

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

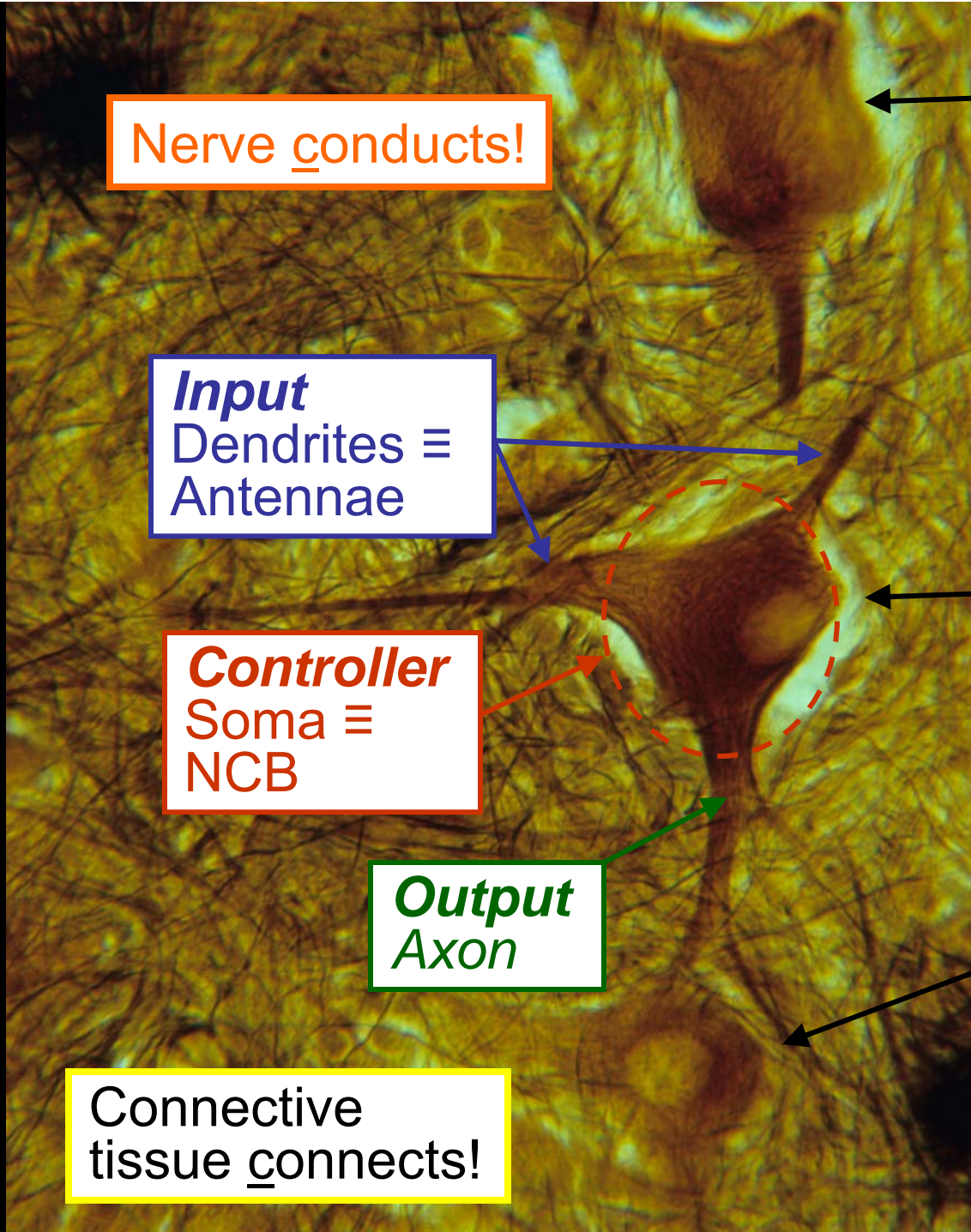
Output
Axon

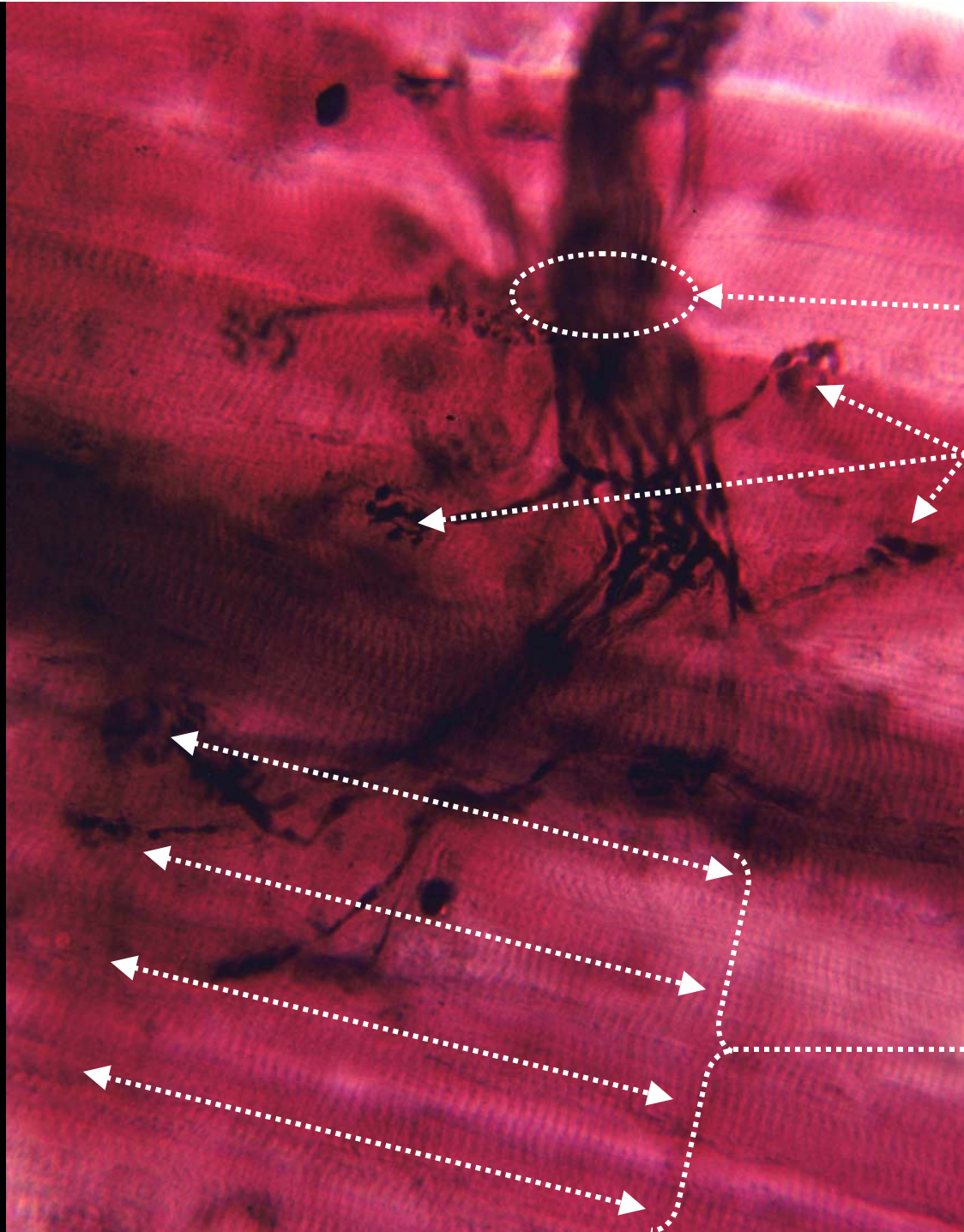
Connective
tissue connects!

Neuron 1

Neuron 2

Neuron 3



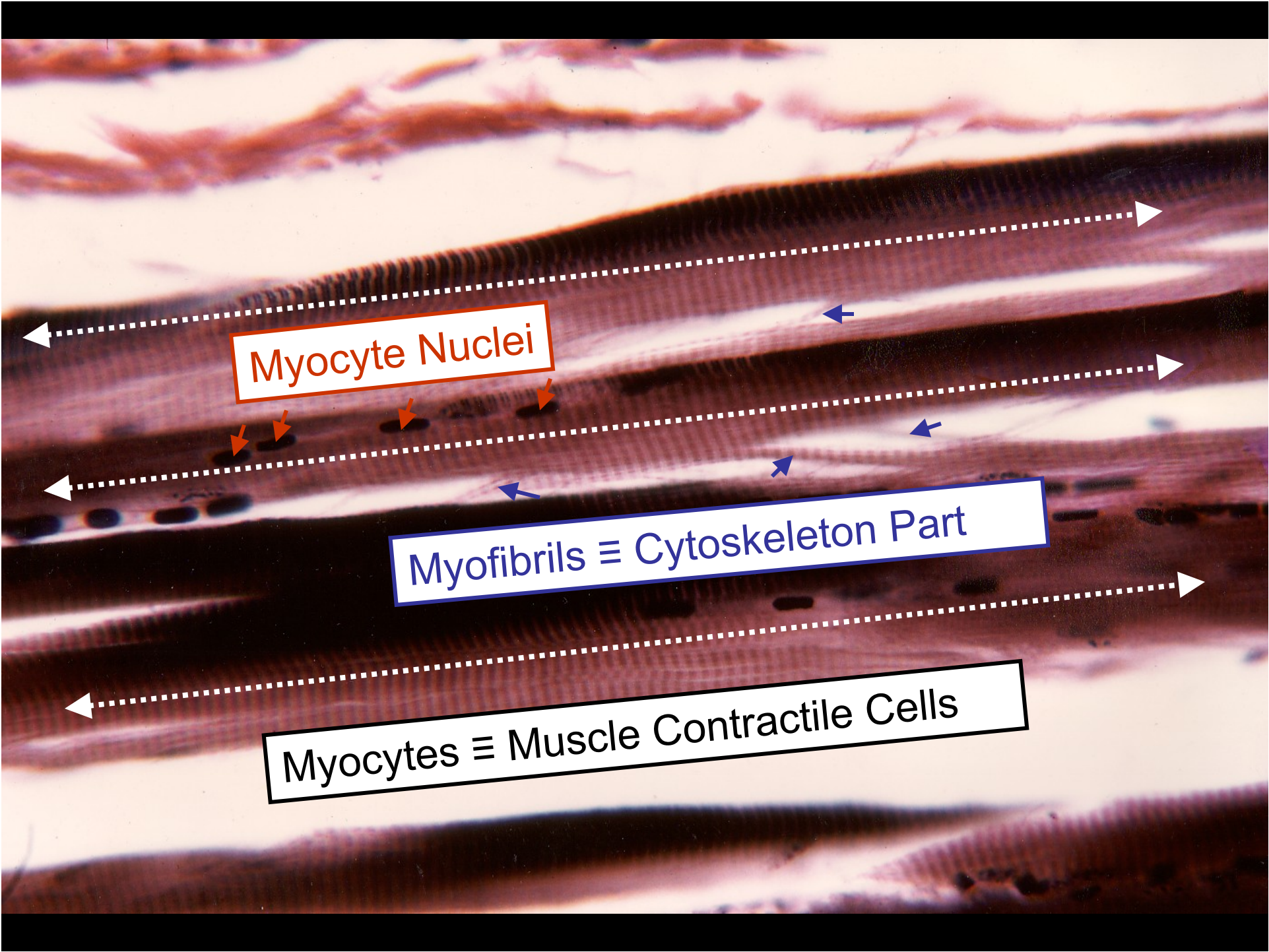


Controllers ≡
NCBs/somas
not pictured →
in spinal cord

Output ≡ Axons

Bouton with
Neurotransmitter
Vesicles

Effectors ≡
Target Organs
Voluntary
Skeletal Muscle
Fibers



Myocyte Nuclei

Myofibrils ≡ Cytoskeleton Part

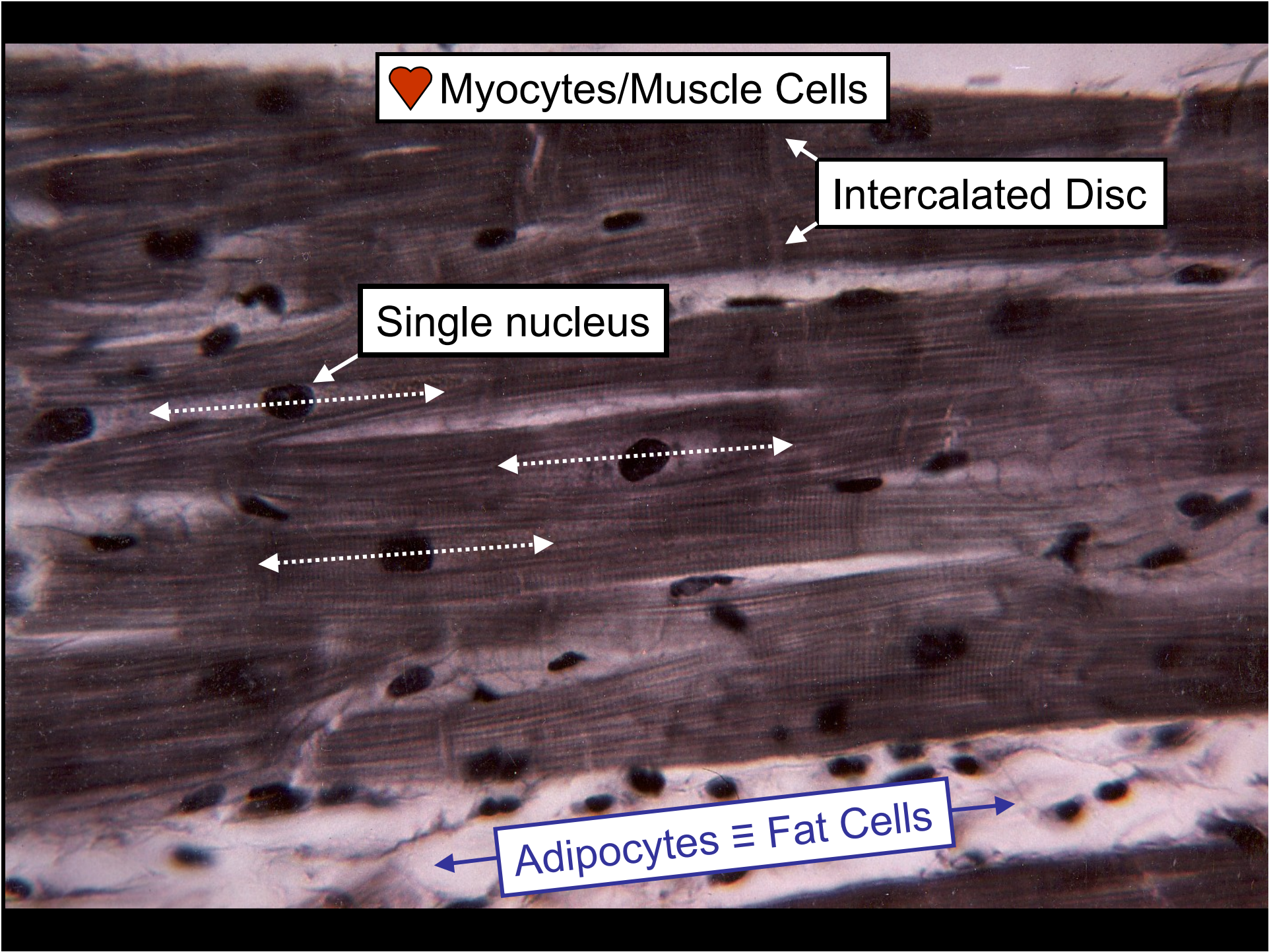
Myocytes ≡ Muscle Contractile Cells

♥ Myocytes/Muscle Cells

Intercalated Disc

Single nucleus

Adipocytes ≡ Fat Cells



Frog Skin

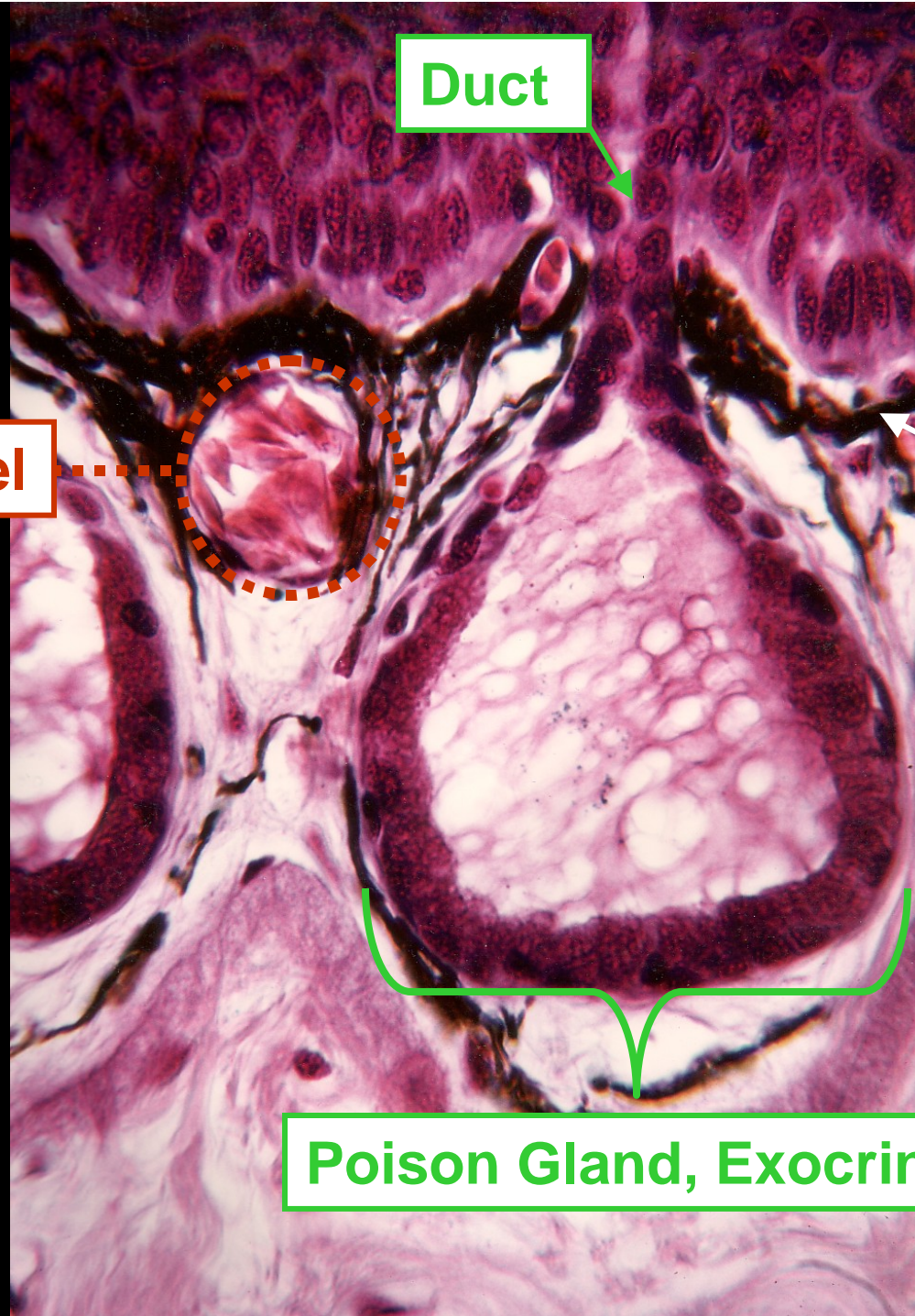
Duct

Columnar Epithelium

Blood Vessel

Melanin Pigment layer

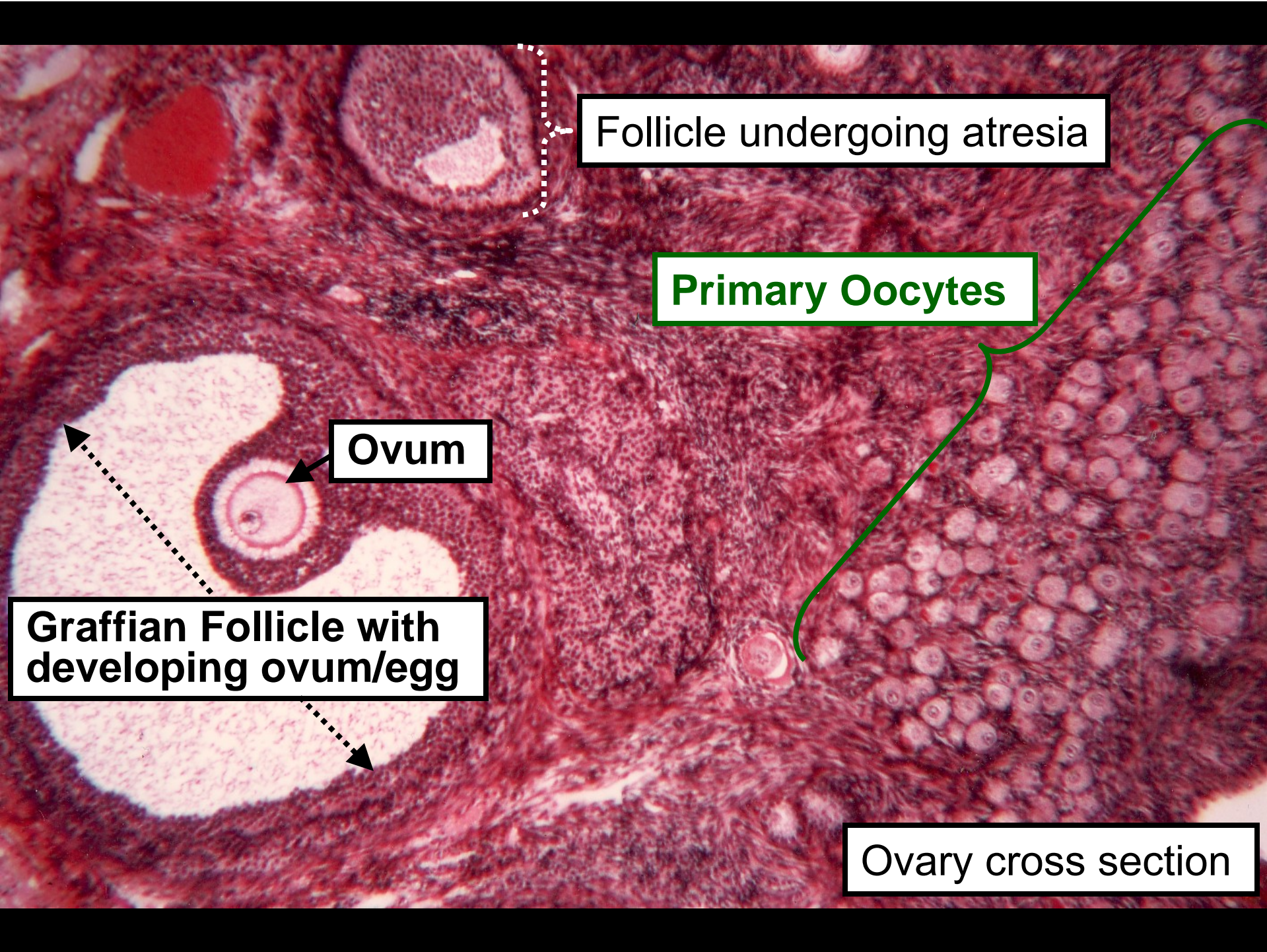
Poison Gland, Exocrine



Columnar Epithelium, Gall Bladder



Epithelial tissue covers & is specialized for transport!



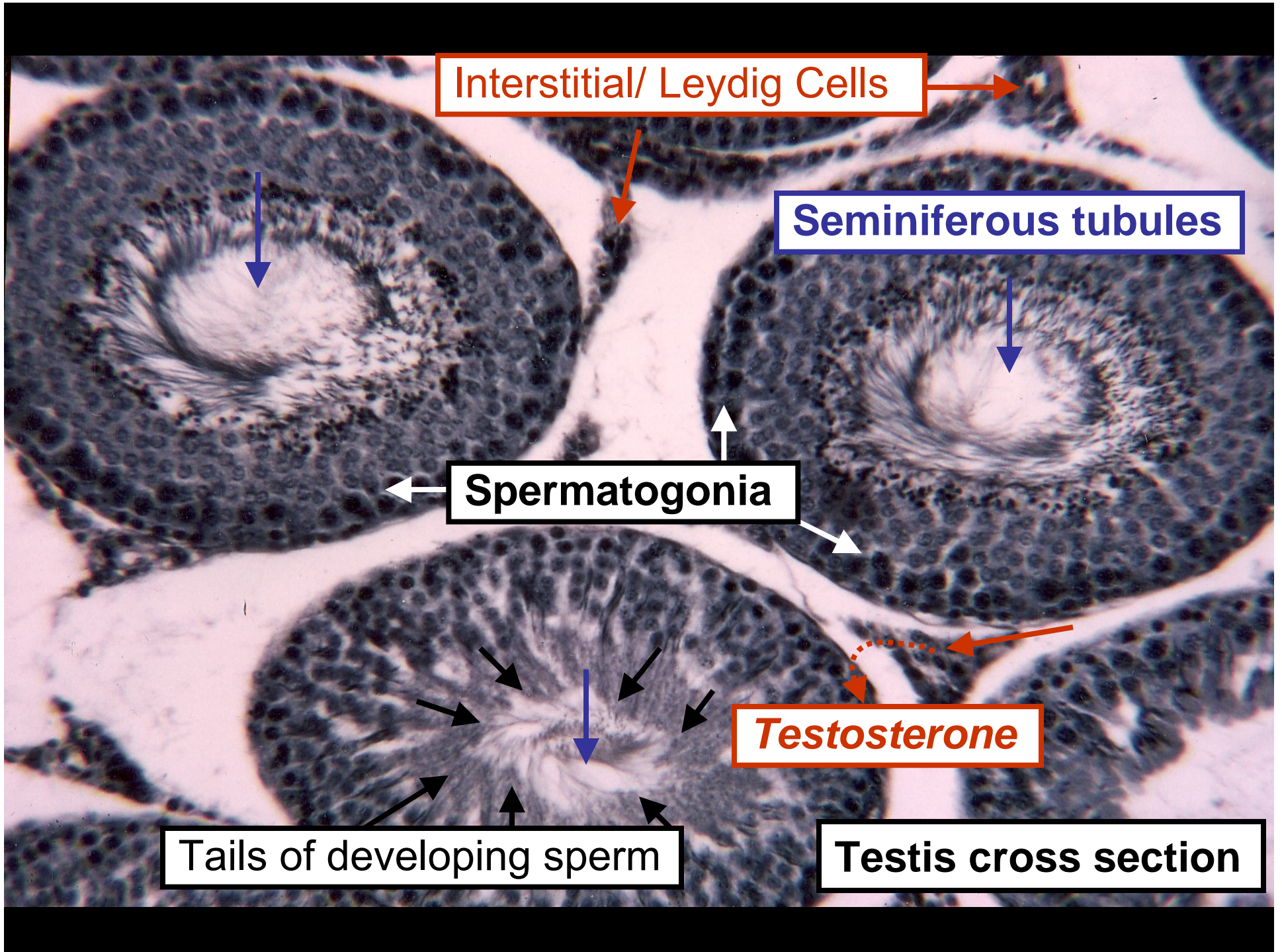
Follicle undergoing atresia

Primary Oocytes

Ovum

Graafian Follicle with developing ovum/egg

Ovary cross section



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 placed over the image with arrows pointing to specific features.

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 outer layer is the tunica albuginea, followed by the tunica vaginalis. The cortex contains several follicles at different stages of development. On the left, there is a large follicle with a thick, multi-layered granulosa cell wall and a large, clear antrum, characteristic of a tertiary (antral) follicle. To its right, there are several smaller follicles, including a primary follicle with a single layer of granulosa cells and a secondary follicle with a more developed granulosa layer and a small antrum. The medulla contains the corpus hemorrhagicum, which is a highly vascularized region. The overall structure is typical of a mammalian ovary.