

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 \equiv
Antennae

Controller
Soma \equiv
NCB

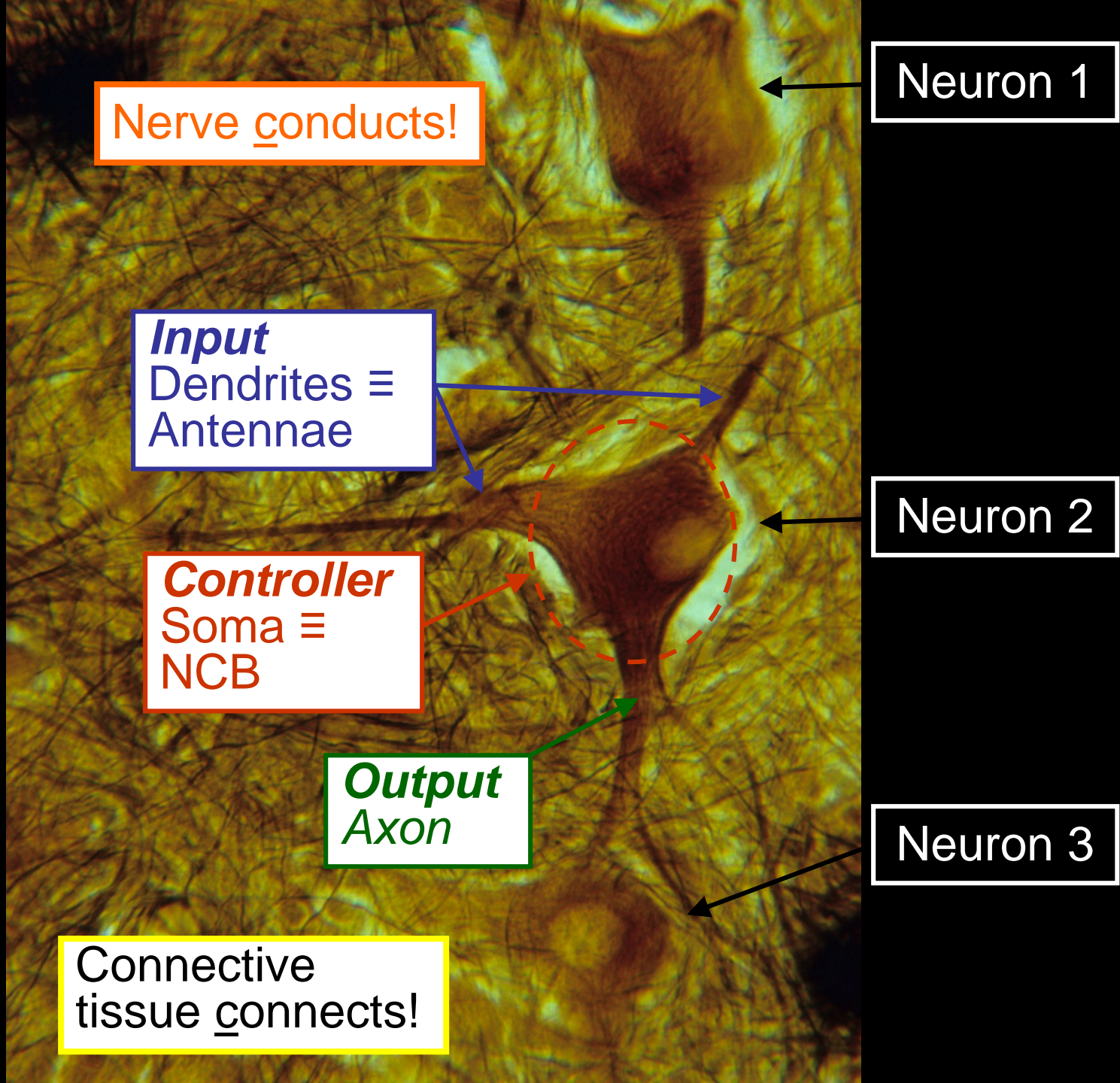
Output
Axon

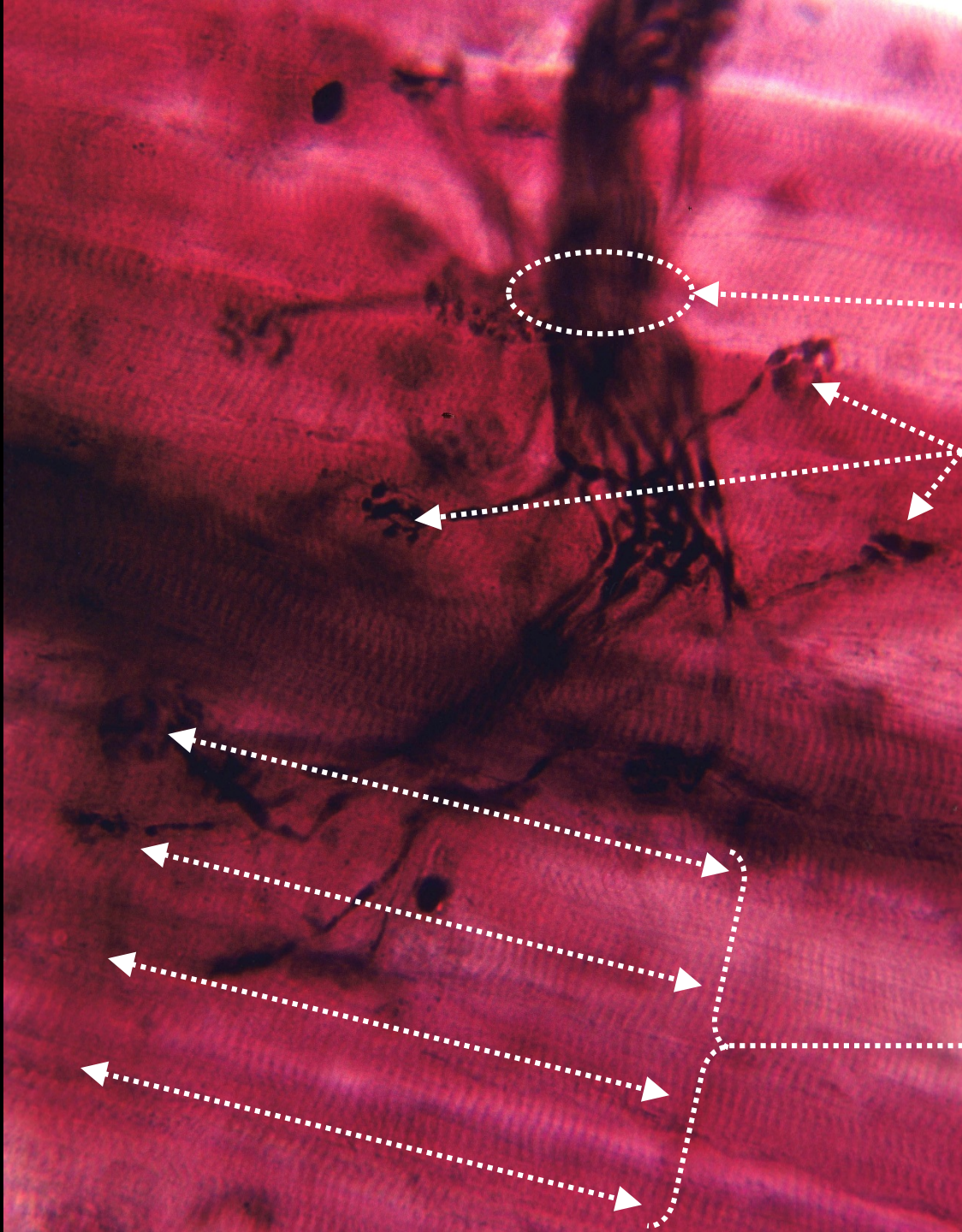
Connective
tissue connects!

Neuron 1

Neuron 2

Neuron 3



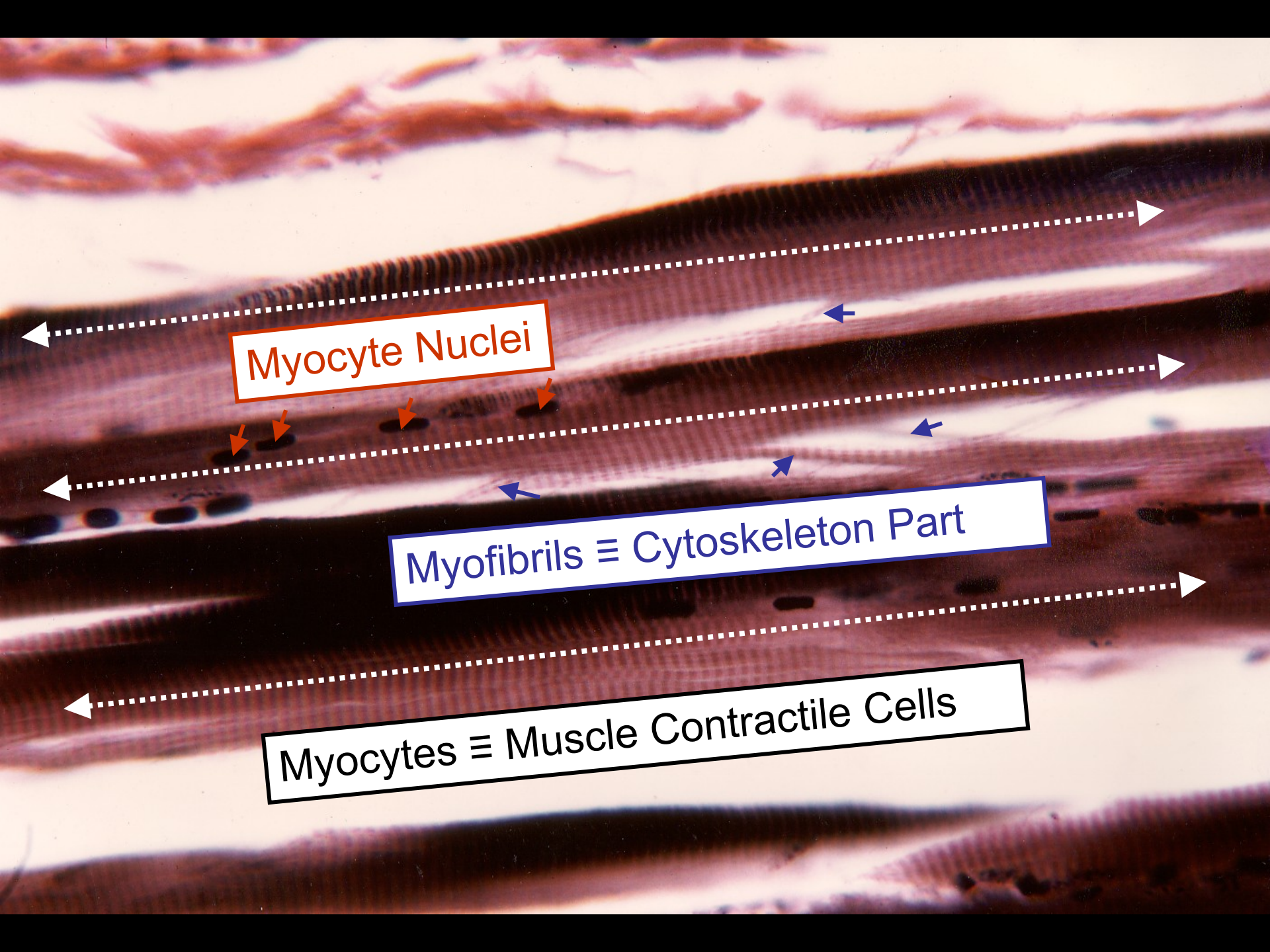


Controllers ≡
NCBs/somas
not pictured →
in spinal cord

Output ≡ Axons

Bouton with
Neurotransmitter
Vesicles

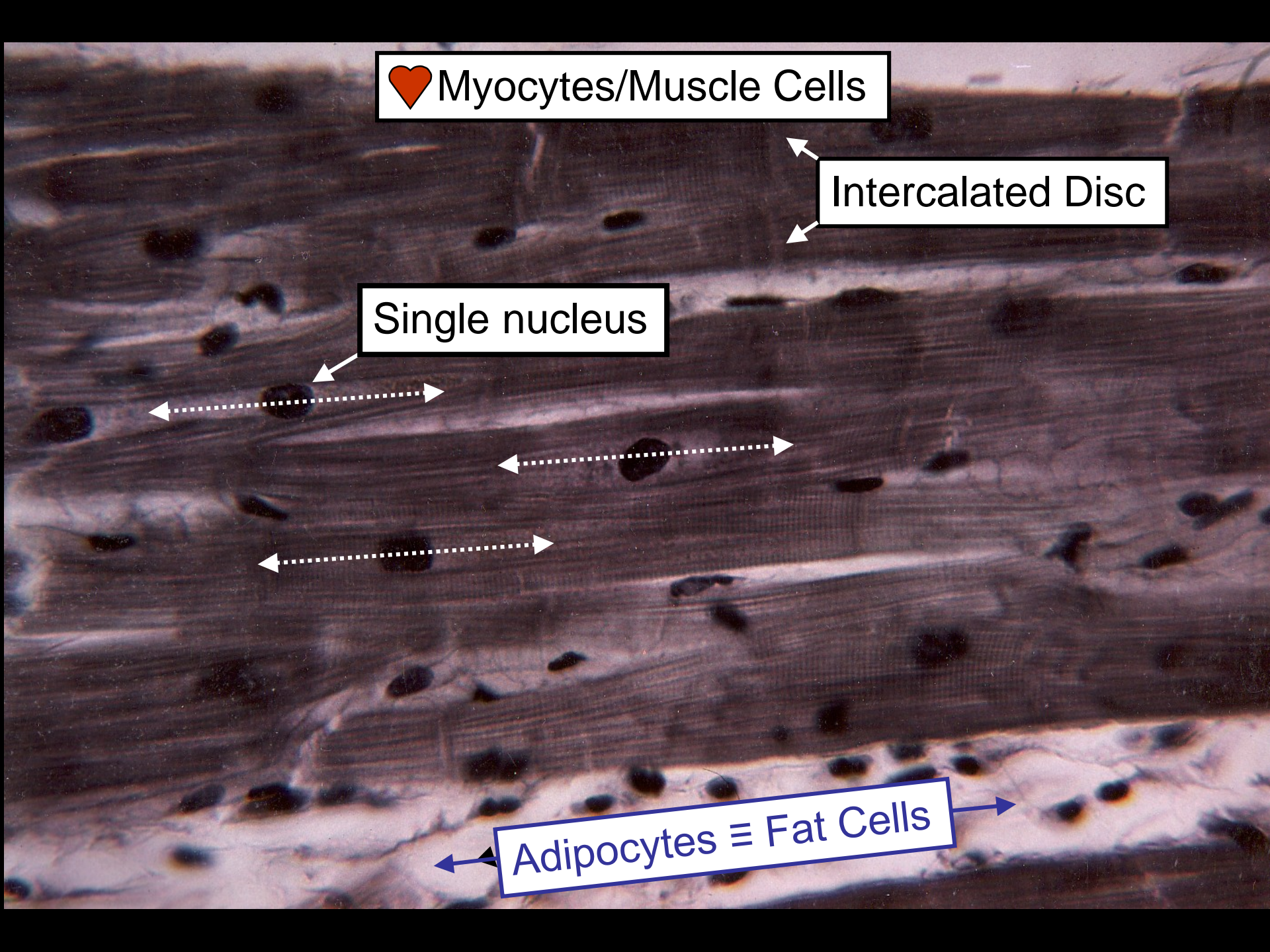
Effectors ≡
Target Organs
Voluntary
Skeletal Muscle
Fibers



Myocyte Nuclei

Myofibrils ≡ Cytoskeleton Part

Myocytes ≡ Muscle Contractile Cells



♥ Myocytes/Muscle Cells

Intercalated Disc

Single nucleus

Adipocytes ≡ Fat Cells

Frog Skin

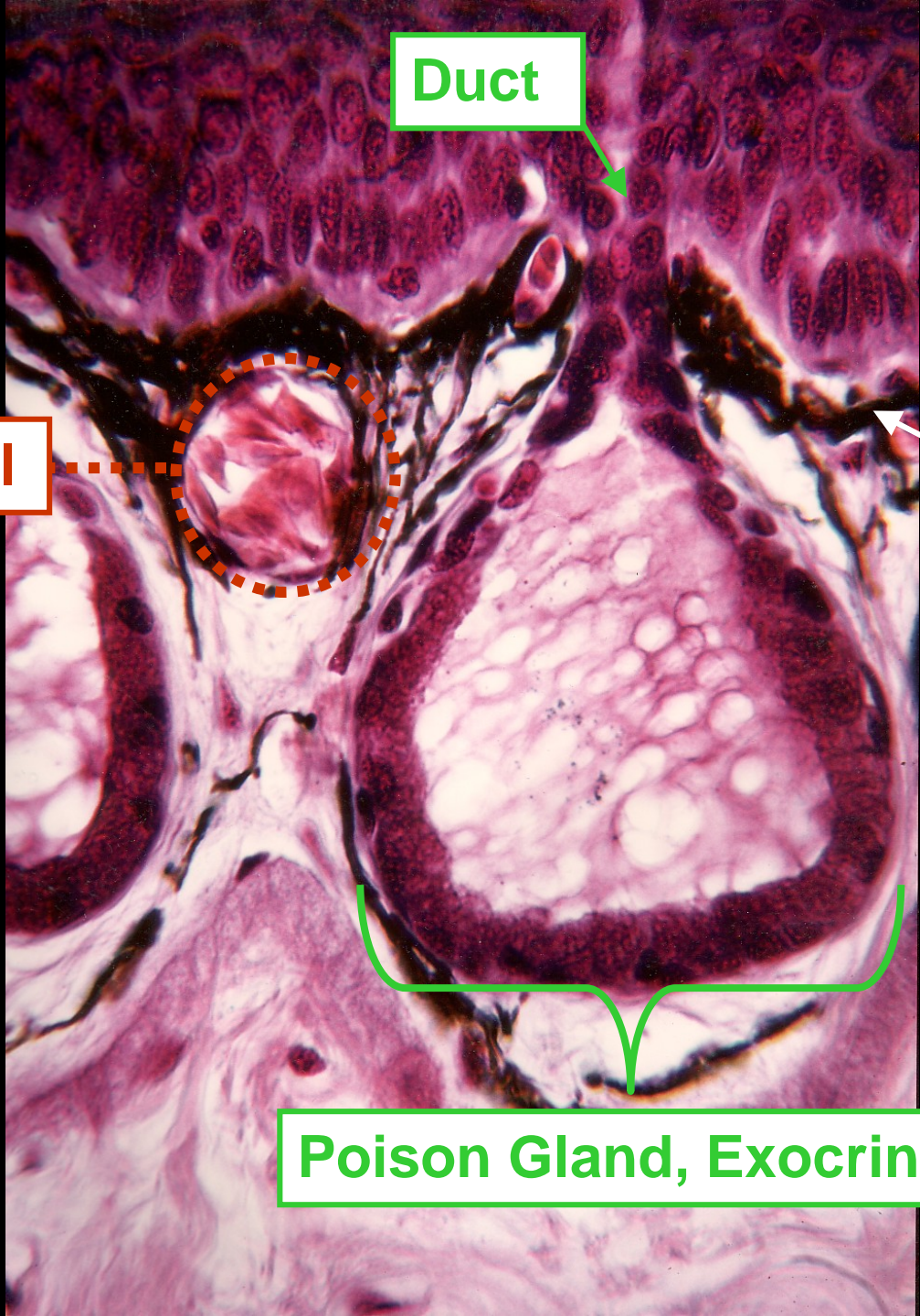
Duct

Columnar Epithelium

Blood Vessel

Melanin Pigment layer

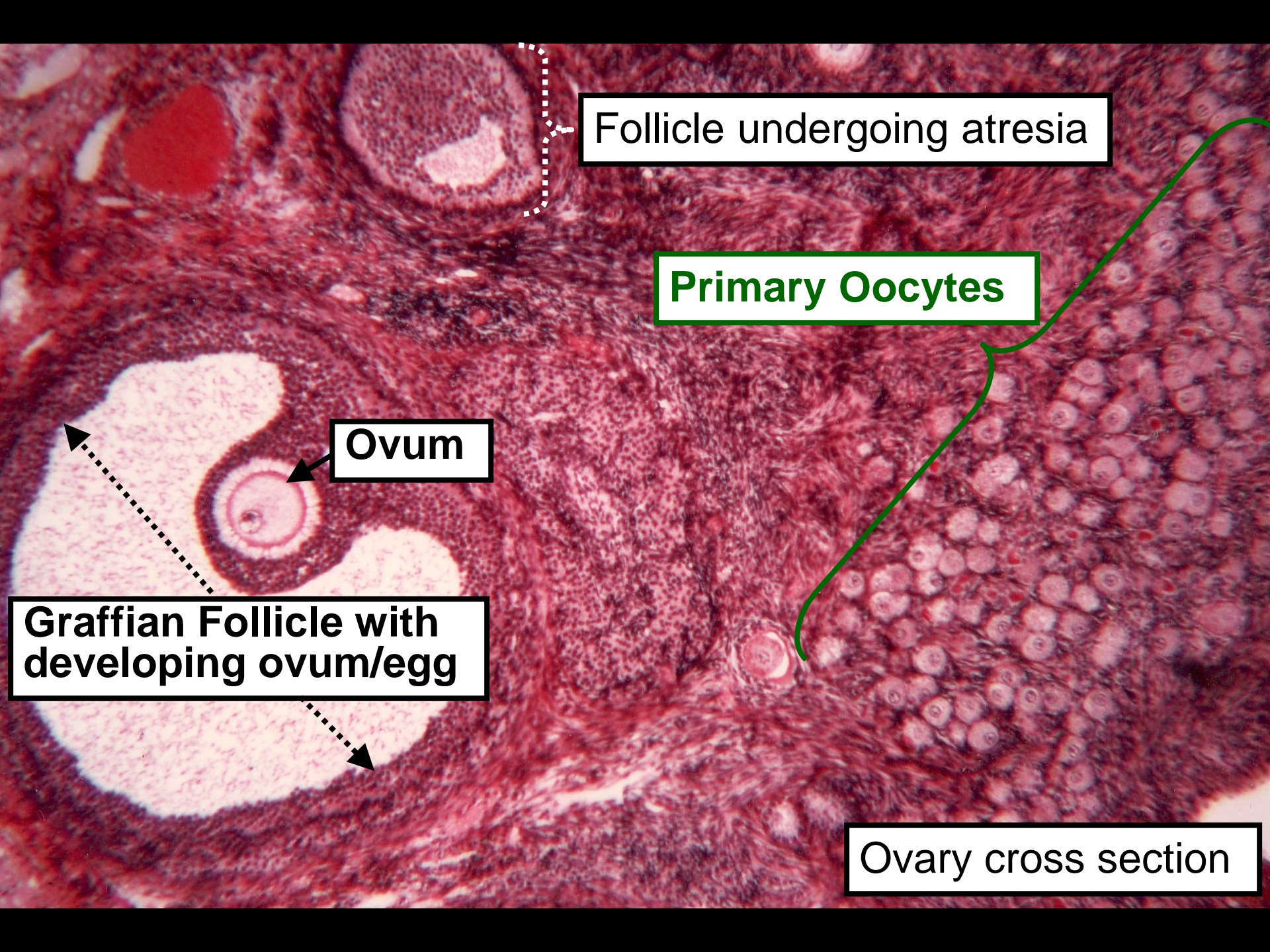
Poison Gland, Exocrine



Columnar Epithelium, Gall Bladder



Epithelial tissue covers & is specialized for transport!



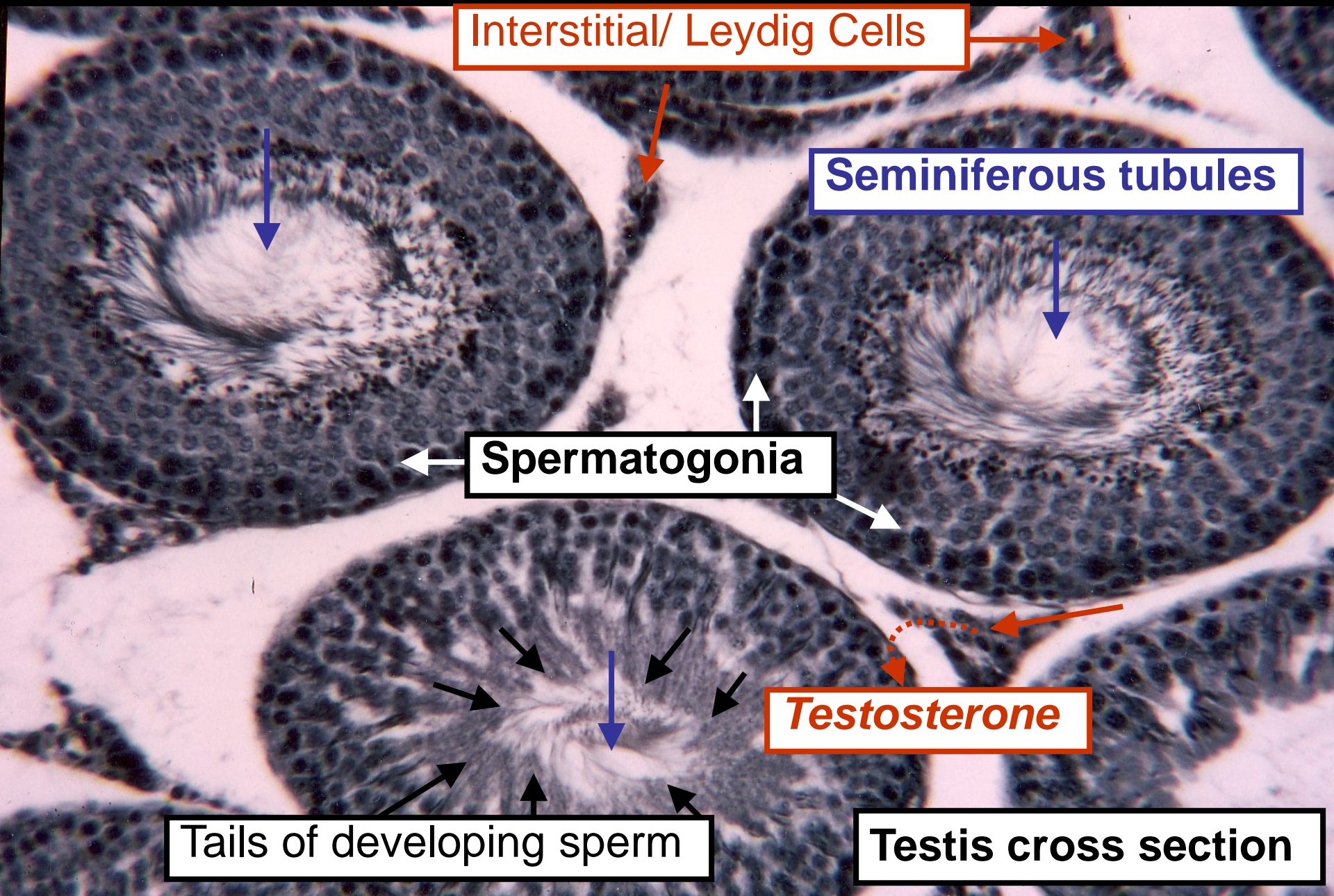
Follicle undergoing atresia

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

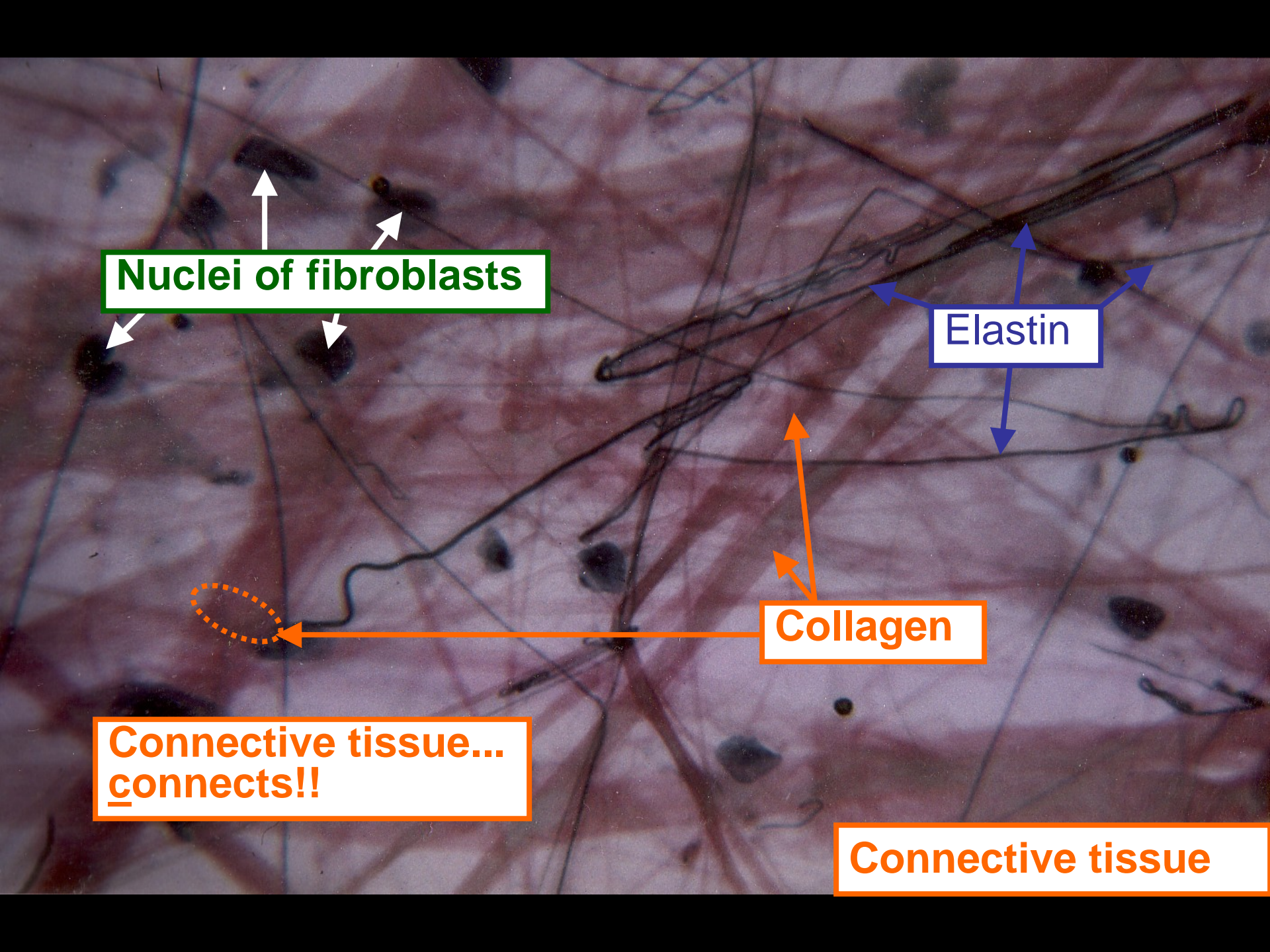
Nuclei of fibroblasts

Elastin

Collagen

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

Connective tissue



A histological section of a tissue, likely from the gastrointestinal tract, showing a complex arrangement of cells and structures. The tissue is stained with hematoxylin and eosin (H&E), showing various cellular components and connective tissue. A prominent feature is a large, irregularly shaped area with a dense population of small, dark-staining nuclei, possibly representing a glandular or epithelial structure. The surrounding tissue shows a mix of cell types and extracellular matrix. A central text box is overlaid on the image, containing the instruction: "Now, try to identify anatomical site & tissues!".

Now, try to identify anatomical site & tissues!