



INTEGUMENTARY SYSTEM

- Skin
 - thin type
 - thick type

- Keratinized adnexa
 - hair
 - nail

- Nonkeratinized adnexa
 - small sweat glands
 - great sweat glands
 - sebaceous glands
 - mammary glands

Skin (integumentum)

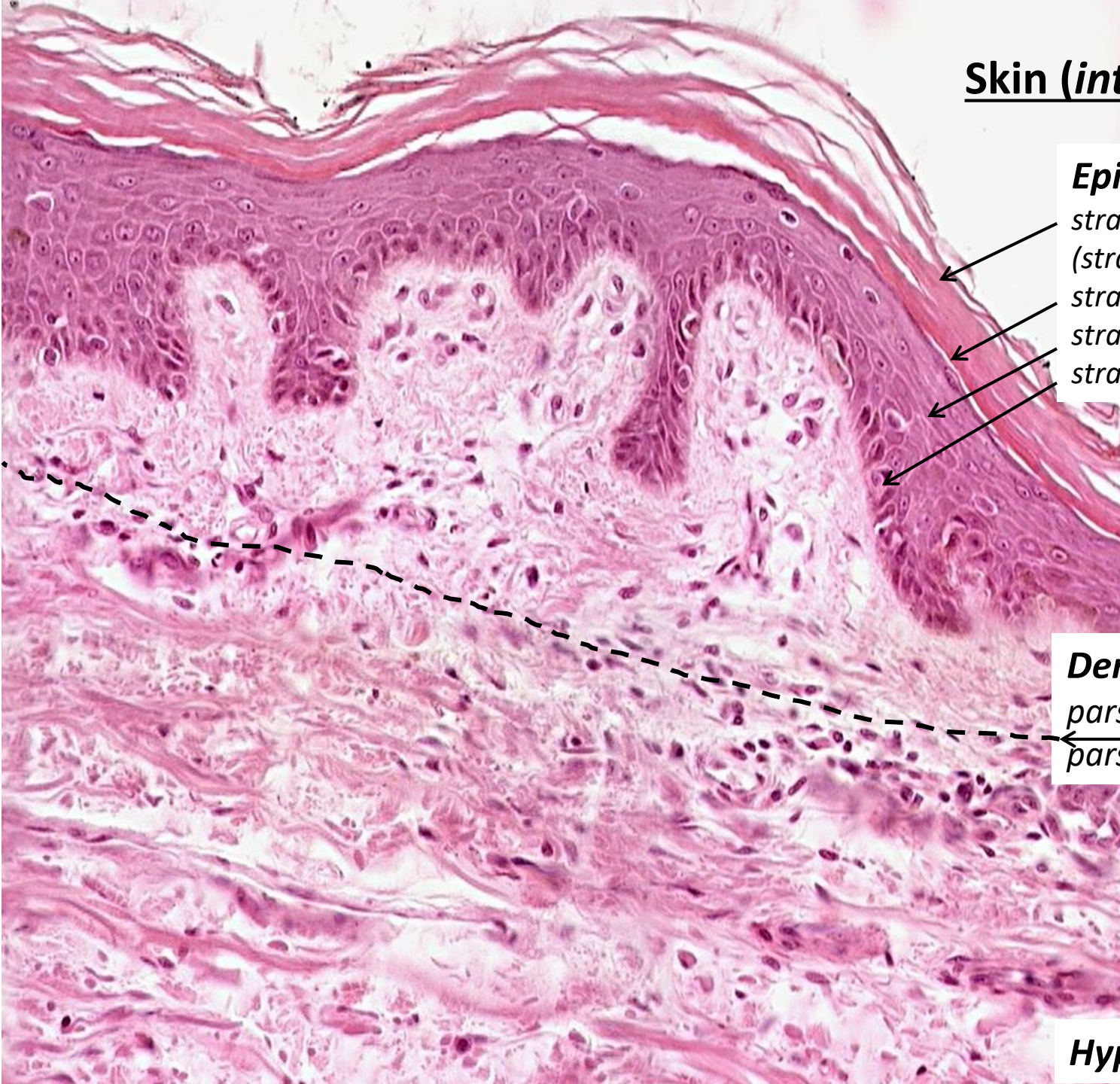
Epidermis

- stratum corneum proprium (stratum lucidum)*
- stratum granulosum*
- stratum spinosum*
- stratum basale*

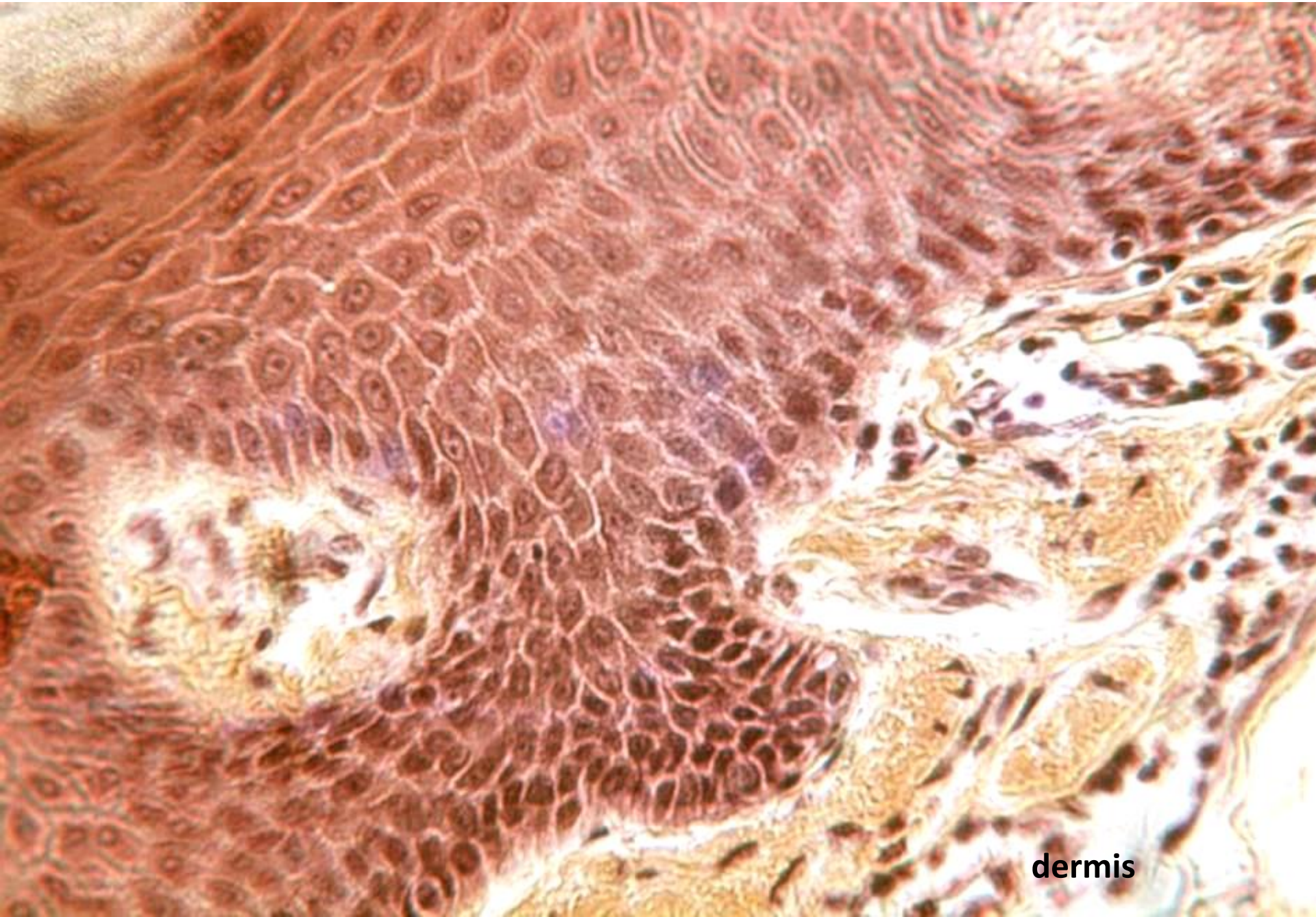
Dermis (corium)

- pars papillaris*
- pars reticularis*

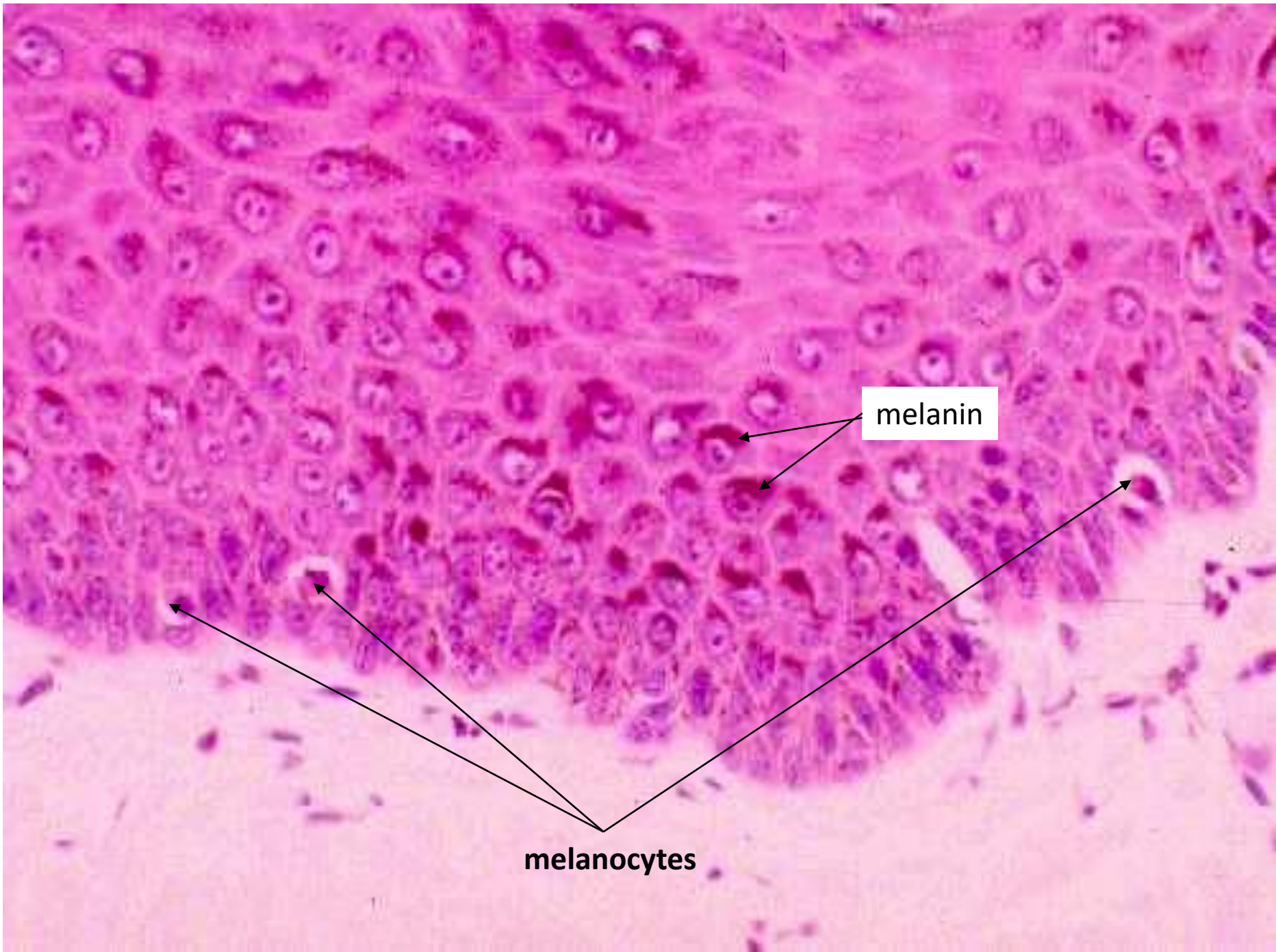
Hypodermis



Epidermis



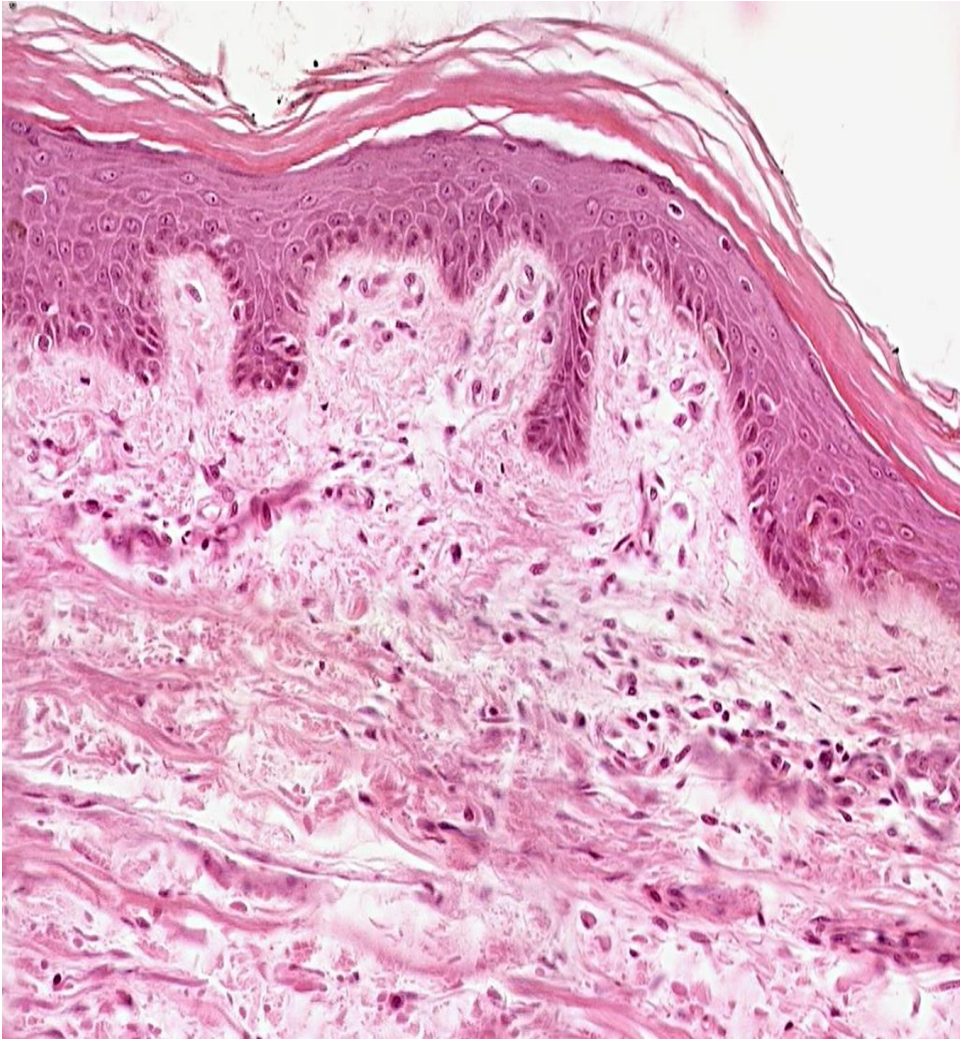
dermis



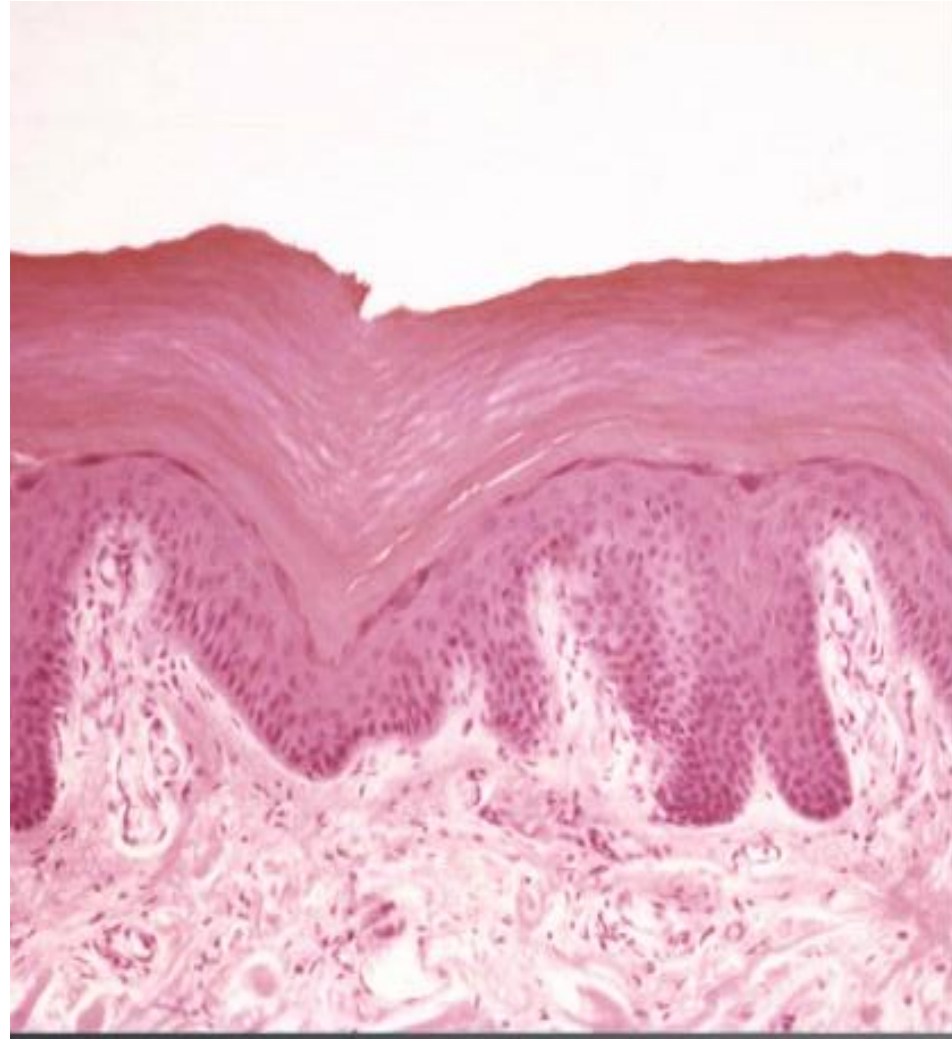
melanin

melanocytes

Thin skin



Thick skin

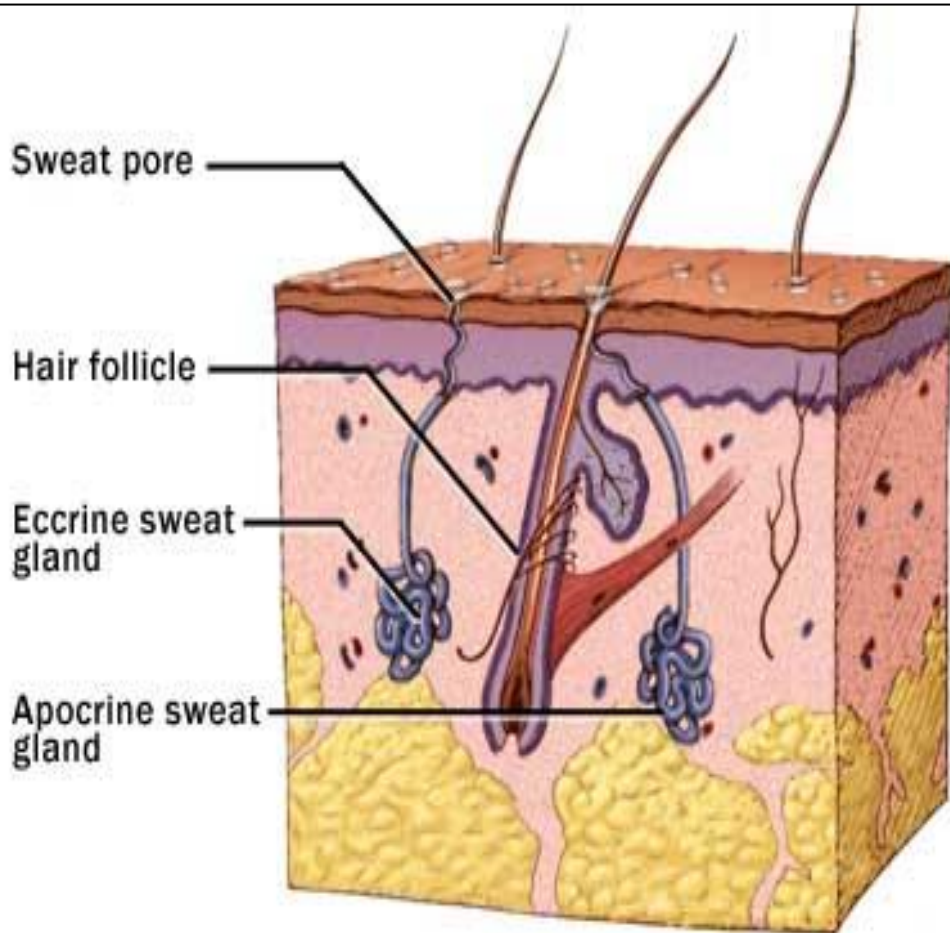


Occurrence: *palma manus, planta pedis*

Skin glands

small sweat (eccrine)
large sweat (apocrine)
sebaceous (holocrine)

} *Gll. sudoriferae*
Gll. sebaceae

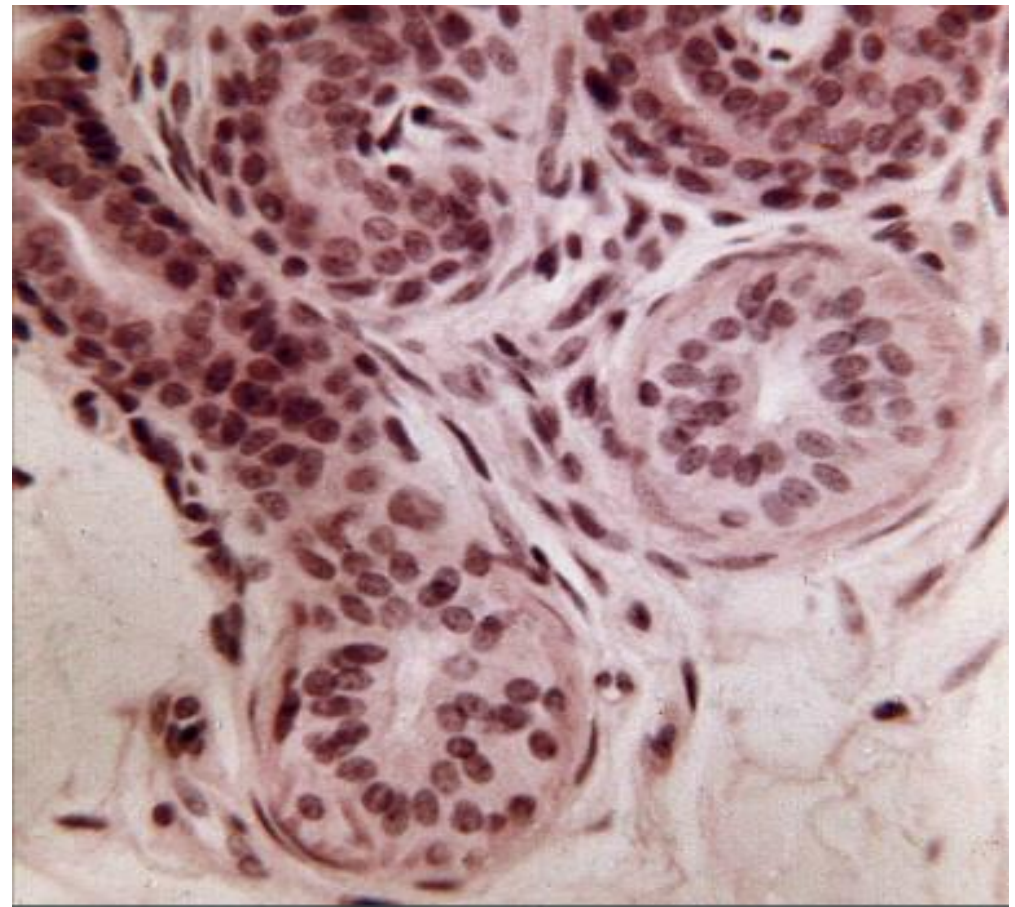
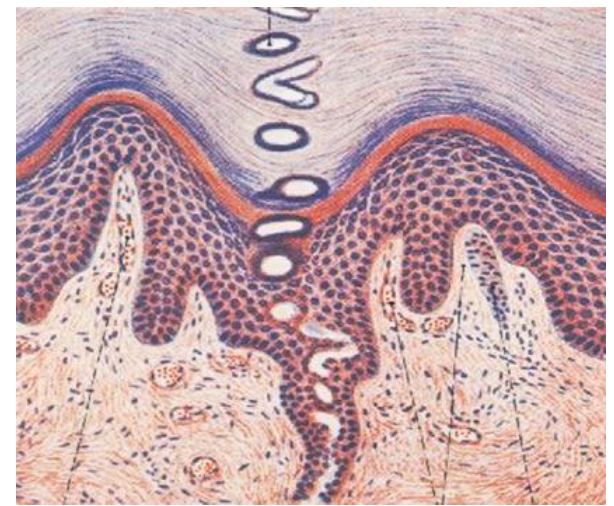
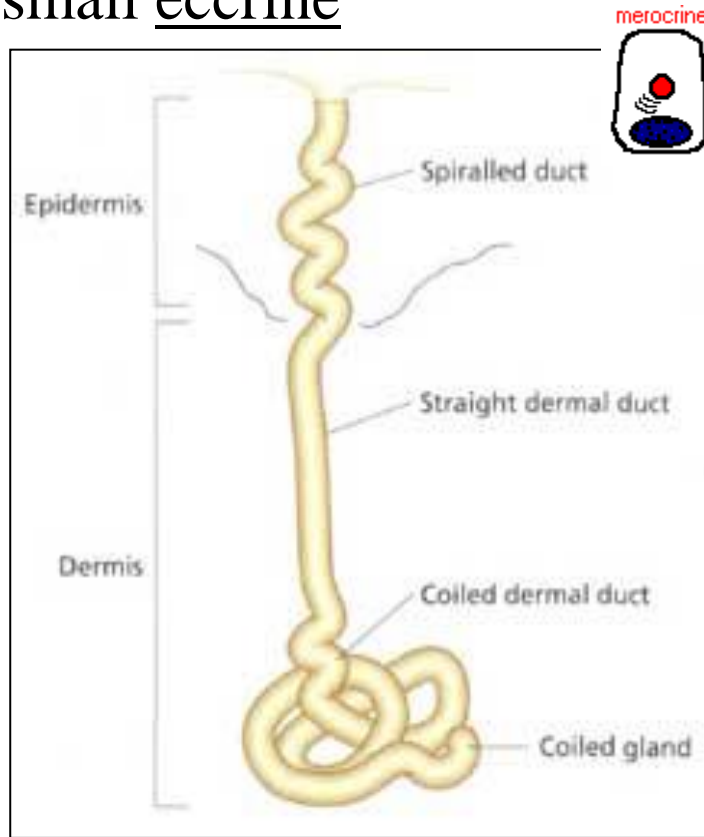


General structure of glands:

- excretory portion (ducts)
- secretory portion
 - glandular cells
 - myoepithelial cells

SWEAT GLANDS (*gll. sudoriferae*)

small eccrine

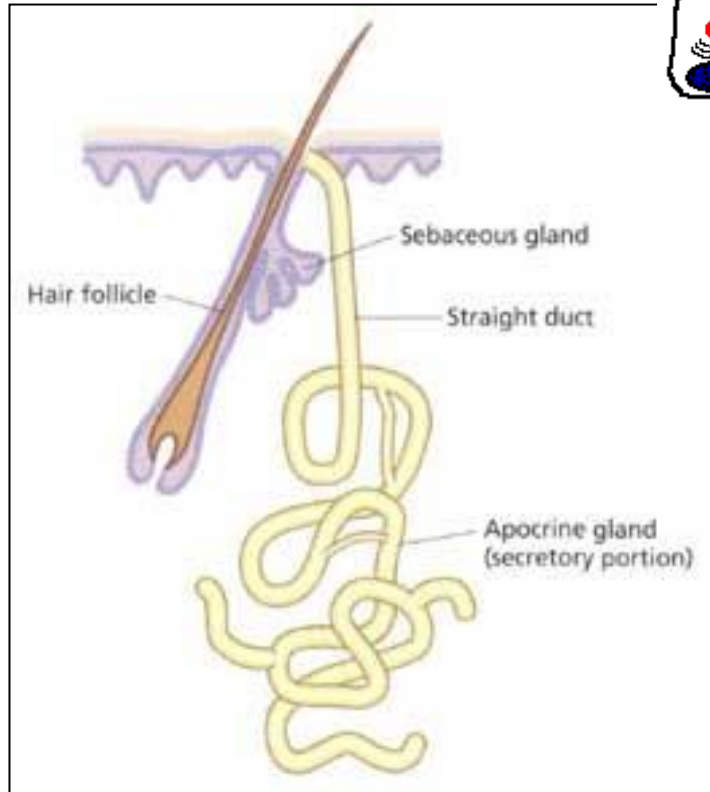


SWEAT – H₂O, NaCl₂, NH₃,
urea, uric acid, proteins

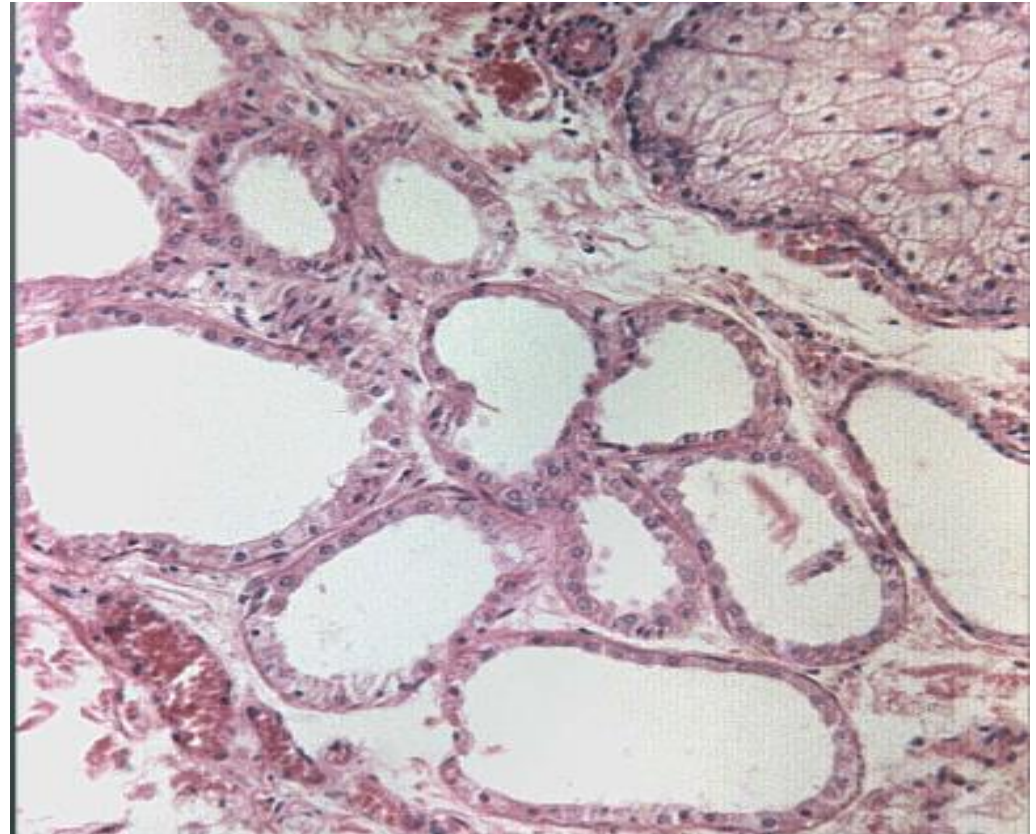
SWEAT GLANDS (*gll. sudoriferae*)

large apocrine

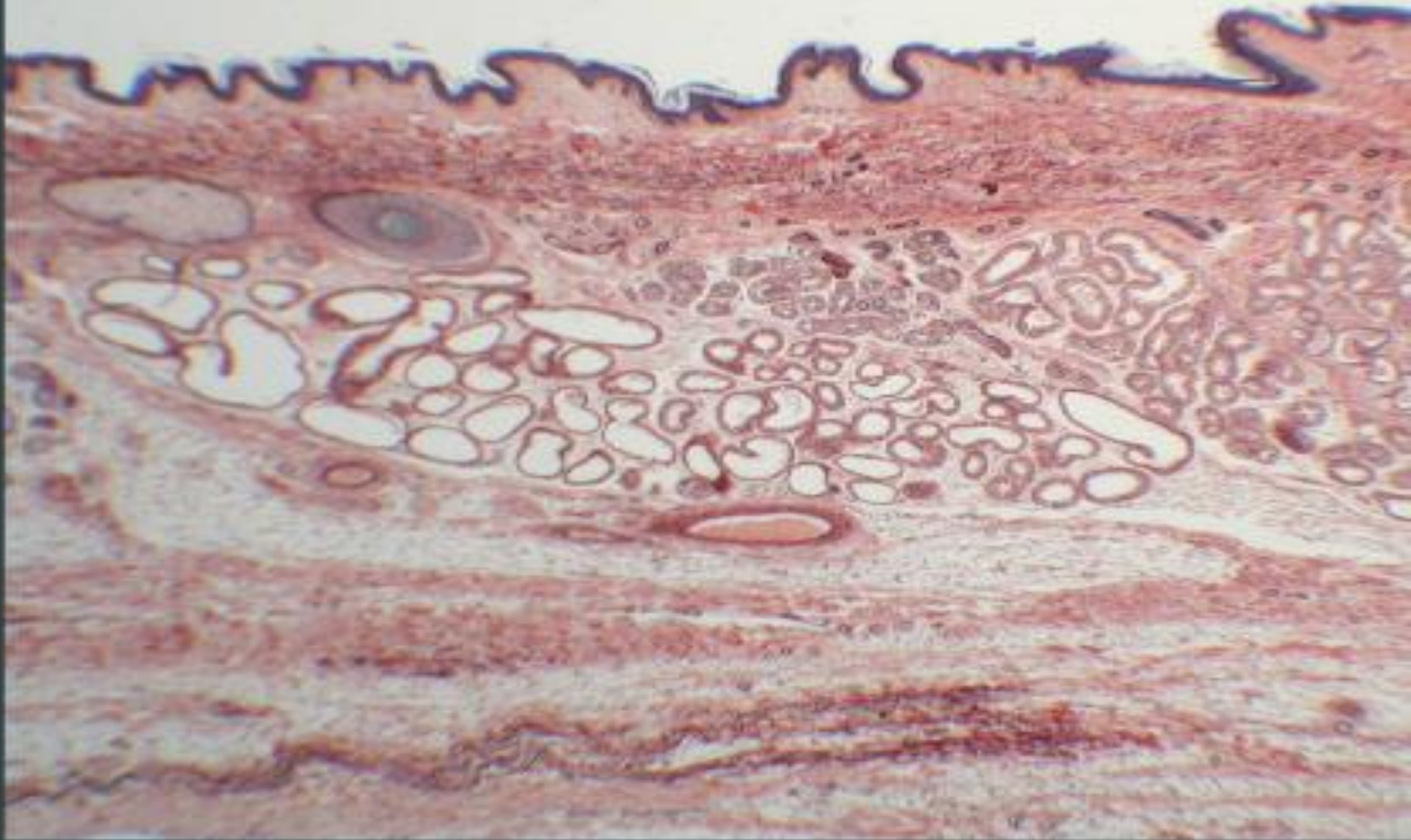
apocrine



after puberty complete **sweat**
– pheromones, fats, steroids;
under hormonal influence



Skin from axilla – great sweat glands (apocrine, aromatic)

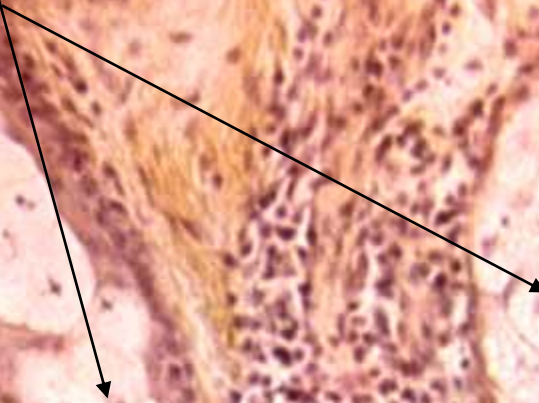


Sebaceous glands (HES)

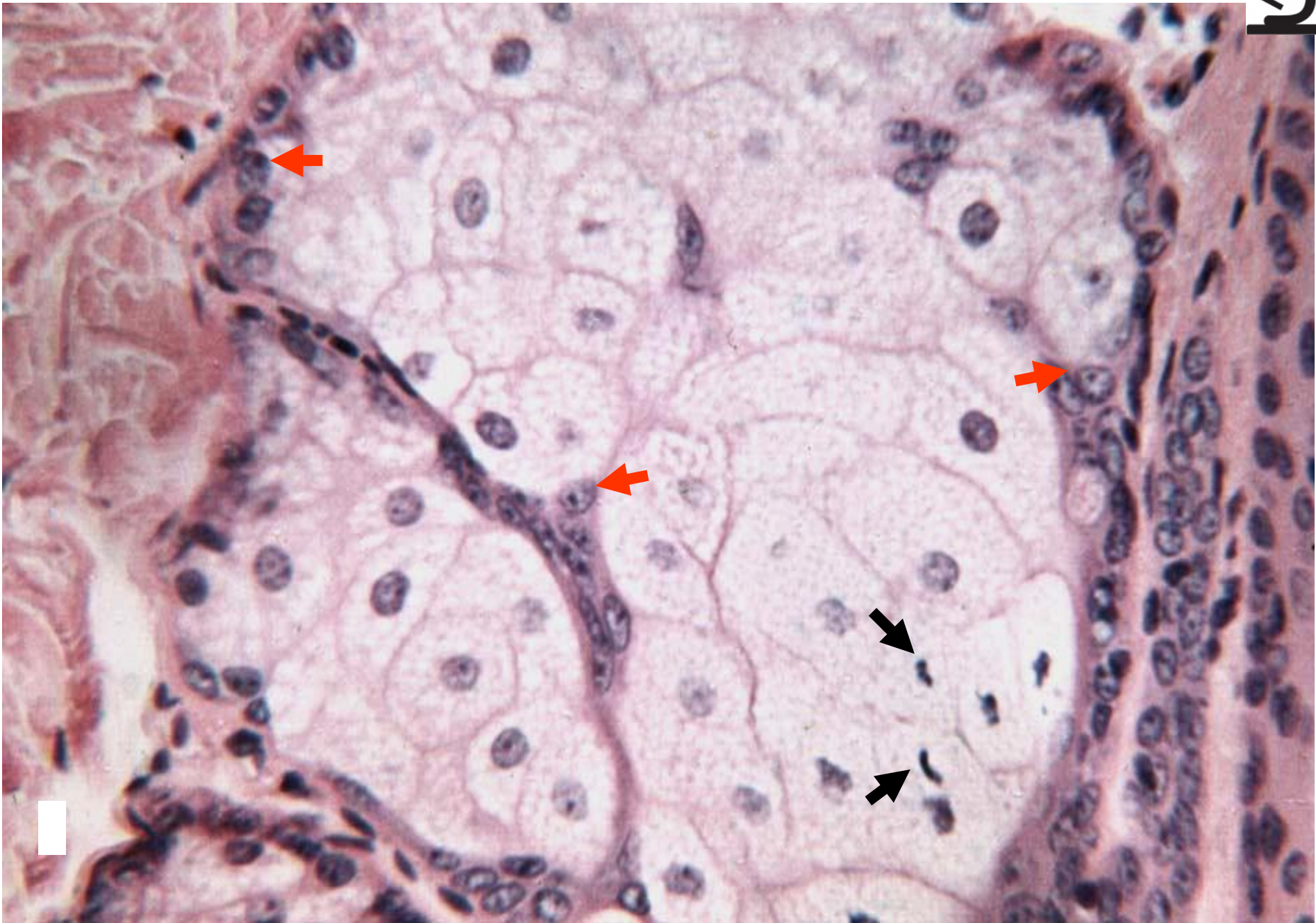


hair follicle

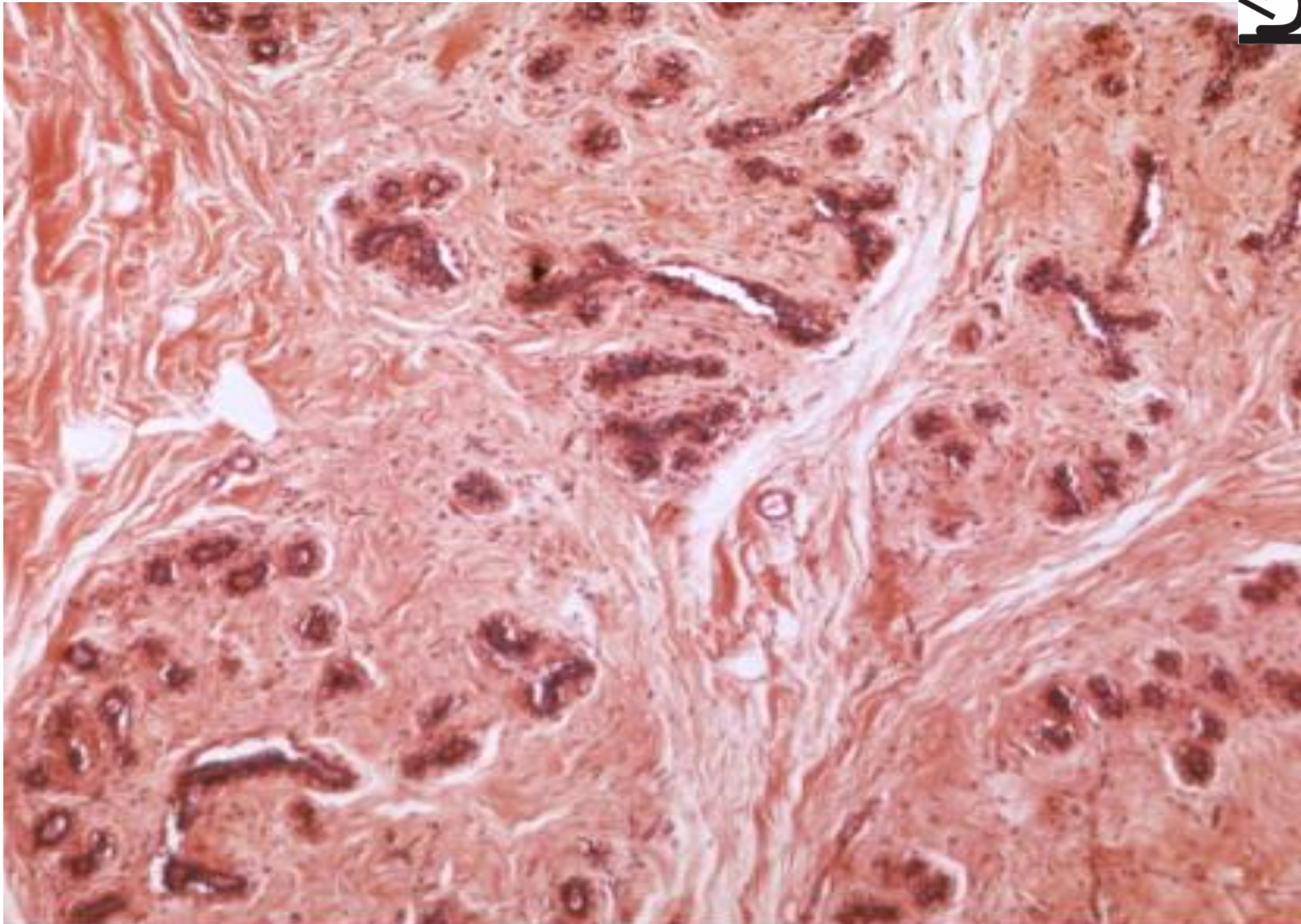
m. arrector pili



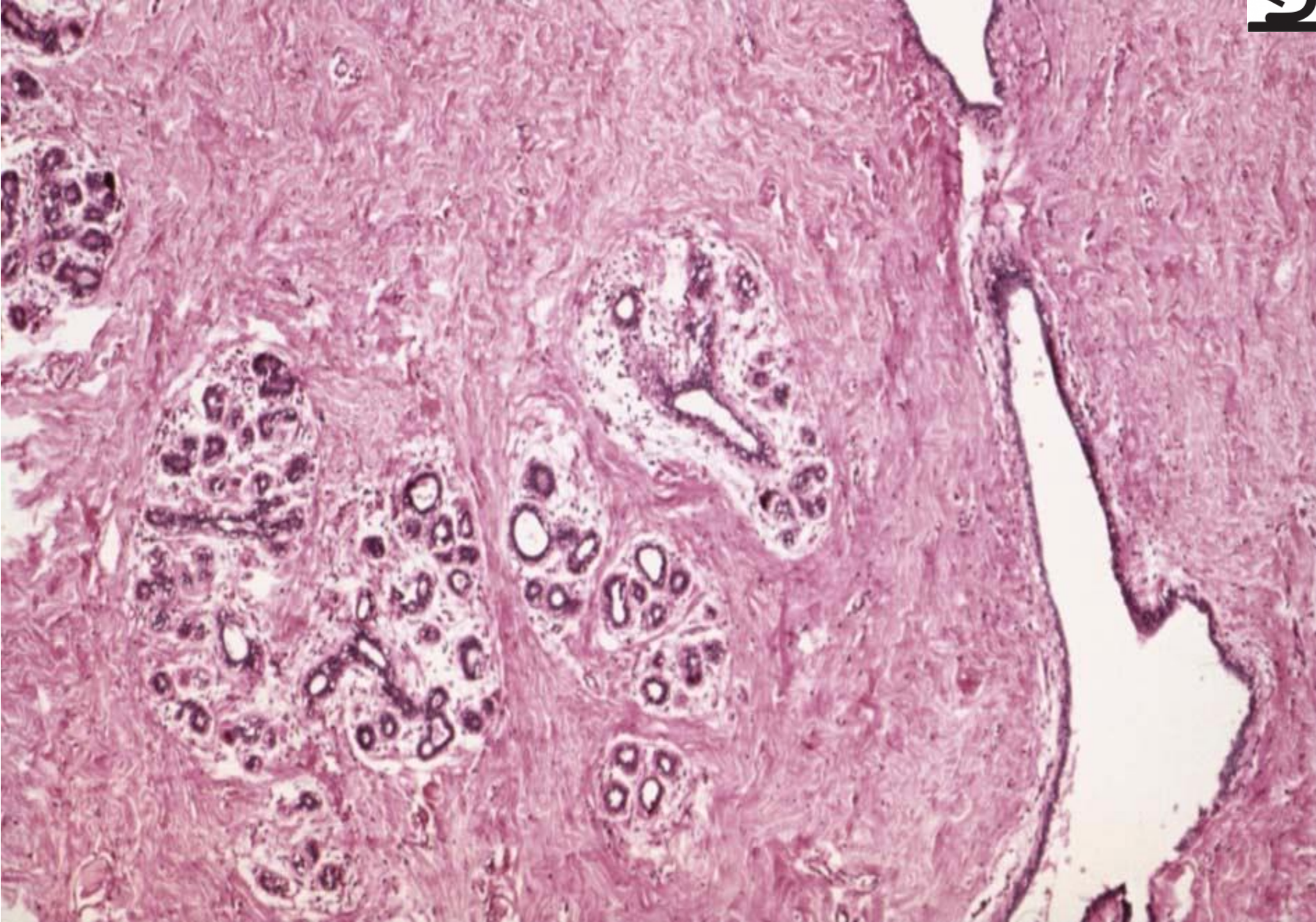
Sebaceous glands (HE)



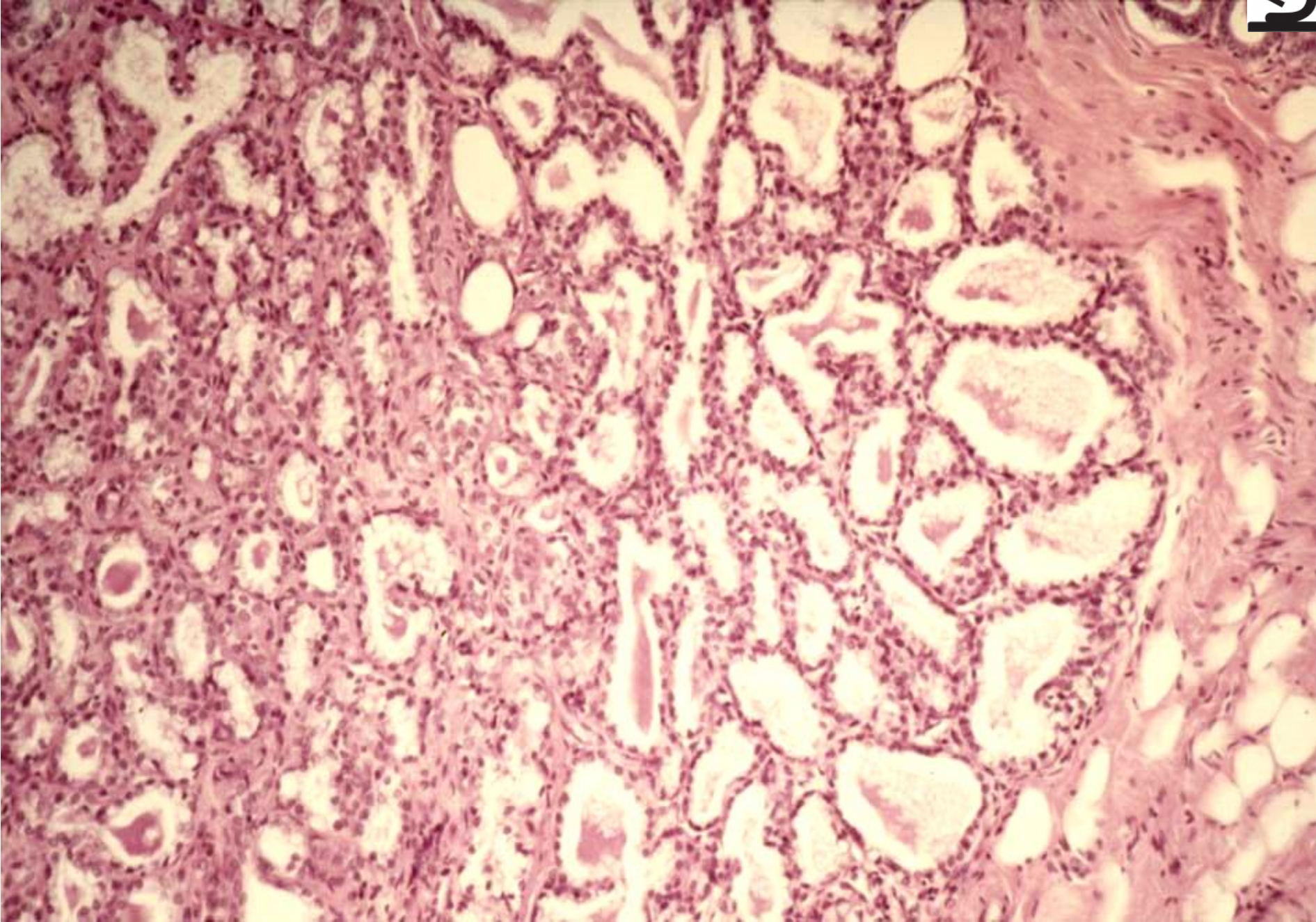
Mamma non lactans (HE)



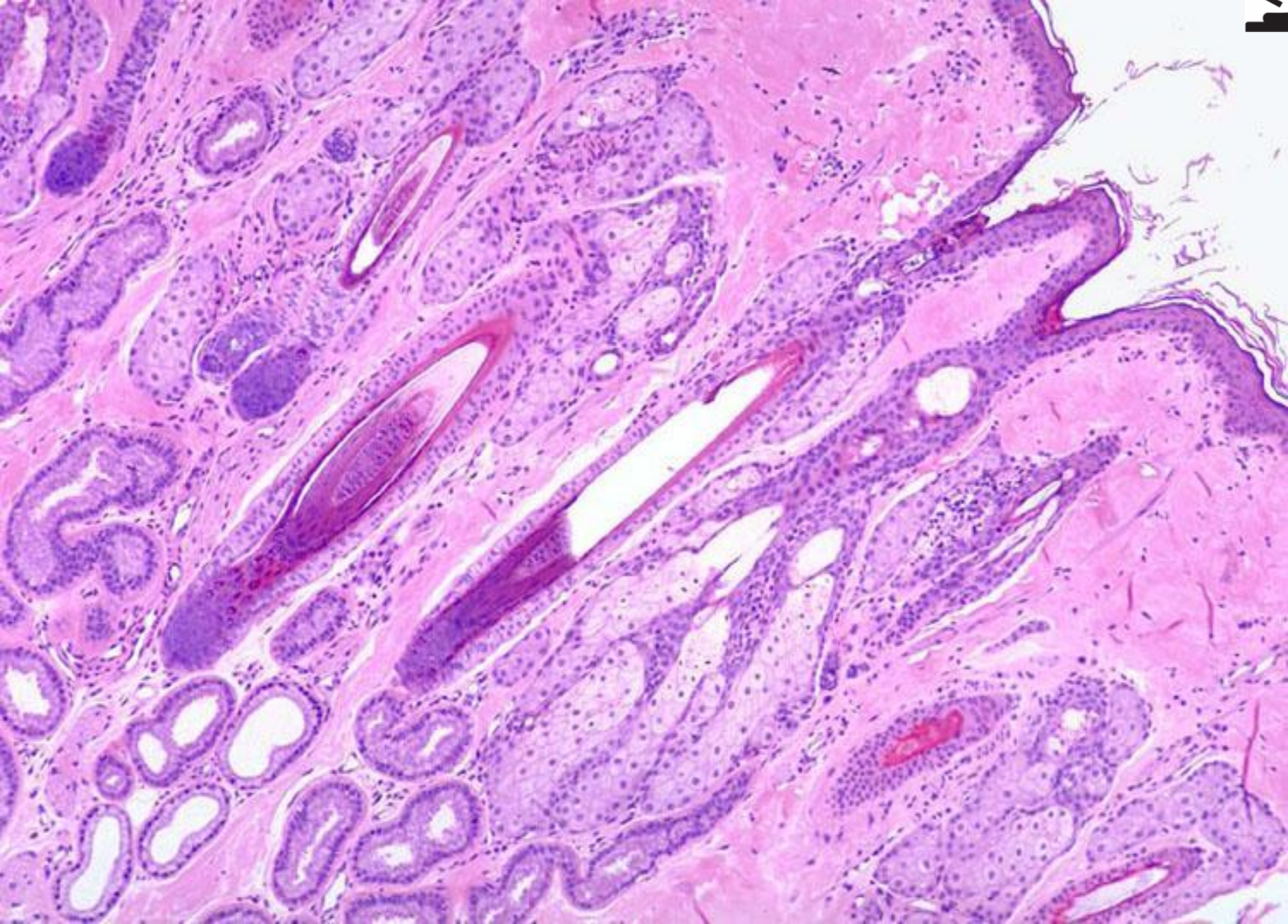
Mamma non lactans (HE)



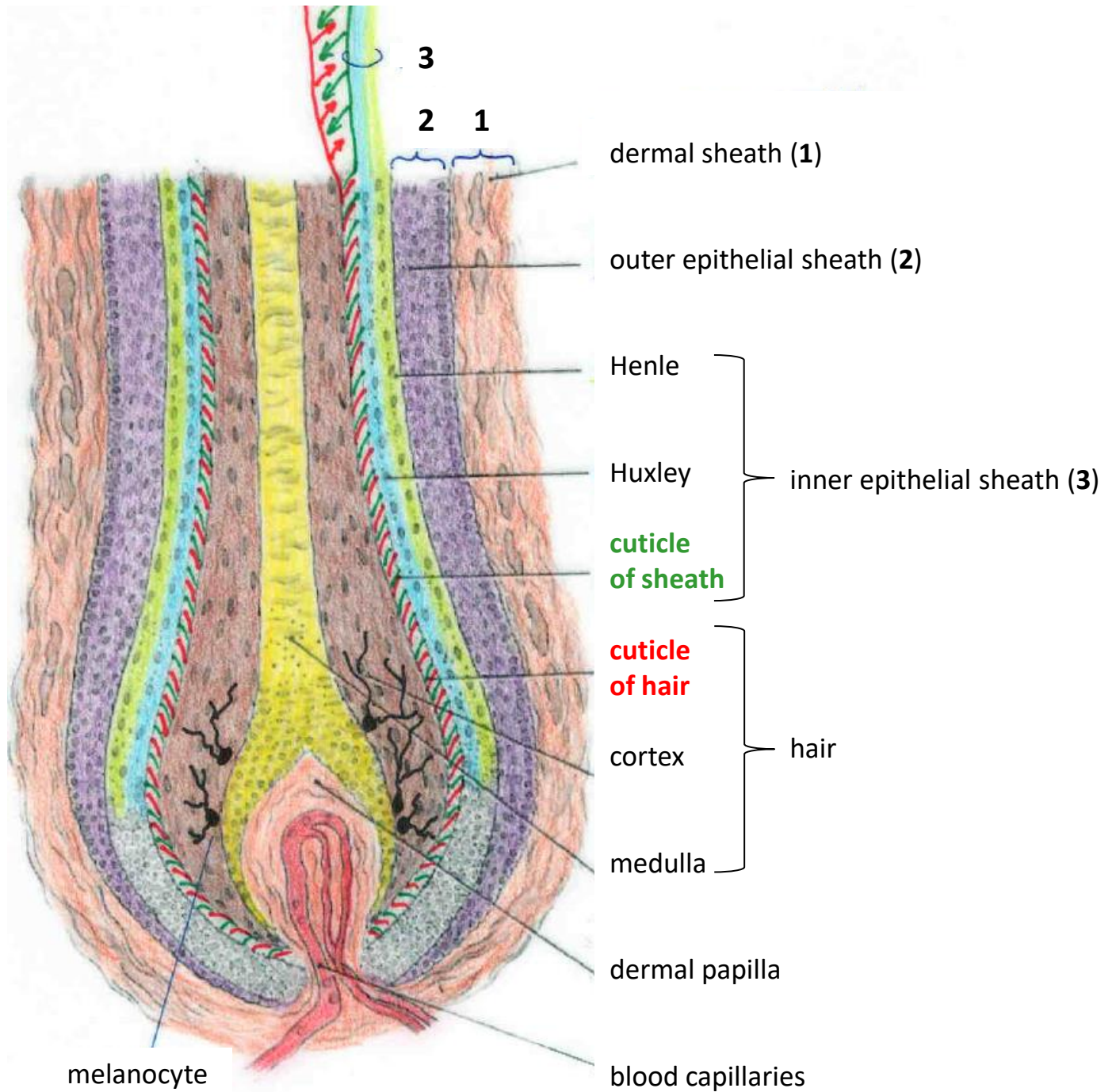
Mamma lactans (HE)



Skin from axilla with hair (HE)



Hair (Pilus)



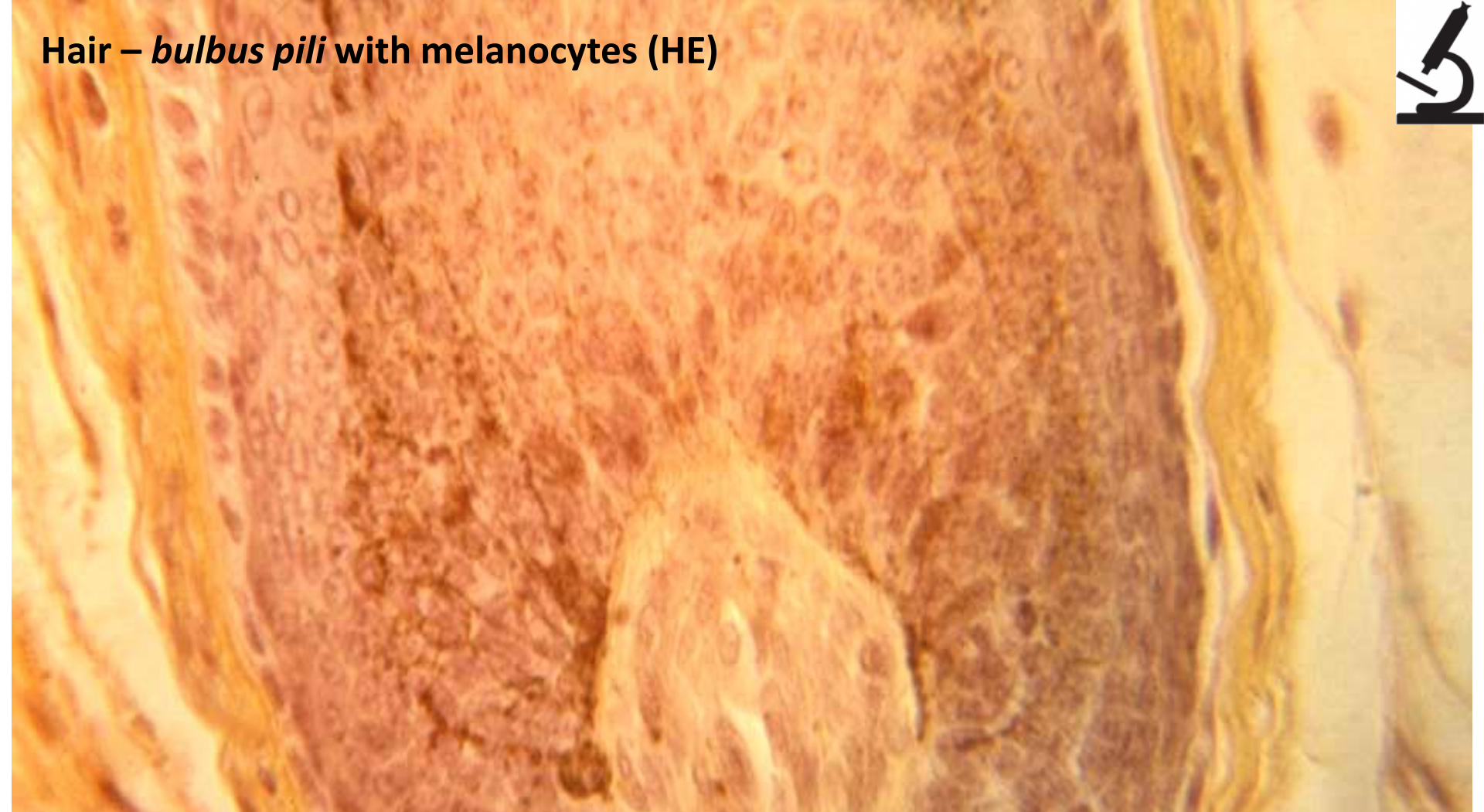
Hair (HEŠ)



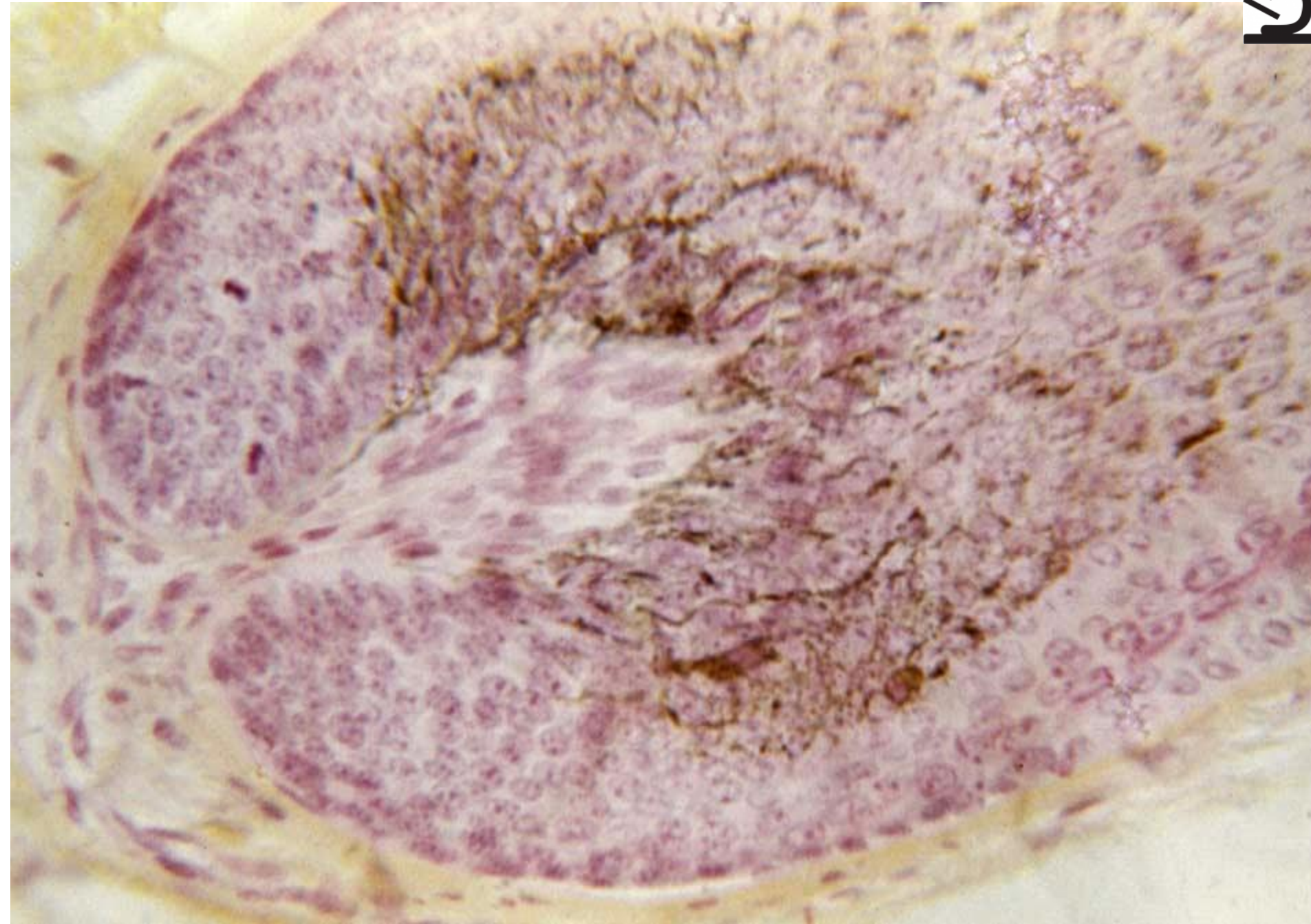
m. arrector pili



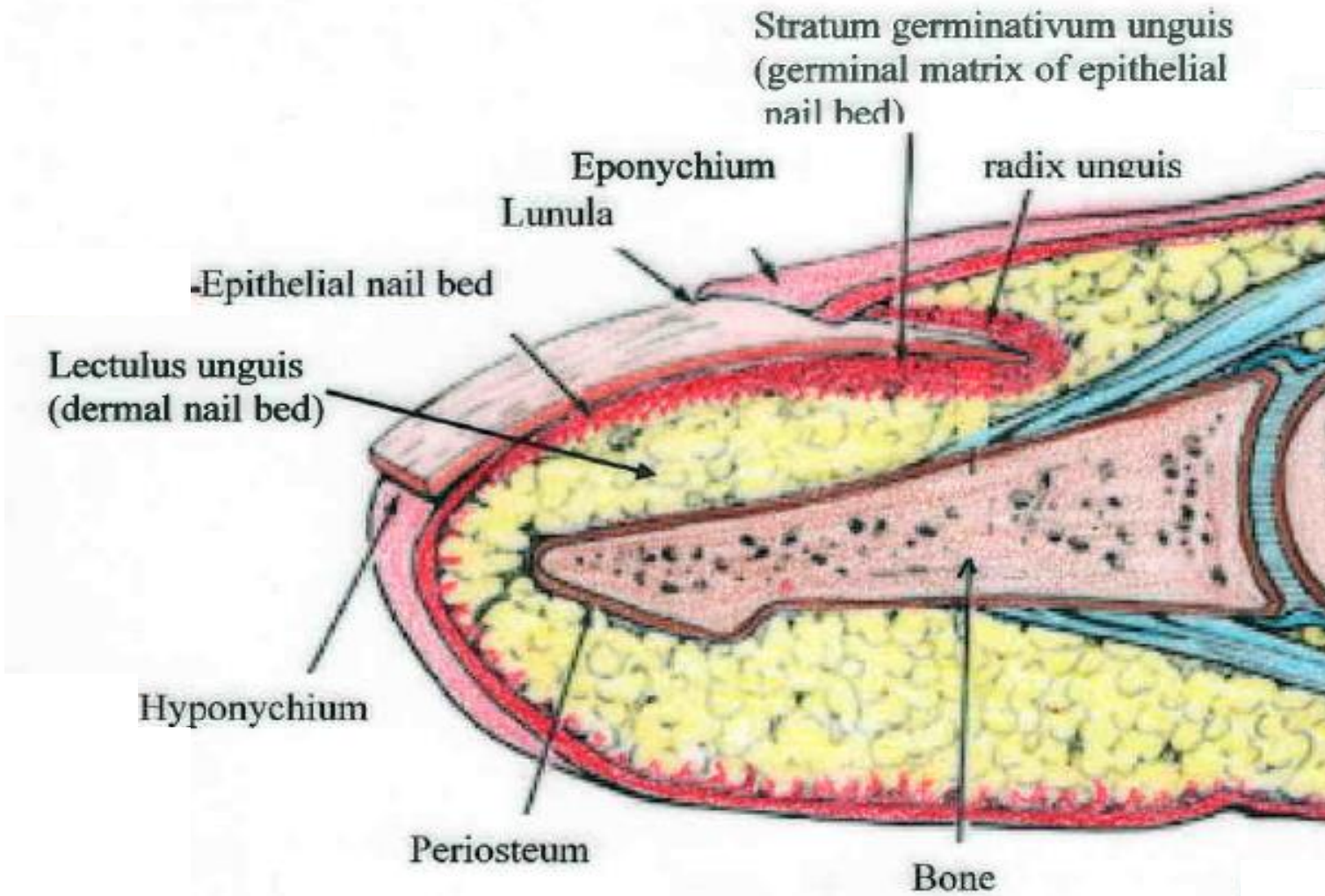
Hair – *bulbus pili* with melanocytes (HE)



Hair – *bulbus pili* with melanocytes, *papilla pili* (HES)



Nail - *Unguis* – *Onyx* (gr)



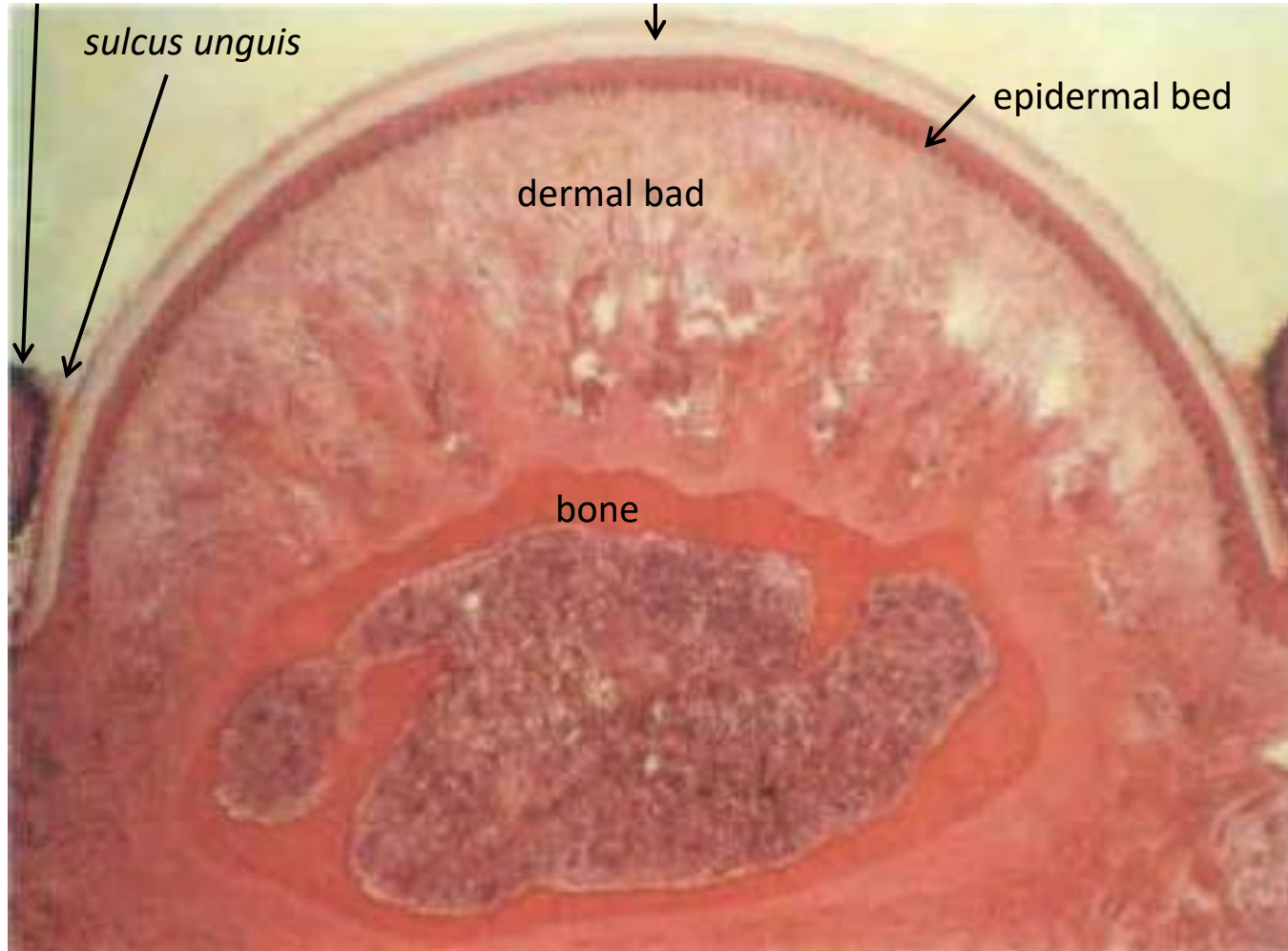
Nail - *Unguis* – *Onyx* (gr)



Longitudinal section

vallum unguis

nail plate



sulcus unguis

epidermal bed

dermal bed

bone

Cross section



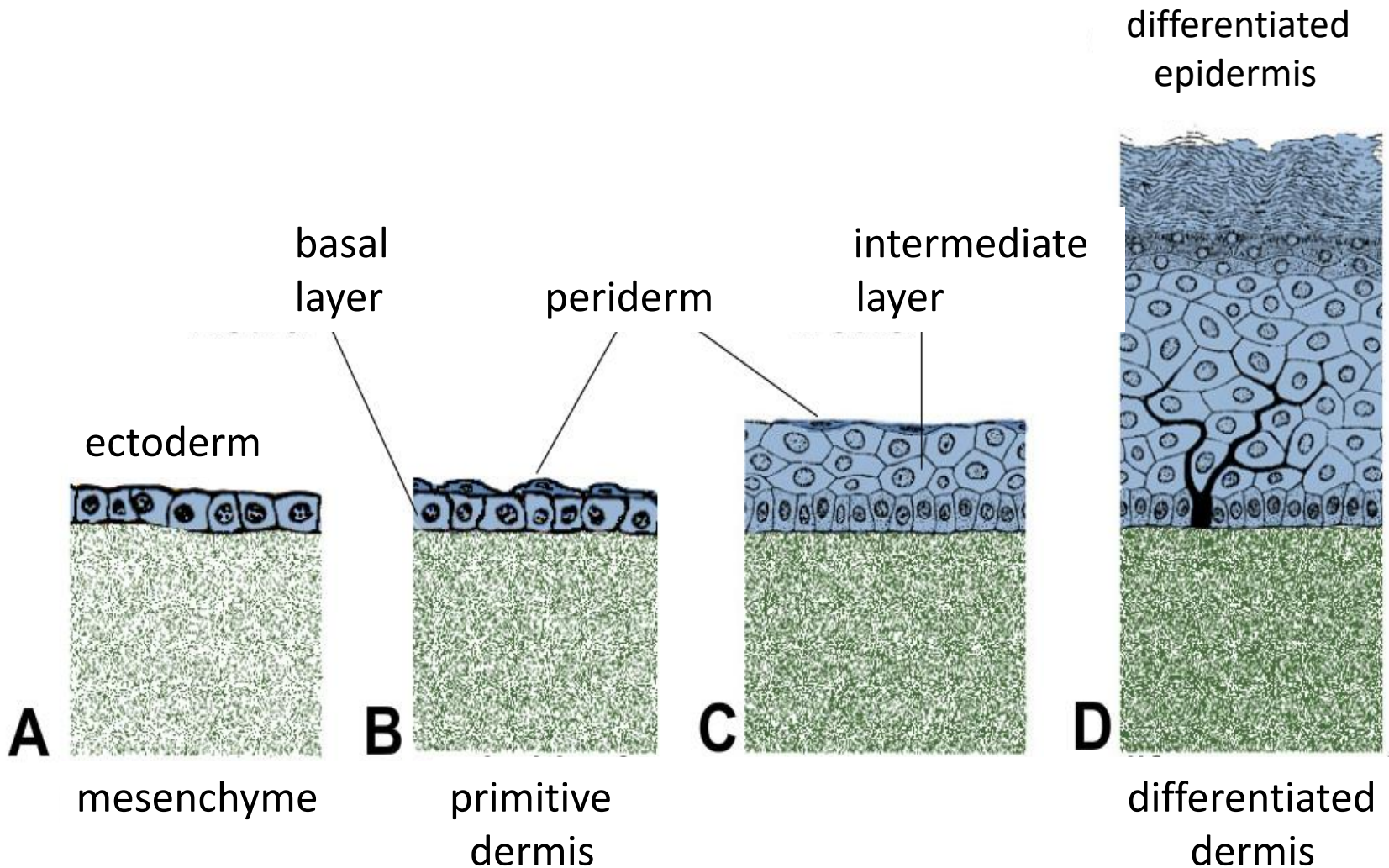
INTEGUMENTARY SYSTEM



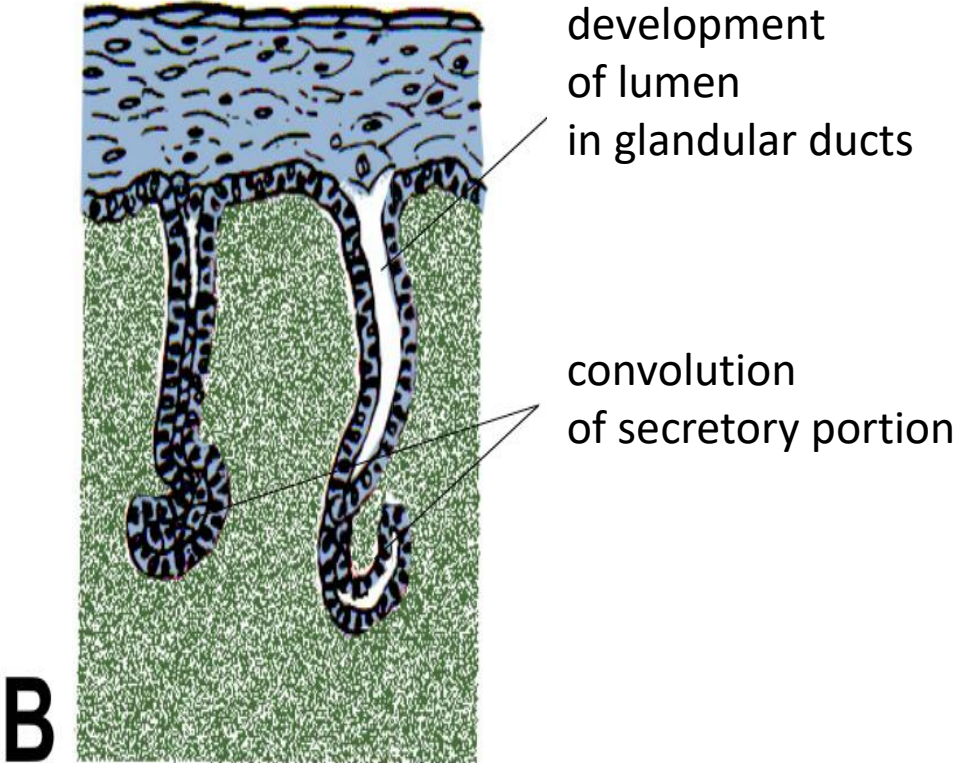
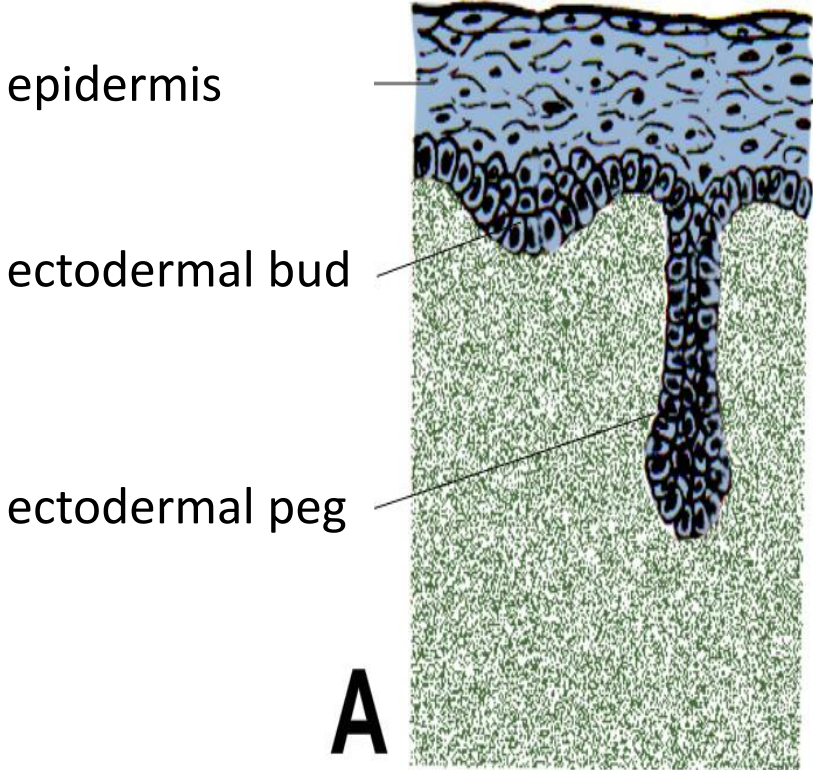
Slides:

- 69. Skin from tip of finger
- 70. Skin from axilla
- 71. Skin with hair
- 72. Nail
- 73. *Mamma non-lactans*
- 74. *Mamma lactans*

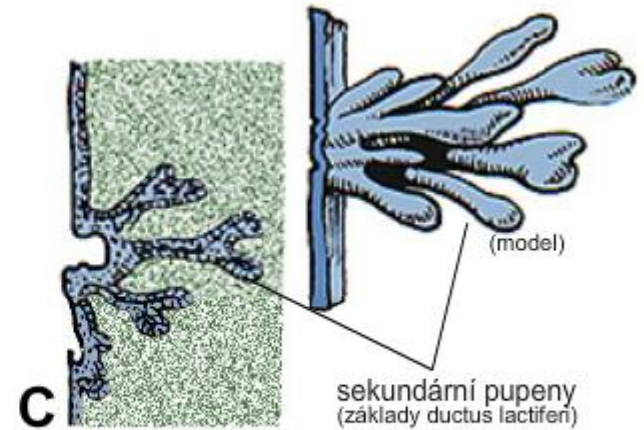
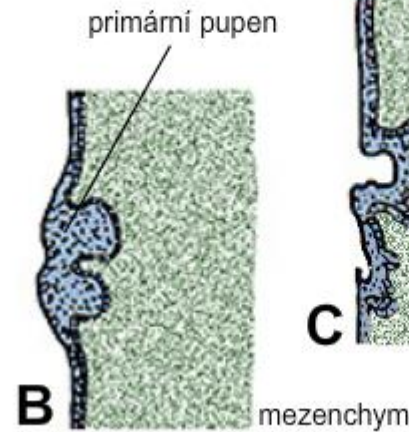
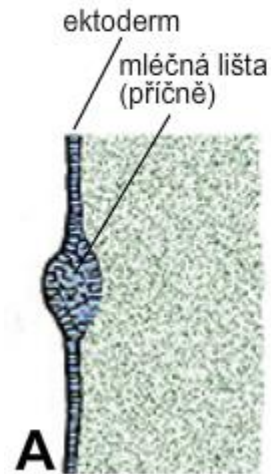
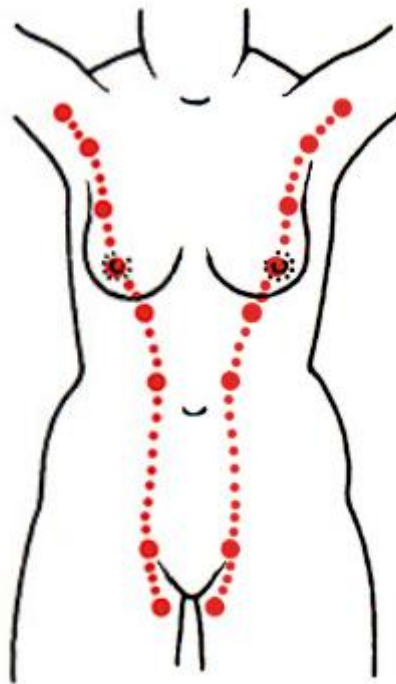
Development of epidermis and corium



Development of sweat glands



Development of mammary line and gland



B, C: primary and secondary ectodermal buds ingrowth mesenchyme

Development of hair and sebaceous gland

