1. What type of tissue is this? Be specific. Smooth Muscle
What is its analogous Z-line structure? Dense Bodies
(Cytoplasmic densities)

9. Identify this cell type. Cardiac Muscle
Where are the T-tubules located? At the Z-line

26. Identify 2 and 4.
2) Z-band
4) A-Band
Which bands shrink during contraction? H & I Bands shrink

34. What type of tissue is this? Dense Irregular CT
What cells make up the majority of this tissue? Fibroblasts

37. What structure is labeled “6”? Dense Bodies
What is the corresponding structure in skeletal muscles?
A. glycogen granules
B. T-tubules
C. Z-lines
D. nucleus
39
What does #1 point to? Transverse part of intercalated disk
What kind of junction does it contain? Fascia adherens (also see desmosomes)
*note: this is the site of actin filament
Compare to #2

40
Identify this structure. Epineurium

35
What type of tissue is this? Nerve

8
Identify indicated by the arrow. Clefts of Schmidt-Lantermann
They are a component of what cell?
Identify this structure. Schwann Cells

19
Identify the structure label by an arrow. Nissl bodies and Fixed and free polysomes

12
Identify this structure. Meissner’s Corpuscle
Name a part of the body where these are located. Glabrous skin (fingertips, toes, lips)
Where can these types of cells be founds?
Sensory Ganglia can be found in DRG.
What cells are surrounding it?
Satellite Cells

What type of cell is indicated by the arrow?
Motor Neuron
The cells in this field comprise what kind of structure?
Autonomic Ganglia

Identify. Pacinian Corpuscle

Identify the cell indicated by an arrow. Intrafusal fibers
What is the function of this structure?
Prevents damage to muscles from stretching by causing extrafusal fibers to contract.

Identify this structure. Rathke's Cyst
Where is this structure found? Pars Intermedia of Pituitary

Name this cell. Basophil
What does this cell produce? FSH, LH, ACTH, TSH
3  Identify this structure. **Herring Body**
What does this structure do?
Temporarily stores neurosecretory granules containing oxytocin, ADH, and neurophysins

15  Name this cell. **Parafollicular**
What does this cell produce? **Calcitonin**

7  Identify the cell labeled #4. **Adipose**
What are the structures labeled #2 **Oxyphil**

36  What is depicted in this picture? Be as specific as possible.
**Lactating mammary gland**

- **Thyroid gland**

24  Identify this region. **Zona Glomerulosa**
What is its main product? **Mineralocorticoids**
33
Identify the cell labeled “1”. Chromaffin Cells. What do they produce? Epinephrine b/c scattered granules.

6
a) Identify the region indicated by the BLACK arrow as specifically as you can. Interterritorial Matrix. b) T or F: this structure contains relatively more collagen than GAGs. True.

10
What type of tissue is this? Fibroelastic. This structure contains:
A) a perichondrium  C) elastic fibers
B) type I collagen fibers  D) all of the above.

17
a) Identify this structure (#7). Isogenous Group. b) This tissue is capable of which type(s) of growth? a) Appositional  b) Interstitial  c) Meiosis  d) Appositional & Interstitial  e) All of the above.

22
a) The outermost layer of this structure comprises which main cell type? Fibroblasts.  b) T or F: Blood vessels from this structure supply the matrix. False: matrix receives nutrients via diffusion.

32
Identify the arrowed structure. Lacuna.
What type of bone is this? Cancellous Bone (a.k.a. Trabecular or Spongy)
Name the layer indicated by the arrow. Endosteum

Which cells reside in the area indicated by the arrow? Osteocyte
What was its progenitor? Osteoblast

Identify the structure indicated by an arrow. Canaliculi
What is the function of the structure? Provide passage for circulation of ECF and diffusion of metabolites b/w lacunae and vessels of haversian canal via gap junctions.

What type of bone is pictured above? Spongy (honey-comb appearance with trabeculae and marrow spaces)
What is the arrow pointing to? lacunae containing osteocytes

What type of bone is pictured above? Compact (organized haversian canals)
Identify the structure with an arrow. Lacuna

Identify the structure. Volkmann’s canal
What are their functions? Connect Haversian canals of neighboring osteons, allowing blood vessels & nerves to pass through the whole network.
Identify the structure. Sharpey’s fibers
What are their functions? Connect periosteum to bone tissue

Which type of ossification is occurring in the slide?
Intramembranous
Identify the structure above.
Osteoclast (large multinucleate cells often lying in depressions, called Howship’s lacunae)

Identify the process is occurring above.
Endochondral ossification (note the osteoblasts laying down bone matrix on the spicules of calcified cartilage).
Which bones on the body are formed via this method?
Most bones (long bones)

Identify the region above.
Zone of Hypertrophy.
What substance do these cells accumulate?
Glycogen accumulates but is lost during fixation and is therefore ideal
Identify the process occurring above.
Intramembranous ossification (note there is no cartilaginous precursor- bone forms directly in mesenchyme).

Identify the structure indicated by the arrow.
Osteoblast

Which bones in the body are formed via this method?
Non-weight bearing (mainly bones of the skull and face)