

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!

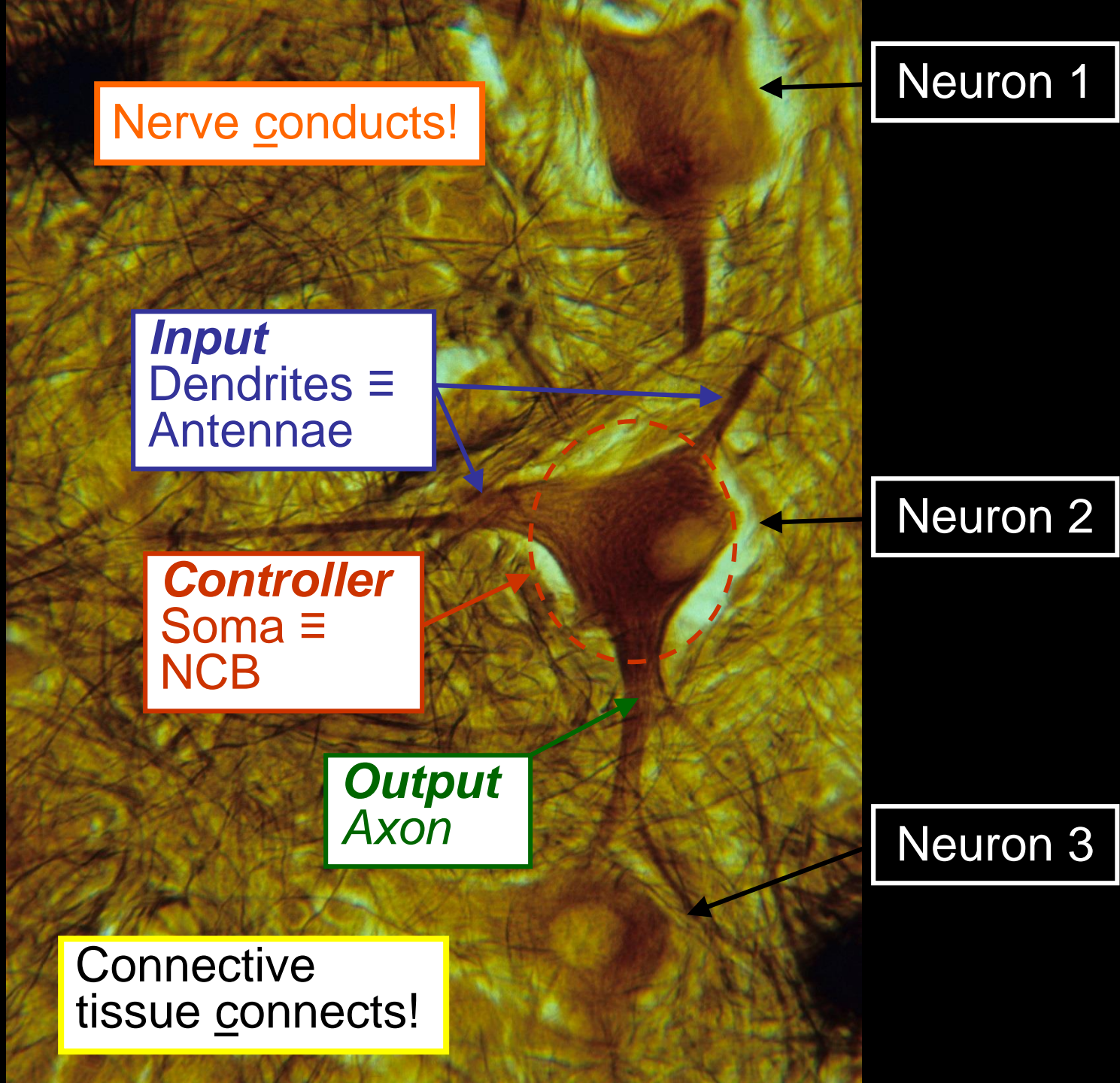
1. Put the e & i slide upright on the microscope tray so you can read it & see how looking through the scope changes what you see.



2. Use the remaining time simply to explore nerve, muscle, epithelial & connective tissues – really anything you want – just be sure to keep the slides in the tray in order! Thanks!

Histology for Beginners

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



Nerve conducts!

Input
Dendrites ≡
Antennae

Controller
Soma ≡
NCB

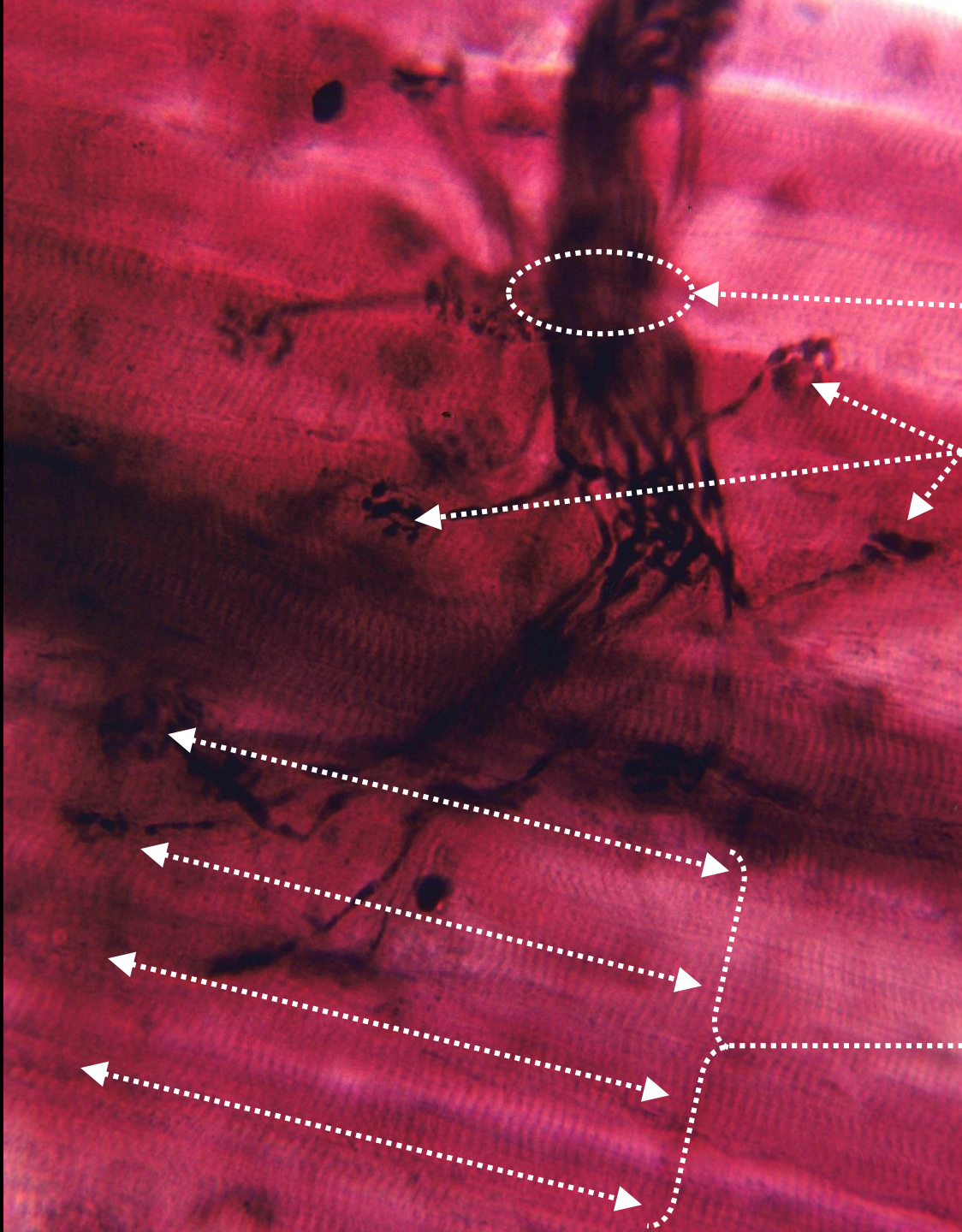
Output
Axon

Connective
tissue connects!

Neuron 1

Neuron 2

Neuron 3

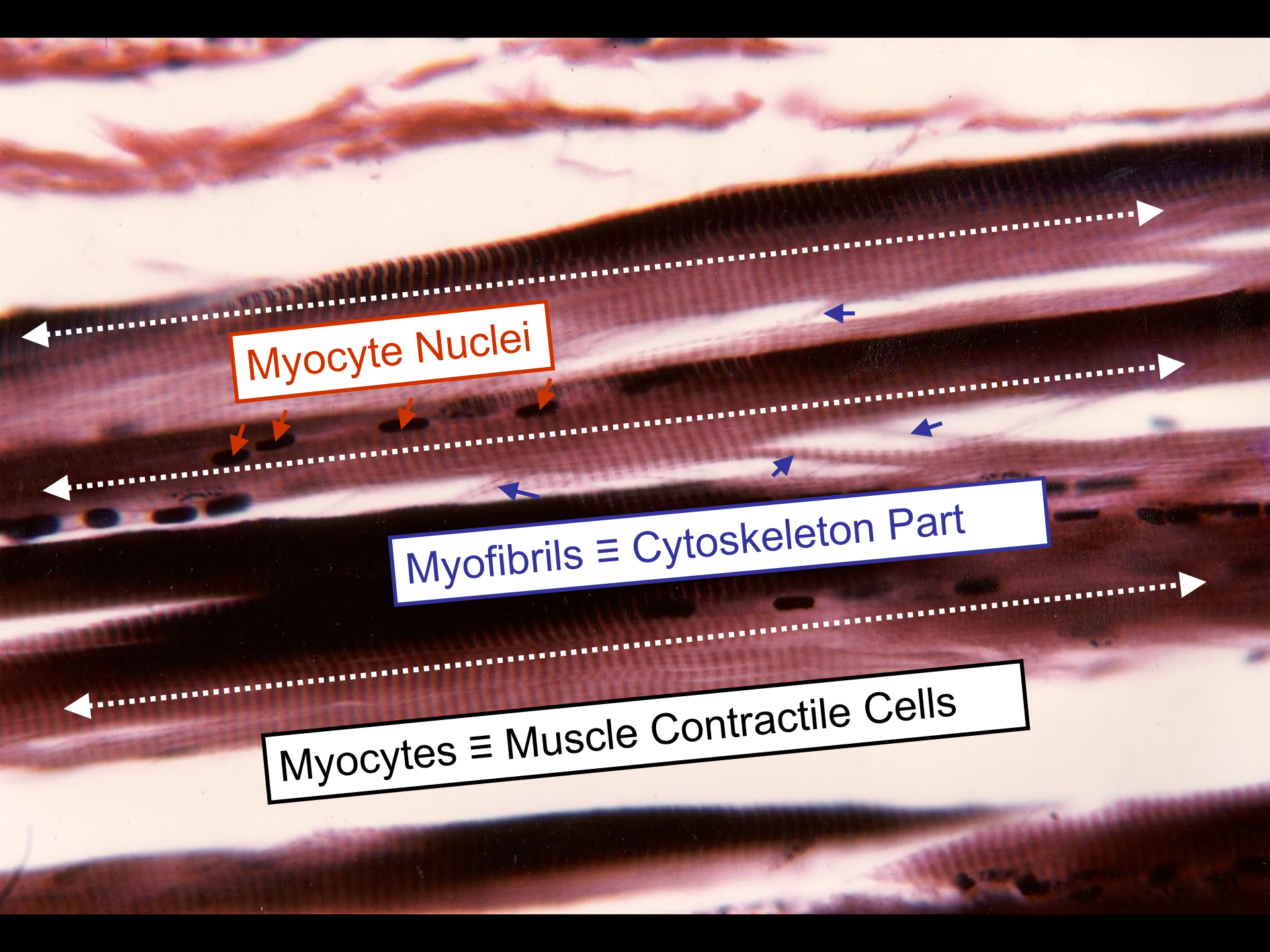


Controllers \equiv
NCBs/somas
not pictured \rightarrow
in spinal cord

Output \equiv Axons

Bouton with
Neurotransmitter
Vesicles

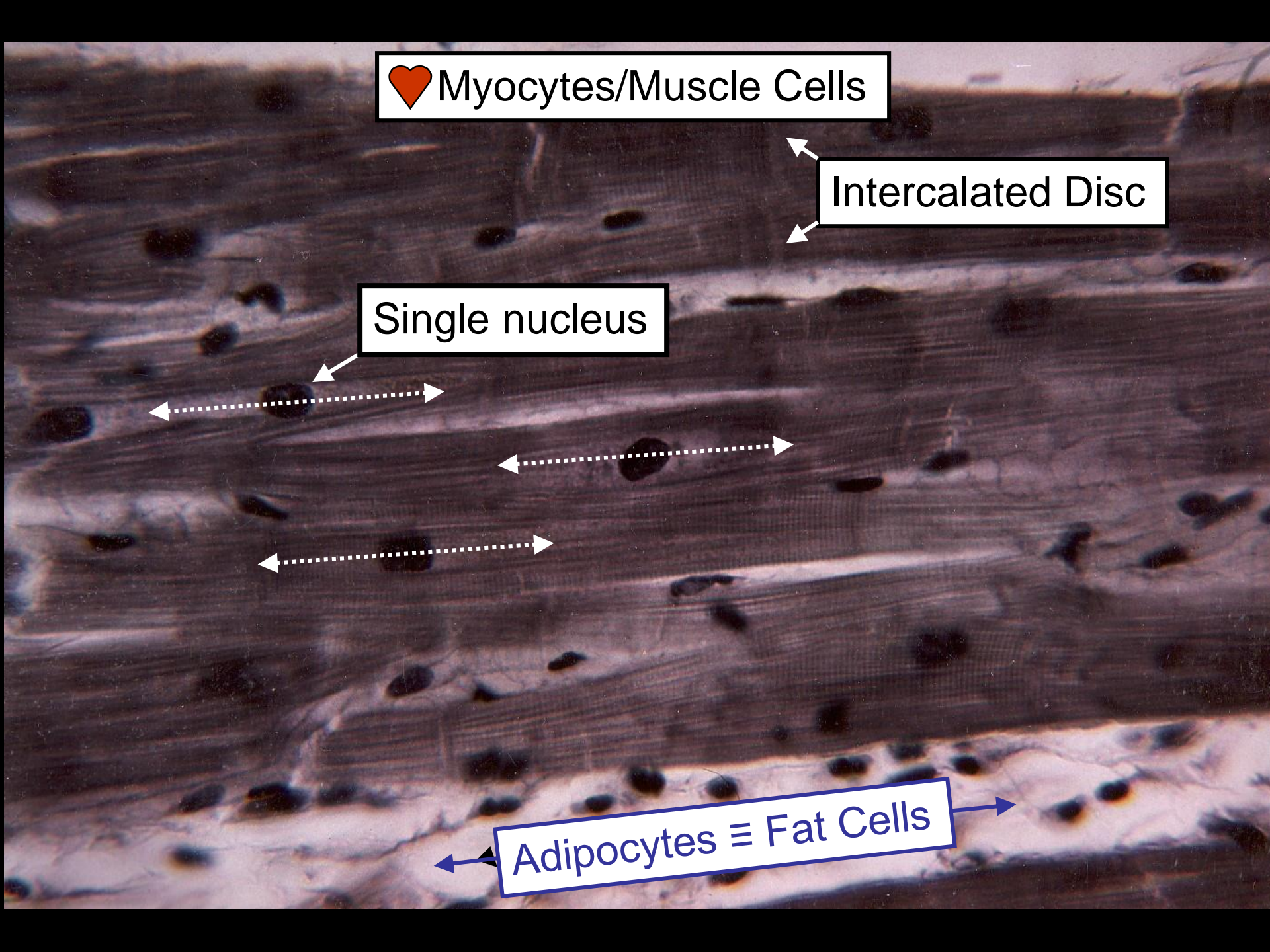
Effectors \equiv
Target Organs
Voluntary
Skeletal Muscle
Fibers



Myocyte Nuclei

Myofibrils ≡ Cytoskeleton Part

Myocytes ≡ Muscle Contractile Cells



♥ Myocytes/Muscle Cells

Intercalated Disc

Single nucleus

Adipocytes ≡ Fat Cells

Frog Skin

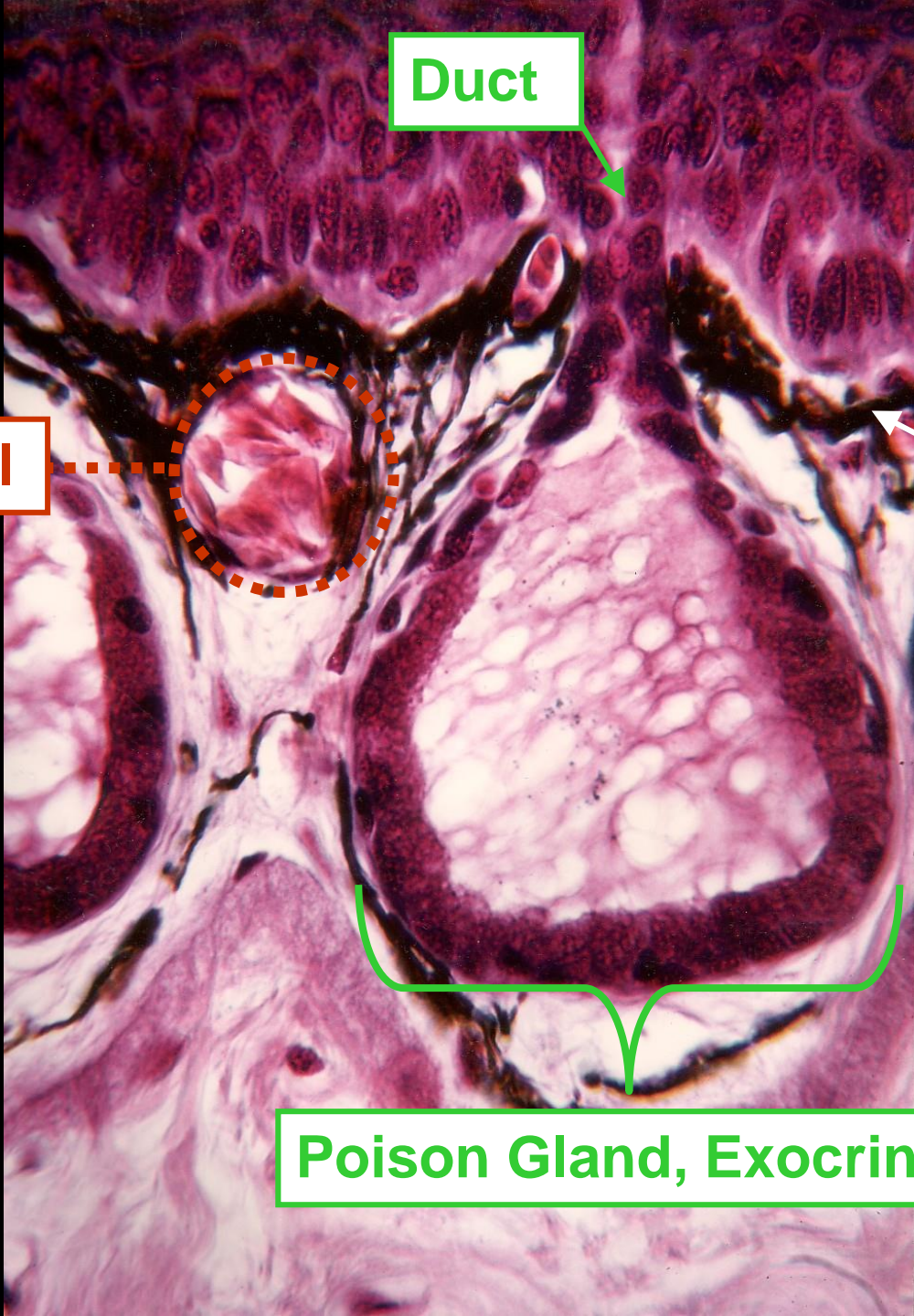
Duct

Columnar Epithelium

Blood Vessel

Melanin Pigment layer

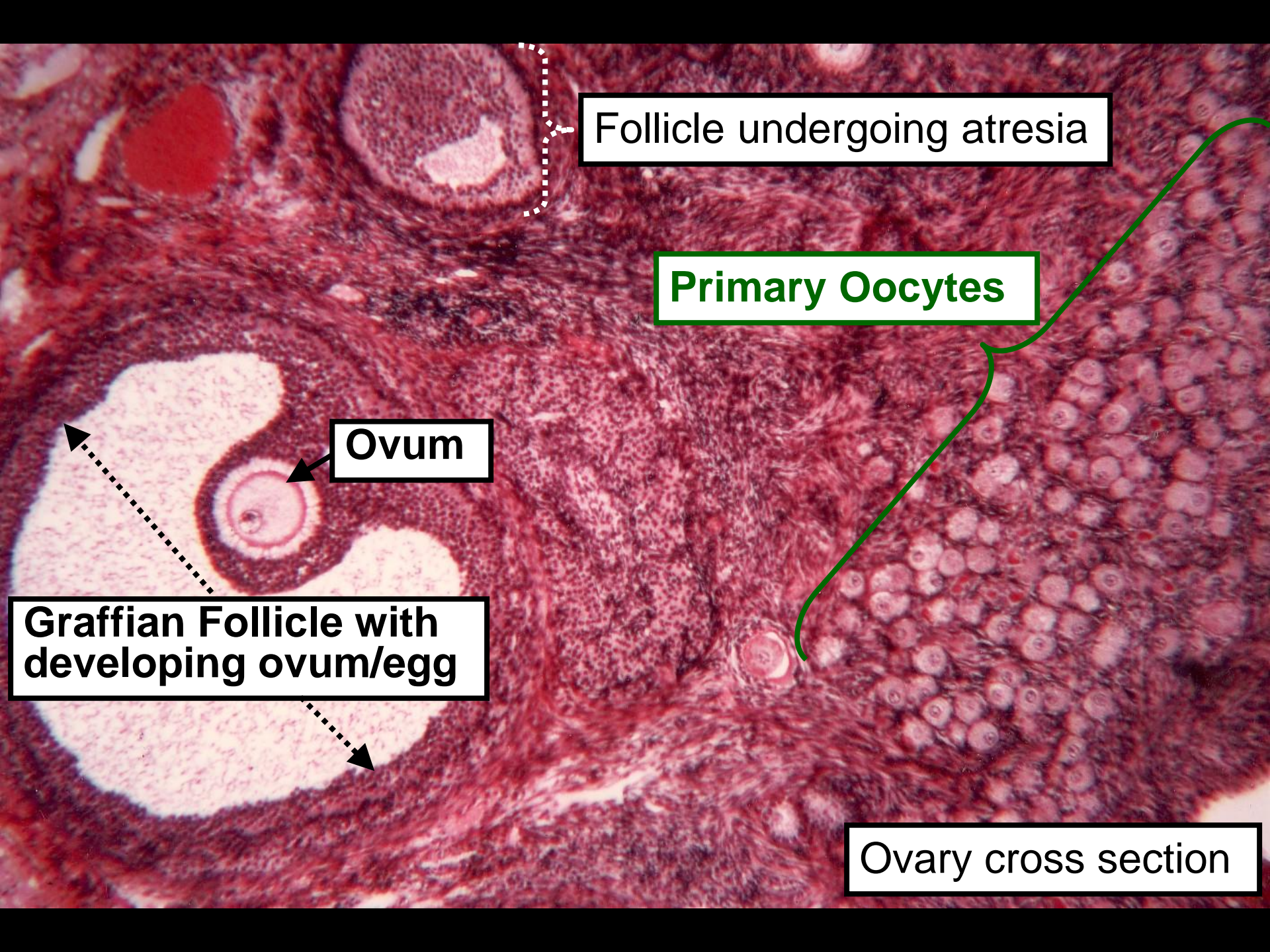
Poison Gland, Exocrine



Columnar Epithelium, Gall Bladder



Epithelial tissue covers & is specialized for transport!



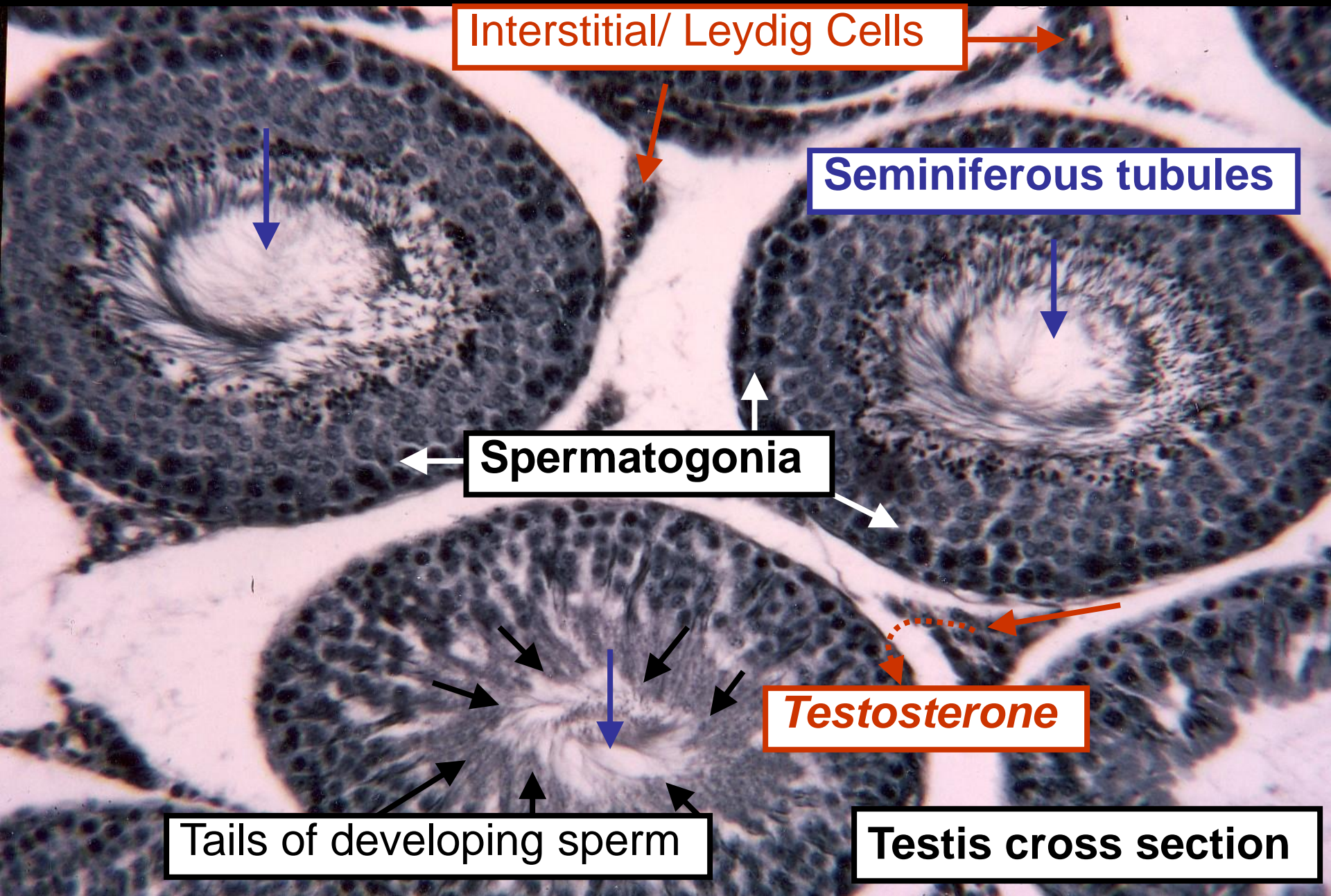
Follicle undergoing atresia

Primary Oocytes

Ovum

Graffian Follicle with developing ovum/egg

Ovary cross section



Nuclei of fibroblasts

This micrograph shows a network of fibers and cells. The background is a pinkish-purple hue. Several dark, oval-shaped nuclei are scattered throughout. A dense network of fibers is visible, with some thicker, more organized bundles and some thinner, more haphazard strands. Labels with arrows point to specific features: white arrows point to dark nuclei, blue arrows point to thin fibers, orange arrows point to thicker bundles, and a dashed orange circle highlights a specific area.

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, arranged in a circular pattern. Each tubule is filled with developing sperm cells at various stages of maturation. The tubules are separated by interstitial tissue, which contains Leydig cells and blood vessels. The overall structure is organized into lobules.

Now, try to identify anatomical site & tissues!