



Archive

pathology

Collected by

W



Wareed Archive:

1) Wrong:

Bradykinin → smooth muscle relaxation.

2) All are true except:

- A) Tyrosine enzyme is in low expression in melanoma
- B) Tyrosine enzyme is in high expression in melanoma

ANSWER: A

3) Emboli consist of all the following except:

- A) Tumor cell
- B) Foreign body
- C) Organized thrombus

ANSWER: C

4) All of these cause chemotaxis except:

- A) C3a, C5a
- B) TNF
- C) Phagocytic bodies
- D) Bacterial debris

ANSWER: C

5) All are true except:

- A) Cancer cell take glucose Less than normal
- B) Cancer cell take Glucose more than normal

ANSWER: B

6) Wrong:

ANSWER: Hereditary nonpolyposis colon associated with APC

7) Is a widespread (systemic) hypo-perfusion of tissues?

- A) Shock
- B) Thrombus
- C) Trauma

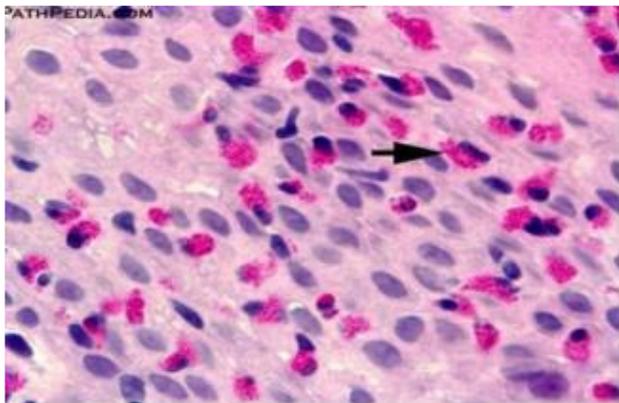
ANSWER: A

8) Not a malignant trauma:

- A) Papilloma
- B) Leukemia
- C) Melanoma

ANSWER: A

9) Name the pointed cells:



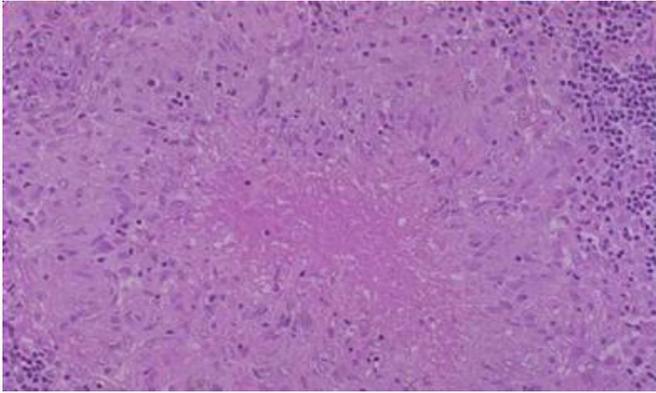
A) Eosinophils

B) Basophils

C) Neutrophils

ANSWER: A

10) Name the granuloma:

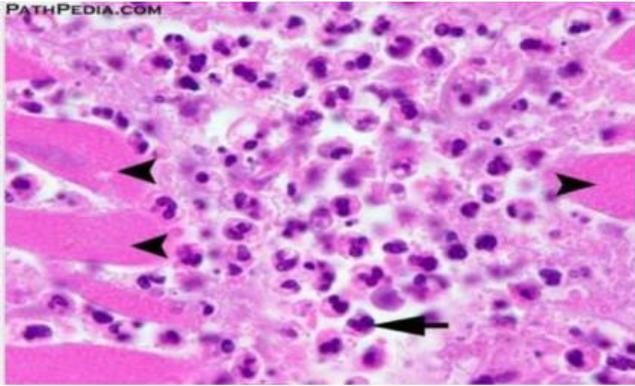


A) Non-caseating granuloma

B) Caseating granuloma

ANSWER: B

11)



- A) Chronic inflammation in myocardium
- B) Acute inflammation in lung
- C) Acute inflammation of myocardium

ANSWER: C

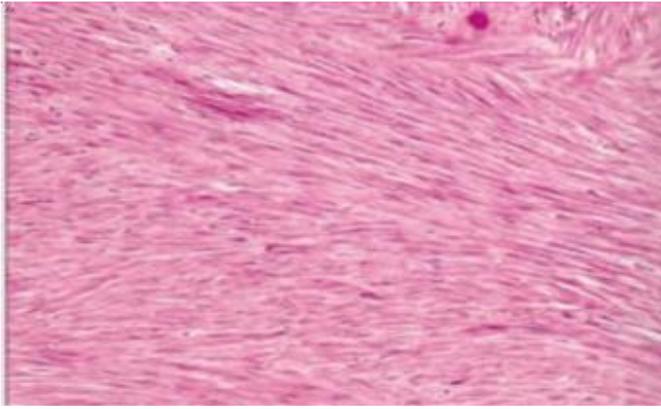
12)



- A) Salivary cancer
- B) Ovarian cystic teratoma

ANSWER: B

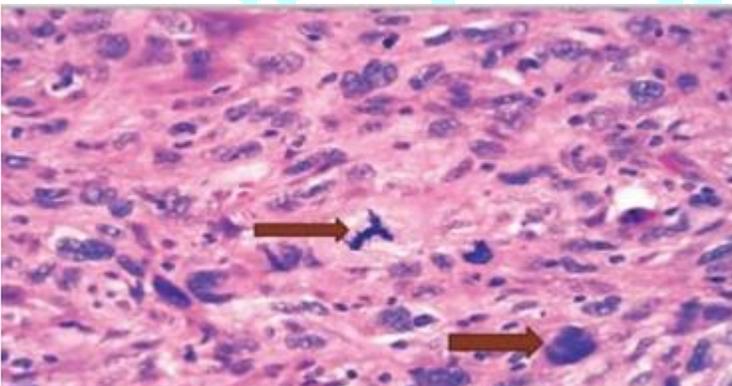
13)



- A) Rhabdomyoma
- B) Rhabdomyosarcoma
- C) Leiomyoma

ANSWER: C

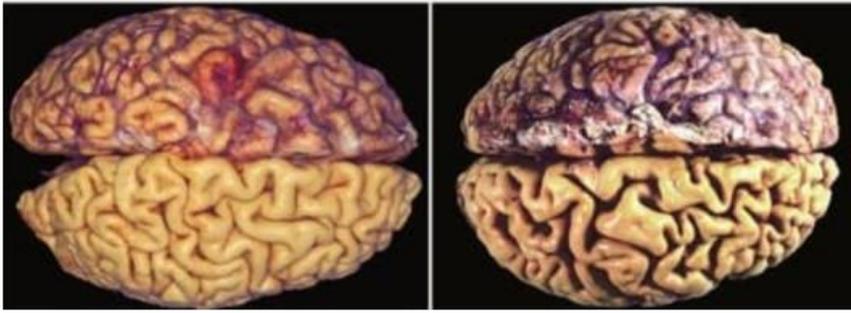
14) Example of:



- A) Typical mitosis
- B) Typical mitosis tripolar
- C) Atypical mitosis tripolar

ANSWER: C

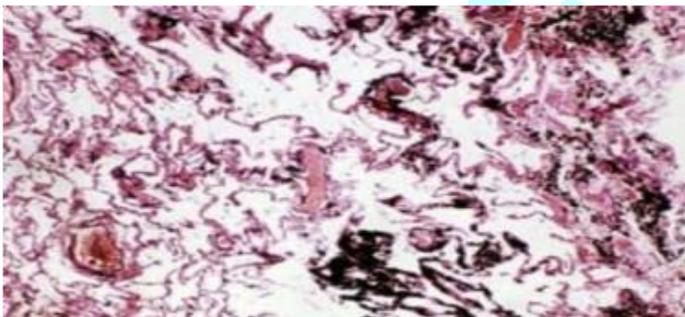
15) What is the pathological condition?



- A) Atrophy - widen sulfide, narrow gyri
- B) Hypoplasia
- C) Hyperplasia
- D) Atrophy widen sulci, narrow gyri

ANSWER: D

16) What is the pathological condition?



- A) Anthracosis
- B) Hemosidrosis
- C) Freckles
- D) Glycogen pigment

ANSWER: A

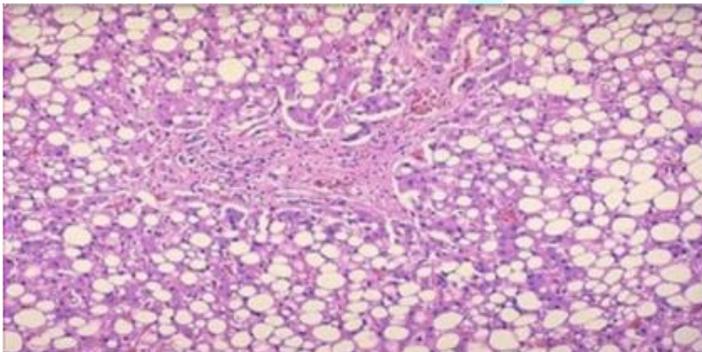
17)



- A) Adenomatous non-polyposis Coli
- B) Adenomatous polyposis coli

ANSWER: B

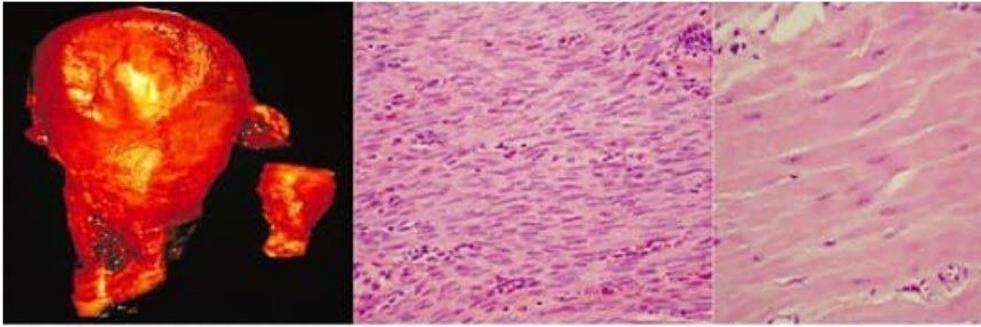
18) What's the pathological condition?



- A) Extra cellular accumulation
- B) Steatosis
- C) Lipofuscin

ANSWER: B

19) What's the physiologic change happened to uterus?



- A) Hyperplasia only
- B) Hypertrophy & Hyperplasia
- C) No change

ANSWER: B

20) What's wrong about generalized edema?

- A) Decrease osmotic pressure
- B) Albuminuria < 3.5gm/d
- C) Albuminuria >3.5gm/d

ANSWER: B

21) Kidney with normal adrenal cell + ectopic mass?

- A) Hamartoma
- B) Choristoma

ANSWER: B

22) Wrong statement:

ANSWER: Differentiation antigen induce immune response

23) All are true except:

- A) Cancer cells that do not express antigens on their membrane replicate mostly in immunosuppressant patients.
- B) Cancer cells that do not express antigens on their membrane replicate mostly in immunocompromised patients.

C) Tumor cells fail to express normal levels of human leukocytes Antigens (HLA) so they will escape attack by CTLs

ANSWER: A

24) Polythemia:

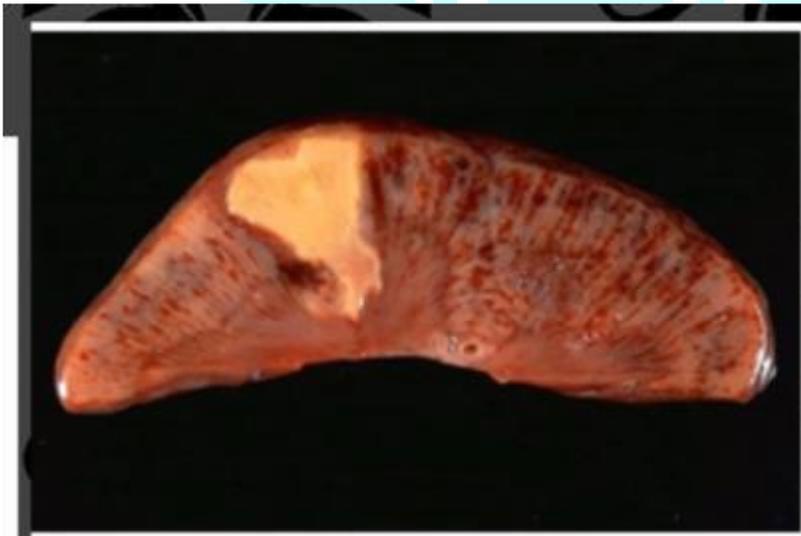
ANSWER: renal cancer

25) Elevation of (glycoprotein CA-15.3) Indicates a:

- A) Ovarian tumor
- B) Liver cancer
- C) Lung cancer
- D) Breast cancer

ANSWER: D

26) What's the pathologic condition?



- A) Pale infraction of kidney
- B) Caseous necrosis
- C) Liquefactive necrosis

ANSWER: A

27) One is wrong about myocardial infarction?

- A) Non contractile cell: 1-2 minutes
- B) Death: 2-3 hours
- C) Morphology EM: 2-3 hours
- D) Morphology LM: 6-12 hours
- E) Grossly: 12-24 hours

ANSWER: B

28) All the following associated with gangrene, except:

- A) Lower limb
- B) Upper limb

ANSWER: B

29) All of these factors can cause lung infarction, EXCEPT:

- A) Heart failure
- B) Anemia
- C) Healthy lung
- D) Atherosclerosis

ANSWER: C

30)



ANSWER: Saddle embolus

31) All of these can metastasize, expect:

ANSWER: Basal Carcinoma of the skin

32) Amniotic embolism-one is false?

ANSWER: Never D.I.C occur

33) Paradoxical embolus, one is true?

ANSWER: A.S.D

34) Nutritional edema occurs due to?

- A) Liver impairment
- B) Increase protein syn.
- C) Increase ingestion

ANSWER: A

35) One of these are associated with physiologic death:

- A) Loss of GF
- B) Decrease hormones level e.g.: Estrogen
- C) Necrosis
- D) Loss of survival signaling

ANSWER: C

36) Compact mass of blood element:

- A) Hemorrhage
- B) Embolism
- C) Thrombus

ANSWER: C

37) What is the most common type of thrombus?

- A) Mixed thrombi
- B) Pale thrombi
- C) Red thrombi

ANSWER: A

38) Wrong statement;

- A) Acute pancreatitis can cause pancreas cancer
- B) Chronic pancreatitis can cause pancreas cancer

ANSWER: A

39) All the following about the study of pathology is correct, Except?

- A) The morphologic changes can be seen grossly and by microscope only

B) Pathogenesis leads from structural alteration to clinical manifestation

ANSWER: A

40) Extrinsic pathway caused by:

A) Misfolded protein accumulation

B) Virus infection

ANSWER: B

41) Cardiogenic edema-one is false?

A) Venous congestion

B) Renal impairment

C) Liver impairment

D) Atherosclerosis

E) Hyperaldosteronism

ANSWER: E

42)



ANSWER: Large granulation / contraction

43) Exudative fluid:

- A) Serous inflam.
- B) Purulent inflam.
- C) Fibrinous inflam.

ANSWER: C

44) All of the following are true regarding (Hyperaemia) except;

- A) Generalized
- B) Acute

ANSWER: A

45) Cardiac cirrhosis-one is true?

- A) Nut-meg liver characteristic
- B) Complication of chronic liver congestion

ANSWER: B

46) All of these cause Vasoconstriction except:

- A) Prostaglandin
- B) Leukotrienes C4
- C) Leukotrienes D4
- D) Leukotrienes E4

ANSWER: A

47)



ANSWER: Brown induration of the lung

48) Benzene agent can cause;

- A) Prostate cancer
- B) Lung carcinoma
- C) Hepatic angiosarcoma
- D) Leukemia

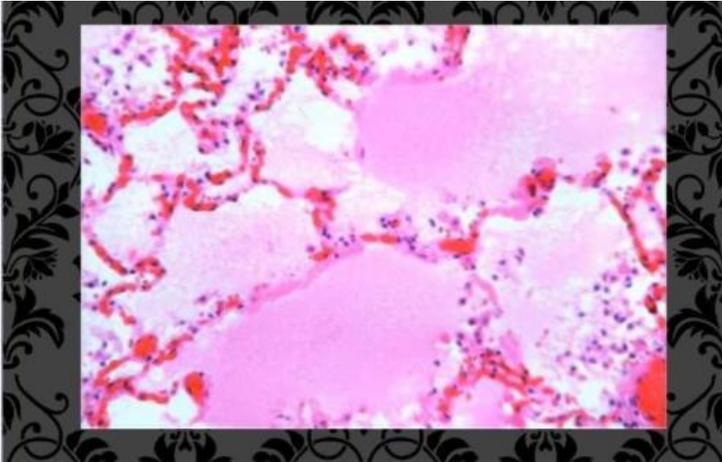
ANSWER: D

49) Serotonin functions except;

- A) Neurotransmitters
- B) Chemotaxis
- C) Vasoconstriction
- D) From neuron and endochromafin

ANSWER: B

50)



ANSWER: Lung congestion, edema

51) Hemorrhagic diathesis include all the following, EXCEPT?

- A) Hemophilia a
- B) Hemophilia b
- C) Hemophilia c
- D) DIC
- E) Purpura

ANSWER: C

52) Acute pulmonary congestion- the wrong statement is?

- A) Large heavy lung
- B) Blood engorged alveolar capillaries
- C) Alveolar septal edema
- D) Intral-alveolar hemorrhage
- E) Heart failure cells

ANSWER: E

53) All the following about hyperemia are true, EXCEPT?

- A) Active process
- B) Generalized
- C) Occurs in acute inflammation
- D) Needs energy
- E) Release of histamine

ANSWER: B

54) Stain commonly used:

ANSWER: H&E

55) All happened in intrinsic pathway except:

- A) Triggering caspases 9
- B) Increase mitochondrial permeability
- C) Triggering caspase 8

ANSWER: C

56) Name the pathologic condition:



- A) Ulceration
- B) Keloid
- C) Wound dehiscence

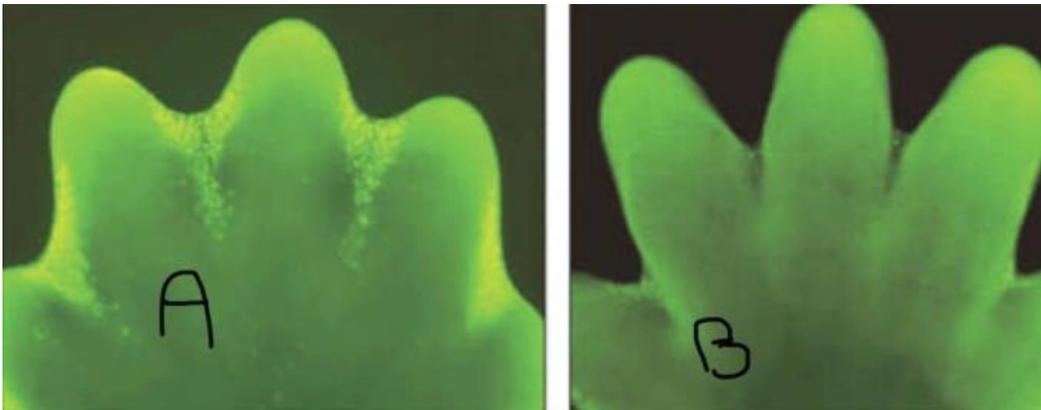
ANSWER: C

57) Cause of Delayed union:

- A) Inadequate immobilization
- B) Pseudarthrosis
- C) Hypovolemic shock

ANSWER: A

58) The change from (A->B) is caused by:



- A) Abnormal apoptosis
- B) Apoptosis caused by loss of GF signaling
- C) Necrosis

ANSWER: B

59) Not associated with reversible damage;

- A) Dilation of ER
- B) Clumping of nuclear chromatin
- C) Karyorrhexis
- D) Plasma membrane blebbing and blenting

ANSWER: C

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1) Which of the following intracellular accumulations is responsible for Anthracosis? Select one

- A) Carbon
- B) Cholesterol clefts
- C) Melanin
- D) Hemosiderin.
- E) Lipofuscin

ANSWER: A

2) Which of the following vitamins is crucial as a cofactor in the coagulation process? Select one

- A) Vitamin K
- B) Vitamin B12
- C) Vitamin C
- D) Vitamin D
- E) Vitamin E

ANSWER: A

3) Gas bubbles within the circulation can coalesce and obstruct vascular flow and cause distal ischemic injury. One of the following is INCORRECT

about gas embolism? Select one

- A) Small venous gas emboli are generally harmless
- B) Patient's sitting position during neurosurgeries can cause air embolism in cerebral arterial circulation
- C) If the scuba diver ascends too rapidly gas expands in the tissues and bubbles into the blood
- D) When air is breathed at high pressure, diver's blood dissolves more oxygen and less nitrogen
- E) High-pressure chamber are used to treat acute decompression sickness

ANSWER: d

4) One of the following pairs between the factors/cytokines involved in coagulation and their role is CORRECTLY matched? Select one

- A) ADP. Bridges between the platelet receptor glycoprotein Ib and exposed collagen
- B) Factor IXa /factor VIIIa complex: The most important activator of factor XII
- C) Thrombin: The most important plasminogen activator
- D) Thromboxane A2: A potent inducer of platelet aggregation
- E) Nitric oxide (NO): induce platelet activation and aggregation

ANSWER: D

5) A30-year-old man complaining of osteoarthritis (OA). Aspirin is taken to reduce joint pain, however the inflammatory process continues the Aspirin therapy alleviates the joint pain mainly through reduction in the synthesis of which of the following mediators? مش معنا

Select one:

- A) Complement C1q
- B) Histamine.
- C) Leukotriene E
- D) Nitric oxide
- E) Prostaglandins

ANSWER:

6) One of the following is incorrect regarding the differences between hyperemia and congestion?

Select one:

- A) Congestion accumulates deoxygenated blood
- B) Both lead to increase blood volume within the tissue
- C) Hyperemia is a passive process resulting from arteriolar dilation.
- D) Congestion results from impaired outflow of venous blood from a tissue.
- E) Hyperemia is observed in condition associated with inflammation

ANSWER: C

7) One of the following pairs between the factor/receptor and the possible complication of its deficiency is wrongly matched?

Select one:

- A) Factor V Moderate to severe bleeding disorder.
- B) Prothrombin deficiency: Incompatible with life.
- C) Factor XII deficiency Mild to Moderate bleeding disorder,
- D) GpIIb-IIIa Deficiency Glanzmann thrombasthenia
- E) GpIb Deficiency Bernard-Soulier syndrome

ANSWER: B

8) Which of the following morphologic changes is irreversible? مش معنا

- A) Dilation and swelling of endoplasmic reticulum.
- B) Mitochondrial swelling
- C) Surface membrane blebs
- D) Nuclear Karyolysis
- E) Clumped nuclear chromatin

ANSWER:

9) Her2-neu amplification causes increased expression of?

Select one:

- A) ER (EGFR) المفروض
- B) PR
- C) E-Cadherin
- D) P-Cadherin
- E) Basal like gene.

ANSWER: B

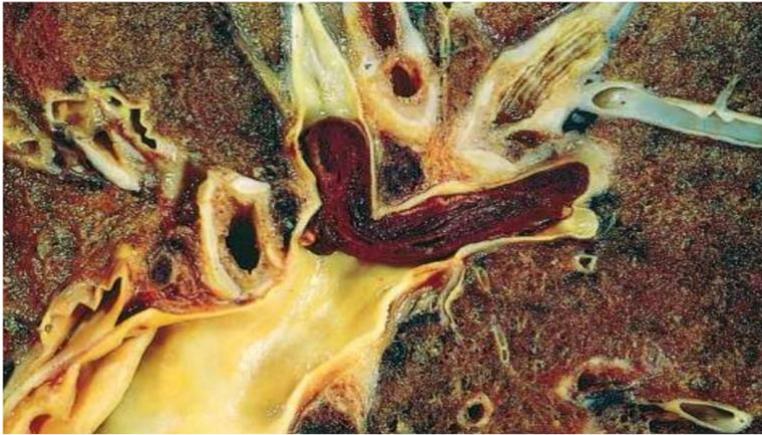
10) Which of the following is most likely to be responsible for a cytoskeleton-extracellular matrix interaction?

Select one:

- A) Epidermal growth factor.
- B) Fibronectin.
- C) Integrin.
- D) Vascular endothelial growth factor
- E) Type IV collagen

ANSWER: C

11) What is the most likely clinical presentation associated with the pathology illustrated in the picture if no treated prompt



Select one:

- A) Sudden death
- B) Pulmonary hemorrhage
- C) Hypertension and right ventricular failure
- D) Fat embolism syndrome
- E) Asymptomatic and cynically silent

ANSWER: A

12) Which of the following is most likely to invade vein in early stage?

Select one:

- A) Gastric cancer
- B) Breast cancer
- C) Basal cell carcinoma
- D) Renal carcinoma
- E) Lymphoma

ANSWER: D

13) One of the platelets cytoplasmic granules are dense granules. ONE of the following is NOT among the component of dense granules?

Select one:

- A) Adenosine diphosphate (ADP).
- B) Adenosine triphosphate (ATP).
- C) Von Willebrand factor (vWF)
- D) Serotonin
- E) Ionized calcium

ANSWER: C

14) As a complication of a two-month history of acute myocardial infarction that has been mostly replaced by capillaries, fibroblasts, collagen, and inflammatory cells, a 50 year-old person develops symptoms of congestive heart failure. Which of the following cell types is most likely to be most characteristic of the inflammatory response in this situation?

Select one:

- A) Eosinophils
- B) Epithelioid cells
- C) Macrophages
- D) Neutrophils
- E) Plasma cells

ANSWER:

15) A 3-year-old boy has had recurrent bacterial infections since birth. Genetic testing shows a defect leading to a lack of one type c integrin production, which of the following abnormalities of neutrophil function is most likely responsible for these clinical symptoms? غير مطلوب

Select one:

- A) Decreased generation of ROS

- B) Diminished phagocytosis of bacteria opsonized with IgG
- C) Failure of migration to the site of infection
- D) Inadequate adhesion on the activated endothelium.
- E) Reduced of the phagocytosis process

ANSWER:

16) All is true about carcinoma in situ of the cervix except?

Select one:

- A) It is a high grade dysplasia
- B) It is considered as cell proliferation
- C) It is strongly associated with HPV type 6 and 11.
- D) The dysplastic cells not invading basement membrane
- E) There is an increase in mitoses.

ANSWER: C

17) A 31-year-old woman with uneventful pregnancy develops sudden shortness of breath with cyanosis and hypotension seconds after delivering a healthy term infant through normal vaginal delivery she develops generalized seizure followed by a coma. She is in the ICU with no improvements. Which of the following findings is MOST likely to be present in her pulmonary microcirculation?

Select one:

- A) Thromboemboli
- B) Aggregates of platelets
- C) Fat microglobules
- D) Gas bubbles
- E) Squamous cells and hair

ANSWER: B

18) Which of the following is most useful in diagnosis and follow up of hepatocellular carcinoma?

Select one:

- A) CEA in serum
- B) Estrogen level in serum
- C) Alpha fetoprotein in serum
- D) PSA in serum
- E) Ca125

ANSWER: C

19) Adaptations are cellular in response to changes in their environment, ONE of the following is INCORRECT about it?

Select one:

- A) Both metaplasia and hyperplasia can predispose to malignant transformation if persist
- B) Atrophic cells are not dead cells.
- C) Physiologic and pathologic atrophies have similar fundamental cellular changes.
- d. Certain viral infections, like papillomaviruses, can cause cellular hypertrophy
- E) Metaplasia arises by reprogramming of stem cells not by a phenotypic change of differentiated cells.

ANSWER: D

20) All of the followings are true concerning BCL2 gene except? Select one: غير مطلوب

- A) It is an anti-apoptosis gene.
- B) Located on chromosome 18.
- C) It is the cause of follicular lymphoma.
- D) Translocation to chromosome 14 is present in T- cell lymphoma.
- E) Loss of this gene increases the sensitivity to treatment.

ANSWER:

21) A 35 old-year man has these skin lenions. Which of the following is incorrect about this abnormal repair response?



Select one:

- A) Due to exuberant granulation tissue growth
- B) Fails to regress with normal remodeling
- C) May grow beyond the boundaries of the original wound
- D) Most common in African American
- E) Traumatic injury to the deep dermis is a typical inciting event

ANSWER: A

22) Which of the following statements are correct regarding dysplasia?

Select one:

- A) Colonic adenoma with low grade dysplasia carries no risk of malignant transformation.
- B) High grade dysplasia of the cervical epithelium can become neoplastic upon acquiring genetic mutations
- C) Sun exposure can cause epidermal damage without dysplastic lesions
- D) Dysplastic lesions in esophageal mucosa cannot progress to squamous cell carcinoma
- E) Esophageal metaplastic glandular epithelium is pre-neoplastic and cannot progress to adenocarcinoma

ANSWER: B

23) These are microscopic descriptions of certain lesions. Decide which are malignant?

Select one:

- A) A mass composed of squamous epithelial cells with a high mitotic rate and atypical mitoses There is nuclear pleomorphic, hyperchromasia and prominent nucleoli**
- B) A well circumscribed lesion composed of proliferation of smooth muscle cells with occasional mitotic figure. There is no cellular atypia or pleomorphism.**
- C) Cervical biopsy showing loss of maturation of the lower two thirds of the epithelium with several basal mitoses. There is superficial maturation and the basement membrane is intact**
- D) Cervical biopsy showing full thickness atypia and superficial mitoses Occasional atypical cells are seen within the submucosa**
- E) All of the above.**

ANSWER: A

24) 57-year-old obese patient presented at the emergency department with 1 year history of a small lump in her breast: over the last 2 months the breast had become much bigger, heavy, itchy, and hot the patient's mother and 2 maternal aunts died of pre-menopausal breast cancer. Clinical examination of the left breast showed widespread erythema and intense edema with peau d'orange, along with an enormous and ill-defined mass. Which of the following pathophysiologic mechanisms is most responsible for the edema and swelling in the patient's breast?

Select one:

- A) Increased Hydrostatic Pressure**
- B) Reduced Plasma Osmotic Pressure**
- C) Lymphatic Obstruction**
- D) Sodium and Water Retention**

E) Inflammation

ANSWER: C

25) A 50-year-old man has a 2-year history of left chest pain that occurs during exercise. Coronary angiography shows 75% narrowing of the anterior descending branch of the left coronary artery. His Doctor diagnosed him with Coronary artery disease due to atherosclerosis. Accumulation of which of the following substances has the main role in the pathogenesis of atherosclerosis?

Select one:

- A) Intracellular glycogen
- B) Proteins
- C) Cholesterol
- D) Triglycerides.
- E) Lipofuscin.

ANSWER: C

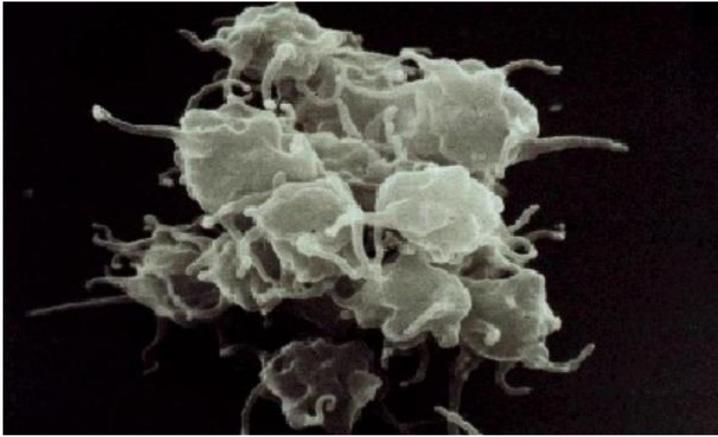
26) One of the following factors deficiencies renders the patient susceptible to thrombosis?

Select one:

- A) Factor XI deficiency
- B) Factor XII deficiency
- C) Prothrombin deficiency
- D) Factor VIII deficiency
- E) Factor IX deficiency

ANSWER: B

27) This is an electron micrograph of an early activated platelet, one of the following is incorrect about activated platelets?



Select one:

- A) They Provide a negatively charged surface where the coagulation factors assemble
- B) Activated by exposure of subendothelial collagen.
- C) These shape changes markedly decrease the surface area
- D) Activated by exposure of subendothelial von Willebrand factor (vWF)
- E) These changes are associated with release of secretory granules.

ANSWER: C

28) Premalignant conditions include all of the following except?

Select one:

- A) Cirrhosis of the liver.
- B) Squamous dysplasia.
- C) Uterine leiomyoma.
- D) Familial adenomatous polyposis.
- E) Chronic gastritis

ANSWER: C

29) Which of the following carcinogens is mostly involved in the development of thyroid cancer?

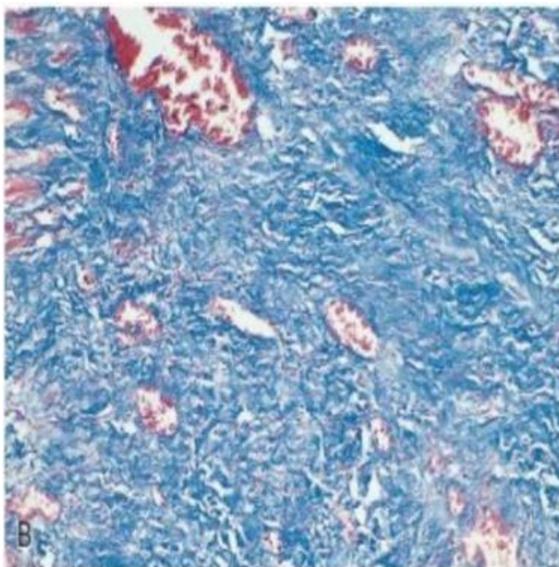
Select one:

- A) Human papilloma virus.
- B) Aflatoxin.
- C) Ionizing radiation.
- D) EBV.
- E) Polycyclic hydrocarbons.

ANSWER: C

30) 24-year-old man with acute appendicitis undergoes surgical removal of the inflamed appendix. The incision site is sutured. A trichrome-stained section representative of the site with blue appearing collagen is shown in the figure. How long after the surgery would this appearance most likely be seen?

Select one:



- A) 1 day.
- B) 2 to 3 days.
- C) 4 to 5 days.
- D) 1 to 2 weeks.
- E) 1 to 3 months

ANSWER: E

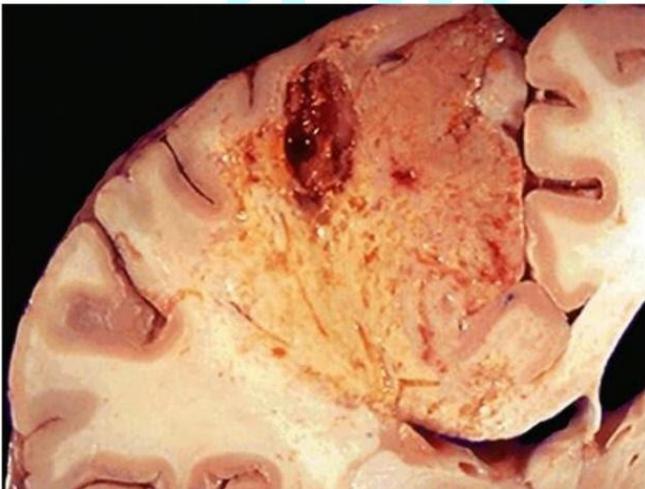
31) Trousseau phenomenon is seen most frequently with?

Select one:

- A) Bronchogenic carcinoma
- B) Colon carcinoma
- C) Breast carcinoma
- D) Thymus carcinoma
- E) Pancreatic carcinoma

ANSWER: E

32) A 72- years -old man presented to the ER with sudden loss of consciousness, after gaining his consciousness 1 hour later. He couldn't speak or move his left arm. Six week later, a brain CT scan showed a large cystic area in the right partial lobe, corresponding to these gross findings. Which of the following pathologic processes has most likely occurred in his brain?



Select One:

- A) Gangrene
- B) Tuberculosis
- C) Fungal infection
- D) Concussion
- E) Ischemic hypoxic brain injury

ANSWER: C

33) Which of the following is correct about this chronic wound?



Select one:

- A) Caused by prolonged compression of tissues against a bone.
- B) Develop in individuals with atherosclerosis
- C) Associated with diabetes Mellitus
- D) May be caused by congestive heart failure
- E) Caused by mechanical pressure and local ischemia

ANSWER: C

34) A 53-year-old woman has experienced abdominal pain for 2 weeks. She is afebrile. There is mild upper abdominal tenderness on palpation, and bowel sounds are present. The figure shows microscopic examination of a biopsy specimen of a duodenal lesion. Which of the following pathologic processes is most likely present?

Select one:



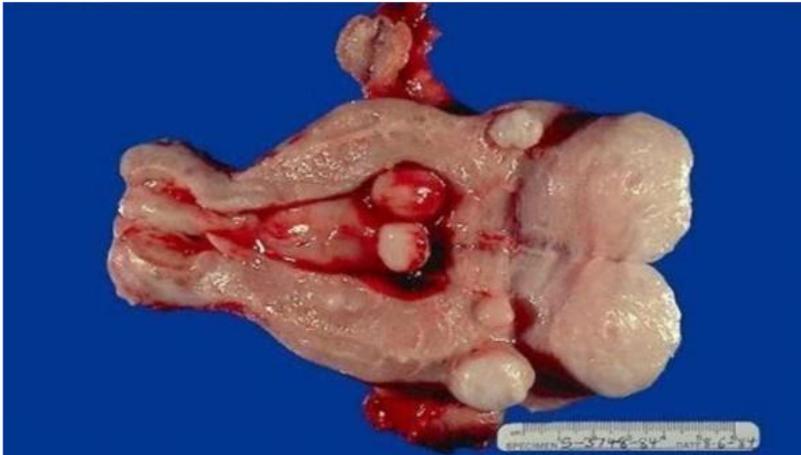
- A) Abscess
- B) Caseating granuloma
- C) Chronic inflammation
- D) Purulent inflammation

E) ulceration

ANSWER: E

35) A 30 years old female presented to gynecological doctor with well circumscribed benign looking uterine mass, from your opinion this neoplasm is mostly?

Select one:



A) Ovarian carcinoma metastasis

B) Leiomyosarcoma

C) Uterine adenocarcinoma

D) Cervical adenoma

E) Leiomyoma

ANSWER: E

36) A 50-year-old woman notes a lump in her breast, her physician's assistant palpates a 2 cm firm mass in her left breast. A fine needle aspiration biopsy is performed, and on microscopic examination a carcinoma is present. Molecular analysis shows HER2 positivity but estrogen receptor negativity in these malignant cells Through which of the following mechanisms has this abnormal expression most likely occurred?

Select one:

A) Amplification

- B) Epigenetic alteration
- C) Growth factor binding
- D) Point mutation.
- E) Reduced miRNA expression

ANSWER: A

37) A 25-year-old woman underwent laparotomy for Cesarean section Then, complaining of wound infection. Primary closure was no longer possible. Which of the following processes best accounts for the observed decrease in wound size?

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Select one:

- A) Resolution of subcutaneous edema
- B) Increase in synthesis of fibrin.
- C) Inhibition of metalloproteinase •
- D) Myofibroblast contraction
- E) Elaboration of adhesive molecules including glycoproteins

ANSWER:

38) All of the followings are involved in cell cycle regulation mechanisms Except, Select one:

- A) Cyclin dependent kinase
- B) Cyclin dependent kinase inhibitors
- C) RB gene
- D) P53 gene
- E) Integrin

ANSWER: E

39) Columnar epithelial cells from the colonic mucosa are studied to identify abnormalities in cell signaling pathways. Abnormal epithelial cells from colonic adenocarcinoma are shown to have a mutation that blocks hydrolysis of GTP-

bound active RAS. Normal columnar cells have active RAS protein that undergoes hydrolysis to the inactive GDP-bound form.

Which of the following signaling pathways is most likely abnormally stimulated in the carcinoma cells? Select one:

- A) ADP.
- B) BCR-ABL.
- C) Cyclic AMP
- D) P53.
- E) MAP kinase.

ANSWER: E

40) A 65-year-old male patient who is a known case of diabetes mellitus with a history of myocardial infarction 5 months ago. Now he is taking multiple medications to control sugar and cholesterol along with low dose aspirin to reduce the risk for arterial thrombosis. In which of the following hemostasis steps does aspirin has the greatest impact?

- A) Exposing tissue factor
- B) Platelet aggregation
- C) Release of von Willebrand factor
- D) Fibrin polymerization
- E) Plasmin generation

ANSWER: B

41) What type of hemorrhage is seen involving the bowel mucosa here?

Select one:

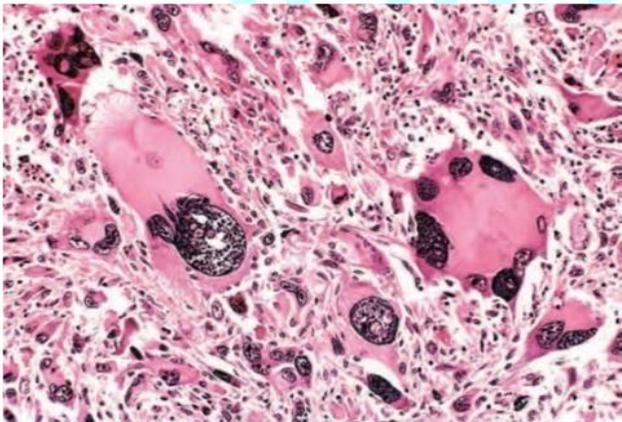


- A) Purpura
- B) Hemopericardium
- C) Petechiae
- D) Ecchymosis
- E) Hydropericardium

ANSWER:

42) Read the following slide then identify what are these large atypica cells are example of?

Select one:



- A) Pleomorphism.
- B) Prominent nucleoli.
- C) Atypical mitosis.
- D) Loss of polarity.
- E) Low nuclear to cytoplasmic ratio.

ANSWER: A

43) One of the following is not among the metabolic derangements and abnormalities caused by septic shock?

Select one:

- A) Gluconeogenesis and hyperglycemia
- B) Catecholamines release
- C) Insulin resistance in liver and other tissues
- D) Hypoxia and diminished oxidative phosphorylation
- E) Anaerobic glycolysis

ANSWER: E

44) You are in the kitchen chopping veggies for the salad while watching an episode of your favorite series on your smartphone. When an intense scene comes in, you lose your concentration and cut yourself superficially with the knife, which result to a small amount of bleeding that stops in few seconds. Which of the following substances is released by endothelium and is most likely responsible for stopping the bleeding so fast?

Select one:

- A) Nitric oxide
- B) Prostacyclin
- C) Adenosine diphosphate (ADP)
- D) Fibrinogen
- E) Endothelin

ANSWER: E

45) Which of the following is caused by an RNA virus?

- A) Hepatoma.
- B) Burkitt lymphoma?
- C) T-cell leukemia.
- D) Lung carcinoma.
- E) Breast carcinoma

ANSWER: C

46) An 8-year-old girl came to the pediatric clinic with her mother who said she is not playing with her siblings and she has been tired the whole past week. This is a picture of her face, other findings included pitting edema at the ankles, but no fever and she has a normal blood pressure. Laboratory studies show high urine protein content. Which of the following is the most likely mechanism of her edema?

Select one:



- A) Lymphatic Obstruction
- B) Inflammation
- C) Sodium and Water Retention
- D) Reduced Plasma Osmotic Pressure
- E) Increased Hydrostatic Pressure

ANSWER: C

47) A 9-year-old fair-skinned female child presented to the dermatologist with her mother, complaining of multiple small light brown patches over her cheeks and nose that get darker upon sun exposure. The doctor counseled the patient about freckles and advised her to use sunscreen.

Which of the following mechanisms underlies the formation of freckles? Select one:

- A) Melanin accumulation in basal keratinocytes.
- B) Wear-and-tear pigment.
- C) Glycogen storage disease.
- D) Large aggregates of ferritin micelles.
- E) Free radical peroxidation of polyunsaturated lipids.

ANSWER: A

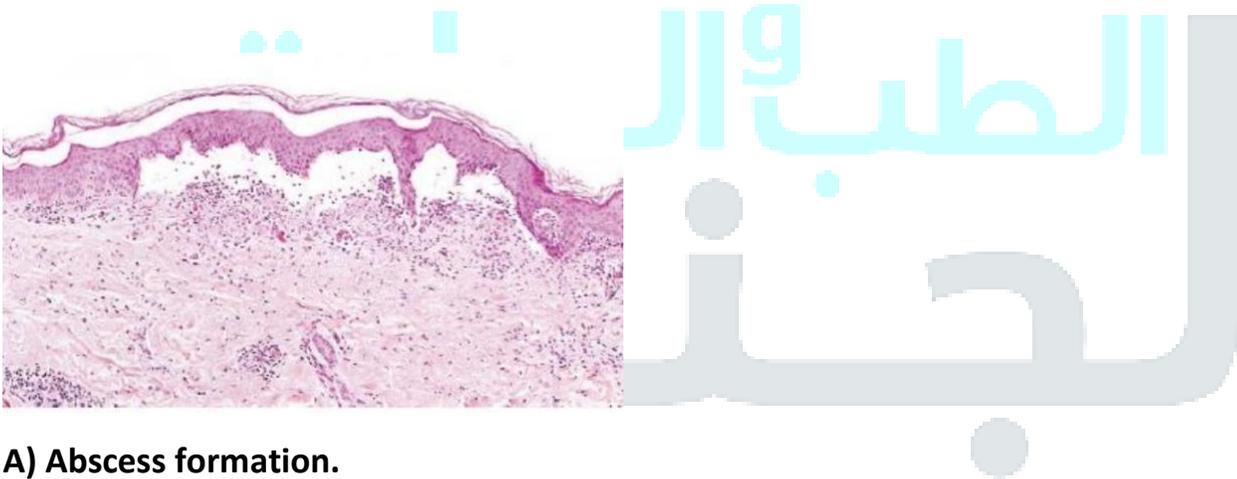
48) All are true about paraneoplastic syndromes except?

Select one:

- A) It may precede the diagnosis of a tumor.
- B) It may produce ectopic hormone production.
- C) One example is secretion of parathyroid like hormone from bronchogenic carcinoma.
- D) One example is secretion of thyroxine from follicular carcinoma of thyroid.
- E) Para neoplastic syndrome may present as hypercoagulability of the blood in pancreatic cancer.

ANSWER: D

49) The changes present in this skin biopsy are an example of which morphologic pattern of acute inflammation?



- A) Abscess formation.
- B) Fibrinous inflammation.
- C) Serous inflammation.
- D) Suppurative inflammation.
- E) Ulcer formation.

ANSWER: C

50) Which of the following represent the approximate age of the myocardial infarction illustrated in this picture?

Select one: غير مطلوب



- A) 1-2 minutes.
- B) 24-72 hours
- C) 20-30 minutes.
- D) 6-12 hours.
- E) More than 8 weeks.

ANSWER:

51) A 78-year-old diabetic woman with history of recurrent urinary tract infections, now presented with 1 week history of dysuria and left flank pain. On examination, her temperature is 38.9° C, pulse 105/min, and blood pressure 78/40 mm Hg. A urinalysis shows numerous WBCs. Her plasma lactate is increased. Urine culture and blood culture grow Escherichia coli. Which of the following organs is least likely to be affected by ischemic injury in this woman? Select one:

- A) Liver
- B) Brain
- C) Heart
- D) Spleen
- E) Kidney

ANSWER: A

52) Which of the following is a physician who emphasized that all diseases originate at the cellular level, and he is known to be the "The Father of Modern Pathology"? Select one: غير مطلوب

- A) Adolf Hitler.
- B) Rudolf Virchow.
- C) Giovanni Morgagni.
- D) Robert Koch.
- E) Robert Hooke.

ANSWER:

53) The degree of resemblance of a tumor to its cell of origin is known as?

Select one:

- A) Dysplasia.
- B) Stage.
- C) Differentiation.
- D) Anaplasia.
- E) Pleomorphism.

ANSWER: C

54) A 73-year-old man has an episode of hematemesis. Upper GI endoscopy reveals an irregular 4 cm gastric antral ulceration. Biopsies are performed and microscopically reveal adenocarcinoma. Molecular analysis shows DNA hypermethylation of the CDKN2 complex. Through which of the following mechanisms has this abnormal gene expression most likely occurred?

Select one:

- A) Amplification.
- B) Epigenetic alteration.
- C) Growth factor binding.
- D) Point mutation.

E) Reduced miRNA expression.

ANSWER: B

55) Which of the following pathophysiologic pathway is primarily responsible for the edema observed in patients with nephrotic syndrome? Select one:

- A) Increase hydrostatic pressure.
- B) Lymphatic obstruction.
- C) Decrease plasma osmotic pressure.
- D) Increase endothelial permeability.
- E) Increase aldosterone production.

ANSWER: C

56) All of the following factors has a major role in determining the severity and outcome of septic shock except?

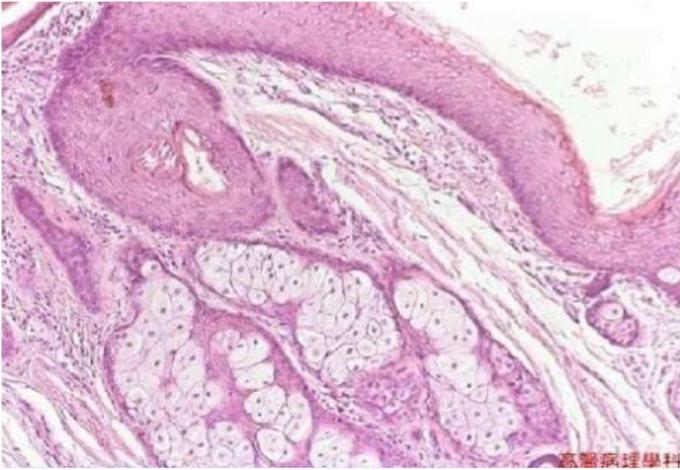
Select one:

- A) The extent and virulence of the infection.
- B) The immune status of the host (patient).
- C) The presence of other comorbid conditions like heart failure.
- D) Level of mediators and cytokines production
- E) The clinical center where the patient has been treated.

ANSWER:E

57) This histological section is for a young female with an ovarian mass, What is the pathologic term of this neoplasm?

Select one:

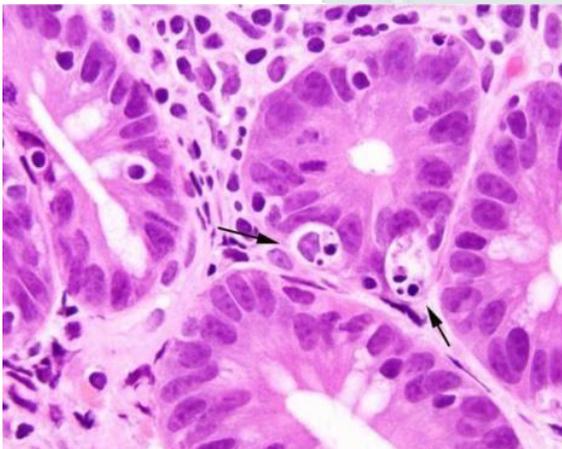


- A) Teratoma
- B) Choristoma.
- C) Hamartoma.
- D) Carcinoma.
- E) Dysgerminoma.

ANSWER: A

58) This is a section from gastrointestinal epithelium. What is the mechanism of apoptosis in this scenario?

Select one: غير مطلوب



- A) Decreased hormone levels
- B) Strong recognition of self-antigens
- C) Activation of the mitochondrial pathway by viral proteins

- D) Loss of growth factor signaling
- E) Activation of proapoptotic proteins by BH3-only sensors

ANSWER:

59) Hypercoagulability is an abnormally high tendency of the blood to clot. All of the following are secondary causes of Hypercoagulability except?

Select one:

- A) Elevated levels of homocysteine
- B) Prolonged bed rest or immobilization
- C) Heparin-induced thrombocytopenia
- D) Prosthetic cardiac valves
- E) Malignancy

ANSWER: A

60) Anasarca means?

Select one:

- A) Systemic inflammatory response.
- B) Severe generalized edema.
- C) Absence of proliferation of vessels following inflammation.
- D) Accumulation of large amount of pus.
- E) Fetal or neonatal death.

ANSWER: B

61) Infarcts are classified based on their color (the amount of hemorrhage) into red and white infarcts. One of the following organs is characterized by White infarction due to the presence of end-arterial circulations and the high tissue density that limits the seepage of blood from adjoining patent capillary beds?

Select one:

- A) Testis

- B) Ovaries
- C) Small intestine Bunn p
- E) Kidneys

ANSWER: E

62) In the stage of tumor which is false?

Select one:

- A) It can be assessed microscopically.
- B) It may correlate with the grade of tumor.
- C) It correlates with prognosis.
- D) It is important for treatment of the tumor.
- E) The size of the tumor is the most important factor for staging.

ANSWER: B

63) Which of the following scenarios is more likely to be associated with Fat necrosis?

Select one:

- A) Immune complexes (antigens and antibodies) reaction.
- B) Hypoxia and death of cells in myocardial cells.
- C) Tuberculous infection.
- D) Hypoxia and death of cells within the central nervous system.
- E) Acute pancreatitis with lipases release.

ANSWER: E

64) All of the following events are among the intrinsic pathway of apoptosis EXCEPT?

Select one:

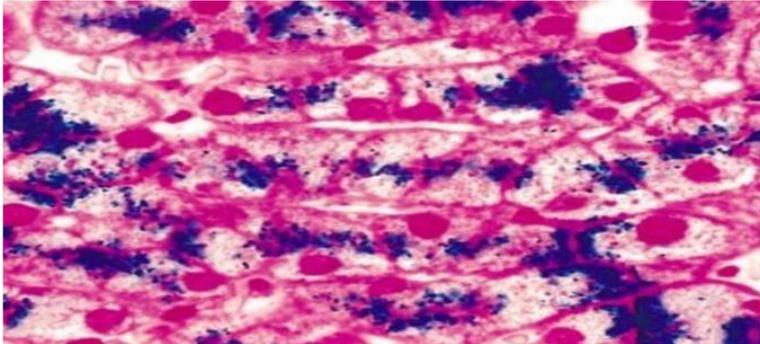
- A) Cytochrome c leaks from mitochondria.
- B) Recruit and activate caspase-8.

- C) Increase mitochondrial permeability.
- D) BH3-only sensors sense DNA damage.
- E) Bax and Bak dimerize after stimulation.

ANSWER:B

65) What is the material highlighted in blue stain in this picture?

Select one:



- A) Lipids.
- B) Glycogen
- C) Hemosiderin.
- D) Platelets.
- E) Melanin

ANSWER:C

66) All of the followings are inherited autosomal recessive syndromes of defective DNA repair except?

- A) Xeroderma pigmentosa.
- B) Peutz- Jegher syndrome.
- C) Ataxia telangiectasia.
- D) Fanconi anemia.
- E) Bloom syndrome.

ANSWER:B

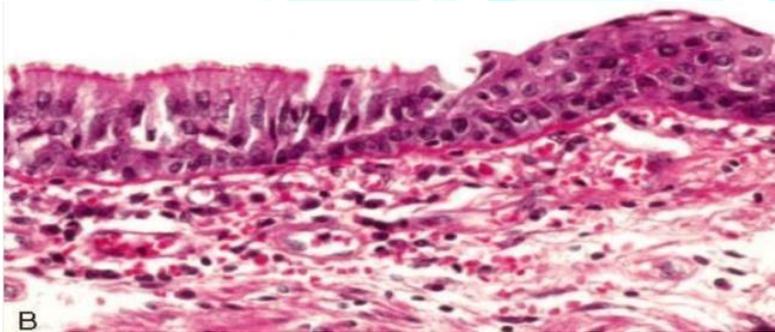
67) One of the following is **INCORRECT** regarding the differences between arterial and venous thrombi?

Select one:

- A) Arterial thrombi are rich in platelets while venous thrombi are rich in red blood cells.
- B) Arterial thrombi are more commonly occlusive than venous thrombi.
- C) Venous thrombi frequently propagate and give rise to emboli.
- D) 90% of veins thrombi develop in the lower extremities.
- E) Arterial thrombi are usually superimposed on a ruptured atherosclerotic plaque.

ANSWER: B

68) A 49-year-old male have been a heavy smoker for around 25 years, presented with shortness of breath at exertion and a history of multiple chest infections (3-4 per year). The illustrated picture is from his bronchial epithelium biopsy. One of the following is incorrect regarding these changes?



- A) Stratified squamous epithelium can survive the noxious chemicals in cigarette smoke
- B) These changes arise by the reprogramming of stem cells
- C) Mucin secretion and ciliary clearance are improved with these changes
- D) Columnar epithelium would not tolerate the noxious chemicals in cigarette smoke
- E) They can progress to squamous cell carcinoma if the cause persists

ANSWER:C

69) Which of the following is an example will be healed as scar formation?

Select one:

- A) Filling and regeneration of the abscess cavity.
- B) Gut epithelium repair after an infection
- C) Reparation of the epidermal following mild damage.
- D) Regrowth of the liver following partial liver transplantation.
- E) Activity in the bone marrow following radiotherapy.

ANSWER: A

70) For the past 7 days, a 30-year-old woman has had a serious headache. On analysis, her temperature is 39.8 C. A lumbar puncture is carried out, and with predominant neutrophils, the cerebrospinal fluid obtained has a WBC count of 500/mm. Which of the following substances is the most important mediator observed in this woman for the fever?

Select one:

- A) Prostaglandin and bradykinin.
- B) Histamine and serotonin.
- C) Interleukin-8 and tumor necrosis factor.
- D) Leukotriene and HPETE.
- E) Tumor necrosis factor and IL1.

ANSWER:E

71) 2 years old child presented with left leukocoria (white eye) and deterioration of vision. Regarding his diagnosis all of the following are true except? Select one:



- A) In familial cases of this disease process it is inherited as an autosomal dominant trait.
- B) Patients develop this disease when they inherit a germ line mutation with a heterozygous genes one is mutated and the other one is normal.
- C) This disease process is a neoplastic one that affects the retina.
- D) Patients with this disease process have increased risk of osteosarcoma.
- E) This entity is sporadic in 60 % of cases.

ANSWER: D

72) A 16-year-old female patient presented to the emergency room with sudden onset of severe, unilateral lower abdominal pain, associated with nausea and vomiting. After abdominal ultrasound, the patient was diagnosed with ovarian torsion and transferred immediately to the operation room. Which of the following underlying conditions is most responsible for her presentation?



Select one:

- A) White infarction.
- B) Red infarction.
- C) Congestion.
- D) Systemic embolism.
- E) Gangrenous necrosis.

ANSWER: B

73) A 68-year-old male patient has been hospitalized for two weeks now after a major road traffic accident left him with multiple fractures involving the hip bones. This morning he developed a swelling in his right leg below the knee and it became painful at the end of the day. Which of the following risk factors most likely contributed to this complication in this patient?

Select one:

- A) Disseminated intravascular coagulation
- B) Fat embolism syndrome
- C) Knee hematoma
- D) Bed rest and Immobilization.
- E) Atrial arrhythmias

ANSWER: B

74) All of the following are causes of increased vascular permeability and exudates in an inflammatory reaction except?

Select one:

- A) Endothelial cell detachment.
- B) Endothelial cell necrosis.
- C) Leukocyte migration through vessel walls.
- D) Retraction of endothelial cells with gap formation.
- E) Transcytosis.

ANSWER: C

75) Which of the following tumors is benign?

Select one:

- A) Lymphoma.
- B) Hemangioma.
- C) Melanoma.
- D) Glioma.

E) Retinoblastoma.

ANSWER: D

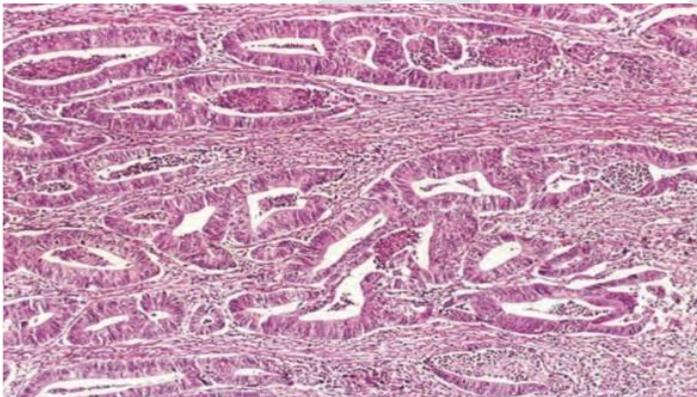
76) ONE of the following is CORRECT regarding the clinical and pathologic features of systemic Thromboembolism?

Select one:

- A) The primary consequence of systemic embolization is hypotension?
- B) The vast majority of emboli are derived from atherosclerotic debris.
- C) 90% of systemic thromboembolism arises from aortic aneurysms.
- D) The rare paradoxical embolism happens when an embolus passes through an atrial or ventricular defect and enters the systemic circulation.
- E) Arterial emboli can travel anywhere, but the commonest site for embolization is the central nervous system.

ANSWER: D

77) A 75 years old male patient presented with constipation and bloody stool. Colonoscopy with biopsies were taken and upon their results colectomy was performed. What is your most likely diagnosis?



- A) Squamous cell carcinoma.
- B) Basal cell carcinoma.
- C) Adenocarcinoma.
- D) Melanoma.
- E) Lymphoma.

ANSWER: C

78) One of the following is an oncogene?

Select one:

- A) P53.**
- B) APC.**
- C) RB1.**
- D) RAS.**
- E) TGF-B.**

ANSWER: D

79) A 52-year-old man has had increasing fatigue for the past 6 months. On physical examination he has a palpable spleen tip. Laboratory studies show a WBC count of 189,000/microliter. The peripheral blood smear shows many mature and immature myeloid cells present. Cytogenetic analysis of cells obtained via bone marrow aspiration reveals a (9:22) translocation. This translocation leads to formation of a hybrid gene that greatly increases tyrosine kinase activity. Which of the following genes is most likely translocated to cause these findings?

Select one:

- A) P53.**
- B) RB.**
- C) ABL.**
- D) NF-1**
- E) RAS.**

ANSWER:C

80) One of the following conditions is commonly complicated by hypovolemic shock?

Select one:

- A) Pulmonary embolism.**

- B) Arrhythmias
- C) Cardiac tamponade
- D) Ventricular rupture
- E) Severe burns.

ANSWER:E

81) A 31 -year-old healthy pregnant woman with no previous complication develops sudden dyspnea with cyanosis and hypotension during routine vaginal delivery of her term infant, she has a generalized seizure and develops a coma She is in the ICU with no improvements This is a section from her pulmonary microcirculation, what is the is the most likely diagnosis?

- A) Fat Embolism syndrome
- B) Postpartum hemorrhage
- C) Amniotic Fluid Embolism
- D) Decompression sickness
- E) Bacterial pneumonia

ANSWER: C

82) Hypercoagulability is an abnormally high tendency of the blood to clot One of the following is incorrect about Hypercoagulability?

- A) It frequently contributes to venous thrombosis
- B) People with homozygote Leiden mutation are 50 times more likely to have DVT than normal people
- C) Patients with prosthetic cardiac valve require anticoagulation treatment
- D) Elevated levels of homocysteine is protective against atherosclerosis
- E) Mucin released from adenocarcinoma can act as a procoagulant Product

ANSWER:D

83) All or the following Diseases/injuries commonly associated with fatty changes EXCEPT?

- A) Protein malnutrition.
- B) Toxic injury
- C) UV radiation.
- D) Diabetes mellitus.
- E) Alcohol abuse.

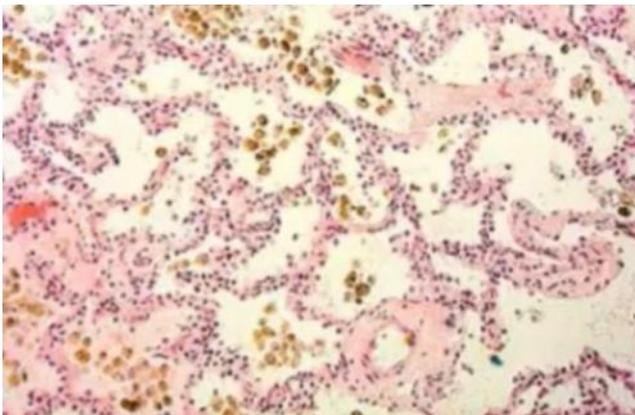
ANSWER: C

84) A patient attends the Clinic complaining of hand swelling for the past two hours which appeared as grade one burn. Neutrophils migrate into the injured tissue. What is the initial mediator responsible for the first step in this type of inflammation?

- A) Complement C3a
- B) Histamine.
- C) Leukotriene B₄-
- D) Nitric oxide
- E) Prostaglandins.

ANSWER:

85) What are these cells filling the alveolar spaces in this section from the lung originally?



- A) Eosinophil
- B) Pneumocytes type 2

- C) Lymphocytes
- D) Macrophages
- E) Neutrophils

ANSWER:D

86) All of the followings are major natural biological carcinogens except?

- A) Aflatoxin B1
- B) Nitrosamine
- C) Betel nuts
- D) Cycasin
- E) Safrole

ANSWER:

87) ONE of the following is INCORRECT regarding the clinical and pathologic features of pulmonary embolism?

- A) Multiple emboli can cause cor pulmonale through time.
- B) Obstruction of medium-sized arteries can lead to pulmonary hemorrhage
- C) Saddle embolus is an embolus that lodges at the bifurcation of the right and left pulmonary arteries.
- D) An embolus that is large enough to block a major pulmonary artery can cause sudden death.
- E) Less than 10% of pulmonary embolisms are small and clinically Silent

ANSWER: E

88) These are microscopic descriptions of certain lesions. Decide which are dysplasia?

- A) A mass composed of squamous epithelial cells with a high mitotic rate and atypical mitoses. There is nuclear pleomorphism, hyperchromasia and prominent nucleoli.

B) A well circumscribed lesion composed of proliferation of smooth muscle cells with occasional mitotic figures. There is no cellular atypia or pleomorphism.

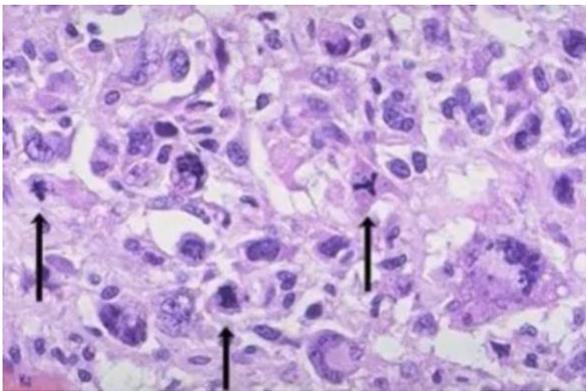
C) cervical biopsy Showing loss of maturation of the lower two thirds Of the epithelium With several basal mitoses_ There is superficial maturation and the basement membrane is Intact

D) Cervical biopsy showing full thickness atypia and superficial mitoses. Occasional atypical cells are seen within the submucosa.

E) None of the above

ANSWER: A

89) Read the following slide then identity what are the arrows pointing to?



A) Pleomorphism.

B) Prominent nucleoli.

C) Atypical mitosis.

D) Loss of polarity

E) High nuclear to cytoplasmic ratio.

ANSWER: E

90) All of the following are tumor suppressor genes except?

A) P53

B) RAS

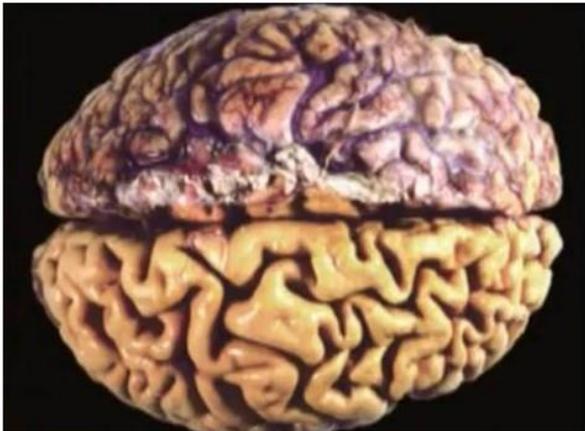
C) RB1

D) APC

E) TGF-B

ANSWER: B

91) An 82-year-old man known to have atherosclerosis and ischemic heart disease. Illustrated in this picture is his postmortem brain autopsy, one of the following is incorrect regarding these changes?



- A) The gyri are narrowed
- B) The sulci are widened
- C) This include decrease protein synthesis
- D) This is a normal physiologic process.
- E) This process includes increase protein degradation.

ANSWER: D

92) A 54-year-Old male developed a brain tumor which was diagnosed as an astrocytoma immunohistochemical stain showed positive IDH staining implying a mutation in IDH. Through Which Of the following mechanisms this mutatioresulted in cancer?

- A) Increased micro RNAs
- B) Oncogene amplification.
- C) Tumor suppressor gene downregulation.
- D) Epigenetic change

E) Impairing DNA repair mechanisms.

ANSWER: D

93) This gross material was taken from an ovarian mass. What is the pathologic term of this neoplasm?



- A) Teratoma.
- B) Choristoma
- C) Hamartoma
- D) Carcinoma.
- E) Dysgerminoma

ANSWER: A

94) ONE of the following is NOT among the COMPONENT of the platelet's Alpha granules?

- A) Platelet-derived growth factor (PDGF).
- B) Serotonin
- C) Von Willebrand factor (VWF).
- D) Transforming growth factor-beta
- E) Coagulation factor V

ANSWER: D

95) Which of the following criteria is most important feature determining whether a tumor is benign or malignant?

- A) Presence of metastasis.
- B) Absence of capsule.
- C) Increased number of mitoses.
- D) Rapid growth of the tumor.
- E) High NC ratio

ANSWER: A

96) Which Of the following Intracellular accumulations is responsible for what is called (wear- and-tear pigment)?

- A) Carbon
- B) Cholesterol Clefts
- C) Melanin.
- D) Hemosiderin.
- E) Lipofuscin

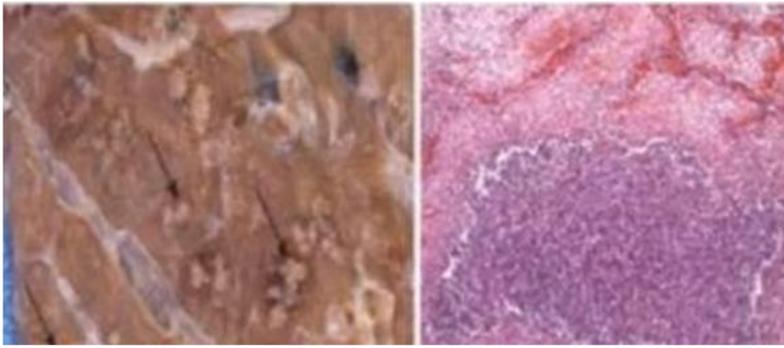
ANSWER: E

97) One of the following is not among the morphologic features of apoptosis?

- A) Retains an intact plasma membrane.
- B) Inflammation.
- C) Apoptotic bodies phagocytized by macrophage
- D) Cells shrink rapidly
- E) Formation of cytoplasmic buds.

ANSWER: A

98) A 53-year-old woman has experienced chest pain for 2 days, she is febrile. By examination. She has abnormal breath sounds. Especially over the upper lobes or involved areas. The figure shows microscopic examination of a biopsy specimen of a lung lesion. Which of the following pathologic processes is most likely present?



- A) Abscess
- B) Caseating granuloma
- C) Chronic inflammation
- D) Ulcer site
- E) Serous effusion

ANSWER: B

99) A 10-year-old male is brought to the ER with prolonged bronchospasm and severe hypoxemia, Steroid is given to relieve his condition. The primary rule of this drug by reducing the synthesis of which of the following mediators?

- A) Leukotriene C3
- B) ThrombanxeA2
- C) Leukotriene C4
- D) Lipoxin B4
- E) Prostaglandins

ANSWER:

100) Amniotic fluid embolism is an uncommon. Give complication of labor and the immediate postpartum period One of the following is INCORRECT about Amniotic fluid embolism?

- A) It is one of the most common causes of maternal mortality worldwide.
- B) Frequently, there is a permanent neurologic deficit if the patient

survives

C) Amniotic fluid or its contents can gain entry into the maternal circulation Via tears in the placental membranes.

D) Amniotic fluid or its contents can gain entry into the maternal circulation via uterine vein rupture.

E) Disseminated intravascular coagulation (DIC) is very rare

Complication

ANSWER :B

101) A 78-year-old diabetic woman with history of recurrent urinary tract infections, now presented with 1 week history of dysuria and left flank pain. on examination. her temperature is 38.9 C, pulse 105/min, and blood pressure 78/40 mm Hg. A urinalysis shows numerous WBCs, her plasma lactate is increased. urine culture and blood culture grow Escherichia coli. Which Of the following organs is least likely to be affected by ischemic injury in this woman?

A) Brain

B) Heart

C) Lung

D) Spleen

E) Kidney

ANSWER:C

102) One of the following is not among the neurohumoral mechanisms that maintain cardiac output and blood pressure during shock?

A) Sympathetic stimulation

B) Anaerobic glycolysis

C) Activation of the renin-angiotensin-aldosterone

D) Anti-diuretic hormone

E) Baroreceptor reflexes

ANSWER:

103) Cells may accumulate abnormal amounts of venous substances ONE of the following is CORRECT regarding these accumulations?

- A) Melanin is an exogenous material that comes from the UV radiation of the sun.
- B) Cholesterol is a key component in the cellular plasma membrane structure.
- C) Diabetes mellitus and protein malnutrition are the most common causes of steatosis in liver
- D) Normal kidney proximal convoluted tubules have pink, hyaline cytoplasmic droplets.
- E) Glycogen accumulations can be easily identified by the prussian blue histochemical reaction.

ANSWER:

104) Which of the following scenarios is more likely to be associated with Fibrinoid necrosis?

- A) Immune (antigens and antibodies) reaction.
- B) Acute pancreatitis with lipases release
- C) TB infection.
- D) Hypoxia and death of cells within the central nervous system.
- E) Hypoxia and death of cells in myocardial cells.

ANSWER:

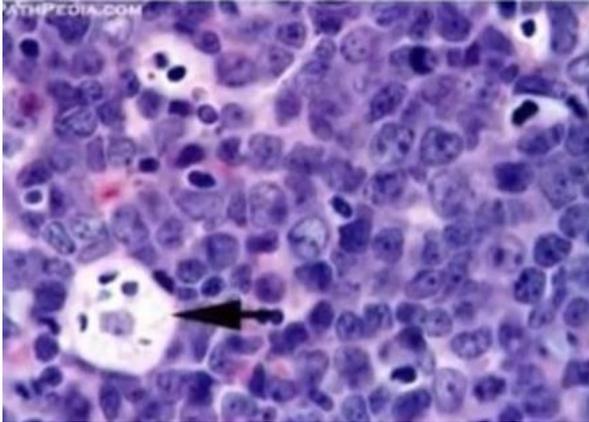
105) A 66-year-old man has noted darker urine for the past 2 weeks. Urine analysis shows hematuria. Cystoscopy is performed and there is a 3 cm mass in the dome of the bladder Biopsies or the mass are taken and on microscopic examination show urothelial carcinoma. Cells of this neoplasm demonstrate a Single mutation causing cellular inability to hydrolyze GTP, thus resulting in cellular transformation, which of the following oncogene is most likely implicated in this case?

- A) ABL
- B) ERBB2

- C) SIS
- D) RAS
- E) N-MYC.

ANSWER:

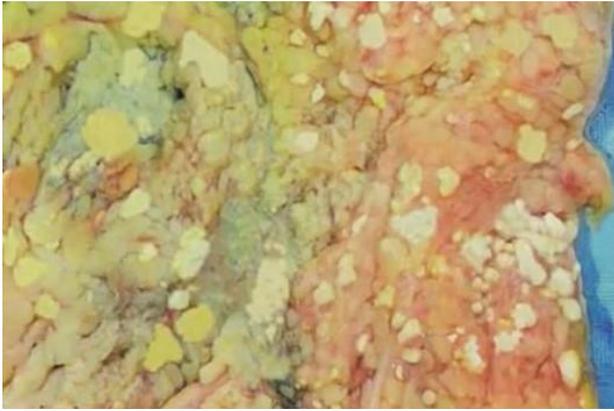
106) This is a section from a lymph node germinal center. What is the mechanism of apoptosis in this scenario?



- A) Activation of the mitochondrial pathway by viral proteins
- B) Strong recognition of self-antigens
- C) Loss of growth factor signaling
- D) Decreased hormone levels
- E) Activation of proapoptotic proteins by BH3-ONLY sensors

ANSWER:

107) A 38-year-old woman has experienced severe abdominal pain over the past day, on examination she is hypotensive and in shock. Laboratory studies show elevated serum lipase. The mesentery in the peritoneal cavity showed these findings. Which of the following events has most likely occurred?



- A) TB
- B) Small intestinal infarction.
- C) Gangrenous necrosis
- D) Hepatitis B virus infection
- E) Acute pancreatitis

ANSWER:

108) A 29-year-old man had a left femoral fracture in a motorcycle accident. His leg is placed in a plaster cast. After his left leg has been immobilized for 6 weeks to permit fracture healing. The diameter of the left calf has decreased in size. This change in size is most likely to result from which of the following alterations in his calf muscles?

- A) Aplasia.
- B) Atrophy.
- C) Dystrophy
- D) Hyalinosis
- E) Hypoplasia

ANSWER:

109) All of the followings are considered functions of TGF- β except?

- A) Enhances collagen synthesis
- B) Inhibits epithelial proliferation,

- C) Increases expression of metalloproteinases
- D) Increases expression of INK4-ARF molecules.
- E) Enhances development of T-HELPER 17 cells

ANSWER:

110) A 25-year-old man underwent laparotomy for appendicitis. A wound infection complicated the postoperative course and surgical wound dehiscence occurred. Primary closure was no longer possible. Which of the following processes best accounts for the observed decrease in wound size?

- A) Resolution of subcutaneous edema healing
- B) Increase in synthesis of collagen
- C) Inhibition of metalloproteinases.
- D) Myofibroblast contraction
- E) Elaboration of adhesive glycoproteins.

ANSWER:

111) One of the following is CORRECT regarding the differences between arterial and venous thrombi?

- A) The majority of venous thrombi occur in the upper extremity
- B) Postmortem clots can sometimes be mistaken for arterial thrombi
- C) Arterial thrombi are more commonly occlusive than venous thrombi.
- D) Arterial thrombi are rich in platelets because they develop by endothelial injury that lead to platelet activation
- E) venous thrombi are usually superimposed on a ruptured atherosclerotic plaque.

ANSWER:

112) A 2-years old child presented with a history of painful swollen

knee of 2 weeks duration, in the previous three day he developed this rash over the buttocks, legs and feet, how would you described this rash and what do you think is the cause of this presentation?



- A) Purpura, Henoch-Schonlein purpura
- B) Bruises, we must ask about history of trauma (falling down)
- C) Petechiae. due to a hypersensitivity reaction to a new food or drug
- D) Ecchymosis. bleeding disorders must ruled out
- E) This is a Sign of a large internal bleeding.

ANSWER:

113) Over expression of receptors of one of the following on tumor cell surface is associated With Increased metastatic potential?

- A) Fibronectin.
- B) E- Cadherin.
- C) APC
- D) BRACA1
- E) VEGF

ANSWER:

114) Over expression of receptors of one of the following on tumor cell surface is associated with increased metastatic potential?

- A) Fibronectin
- B) E- Cadherin

- C) APC.
- D) BRACA 1
- E) VEGF

ANSWER:

115) Mutation of Von Hippel Lindau gene is associated with all of the following except?

- A) Renal cyst.
- B) Renal cell carcinoma
- C) Angiogenesis.
- D) Activation of VEGF transcription.
- E) Ubiquitination or hypoxia induced factor 1a.

ANSWER:

116) Which of the following is correct about this chronic wound?



- A) Caused by prolonged compression of tissues against bone
- B) Develop in individuals with atherosclerosis
- C) Associated with diabetes Mellitus.
- D) May be caused by congestive heart failure.
- E) Caused by mechanical pressure and local ischemia.

ANSWER:

117) Which of the following factors has the least impact on the severity and outcome of the septic shock?

- A) The extent and virulence of the infection.**
- B) The clinical center where the patient has been treated.**
- C) The presence or other comorbid conditions like heart failure**
- D) Level of mediators and cytokines production**
- E) The immune status of the host (patient)**

ANSWER:

118) A 68-year-old male patient has been hospitalized for two weeks now after a major road traffic accident left him with multiple fractures involving the hip bones. This morning he developed a swelling in his right leg below the knee and it became painful at the end of the day.

Which of the following completions is most likely to occur in this man?

- A) Disseminated intravascular coagulation**
- B) Fat embolism syndrome**
- C) Knee hematoma**
- D) Pulmonary thromboembolism**
- E) Myocardial infarction**

ANSWER:

119) Molecular studies of a bilateral retinal tumor in a child show mutation in RB gene which of the following genetic events best describes the mechanism of carcinogenesis?

- A) Balanced translocation.**
- B) Gene amplification.**

- C) Loss of heterozygosity.
- D) Gene overexpression.
- E) Micro stellate instability.

ANSWER:

120) 2 years old child presented with left leukocoria (white eye) and deterioration of vision regarding his diagnosis all of the following are true except?



- A) In familial cases of this disease process it is Inherited as an autosomal dominant trait
- B) Patients develop this disease when they inherit a germ line mutation with a heterozygous genes one is mutated and the other one is normal.
- C) This disease process is a neoplastic one that affects the retina
- D) Patients with this disease process have increased risk of osteosarcoma
- E) This entity is sporadic in 60 % Of cases.

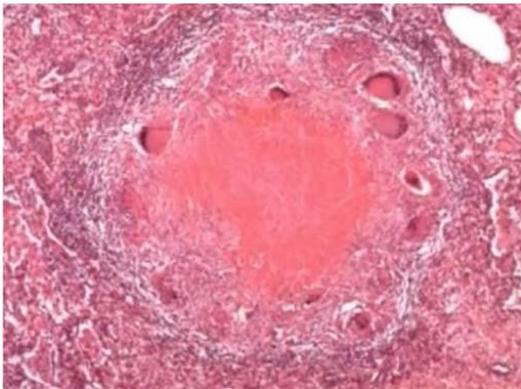
ANSWER:

121) The Single most common oncogene abnormality in human tumors is?

- A) RAS gene mutation.
- B) ABL gene translocation.
- C) MYC gene translocation.
- D) P53 gene mutation
- E) RB gene mutation.

ANSWER:

122) Which of the following is correct about this lesion?



- A) Diagnostic for Crohn disease in the wall of intestine.
- B) Diagnostic for cat scratch disease along with numerous neutrophils.
- C) Diagnostic for Sarcoidosis in the lung along with activated macrophages.
- D) Diagnostic for Tuberculosis along with acid fast bacilli.
- E) Diagnostic for Leprosy along with numerous plasma cells.

ANSWER:

123) Which Of the following is a physician who introduced the correlation of Clinical findings (signs. symptoms) with findings at postmortem examination?

- A) Adolf Hitler

- B) Rudolf Virchow
- C) Giovanni Morgagni
- D) Gianluigi Buffon.
- E) Giovanni de Medici.

ANSWER:

124) A 70-year-old male presented with sudden onset chest pain radiating to the neck, he was rushed to the hospital where physical examination revealed tachycardia. Electrocardiographic changes are those of myocardial infarction and serum troponin level is elevated. Which of the following drugs can improve this patient condition if administered within few hours of onset of his chest pain?

- A) Aspirin
- B) Unfractionated heparin
- C) Tissue plasminogen activator
- D) Low molecular weight heparin
- E) Warfarin

ANSWER:

125) Due to insensitve losses due to increased vascular permeability. a badly burned patient needs very high fluid substitution, All of the following are causes of increased vascular permeability and exudates in an Inflammatory reaction except?

- A) Endothelial cell detachment
- B) Endothelial cell necrosis
- C) Leukocyte migration through vessel walls.
- D) Retraction of endothelial cells with gap formation

E) 3-Platelet-Activating Factor.

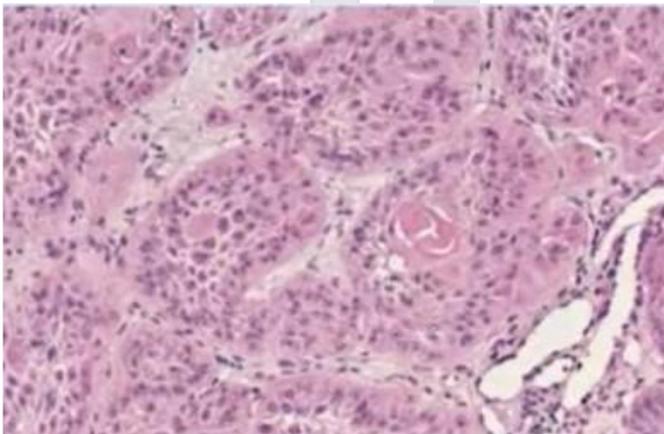
ANSWER:

126) One of the following pairs between the factor/cytokines involved in coagulation and their role is **WRONGLY** matched?

- A) Tissue factor Binds and activates factor VII
- B) t-PA The most important Plasminogen activator
- C) Thrombin: conversion of fibrinogen into crosslinked fibrin monomers
- D) ADP bridges between the platelet receptor glycoprotein Ib and exposed collagen
- E) u Thromboxane A₂: A potent inducer of platelet aggregation

ANSWER:

127) This is the Histological section taken from a 70 years old man presented With an irregular skin lesion, Suspect the final diagnosis for this lesion?

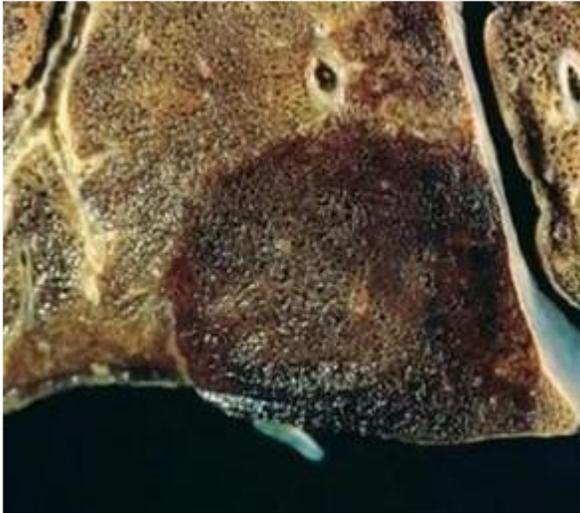


- A) Adenocarcinoma.
- B) Squamous carcinoma.
- C) Fibroepithelial polyp
- D) Cylindroma

E) Basal cell carcinoma.

ANSWER:

128) Which of the following best describes the lesion you can see in this picture?



- A) White infarction
- B) Red infarction
- C) Congestion
- D) Systemic embolism
- E) Gangrenous necrosis

ANSWER:

129) 28-year-Old woman have multiple polyps on colonoscopy. Her father died at age 50 of colon cancer. She is most likely to have mutation in the?

- A) APC gene
- B) P53 gene
- C) RB gene
- D) C-MYC gene
- E) PTEN gene.

ANSWER:

130) One of the following is correct considering the differences between hyperemia and congestion?

- A) Congestion is an active process that accumulates deoxygenated hemoglobin within tissue
- B) Hyperemia can be observed systemically like in cardiac failure
- C) hyperemia is a passive process resulting from arteriolar dilation.
- D) Both to increase volume Within the tissue.
- E) Congestion leads to increased blood inflow

ANSWER:

131) All of the following are examples of extravascular fluid effusions except?

- A) Hydroperitoneum
- B) Hydrothorax
- C) Hydropericardium.
- D) Ascites
- E) Jaundice

ANSWER:

132) The gene that is mutated in neurofibromatosis type 1 is normally functioning as?

- A) Activator or GTPase.
- B) Regulator of cell cycle.
- C) Promotor of new angiogenesis
- D) Nuclear factor
- E) Initiator of apoptosis.

ANSWER:

133) You are in the kitchen chopping veggies for the salad while watching an episode of your favorite series on your smartphone, when an intense scene comes in, you lose your concentration and cut yourself superficially with the knife, which result to a small amount of bleeding that stops in few seconds Which of the following mechanism is most likely for stopping the bleeding so fast?

- A) Nitric oxide release
- B) Clot stabilization
- C) Deposition of fibrin
- D) Platelet aggregation
- E) Vasoconstriction

ANSWER:

134) All are true about sarcoma except?

- A) It is a malignant tumor of connective tissue.
- B) It has a premalignant in situ stage.
- C) It is more likely to affect younger age groups.
- D) It is more likely to spread by blood
- E) The lung is a common Site for metastasis.

ANSWER:

135) A 30-yeardd pregnant woman has complained of urinary symptoms, Bacterial infection is suspected and cultured. Urine analysis is preformed and showed numerous neutrophils, these neutrophils will be delivered to the Site of injury as a result of the release of one of the following chemical mediators?

- A) Histamine

- B) Prostaglandin
- C) Complement C3b
- D) Bradykinin
- E) Complement C5a

ANSWER:

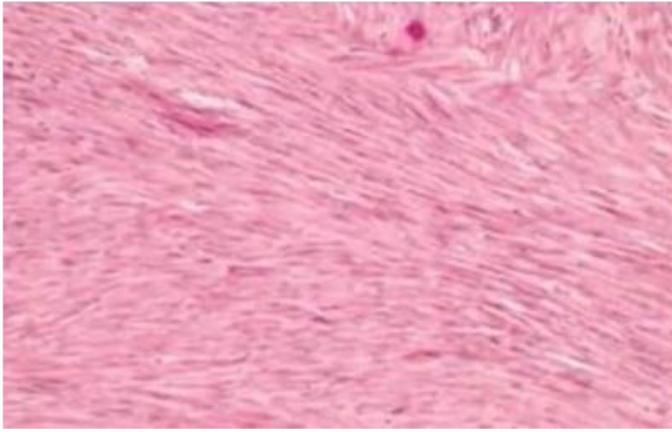
136) Which of the following represent the approximate age of the myocardial Infarction illustrated in this picture?



- A) 1-3 hours.
- B) 12-24 hours
- C) 20 minutes
- D) 3 days
- E) More than 8 weeks.

ANSWER:

137) 30 years Old female presented to gynecological doctor with well circumscribed benign looking uterine mass. from your opinion this histological section from this neoplasm is mostly?



- A) Ovarian carcinoma metastasis
- B) Leiomyosarcoma
- C) Uterine adenocarcinoma
- D) Cervical adenoma
- E) Leiomyoma

ANSWER:

138) Barret esophagus is an example of?

- A) Atrophy.
- B) Metaplasia
- C) Dysplasia
- D) Hypertrophy.
- E) Hyperplasia.

ANSWER:

139) One of the following factors deficiencies is incompatible with life?

- A) Factor XI deficiency.
- B) Factor XII deficiency
- C) Prothrombin deficiency
- D) Factor VIII deficiency
- E) Factor IX deficiency.

ANSWER:

140) A 33-year-old previously healthy woman presented to her general practitioner with a 1-day history of worsening left swelling associated with pain and tightness. The patient denied a history of recent surgery or trauma, prolonged immobilization or smoking. She denied any recent insect bites. Medications review revealed that she had started oral contraceptives 2 months previously. A Doppler sonogram shows thrombosis of deep left leg veins. Which of the following pathophysiologic mechanisms is most responsible for the edema and swelling in this patient?

- A) Increased Hydrostatic Pressure
- B) Reduced Plasma Osmotic Pressure
- C) Lymphatic Obstruction
- D) Sodium and Water Retention
- E) Inflammation

ANSWER: A

141) The most common primary tumor that gives rise to metastasis to breast is?

- A) Colonic carcinoma
- B) Gastric carcinoma.
- C) Bronchial carcinoma
- D) Thyroid carcinoma.
- E) Cervical carcinoma.

ANSWER:

142) A 30-year-old woman has had a back pain for the past 3 days. On examination, her temperature is 39.8 C. A CT scan is performed and showed a prolapsed disk, which of the following substances is the most likely mediator for the pain complained by this man? غير مطلوب

- A) Complement C3a.
- B) Histamine.

- C) Leukotriene B4
- D) Nitric oxide.
- E) Prostaglandins.

ANSWER:

143) All of the following are method by which tumor cells may evade cell death by apoptosis except?

- A) Increased CD95 levels
- B) Reduced production of cytochrome C from mitochondria
- C) Reduced levels of BAX
- D) Loss of APAF1
- E) Upregulation of IAP

ANSWER: E

144) One of the following matches is false regarding human cancer and associated oncogene? غير مطلوب

- A) Astrocytoma and SIS overexpression.
- B) Bladder cancer and FGF3 amplification
- C) Thyroid cancer and HGF overexpression.
- D) Mantle cell lymphoma and cyclin E overexpression.
- E) Chronic myeloid leukemia and ABL translocation

ANSWER:

145) A 58-year-old man presented with chest pain for the past 6 hours: Laboratory studies show elevated serum troponin and creatine Kinase. A coronary angiogram is performed and reveals >90% occlusion of one of the coronary arteries Which of the following cellular changes means that we have an irreversible Injury in the myocardial fibers?

- A) Glycogen stores are depleted.
- B) Triglyceride vacuoles in the cytoplasm

- C) Nuclei undergo karyorrhexis.
- D) Endoblastic reticulum dilation.
- E) Blebs form on cell membranes

ANSWER: C

146) Which of the following is responsible for providing a negatively charged phospholipid surface, on which the coagulation components are assembled?

- A) Activated smooth muscle cells
- B) Activated platelets
- C) Activated fibroblasts
- D) Activated vonWillebrand factor
- E) Exposed tissue factor

ANSWER: B

147) Which of the following condition is least likely to be complicated by the pathology seen here involving the left and right ventricular apices?



- A) Endomyocardial catheter trauma
- B) Heart arrhythmias
- C) Vein thrombosis
- D) Dilated cardiomyopathy
- E) Myocardial infarction

ANSWER:

148) All of the following cancers may be associated with secondary polycythemia except?

- A) Renal cell carcinoma.
- B) Gastric carcinoma
- C) Hemangioblastoma.
- D) Pancreatic carcinoma
- E) Hepatocellular carcinoma

ANSWER: D

149) One of the following diseases/conditions causes edema through lymphatic Obstruction?

- A) Elephantiasis (filariasis infection).
- B) Acute renal failure.
- C) Thrombosis.
- D) Nephrotic syndrome.
- E) Increase aldosterone secretion.

ANSWER: A

150) 33-year-old male. Intravenous drug user this smoker undergoes a biopsy and histology revealed hepatic carcinoma What is the most likely pathogenesis of his condition?

- A) HIV infection.
- B) TB infection
- C) EBV infection
- D) Hepatitis C infection
- E) Alcoholic hepatitis

ANSWER: D

151) A fit 33-year-old male had been a scuba diver for about six years. He was diving at 123 ft. for 23 minutes. While ascending to the surface the diver had a problem

with his oxygen mask and rapidly ascended to the surface. Upon reaching the surface. The patient immediately experienced diffuse tingling sensation and pain of arms, hands, and feet the patient then replaced his mask and returned 10 ft. below the surface to recompress for 10 minutes until emergency medical services arrived. Which of the following is most likely the cause of these symptoms?

- A) Nitrogen bubbles
- B) Fat micro emboli
- C) Bone marrow micro emboli
- D) Atherosclerotic plaque emboli
- E) Fibrin clots

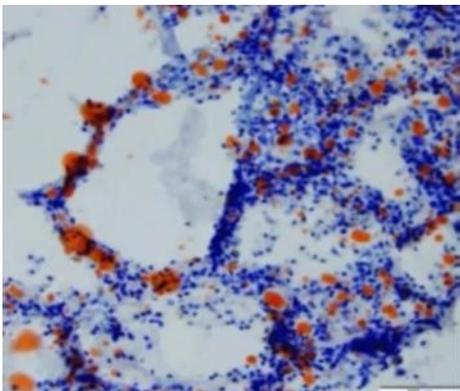
ANSWER: A

152) All of the followings are important roles Of P53 in maintenance of genome integrity except?

- A) Activates transcription of MIR43
- B) Downregulates CDKN1A (P21).
- C) Inhibits translation of MYC genes.
- D) Inhibits translation of BCL2.
- E) Increases levels of GADD45 genes.

ANSWER: B

153) What is the material highlighted in red-brown stain in this picture?



- A) Lipids.

- B) Fibrin
- C) Homocysteine.
- D) Platelets.
- E) Bone marrow cells.

ANSWER: E

154) Infarcts are Classified based on their color (the amount of hemorrhage) into red and white infarcts. One of the following organs is characterized by red infarction due to dual circulation in which the collateral arteries have inadequate perfusion?

- A) Spleen
- B) Ovaries
- C) Small intestine
- D) Heart
- E) Testis

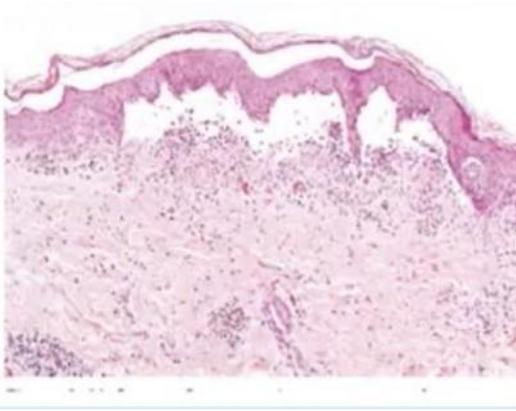
ANSWER: B

155) Which of the following is an example Will be healed as scar formation?

- A) Filling and regeneration of the abscess cavity.
- B) Gut epithelium repair after an infection
- C) Reparation of the epidermal following mild damage.
- D) Regrowth of the liver following partial liver transplantation.
- E) Activity in the bone marrow following radiotherapy.

ANSWER: A

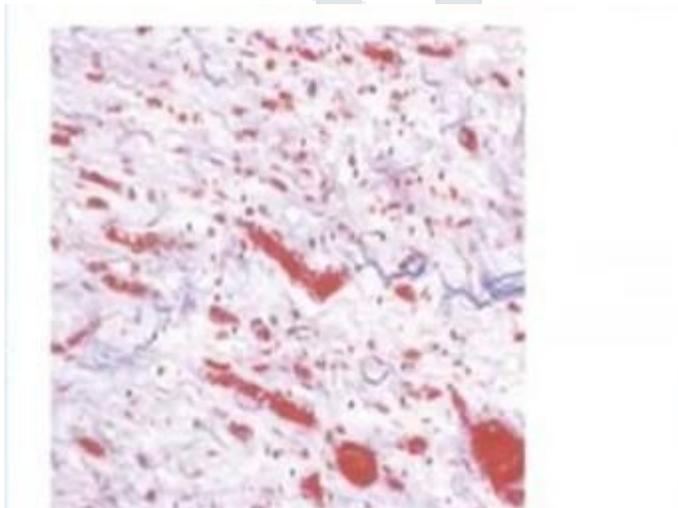
156) The changes present in this Skin biopsy are an example of which morphologic pattern of acute inflammation?



- A) Abscess formation.
- B) Fibrinous inflammation.
- C) Serous inflammation.
- D) Suppurative inflammation.
- E) Ulcer formation.

ANSWER: C

157) 24-year-old man with acute appendicitis undergoes surgical removal of the inflamed appendix, the incision site is sutured. A trichrome-stained representative of the site with blue appearing collagen is shown in the figure. What are the main responsible mediators for this lesion? غير مطلوب



- A) Prostaglandins and Platelet-derived growth factor
- B) Complement C3a and C5a

- C) Histamine and Leukotriene B4
- D) Nitric oxide Tumor growth factor B
- E) Platelet-derived growth factor and Tumor growth factor B

ANSWER:

158) Overexpression of cathepsin D in tumor cells is important for?

- A) Tumor cell differentiation.
- B) Tumor cell growth
- C) Tumor cell invasion.
- D) Tumor cell adhesion to intracellular matrix.
- E) Tumor cell adhesion to basement membrane.

ANSWER: C

159) All of the following conditions are commonly complicated by a cardiogenic shock except?

- A) Pulmonary embolism
- B) Arrhythmias
- C) Hemorrhage
- D) Ventricular rupture
- E) Cardiac tamponade

ANSWER: C

"يا ربِّ.. وأنتَ الجميل الذي خلقتني جميلاً، وأردتَ لي أن أكون كما
خلقتني؛ أبقي على فطرتك بعيداً عن تشويه ذاتي!"

"يا ربِّ، وكلُّ نفسٍ يقربني إليك، وكل صباح أستفتح فيه بذكرك؛
امنحني القوَّة ألا تتعثر خطاي في مسيري إليك."

"يا ربِّ، أعطني حُرِّيَّةَ بقدر عبوديَّتي لك، وبقينا بقدر أمني فيك،
واجعل ما بيني وبينك مسافة حبٍّ وقربها.. "

"يا ربِّ، منحني عيني ولساناً وشفقتين، اهديني ألا تتشغل هذه
الجوارح بغيرك عنك. يا ربِّ، وأنتَ الكبير في عليائك وأنا الهباءة في
كونك؛ فكن أنت الصَّاحب في سفر الحياة." .
د.سلمان العودة - فكَّ الله أسره .

تحية إكبار وإجلال للمحاربين الذين وصلوا إلى هنا ^-^
بالتوفيق ، ولا تنسوننا من صالح دعائكم .
#لجنة_الطب_والجراحة .