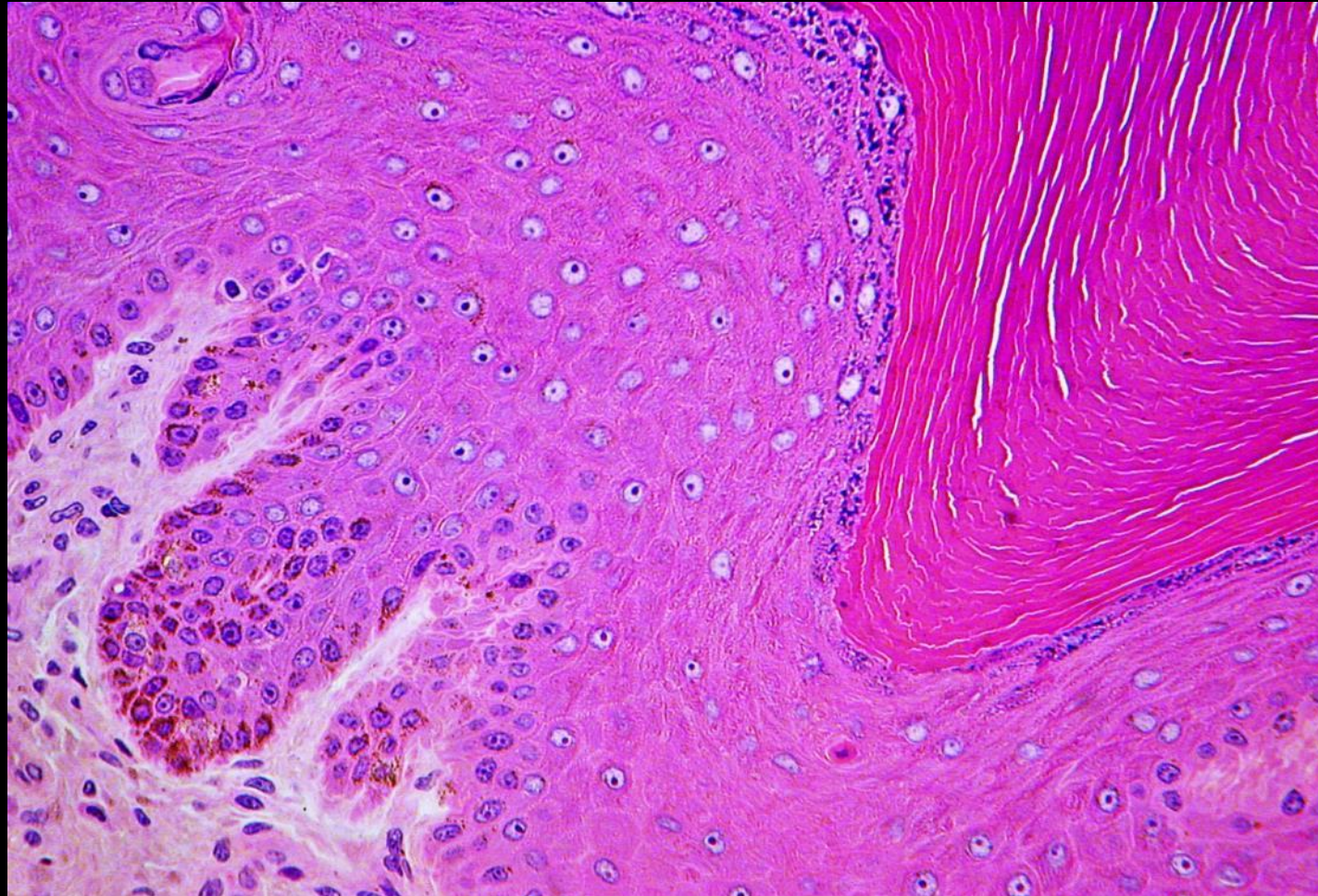
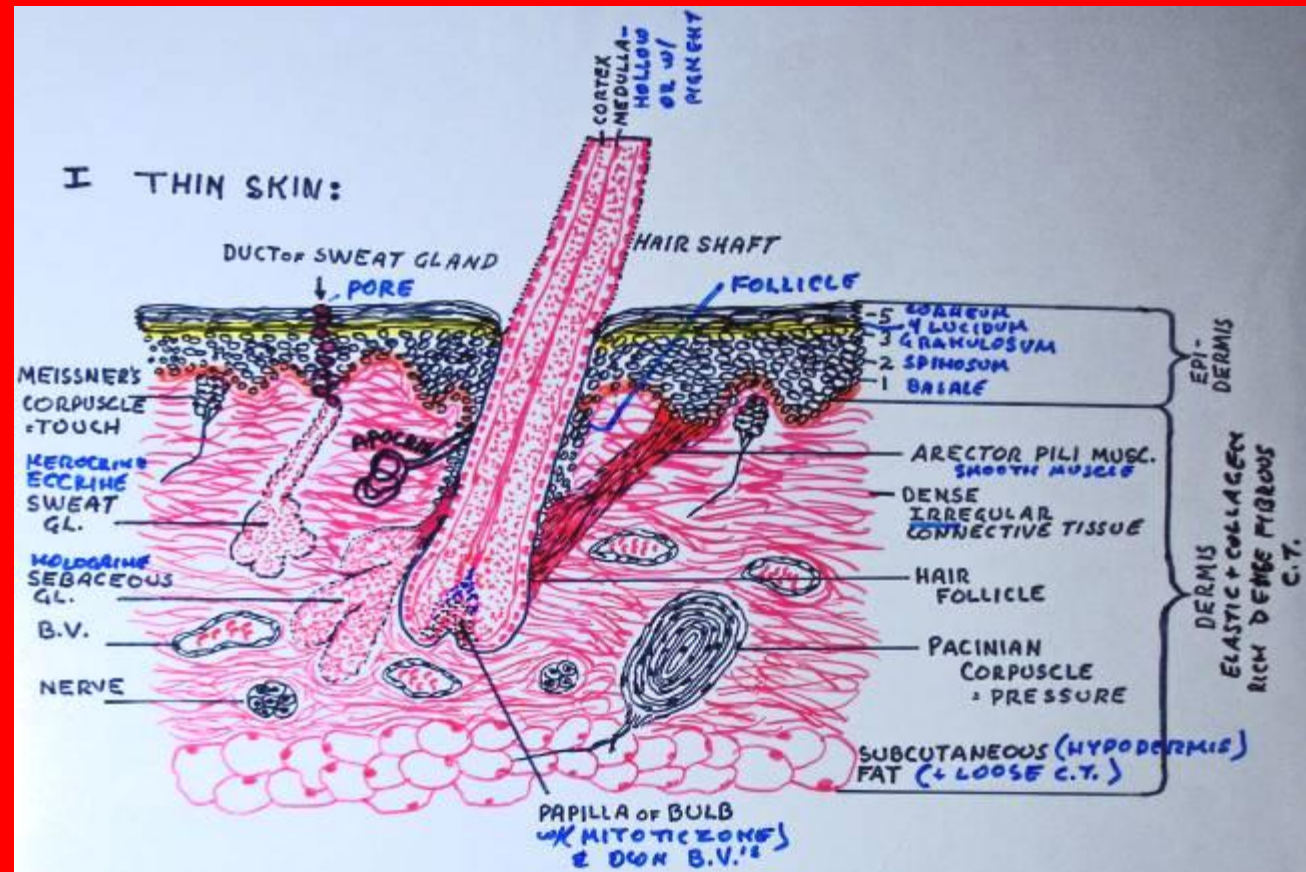


SKIN HISTOLOGY – the microscopic anatomy of the Integument

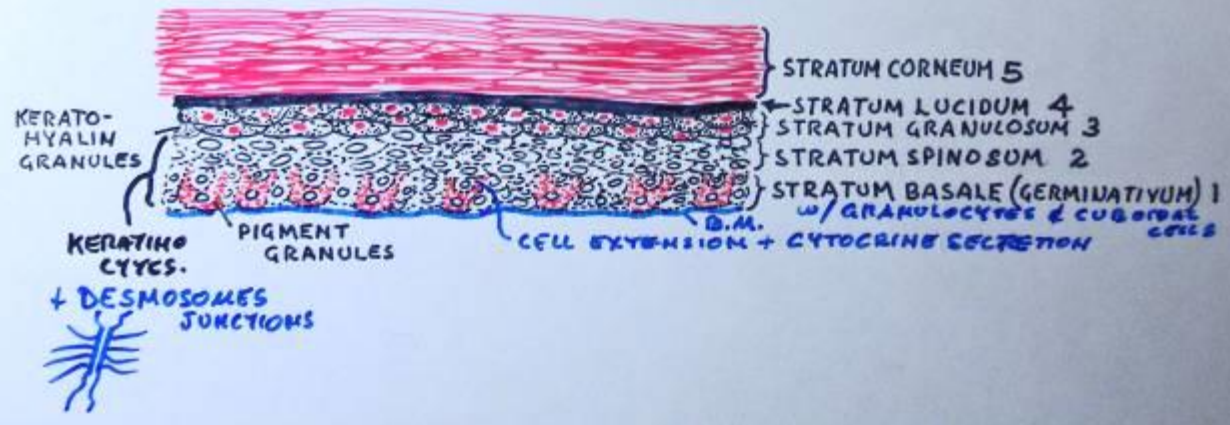


I THIN SKIN:

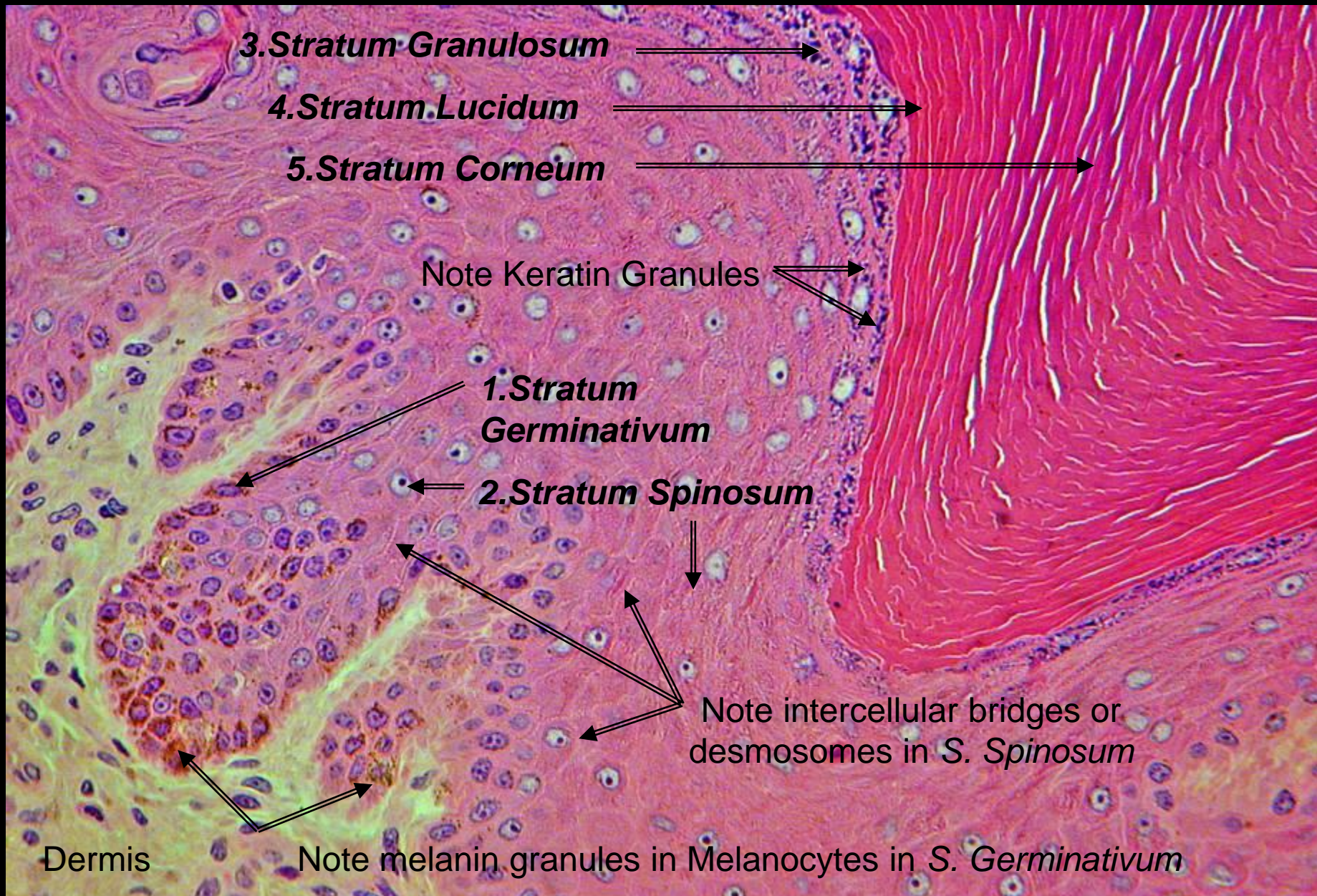


Hair follicles, sweat glands, sebaceous glands (even teeth) are products of the epidermis, embryologically speaking ectoderm, that extend downward into the dermis.

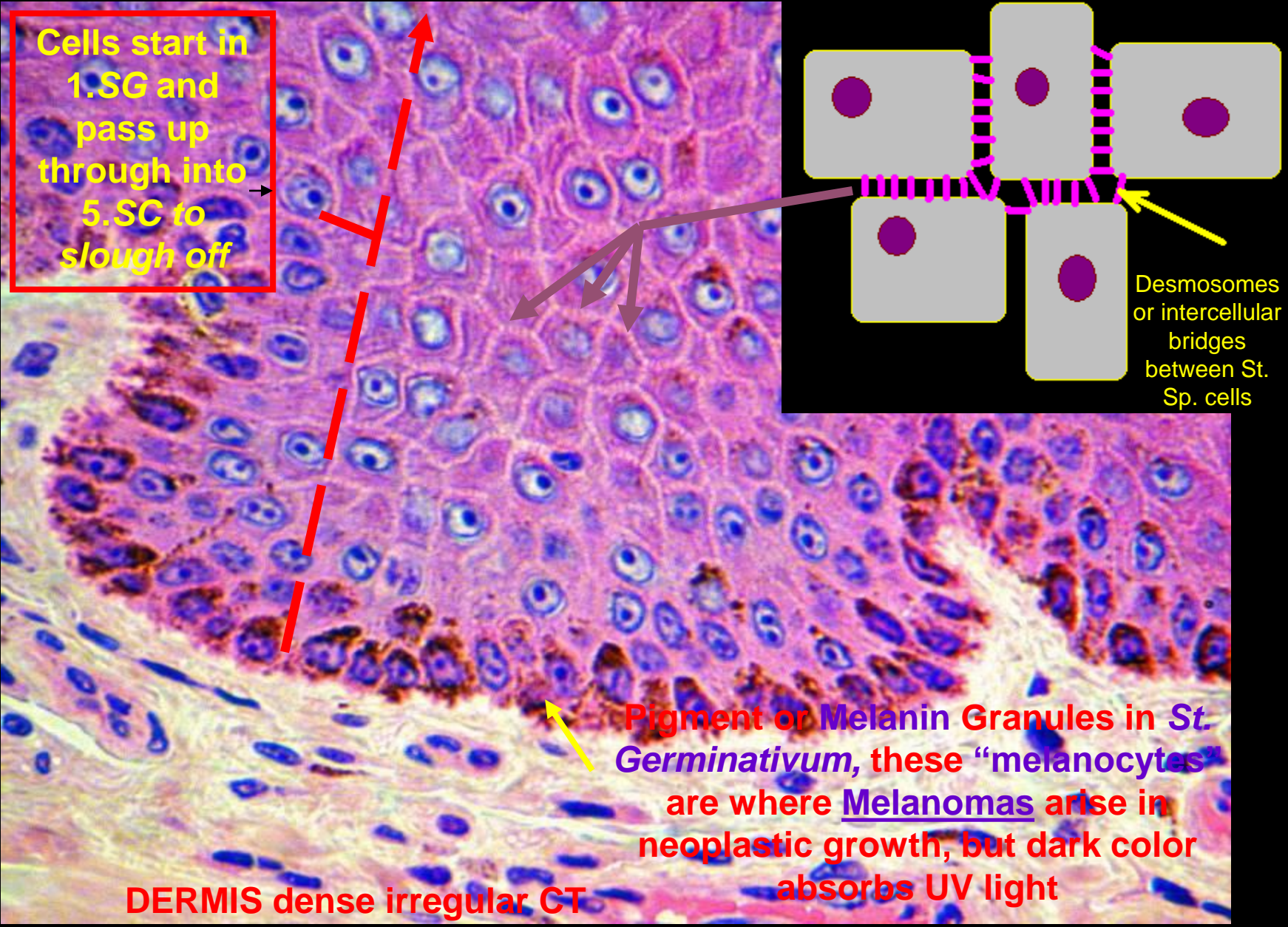
II THICK SKIN EPITHELIUM:



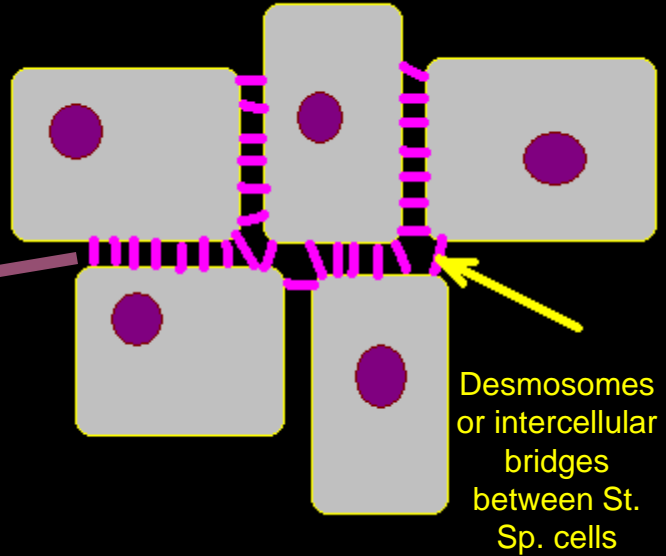
Palms & soles – 'thick skin'



The 5 Layers of the Epidermis (1.5 μ m ultra thin section, @100X, H&E)



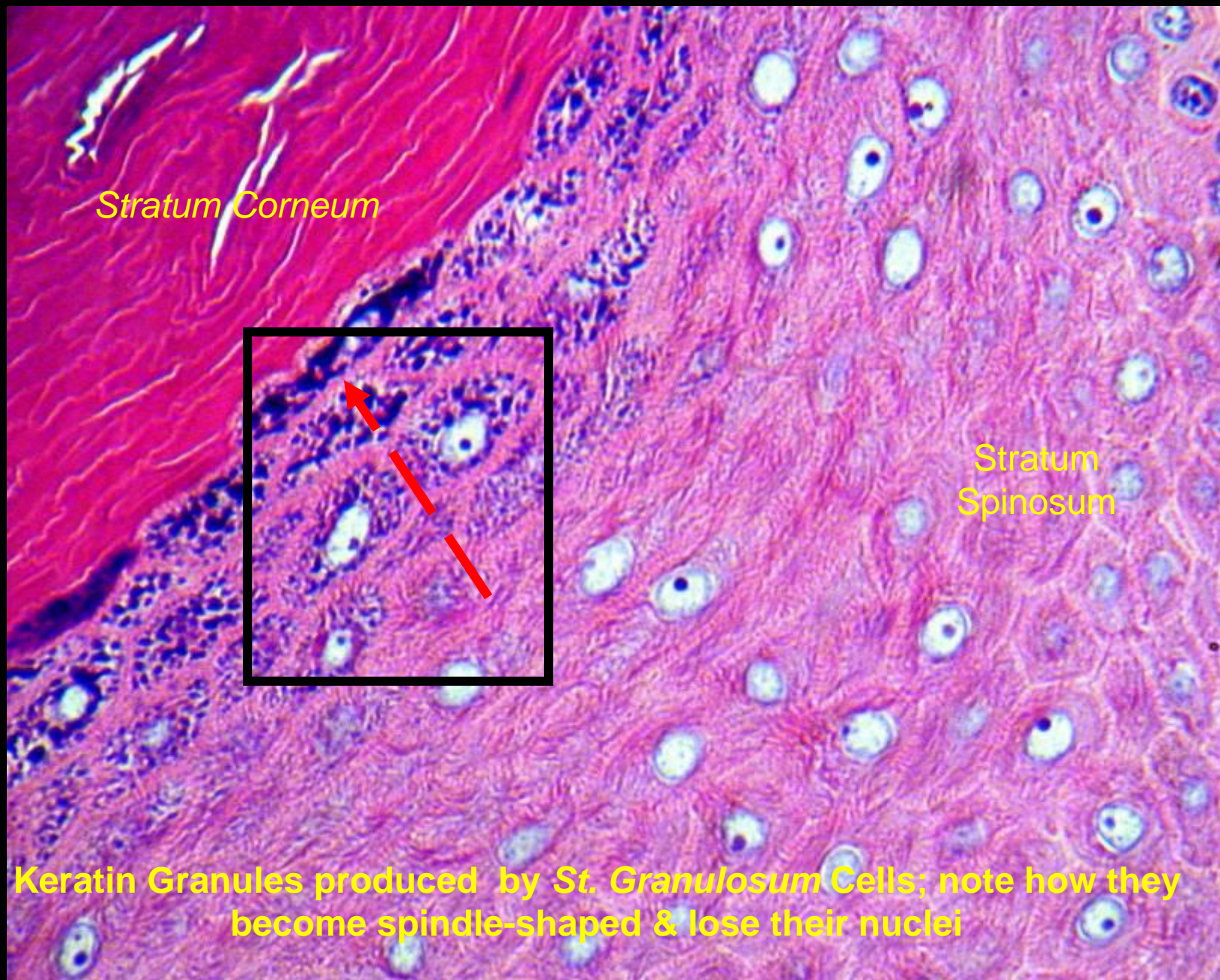
Cells start in 1.SG and pass up through into 5.SC to slough off

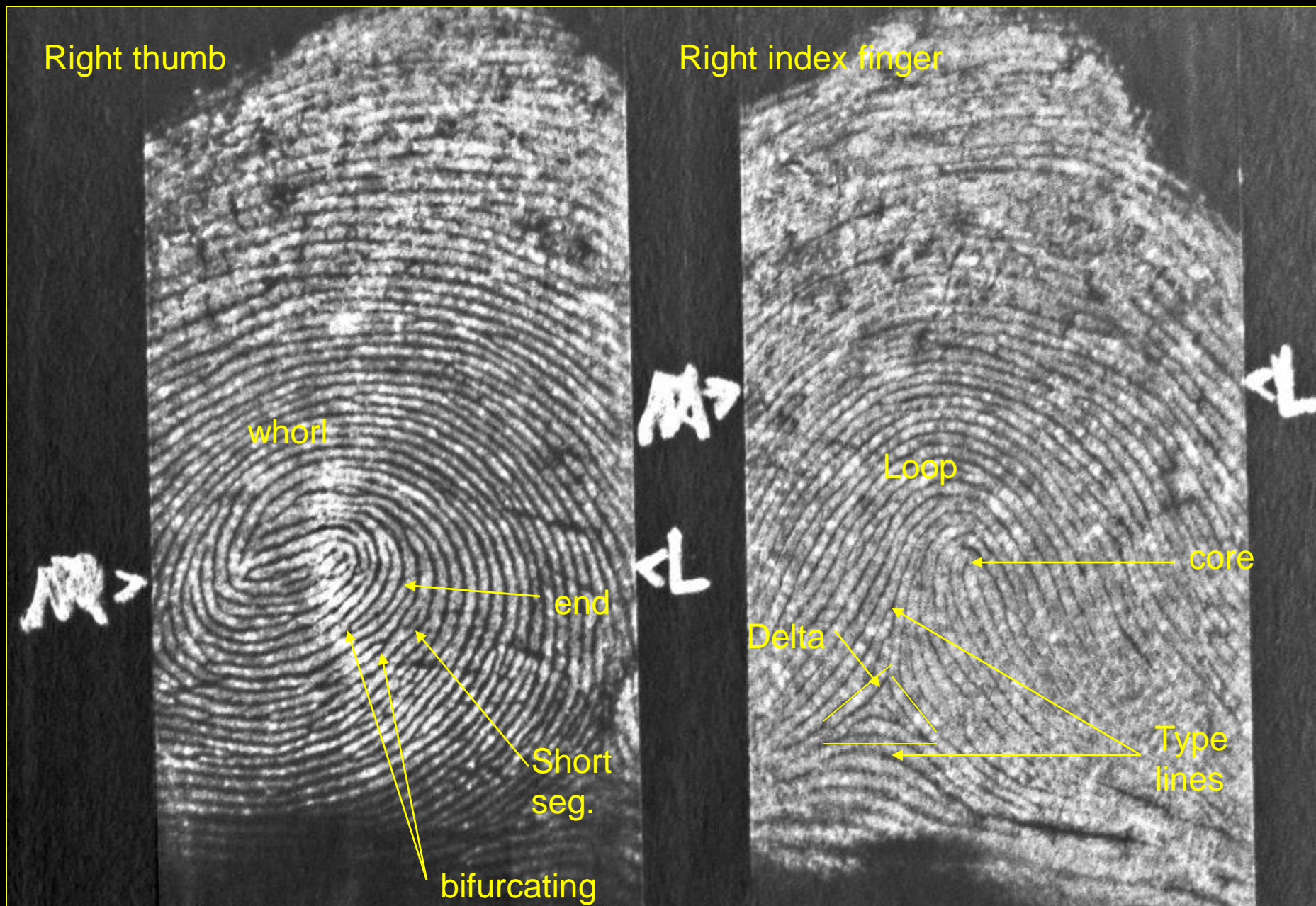


Pigment or Melanin Granules in St. Germinativum, these "melanocytes" are where Melanomas arise in neoplastic growth, but dark color absorbs UV light

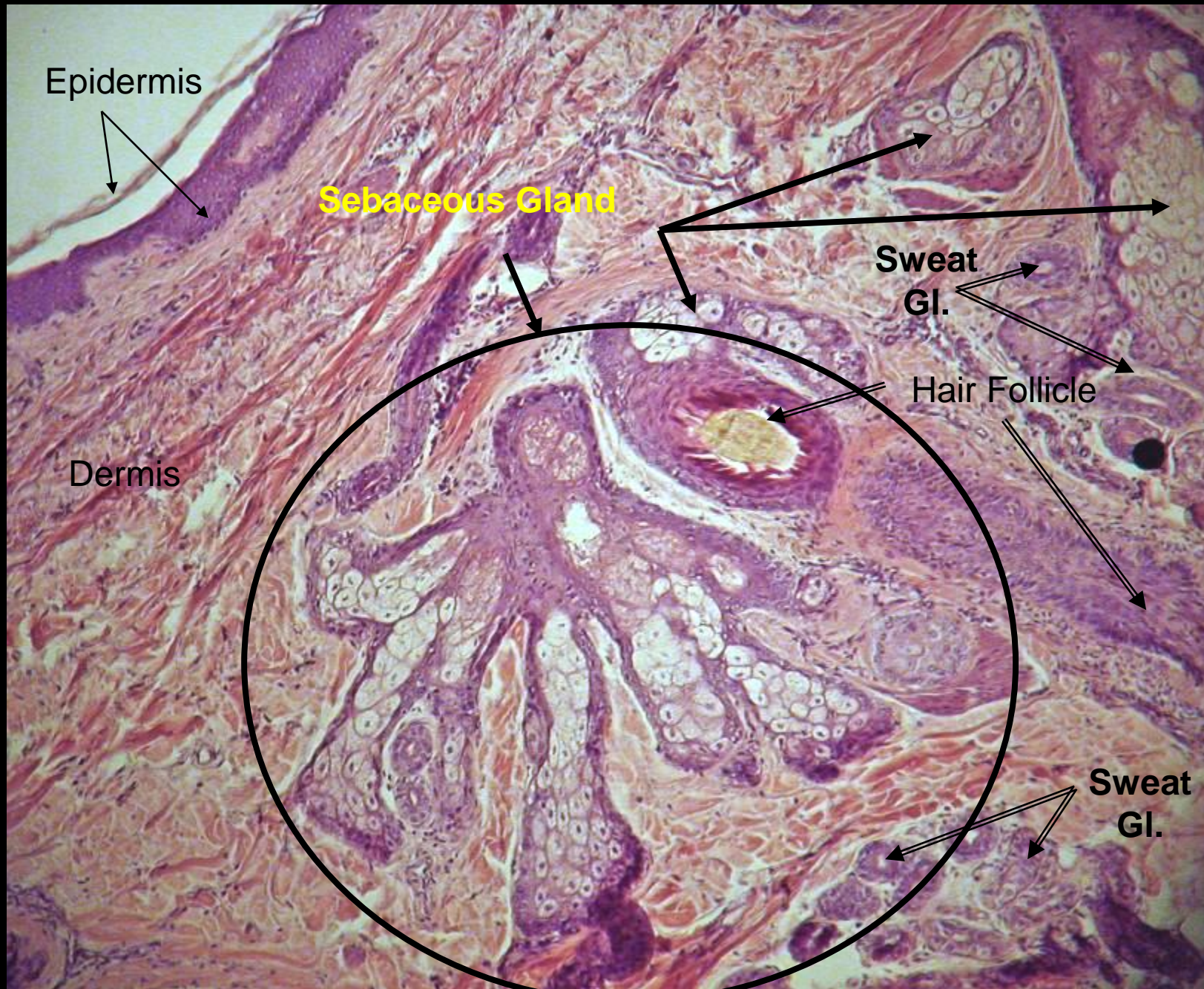
DERMIS dense irregular CT

Intercellular Bridges (Desmosomes →) in Stratum Spinosum





*Matching an individual's dermal ridge patterns in **fingerprint** analysis – NO 2 are alike*



Epidermis

Sebaceous Gland

Sweat
Gl.

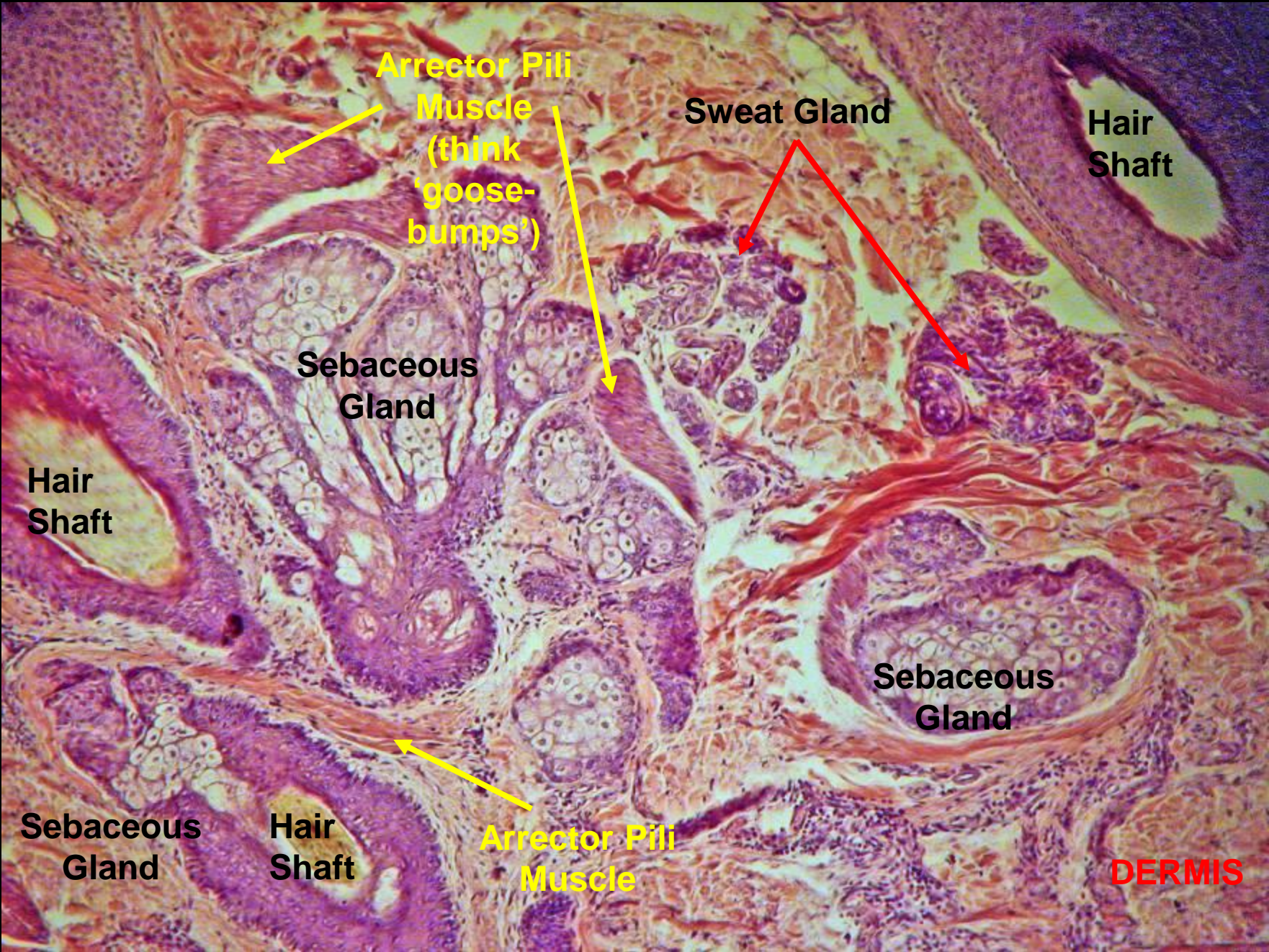
Hair Follicle

Dermis

Sweat
Gl.

'THIN SKIN'

Hair and sebaceous glands



Arrector Pili

Muscle
(think
'goose-
bumps')

Sweat Gland

Hair
Shaft

Sebaceous
Gland

Hair
Shaft

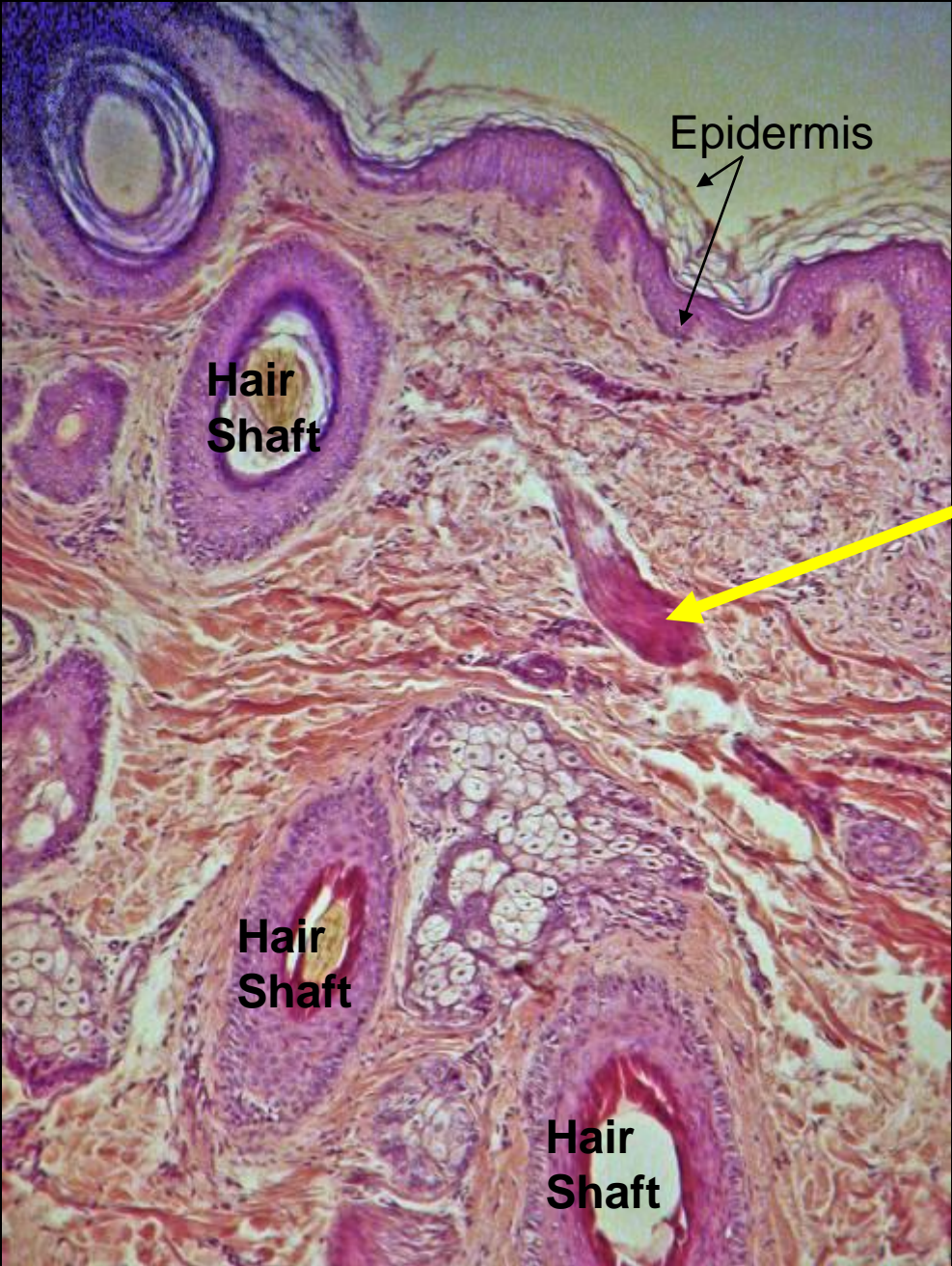
Sebaceous
Gland

Sebaceous
Gland

Hair
Shaft

Arrector Pili
Muscle

DERMIS



Epidermis

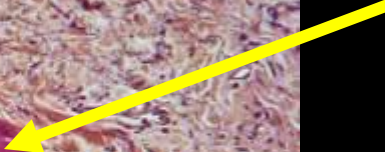


Hair Shaft

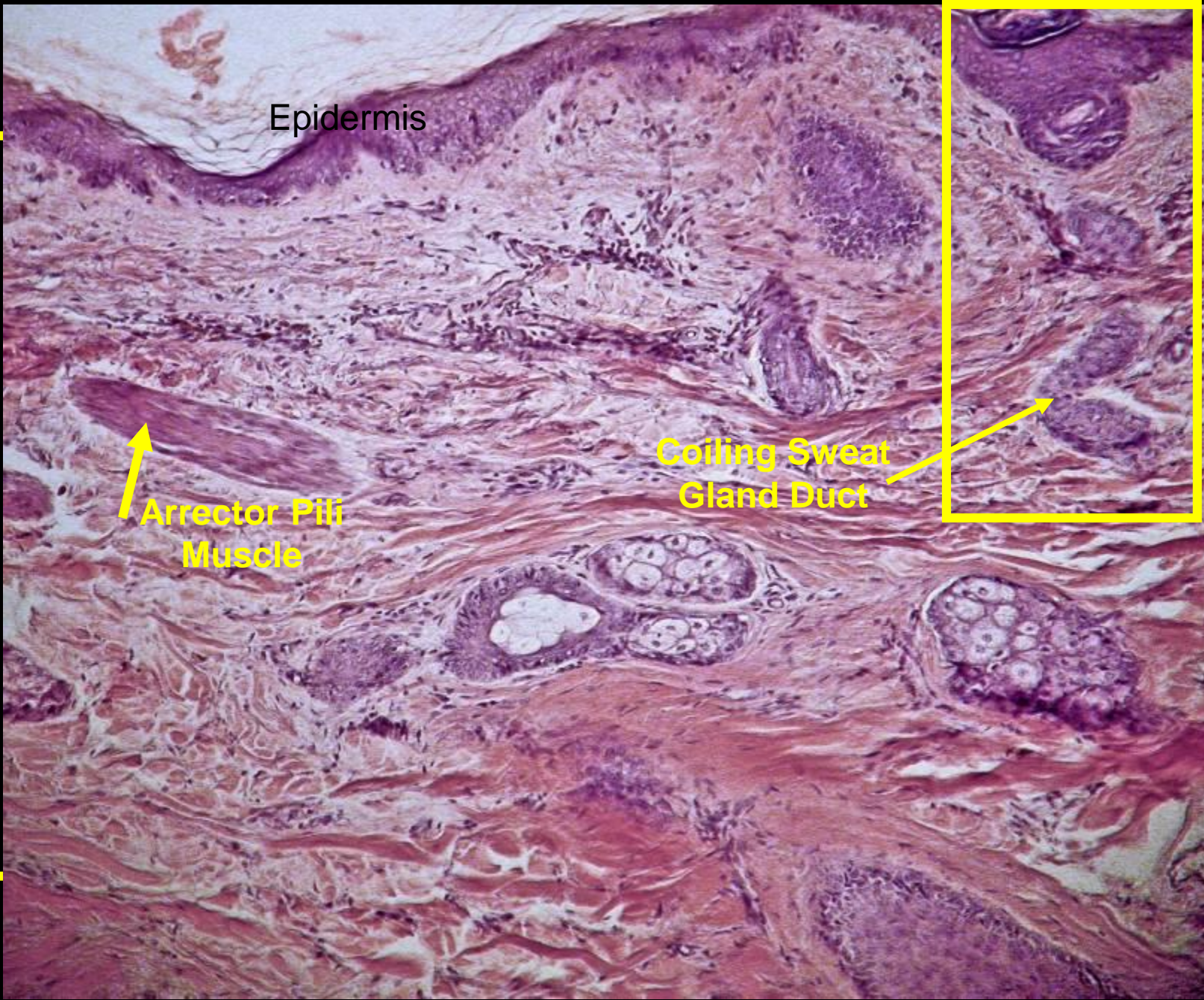
Hair Shaft

Hair Shaft

Arrector Pili Muscle



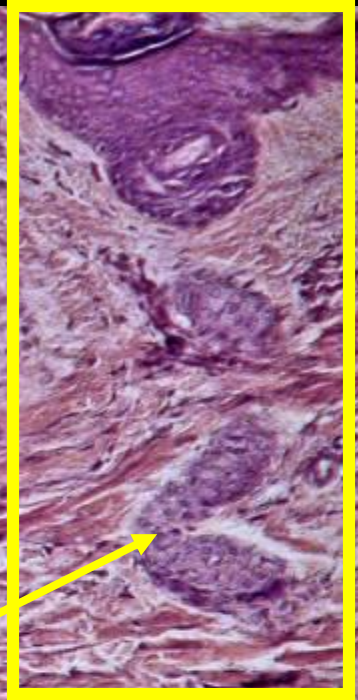
**D
E
R
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I
S**



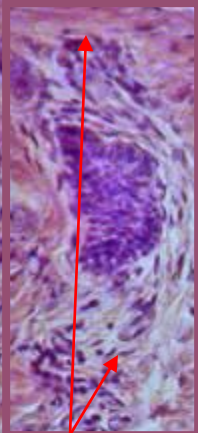
Epidermis

Arrector Pili
Muscle

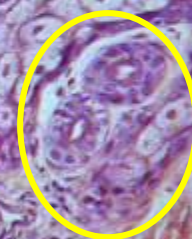
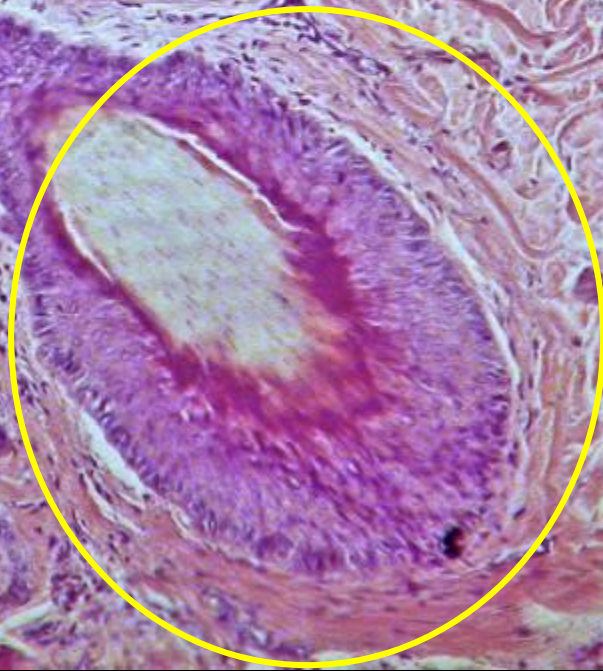
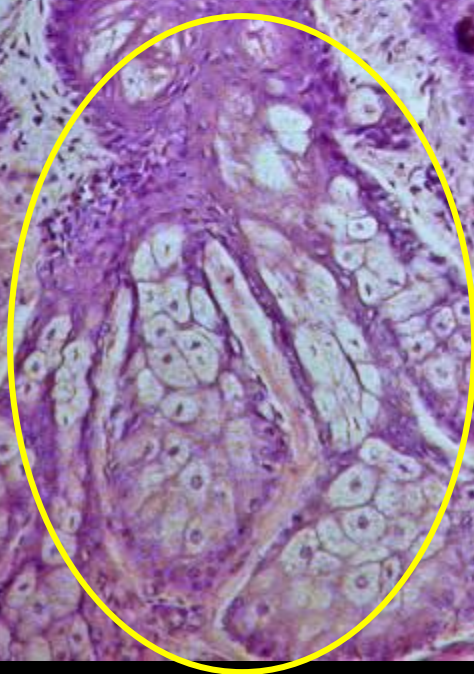
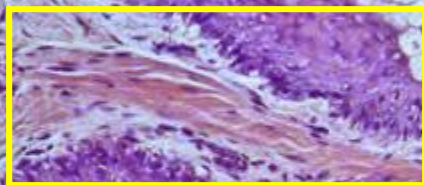
Coiling Sweat
Gland Duct

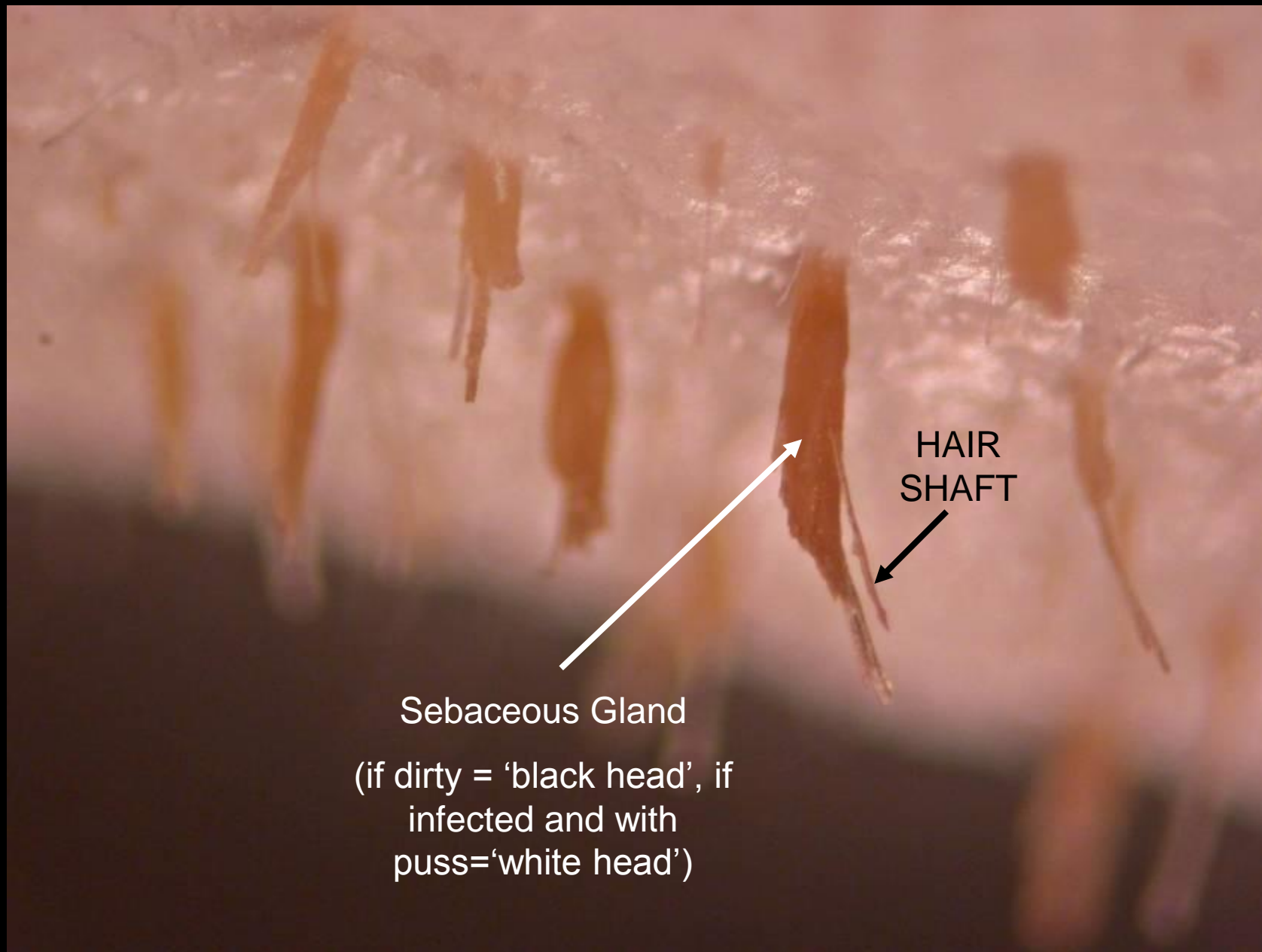


What Structures are these?



Meissner's
corpuscle-
touch

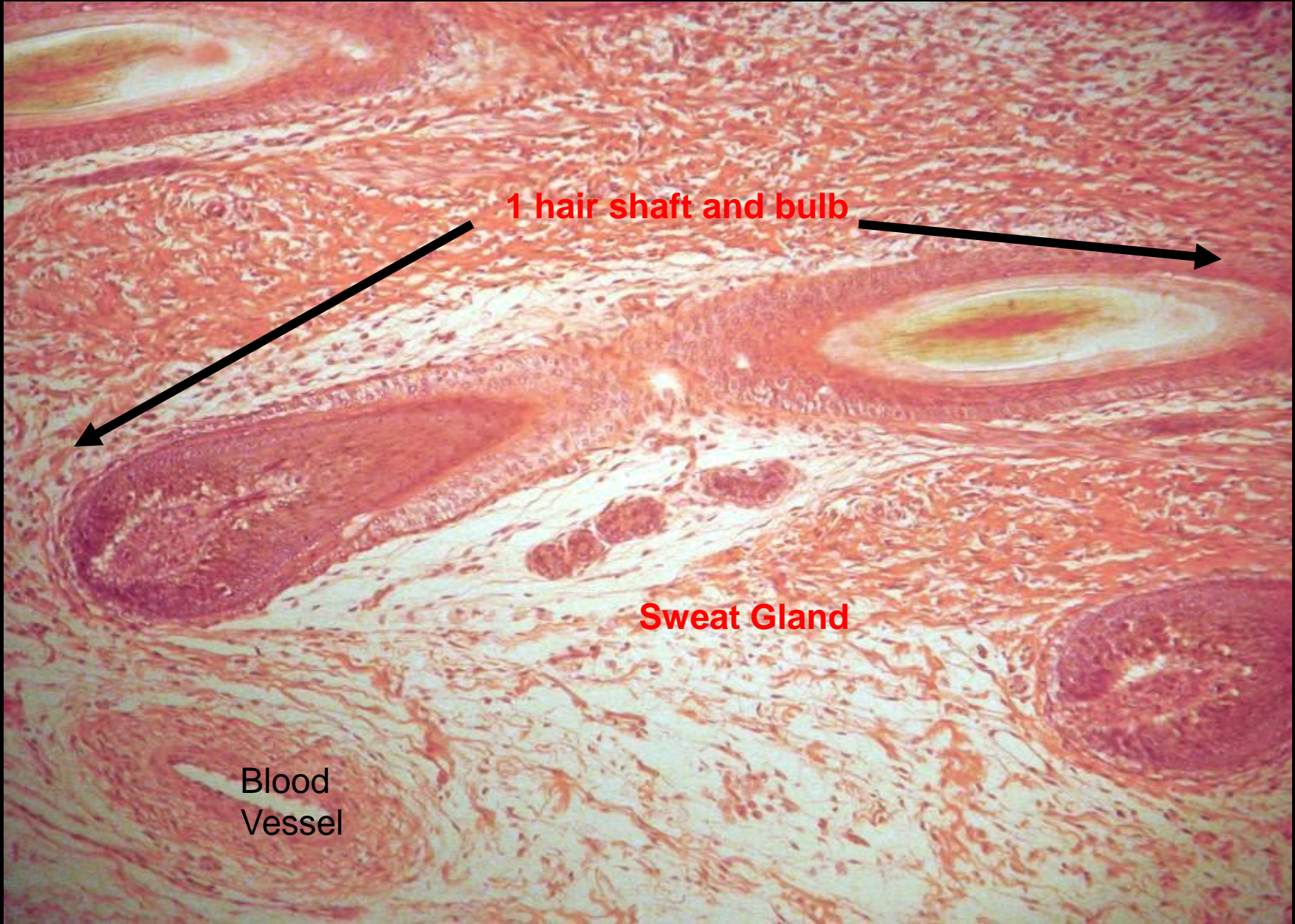




Sebacious Gland
(if dirty = 'black head', if
infected and with
puss='white head')

HAIR
SHAFT

Reverse of skin (peel) showing hairs & associated sebaceous glands

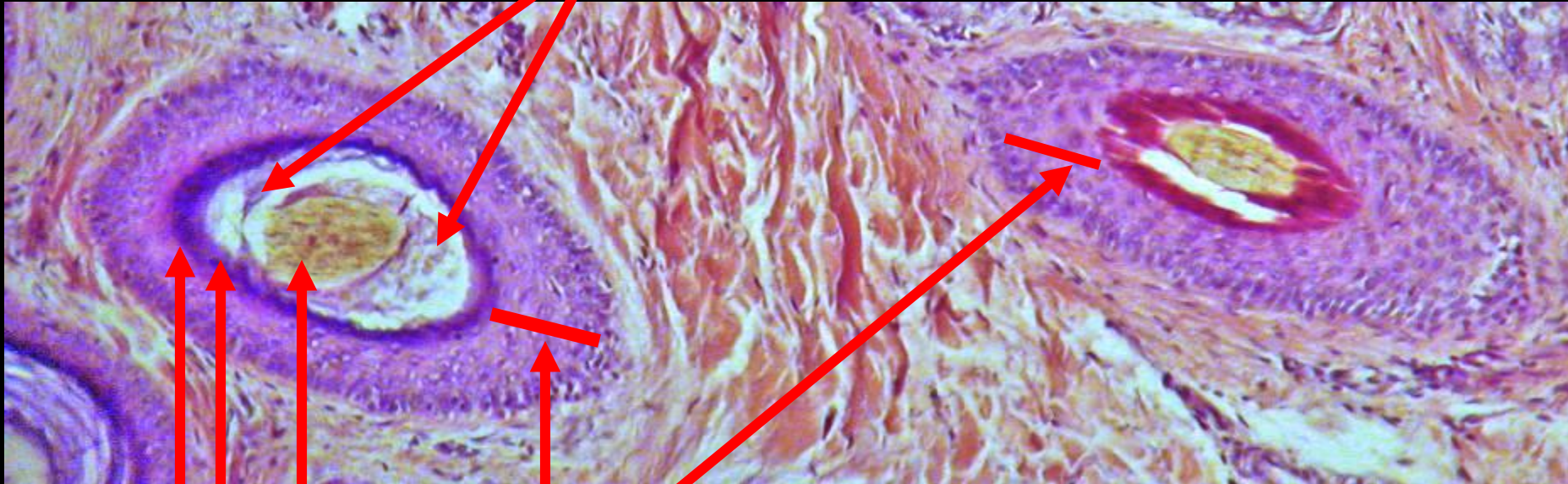


1 hair shaft and bulb

Sweat Gland

Blood
Vessel

Cuticle of hair & inner root sheath



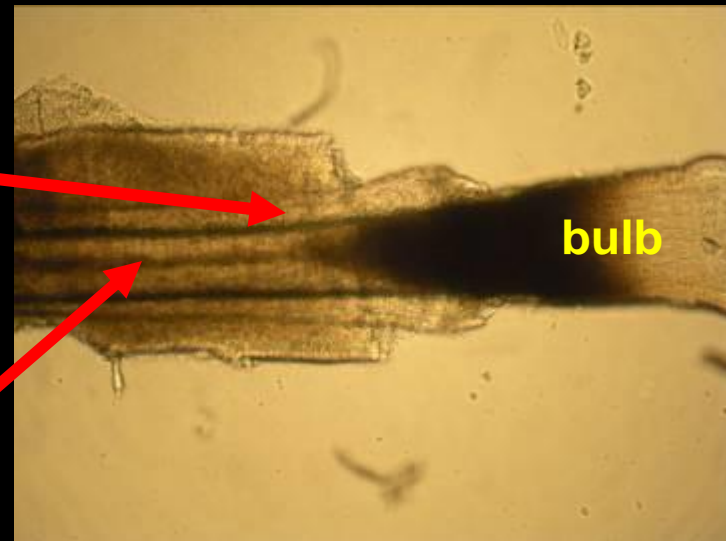
**Outer epithelial
root sheath**

Cortex of hair

“Huxley’s layer”

“Henley’s layer”

**Medulla in
center of
Cortex;
together =
hair shaft**



bulb

Plucked hair and bulb



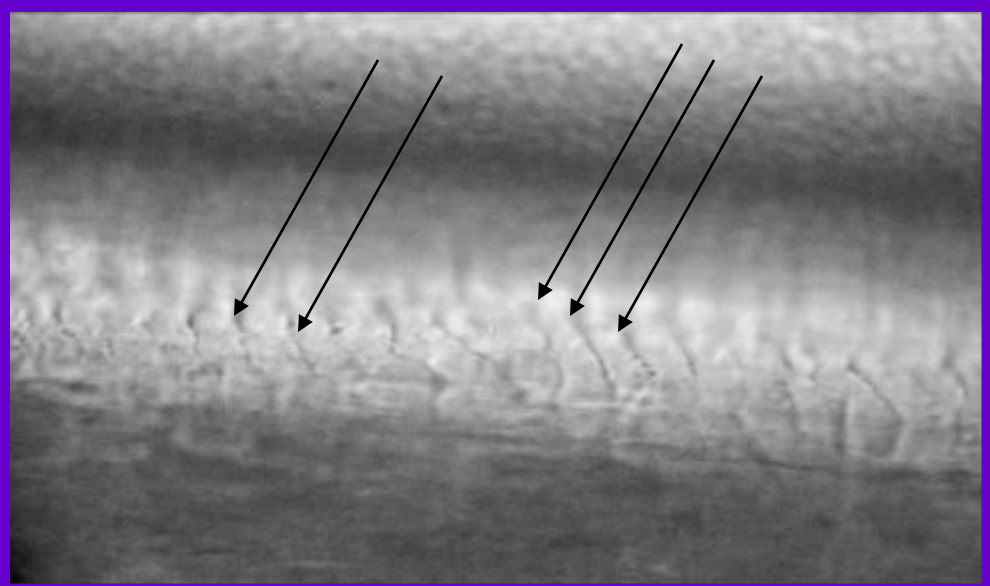
Hair Shaft

Broken frag. of epidermis

Hair 'Bulb': full of DNA

overlapping scales on surface of human hair

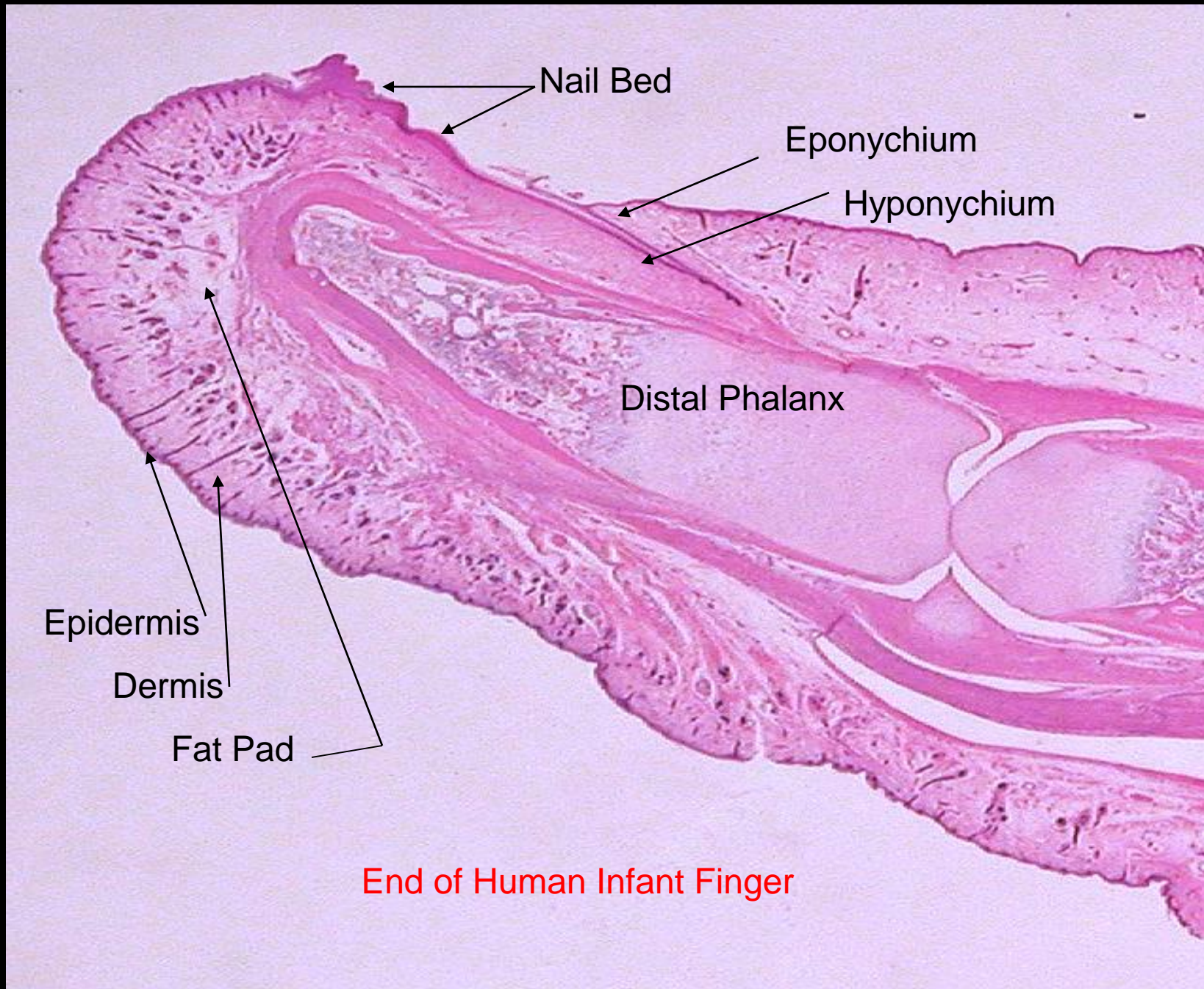
Pulled hair



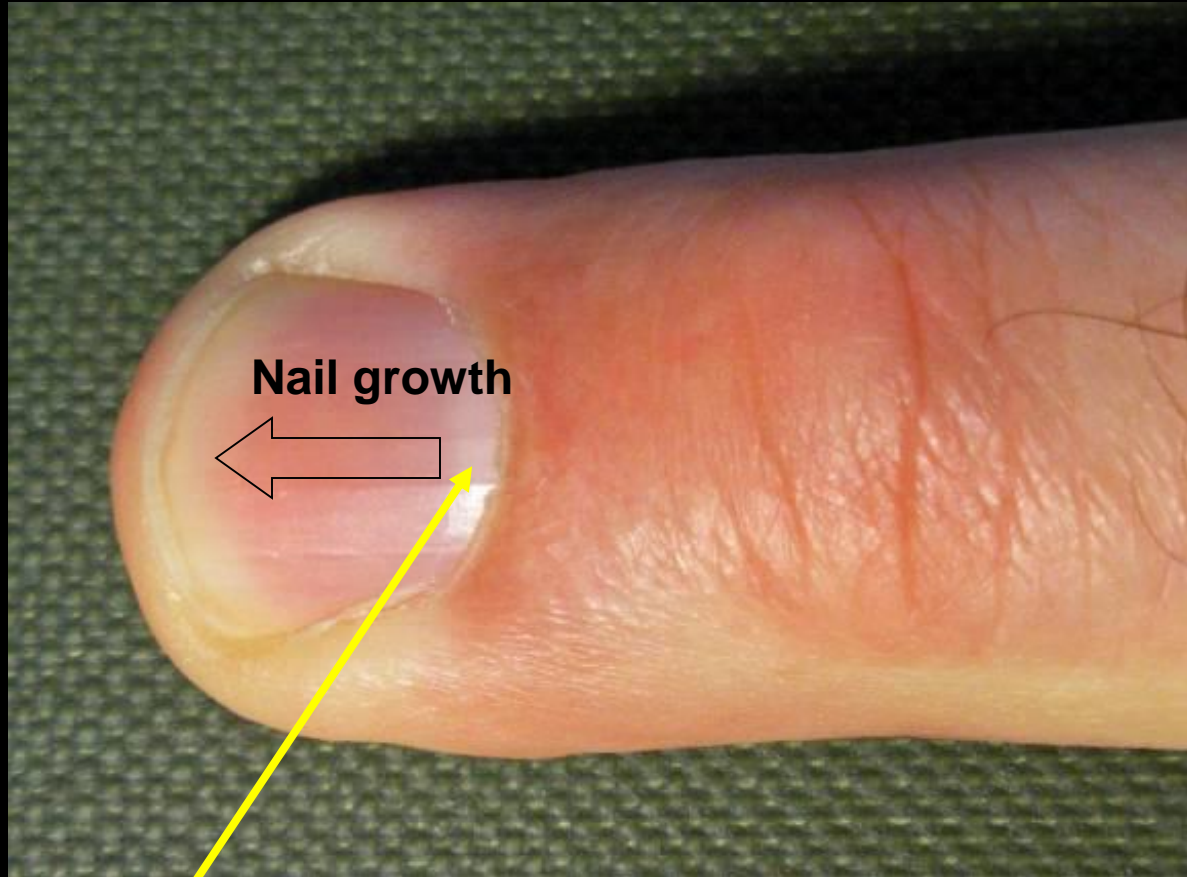


Bulb

Root of Hair with its Papilla



Nails and hair are 'dead' keratin (protein)

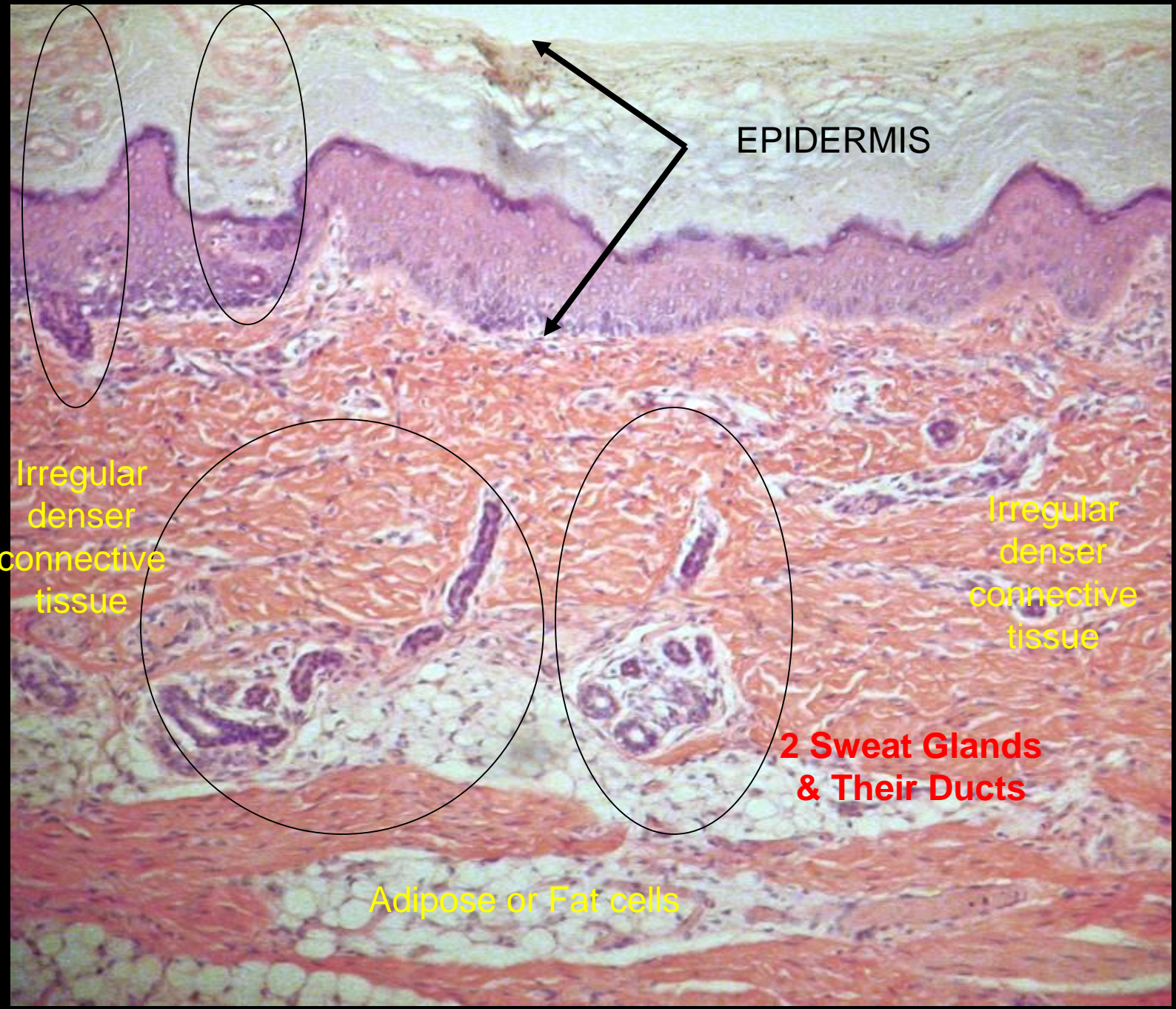


Lunule (site of nail growing stratum germinativum) below eponychium



Left distal phalange of 5th finger - total amputation

Skin is rapidly repaired



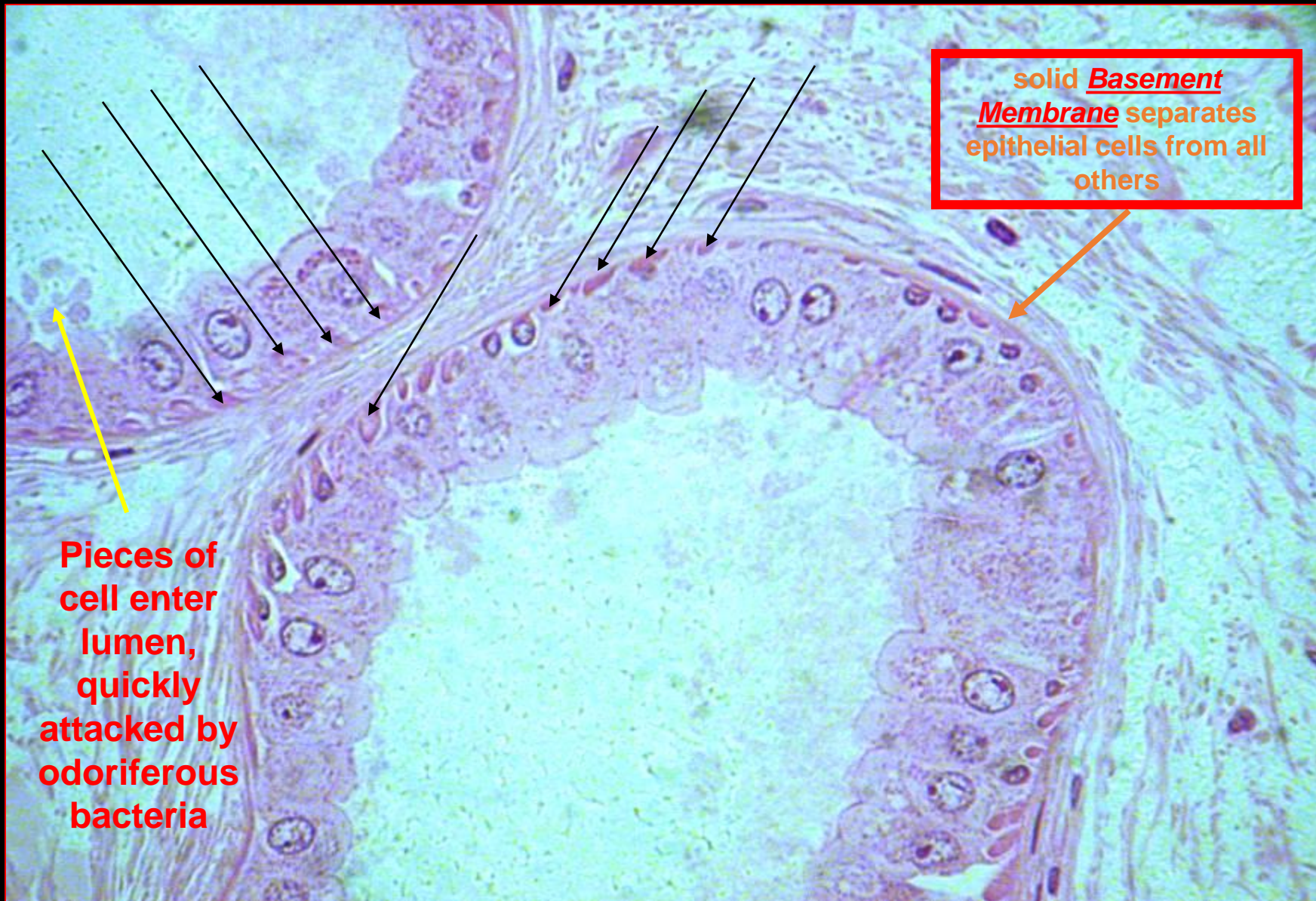
EPIDERMIS

Irregular
denser
connective
tissue

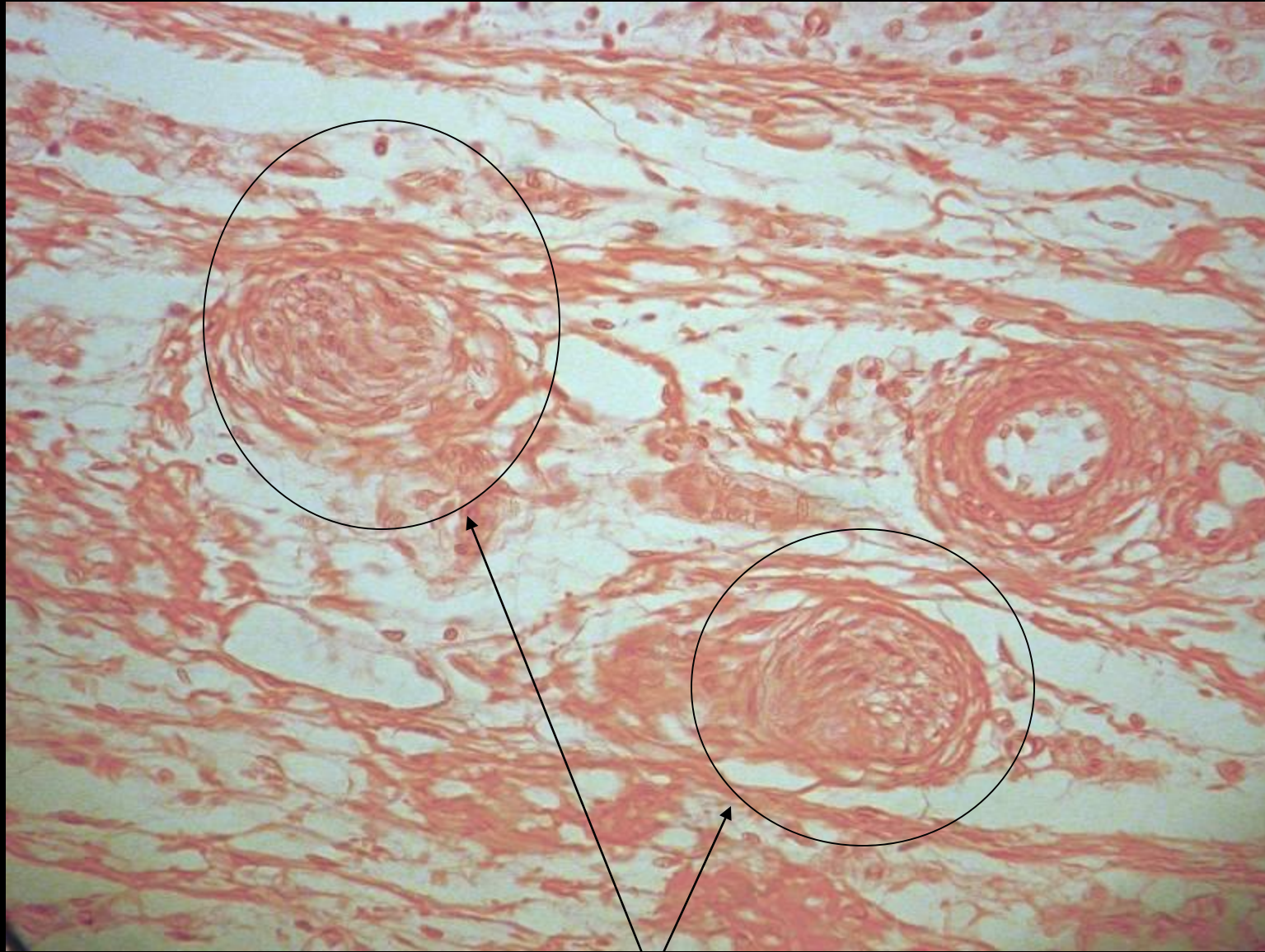
Irregular
denser
connective
tissue

**2 Sweat Glands
& Their Ducts**

Adipose or Fat cells



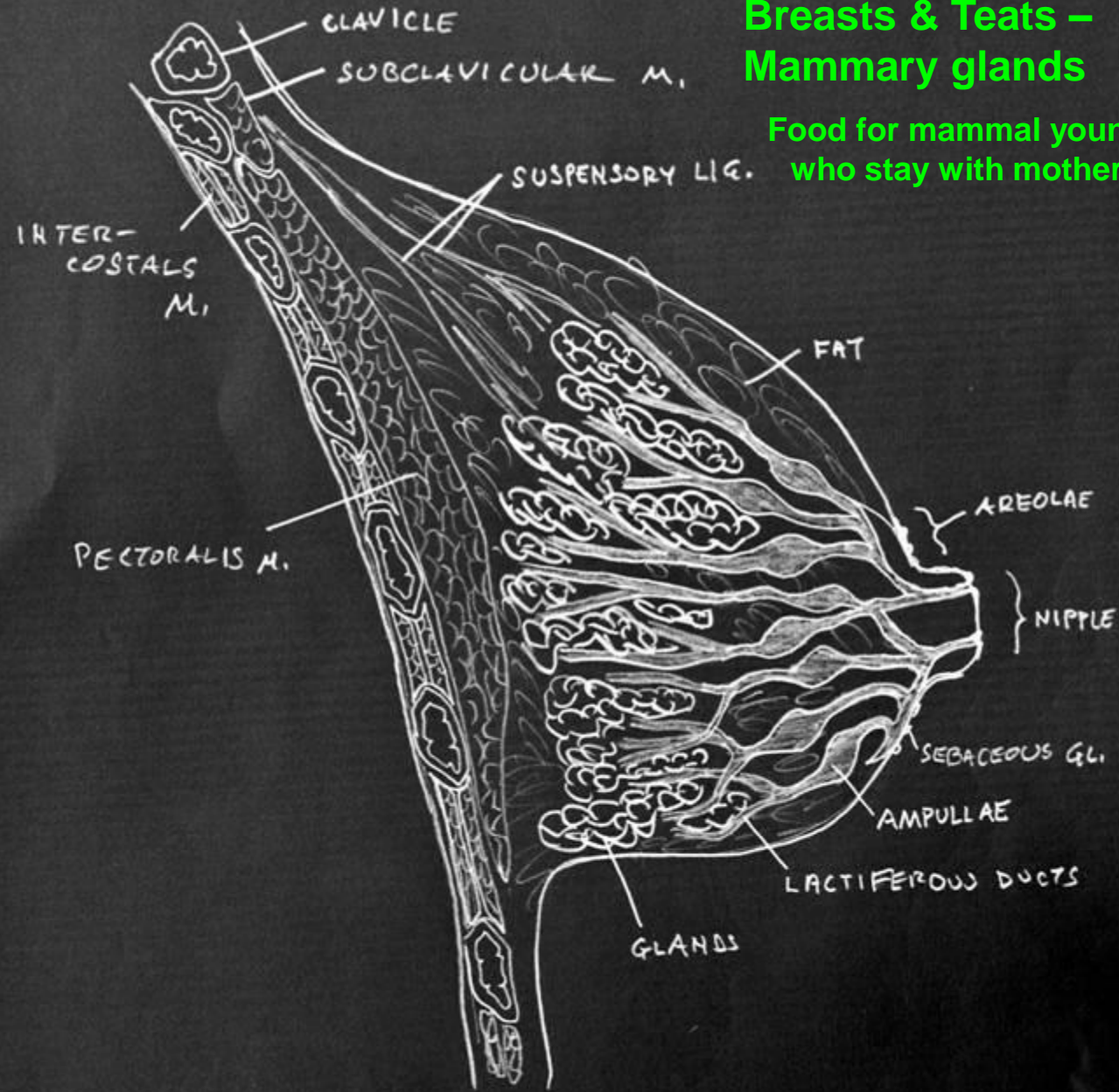
Human Axilla: Apocrine Sweat Glands (arm pit & crotch area) – note copious secretion granule formation and ‘Myoepithelium’ smooth muscle fibers (arrows) at base of each secretory cell

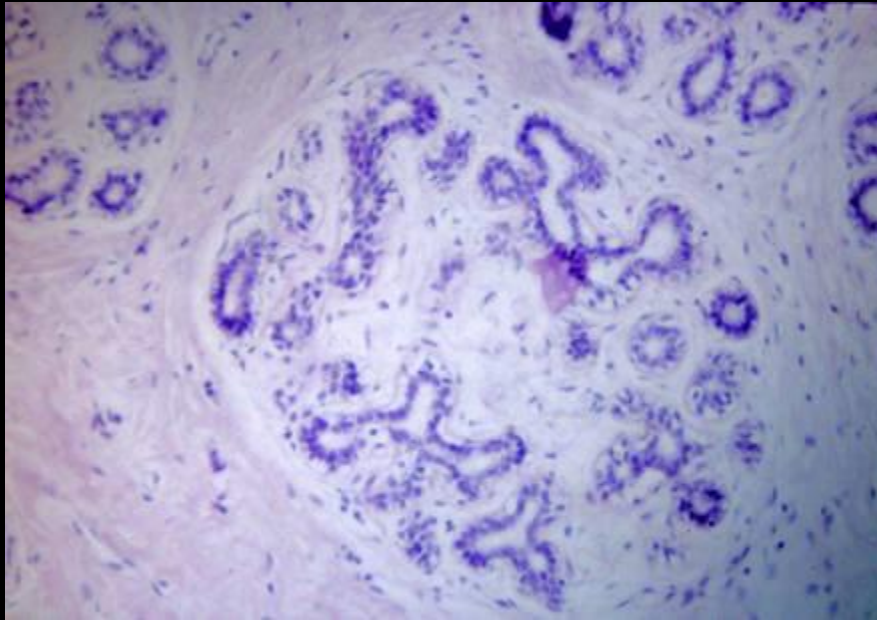


Pressure sense – Paccinian Corpuscles

Breasts & Teats – Mammary glands

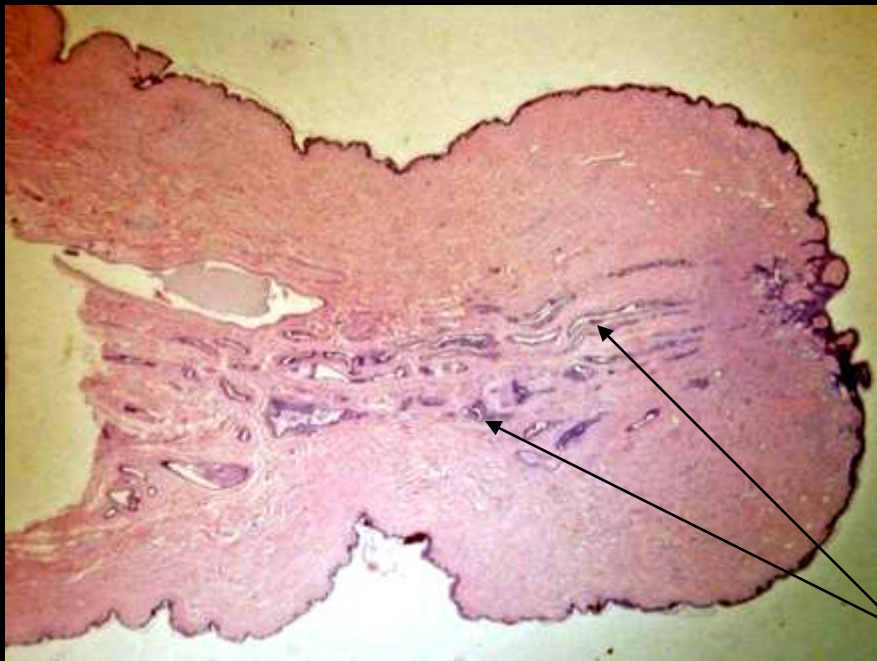
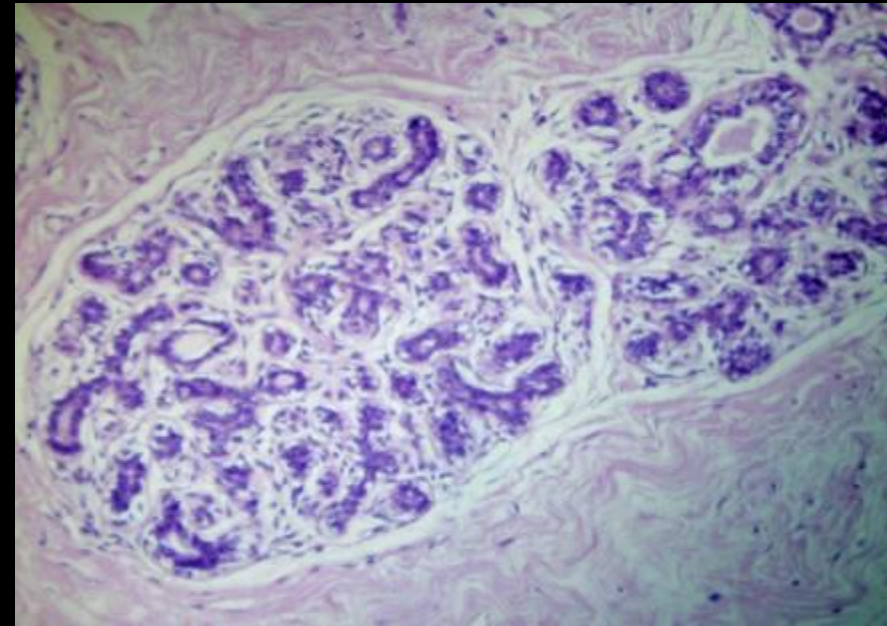
Food for mammal young
who stay with mother



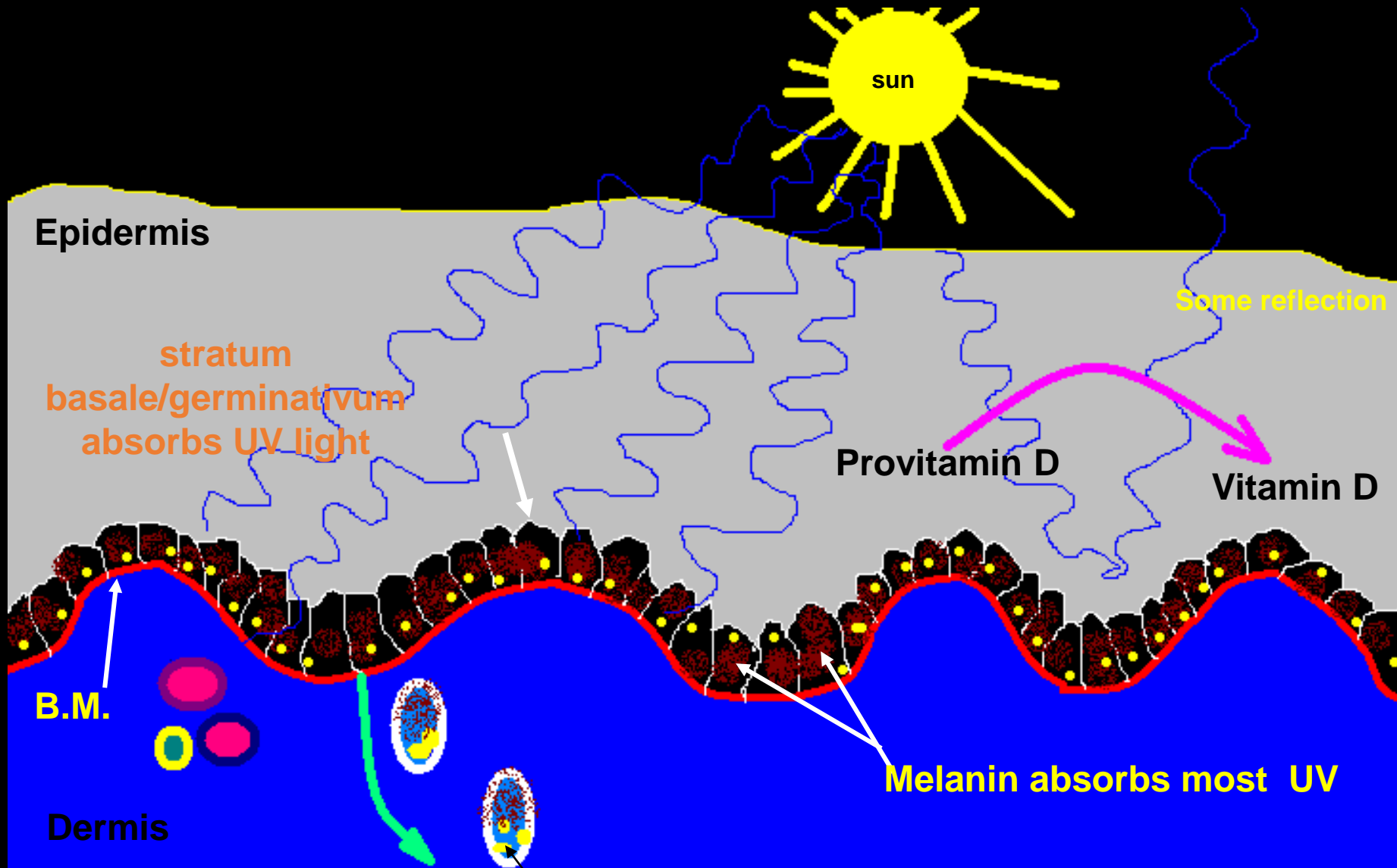


Mammary Gland-Inactive

Proliferative



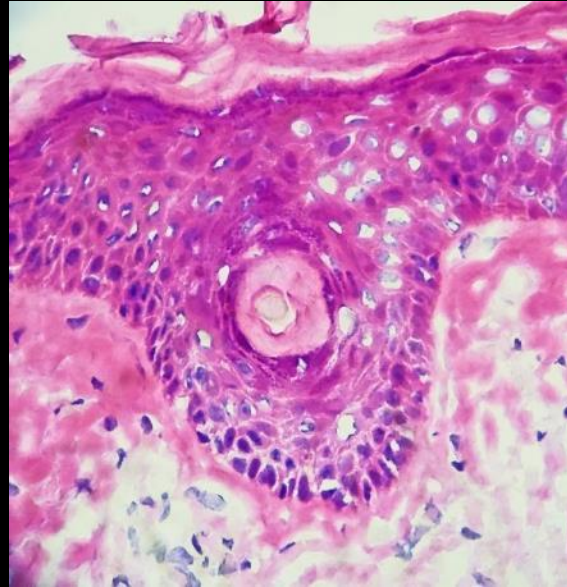
Human-Nipple



UV Abused melanocytes of stratum basale/germinativum become cancerous & metastasize to body through blood & lymph= MELANOMA

My Squamous Cell Carcinoma -

Thanks to Drs. Adams & Finkelstein





Biopsy 5/26/'15 by Dr. Finkelstein;
dermatopathologist diagnosis is
squamous cell carcinoma; PDT
(photodynamic therapy) done on
6/19/'15 destroys most Actinic Keratosis
(AK) a precancerous lesion.

Miraca
Life Sciences

DERMATOPATHOLOGY REPORT

SPECIMEN NUMBER		PATIENT		PHYSICIAN	
CD15-96418		[REDACTED]		[REDACTED], D.O., P.A.	
PROCEDURE DATE	26 MAY 2015	AGE/SEX	69 YEARS, Male	LOCATION	[REDACTED]
RECEIVED DATE	27 MAY 2015	PATIENT ID	5988		
REPORT DATE	29 MAY 2015	PHONE	941-907-0505	PRACTICE	[REDACTED]

CLINICAL IMPRESSION/HISTORY
Papule and erythematous. DDx: Neoplasm of unspecified behavior vs. basal cell carcinoma vs. squamous cell carcinoma. 239.2.

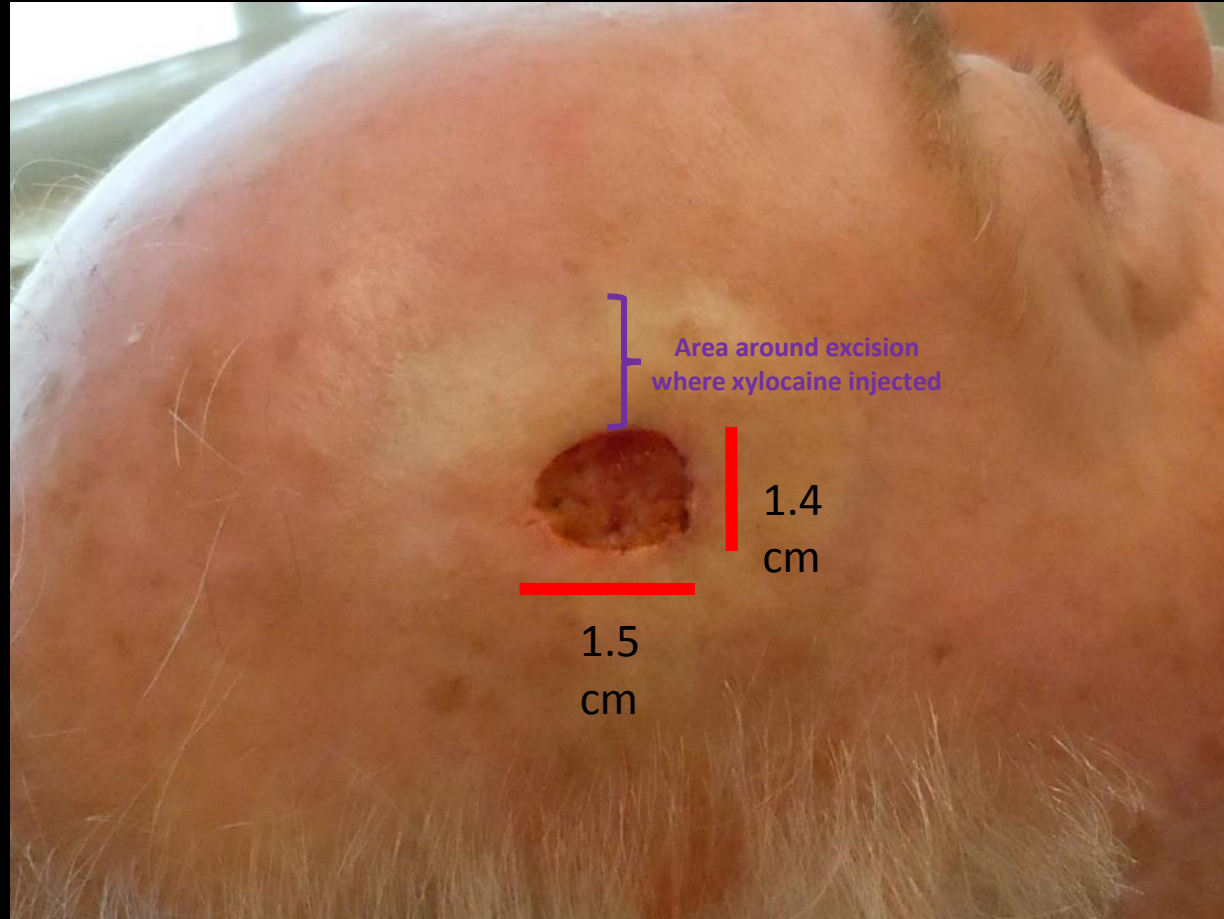
FINAL MICROSCOPIC DIAGNOSIS
A. Right superior central forehead, Shave Biopsy:
SUPERFICIALLY INVASIVE SQUAMOUS CELL CARCINOMA ARISING IN HYPERTROPHIC ACTINIC KERATOSIS; EXTENDING TO THE TISSUE EDGE.

GROSS DESCRIPTION
Received is a formalin filled specimen container labeled with the patient's name and "right superior central forehead". It contains a flat, friable piece of skin measuring 1.1 x 0.8 x 0.1 cm. The tissue is inked blue alongside the surgical margin, quadrisectioned and entirely submitted in one cassette. (CD/cduga 5/28/15 04:16 AM)
Due to loss of elastic tension and tissue shrinkage in formalin, the clinical sizes may be larger than those reported here.

ADDITIONAL COPIES
At the request of Robert P. Finkelstein, D.O., P.A., a copy of this report will be sent to Interface Copy

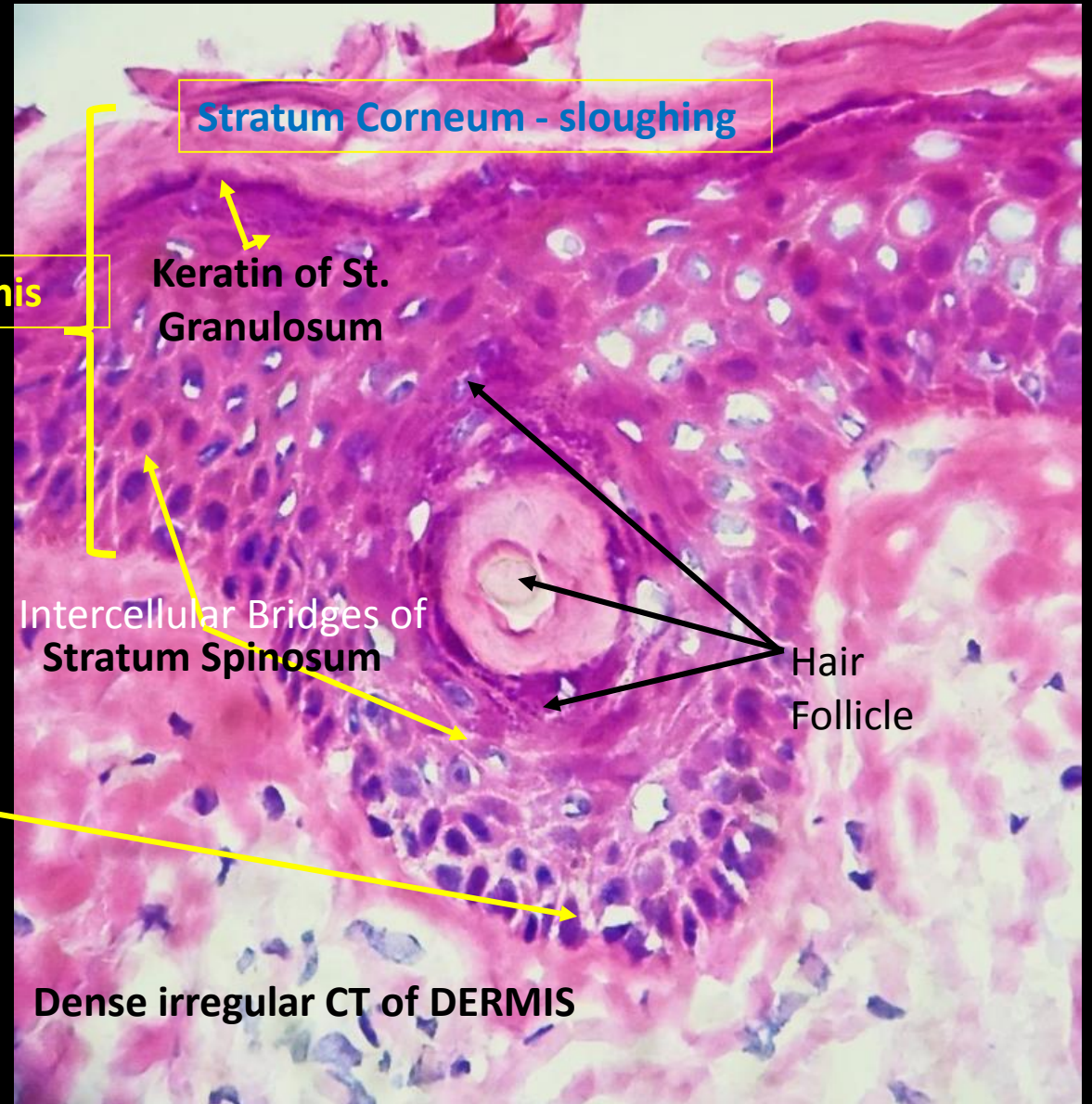
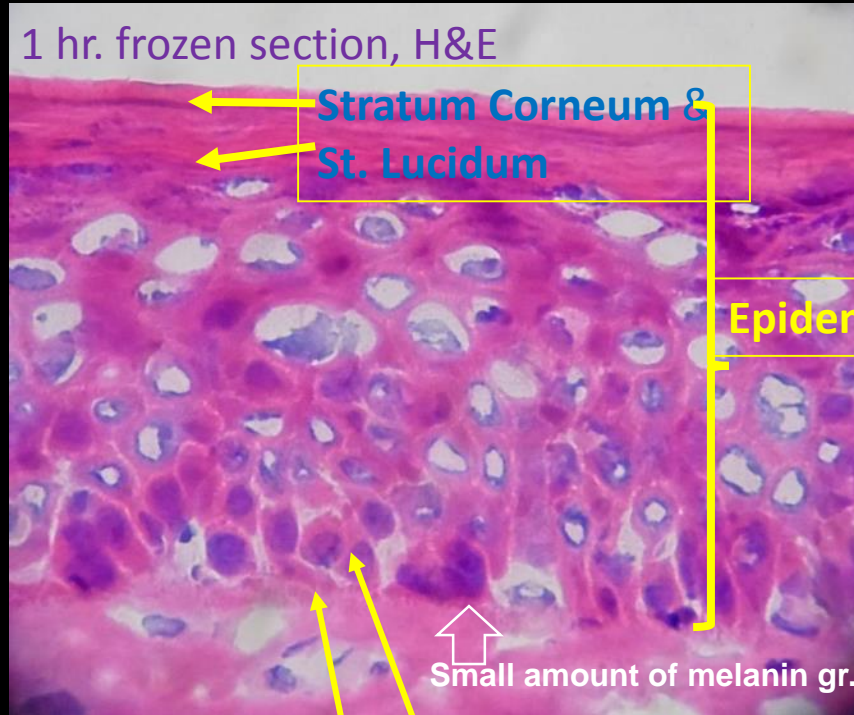
[REDACTED]
[REDACTED]
(Electronic Signature)
29 MAY 2015

CPT Code(s): 86335



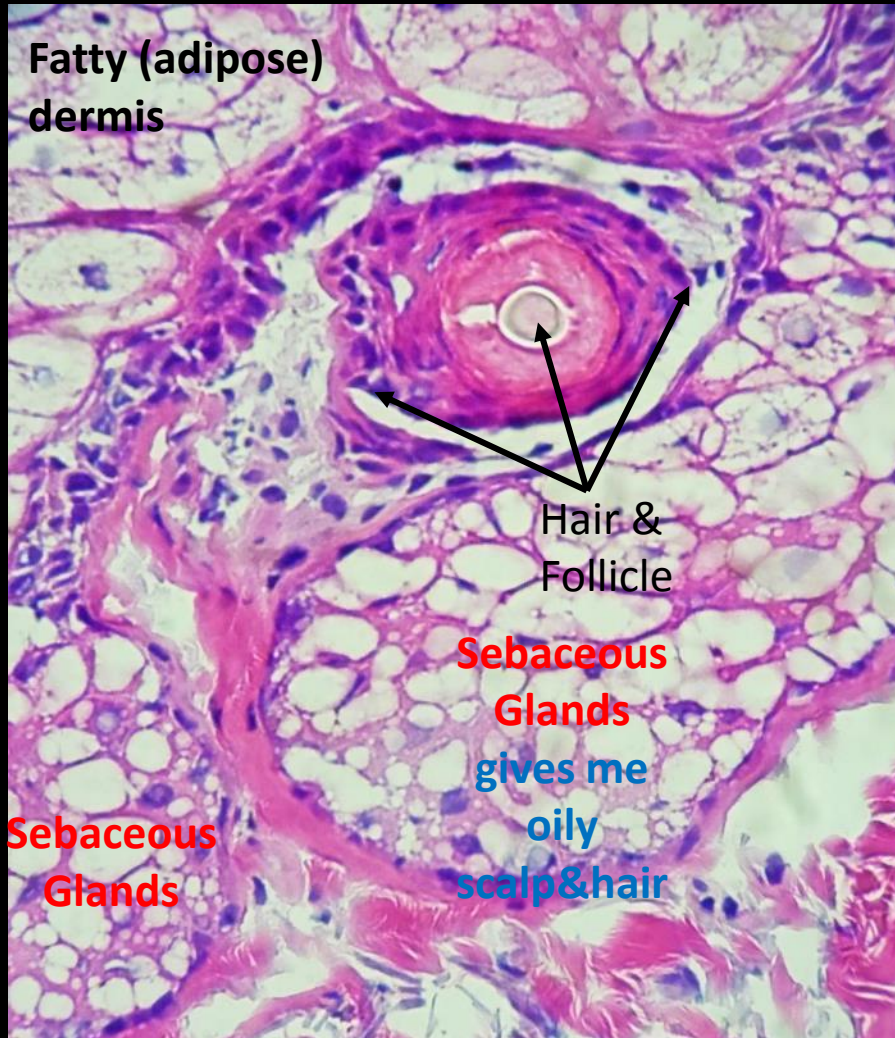
1st Excision of Mohs' surgery
7/1/'15 Dr. Adams

1 hr.: frozen section, H&E at 400X



Basement Memb.
St. Basale/Germinativum

Mohs' diagnosis: all cancer removed: normal tissue



1 hr.: frozen section, H&E at 400X

Mohs' diagnosis: Dr. Will Adams - all cancer removed: all normal tissue, i.e. no squamous 'pearls' surrounded by malignant cells with pleomorphic nuclei & mitotic figures.



Post Mohs' Excision (2 hrs.)

T- shaped, enlarged incision to suture properly for scarless healing based on age, complexion; dermis sutured separately

