



HLS- Histology test Bank



Histology:

Which of the following is the correct pathway when one lymph node sends a lymphocyte to educate another lymph node about antigenic stimulation?

- A) Post-capillary venules --> thoracic duct -> Systemic Circulation --> Efferent lymphatic vessel
- B) Afferent lymphatic vessel --> Post-capillary venules --> Efferent lymphatic vessel
- C) Afferent lymphatic vessel --> Thoracic duct --> Systemic Circulation --> Efferent lymphatic vessel
- D) Afferent lymphatic vessel --> Thoracic duct --> Efferent lymphatic vessel
- E) Efferent lymphatic vessel --> Thoracic duct --> Systemic Circulation --> Post-capillary venules

Answer: E

Which description is true of all primary lymphoid organs?

- A) Contain crypts.
- B) Contain epithelial-reticular cells.
- C) Lack of connective tissue capsules.
- D) Are sites for antigen exposure.
- E) Are capable of antigen-independent lymphopoiesis.

Answer: E

Lymphocytes in the circulation enter lymph nodes from

- A) afferent vessels
- B) marginal zone
- C) postcapillary venule

Answer: C

True about all secondary lymph organs

- A) contain lymph follicles
- B) contain epithelial reticular cells as stroma
- C) contain afferent vessels
- D) contain capsule

Answer: A

Which of the following isn't true about lymph nodes:

- A) post capillary venules are located in the outer cortex
- B) most of lymphocytes enter lymph nodes via blood vessels
- C) The cords are separated by spaces called medullary sinuses

Answer: A

T cells in spleen are mostly presented in

- A) lymphoid follicles
- B) splenic cords
- C) splenic sinuses
- D) PALS

Answer: D

Lymphatic organs, choose the WRONG statement:

- A) Blood lymphocytes enter the spleen through marginal zone sinuses and enter the lymph nodes through postcapillary venules.

- B) Aggregations of lymphocytes occupy the majority of splenic parenchyma.
- C) The variation in color intensity of thymic lobules (cortex and medulla) is attributed to the density of thymocytes.
- D) Cells with TCR proteins that bind to MHC-1 will express CD8 proteins at the end of thymic education.
- E) PALS area in spleen and paracortex in lymph nodes are considered thymus dependent zones.

Answer: B

In the spleen, the plasma cells are found mainly in?

- A) Splenic sinuses of the splenic red pulp.
- B) Periarteriolar lymphoid sheaths of splenic white pulp.
- C) Primary follicles of splenic white pulp.
- D) Germinal centers of Malpighian corpuscles.
- E) Cords of Billroth of the splenic red pulp.

Answer: E

Which type of connective tissue comprises the capsule of the spleen?

- A) Dense irregular connective tissue
- B) Loose connective tissue
- C) Dense regular connective tissue
- D) Elastic connective tissue
- E) Reticular connective tissue

Answer: A

Which cells of the spleen degrade hemoglobin to its constituents and collect the remaining iron?

- A) Lymphocytes
- B) Follicular dendritic cells
- C) Macrophages
- D) Myofibroblasts
- E) Stave cells

Answer: C

Which one of these statements is NOT true regarding the blood circulation in the spleen?

- A) The spleen has a unique 'open' circulation in which blood is not enclosed by endothelium
- B) Each central arteriole eventually loses its sheath of lymphocytes and enters the red pulp forming penicillar arterioles
- C) The central arteriole terminates in the marginal zone as marginal zone sinuses and forms penicillar arterioles in the red pulp
- D) In closed circulation, blood empties from sheathed capillaries into splenic cords and then enters the sinuses through slits in the wall

Answer: D

Which cells synthesize and secrete the majority of stromal tissue in the spleen?

- A) Reticular cells
- B) Myofibroblasts
- C) Macrophages
- D) Follicular dendritic cells
- E) Plasma cells

Answer: A

Which part of the lymphoid nodule of the spleen is mostly composed of inactive lymphocytes and encircles the germinal center?

- A) Hilum of spleen
- B) Mantle zone
- C) Splenic sinusoids
- D) Splenic trabeculae
- E) Marginal zone

Answer: B

Which of the following structures emerges from the splenic capsule and penetrates the parenchyma of the spleen?

- A) Red pulp
- B) White pulp
- C) Splenic cords
- D) Splenic trabeculae
- E) Splenic sinusoids

Answer: D

Which of the following cells line the splenic sinusoids?

- A) Reticular cells
- B) Dendritic cells
- C) Stave cells
- D) Fibroblasts
- E) Macrophages

Answer: C

Which part of the lymphoid nodule of the spleen is formed by the proliferation of B lymphocytes in response to antigen stimulation?

- A) Marginal zone
- B) Splenic trabeculae
- C) Paracortex
- D) Germinal center
- E) Mantle zone

Answer: D

Which of the following structures are found in the red pulp of the spleen?

- A) Splenic sinusoids
- B) Periarteriolar lymphatic sheath
- C) Splenic cords
- D) Lymphatic follicles
- E) A+C

Answer: E

Which of the following structures are found in the white pulp of the spleen?

- A) Periarteriolar lymphatic sheath
- B) Splenic cords
- C) Lymphatic follicles
- D) Splenic sinusoids
- E) A+C

Answer: E

All of the following cells can be seen in the cortex of the thymus except:

- A) Macrophages
- B) Dendritic cells

- C) Reticular epithelial cells
- D) Double positive T cells
- E) Double negative T cells

Answer: B

Which of the following is covered by stratified squamous non-keratinized epithelium

- A) palatine tonsils
- B) appendix
- C) payers patch

Answer: A

Choose the right statement about the thymus gland

- A) it has afferent lymph vessels
- B) Thymic epithelial cells form a blood thymic barrier in the medulla
- C) thymic epithelial cells form the stroma of the gland

Answer: C

The lymphatic nodules of the mucosa-associated lymphatic tissue predominantly contain the B-Lymphocytes, whereas the diffuse area has T-Lymphocytes.

- A) True
- B) False

Answer: A

Removal of the old and aged erythrocytes from the circulation:

- A) Is due to the dilated endothelium and large pores in the lining of the sinusoids of the spleen

- B) Takes place in the marginal zone sinuses
- C) Occurs in the lymph node
- D) Is the function of splenic cords
- E) A + B

Answer: A

Diffuse lymphatic tissue, choose the WRONG statement:

- A) Peyer's patches are composed of Lymphatic nodules with a thin underlying connective tissue capsule.
- B) M cells are intestinal epithelial cells overlying the diffuse lymphatic tissues.
- C) The basement membrane overlying lymphatic nodules of Peyer's patches is highly porous.
- D) Pharyngeal tonsils are covered by respiratory epithelium.
- E) Palatine tonsils are partly encapsulated and covered by nonkeratinized stratified squamous epithelium.

Answer: A

Which of the following granules are found in Hassall's corpuscles?

- A) Keratohyaline granules
- B) Zymogen granules
- C) Lipofuscin granules
- D) Mucinogen granules
- E) Melanin granules

Answer: A

Which portion of the thymus is markedly basophilic on light microscopy with hematoxylin and eosin (H&E) stain?

- A) Cortex
- B) Medulla
- C) Medullary cords
- D) Paracortex
- E) Capsule

Answer: A

Which of the following structures build the blood-thymus barrier, together with the reticular epithelial cells?

- A) Thymocytes
- B) Dendritic cells
- C) Macrophages of perivascular connective tissue
- D) Endothelium of capillaries
- E) C+D

Answer: E

Which of the following structures represent the established domains between the trabeculae in the thymus?

- A) Medullary cords
- B) Cell cords
- C) Red pulp
- D) PALS
- E) Thymic lobule

Answer: E

In which part of the thymus is the blood-thymus barrier located?

- A) Medulla
- B) Marginal zone of white pulp

C) Corticomedullary junction

D) Cortex

E) Medullary cords

Answer: D

Which cells are responsible for phagocytizing T lymphocytes that have not met the requirements of the education process?

A) Follicular dendritic cells

B) Macrophages

C) Reticular cells

D) Plasma cells

E) Thymocytes

Answer: B

Which type of epithelium lines the palatine and lingual tonsillar crypts?

A) Simple squamous epithelium

B) Respiratory epithelium

C) Non keratinized stratified squamous epithelium

D) Keratinized stratified squamous epithelium

Answer: C

Which of the following structures protects the developing T lymphocytes in the thymus from early antigen exposure?

A) Keratohyaline granules

B) Trabeculae

C) Hassall's corpuscles

D) Blood thymic barrier

Answer: D

Which of the following structures make up the majority of the palatine tonsil parenchyma?

- A) White pulp
- B) Lymphatic nodules
- C) Cords of Billroth
- D) Red pulp
- E) Lymphatic sinuses

Answer: B

T cells in spleen are mostly presented in:

- A) lymphoid follicles.
- B) splenic cords.
- C) splenic sinuses.
- D) PALS.

Answer: D

The presence of which of the following characteristics is the least value in distinguish spleen

from thymus:

- A) Activated B cells.
- B) Fibroblasts in capsule and trabeculae.
- C) Endothelial cells with tight junctions and thick basement membranes.
- D) Reticular epithelial cells.

Answer: C

Which of the following features is characteristic of lymph nodes:

- A) Cortex

B) Afferent vessels

C) Medulla

D) Sinuses

E) Lobes

Answer: B

Which of the following characteristics is the least value to distinguish between spleen and lymph nodes:

A) blood sinusoids

B) Lymphatic follicles

C) small dark round nucleus cells

D) Subcapsular sinus

Answer: B

The presence of which of the following characteristics is the least value in distinguish lymph

nodes from spleen:

A) High endothelial venules.

B) Afferent lymphatic vessels at capsule.

C) Lymphatic sinuses.

D) Stromal reticular tissue.

Answer: D

Which of the following characteristics is the least value to distinguish between spleen and

lymph nodes:

A) blood sinusoids

B) fibroblasts in capsule and trabaecule

C) small dark round nucleus cells

D) Subcapsular sinus

Answer: B

which of the following isn't made of reticular framework:

A) bone marrow

B) Thymus

C) spleen

D) lymph node

Answer: B

True about blood-thymus barrier:

antigens that cross is cause immunological tolerance

Activated B lymphocytes in spleen are located in:

Malpighian corpuscles

Wrong about the spleen:

like HEC of the lymph node, marginal sinuses only allow lymphocytes to go to the spleen

Done by: Abdallah Aburoman & Ibrahim Al-Shawabkeh