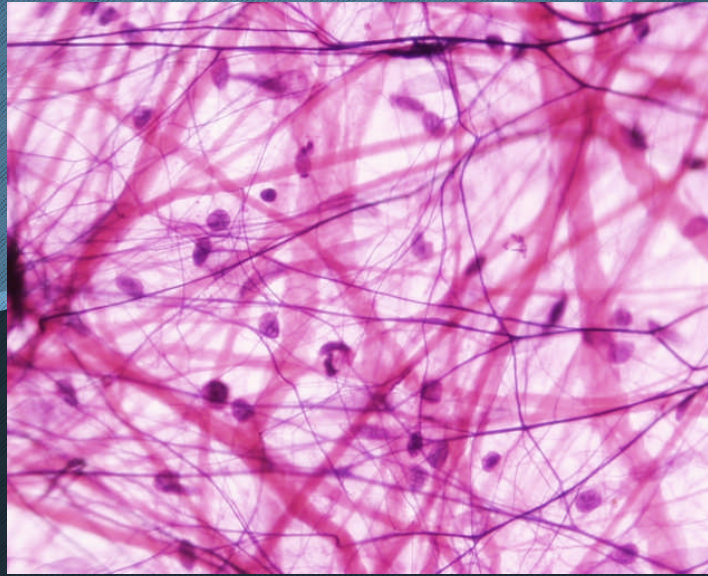
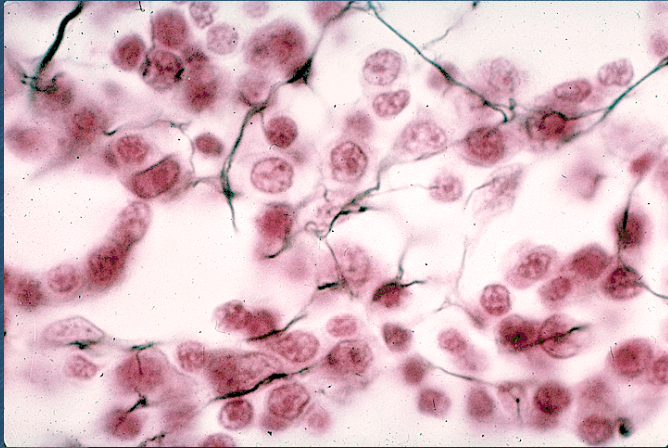


The Histology of Connective Tissue



Created By:

Kiah Cannon

Eliana Langermann

Kyrie Pletts

R. Scott Murray

Question 1

The Functions of Connective Tissue are as follows: binding and support, protection, insulation, and transportation.

Is this statement True or False?

Question 2

Connective Tissue differs from the other three tissue types in that it consists of cells separated from each other by abundant

- A. Intracellular Matrix
- B. Extracellular Matrix
- C. Interstitial Matrix
- D. Endocellular Matrix

Question 3



The specialized cells of the various connective tissue produces the extracellular matrix. The name of the cell identifies the cell functions by means of one of the following suffixes. Blasts, Cytes, and Clasts.

- A. **Blasts** maintain the matrix, **cytes** break it down for remodeling, and **clasts** create the matrix
- B. **Blasts** create the matrix, **cytes** break it down for remodeling, and **clasts** maintain it
- C. **Blasts** create the matrix, **cytes** maintain it, and **clasts** break it down for remodeling.
- D. **Blasts** remodel the matrix, **cytes** maintain it, and **clasts** create it



Question 4

Which one of the following functions does NOT relate to Connective Tissue

- A. Transports Material
- B. Underlies mucous membranes
- C. Forms tendons
- D. Where passive exchange occurs

Question 5

Match the following Structures to their designated Connective Tissue

1. Matrix composed of bundles and sheets of collagenous and elastic fibers oriented in multiple directions
 2. Matrix composed of collagen fibers that run in all directions or in alternating planes of fibers oriented *in a somewhat* single direction.
 3. Matrix composed of regularly arranged collagen fibers and elastic fibers.
 4. Matrix Composed of collagen fibers running in somewhat the same direction
- A. Dense Regular Collagenous Connective Tissue
 - B. Adipose Tissue
 - C. Reticular Tissue
 - D. Dense Regular Elastic Connective Tissue
 - E. Dense Irregular Collagenous Connective Tissue
 - F. Dense Irregular Elastic Connective Tissue
 - G. Areolar Connective Tissue

QUESTION 6

- ▶ Injuries of the knee joint (meniscus tear) is pretty common in sports related injuries. This “Supporting” Connective Tissue injury is found in what cartilage region?
- A. Fibrocartilage
 - B. Elastic Cartilage
 - C. Hyaline Cartilage
 - D. Lacunae

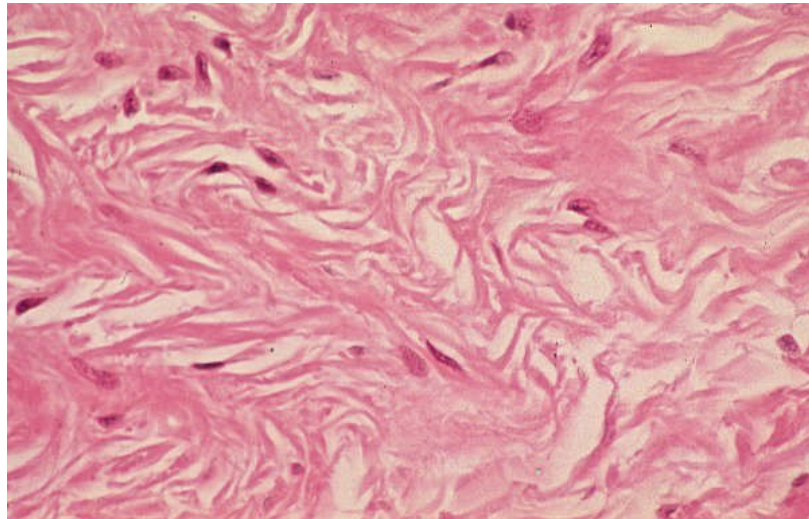
Question 7

Blood. Blood is unique in that it is the only connective tissue that doesn't actually connect anything physically. It consists of the cells called _____ (red blood cells) and _____ (white blood cells), and an Extracellular Matrix called _____.

- A. Leukocytes, Plasma, Erythrocytes
- B. Erythrocytes, Plasma, Leukocytes
- C. Erythrocytes, Leukocytes, Plasma
- D. Plasma, Erythrocytes, Leukocytes

Question 8

What type of connective tissue is this?
Where is it found?



- a) Loose irregular, dermis
- b) Dense irregular, hypodermis
- c) Loose regular, epidermis
- d) Dense regular, dermis

Which of the following would be best suited to differentiate collagen fibers from other fibers?

- a) Silver Impregnation
- b) Sudan stain
- c) Wright's stain
- d) Mason's Trichrome stain



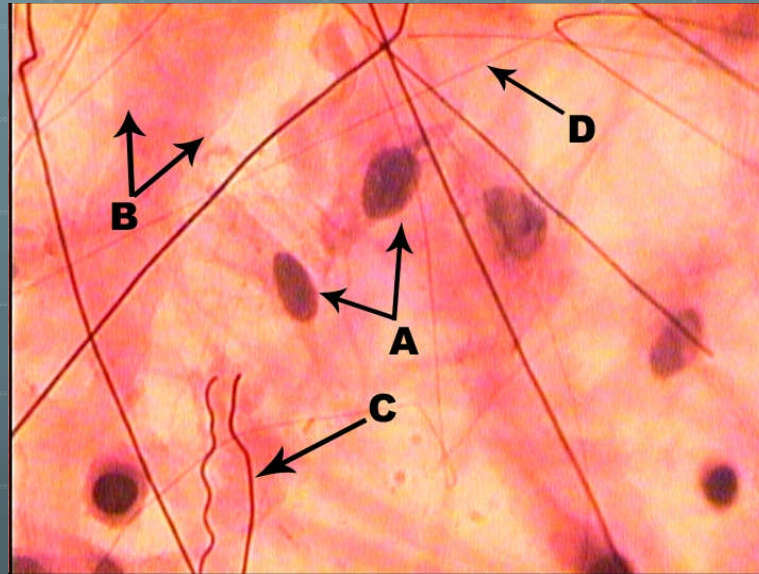
QUESTION

Question 10

Which would be classified as a "specialized connective tissue"?

- a) Mucous connective tissue
- b) Blood
- c) Loose connective tissue
- d) Mesenchyme

Question 11



List what these are in order from A to D

- a) fibroblasts with dark nuclei, thick collagen fibers, thin elastic fibers, very fine reticular fibers
- b) thin elastic fibers, thick collagen fibers, very fine reticular fibers, fibroblasts with dark nuclei
- c) fibroblasts with dark nuclei, thin elastic fibers, thick collagen fibers, very fine reticular fibers
- d) thick collagen fibers, thin elastic fibers, fibroblasts with dark nuclei, very fine reticular fibers

Question 12

What type of tissue makes up the dermis of skin?

- a) mucous connective tissue
- b) dense regular connective tissue
- c) dense irregular connective tissue
- d) loose irregular connective tissue

QUESTION 13

Which of these cells is not routinely found in loose connective tissue?

- a) Microglia
- b) Mast cell
- c) Histiocyte
- d) Plasma cell



Question 14

What type of tissue is Wharton's jelly?

- a) Mesenchyme
- b) dense regular connective tissue
- c) mucous connective tissue
- d) loose irregular connective tissue

Question 15

What type of cell releases certain chemicals that play an important role when the body is injured or infected?

- A. White Blood Cells
- B. Mast Cells
- C. Macrophages
- D. Stem Cells

Question 16

What type of cell contains enzymes and special proteins that function in the clotting process to reduce bleeding from a wound?

- A. White Blood Cells
- B. Mast Cells
- C. Plasma
- D. Platelets

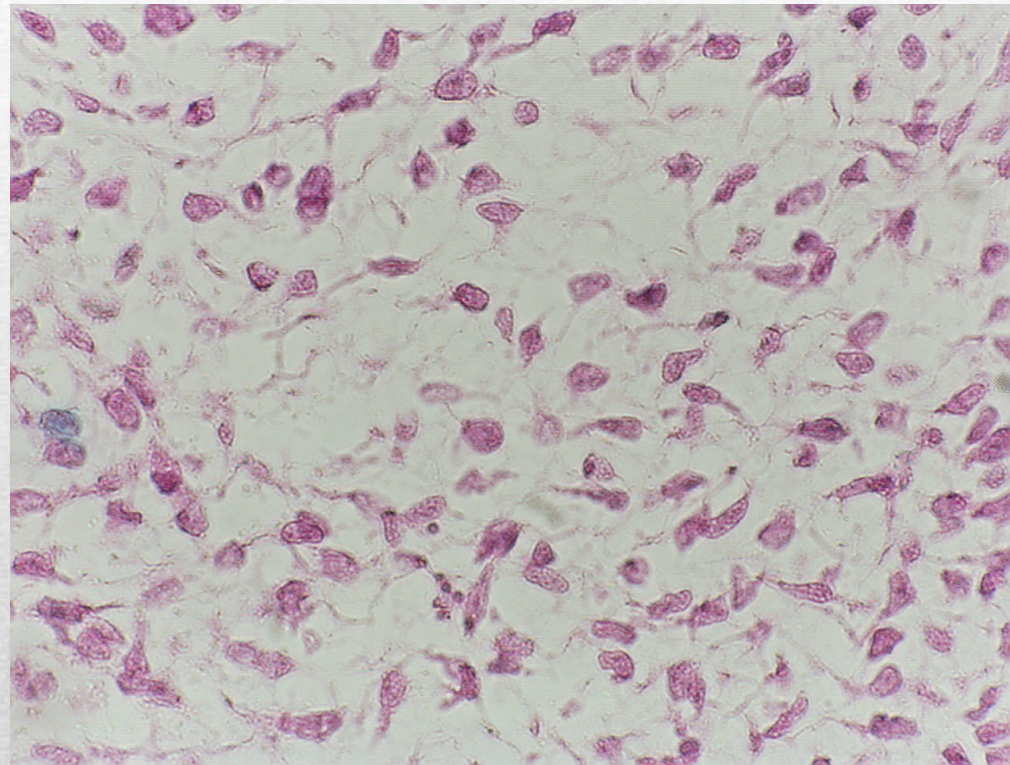
QUESTION 17

What type of molecule is linked to form collagen fibrils.

- A. Collagen
- B. Tropocollagen
- C. Protein
- D. Macrophage

What type of connective tissue is this?

- A. Embryonic
- B. Mucous
- C. Areolar
- D. Adipose

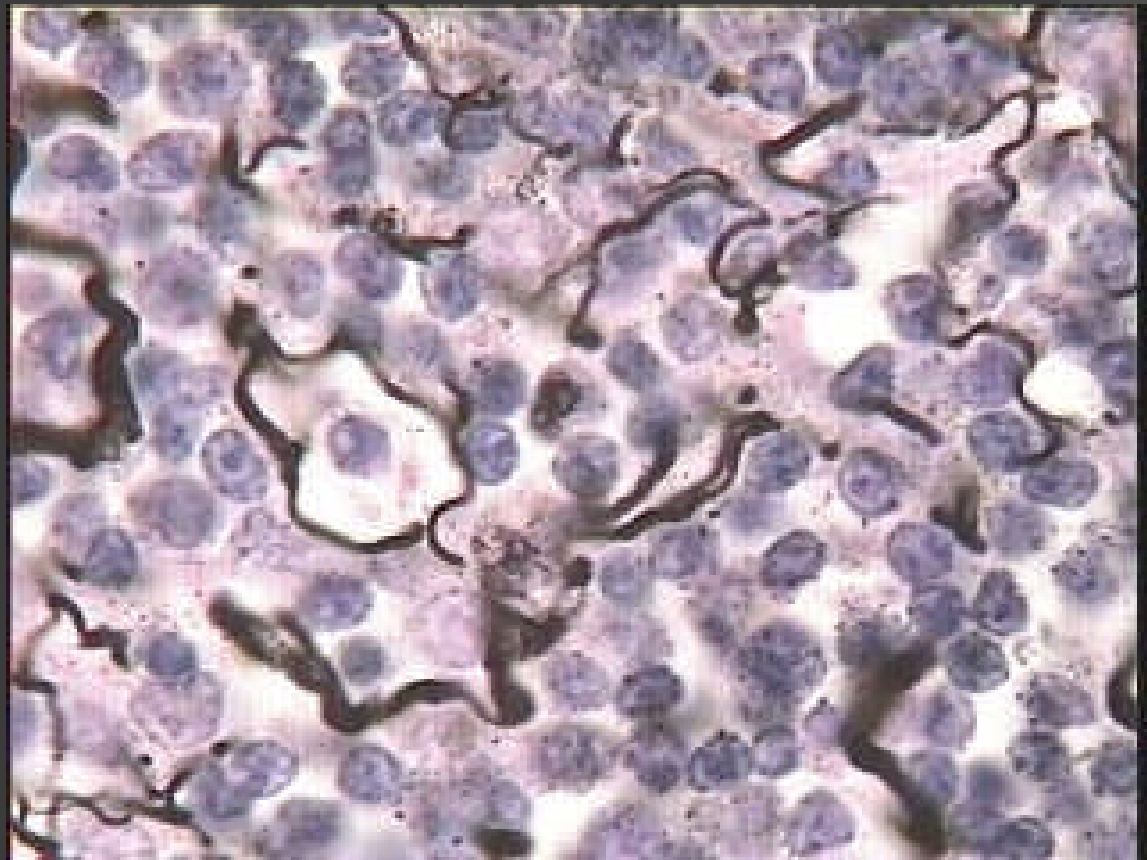


Question 18

Question 19

What type of connective tissue is this?

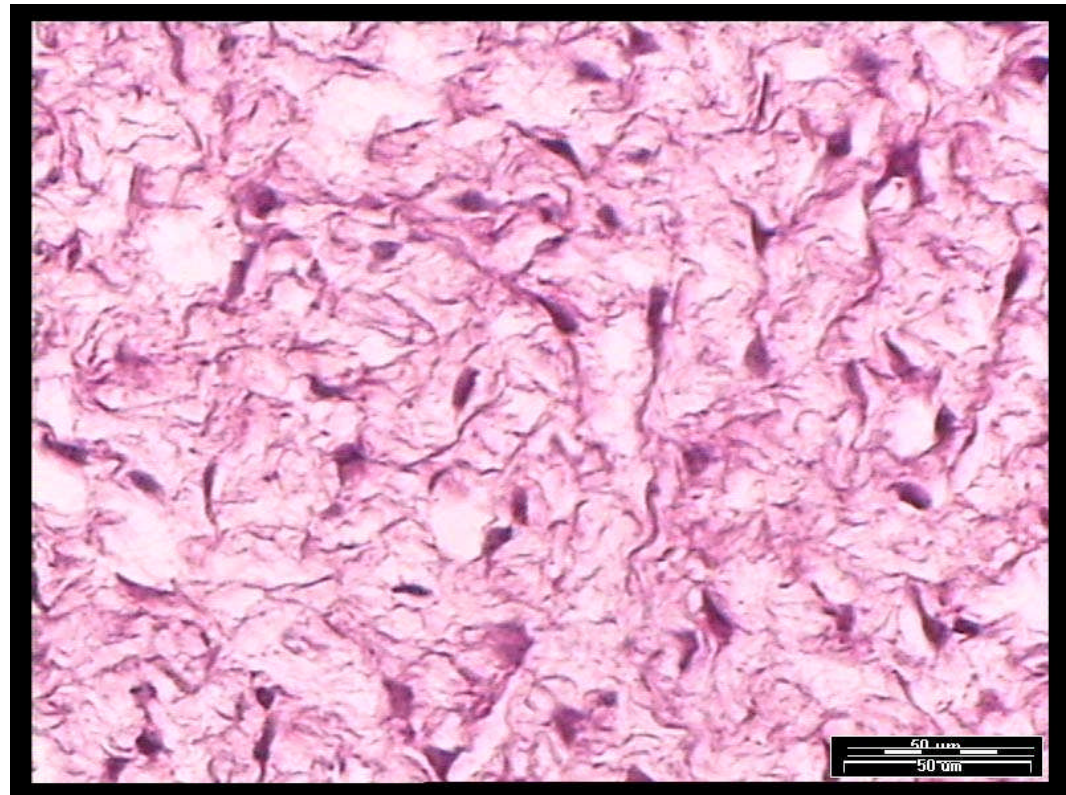
- A. Embryonic
- B. Mucous
- C. Areolar
- D. Reticular



Question 20

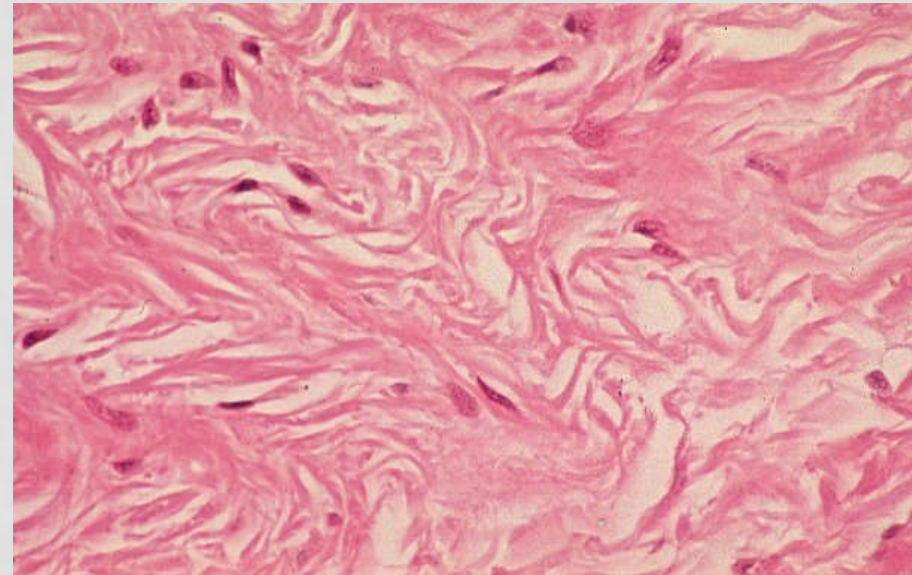
+ What type of connective tissue is this?

- A. Embryonic
- B. Mucous
- C. Areolar
- D. Reticular



QUESTION 21

What type of connective tissue is this?



- A. Dense Regular Elastic
- B. Dense Irregular Elastic
- C. Dense Regular Collagenous
- D. Dense Irregular Collagenous

Question 22

What are the major components of extracellular matrix within the connective tissue (you may choose more than one answer).



- A. Protein Fibers
- B. Ground Substance consisting of fibrous protein and other molecules
- C. Fluid
- D. Ground Substance consisting of nonfibrous protein and other molecules
- E. All of the Above

QUESTION 23

What are the 3 types of proteins fibers found in Connective Tissue?

- A. Reticular
- B. Collagen
- C. Tropocollagen
- D. Inelastic
- E. Elastic

Question 24

The function of Proteoglycans aggregates is to trap large quantities of water, which allows them to return to their original shape when compressed or deformed.

Is this question True or False?

Question 25



Where, in the cartilage of supporting Fibrocartilage connective tissues, are chondrocytes found?

- A. In osteocytes
- B. In the lamellae
- C. In the central canal
- D. In Lacuna

Question 26

Macrophages are found in some connective tissue types. They are derived from monocytes, a type of white blood cell. Macrophages are either _____, meaning that they do not move through the connective tissue in which they are found, or _____, moving in amoeboid fashion through the connective tissue.

- A. Stationary, Traveling
- B. Immobile, Wandering
- C. Fixed, Traveling
- D. Fixed, Wandering

Question 27

What does the inorganic portion (calcium and phosphate) of the bone matrix consist of?

- A. Hydroapatite
- B. Hydrochloric apatite
- C. Hydroxyapatite
- D. Epoxyapatite

Extra Credit (+3)

From a microscopic view, what is the visual difference between the dense *regular* collagenous connective tissue and the dense *irregular* collagenous connective tissue.

Explain your answers in a few words or less.