

Cards & Staff Introduction

Last Name, First, Nickname, Phone, e-mail Lab time

Major, Undeclared or Area of Interest?

Academic Status: Fr, So, Jr, Sr, PB, MS, CEP

Professional Objective

Hometown, Birthplace

Why enrolled? Required? Interest?...



Prior related coursework? A&P in high school, EMT,...

Prior Universities/Community Colleges?

Family/Special interests/Hobbies

Something unique about yourself/Secret we won't reveal!

Thanks for printing your name & lab time on Lab notebook.

BI 121 Lab 1, Histology = Microscopic Study of Tissues

I. Lab Roster Cards & Staff Introduction

II. Requirements Attendance, Participation, Worksheets

III. Histology for Beginners In Memory of Harry Howard

IV. Microscope Familiarity

A. Objectives/nosepieces – power up!

B. Focus – coarse and fine

C. Movement – mechanical stage

D. How do I put a slide on the stage?

E. Adjusting for eye width



...My what fun it is to see –
hooray, hooray, his-tol-o-gy!!

V. View & Have Fun! See also photos @ front & scopes in back. Please ask questions & come see us!

Histology for Beginners

In Memory of Harrison Howard
Former Director, Bio-optical Lab

Nerve conducts!

Input
Dendrites \equiv
Antennae

Controller
Soma \equiv
NCB

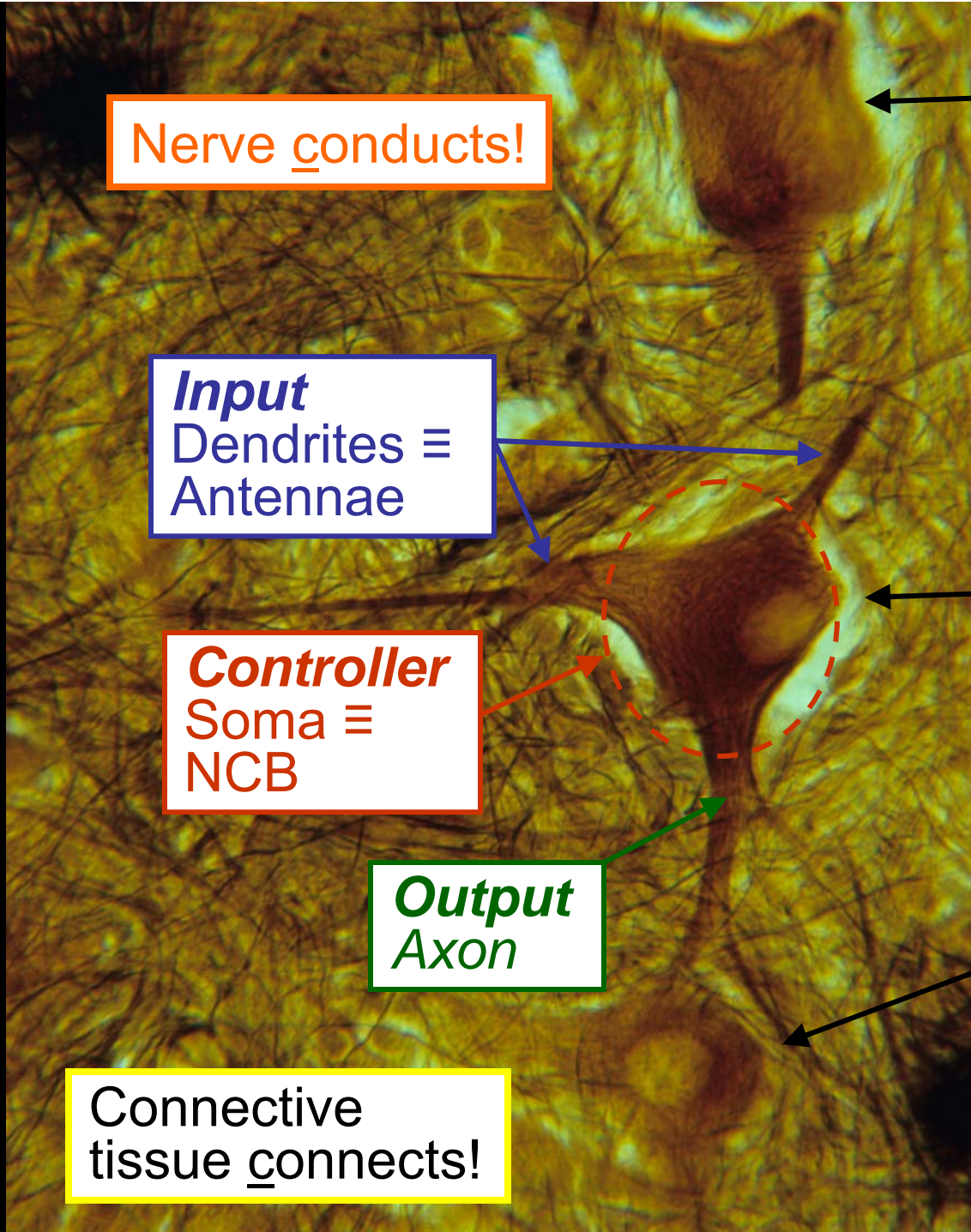
Output
Axon

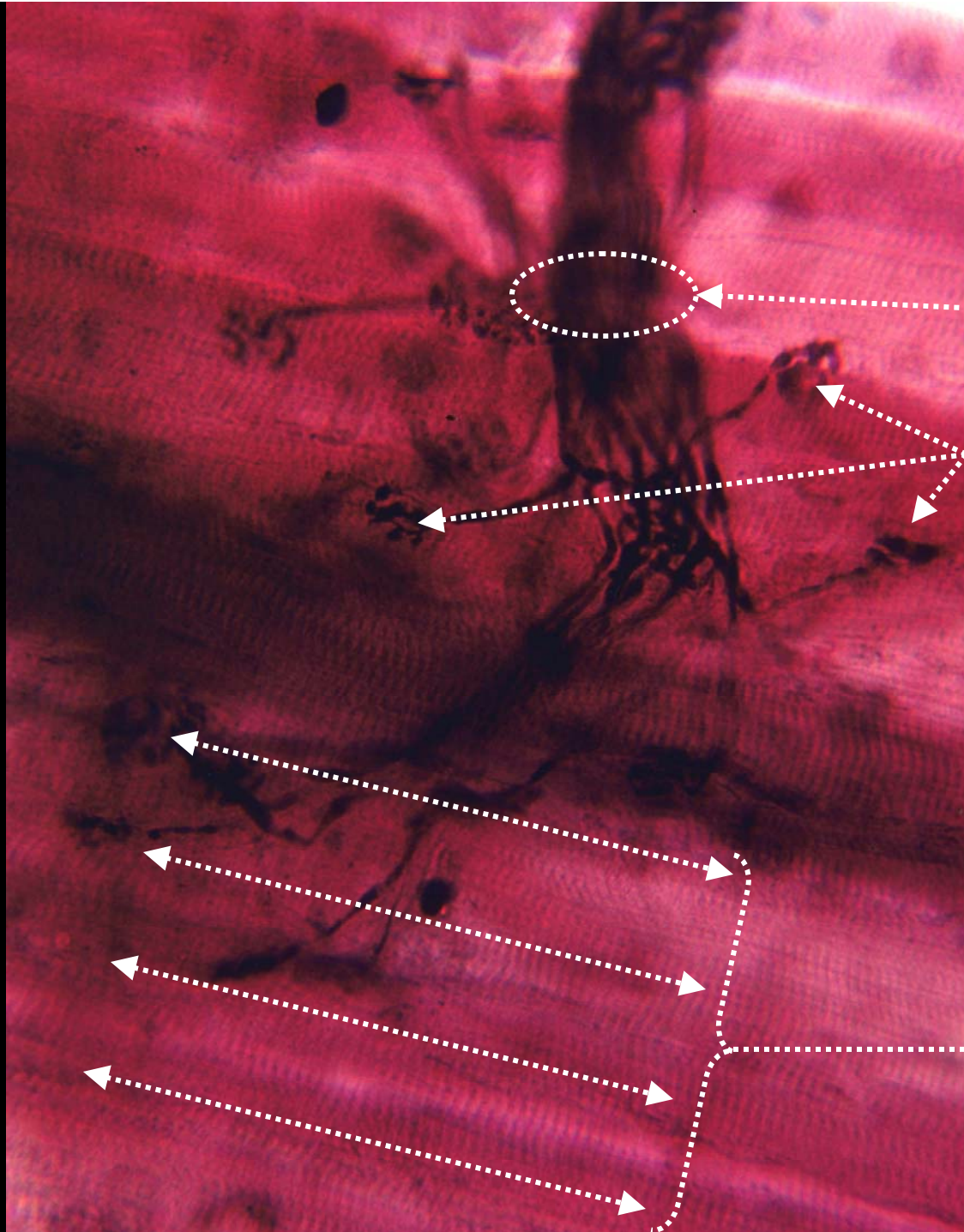
Connective
tissue connects!

Neuron 1

Neuron 2

Neuron 3



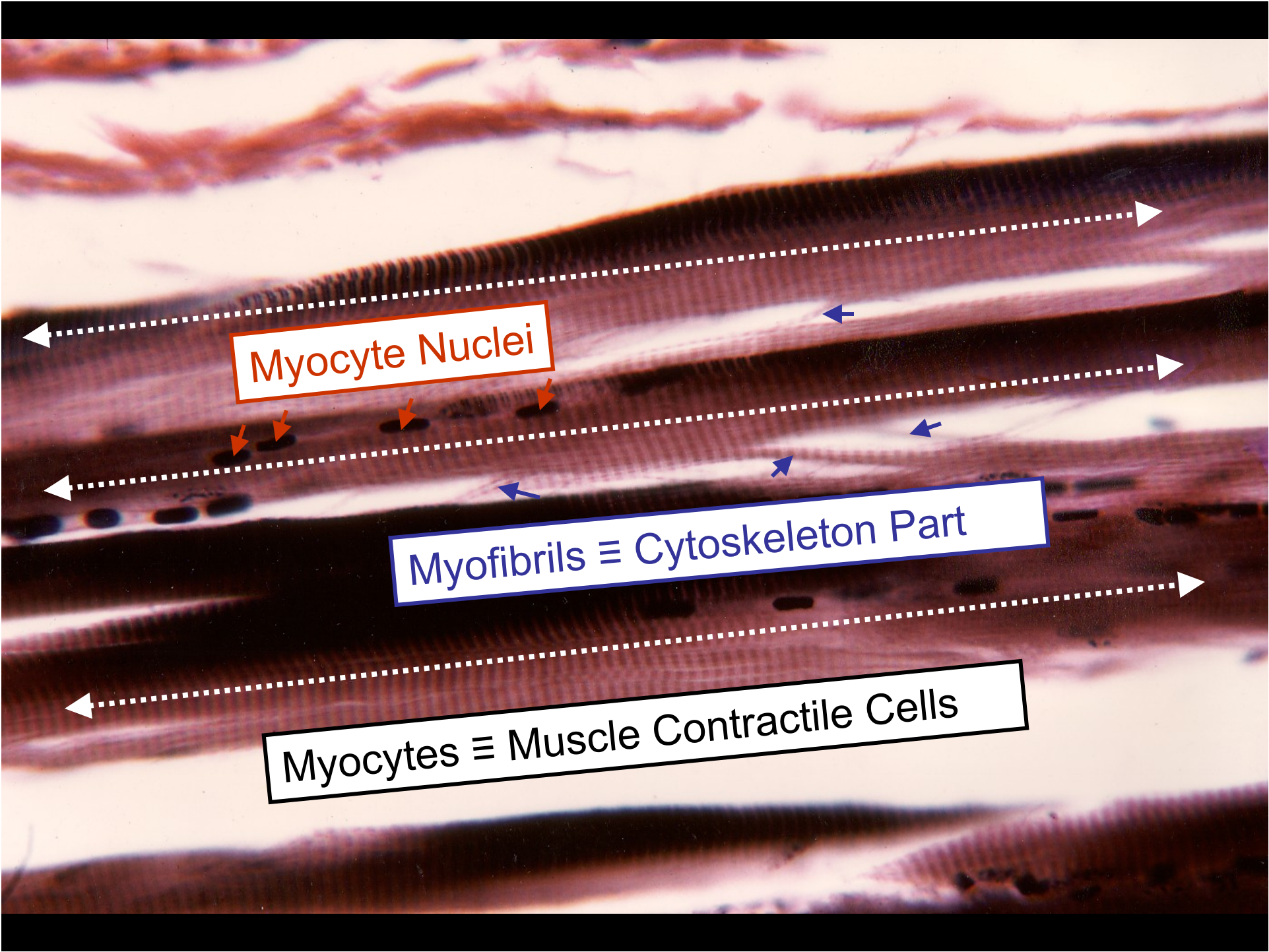


Controllers \equiv
NCBs/somas
not pictured \rightarrow
in spinal cord

Output \equiv Axons

Bouton with
Neurotransmitter
Vesicles

Effectors \equiv
Target Organs
Voluntary
Skeletal Muscle
Fibers



Myocyte Nuclei

Myofibrils ≡ Cytoskeleton Part

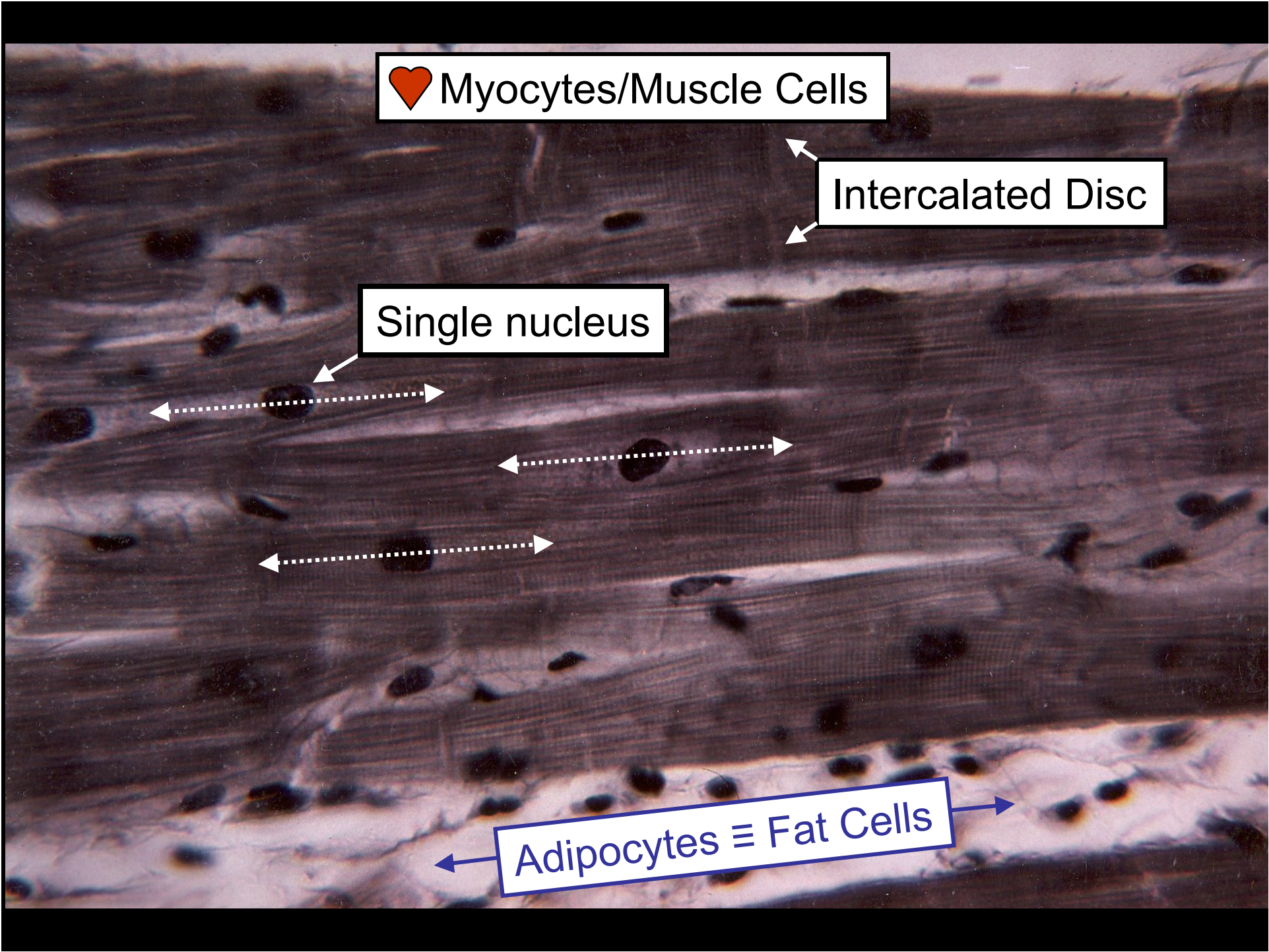
Myocytes ≡ Muscle Contractile Cells

♥ Myocytes/Muscle Cells

Intercalated Disc

Single nucleus

Adipocytes ≡ Fat Cells



Frog Skin

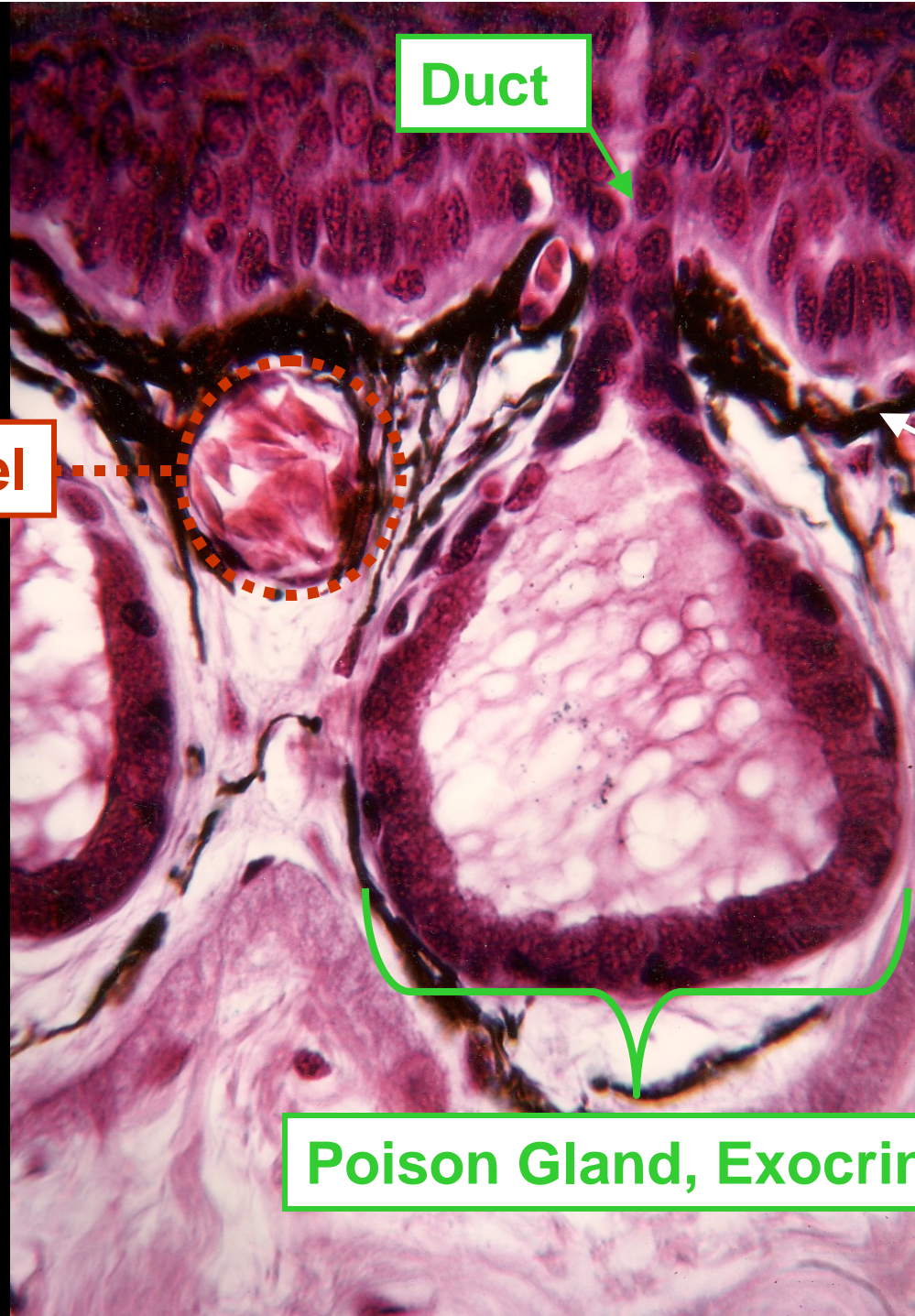
Duct

Columnar Epithelium

Blood Vessel

Melanin Pigment layer

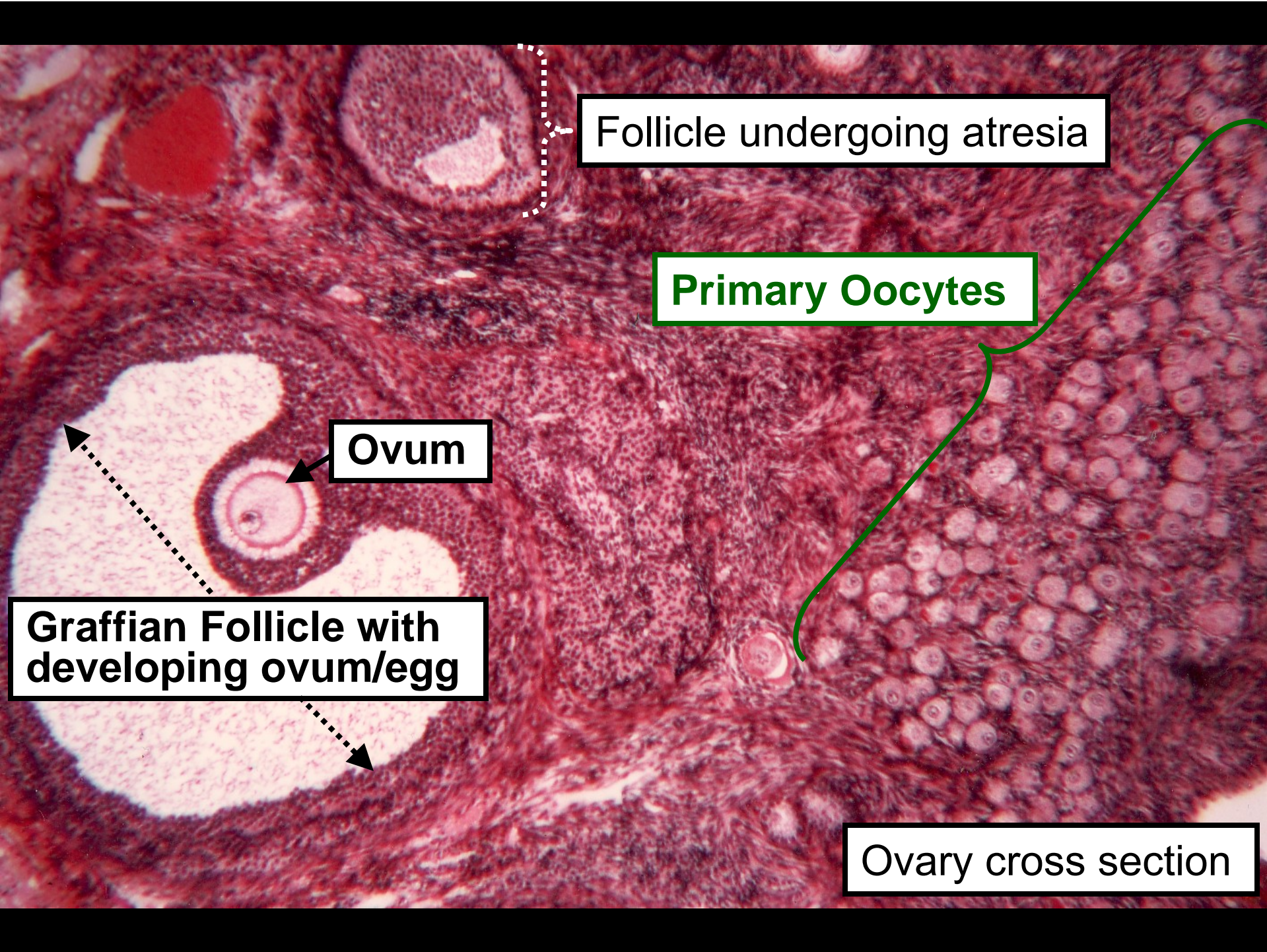
Poison Gland, Exocrine



Columnar Epithelium, Gall Bladder



Epithelial tissue covers & is specialized for transport!



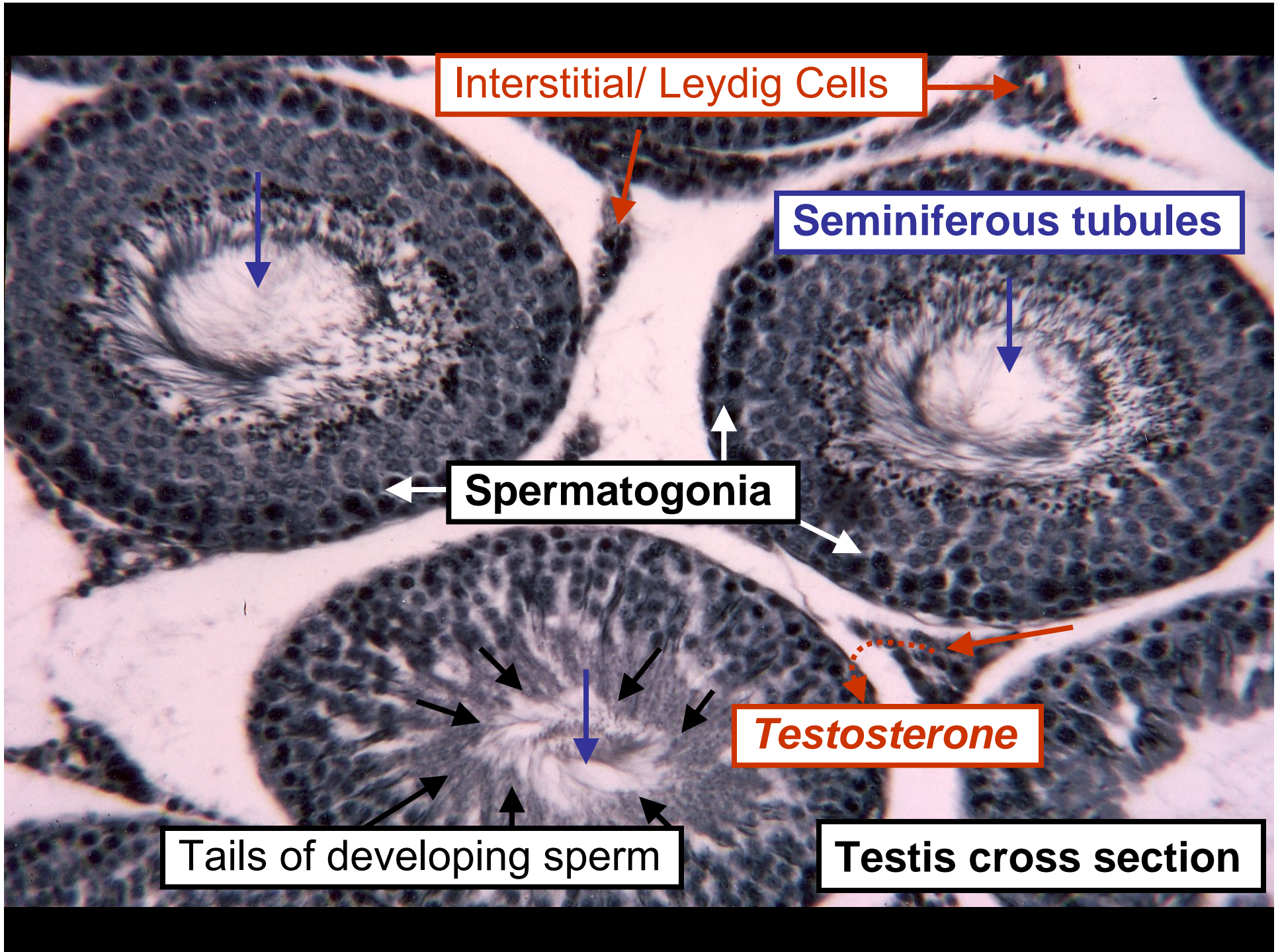
Follicle undergoing atresia

Primary Oocytes

Ovum

Graafian Follicle with developing ovum/egg

Ovary cross section



Interstitial/ Leydig Cells

Seminiferous tubules

Spermatogonia

Testosterone

Tails of developing sperm

Testis cross section

Nuclei of fibroblasts

This is a light micrograph of connective tissue. The background is a pinkish-purple matrix. Scattered throughout are dark, oval-shaped spots representing the nuclei of fibroblasts. Several thin, dark, wavy lines are visible, representing collagen fibers. A few thicker, darker, and more irregularly shaped structures represent elastin fibers. The overall appearance is that of a loose, fibrous network.

Elastin

Collagen

**Connective tissue...
connects!!**

Connective tissue

A histological section of the testis, stained with hematoxylin and eosin (H&E). The image shows several seminiferous tubules in cross-section. Each tubule is lined by a stratified germinal epithelium, with spermatogonia at the basement membrane and developing sperm cells towards the lumen. The interstitial space between the tubules contains various cell types, including Leydig cells and fibroblasts. The overall structure is organized into lobules separated by connective tissue septa.

Now, try to identify anatomical site & tissues!