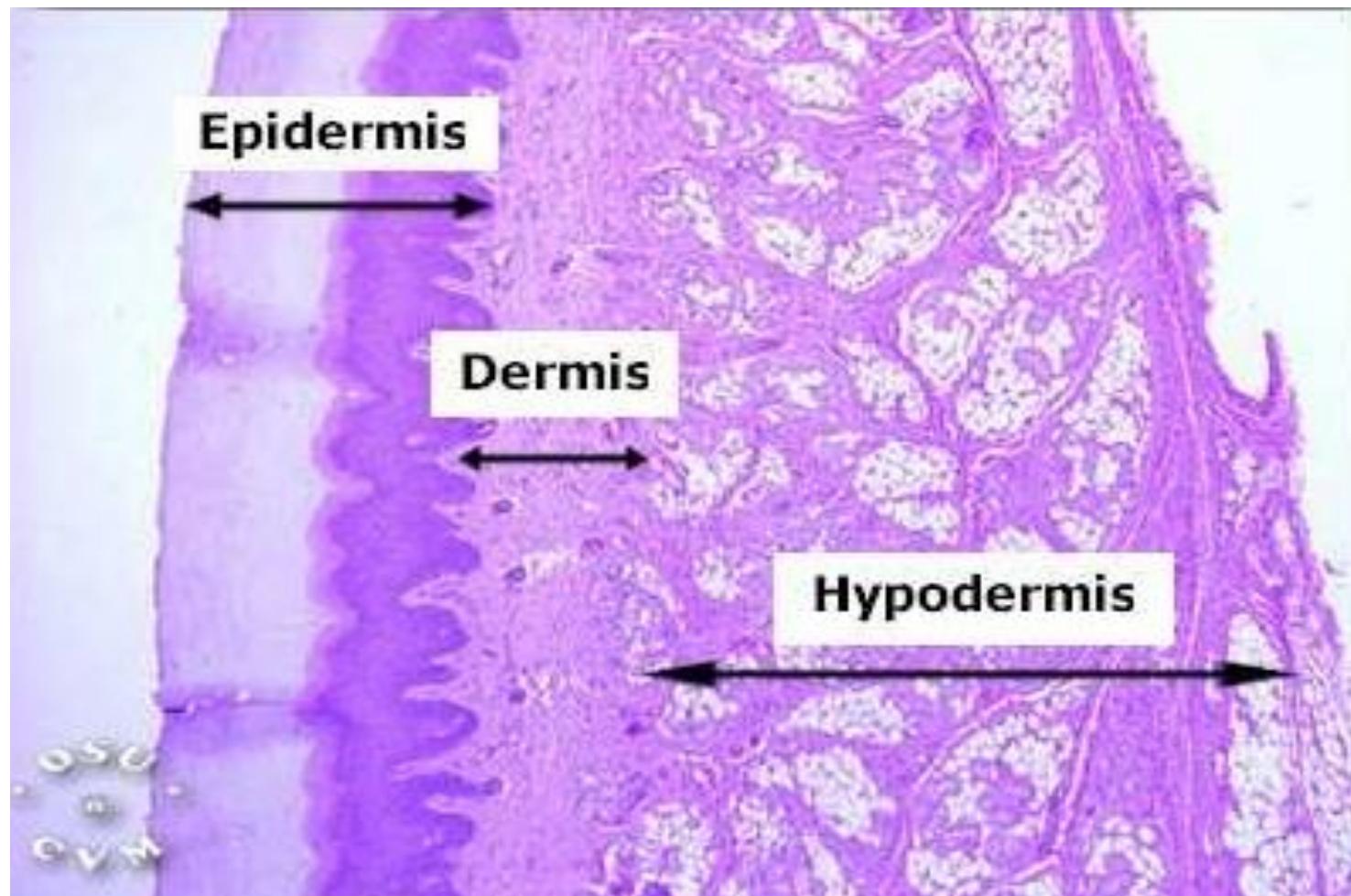
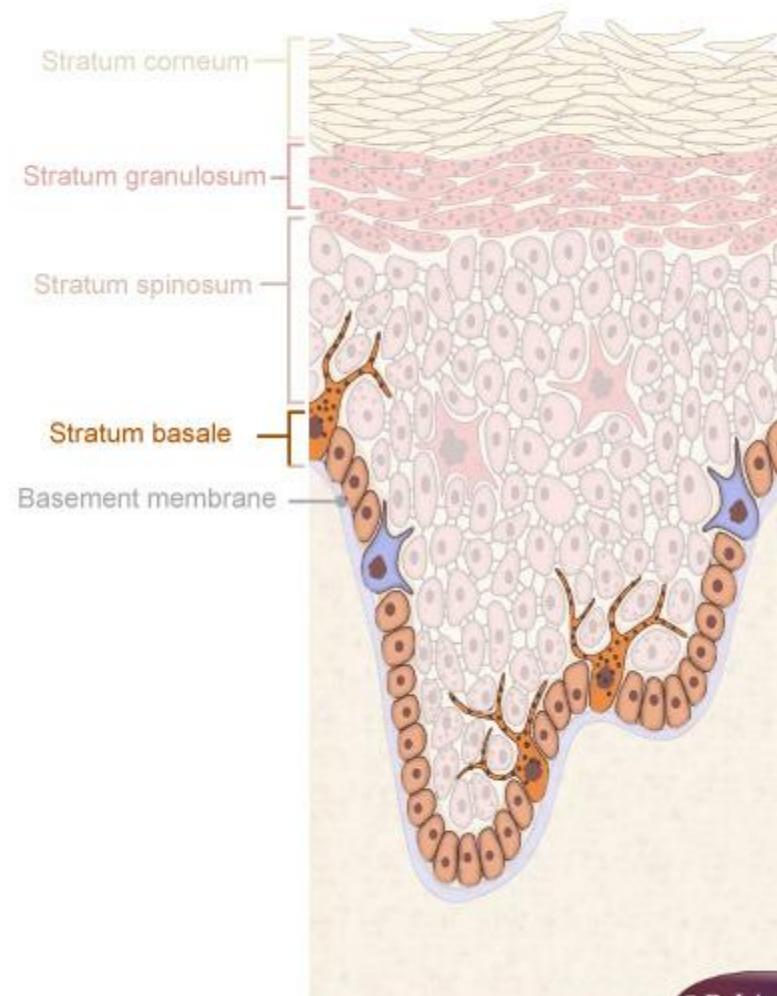


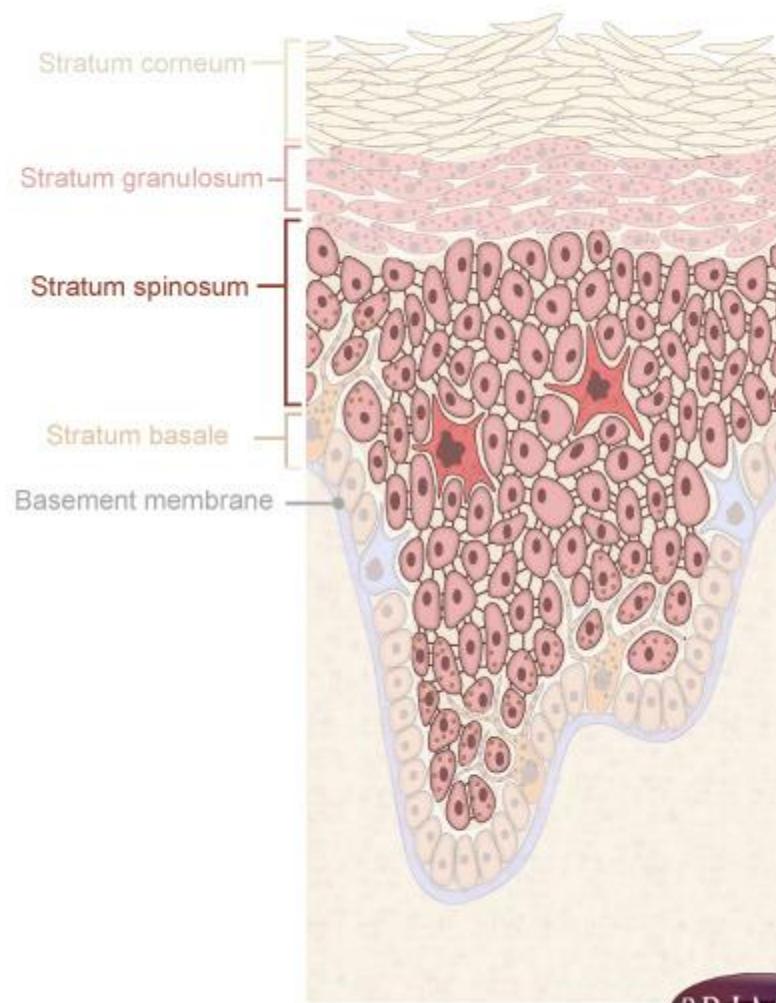
Skin

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



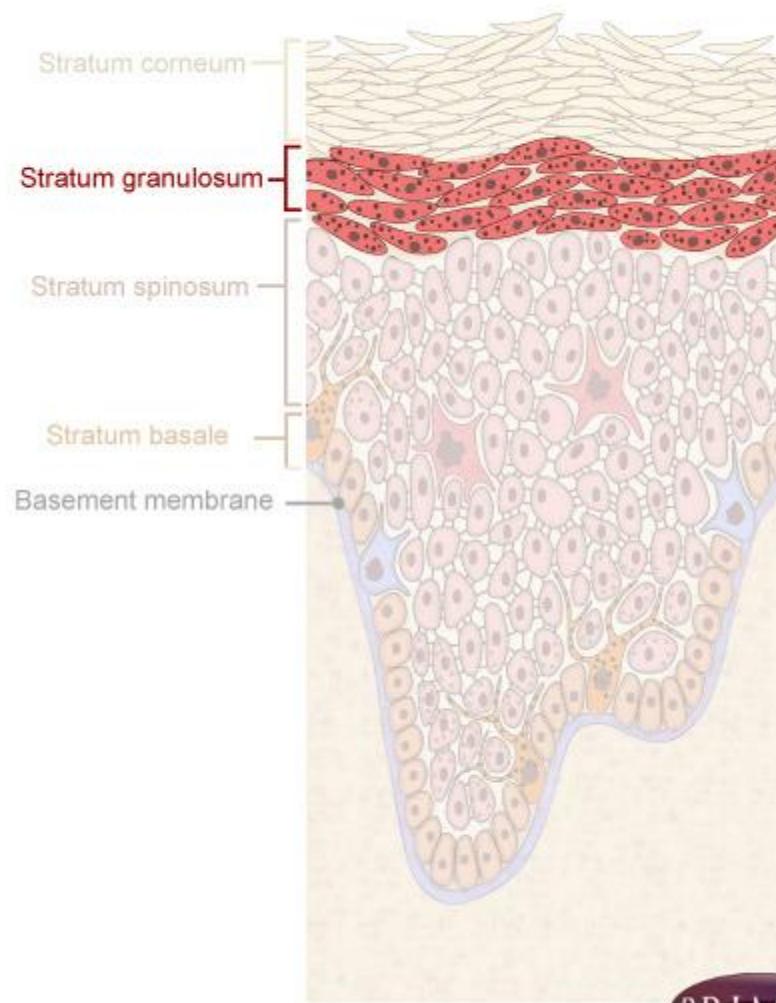
Epidermal layers





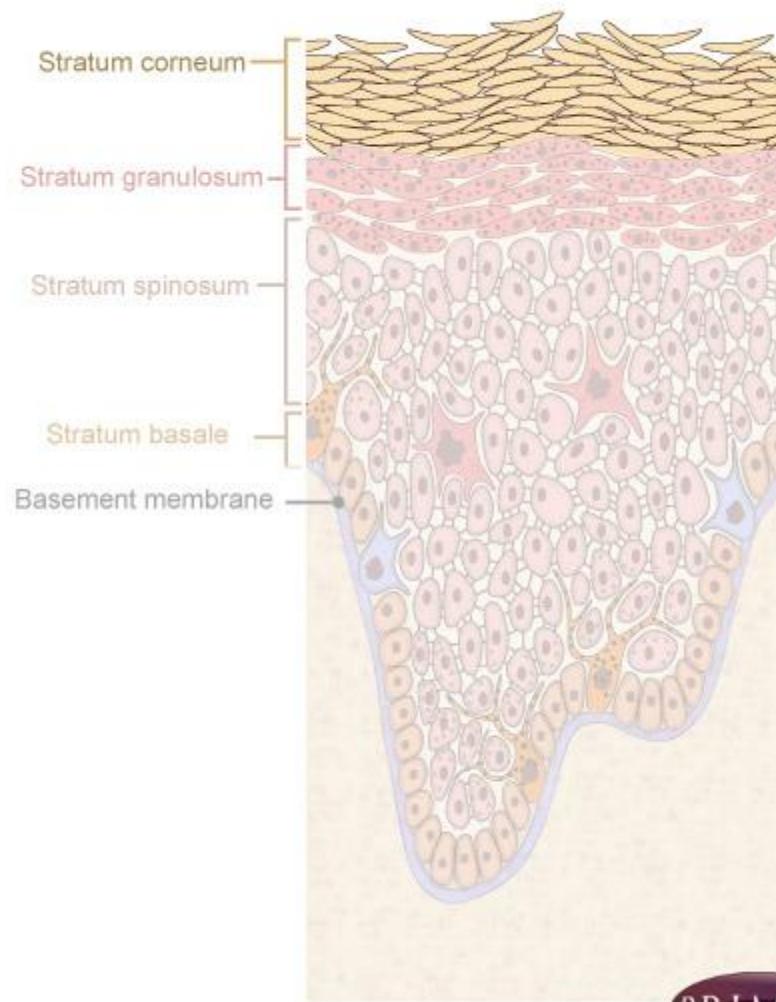
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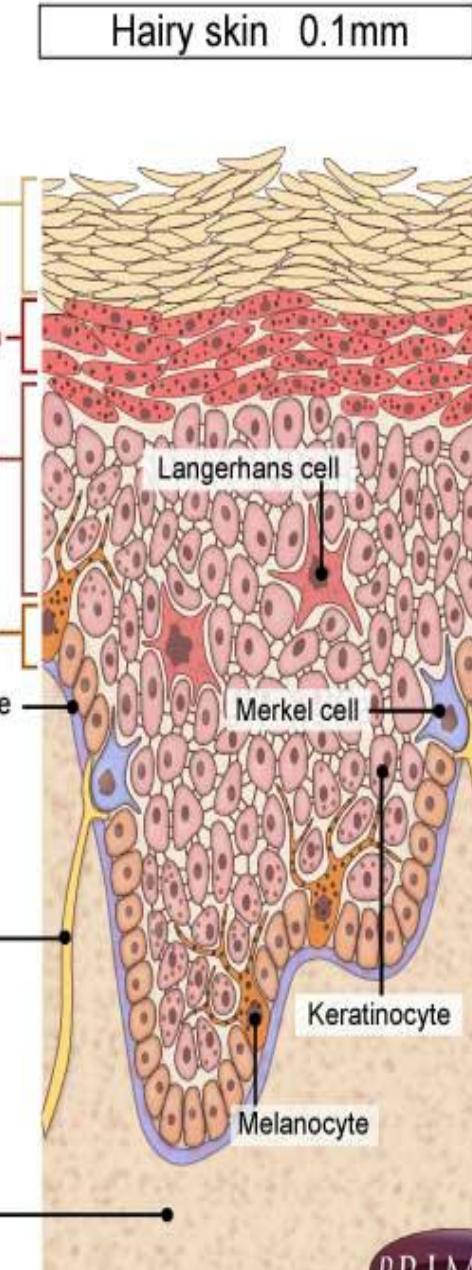
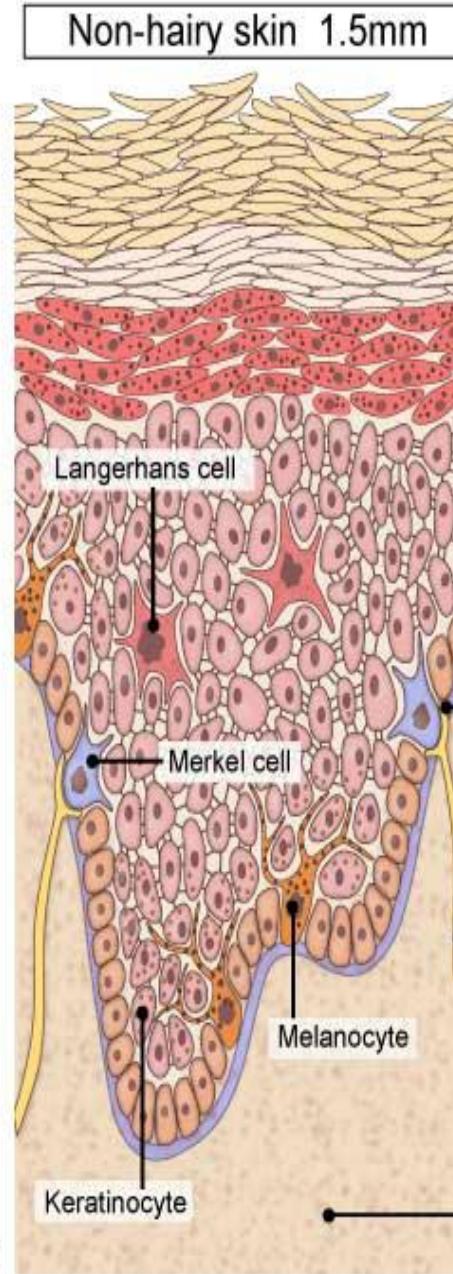
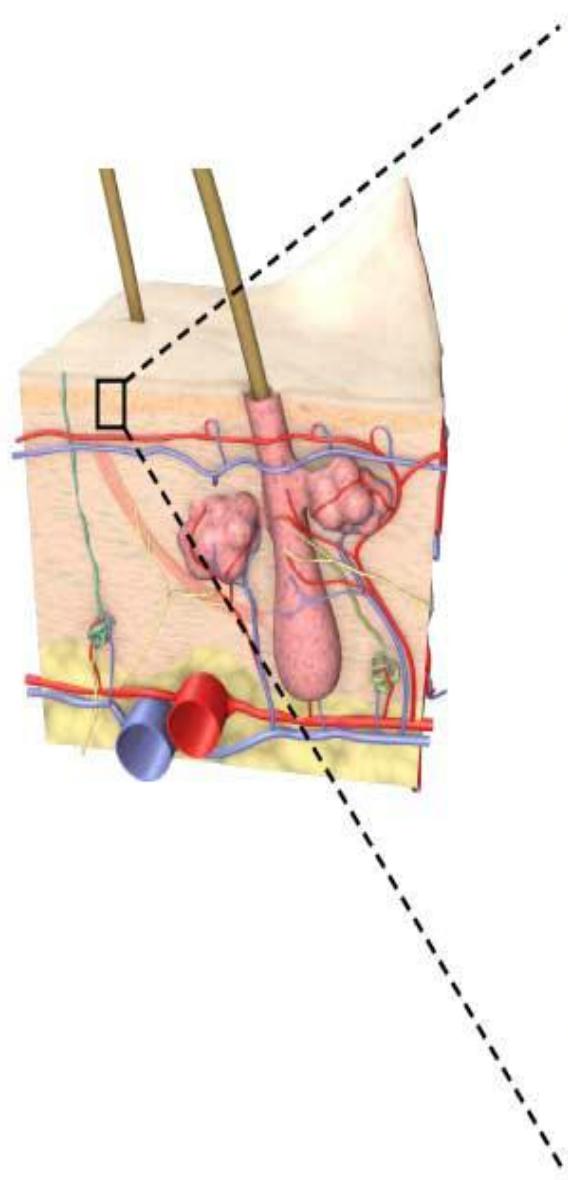
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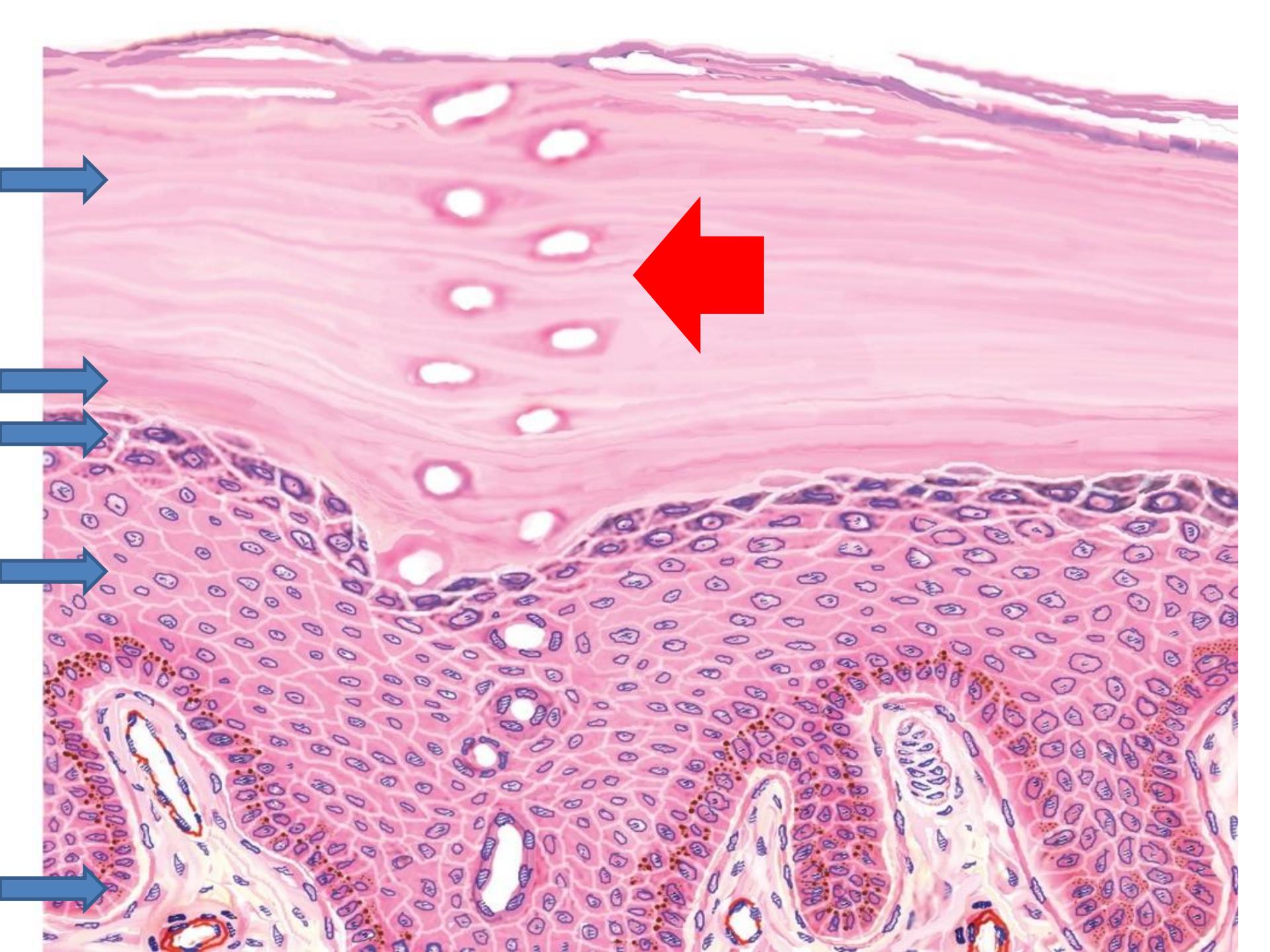
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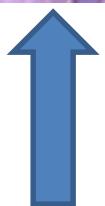
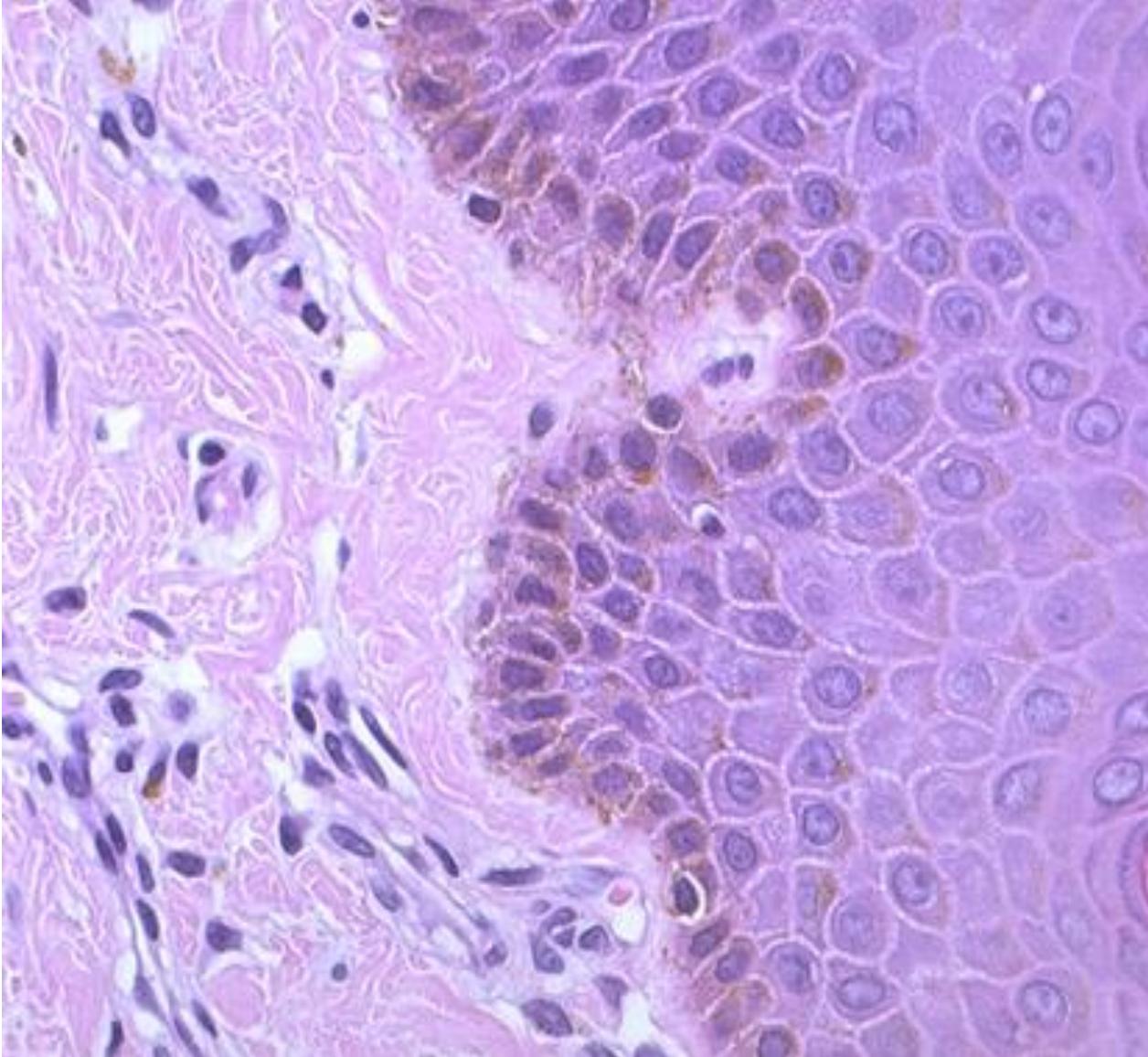


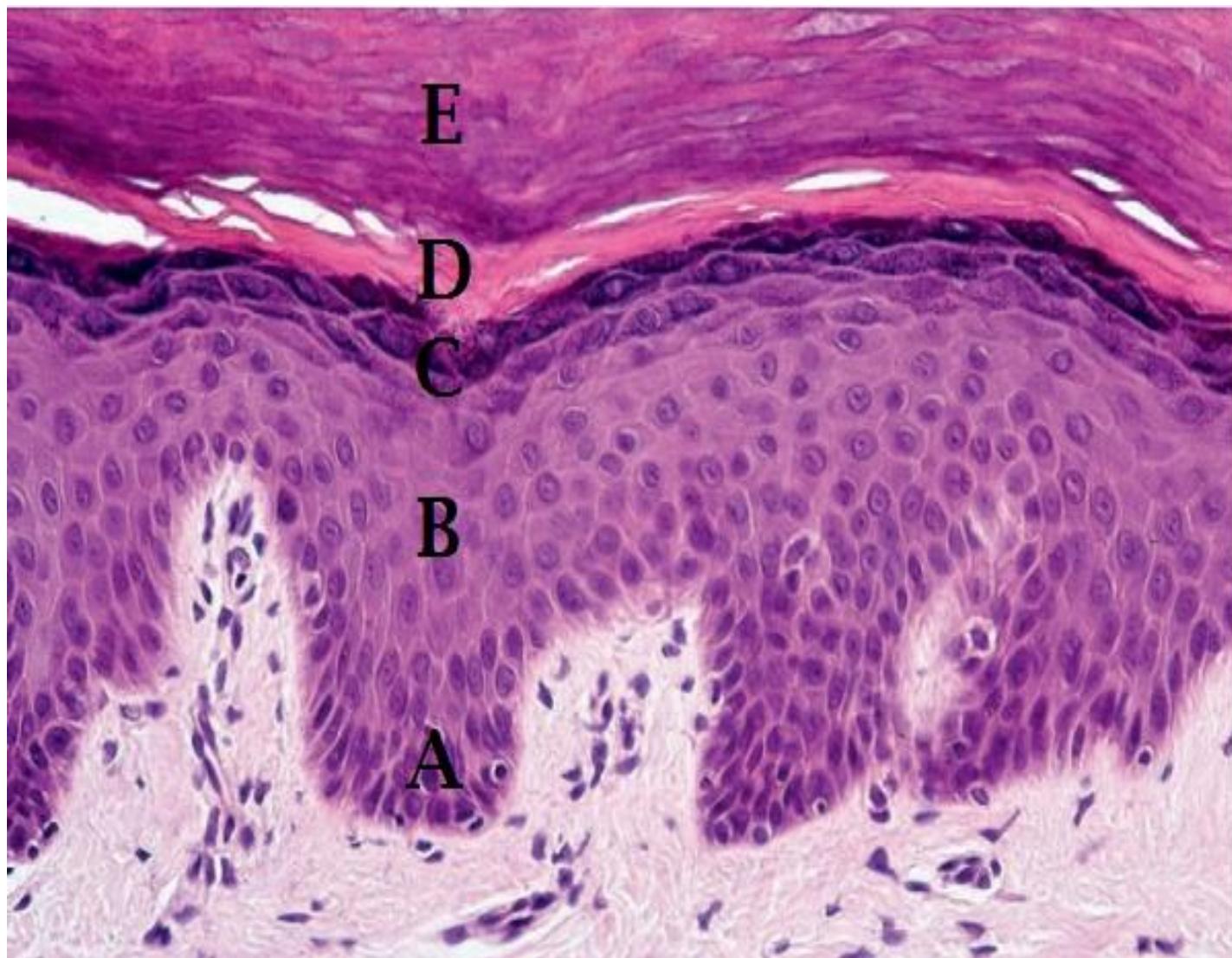
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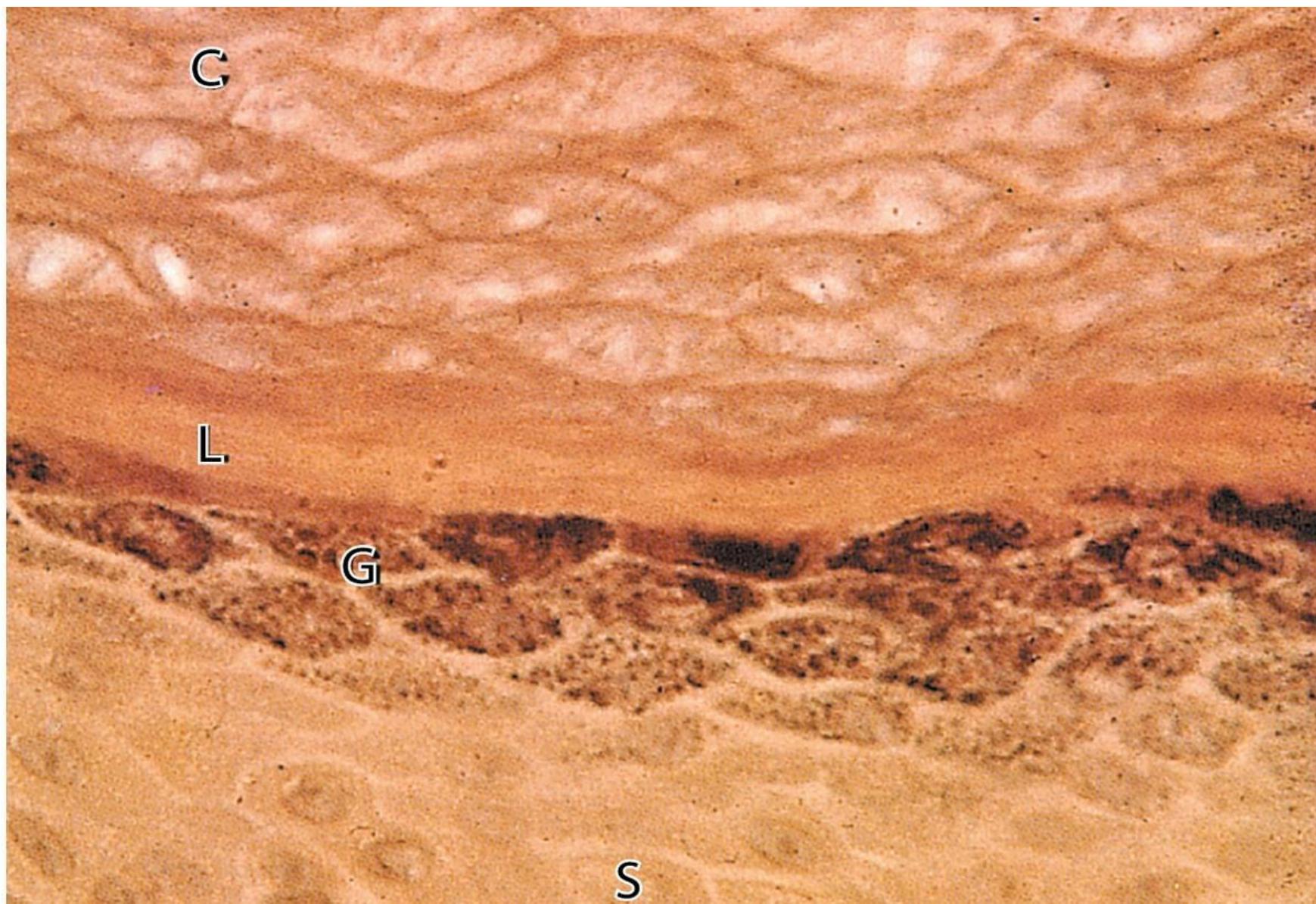


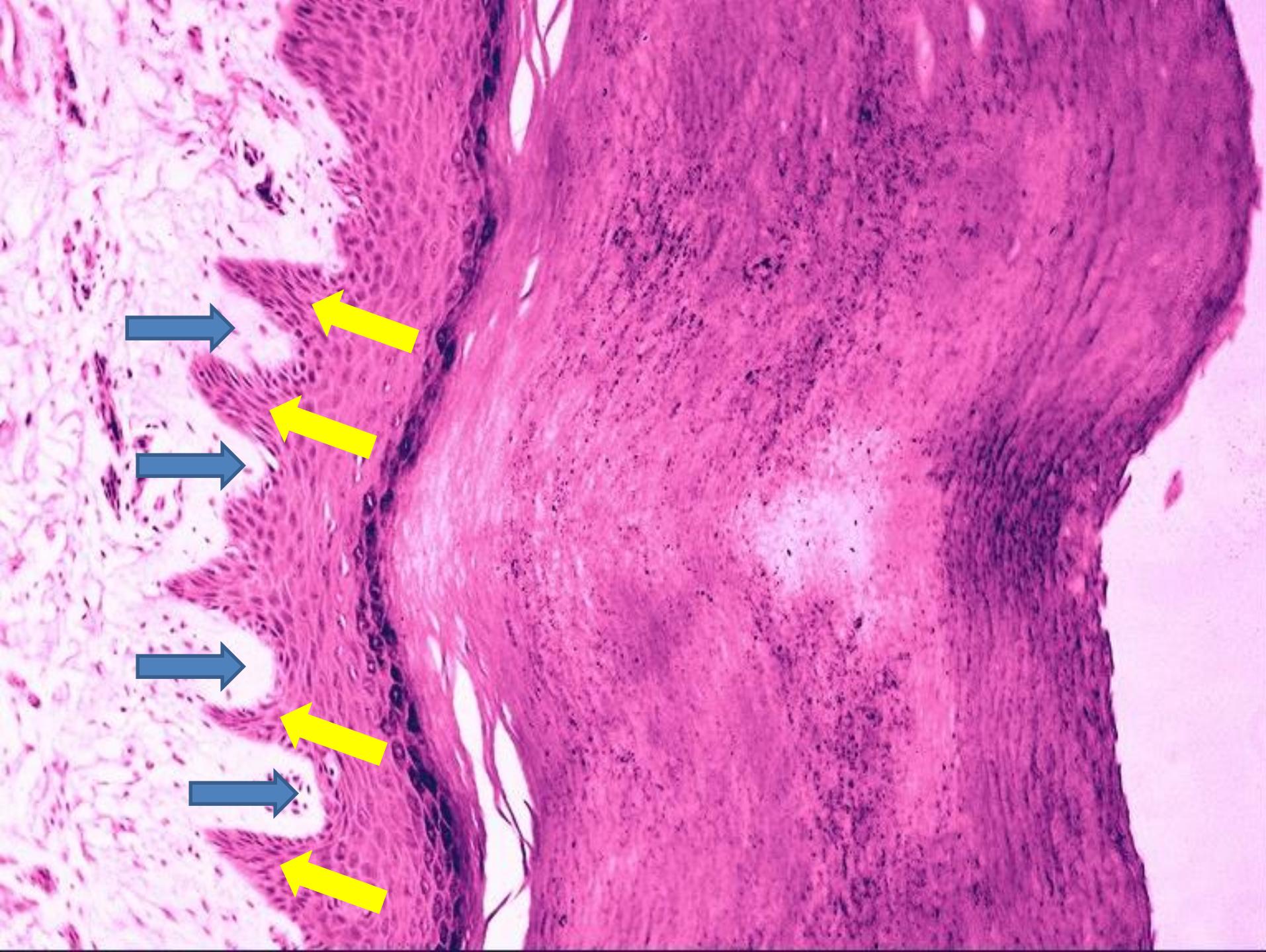




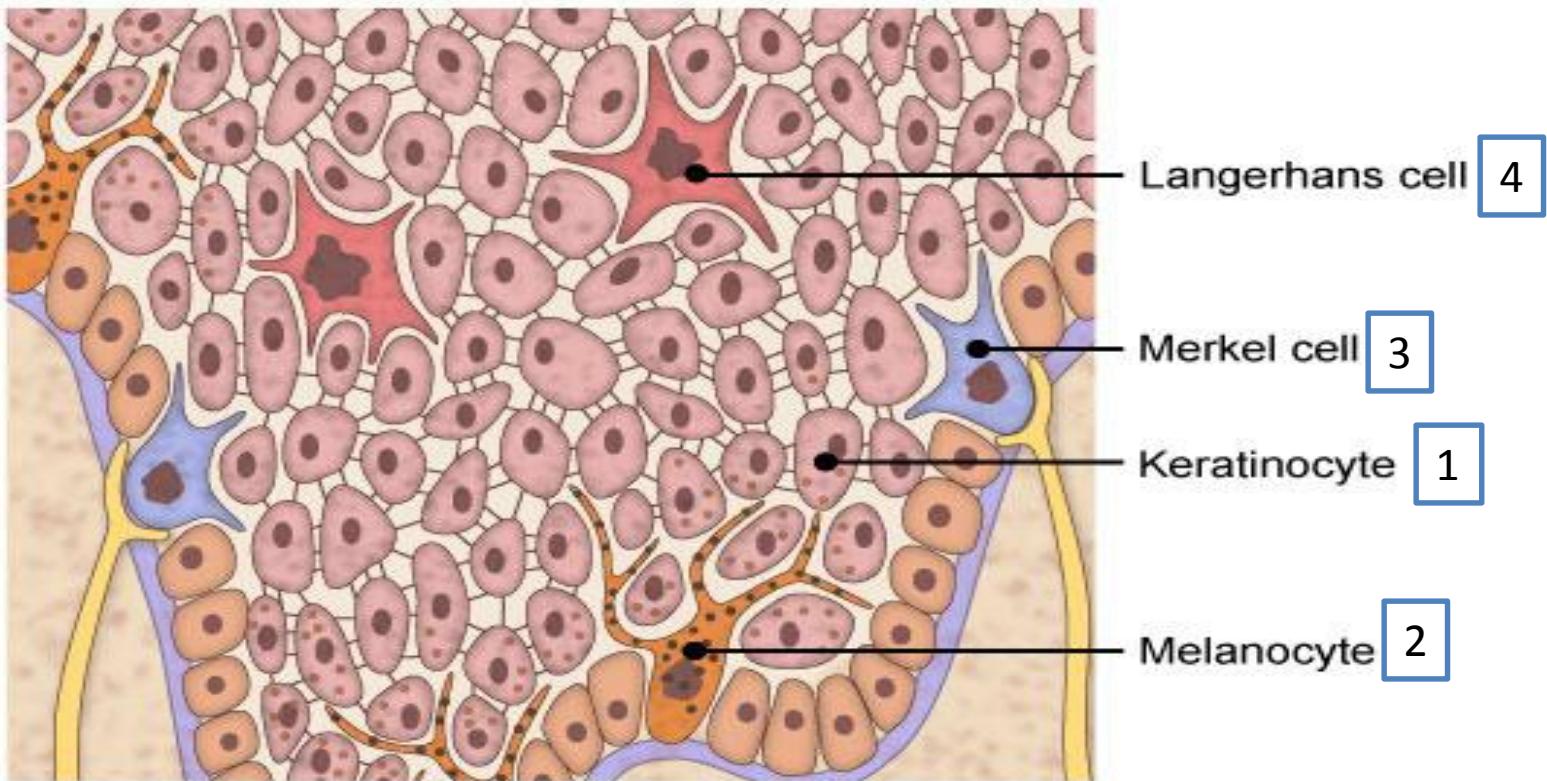


THICK OR THIN SKIN ????

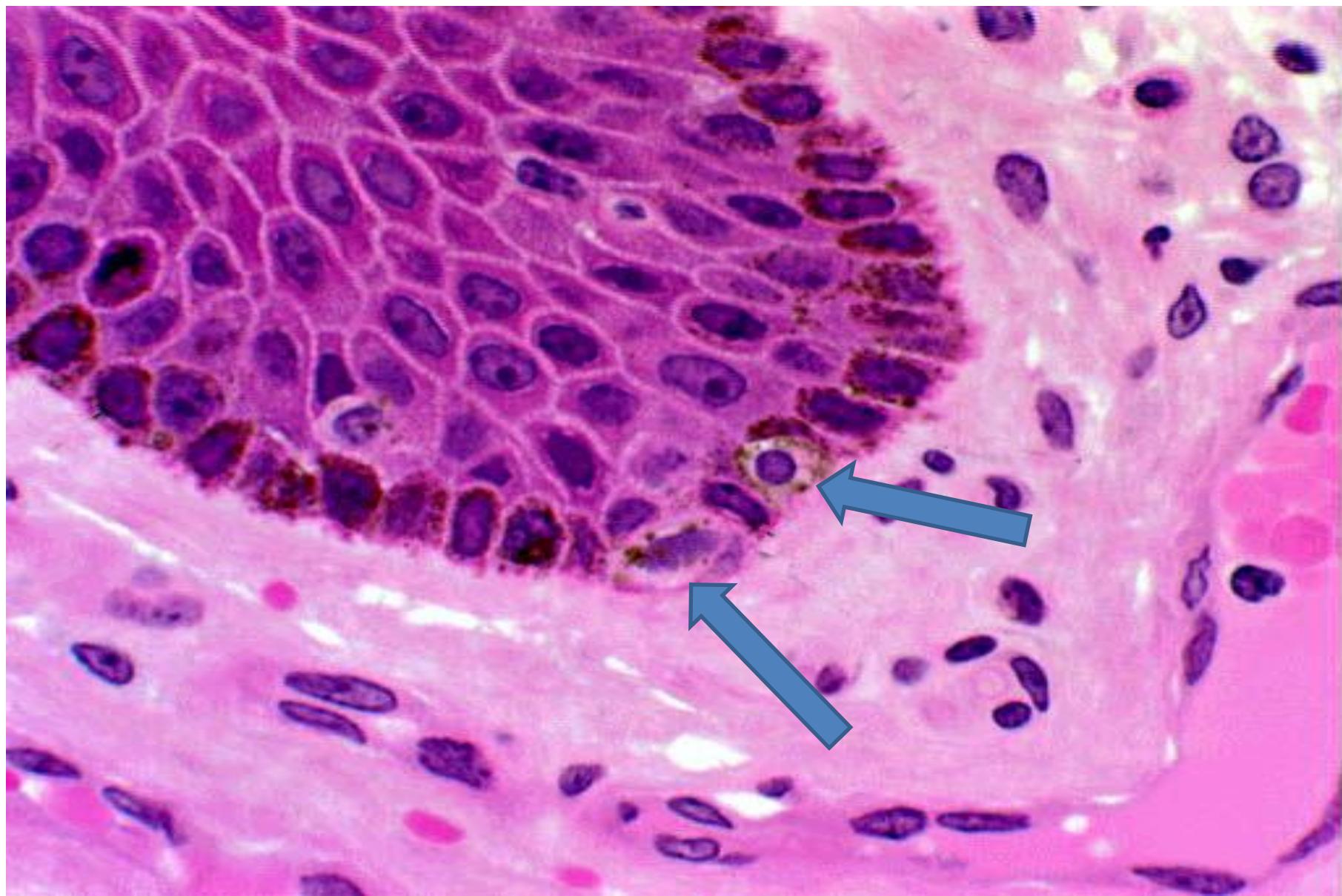




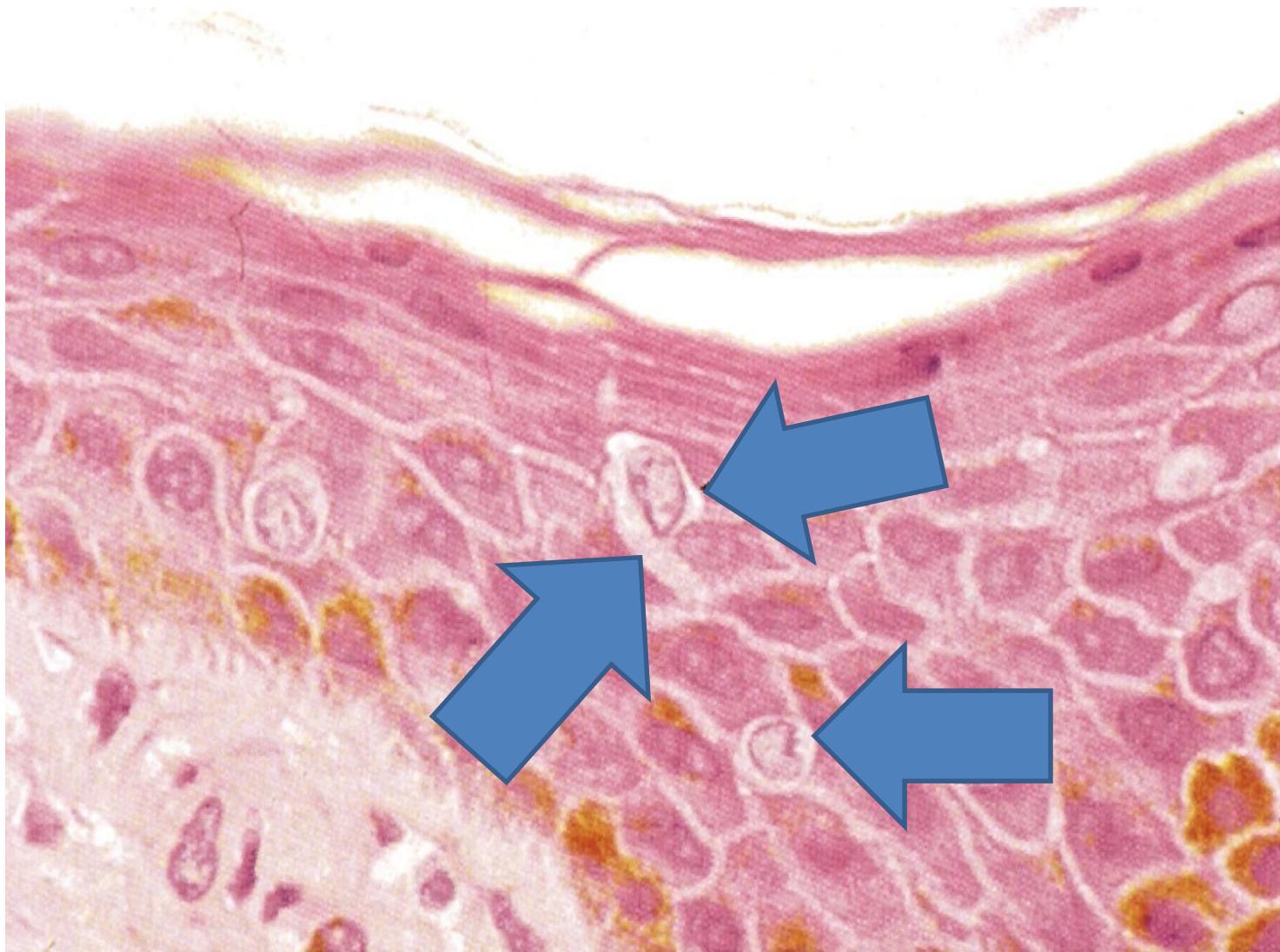
Cells of Epidermis

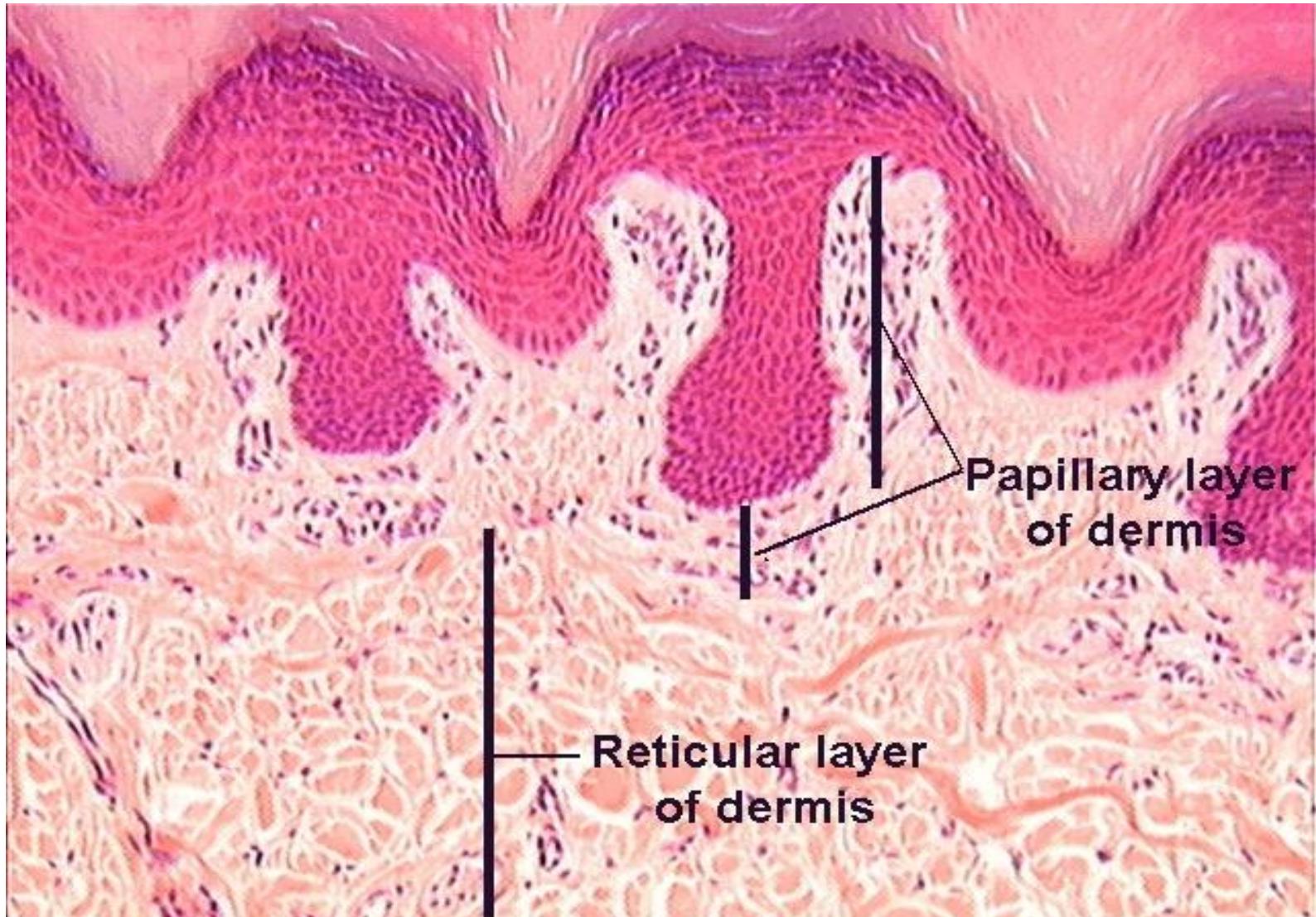


Melanocyte



Langerhans cells

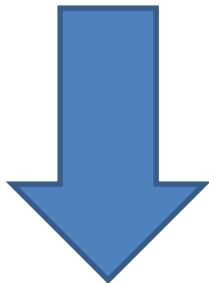




Dermis

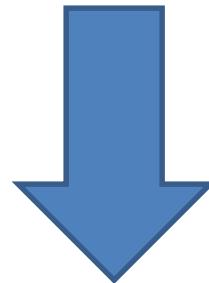
Sensory receptors

Unencapsulated

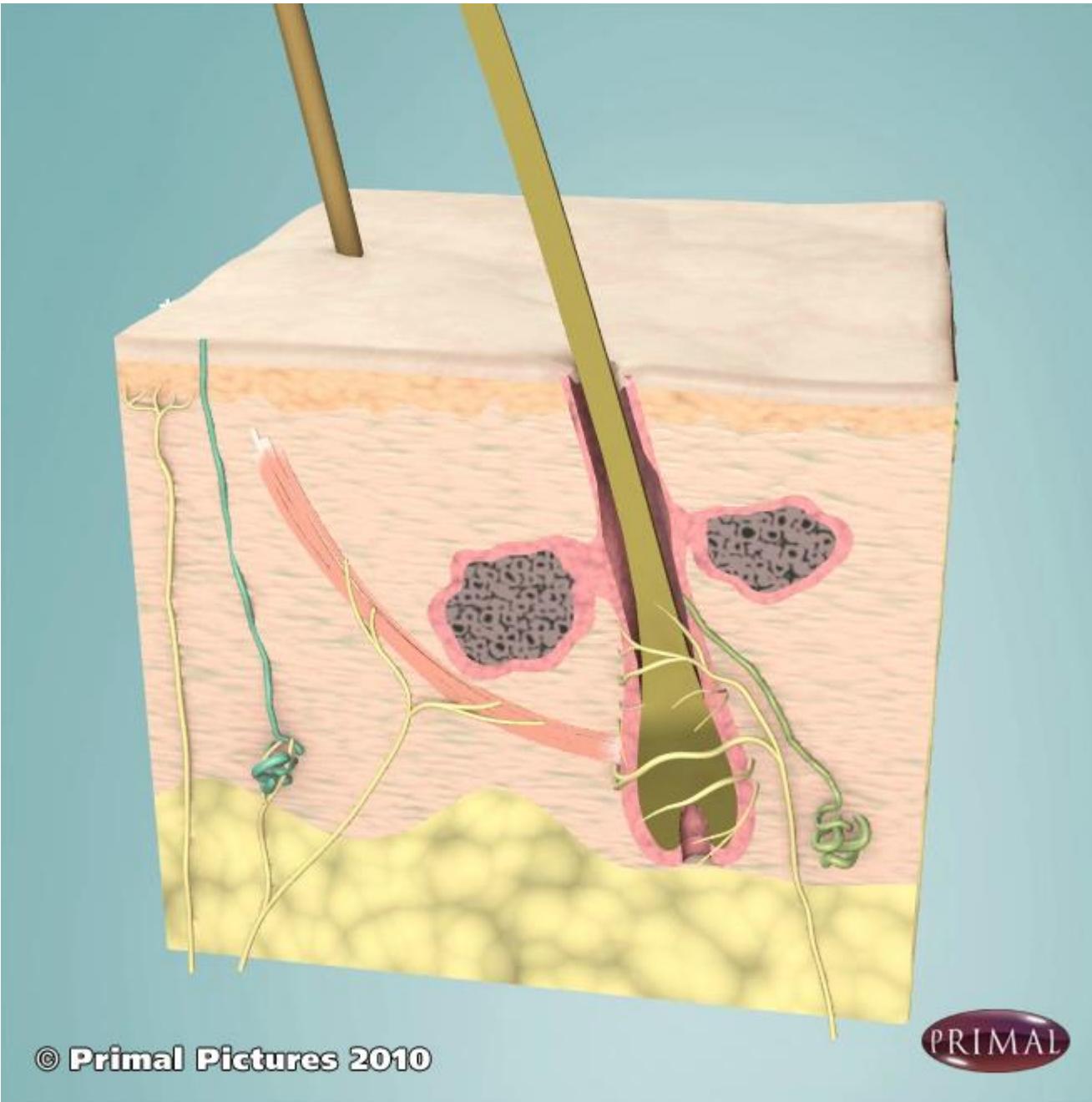


- 1- Merkel disc
- 2- Free nerve endings
- 3- Root hair plexuses

Encapsulated

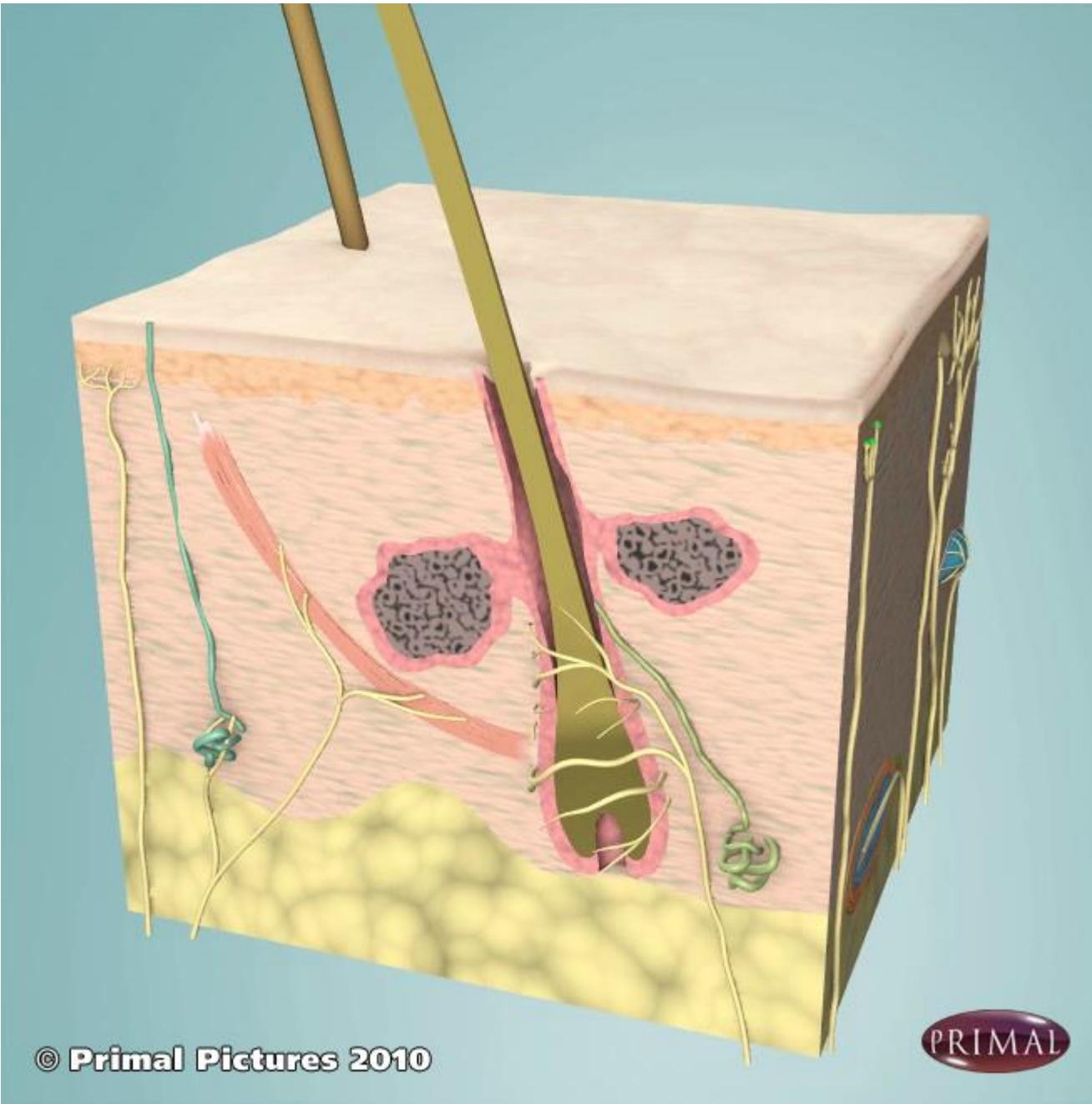


- 1- Meissner corpuscles
- 2- Pacinian corpuscles
- 3- Ruffini corpuscles



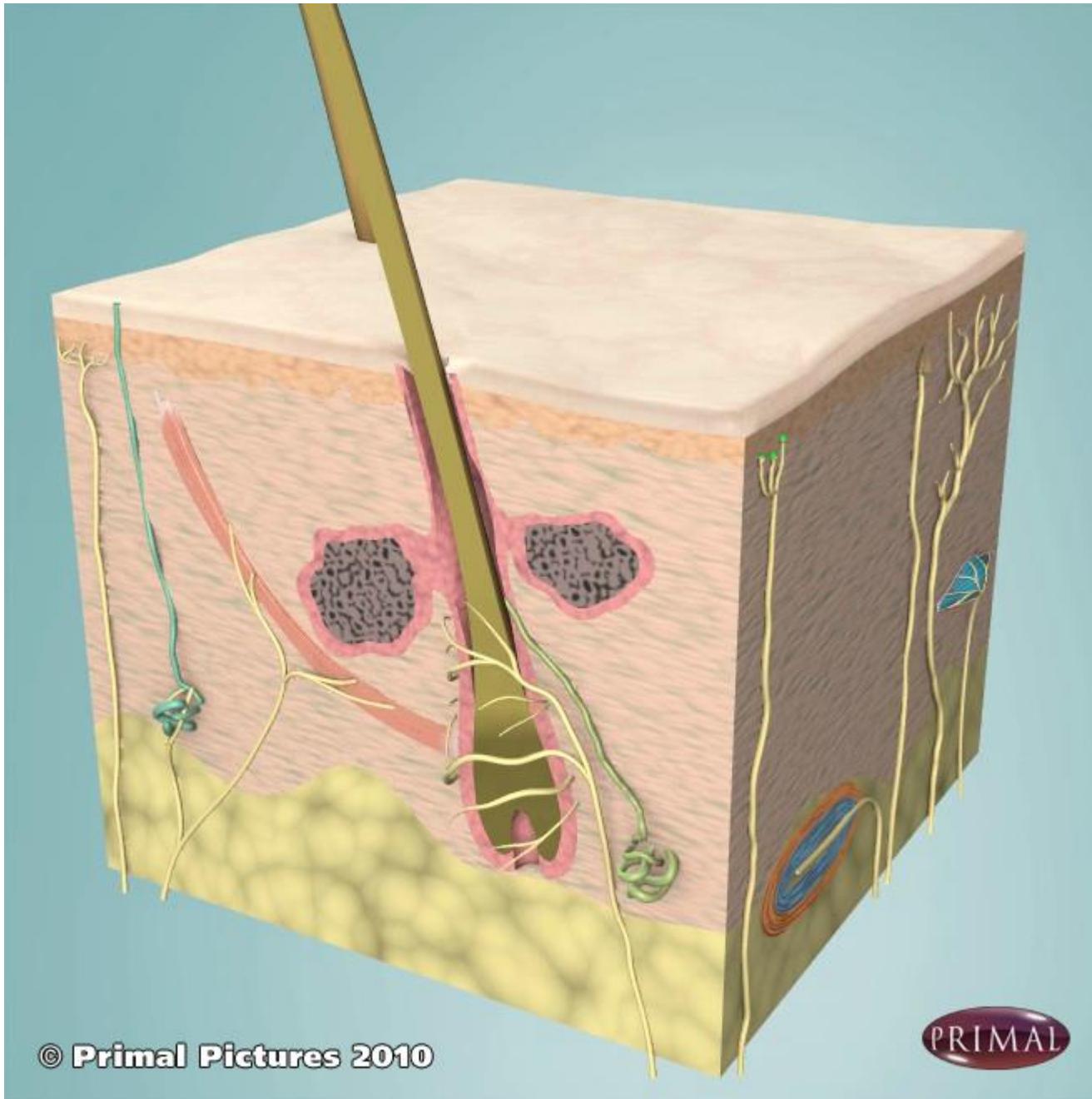
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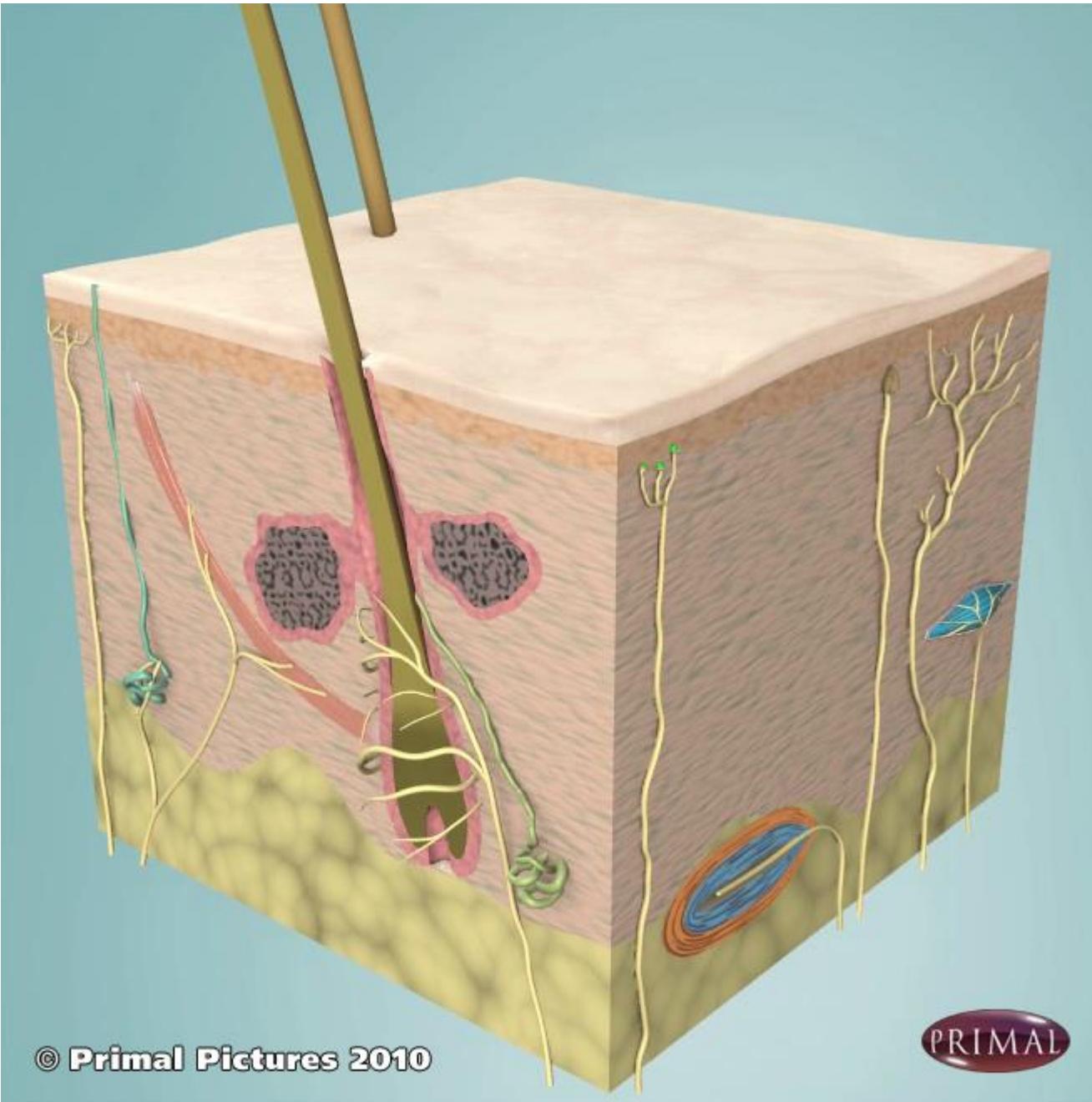
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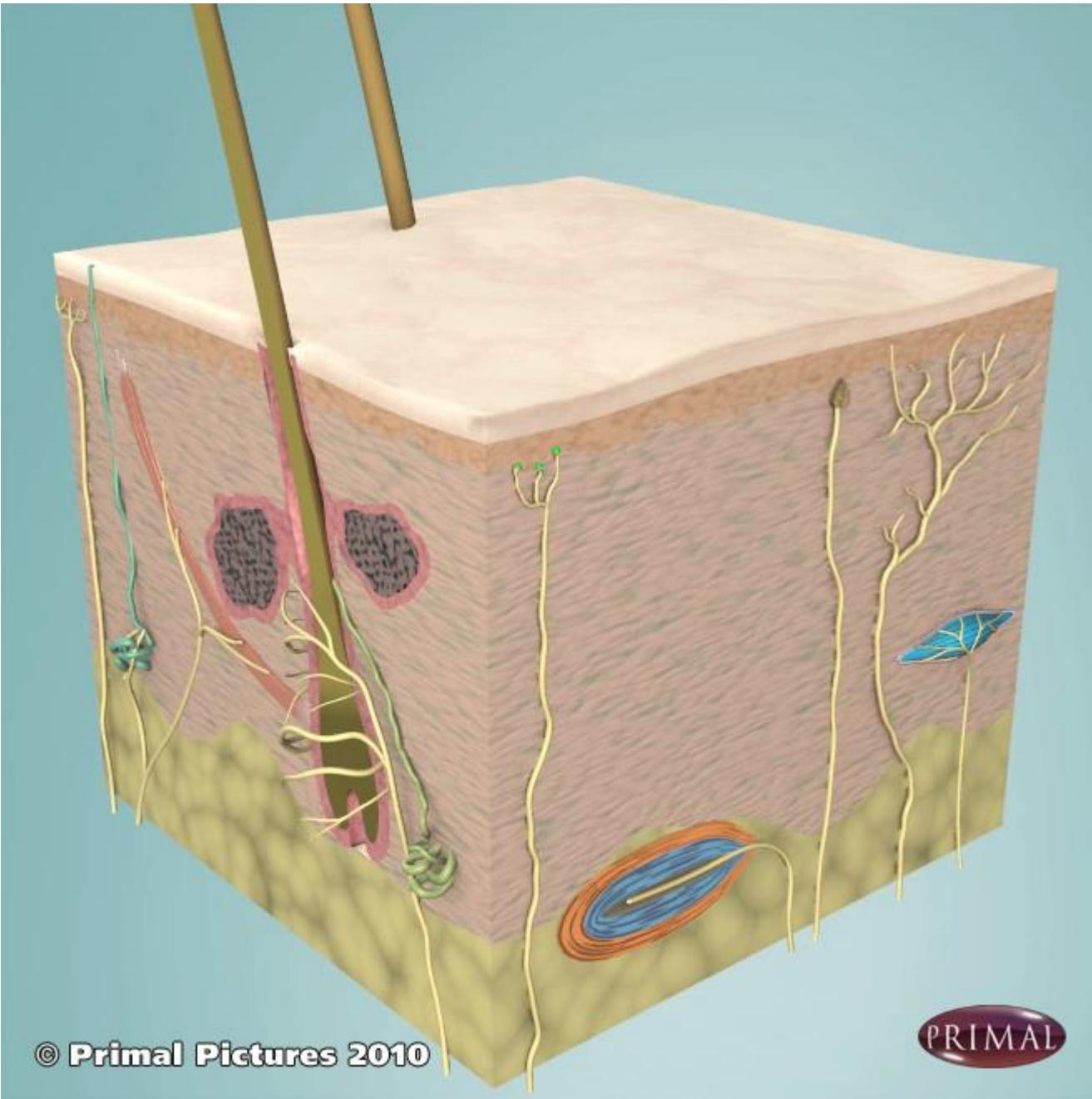
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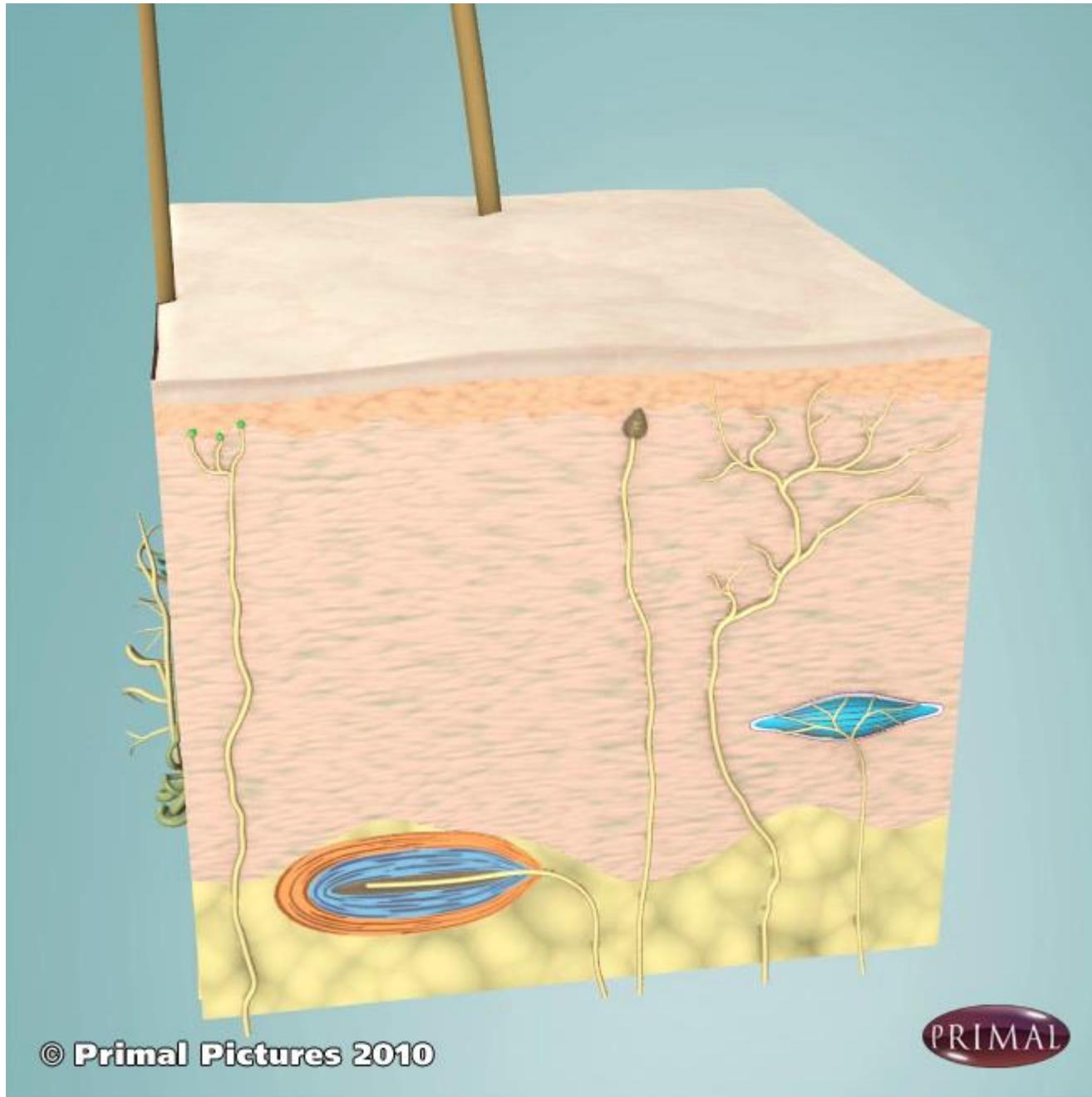
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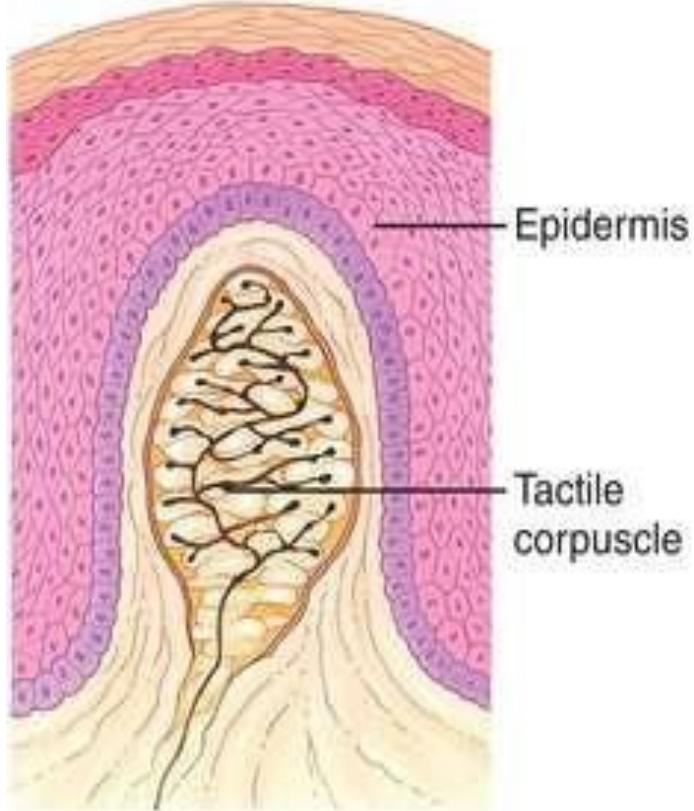
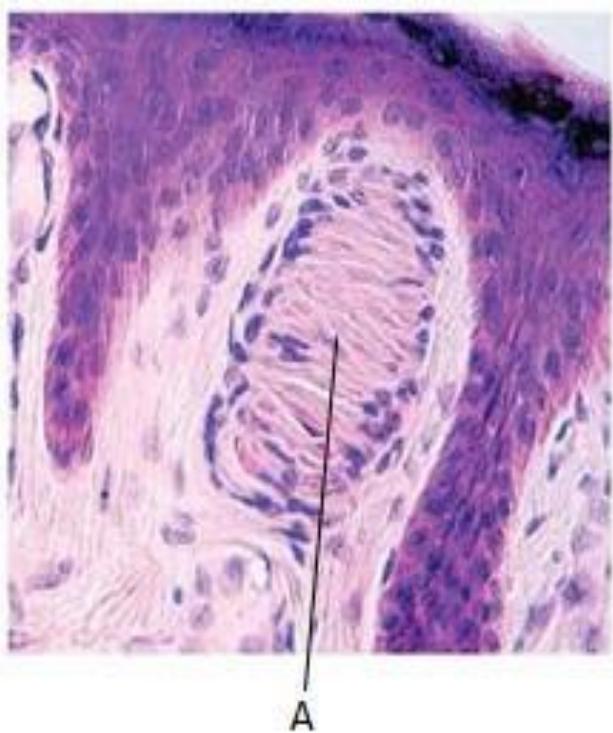
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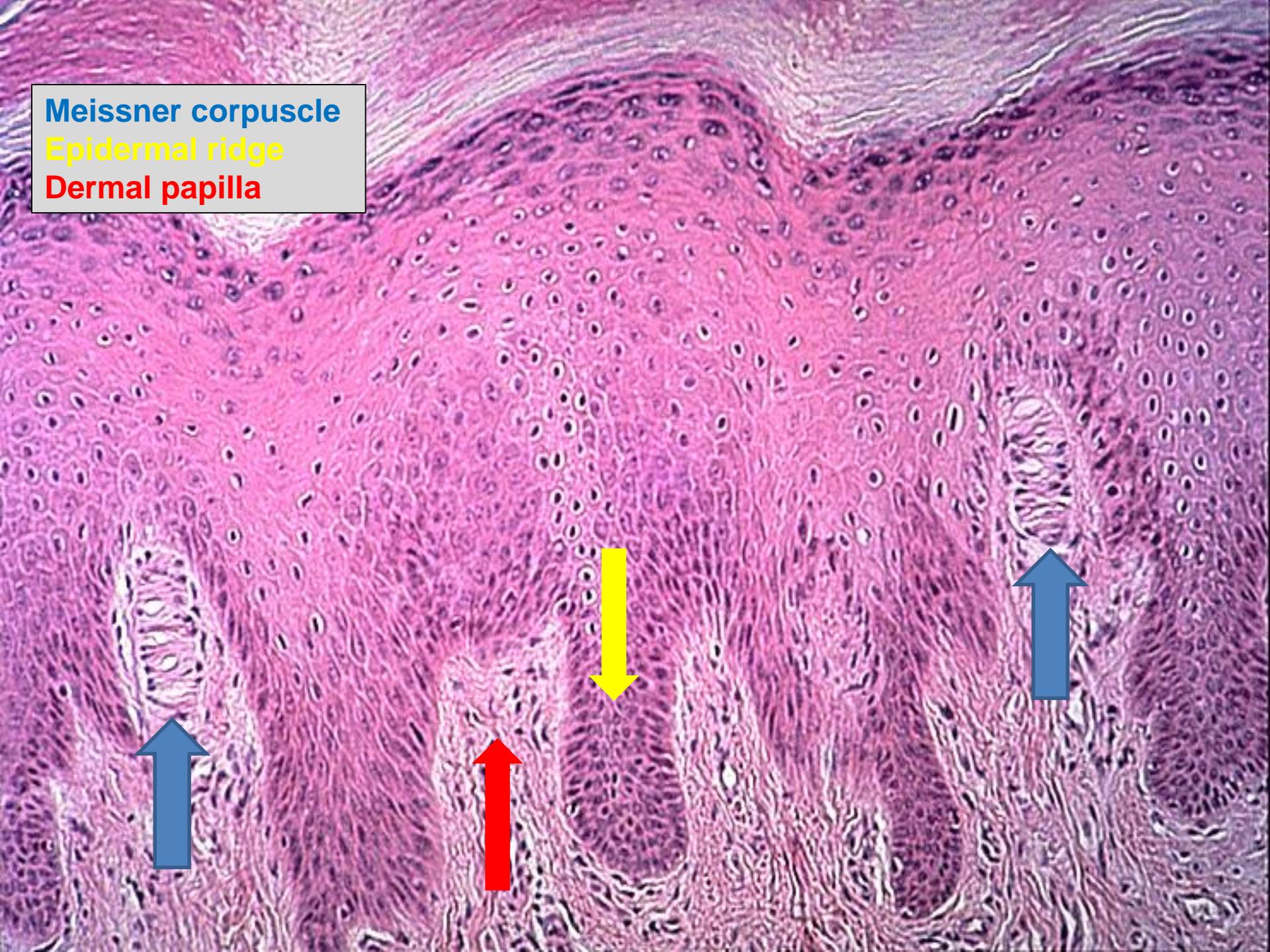
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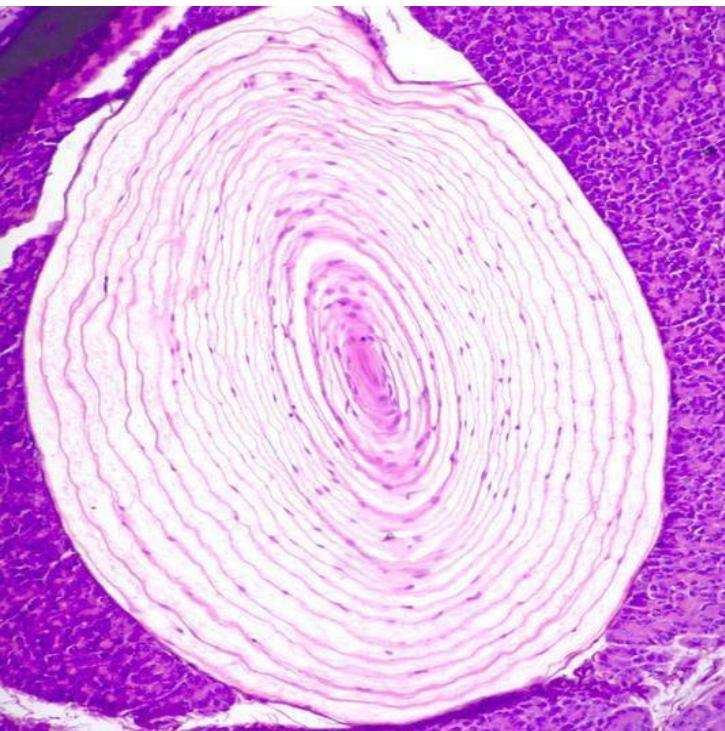
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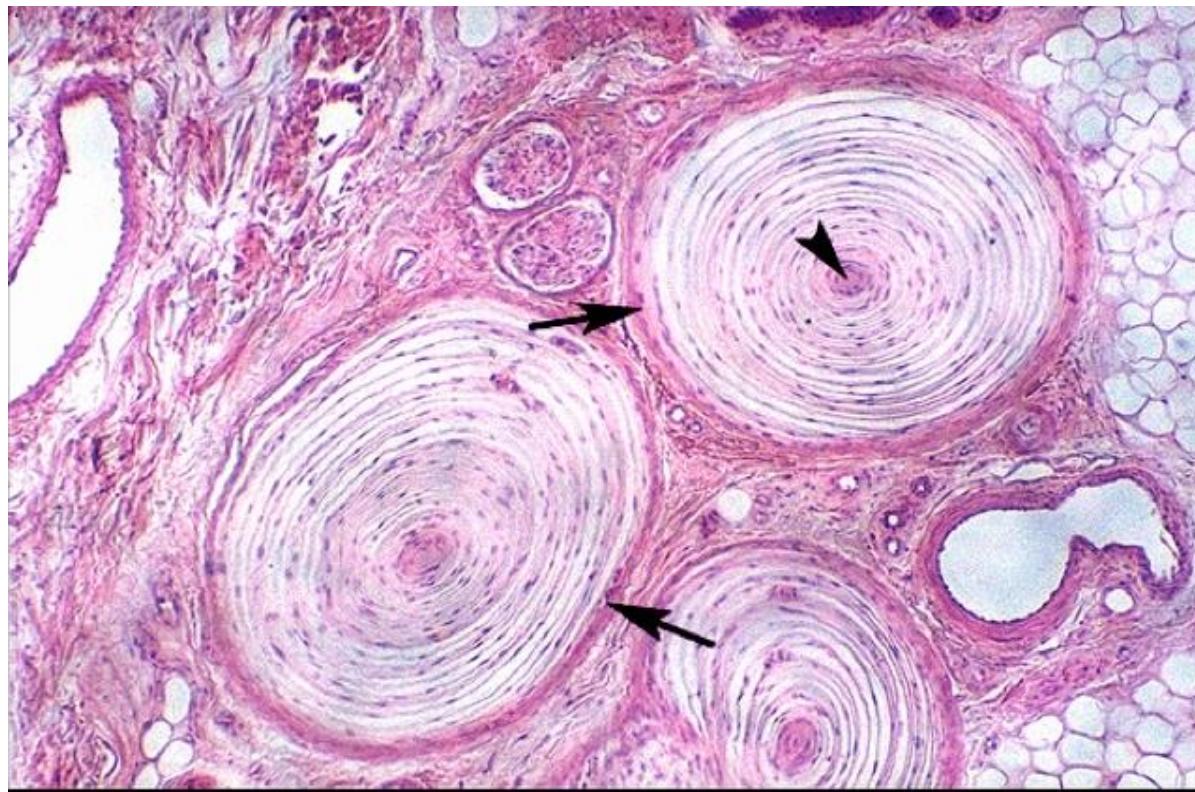
Meissner corpuscle

Meissner corpuscle
Epidermal ridge
Dermal papilla



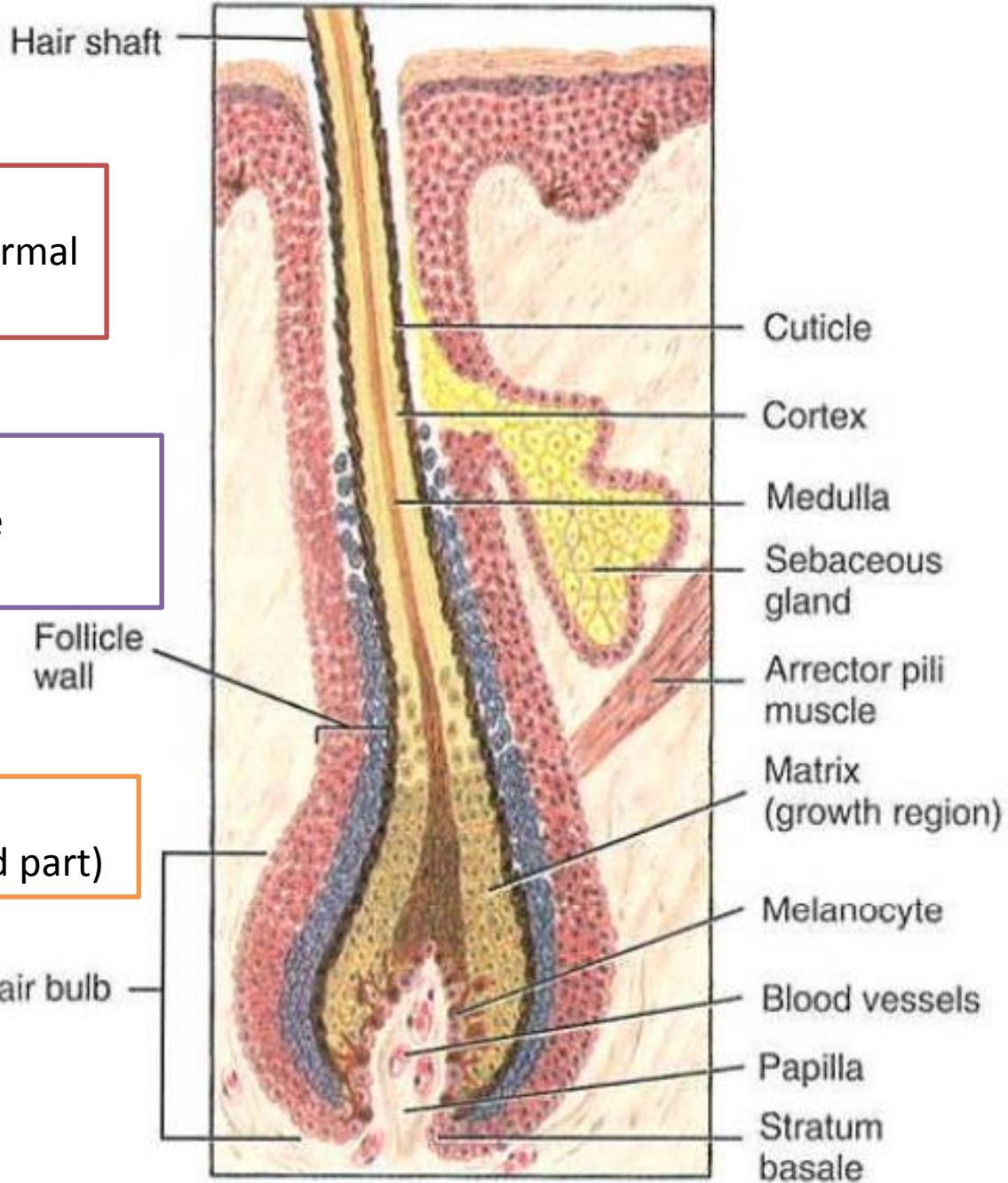


Pacinian corpuscles



Pacinian corpuscles

Hair

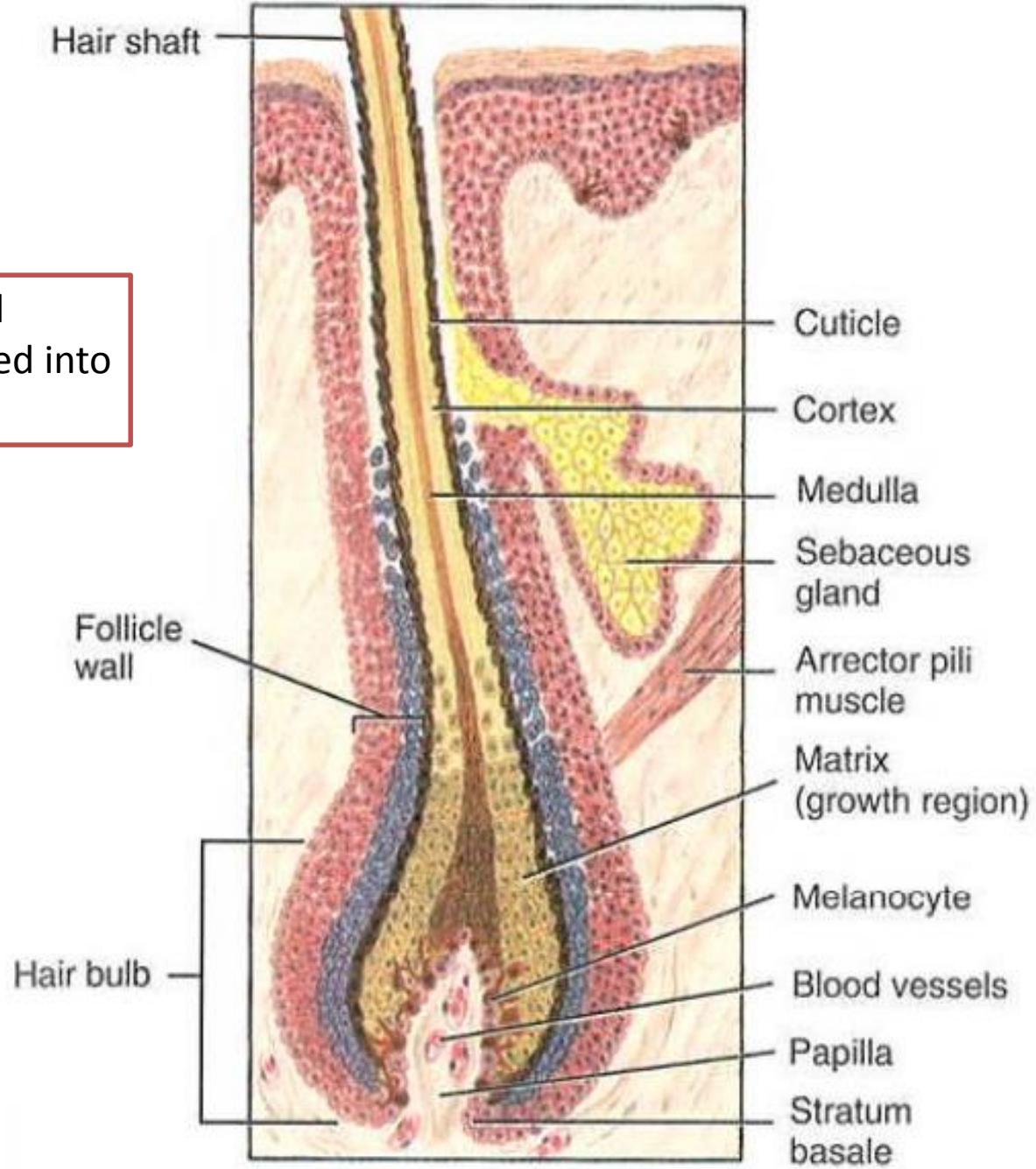


Hairs are elongated keratinized structures that form within epidermal invaginations (hair follicles)

Hair shaft: The part of a hair extending beyond the skin surface (visible part)

Hair root: The part of a hair below the skin surface (embedded part)

Hair follicle is a tube of stratified squamous epithelium, invaginated into the dermis

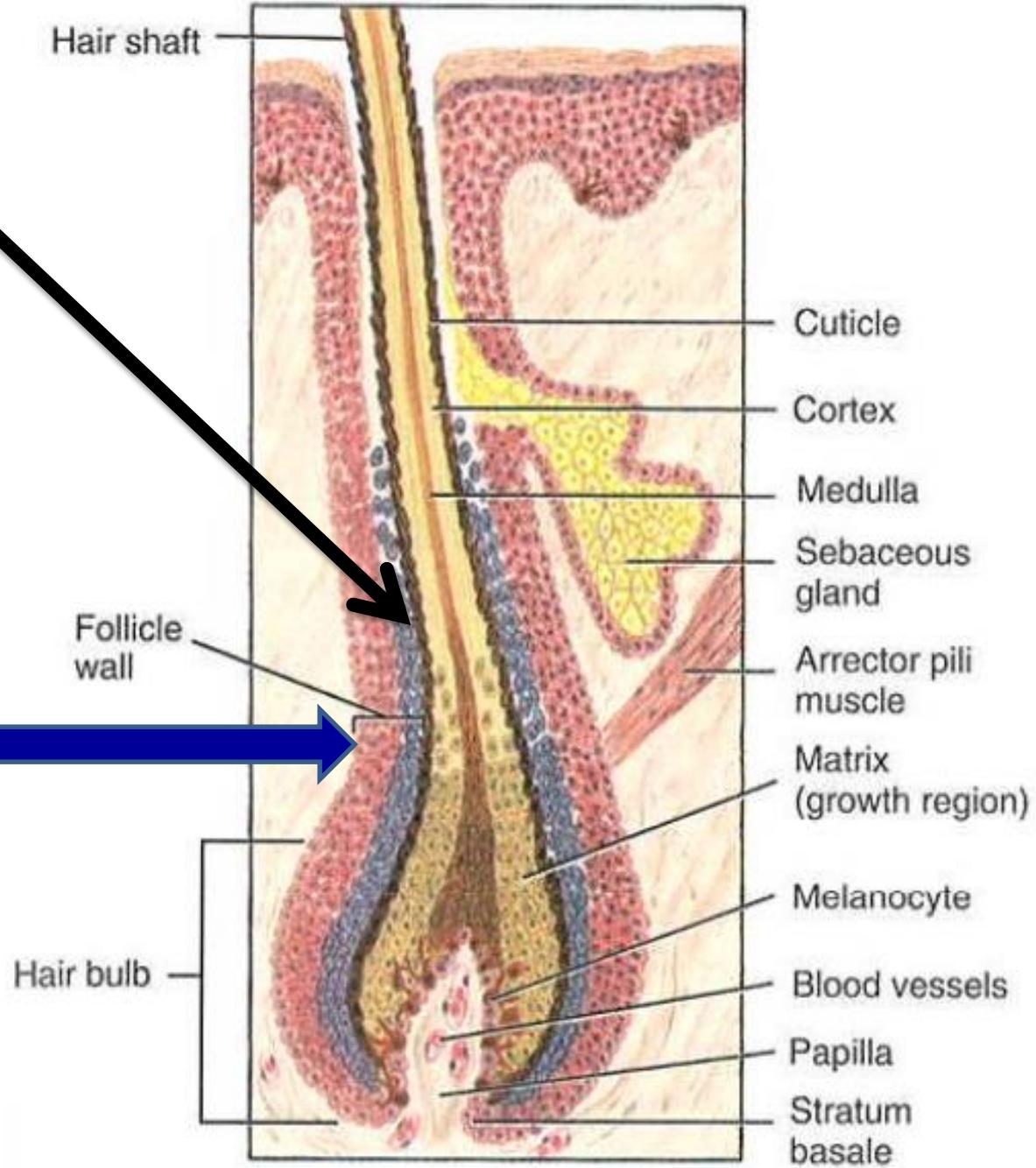


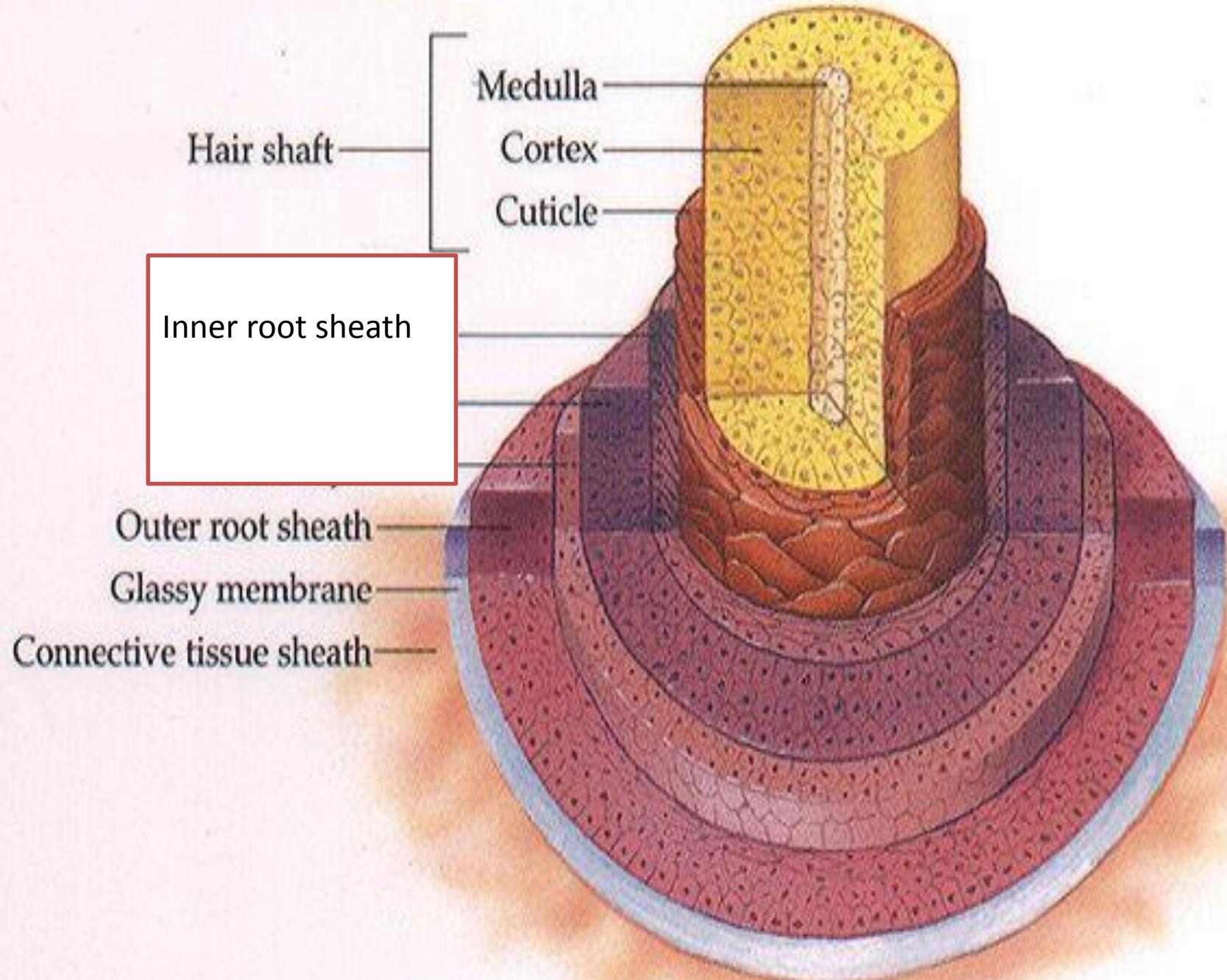
INNER ROOT SHEATH

Disintegrates at the level of the sebaceous gland

OUTER ROOT SHEATH

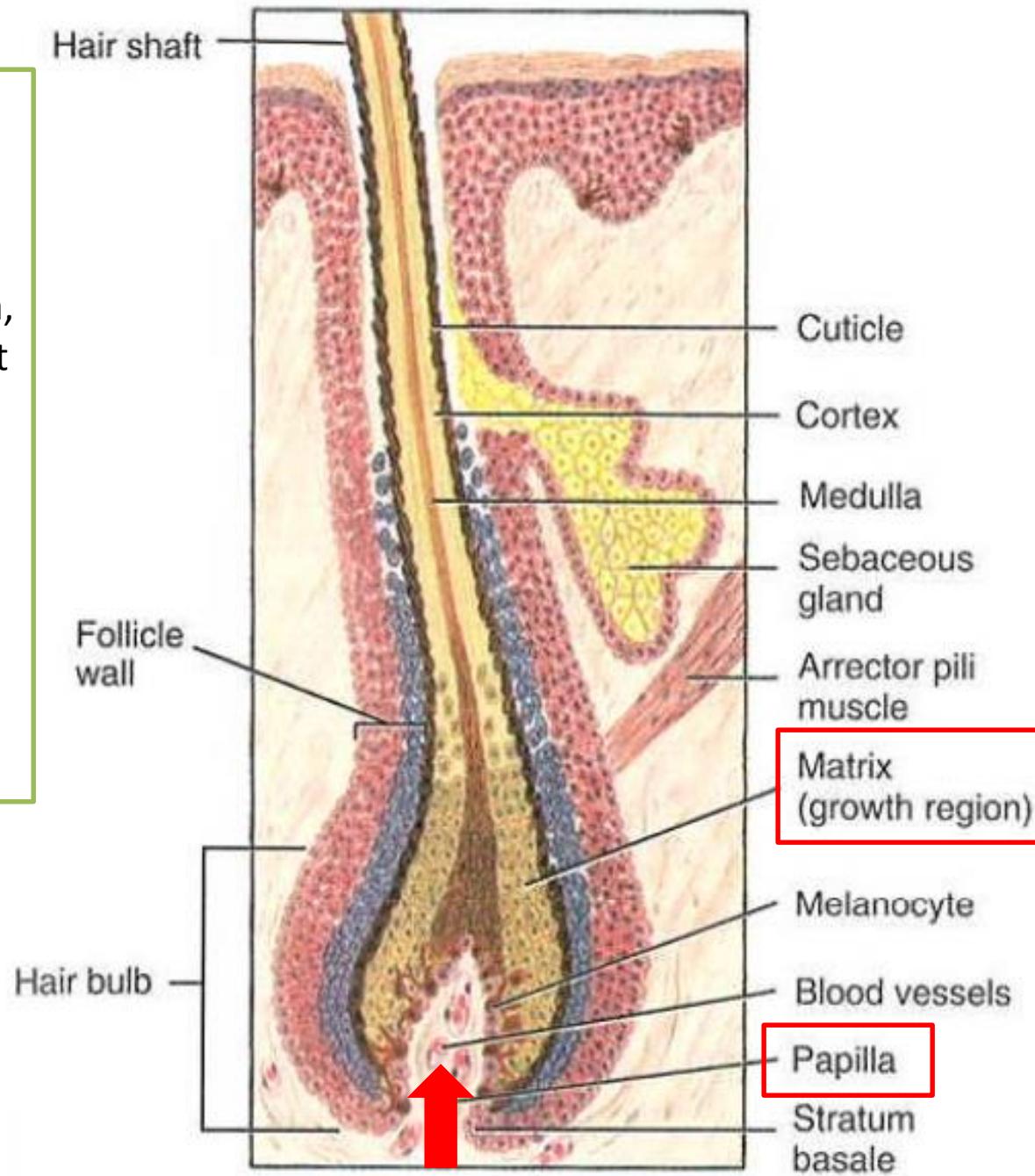
- is continuous with the epidermis
- It does not take part in hair formation.
- Surrounded by a glassy basement membrane
- basement membrane is surrounded by a connective tissue sheath.





Hair matrix

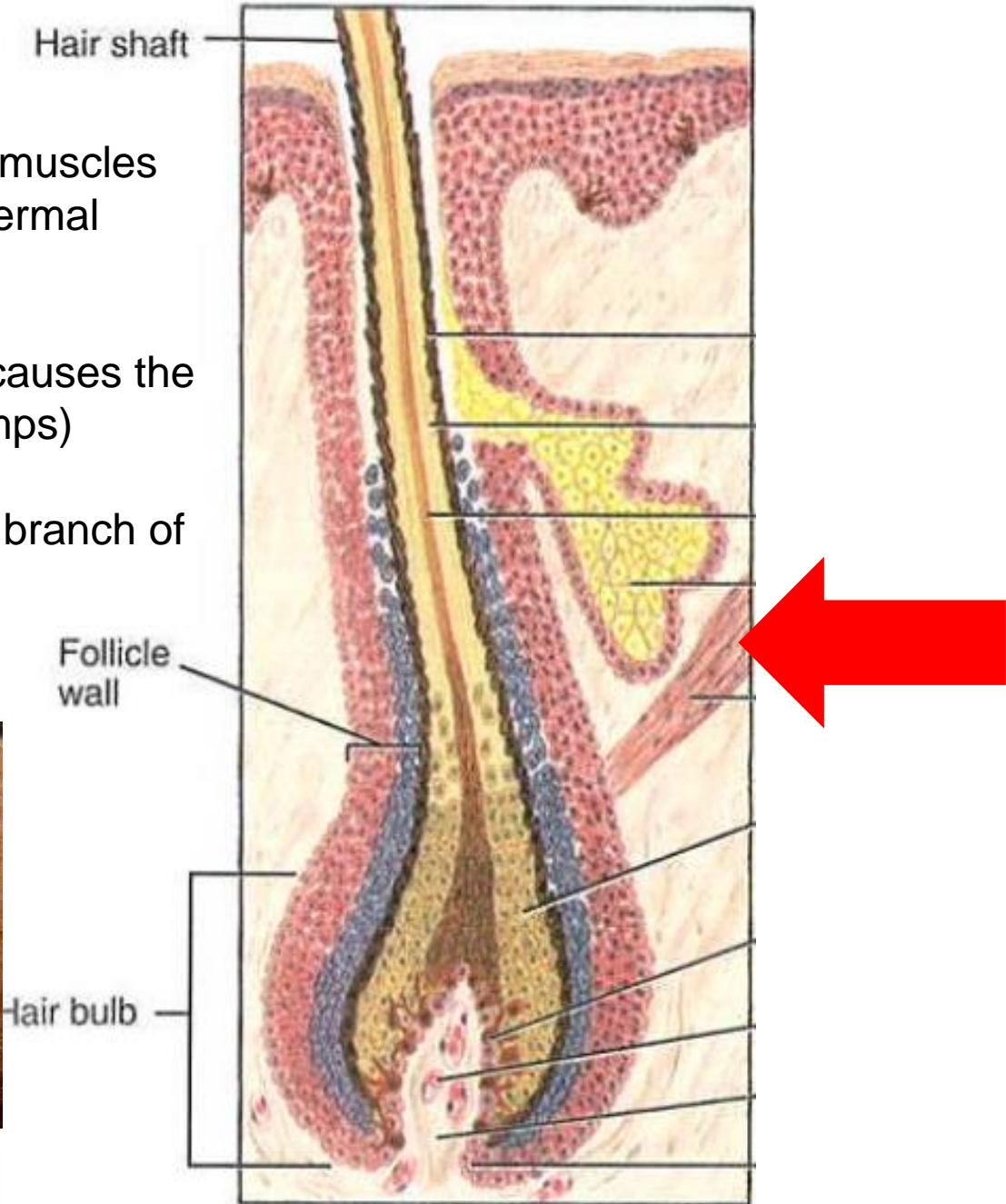
- contains the proliferating cells that generate the hair and the internal root sheath
- is just above the dermal papilla,
- separated from it by a basement membrane.
- the cells in the hair matrix proliferate and move upwards, gradually becoming keratinized to produce the hair.
- Melanocytes located in the matrix produce hair color.

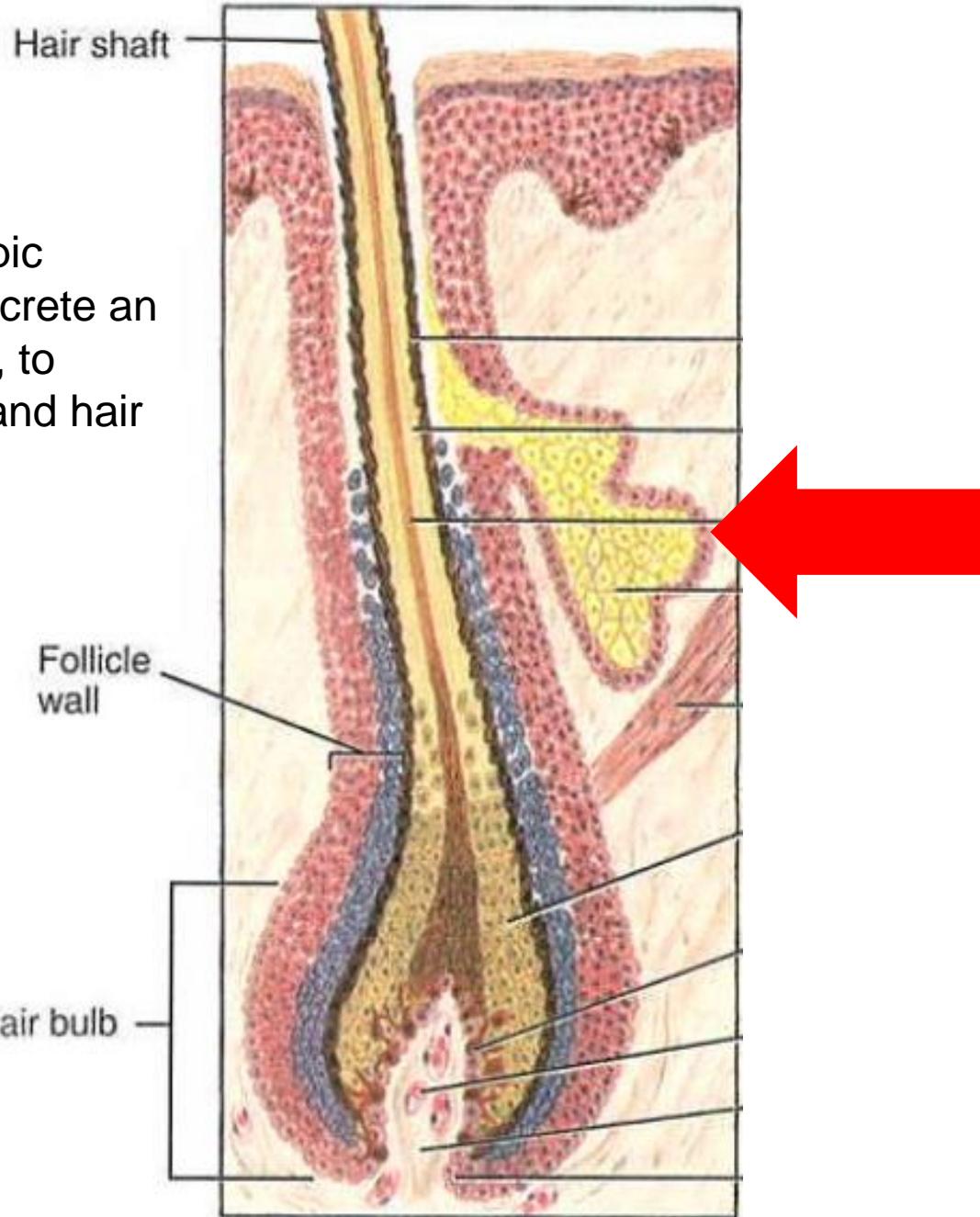


Hair shaft

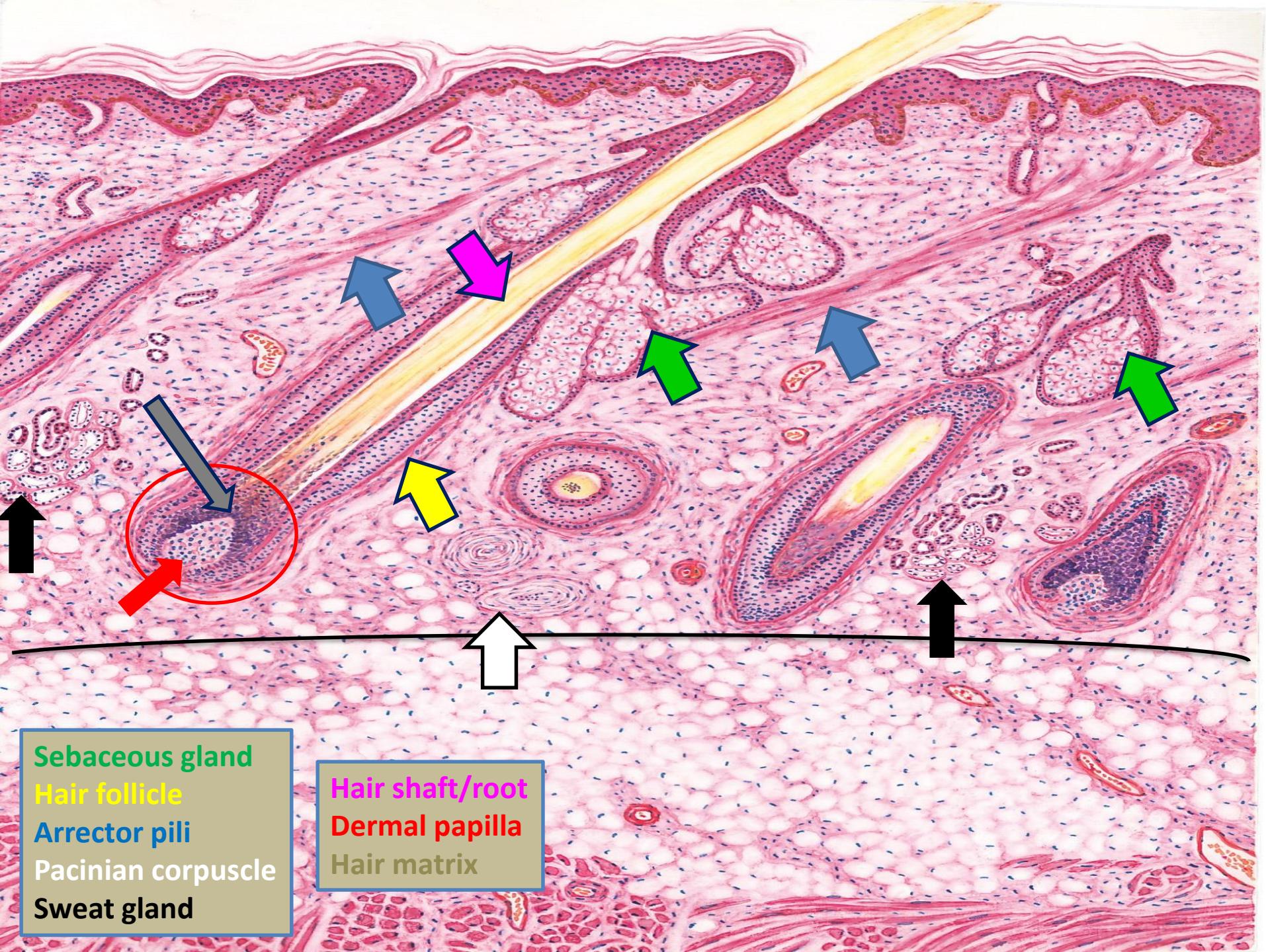
Arrector pili muscles are small muscles extend from hair follicles to the dermal papilla

- Contraction of these muscles causes the hairs to stand on end (goose bumps)
- Innervated by the sympathetic branch of the autonomic nervous system





Sebaceous glands are microscopic exocrine glands in the skin that secrete an oily or waxy matter, called **sebum**, to lubricate and waterproof the skin and hair



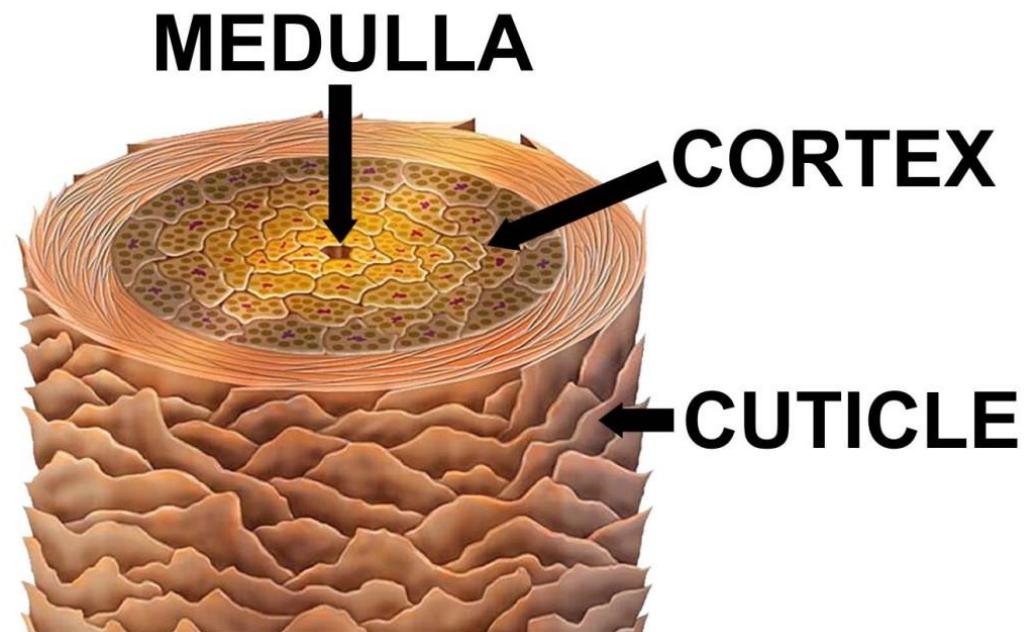
Sebaceous gland
Hair follicle
Arrector pili
Pacinian corpuscle
Sweat gland

Hair shaft/root
Dermal papilla
Hair matrix

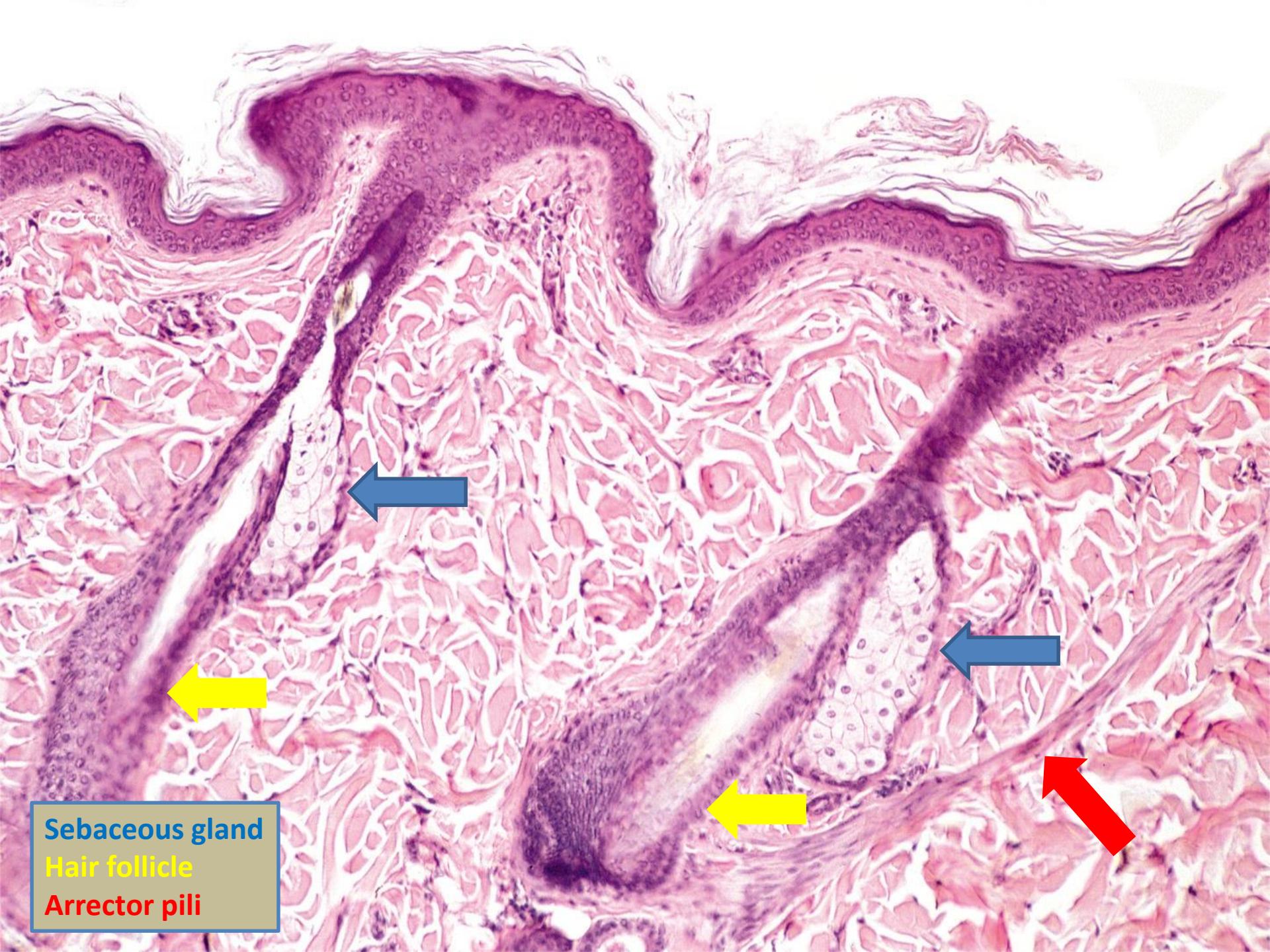
Medulla: large vacuolated and moderately keratinized cells

Cortex: heavily keratinized and densely packed cells

Cuticle: thin layer heavily keratinized squamous cells covering the cortex

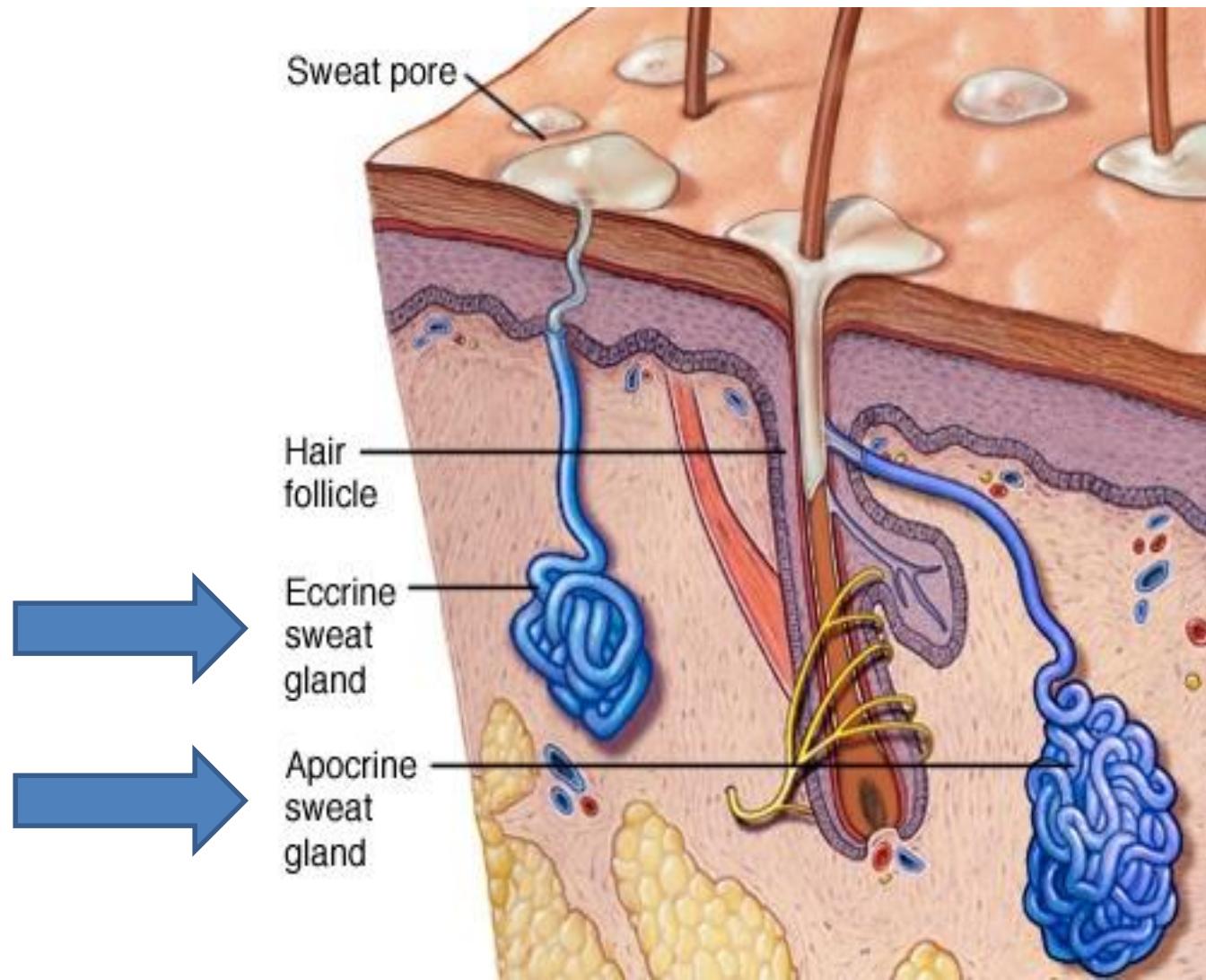


Structure of the hair shaft

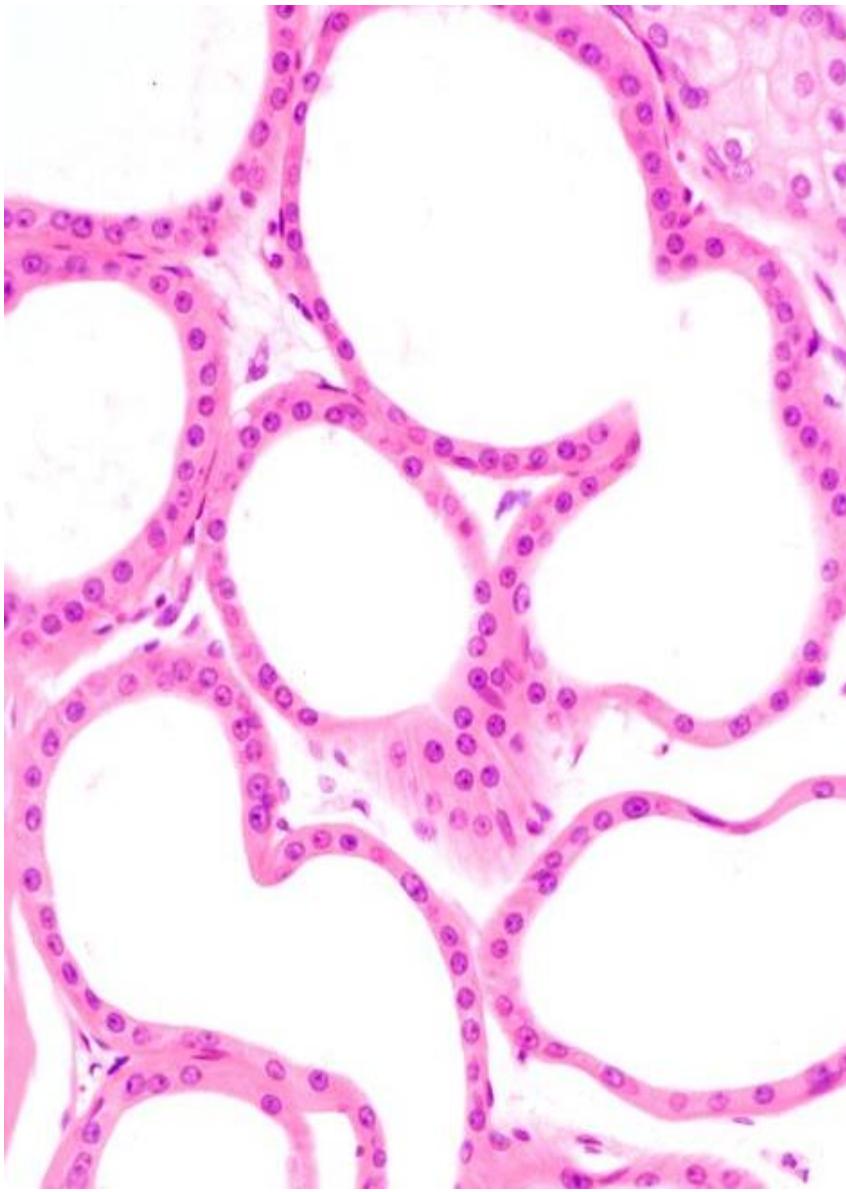


Sebaceous gland
Hair follicle
Arrector pili

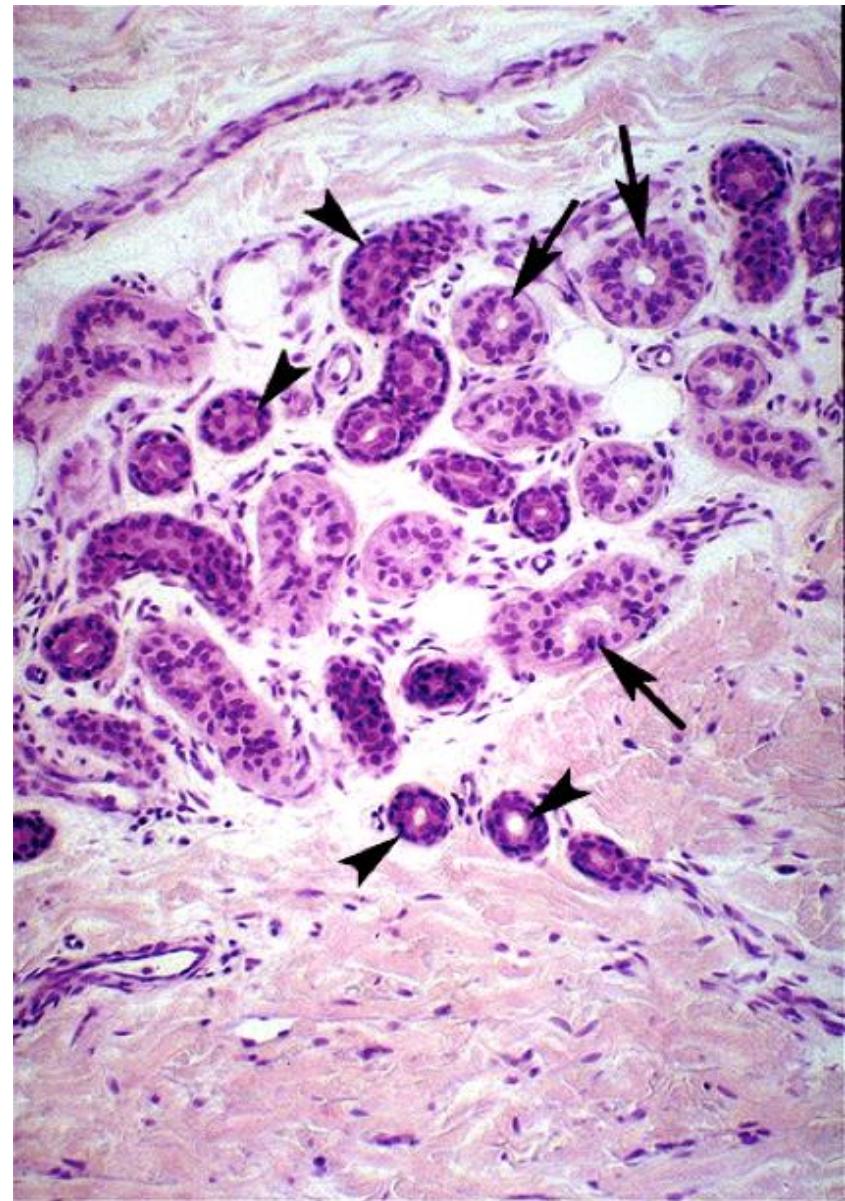
Sweat glands

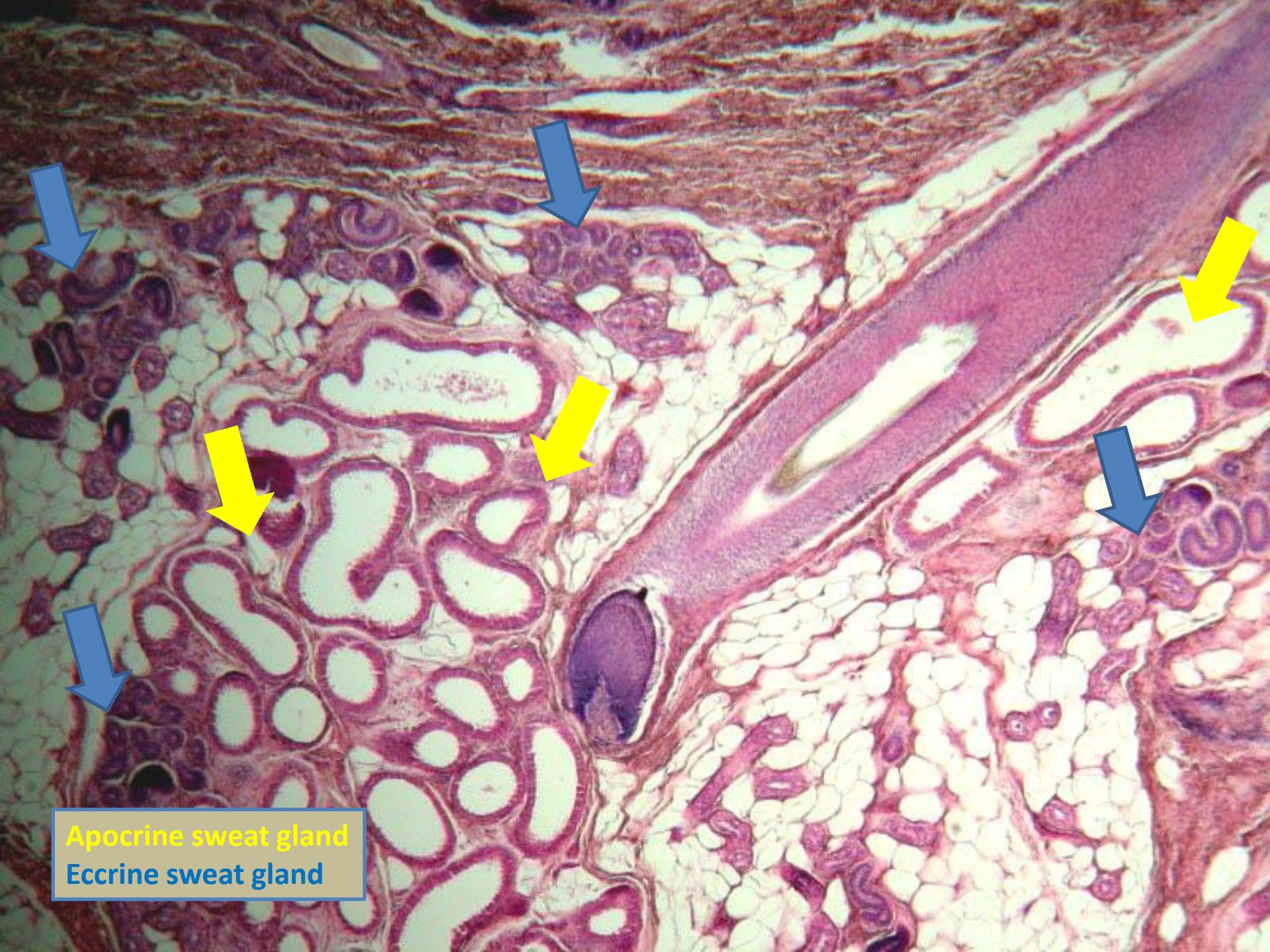


Apocrine sweat glands

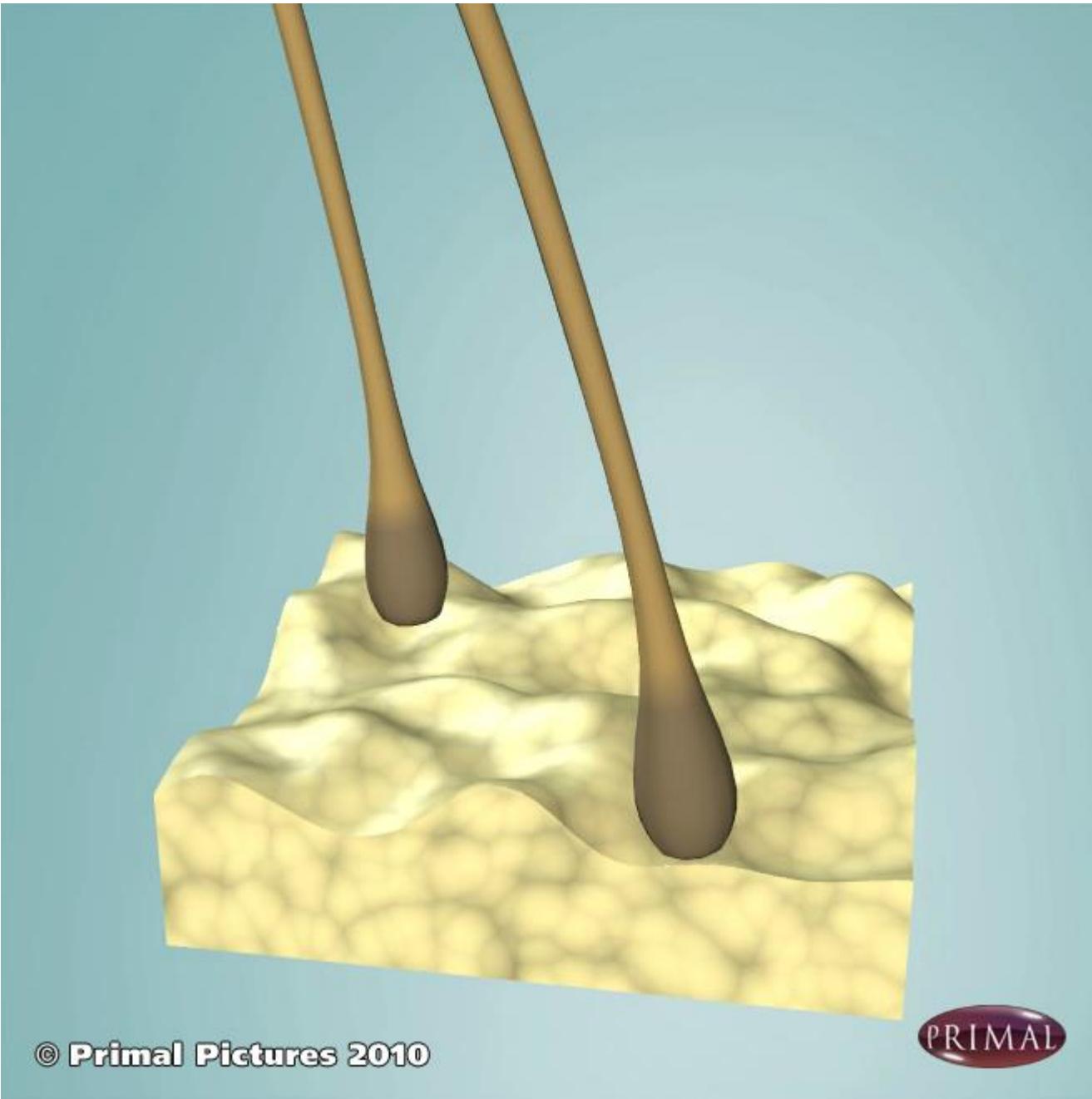


Eccrine sweat glands



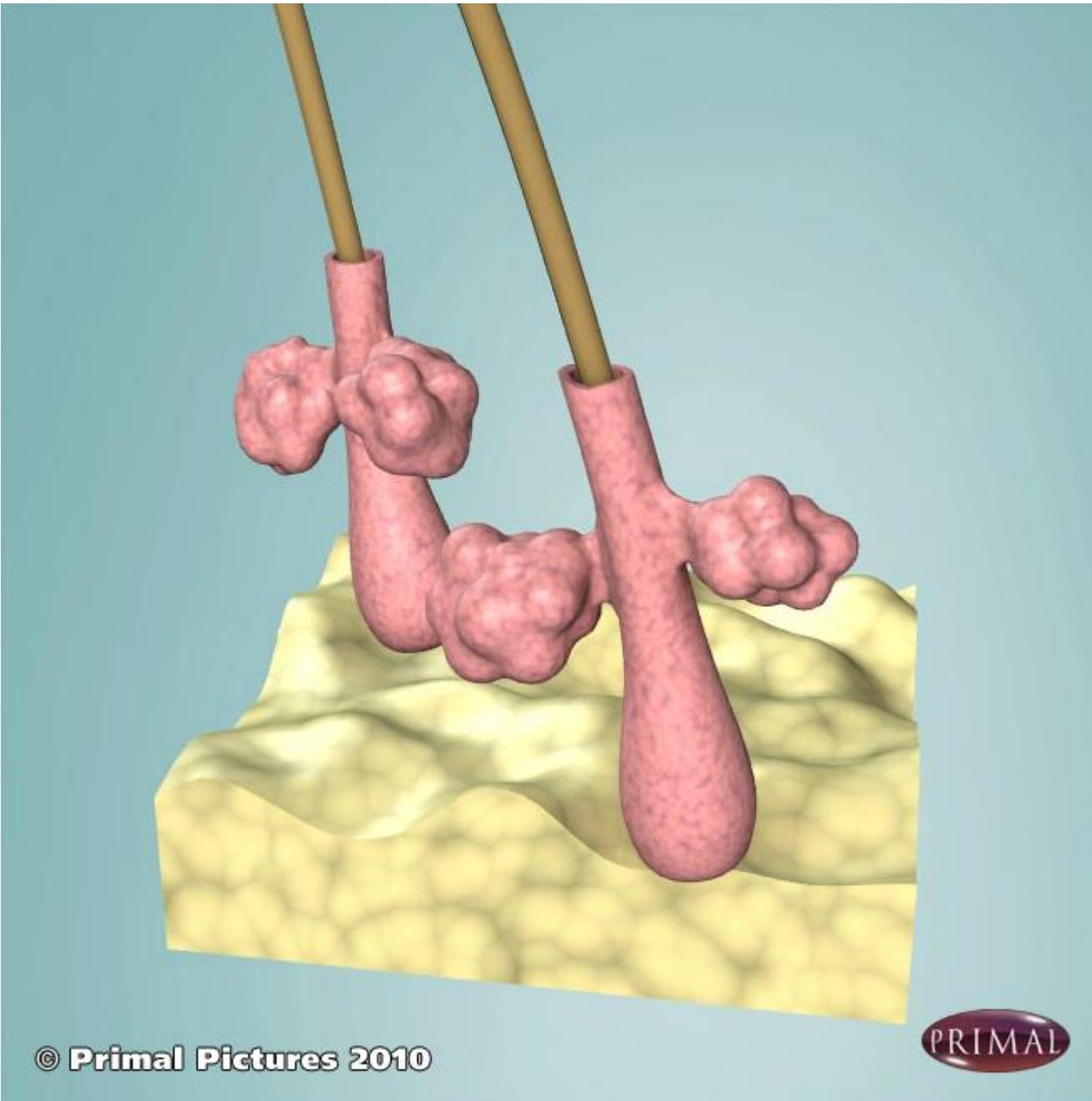


Apocrine sweat gland
Eccrine sweat gland



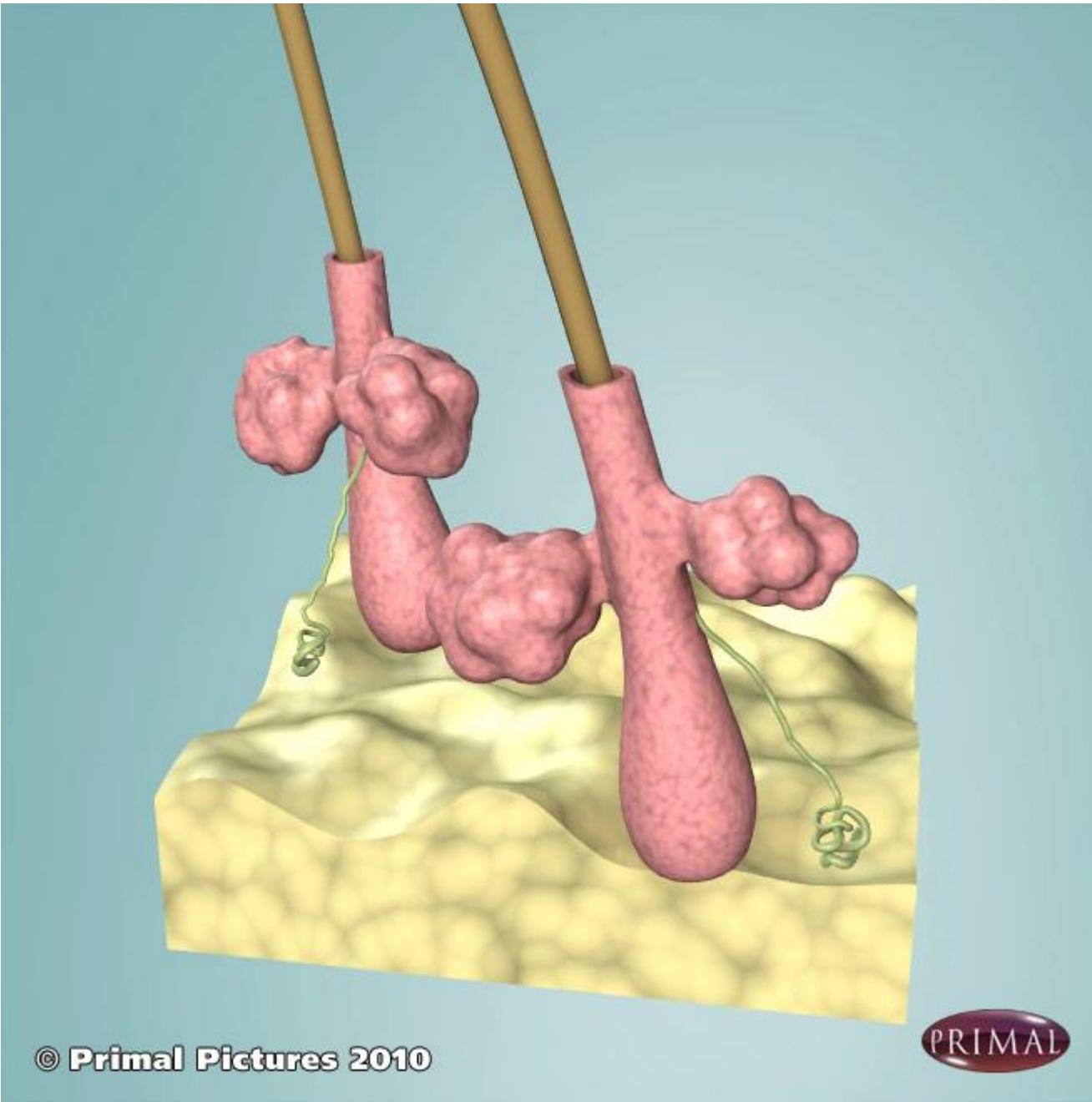
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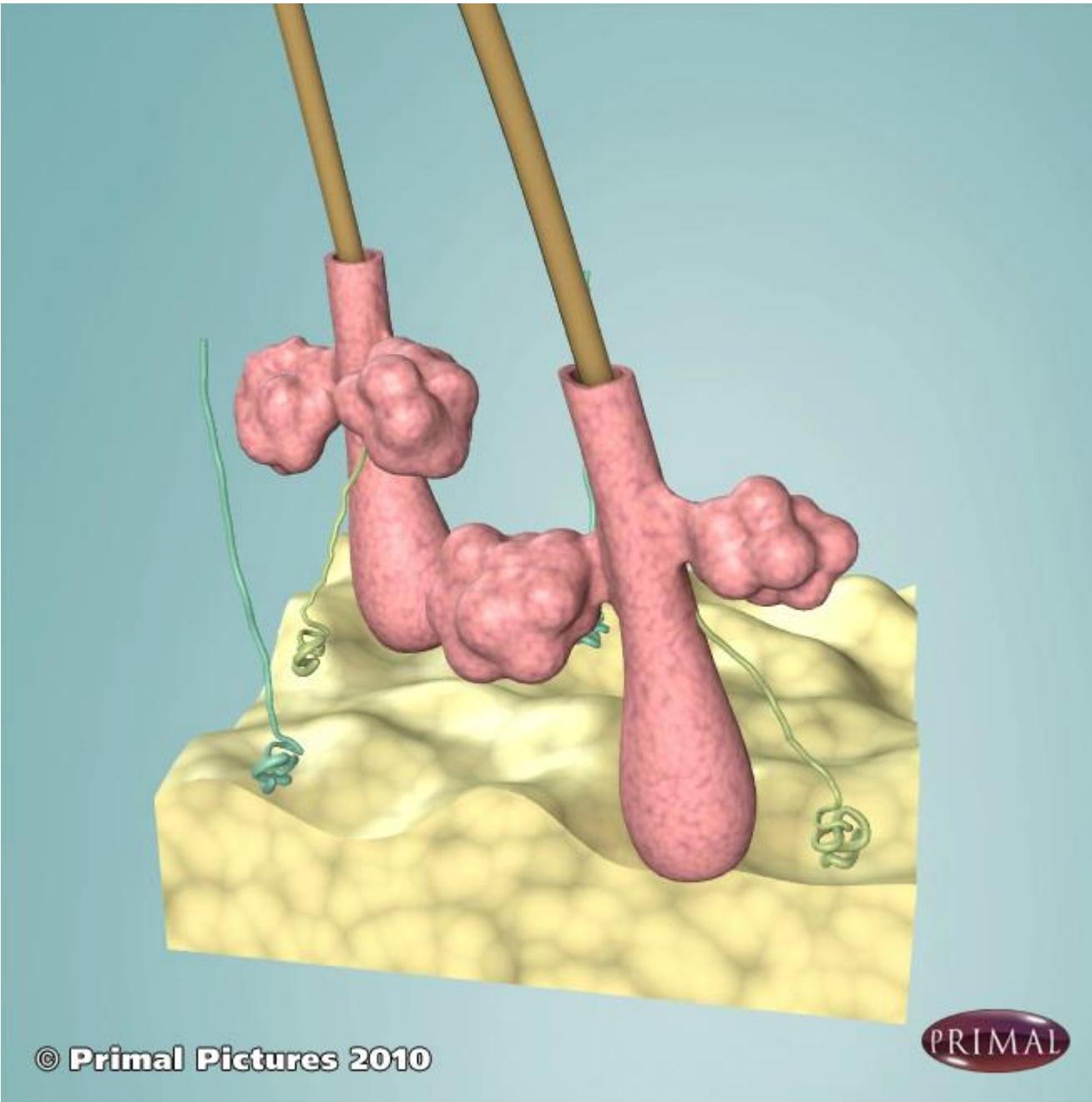
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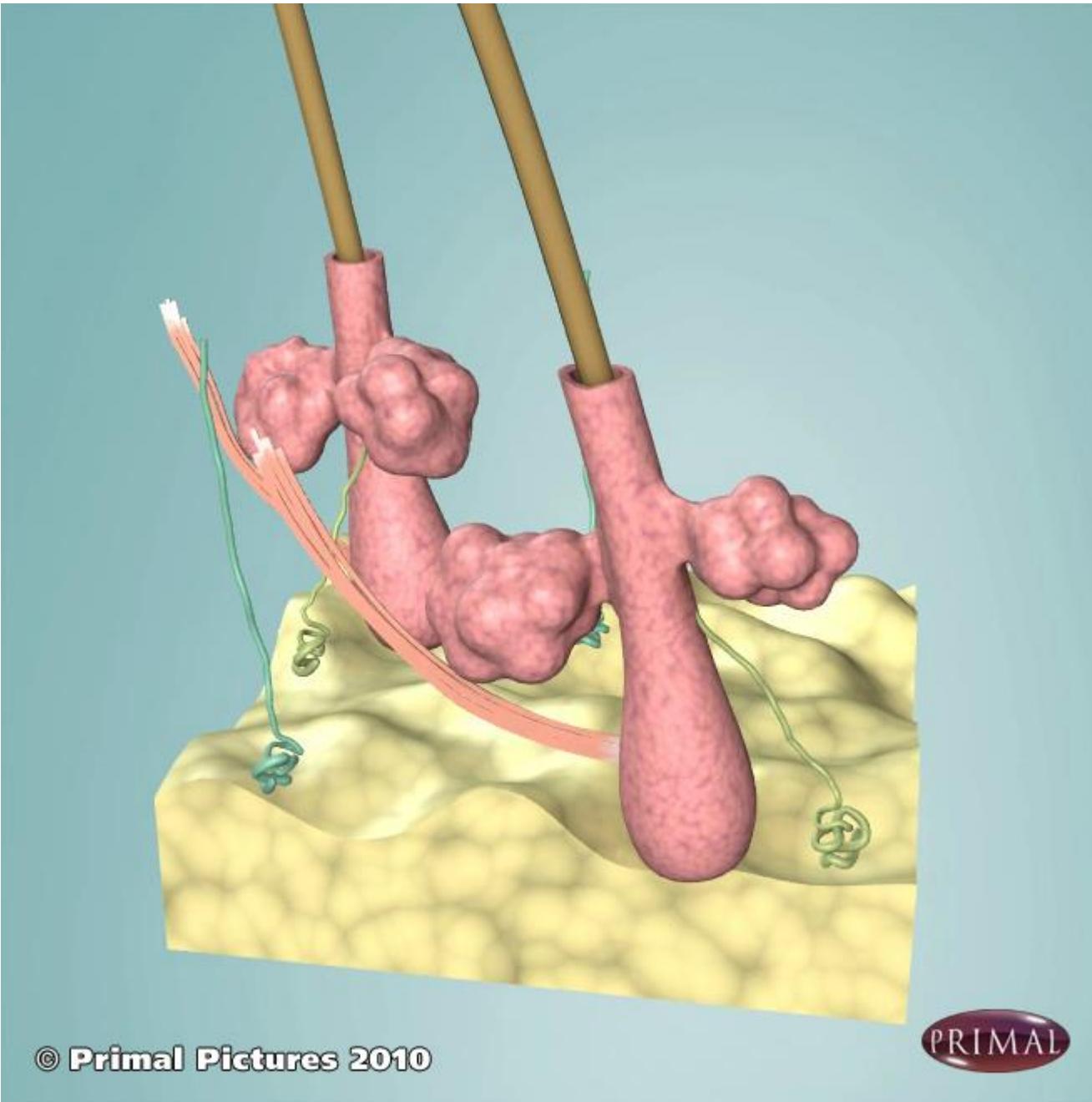
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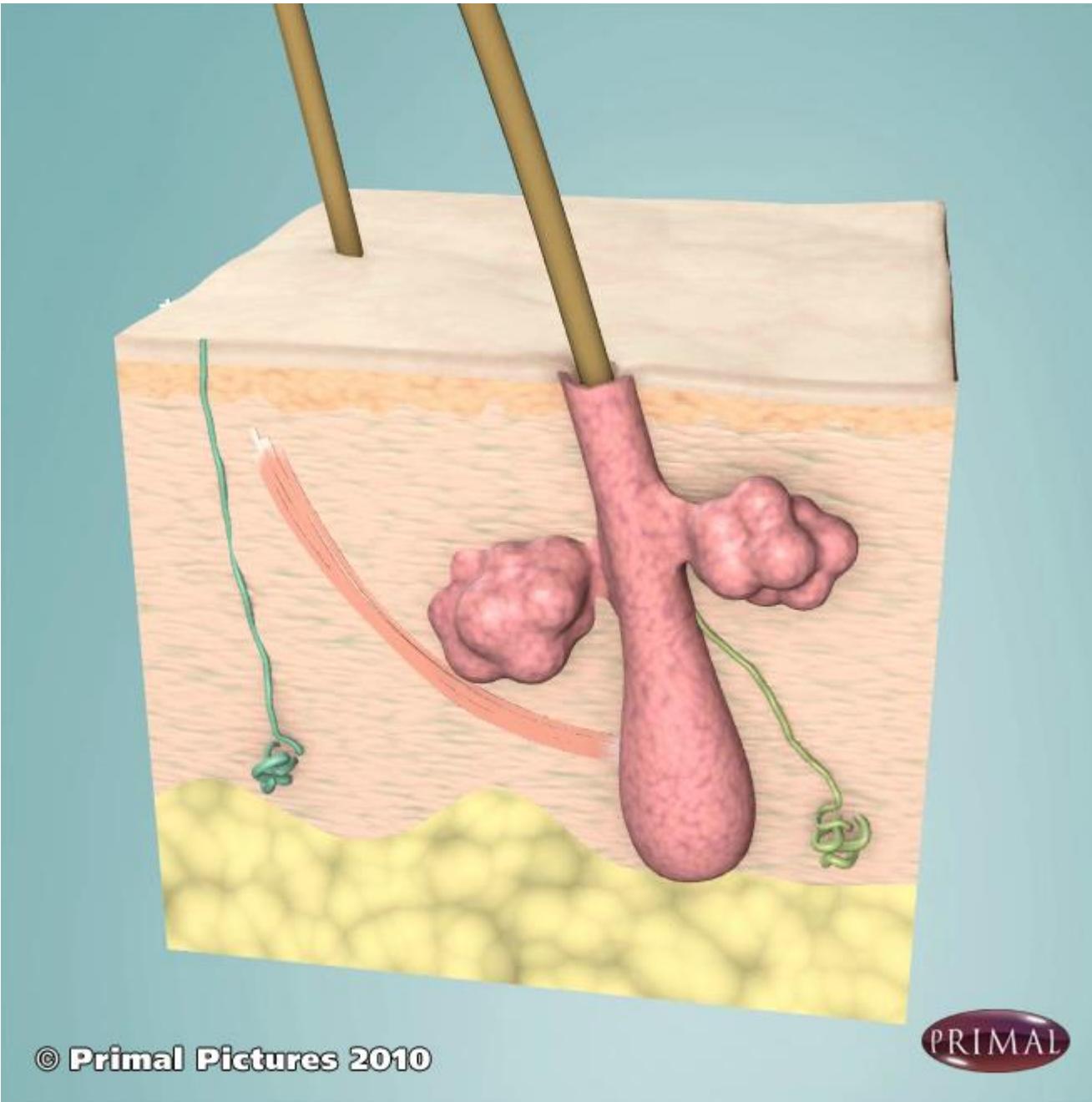
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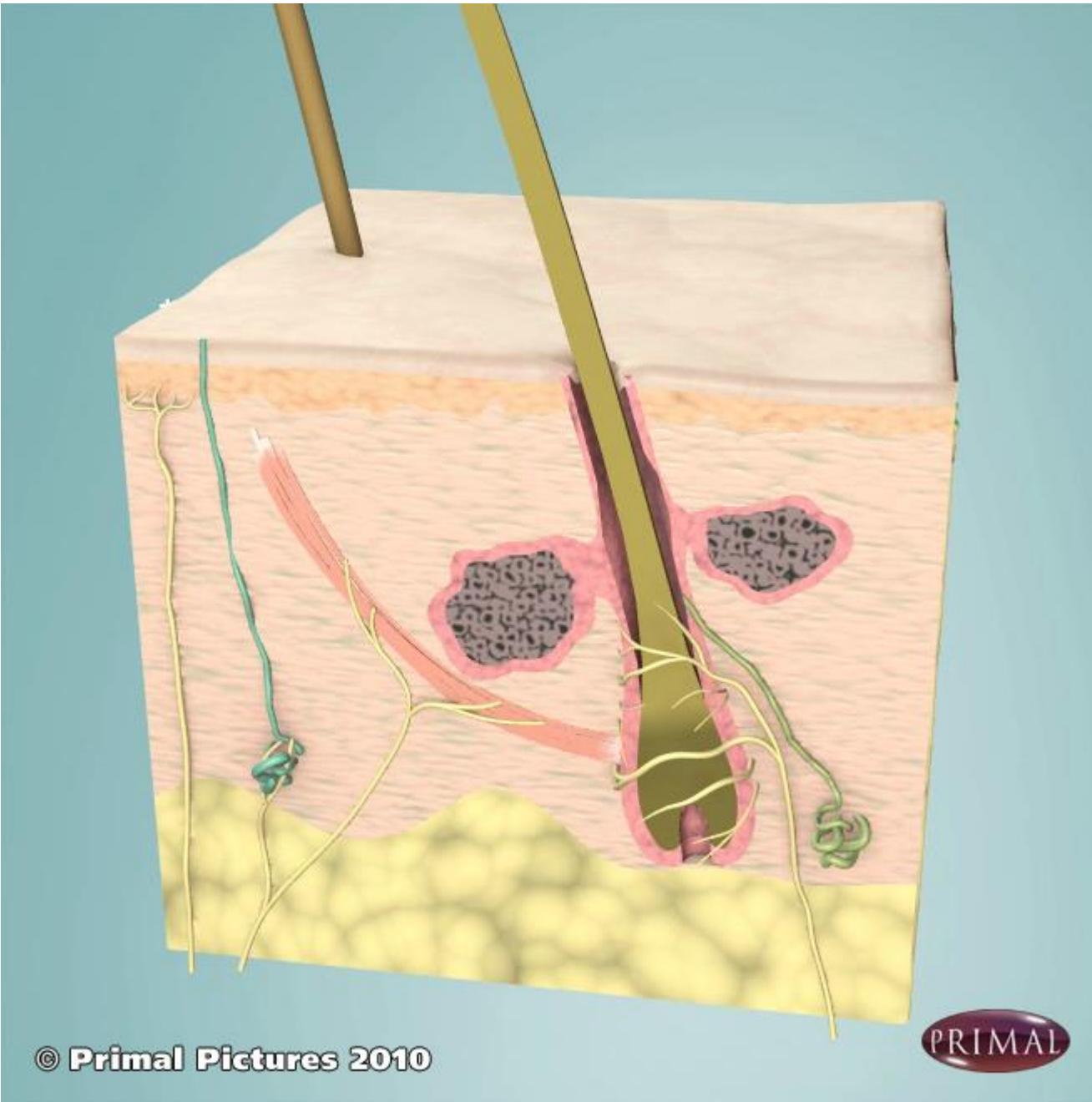
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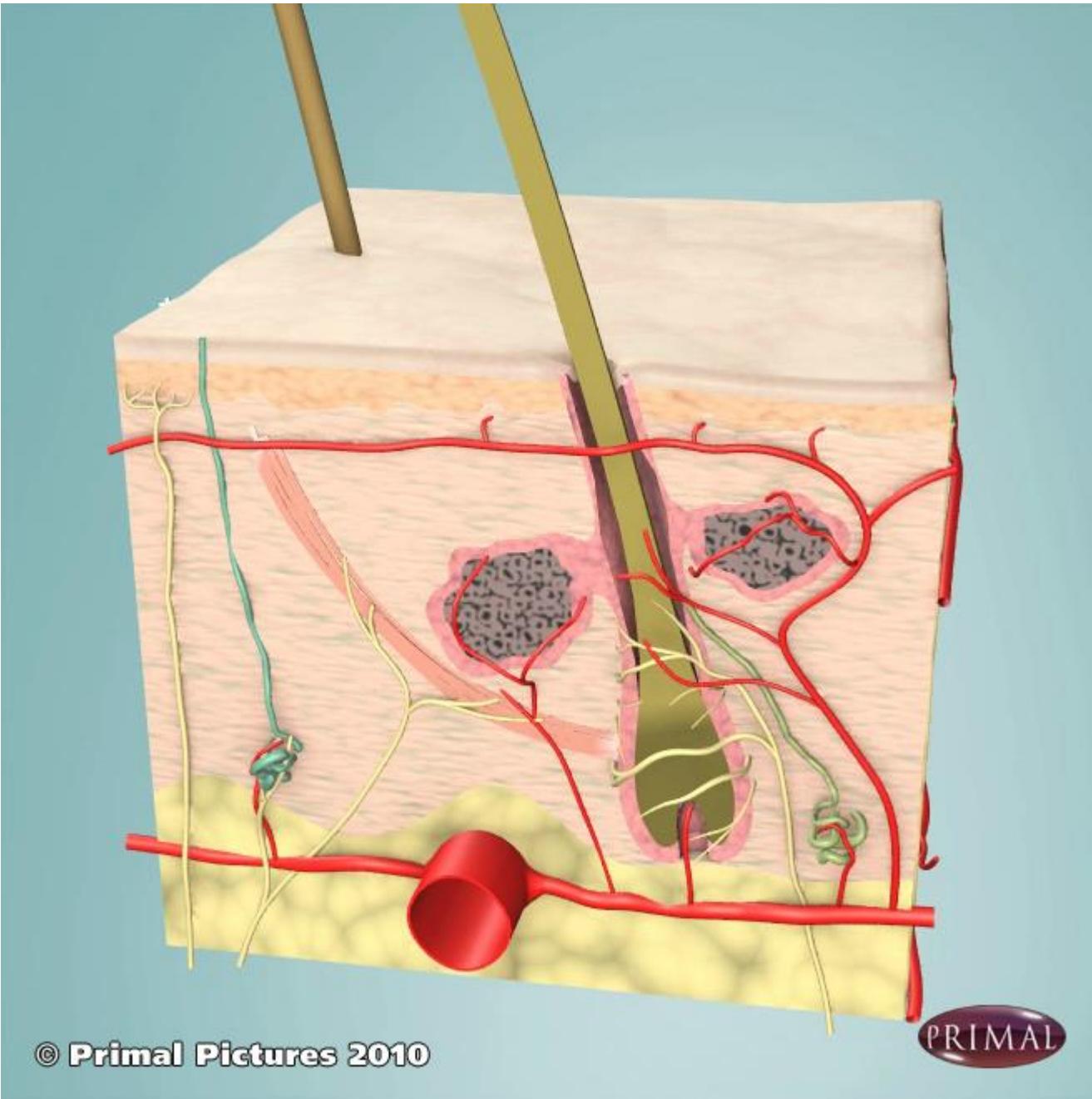
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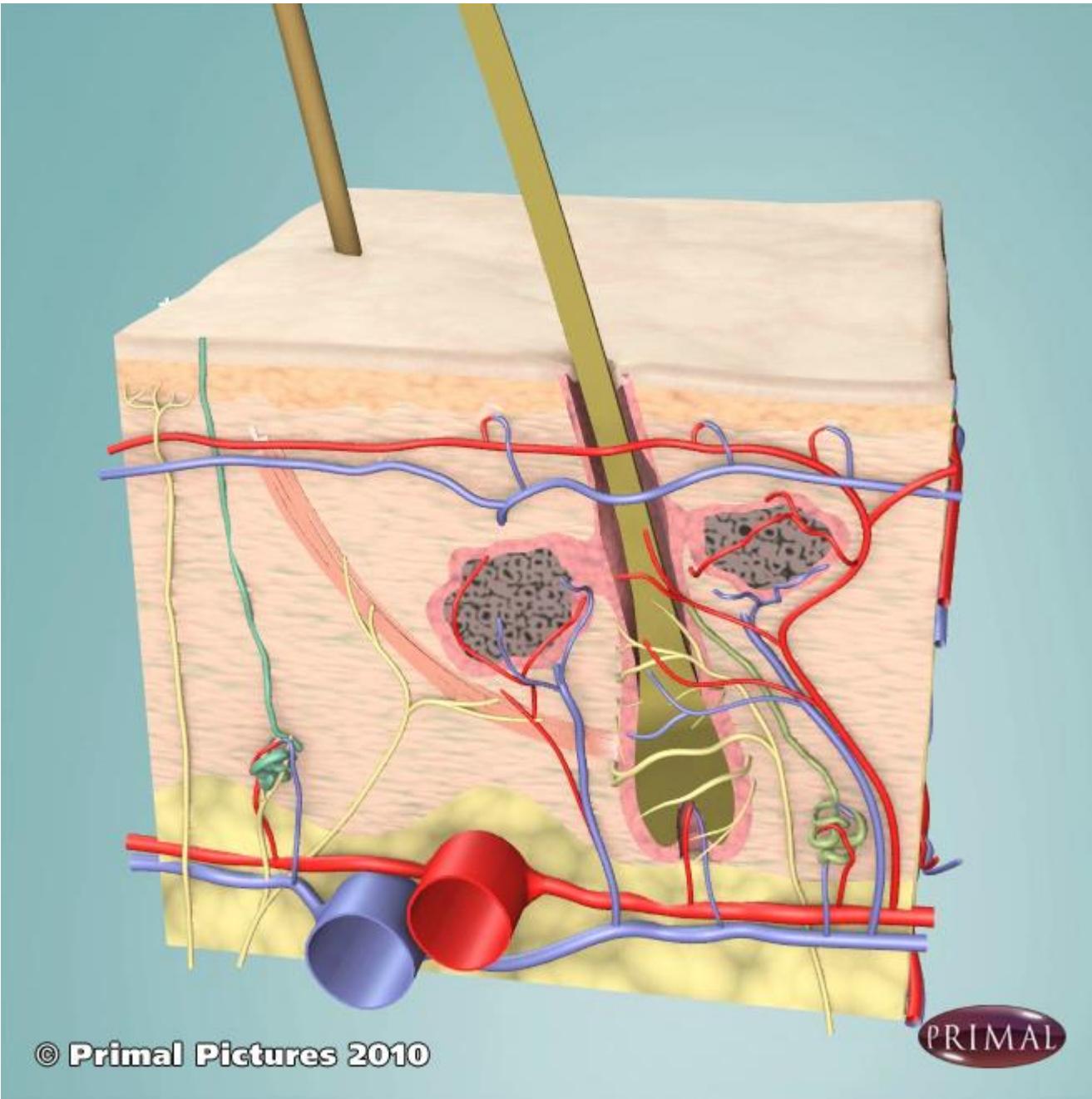
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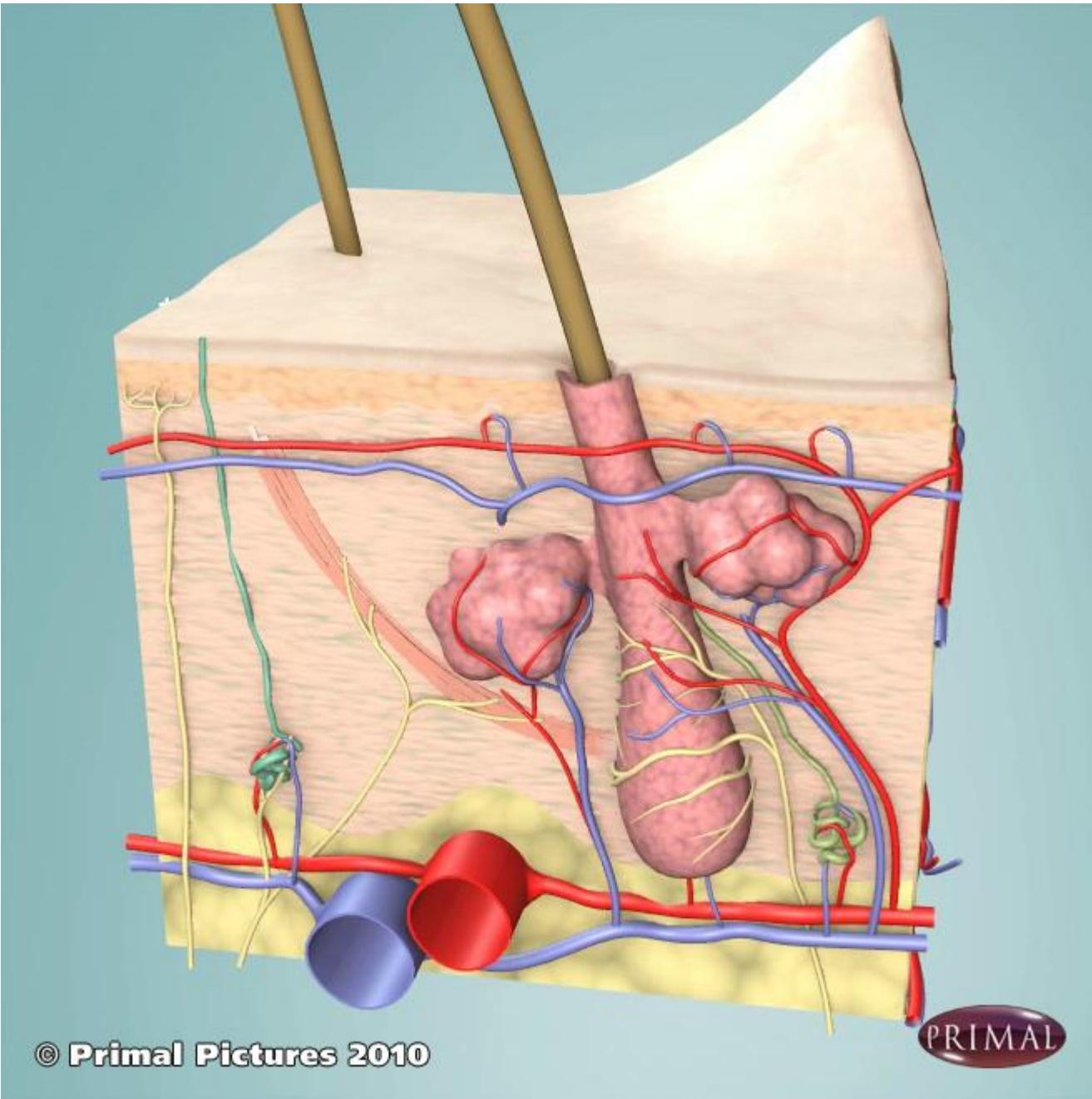
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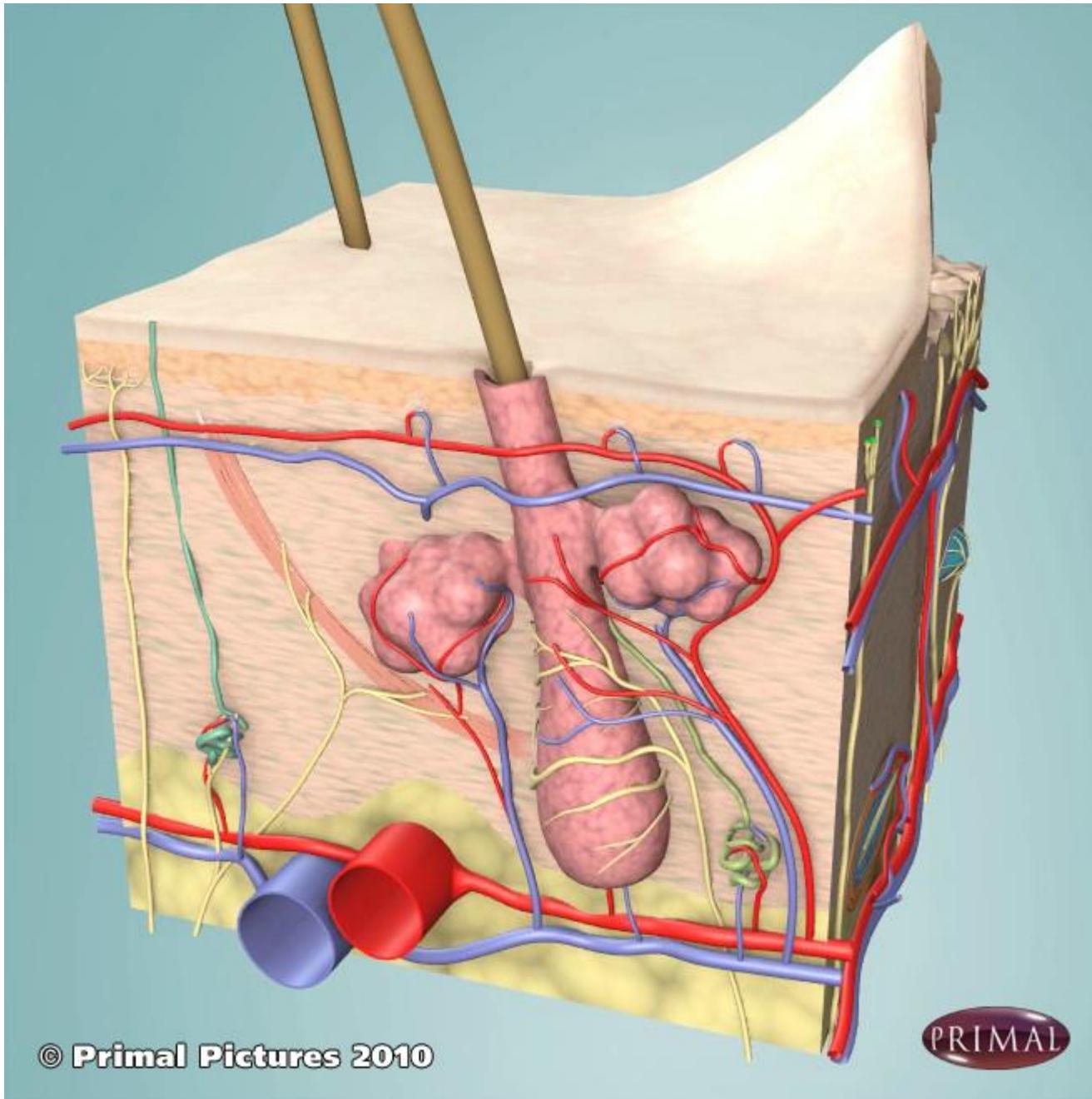
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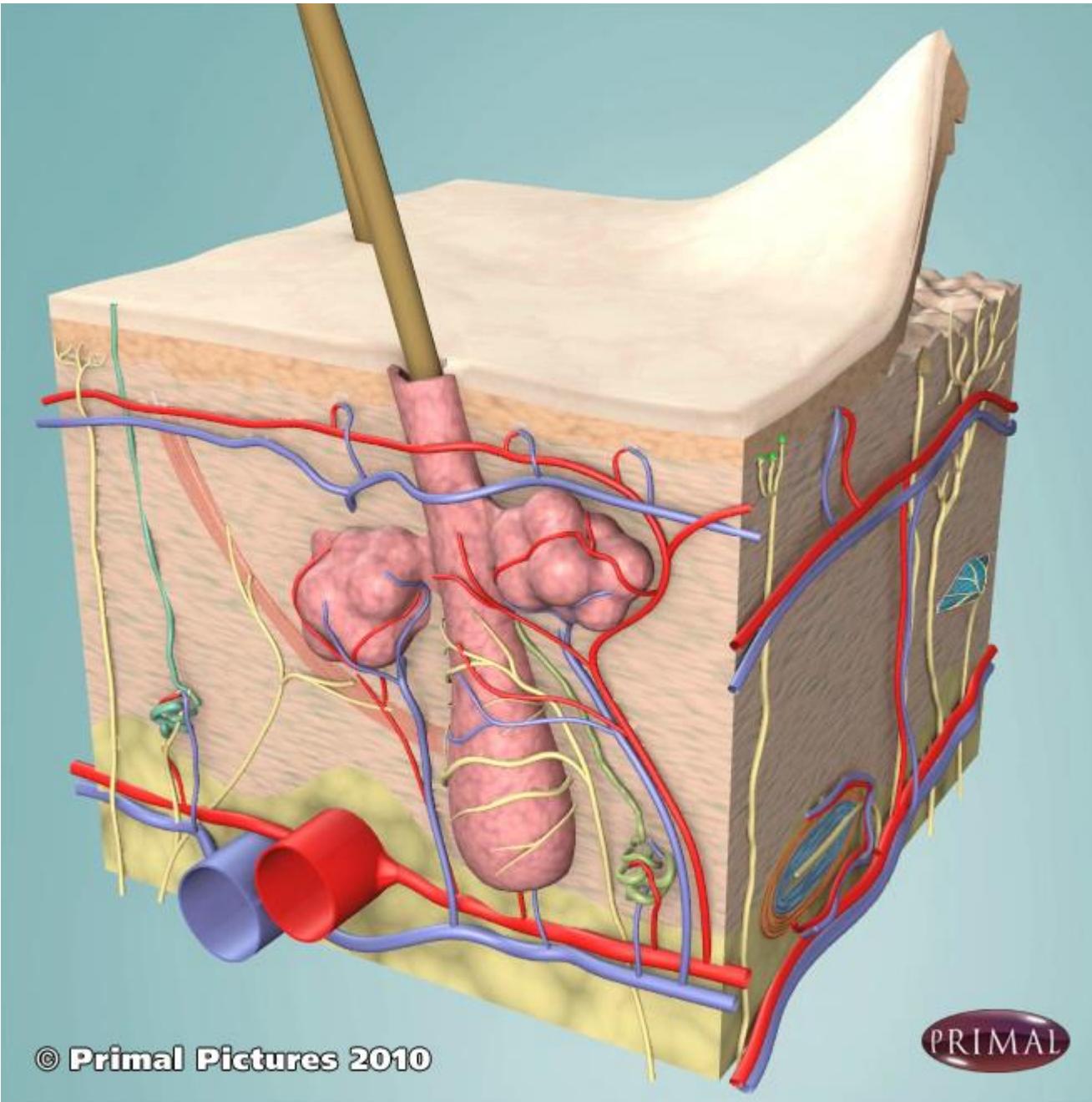
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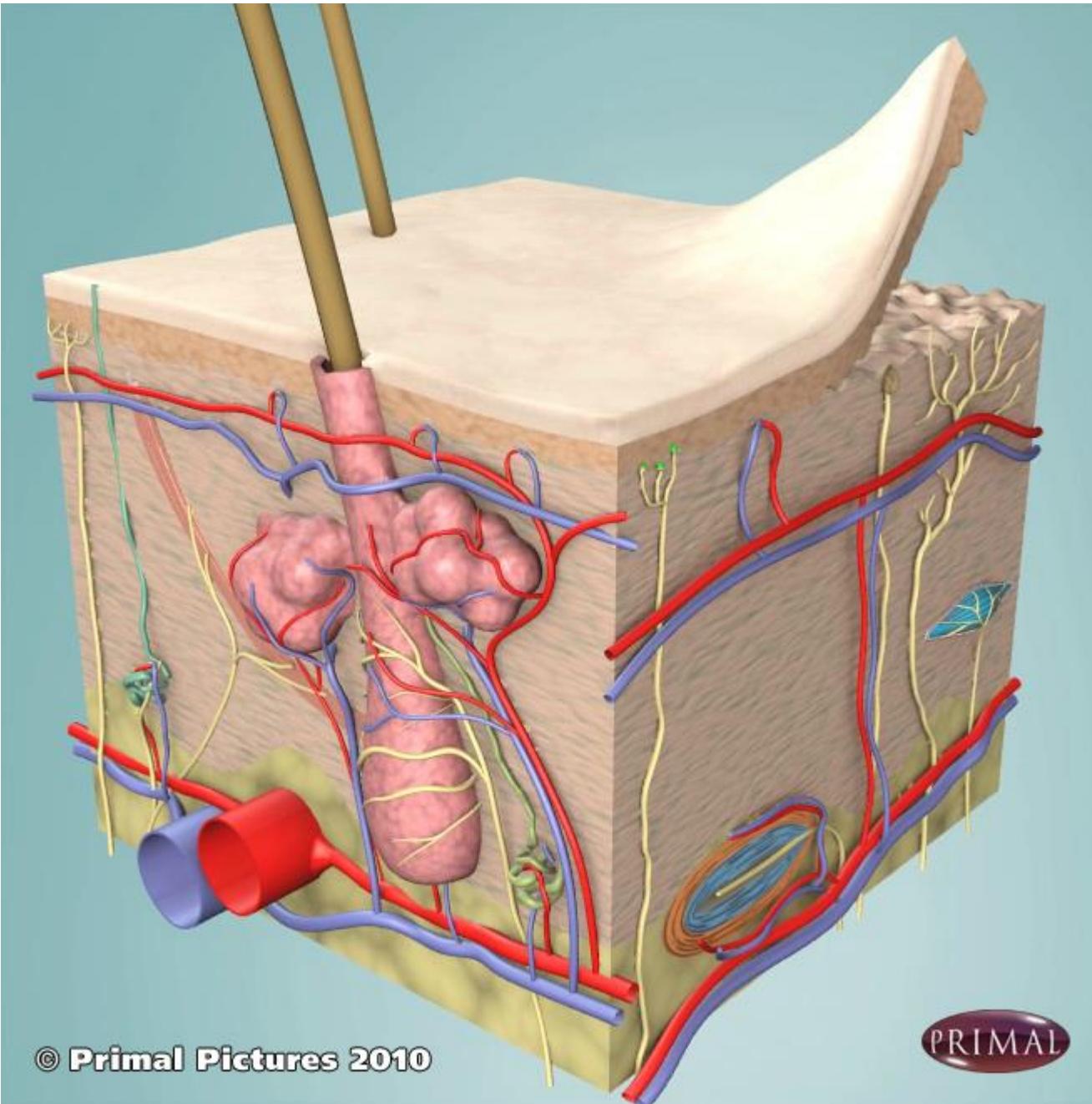
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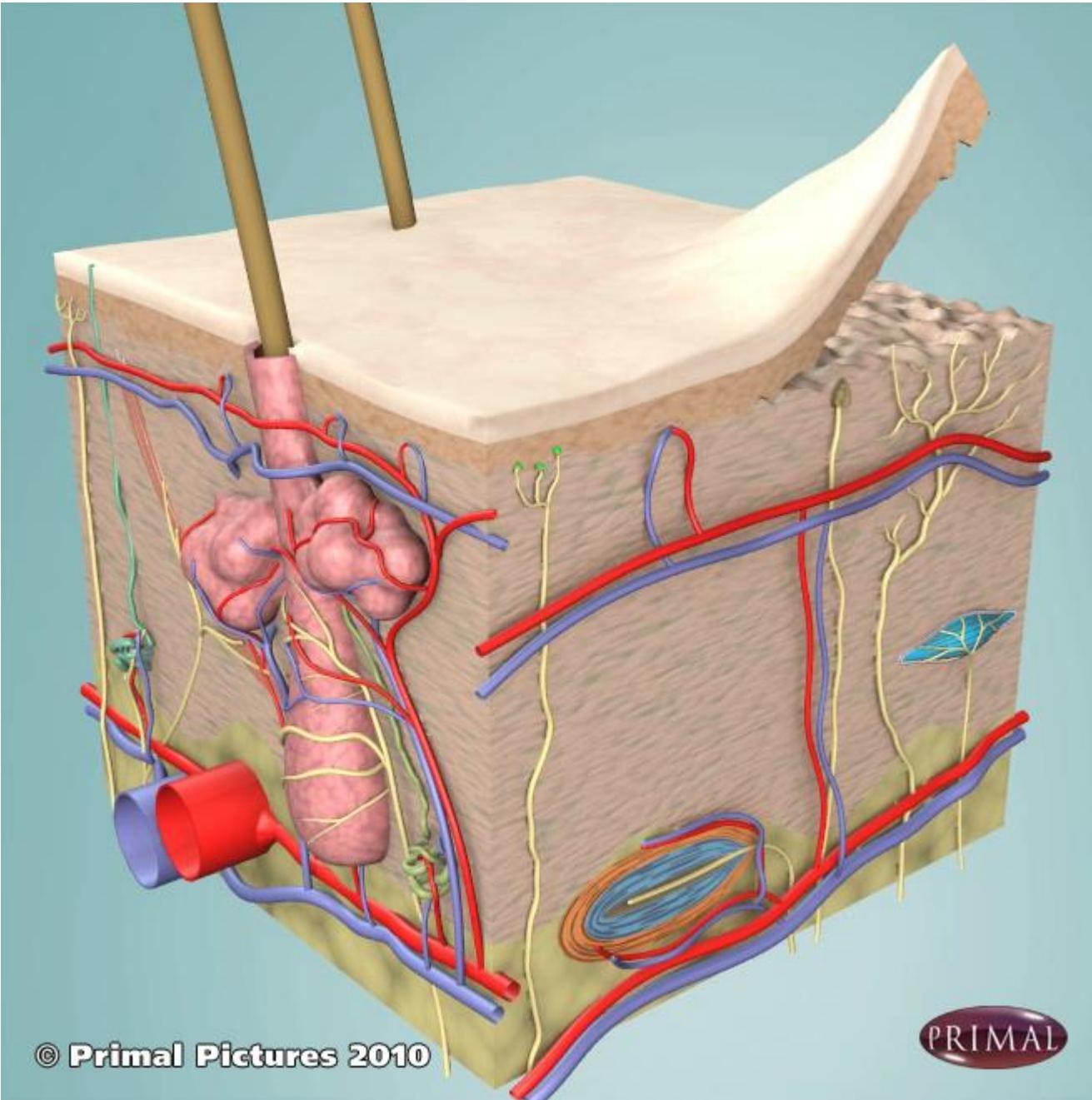
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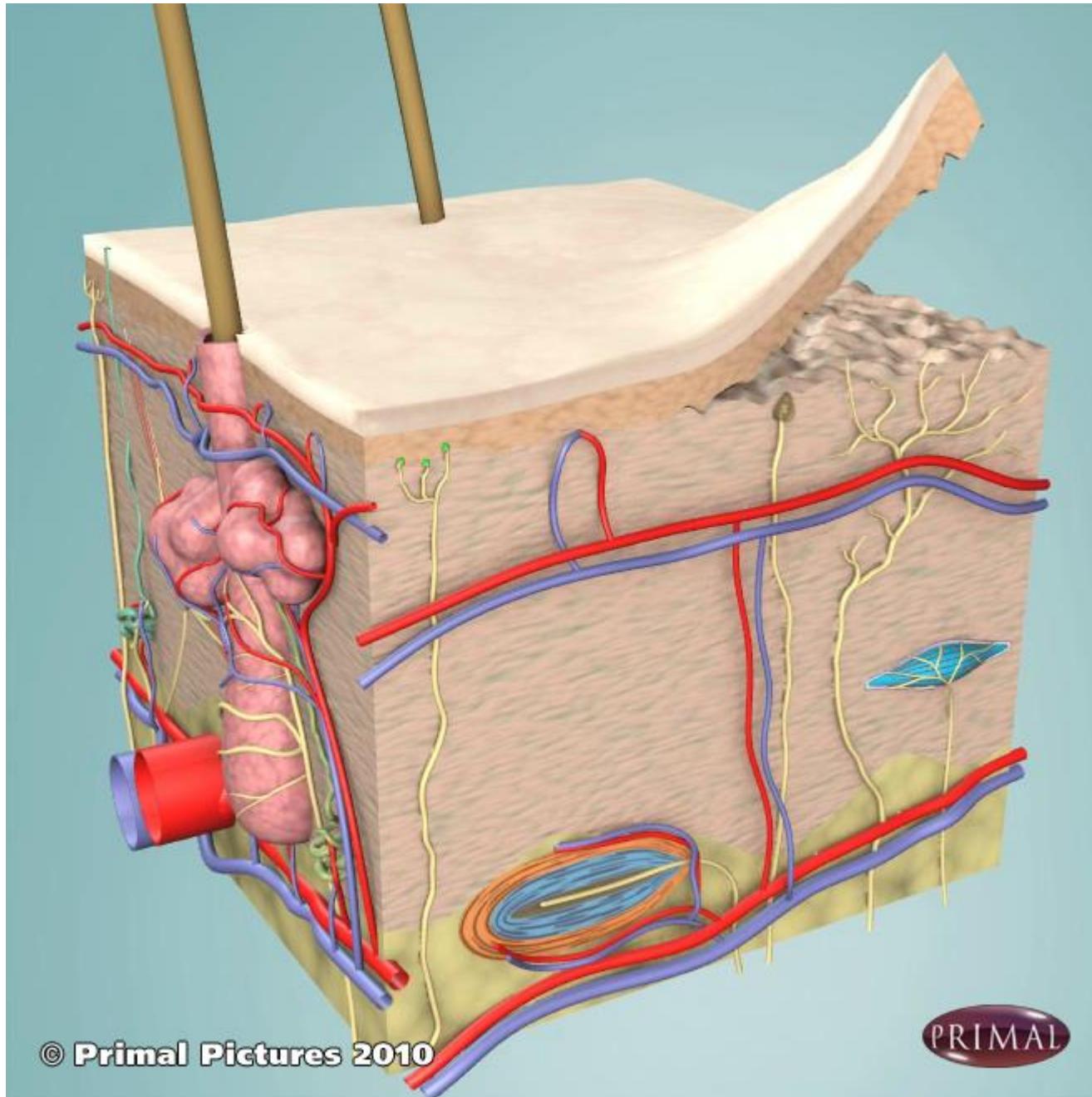
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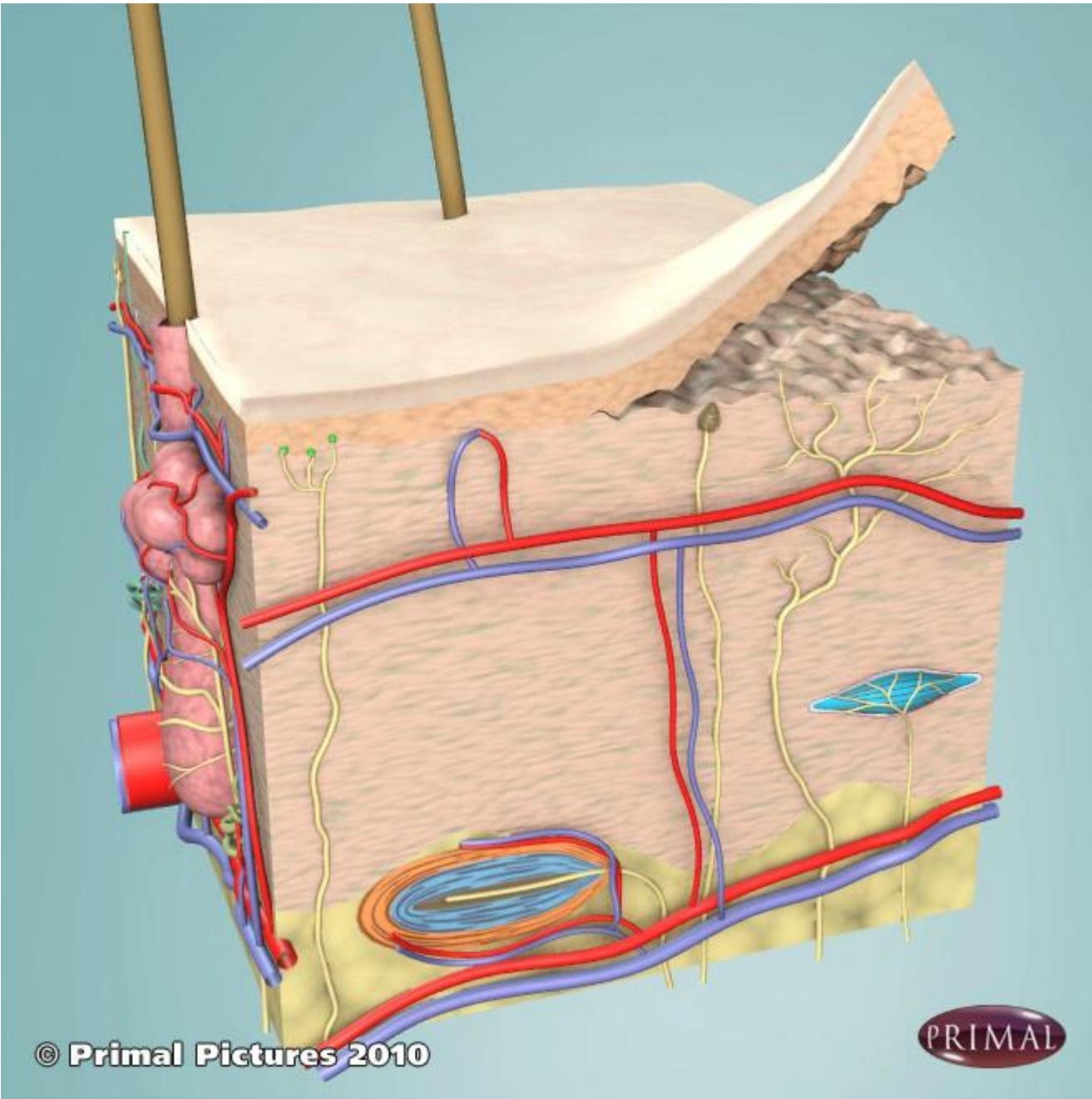
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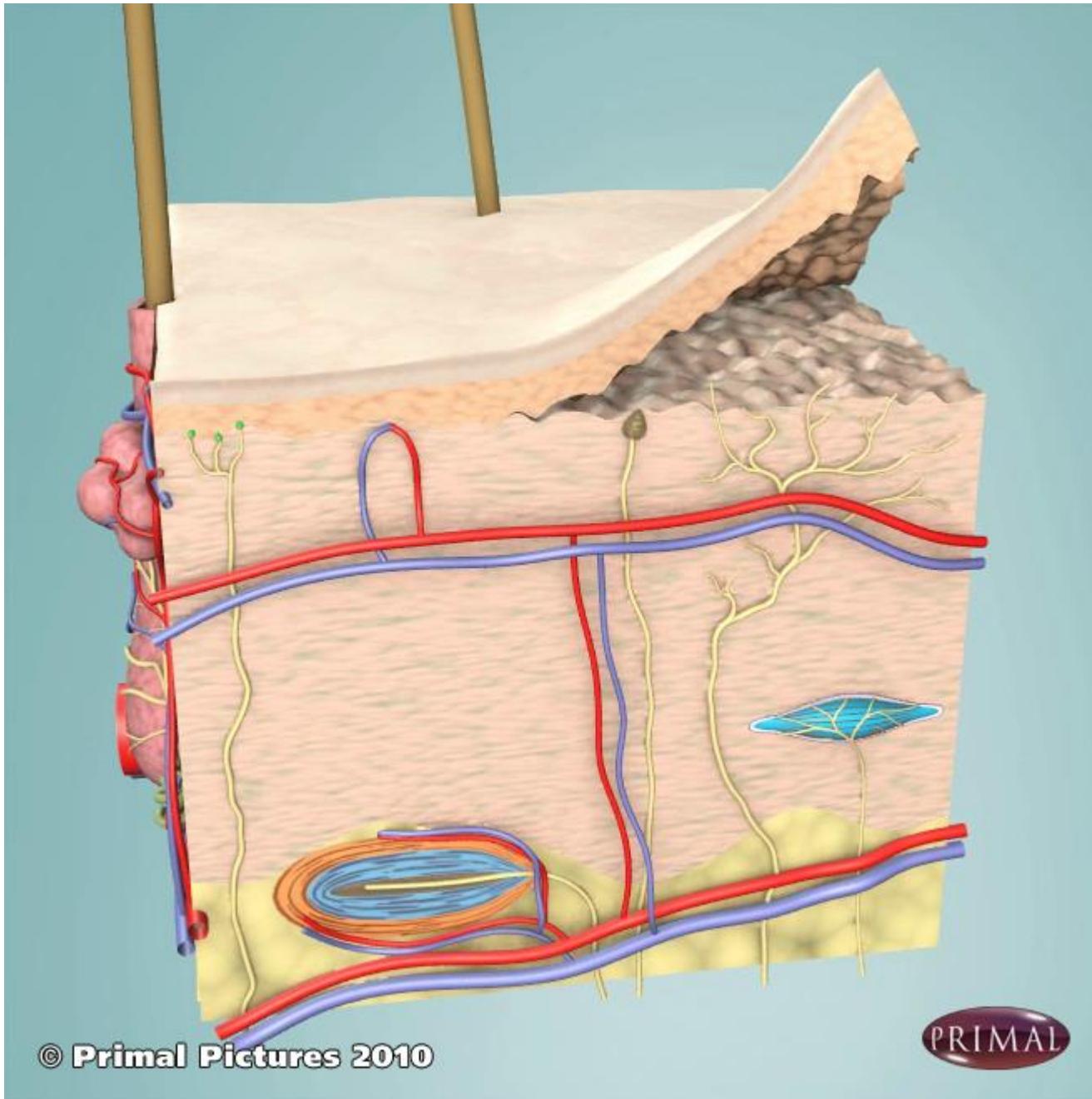
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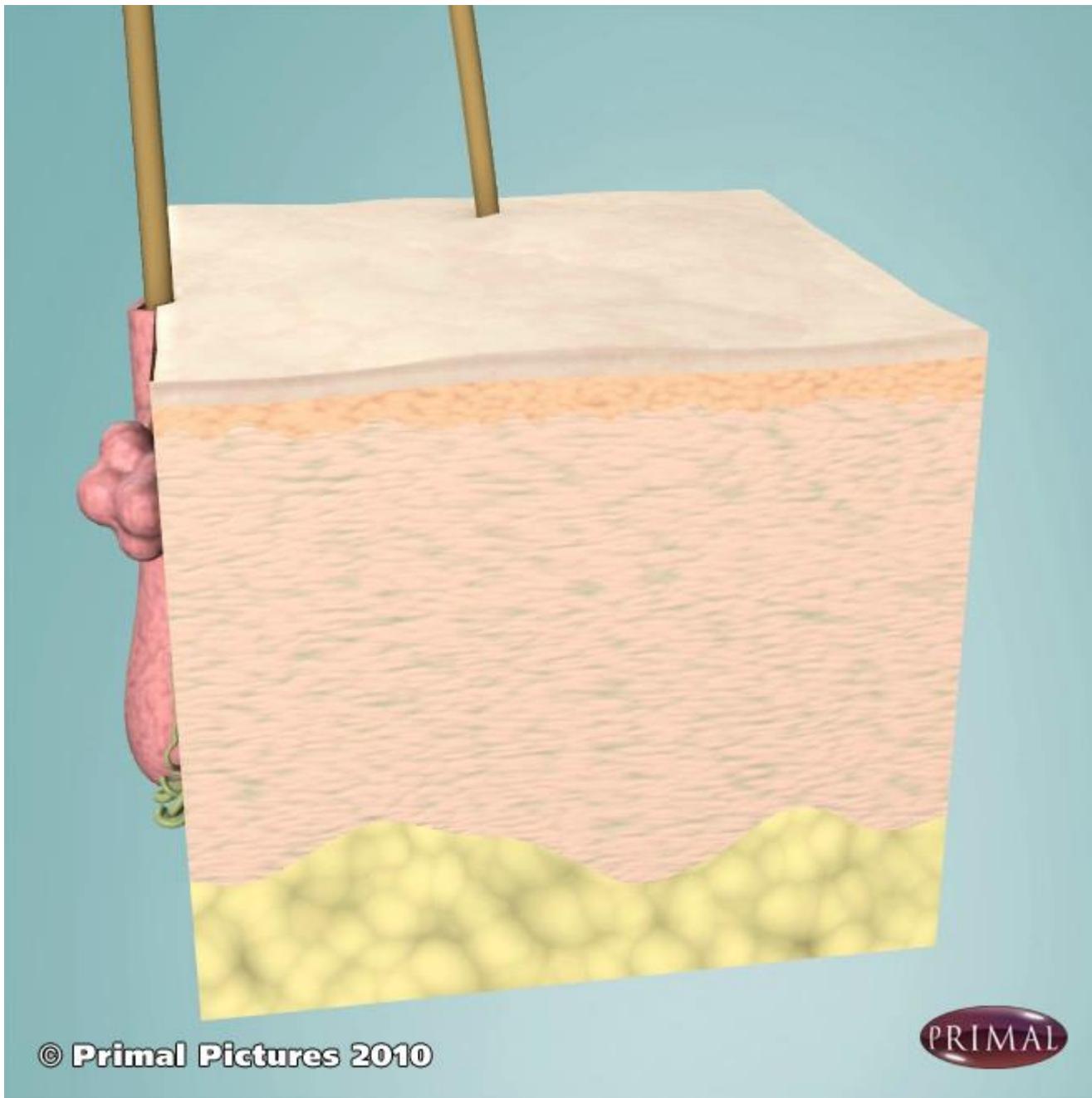
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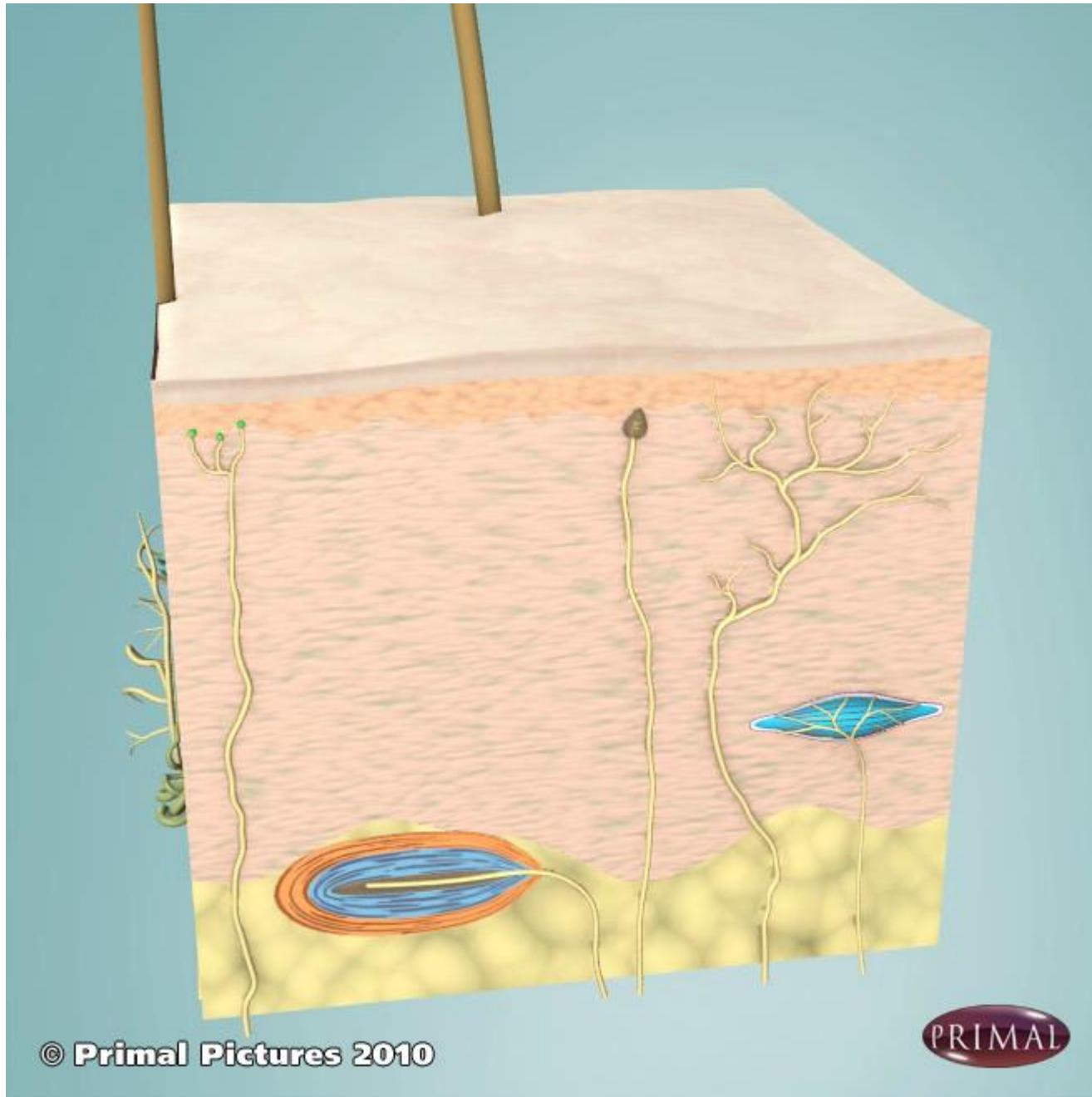
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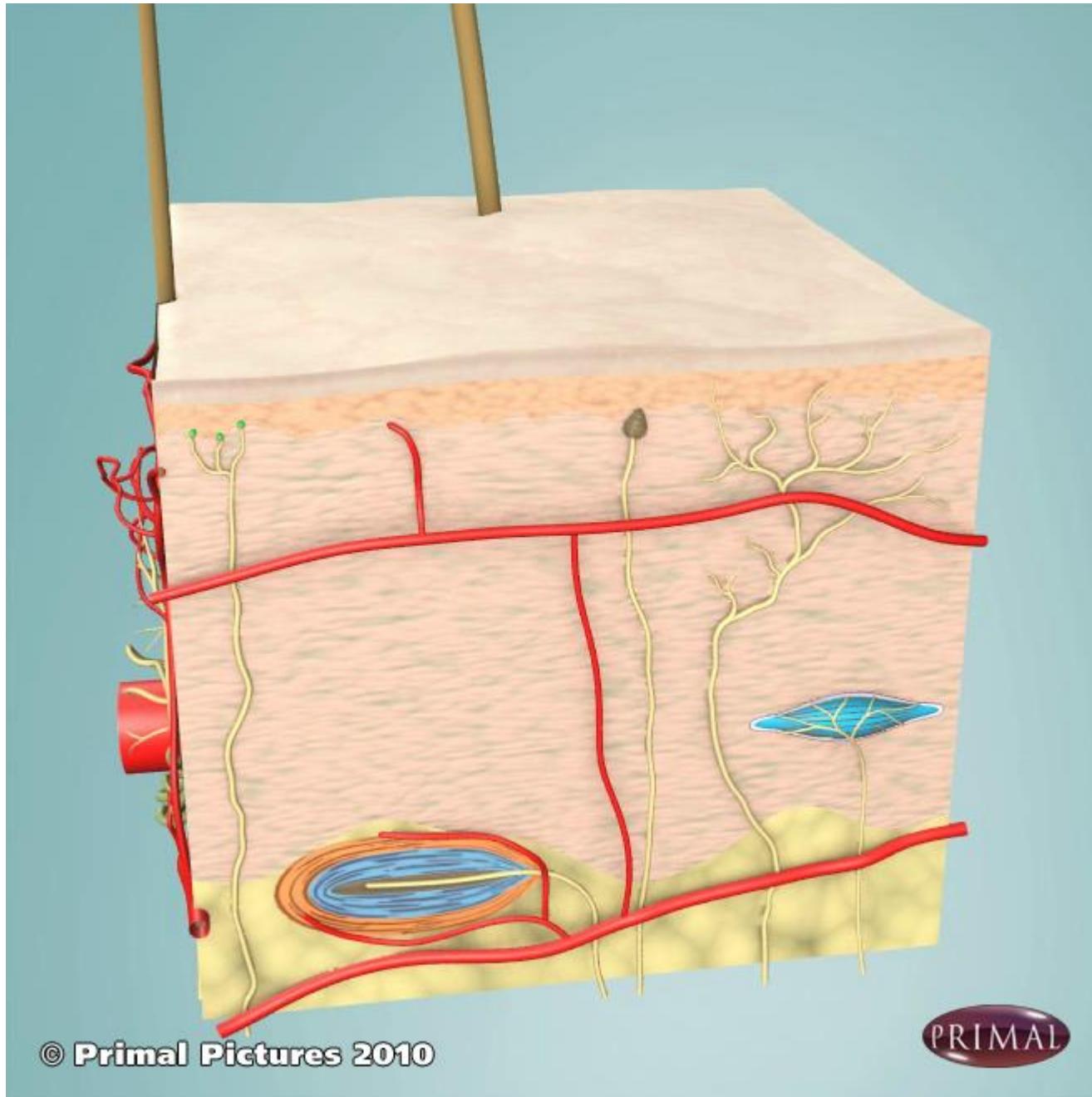
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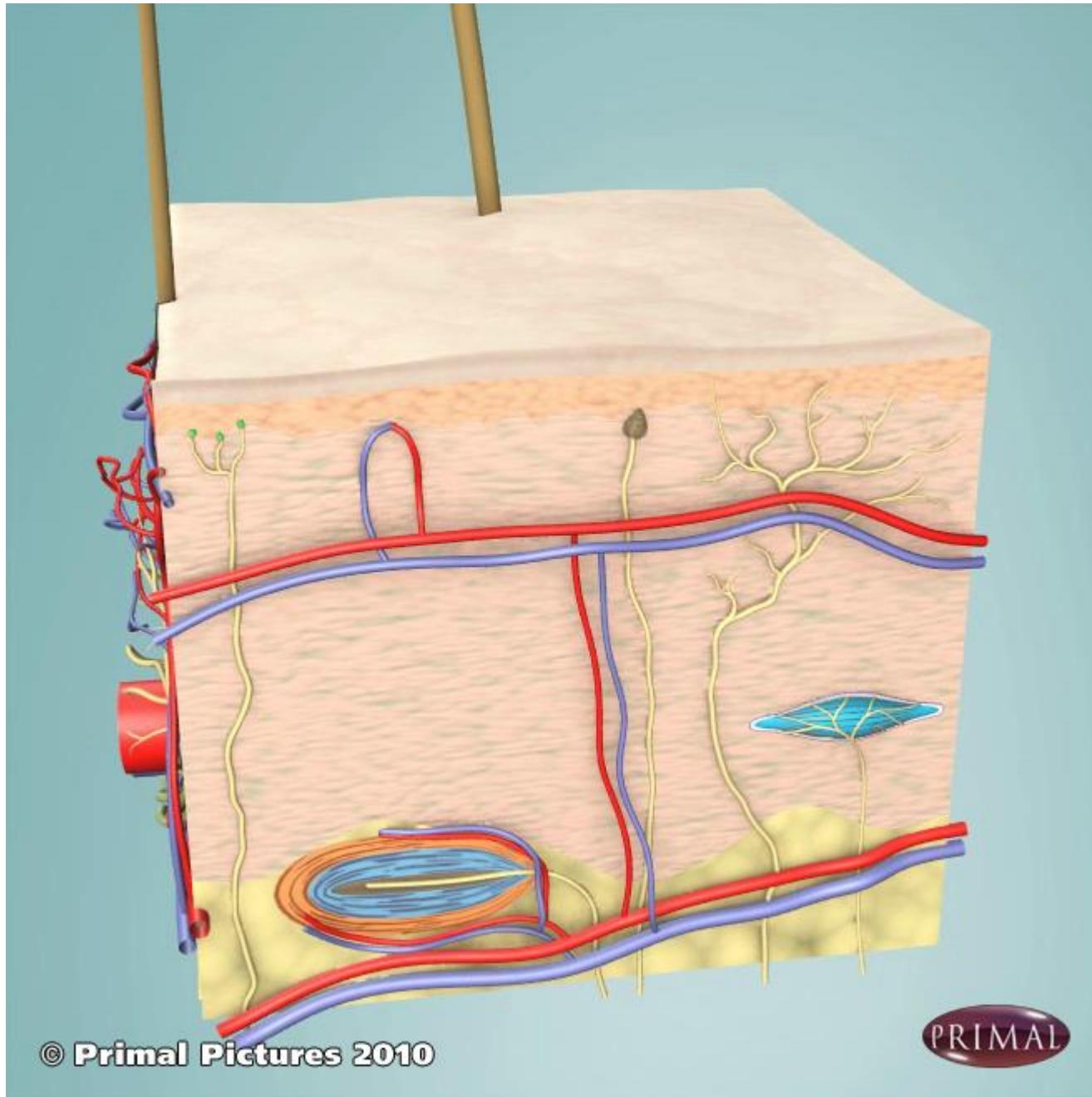
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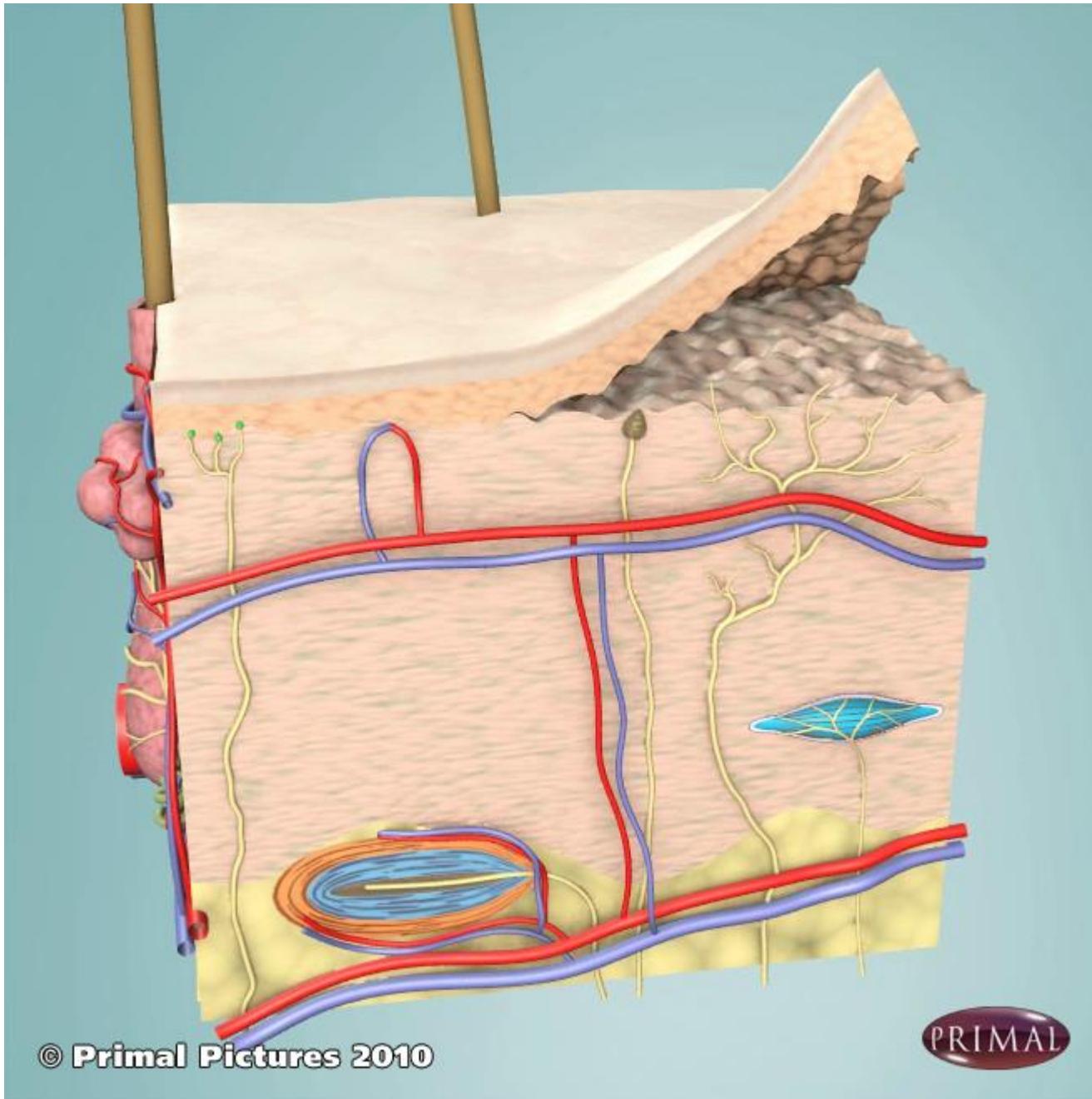
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