

### **C3 Questions: Skin structure**

#### **Questions: Skin Structure**

1. Name the four cell layers of the epidermis?
2. What are the embryological origins of keratinocytes and melanocytes?
3. What is the layer of anucleate cells called?
4. What gives spindle cells their 'prickles'?
5. Where do you find keratinocyte stem cells?
6. What is the cornified envelope?
7. Which is thicker, the epidermis or the dermis?
8. Which are most common: cancers derived from the epidermis or the dermis?
9. Which layer within the epidermis is one cell thick?
10. What compartment contributes most cells to skin: the epidermis or the dermis?

#### **Answers: Skin Structure**

1. Four layers of the epidermis are: basal cell layer, spindle cell layer, granular cell layer, and stratum corneum (horny layer)
2. The embryological origins of keratinocytes and melanocytes are ectoderm and neural crest respectively
3. Stratum corneum or horny layer
4. Desmosomes attach the keratinocytes together. As the cells shrink during processing for histology, the desmosomes appear as prickles, because they are the still closely opposed areas, after the rest of the cell membrane has shrunk away from each adjacent cell membrane.
5. There are two keratinocyte stem cell pools. One, within the basal compartment of the interfollicular epidermis, and the other close to the site of the bulge like region in the hair follicle.
6. The cornified envelope is the name given to the outer barrier of the dead corneocytes. It is made by condensation and cross-linking of a variety of epidermal proteins. Outside the cornified envelope, you find mainly lipids. The stratum corneum plays a significant role in photo protection (discussed later in skincancer909).
7. The dermis is much, much thicker. If you get this wrong, go back to the text.
8. Most skin cancers are derived from the keratinocytes of the epidermis.
9. The basal cell layer.
10. Slightly contrived question, but although the epidermis is much thinner, both compartments contribute almost equally to cell number.