

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

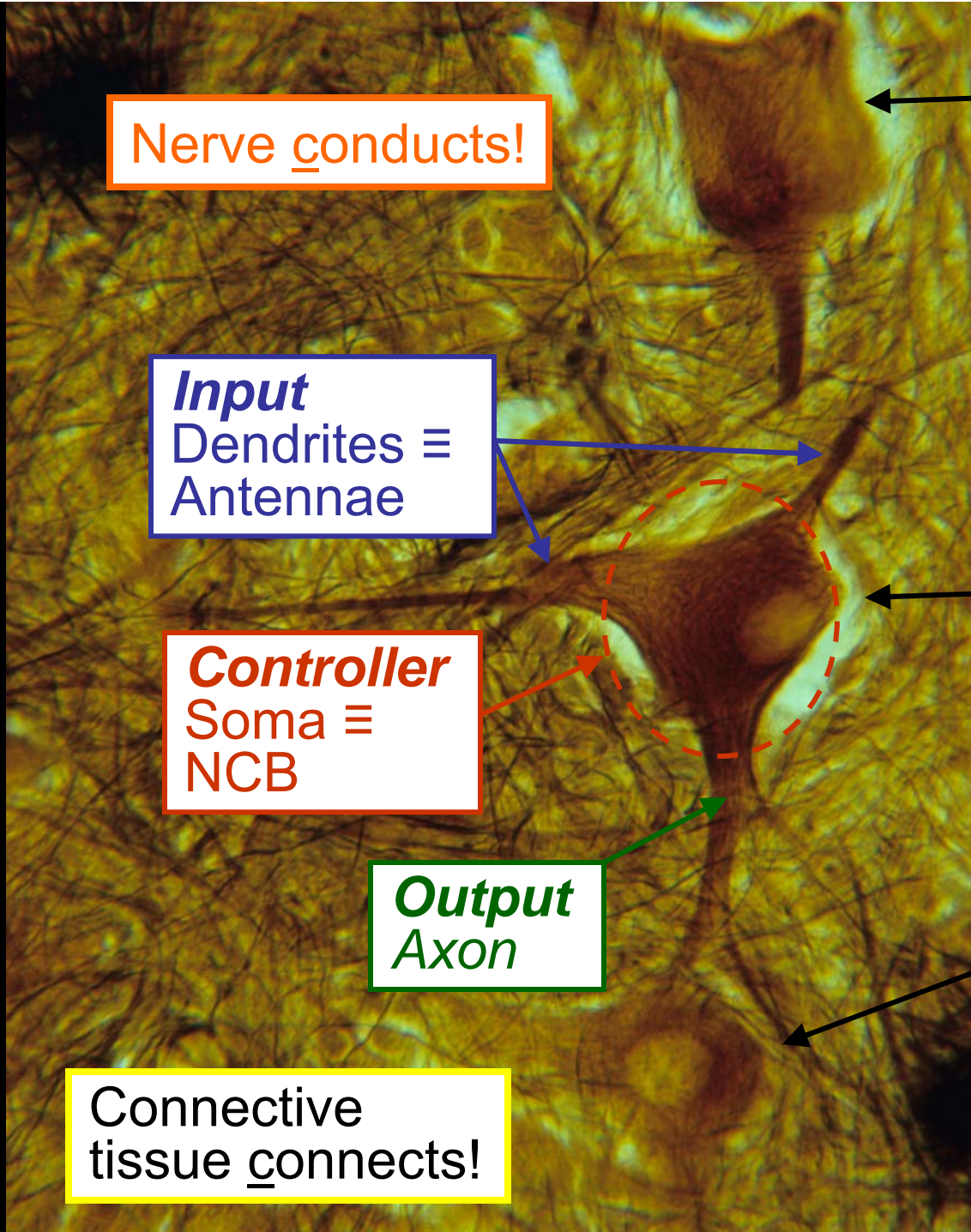
Output
Axon

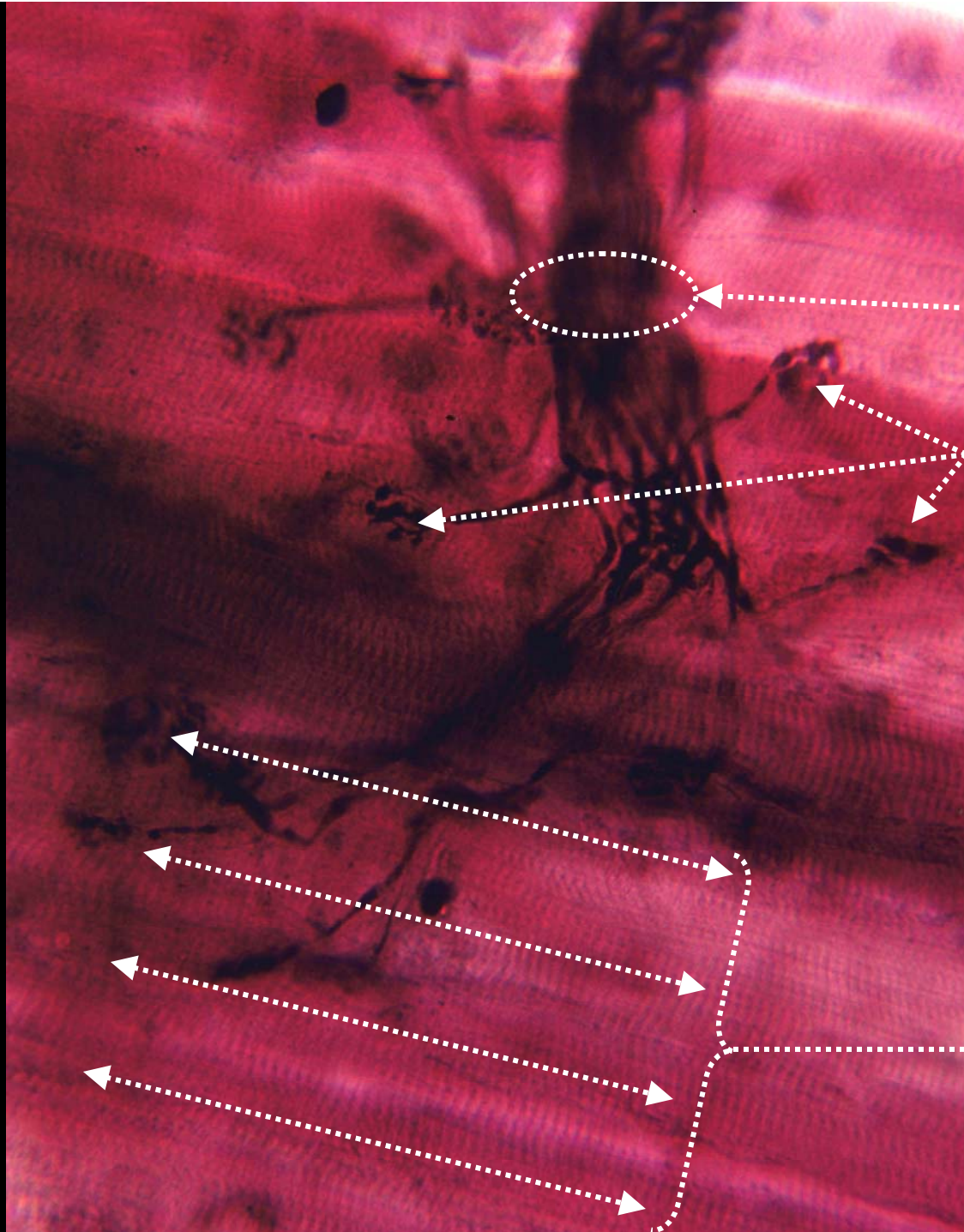
Connective
tissue connects!

Neuron 1

Neuron 2

Neuron 3



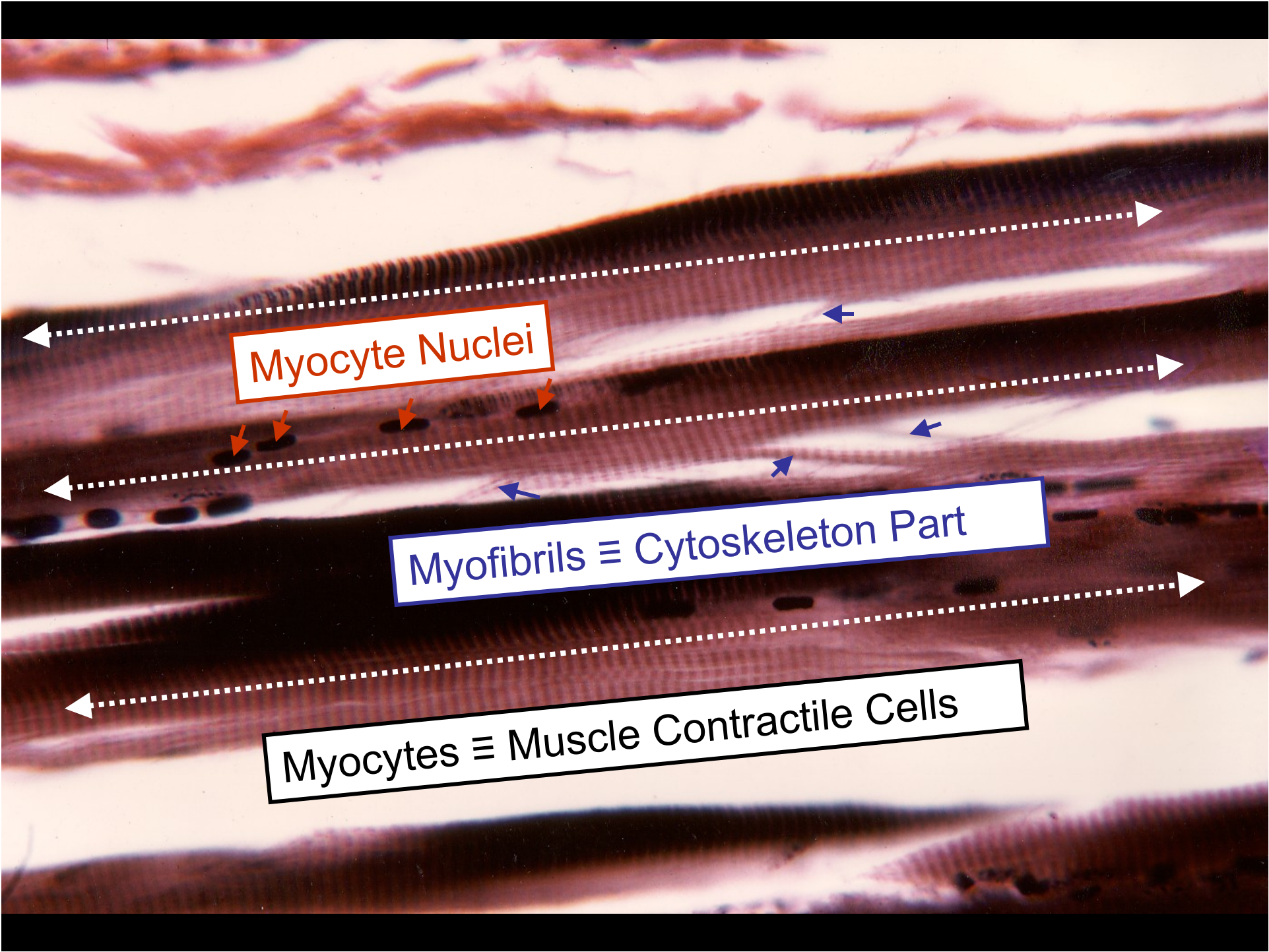


Controllers \equiv
NCBs/somas
not pictured \rightarrow
in spinal cord

Output \equiv Axons

Bouton with
Neurotransmitter
Vesicles

Effectors \equiv
Target Organs
Voluntary
Skeletal Muscle
Fibers



Myocyte Nuclei

Myofibrils ≡ Cytoskeleton Part

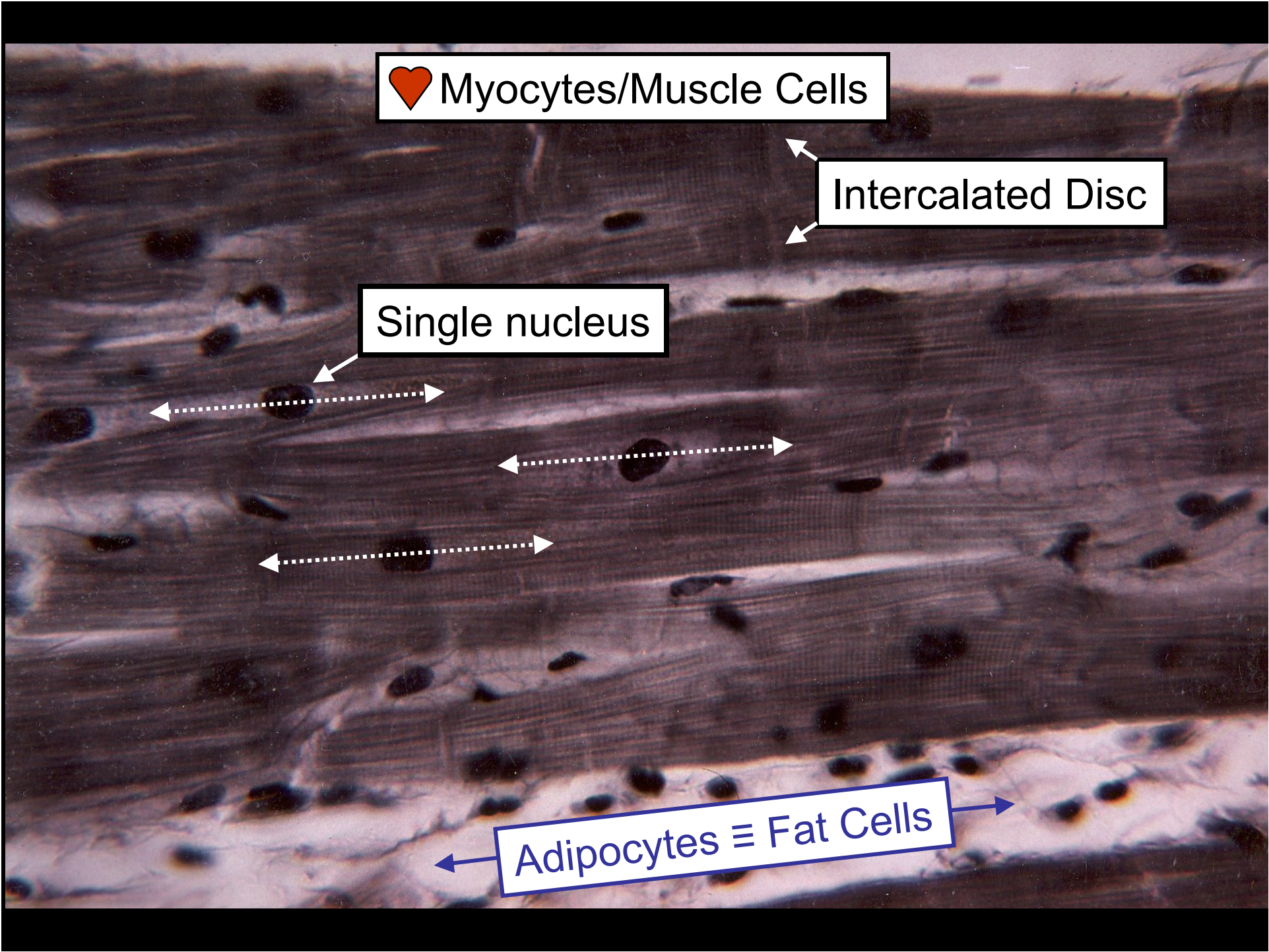
Myocytes ≡ Muscle Contractile Cells

♥ Myocytes/Muscle Cells

Intercalated Disc

Single nucleus

Adipocytes ≡ Fat Cells



Frog Skin

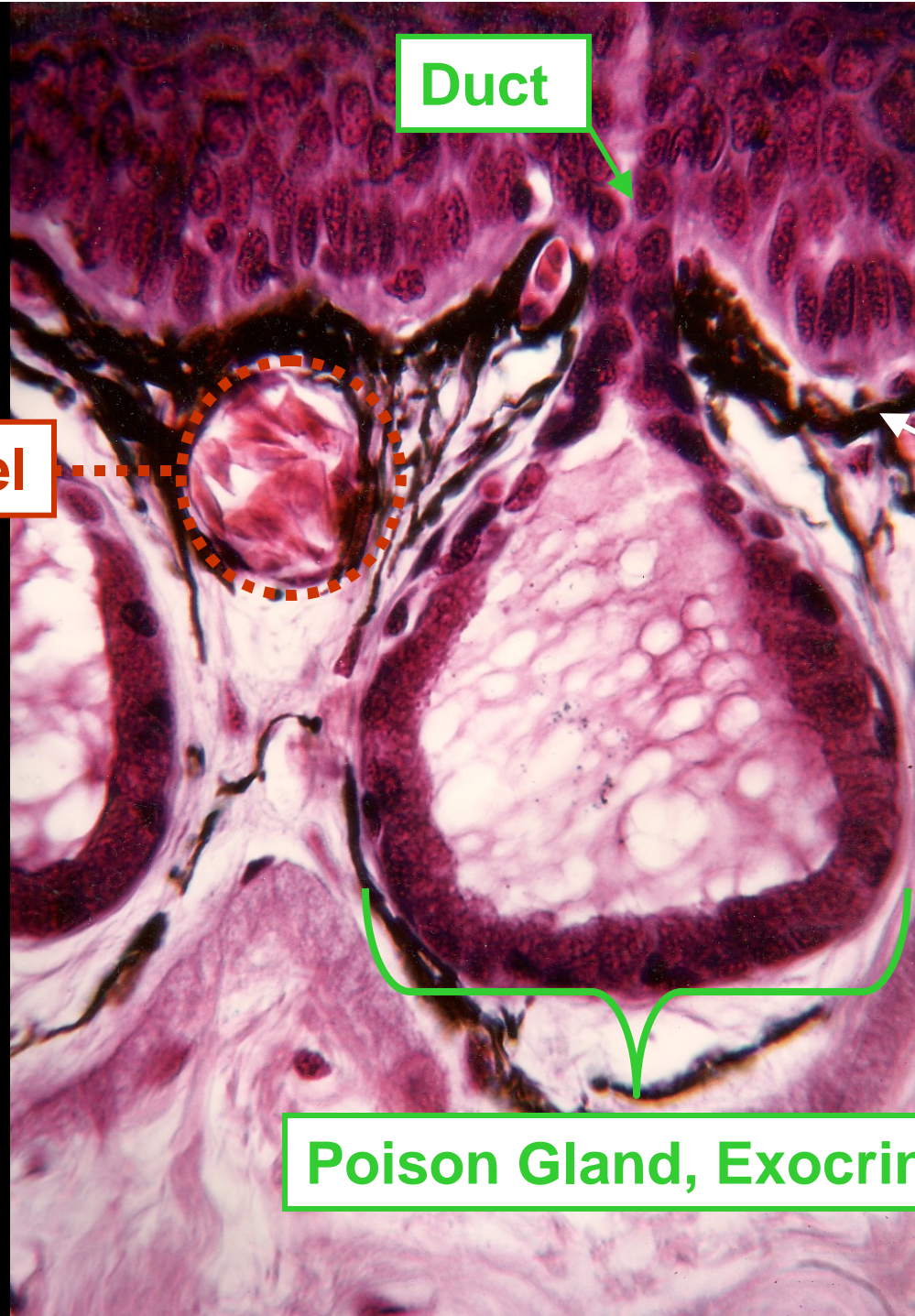
Duct

Columnar Epithelium

Blood Vessel

Melanin Pigment layer

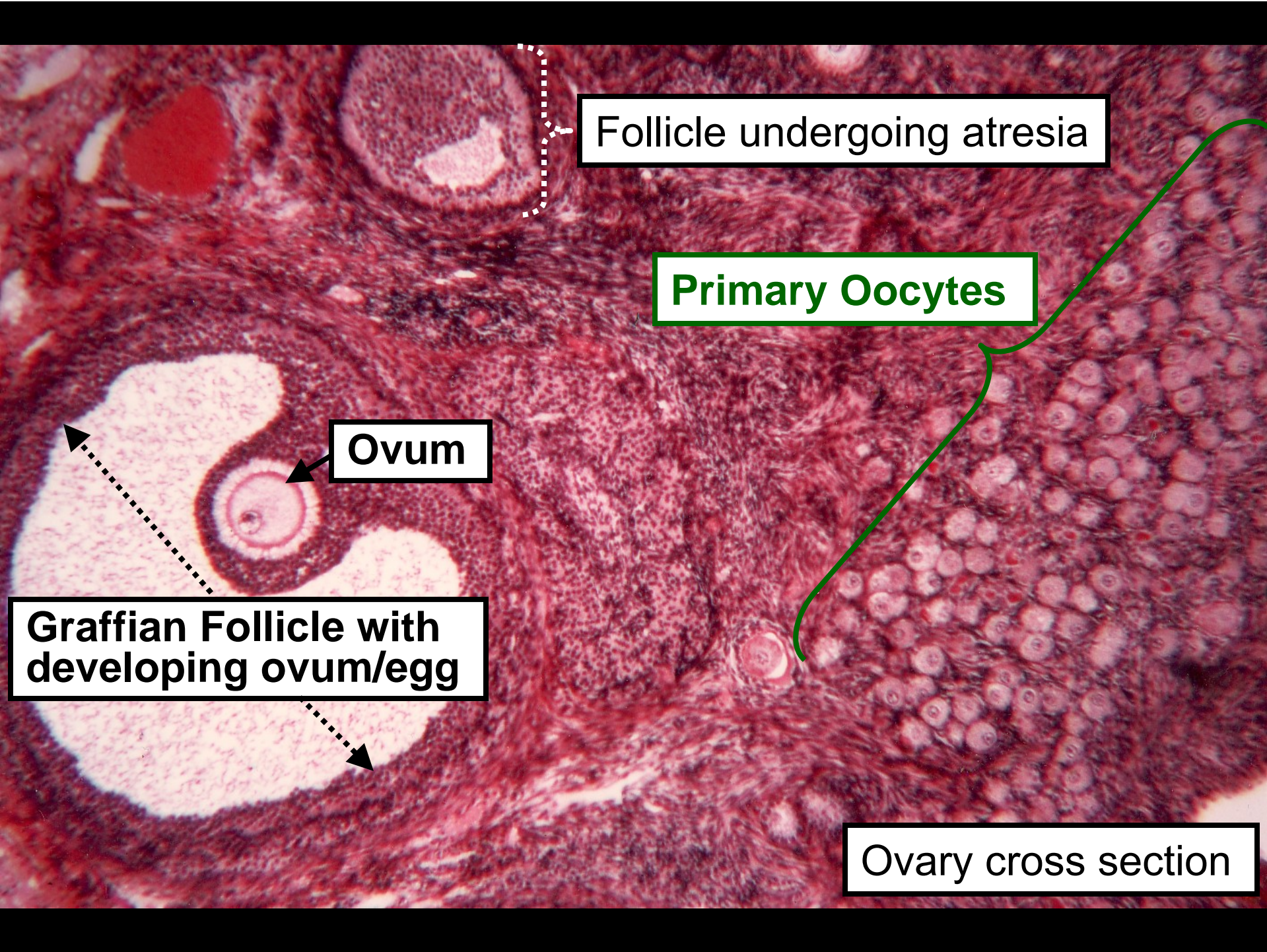
Poison Gland, Exocrine



Columnar Epithelium, Gall Bladder



Epithelial tissue covers & is specialized for transport!



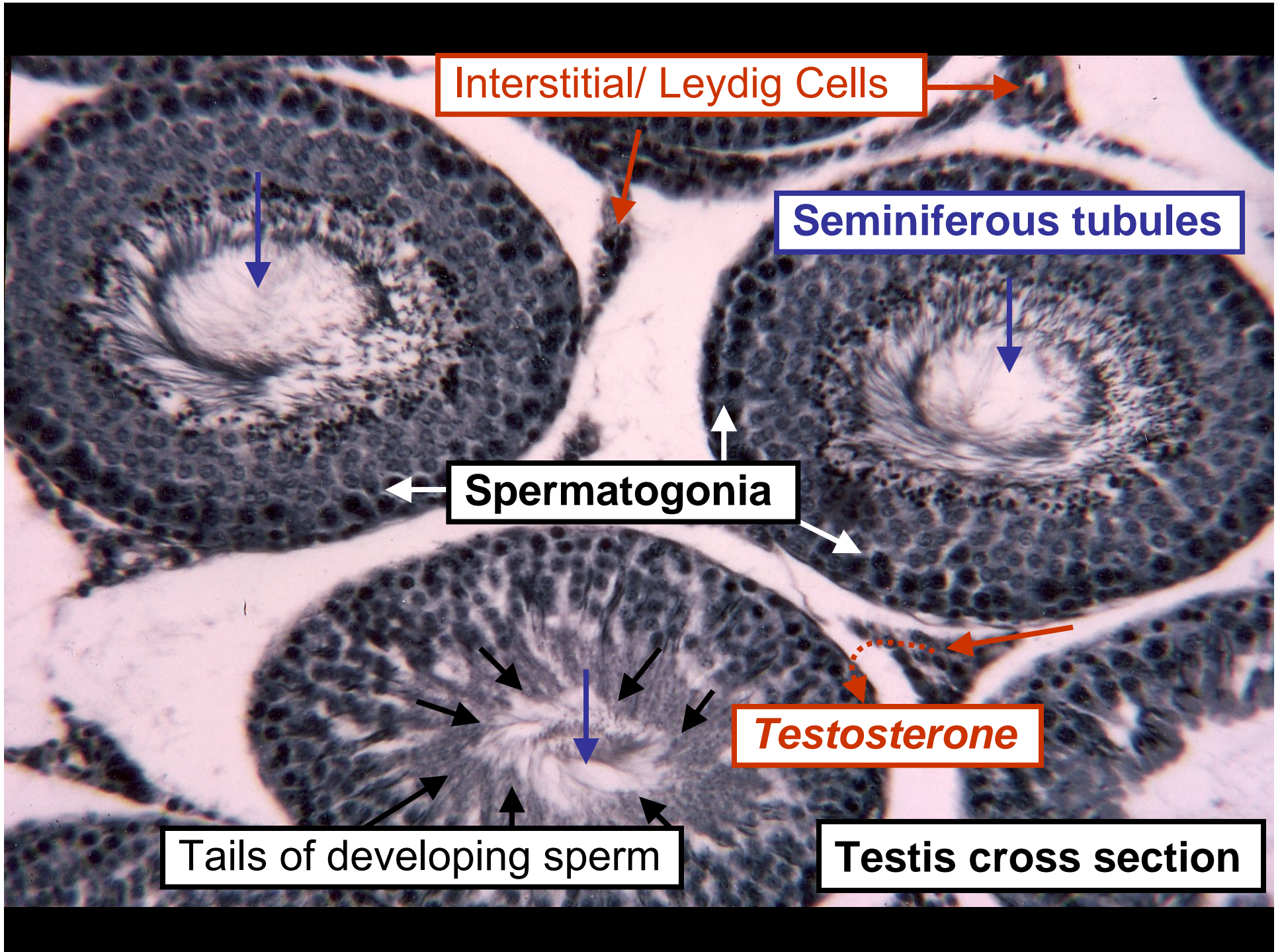
Follicle undergoing atresia

Primary Oocytes

Ovum

Graafian Follicle with developing ovum/egg

Ovary cross section



Nuclei of fibroblasts

This micrograph shows a network of fibers and cells. The background is a pinkish-purple matrix. Dark, spindle-shaped spots are scattered throughout. A dense network of thin, dark fibers is visible. A few thicker, wavy fibers are also present. The labels are color-coded: green for nuclei, blue for elastin, orange for collagen, and orange for the general connective tissue matrix.

Elastin

Collagen

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

Connective tissue



Now, try to identify anatomical site & tissues!

This histological image shows a cross-section of an ovary. The central region is the cortex, containing numerous follicles at various stages of development. The outermost layer is the tunica albuginea, followed by the tunica vaginalis. The cortex is composed of a layer of simple cuboidal epithelium (granulosa cells) and an inner layer of theca cells. The follicles are arranged in a roughly circular pattern, with the largest follicles (antral follicles) located in the outer cortex and smaller follicles (primordial and primary follicles) located in the inner cortex. The medulla is located in the center of the ovary, containing the corpus hemorrhagicum and the corpus luteum. The overall structure is highly organized and characteristic of the female reproductive system.