

Histology of the Skin and Epidermal Derivatives

Dr Claire Aland

(with acknowledgement of Dr Louise Ainscough & Dr Kristy Weir)

COMMONWEALTH OF AUSTRALIA
Copyright Regulations 1969

WARNING

This material has been reproduced and communicated to you by or on behalf of the University of Queensland pursuant to Part VB of the Copyright Act 1968 (the Act).

The material in this communication may be subject to copyright under the Act. Any further reproduction or communication of this material by you may be the subject of copyright protection under the Act.

Do not remove this notice.

CAUTION

- The **Transplantation and Anatomy Act 1979 (Qld)** binds all persons and is, thereby, relevant to all UQ anatomy students.
- It is stated under s36 (2) of the Act :
"A person who performs an anatomical examination upon a body shall do so in a quiet, orderly and decent manner".
- **This requirement shall be met for any and all use of donated human tissues at UQ.** This includes, but is not limited to:
 - tissue use by students during attendance at the Gross Anatomy Facility;
 - hardcopy use of images of donated tissues;
 - accessing UQ lecture notes or other online UQ anatomy resources containing references to, or images of, donated human tissues;
 - use of notes inside or outside of class time.
- The **SBMS Code of Conduct for Use of Donated Human Tissues** equally applies.



Transplantation and Anatomy Act 1979

Current as at 24 March 2016

[www.legislation.qld.gov.au/Acts_SLs/
Superseded/SUPERS_T/Transpl_Anat
A79.htm](http://www.legislation.qld.gov.au/Acts_SLs/Superseded/SUPERS_T/Transpl_AnatA79.htm)

Do not remove this notice.

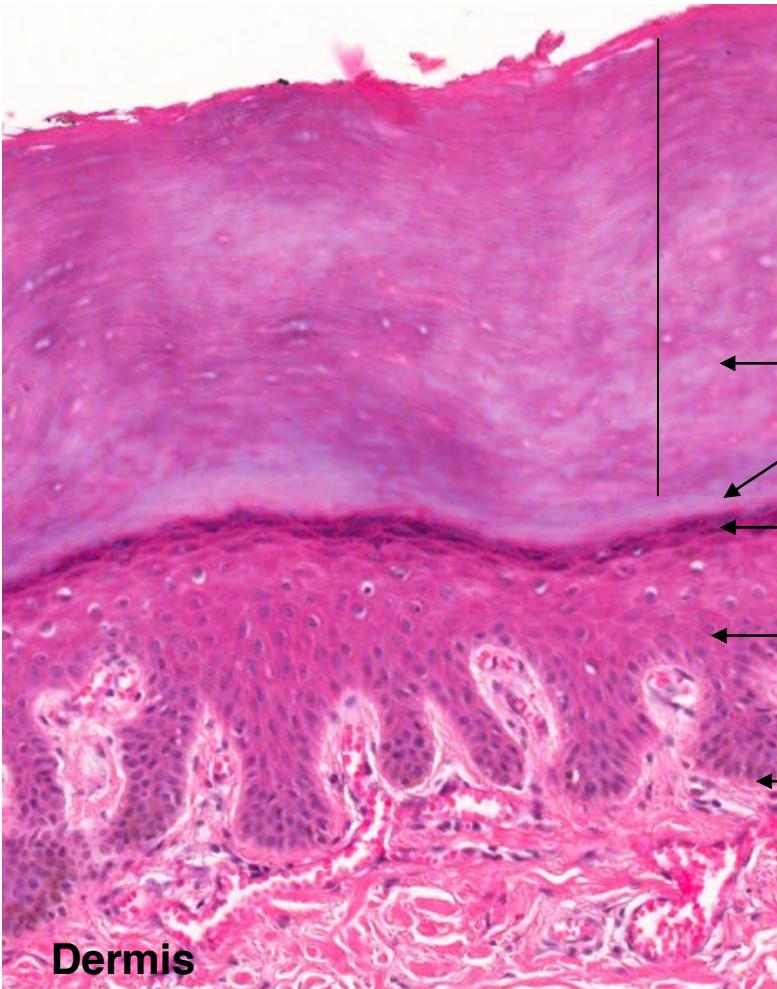
EPIDERMIS

DERMIS

HYPODERMIS

Skin Is 'Thick' Or 'Thin'.

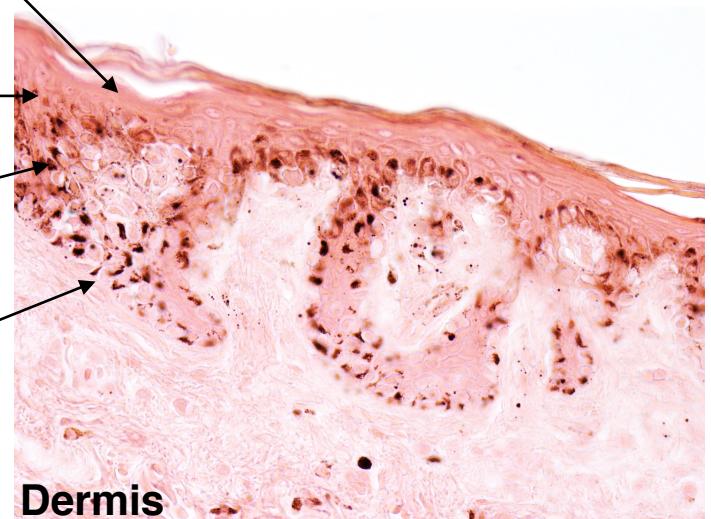
Thick Skin



Dermis

- stratum corneum
- stratum lucidum
- stratum granulosum
- stratum spinosum
- stratum basale

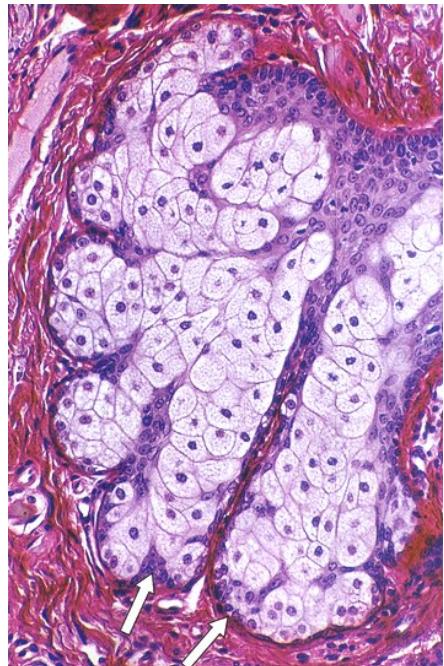
Thin Skin



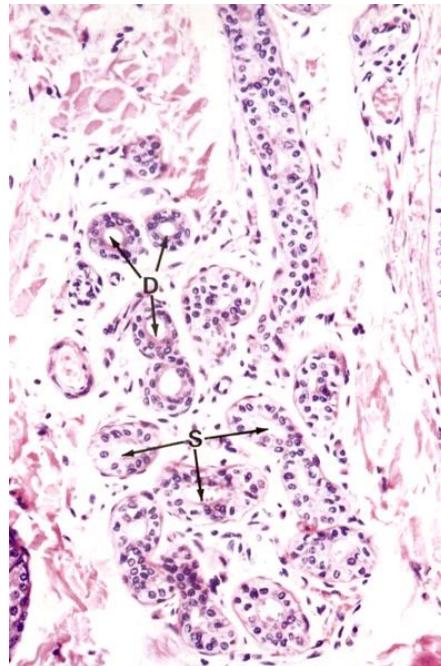
Dermis

Glands of the Skin

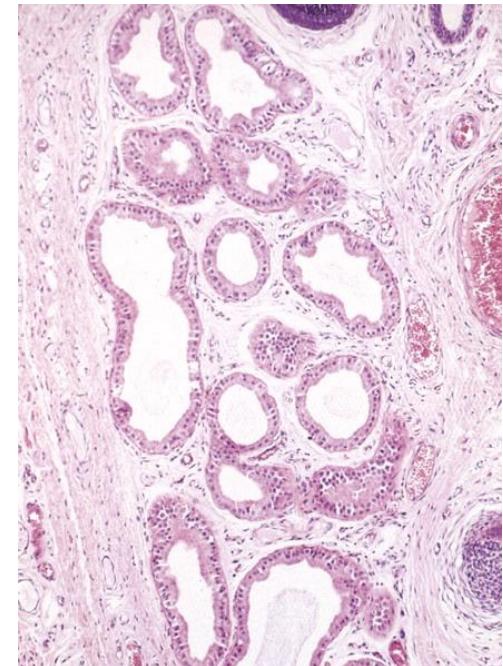
Sebaceous glands



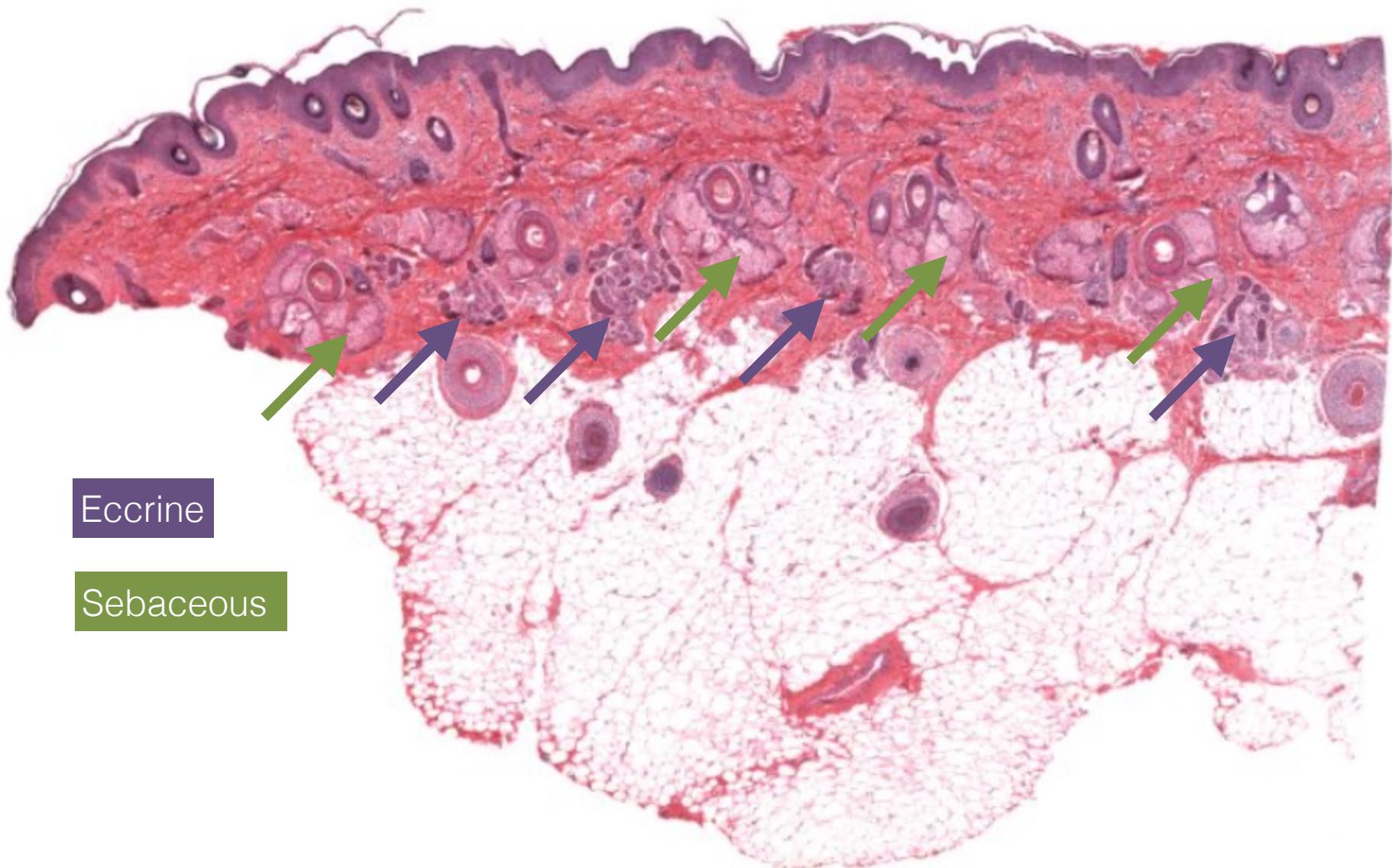
Eccrine sweat glands



Apocrine sweat glands



Where are these glands located?



Eccrine

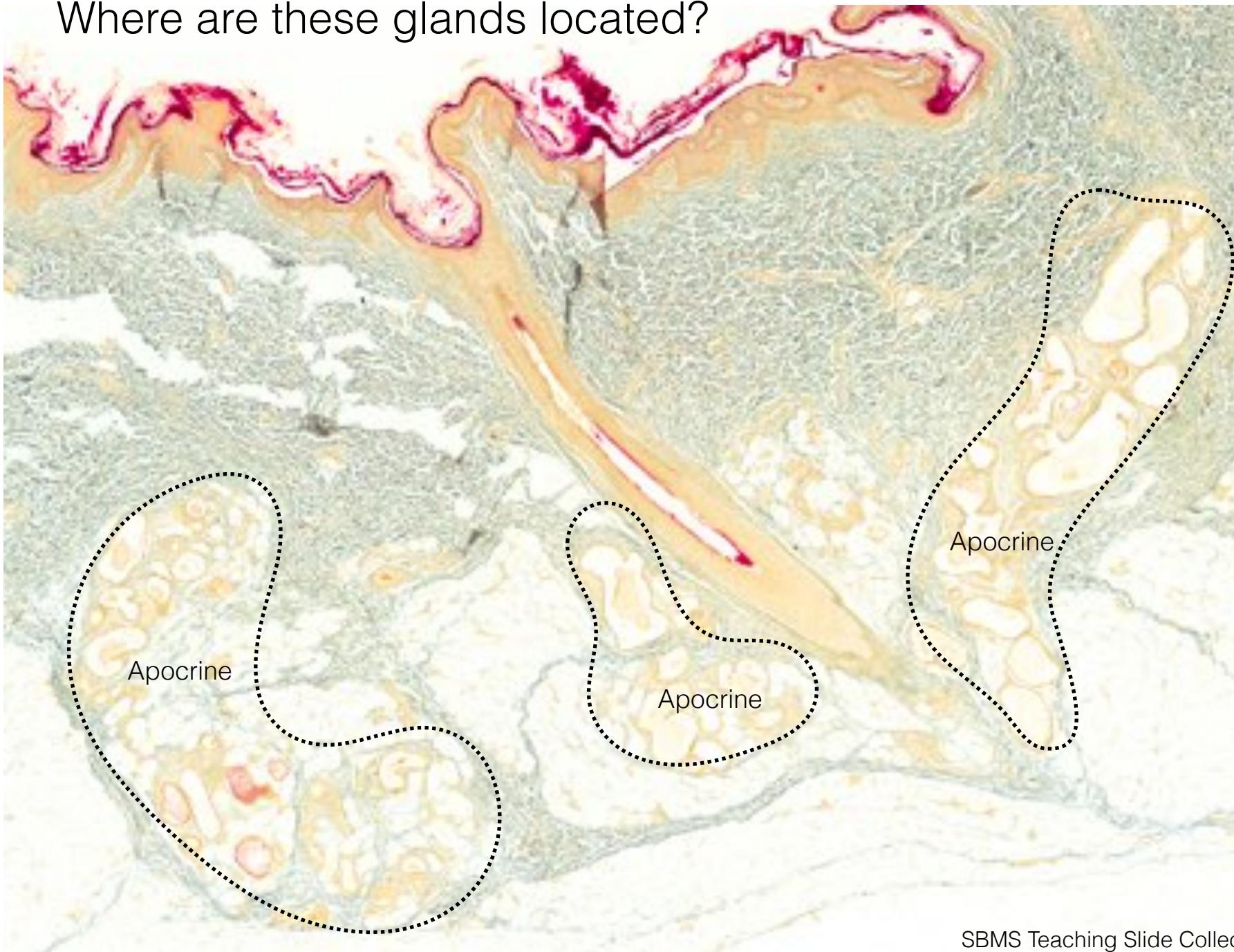
Sebaceous

1000 μm

Histology Guide

<http://www.histologyguide.com/slide-view/MH-086b-scalp/11-slide-1.html?x=0&y=0&z=-1&page=1>

Where are these glands located?



Eccrine sweat glands

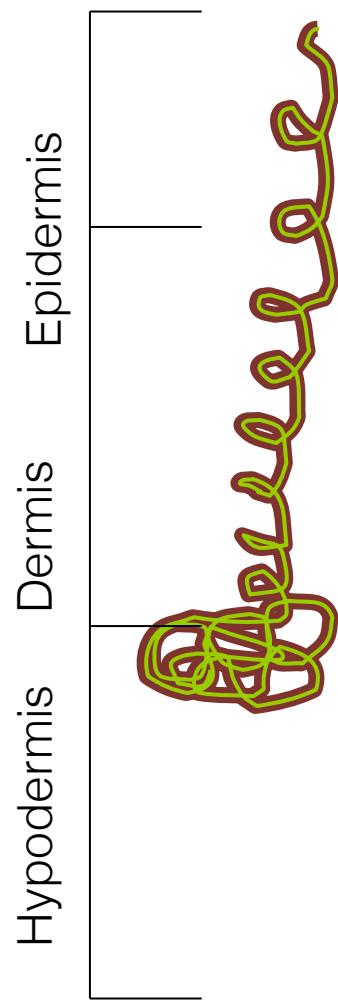
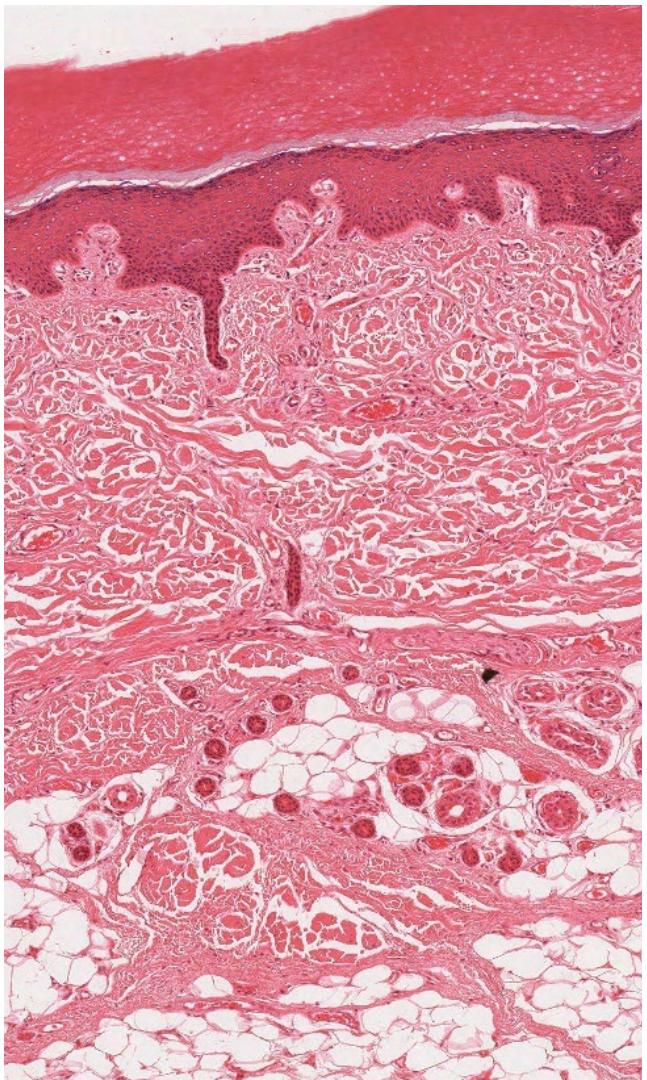
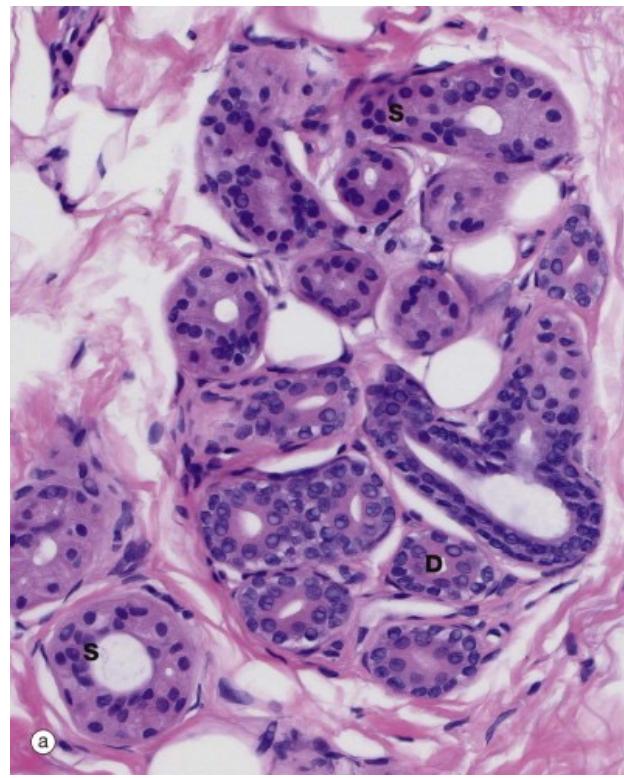
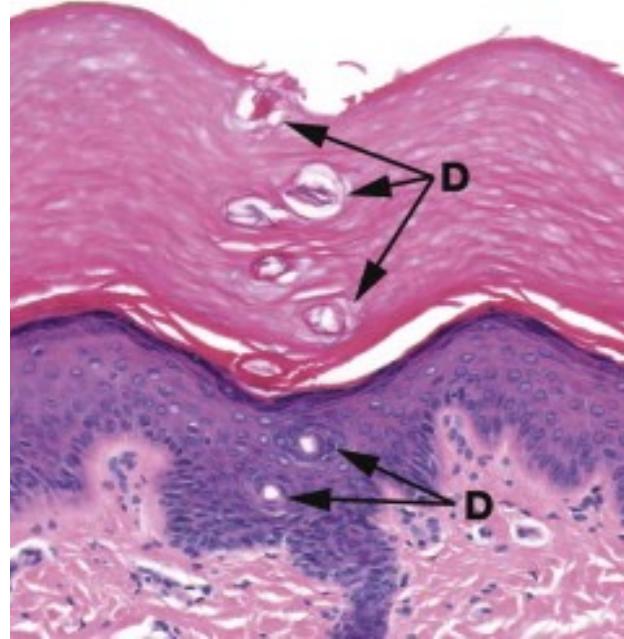


Figure 9-12a & 9-13 Wheater's Functional Histology



Myoepithelial cells

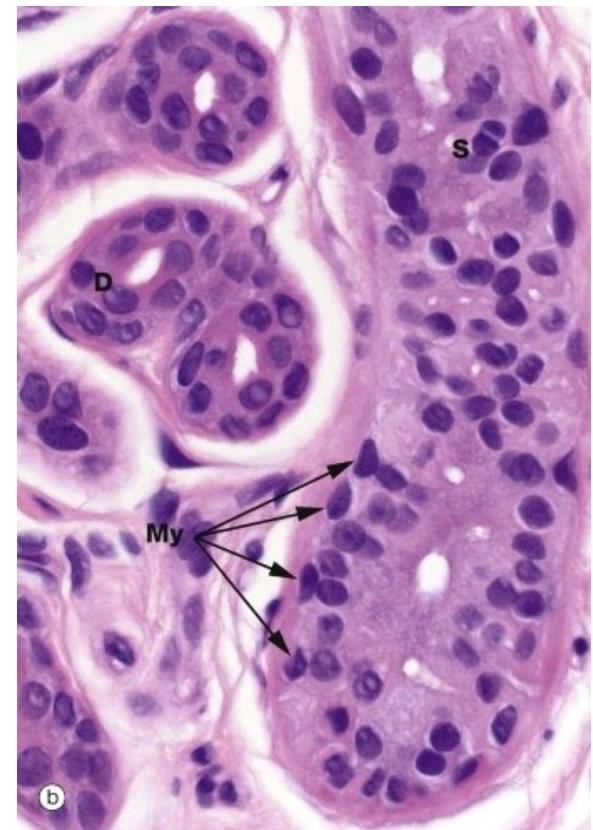
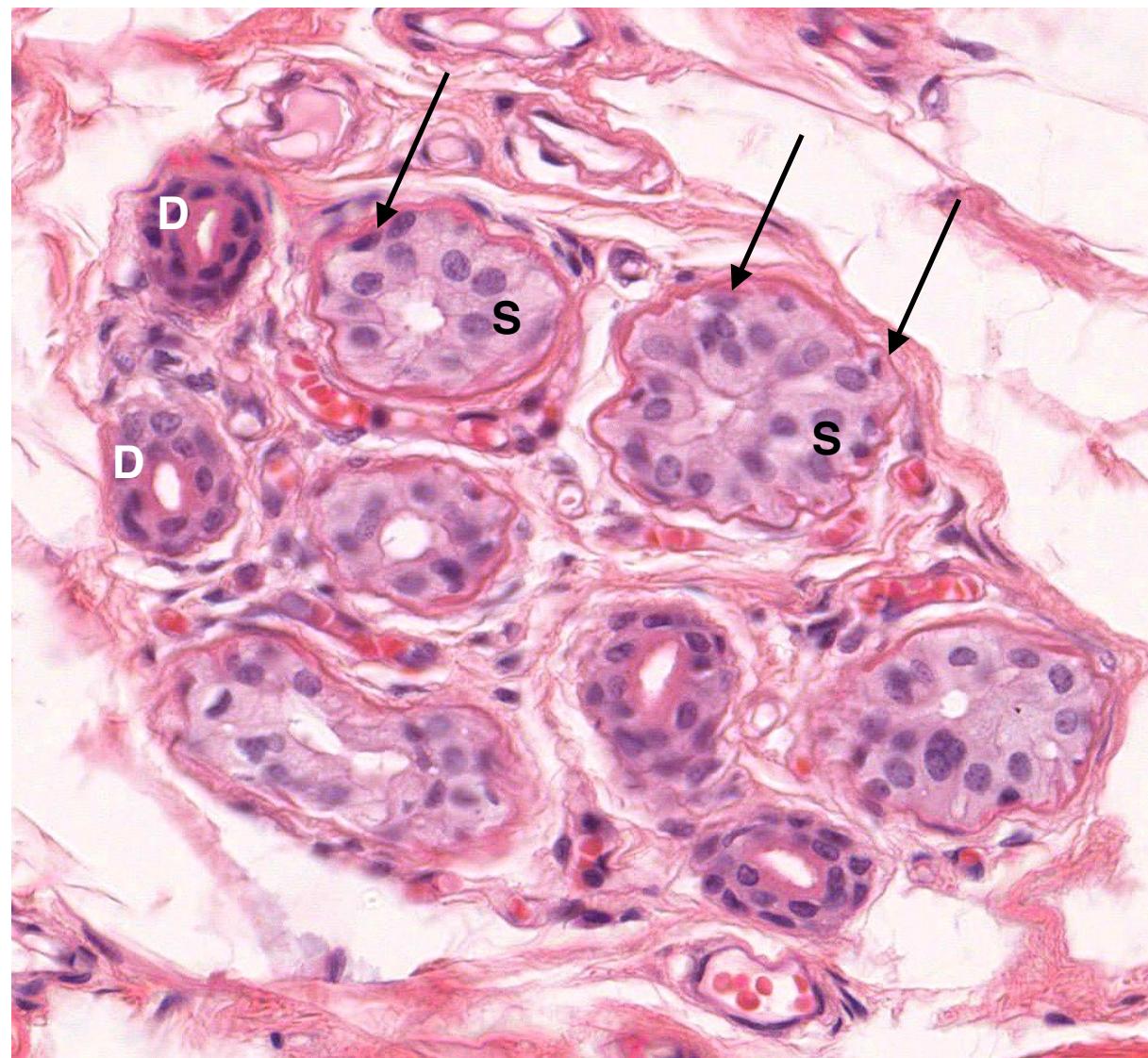
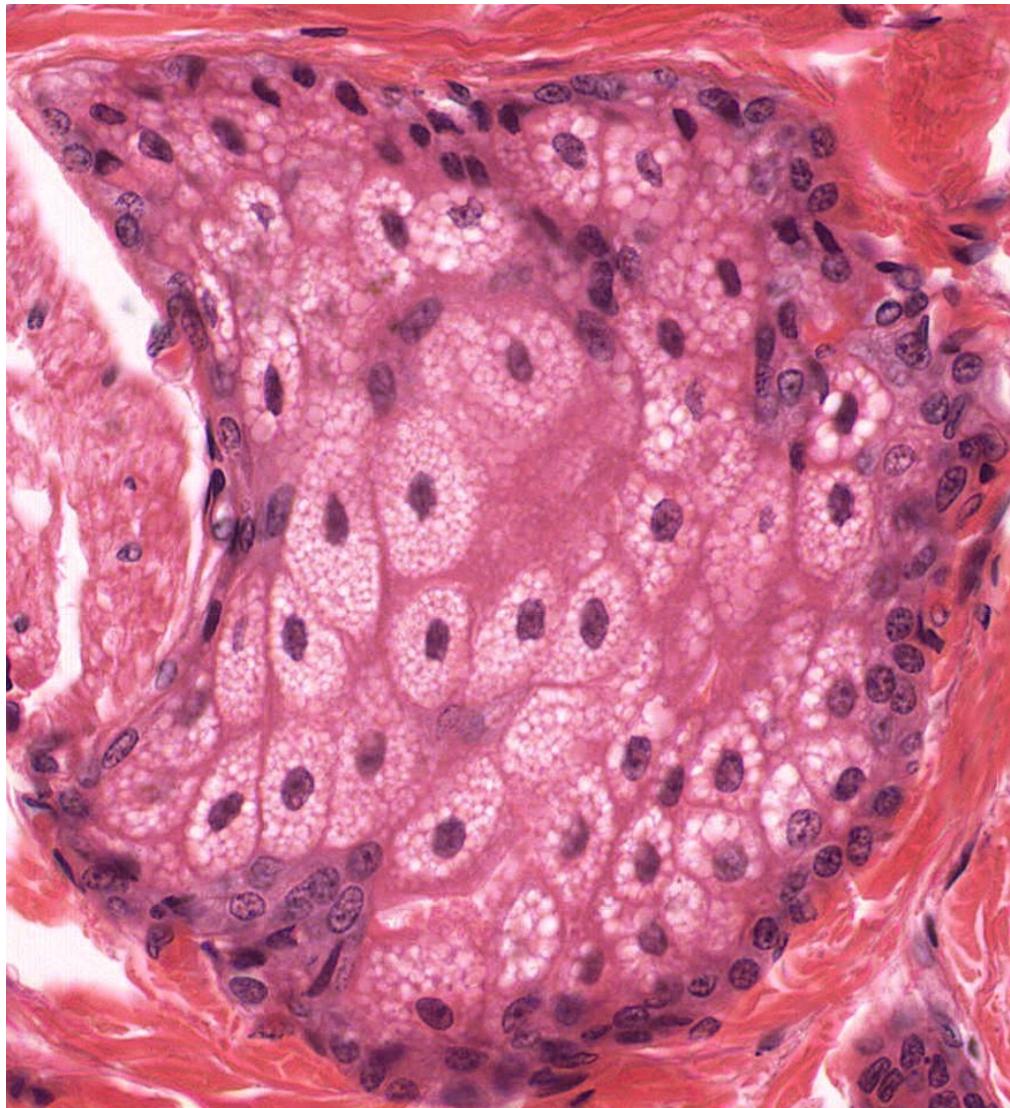
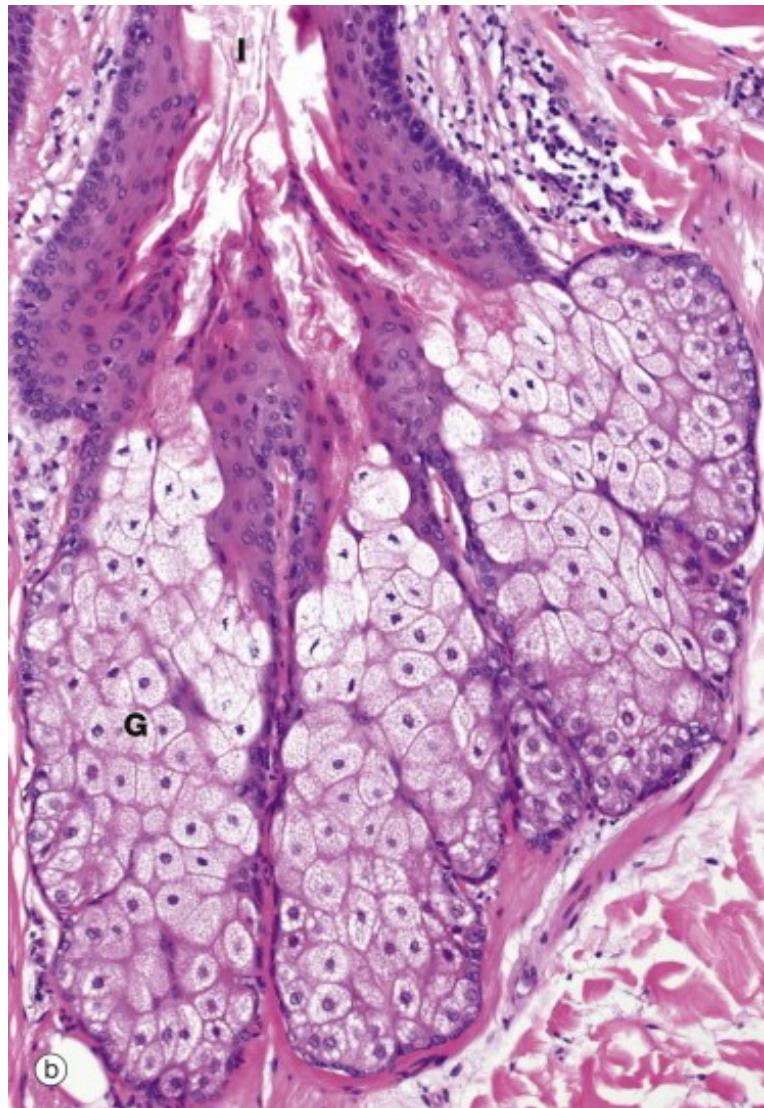


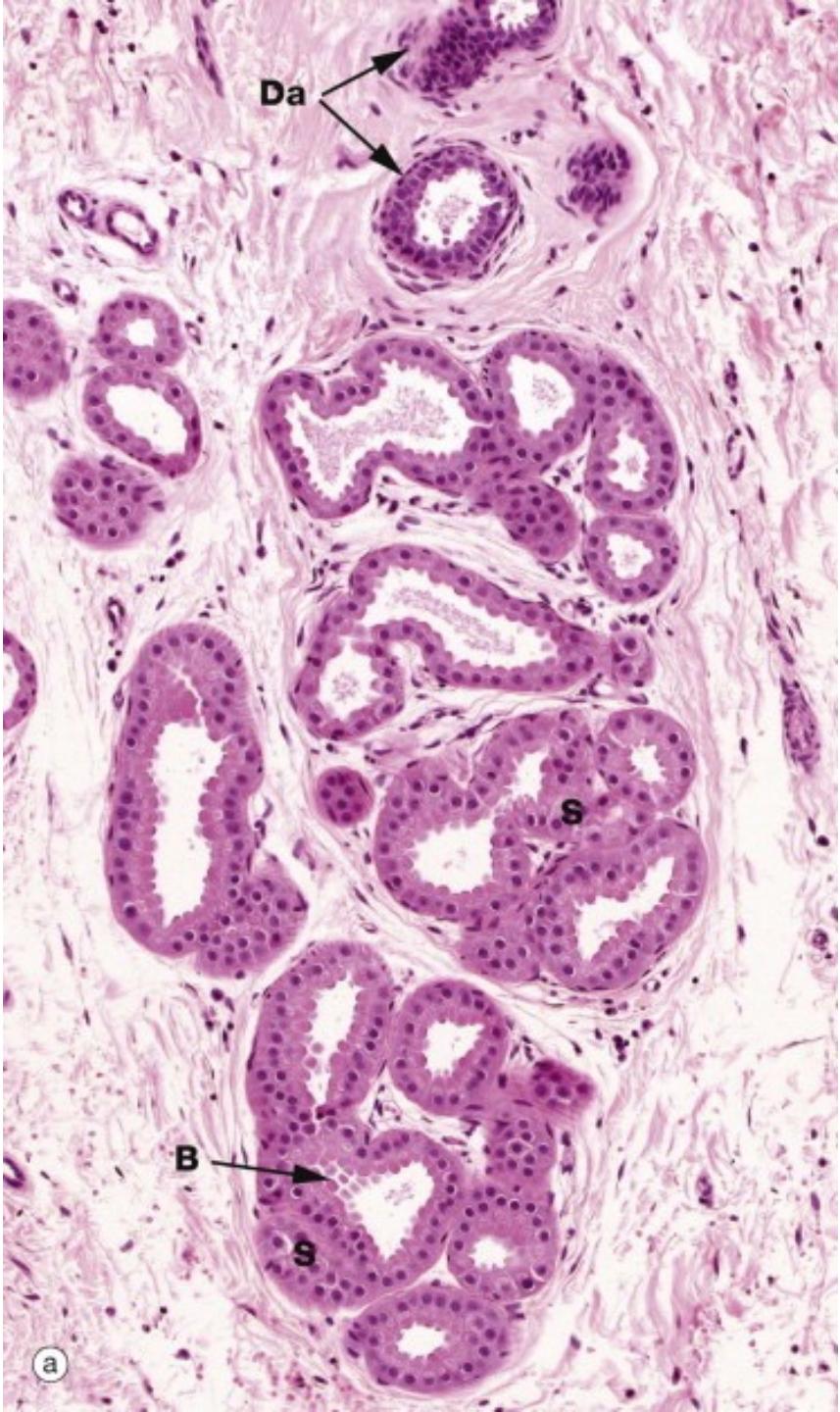
Figure 9-12b Wheater's
Functional Histology

Sebaceous glands



Histology Guide

<http://www.histologyguide.com/slide-view/MH-086b-scalp/11-slide-1.html?x=9122&y=3756&z=50&page=1>



Apocrine glands

Apocrine or merocrine?

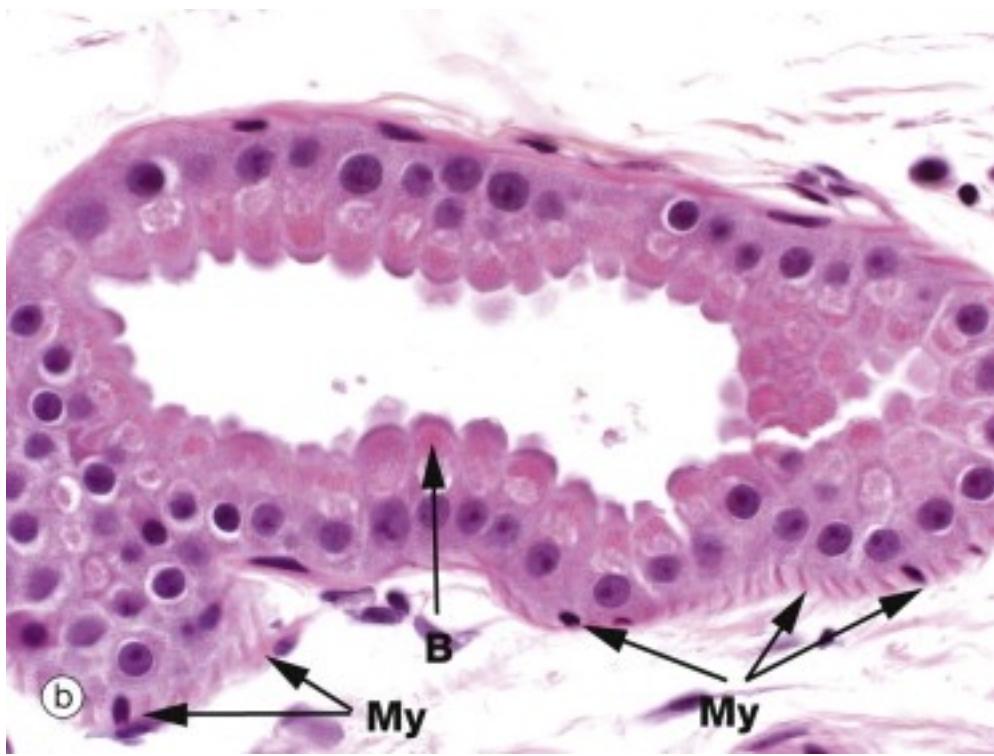


Figure 9-14a&b Wheater's Functional Histology

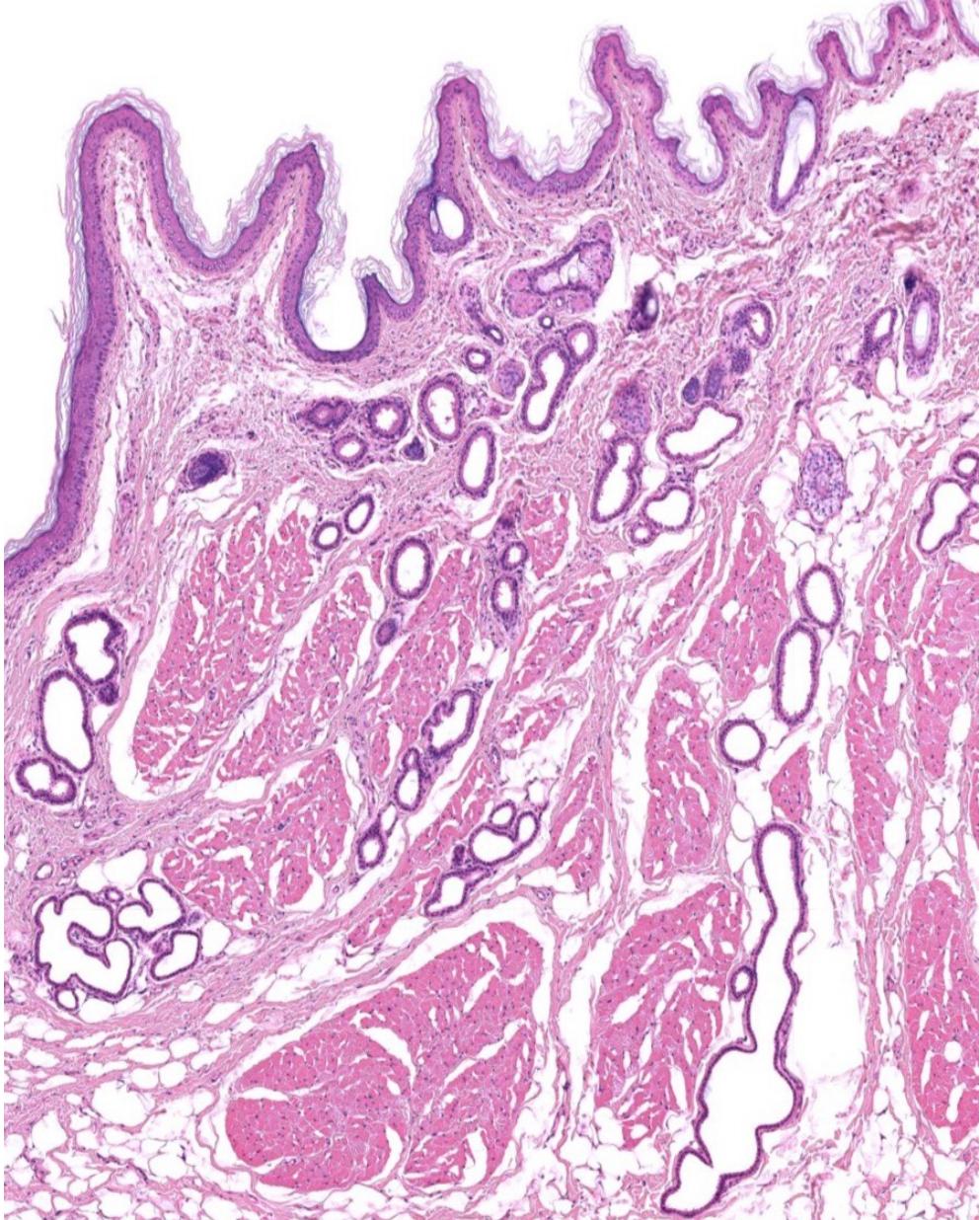
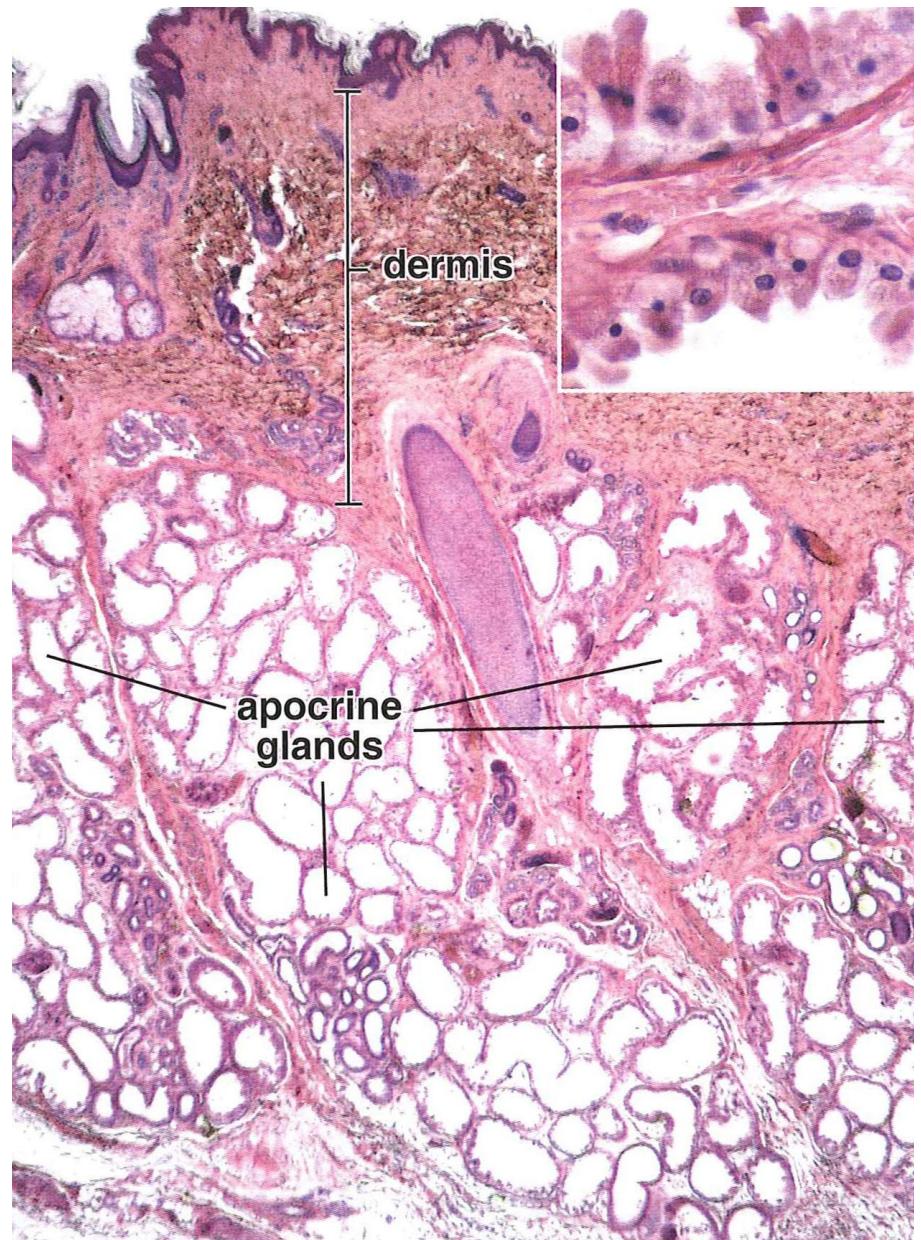
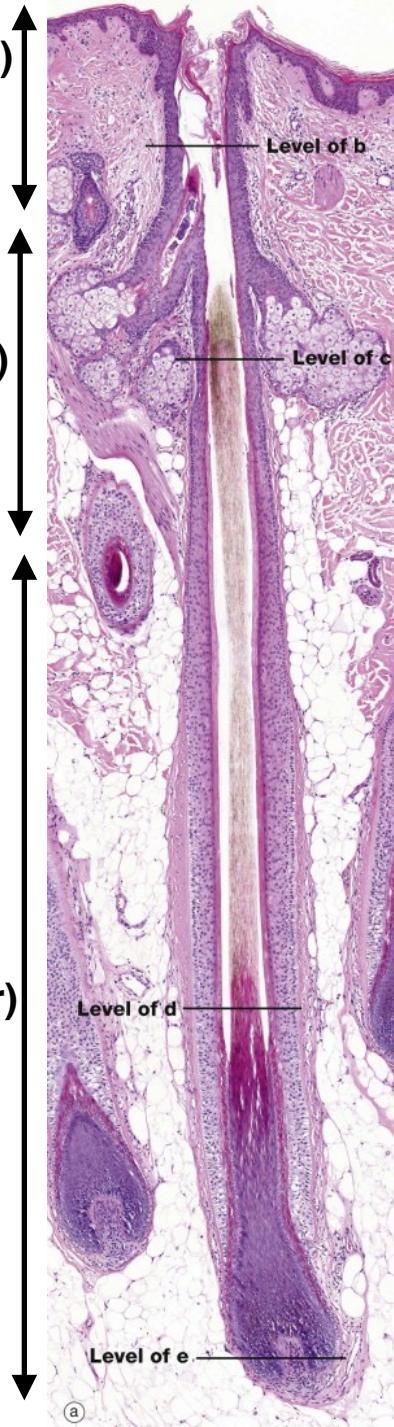


Figure 15-18 Ross, MH. Pawlina, W (2006) Histology a Text and Atlas Lippincott Williams & Wilkins

Histology Guide

<http://www.histologyguide.com/slide-view/MHS-258-recto-anal-junction/14-slide-1.html?x=0&y=0&z=-1&page=1>

Infundibulum (upper)



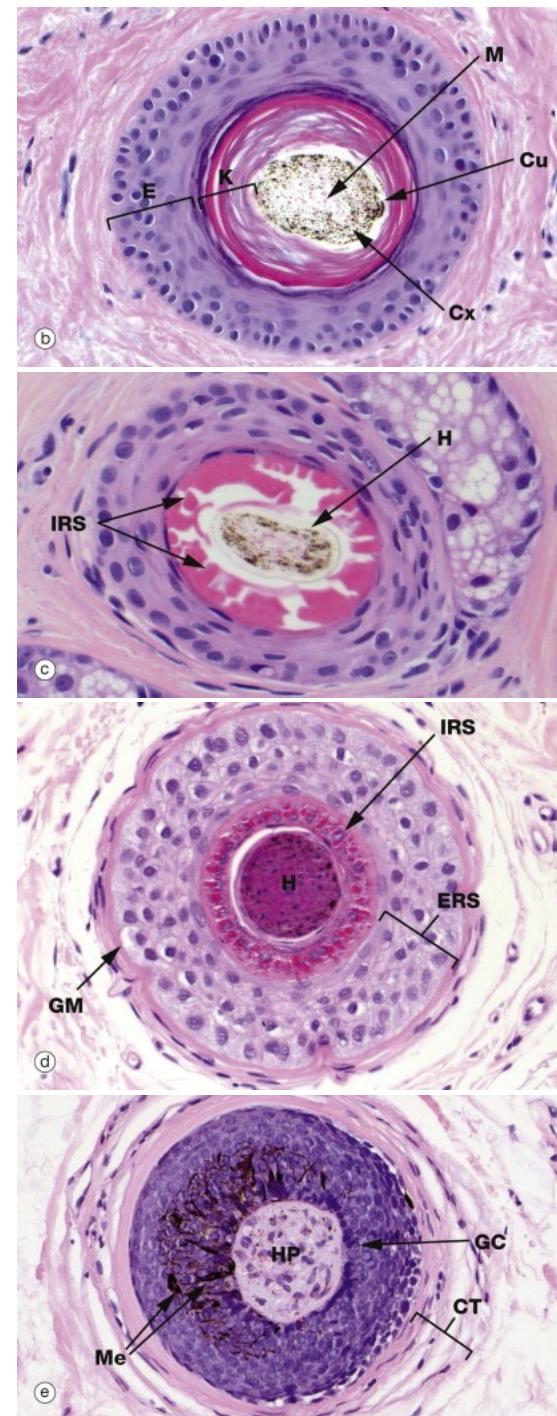
Isthmus (middle)

hair/dermal papilla:

carries blood supply to hair
hair bulge (above bulb) receives signals to stimulate growth
hair bulge cells migrate to hair matrix and divide

Bulb & supra bulb (lower)

Garcin CL, Ansell DM. The battle of the bulge: re-evaluating hair follicle stem cells in wound repair. *Exp Dermatol*. 2017;26(2):101-104. doi:10.1111/exd.13184.





Hair has dropped out!

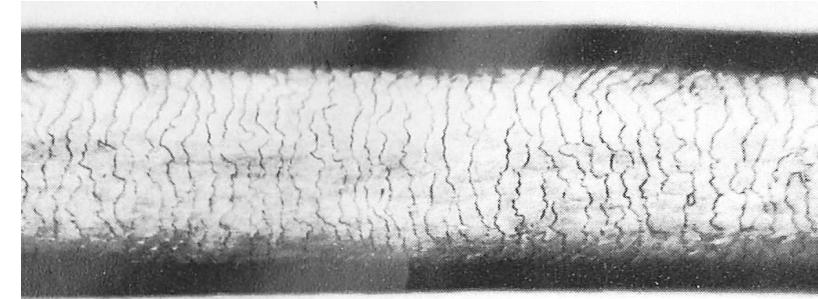
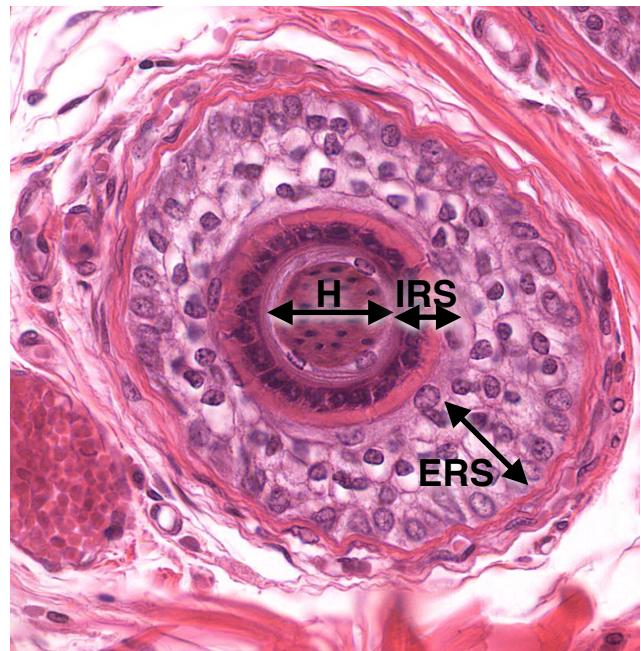
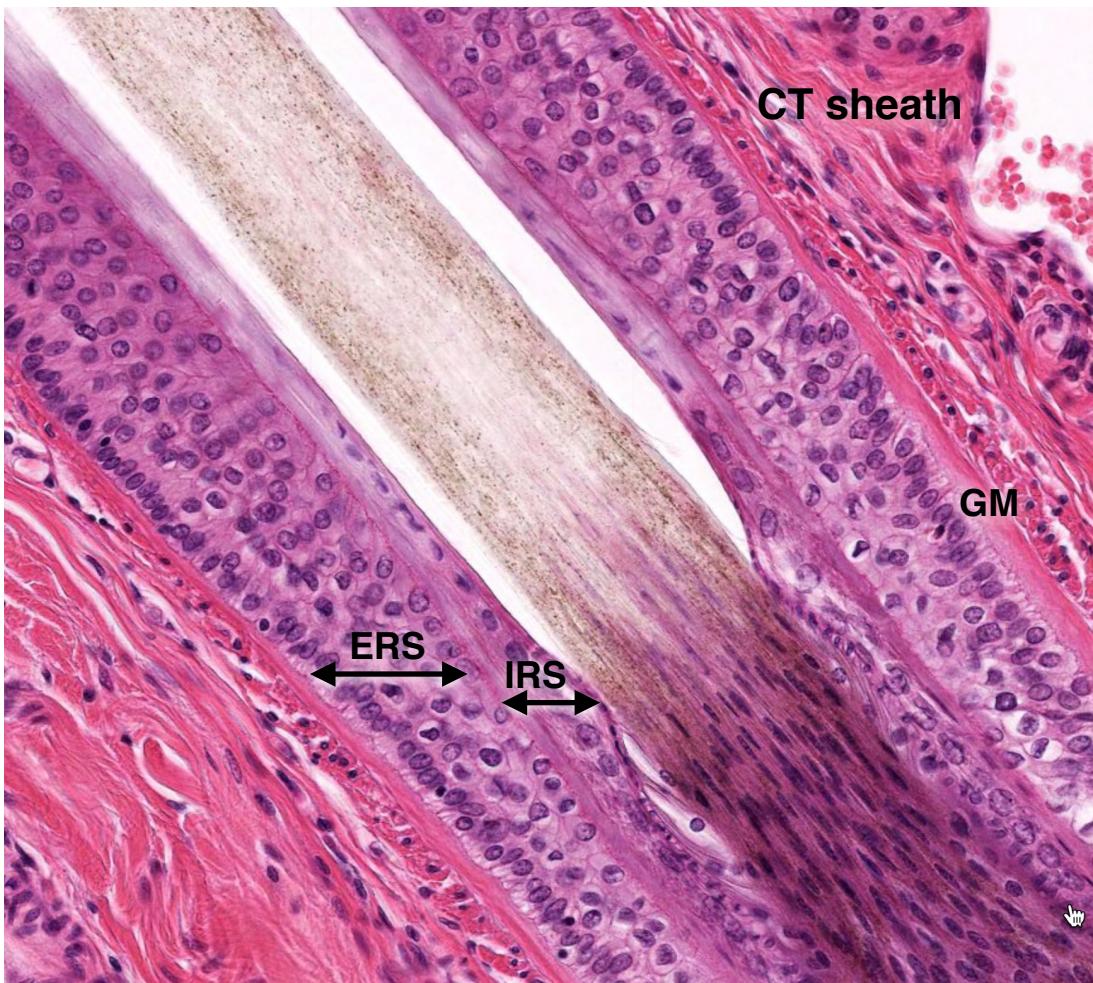


Figure 20-19 Ham, AW, Cormack, DH (1979) Histology 8th Edition



Nails

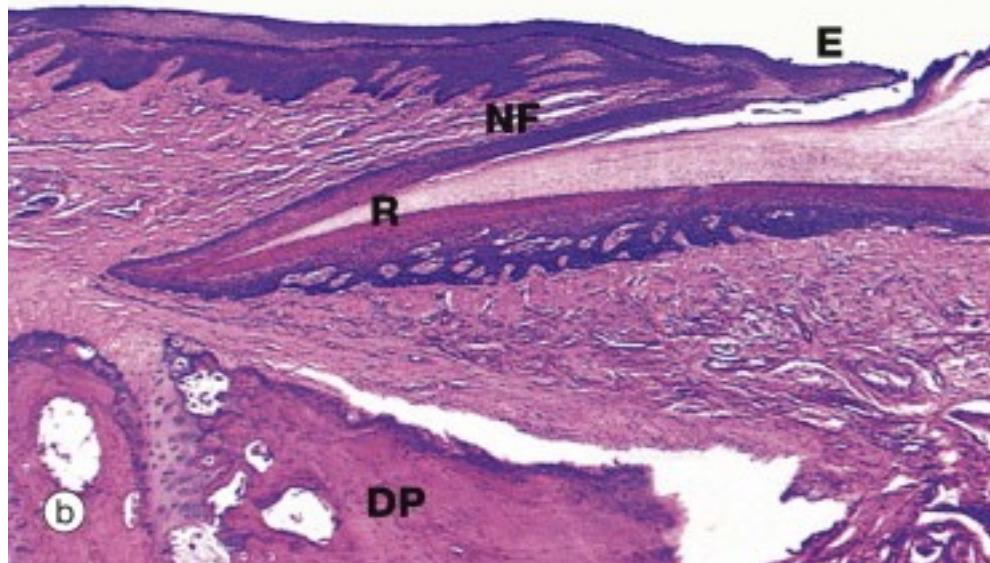
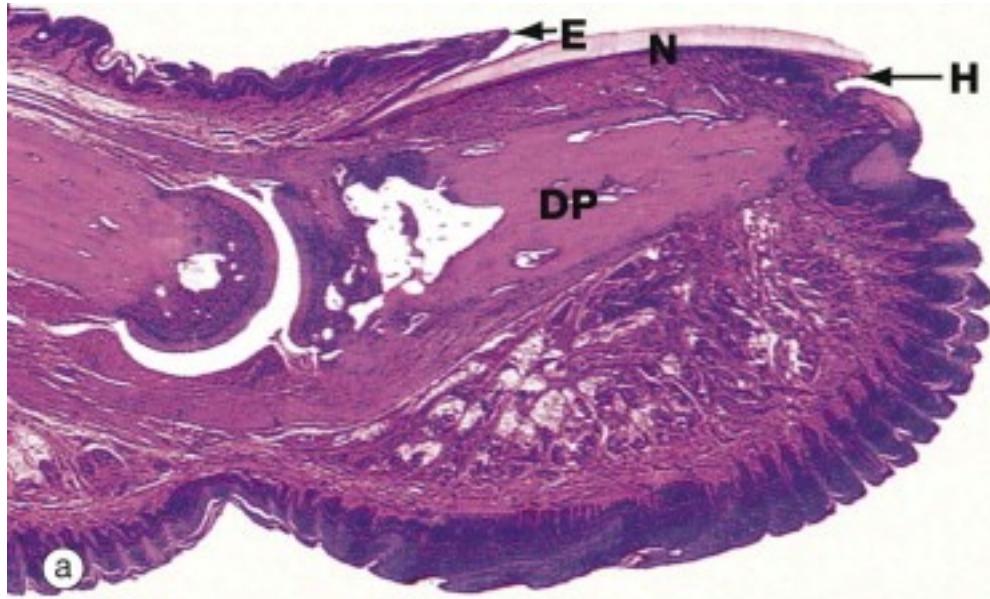
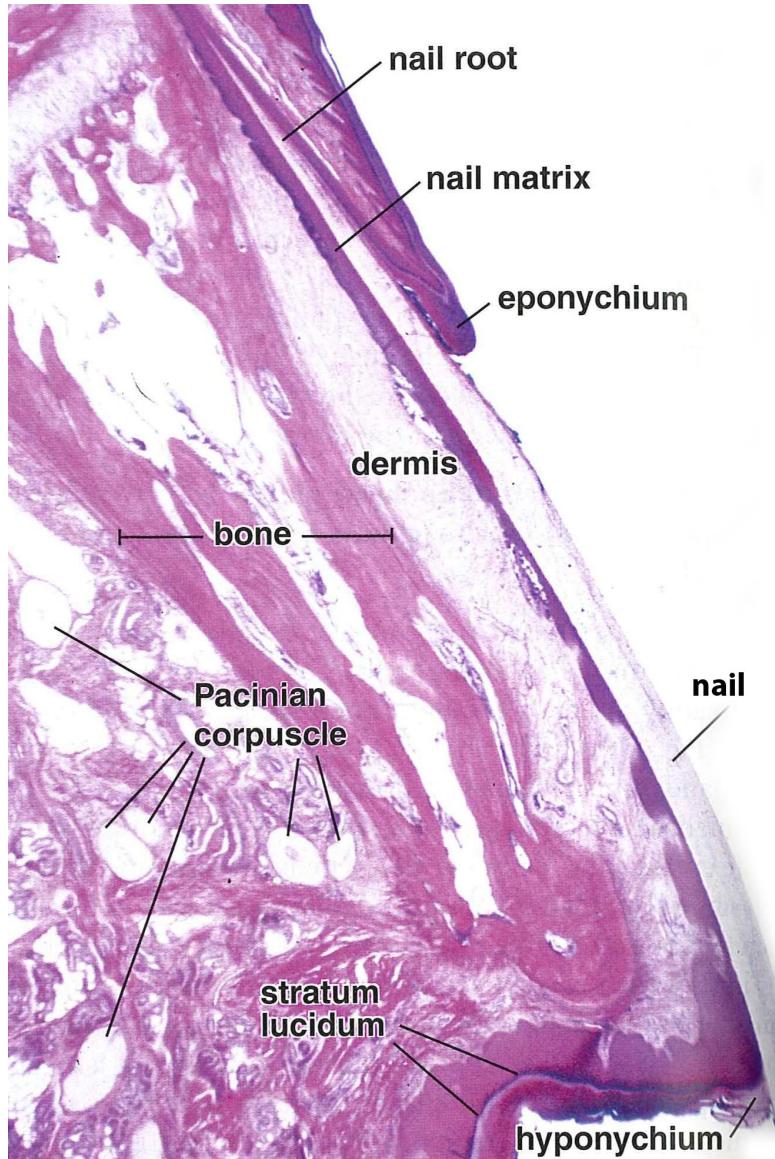


Figure 15-19 Ross, MH. Pawlina, W (2006) Histology a Text and Atlas Lippincott Williams & Wilkins

Figure 9-9a & b Wheater's Functional Histology

References

Ham, AW, Cormack, DH (1979) Histology, 8th Edition, Lippincott

Junqueira LC & Carneiro J (2003) Basic Histology: A text atlas. McGraw-Hill Companies, New York.

Kerr, JB (1999) Atlas of Functional Histology, Mosby

Marieb EN (2004) Human anatomy & physiology. Pearson/Benjamin Cummings, San Francisco.

Martini FH/Martini FH and Nath JL (2006/2009) Fundamentals of anatomy and physiology. Pearson/Benjamin Cummings, San Francisco.

Ross MH & Pawlina W 2006/2011 Histology: A text and atlas. 5th/6th Ed Lippincott, Williams & Wilkins, USA.

Young B & Heath J (2000) Wheater's functional histology. Churchill Livingston, London

Young, B, Lowe, JS, Stevens, A, Heath, JW (2006) Wheater's Functional Histology: A Text and Colour Atlas, 5th Ed, Churchill Livingstone, Elsevier