HISTOLOGY

By Mutaz Sarrar

- Which structure is responsible for water proof barrier of the skin?
- 1- Cytokeratin in the stratum corneum.
- 2- Keratohyaline granules in the stratum granulosum.
- 3- Desmosomes in the stratum spinosum.
- 4- Lamellated granules in the stratum granulosum.

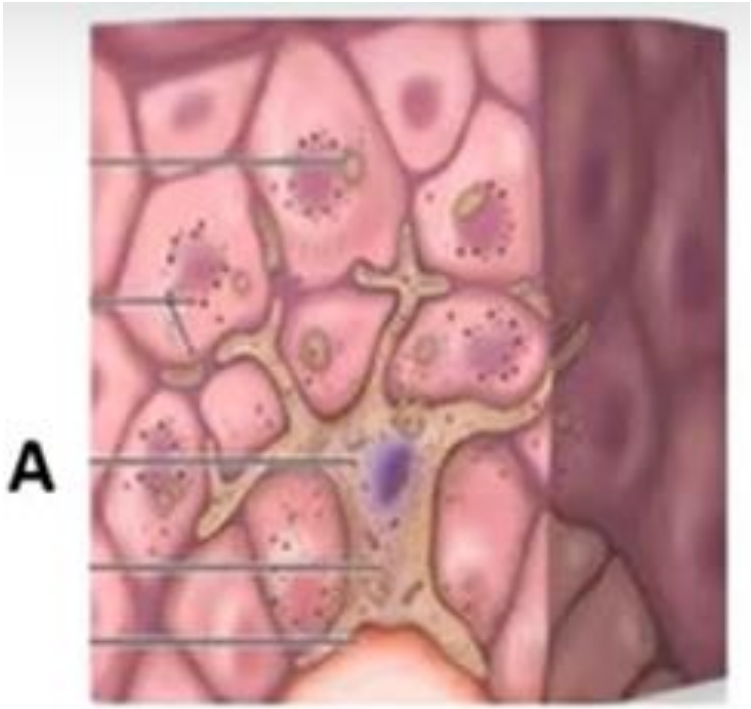
ANS:4

- Which structure-function adaptation of the melanocyte is mismatched?
- 1-Melanosomes.....protection against UV radiation.
- 2-Numerous branches.....increase surface are for transfer of melanosomes.
- 3-Many desmosomes with the adjacent keratinocytes..... resists the friction effect.
- 4-Rough endoplasmic reticulum.....melanin synthesis.

ANS:3

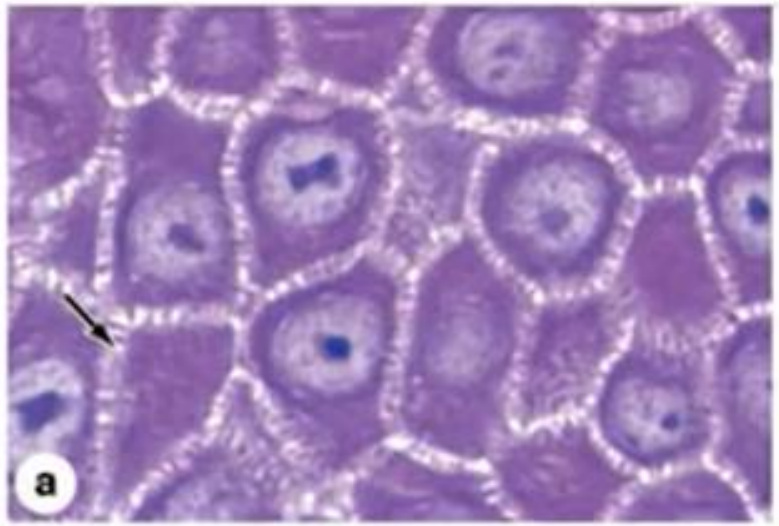
- What is the histological feature characterizing the marked cell at A?
- 1. It is attached to the surrounding cells by numerous desmosomes.
- 2. It contains cytokeratin filaments.
- 3. Its cytoplasm is rich in lysosomes.
- 4. It has the ultrastructure feature of protein synthesizing cells.

ANS:4



- Electron microscopic examination of the cells in the attached photo reveals which of the following structures?
- 1. Cytokeratin filaments& non membranous granules.
- 2. Lamellated granules& melanin granules.
- 3. Cytokeratin filaments & numerous lysosomes.
- 4. Kertohyaline granules & lamellated granules.

ANS:2



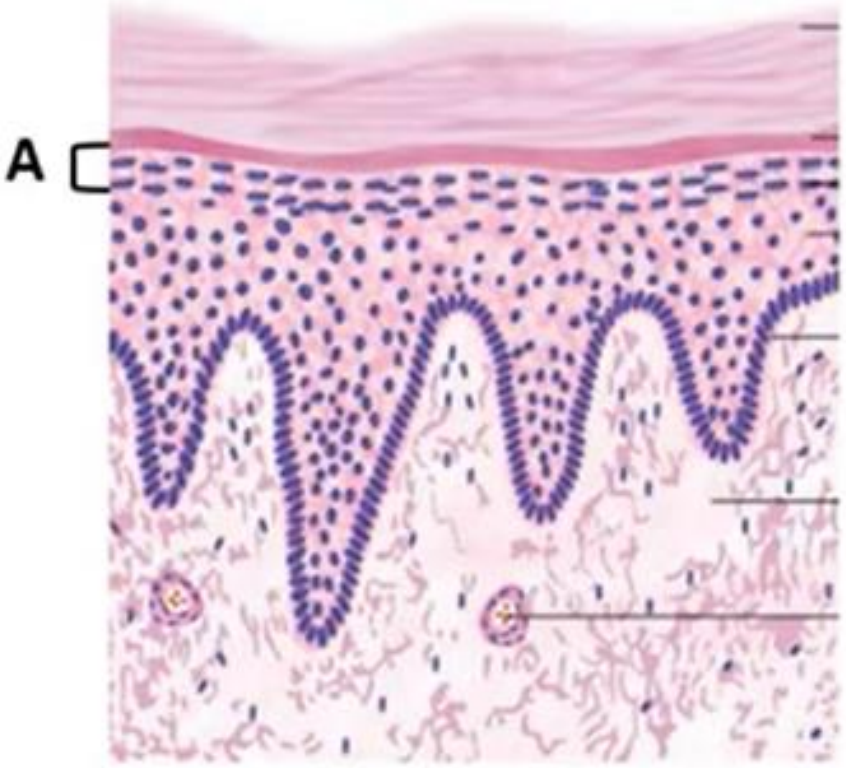
- Which structural adaptation does not match Langerhans cell?
- 1. Numerous lysosomes.
- 2. Multiple cytoplasmic processes.
- 3. Desmosomes with the adjacent keratinocytes.
- 4. Few cytoplasmic organelles.

ANS:3

What is the main function of the marked layer at A?

- 1. Perception of sensory stimuli.
- 2. Barrier against water loss.
- 3. Renewal of the skin cells.
- 4. Protects from thermal agents.

ANS:2



- Which statement is not describing the process of keratinization?
- 1. As the cells move upward, they become more flat.
- 2. The cells at the surface are stained acidophilic in comparison to the cells at the basal layer.
- 3. The cells become less differentiated in the stratum corneum with programmed cell death.
- 4. The desmosomes are degenerating in the most superficial layers.

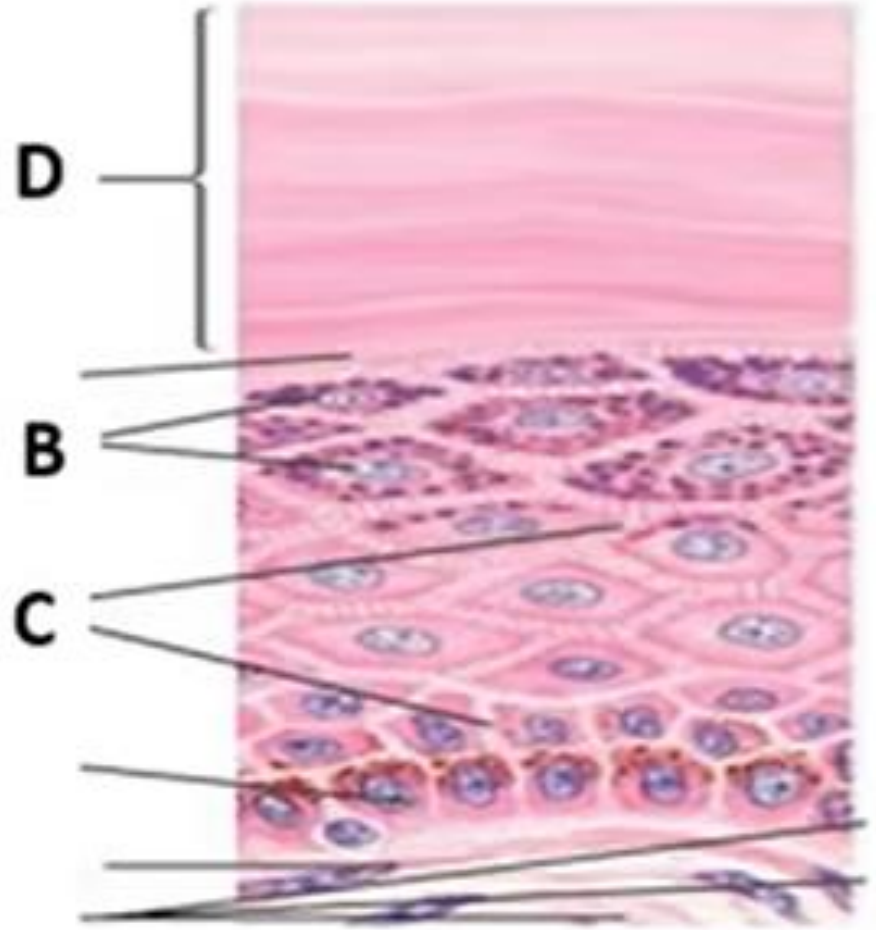
ANS:3

- Examination of the basal layer of the epidermis reveals how many types of cells?
- 1. Three.
- 2. Two.
- 3. One.
- 4. Four.

ANS:4

- In the attached figure, a lipid rich extracellular material is found in which layer/s of the skin?
- 1. B only.
- 2. D&B.
- 3. Conly.
- 4. B&C.

ANS:2



- What is the histological feature characterizing the skin dermis?
- 1-The reticular layer consists of parallel collagen bundles run in a single direction.
- 2- The dermal papillae are longer in the thick skin.
- 3-The receptors for temperature are present in the deep layer.
- 4- The papillary layer is avascular.

ANS:2

- Which epidermal cell doesn't match its function?
- 1. Markel's cell..... ...Perception of fine touch.
- 2. Melanocyte..... .Production of non membranous melanosomes.
- 3. Keratinocyte... ..synthesis of intermediate filaments
- 4. Lagerhans cell..... Antigen presenting cell.

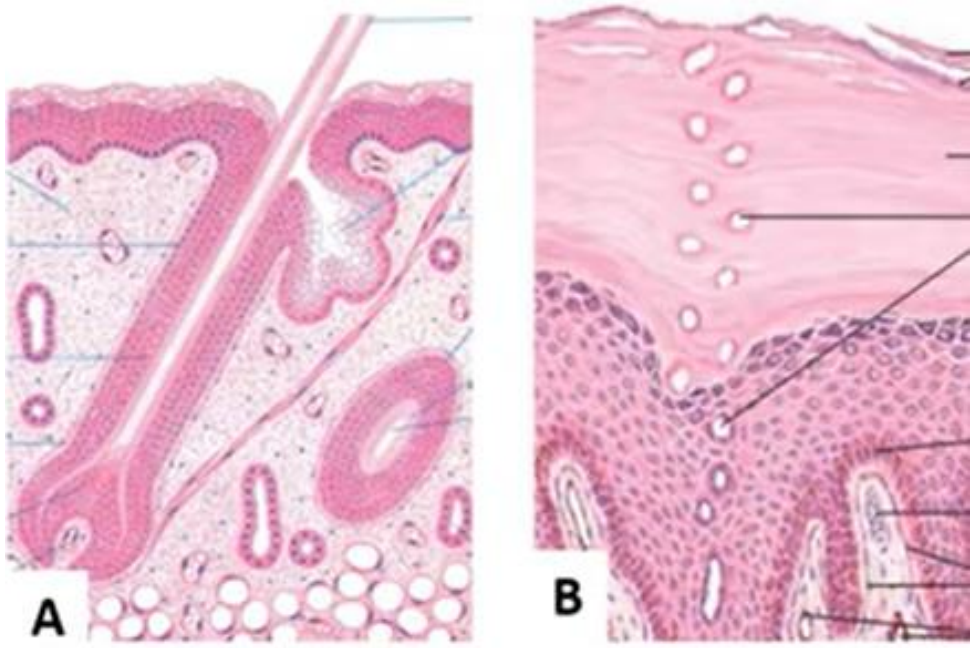
ANS:2

- Secretion of a lipid rich extracellular material is the function of which layer/s of the skin?
- 1. Stratum granulosum only.
- 2. Stratum granulsum & stratum corneum.
- 3. Stratum spinosum only.
- 4. Stratum spinosum & stratum granulosum.

ANS:1

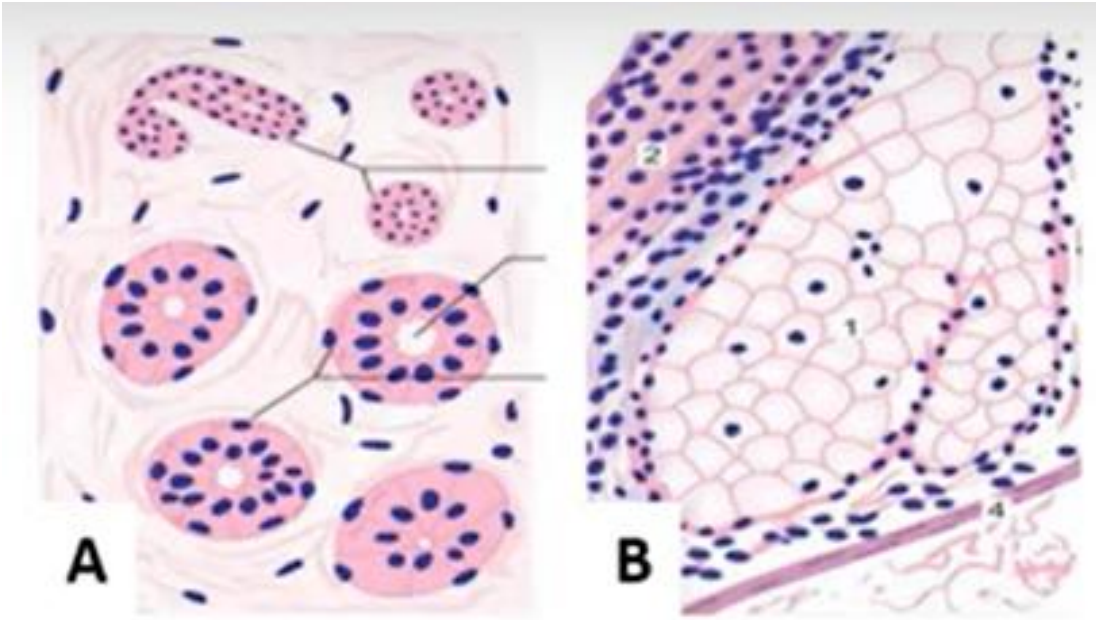
- How does the structure A differ from B?
- 1. Its characteristic deep dermo-epidermal interdigitaions.
- 2. It contains five skin strata.
- 3. The presence of apocrine sweat glands.
- 4. The excretory ducts of eccrine sweat glands which open into the skin surface.

ANS:3



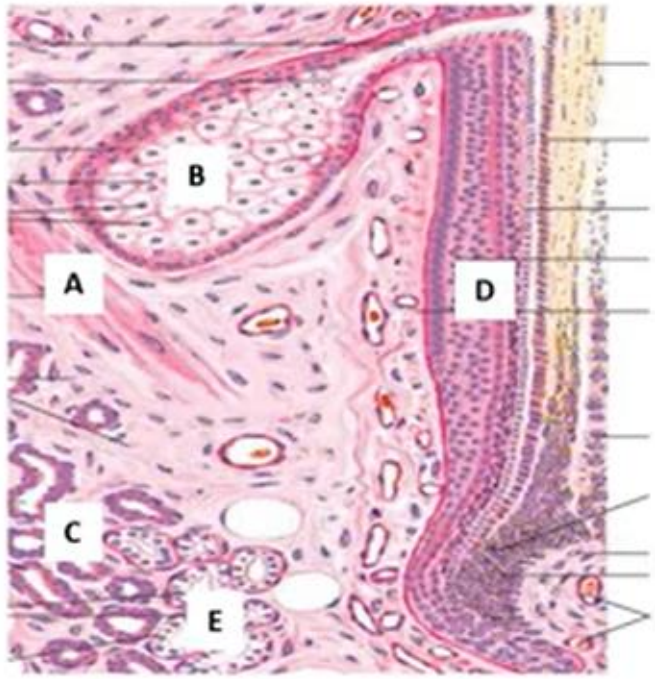
- Which statement is correctly describing the two glands in the opposite photos?
- 1. Structures at A release the secretion by apocrine mode.
- 2. Structure at B has a long and coiled duct.
- 3. Structures at A are simple alveolar.
- 4. Structure at B contains a germinal layer.

ANS:4



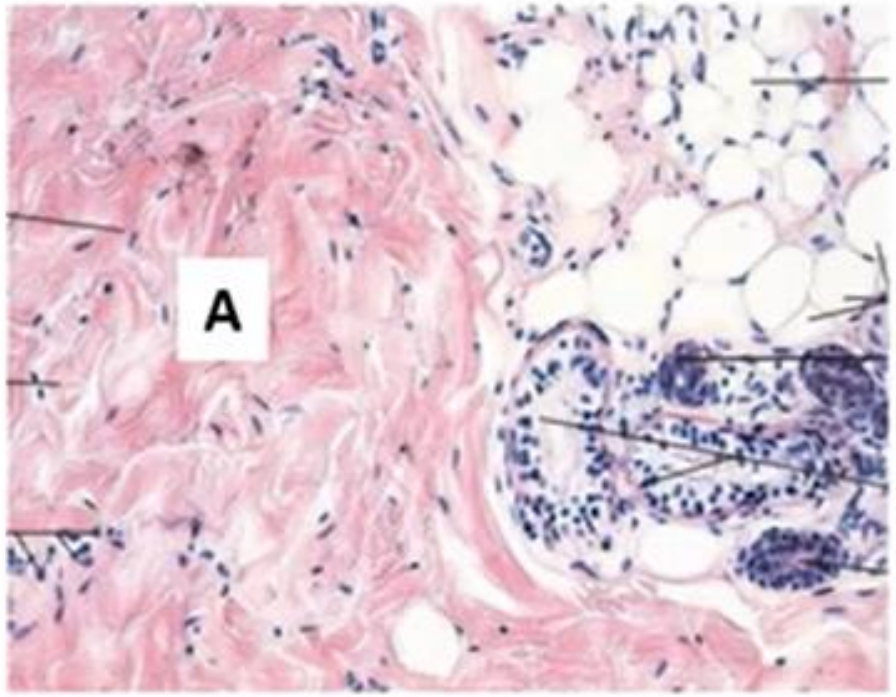
- Which parts in the opposite photo form the pilosebaceous unit?
- 1. C,D&A.
- 2. B,A&D.
- 3. E,C&B.
- 4. D,E&A.

ANS:2



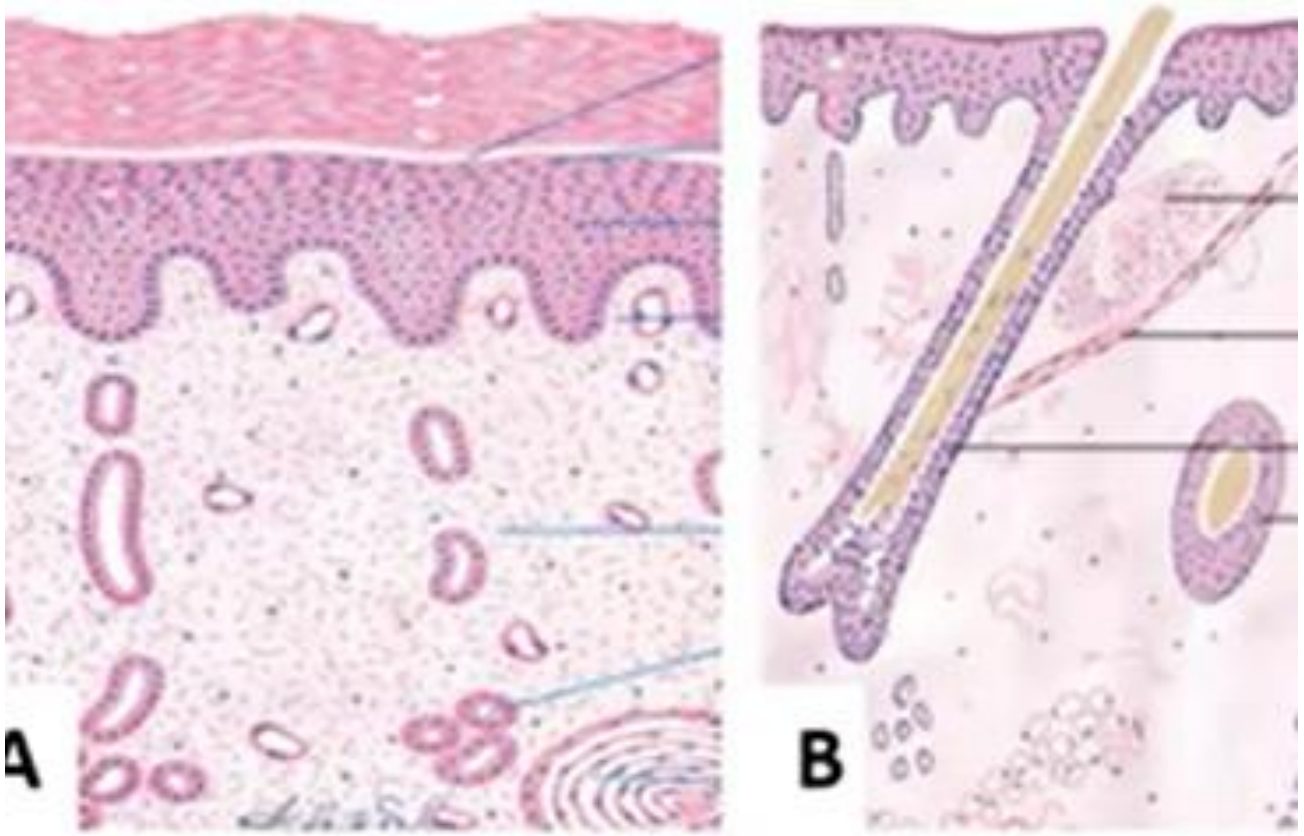
- In the attached figure of a part of the skin, what is the characteristic histological feature for the marked area at A?
- 1. It consists of loose areolar connective tissue.
- 2. It is avascular layer.
- 3. It contains sensory receptors for pressure.
- 4. It is a highly cellular layer.

ANS:3



- In the two histological sections A&B, which structure is found in A not B?
- 1. Clear layer with degenerating organelles.
- 2. Eccrine sweat glands.
- 3. Sensory receptors.
- 4. Glands secrete an oily material.

ANS:1



- Which statement is the best to describe the medulla of the hair?
- 1- It consists of tightly packed fusiform cells.
- 2- It is responsible for protection of the hair.
- 3- It is present in thick hair.
- 4- Proliferation of its cells is responsible for growth of the hair.

ANS:3

- Which statement is correct?
- 1.The synthesis of melanin by basal cells is under hormonal control.
- 2.Langerhans cells function in the immunsystem and can leave the epidermis after exposure to antigens.
- 3.The contents of keratohyalin granula are release into the extracellular space, where they are important for the barrier function of the epidermis.
- 4.Sebaceous glands are critical for the temperature regulation of the body.

ANS:2

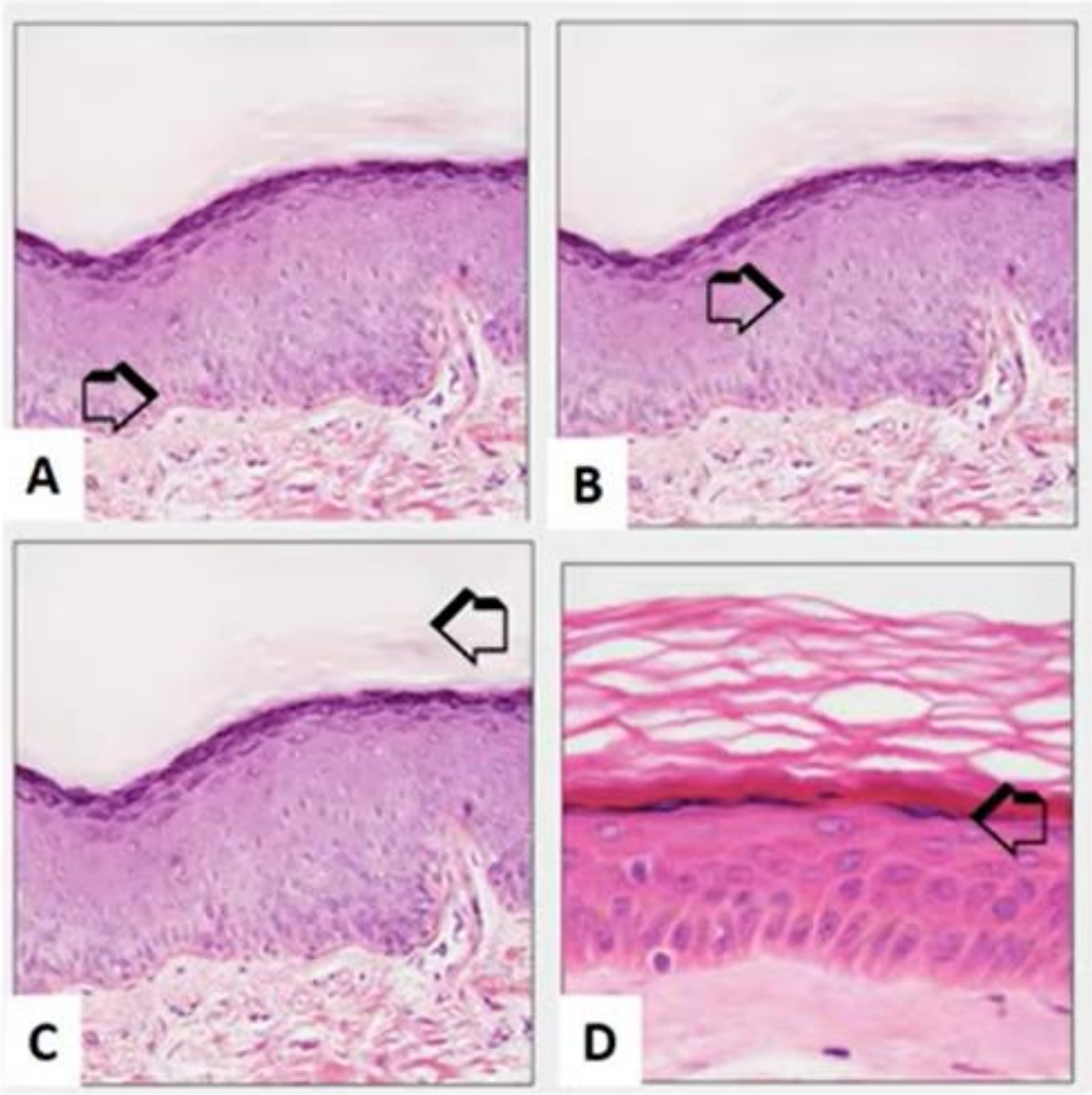
- In which layer of the epidermis are cells mitotically active?
- 1.hairy skin.
- 2.stratum corneum.
- 3.stratum granulosum.
- 4.stratum basale.

ANS:4

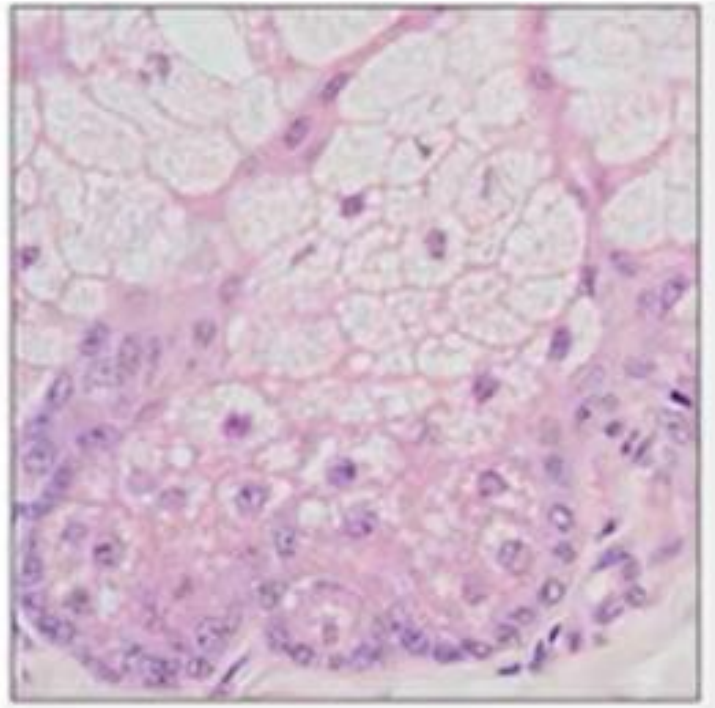
- Which statement is incorrect?
- 1.The papillary layer of the dermis contains fine collagen and elastic fibres and the capillary network which supplies the epidermis.
- 2.Merocrine and apocrine sweat glands are simple tubular coiled glands.
- 3.The renewal of the human epidermis through the mitotic activity of basal cells takes 3-4 weeks.
- 4.The excretory ducts of sweat gland are lined by a stratified squamous epithelium.

ANS:4

- The opposite photos of the epidermis include different pointed layers marked by the arrows. Which of these photos includes a pointed layer that is responsible for the resisting the effect of friction applied upon your skin?
- 1. C.
- 2. D.
- 3. B.
- 4. A.
- ANS:3



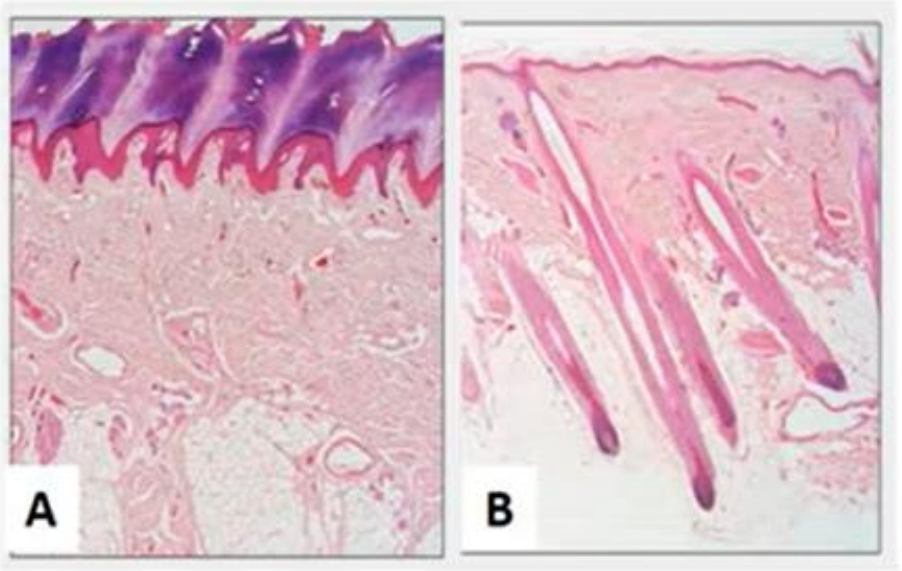
- Which statement is describing the structure in the opposite diagram?
- 1. It is active since birth.
- 2. It is a simple coiled tubular gland.
- 3. Its cells are ruptured with the release of its secretion.
- 4. It is surrounded by myoepithelial cells.



ANS:3

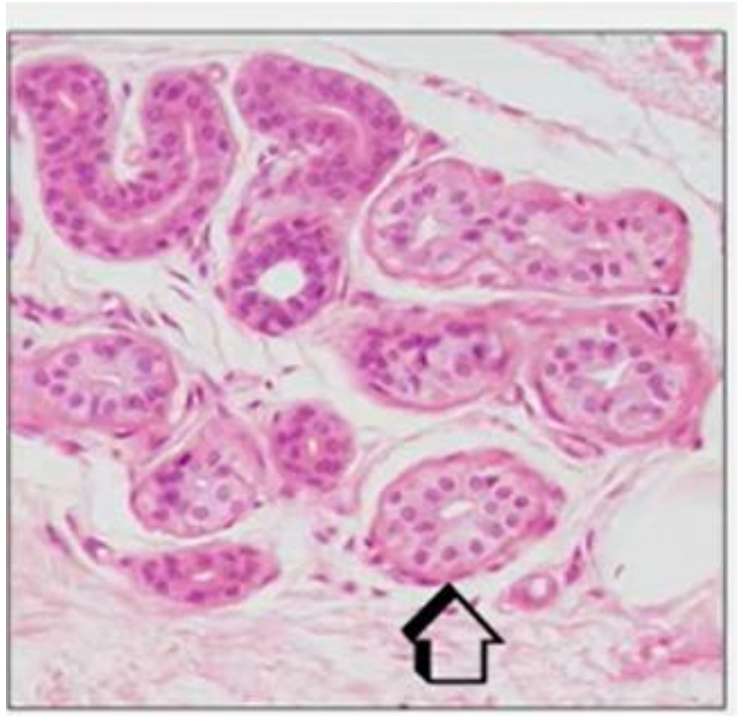
- Which statement is correct about these two photos?
- 1. A is present all over your body.
- 2. B contains stratum lucidum.
- 3. A contains sebaceous glands.
- 4. B contains less sweat glands.

ANS:4



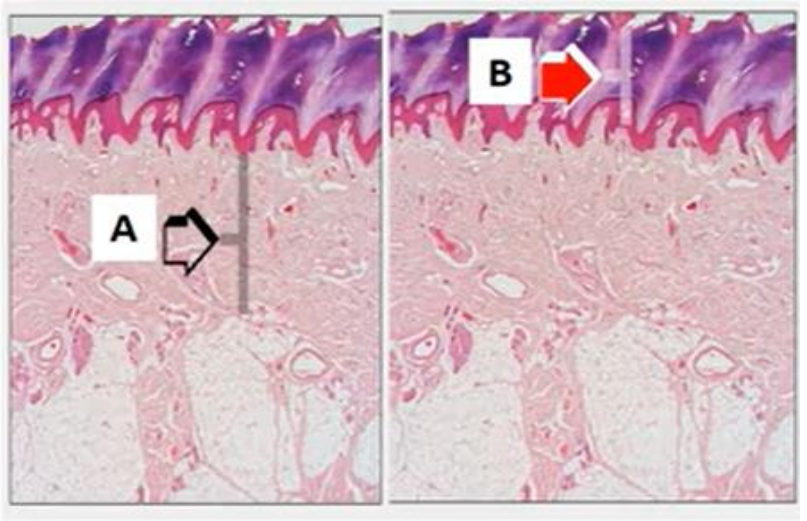
- The arrow points to a structure in the skin. Which statement is correct about this pointed structure?
- 1. It releases its content by apocrine mode of secretion.
- 2. It has a mitotically active cells for their regeneration.
- 3. It may be found in the deep part of the dermis.
- 4. Its secretion is fatty in nature.

ANS:3



- The opposite photos represent two different pointed parts of the skin. Which statement is correct about the pointed part?
- 1. B is more vascular than A.
- 2. A is less fibrous than B.
- 3. B is thick in your palm and sole.
- 4. A is mainly cellular.

ANS:3



- A common feature of several inflammatory skin diseases is the formation of blisters(small pockets of fluid formed within the skin). Microscopic examination of a skin biopsy from an affected area shows detached, rounded keratinocytes in the stratum spinosum and a row of cells in the stratum basale that are tightly attached to the underlying basement membrane. Function of which of the following structures is most likely compromised during the course of the disease?
- 1. Hemidesmosomes.
- 2. Gap junctions.
- 3. Type IV collagen.
- 4. Desmosomes.
- ANS:4

- In the epidermal layer of the skin, certain cells produce a secretory product that is transferred to the neighboring cells. The transfer process is achieved when the donor cell containing the product is pinched off by the recipient cell. Which of the following is most likely involved in the described intercellular transfer?
- 1. Keratohyaline granules.
- 2. Lamellated granules.
- 3. Neurosecretory vesicles.
- 4. Melanosomes.

ANS:4

THE END