

# HLS

LAB exam

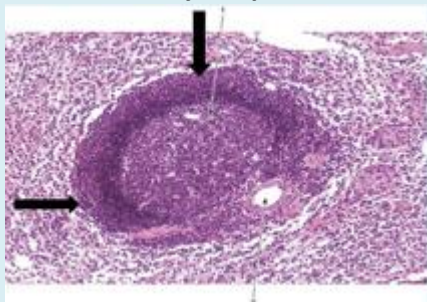
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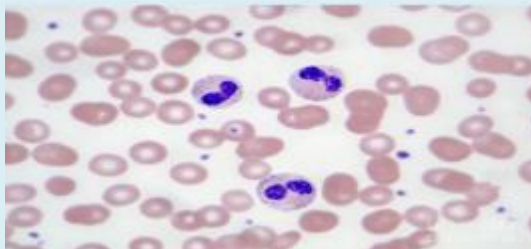


1. Identify the pointed structure?



- Select one:
- a. Lymph follicles.
  - b. White pulp.**
  - c. Peyer's patches.
  - d. Lymph node.
  - e. Diffuse lymphatic tissue.

2. What do you call the abnormal cell seen in this blood film?



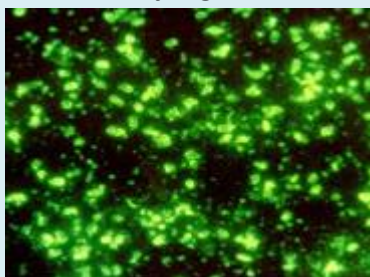
- Select one:
- a. Pseudo-Pelger-Huet cells.**
  - b. Pawn ball cell.
  - c. Ring sideroblasts.
  - d. Nucleated red blood cell.
  - e. Moll cells.

3. Gram stain was gram negative rods for the below culture, the causative organism is?



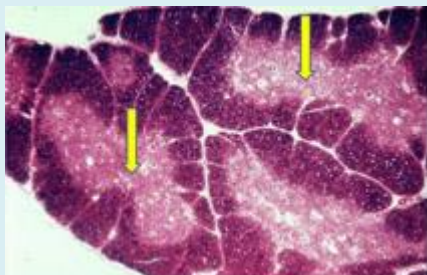
- Select one:
- a. *O. tsutsugamushi*.
  - b. *Coxiella burnetii*.
  - c. *Brucella melitensis*.
  - d. *Salmonella typhi*.
  - e. *R. typhi*.

4. A person has been bitten by a flea and presented to you with axillary lymph nodes enlargement, the immune fluorescent test against the capsule of the causative organism in the aspirate was positive as in image below, the likely organism is?



- a. Yersinia pestis.**
- b. *R. typhi*.
- c. *C. burnetii*.
- d. *Salmonella typhi*.
- e. *R. richetisii*.

5. The pointed area contains?



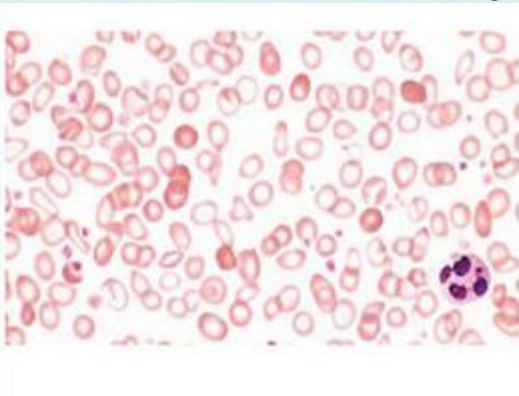
- Select one.
- a. B—lymphocytes and macrophages.
  - b. T,13 lymphocytes and Hassall's corpuscles.
  - c. T-lymphocytes, plasma cells and epithelial reticular cell.
  - d. T-lymphocytes and epithelial reticular cell and reticular fibers.
  - e. T-lymphocytes few, Hassall's corpuscles and macrophages.**

## 6. Bleeding time test?



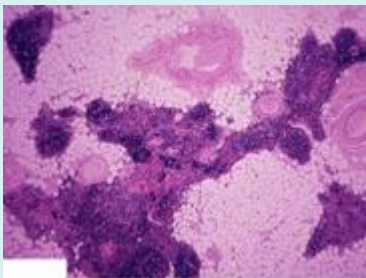
Select one:

- a. Measures the time taken for clot to form.
  - b. Measures the time for platelet plug formation.
  - c. Measures the time for blood vessel constriction.
  - d.** Blood vessel constriction and platelet plug formation to occur.
  - e. Depends on presence of Thrombin.
- 7. This is a peripheral blood film for a patient who presents with pale skin and fatigability, all the following could be an underlying cause of her anemia, EXCEPT?**



- a.** Acute blood loss.
- b. Chronic blood loss.
- c. Increased requirement.
- d. Impaired absorption.
- e. Dietary.

## 8. Concerning this organ the TRUE statement is?



- a. Contain lymphatic nodules.
- b. Contain plasma cells.
- c. Epithelial reticular cells form reticular fibers.
- d. Contain afferent lymphatic.
- e.** Epithelial reticular cells share in the formation of blood thymus barrier.

## 9. Hb F is formed of 2 alpha chains and 2?

Select one

- a. Beta chains.
- b.** Gamma chains.
- c. Delta chains,
- d. Kappa chains.
- e. Sigma chains.

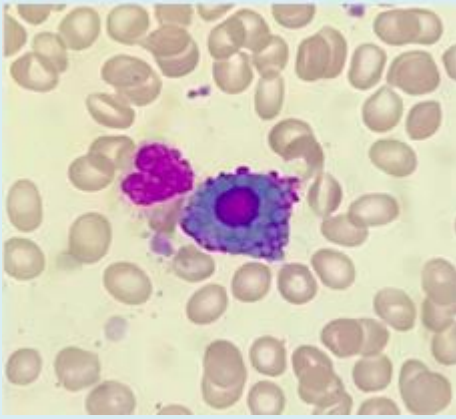
## 10. Carboxy Hb is?



Select one:

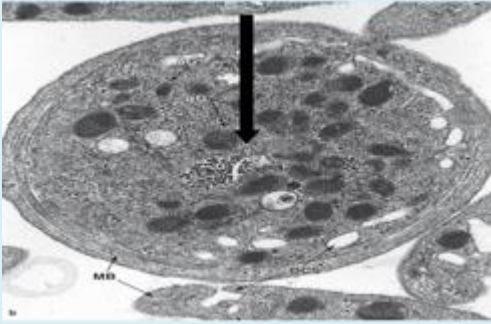
- a. Hb combining with O<sub>2</sub>.
- b. Hb combining with CO<sub>2</sub>.
- c.** Hb combining with CO.
- d. Hb combining with Glucose.
- e. Hb combining with Hydrogen.

## 11. What are these spherical inclusions most likely packed with?



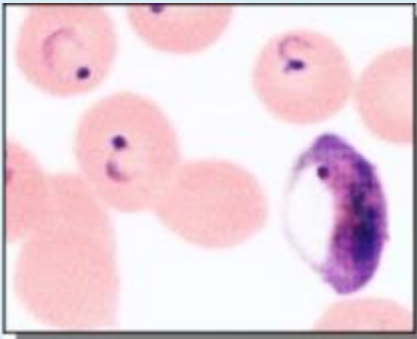
- Select one
- a. Calcium.
  - b. PDGF-beta.
  - c. Immunoglobulins.**
  - d. Albumin.
  - e. RANKL.

12. The most numerous structure in the pointed area?



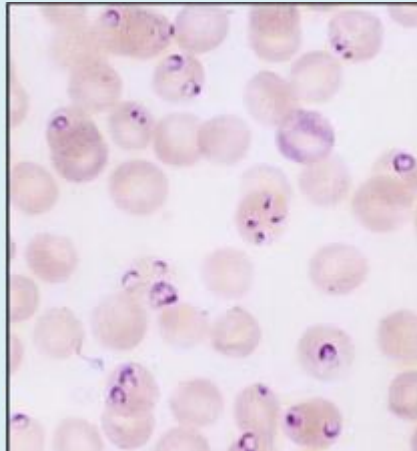
- Select one.
- a. Actin and myosin filaments.
  - b. Intermediate filaments.
  - c. Microtubules and open canalicular system.
  - d. Ribosomes, mitochondria and glycogen only.
  - e. Alpha, delta, lambda granules and few organelles.**

13. In this blood smear you can detect?



- Select one
- a. Trophozoles.
  - b. Gametocytes.
  - c. Trophozoites and gametocytes.**
  - d. Tachyzoiles.
  - e. Bradyzoites and tachyzoites.

14. this blood film reflect the following disease?



- Select one:
- a. Toxoplasmosis.
  - b. Babesiosis.**
  - c Malaria.
  - d. Lashrnaniasis.
  - e. Typhoid fever.

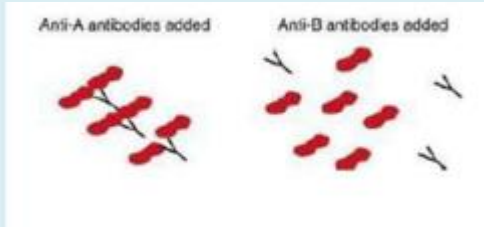
15. A 15 years old female patient who presented with microcytic anemia with reticulocytosis as shown by CBC. What is the most common cause of this radiologic finding?



Select one:

- a. Secondary hemochromatosis.
- b. Expansion of bone marrow.**
- c. Aplastic anemia.
- d. Sickle cell anemia.
- e. Iron deficiency.

16. Which blood type is depicted in the following figure?



- a. A**
- b. B
- c. O
- d. AB
- e. Rh +ve

17. The pointed structure is feature characteristic for?



Select one:

- a. Mature monocytes.
- b. Mature lymphocytes.
- c. Immature Neutrophils.
- d. Immature megakaryocytes.
- G. Mature megakaryocytes.**

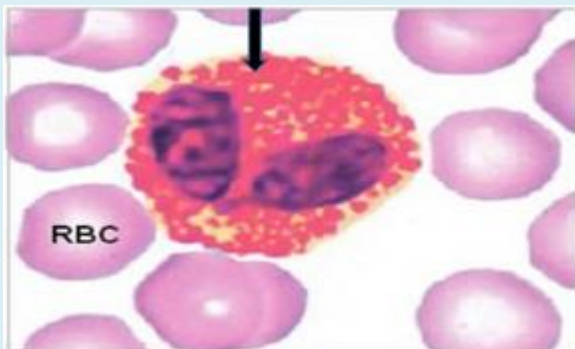
18. This parasitic form belongs to ?



Select one:

- a. Toxoplasma gondii.
- b. Coxiella burnetii.
- c. Trypanosoma brucei.**
- d. Leishmania donovani.
- e. Yersinia pestis.

19. The pointed cell increase in?



Select one:

- a. Acute infection.
- b. Chronic infection.
- c. Malaria.
- d. Parasitic infection.**
- e. Lymphoma.

20. Which of the following acute myeloid leukemias is commonly associated with this involvement?



Select one:

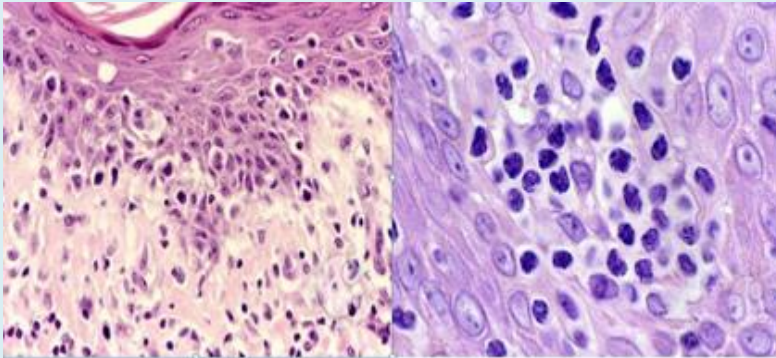
- a. AML with erythroid differentiation.
- b. AML with megakaryocytic differentiation.
- c. AML with monocytic differentiation.
- d. AML acute promyelocytic leukemia.
- e. AML with in(16).

21. Prevention of blood clotting by calcium removal include the following, EXCEPT?

Select one:

- a. Heparin.
- b. Na<sup>+</sup> oxalate.
- c. Na<sup>+</sup> citrate.
- d. EDTA.
- e. K<sup>+</sup> citrate.

22. One of the following is correct about this disease?



Select one:

- a. It has a favorable prognosis even in patients diagnosed at late stage.
- b. It is a form of cutaneous B cell lymphoma.
- c. Tumor cells are CD4 negative and CD8 positive.
- d. Sezary syndrome is a clinical variant with tumor cells in the peripheral blood.
- e. Patients with tumor disease survive for many years.

23. Hematocrite value is % ratio of the volume of



- a. WBCs to plasma.
- b. RBCs to plasma.
- c. RBCs to whole blood.
- d. Total blood to RBCs.
- e. Plasma to plasma proteins.

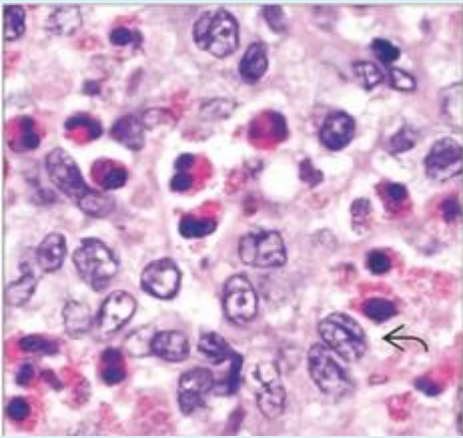
24. Oxy Hb (HbO<sub>2</sub>) is?



select one:

- a. Hb combining with O<sub>2</sub>.
- b. Hb combining with CO<sub>2</sub>.
- c. Hb combining with CO.
- d. Hb combining with Glucose.
- e. Hb combining with Hydrogen.

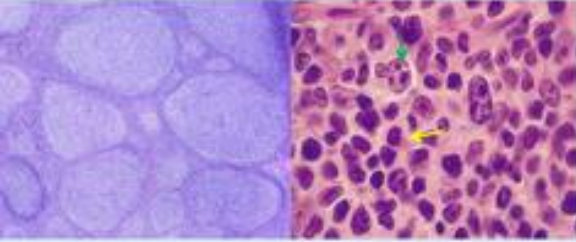
25. One of the following immunohistochemical stains is specific for neoplastic "coffee bean" cells in this section?



Select one:

- a. TdT.
- b. MPO.
- c. CD15.
- d. CD30.
- e. Langerin.

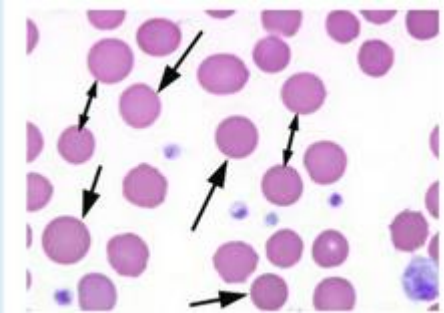
26. In this lymph node section, what is the name of the cell at the YELLOW arrow?



Select one:

- a. Immunoblast.
- b. Centrocyte.**
- c. Centroblasts.
- d. Prolymphocyte.
- e. Sezary cell.
- e. 4B

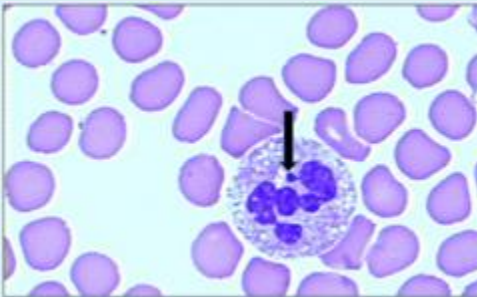
27. CA 15 year-old patient who presented anemia, splenomegaly and jaundice. A blood film is done (shown in this picture). All the following are complications for this blood disorder, EXCEPT?



Select one:

- a. Aplastic crisis.
- b. Hemolytic crises.
- c. Foot and lower leg ulcers.
- d. Gallbladder stones.
- e. Skeletal abnormalities.

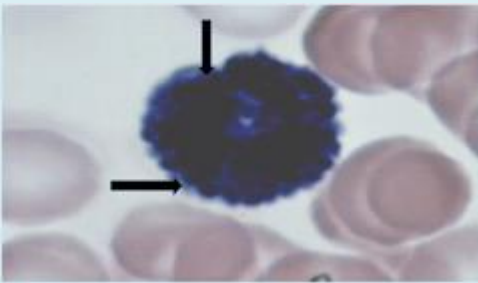
28. The pointed structure is?



Select one:

- a. Microphage — Barr body.**
- b. Polymorphnuclear cell — Barr body in male.
- c. Neutrophils — condensed active X chromosome in male. OO
- d. Neutrophil — condensed active X chromosome in female.
- e. Lymphocyte — condensed inactive X chromosome in female.

29. The true statement for the pointed blood cell?



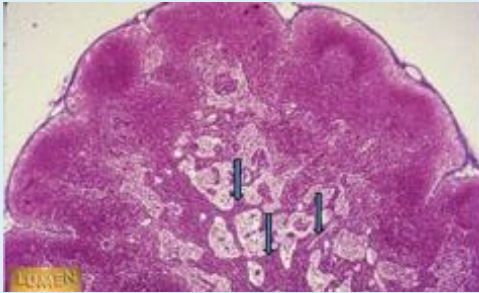
30. Blood group A contains?

Select one:

- a. Derived from lymphoid colony.
- b. Characterized by metachromasia.**
- c. Increase with parasitic infection. OO
- d. Its total count 1/2 - 1%.
- e. Bilobed C- shape nucleus.



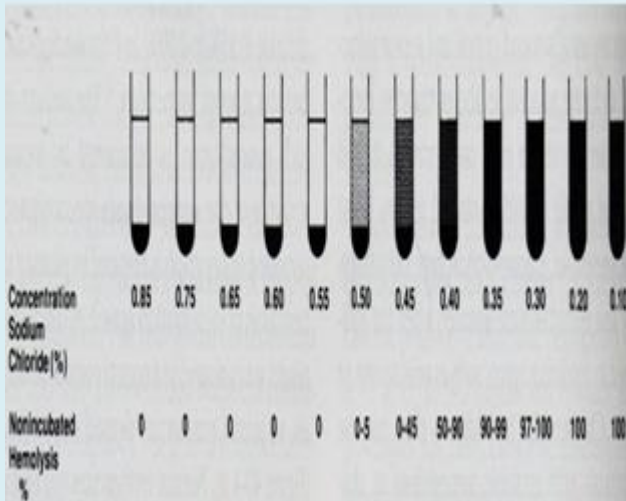
31. The pointed structure is?



Select one:

- a. Agglutinin B
  - b. Precipitinogen A
  - c. Precipitinogen B
  - d. Agglutinin A**
  - e. Agglutinin D
- Select one:
- a. Medullary sinuses in spleen.
  - b. Medullary cords in spleen.
  - c. Medullary cords in lymph nodes.**
  - d. Red pulp in spleen.
  - e. White pulp.

32. Increase osmotic fragility is hand in all EXCEPT?



- a. Spectrin deficiency.
- b. G.6PD deficiency.
- c. Hereditary hemolytic anemia.
- d. Sickle cell anemia.**
- e. Old RBCs.

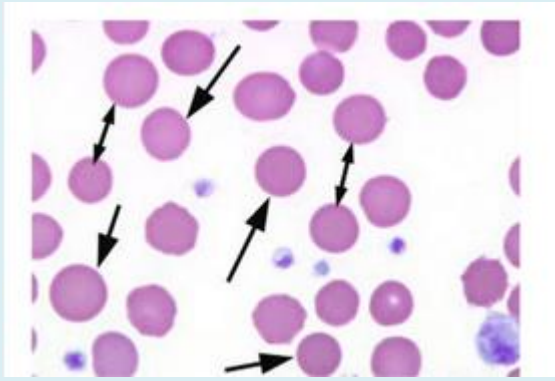
33. Glycosylated Hb (Hb A1c) is?



- a. Hb combining with O<sub>2</sub>.
- b. Hb combining with CO<sub>2</sub>.
- c. Hb combining with CO.
- d. Hb combining with Glucose.**
- e. Hb combining with Hydrogen.

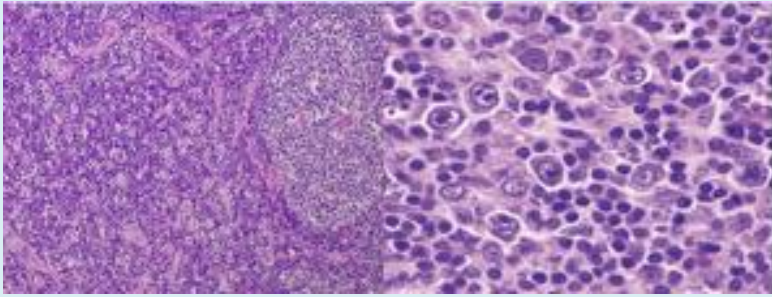
34. The main causative agent for this blood disease is?





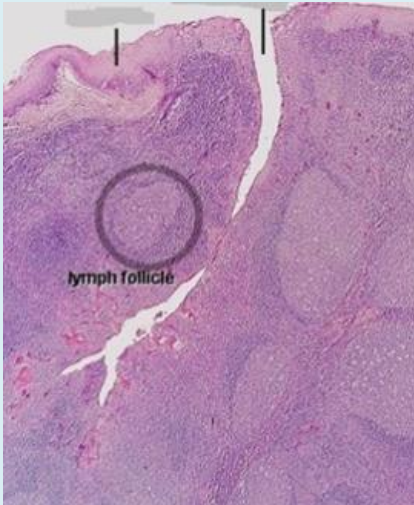
- a. Enzyme detects.
- b. Hemoglobinopathies,
- c. Thalassaemia syndromes.
- d. Detects In RBC membrane.**
- e. Artificial valves.

35. One of the following sentences best sentences the pathogenesis behind the changes you see in this lymph node?



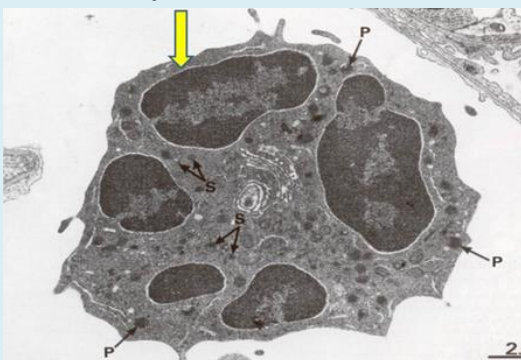
- a. Activated parafollicular T cells transform into large proliferating immunoblasts.**
- b. Hypertrophy of lining endothelial cell.
- c. Dense infiltrate of macrophages (histiocytes).
- d. Parafollicular neutrophils, necrosis and possible pus formation.
- e. Stimuli that activate humoral immune responses.

36. The true statement for this organ is?



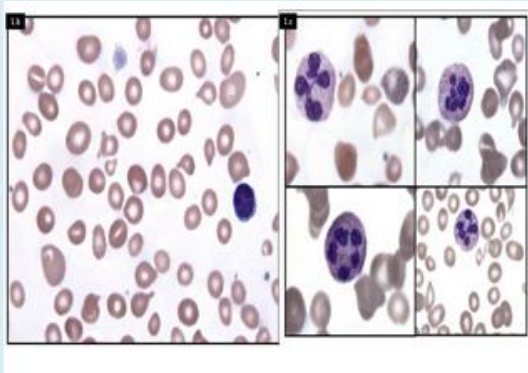
- a. Contain primary nodules only.
- b. Contain single crypt.
- c. Contain single fold.
- d. Covered by non keratinized stratified epithelium.**
- e. Presence of palatine gland near the epithelium.

37. The pointed cell is?



- a. Mast cell of the blood.
- b. Eosinophils.
- c. Polymorphnuclear cell.**
- d. Monocytes.
- e. Blood platelets.

38. This is a blood film for a 55-year-old male who presented with weakness and fatigue. What is the most common cause on this case?



- a. B12 Deficiency.
- b. Hypothyroidism.
- c. Folate Deficiency.**
- d. B12 Deficiency or folate Deficiency.
- e. B12 Deficiency or hypothyroidism.



39. This vector is responsible for transmitting?



- a. *R. rickettsii*.
- b. *O. tsutsugamushi*.
- c. *R. prowazokii*.
- d. *R. typhi*.
- e. *Coxiella burnetii*.

40. Adult hemoglobin has chains ?

- a. 2 alpha, 2δ`
- b. 2αhpha, 2βeta**
- c. 4αhpha
- d. 2αhpha, 2 delta
- e. 4βeta