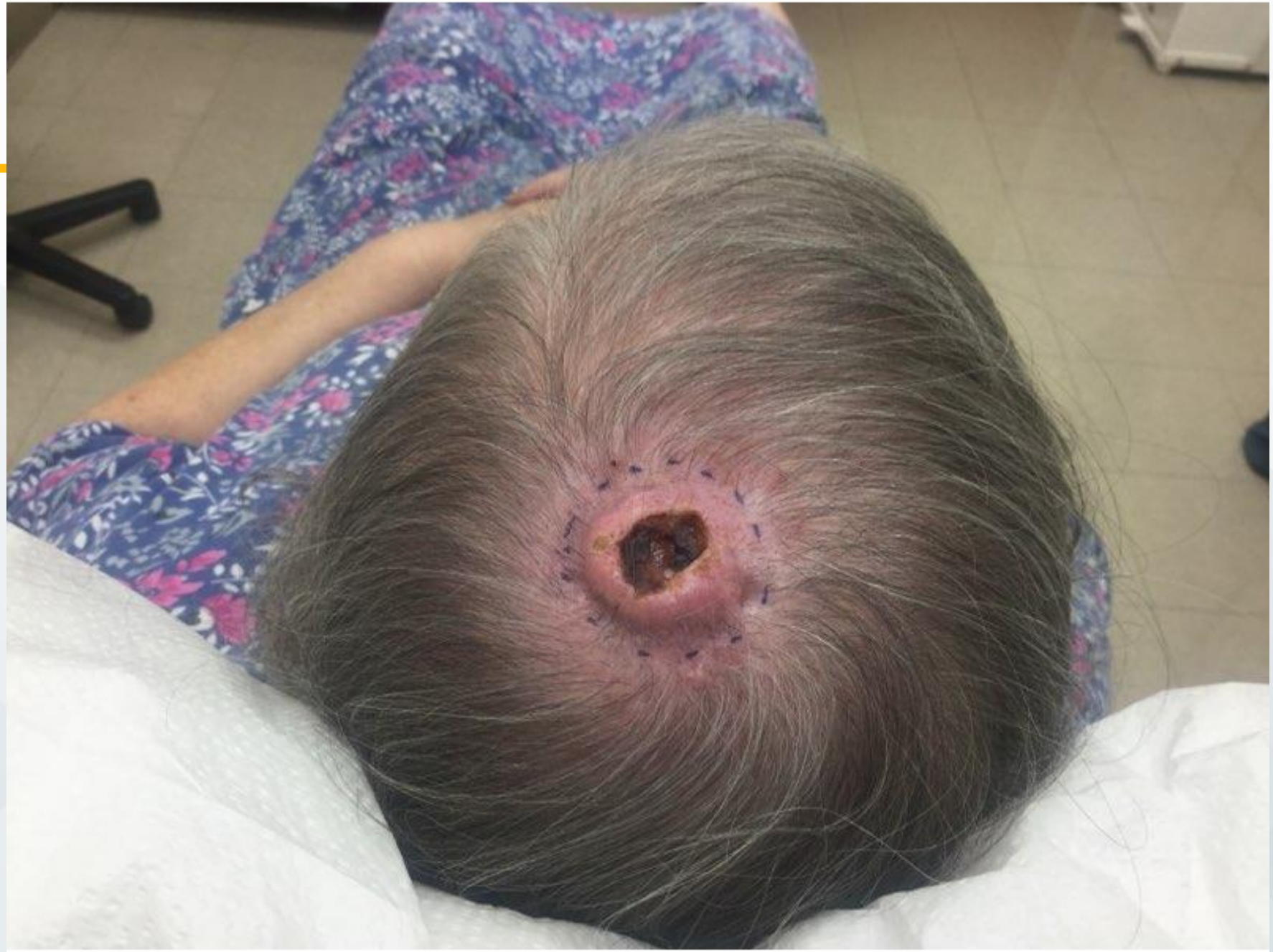


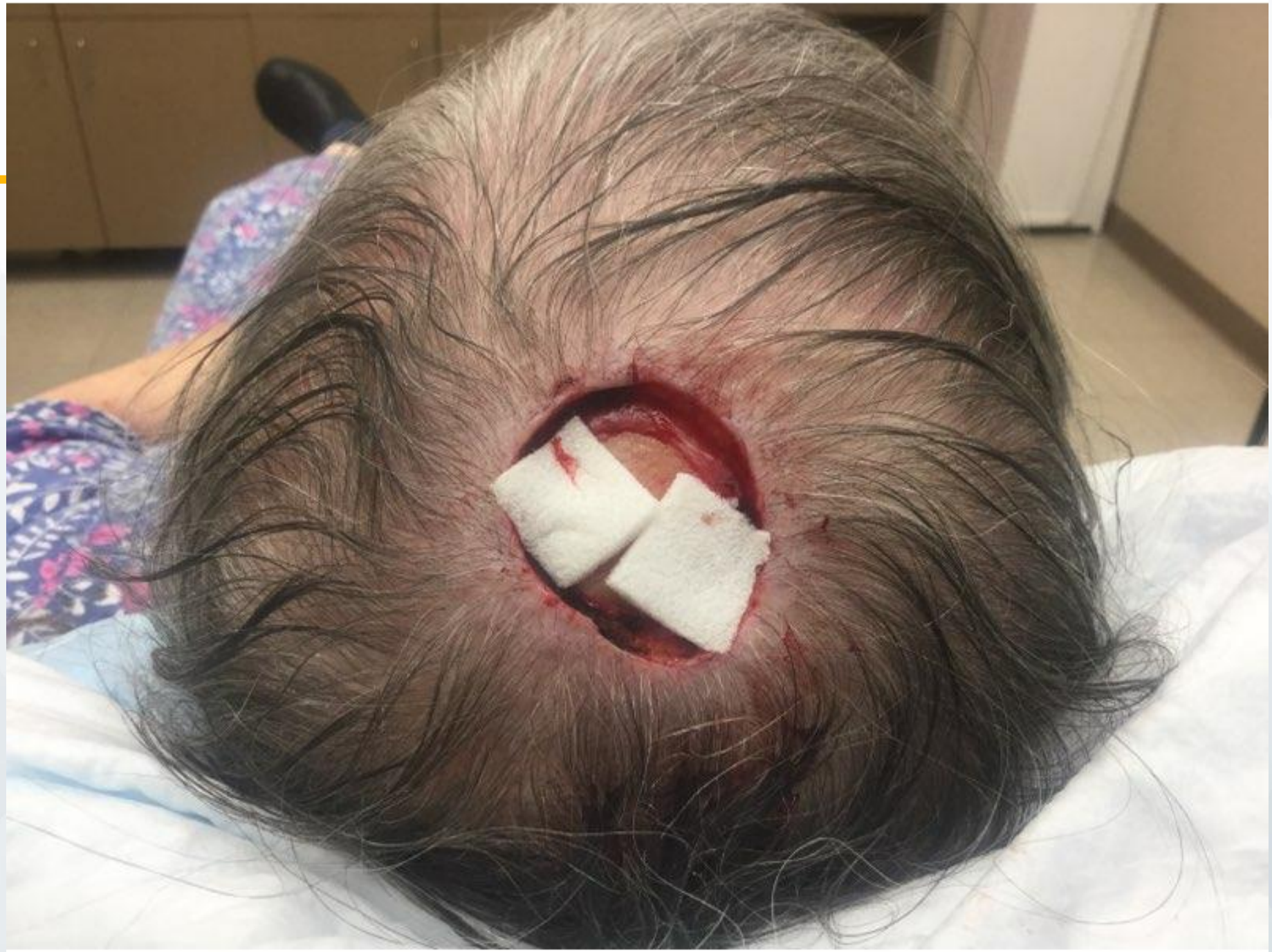


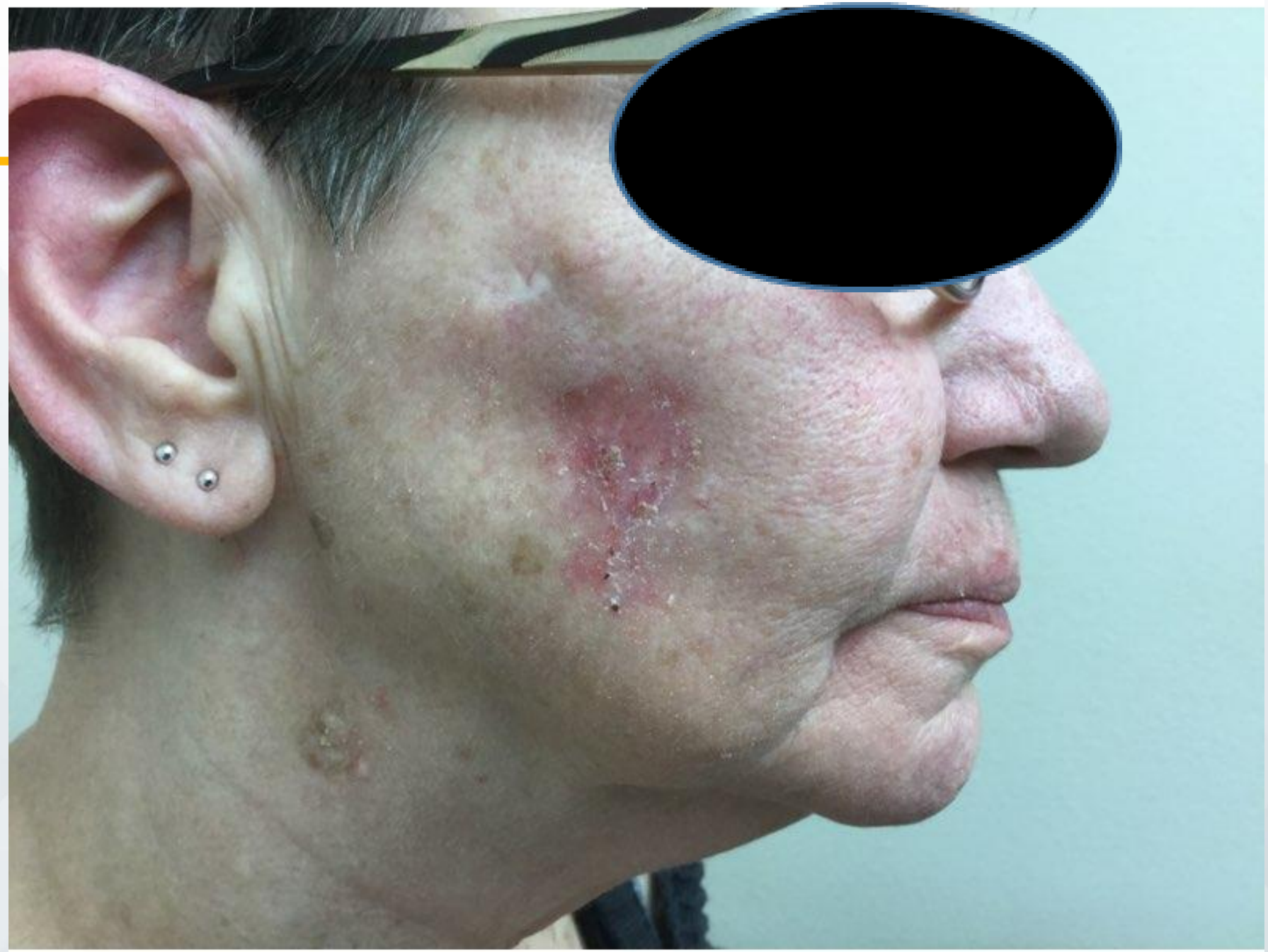
Take home message

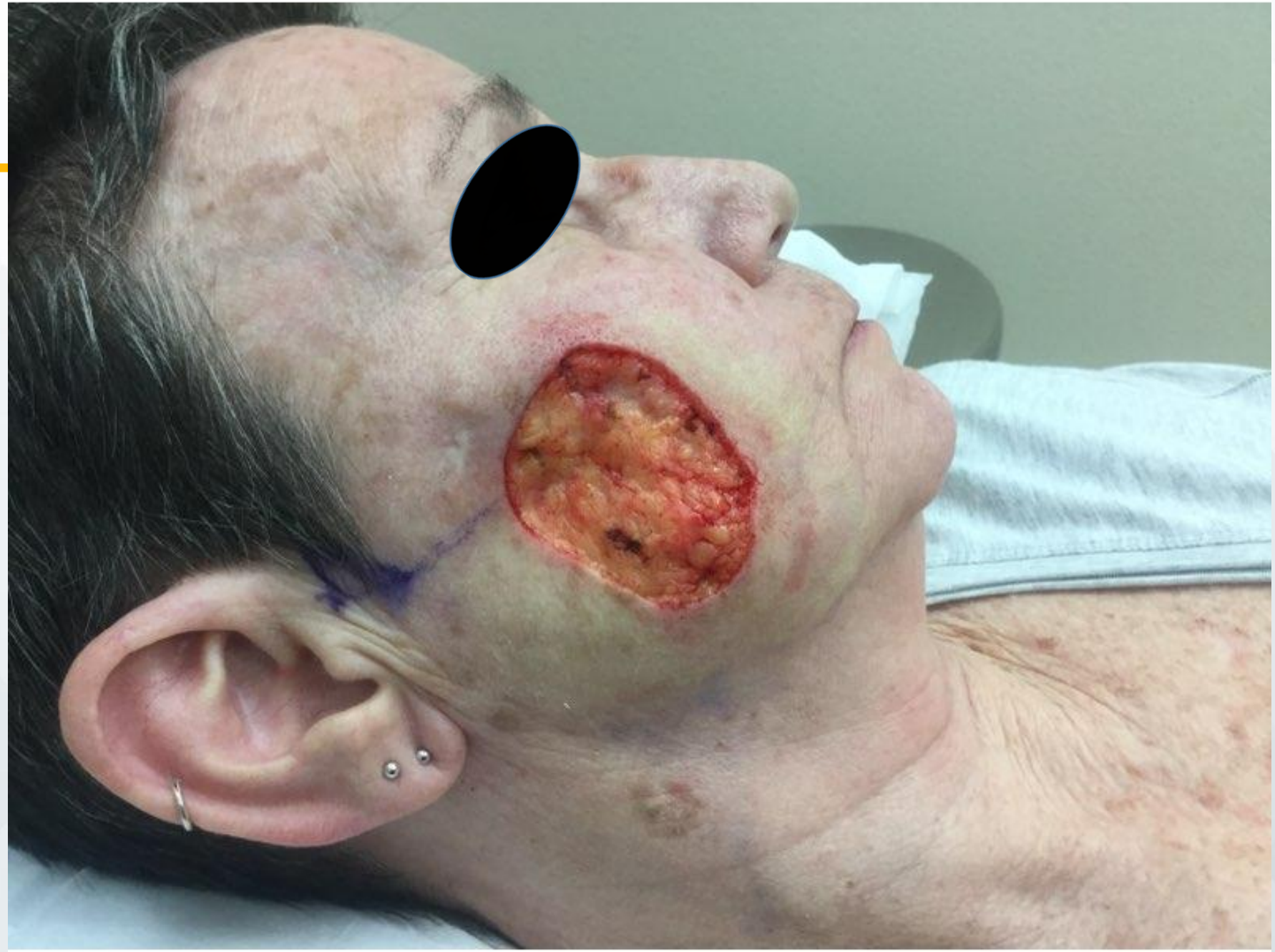
- Skin biopsies are very easy to perform
- Not that easy to interpret
- Clinico-pathological correlation is paramount
- Please provide good description to the pathologist

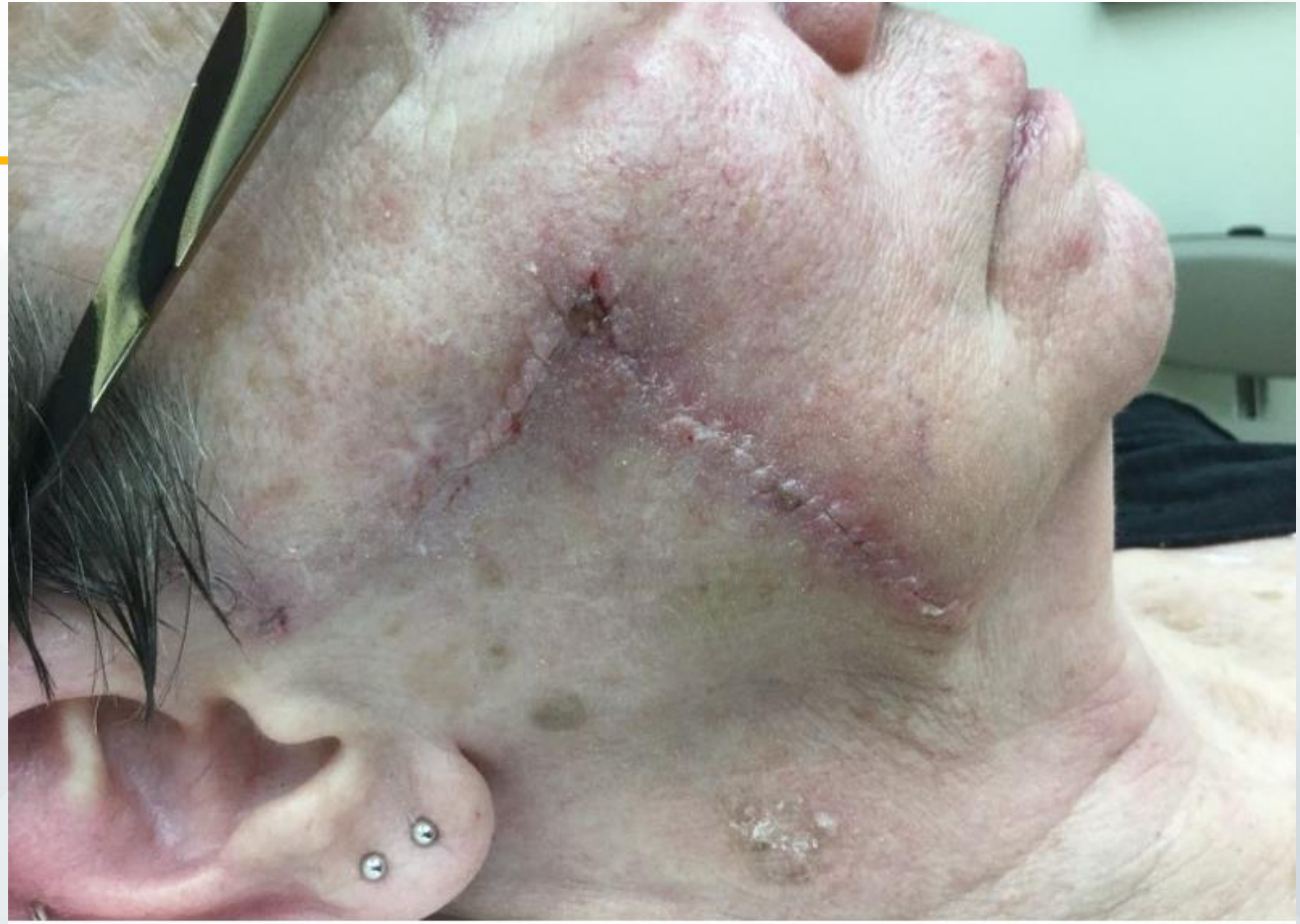
Surgical cases

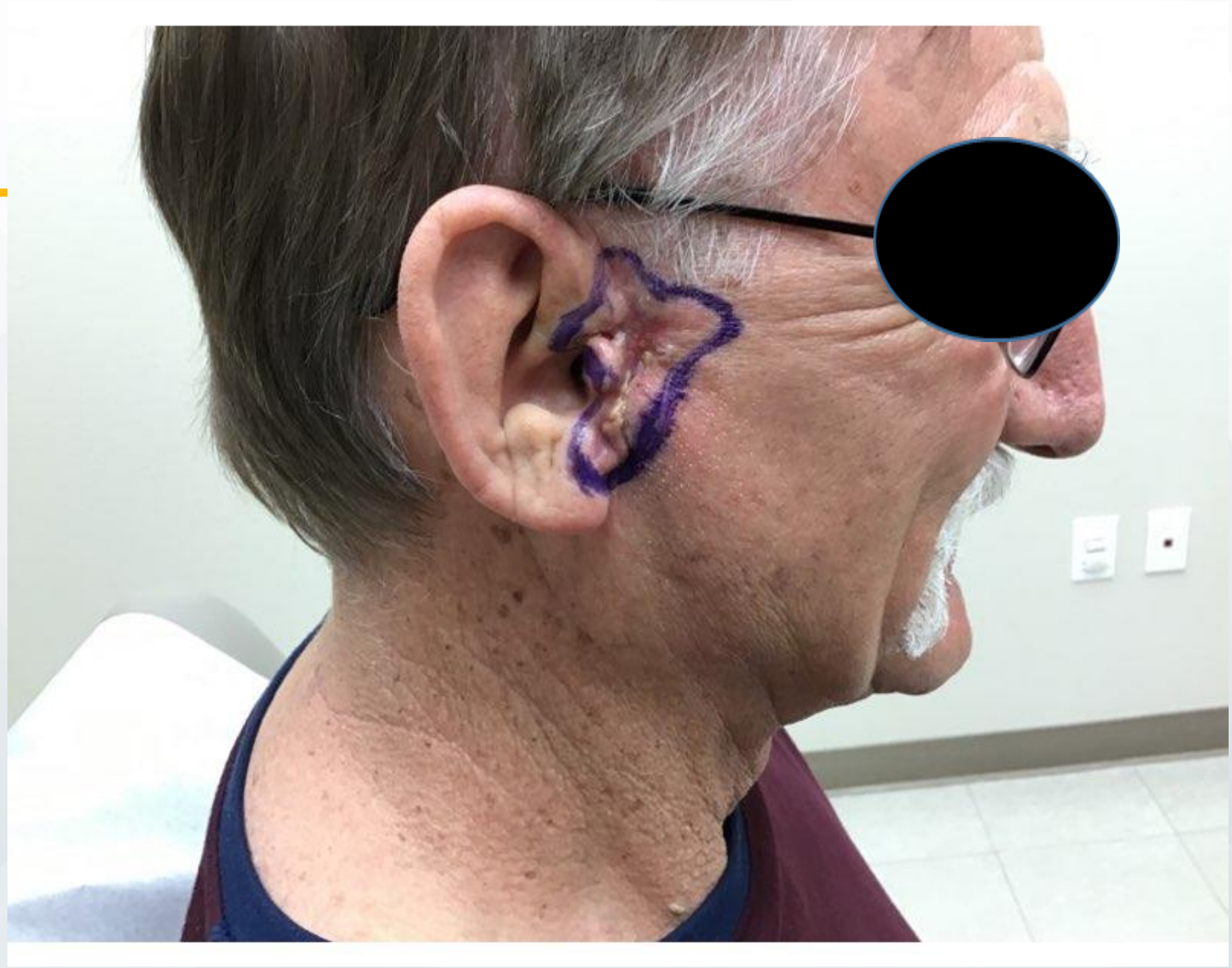


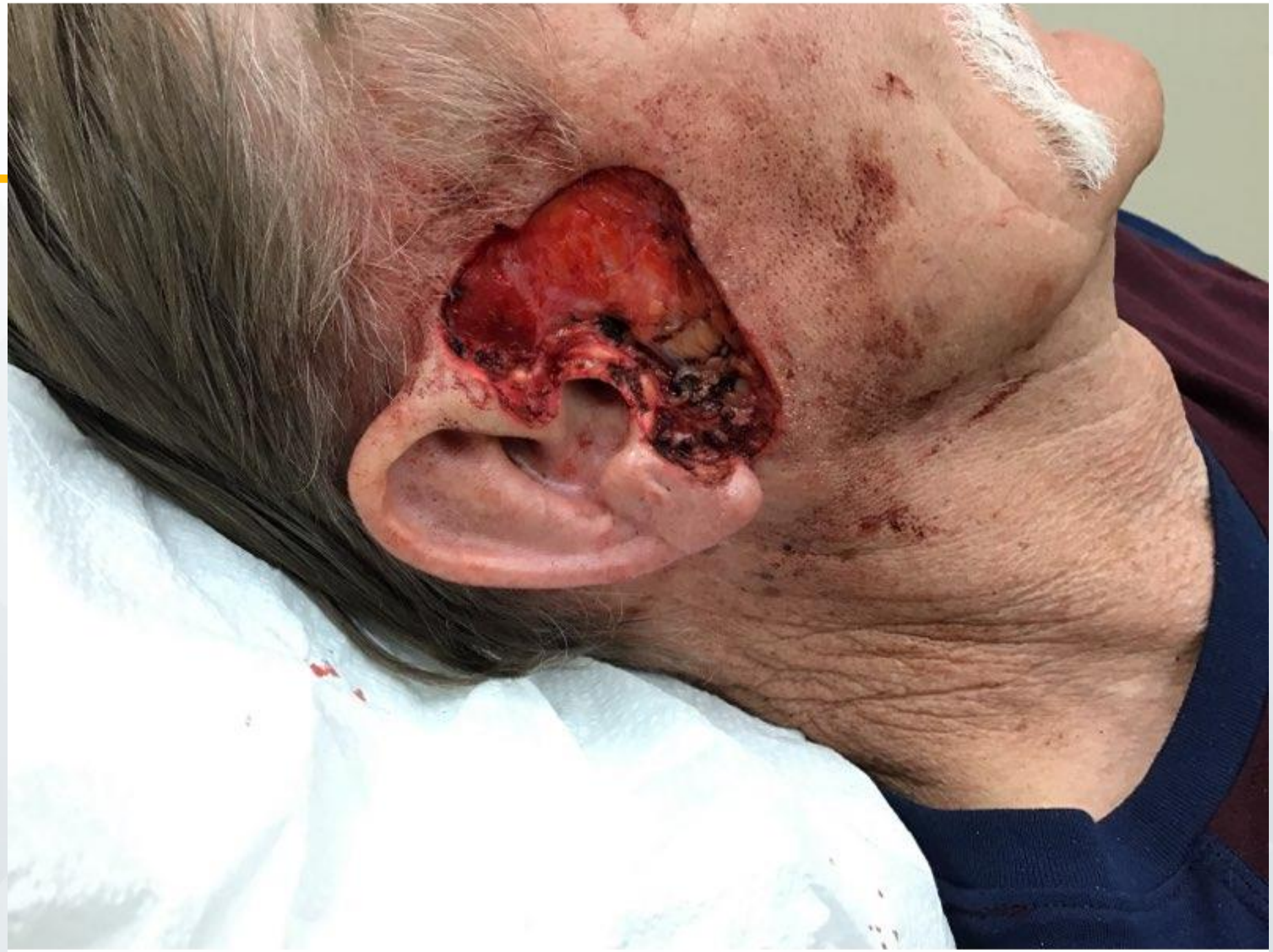


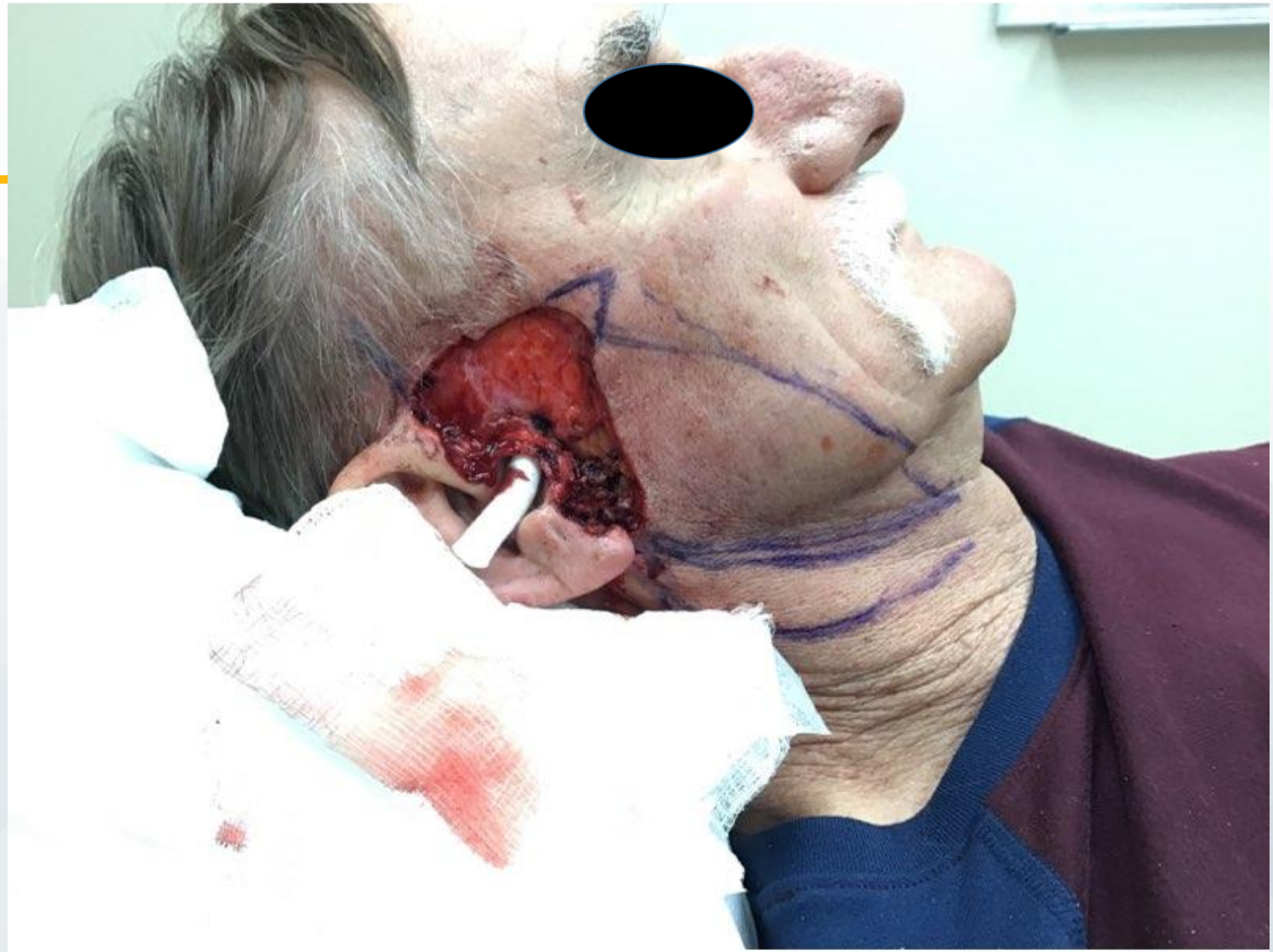


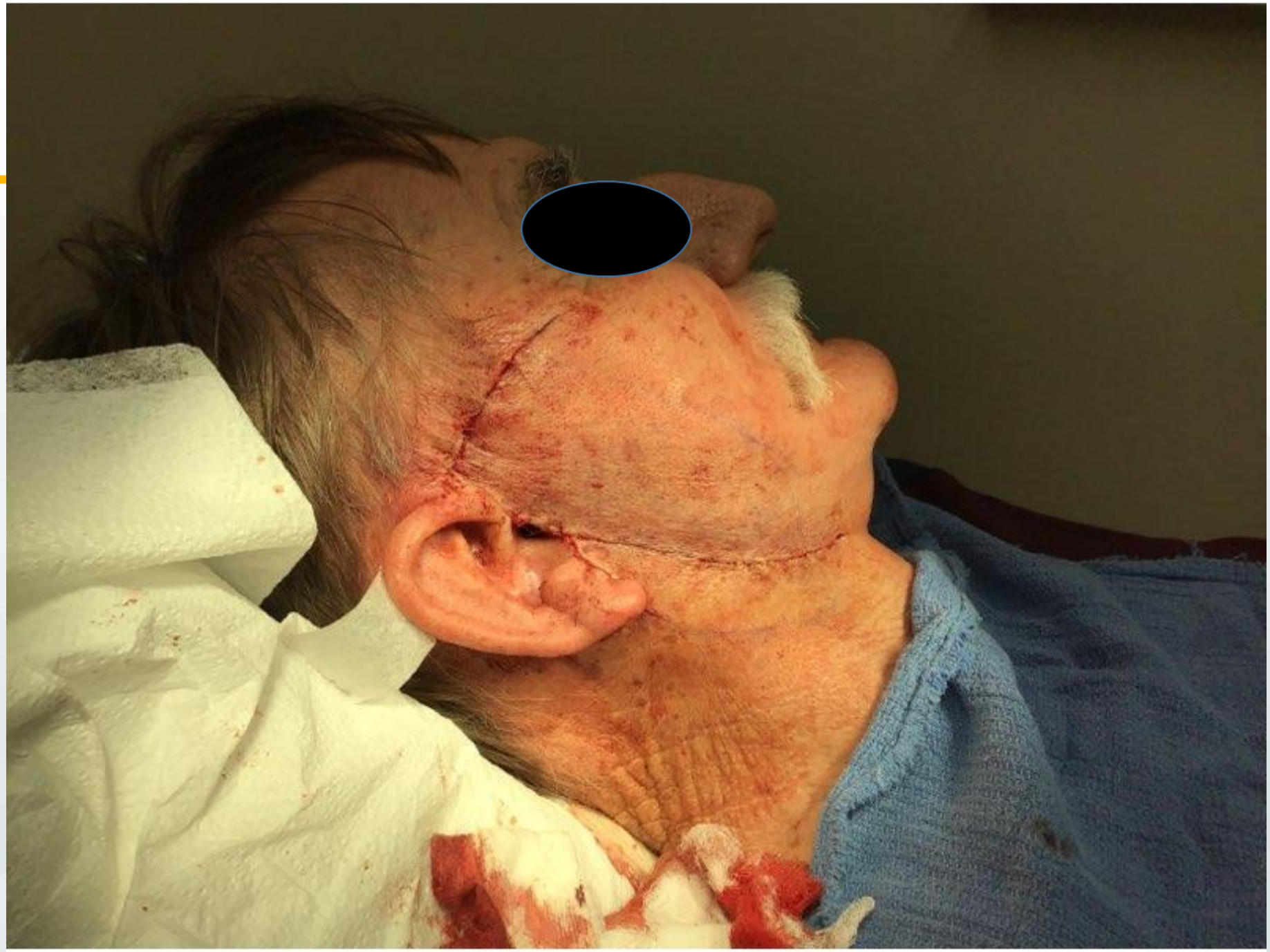


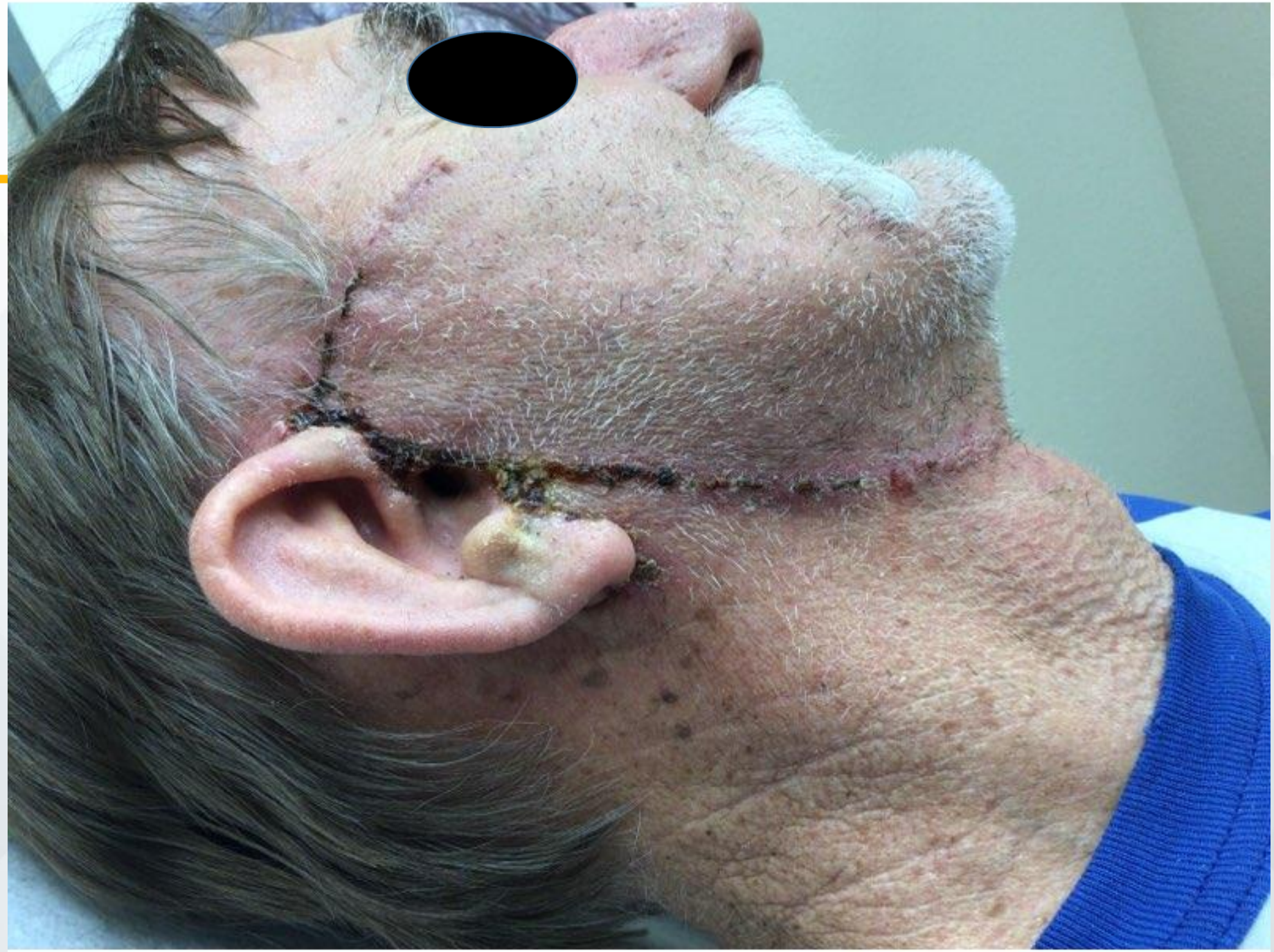


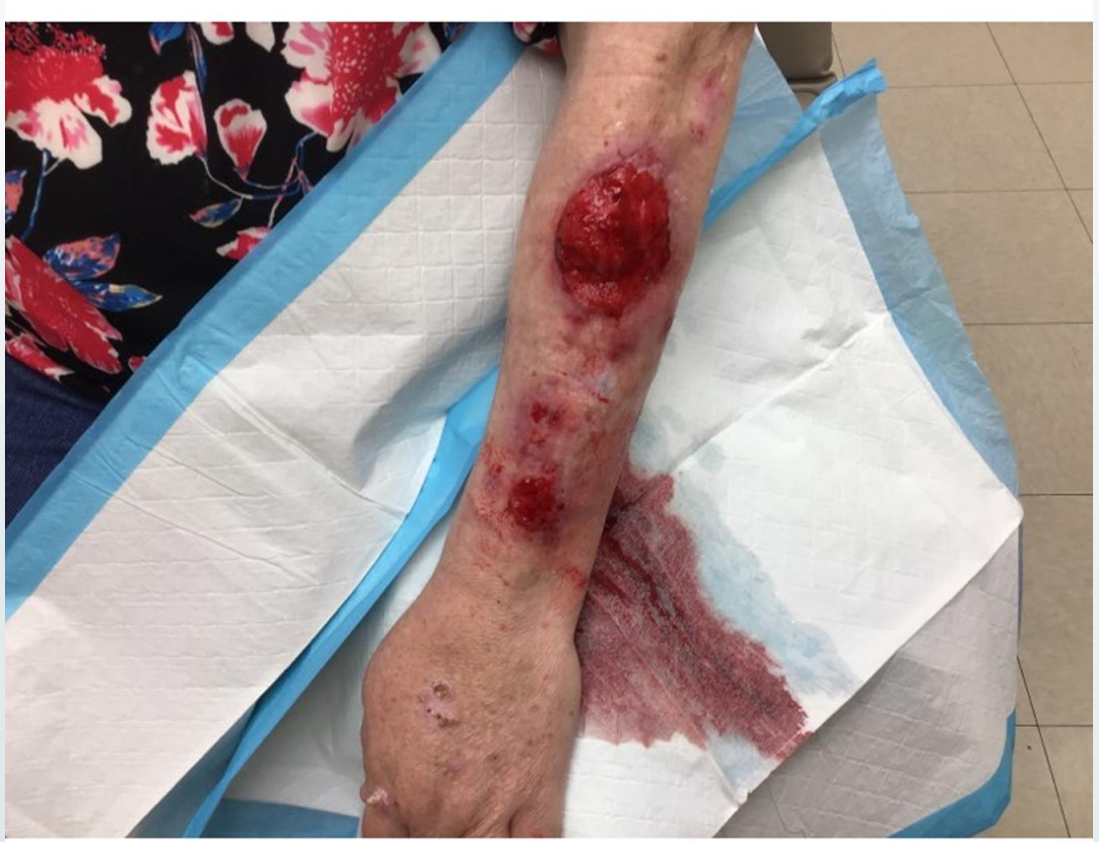












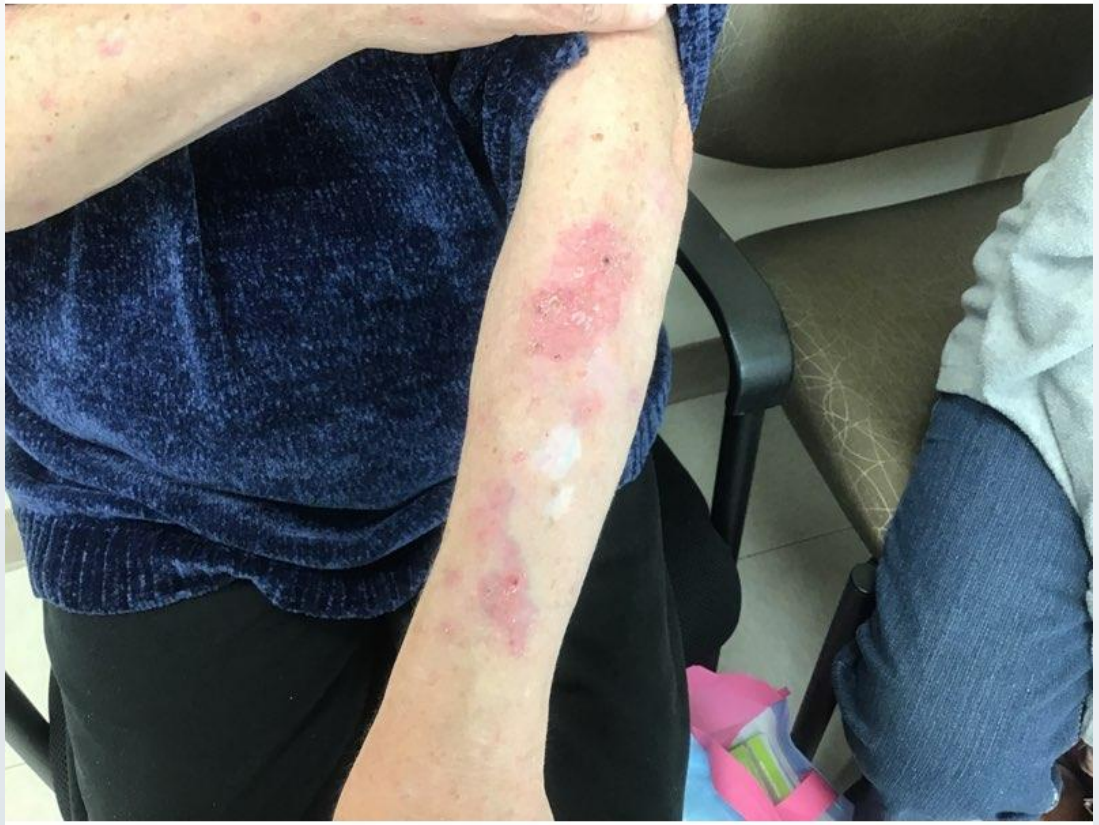
Specimen: 1. Left forearm 2. Right dorsal hand
Clinical Data: 1-2. SCC

Dermatopathology Report

Diagnosis:

1. SKIN, LEFT FOREARM, BIOPSY:
- BASAL CELL CARCINOMA, INFILTRATIVE/NODULAR TYPE, (THE LESION EXTENDS TO PERIPHERAL AND DEEP MARGINS).

2. SKIN, RIGHT DORSAL HAND, BIOPSY:
- BASAL CELL CARCINOMA, NODULAR TYPE, ULCERATED, (THE LESION EXTENDS TO PERIPHERAL AND DEEP MARGINS).



CLINICAL DATA:

Procedure:	Biopsy by shave method H and E.
Morphology:	Papule.
DDX:	Neoplasm of uncertain behavior.
Notes:	Rule out BCC.

4/19/23

FINAL DIAGNOSIS (Microscopic):

Left proximal dorsal forearm:

Dermal scar and basal cell carcinoma, superficial and infiltrative type, extending to the base.

– Mohs

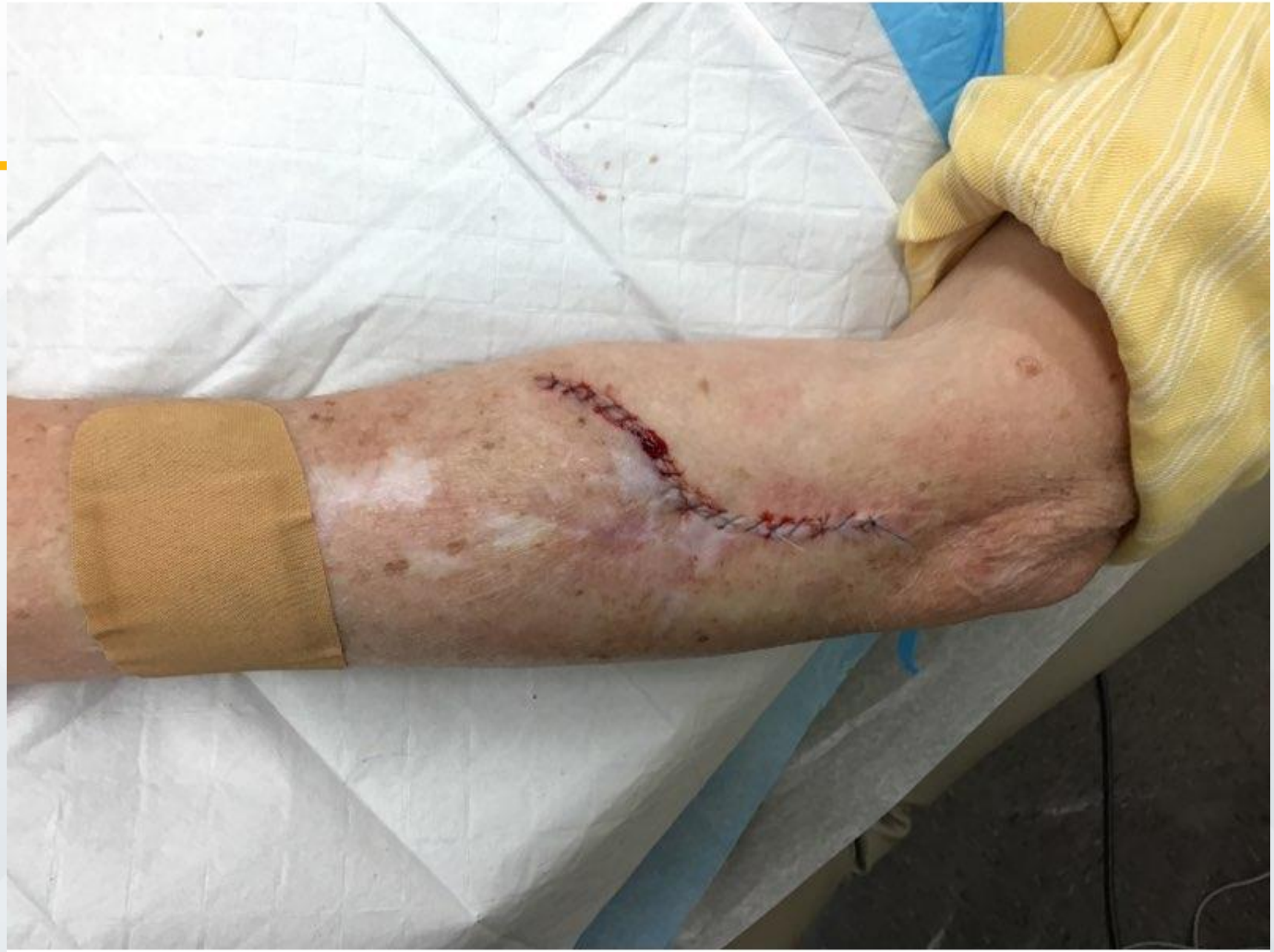
GROSS:

The container is labeled with the patient's name (initials GH) and "left proximal dorsal forearm". The container is filled with formalin and the specimen consists of a 1.0 x 0.9 x 0.1 cm shave of white skin, inked black, serially sectioned and submitted entirely in 1A.

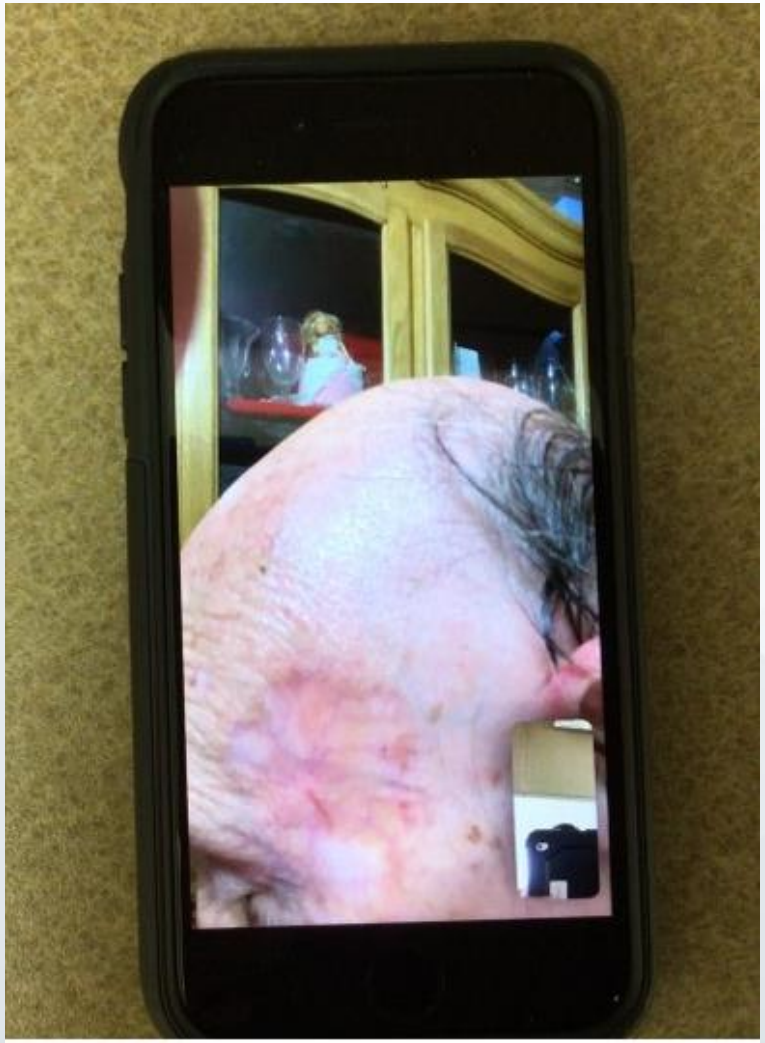
(Specimen grossing/histology performed at Sierra Pathology Lab, Inc., 305 Park Creek Dr., Clovis CA 93611, Daniel A. Cortez, M.D., Medical Director)

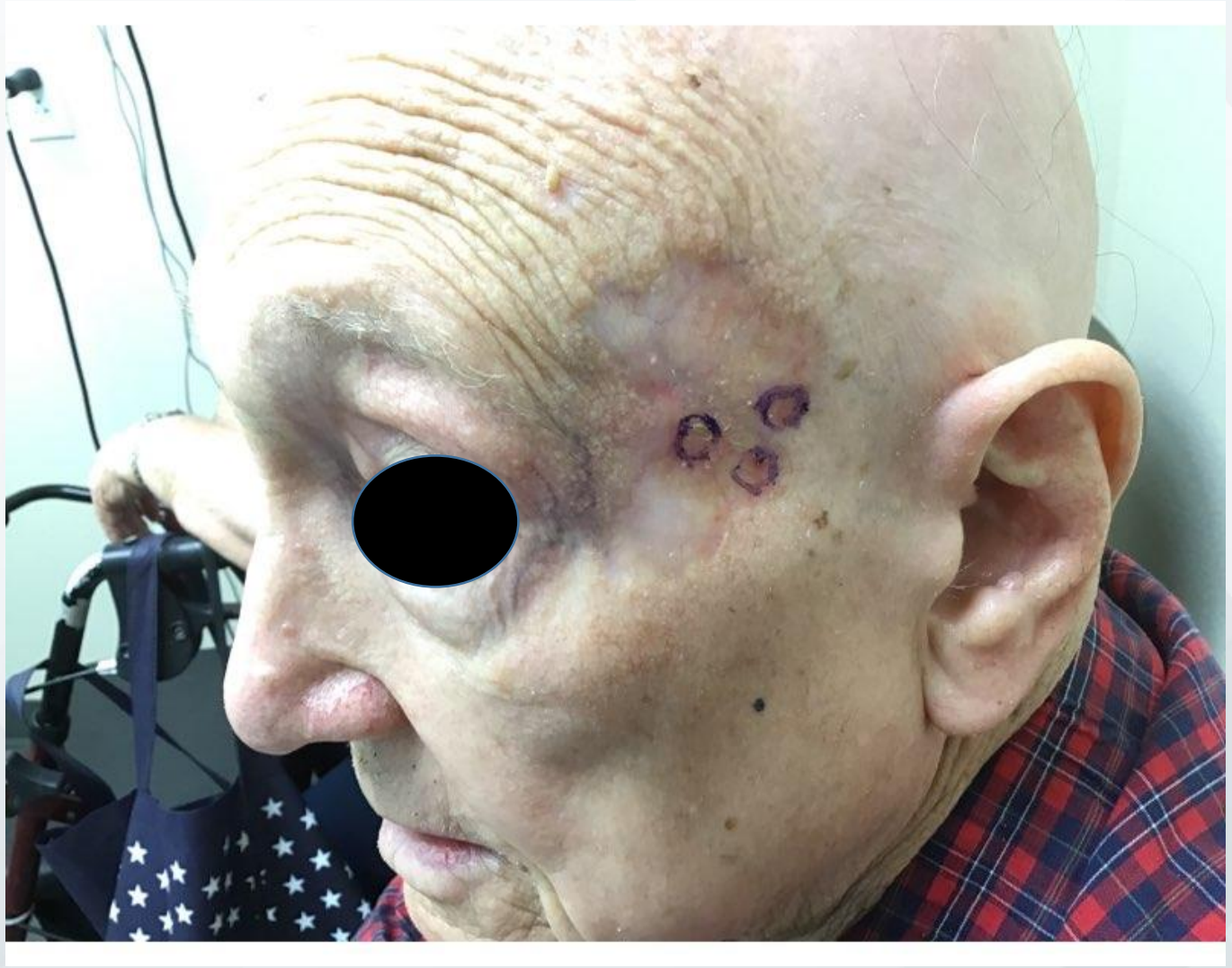
Final Diagnosis performed by Adnan Mubasher M.D.. Electronically Signed 4/19/2023 at 2:42 PM. Contact number (559) 326-2804
Pathologist
(Sierra Pathology Laboratory, 305 Park Creek Dr., Clovis CA 93611, Daniel A. Cortez M.D., Medical Director)

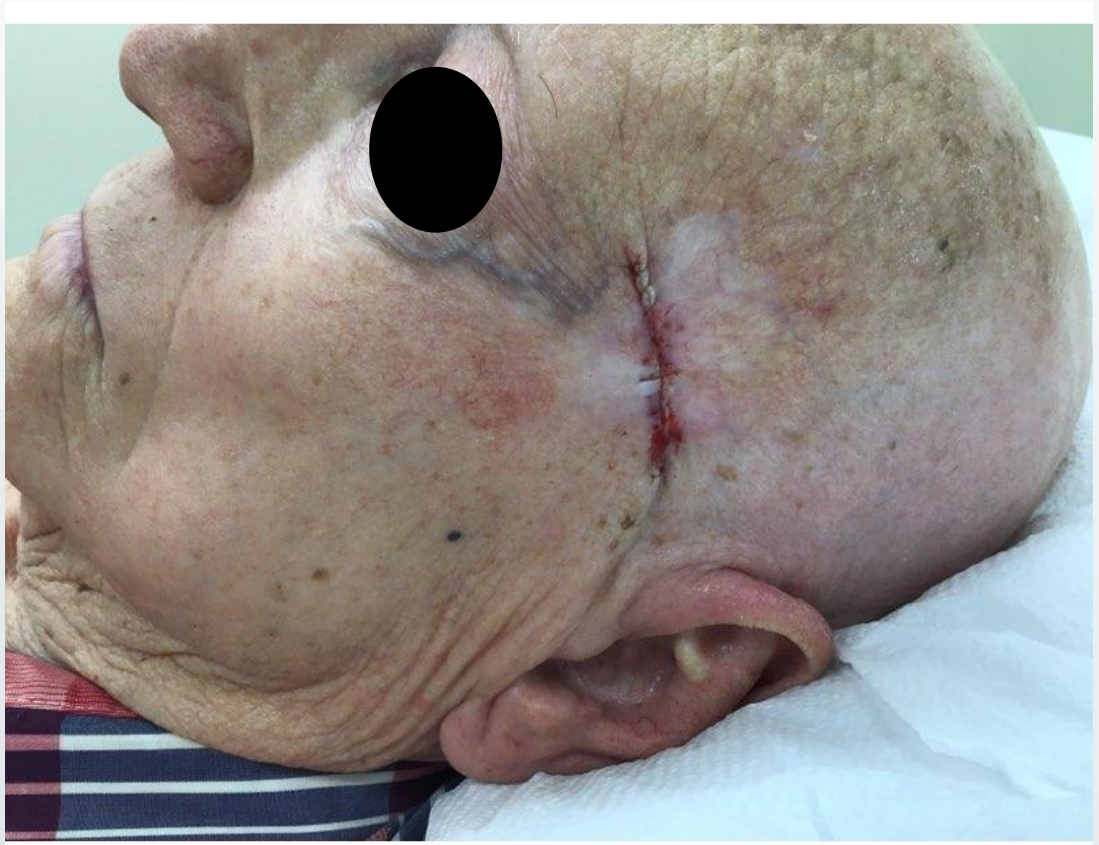
ICD Codes: C44.619

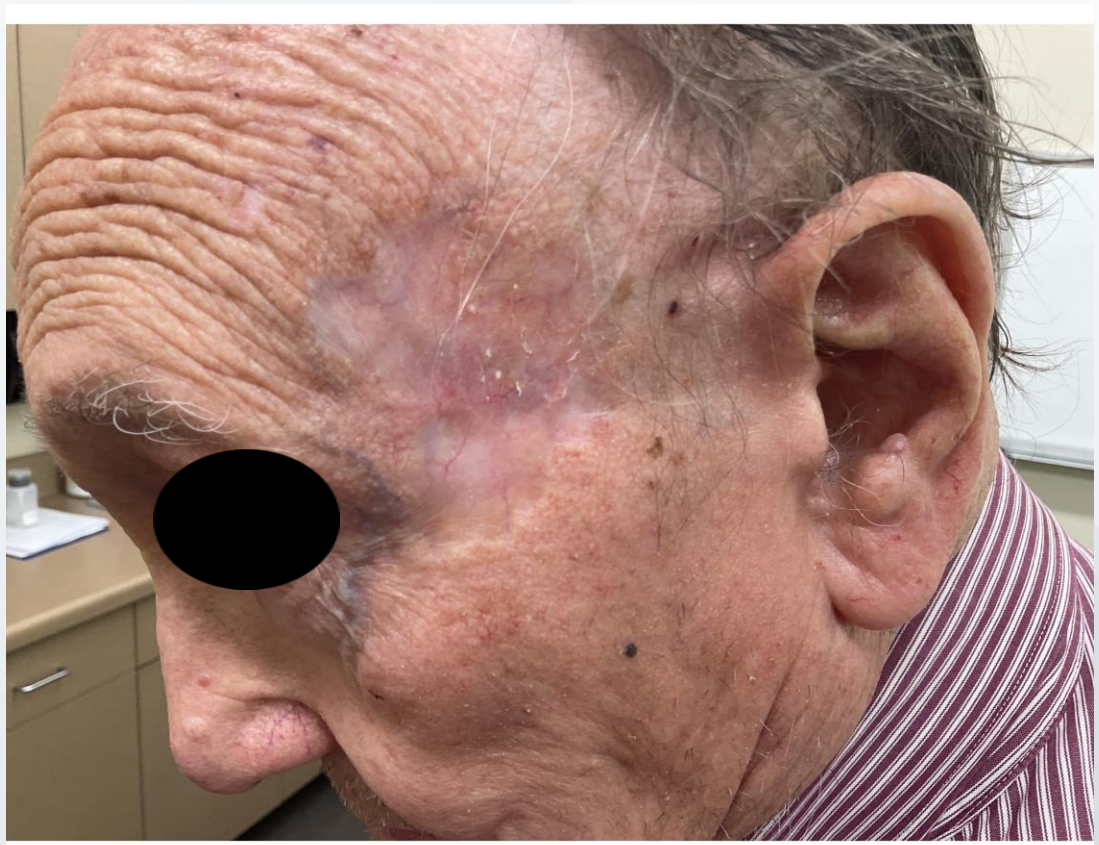


CLINICAL DATA:	R/O BCC, SCC, OTHERS
DIAGNOSIS:	INFILTRATIVE BASAL CELL CARCINOMA WITH KERATINIZATION, EXTENDING TO THE TISSUE EDGES (C44.319) (LEFT TEMPLE)
SPECIMEN SITE:	LEFT TEMPLE

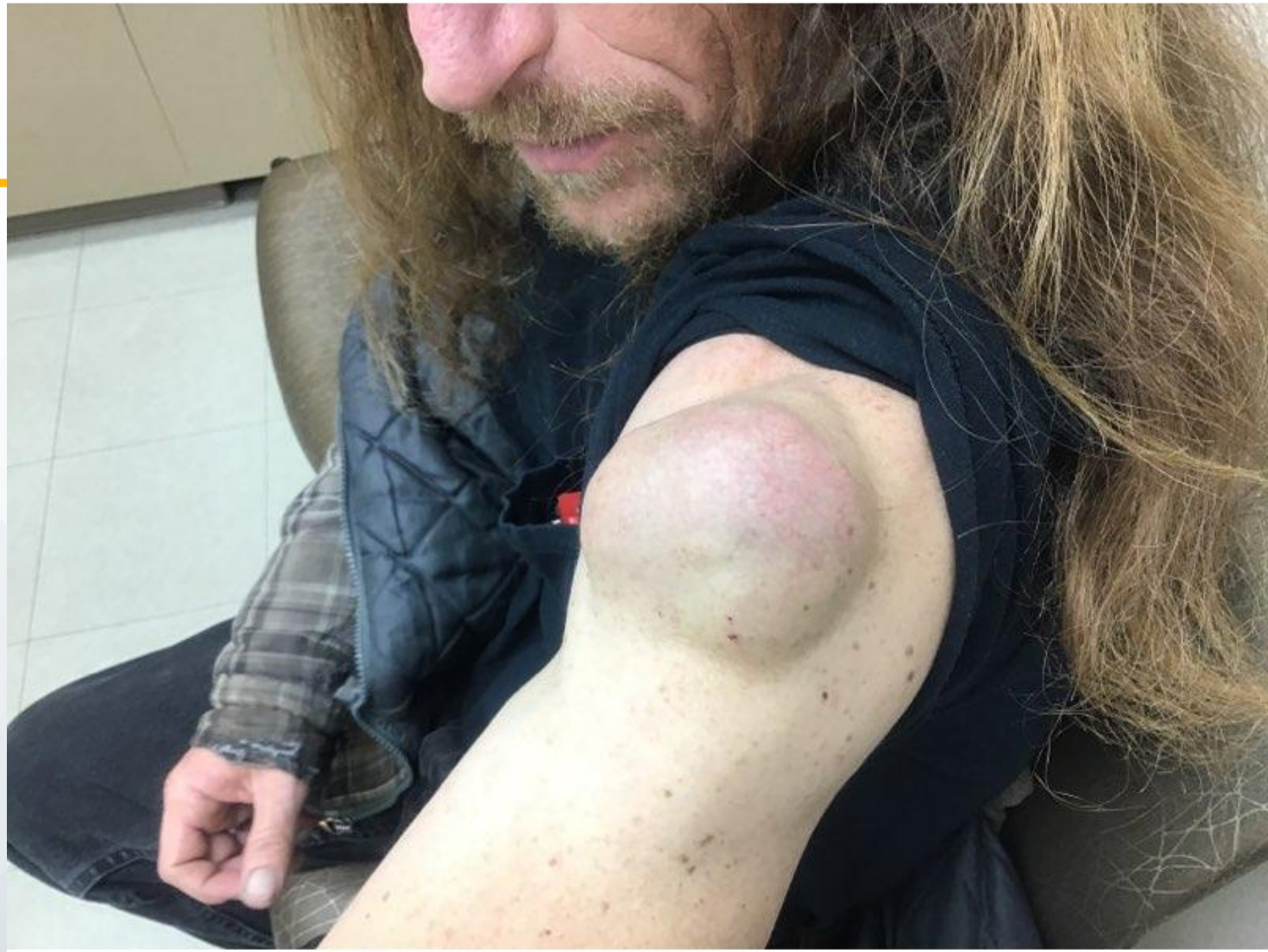


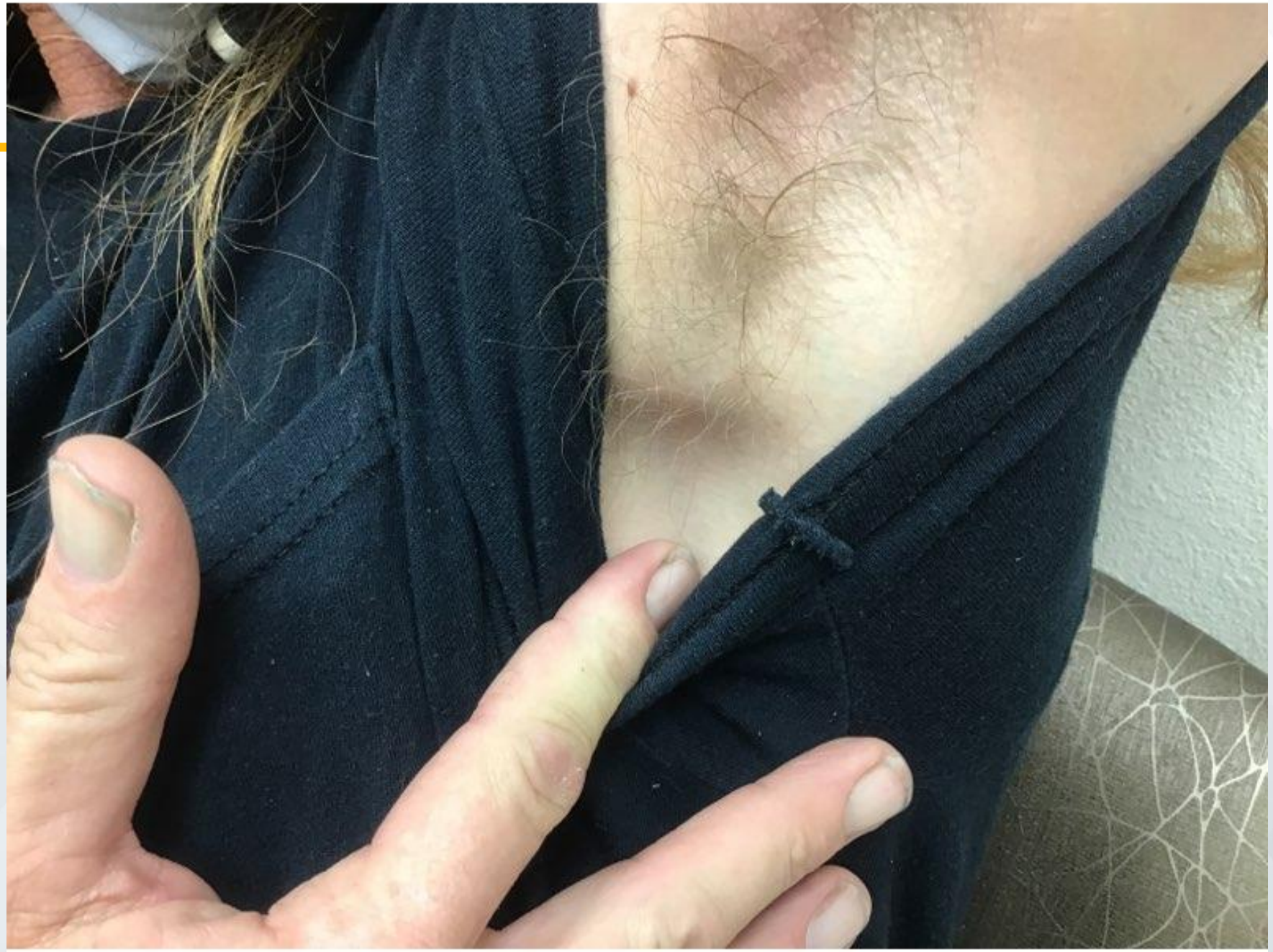


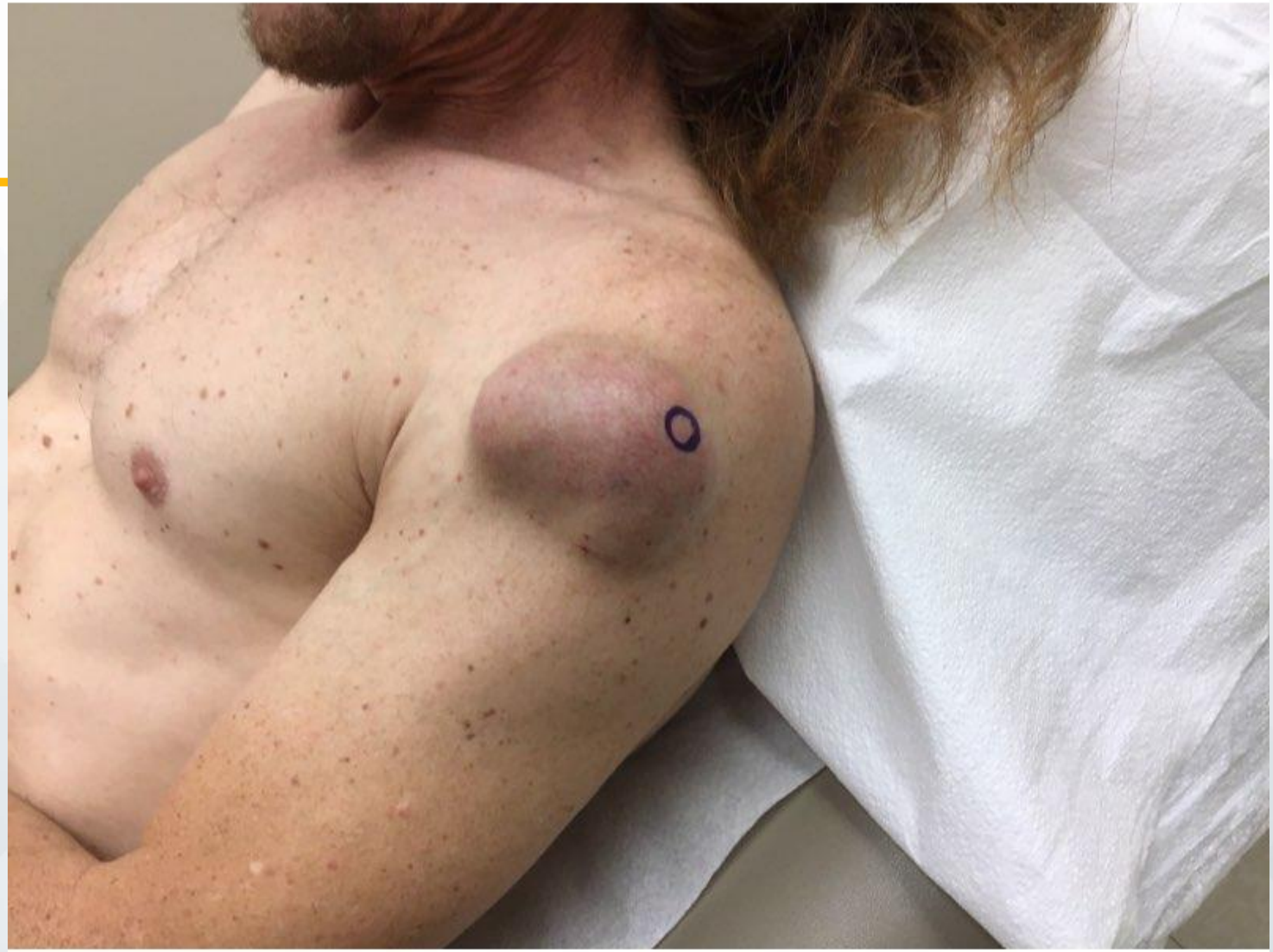




45 yo M with a firm mass on the left shoulder for years







DERMATOPATHOLOGY CONSULTATION

SPECIMEN SUBMITTED:
Left anterior shoulder

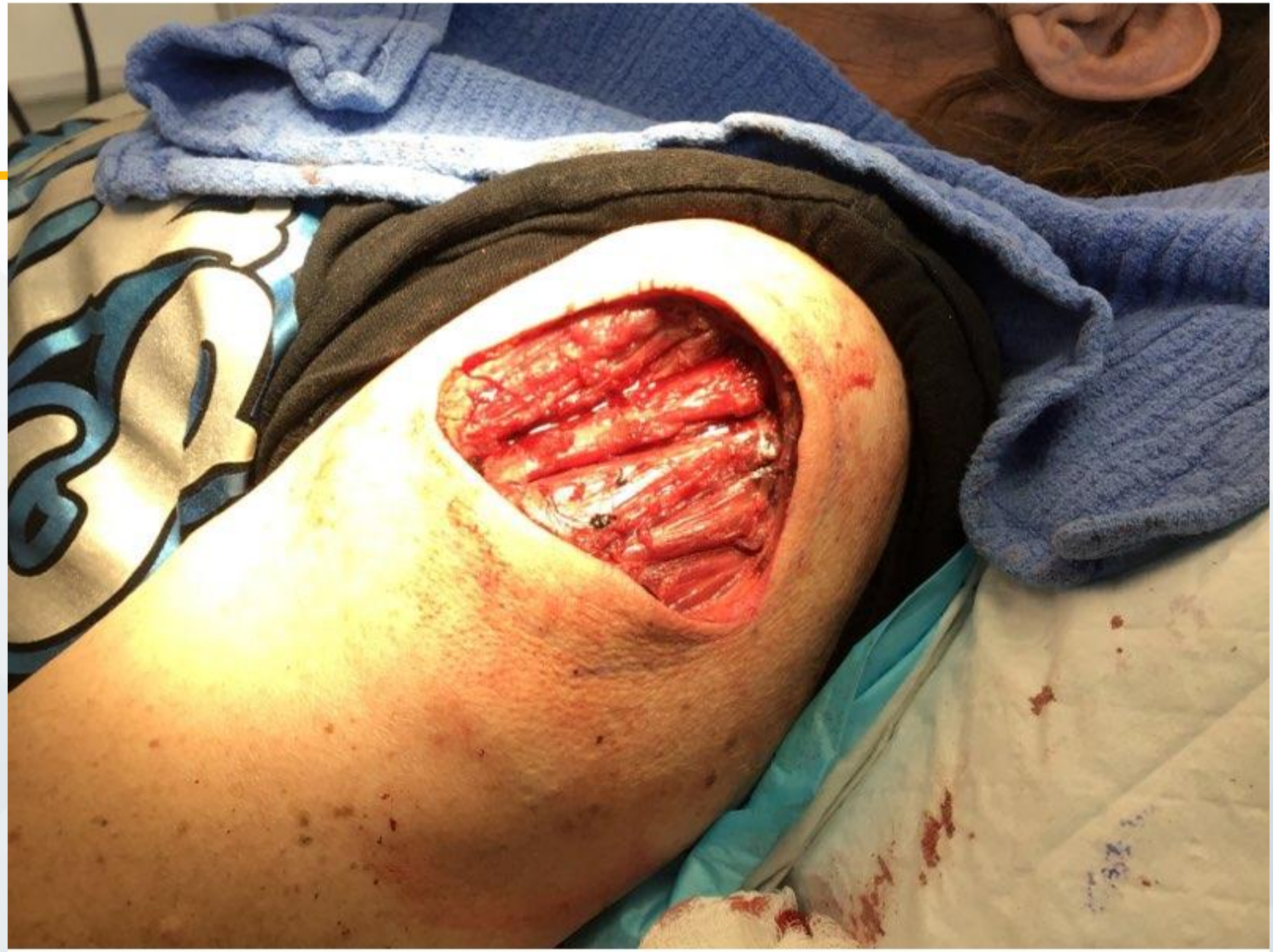
CLINICAL DATA:
Procedure: Excision.
Morphology: Suspicious irregular multi-colored papule.
DDX: Metastatic melanoma.
Notes: Please check margins. Large piece, see previous path report, see pictures, rule out metastatic melanoma.

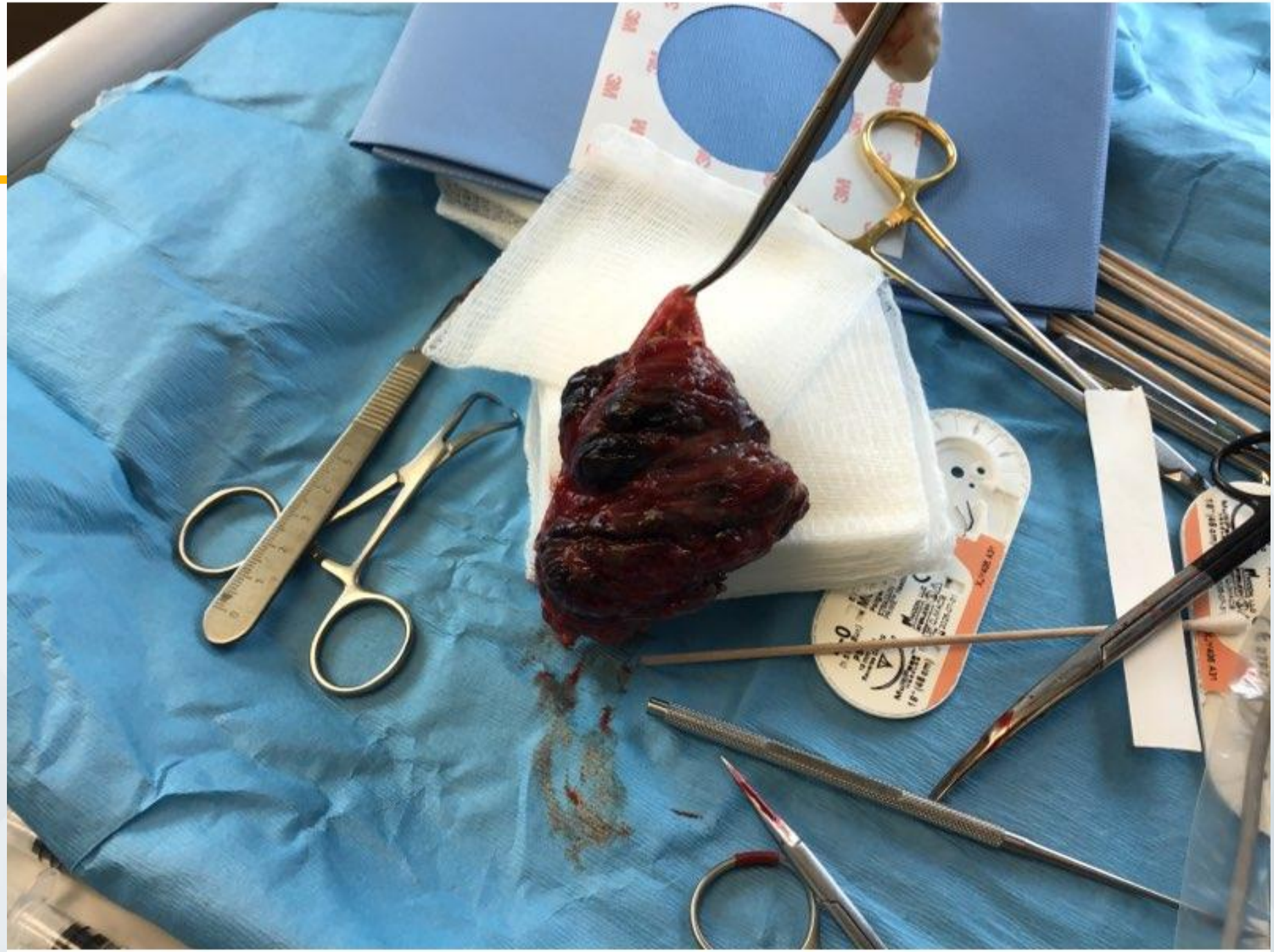
FINAL DIAGNOSIS (Microscopic):

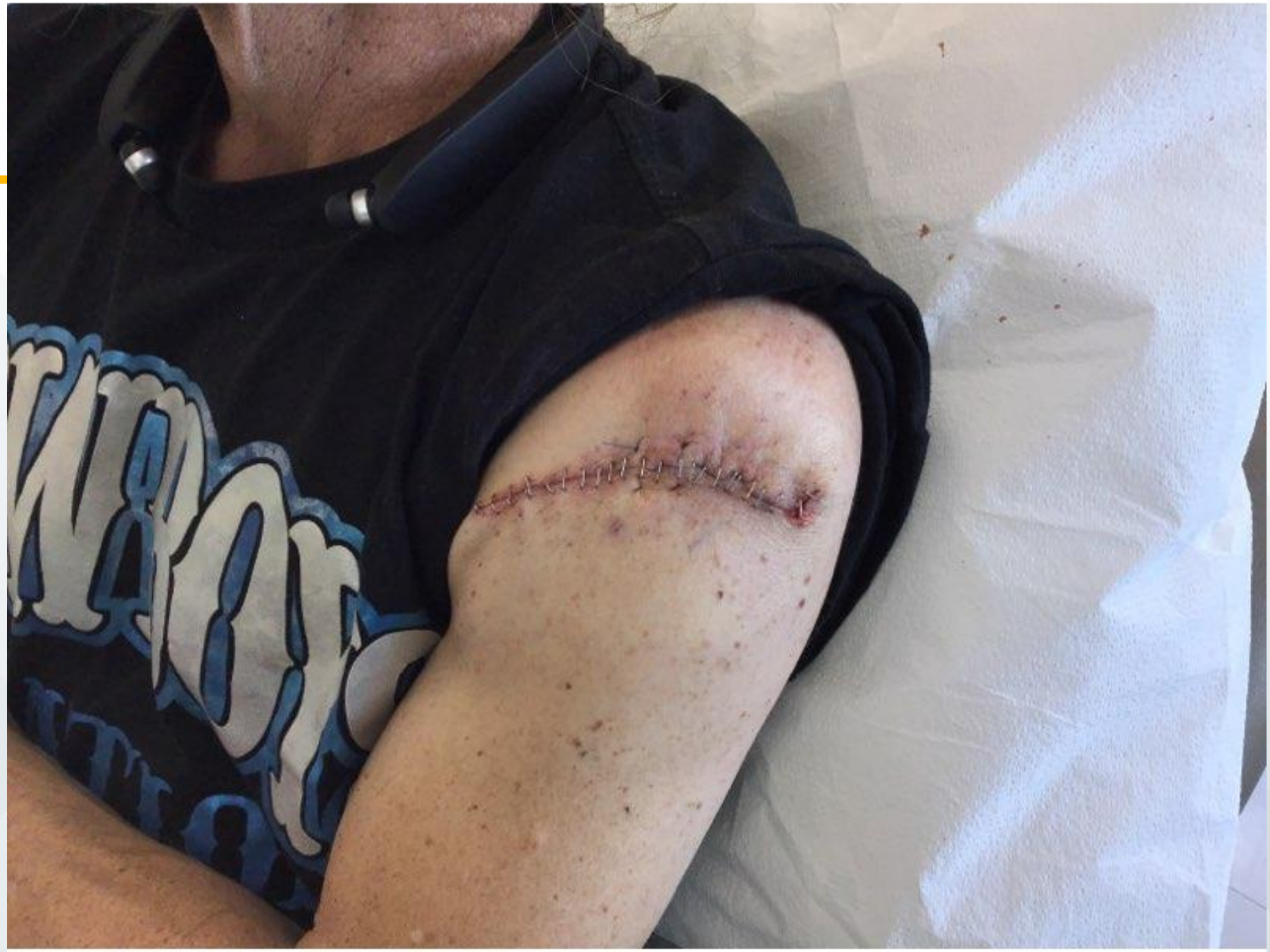
Left anterior shoulder:

a. **Metastatic melanoma, involving the dermis, subcutis, and skeletal muscle.**
b. **Positive deep margin.**

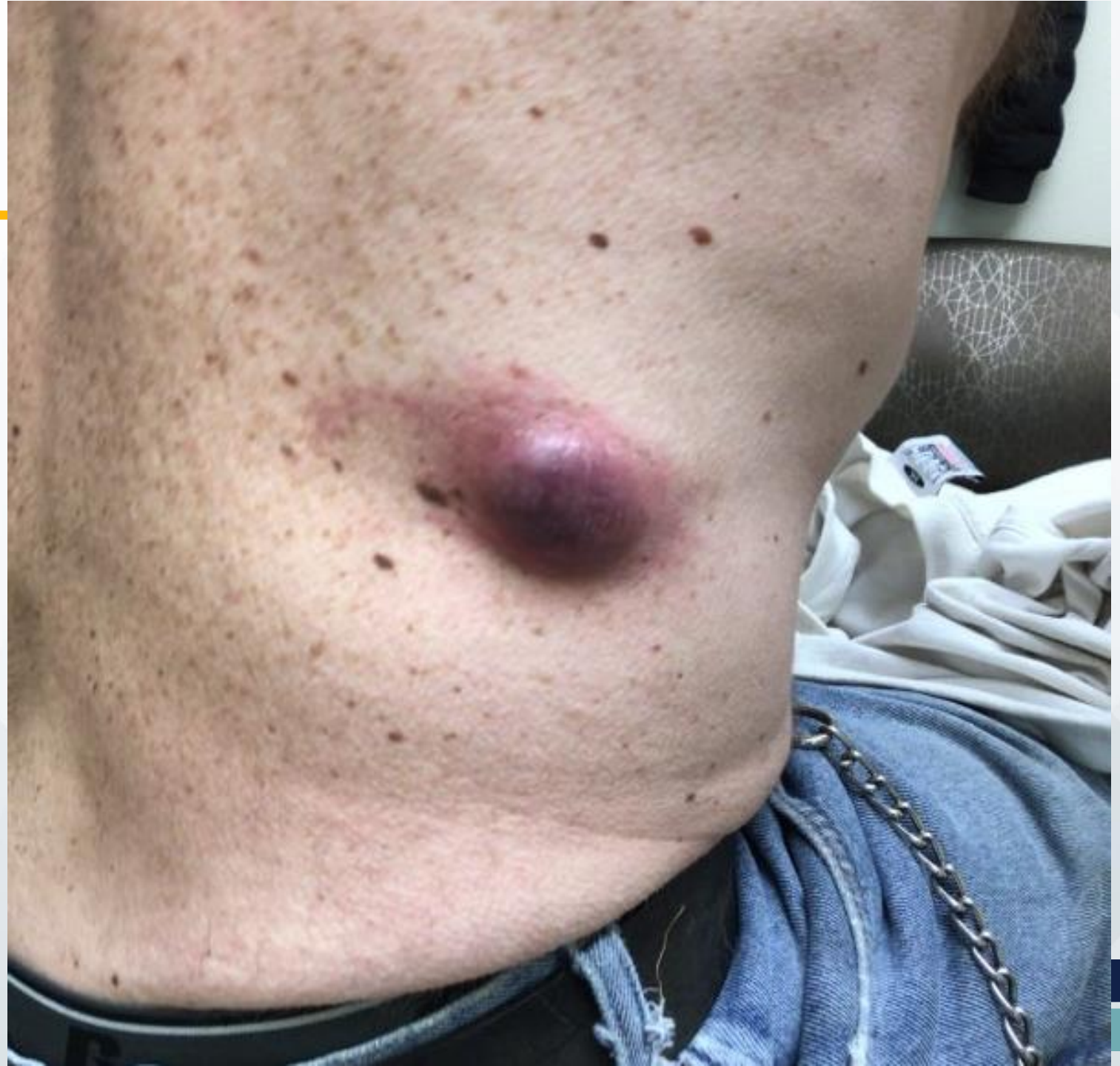
3/29/21
- Refer to Hem/Onc.

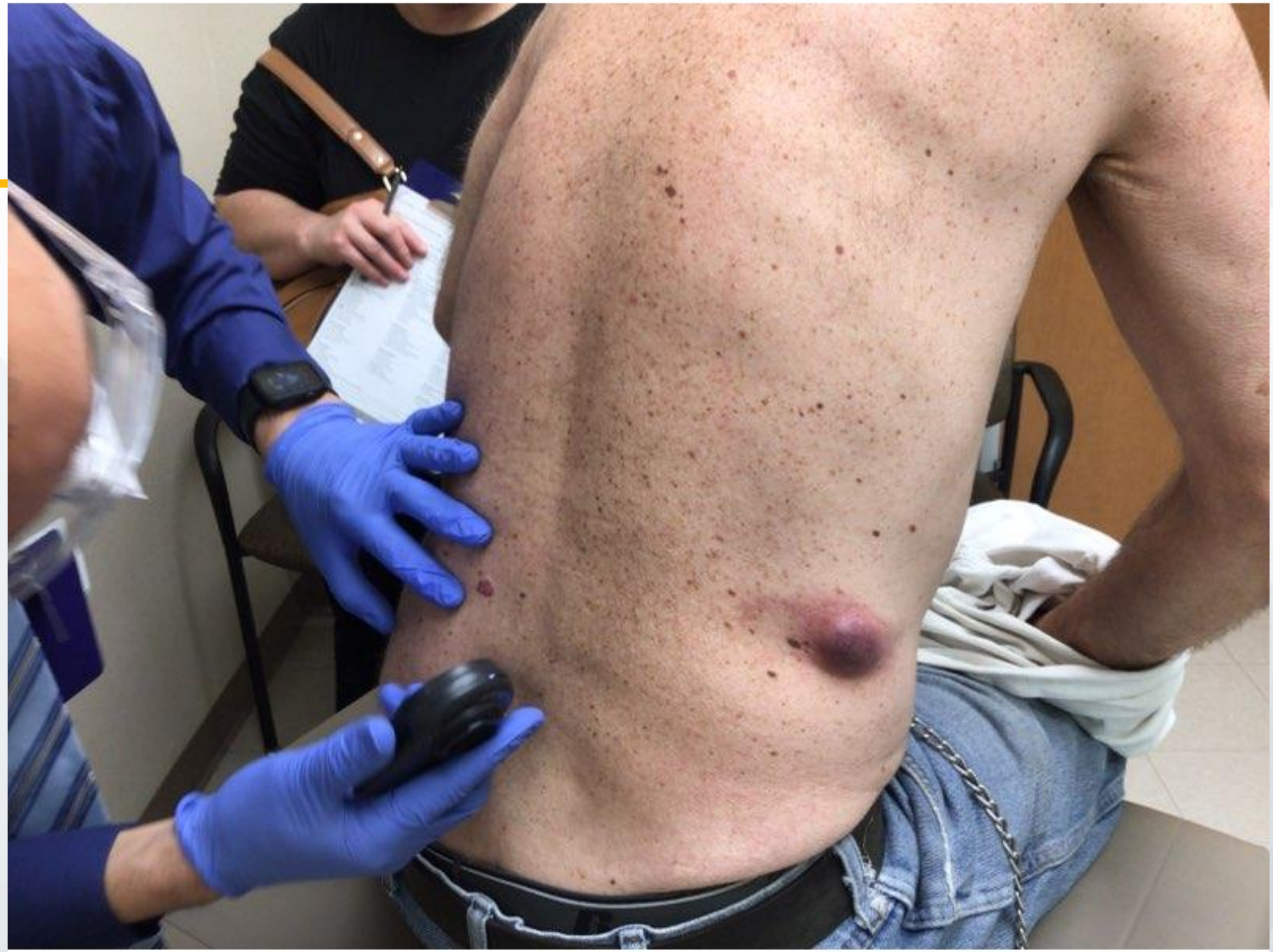


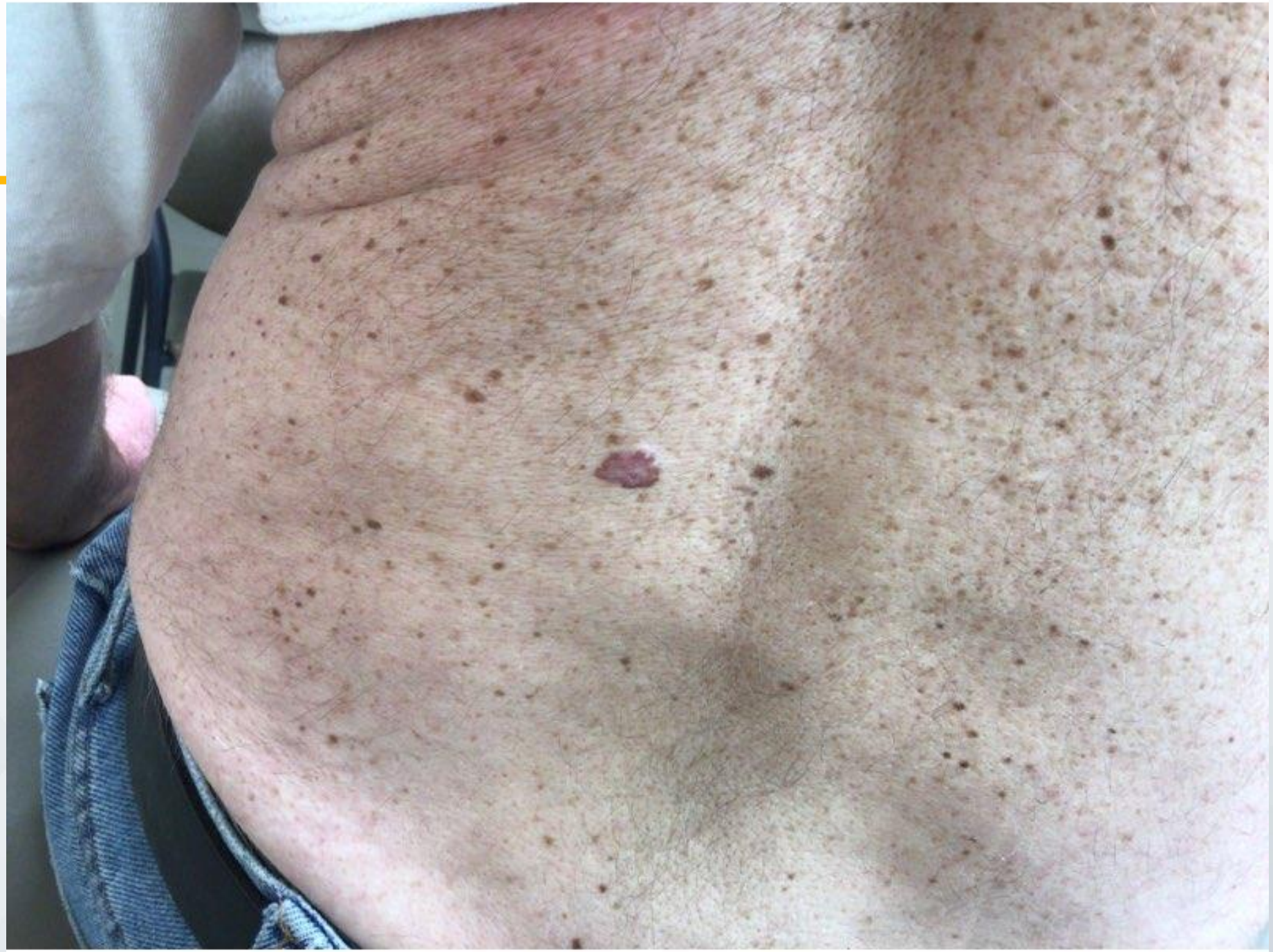


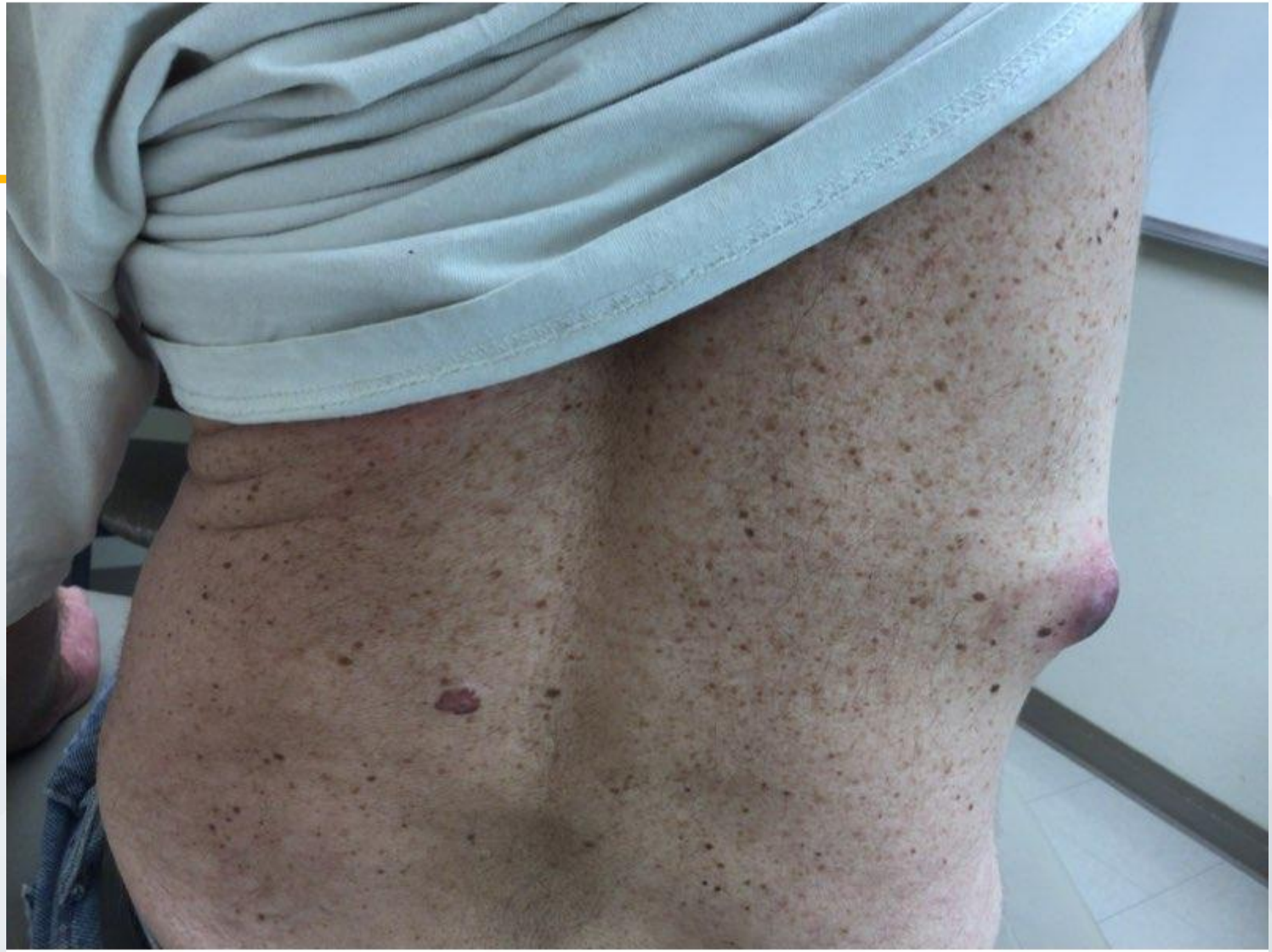


59 yo M with inflamed cyst to the R flank for 2 months. ATB x2 w/o significant improvement

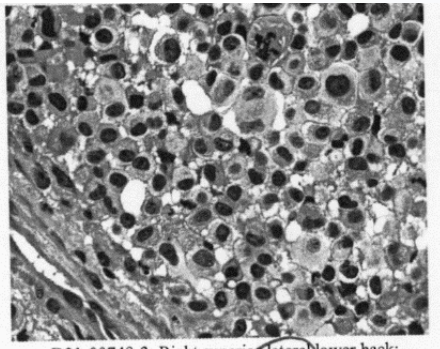








DERMATOPATHOLOGY CONSULTATION



D21-00748-2: Right superior lateral lower back:

SPECIMEN SUBMITTED:
1. Left inferior medial mid back
2. Right superior lateral lower back

CLINICAL DATA:
Procedure: (1) Biopsy by shave method H and E. (2) Punch excision.
DDX: (1) Neoplasm of uncertain behavior vs melanoma.
(2) Neoplasm of uncertain behavior vs cyst.
Notes: (2) Please check margins. Rule out cyst.

FINAL DIAGNOSIS (Microscopic):

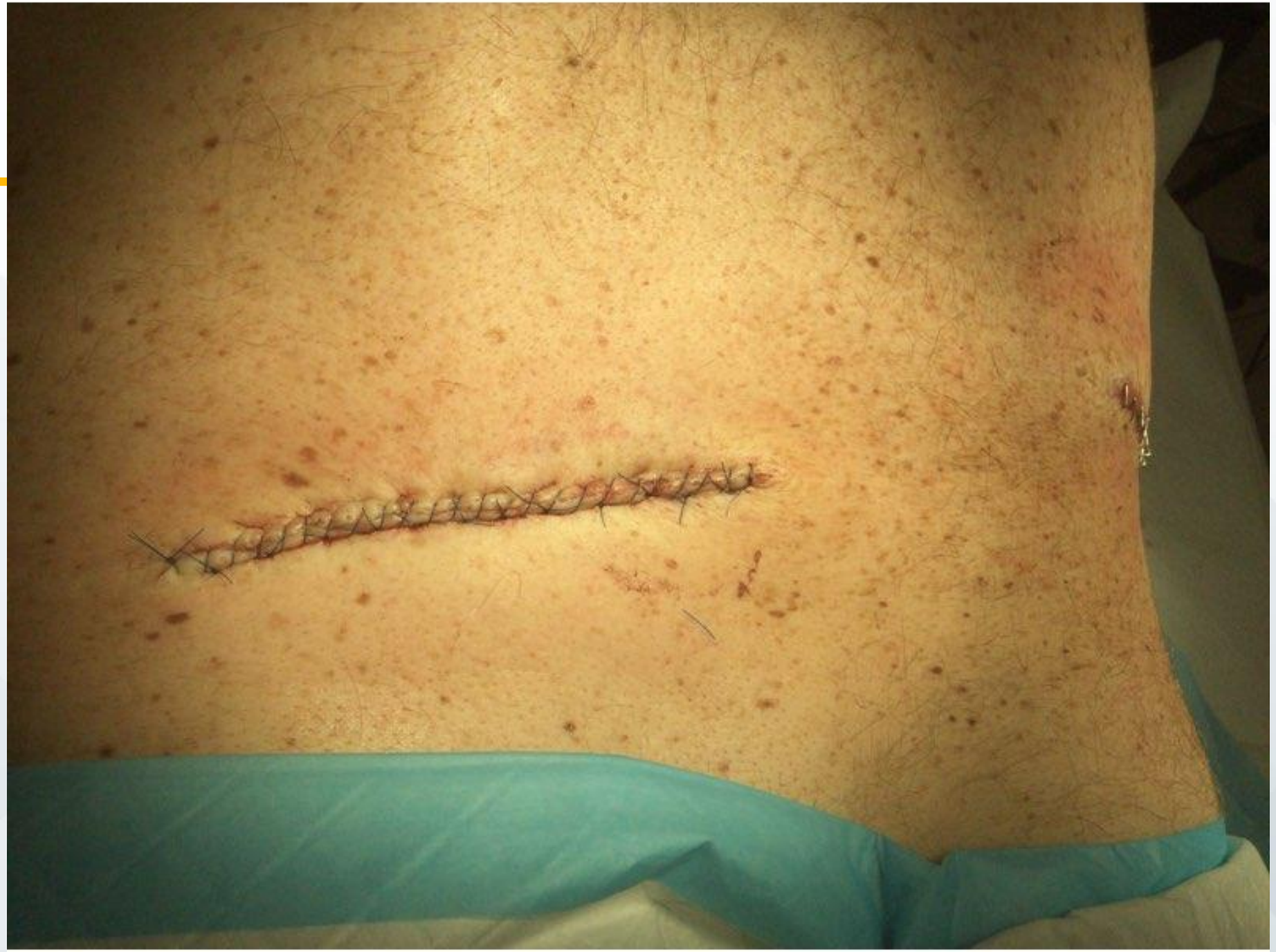
1. Left inferior medial mid back:

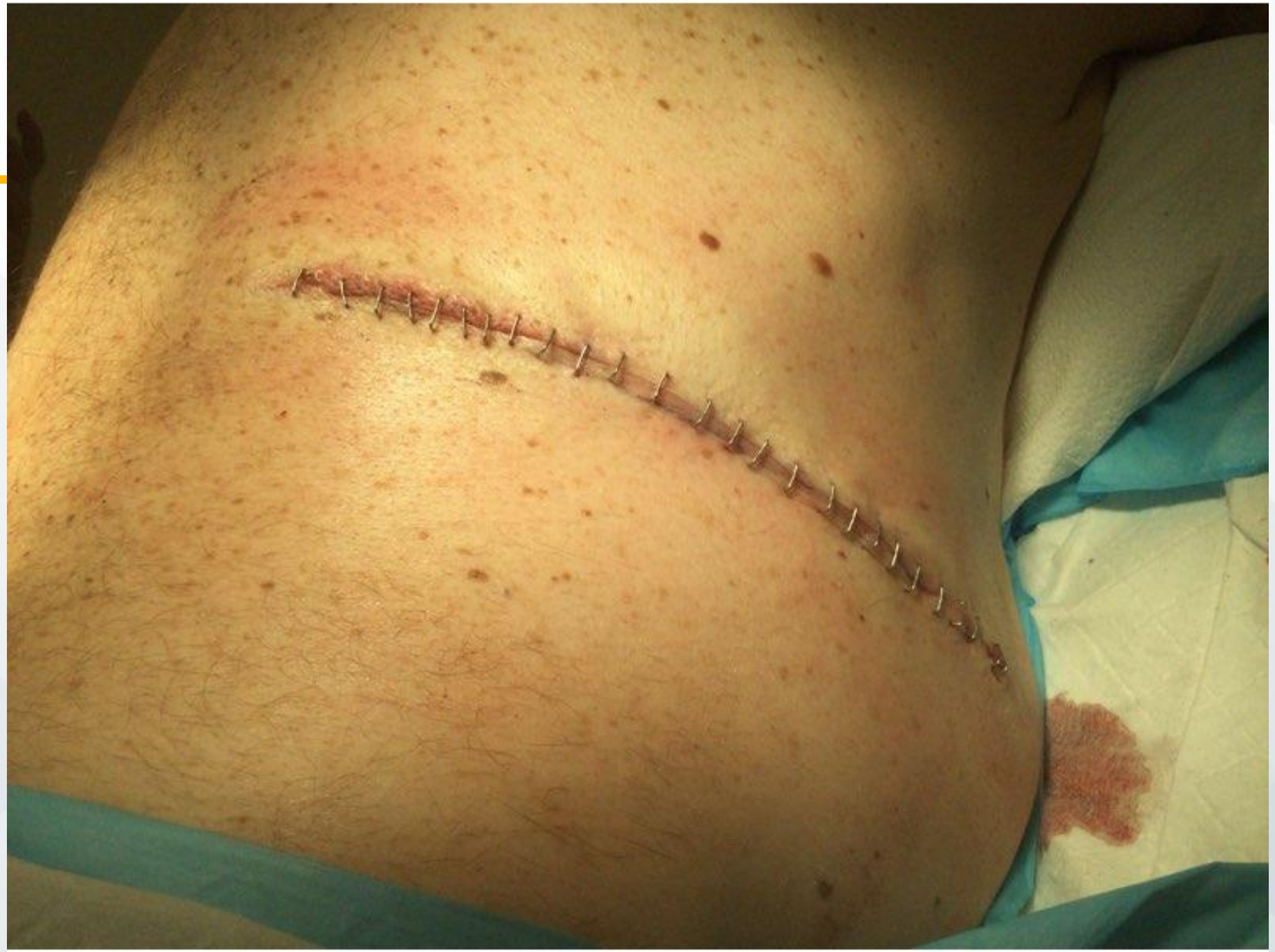
a. **Invasive melanoma with extensive regression, negative for ulceration, Breslow depth 0.98 mm, pT1b. (See COMMENT).**
b. **Margins narrowly negative for melanoma.**
c. **Suspicious for lymphatic invasion.**
d. **For additional information see synoptic summary at the end of the report.**

COMMENT: Sections demonstrate a highly atypical confluent lentiginous nested in situ component with prominent pagetoid upward scatter. There is extensive fibrillary fibrosis, sparse chronic inflammation, and a possible focal residual an invasive component, consistent with extensive regression. Beneath the area of regression is a proliferation of nevoid cells which track along a hair follicle to the deep margin, consistent with congenital pattern melanocytic nevus. Dermal mitoses are not identified. Due to extensive regression the Breslow depth and mitotic count may be underestimated.

2. Right superior lateral lower back:
Metastatic melanoma with necrosis, margins positive. (See COMMENT).

COMMENT: Sections demonstrate deep dermal involvement by malignant epithelioid and nevoid melanocytes with enlarged irregular hyperchromatic nuclei, prominent nucleoli and abundant eosinophilic cytoplasm. Numerous mitoses are present with some atypical mitoses. There is no connection to the overlying epidermis, consistent with metastasis.

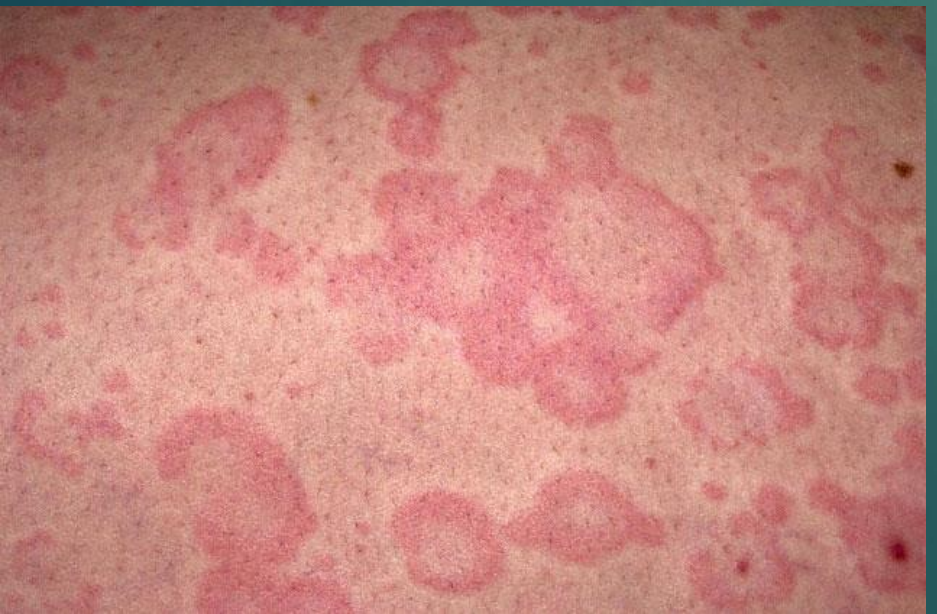




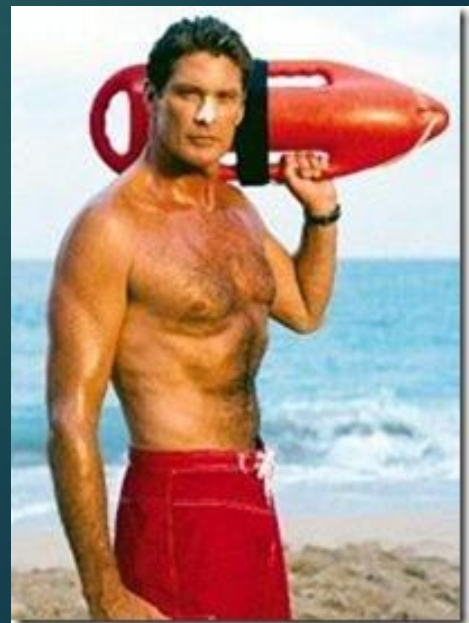
Summary

- Biopsies are simple and inexpensive procedures
- Clinico-pathological correlation
- When in doubt, refer to Derm for a 2nd opinion

Dermatology CME



Greg Simpson MD



Disclosures

- I do not have any relevant financial endorsements to disclose.
- I will be talking about the off label use of many medications

Overview

Skin Types

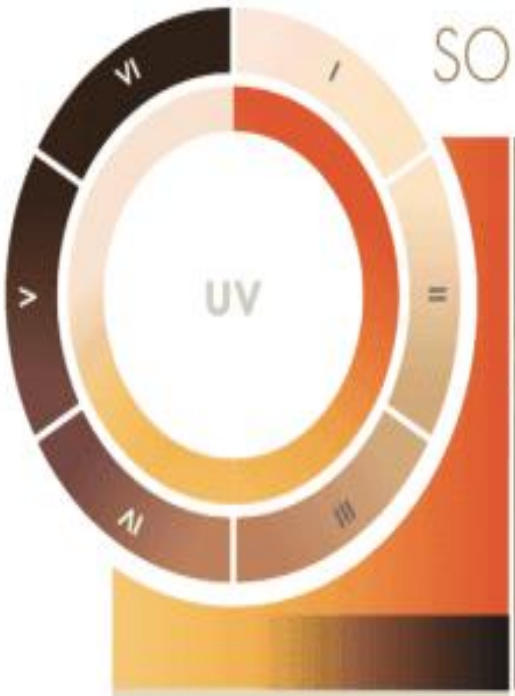
Skin of Color

Differential Generator

Interesting cases

Fitzpatrick Scale Explained

Type I	Type II	Type III	Type IV	Type V	Type VI
Light, Pale White	White, Fair	Medium White to Olive	Olive Tone	Light Brown	Dark Brown
Always burns, never tans	Usually burns, tans with difficulty	Sometimes mild burn, gradually tans to olive	Rarely burns, tans with ease to moderate brown	Very rarely burns, tans very easily	Never burns, tans very easily, deeply pigmented



SO WHAT'S YOUR **SKIN TYPE?**

	SKIN TYPE **VI**	SKIN TYPE **V**	SKIN TYPE **IV**	SKIN TYPE **III**	SKIN TYPE **II**	SKIN TYPE **I**
skin color before exposure:	deeply pigmented dark brown to darkest brown	dark brown	olive or light brown	fair to beige, with golden undertones	fair or pale	ivory
skin reaction to sun:	never freckles, never burns, always tans	rarely freckles, almost never burns, always tans	doesn't really freckle, burns rarely, often tans	might freckle, burns on occasion, sometimes tans	usually freckles, often burns/peels, rarely tans	always freckles, always burns/peels, never tans

Why?

Vitiligo use Fitzpatrick type 1

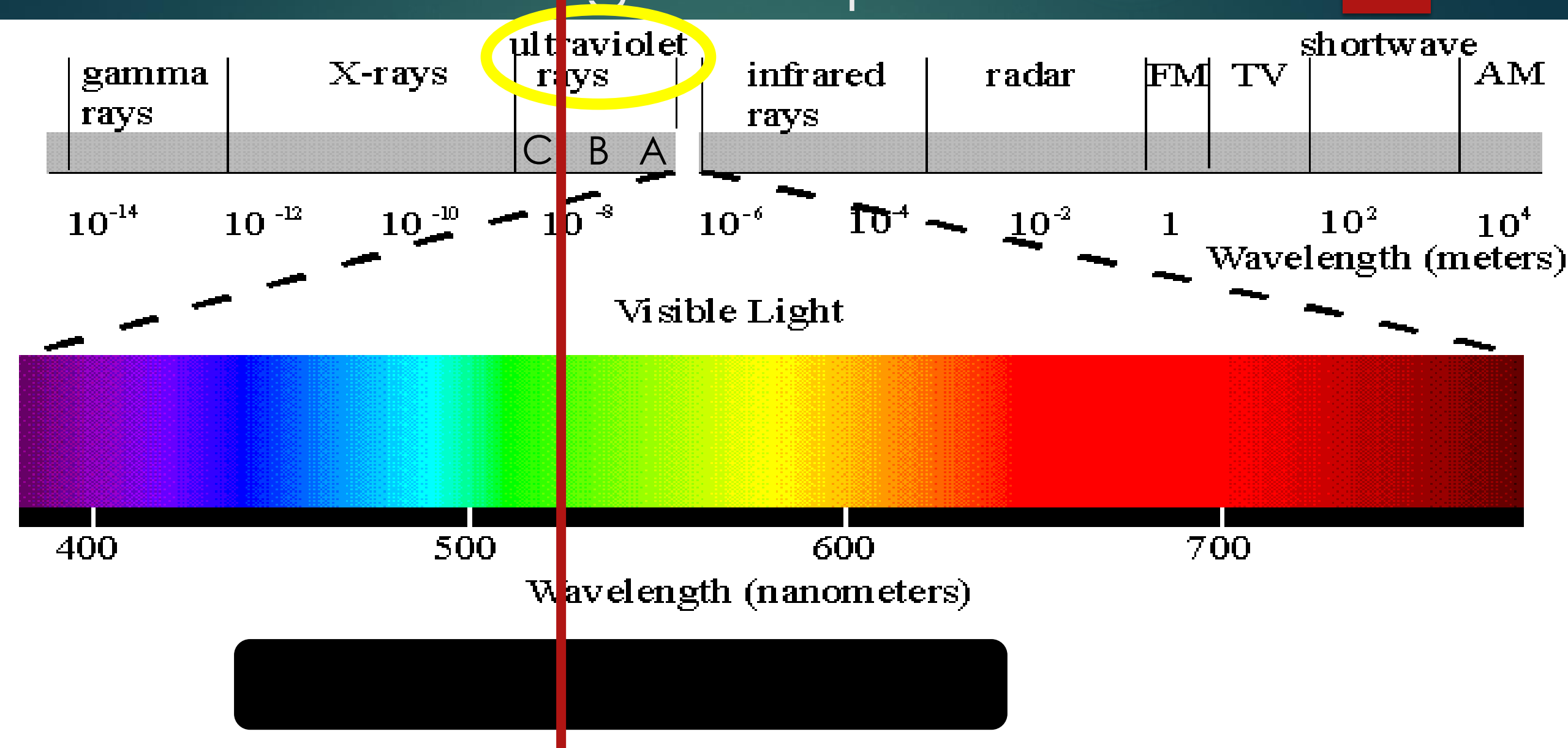
- Skin Cancer risk
- Assess Photosensitivity

Initial NB UVB Dosing based on Fitzpatrick Skin Type

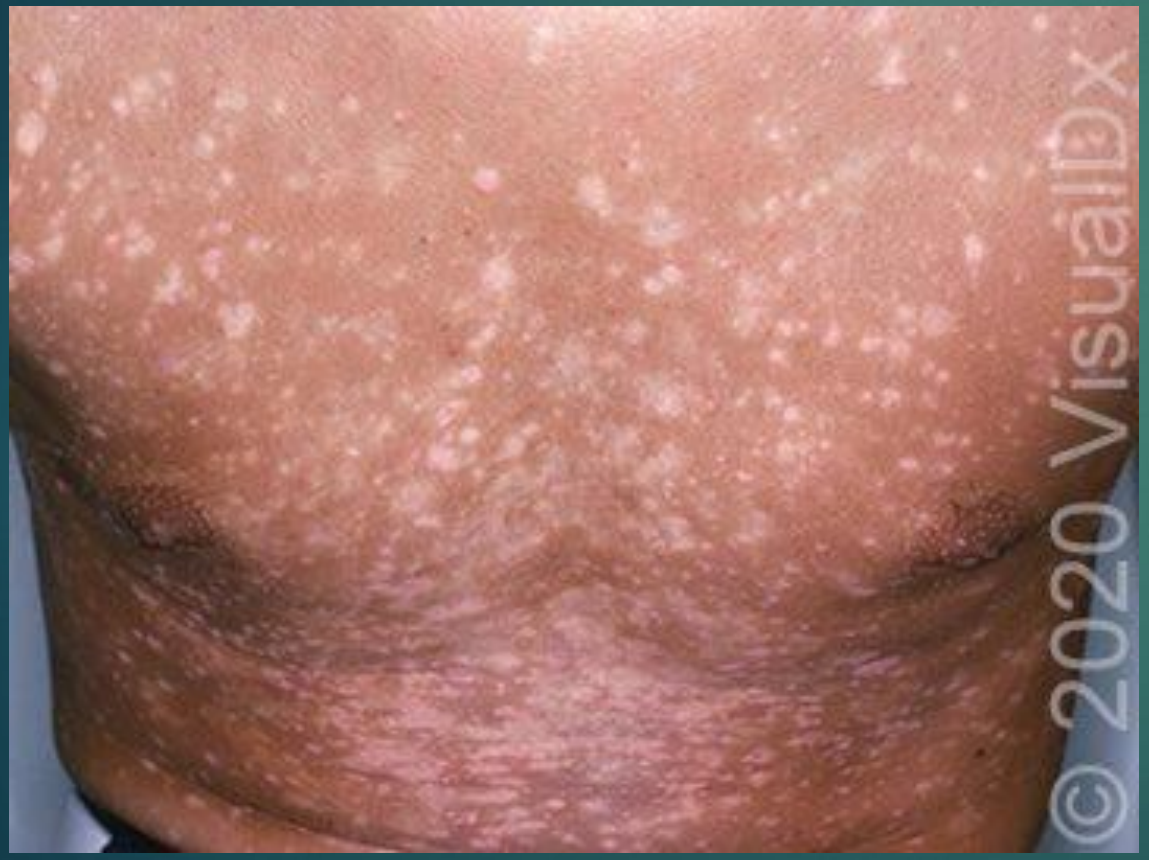
Fitzpatrick Skin Type	Tanning Response	Initial NB UVB Dose
I	Always burns, never tans	100 mJ
II	Usually burn, tans with difficulty	220 mJ
III	Sometimes mild burn, tan average	260 mJ
IV	Rarely burns, tans with ease	330 mJ
V	Very rarely burns, tans very easily	350 mJ
VI	No burn, tans very easily	400 mJ

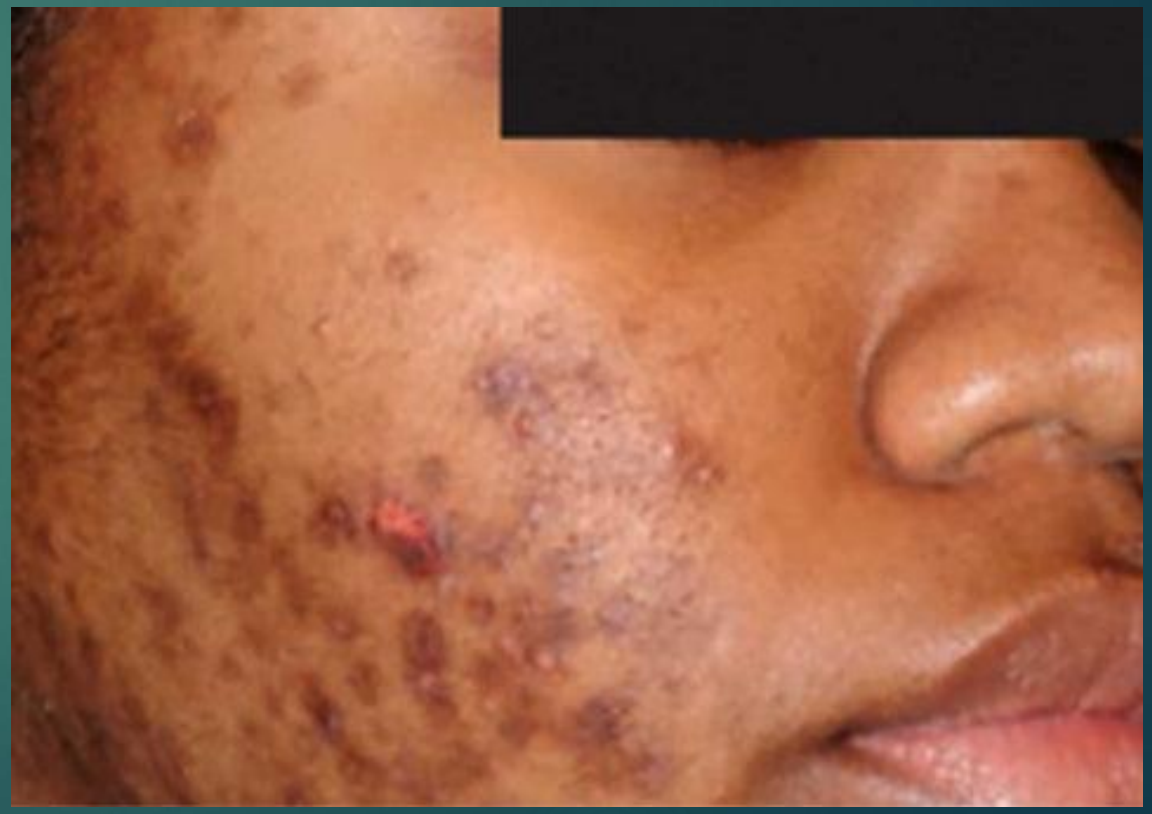
NBUVB= 311-312 NM

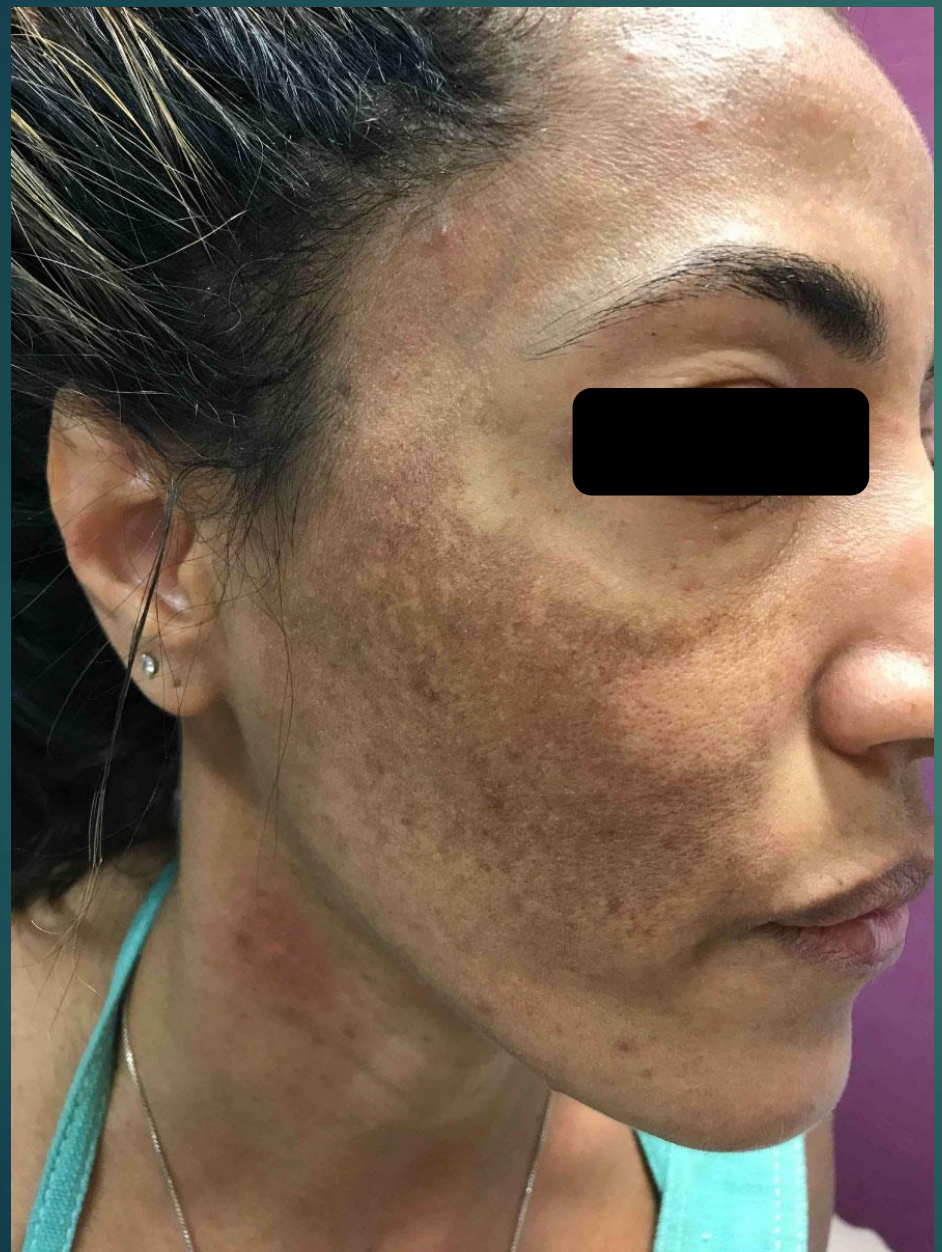
Electromagnetic spectrum

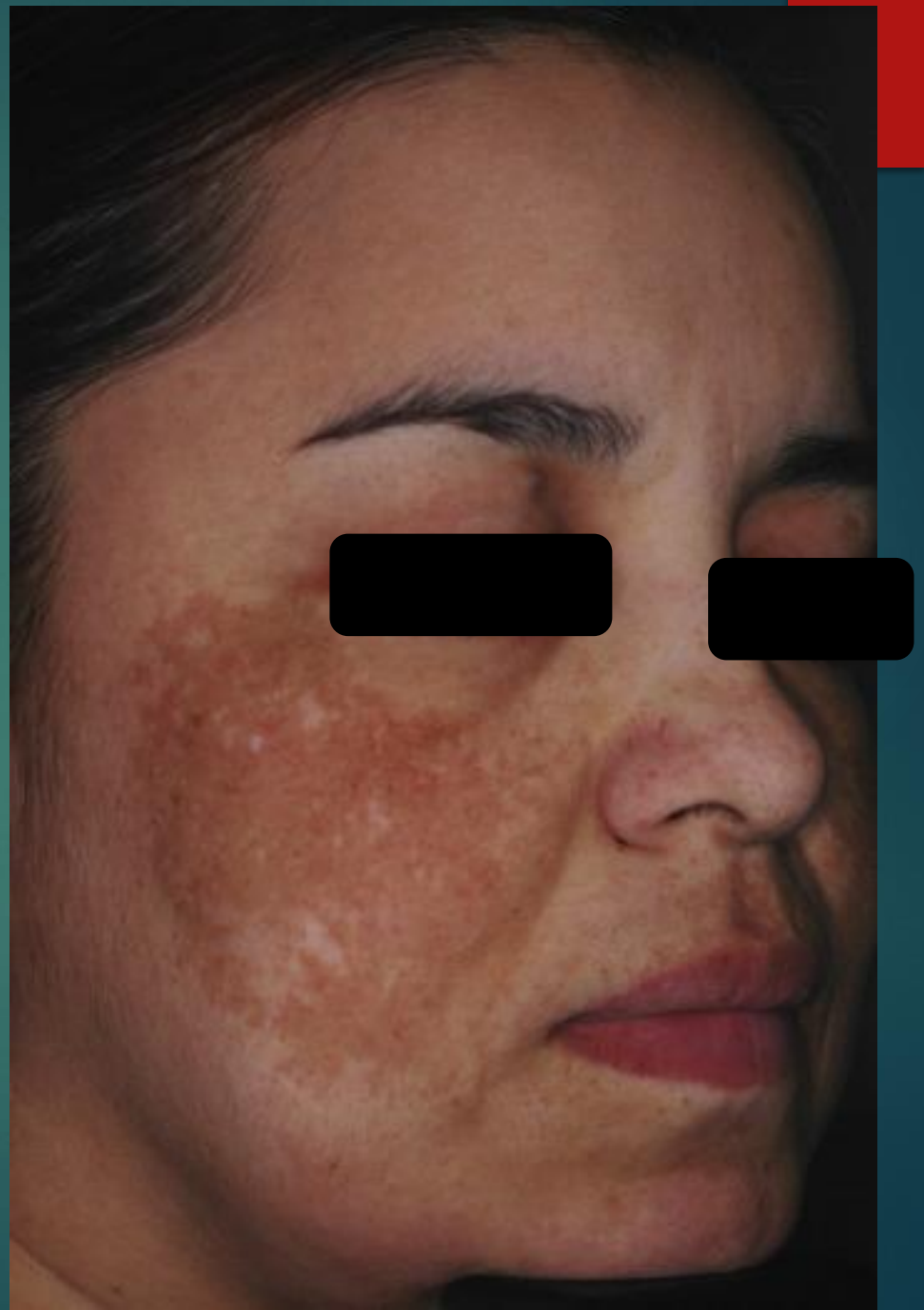


Post-inflammatory pigment change

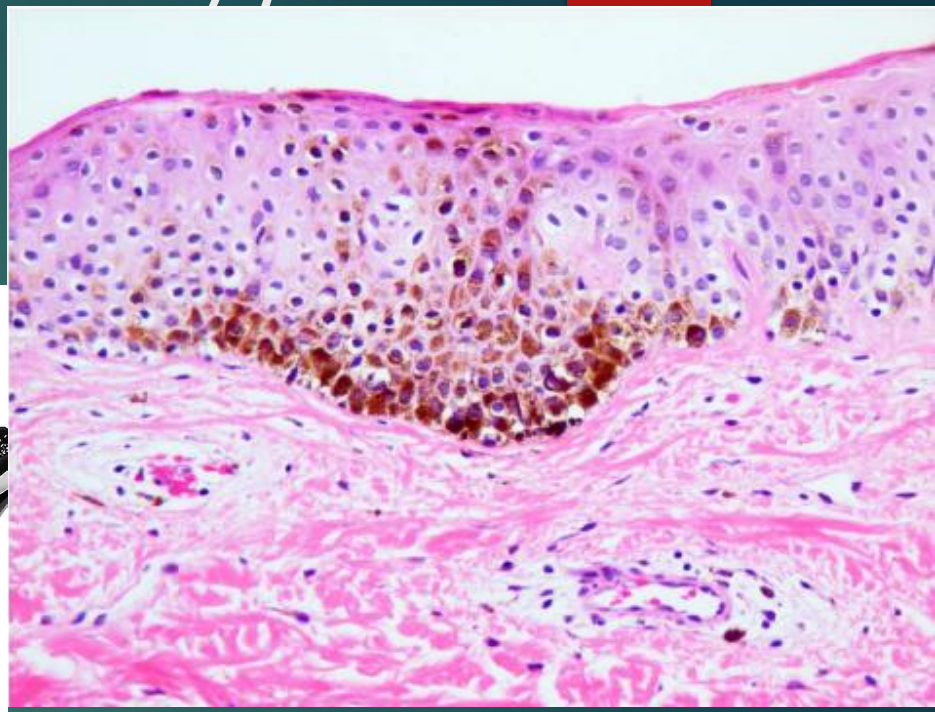




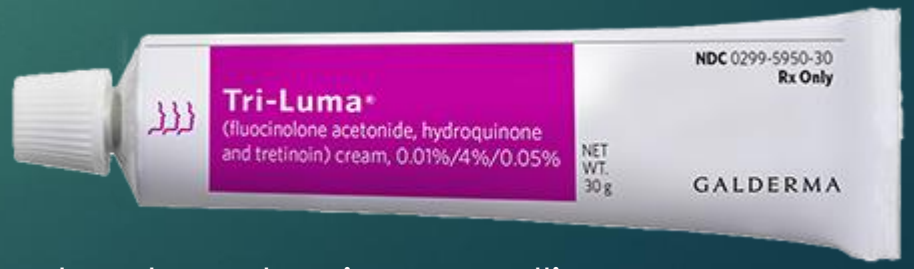


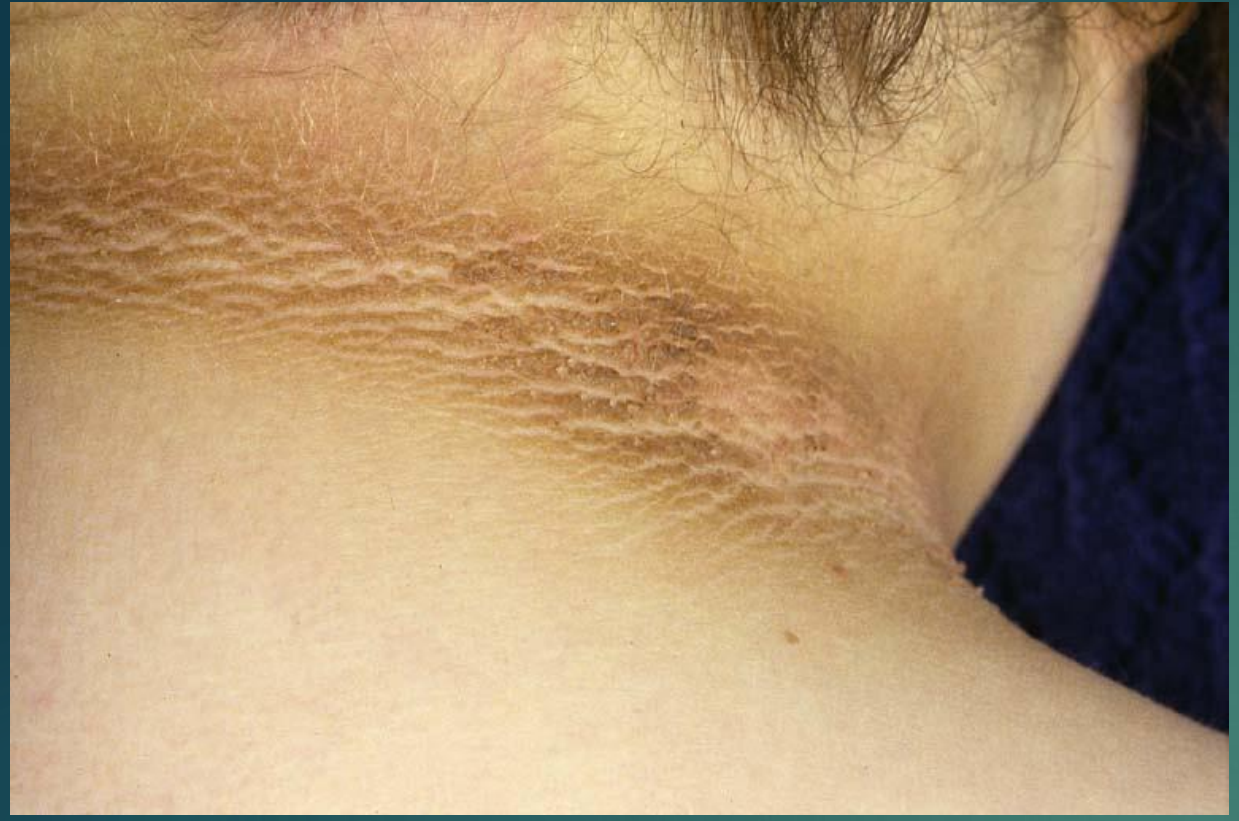


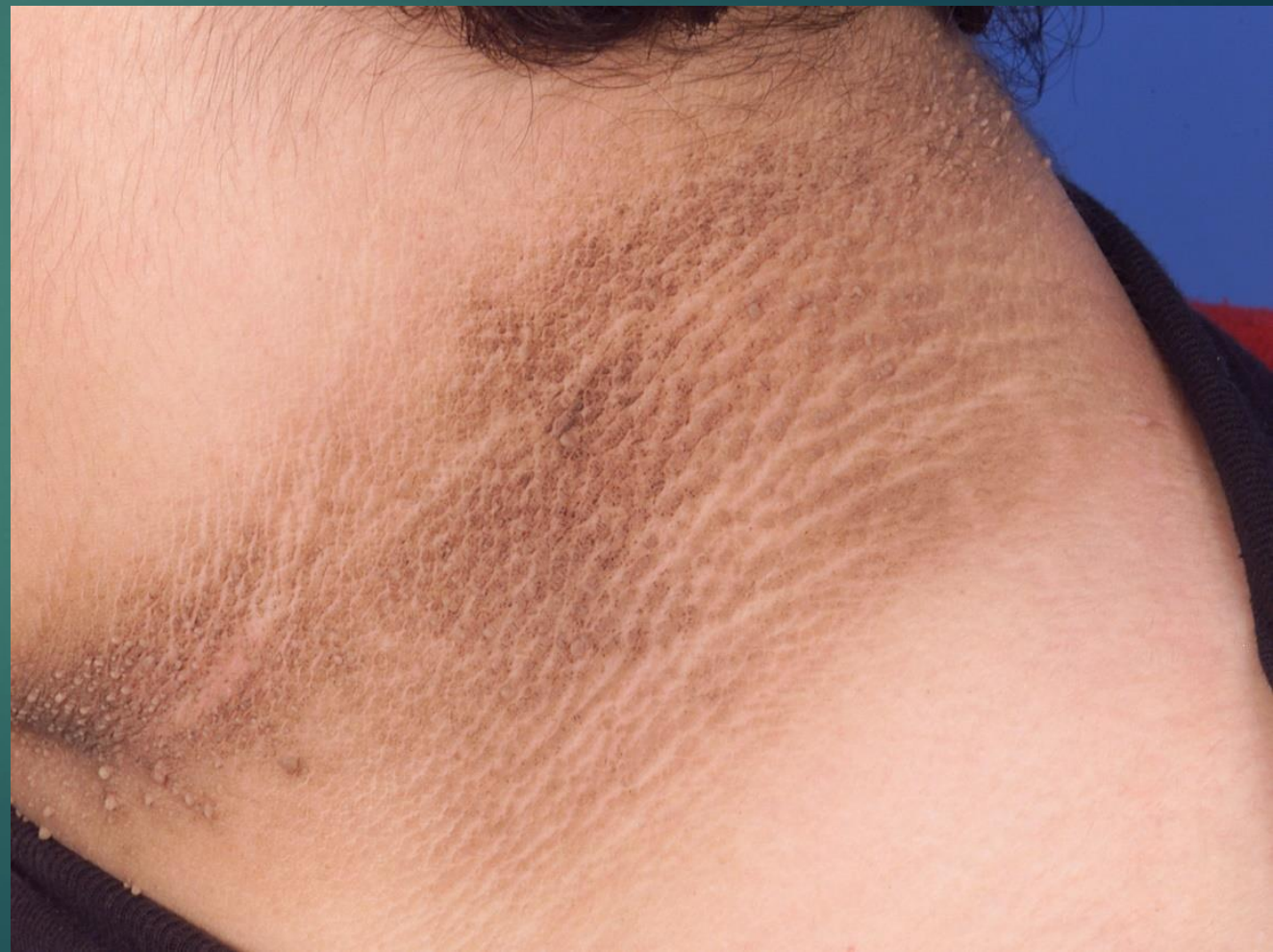
Melasma (Mask of pregnancy)



- Genetics, Hormones, Sun exposure
- SUN PROTECTION!!!!!
- Hydroquinone (2% OTC, stronger Rx
- Tretinoin
- Mild steroids
- Azeleic Acid, Kojic Acid, antioxidants, etc
- chemical peel, microdermabrasion, dermabrasion, laser treatment, microneedling







Acanthosis nigricans

- Obesity
- Insulin Resistance
- Genetics/Syndromes
- Cancer?

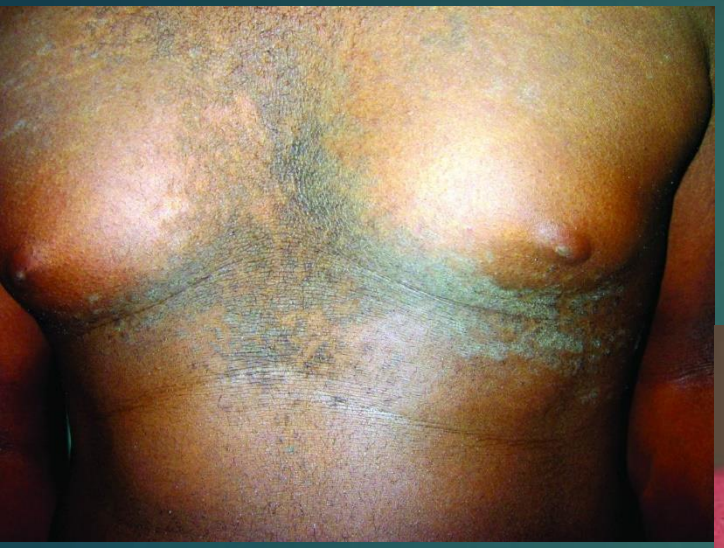
Syndromes Associated With Acanthosis Nigricans

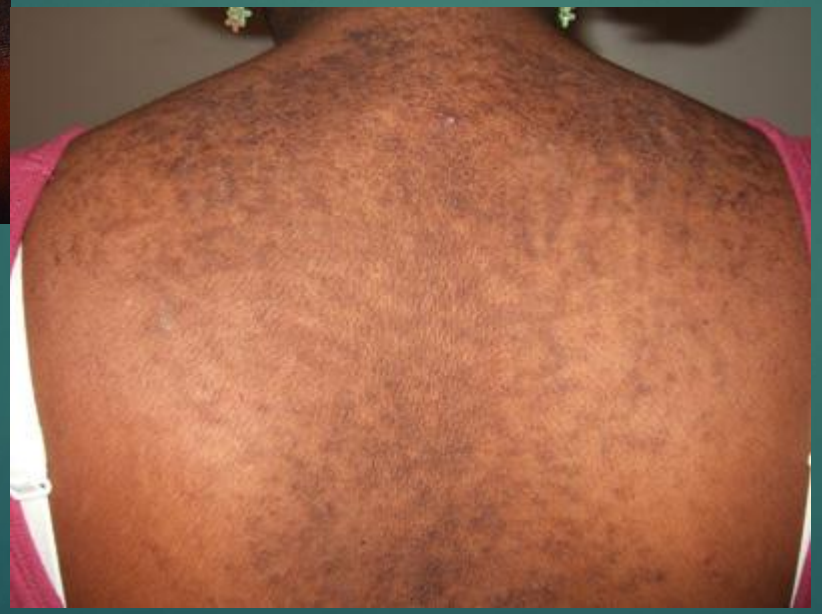
Acromegaly
Alstrom telangiectasia
Barter syndrome
Beare-Stevenson syndrome
Benign encephalopathy
Bloom syndrome
Capozucca syndrome
Chondrodystrophy with dwarfism
Costello syndrome
Crouzon syndrome
Dermatomyositis
Familial pineal body hypertrophy
Gigantism
Hashimoto thyroiditis
Hirschowitz syndrome
Lawrence-Moon-Bardet syndrome
Lawrence-Seip syndrome
Lipoatrophic diabetes mellitus
Lupoid hepatitis
Lupus erythematosus
Phenylketonuria
Pituitary hypogonadism
Pseudoacromegaly
Prader-Willi syndrome
Pyramidal tract degeneration
Rud syndrome
Scleroderma
Stein-Leventhal syndrome
Type A syndrome (HAIR-AN syndrome)
Werner syndrome
Wilson syndrome

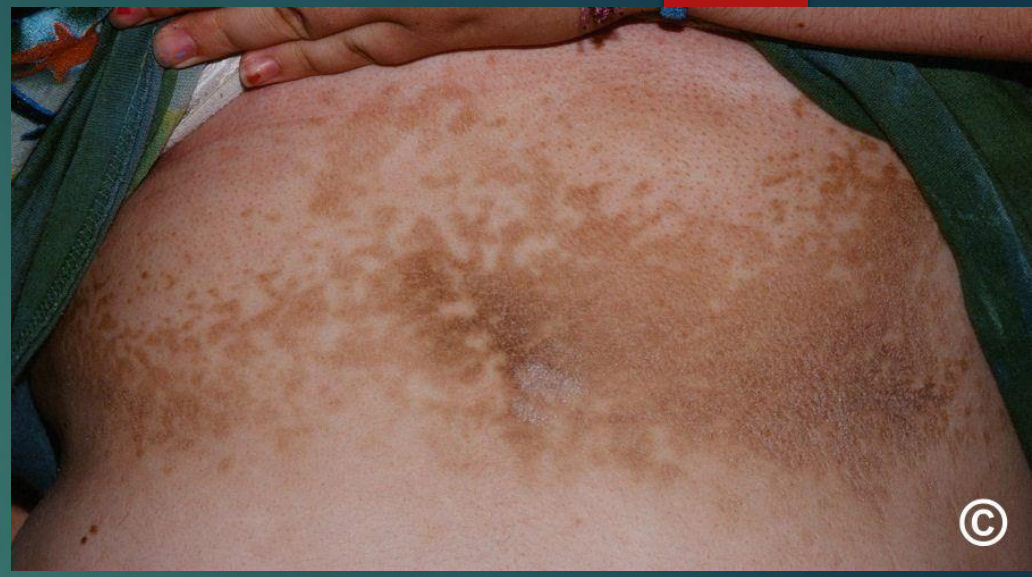
Malignant Diseases Associated With Acanthosis Nigricans

Bile duct cancer
Bladder cancer
Breast cancer
Colon cancer
Endometrial cancer
Esophageal cancer
Gallbladder cancer
Hodgkin disease
Kidney cancer
Liver cancer
Lung cancer
Mycosis fungoides
Non-Hodgkin lymphoma
Ovarian cancer
Pancreatic cancer
Pheochromocytoma
Prostate cancer
Rectal cancer
Testicular cancer
Thyroid cancer
Wilms tumor

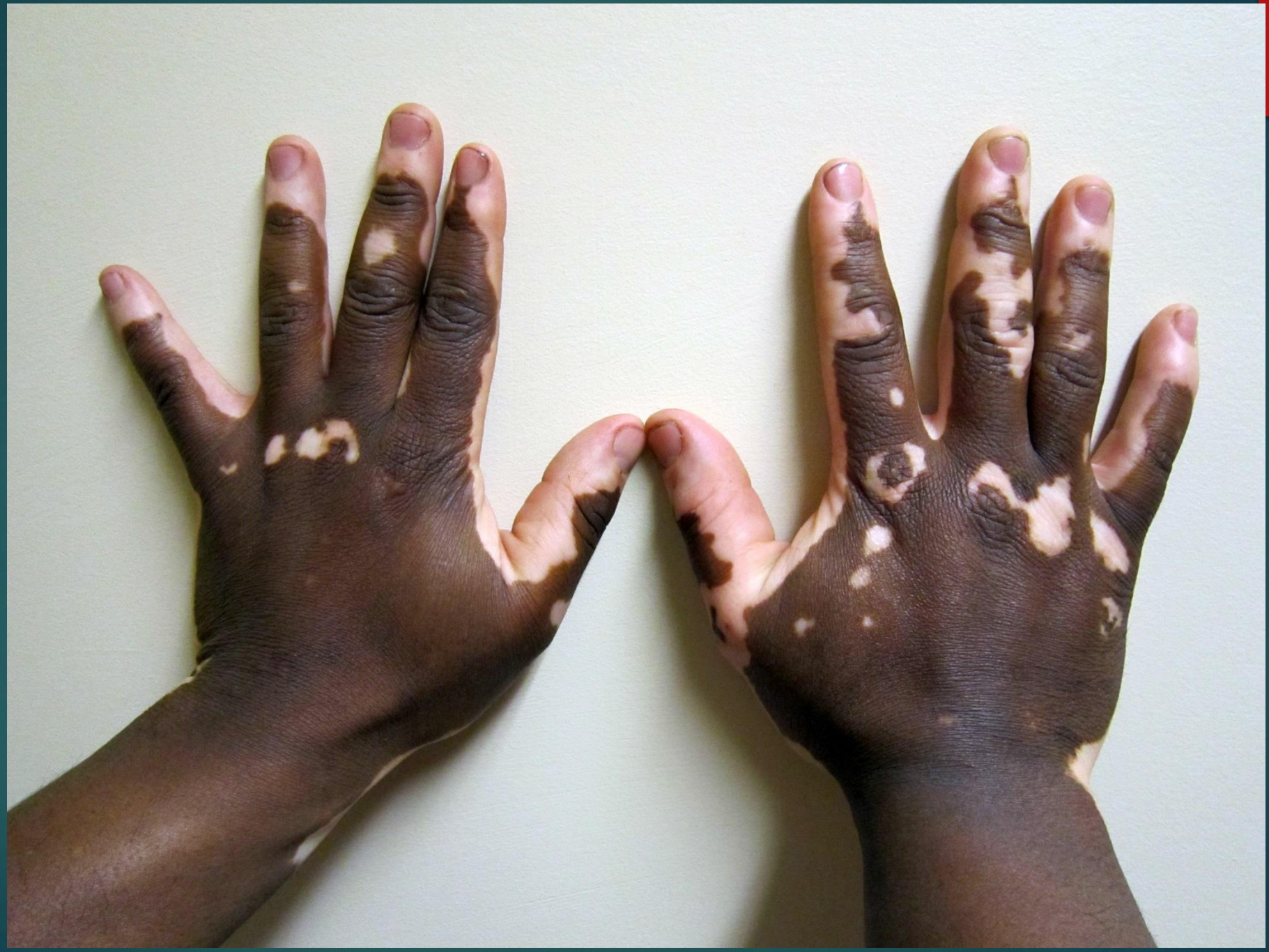
Confluent and reticulated papilomatosis

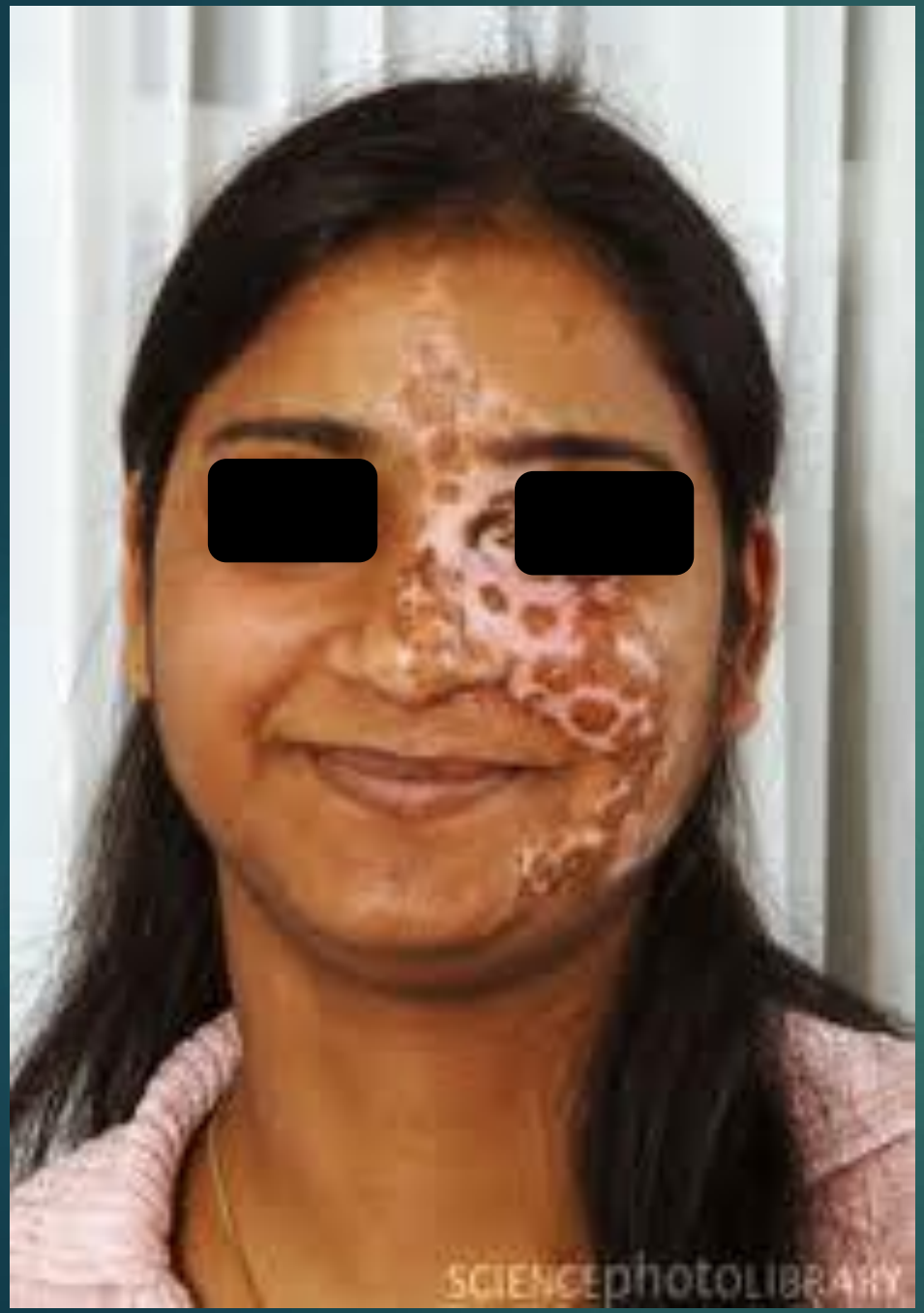


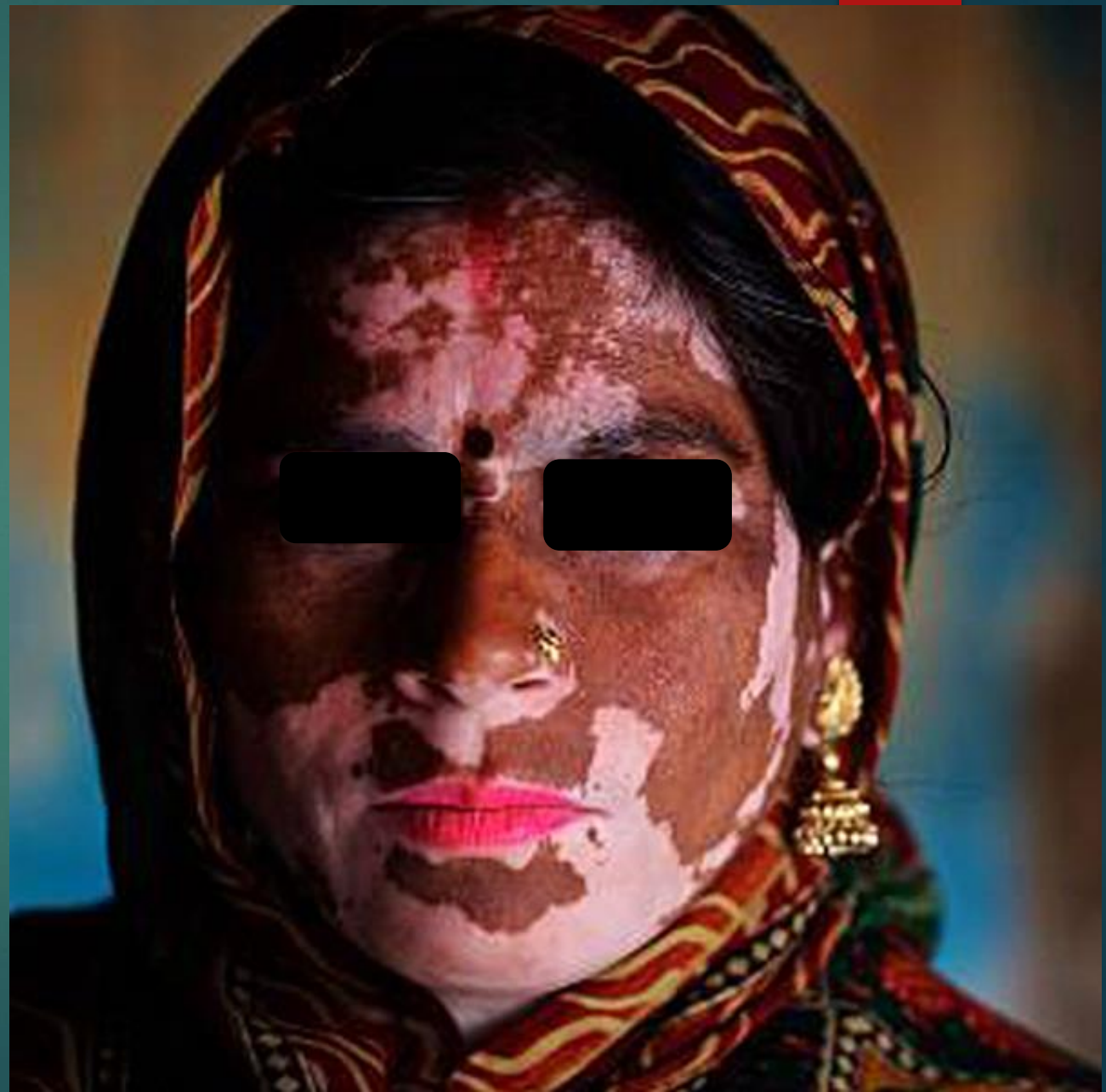




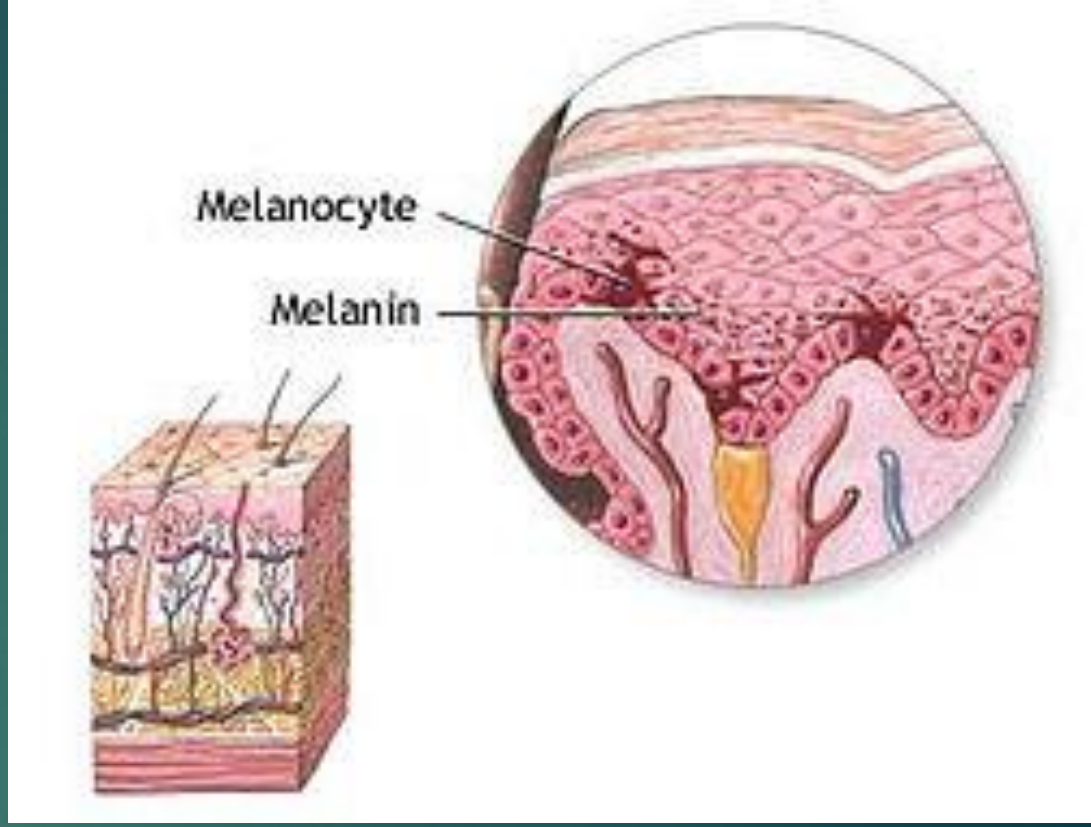
- Dietzia papillomatosis is an aerobic, Gram-positive coccus or short rod belonging to the group of actinomycetes



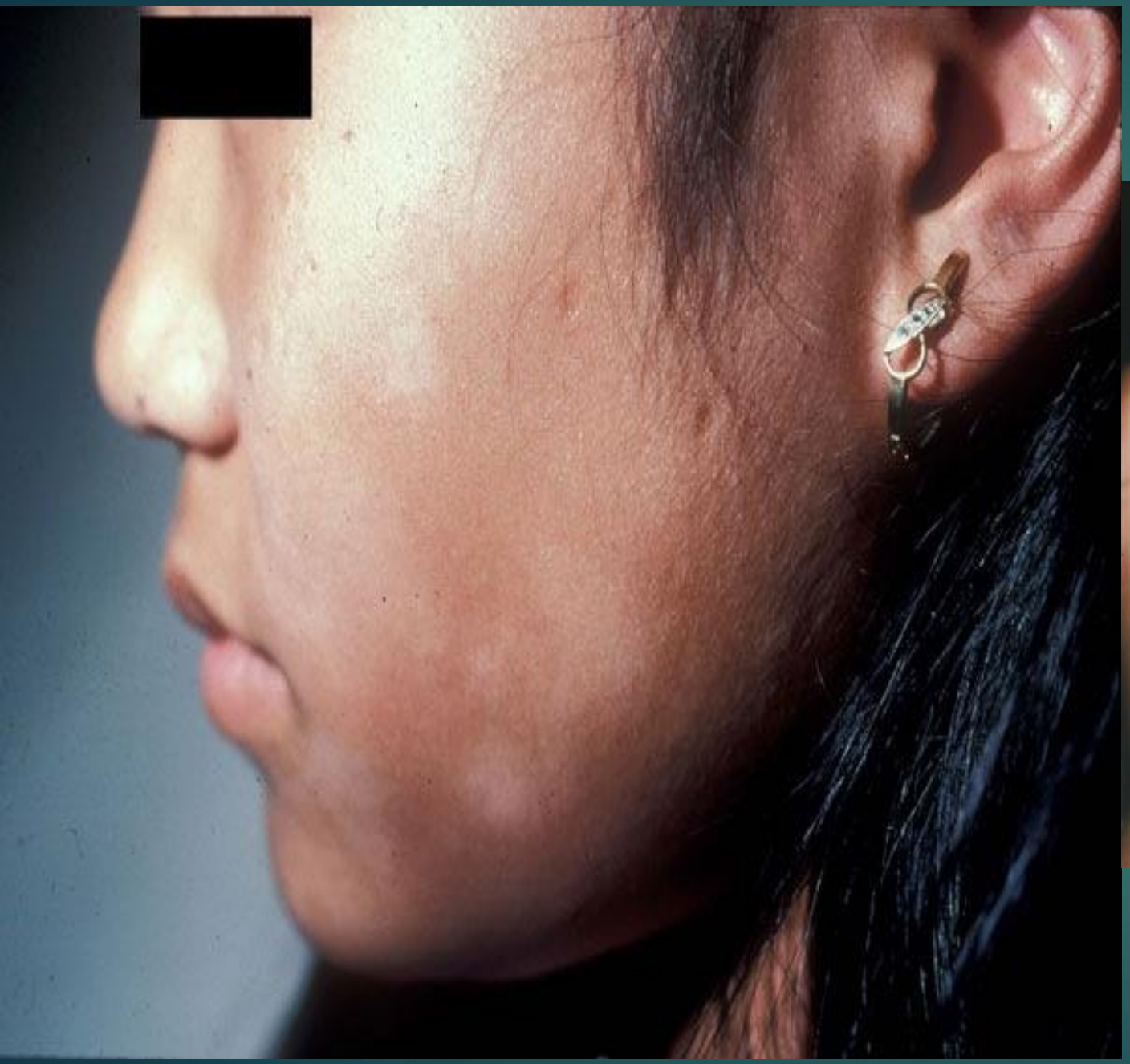

SCIENCEphotoLIBRARY

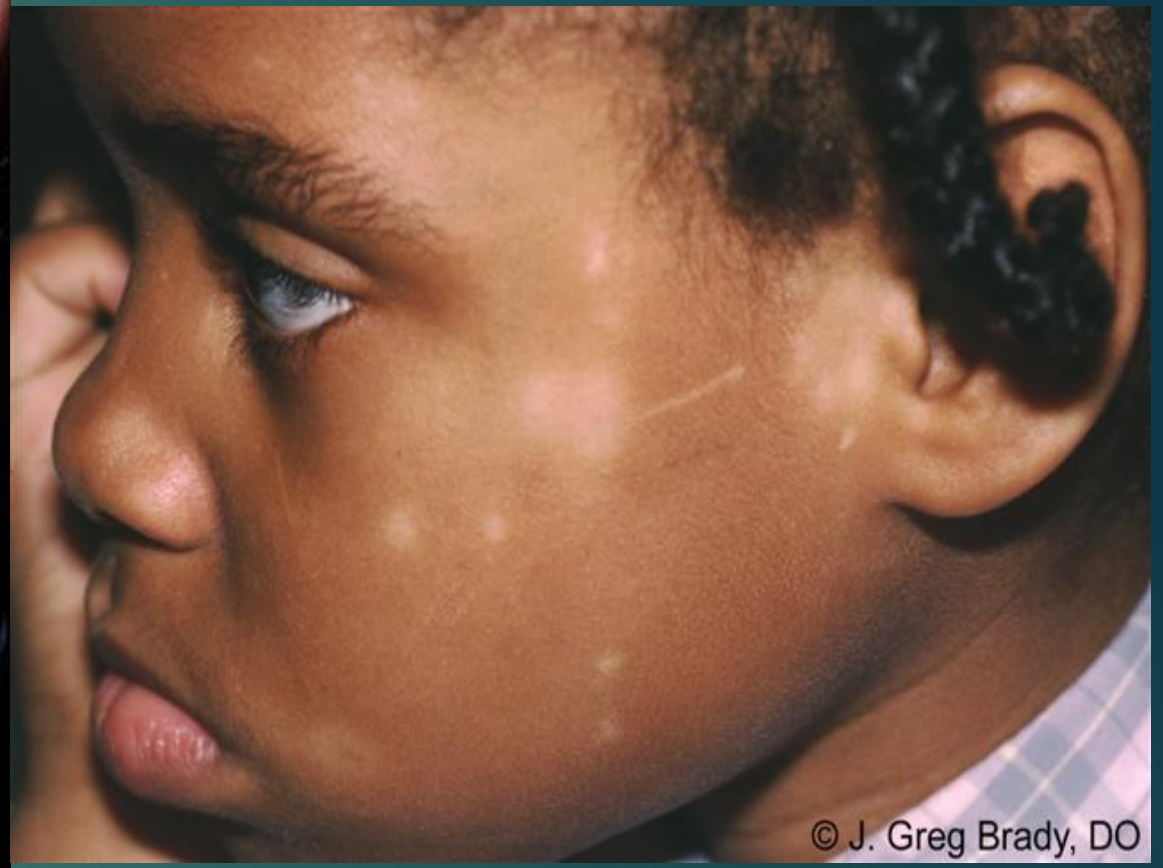


Vitiligo



- Autoimmune condition
- Destruction of melanocytes
- Can be reversible
- At risk for other auto-immune conditions- thyroid, diabetes
- Treatment: topical steroids, non-steroids, Light therapy (JAK inhibitors?)
- Depigmentation: Monobenzyl ether of hydroquinone (Benoquin)

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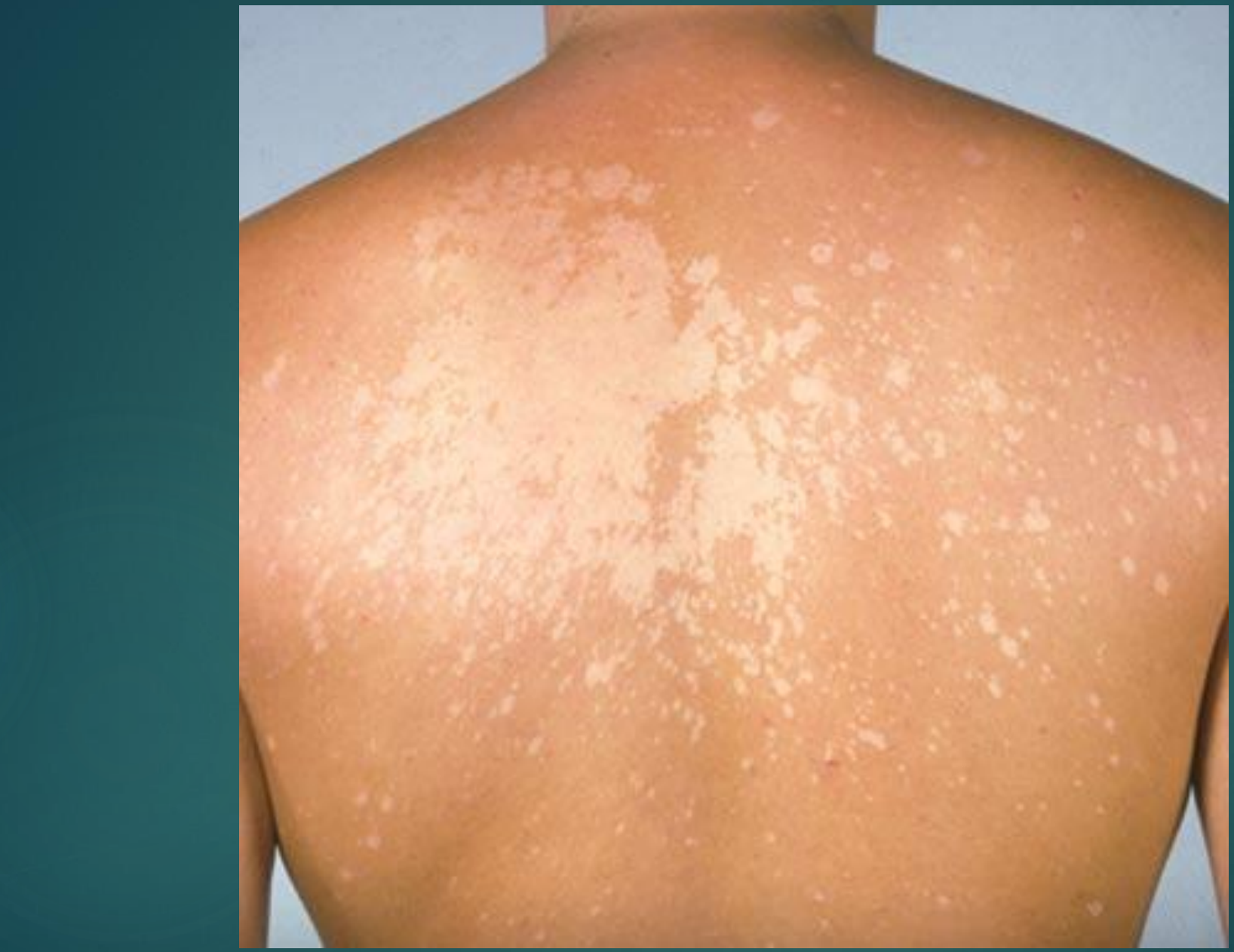
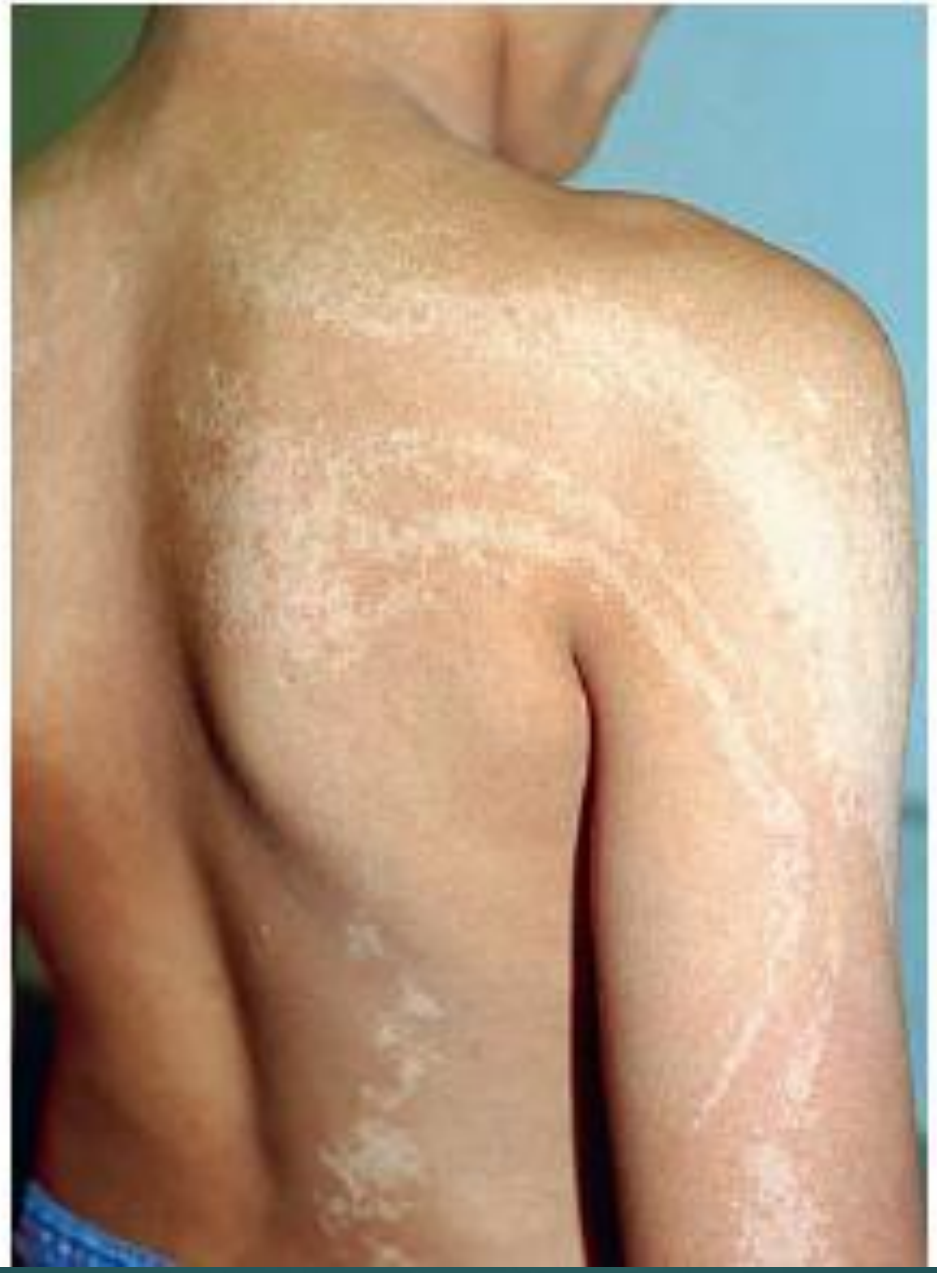
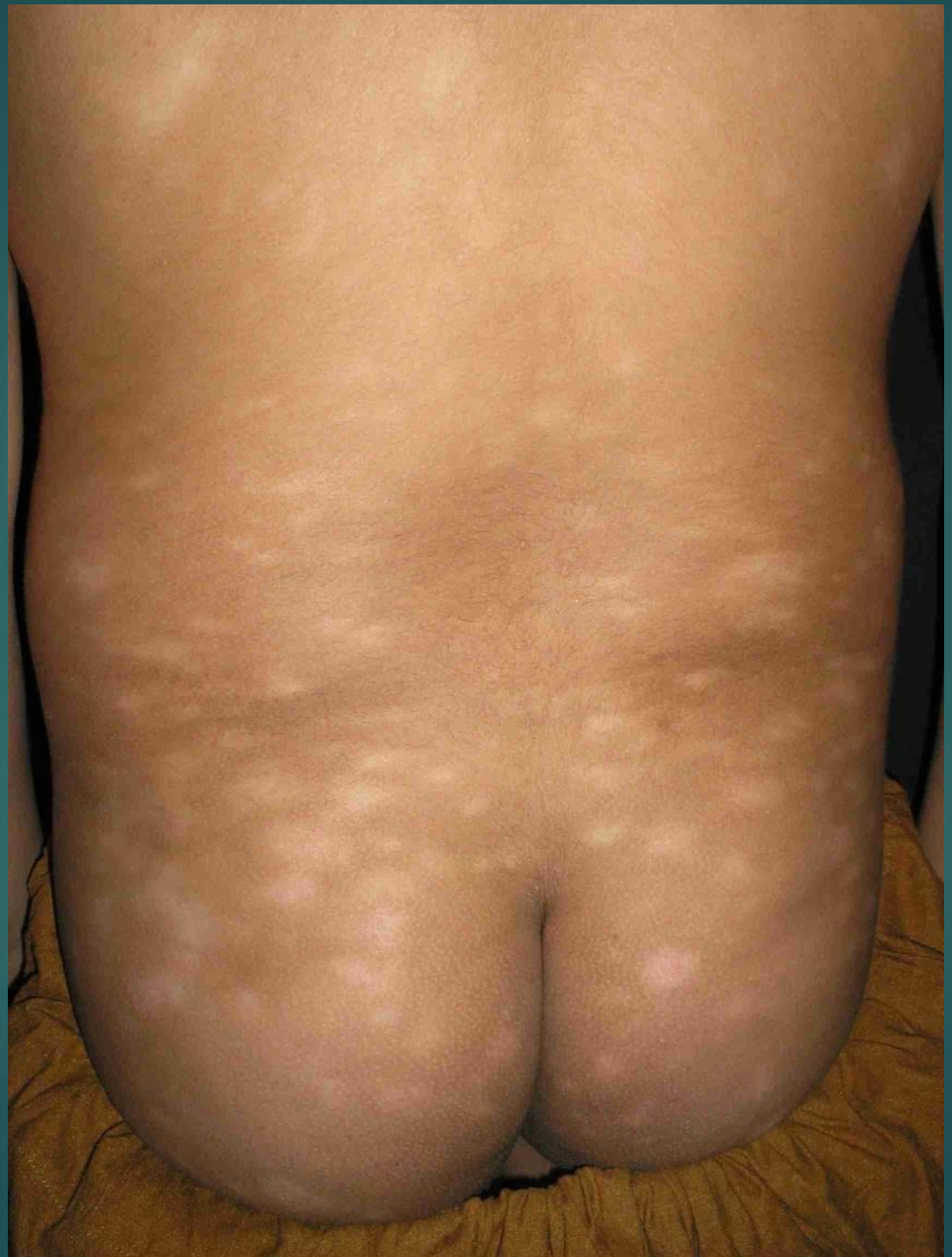
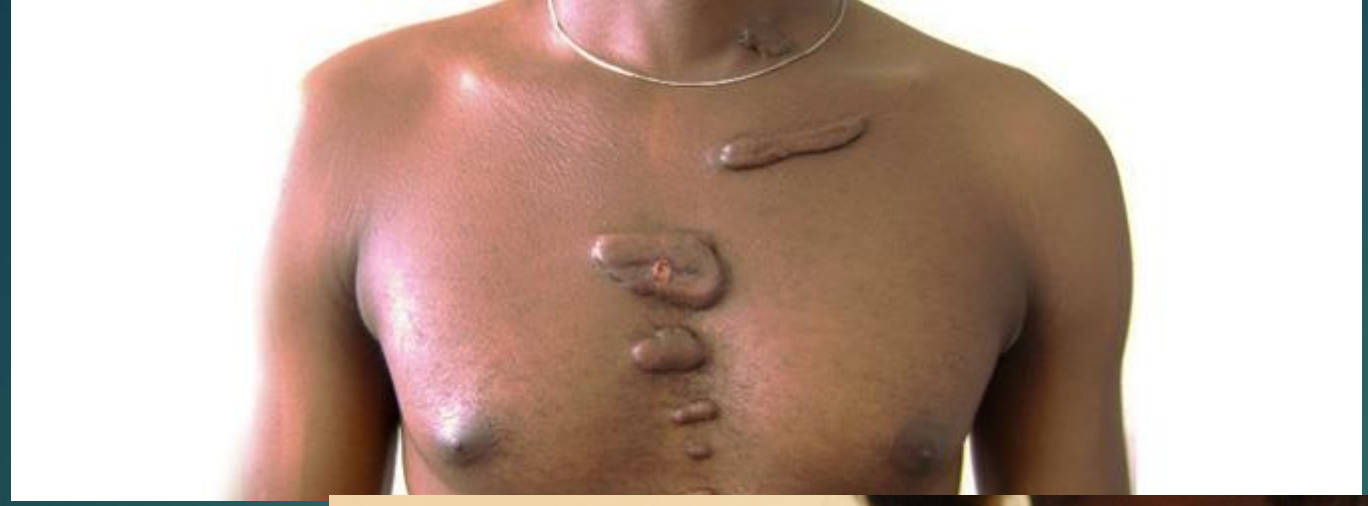
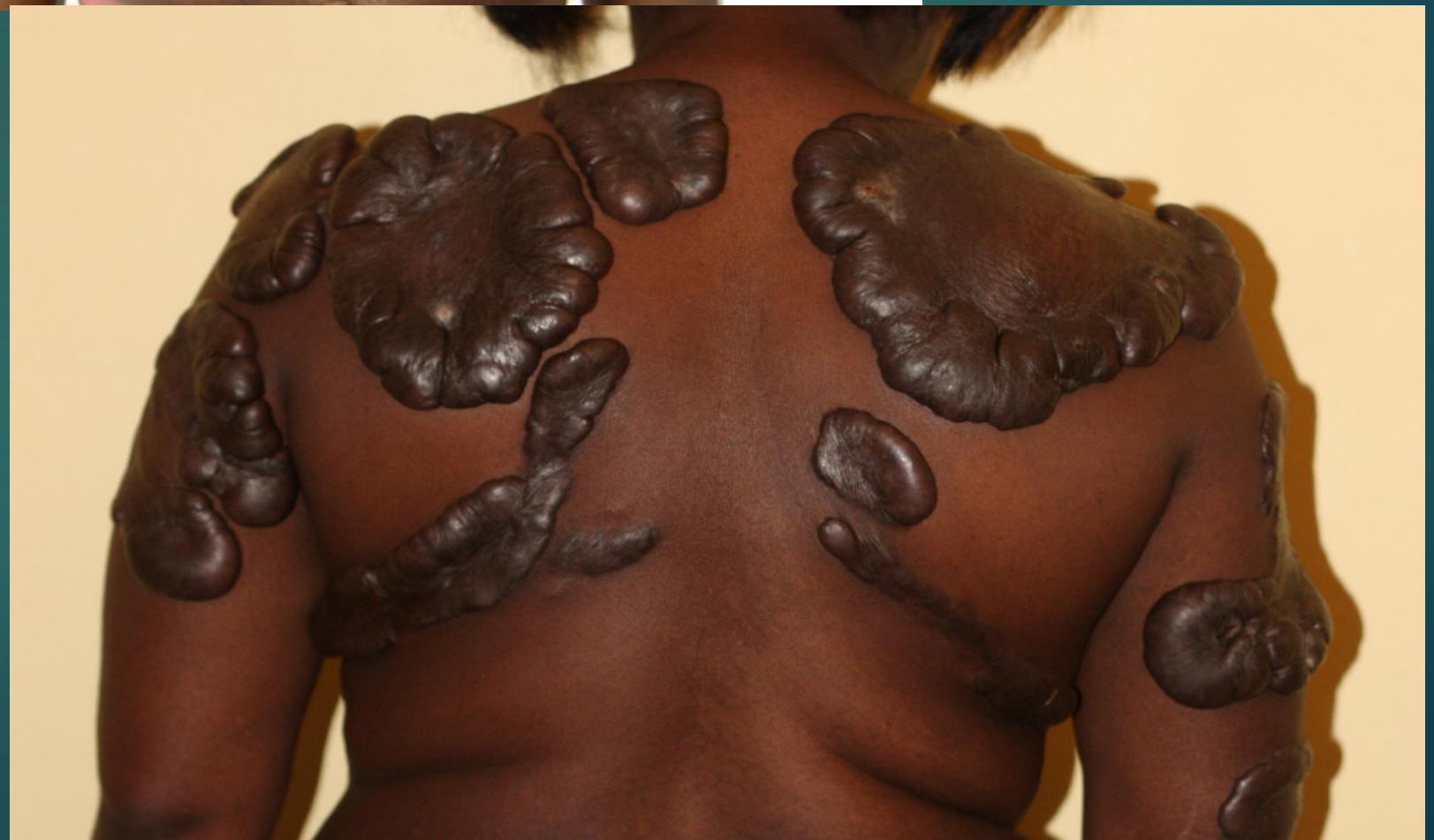
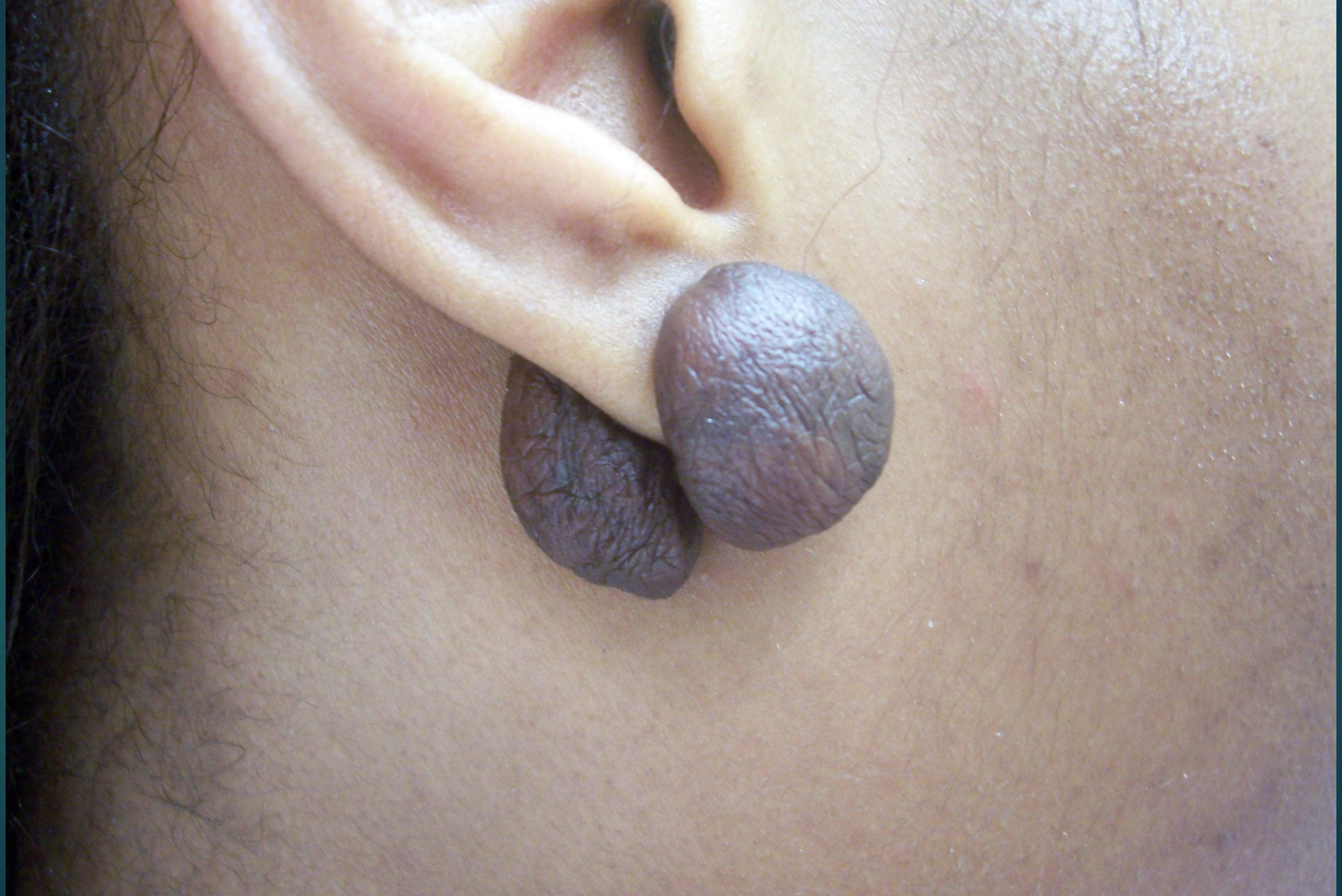






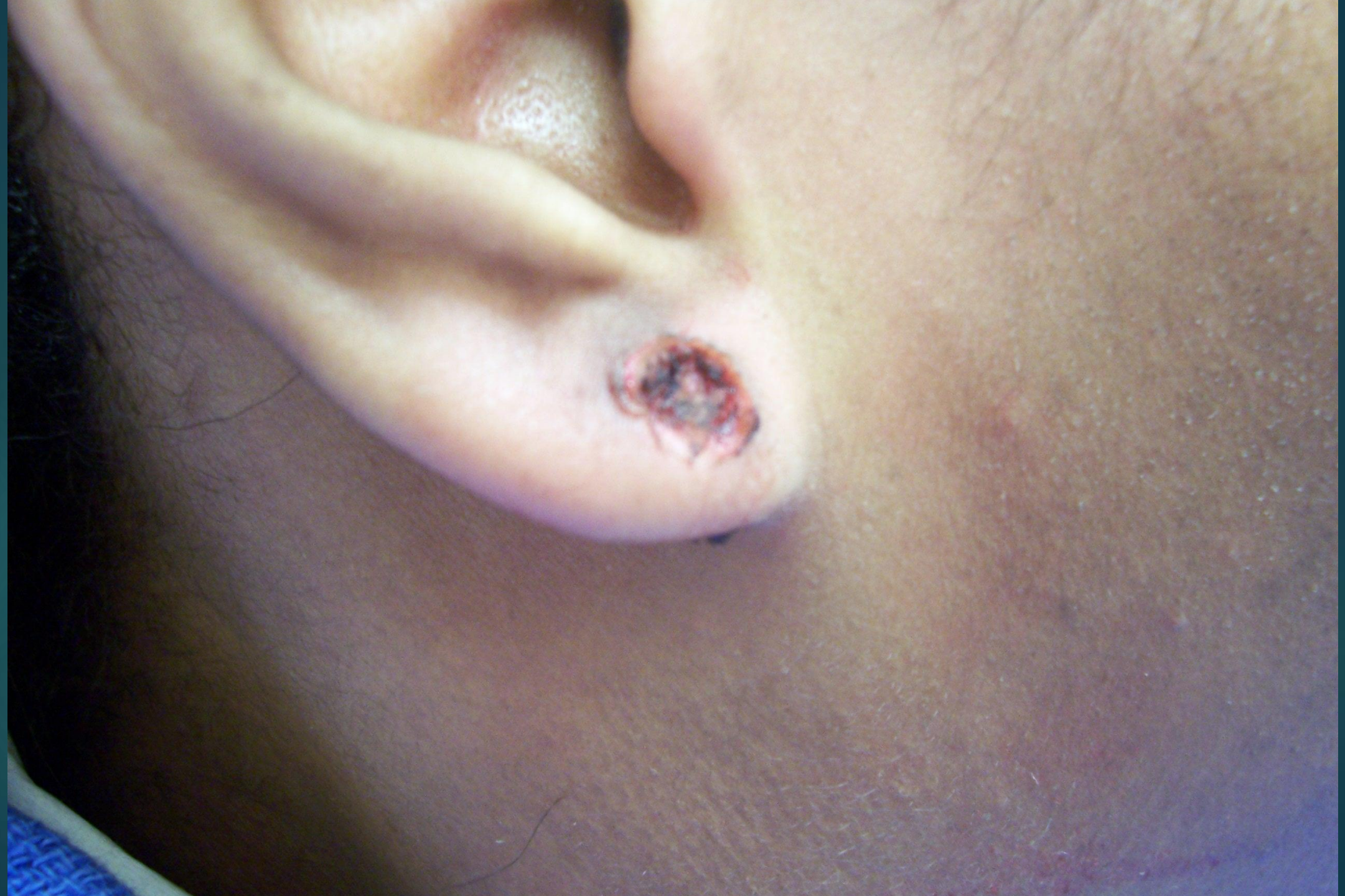






Aside from shaving off the nodules, what else would you do to prevent recurrence of the keloids?

A. Post-operative radiation
B. Intralesional triamcinolone
C. Imiquimod cream qhs
D. Topical steroid



Acne keloidalis nuchae

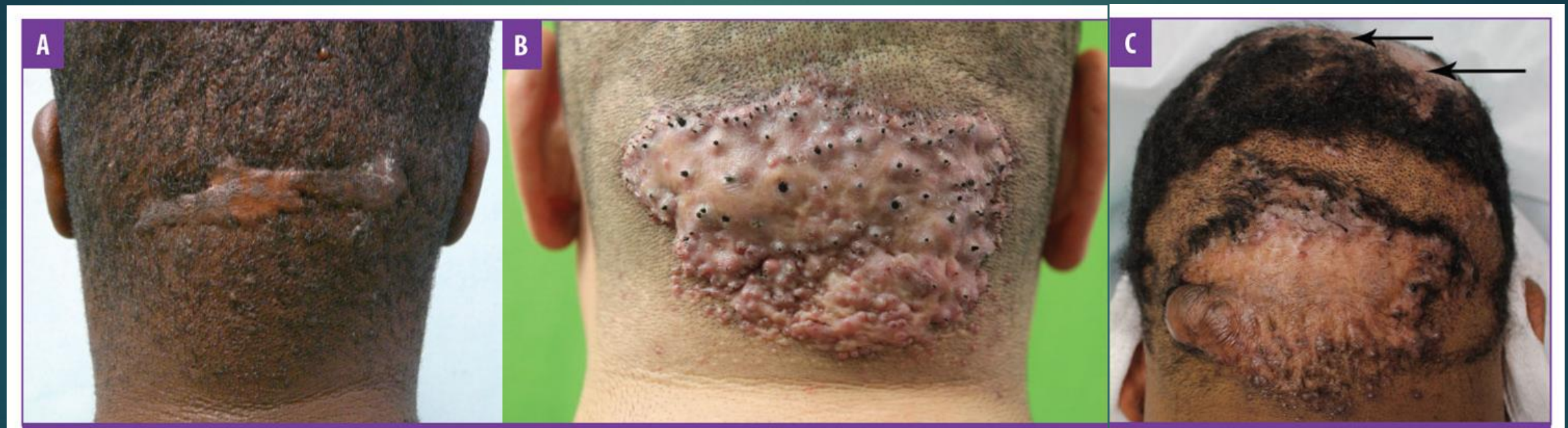


FIGURE 2. A) Patient 1: African man with Class I, plaque, negative; B) Patient 2: Hispanic man with Class II, plaque, negative; C) Patient 3: African-American man with Class II, plaque, positive; The patient's extensive folliculitis decalvans (FD) severely restricted scalp laxity that would limit wound contraction after excision of acne keloidalis nuchae (arrows indicate FD).

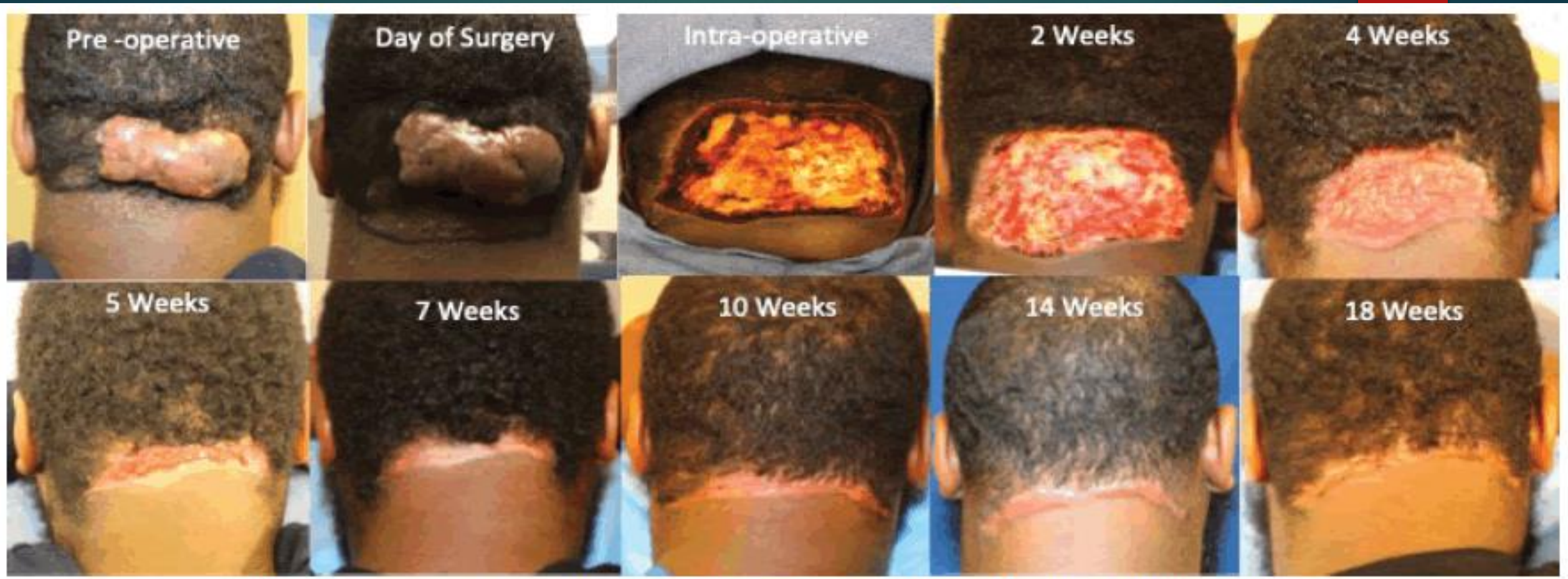
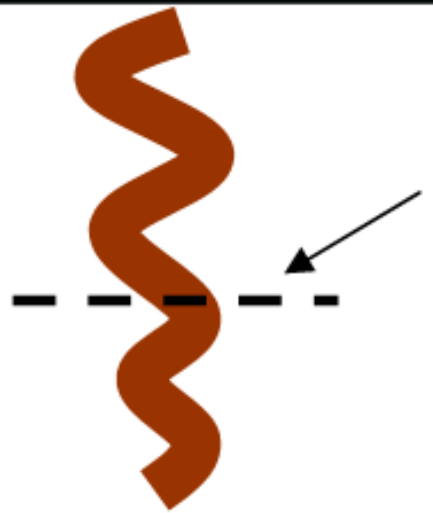
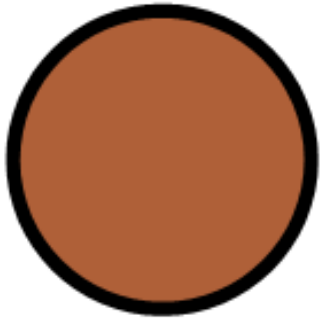


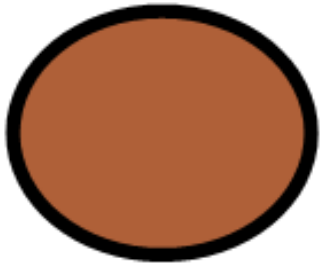
Figure 1: Pre-operative and post-operative photo progression of Patient #1 with acne keloidalis nuchae.



Hair is cut here

(Cross Section)



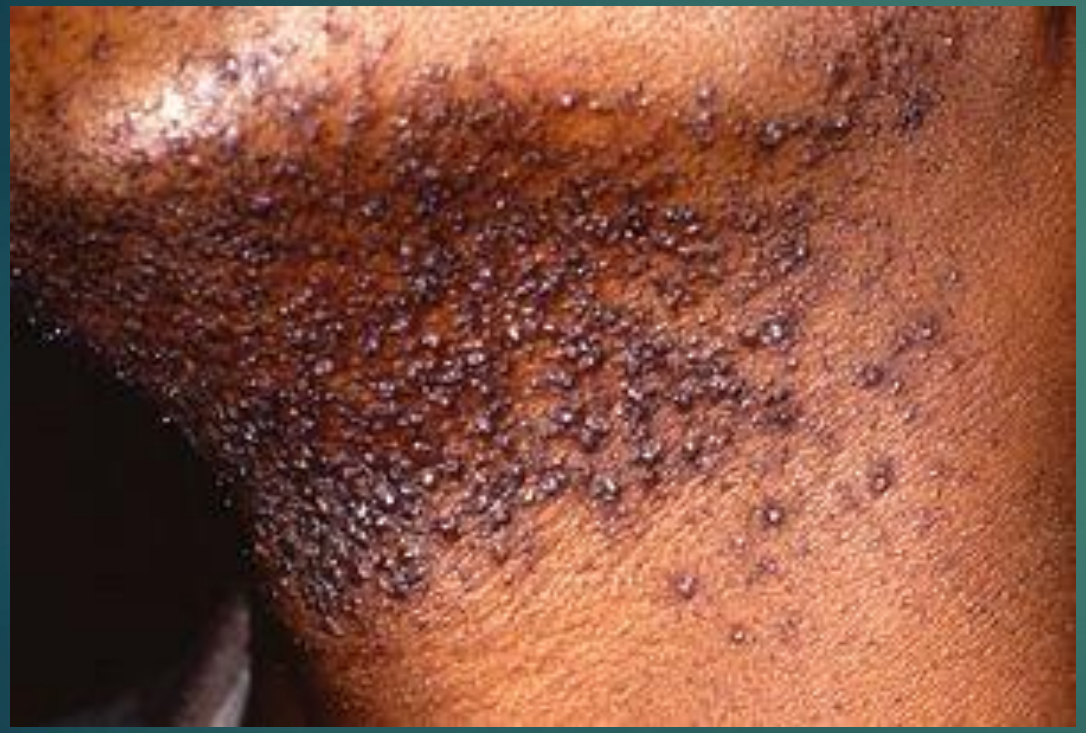


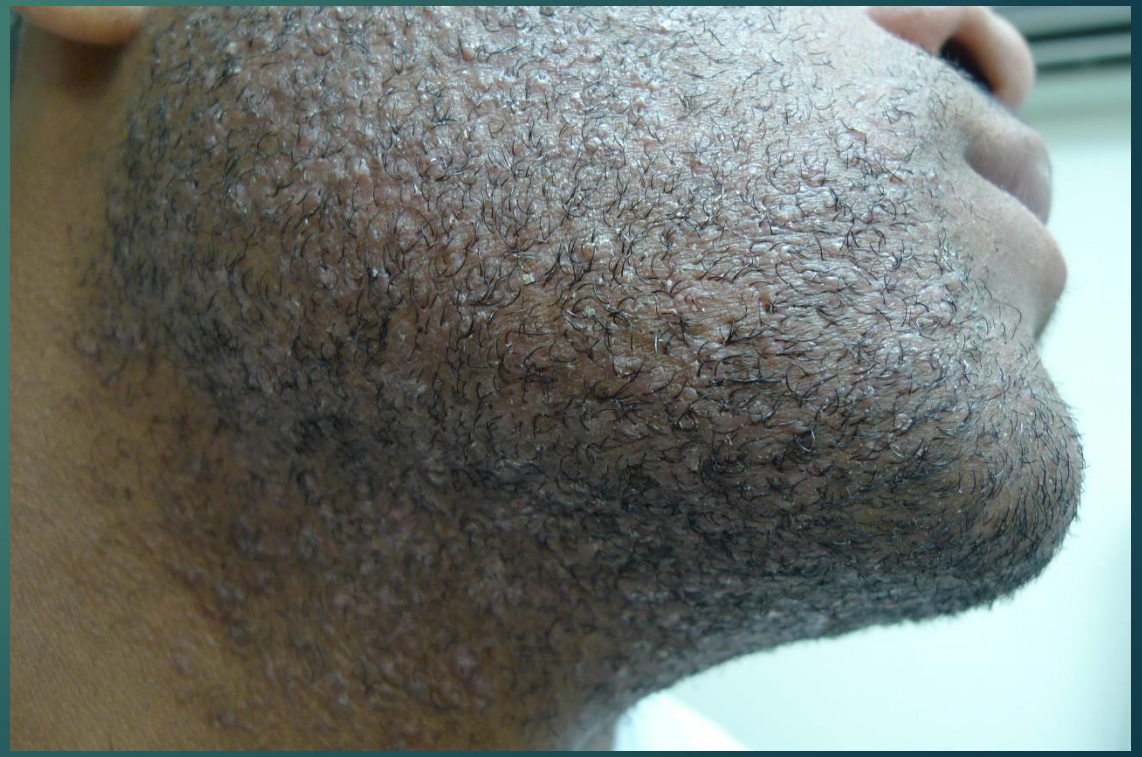
Asian hair
Round shape

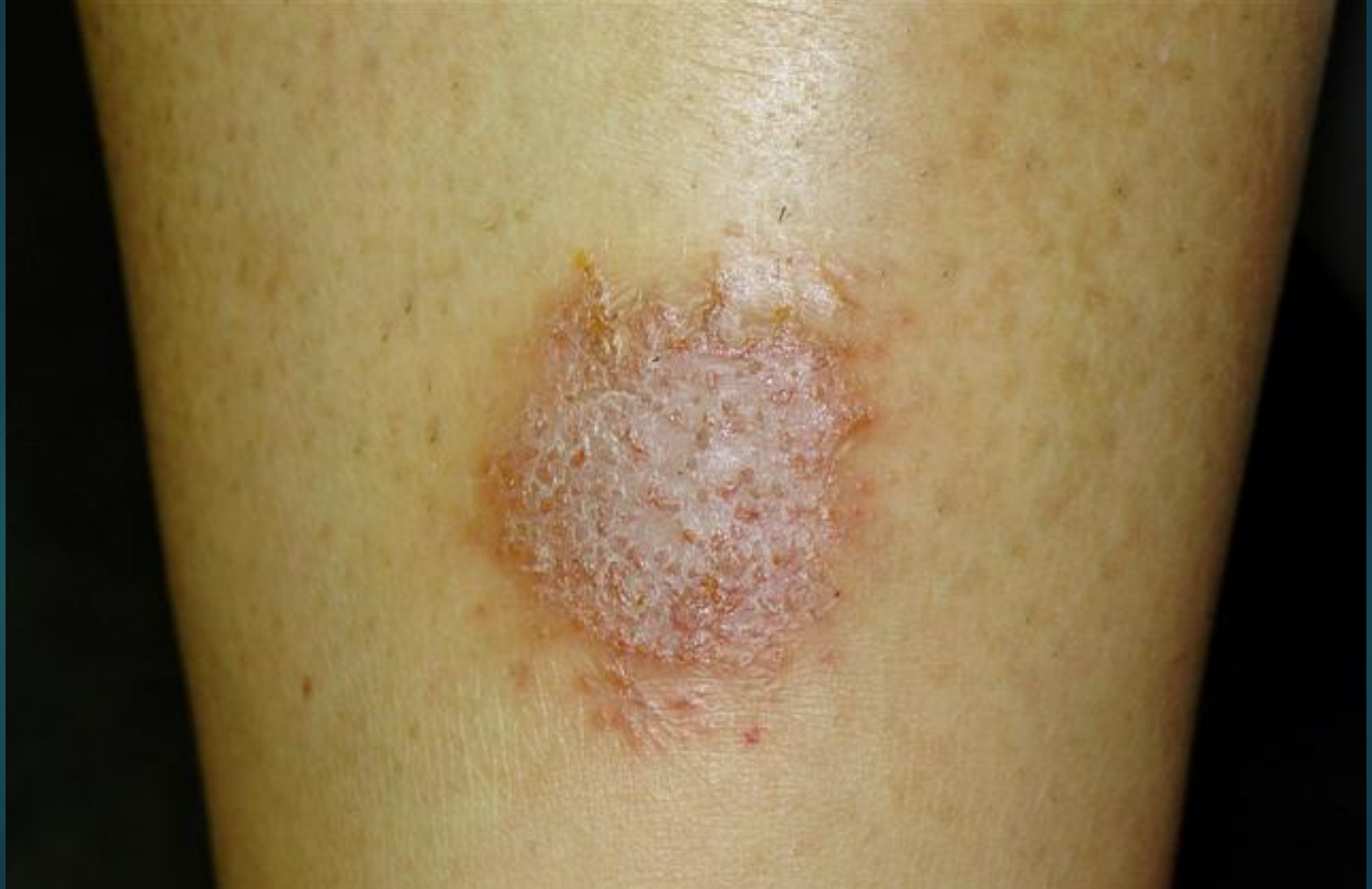
Caucasian hair
Slightly less round than asian hair

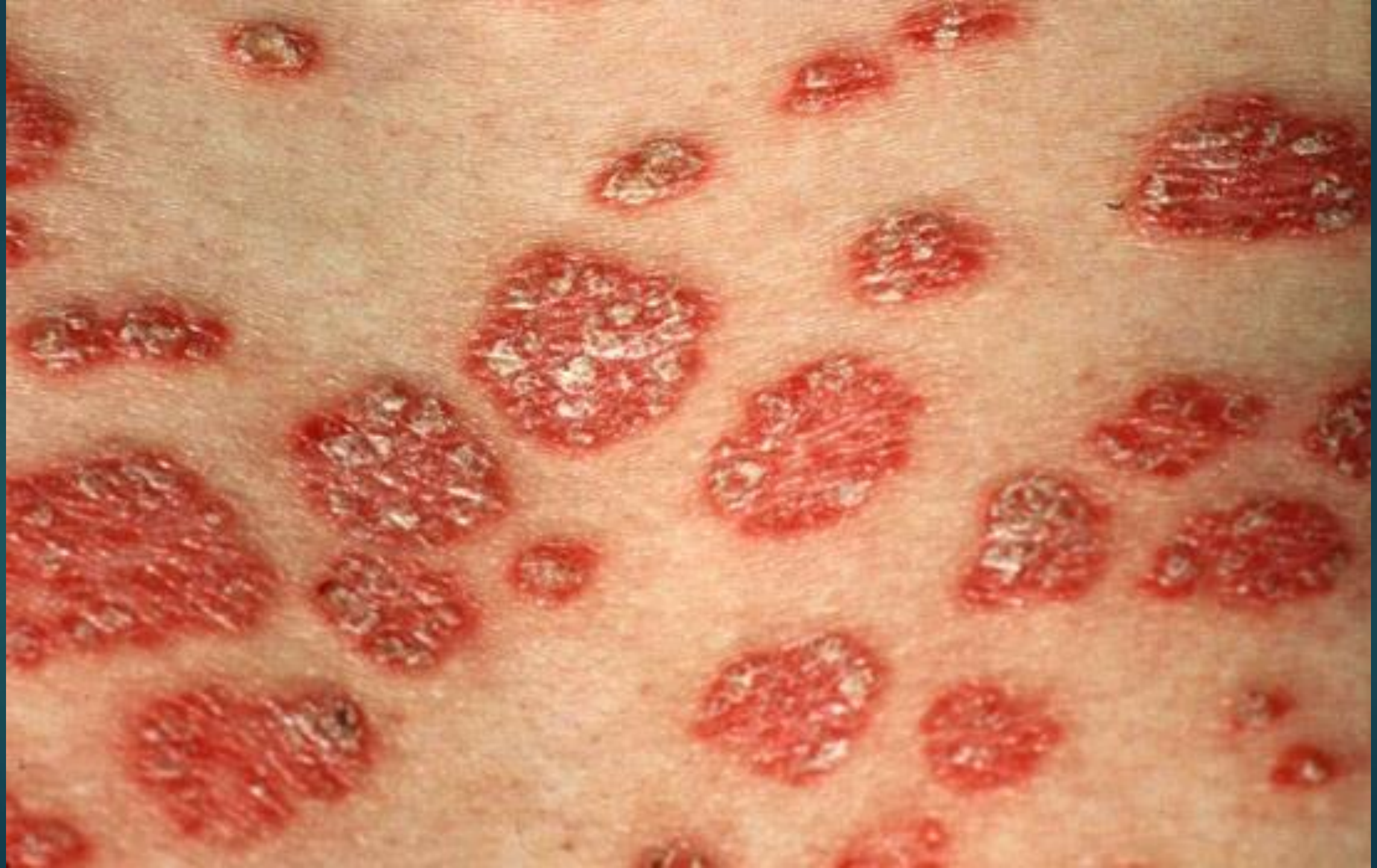
African hair
Oval or elliptical shape.

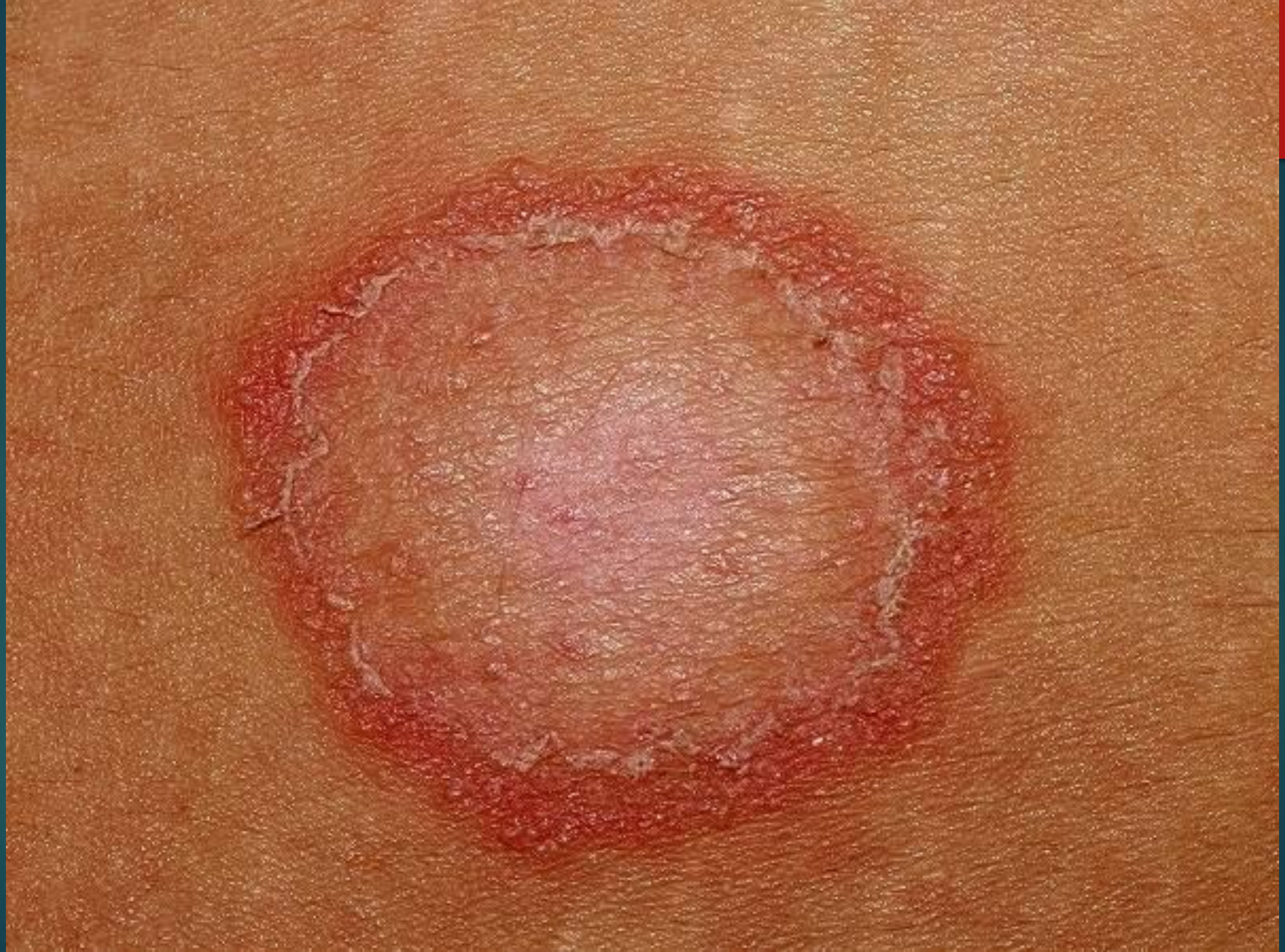
Pseudofolliculitis Barbae

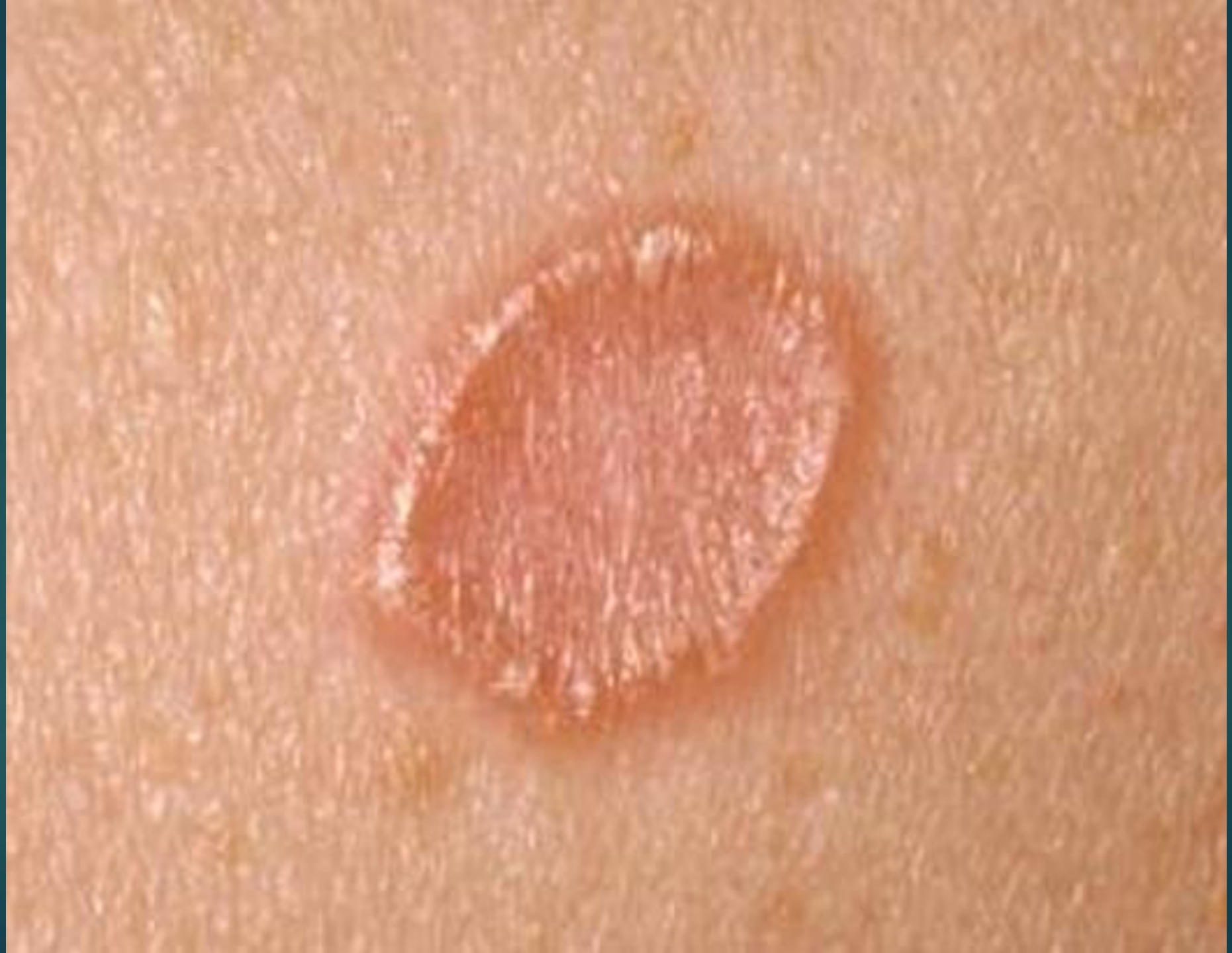


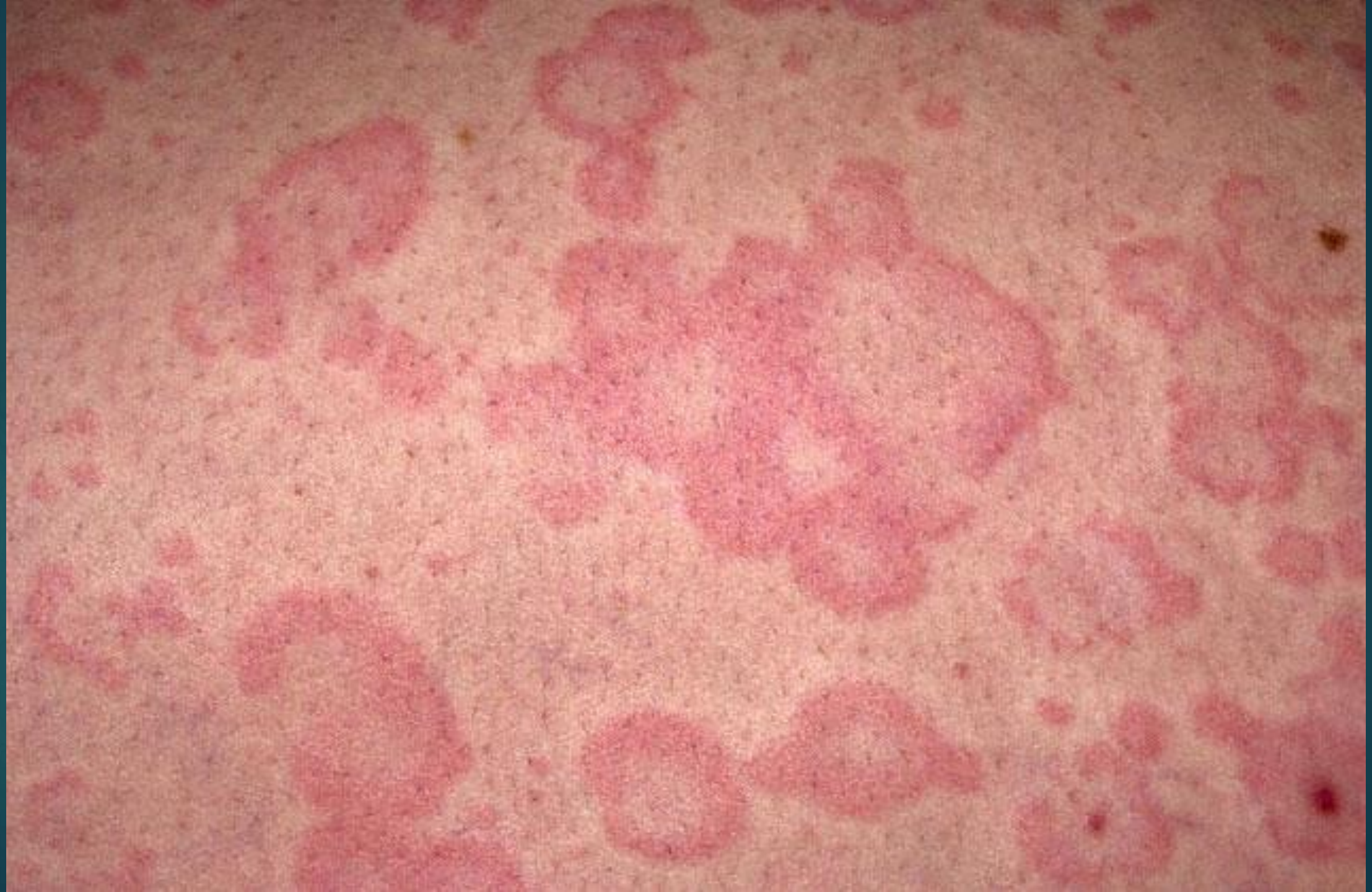


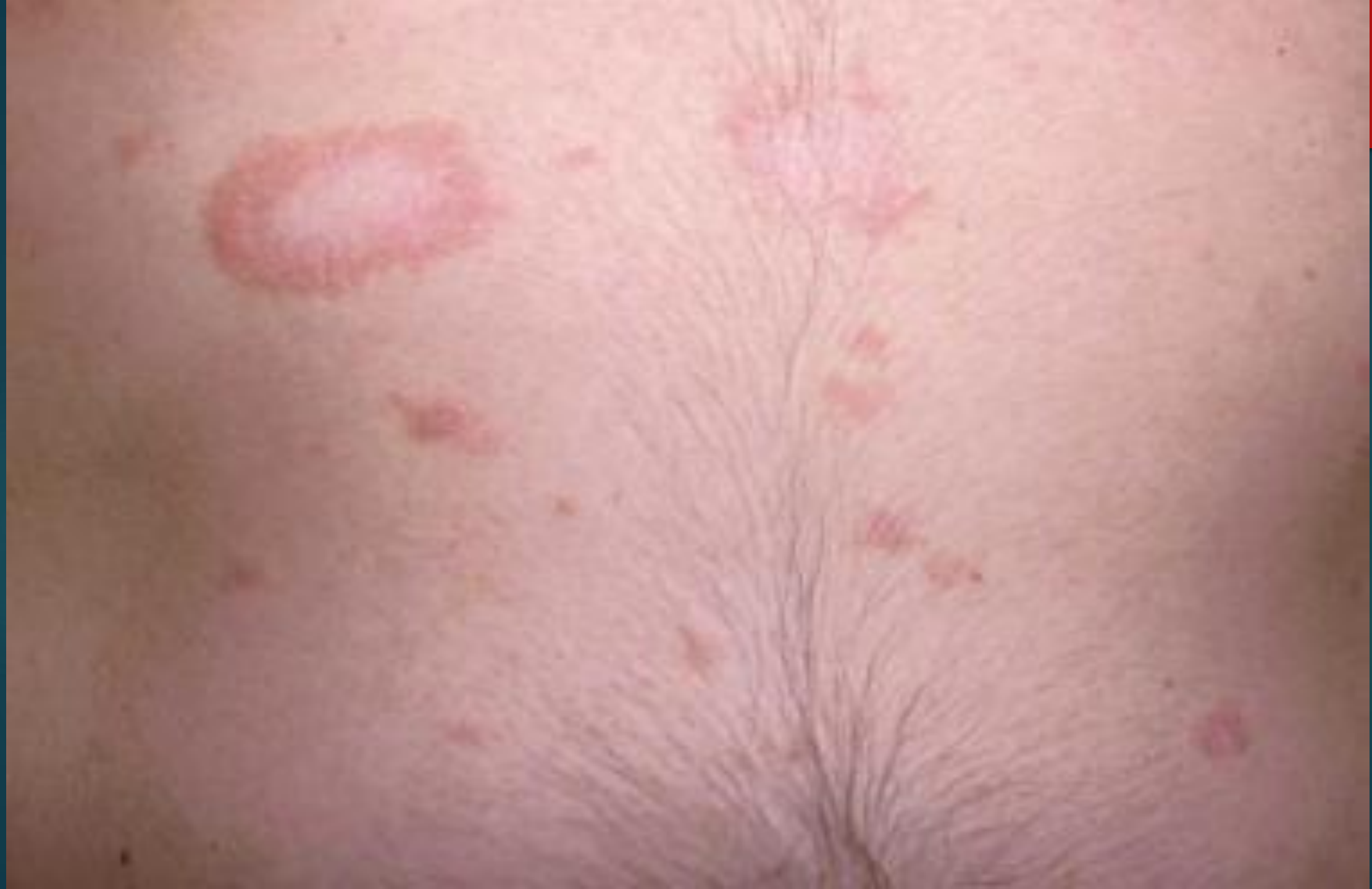








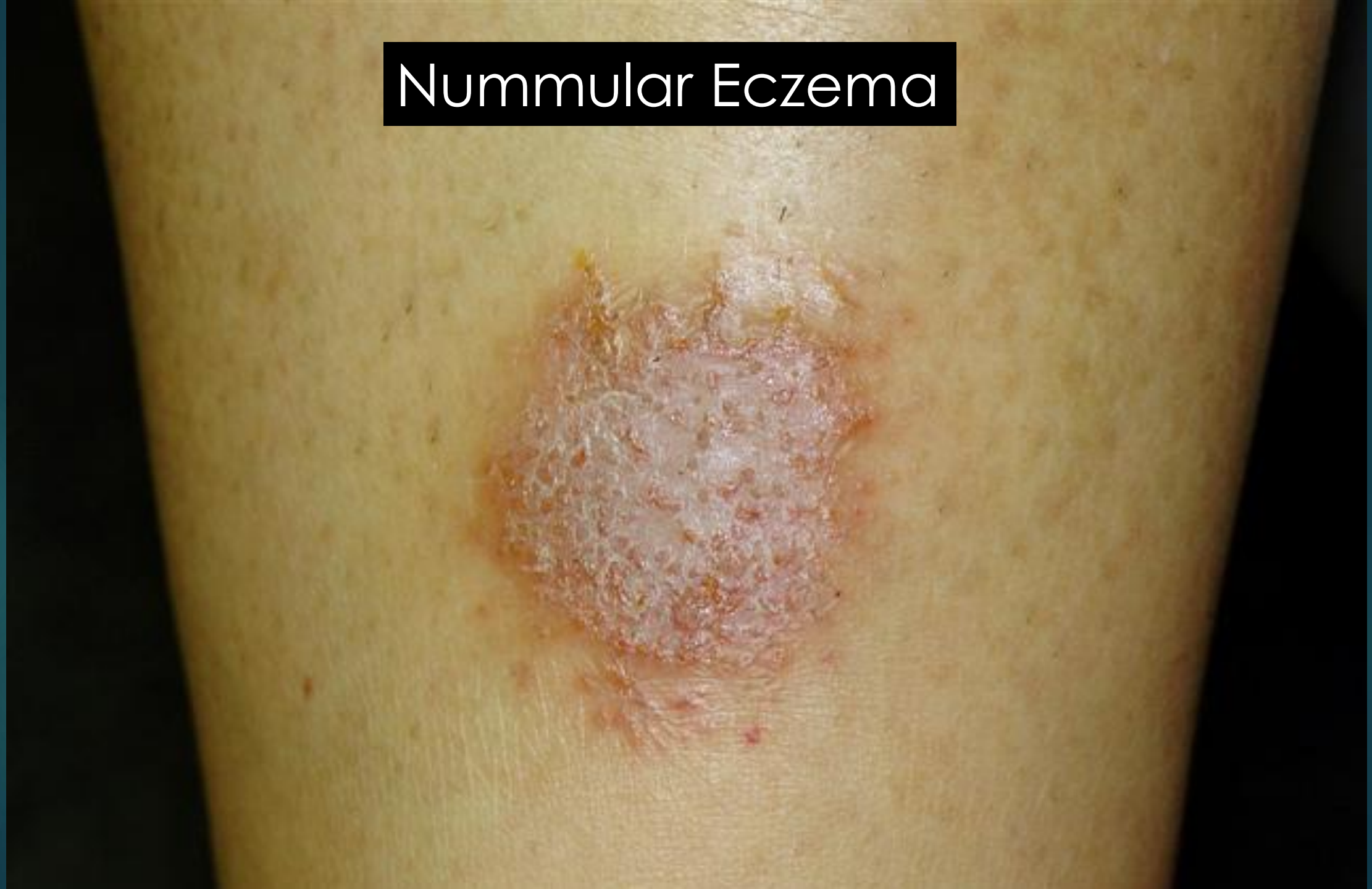




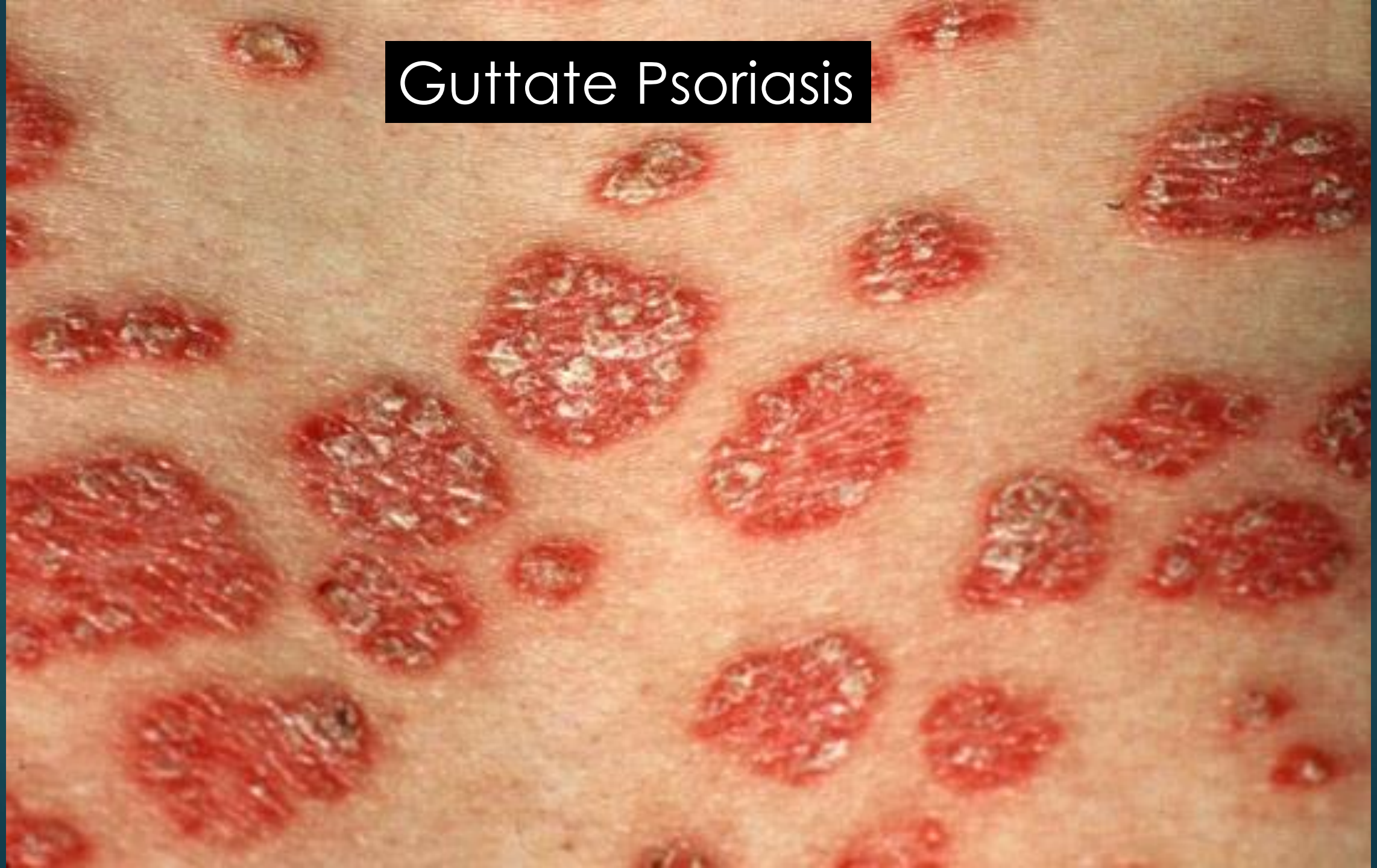
Differential Diagnosis

- Guttate psoriasis
- Nummular eczema
- Granuloma annulare
- Tinea corporis
- Urticaria
- Pityriasis rosea

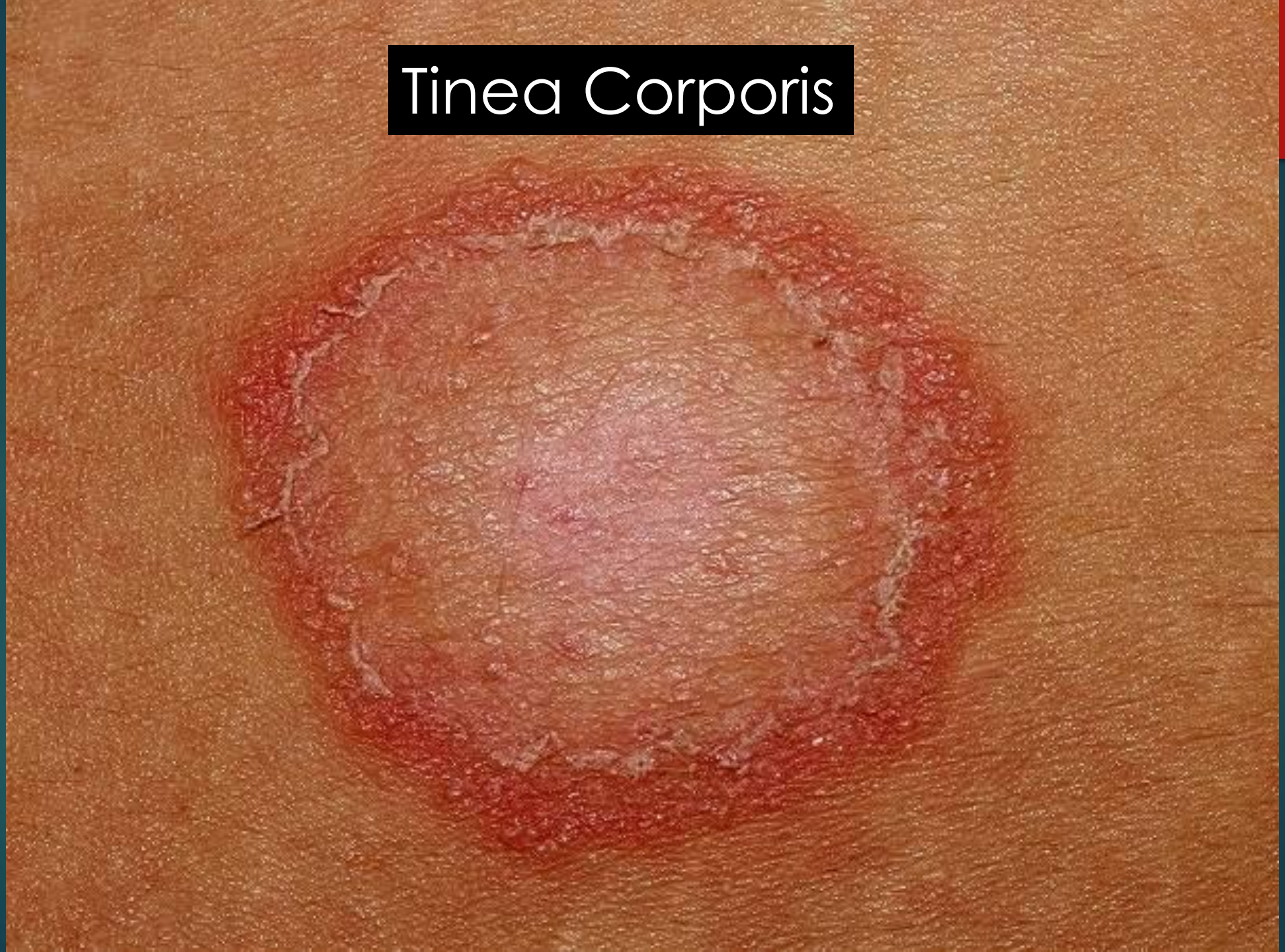
Nummular Eczema



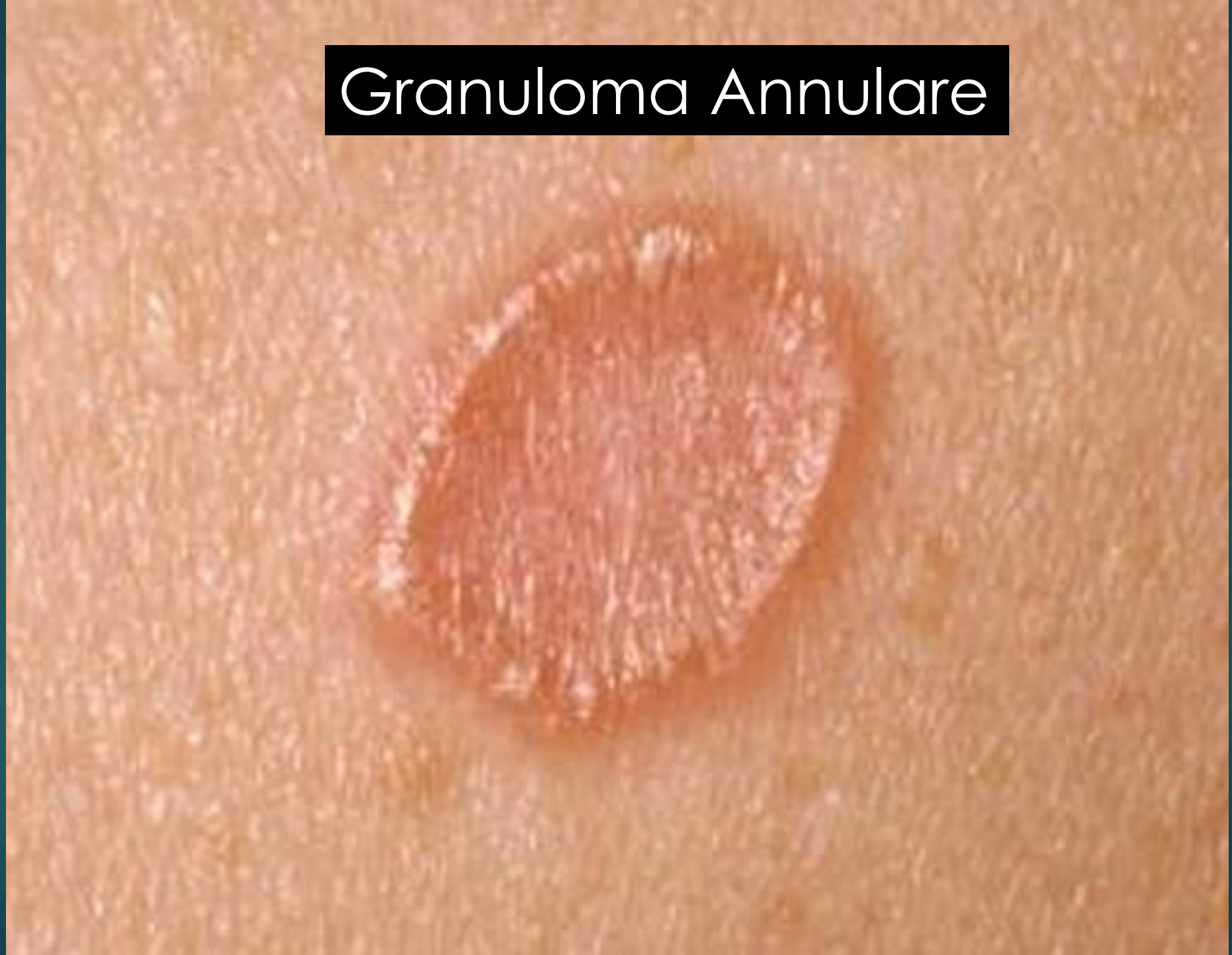
Guttate Psoriasis



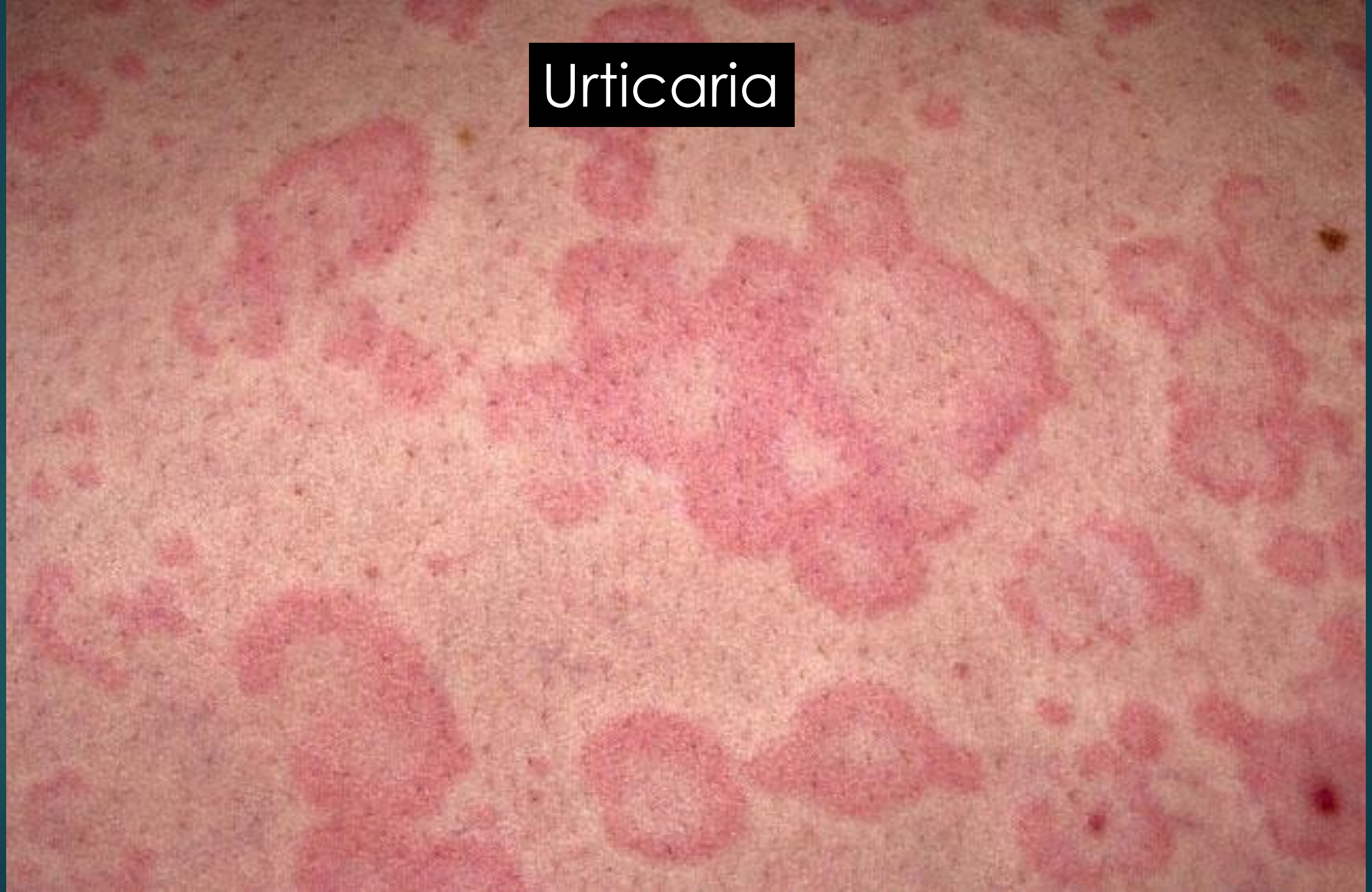
Tinea Corporis



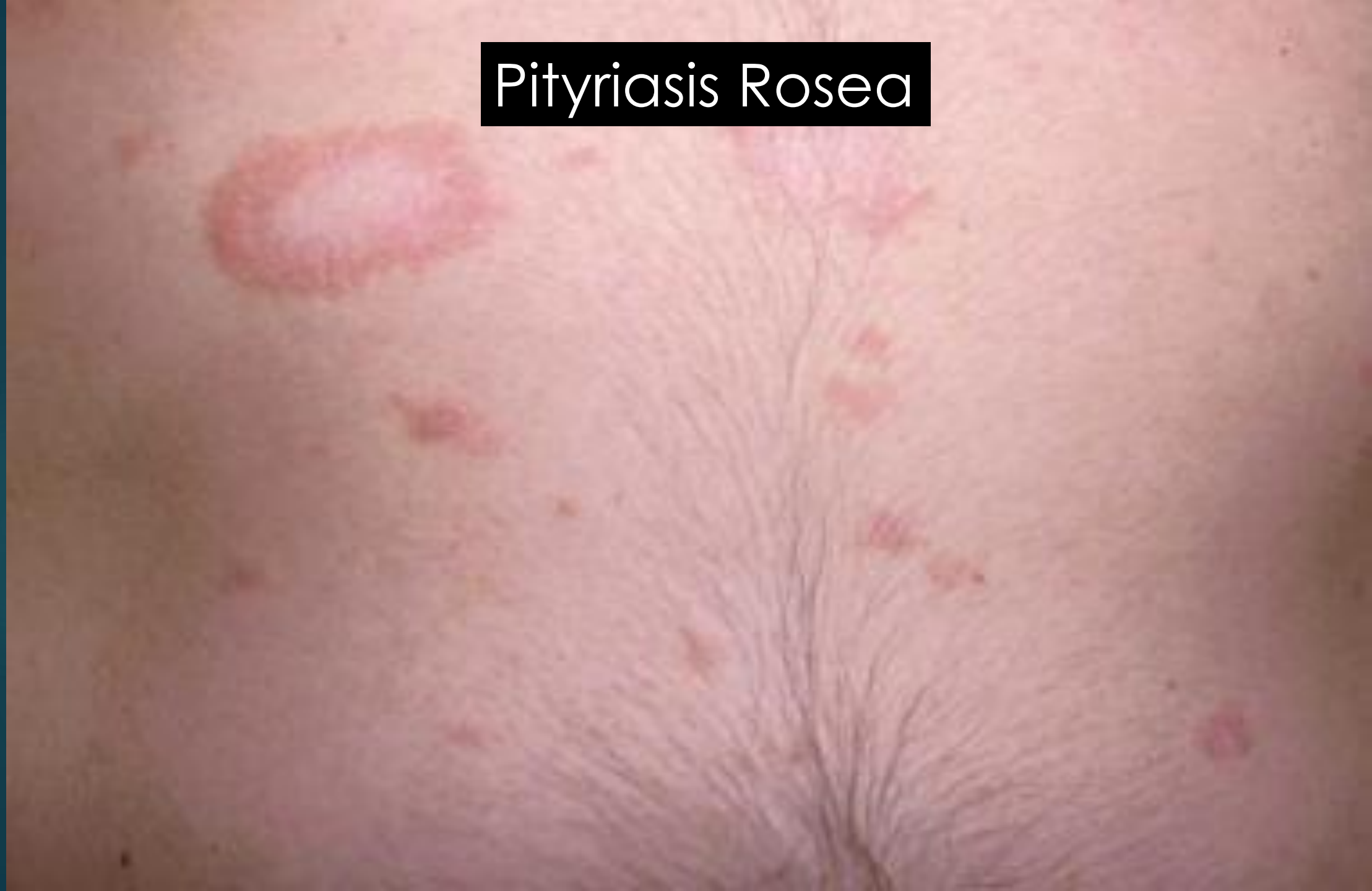
Granuloma Annulare



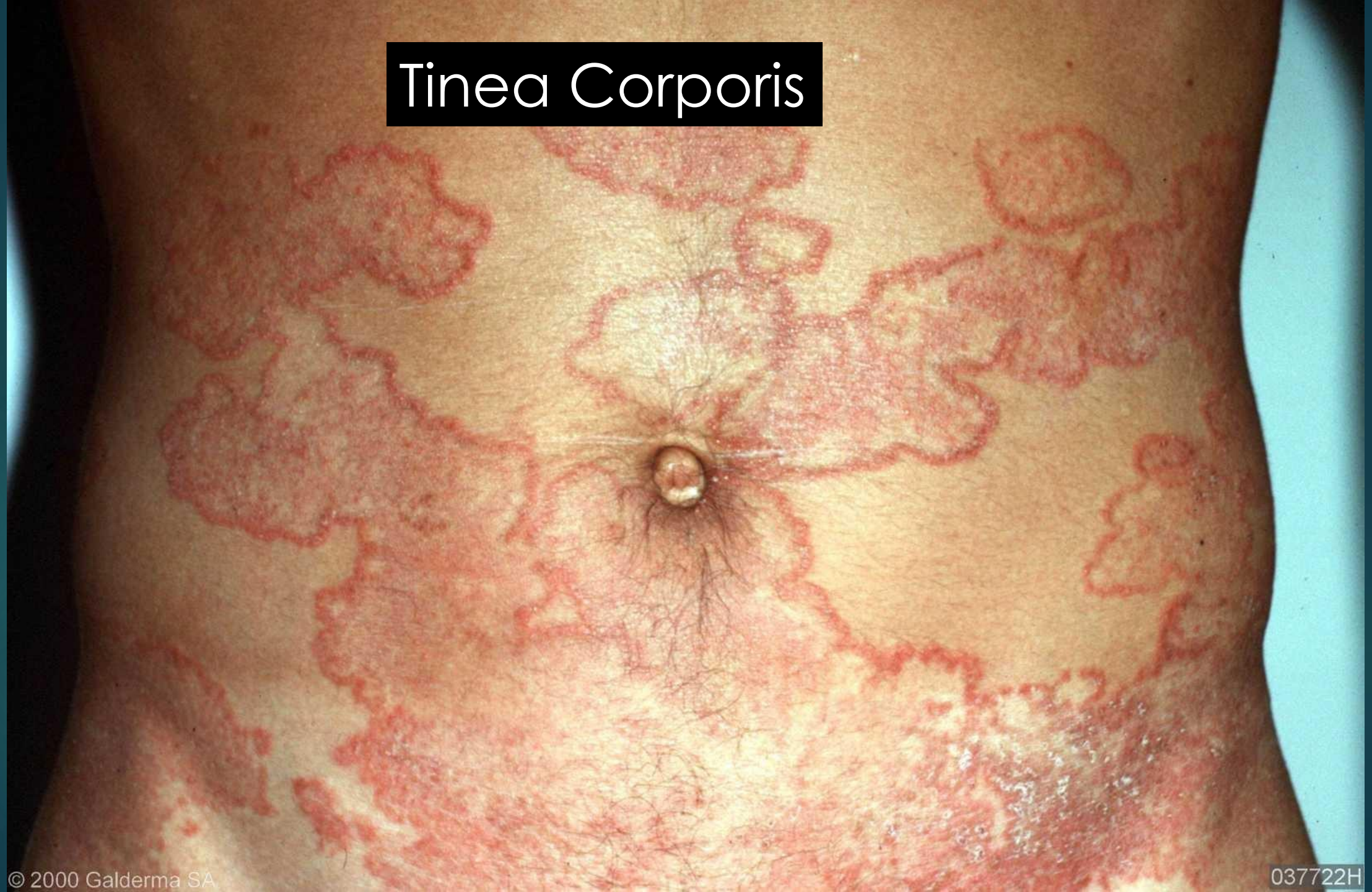
Urticaria

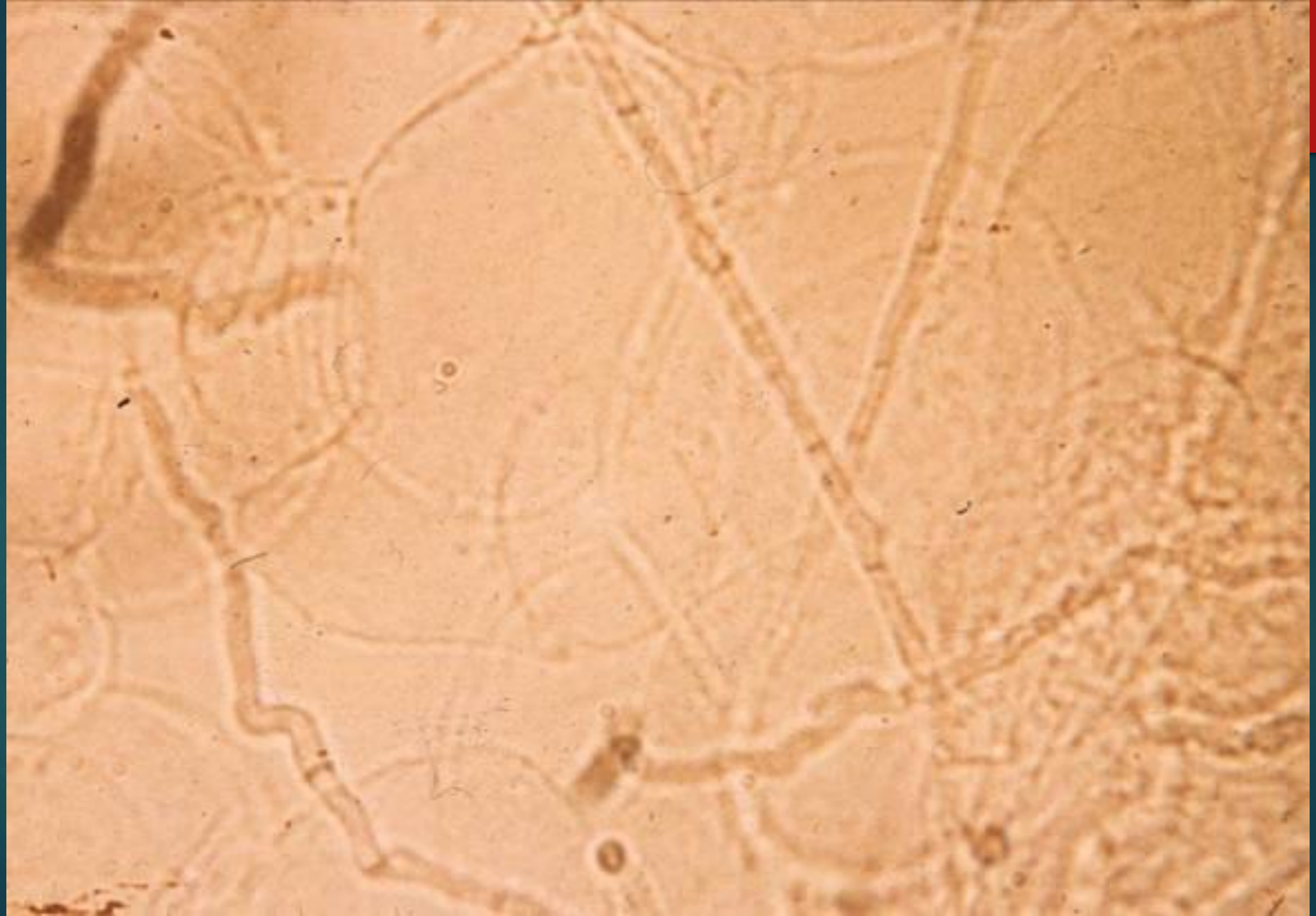


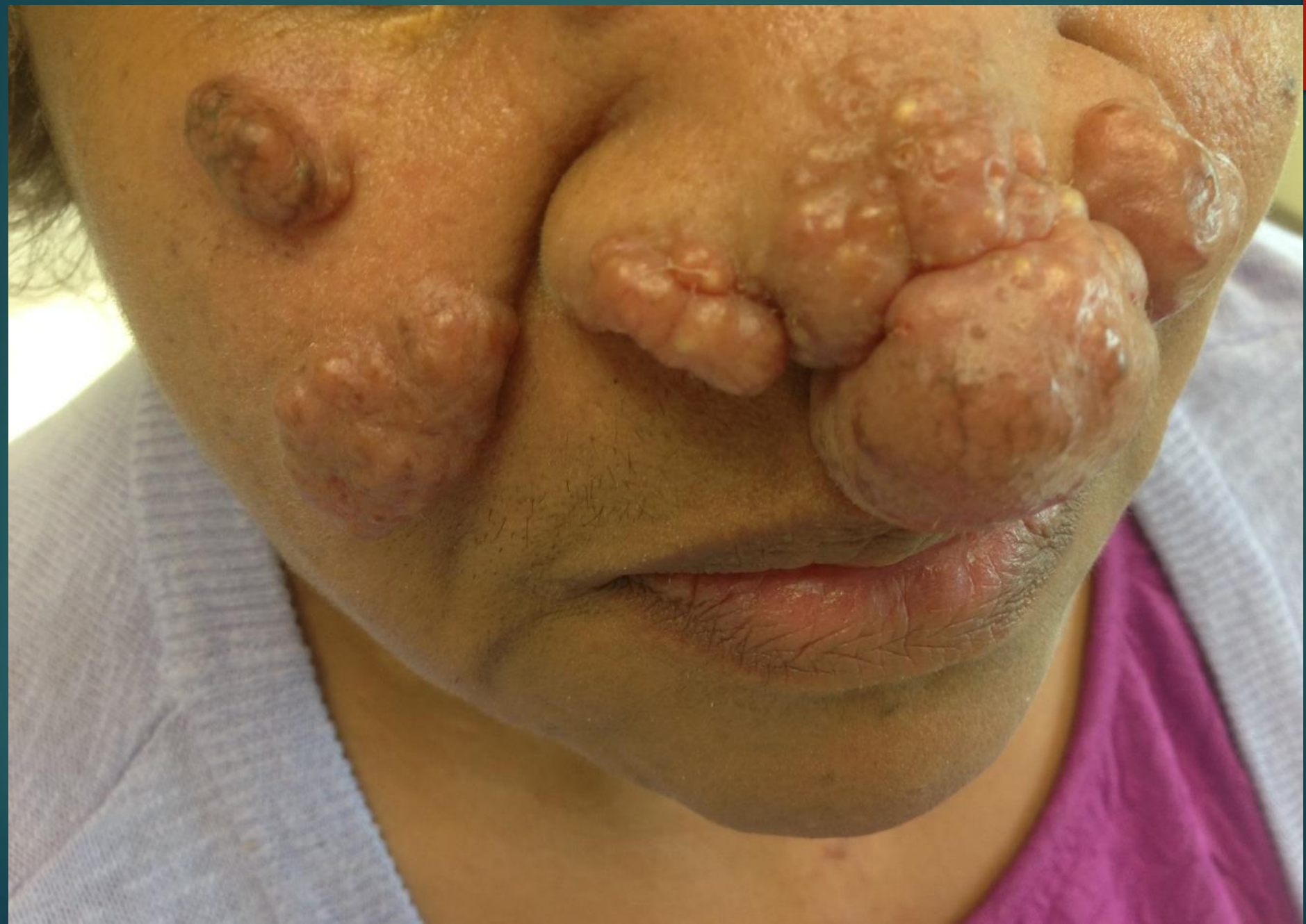
Pityriasis Rosea

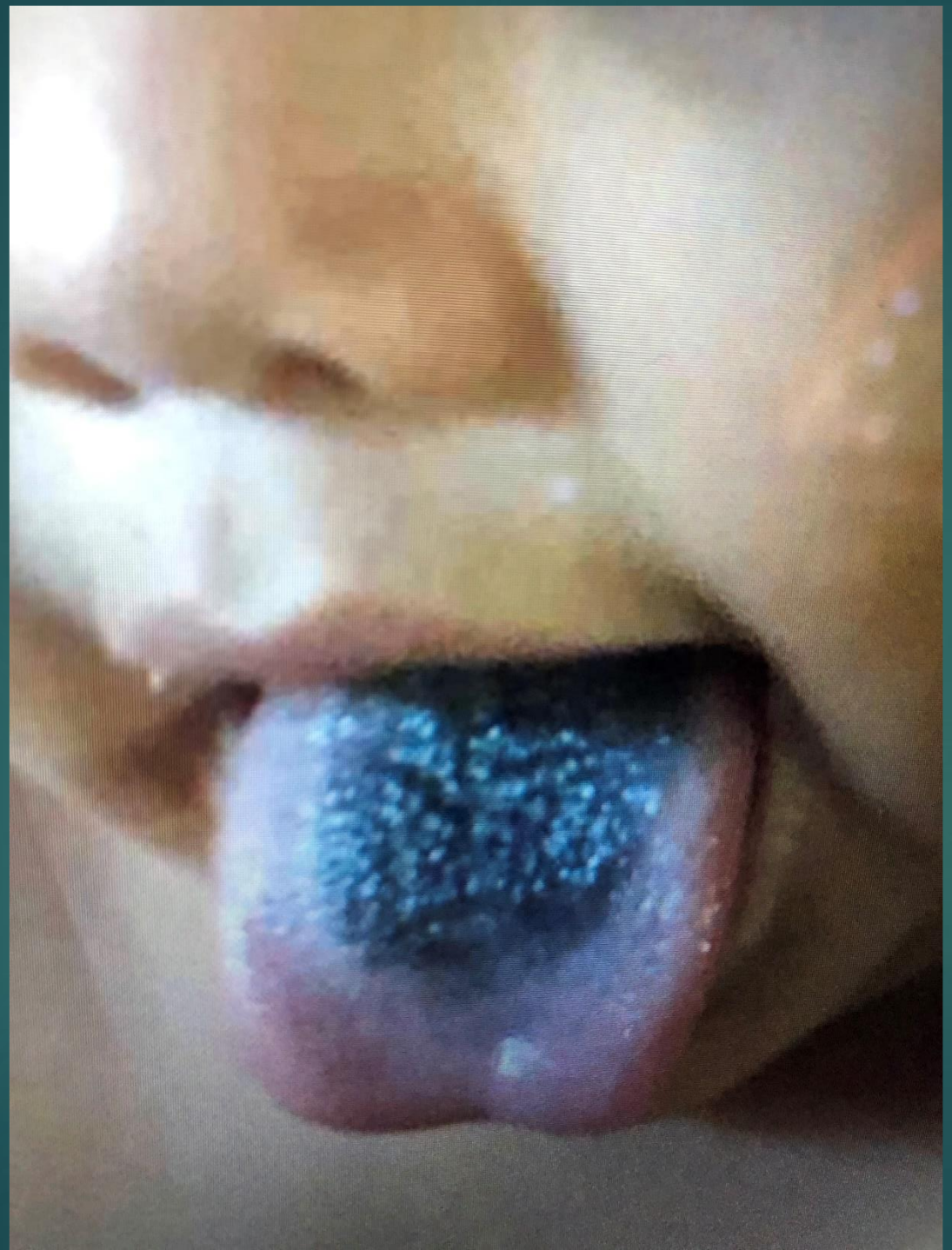


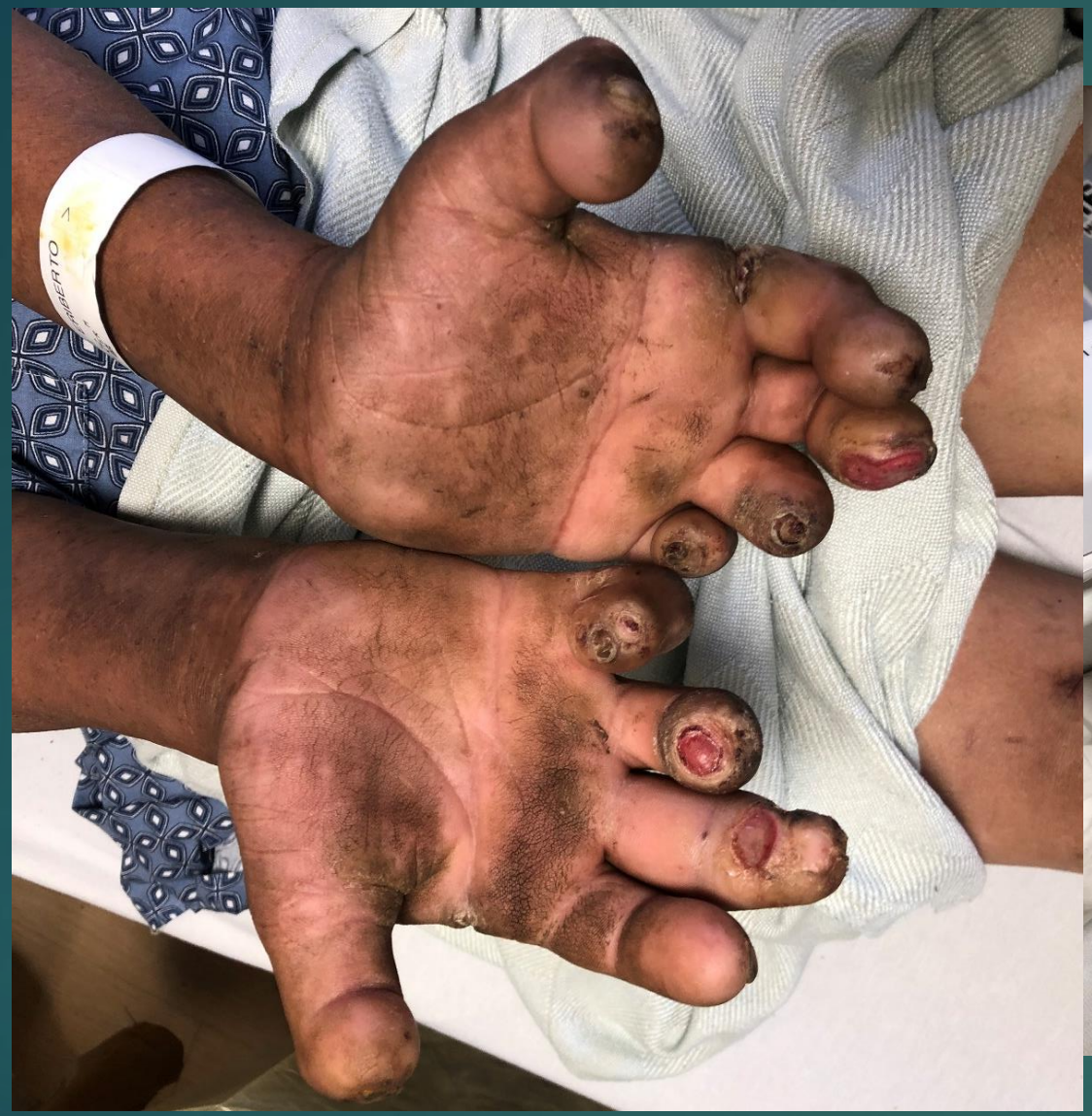
Tinea Corporis

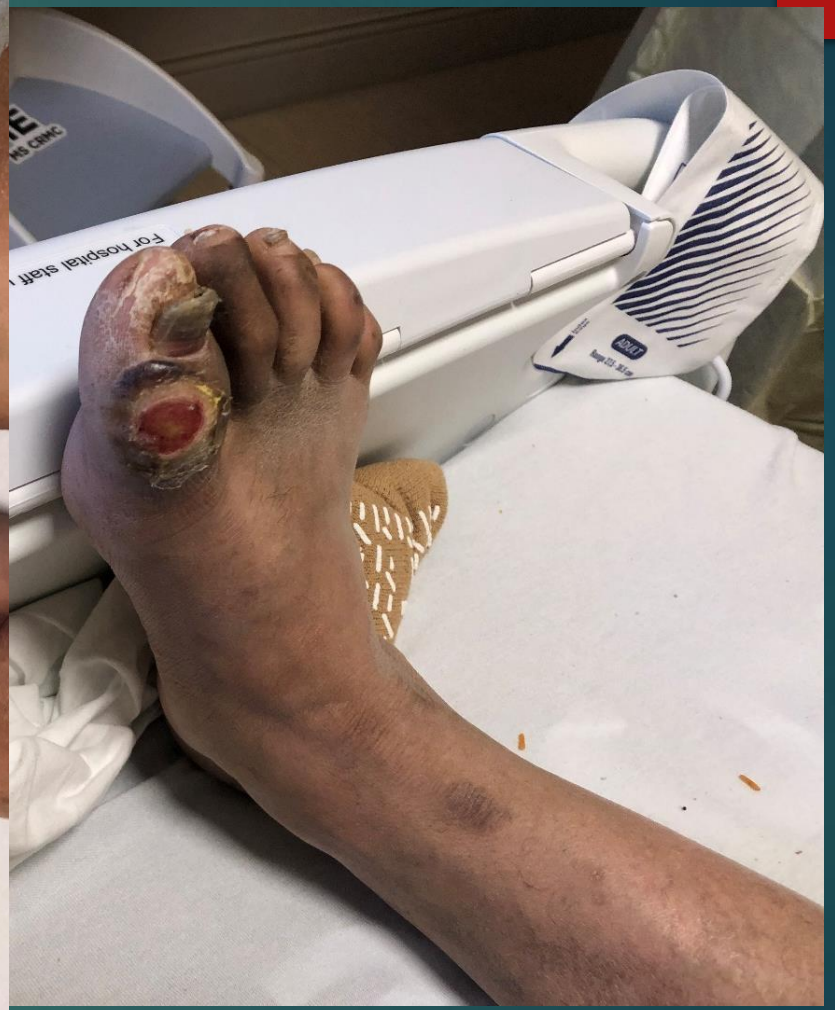


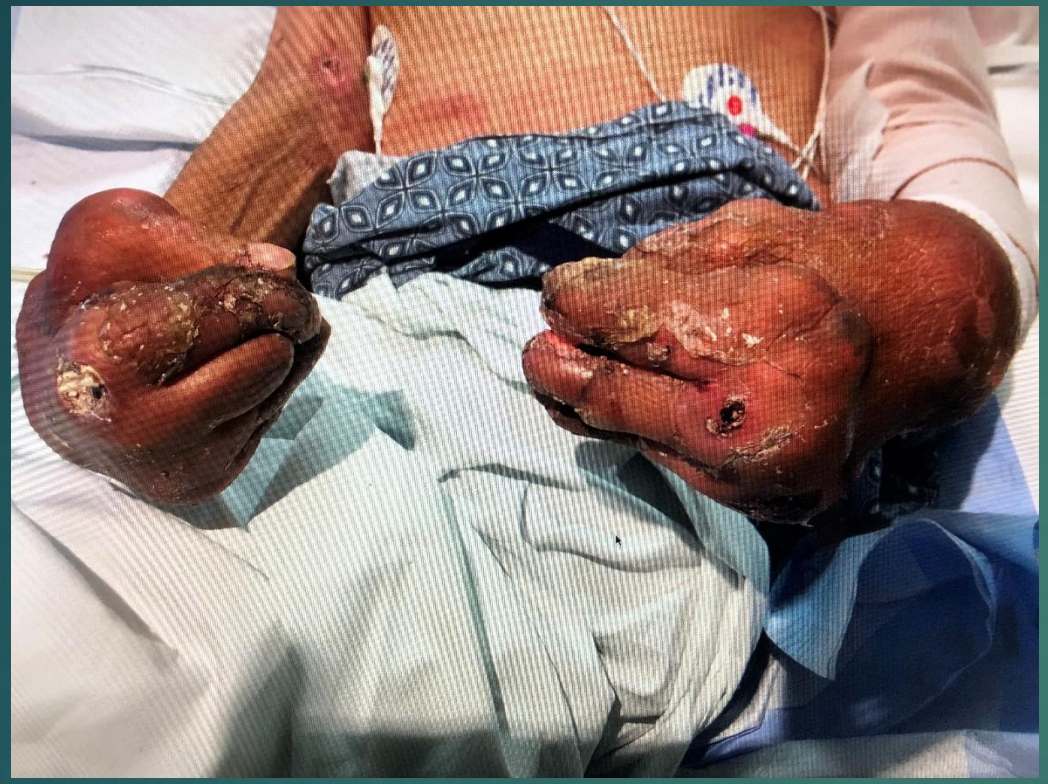


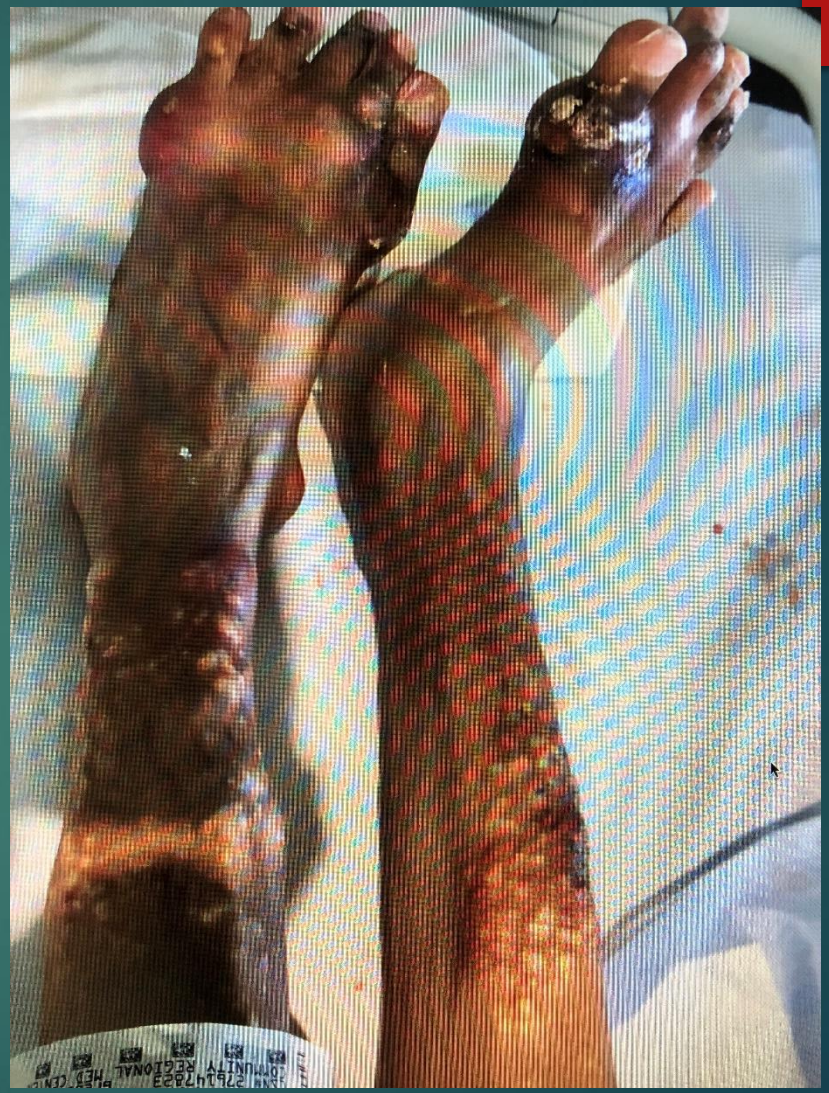












BORN WITH ALBINISM

Conclusions

- Fitzpatrick skin types
- Prevention of rash=Prevent pigment change
- Hypopigmented vs Depigmented
- Sun Protection
- Differentials

- Luis Dehesa Sheila Mayo Greg Simpson David Mapes




Thank you