



Skin Histology

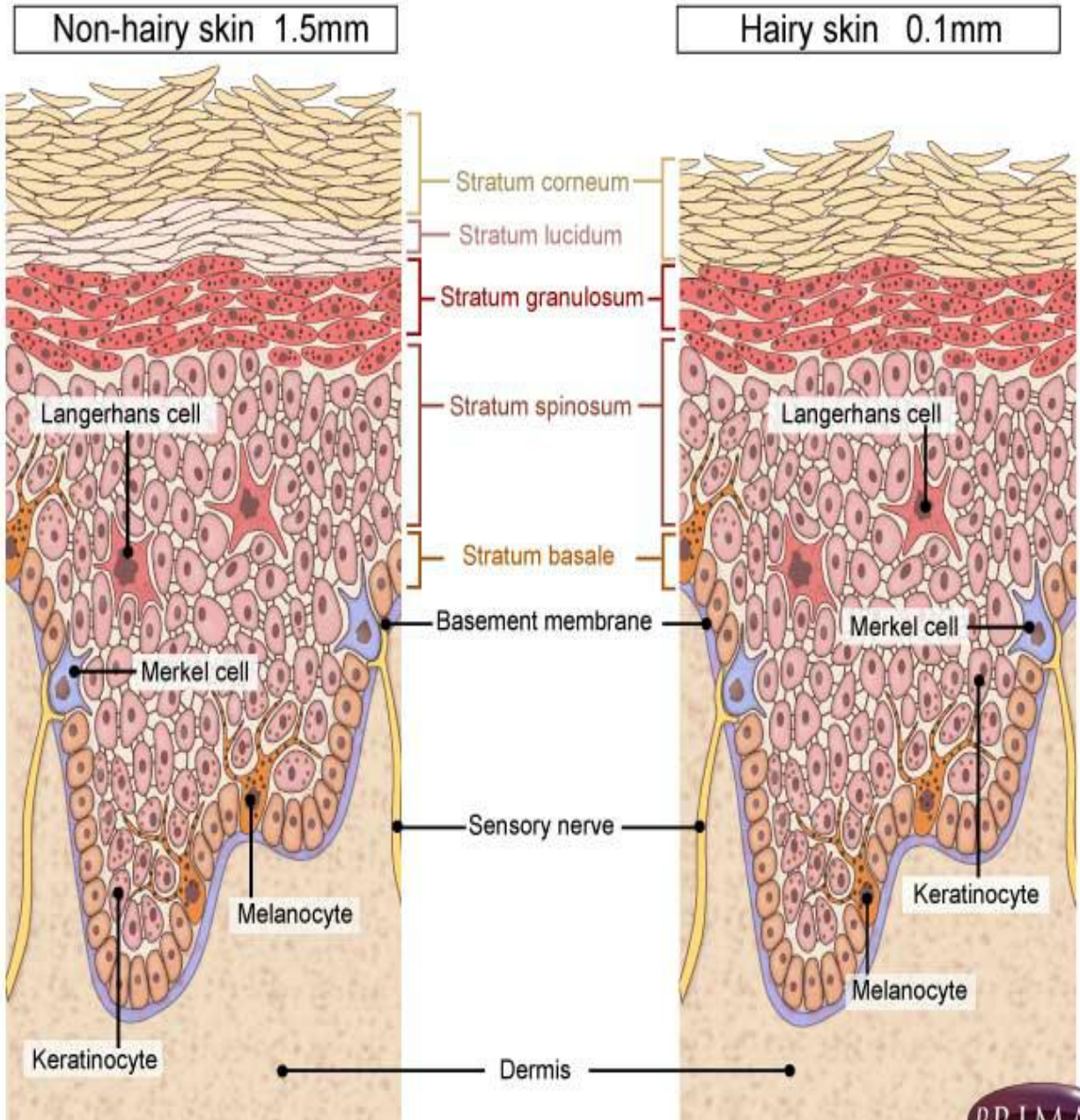
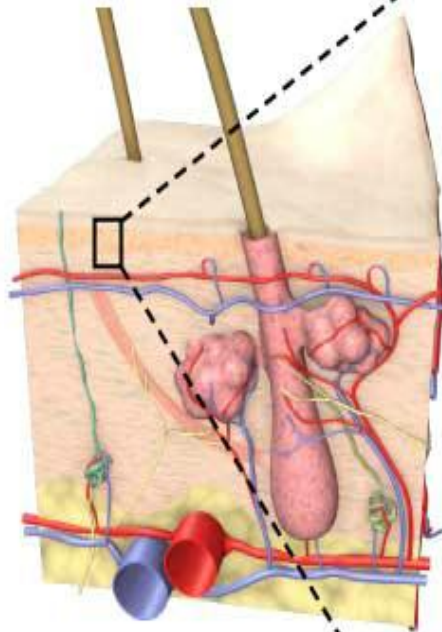
Practical part

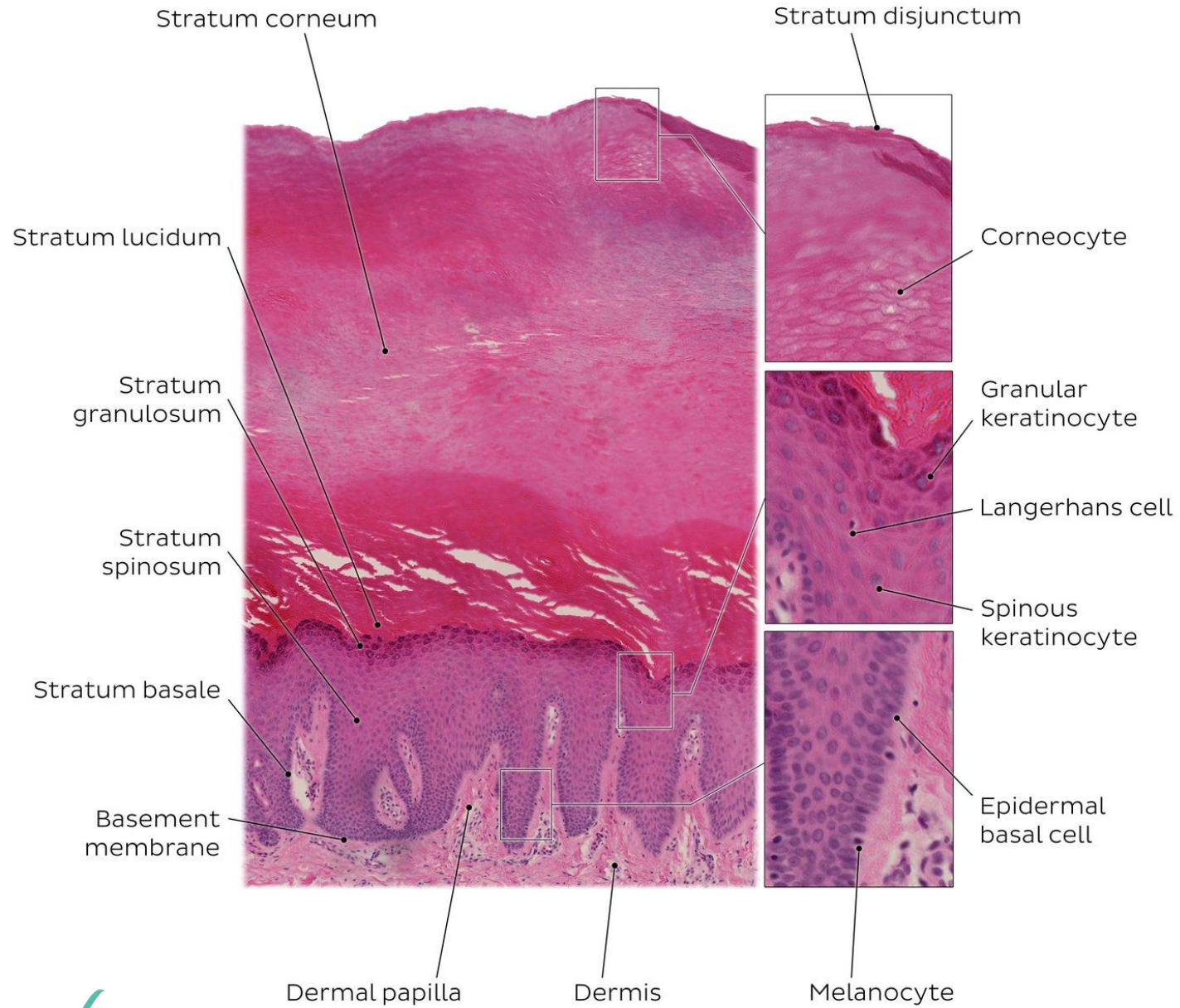
Dr. Heba Kalbounch

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Professor of Anatomy, Histology and Embryology

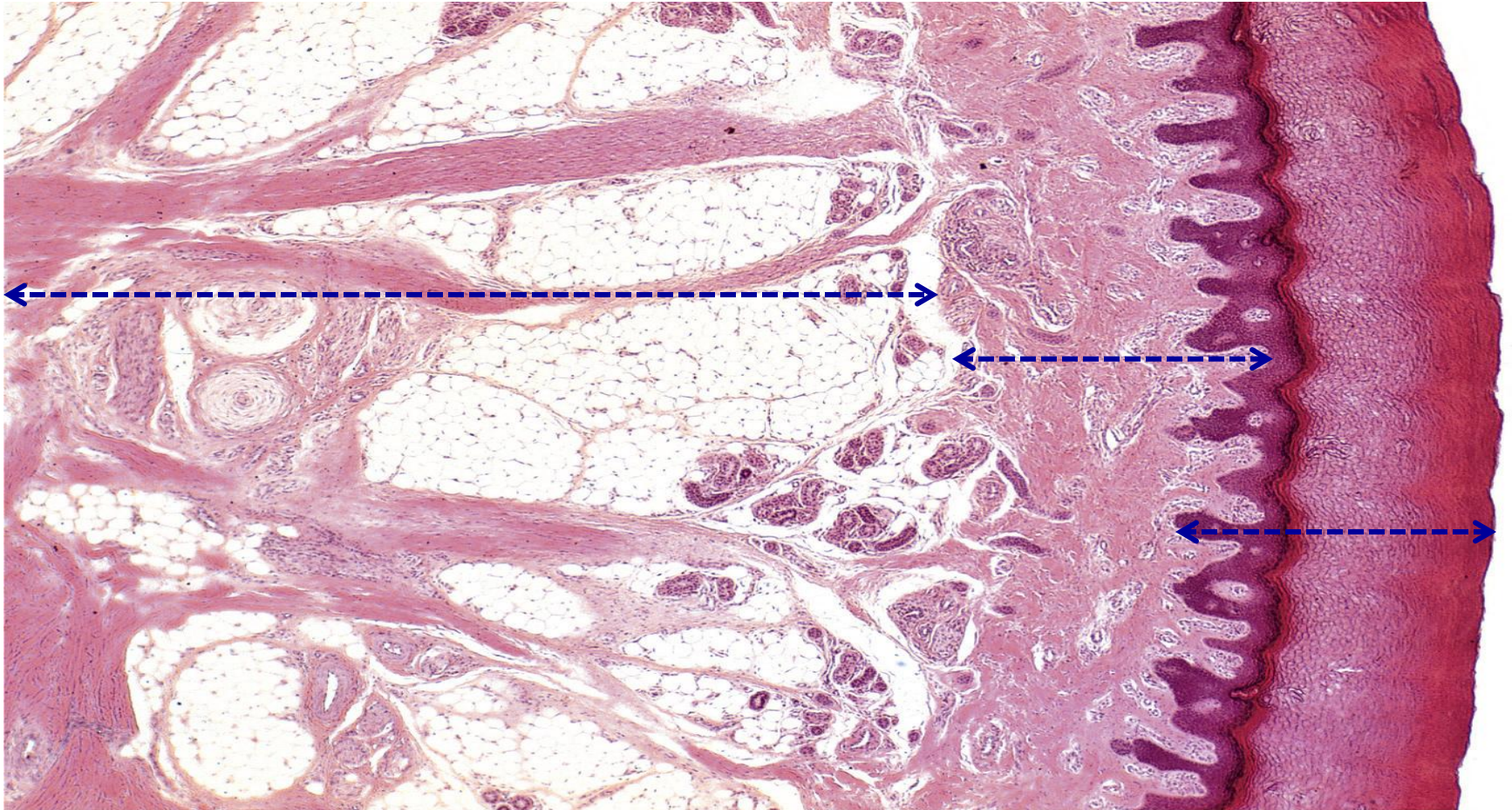
Skin of eyelids
and the back!!!

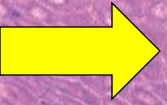
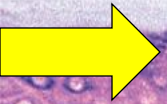
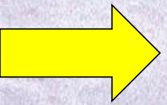
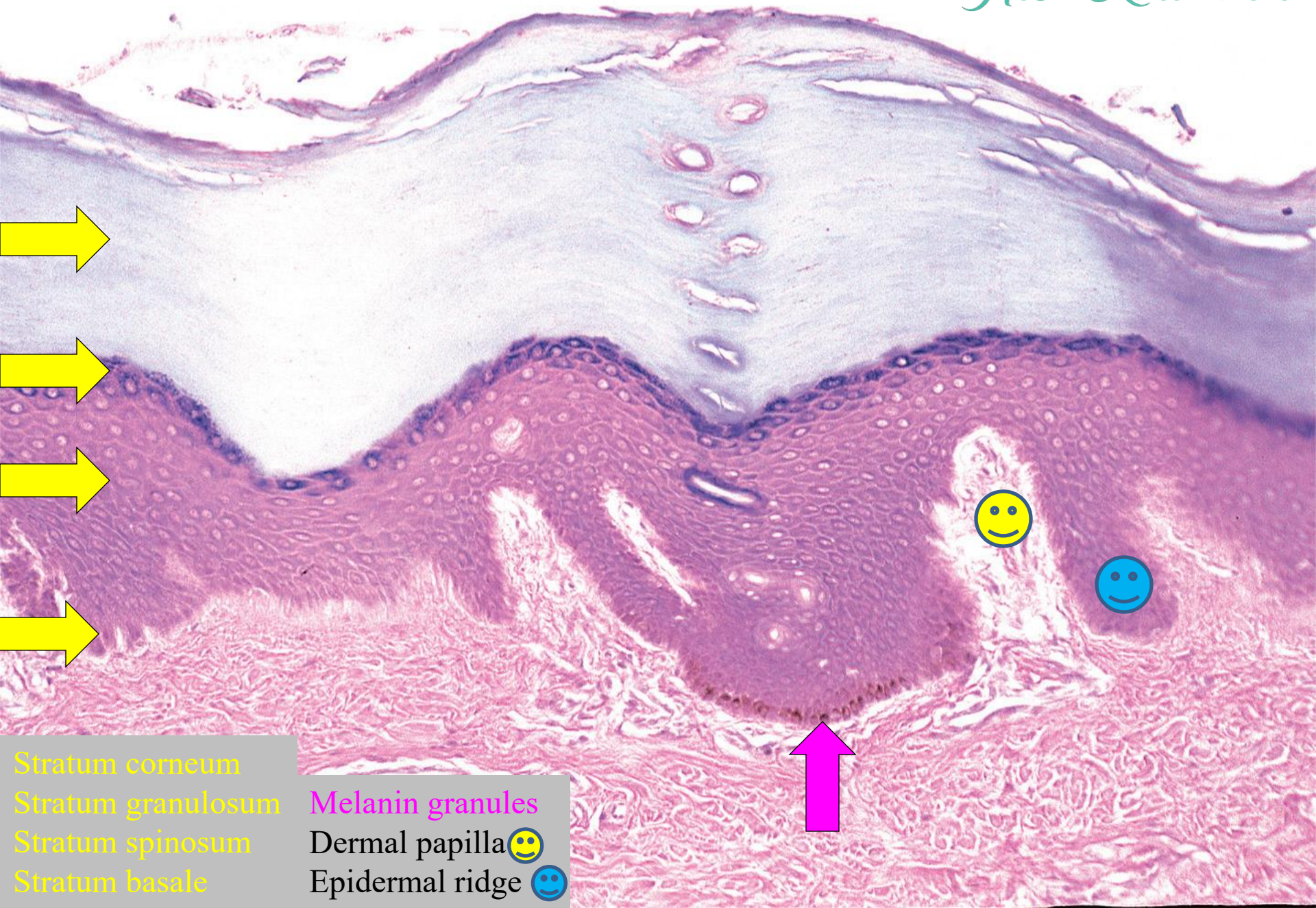




Prof. Dr.
Heba Kalbounieh

The skin is composed of two layers: the outer epidermis and the deeper dermis, both of which rest on the hypodermis





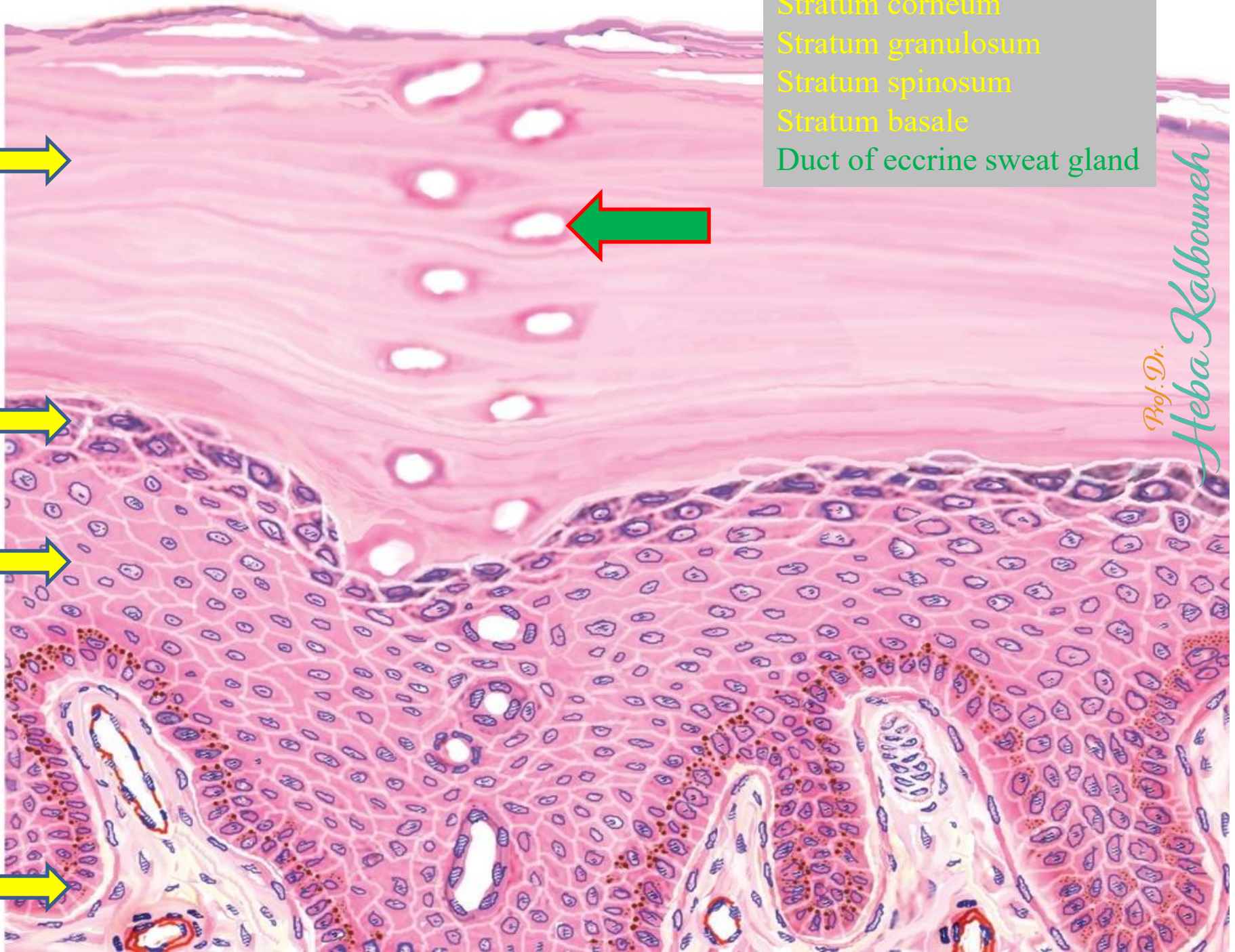
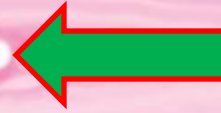
Stratum corneum
Stratum granulosum
Stratum spinosum
Stratum basale

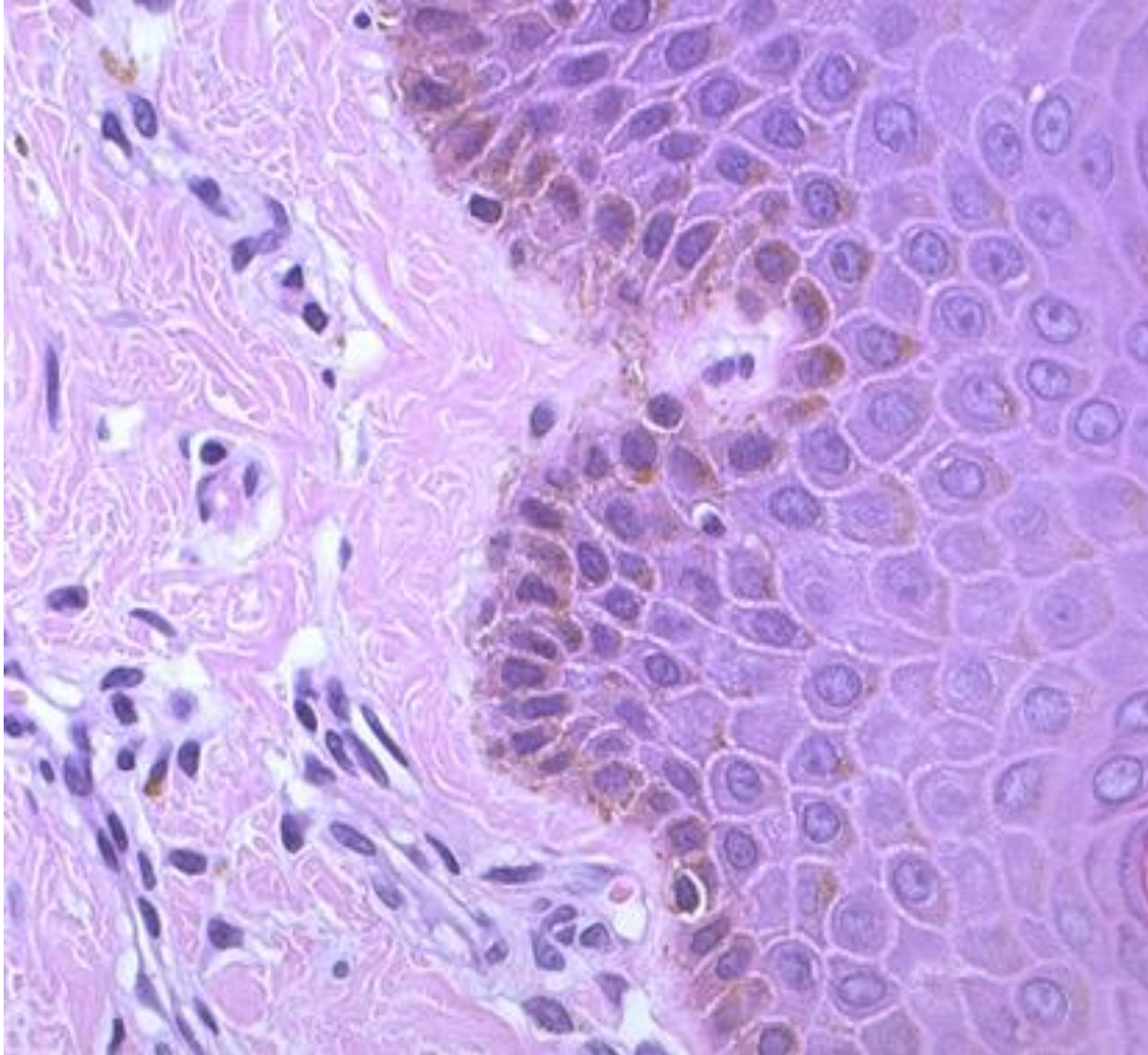
Melanin granules
Dermal papilla 😊
Epidermal ridge 😊



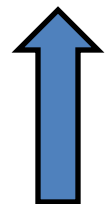
Stratum corneum
Stratum granulosum
Stratum spinosum
Stratum basale
Duct of eccrine sweat gland

Prof. Dr.
Heba Kalbouneh

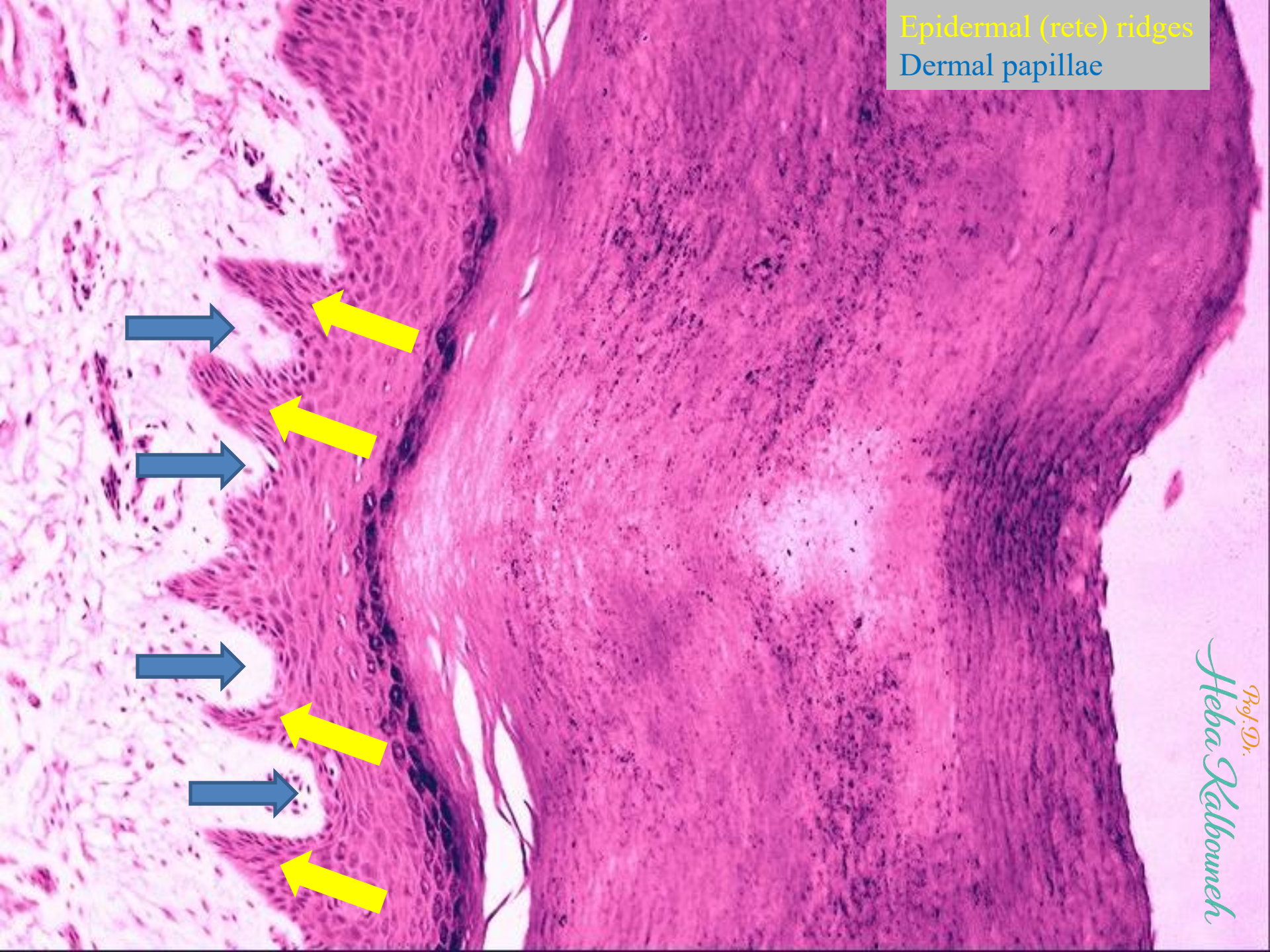




Stratum basale
Stratum spinosum



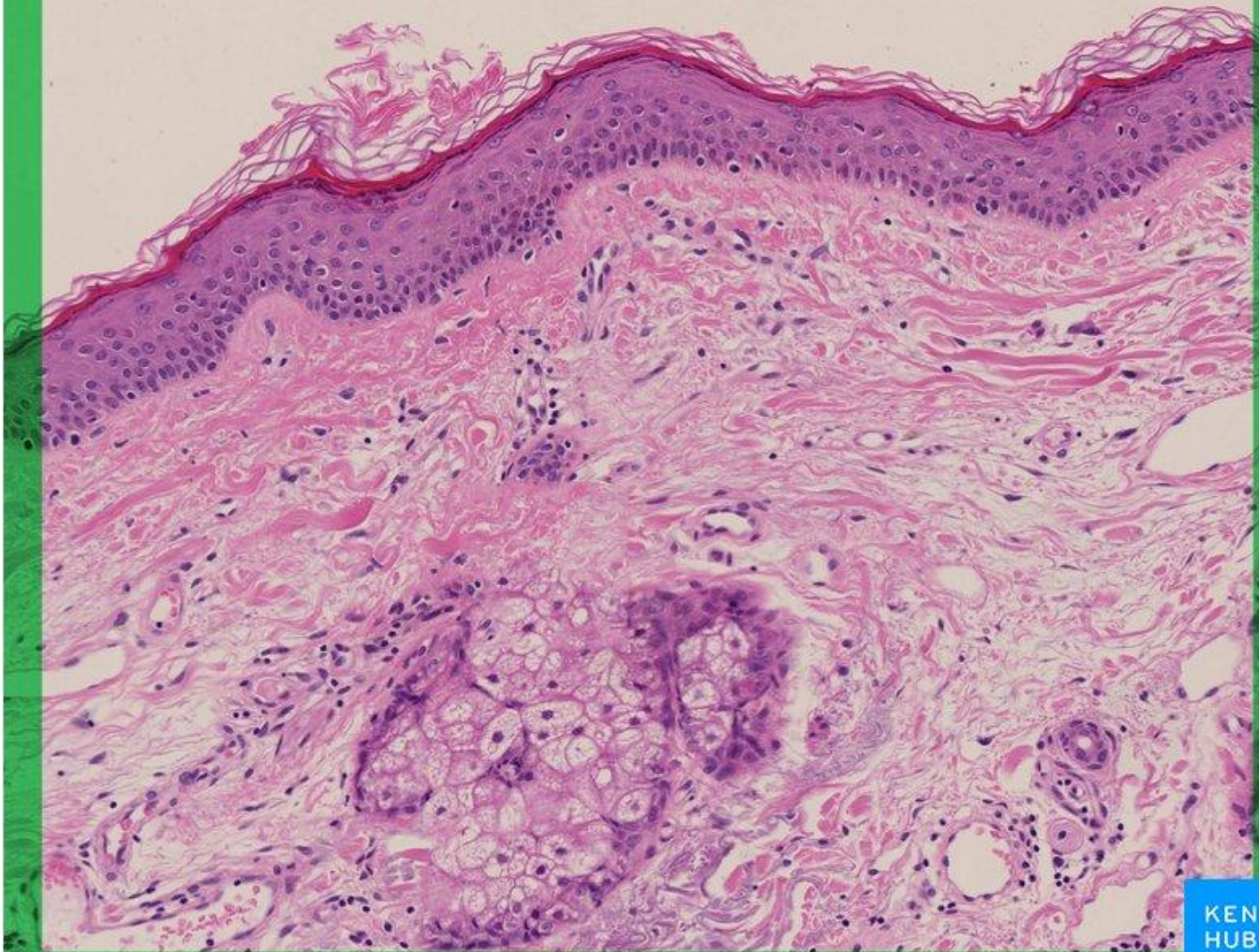
Epidermal (rete) ridges
Dermal papillae

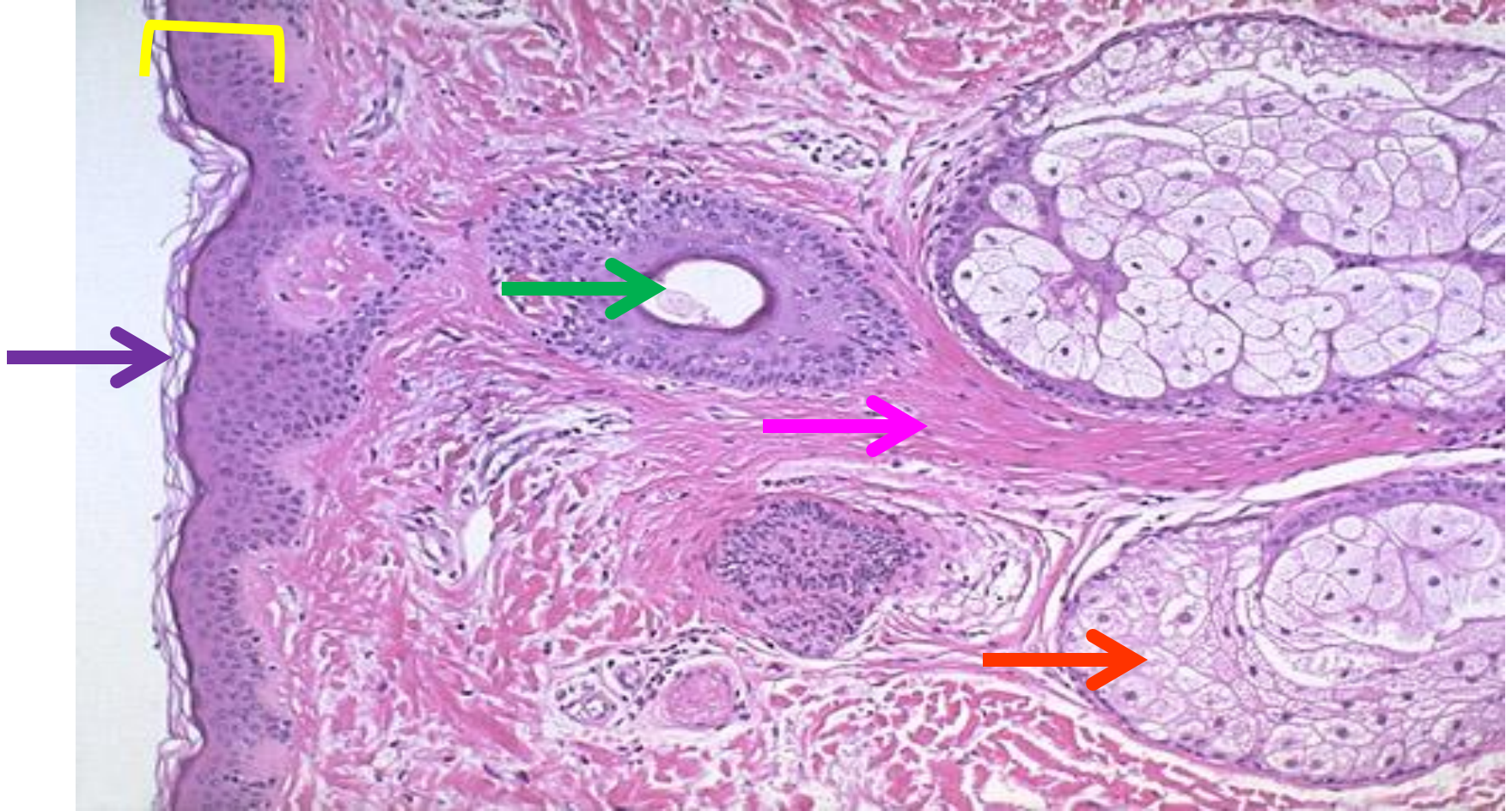


Thin or Thick Skin?

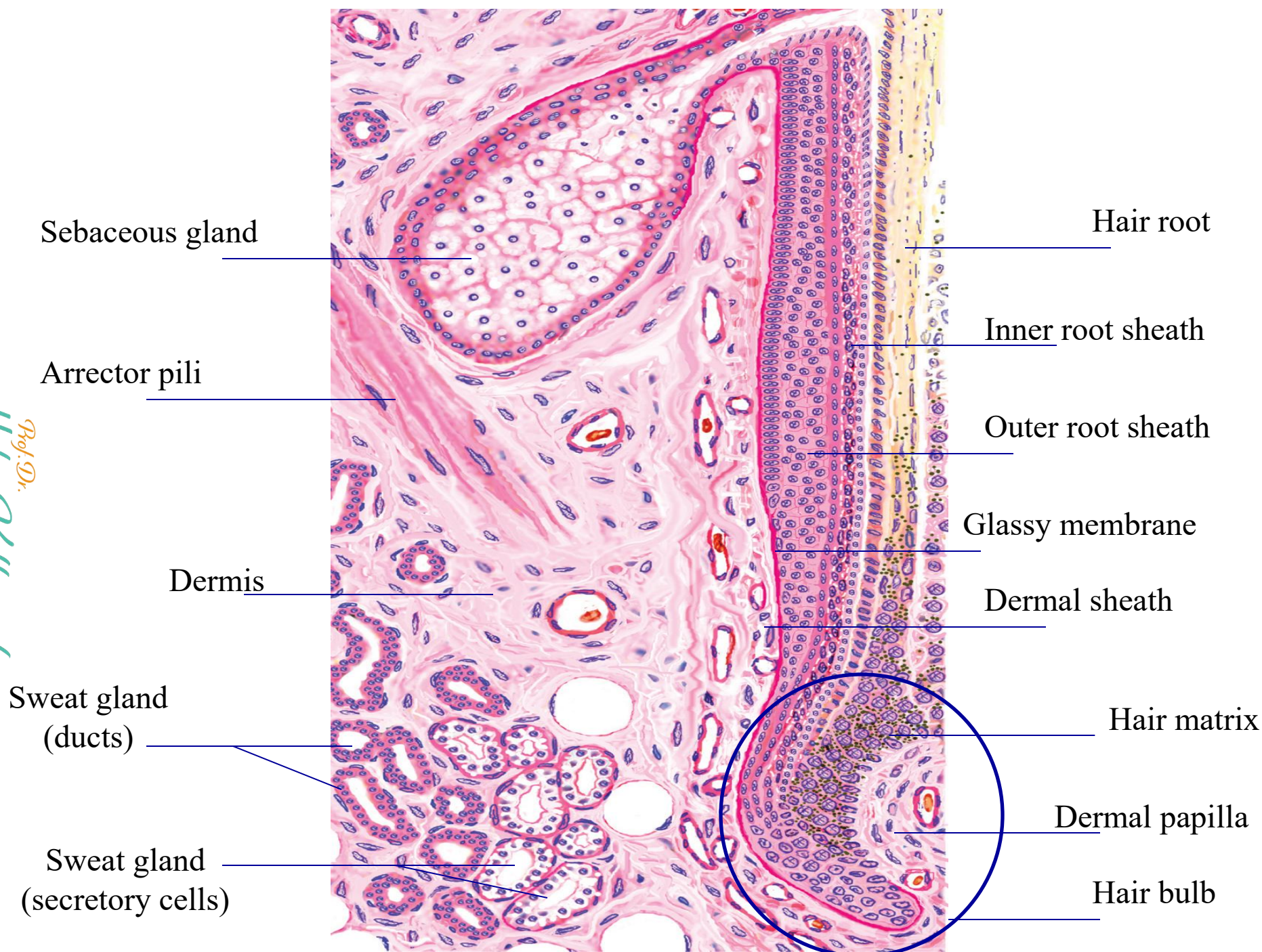


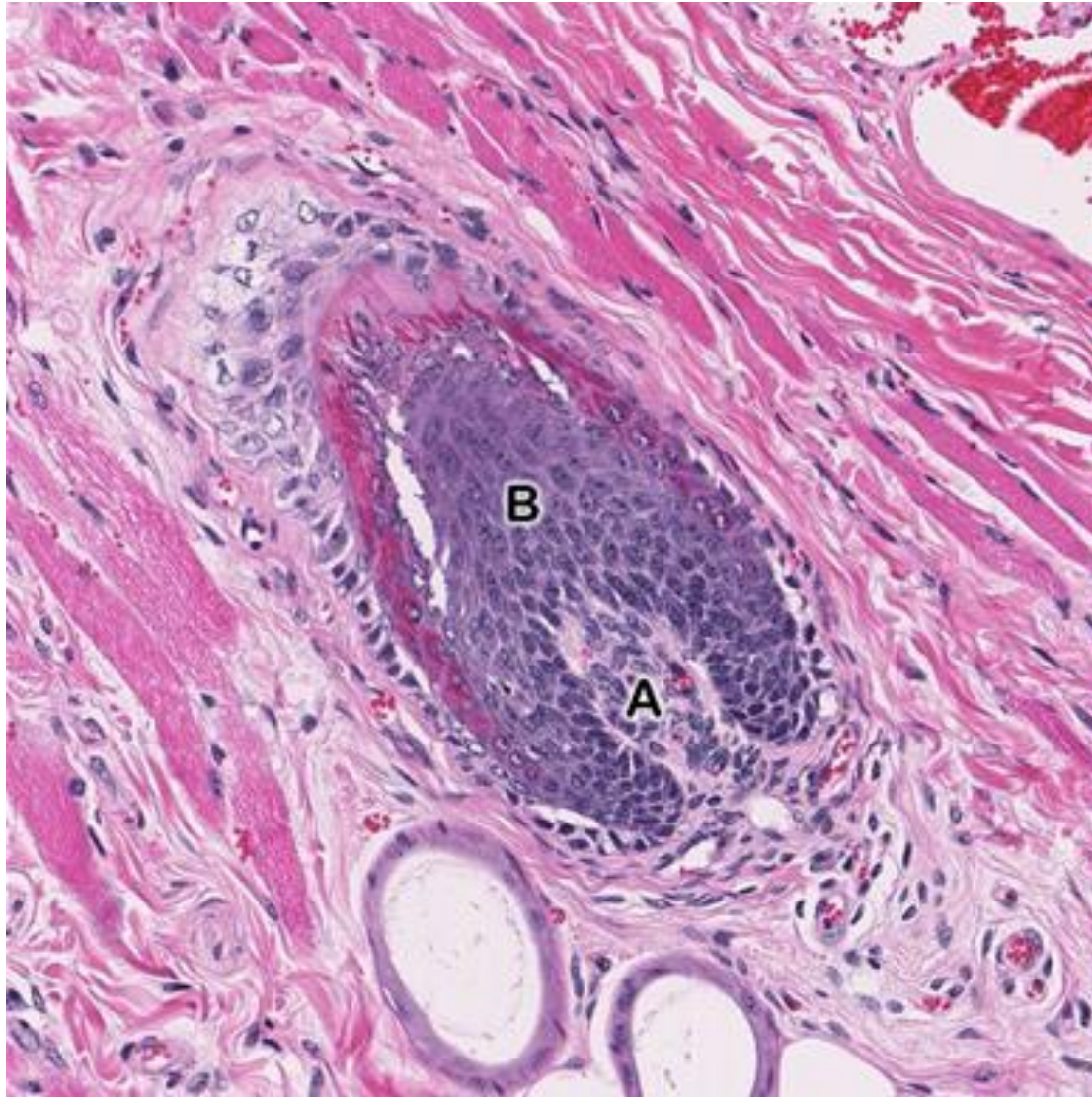
Thin or Thick Skin?





The normal histologic appearance of the skin is shown here. At the top is the **epidermis**. A thin layer of **keratin** overlies the epidermis. This layer of keratinization is thicker on the palms and soles and in areas where skin is rubbed or irritated. Beneath the epidermis is the dermis containing connective tissue with collagen and elastic fibers. At the center can be seen **a hair follicle** with surrounding **sebaceous glands**. Associated with the hair follicle is a small bundle of smooth muscle known as the **arrector pili** that can cause the hair to "stand on end" and dimple the skin to form "goose bumps".



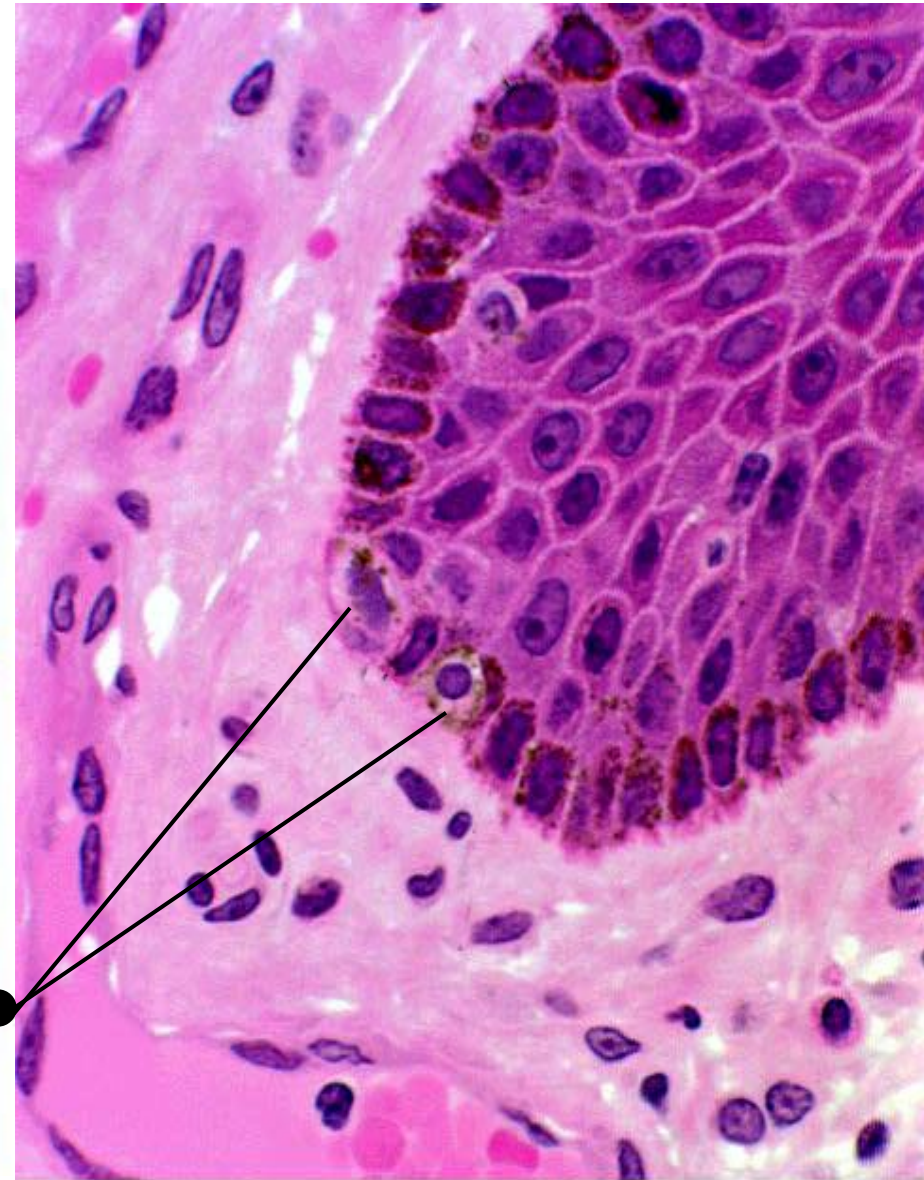
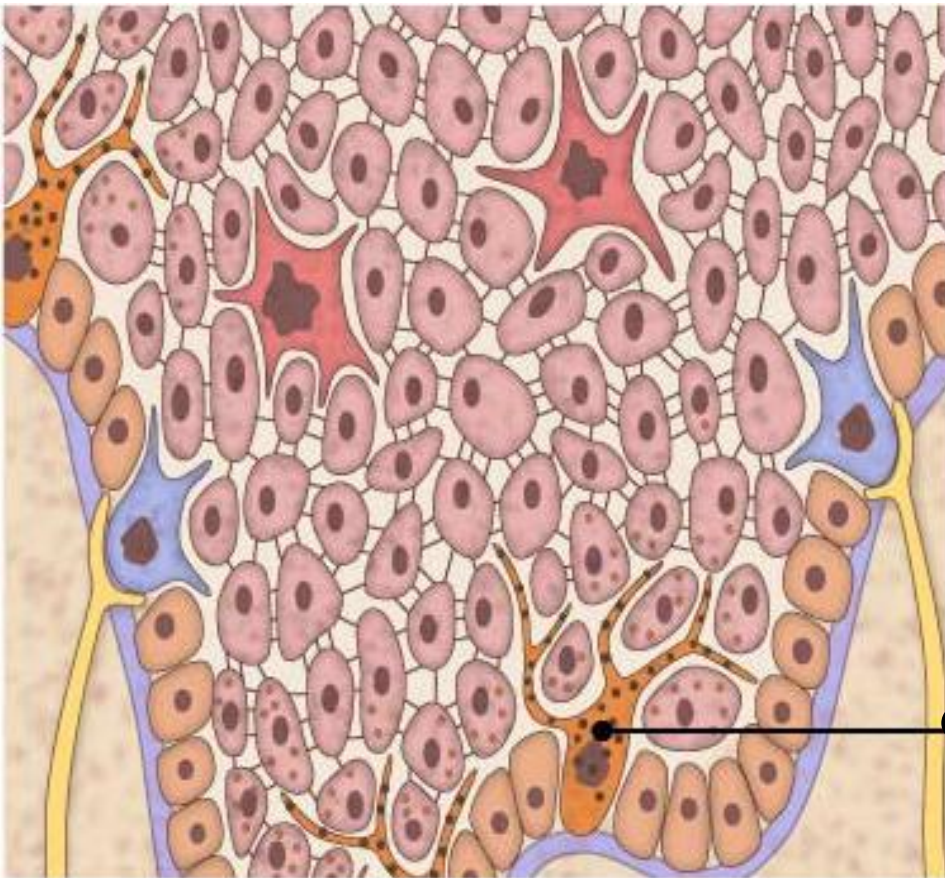


A: Dermal papilla
B: Hair matrix

Melanocytes:

- Not attached to neighboring keratinocytes
- Lightly stained cytoplasm

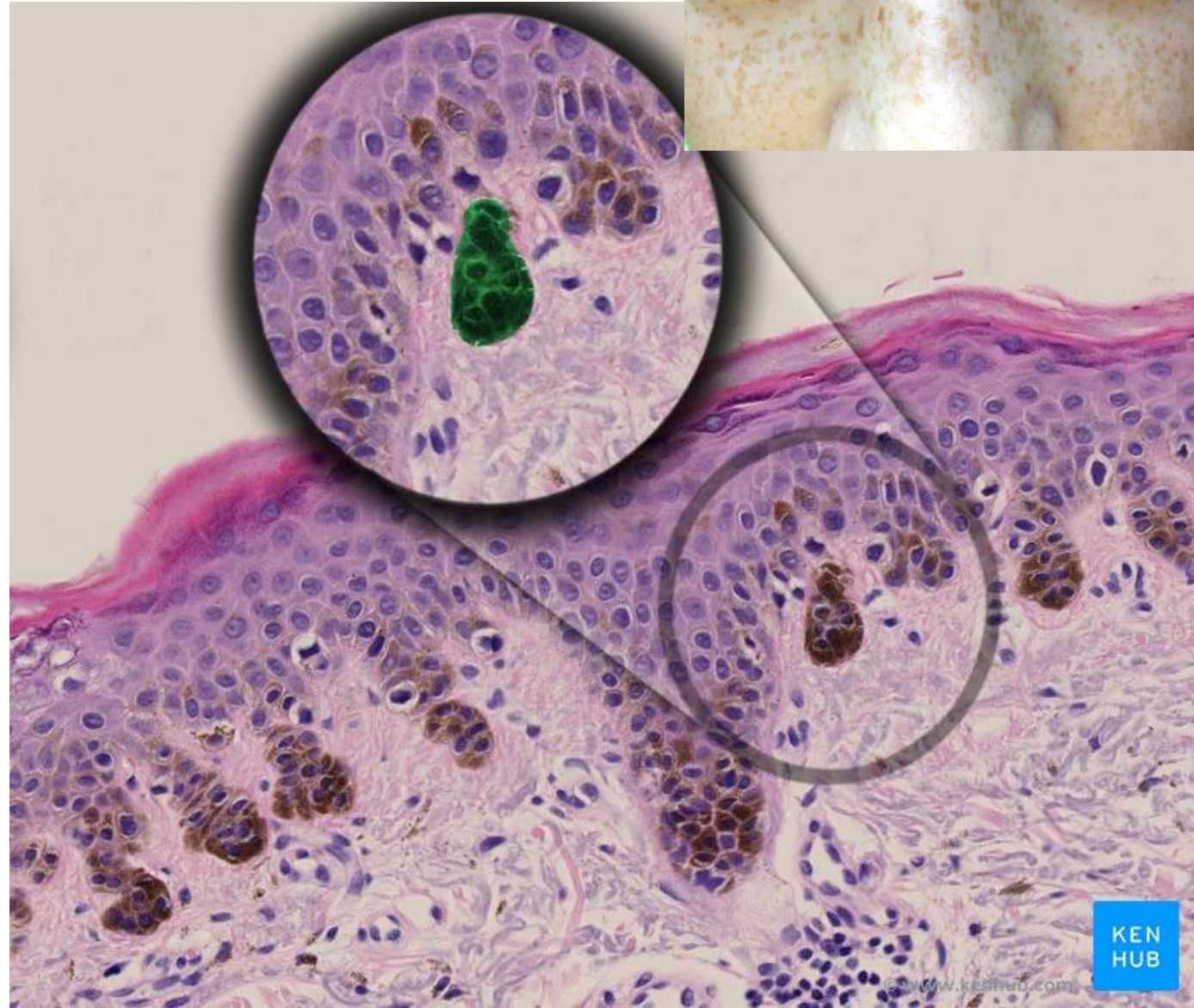
1 melanocyte for every 10 basal keratinocytes



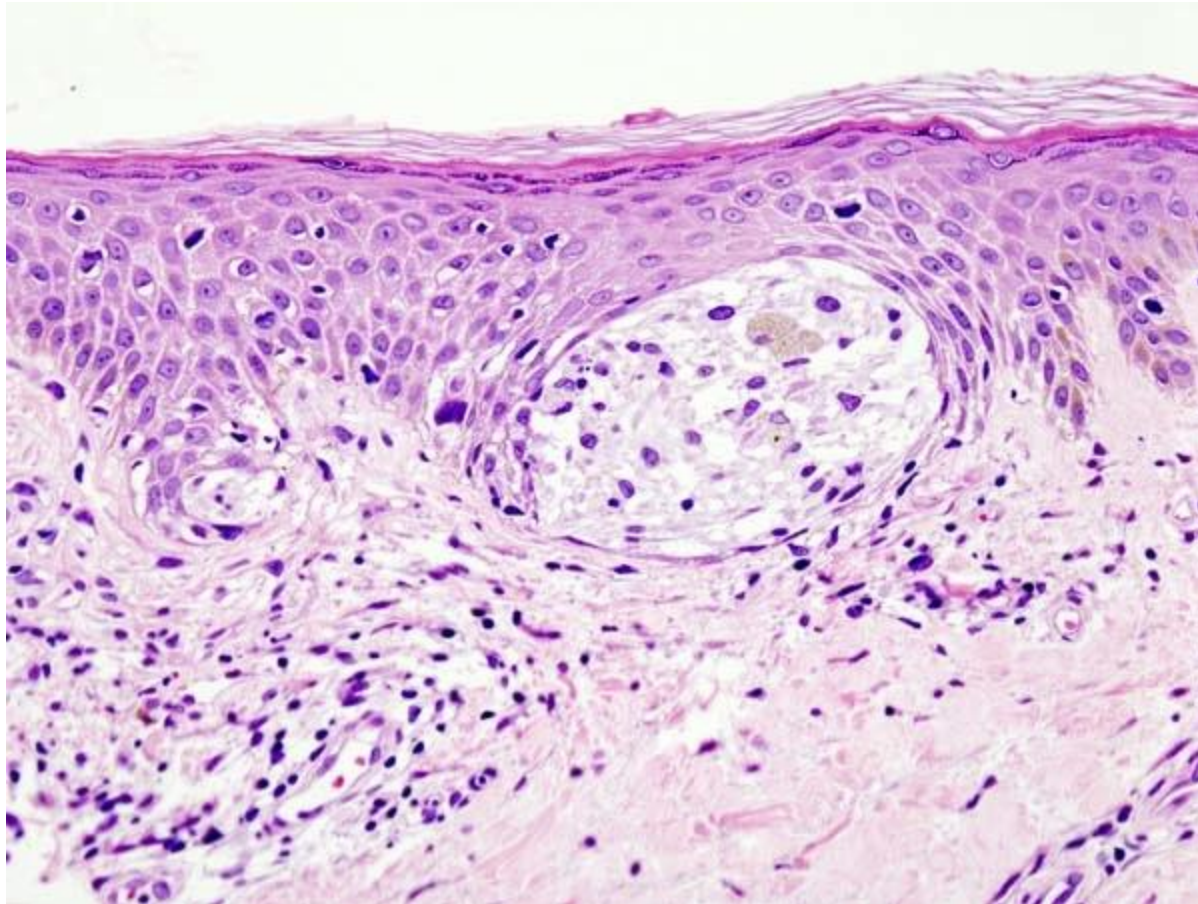
Freckles are clusters of concentrated melaninized cells



Freckles do not have an increased number of the melanin-producing cells, or melanocytes, but instead have melanocytes that overproduce melanosomes changing the coloration of keratinocytes

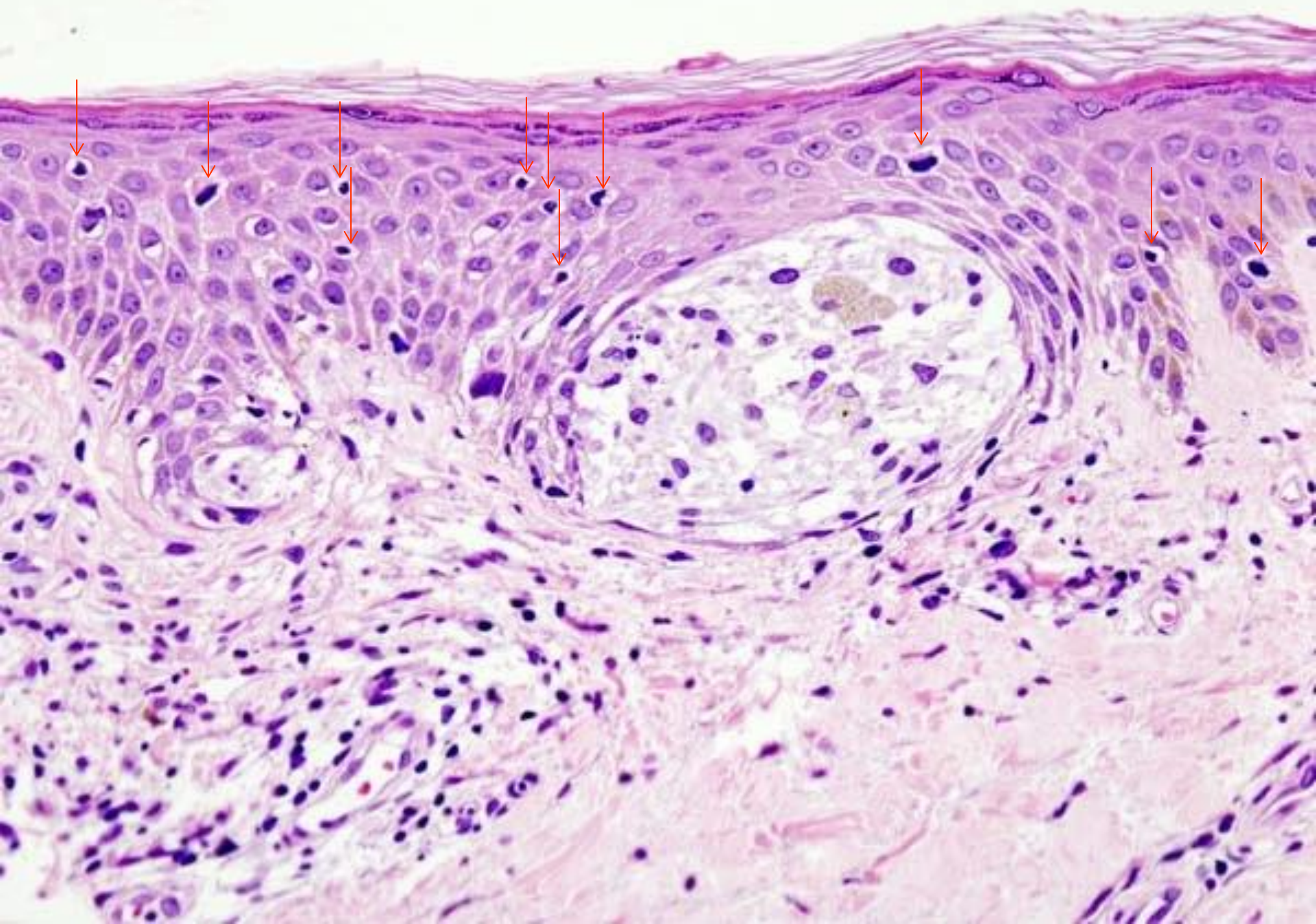


Is there anything abnormal in the epidermis? If so, what might it indicate.

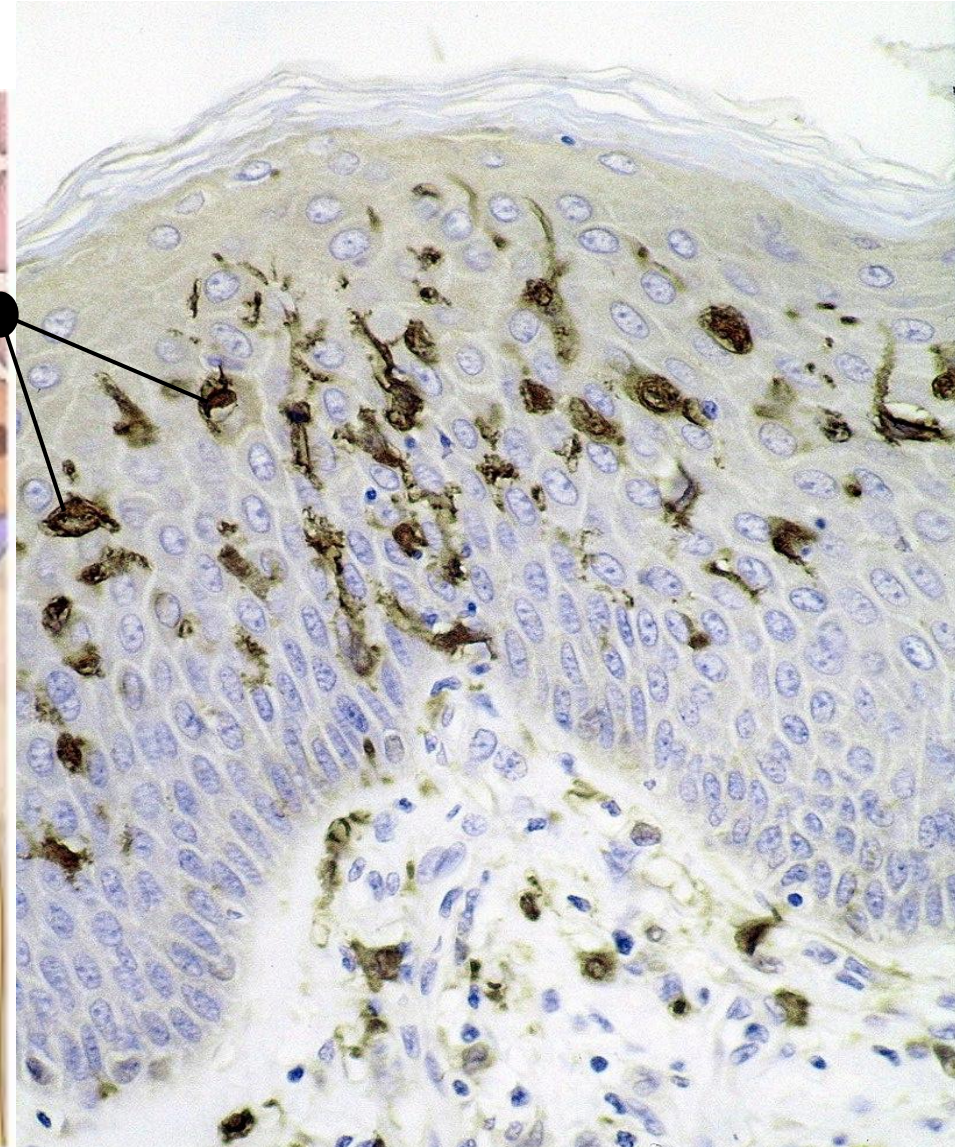
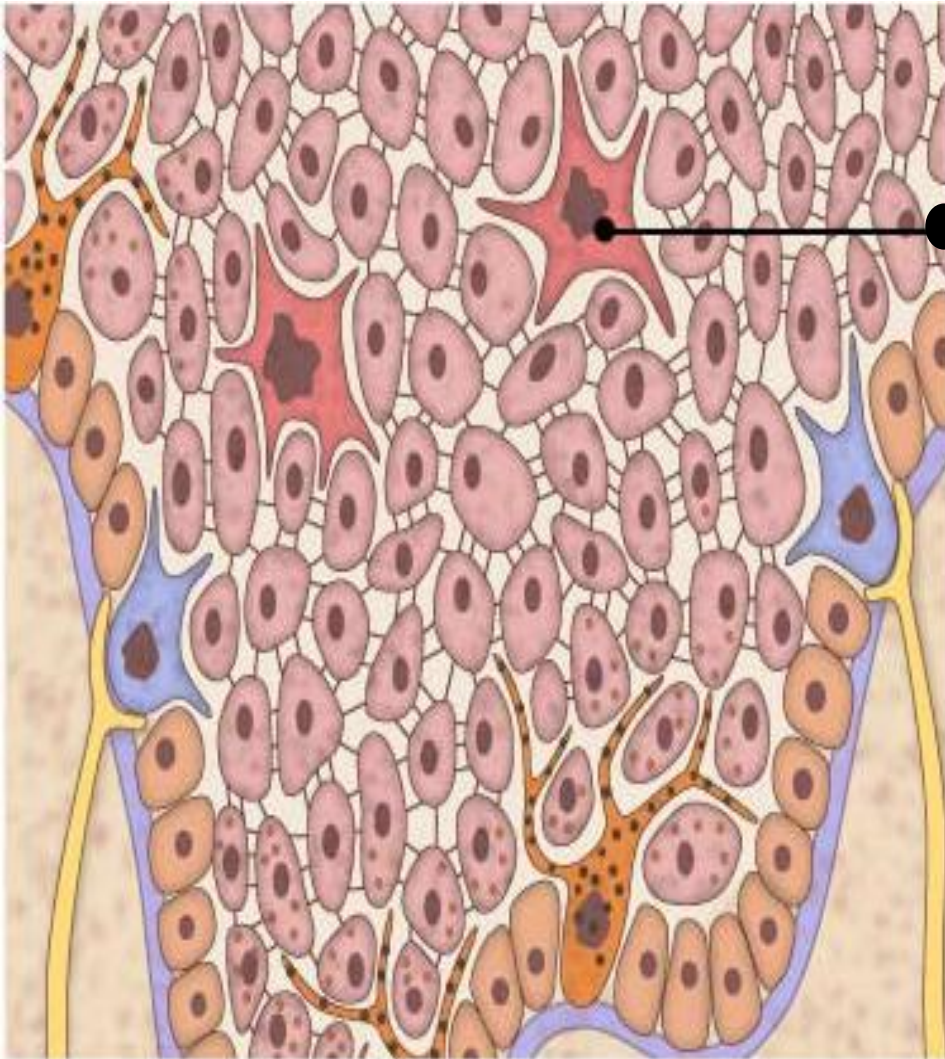


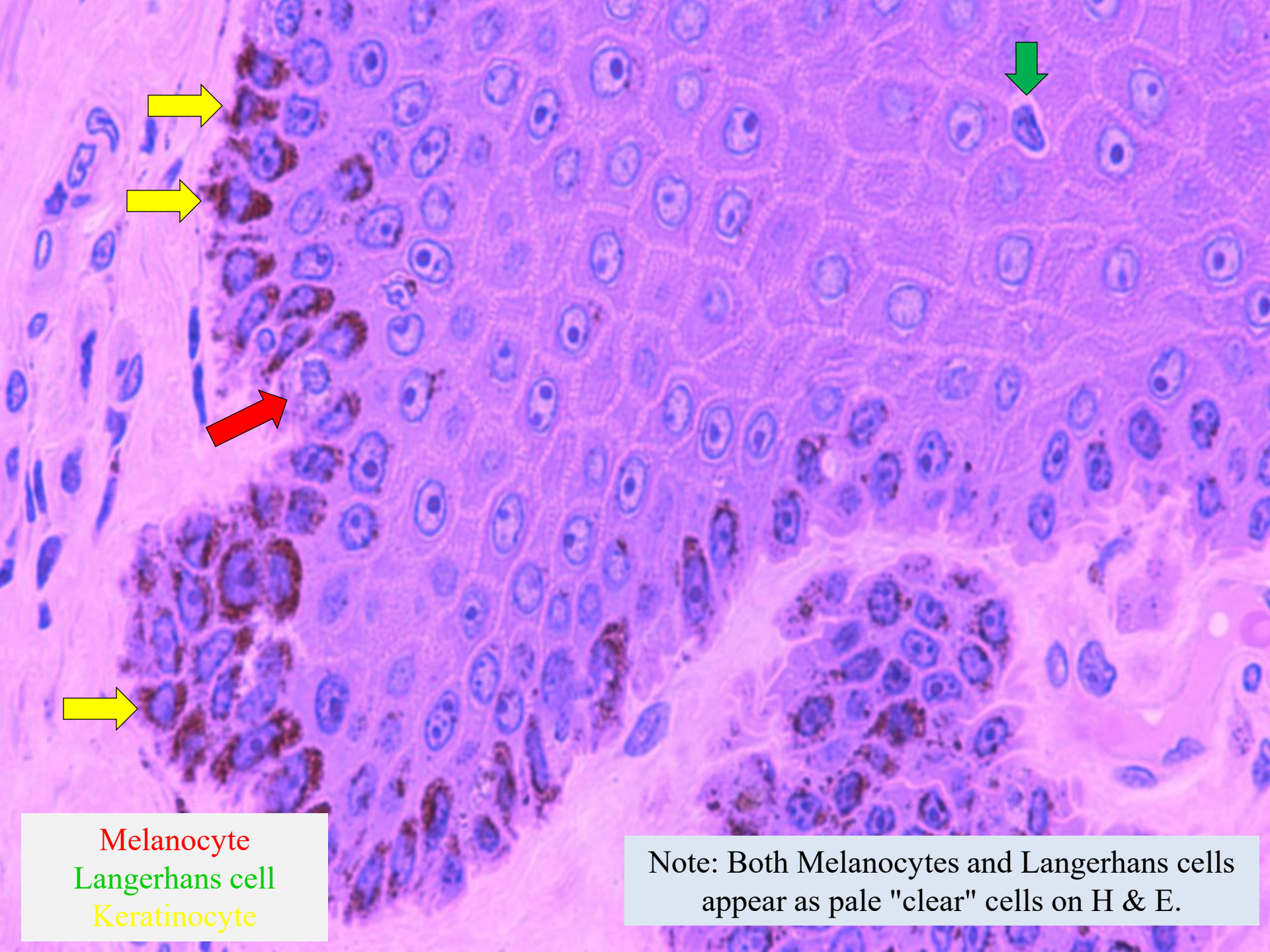
Other pigments!!!

Look for cells with pale cytoplasm in the epidermis. These cells are melanocytes and the large number of melanocytes in upper layers of epidermis is abnormal. In normal skin, melanocytes are found only in the basal layer of the epidermis. The condition suggests the early stages in the development of melanoma.



Langerhans cells:

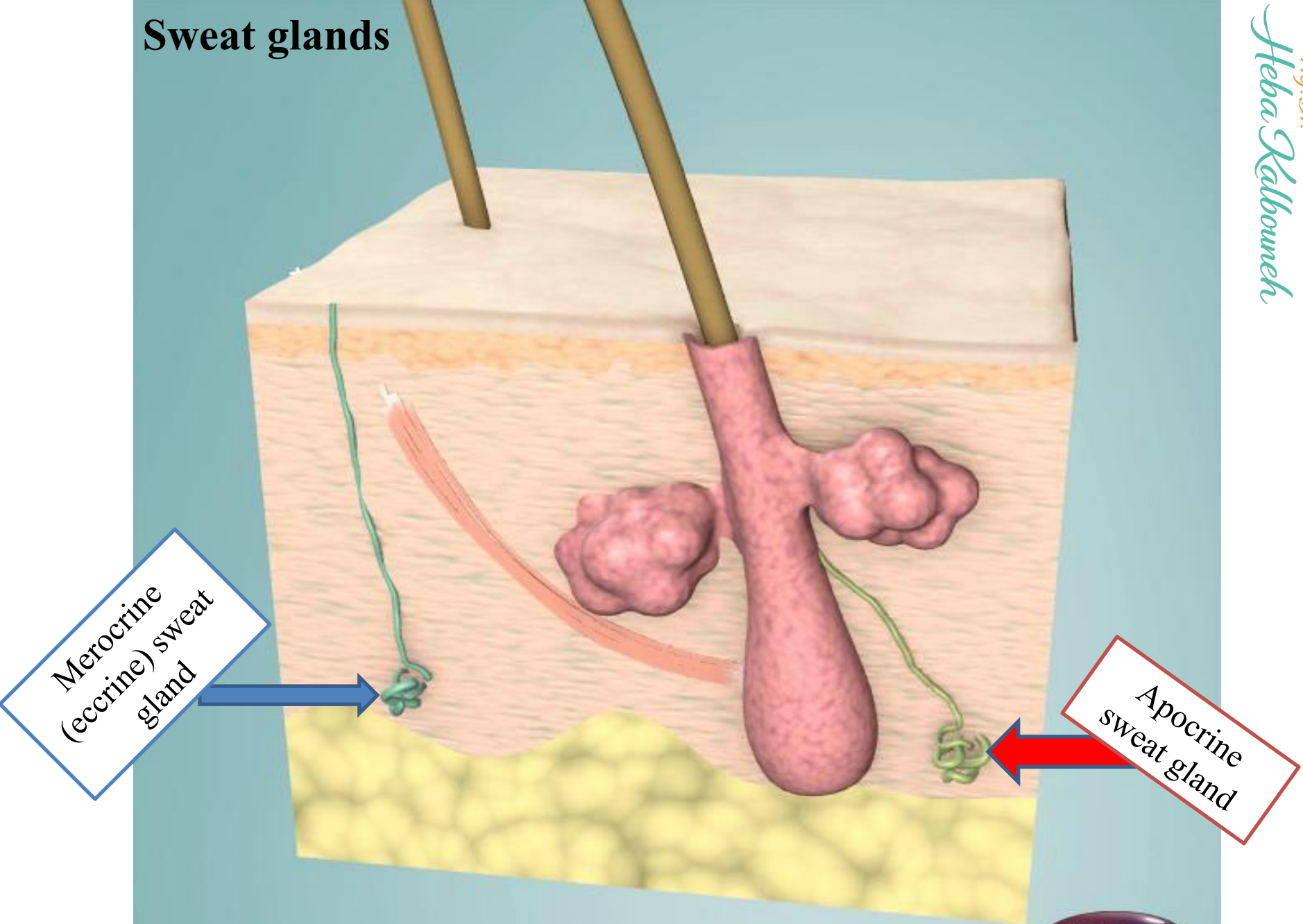




Melanocyte
Langerhans cell
Keratinocyte

Note: Both Melanocytes and Langerhans cells appear as pale "clear" cells on H & E.

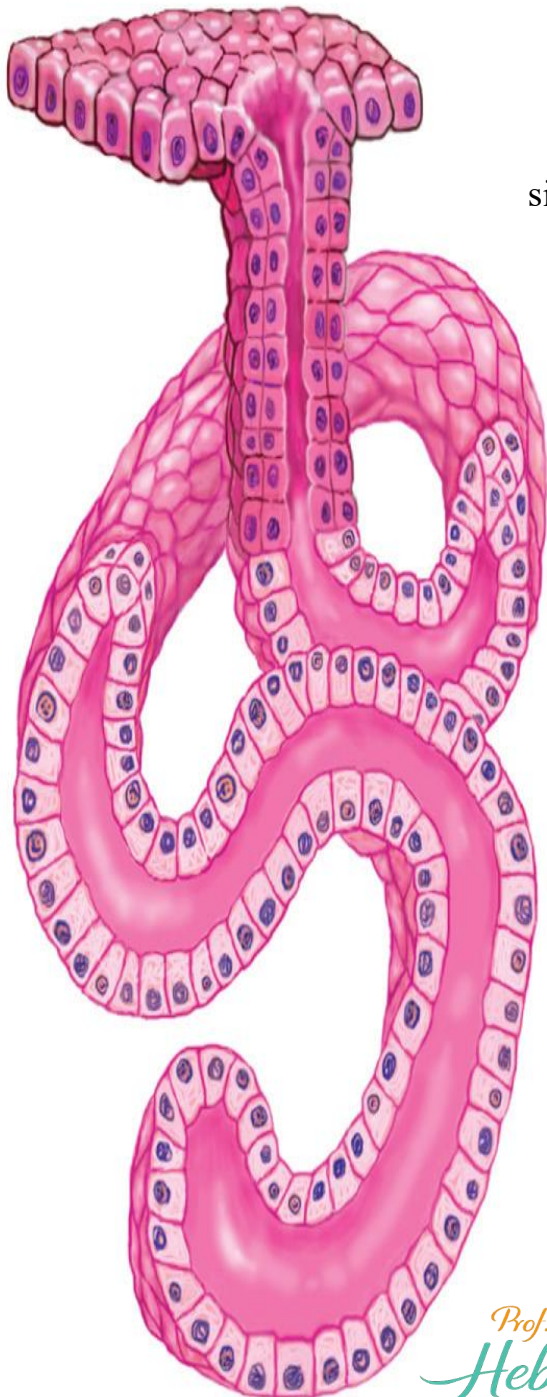
Sweat glands



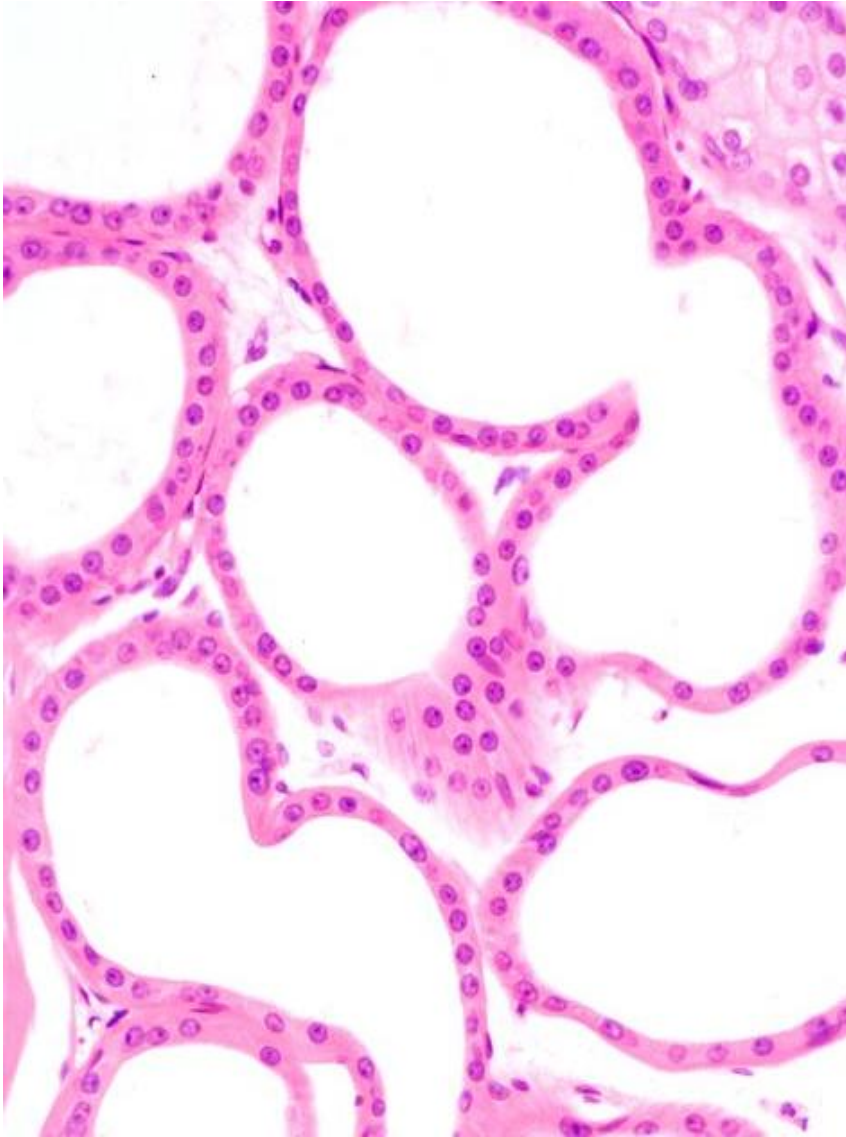
Merocrine
(eccrine) sweat
gland

Apocrine
sweat gland

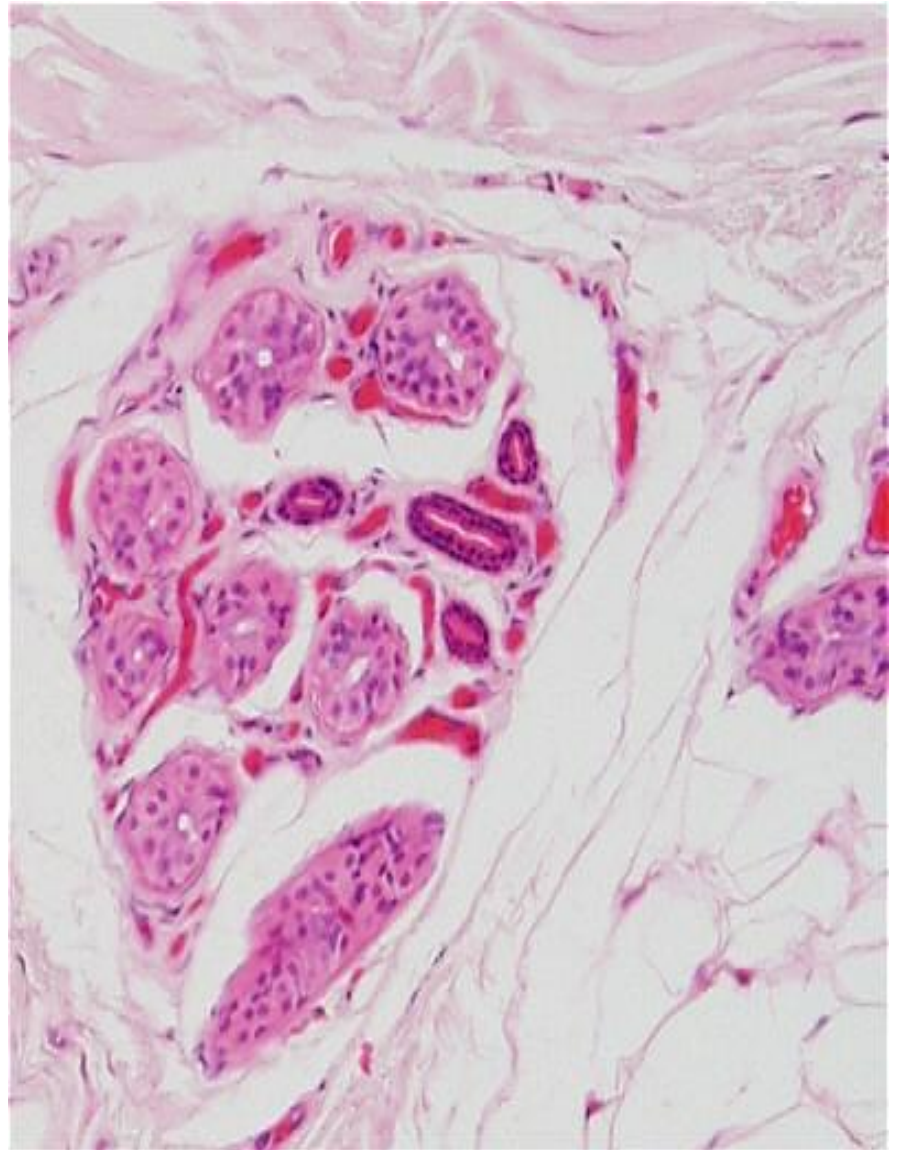
Sweat gland is a
simple coiled tubular
gland

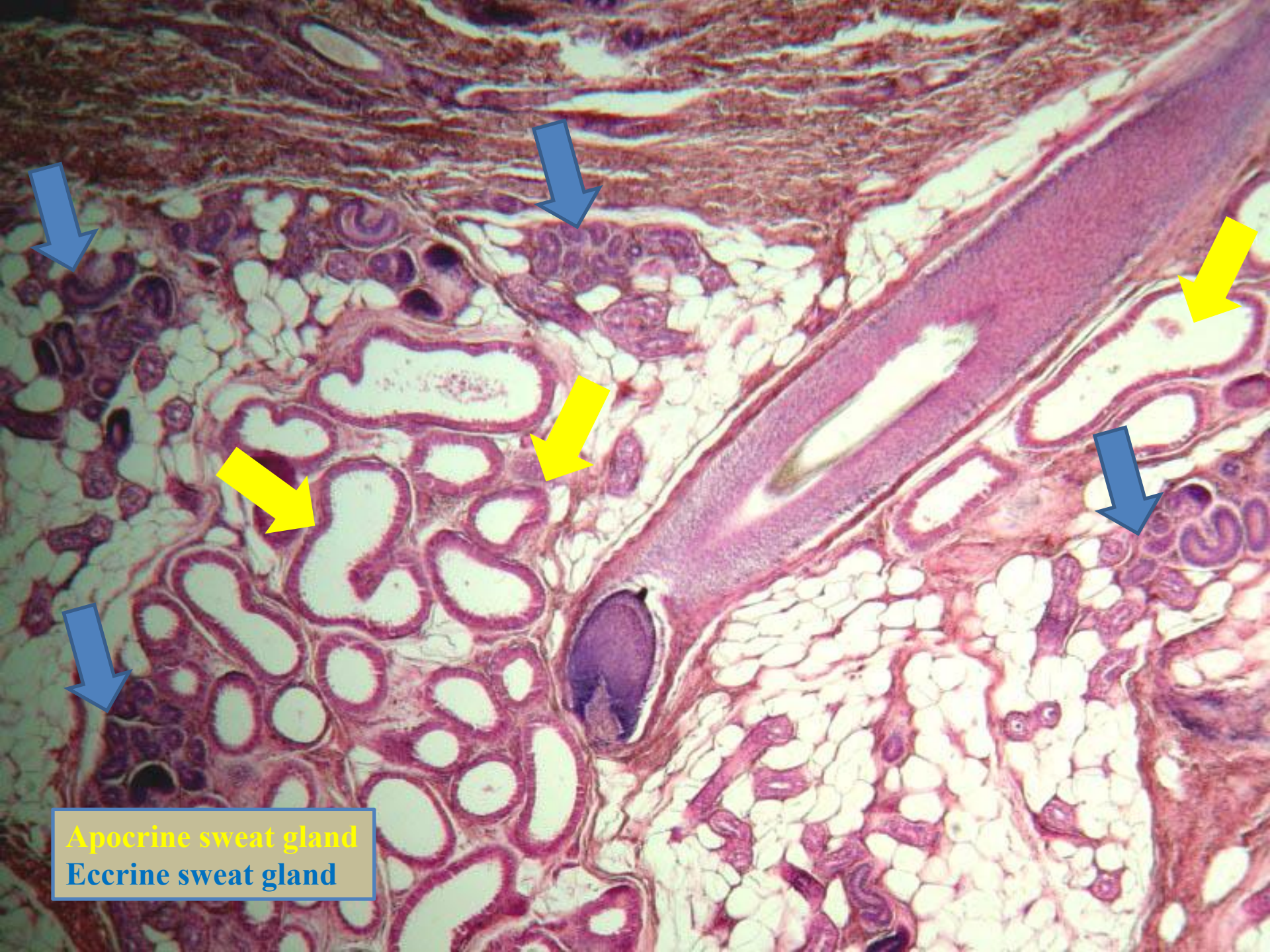


Apocrine sweat glands



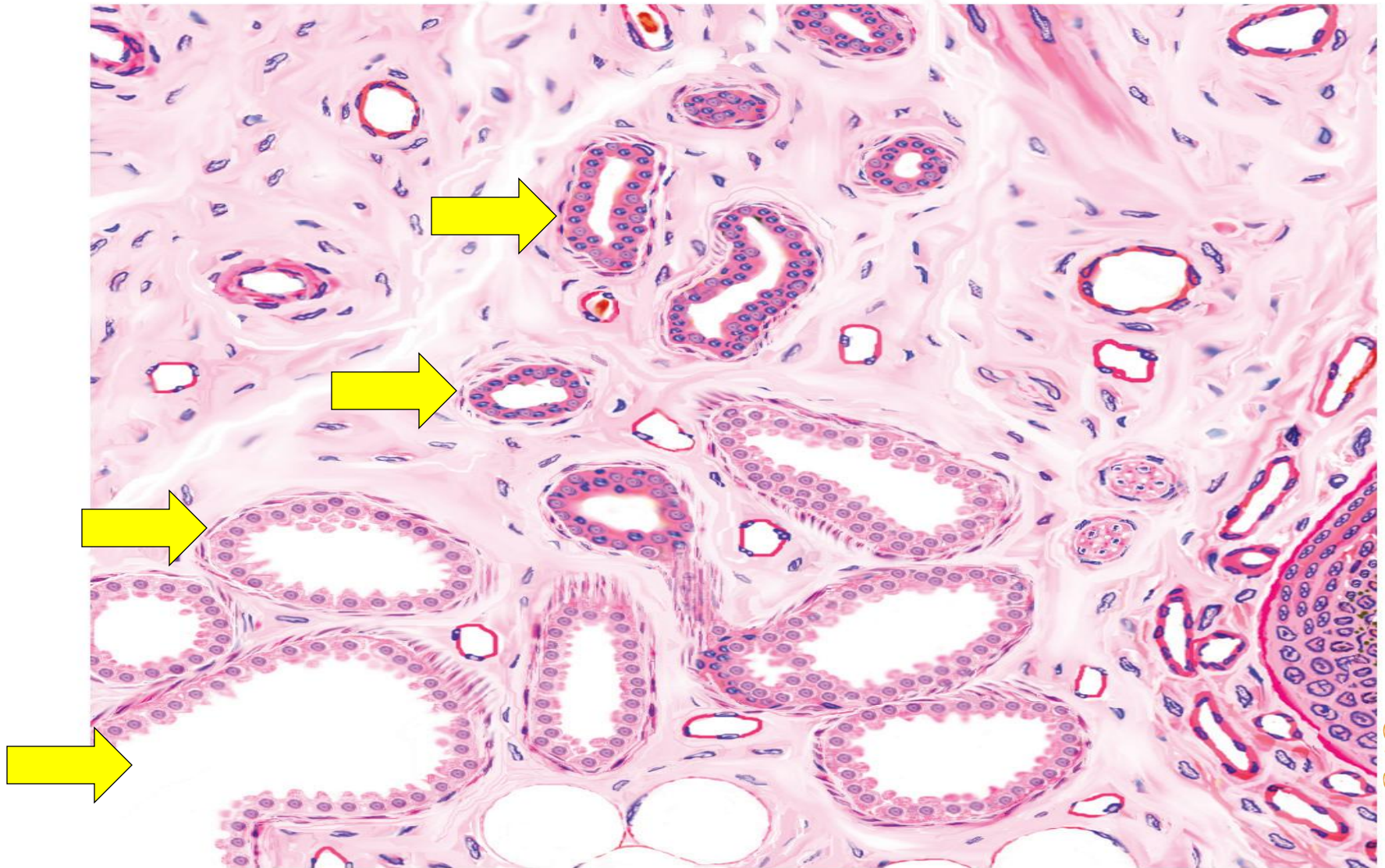
Eccrine (merocrine) sweat glands



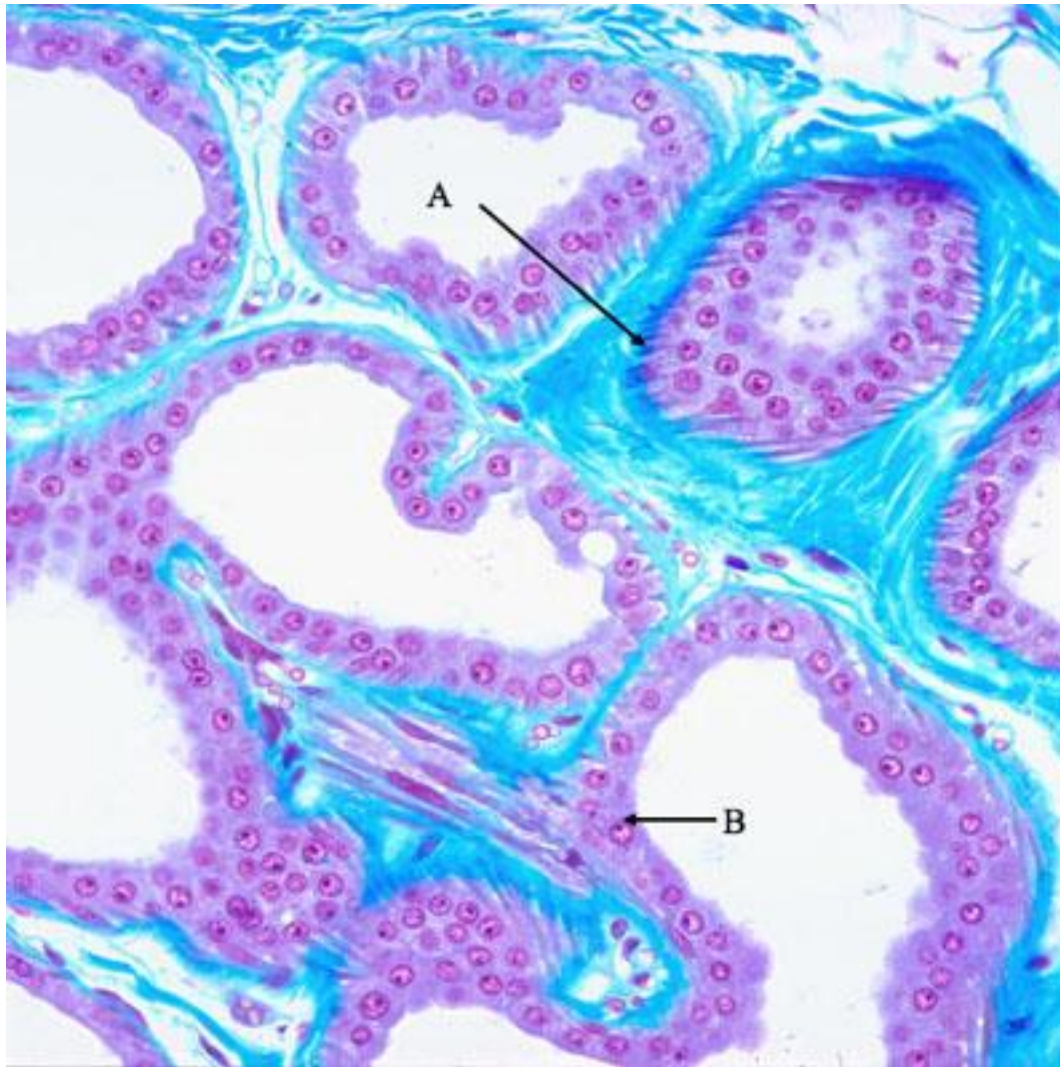


Apocrine sweat gland
Eccrine sweat gland

Apocrine or eccrine sweat glands????

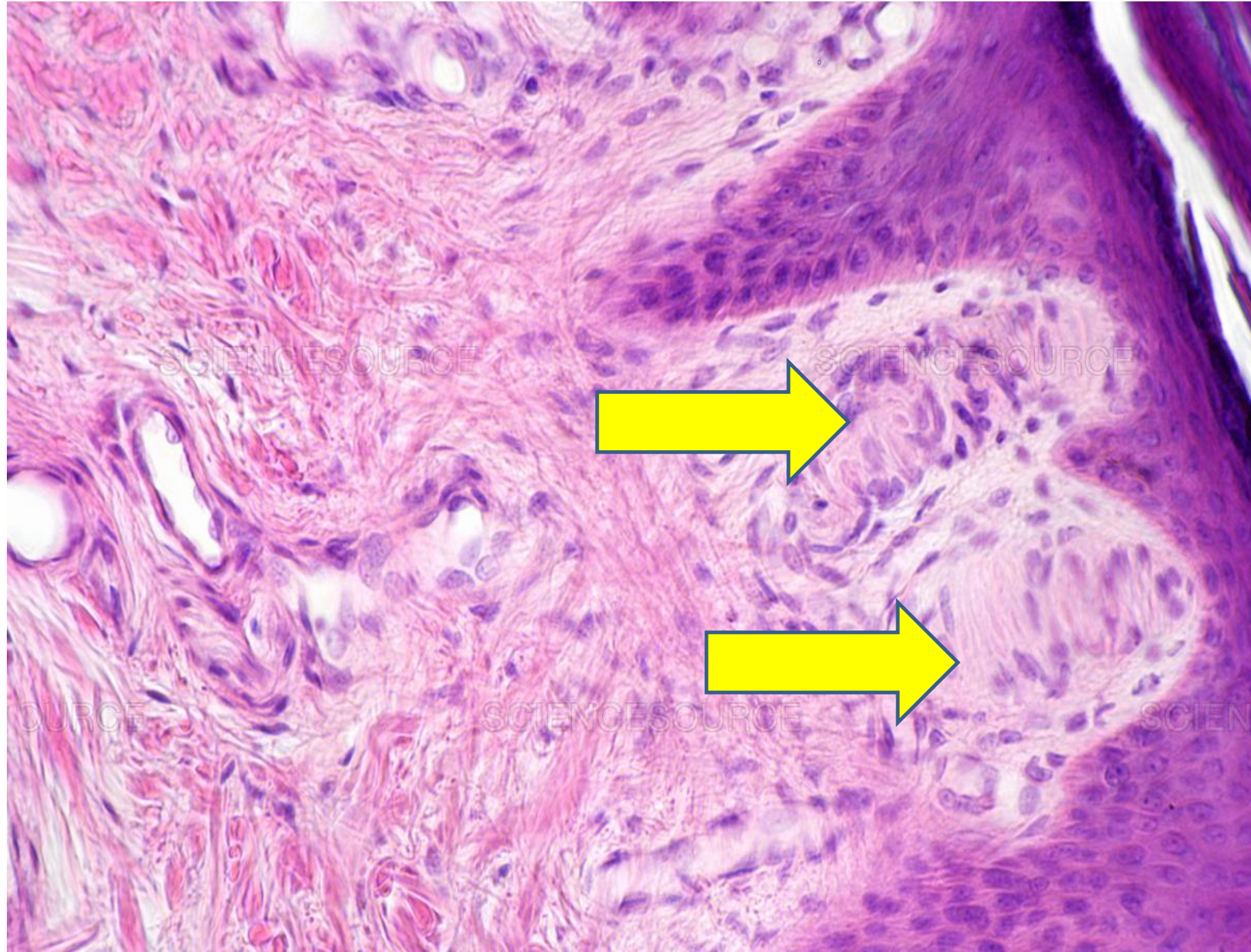


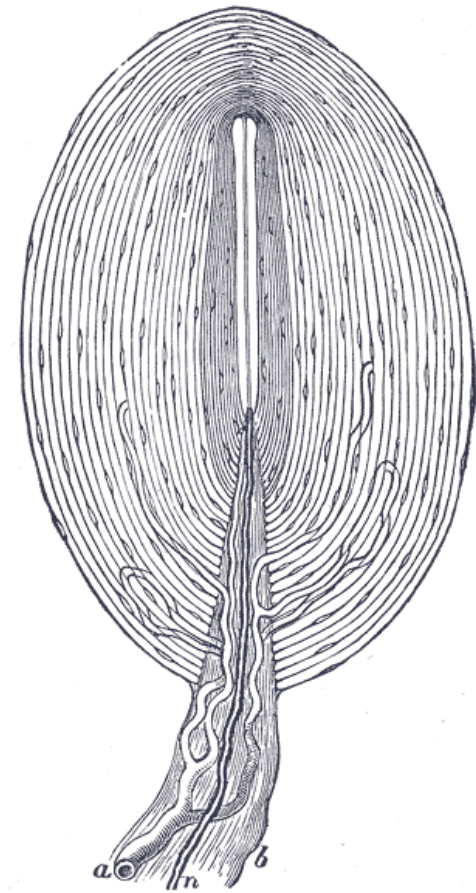
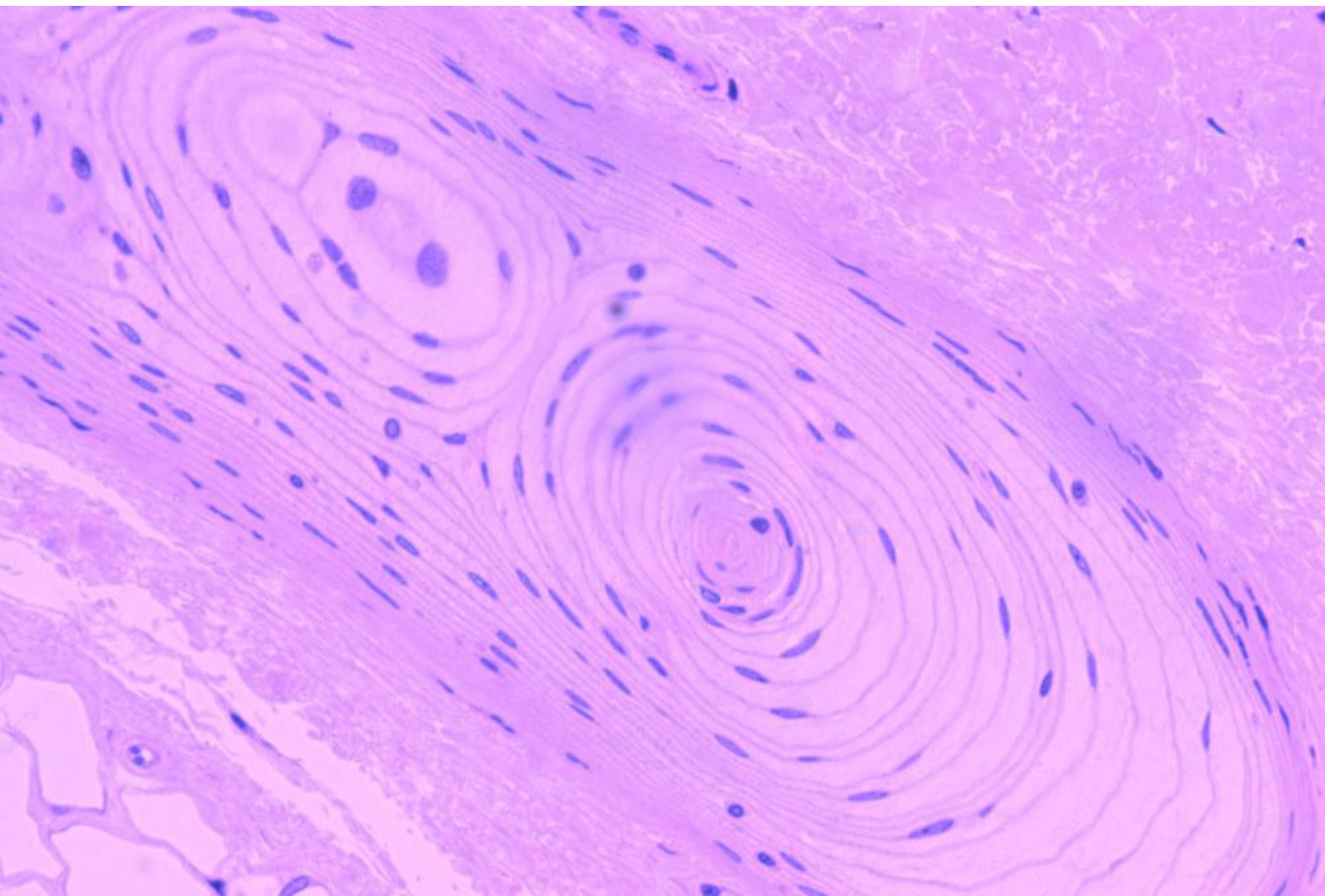
Apocrine or eccrine sweat glands????



Meissner's corpuscles localize in the dermis between epidermal ridges.
Meissner's corpuscles are touch receptors and enriched in fingers and toes





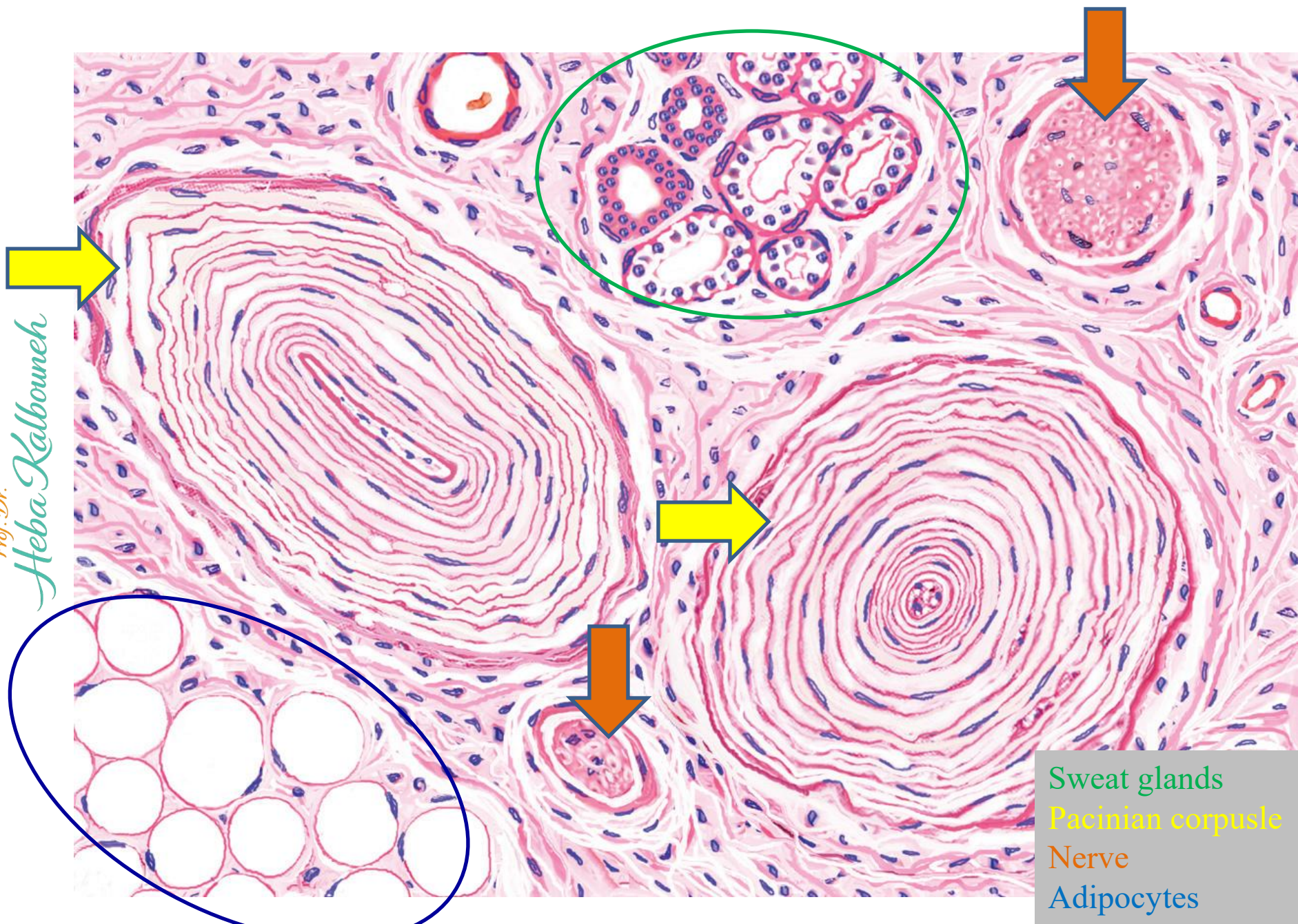


Pacinian Corpuscle

Pacinian corpuscles are large (~ 1 mm), onion-like structures in the dermis and hypodermis.

Pacinian corpuscles contain a myelinated nerve ending in the central core of the structure.

Pacinian corpuscles are sensitive to mechanical and vibratory pressure, rapidly changing pressure

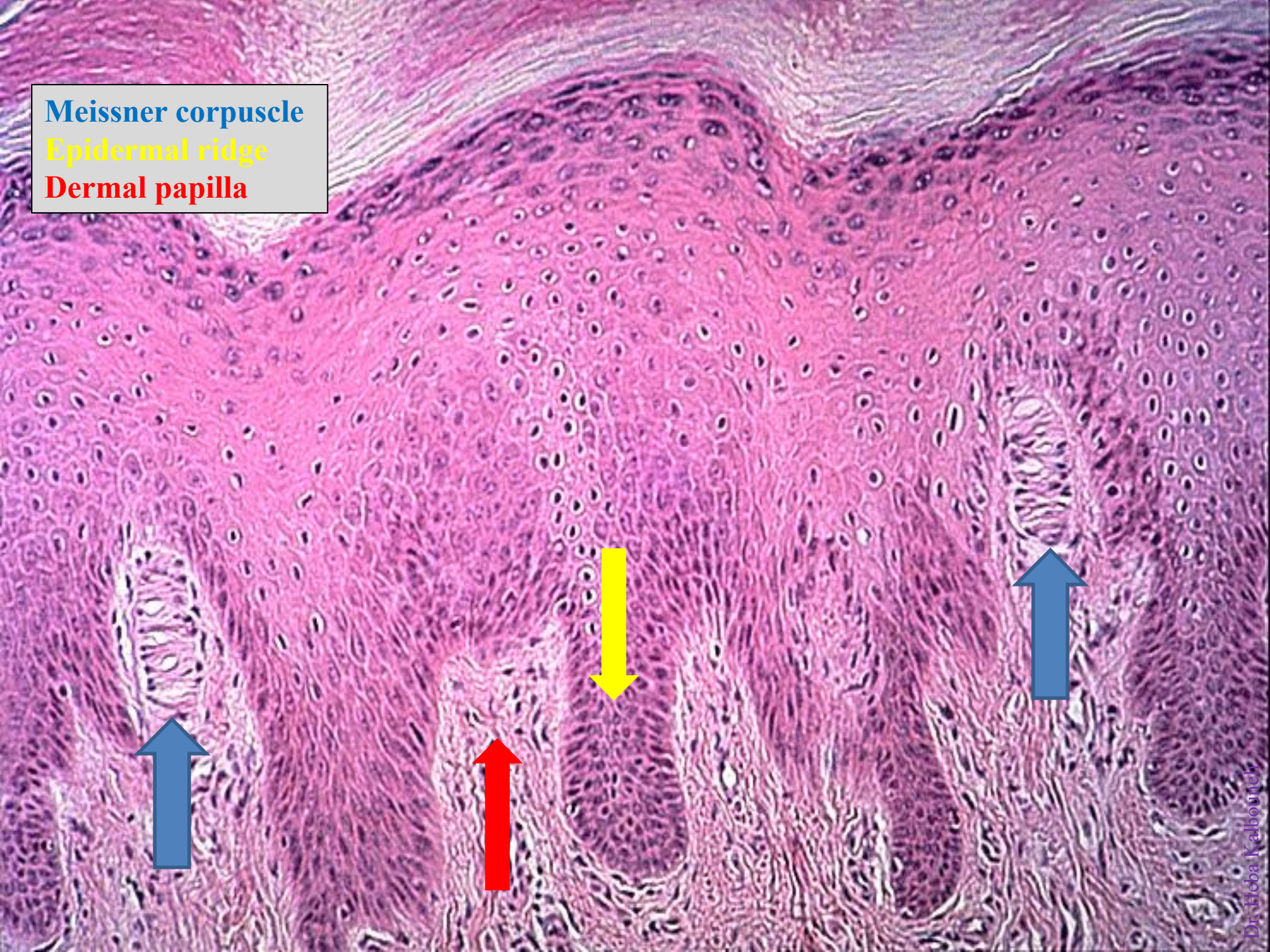


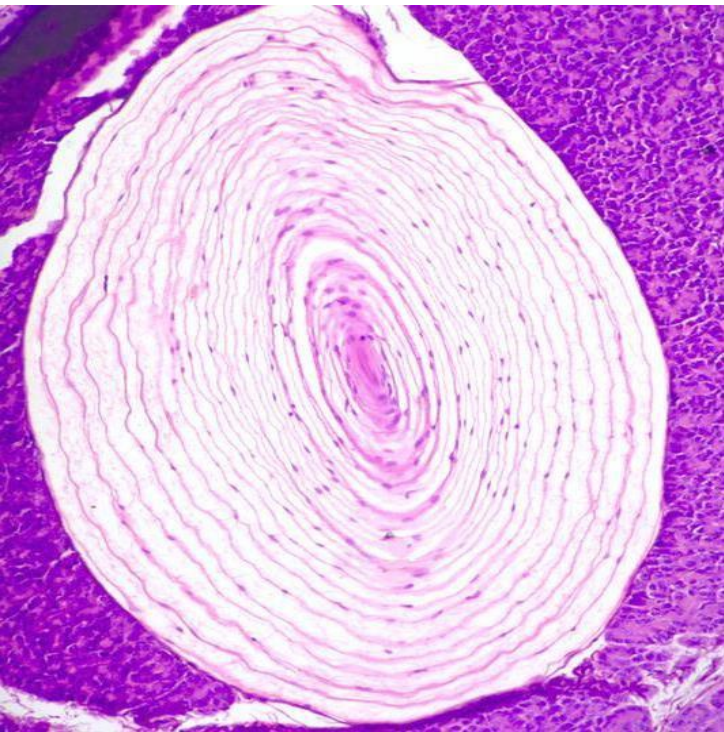
Sweat glands
Pacini corpuscle
Nerve
Adipocytes

Meissner corpuscle

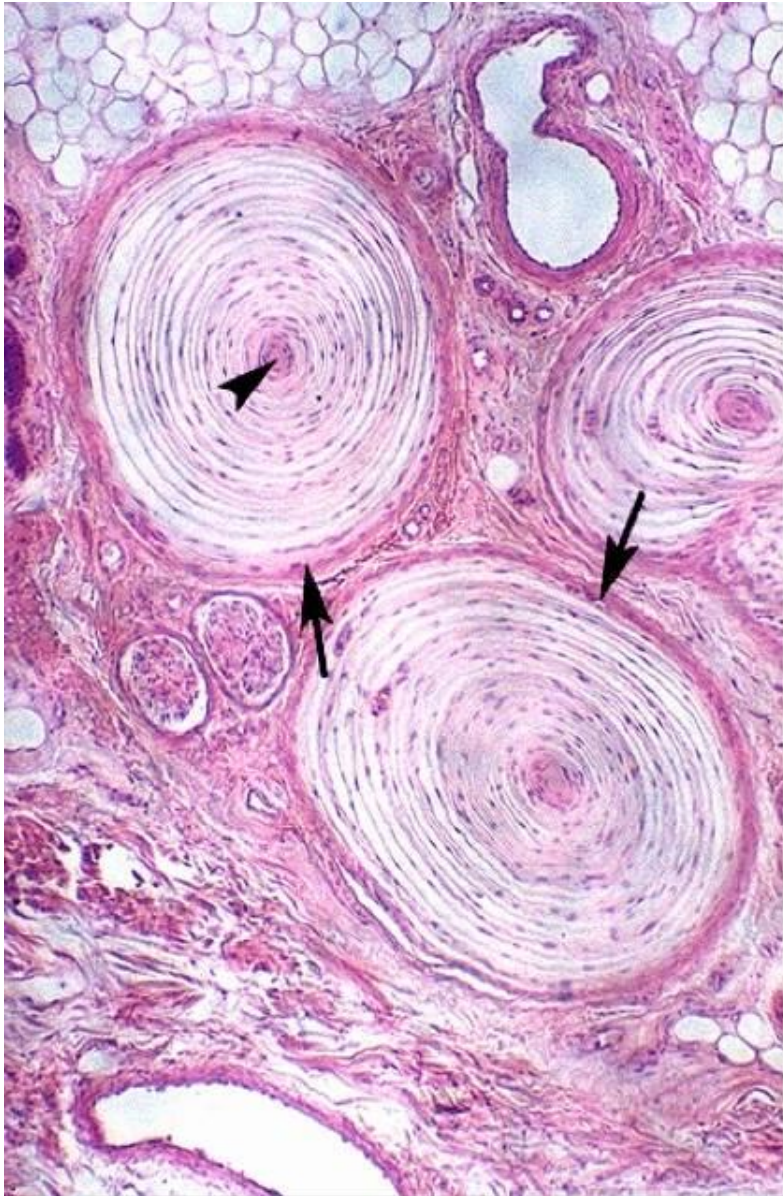
Epidermal ridge

Dermal papilla

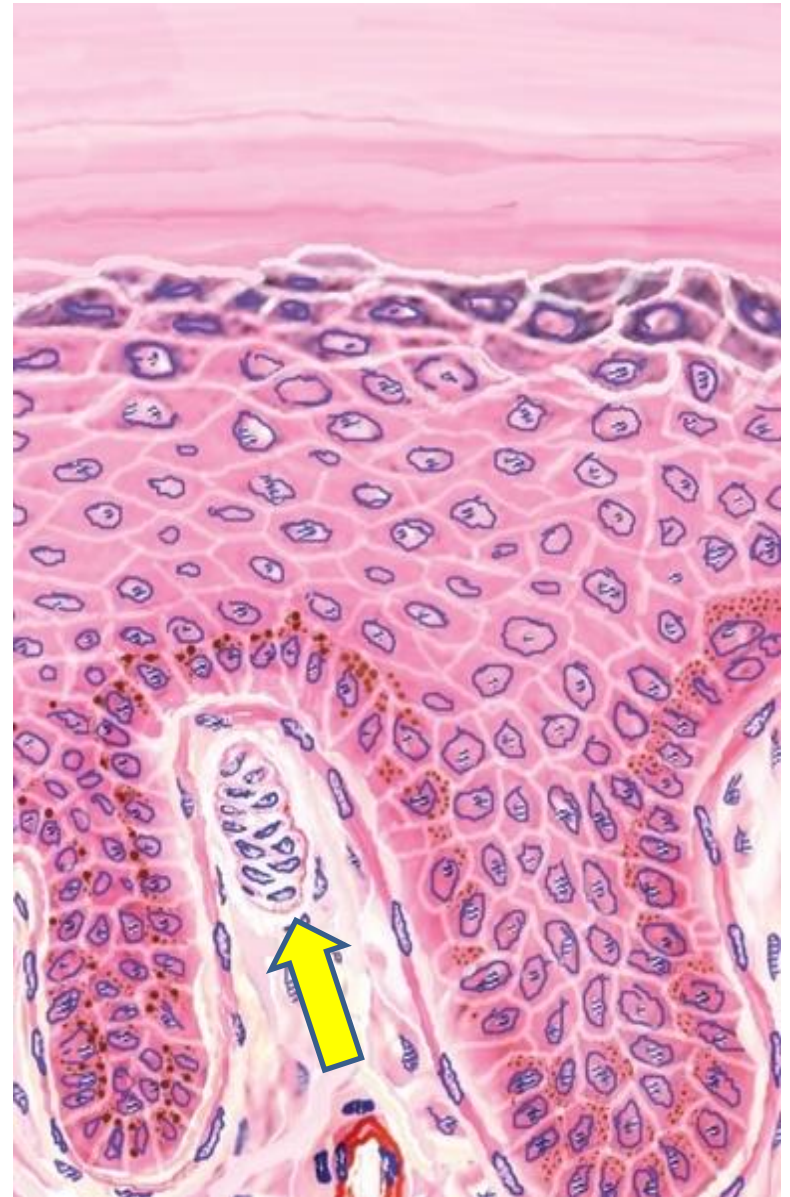




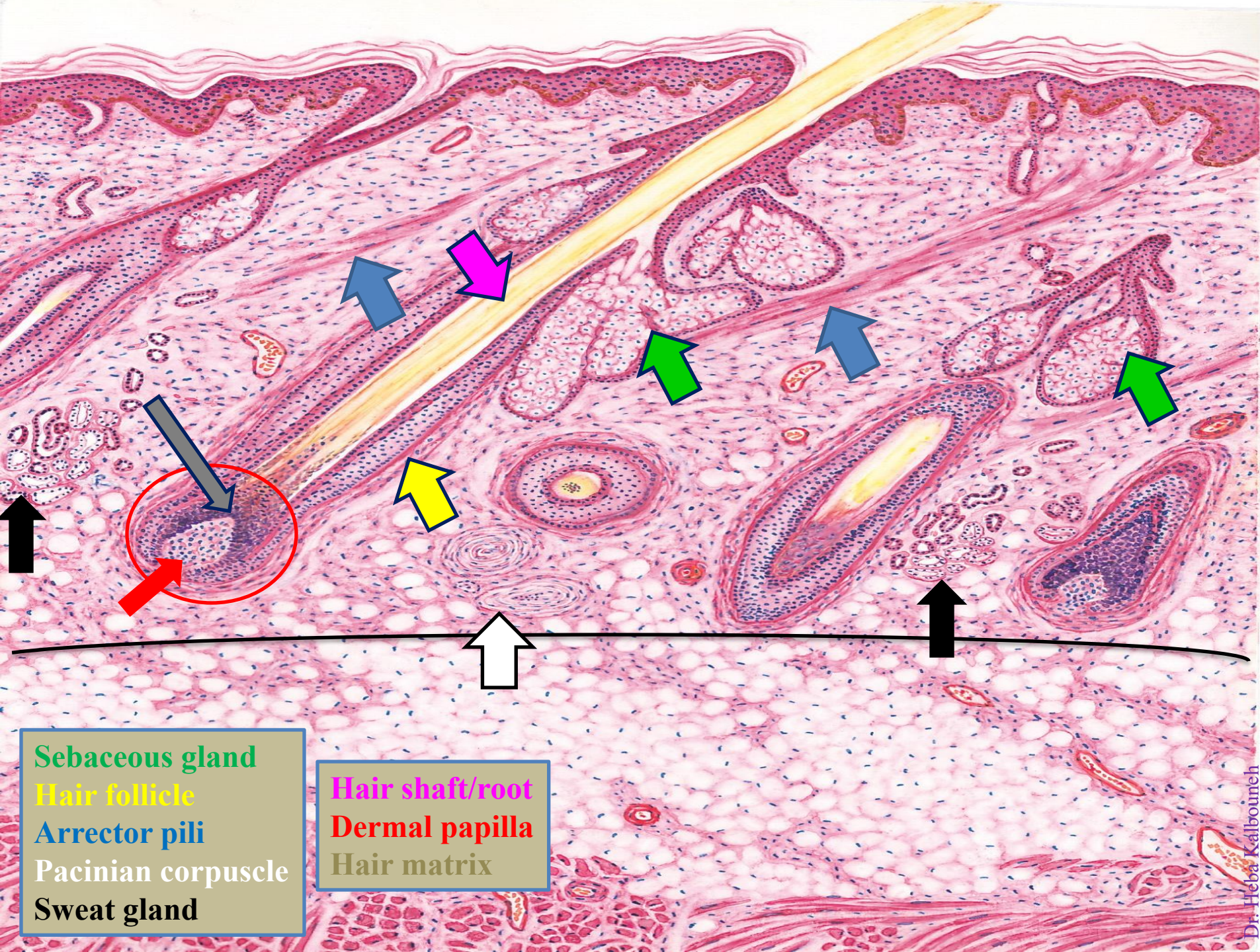
Pacinian corpuscles



Pacinian corpuscles

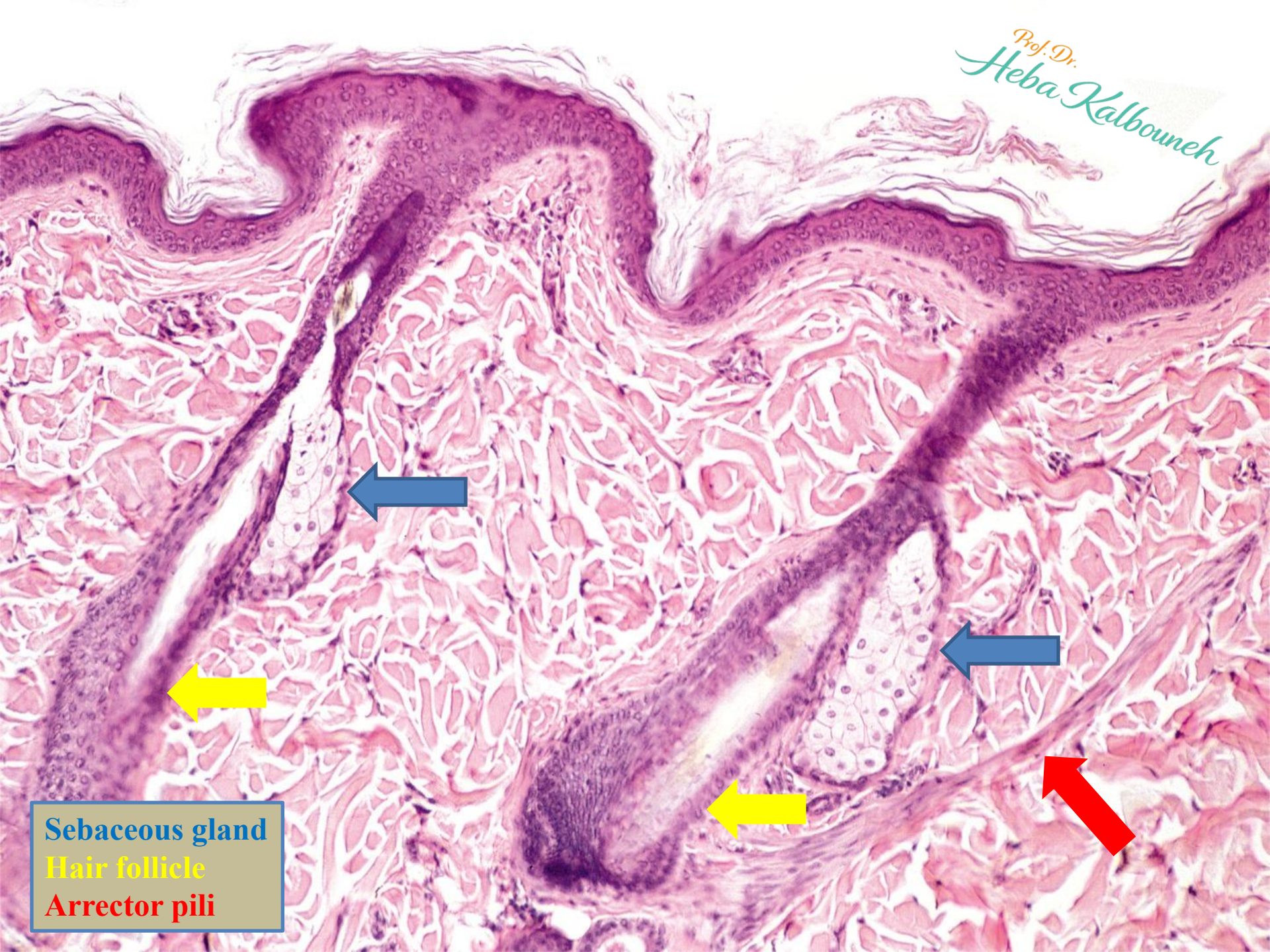


Meissner's corpuscle



Sebaceous gland
Hair follicle
Arrector pili
Pacinian corpuscle
Sweat gland

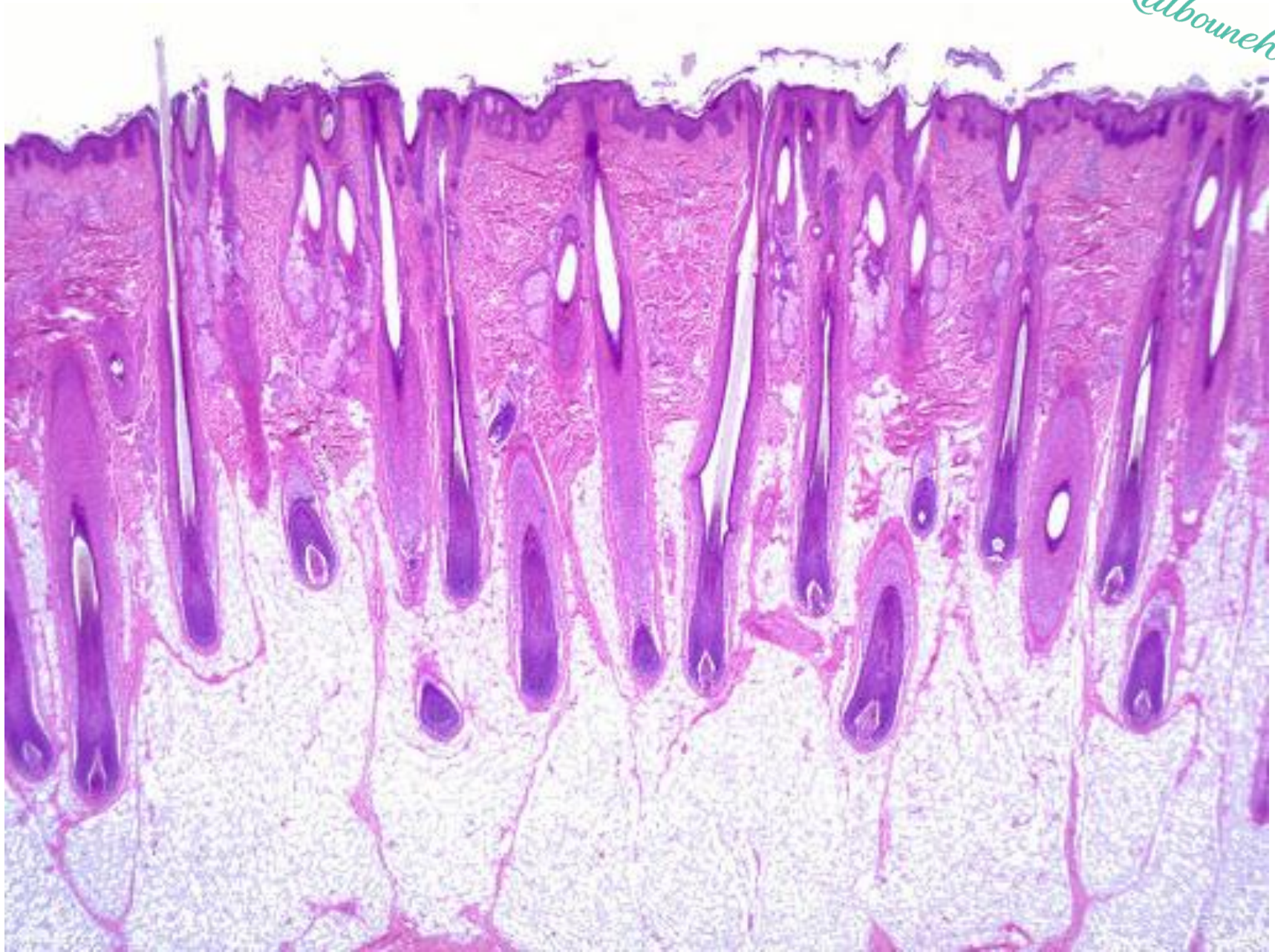
Hair shaft/root
Dermal papilla
Hair matrix



Sebaceous gland
Hair follicle
Arrector pili

Thin or Thick Skin?

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Thin or Thick Skin?

