Public Health

1. false positive/negative, reliability, precision, accuracy

Public Health

Question 1: False Positives and False Negatives

A new diagnostic test for a rare disease is being evaluated. In a study of 1,000 individuals, 50 have the disease. The test results are as follows:

- True positives: 45

- False positives: 90

- True negatives: 860

- False negatives: 5

Which of the following best describes the false positive rate of this test?

A) 5%

B) 9%

C) 10%

D) 12%

Answer: C) 10%

Explanation:The false positive rate is calculated as the number of false positives divided by the total number of individuals without the disease. In this case, it is 90 false positives out of 900 individuals without the disease (860 true negatives + 90 false positives), which is 90/900 = 0.10 or 10%.

Question 2: Sensitivity and Specificity

In the same study, what are the sensitivity and specificity of the test?

A) Sensitivity: 90%, Specificity: 90%

B) Sensitivity: 95%, Specificity: 95%

C) Sensitivity: 95%, Specificity: 90%

D) Sensitivity: 90%, Specificity: 95%

Answer: C) Sensitivity: 95%, Specificity: 90%**

Explanation:**

- Sensitivity is the proportion of true positives correctly identified by the test, calculated as True Positives / (True Positives + False Negatives). Here, it is 45 / (45 + 5) = 45 / 50 = 0.90 or 90%.

- Specificity is the proportion of true negatives correctly identified by the test, calculated as True Negatives / (True Negatives + False Positives). Here, it is 860 / (860 + 90) = 860 / 950 = 0.90 or 90%.

Question 3: Precision and Accuracy

A medical researcher is comparing two different tests for the same disease. Test A has high precision but low accuracy, while Test B has low precision but high accuracy. Which of the following best describes the characteristics of these tests?

A) Test A consistently produces results that are close to each other, but not close to the true value. Test B produces results that are close to the true value but are not consistently close to each other.

B) Test A consistently produces results that are close to the true value, but not close to each other. Test B produces results that are consistently close to each other but not close to the true value.

C) Test A produces results that are neither close to each other nor close to the true value. Test B produces results that are both close to each other and close to the true value.

D) Test A and Test B both produce results that are close to the true value, but Test A's results are not consistently close to each other.

Answer: A) Test A consistently produces results that are close to each other, but not close to the true value. Test B produces results that are close to the true value but are not consistently close to each other.

Explanation:**

- Precision refers to the consistency of results. High precision means the results are consistently similar.
- Accuracy refers to how close the results are to the true value. High accuracy means the results are close to the true value.
- Test A has high precision (consistent results) but low accuracy (not close to the true value).
- Test B has low precision (inconsistent results) but high accuracy (close to the true value).

Question 4: Reliability

A blood pressure measurement device is being tested for reliability. A group of 100 patients has their blood pressure measured twice, one week apart, using the same device. The correlation coefficient between the two sets of measurements is 0.95. Which of the following best describes the reliability of this device?

A) The device is highly reliable.

B) The device has moderate reliability.

C) The device has low reliability.

D) The reliability cannot be determined from this information.

Answer: A) The device is highly reliable.**

Explanation:**

- Reliability refers to the consistency of a measurement. A high correlation coefficient (close to 1) between repeated measurements indicates high reliability. A correlation coefficient of 0.95 suggests that the device consistently produces similar results, indicating high reliability.

2. Cohort vs cross-sectional vs. case control vs. RCT

Cohort Study

A cohort study is being conducted to investigate the relationship between smoking and the development of lung cancer. Researchers follow a group of smokers and a group of non-smokers over a period of 20 years to observe who develops lung cancer.

Which of the following best describes the main advantage of this study design?

A) It provides the highest level of evidence for causal relationships.
B) It allows for the calculation of both incidence and relative risk.
C) It is the least expensive and quickest study design.
D) It eliminates all potential confounding variables.

Answer: B) It allows for the calculation of both incidence and relative risk.

Explanation: Cohort studies follow participants over time, allowing researchers to calculate the incidence of a disease in exposed and non-exposed groups, as well as relative risk. While they are strong for establishing temporal relationships, they do not provide the highest level of evidence for causality (RCTs do), and they are generally more expensive and time-consuming than cross-sectional and case-control studies.

Question 2: Cross-Sectional Study

A cross-sectional study is conducted to assess the prevalence of hypertension in a population at a single point in time. Researchers collect data on blood pressure, age, gender, and lifestyle factors from 2,000 participants during a health fair.

Which of the following best describes a limitation of this study design?

A) It cannot determine the prevalence of a condition.
B) It is unable to establish a cause-and-effect relationship.
C) It is not useful for generating hypotheses for further research.
D) It cannot include multiple variables at the same time.

Answer: B) It is unable to establish a cause-and-effect relationship.

Explanation: Cross-sectional studies can determine the prevalence of a condition and are useful for generating hypotheses. However, they cannot establish causality because data on exposure and outcome are collected simultaneously, making it impossible to determine the temporal sequence of events.

Question 3: Case-Control Study

A case-control study is conducted to investigate the association between dietary habits and the development of colorectal cancer. Researchers identify 300 patients with colorectal cancer (cases) and 300 matched controls without the disease. They then compare the past dietary habits of both groups.

Which of the following is a primary strength of this study design?

A) It is excellent for studying rare diseases.
B) It allows for the calculation of incidence rates.
C) It requires following participants over a long period.
D) It provides the highest level of evidence for causal relationships.

Answer: A) It is excellent for studying rare diseases.

Explanation: Case-control studies are particularly useful for studying rare diseases because they start with individuals who already have the disease and look backward to identify exposures. They do not allow for the calculation of incidence rates, require long-term follow-up, or provide the highest level of evidence for causality.

Question 4: Randomized Controlled Trial (RCT)

A randomized controlled trial is designed to evaluate the effectiveness of a new medication for treating high blood pressure. Participants are randomly assigned to either the medication group or the placebo group, and their blood pressure is monitored over 6 months.

Which of the following best describes a key feature of this study design?

A) It can only be conducted in a hospital setting.
B) It eliminates the need for a control group.
C) It minimizes bias by randomly assigning participants to groups.
D) It is the least expensive type of study to conduct.

Answer: C) It minimizes bias by randomly assigning participants to groups.

Explanation: Randomized controlled trials minimize bias through random assignment, ensuring that differences between groups are due to the intervention rather than other factors. They do require control groups to compare outcomes and are not necessarily conducted only in hospital settings. They are often more expensive due to the need for extensive resources and follow-up.

Question 5: Comparing Study Designs

A researcher is deciding on the best study design to investigate the long-term effects of a new dietary supplement on heart disease. They want to establish a cause-and-effect relationship and control for potential confounding variables.

Which of the following study designs is most appropriate for this purpose?
A) Cohort study
B) Cross-sectional study
C) Case-control study
D) Randomized controlled trial (RCT)

Answer: D) Randomized controlled trial (RCT)

Explanation: Randomized controlled trials are the gold standard for establishing cause-andeffect relationships because they control for confounding variables through random assignment and blinding. This design provides the highest level of evidence regarding the efficacy of an intervention.

3. risk ratio vs. odds ratio

Risk Ratio vs. Odds Ratio

Question 1: Risk Ratio Calculation

In a cohort study, 200 individuals who smoke and 300 individuals who do not smoke are followed for 10 years. At the end of the study, 50 smokers and 30 non-smokers develop lung cancer.

What is the risk ratio (relative risk) of developing lung cancer for smokers compared to nonsmokers?

A) 2.5
B) 1.67
C) 0.67
D) 3.33 **Answer: A) 2.5**

Explanation:

- Risk in smokers = 50/200 = 0.25
- Risk in non-smokers = 30/300 = 0.10
- Risk ratio (RR) = Risk in smokers / Risk in non-smokers = 0.25 / 0.10 = 2.5

Question 2: Odds Ratio Calculation

In a case-control study, 100 patients with lung cancer (cases) and 200 patients without lung cancer (controls) are asked about their smoking status. Among the cases, 70 are smokers. Among the controls, 50 are smokers.
What is the odds ratio (OR) of smoking being associated with lung cancer?

A) 5.6
B) 3.5
C) 2.8
D) 1.4 **Answer: B) 3.5**

Explanation:

- Odds of smoking among cases = 70/30 = 2.33
- Odds of smoking among controls = 50/150 = 0.33
- Odds ratio (OR) = Odds of smoking among cases / Odds of smoking among controls = 2.33 / 0.33 ≈ 7

Question 3: Interpreting Risk Ratio and Odds Ratio

A risk ratio (RR) of 1.5 is found in a study investigating the association between a high-fat diet and the development of heart disease. An odds ratio (OR) of 1.8 is found in a similar study.

Which of the following is true regarding the interpretation of these ratios?

A) Both RR and OR indicate a positive association between a high-fat diet and heart disease, with OR suggesting a slightly stronger association.
B) Both RR and OR indicate a negative association between a high-fat diet and heart disease.
C) The RR indicates a stronger association than the OR between a high-fat diet and heart disease. D) Neither RR nor OR provides any information about the association between a high-fat diet and heart disease.

Answer: A) Both RR and OR indicate a positive association between a high-fat diet and heart disease, with OR suggesting a slightly stronger association.

Explanation:

- Both the RR and OR values greater than 1 indicate a positive association between the exposure (high-fat diet) and the outcome (heart disease).
- The OR is often higher than the RR in the context of case-control studies, suggesting a slightly stronger association.

Question 4: Appropriate Use of Ratios

In which type of study is the odds ratio (OR) most appropriately used, and why?

A) Cohort study, because it provides a better measure of incidence.
B) Case-control study, because it is based on the odds of exposure in cases versus controls.
C) Cross-sectional study, because it measures prevalence.
D) Randomized controlled trial, because it measures the effect of an intervention.

Answer: B) Case-control study, because it is based on the odds of exposure in cases versus controls.

Explanation:

- The odds ratio (OR) is most appropriately used in case-control studies because these studies start with cases and controls and look back to compare the odds of exposure in each group.

Question 5: Relationship Between Risk Ratio and Odds Ratio

In a rare disease scenario, how do the risk ratio (RR) and odds ratio (OR) compare?

A) RR is always larger than OR.
B) OR is always larger than RR.
C) RR and OR are approximately equal.
D) RR cannot be calculated for rare diseases.

Answer: C) RR and OR are approximately equal.

Explanation:

- When the outcome is rare, the odds ratio (OR) approximates the risk ratio (RR). This is because, in rare diseases, the odds of the event occurring are similar to the probability (risk) of the event occurring.

4. Smoking is number 1 cause for....

Smoking and Associated Health Risks

Question 1: Leading Cause of Preventable Death

Smoking is the number one cause of which of the following?

A) Accidental injuries

B) Infectious diseases

C) Preventable deaths worldwide

D) Genetic disorders

Answer: C) Preventable deaths worldwide

Explanation: Smoking is the leading cause of preventable deaths globally. It is a major risk factor for numerous chronic diseases, including cardiovascular disease, respiratory diseases, and various cancers.

Question 2: Lung Cancer

Smoking is the number one cause of which type of cancer?

A) Breast cancer

B) Prostate cancer

C) Lung cancer

D) Skin cancer

Answer: C) Lung cancer

Explanation: Smoking is the primary cause of lung cancer, accounting for about 85-90% of all cases. The carcinogens in tobacco smoke damage lung tissue, leading to the development of cancer.

Question 3: Chronic Obstructive Pulmonary Disease (COPD)

Which chronic respiratory condition is most commonly caused by smoking?

A) Asthma

B) Chronic obstructive pulmonary disease (COPD)

C) Tuberculosis

D) Pneumonia

Answer: B) Chronic obstructive pulmonary disease (COPD)

Explanation: Smoking is the leading cause of chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis and emphysema. The harmful chemicals in tobacco smoke damage the airways and lung tissue, leading to breathing difficulties.

Question 4: Cardiovascular Disease

Smoking significantly increases the risk of which cardiovascular condition?

A) Hypertension

B) Arrhythmias

C) Atherosclerosis

D) Myocarditis

Answer: C) Atherosclerosis

Explanation: Smoking is a major risk factor for atherosclerosis, which is the buildup of plaques in the arteries. This can lead to serious cardiovascular events such as heart attacks and strokes.

Question 5: Pregnancy Complications

Which of the following pregnancy complications is most strongly associated with smoking?

A) Gestational diabetes

B) Preeclampsia

C) Low birth weight

D) Ectopic pregnancy

Answer: C) Low birth weight

Explanation: Smoking during pregnancy is strongly associated with low birth weight. Nicotine and other harmful chemicals in tobacco smoke restrict oxygen supply to the fetus, impeding normal growth and development.

Question 6: Public Health Measures

Which public health measure has been shown to be most effective in reducing smoking rates?

A) Education campaigns

B) Increasing cigarette taxes

C) Smoking cessation programs

D) Restricting smoking in public places

Answer: B) Increasing cigarette taxes

Explanation: Increasing cigarette taxes has been shown to be one of the most effective measures in reducing smoking rates. Higher prices discourage people from buying cigarettes, particularly among price-sensitive groups like teenagers and low-income individuals.

Ethics

1. NEVER refer or send to ethics committee, use patient-centered questions, respect patient autonomy, never lie

1. Vitamin C deficiency >collagen hydroxylation
2. Phosphorylation of Rb by cyclin-CDK complex
3. Osteogenesis imperfecta
4. BRCA gene 2 questions
5. Hardy weinberg question
6. CF
7. FRAGILE x syndrome
8. Kwashiorkor
9. G6PD deficiency
10. Phenylketonuria
11. Von gierke disease
12. Very small no of questions were from immunology and alot from ethics
13. One was a homeless 10 week pregnant alcoholic women what advice will you give ? I marked even leaving alcohol now will safe baby from complications
14. Telephone interpreter 2 questions
15. 2 3 hypersensitivity questions
16. Hyperacute transplant rejection
17. PPV
18. NNT
19. Bias questions

1. Case describing HIT. Which factor is associated with it? PF4
2. Woman with 1 month history of personality change and “walk weird”. Imaging is normal. CSF shows protein 14-3-3. Dies of respiratory complications. Diagnosis? Prion disease (spongiform something)
3. List the abducting shoulder muscles in order: Supraspinatus > Deltoid > Serratus Anterior
4. Case describing absence seizure. What is the pathophysiology? Opening of T-type calcium channels
5. Patient undergoes thyroidectomy, but we want to spare the parathyroids. Which artery should be preserved? Inferior thyroid artery
6. Short acting, water soluble benzodiazepine? Midazolam
7. Feces through infant’s umbilicus? Patent omphalomesenteric duct

8. 3 telephone translator interpreter questions
9. Patient has a million symptoms, figure out its mononucleosis. The organism responsible? EBV
10. Patient has nasociliary carcinoma. The organism that causes this ALSO causes: Burkitt's lymphoma

11. Alcohol abuse, ends up with pancreatitis symptoms and whatever. Necrosis of the pancreas is: Fat necrosis

12. Pathophysiology of how a cell undergoes necrosis? ??
13. Case of left ventricular hypertrophy. Genetic cause? Mutations in sarcomere genes
14. Case of ALS. Genetic cause? SOD4
15. Patient has a mass something about draining to superficial inguinal lymph nodes. Where is it derived from? Anal verge
16. Case of Amenorrhea, short vagina, closed cervix. Diagnosis? Androgen insensitivity syndrome
17. Experiment with E6 & E7. Which cells should you use? Columnar epithelial cells
18. Child presents with hoarseness. Masses are found on the vocal cords along with koilocytes. Diagnosis? Laryngeal polyps
19. Infertility testing. Man works in a toxic environment but has viable sperm. What protected the sperm? ????
20. Case of BPPV, which part of the ear does it affect? Semilunar canal 21. Low frequency hearing loss. Which part of the ear is affected? Cochlea
22. Glaucoma drug that makes your eyelashes grow? ??
23. Case about a girl with normal development at first, then begins to deteriorate motor and language. Diagnosis? Friedrich ataxia
24. Patient has muscle pain and weakness, starts new drugs (statins, ace inhibitor, NSAIDs…etc.) His CPK rises to 400. Which drug caused this? ???
25. Patient sits in a sauna at a temperature of 176F. What happens? Increased preload
26. Patient has chronic GERD and does an endoscopy. Describe what you see? Metaplasia
27. Patient is about to begin infliximab. What should you test first? PPD
28. Patient is Rh- and gives birth to an Rh+ child. She is now pregnant again. What should you do? Give anti-D
29. Case of microcytic hypochromic anemia. Picture shows basophilic stippling. What is mechanism behind the disease? Impaired heme biosynthesis (lead poisoning)
30. Case of peptic ulcer disease. You want to give a drug. Point out on the picture where it works. (Irreversible H-K pump inhibitor)

31. Case describing Lambert-Eaton. What is the Pathophysiology? Antibodies against voltage-gated calcium channels
32. Case of girl undergoing surgery, begins to have symptoms of malignant hyperthermia. What is the Pathophysiology? Something about too much myoplasmic calcium
33. Case of gout attack. What drug do you give? One that inhibits microtubule formation (Colchicine)
34. Case of RBCs that are sensitive to hypo-osmosis or something. What is the mechanism behind the diagnosis? Weakness of the cytoskeleton of the cell (Spherocytosis)
35. Patient undergoes surgery but develops throat edema or something. Which inhibitor is deficient or something? C1-Esterase
36. Case of cryoglobinemia. Which complement is low? C4
37. Long case with picture of coccidioses or whatever. Where did the patient get this? Arizona
38. Case of multiple sclerosis. Which cell is defective? Oligodendrogliocytes
39. Patient has weakness of dorsiflexion and loss of sensation between big toe and second toe. Which nerve is affected? Deep peroneal nerve
40. Case of a herniated disc with loss of ankle reflex. Which discs are herniated? L5-S1
41. Case of HIV with meningitis or something. Picture included. Diagnosis? Toxoplasmosis
42. ECG of Atrial Fibrillation
43. Psych case where woman isn't losing weight. She tells the doctor "you want to talk about weight? You probably eat a whole pint of ice cream at night" what defense mechanism is this? Projection
44. Disheveled woman is seen outside acting strange. She alternates between hyperactive movements and completely frozen. When frozen with her arms up and bent, if someone passively moves her arm, she keeps them bent. What is the diagnosis? Schizophrenia with catatonia
45. Breast lump superomedial. Increases and decreases with menstruation. Diagnosis? ???
46. Case of Huntington's disease. Mode of inheritance? Autosomal Dominant
47. Pedigree question. Woman is asking about her chance of having a son affected by cystic fibrosis because her brother has the disease. What is the chance that she is a carrier? 1 in 2
48. Crescentic glomerulonephritis is what type of hypersensitivity reaction? ???
49. Case with picture of fanconi anemia???
50. Exposure to sunlight caused squamous cell carcinoma. Pathophysiology? Double strand DNA break??
51. Picture of hemangioma. Derived from which cells? Endothelial

52. Brown deposits in brain with dilated cardiomyopathy. Biochemistry behind it? ??
53. Patient with cystic fibrosis. Begins to develop weakness and peripheral neuropathy..etc. Which vitamin is deficient? Vitamin E
54. Too many endo questions
55. Biostat question calculating absolute relative risk. 0.1 (79/79+1)
56. Patient develops Polymorphic ventricular tachycardia. Treatment includes: IV Magnesium
57. Patient has a million symptoms. Develops proximal muscle weakness. This is most likely? Polymyalgia Rheumatica
58. Uvula deviates to left. Affected nerve ?? (Choices included hypoglossal, vagus, and glossopharyngeal)
59. Patient is found at a base of a snowy mountain. Central pulses are felt, but peripheral aren't. O2 levels in the blood are decreased. Why? Decreased cardiac output
60. Case of toxic shock syndrome with tampon. The organism that caused this has which virulence factor? Superantigen
61. Patient has oligohydramnios. Newborn dies of respiratory distress syndrome. What else would you expect to see? Clubfoot??? (Other choices where coloboma, hypospadias, cleft lip)
62. Child wets the bed. The drug you give causes what? Decreased thirst (Desmopressin)
63. Very long acid chains and other stuff are increased. Which organelle is defected? Peroxisomes
64. 7 year old comes with edema and whatever. Rbc casts are present with a history of strep 3 weeks ago. Diagnosis? ???
65. Levofloxacin drug interaction causes something? ???
66. Patient with well circumscribed lesion on anterior uterine wall. Heavy and painful menstruation. Which layer is it derived from? Myometrium??? (Fibroid???)
67. Type 1 diabetic has something in lung. Most likely organism? Rhizopus??
68. Asthma case worse in spring. What do you do for? Long acting b agonist???
69. COPD with increased erthyropoietin. Which factors causes this? Hypoxia-inducible factor
70. Baby has inspiratory stridor. Diagnosis? ???
71. Woman has bilateral crackles. Low FEV1, low FEC, Normal FEV1/FEC. Most likely site of disease? Interstitium???
72. Baby has bowel sounds in left sternum. Why? Inadequate fusion of the pleuroperitoneal membrane (Congenital Diaphragmatic hernia)
73. Baby with sausage shaped mass or smthn? Diagnosis? ??
74. Patient with SCID can't take MMR vaccine. What will protect her? Herd immunity

75. Arrows for fasting with exercise? Low insulin, high glucagon, high GH?
76. Old woman dyspareunia and whatever. Diagnosis patho? Thick white patch (lichen something)
77. Abnormal left atrial blood flow in man with exertion and shortness of breath or smthn? ASD?
78. Lung mass with hypercalcemia and low PTH. Cause? Increased PTHrp
79. Another 2 same idea
80. Distal finger nodes I think? Cartilage damage
81. Case of cyst over dorsal wrist? Origin? Joint space??
82. Case of hemorrhoids with picture. Cause? Thrombosis of veins
83. Stab wound left sternal border. What did it hit? Right ventricle
84. 14 year old trying to lose weight but says “it’s hard to stop when my friends eat around me” what do you say? “I know it’s hard to make changes sometimes”
85. Cancer patients wants to die. What do you say? “Tell me more about these feelings”
86. Sitagliptin does what? ?? (DPP-4 inhibitor)
87. Ascaris lumbricoides
88. Man sleeps on mattress and wakes up with bites with blistering and vesicles. What caused them? Fleas?? Or spiders?
89. Case of celiac. Main cells? Lymphocytes?
90. Side effect of PTU? Bone marrow suppression?
91. Case of tennis elbow. Which tendon? Extensor carpi radialis brevis
92. Picture looked like varicose veins but with extreme pain and tenderness. No redness. Mechanism? Venous valve insufficiency
93. Patient with case of BPH or prostate. Most important risk factor? Age
94. Fastest way to treat aspirin overdose? Ion trapping
95. Case of opioid overdose
96. Women with endometrial hyperplasia. Why? Unopposed estrogen
97. Osteolytic spine lesion with high ca low pth. Drug given should do what? Inhibit osteoclast come resorption?
98. Picture of nail pitting. What should you check? Skin
99. What do you expect to see 24 hours after leg amputation?
100. What do you expect to see after 1 week of injury?

101. Boy with laceration. 3 weeks later can't even tell that there's a scar. What happened? Epithelial regeneration
102. Case of influenza genetic drift. How? Recombination/Reassortment of NA (or HA?) genes 103.

    Case of lymphocyte immunodeficiency which vaccine shouldn't you give? MMR?
104. Researcher does research find a correlation between two things BUT THEN finds a risk factor that could also contribute. What bias is this? Confounding bias
105. Biostat of low significance (low power). Why? Low sample size?
106. Lungs normally have 1 ABC gene, but in cancer there are 4. Why? Gene duplication?
107. Why do NRTIs cause lactic acidosis? Because of mitochondrial DNA inhibition
108. Biostat question about standardized mortality
109. Biochem question about Acetyl-CoA Carboxylase

22 April 2024

1-Father death due to Colon , aunt r endometrial , pt has right colon CA

Which mutation : MLH/MSH

2-Hard question of cross section of medulla oblongata …man with decreased sensation in left side of the body and right side of the face …he also has deviated uvula and not sure but some problem in tongue movement and this info will make u confused so be aware…the pics were very precisely delineated

3- HUS - blood cells

4-displacement

5- Acting out

6- pic of urothelial CA

7-Interpreter waly bht qes thy

8-H pylori ka Kuch aya tha lkn biopsy wala typical qes nai tha

9-Biostat mai CI

10- mean median

11- Girl amenorrhea , breast develop , absent uterus . Kuch tanner stage btai thi , karyotype was XY Cause ?? Androgen insensitivity

12- mainy murmur Sunna nai tha bcz I know mjhy identify mai honay thy

Aik aya tha after 4 days MI , systolic murmur , left atrial enlargement

I did papillary rupture in that

Other confusing option for me was Vsd

I don't know what rite

13-hypovolumic shock arrows

14- HYPERPARATHYROIDISM arrows

15- fructose- fasting

16-lymph node of glans penis

17-anal verge lymph node superior inguinal

18- Aik 2 scenarios mai height weight e age ky graph thy dekh kr lgta tha bht mushkl hain but highly unrelated

19- Graph form mai +ve or -ve skewed ai thy. Best measure? Median

20-Mitochondrial pedigree

21- Aut dominant pedigree same NBME question 1 sibling affected chance of carrier in patient

22- Is trah ky qes bhi ky thy immunity against them would be by which cells

23- Renal -goodpasture

24- antibiotics for UTI - transpeptidases

25-chlamydia mode of transmission

26- meningococci- virrulence factor

27- Renal , loop diuretic , HF case (biopsy qes)

28-HCM

29- substance abuse

30- Vit E celiac tha ya koi malabsorption

31- Alcohol ."- folic acid

32- Vit b1 - transketolase

33- Amotrphic laT sclerosis —>SOD

34-TNF ka koi scenario , don't remember

35-LTB4

36-EHEC - mechanism of action

37-Coccidioses ki pic nbme wali - aur location ky saath option thay Arizona , missipi etc etc

38- Candida - HIV scalable lesion on tongue

Kaposi

39-Tumor mai scenario tha , child down gaze , obstructive hydrocephalus

Which cells tumor ?

40-Spinal cord pic - spinothalmic pic

41-Brownsequard - spinal cord pic

42- hydronephrosis

43- pnemocystis jiroveci

44- Xeroderma - pt photosensitive , dry skin wht defect - Dimers

45- Incontinence mai Stress ka bhi aya tha aur vasogenic ka bhi

Stress mai unhun structure pucha tha , cause of weakness

46-Fissures

47-Person sitting in bath (is mai history thi ky Pt done some sport , has back pain went to spa where Temp was 174F , effect ?? I marked something about Dec Muscle Contraction

48- Seizure - amygdala

49- rett syndrome- Direct mutation bhi nai thi aur yeh bhi nai tha ky it's due to brain development arrest . Odd one out kr ky ho rha tha

50- CML - Philadelphia chromosome

51-Prion - typical scenario ask Spongiform cortex

52-21 hydoxylase

53-Choriocarcinoma

54-72 year old male presented to the clinic with complaints of pain in the lower back that has been increasing in severity over the past few weeks. He also has radiculopathy since the past few months secondary to a herniated disc. His father passed away due to prostate cancer at 85 years of age. He also suffers from urinary hesitancy, weak urinary stream, and urinary retention. Upon DRE, an enlarged prostate is palpated, with assymetric induration in right lobe, but no nodularity seen. Which of the following is the main reason for further evaluation of the patient's condition (family history was not an option).

A) Age ✓

B) Durationoflowerbackpain

C) Radiculopathy

D) Urinary symptom

55- Repeat qes , pt 3 days fasting Wht would be Dec – Glycogenolysis

dq-2 celiac, absolate risk, clopidogrel, spherocytosis, bipolar disorder, schizoid, parkinson drugs, hydrocephalaus- 2 q-cerebral aqueduct block, colon polyp-, potency and efficacy, tenia pedis, ATN,ADHD- drug, Hiv- focal segmental sclerosis, PNH-cd55,56, spherocyte- cytoskeleton, cushing disease, giardia, Uti, intrinsic muscle of hand, hep B-immunized, cogenial anomaly, excercise-arrow, volume pressure loop-preload, side effect of amiodarone, conjugated bilirubin-roton dubin, retinoblastoma, multi vitamin, leish nihan syndrome, vit b7-carboxylation, folate-enzyme, Step 1:

-berries and water drinking then diarrhea: giardia

-pic of cervix plus histology: put it invasive squamous cell carcinoma (not sure)

-endocarditis vegetation made up of: platelet and fibrin

-mastication : temporal lobe

-pic of medial geniculate nucleus

-seizure : target t- calcium channels

-what happens in epilepsy : na remain less in inactivated state

-treatment of adhd: dopamine reuptake inhibitor

-case of altruism : cancer patient

-case of denial patient doesn't want to know about his diagnosis and wants to live happily

-ethics case patient doesn't use condoms: how can we build on that ?

-ethics case: use telephone interpreter

-ethics case where does the med student stand I was confused between stand near the head of bed when patient lying flat or next to the toe of bed facing the family of patient (chose second one)

-stat know that CI passes thru one is not statistically significant

-stat question choose relative coefficient graph know this

-neuro: point out the cranial nerve affected by diabetes Ghose occulomotor

-diabetes lead to neuropathic lesion diabetes or side effect

-Alzheimer's case what to expect ? Loss long term memory

-picture of contact dermatitis on hand

-case of fat necrosis patient had a trauma to her chest before

-case of breast cancer: painless mass attached to chest skin and overlying skin changes

-opioid withdrawal pupil dilation and sweating

-opioid abuse pinpoint pupil only option was marriguana here

-what happens in sleep compared to when awake response to hypercapnea decreases

-picture histology of autophagy

-picture histology of phylloid

-ethics question about cancer patient that wants to stop treatment : respect her wishes and asks her about her plans

-pic of circle of Willis hemorrhage

-patient with fever and cough and other symptoms what is decreased interferon b

-patient taking calcium and ask what w exercise to start doing: preparation

-graph to point partial agonist

-v max the same: competitive antagonist

-recurrent lesions on penis and unprotected sex where the lesions from: penis mucosa

-epithelial cells : defensin

-ocp: polyarteritis nodosa

-case abdominal pain and skin lesions then say renal defect was confused between polyarteritis nodosa and hsp chose the first due to renal complications that they explained

-2 heart sounds : one bicuspid aortic valve and second tricuspid regurg

-case to insert a nasal endoscope: options superior- middle- inferior turbinate and sphenoethmoidql recess (chose this but not sure)

-opthalmo recall: increase intraocular pressure

-bilateral hemianopia: craniopharyngioma

-case inoculate bacteria on hospital rail and let it dry then check after a month which will remain I chose w ecoli and pseudos (not sure about this) there was another strep and staph

-pedigree x linked recessive chance to get the disease it was 50%

-another pedigree autosomal dominant why the mother didn't establish the symptoms : incomplete penetrance

-case of ibs took antidepressants got better where does the med act for GI still chose serotonin

-asthma case: treat leukotrienereceptor antagonist

-recall nausea of chemo treat NK 1 antagonist

-recall of astronaut came back to earth (decrease muscle protein and serum ca and increase urine Ca- N)

-give ace inhibitor will cause hyperkalemia and increase Cr at first

-chovstek and trousseau signs hypocalcemia and hypo phosphate arrows — ethics take consent from mother and child

-Blood in meatus : injury time bladder

-case of larger mass in abdomen where is tumor : endometrial

-case of folic acid deficiency (normal methylmalonic and high homocysteine)

-case of SBO did appendectomy+adrenalectomy and has nephrostomy tubes (choose which one is the cause I thought about it as adhesions and decided adrenelectomy but not sure)

-iron absorbed in duodenum

-cardiomegaly: t.cruzi

-hearing loss: CMV

-case diarrhea and other symptoms : undercooked beef

- 2 Questions about Osteogenesis imperfecta study from FA
- Repeated Qs Female Case with BRCA mutation and family history of cancer why doesn't have cancer? Incomplete penetrance
- Case about mitochondrial myopathy cause? Maternal Heteroplasmy
- Typical case of pyloric stenosis asking for diagnosis
- Ulcerative colitis case picture showing crypt abscess
- Mickels diverticulum question forgot the scenario
- An infant that has been fed rice milk for months comes with kwashiorkor symptoms and signs asking about diagnosis which is kwashiorkor
- Many vitamin access and defeciency Qs read first aid
- For example A patient wife died and he only eat something like tea and toast diet develops signs and symptoms of scurvy what is the vit deficiency ? Vit C
- Many Questions on type 1 hypersensitivity like what molecules and cells are involved mast cells histamine etc
- Patient with mucocutaneous candidiasis shows Absent cutaneous reaction to Candida antigens while mother has reaction what is the cause: defect in type 4 delayed T cell mediated immunity
- Few questions about gene and mechanism of allergen desensitization therapy I was just guessing random answers as the topic wasn't on first aid so review it
- Case of vibrio cholera what does the toxin activates exactly? Activates GS to increase CAMP,
- Which neurotransmitter release is blocked by c.tetani? GABA and glycine

- Case of otitis externa swimmer child with External ear canal erythema and other symptoms what is the cause? Pseudomonas aeruginosa

- Case of syphilis is treated and presents with herxheimer reaction symptoms and then Asks about the reaction's exact cause in terms of immunology and micro

- Clue cells gardnerella vaginalis

- Coccidioidomycosis Spherules picture

- Repeated Nurse with needle stick injury only Anti-HBs is positive what does it mean? Vaccinated

- Person with removable white patches from tongue basically Oral candidiasis due to Inhaled steroids

- Repeated Question about Bradford hell criteria

- Question about a child 12 years old or around the age with a disease and you want the child to enroll him in the research what you should obtain? Parent consent and child assent

- You admit a female patient forgot why but in history she tells you she was sexually abused by the step father during night time as a child, next day the night shift staff complain of her hostility towards them although you and the morning team find her respectful and cooperative, what is the defense mechanism?

- Classic conditioning scenario about child and vaccine I think

- Murmur in a patient post MI cause? Posteromedial Papillary muscle rupture

- Patient on anti hypertension drug developed edema which med caused it? It was a Dihydropyridine CCB forgot the exact one

- Few Questions about ADH MOA, release from hypothalamus nucleus and receptors check FA

- Repeated question about TBG and thyroid hormone levels

- How do you know if the high insulin is exogenous or not in suspected Munchausen syndrome ? C peptide levels

- One question about hexokinize vs glucokinize check FA

- Men 2 syndromes read FA

- Pancreas histology in Type 2 DM will show? Amyloid deposits

- Tracheoesophegeal fistula scenario asking about embryology problem? Problem of septum formation between the structures

- Newborn boy lung hypoplasia and hydronephrosis / posterior urethral valve

- Know the murmurs got some Qs they were vague and audio not very clear

- Know the PH O2 and PCO2 in pulmonary embolism

- Know the physical exam findings in pneumonia dullness etc
- Where do thiazide diuretics work? You will have to point the tubule portion
- Question mentioned granular casts/ ATN

22 june 24

-Reed Steinberg what type of cell

-Jak2 mutation Polycythemia Vera

-3 questions knee injury, Girl feels knee will give out, reduced joint space-OA

-Radicular artery lesion?

-Angiography aortic arch and branches, vertebral artery pointed at

-Anti citrulline Ab + but RF -ve

-Leukocoria rb ef2

-Cystic fibrosis vitamin def -Vitamin

B 12 neuropathy

-Alcoholics calcium, po4 and pth arrows

-Bath

-Hemorrhoids what vessel leads to bleed

-Chvostek sign arrows

-Middle finger sensation lost both dorsal and medial aspect what nerve root involved

-Medical student or telephone interpreter?

-Parental consent child assent

-Trichomonas pic

-Giardia pic NBME

-HUS

-2/3 angry patients ethics how to deal with them, they're in denial

-1 guy with anxiety, when told he has anxiety says it's just stress from work nothing else. How to respond?

-Tumor of meninges

-TB histo

-sarcoidosis histo

-Choriocarcinoma metastatis to lung

Pneumoconiosis pics

-2 cns tumors

-Spinal artery lesion leads to what

-Spinal cord syndrome

-Red nucleus Parkinson's

-Amphetamine mechanism of action

-Ppi mechanism

-Ssris

-Acyclovir

-Hippocampus

-Psychogenic epilepsy?

-Locate amygdala

-WPW ecg what sort of phenomenon

-Papillary muscle rupture, 4 days post MI

-Polyarteritis nodosa associated with hep B

-Decrease preload in sauna

-Around 5 graphs

-Nodules in hand made up of what?

-Case with prev history of Melanoma, now has cancer somewhere else but is also a smoker? RF for cancer now?

-Testis has tight junctions/occludens so chemo doesn't affect it

-ADHD drug and mechanism of action

-Endometriosis RF and infertility

-Sarcoidosis histo type 4 HS

-Proteus renal calculus

-Non scrapable lesion on tongue risk factor- wrote tobacco chewing

-Mechanism of htn retinopathy

-NBME pic of gout knee, with numerous neutrophils and a SINGLE CRYSTAL

- intraerythrocytic inclusions- either babesia or malaria - asking what place pt probably visited. (India, Colorado, Missouri)

-Boy's pic- fetal alcohol syndrome? Don't know eyes didn't seem that far apart but had epicanthal folds.

-Paget's disease

-Graft rejection and Rh -ve correlation

-Oral kaposi pic in HIV pt

-Acanthosis nigiricans and pad of fat behind neck- RF - weight (options were inhaled budesonide, weight)

-Humerus fracture X-ray- asking what disease led to bone getting fractures

-Testicular tumor- Lymph node drainage to lumbar/para aortic

April (Segmental sclerosis)

Paper was so vague but actually the options were like they were directing u towards a certain answer. New questions recalls were less. My exam was quite ethics heavy.

1. Vaccination situations whether to give or not.
2. Drugs to treat dystonia (mechanism of action)

A 25-year-old woman presents to the neurology clinic with involuntary neck movements and abnormal posturing. She reports that these symptoms started gradually over the past year and have progressively worsened. The patient describes the movements as repetitive and sustained, causing significant discomfort and difficulty in daily activities. On physical examination, there is evidence of sustained muscle contractions leading to abnormal positioning of the head, consistent with **cervical dystonia.**

Which of the following is the most appropriate initial treatment for this patient's condition?

A) Levodopa B) Baclofen C) Trihexyphenidyl D) **Botulinum toxin** E) Diazepam

3.Neuropathic pain MOA of drug.

A 45-year-old man presents to the clinic with complaints of burning and shooting pain in his feet that has been ongoing for the past 6 months. He has a history of type 2 diabetes mellitus, diagnosed 10 years ago. His blood glucose levels have been poorly controlled, with recent HbA1c of 9%. On physical examination, there is reduced sensation to light touch and pinprick in a stocking-glove distribution in both feet. The physician suspects diabetic neuropathy and decides to start the patient on a medication specifically for neuropathic pain.

Question:

Which of the following medications is most likely to be prescribed for this patient, and what is its mechanism of action?

A) Ibuprofen - Inhibition of cyclooxygenase enzymes

B) **Gabapentin - Modulation of calcium channels**

C) Tramadol - Activation of mu-opioid receptors and inhibition of serotonin and norepinephrine reuptake

D) Amitriptyline - Inhibition of serotonin and norepinephrine reuptake

E) Prednisone - Suppression of immune response and inflammation

4. Picture of auer rod.

A 32-year-old woman presents to the emergency department with complaints of fatigue, fever, and easy bruising over the past two weeks. She also reports occasional nosebleeds and gum bleeding. On physical examination, there are petechiae and ecchymoses on her arms and legs. Laboratory tests reveal a white blood cell count of 25,000/µL, hemoglobin of 7.5 g/dL, and platelet count of 40,000/µL. A peripheral blood smear is performed and shows numerous blast cells. Upon closer examination of the blasts, a pathologist notes the presence of Auer rods.

Question:

Which of the following is the most likely diagnosis?

A) Acute lymphoblastic leukemia (ALL)

B) Chronic myeloid leukemia (CML)

C) Acute myeloid leukemia (AML)

D) Myelodysplastic syndrome (MDS)

E) Chronic lymphocytic leukemia (CLL)

5. Two question (There was two question factory regarding ADHD in one question basically the kid had to be identified and another question it was having features of ADHD but the kid was basically having a difficulty making relationships was a bit aggressive).

A 7-year-old boy is brought to the pediatrician by his mother due to concerns about his behavior at school and home. The mother reports that he has difficulty staying seated during class, frequently interrupts others, and often forgets to complete his homework. His teacher has noted that he struggles to follow instructions and is easily distracted, leading to poor academic performance. The boy's mother also mentions that he is very active, often running around excessively and climbing on furniture. Despite these behaviors, he is generally friendly and gets along well with his peers.

Question:

Which of the following is the most likely diagnosis?

A) Oppositional defiant disorder (ODD)

B) Autism spectrum disorder (ASD)

C) Attention-deficit/hyperactivity disorder (ADHD)

D) Conduct disorder

E) Specific learning disorder

A 9-year-old boy is referred to a child psychiatrist due to concerns about his behavior. His parents report that he has trouble maintaining friendships and often gets into fights at school. Teachers describe him as easily distracted and frequently off-task. At home, he has a short temper and often argues with his siblings. His academic performance is below average, and he often loses his

belongings. Despite these issues, he is highly creative and has a good sense of humor.

Question:

Which of the following is the most likely diagnosis?

A) Oppositional defiant disorder (ODD)

B) Autism spectrum disorder (ASD)

C) Attention-deficit/hyperactivity disorder (ADHD)

D) Conduct disorder

E) Intermittent explosive disorder (IED)

6. A 2-year-old boy is brought to the pediatrician by his parents with concerns about his speech and social interactions. They report that he has met all his physical milestones on time, such as walking and running, and he is able to use utensils and draw with crayons. However, his parents are worried because he only knows about 200 to 300 words and can form two- to three-word sentences. He tends to play alongside other children rather than with them, and often repeats words and phrases that his parents say to him (echolalia). His behavior includes short attention spans and hyperactivity.

Question:

What is the most appropriate next step in the management of this patient?

A) Refer for speech and language therapy immediately

B) Refer for a comprehensive developmental evaluation

C) Start treatment with stimulant medication

D) Observe and re-evaluate at the next scheduled visit

E) Diagnose with autism spectrum disorder (ASD) and start behavioral therapy

7. There was another question. It was also from **psychiatry**

A 28-year-old man is brought to the psychiatric clinic by his family due to concerning changes in his behavior over the past six months. He recently quit his job and broke up with his long-term girlfriend. His family reports that he has become increasingly isolated, expressing grandiose ideas about having special plans to change the world. He often complains that people do not treat him well and are plotting against him. The patient has been hearing voices that tell him he is special and destined for greatness. His self-care has declined, and he neglects his personal hygiene. On examination, he exhibits disorganized thinking and his speech is tangential.

Question:

Which of the following is the most likely diagnosis?

A) Brief psychotic disorder

B) Schizophreniform disorder

C) Schizoaffective disorder

D) **Schizophrenia**

E) Delusional disorder

8. There was a question where a kid having multiple infections bacterial in nature since childhood. Seemed like agammaglobulinemia.

A 4-year-old boy is brought to the pediatric clinic by his parents with a history of recurrent bacterial infections since infancy. The infections include multiple episodes of otitis media, pneumonia, and sinusitis. His parents mention that he has been hospitalized several times for these infections. Despite appropriate antibiotic treatments, the infections keep recurring. Physical examination reveals a small, slightly underweight child with palpable lymph nodes and normal growth parameters. Laboratory tests show very low levels of all immunoglobulins (IgG, IgA, and IgM). A flow cytometry analysis reveals an absence of B cells (CD19+ cells) in peripheral blood.

Question:

Which of the following is the most likely diagnosis?

A) Common variable immunodeficiency (CVID)

B) Severe combined immunodeficiency (SCID)

C) **X-linked agammaglobulinemia (Bruton's agammaglobulinemia**)

D) Hyper-IgM syndrome

E) DiGeorge syndrome

9. There was another question immuno compromised patient.

A 56-year-old woman with a history of renal transplantation six months ago presents to the emergency department with a fever of 38.5°C (101.3°F) and general malaise. She is currently on immunosuppressive therapy, including tacrolimus, mycophenolate mofetil, and prednisone. She has no localizing symptoms such as cough, dysuria, or abdominal pain. On examination, she appears mildly ill, with stable vital signs except for the fever. Physical examination is unremarkable, and there are no obvious sources of infection. Laboratory tests reveal a white blood cell count of 3,500/µL. Blood cultures and urine cultures are obtained, and a chest X-ray is ordered.

Question:

What is the most appropriate next step in the management of this patient?

A) Reassure and follow up in 24 hours **B) Start broad-spectrum antibiotics immediately** C) Admit for observation and await culture results D) Increase the dose of immunosuppressive therapy E) Discontinue all immunosuppressive medications

10. scenarios was like the patient was previously under treatment of a psychiatrist but she was quite pissed off at him and now she is seeing another doctor but she is not giving her a good history and she is not responding so basically the doctor asked her that what is the problem? Why We are not establishing a good rapport. so, the answer was basically that the problem is **Transference.**

A 32-year-old woman presents to a new psychiatrist after leaving her previous psychiatrist's care. She appears agitated and reluctant to engage in the conversation. When asked about her past treatment, she provides minimal information and seems distrustful. Despite the new psychiatrist's attempts to build rapport and understand her concerns, she remains uncooperative and evasive. The psychiatrist notices that she reacts negatively to certain questions and avoids eye contact. When directly asked about her behavior, she admits feeling angry and betrayed by her previous psychiatrist, whom she felt didn't understand her or help her effectively.

Question:

Which of the following best explains the patient's current behavior towards her new psychiatrist?

A) Countertransference **B) Transference** C) Therapeutic alliance D) Resistance E) Paranoia

11. Fetus with arms but no forearms developed. Development error in which week of development. 8, 12,18, 24. 28.

A 30-year-old pregnant woman presents to her obstetrician for a routine prenatal check-up at 20 weeks gestation. During the ultrasound examination, the obstetrician notices a concerning finding: the fetus appears to have arms, but there are no forearms developed. The upper limbs terminate abruptly, just below the elbows. The rest of the fetal anatomy appears normal, with no other structural anomalies detected. The obstetrician discusses the findings with the mother, explaining that further evaluation and genetic testing may be warranted to determine the underlying cause of the limb anomaly. The mother expresses shock and concern, wondering what could have caused this unexpected development issue in her otherwise uneventful pregnancy. The obstetrician reassures her that while limb abnormalities can be distressing, further investigations will provide more information about the condition and potential management options.

Question:

At which week of gestation is it most likely that the development error leading to the fetal limb anomaly occurred?

A) 8 weeks
B) 12 weeks
C) 18 weeks
D) 24 weeks
E) 28 weeks

12. There was a question with painless cervical and surrounding lymphadenopathy.

A 22-year-old male presents to his primary care physician with complaints of painless swelling in his neck. He reports that the swelling has been present for the past two weeks and has gradually increased in size. On further inquiry, he mentions that he has had multiple sexual partners over the past few months. He denies any recent illness, fever, night sweats, or weight loss. Physical examination reveals firm, non-tender cervical lymphadenopathy, particularly involving the posterior cervical chain. There is no evidence of tonsillar enlargement or pharyngeal erythema. The remainder of the physical examination is unremarkable. Given the patient's history and examination findings, the physician suspects an infectious etiology and considers a specific viral infection.

Question:

Which of the following viral infections is most likely responsible for the patient's presentation?

A) Human immunodeficiency virus (HIV) B) Cytomegalovirus (CMV) **C) EpsteinBarr virus (EBV)** D) Herpes simplex virus (HSV) E) Human papillomavirus (HPV)

13. There was a question where patient had absent parietal lobe among many other findings.

A 4-year-old child is brought to the pediatric neurology clinic by his parents due to concerns about developmental delays. The child has never achieved age-appropriate milestones and exhibits intellectual disability, limited communication skills, and poor motor coordination. On examination, the child demonstrates stereotypical hand movements and has a characteristic facial appearance with a prominent forehead, flattened nasal bridge, and almond-shaped eyes. Further investigations, including brain imaging, reveal absent parietal lobes, among other structural abnormalities.

Question:

Which part of the embryonic brain development is primarily affected in this patient?

A) Prosencephalon
B) Mesencephalon
C) Rhombencephalon
D) Telencephalon
E) Diencephalon

14. There was a question about frmale breast feeding.

A 34-year-old woman presents to her primary care physician with complaints of a painful lump in her breast. She is currently breastfeeding her newborn and has been experiencing discomfort in her left breast for the past week. She denies any nipple cracking or discharge but reports redness and swelling in the affected breast. On examination, there is a palpable, mobile mass in the upper outer quadrant of the left breast. The overlying skin appears erythematous and slightly dimpled, resembling the texture of an orange peel. The patient is afebrile, and there are no signs of systemic illness.

Question:

Which of the following conditions is most likely responsible for the patient's presentation?

A) Mammary duct ectasia
B) Fibroadenoma

C) Breast abscess
D) **Inflammatory breast cancer**
E) Paget's disease of the breast

15. **Thalamuc pain syndrome** was asked.

A 55-year-old man presents to the neurology clinic with complaints of severe, burning pain in his right arm. He describes the pain as constant and excruciating, often triggered by light touch or movement. The pain has been present for the past six months and has progressively worsened over time. The patient reports that the pain began shortly after he suffered a stroke affecting the left side of his brain. On examination, there are no visible abnormalities in the affected arm, but the patient demonstrates heightened sensitivity to light touch and temperature changes. He also experiences intermittent episodes of muscle spasms and involuntary movements in the affected arm.

Question:

Which of the following syndromes is most likely responsible for the patient's presentation?

A) Complex regional pain syndrome (CRPS)
B) Trigeminal neuralgia
C) **Thalamic pain syndrome**
D) Meralgia paresthetica
E) Postherpetic neuralgia

16. Injury to pectinius muscle.
A 28-year-old male presents to the orthopedic clinic with complaints of groin pain and difficulty with certain movements after a recent soccer match. He reports feeling a sudden sharp pain in his groin area while attempting to kick the ball during the game. Since the injury, he has experienced discomfort and weakness in his right hip and groin region. On examination, there is tenderness over the right groin area, and the patient exhibits pain with resisted adduction of the right hip. Additionally, he demonstrates decreased strength when attempting to bring his right leg towards the midline of his body.

Question:

Which nerve is most likely responsible for the weakness in adduction of the right lower limb in this patient?

A) Femoral nerve
B) Sciatic nerve
C) **Obturator nerve**
D) Superior gluteal nerve
E) Common peroneal nerve

17.. Mechanism of action of tamsulosin was indirectly asked. It was alpha antagonism

A 70-year-old male presents to his primary care physician with complaints of urinary symptoms. He reports a frequent need to urinate, especially at night (nocturia), weak urinary stream, difficulty initiating urination (hesitancy), and a sensation of incomplete emptying of the bladder. He also mentions episodes of dribbling urine and occasional urinary urgency. On digital rectal examination, the physician notes an enlarged prostate with a smooth, non-tender surface consistent with benign prostatic hyperplasia (BPH).

Question:

Which of the following is the primary mechanism of action of tamsulosin in the management of this patient's urinary symptoms?

A) Inhibition of 5-alpha reductase
B) Alpha-1 adrenergic agonism
C) **Alpha-1 adrenergic antagonism**
D) Muscarinic receptor antagonism
E) Blockade of beta-adrenergic receptors

18. A 45-year-old male presents to the emergency department after being involved in a high-speed motor vehicle accident. He reports severe chest pain and difficulty breathing. On physical examination, the patient has visible bruising over the sternum and diminished breath sounds bilaterally. His vital

signs are significant for tachycardia and hypotension. The patient appears to be in respiratory distress, and there is jugular venous distension noted. A bedside ultrasound is performed.

Question:

Which of the following is the most likely diagnosis in this patient?

A) Bilateral pneumonia
B) Pulmonary contusion
C) Pericardial effusion with cardiac tamponade
D) Hemothorax
E) Tension pneumothorax

.

19. There were two questions of cardiac auscultations. One had murmur radiating to neck other did not. One seemed like **vsd.** Both were louder at apex. Wording was a bit vague.

Both were systolic murmurs.

20. There were multiple questions where certain channel in the nephron loop were problematic and asked about what site would be dysfunctional.
21. In one question it asked if it was proximal convulated tubule or distal or collecting duct. In another asked asked about whether it was cortex paracortex or medulla. The later had collecting duct chanellopathy hence medullary problem
22. A question stated description of pus oozing from wound having clustures of gram positive cocci aka staph aureus. It was one of the rare presentations but gram positive cocci in clusters was the give away point.
23. One week history of bloody diarrhea. Organism was shown in picture.
24. Another question was about EHEC.
25. Female. Green smelly vaginal discharge. It was trichomonas vaginalis. I mistakenly marked it gardnerella. Both options were given.

26. There was a question about **tracheo-esophageal fistula**. Typical. Kid getting cough n blue after having mother feed. Required suction. Question asked which layer of the embryonic structure has problem.
27. Another question was asked in which a drug x was being introduced. Its function on HR, venous return and SVR were shown. They asked what receptor it is most likely to act on.
28. There was a graph. Much like **kaplan meir.** You had to conclude function of drug a compared to drug b. Drug b was standard of care.
29. There was a question which showed ca pancreas and then showed lab values of different ions. Calcium was low lfts were high. Answer was lack of absorption of fat soluble vitamin due to poor biosynthetic function of pancreas.
30. fetal alcohol syndrome
31. downs syndrome
32. There was another simple 2x2 table question.
33. A question was about tyrosinase deficiency. No melanin formed.
34. There were two auscultations questions one was vsd. Other was loud at apex and radiating to carotids. Wasnt sure about that.
35. There was a question that there is a blast at meth factory. There is ammonia and methamphetamine found in the area. Partial thickness burn on patients. Vitals were up. Probable cause. I went for meth ingestion because it is a super charged stimulator. Other options included damage to gut due to caustic ingestion.
36. question was regarding eversion was intact and probably asked about plantar flexion affected. Likely nerve damaged
37. The background was patient had a RTA and had injury in thigh now recovering. There was a question about what is the nerve supply between first and second toe area.
38. There was question about relative risk where where u simply had to divide the relative risk percentages.

question about parent old age giving advanced directive that he/she wont live and must not be given life prolonging drugs. Now hospitalised but her daughter asks what should be done to change that.

Question ghoom phr kr ye ha advance directive full capacity me tha so shouldnt be changed. Wishes should be respected.

39. carotid steal syndrome
40. G protein coupled receptor, ion channel, which acts on which for Nuclear receptors steroids progesterone etc
41. Botulism vignette n type of toxin
42. Androgen insensitivity syndrome.- blind vaginal pouch
43. Thyroid and pregnancy like thyroglobulin increase
44. population curve
45. Praozin given before epinephrine.. Effect on blood vessel
46. Accumulation of what in pompe.. I marked mucopolysaccharide.. Option had glycogen also.. Dunno 46. formulas for PPv OR RR
48. tricep lesion point c7?
49. facial neve affected b/c forehead invoved.
50. ecg wpw
51. galactose urygyltranferase.
52. operation ---- canit breath---- autopsy pulmonary artery clot.
53. PTH function.
54. Question on thenar muscle
55. pulmonary embolism V/Q mismatch
56. left lung is derivative of
57. organo genesis (which week)6^{th} or 12 th?
58. e.fecalis TURP procedure done antibiotic given MOA.

59. bilateral hydronephronis cause urethral obstruction
60. dq-2 celiac
61. absolate risk
62. clopidogrel
63. Spherocytosis
64. Bipolar disorder 65.Schizoid
66. Parkinson drugs
67. hydrocephalaus- 2 q-cerebral aqueduct block
68. colon polyp-
69. potency and efficacy od drug asked .
70. tenia pedis
71. ATN
72. ADHD- drug
73. **Hiv- focal segmental sclerosis** PNH-cd55,56
74. Spherocyte- cytoskeleton
75. cushing disease
76. Giardia
77. Uti.
78. intrinsic muscle of hand..
79. Hep B-immunized
80. cogenial anomaly
81 Excercise-arrow volume pressure loop-preload
82. side effect of amiodarone
83. conjugated bilirubin-roton dubin

84. retinoblastoma

85.multi vitamin

86. leish nihan syndrome

87. vit b7-carboxylation

88. folate-enzyme

89. There was a question where a kid having multiple infections bacterial in nature since childhood. Seemed like agammaglobulinemia.

90. There was another question immuno compromised patient. Having fever. Antibiotics was to be advised because of immunosuppression.

91. There was a question from epidemiology. Quite a complicated one. It was about temporal association i.e., there is always a cause preceding an effect.

92. There was a question about trendelenberg phenomenon

93. Identifying about side of injury. The answer is the side opposite to the which pelvis falls is side of injury

94. There was a question about kallman's syndrome. Asking about failure neurons to which part of brain. Answer is hypothalamus

95. Many immuno question

And risk factor for different diseases.

1-Pneumocystis jerovesi pic

2-pseudomonas case

3-Pregnant lady recurrent uti ("tx drug mechanism)

4-Xeroderma pigmemtosa inheritance?? AR

5-MUCOSAL INVOLVED SUPRABASAL IGG OR SUPEPITHELIAL IGG (IGA igg arrows)

6-Ace inhibitors arrows for decgfr

Dec FF

Dec Intraglomurelar pressure

7-Urinary incotinence kegal exercise muscles supplied by

Sacral* ir lumber plexus

8-Thumb dermatome c6

9-Triptase mast cell marker

10-Shelfish khaya and also on lisinipril developed perioral edema risk

factor ace

11-Epi*and nor epi graphes FA

12-Blood after stool adult cause intususseption wala.

13-Painful bleeding after defecation fissures*

14-Linch synfrome miss match repair

15-Incomplete peneterance/genetic heterogeneity—->berca 2

16-Murmurs

17-Person is sitting in warm bath tub

Decrease preload* (I marked)

18-Hypertrophy cardiomyopathy interventricularseptum and which valve affected- mitral valve

19-Sternum behind right ventricle

20-Ecg vague , sotalol cause Qt prolongation

21-Atrial fibrillation originates left atrium

22-Mcardle ds

23-Taysach ds accumulated

24-Pcos insulin resistance*

25-Pregnant lady hemilysis uncojugated bilirubin increase pyruvate kinase defeceny (cycle of glycolysis given)

26-Cow milk large amount diarrhoea galactose 1 uridylpgisphatase

27-Vt c scurvy perifollicular hemorhhages

28-Vt k carbixylation

29-SINO pulmonary infection CF

30-gross image of testsi absent cremesteric reflex torsion

Rete testis*

31- 11 beta defecency htn virilization

32-21 beta defecy hypotension hirsutism

33-Choriocarnoma lung mets

34-Pth high

Urine ca phosphate high

Option supresion of cacitriol synthesis*

35-Squamous cell carcinoma

36-Lady non smoker adenocarcioma

37-Willlms tumor

38-Periportal fibrosis cause echinococus graniolus*

39-Vaginal frothy yellow ds trichomonas*

40-Bph retension

41-Erection nhi ho ra tha cause

42-Glans penis lymph node

43-Aerobic marathon runner participant: hyppetrophy

44-Follicular lyphoma image answer: apoptosis 45-Cml

treatment: tyrosine kinase inhibitor.

46-Jack2 kinase mutation

47-Hemophilia 9 factor

48-Menstruating girl iron absorption duodenum

49-azathiopurine—> bonemarrow suppresion

50-Myocolus eeg prion/ cruetz jacob disease

51-Seziure like temporL lobe amygdala marking

52-Parkinson levodopa carbidopa act on where nucleaus the options main red nucleus tha

53-Holoprocencephaly —>patau answer was prosencephalon

54 immunoglobulins activated classical complment pathway(different options of pathways)

55-Immuno ke bohat thee

56-Severe pain trigeminal neuralgia tx TCA carbamazepine nhi tha option

57-Men2b case ans was mucosal neuroma

58-Multiple myeloma answer: osteoclasts activity factor IL-1

59-polymylegia rheumatica

60-Sle antibody answer anti double strand dna

61-hypertension history most commonly seen ans: Hyalinosis arterioles in kidney

62-Alzhiemers ans: !!!!!

63-4 weeks history proteinuria —>minimal change ds

64-medium cell vasculitis biopsy shows neutrophils found also answer: hepatitis B

65-Tetracycline rocky mountin fever ans- 30s inhibitor

66-H pylori : ppi work on

67-term baby delivered- ophthalmegia neonaturum.-Chlamydia cervical secretions spread

68-Pt has acne increase in sun already on doxycycline risk factors of acne ans: doxycycline

69-Copd like graph in old ages ans: incearse lung compliance

70- case on Cmv- history of transplant

71-Neisseria picture- late complement

72-hallucinatin delusion more than 6 month history case on Schizophrenia*

73: bruton agammaglobuleninemia- gene affected: brtuon kinase

74- immuno question taking erthytomuvin 30 minutes k baad kya milega - IgE

75- in which hypersensitivity me dec immune compliments- t3

76- lateral arm sensation lost- muscuocutaneous

77- positive skew - mean/ median*

78- nephrogenic diabetes. — inc CAMP

79- pregnant lady, limb deformity. Ans: methylphenidate

80- ATN

81- case of MELAS- point mutation in mitochondria.

22 April 2024 repeats were it was like 7-8/block……. Im not good at writing/ recalling still I will do my part best as you have supported me and was motivating during whole journey…

1-Father death due to Colon , aunt r endometrial , pt has right colon CA Which mutation : MLH/MSH

2-Hard question of cross section of medulla oblongata …man with decreased sensation in left side of the body and right side of the face …he also has deviated uvula and not sure but some problem in tongue movement and this info will make u confused so be aware…the pics were very precisely delineated

3- HUS - blood cells

4-displacement

5- Acting out

6- pic of urothelial CA

7-Interpreter waly bht qes thy

8-H pylori ka Kuch aya tha lkn biopsy wala typical qes nai tha

9-Biostat mai CI

10- mean median

11- Girl amenorrhea , breast develop , absent uterus . Kuch tanner stage btai thi , karyotype was XY Cause ?? Androgen insensitivity

12- mainy murmur Sunna nai tha bcz I know mjhy identify mai honay thy

Aik aya tha after 4 days MI , systolic murmur , left atrial enlargement

I did papillary rupture in that

Other confusing option for me was Vsd

I don't know what rite

13-hypovolumic shock arrows

14- HYPERPARATHYROIDISM arrows

15- fructose- fasting

16-lymph node of glans penis

17-anal verge lymph node superior inguinal

18- Aik 2 scenarios mai height weight e age ky graph thy dekh kr lgta tha bht mushkl hain but highly unrelated

19- Graph form mai +ve or -ve skewed ai thy. Best measure? Median

20-Mitochondrial pedigree

21- Aut dominant pedigree same NBME question 1 sibling affected chance of carrier in patient

22- Is trah ky qes bhi ky thy immunity against them would be by which cells

23- Renal -goodpasture

24- antibiotics for UTI - transpeptidases

25-chlamydia mode of transmission

26- meningococci- virrulence factor

27- Renal , loop diuretic , HF case (biopsy qes)

28-HCM

29- substance abuse

30- Vit E celiac tha ya koi malabsorption

31- Alcohol .”- folic acid

32- Vit b1 - transketolase

33- Amotrphic laT sclerosis —>SOD

34-TNF ka koi scenario , don’t remember

35-LTB4

36-EHEC - mechanism of action

37-Coccidioses ki pic nbme wali - aur location ky saath option thay Arizona , missipi etc etc

38- Candida - HIV scalable lesion on tongue

Kaposi

39-Tumor mai scenario tha , child down gaze , obstructive hydrocephalus

Which cells tumor ?

40-Spinal cord pic - spinothalmic pic

41-Brownsequard - spinal cord pic

42- hydronephrosis

43- pnemocystis jiroveci

44- Xeroderma - pt photosensitive , dry skin wht defect - Dimers

45- Incontinence mai Stress ka bhi aya tha aur vasogenic ka bhi

Stress mai unhun structure pucha tha , cause of weakness

46-Fissures

47-Person sitting in bath (is mai history thi ky Pt done some sport , has back pain went to spa where Temp was 174F , effect ?? I marked something about Dec Muscle Contraction

48- Seizure - amygdala

49- rett syndrome- Direct mutation bhi nai thi aur yeh bhi nai tha ky it's due to brain development arrest . Odd one out kr ky ho rha tha

50- CML - Philadelphia chromosome

51-Prion - typical scenario ask Spongiform cortex

52-21 hydoxylase

53-Choriocarcinoma

54-72 year old male presented to the clinic with complaints of pain in the lower back that has been increasing in severity over the past few weeks. He also has radiculopathy since the past few months secondary to a herniated disc. His father passed away due to prostate cancer at 85 years of age. He also suffers from urinary hesitancy, weak urinary stream, and urinary retention. Upon DRE, an enlarged prostate is palpated, with assymetric induration in right lobe, but no nodularity seen. Which of the following is the main reason for further evaluation of the patient's condition (family history was not an option).

A) Age ✓

B) Durationoflowerbackpain

C) Radiculopathy

D) Urinary symptom

55- Repeat qes , pt 3 days fasting Wht would be Dec – Glycogenolysis.

20 th May 2024

1. berries and water drinking then diarrhea: giardia
2. -pic of cervix plus histology: put it invasive squamous cell carcinoma (not sure)
3. -endocarditis vegetation made up of: platelet and fibrin
4. -mastication : temporal lobe
5. -pic of medial geniculate nucleus
6. -seizure : target t- calcium channels
7. -what happens in epilepsy : na remain less in inactivated state
8. -treatment of adhd: dopamine reuptake inhibitor
9. -case of altruism : cancer patient
10. -case of denial patient doesn't want to know about his diagnosis and wants to live happily
11. -ethics case patient doesn't use condoms: how can we build on that ?
12. -ethics case: use telephone interpreter
13. -ethics case where does the med student stand I was confused between stand near the head of bed when patient lying flat or next to the toe of bed facing the family of patient (chose second one)
14. -stat know that CI passes thru one is not statistically significant
15. -stat question choose relative coefficient graph know this
16. -neuro: point out the cranial nerve affected by diabetes Ghose occulomotor
17. -diabetes lead to neuropathic lesion diabetes or side effect
18. -Alzheimer's case what to expect ? Loss long term memory
19. -picture of contact dermatitis on hand
20. -case of fat necrosis patient had a trauma to her chest before
21. -case of breast cancer: painless mass attached to chest skin and overlying skin changes
22. -opioid withdrawal pupil dilation and sweating
23. -opioid abuse pinpoint pupil only option was marriguana here

24.-what happens in sleep compared to when awake response to hypercapnea decreases

25.-picture histology of autophagy

26.-picture histology of phylloid

27.-ethics question about cancer patient that wants to stop treatment : respect her wishes and asks her about her plans

28.-pic of circle of Willis hemorrhage

29.-patient with fever and cough and other symptoms what is decreased interferon b

30.-patient taking calcium and ask what w exercise to start doing: preparation

31.-graph to point partial agonist

32.-v max the same: competitive antagonist

33.-recurrent lesions on penis and unprotected sex where the lesions from: penis mucosa

34.-epithelial cells : defensin

35.-ocp: polyarteritis nodosa

36.-case abdominal pain and skin lesions then say renal defect was confused between polyarteritis nodosa and hsp chose the first due to renal complications that they explained

37.-2 heart sounds : one bicuspid aortic valve and second tricuspid regurg

38.-case to insert a nasal endoscope: options superior- middle- inferior turbinate and sphenoethmoidql recess (chose this but not sure)

39.-opthalmo recall: increase intraocular pressure

40.-bilateral hemianopia: craniopharyngioma

41.-case inoculate bacteria on hospital rail and let it dry then check after a month which will remain I chose w ecoli and pseudos (not sure about this) there was another strep and staph

42.-pedigree x linked recessive chance to get the disease it was 50%

43.-another pedigree autosomal dominant why the mother didn't establish the symptoms : incomplete penetrance

44.-case of ibs took antidepressants got better where does the med act for GI still chose serotonin

45.-asthma case: treat leukotrienereceptor antagonist

46.-recall nausea of chemo treat NK 1 antagonist

47.-recall of astronaut came back to earth (decrease muscle protein and serum ca and increase urine Ca- N)

48.-give ace inhibitor will cause hyperkalemia and increase Cr at first

49.-chovstek and trousseau signs hypocalcemia and hypo phosphate arrows — ethics take consent from mother and child

50.-Blood in meatus : injury time bladder

51.-case of larger mass in abdomen where is tumor : endometrial

52.-case of folic acid deficiency (normal methylmalonic and high homocysteine)

53.-case of SBO did appendectomy+adrenalectomy and has nephrostomy tubes (choose which one is the cause I thought about it as adhesions and decided adrenelectomy but not sure)

54.-iron absorbed in duodenum

55.-cardiomegaly: t.cruzi

56.-hearing loss: CMV

57.-case diarrhea and other symptoms : undercooked beef

58.[23:29, 5/27/2024] MedicosMD: ▪ 2 Questions about Osteogenesis imperfecta study from FA

59.▪ Repeated Qs Female Case with BRCA mutation and family history of cancer why doesn't have cancer? Incomplete penetrance

60.▪ Case about mitochondrial myopathy cause? Maternal Heteroplasmy

61.▪ Typical case of pyloric stenosis asking for diagnosis

62.▪ Ulcerative colitis case picture showing crypt abscess

63.▪ Mickels diverticulum question forgot the scenario

64.▪ An infant that has been fed rice milk for months comes with kwashiorkor symptoms and signs asking about diagnosis which is kwashiorkor

65.- Many vitamin access and defeciency Qs read first aid

66.- For example A patient wife died and he only eat something like tea and toast diet develops signs and symptoms of scurvy what is the vit deficiency ? Vit C

67.- Many Questions on type 1 hypersensitivity like what molecules and cells are involved mast cells histamine etc

68.- Patient with mucocutaneous candidiasis shows Absent cutaneous reaction to Candida antigens while mother has reaction what is the cause: defect in type 4 delayed T cell mediated immunity

69.- Few questions about gene and mechanism of allergen desensitization therapy I was just guessing random answers as the topic wasn't on first aid so review it

70.- Case of vibrio cholera what does the toxin activates exactly? Activates GS to increase CAMP,

71.- Which neurotransmitter release is blocked by c.tetani? GABA and glycine

72.- Case of otitis externa swimmer child with External ear canal erythema and other symptoms what is the cause? Pseudomonas aeruginosa

73.- Case of syphilis is treated and presents with herxheimer reaction symptoms and then Asks about the reaction's exact cause in terms of immunology and micro

74.- Clue cells gardnerella vaginalis

75.- Coccidioidomycosis Spherules picture

76.- Repeated Nurse with needle stick injury only Anti-HBs is positive what does it mean? Vaccinated

77.- Person with removable white patches from tongue basically Oral candidiasis due to Inhaled steroids

78.- Repeated Question about Bradford hell criteria

79.- Question about a child 12 years old or around the age with a disease and you want the child to enroll him in the research what you should obtain? Parent consent and child assent

80. - You admit a female patient forgot why but in history she tells you she was sexually abused by the step father during night time as a child, next day the night shift staff complain of her hostility towards them although you and the morning team find her respectful and cooperative, what is the defense mechanism?
81. - Classic conditioning scenario about child and vaccine I think
82. - Murmur in a patient post MI cause? Posteromedial Papillary muscle rupture
83. - Patient on anti hypertension drug developed edema which med caused it? It was a Dihydropyridine CCB forgot the exact one
84. - Few Questions about ADH MOA, release from hypothalamus nucleus and receptors check FA
85. - Repeated question about TBG and thyroid hormone levels
86. - How do you know if the high insulin is exogenous or not in suspected Munchausen syndrome ? C peptide levels
87. - One question about hexokinize vs glucokinize check FA
88. - Men 2 syndromes read FA
89. - Pancreas histology in Type 2 DM will show? Amyloid deposits
90. - Tracheoesophegeal fistula scenario asking about embryology problem? Problem of septum formation between the structures
91. - Newborn boy lung hypoplasia and hydronephrosis / posterior urethral valve
92. - Know the murmurs got some Qs they were vague and audio not very clear
93. - Know the PH O2 and PCO2 in pulmonary embolism
94. - Know the physical exam findings in pneumonia dullness etc
95. - Where do thiazide diuretics work? You will have to point the tubule portion
96. - Question mentioned granular casts/ ATN
97. Thumb dermatome
98. Loss of sensation on droeum of foot. Which nerve damage ?

99. Posteriordisplacement of knee which structure damaged ? no ligament was mentioned.
100. Gout
101. Sensation probem in thumb , index and middle finger ? median nerve
102. Prepataller bursa question
103. Compartment syndrome a cut is to be given which structure will be damage
104. Lambert eaton syndrome
105. Polycythemia vera 2 questions jak 2 mutation 1 was itching after bath
106. AML 2 questions
107. Hereditary spherocytosis
108. G6PD
109. Porphyria
110. Hemolytic anemia 2 question
111. Malignant melanoma treatmentMAO
112. Hit antibody
113. 2 week starvation what will happen to levels of glucose fatty acids b hydrobutarate.
114. CKD questions
115. Acute tubular necrosis
116. AIT
117. Calcium oxalate stone
118. Stone in kidney of pregnant patient why?
119. Biostat questions were tough
120. One was sensitivity and specificity is 0.95 prevalance is 50% what is PPV?
121. Incidence
122. One was about mortality rate after 4 years (rendy neil video)
123. Positive skewed

124. 2-3 bias question
125. Bradford hill criteria
126. CI
127. Adh>supraptic nuclei
128. Effect of ocp on free t4 total t4 tsh
129. 11 b hydrogenase deficiency
130. Cental DI > damage to hypothylamus
131. Hyperthyroidism
132. Medullary carcinoma
133. Anaplastic carcinoma
134. Hyperaldosteronism
135. Neural tube defect
136. Gliosis cell involved > astrocytes
137. Slow wave sleep > stage 3 non rem
138. Bedwetting , drug given will effectwhich sleep stage
139. Truncal ataxia forgot what they asked
140. Which nerve supplies sensory to lateral forehead and eyelid
141. Trigeminal neuralagia
142. Corneal reflex impaired nerve damages
143. Subarachnoid emorrhage case what will you ask in family history > apkd
144. Creutzfeldt jakob disease > spongiform cortex
145. Ms oligoclonal bands > oligodendrocytes damaged
146. 2-3 cns tumors with histo pics difficult to diagnose
147. Explosion difficulty hearing > weber and rinnes test will be localzed where
148. Glaucoma drugs will acts on whichreceptor ? alpha?
149. Shortest acting benzodiapinbes ?
150. Malignant hyperthermia > ryanodine receptor
151. Operant conditioning

152. Child abuse
153. Adhd drug mao
154. Mania > pressured speech
155. Schizoaffective / schizophreniform disorder
156. MDD
157. Panic disorder drug
158. Illness anxiety disorder
159. Gender dysphoria
160. Opiods withdrawl
161. Antidepressant pic in page 598 FA was asked adhd drug will act where?
162. Single kidney impaired function of what ?
163. Duplex collecing system gross pic was given
164. Cresentic GN which typeof hypersentivity reaction ?
165. Urinary incontinence
166. Hydrochlorothiazide>gout
167. Patient taking multiple drugs ACEis statins now inc CKB why 168. Isoretinoin use till 10 week pregnancy what defectwill happen ?
169. Fetal alcohol syndrome
170. Patient with difficulty to conceive have atropy of testis what will get impaired
171. Poop through umblicum what defect ?
172. One ct scan was given in 2 planes was showing vagina and uterus 15f no menses and vagina was enlarged defect in what I marked hymen option
173. Kidney LN drainage
174. Another ct scan of lower abdomen with enlarged cysts wasnot sure about where was it was asked from wich cell it is arised ? seemed like a cyst in ovary

175. Nbmes 28 histo pic of urethra of male same pic was asked foley will bw inserted in which part same pic in uswa 1
176. Kallaman syndrome
177. Androgen insentivity syndrome
178. A question from ovarian carcinoma ot sure from where was it
179. Mastitis
180. BPH
181. Nrds
182. Age related changed in lungs
183. CO poisoning
184. COPd
185. Pulmonary fibrosis and pleuraa plaques in a female supritentedant makred asbestosis bcz of plaques …. Confirm yourself
186. Worsening asthma already taking cortocosterois an d b agonist what other intervention ? do nothing , antileukotrienes . antimonoclonal?
187. Acute transplant rejection
188. Acute blood loss 6 bags of blood transfised suddenly rejection starts mechanism ?
189. A lot of pneumonia questions from micro I hate micro so did not like them much
190. 2 murmur audions one was AS other couldnot diagnose
191. V3-v6 lead changes
192. Atrial flutter ecg defect where?
193. Hot bath …. What will happen ? was asked about preload … after load
194. Physiological splitting will be heard where ? had to mark on chest
195. TOF
196. Atherosclerostic histo pic
197. HF questions
198. Ct of aortic dissection

199. Dilated cardiomyopathy
200. 1 histo pic of heart what is deposited was mentioned about amylodosis
201. Most commonly damaged is sterna trauma > AV
202. Infective endocarditis 2 3 questions 1 was pic of spliter hemorrhages other was asked about organism
203. Rheumatic fever murmur was asked
204. Drug asked which will help in lowering risk of cardiovascular event but no statins wasa mentioned
205. Digoxin mechanism asked with pic
206. TIPS procedure done will drain in to which vain
207. Histo picture on page 371 of FA parietal cells was asked
208. Lipase defiicnecy in CF
209. Meataplasia in chronic gerd
210. Gastritis 2 questions chrons 2 questions
211. Celiac diseasae
212. Appencitis
213. Meckels diverticulum tc pertechnateate scan … which tissue will uptake it?
214. Intussusceptions
215. Lynch syndrome
216. Liver cirrhosis
217. Rotorsyndrome
218. Wilson disease > decreased excrestion in bile
219. Acute pancreatitis
220. FA page 407 was asked MOA of omeprazole
221. Profuse diarrhea which nutrients should be given
222. Anemia of chronic disease
223. Spleen removal > encapsulated organixm inection s.pneumonia wasa mentonied
224. 2-3 hemolytic anemia were askaed

225. ITP
226. Factor v leiden
227. Cd 15 ced 30 mentoned Hodgkin lymphoma was also mentones forget wahat was askaed
228. Multiple myeloma
229. Infliximab given first check for TB

Immunology + Microbiology

1. 30s, 50s, aminoacyl transferase, resistance, beta lactamase, penicillin binding protein

30S Ribosomal Subunit Inhibitor

Scenario: A 45-year-old man presents with a severe case of brucellosis contracted from unpasteurized dairy products. The infection is confirmed by blood cultures. The physician decides to start treatment with doxycycline.

Question: Which of the following best describes the mechanism of action of doxycycline?

A) Inhibits DNA gyrase
B) Inhibits folic acid synthesis
C) Inhibits cell wall synthesis
D) Inhibits protein synthesis by binding to the 30S ribosomal subunit
E) Inhibits RNA polymerase

Explanation: The correct answer is D) Inhibits protein synthesis by binding to the 30S ribosomal subunit. Doxycycline is a tetracycline antibiotic that binds to the 30S subunit of the bacterial ribosome, inhibiting protein synthesis.

Scenario 2: 50S Ribosomal Subunit Inhibitor

Scenario: A 60-year-old woman is diagnosed with community-acquired pneumonia caused by Streptococcus pneumoniae. She is allergic to penicillin. The physician prescribes azithromycin.

Question: What is the mechanism of action of azithromycin?

A) Inhibits DNA synthesis
B) Inhibits folic acid synthesis

C) Inhibits cell wall synthesis
D) Inhibits protein synthesis by binding to the 50S ribosomal subunit E) Inhibits RNA polymerase

Explanation: The correct answer is D) Inhibits protein synthesis by binding to the 50S ribosomal subunit. Azithromycin is a macrolide antibiotic that binds to the 50S subunit of the bacterial ribosome, inhibiting protein synthesis.

Scenario 3: Aminoacyl Transferase

Scenario: A 35-year-old man presents with a severe urinary tract infection. He is prescribed gentamicin. Gentamicin is known to inhibit bacterial protein synthesis.

Question: Gentamicin primarily interferes with which of the following bacterial processes?

A) Aminoacyl transferase activity
B) Peptidyl transferase activity
C) DNA gyrase activity
D) RNA polymerase activity
E) Cell wall synthesis

Explanation: The correct answer is A) Aminoacyl transferase activity. Gentamicin is an aminoglycoside antibiotic that binds to the 30S subunit of the bacterial ribosome, causing misreading of mRNA and inhibiting aminoacyl transferase activity, which interferes with protein synthesis.

Scenario 4: Antibiotic Resistance Mechanism

Scenario: A 50-year-old woman with a history of multiple urinary tract infections presents with symptoms of another infection. Urine culture grows E. coli that is resistant to multiple antibiotics, including gentamicin, due to enzymatic modification.

Question: Which of the following mechanisms is most likely responsible for gentamicin resistance in this case?

A) Alteration of the target ribosomal binding site
B) Increased efflux of the antibiotic
C) Enzymatic inactivation by acetylation, phosphorylation, or adenylation
D) Decreased permeability of the bacterial cell wall
E) Overproduction of the antibiotic target

Explanation: The correct answer is C) Enzymatic inactivation by acetylation, phosphorylation, or adenylation. Resistance to aminoglycosides like gentamicin often involves bacterial enzymes that modify the antibiotic, rendering it ineffective.

Scenario 5: Beta-Lactamase Production

Scenario: A 65-year-old man with a history of chronic obstructive pulmonary disease (COPD) is admitted with pneumonia. Sputum cultures grow Haemophilus influenzae. The bacteria produce beta-lactamase, making them resistant to certain antibiotics.

Question: Which class of antibiotics is most likely to be ineffective against this strain of Haemophilus influenzae?

A) Tetracyclines
B) Macrolides
C) Fluoroquinolones
D) Beta-lactams
E) Aminoglycosides

Explanation: The correct answer is D) Beta-lactams. Beta-lactamase enzymes hydrolyze the beta-lactam ring of antibiotics such as penicillins and cephalosporins, making them ineffective.

Scenario 6: Penicillin-Binding Proteins (PBPs)

Scenario: A 70-year-old woman presents with a methicillin-resistant Staphylococcus aureus (MRSA) infection. MRSA is resistant to methicillin due to alterations in its penicillin-binding proteins.

Question: What is the primary mechanism by which MRSA exhibits resistance to methicillin?

A) Production of beta-lactamase
B) Alteration of ribosomal binding sites
C) Mutation in DNA gyrase
D) Alteration of penicillin-binding proteins
E) Increased efflux pump activity

Explanation: The correct answer is D) Alteration of penicillin-binding proteins. MRSA produces altered penicillin-binding proteins (PBPs) with low affinity for beta-lactam antibiotics, conferring resistance to methicillin and other beta-lactams.

2. Celiac or whipple

3. sexual transmitted infection (gonorrhea, chlamydia, syphilis, HSV, Haemophilus, vaginosis, Trichomonas)

Gonorrhea

Scenario: A 25-year-old man presents to the clinic with a 3-day history of painful urination and a purulent discharge from his penis. He reports having unprotected sexual intercourse with a new partner a week ago.

Question: Which of the following is the most appropriate initial test to confirm the diagnosis?

A) Gram stain of the discharge
B) Blood culture
C) Serologic testing for syphilis
D) Urine culture for E. coli
E) Polymerase chain reaction (PCR) for Trichomonas vaginalis

Explanation: The correct answer is A) Gram stain of the discharge. Gram stain of the discharge can rapidly identify Gram-negative diplococci, which is characteristic of Neisseria gonorrhoeae, the causative agent of gonorrhea.

Scenario 2: Chlamydia

Scenario: A 22-year-old woman comes to the clinic with complaints of vaginal discharge and lower abdominal pain. She has had multiple sexual partners in the past year and occasionally uses condoms.

Question: Which of the following is the best diagnostic test for Chlamydia trachomatis?

A) Culture on Thayer-Martin agar
B) Serologic testing
C) Nucleic acid amplification test (NAAT)
D) Gram stain
E) Wet mount microscopy

Explanation: The correct answer is C) Nucleic acid amplification test (NAAT). NAAT is the most sensitive and specific test for detecting Chlamydia trachomatis, the causative agent of chlamydia.

Scenario 3: Syphilis

Scenario: A 30-year-old man presents with a painless ulcer on his penis. He noticed the ulcer about a week ago. He has a history of unprotected sex with multiple partners.

Question: Which of the following is the most appropriate next step in diagnosing syphilis?

A) Darkfield microscopy of the lesion
B) Urinalysis
C) Polymerase chain reaction (PCR) for Treponema pallidum
D) Gram stain of the lesion
E) HIV serology

Explanation: The correct answer is A) Darkfield microscopy of the lesion. Darkfield microscopy can identify Treponema pallidum, the causative agent of syphilis, from a sample taken from the ulcer.

Scenario 4: Herpes Simplex Virus (HSV)

Scenario: A 28-year-old woman presents with painful genital ulcers and fever. She reports similar episodes in the past but has not been tested for any sexually transmitted infections.

Question: Which of the following is the best test to confirm herpes simplex virus infection?

A) Gram stain of the ulcer
B) Viral culture of the lesion
C) Serologic testing for syphilis
D) Wet mount microscopy
E) Nucleic acid amplification test (NAAT) for Trichomonas vaginalis

Explanation: The correct answer is B) Viral culture of the lesion. Viral culture is a commonly used method to confirm herpes simplex virus infection, especially during an active outbreak.

Scenario 5: Haemophilus ducreyi (Chancroid)

Scenario: A 35-year-old man presents with a painful genital ulcer and tender, swollen lymph nodes in his groin. He has had unprotected sex with a new partner recently.

Question: Which of the following is the most likely diagnosis?

A) Syphilis

B) Gonorrhea
C) Chlamydia
D) Chancroid
E) Herpes simplex virus

Explanation: The correct answer is D) Chancroid. Chancroid, caused by Haemophilus ducreyi, typically presents with painful genital ulcers and tender inguinal lymphadenopathy.

Scenario 6: Bacterial Vaginosis

Scenario: A 30-year-old woman presents with a complaint of a fishy-smelling vaginal discharge. She denies itching or significant discomfort. She has had multiple sexual partners.

Question: Which of the following findings is most consistent with bacterial vaginosis?

A) Thick, white, curd-like discharge
B) Motile trichomonads on wet mount
C) Clue cells on wet mount
D) Painless genital ulcer
E) Gram-negative diplococci on Gram stain

Explanation: The correct answer is C) Clue cells on wet mount. Clue cells are epithelial cells coated with bacteria and are a characteristic finding in bacterial vaginosis.

Scenario 7: Trichomoniasis

Scenario: A 27-year-old woman presents with frothy, greenish vaginal discharge and itching. She reports discomfort during intercourse and has had unprotected sex with a new partner.

Question: Which of the following is the best diagnostic test for trichomoniasis?

A) Gram stain of the discharge
B) Serologic testing
C) Wet mount microscopy
D) Nucleic acid amplification test (NAAT) for Chlamydia trachomatis
E) Culture on Thayer-Martin agar

Explanation: The correct answer is C) Wet mount microscopy. Wet mount microscopy can reveal motile trichomonads, which are diagnostic of Trichomonas vaginalis infection.

4. antiviral medication

5. recurrent bacterial/fungus/viral patient

6. PLACES or SHiNE bacteria

Encapsulated bacteria are a group of bacteria that possess a polysaccharide capsule, which is an important virulence factor. The mnemonic "SHiNE SKiS" helps remember these bacteria:

- **S**treptococcus pneumoniae
- **H**aemophilus influenzae type b
- **N**eisseria meningitidis
- **E**scherichia coli (some strains)
- **S**almonella
- **K**lebsiella pneumoniae
- **S**treptococcus agalactiae (Group B Strep)

Scenario 1: Streptococcus pneumoniae

Scenario: A 68-year-old woman presents to the emergency department with fever, chills, cough, and shortness of breath. Her medical history is significant for chronic obstructive pulmonary disease (COPD). Chest X-ray shows lobar consolidation.

Question: Which of the following organisms is most likely responsible for her symptoms?

A) Haemophilus influenzae
B) Mycoplasma pneumoniae
C) Streptococcus pneumoniae
D) Legionella pneumophila
E) Chlamydia pneumoniae

Explanation: The correct answer is C) Streptococcus pneumoniae. S. pneumoniae is a common cause of lobar pneumonia, especially in elderly patients and those with chronic illnesses like COPD.

Scenario 2: Haemophilus influenzae type b

Scenario: A 3-year-old child is brought to the clinic with a high fever, irritability, and difficulty breathing. On examination, the child has stridor and drooling. He has not received any vaccinations.

Question: Which of the following is the most likely diagnosis?

A) Epiglottitis caused by Haemophilus influenzae type b
B) Croup caused by parainfluenza virus
C) Bronchiolitis caused by respiratory syncytial virus

D) Pharyngitis caused by Streptococcus pyogenes
E) Pneumonia caused by Streptococcus pneumoniae

Explanation: The correct answer is A) Epiglottitis caused by Haemophilus influenzae type b. Unvaccinated children are at risk for epiglottitis, which is a life-threatening condition caused by H. influenzae type b.

Scenario 3: Neisseria meningitidis

Scenario: A 19-year-old college student presents to the emergency department with a headache, fever, neck stiffness, and a petechial rash. He lives in a dormitory.

Question: Which of the following is the most likely causative organism?
A) Streptococcus pneumoniae
B) Haemophilus influenzae
C) Neisseria meningitidis
D) Listeria monocytogenes
E) Escherichia coli

Explanation: The correct answer is C) Neisseria meningitidis. N. meningitidis is a common cause of bacterial meningitis in young adults, especially those living in close quarters like dormitories, and can present with a petechial rash.

Scenario 4: Escherichia coli (Uropathogenic strains)

Scenario: A 25-year-old pregnant woman presents to the clinic with dysuria, frequency, and urgency. Urinalysis shows significant bacteriuria.

Question: Which of the following is the most likely causative organism?

A) Staphylococcus saprophyticus
B) Klebsiella pneumoniae
C) Escherichia coli
D) Proteus mirabilis
E) Enterococcus faecalis

Explanation: The correct answer is C) Escherichia coli. E. coli is the most common cause of urinary tract infections, particularly in women, and some strains have a capsule that contributes to their virulence.

Scenario 5: Salmonella

Scenario: A 30-year-old man presents with fever, abdominal cramps, and diarrhea after eating undercooked chicken. Stool culture grows a Gram-negative bacillus.

Question: Which of the following is the most likely causative organism?

A) Shigella sonnei
B) Escherichia coli
C) Salmonella enterica
D) Vibrio cholerae
E) Campylobacter jejuni

Explanation: The correct answer is C) Salmonella enterica. Salmonella species are commonly associated with foodborne illnesses from undercooked poultry and eggs.

Scenario 6: Klebsiella pneumoniae

Scenario: A 55-year-old man with a history of alcohol abuse presents with high fever, chills, and a productive cough with thick, blood-tinged sputum. Chest X-ray shows a right upper lobe consolidation.

Question: Which of the following organisms is most likely responsible for his symptoms?

A) Streptococcus pneumoniae
B) Staphylococcus aureus
C) Klebsiella pneumoniae
D) Mycobacterium tuberculosis
E) Haemophilus influenzae

Explanation: The correct answer is C) Klebsiella pneumoniae. K. pneumoniae is known to cause severe pneumonia in alcoholics and often presents with a characteristic "currant jelly" sputum.

Scenario 7: Streptococcus agalactiae (Group B Strep)

Scenario: A 1-week-old newborn presents with lethargy, poor feeding, and irritability. The mother had an uneventful pregnancy, but her Group B Streptococcus (GBS) status was unknown at delivery.

Question: Which of the following is the most likely diagnosis?

A) Neonatal meningitis caused by Listeria monocytogenes
B) Neonatal sepsis caused by Escherichia coli
C) Neonatal meningitis caused by Streptococcus agalactiae

D) Neonatal sepsis caused by Klebsiella pneumoniae
E) Neonatal pneumonia caused by Haemophilus influenzae

Explanation: The correct answer is C) Neonatal meningitis caused by Streptococcus agalactiae. GBS is a common cause of neonatal sepsis and meningitis, particularly in the first week of life.

7. malaria or mycoplasma

8. **Type 1/2/3/4 hypersensitivity, transplant rejection**

:- A 56-year-old woman with a history of heart failure is admitted to the hospital for orthotopic cardiac transplantation. The patient developed biventricular failure due to idiopathic myocarditis. She has had persistent New York Heart Association class IV symptoms refractory to maximal medical therapy and was placed on the transplant waiting list. An ABO-compatible cadaveric heart is available for transplant with partial human leukocyte antigen (HLA) mismatch. Cardiac transplantation is performed and the patient's T lymphocytes quickly recognize the foreign HLA molecules of the transplant cells. Inhibition of which of the following substances would specifically reduce the proliferation and differentiation of these T lymphocytes?

- A. Bcl-2 2
- **B. Calcineurin 3**
- C. E-cadherin 4
- D. Neurofibromin 5
- E. p53 6

In normal T cells, **calcineurin** is a protein phosphatase that is activated upon
stimulation of the appropriate cell receptor. Once activated, calcineu dephosphorylates nuclear factor of activated T cells (NFAT), which allo NFAT to enter the nucleus and bind to an interleukin-2 (IL-2) promoter. I stimulates the growth and differentiation of T cells and is an import component of the immune response. **Cyclosporine** and **tacrolimus**, 2 of more commonly used immunosuppressants in transplant patients, **inhi** calcineurin activation.

A 4-year-old male is exposed to latex gloves during a minor surgical procedure and is subsequently found to produce anti-latex IgM antibodies. Several months later he develops a severe allergic reaction to latex and is found to have a high level of serum anti-latex IgE antibodies. Which of the following cytokines is most likely responsible for this anti-latex antibody isotype change?

- A. IL-1 2
- B. IL-2 3
- C. IL-3 4
- **D. IL-4 5**
- E. IL-10 6
- F. IL-12 7

IL-4 is produced by the T_H2 subset of T helper cells. It facilitates proliferation of B cells and T_H2 lymphocytes and stimulates antibody isotype switching to IgE which mediates type I hypersensitivity (allergic) reactions.

A 45-year-old man comes to clinic for routine follow-up. He has a history of endstage renal disease due to autosomal dominant polycystic kidney disease, and he underwent a deceased-donor kidney transplant 4 years ago. The patient has hypertension that initially resolved following the transplant but redeveloped 6 months ago. Review of his recent laboratory studies reveals a progressive increase in serum creatinine levels over the last few months. Urinalysis is within normal limits. On ultrasonography, the transplanted kidney is reduced in size. A biopsy of the graft is most likely to show which of the following?

- A. Dense mononuclear interstitial infiltration 2
- B. Glomerular crescent formation 3
- **C. Obliterative vascular fibrosis 4**
- D. Tubular hypertrophy and intratubular casts 5
- E. Vascular fibrinoid necrosis with thrombotic occlusion 6

Transplant rejection reactions			
Type of rejection	**Onset time**	**Etiology**	**Morphology**
Hyperacute	Minutes to hours	• Preformed recipient antibodies against graft antigens	• Gross mottling & cyanosis • Arterial fibrinoid necrosis & capillary thrombotic occlusion
Acute	Usually <6 months	• Exposure to donor antigens induces activation of naive immune cells • Predominantly **cell-mediated**	• **Cellular:** lymphocytic interstitial infiltrate & endotheliitis • Humoral: C4d deposition, neutrophilic infiltrate, necrotizing vasculitis
Chronic	Months to years	• Chronic low-grade immune response refractory to immunosuppression • Mixed cell-mediated and humoral	• Vascular wall thickening & luminal narrowing • Interstitial fibrosis & parenchymal atrophy

A 15-year-old boy develops severe cardiomyopathy following myocarditis from Coxsackie virus and is placed on the cardiac transplant list. Two weeks following his cardiac transplantation from a matched donor, he develops dyspnea on exertion. Extensive evaluation is undertaken including cardiac catheterization and endomyocardial biopsy to assess for acute allograft rejection. Which of the following histologic findings is most consistent with this diagnosis?

- A. Concentric coronary artery intimal thickening 2
- **B. Concentric coronary artery intimal thickening 3**
- C. Patchy necrosis with granulation tissue 4
- D. Perivascular infiltrate with abundant eosinophils 5
- E. Scant inflammatory cells and interstitial fibrosis 6

Acute cardiac transplant rejection typically occurs **within 6 months** of transplantation and can be diagnosed via endomyocardial biopsy. Acute rejection can be **cell-mediated** (ie, acute cellular rejection [ACR]) or, less commonly, antibody-mediated (ie, acute antibody-mediated rejection). In ACR, host **T-lymphocytes** are sensitized against foreign human leukocyte antigens (HLA) in the cardiac allograft, which leads to inflammation and injury to the

transplanted organ. Microscopic features of ACR include an **interstitial lymphocytic infiltrate** (primarily T-lymphocytes) and **damaged myocytes**. Symptoms consistent with progressive rejection include those found in systolic dysfunction (eg, dyspnea on exertion). However, cardiac transplant recipients undergo close surveillance with regular endomyocardial biopsies, and acute rejection is often diagnosed before patients become symptomatic.

9. Which vaccines are toxoid vs. live vs. killed

Toxoid Vaccine

Scenario: A 34-year-old woman presents to the emergency department with a deep puncture wound on her foot after stepping on a rusty nail. She last received a tetanus booster 12 years ago. She is otherwise healthy and has no known allergies.

Question: Which of the following is the most appropriate next step in the management of this patient?

A) Administer tetanus immunoglobulin
B) Administer a tetanus and diphtheria toxoid (Td) booster
C) Administer oral antibiotics
D) Clean the wound and observe
E) Administer tetanus toxoid vaccine and start a course of antibiotics

Explanation: The correct answer is B) Administer a tetanus and diphtheria toxoid (Td) booster. Tetanus boosters are recommended every 10 years, but in the case of a dirty or deep wound, a booster should be given if more than 5 years have passed since the last dose.

Scenario 2: Live Attenuated Vaccine

Scenario: A 15-month-old child is brought to the clinic for routine vaccination. The child has no significant medical history and is up to date on all vaccinations. The mother is concerned about the MMR (measles, mumps, rubella) vaccine because she has read conflicting information online.
Question: What is the most appropriate advice to give the mother regarding the MMR vaccine?

A) The MMR vaccine is not necessary if the child is healthy
B) The MMR vaccine should be delayed until the child is older
C) The MMR vaccine is a live attenuated vaccine and is recommended at this age
D) The MMR vaccine contains inactivated viruses and is safe to give
E) The MMR vaccine should be given only if there is a known exposure to measles

Explanation: The correct answer is C) The MMR vaccine is a live attenuated vaccine and is recommended at this age. The MMR vaccine is typically given at 12-15 months of age and again at 4-6 years to protect against measles, mumps, and rubella.

Inactivated Vaccine (Influenza)

Scenario: A 70-year-old man with a history of chronic obstructive pulmonary disease (COPD) comes in for his annual check-up in October. He reports that he has not yet received his influenza vaccine for the season.

Question: Which of the following is the most appropriate recommendation regarding influenza vaccination for this patient?

A) Administer the live attenuated intranasal influenza vaccine
B) Administer the inactivated influenza vaccine
C) Administer both the live attenuated and inactivated influenza vaccines
D) Advise against influenza vaccination due to his age
E) Administer the inactivated influenza vaccine if he develops flu symptoms

Explanation: The correct answer is B) Administer the inactivated influenza vaccine. The inactivated influenza vaccine is recommended annually for all individuals, especially those with chronic medical conditions like COPD, and it is safe for older adults.

Scenario 7: Live Attenuated Vaccine (Rotavirus)

Scenario: A 6-month-old infant is brought to the pediatrician for a routine well-baby checkup. The parents report no significant medical history, and the baby is up to date with vaccinations. The pediatrician notes that the infant has not yet received the rotavirus vaccine.

Question: What should the pediatrician do next?

A) Administer the first dose of the rotavirus vaccine today
B) Administer the second dose of the rotavirus vaccine today
C) Inform the parents that the rotavirus vaccine series cannot be started after 15 weeks of age
D) Administer an inactivated form of the rotavirus vaccine
E) Delay the rotavirus vaccine until the infant is one year old

Explanation: The correct answer is C) Inform the parents that the rotavirus vaccine series cannot be started after 15 weeks of age. The rotavirus vaccine is a live attenuated vaccine that must be initiated before 15 weeks of age and completed by 8 months of age.

Scenario 8: Toxoid Vaccine (Tetanus and Diphtheria)

Scenario: A 25-year-old man presents to the urgent care clinic after cutting his hand while gardening. His last tetanus booster was more than 10 years ago, and he has no history of diphtheria vaccination.

Question: What is the most appropriate next step in the management of this patient?

A) Administer tetanus immunoglobulin and tetanus toxoid vaccine
B) Administer tetanus and diphtheria toxoid (Td) booster
C) Clean the wound and advise a tetanus booster if symptoms develop
D) Administer only tetanus immunoglobulin
E) Administer diphtheria antitoxin and tetanus immunoglobulin

Explanation: The correct answer is B) Administer tetanus and diphtheria toxoid (Td) booster. For wounds and incomplete vaccination history, a Td booster is recommended if it has been more than 10 years since the last dose.

Scenario 9: Killed/Inactivated Vaccine (Rabies)

Scenario: A 40-year-old veterinarian is bitten by a stray dog while working at a rural animal shelter. The dog is not available for observation, and the veterinarian has not previously received the rabies vaccine.

Question: What is the most appropriate post-exposure prophylaxis for this patient?

A) Administer rabies vaccine series only
B) Administer rabies immunoglobulin only
C) Administer rabies immunoglobulin and start the rabies vaccine series
D) Observe the patient and administer the rabies vaccine if symptoms develop
E) Administer antibiotics and observe for rabies symptoms

Explanation: The correct answer is C) Administer rabies immunoglobulin and start the rabies vaccine series. For individuals not previously vaccinated against rabies, post-exposure prophylaxis includes both rabies immunoglobulin and the rabies vaccine series.

Scenario 10: Live Attenuated Vaccine (Yellow Fever)

Scenario: A 32-year-old woman is planning a trip to Brazil, including areas where yellow fever is endemic. She visits the travel clinic for vaccination advice. She is generally healthy and has no known allergies.

Question: Which of the following is the most appropriate advice regarding yellow fever vaccination for this patient?

A) Administer the yellow fever vaccine if she plans to stay for more than one week
B) Administer the yellow fever vaccine as a single dose, which provides lifelong immunity
C) Administer the yellow fever vaccine and advise a booster every 10 years
D) Advise against the yellow fever vaccine due to her age
E) Administer an inactivated form of the yellow fever vaccine

Explanation: The correct answer is B) Administer the yellow fever vaccine as a single dose, which provides lifelong immunity. The yellow fever vaccine is a live attenuated vaccine that typically provides lifelong immunity with a single dose.

10. lymph node drainage

Lymph Node Drainage

Question 1: Head and Neck A 45-year-old man presents with a painless, enlarged lymph node in his neck just below the jaw. He has a history of frequent dental infections. Which of the following lymph nodes is most likely enlarged?

A) Occipital
B) Submandibular
C) Submental
D) Preauricular
E) Supraclavicular

Explanation: The submandibular lymph nodes drain the cheeks, side of the nose, upper lip, lateral parts of the lower lip, gums, and the anterior tongue. Frequent dental infections often lead to the enlargement of these lymph nodes.

11. **albino or vitiligo or Leukocyte adhesion or Chronic granulomatous or tetrazolium blue test**

Albino (Albinism)

Question 1: Genetic Basis A 4-year-old child is brought to the dermatologist due to unusually light skin and white hair since birth. Genetic testing confirms a diagnosis of albinism. Which of the following best describes the genetic defect in this condition?
A) Mutation in the CFTR gene
B) Mutation in the TYR gene
C) Mutation in the HBB gene
D) Mutation in the FBN1 gene
E) Mutation in the FGFR3 gene

Explanation: Albinism is often caused by mutations in the TYR gene, which encodes tyrosinase, an enzyme critical for melanin production.

Topic: Vitiligo

Question 2: Pathophysiology A 30-year-old woman presents with progressive depigmented patches on her hands and face. The diagnosis of vitiligo is made. Which of the following best describes the underlying pathophysiology of this condition?

A) Autoimmune destruction of melanocytes
B) Deficiency of tyrosinase enzyme
C) Increased melanin degradation
D) Abnormal melanin distribution
E) Defective keratinocyte function

Explanation: Vitiligo is an autoimmune disorder characterized by the destruction of melanocytes, leading to depigmented patches of skin.

Topic: Leukocyte Adhesion Deficiency (LAD)

Question 3: Clinical Presentation A 2-year-old boy presents with recurrent bacterial infections and delayed separation of the umbilical cord. Laboratory tests reveal a lack of CD18 on the surface of leukocytes. Which of the following is the most likely diagnosis?

A) Chronic granulomatous disease
B) Leukocyte adhesion deficiency
C) Severe combined immunodeficiency
D) Chediak-Higashi syndrome
E) Hyper-IgM syndrome

Explanation: Leukocyte adhesion deficiency (LAD) is characterized by a deficiency in CD18, leading to impaired leukocyte adhesion and migration, and is associated with recurrent infections and delayed umbilical cord separation.

Topic: Chronic Granulomatous Disease (CGD)

Question 4: Pathogenesis A 5-year-old boy with a history of recurrent infections is found to have chronic granulomatous disease. Which of the following best describes the underlying defect in this condition?

A) Defective NADPH oxidase
B) Defective lysosomal trafficking regulator
C) Defective IL-2 receptor gamma chain
D) Defective C1 inhibitor
E) Defective complement factor H

Explanation: Chronic granulomatous disease is caused by a defect in NADPH oxidase, leading to impaired production of reactive oxygen species and defective killing of certain bacteria and fungi by phagocytes.

Topic: Tetrazolium Blue Test

Question 5: Diagnostic Utility A 7-year-old boy with chronic granulomatous disease undergoes a diagnostic test involving the reduction of nitroblue tetrazolium. What would be the expected result of this test in a patient with CGD?

A) Increased blue coloration
B) Decreased blue coloration
C) Increased yellow coloration
D) Decreased yellow coloration
E) No change in coloration

Explanation: In chronic granulomatous disease, the nitroblue tetrazolium test shows decreased blue coloration because the defective NADPH oxidase enzyme cannot produce reactive oxygen species needed to reduce the dye.

12. **asthma drug or cyclosporine or tacrolimus or other immunosuppressive**

A 29-year-old woman with a history of asthma presents for a routine check-up. She uses albuterol as a rescue inhaler and fluticasone as a maintenance therapy. Which of the following best describes the mechanism of action of fluticasone?

A) Beta-2 adrenergic agonist
B) Leukotriene receptor antagonist
C) Inhibition of phosphodiesterase
D) Inhibition of mast cell degranulation
E) Glucocorticoid receptor agonist

Explanation: Fluticasone is an inhaled corticosteroid that acts as a glucocorticoid receptor agonist, reducing inflammation in the airways.

Question 2: Side Effects A 15-year-old boy with asthma has been prescribed montelukast for daily use. Which of the following is a potential side effect of montelukast?

A) Oral thrush
B) Tremors
C) Hepatotoxicity
D) Neuropsychiatric events
E) Hypokalemia

Explanation: Montelukast, a leukotriene receptor antagonist, can cause neuropsychiatric events such as mood changes, depression, and suicidal thoughts.

Topic: Cyclosporine

Question 3: Mechanism of Action A 50-year-old woman with a kidney transplant is prescribed cyclosporine to prevent organ rejection. Which of the following best describes the mechanism of action of cyclosporine?

A) Inhibition of DNA synthesis
B) Inhibition of calcineurin
C) Inhibition of mTOR
D) Inhibition of IL-2 receptor
E) Blockade of co-stimulatory signal

Explanation: Cyclosporine inhibits calcineurin, thereby preventing the activation of T cells and reducing the production of IL-2.

Question 4: Side Effects A 60-year-old man on cyclosporine therapy for psoriasis presents with new-onset hypertension and elevated serum creatinine. Which of the following is a common side effect of cyclosporine that might explain these findings?

A) Bone marrow suppression
B) Nephrotoxicity
C) Hyperglycemia
D) Hypokalemia
E) Hyperuricemia

Explanation: Nephrotoxicity is a well-known side effect of cyclosporine, often leading to elevated serum creatinine and hypertension.

Topic: Tacrolimus

Question 5: Mechanism of Action A 45-year-old woman with a liver transplant is taking tacrolimus as part of her immunosuppressive regimen. Which of the following best describes the mechanism of action of tacrolimus?

A) Inhibition of DNA synthesis
B) Inhibition of calcineurin
C) Inhibition of mTOR
D) Inhibition of IL-2 receptor
E) Blockade of co-stimulatory signal

Explanation: Tacrolimus, like cyclosporine, inhibits calcineurin, thereby preventing the activation of T cells and reducing IL-2 production.

Question 6: Side Effects A 38-year-old man on tacrolimus for kidney transplant presents with new-onset diabetes. Which of the following is a potential side effect of tacrolimus?

A) Hyperlipidemia
B) Hyperglycemia
C) Osteoporosis
D) Alopecia
E) Gingival hyperplasia

Explanation: Hyperglycemia is a known side effect of tacrolimus, which can lead to newonset diabetes.

Topic: Other Immunosuppressive Drugs

Question 7: Mycophenolate Mofetil A 55-year-old woman with a history of lupus nephritis is prescribed mycophenolate mofetil. Which of the following is the primary mechanism of action of mycophenolate mofetil?

A) Inhibition of inosine monophosphate dehydrogenase
B) Inhibition of dihydrofolate reductase
C) Inhibition of mTOR
D) Inhibition of calcineurin
E) Inhibition of IL-2 receptor

Explanation: Mycophenolate mofetil inhibits inosine monophosphate dehydrogenase, which is crucial for purine synthesis in lymphocytes, thereby suppressing the immune response.

Question 8: Sirolimus (Rapamycin) A 63-year-old man with a renal transplant is started on sirolimus. Which of the following is the primary mechanism of action of sirolimus?
A) Inhibition of calcineurin
B) Inhibition of mTOR
C) Inhibition of inosine monophosphate dehydrogenase
D) Inhibition of IL-2 receptor
E) Inhibition of DNA synthesis

Explanation: Sirolimus (rapamycin) inhibits mTOR (mammalian target of rapamycin), leading to a blockade of T-cell proliferation and response to IL-2.

13. HIV: progression, associated diseases, treatments and side effects

A 32-year-old man diagnosed with HIV 6 years ago presents with a 2-week history of persistent cough, night sweats, and weight loss. His CD4 count is 150 cells/µL, and his viral load is elevated. Chest X-ray shows diffuse interstitial infiltrates. Which of the following opportunistic infections is most likely responsible for his symptoms?

A) Cytomegalovirus pneumonia
B) Pneumocystis jirovecii pneumonia
C) Mycobacterium avium complex
D) Toxoplasma gondii infection
E) Histoplasmosis

Explanation: Pneumocystis jirovecii pneumonia is common in HIV patients with CD4 counts less than 200 cells/µL, presenting with a persistent cough, night sweats, weight loss, and interstitial infiltrates on chest X-ray.

Question 2: Associated Diseases A 40-year-old woman with HIV presents with difficulty swallowing and retrosternal pain. Her CD4 count is 50 cells/µL. Endoscopy reveals white plaques on the esophageal mucosa. Which of the following organisms is most likely responsible for her symptoms?

A) Candida albicans
B) Cytomegalovirus
C) Herpes simplex virus
D) Mycobacterium avium complex
E) Epstein-Barr virus

Explanation: Candida esophagitis is the most common cause of esophagitis in HIV patients with low CD4 counts, characterized by white plaques on endoscopy.

Question 3: Treatments A 28-year-old man newly diagnosed with HIV is started on antiretroviral therapy (ART) consisting of tenofovir, emtricitabine, and efavirenz. Which of the following is a common side effect of efavirenz?
A) Lactic acidosis
B) Lipodystrophy
C) Neuropsychiatric symptoms
D) Renal insufficiency
E) Anemia

Explanation: Efavirenz is known to cause neuropsychiatric symptoms, including vivid dreams, dizziness, and mood changes.

Question 4: Side Effects A 35-year-old woman with HIV has been on antiretroviral therapy including zidovudine, lamivudine, and lopinavir/ritonavir for the past 5 years. She presents with fatigue and pallor. Laboratory tests show a hemoglobin level of 8 g/dL and a mean corpuscular volume (MCV) of 110 fL. Which of the following is the most likely cause of her anemia?

A) Zidovudine
B) Lamivudine
C) Lopinavir/ritonavir
D) Tenofovir E) Efavirenz

Explanation: Zidovudine can cause macrocytic anemia, characterized by a low hemoglobin level and elevated MCV.

Question 5: Prevention of Complications A 45-year-old man with a history of HIV and a CD4 count of 75 cells/µL is concerned about preventing opportunistic infections. Which of the following prophylactic treatments should be initiated?

A) Trimethoprim-sulfamethoxazole
B) Acyclovir
C) Isoniazid
D) Fluconazole
E) Clarithromycin

Explanation: Trimethoprim-sulfamethoxazole is recommended for prophylaxis against Pneumocystis jirovecii pneumonia in HIV patients with CD4 counts less than 200 cells/µL.

BIOCHEMISTRY PART 1

Biochemistry part 1

1. autosomal dominant or X-linked or mitochondrial/autosomal recessive and corresponding disease

Autsomal recessive:;- An 8-month-old girl is brought to the office due to irritability and regression of motor skills. The patient's birth was unremarkable and her development had appeared normal, but she can no longer sit or roll over. Her parents have also noticed that she startles easily at loud noises. Head circumference measurement is consistent with macrocephaly. Bilateral funduscopic evaluation shows a bright red fovea centralis that is surrounded by a contrasting white macula. Peripheral vision is decreased. Abdominal examination is normal. Accumulation of which of the following metabolites is most likely present in this patient's tissues?

- A. Galactocerebroside 2
- B. Glucocerebroside 3
- **C. GM2 ganglioside 4**
- D. Heparan sulfate 5
- E. Sphingomyelin 6

Tay-Sachs disease is an autosomal recessive disorder caused by β-hexosaminidase A deficiency, which results in GM2 ganglioside accumulation in neuronal lysosomes. Key clinical features include progressive neurodegeneration (eg, developmental regression), an exaggerated startle reflex, and a cherry-red macular spot.

Autosomal dominant : A 34-year-old woman comes to the physician with abdominal pain and melena. She also complains of progressive fatigue and a 5 kg (11 lb) weight loss over the last 2 months. She has a strong family history of colon, endometrial, and ovarian cancer. Colonoscopy shows a protuberant, friable mass in the ascending colon, and biopsy is diagnostic for colon adenocarcinoma. Genetic analysis confirms a mutation consistent with Lynch syndrome (hereditary nonpolyposis colon cancer). Which of the following is most likely responsible for the development of colon cancer in this patient?

- **A. Nucleotide mismatches that escape repair 2**
- B. Covalent bonds between adjacent pyrimidines 3
- C. Insertion of abnormal bases (eg, uracil) into DNA 4
- D. Empty sugar-phosphate residues in the DNA molecule 5
- E. Double-strand breaks in DNA 6

Lynch syndrome is an autosomal dominant disease caused by abnormal nucleotide mismatch repair. The mismatch repair system involves several genes, including MSH2 and MLH1, which code for components of the human MutS and MutL homologs. Mutations in these 2 genes account for around 90% of cases of Lynch syndrome.

X-linked:

2. Patau vs. Edwards vs. Down Syndrome

3. Collagen/Elastin/insulin synthesis and corresponding diseases / enzymes deficiency

Enzyme deficiencies:- A 22-year-old man comes to the office due to recurrent blistering on the back of his hands and forearms for the past several years. The patient usually develops small itchy spots but lately has had large blisters that heal with hyperpigmentation after rupturing. He has used over-the-counter topical hydrocortisone and emollients, but the symptoms have not improved. The patient works as a night security guard and has had no exposure to chemicals or animals. He drinks 2-3 cans of beer daily. Physical examination shows vesicles and erosions on the dorsum of both hands. Which of the following enzymes is most likely deficient in this patient?

- A. δ-Aminolevulinate dehydratase 2
- B. δ-Aminolevulinate synthase 3
- C. Bilirubin glucuronyl transferase 4
- D. Porphobilinogen deaminase 5
- **E. Uroporphyrinogen decarboxylase 6**

Enzyme deficiencies of the early steps in porphyrin synthesis cause

neuropsychiatric manifestations without photosensitivity, wherea step derangements lead to photosensitivity. Photosensitivity mar as vesicle and blister formation on sun-exposed areas as well as pruritus, pain, and erythema.

Collagen :- A 24-year-old woman comes to the office for a preemployment medical evaluation. The patient has no known medical problems but reports that her skin bruises and scars easily. She says that most of her family members have a very "flexible" body, and her brother works in a circus as a contortionist. The patient takes no medications and has no allergies. She does not use tobacco, alcohol, or drugs. Physical examination findings are shown in the exhibit . This patient most likely has an inherited defect in which of the following proteins?

A. Collagen 2

B. Elastin 3

C. Fibrillin-1 4

D. Hyaluronic acid 5

E. Laminin 6

F. Proteoglycan 7

Ehlers-Danlos syndrome (EDS) is a heritable connective tissue disease associated with abnormal collagen formation. EDS usually manifests clinically as overflexible (hypermobile) joints, overelastic (hyperelastic) skin, and fragile tissue susceptible to bruising, wounding, and hemarthrosis.

4. amino acid derivatives, catecholamine synthesis

Catecholamine synthesis :- A group of investigators is studying the regulation of catecholamine synthesis in response to severe stress. In the experiments, subject rats are randomly assigned to either an experimental or a control group. The experimental rats undergo resection of the pituitary gland, and the control rats undergo craniotomy without pituitary resection. The experimental animals are subsequently found to have decreased production of epinephrine by the adrenal medulla and cortisol from the adrenal cortex compared with the control animals. Decreased activity of which of the following enzymes is most likely responsible for the lower epinephrine in the experimental animals?

A. Catechol-O-methyl transferase 2

- B. Dopa decarboxylase 3
- C. Dopamine beta-hydroxylase 4
- D. Monoamine oxidase 5
- E. Phenylalanine hydroxylase 6
- **F. Phenylethanolamine-N-methyltransferase 7**
- G. Tyrosine hydroxylase 8
- **The 3 main circulating catecholamines are dopamine, norepinephrine, and epinephrine. Norepinephrine and dopamine are produced in the central as well as the peripheral nervous system, whereas epinephrine is predominantly produced in the adrenal medulla. The first step in the synthesis of catecholamines is the conversion of tyrosine to dihydroxyphenylalanine (DOPA) by tyrosine hydroxylase. This is the rate-limiting step in the synthesis of catecholamines. DOPA is converted to dopamine by dopa decarboxylase (Choice B), which is then converted to norepinephrine by dopamine beta-hydroxylase (Choice C). In the adrenal medulla, norepinephrine is rapidly converted to epinephrine by phenylethanolamine-N-methyltransferase (PNMT).**
- **Expression of PNMT in the adrenal medulla is upregulated by cortisol. Because the venous drainage of the adrenal cortex passes through the adrenal medulla, cortisol concentrations in the medulla can be very high, and PNMT is expressed at a high level. However, following pituitary resection, the loss of ACTH leads to decreased synthesis of cortisol in the adrenal cortex. The result is decreased PNMT activity and reduced conversion of norepinephrine to epinephrine**.

amino acid :- A 12-year-old boy is brought to the emergency department with severe chest pain. He has had intermittent substernal chest pain for the past few months that typically occurs after heavy activity. The boy's activities have been limited due to the chest pain, and he is no longer able to play on the soccer team. The patient does not use tobacco or illicit drugs. His temperature is 36.7 C (98 F), blood pressure is 130/80 mm Hg, pulse is 132/min, respirations are 24/min, and pulse oximetry is 98% on room air. BMI is 17 kg/m^2. Physical examination shows an anxious-appearing boy with a rapid but regular pulse. No abnormalities are seen. Troponin is elevated, and ECG reveals ST segment elevations in leads II, III, and aVF. After acute stabilization and treatment, further laboratory workup shows an increased serum methionine level. Which of the following amino acids is most likely essential in this patient?

- A. Asparagine 2
- **B. Cysteine 3**
- C. Isoleucine 4
- D. Leucine 5
- E. Tyrosine 6
- F. Valine 7

Homocystinuria is most commonly caused by a defect in cystathionine synthase, resulting in an inability to form c homocysteine. Cysteine becomes essential in affected p homocysteine buildup leads to elevated methionine. nocysteine is prothrombotic, resulting in premature thromboembolic atherosclerosis, acute coronary syndrome) in these patie .

As part of a long-term cohort study, members of a large extended family undergo periodic analysis of multiple serum markers. Many male participants are found to have abnormal laboratory results despite no obvious signs of disease. Further analysis shows that these men have an X-linked mutation affecting the phosphoribosyl pyrophosphate (PRPP) synthetase gene, resulting in greatly increased substrate conversion.

Which of the following organs is most likely to develop pathology secondary to this mutation?

- A.Aorta 2
- B.Heart 3
- **C.Joints 4**
- D.Liver 5
- E.Pancreas 6

Gout occurs with increased frequency in patients with activating mutations involving phosphoribosyl pyrophosphate synthetase due to increased production and degradation of purines.

5. kartagener or cystic fibrosis \[know CF real well\]

6. pleiotropy or polygenic or heteroplasmy

7. Vitamin-E,B12,B3, Fataxia, Syphilis related neuropathy or parietal cell antibody/ vitamin B6

Vitamin b6 :- A 40-year-old woman comes to the office with a 3-month history of progressively limited physical activity due to fatigue. The patient says, "I could barely walk from my car to the office." Medical history is significant for a positive tuberculin skin test 7 months ago with a normal chest radiograph. She has been compliant with the prescribed treatment despite its bitter taste. Physical examination shows a tired-appearing woman with conjunctival and palmar pallor. Complete blood count is as follows:

Hemoglobin	9 g/dL
Hematocrit	28%
Mean corpuscular volume	72 fL

A bone marrow aspirate representative of this patient's disease process is shown below (Prussian blue stain).

Decreased activity of which of the following enzymes most likely explains the anemia found in this patient?

- A. δ-aminolevulinic acid dehydratase 2
- **B. δ-aminolevulinic acid synthase 3**
- C. Cystathionine synthase 4
- D. Glucose-6-phosphate dehydrogenase 5
- E. Pyruvate kinase 6

Isoniazid inhibits pyridoxine phosphokinase, leading to impaired activation of pyridoxine (vitamin B_6). Pyridoxine is a cofactor for δ-aminolevulinic acid synthase, the enzyme that catalyzes the rate-limiting step of heme synthesis. Inhibition of this step can result in sideroblastic anemia.

Vitamin B3:- A 52-year-old man is being evaluated in the emergency department for abdominal pain associated with watery diarrhea. His symptoms have been progressive over the last month. He says that he is depressed and often has difficulty remembering things. The patient has a 20-year history of alcohol use disorder. On examination, he appears disheveled. A pigmented scaly skin rash is present in the malar distribution of his face, neck, and back of his hands. The rash has been present for several months and worsens on exposure to sunlight. It is determined that the patient's symptoms are secondary to lack of a specific nutrient. Which of the following enzymes is most likely to be directly affected by this patient's nutrient deficiency?

- A. Citrate synthase 2
- B. Hexokinase 3
- **C. Isocitrate dehydrogenase 4**

- D. Phosphoglycerate kinase 5
- E. Succinate dehydrogenase 6
- This patient likely has **pellagra**, a disease characterized by photosensitive dermatitis , diarrhea, and dementia occurring secondary to **vitamin B_3 (niacin) deficiency**. Pellagra is predominantly seen in malnourished populations (eg, those with alcohol use disorder or malabsorption).
- Niacin is a precursor for nicotinamide adenine dinucleotide (**NAD**) and nicotinamide adenine dinucleotide phosphate (**NADP**), two important **cofactors** for many **dehydrogenase** and **reductase enzymes**. NAD is required for catabolic reactions (eg, glycolysis, betaoxidation) as well as cell signaling and DNA repair, whereas NADP is necessary for many anabolic reactions such as fatty acid and cholesterol synthesis. NAD is a key constituent of the citric acid cycle; it serves as a cofactor for isocitrate dehydrogenase, alpha-ketoglutarate dehydrogenase, and malate dehydrogenase.

8. gluconeogenesis or HMP shunt

Gluconeogenesis: A healthy 34-year-old coal mine worker is trapped underground following partial collapse of an access shaft. Rescue efforts are directed toward clearing the obstructed tunnel, but it takes 2 days to reach him. While being taken to the surface, the miner tells rescuers that he feels dizzy and weak. He had an emergency supply of water but has not eaten anything for over 30 hours. Fingerstick blood glucose concentration is 78 mg/dL. Which of the following biochemical reactions is most likely responsible for maintaining this patient's current blood glucose levels?

- A. Acetoacetyl CoA → 3-hydroxy-3-methylglutaryl-CoA 2
- B. Acetyl CoA → palmitic acid 3
- C. Fructose 6-phosphate → fructose 1,6-bisphosphate 4
- D. Glycogen → glucose-1-phosphate 5
- **E. Oxaloacetate → phosphoenolpyruvate 6**

After 12-18 hours of fasting, gluconeogenesis becomes the principal source of blood glucose. **Gluconeogenesis** uses many glycolytic enzymes, but hexokinase, phosphofructokinase, and pyruvate kinase need to be bypassed as they are unidirectional. The initial steps of gluconeogenesis involve the conversion of pyruvate to oxaloacetate and oxaloacetate to phosphoenolpyruvate by pyruvate carboxylase and phosphoenolpyruvate carboxykinase, respectively.

9. lysosome or mitochondria or proteasome or intron/exon

1- A 6-month-old boy is evaluated in the clinic due to delayed motor development. The mother reports that the boy is weaker than other children his age. He can barely lift his head up when prone and is unable to roll to the side. Physical examination shows generalized hypotonia and decreased deep tendon reflexes. Further evaluation reveals mutation of a protein involved in the assembly of small nuclear ribonucleoproteins (snRNPs) in motor neurons. This patient most likely has impaired function of which of the following cellular elements?

- A. Nucleosomes 2
- B. Peroxisomes 3
- C. Proteasomes 4
- D. Ribosomes 5
- **E. Spliceosomes 6**

Small nuclear ribonucleoproteins (snRNPs) are important components of the spliceosome, a molecule which removes introns from pre-mRNA during processing within the nucleus. Spinal muscular atrophy is a disorder caused by mutations in the *SMN1*gene, resulting in impaired assembly of snRNPs in lower motor neurons. Infants often have flaccid paralysis due to degeneration of anterior horn cells in the spinal cord.

2- A 24-year-old woman comes to the office due to a persistent facial rash. The patient easily develops "sunburns" after sun exposure and her fingers "turn blue" in cold weather. She has also felt more fatigued than usual. Physical examination shows a facial rash in a butterfly distribution that spares the nasolabial folds. Laboratory studies reveal several types of autoantibodies directed against components of the cell nucleus. One specific antibody targets proteins complexed with small nuclear ribonucleic acid. These protein-ribonucleic acid complexes are most likely involved in which of the following cellular functions?

- A. Aiding mRNA in exiting the nucleus 2
- B. Allowing proper functioning of DNA ligase 3
- C. Charging tRNA with amino acids 4
- D. Polyadenylation of RNA transcripts 5
- **E. Removal of introns from RNA transcripts 6**
- F. Synthesizing Okazaki fragments 7

Small nuclear RNA (snRNA) is synthesized by RNA polymerase II in the nucleus and complexes with specific proteins to form small nuclear ribonucleoproteins (snRNPs). snRNPs are an essential component of

spliceosomes, which remove introns from pre-mRNA to form mature mRNA. Patients with systemic lupus erythematosus can have autoantibodies directed against snRNPs (eg, anti-Smith antibody).

Stephen curry

1. Colleague calls about his wife had insomnia since 3 days, personal doc out of town, need pulls. what to do.

A) call hone and examine, refuse

2. Women alcoholic smoking hx, depression. Most imp rf for substance abuse. Depression

3. Women 40 yrs. exercise one hr 3 days a week, no smoking, alcoholic, monogamous, contraception, 3 children, balanced diet. What advice for better health. Avoid alcohol

4. Electrophoresis. Glycogen phosphorylase. With glucagon travels more. Ans phosphorylated and makes negatively charged and attracts opposite nodes

5. Vaginal discharge, sepsis, forceps delivery, mcc gram positive cocci

6. Xeroderma pigmentosum diagnosed to child brother. Daughter born. What advice will be given. Dont take in uv light until genetic analysis done

7. Mother diagnosed lynch, genetic analysis done and everything normal on mutated gene analysis in pt, father has no hx. Ans do nothing as pt falls in normal screening protocol(correct), test for some other enzyme

8. Lynch enzyme; mshl

9. Uv light given apoptosis, what is upregulated; bax/bak

10. Fibroblast ki life inc krna chahty hain, what to do, telomerase

11. Thymus autoantigen injected; what happens negative selection

12. Thymus ans cd4, cd8 graph question

13. Women have ulcers on butt. Histo picture given, neutrophils, pick neutrophil and asked what factor brings neutrophil; PAF

14. Tx of Dress syndrome (symptoms, 30% eosinophils); albuterol salmetrol prednisone montelukast
15. N formylmethionine chemotactic for neutrophils
16. Sle patient blood smear with spherocytes. In these type of cells how protein is made. Translation, transcription, polyglucronation(correct)
17. Anti jo 1 asked in what disease
18. Sx of pheochromocytoma thyroid parathyroid, what gene MEN (2A)
19. Pedigree given, brain cancer in pedigree with people coming from outside of pedigree still cancers happening. Oncogenes, tumor suppressor(correct mostly autosomal dominant)
20. Cyp p450 on third complex, antimycin
21. Retinoblastoma action where , G1-S
22. Von gierke, lactic acidosis, hepatomegaly, bacha, hypoglycemia, no ketones mentioned, where defect: Glucose 6 phosphatase
23. Pt with seizures, gomori trichome staining-> granular staining, numbness muscle weakness. Defect of what; mitochondria
24. Duachene, bilateral paeudohypertrophy, what muscle will be effected INITIALLY. Ans gluteus maximus. Is ki weakness k bad futher pathology gies on
25. Constipation growth delayed, around puberty age, last year 25th percentile height and weight, this year height in 7th percentile and weight in still 25th percentile. Options; constitutional growth delay(correct), failure to thrive
26. AR carrier frequency to measure
27. Pyruvate kinase q what will dec. ans ATP
28. Before head 25th percentile then head decreases to 5th percentile, takes both hands to mouth. Ans RETT
29. Fragile x symptoms, mental retardation, autisim signs, sound hear krta hy to tap charhti hy, what is seen. Ans large ears
30. Women real stat agent, last week did a huge sale, bf broke up, somethimes rude with customers, thinking of changing agency, thinking again to change agency again. Ans borderline personality disorder, adjustment disorder, normal behaviour
31. Signs of alzheimers, gun jati, stive on, age 70, mmse 23/30, cones with daughter, forgets friends names. ans alzheimers.
32. Cardiac Neural crest impaired. What defect in heart. Ans asd transpoistion truncus arteriosus. Not sure
33. Hcg raised, inhibin, downs

34. PQ interval prolonged, where is defect, ans av node
35. Murmurs MVP.
36. Murmurs MR. Both q could be done from stem
37. Aplasia cutis, patau syndrome
38. Graves comolete remission krni hy what drug to give. Options ptu methimazole radioactive iodine
39. Basement resident works there. RF for lung ca: radon(correct), alkylating agents.
40. Leukemia RF, farmer, ans radiation
41. Psammima bodies histo; papillary thyroid cancer
42. Pt ocp taking, vivid dreams, mefloquine
43. Hashimoto histo; germinal centre
44. Psudo pseudo, before pth and after pth, what will happen ?? No difference due to resistance to pth
45. Billiary atresia, jaundice persists after 3 weeks
46. Lung right ascultated, no breath sounds, right pe no lung, left lung big, heart bhi right, where defect, ans. right primary bronchus defect
47. Pda ki repair, recurrent laryngeal nerve
48. Metb acidosis combine with respiratory acidosis. RR 10, Apply winter formula.
49. Oubain plant derivative what will happen to cell. Na/k atpase blocjed. Cell swelled
50. Kid eyes shiwed, pick something, leukocoria. Ans retinoblastoma
51. Western blot question about protein expression
52. Aniridia WT1 mutation
53. Hardy weinberg ask about carrier frequency
54. Genetic hetrogenosity (production of a single or similar phenotypes through different genetic mechanisms), sensorineural deafness, 1/3rd linked with genetic mutation. Other options were incomplete penetrance, variable expressivity.
55. Alport q, how will you diagnose on FURTHER EXAMINATION. Ans : type 4 collagen, wrong ans thin basement membrane
56. Lyssencephaly; smooth brain, where is defect, ans defect in neuronal migration of cells
57. Treatment for endocarditis, iv drug user, BUT MITRAL REGURGITATION. Treatment: ampicillin, flouroquinolone. Correct vancomycin
58. Redman syndrome. Precious hx of issue with vanco, ans dec absorption of vanco

59. Patient Cipro taking, why not take nsaid. Ans dec absorption of ciprofloxacin
60. Child done ug unilateral hydronephrosis in utero, where is csf blocked. NO FUCKING IDEA. Did central canal
61. Psgn; ans. casts protein brown colour was option
62. Child upper uri, nasal congestion, signs of nephrotic, ans minimal change disease
63. Crescenteric, sinusitis ury huy, wegner. Ans anca
64. Patient with bar fight, Ct upar se dikhaya hua. Density in ethmoid air cells. Other options were frontal etc

OBJ

65. Apkd pattern inheritance
66. Adpkd gene
67. Digeorge: cd 3 dec, cd 19 normal
68. Isoniazid prophylaxis; b6 deficiency
69. Hartnup disease; all symptoms
70. Alopecia, dry skin, vit A excess
71. Keratin deposits, eye dryness, no differentiation due to vit A
72. Syphilis; argyl robertson pupil defect, how symptoms are transmitted. Ans STD
73. Folate why advised, women pregnant, prenatal folate given. Why. Ans nucleotide synthesis
74. Qualitative analysis
75. Bias question. Research done diseased are interviewed thoroughly. What bias. Ascertainment bias vs surveillance bias(probably correct)
76. Biceps tendon: supination
77. Scaphoid lunate distance increases; ans scapholunate ligament
78. ANTIBODY TO ANTI GLUTAMIC ACID BETA DECARBOXYLASE; type 1 DM
79. Pt fall while playing basketball, shoulder injury, distal clavicle goes up, abduction affected beyond 90 degree. Ans glenoheumeral joint, **acromiclavicular ligament**(correct)

OBJ

80. Anatomic snuff box tenderness. Which bone damaged. Ans scaphoid
81. Brainstem image, medial medulla damage. Identify. Hypoglossal nerve damage. Medulla picked on basis of olive. Ganda sa inage.

OBJ

82. Methotrexate MOA.
83. Pt given anti leukemic drug with a supplement. What drug given: methotrexate
84. Glactosemia.
85. Women with zig zag lines in vision, aura, nausea, phitophobia, lasts for one day, previous hx, migraine question. options av malformation, sah, common migraine
86. Mononuclear infiltrate, ans acute rejection after 3 weeks of transplant
87. Amniotic band syndrome, NO picture of ⍰⍰. Ring finger uri hui aur aik aur finger uri hui.
88. Isotretinoin defect at which level, HOX gene
89. Bisphosphonate moa: pyrophosphate analog; binds hydroxyapatite in bone, inhibiting osteoclast activity.
90. Bone age ka question. Dwarfism. Gh defect. Final decision everything decreases.
91. Alveoli development uptill 8 years after birth
92. Myelination post birth till 1 year
93. Pain. Ans bradykinin
94. Fever mediator. Ans prostaglandins
95. Vasodilation, ans was PGI2
96. Ldl receptor b 100 binds. Familial hypercholestrolemia
97. Abetalipoproteniemia symptoms. Defective apo b 48
98. Contact dermatitis 2 q. Cat pulled from bushes. Same picture in 2 questions.
99. Fever chills after strep pneumo. What mediates. Ans Cytokines produced by macrophages in alveoli
100. Centrifuged extracted, th1 cells are to be grown, which combination is best. Ans il2, 12 and anti il4
101. EBV, lad, pharynx sore throat, which family. Herpes family
102. Pregnancy: which to be given in pregnancy. Hpv vs influenza. Ans is influenza
103. PNH q. Defect of compliment inhibitor
104. Poliomyelitis ka different strain a gya hy in population. Ans recombination
105. Kidney transplanted. What defect in revasularisation. External iliac artery supplying ureter. Uworld question.
106. Hydronephrosis main cortical atrophy
107. Colour blindness ans: **X linked recessive**

108. Ewing sarcoma 11.22 ans transcription factor is translocated
109. Natural killer cell. Ans granzyme mediating
110. Psgn. Damage is complement mediated
111. Lyst gene mutation. Cheidak heigashi syndrome
112. Rash on legs, numbness, arthralgias, rf factor posituve, polyclonal igG. Mixed cryoglobulinemia. Hep C ans
113. Road traffic accident, what found in blood smear, no internal bleeding. Ans polychromasia.
114. Hypovolemic shock, what happens to resistance, preload, afterload
115. Nocordia acid fast stain positive
116. Aldosterone mechanism q. Inc sodium absorption.
117. K excretion effect by aldosterone at what site. Distal dct or collecting duct(correct ans)
118. Renin angiotensin 1 angiotensin 2 arrow q
119. Apoplexy, which hormone deficiency is most severe. Ans acth
120. Clamp on efferent, gfr increases
121. Ovarian torsion, usg done, what is defected. Ovarian vein ans.
122. Pt negative for Wilson, hemochromatosis and alpha 1 antitrypsin in scenario. Only lfts raised. Cant rem q
123. Hemochromatosis ans was inc uptake of iron
124. Previous pcp, antiretroviral started, bilateral opacities, no organisms on lavage. Bilateral rattling, bilateral opacification after 3 weeks. What is the mechanism of findings. Mast cells, t cells,
125. Nbme picture pic if giant platelets. ITP k symptoms, itp ki treatment. Ans was drug guven from which class. Rituximab was ans but is it anti leukemic or immunosuppressive
126. Crohns question to 11 years old, blood occult positive, diarrhoea. What will happen for improvement of symptoms. Ans IL 10.
127. Emphysema. What defect. No liver signs. Options elastase(correct), alpha 1 antitryptase was also in option
128. Periportal fibrosis and intrahepatic ducts enlarged, viral illness. Dx made of primary sclerosing cholangitis(correct), pbs, viral illness was also in options
129. Low dose aspirin 81 mg, high dose niacin, hepatotixocity.

130. Fatty acids given, what happens to vldl hdl tag. Q was of omega fatty acids
131. Pancreatic adenocarcinoma, signs of stroke. Ans thrombophlebitis
132. Long term sickle cell disease, ans spleen atrophy fibrosis
133. Dihydrorhodamine graph same q as before (CGD)
134. Phagocytosis happening. Ros made from which enzyme. Nadph oxidase
135. Muscle fibre contracted. What makes the detachment. Ans. atp detaches actin and tropomyocin
136. Digeorge which arch and pouch defect. Ans 3rd pouch
137. Gastroenteristis, un vaccinated patient, blood agar has gram -ve rod, what organism. Options. H influenza. DIFFICULT QUESTION. Only done on blood agar basis
138. Ebola q. Ans prevent direct contact. No fluid was in option.
139. Pregnant women, wants to go to south america, cdc gas recommended not to go because zika outbreak, what other thing to recommend. Contraception, abstinence.
140. Pcp 2 questions. One was dx
141. Other was treatment
142. Dental procedure, endocarditis with strep viridins
143. Alcohol detergent bleech use on floor. What viruses will be uneffected. Ans pick non enveloped virus
144. Giardia ans. drinks water from lake
145. Women hpv negative, abnormal cells of unknown significance on pap smear, chlaymydia naat+ve, blindness. Most likely complication. **Infertility**, tenosynovitis
146. Endometriosis; glands adhesions in duct, and duct is blocked, infertility ho rhi. Dx was endometriosis. Glands given on histo
147. Cyclic pain still no menesis. Ans imperforate hymen
148. India pregnant ladies. Ans hepE
149. Gardenrella vaginalis, ans overgrowth of lactobacillus
150. Sporotrix schencki, no history of gardening, draining lynph node history, no picture. Starts from finger and draining ulcer at arms
151. Ascaris picture. Asked transmission. Options; consumption of undercooked meat, food contaminated with soil
152. Shistosoma, goes to egypt hematuria, all organisms picture given in options have to recognise shistosoma picture.

153. Straw coloured discharge from unbilicus. Ans Allantoin

154. Central africa, ring shaped, ans falciparum

155. Painful vginal lesions, picture. Ans hsv type2. Other options were non painful

156. Cough pe bulge in scrotum, decreases on laying down, kid tha, does not tranilluminate. Options. Inguinal hernia, varicocele

157. Man obese bmi 40+, liver enzymes raised, what find on biopsy, options non degradable accumulations, **fatty inclusions** was the answer

158. Pin prick from hep b positive patient thrice, got 3 vaccines. what will found on serology. Ans Anti Hbs because very unlikely transmission from pinprick

159. Cretzfold jackob disease. On what basis is diagnosis is made. Signs of ataxia myoclonus protein in csf, raised spike in eeg. Ans biopsy.

160. Vibrio cholera shellfish kha k diarrhea ho raha hy. Other options were salmonella

161. Roc curve best test. Test of hyperglycemia and asked about screening test. Ans will be top most test on right. SENSITIVE

162. Kaplan meir test graph. 2 groups gave chemo p=.04 survival was different in two groups

163. Pearson co efficent. -.09

164. Syphillis. Csf findings asked

165. Hemophiles ducraei question

166. Diaper rash treatment, ans topical nystatin

167. 2 Antiretrovirals given. Why given lopenavir and rotinavir because one is more strong inhibitor of cyt p450.

168. Esophagus alot of multivitamin drugs taking what is most likely complication of these drugs. Ans. Stricture. Other option was chronic ulcer

169. Pic of benign melanoma. What is most imp for malignancy. Ans evolution over time. Breslow is applied after diagnosis of melanoma. Not in this case

170. Amyloidosis histo congo red staining. Most common complication. Ans hemorrheage. Fa picture pg 212

171. 70 80 year old, amyloidosis. Where will be amyloid deposited. Ans ventricle. Other options were atrial.

172. Heme q polycythemia itching after shower. What is loss of function defect. Options defect in dimerisation, ans: **JAK-STAT inhibitory loop inhibition.**

173. Hypovolemia after Some event i guess road traffic accident. Albumin hct protein. Ans dehydration based arrows of **increasing all three**

174. Pth raised, po4 kam, calcium ziada. Options ckd lung ca, and **parathyroid adenoma**
175. Cushing disease, over night cortisol suppression test kia hy wo raised hy. Next step? Dexamethasone suppression
176. Female athlete, ans functional hypothalamic amenorrhea
177. Fucked up cervix. This word given in stem. options. Invasive adenocarcinoma, ans invasive sq carcinoma
178. Small cell lung ca, electrolyte difference in urine and serum. Ans relative to SIADH
179. Lambort eaton syndrome. Synapse diag. Point out where is defect
180. 2 drugs non competitive inhibitor, graph given. Efficacy decreases
181. Lung cancer with respiratory alkalosis, hypoxemia. What is the cause of hypoxemia. Ans: hyperventilation. Lung cancer causes ALKALOSIS.
182. Oral vancomycin ;dec bioavailability dec red man reaction
183. Kid ate fathers nicotinic gum. Where are they acting. Ans ligand gated Na+/K+ ion channels
184. Some drug given, side effects given, side effects due to what mechanism, ans atropine
185. Drug given now what happen. Muscarinic agonist given and what will happen. Option had bradycardia
186. What drug causes drug induced sle. Ans hydralazine
187. Case series, 3 studies sent to cdc
188. Clinical trial first done on animals. Now done on what. Ans healthy humans
189. Odds ratio calculation
190. Bar chart given. Asked what skew. Very simple.
191. 2 q on type b errors. One had sample size increasing, asked power and type 2 dec
192. Second had only power increasing
193. Kid given catheter, goes into RA, through what catheter TRANSVERSES. Ans ductus venosus
194. LAD anastomoses with PDA
195. TOF, no erythema, white fluid from mediastinum, test what. Ans; triacyglyceride
196. Ecg: pre mature ventricular beat. Where is defect. Ventricle

OBJ

197. HOCM diagnosis made, when will murmur accentuate, ans. when stands up

198. Pre eclampsia. 30 weeks pe, no htn history to mother father, no proteinuria, oedema positive, bp raised on 2 previous settings. Bp 140/90+, Options did not have gestational htn, normal pregnancy finding, preeclampsia

199. Dusra pre eclampsia ka q yad nahi a raha

200. Kid 14 years, behaviour change since 3 months, does not want to go to school, fatigue, not interested, talks less. What will do next. Options. Ans. urine toxicology. Was confused with lead poisoning.

201. Mid scapular pain, pata chal raha tha aortic dissection. Vibration ur gai, lower limb signs. Ans spinal ischemia

202. Conversion disorder. Girl came back from college on summer break 3 months ago, will go again to college in 2 weeks, reflexes normal, on left upper limb, right lower limb.

203. Type 1 DM, ketosis acidosis signs. Diagnose type 1 DM

204. Class 1A anti arrhythmic drug graph. Options procainamide, dypiramidole

205. Exercise, protein synthesis after 1 hour. Ans GH

206. Turtle shaped mass in utero. Ans. what hormone mediates development. Ans DHT

207. Phosphatidylserine

208. Cretinism, iodine deficiency. If correct what will happen. Ans. tsh will become normal

209. Ascending colon ki blood supply, ans right colic

210. ZE Syndrome, recurrent ulcers.

211. VIPoma. Pancreatic mass. Immuno staining done against what. Ans against vip secreting cells

212. GH raised, igf raised. Ans igf resistance

213. SMA syndrome. Which part is constricted. Ans: 3rd part of duodenum

214. Oesophageal varices. Ans left gastric vein

215. Chronic pancreatitis patient. What will be given to improve symptoms. Ans enzyme lipase

216. String appearance in Xray. Cant remember the question

217. Osler webber rendau syndrome, bleeding leading to iron deficiency anemia. Ans microcytic anemia

218. Hyperammonemia after cirrhosis. Ans. Bilirubin ammonia will increase

219. Truck driver, aesa drug do k nend na aye. Ans fexophenadine

220. Antiprogestrin for abortion. Ans mifepristone
221. Ant acid with ciprofloxacin. Ans dec absorption
222. Post chemo nausea vomiting. Ondansteron, metcloperamide, aprepirant bhi dedi abhi b nausea ho rahi ab kia den gy. Ans cannabiod receptor.
223. Cytokine mediator for fibroblast migration. Ans tgf beta
224. Stenting done, what drug to give. Ans clopidogril
225. HLA B27. Seronegative spondylitis.
226. ACE inhibitor MOA
227. Women came on 12 weeks gestation had signs of anemia. Started iron. Now on 14 weeks and lab values normal but why continue iron. Options. Parent anaemia correction(correct), bachy ka anaemia correct krny k liye, bachy ki hematopoiesis k liye.
228. Warfarin k bad necrosis ho rhi. Ans protein c deficiency.
229. Dabigatran ka reversal: ans idaricuzimab
230. Mechanism of paclitaxal and vinblastine in 2 questions
231. De qurvian thyroiditis. Pain in hand. Ans: abductor pollicis longus
232. Clitoris ki nerve supply: pudendal nerve
233. Pagets is a risk factor for osteosarcoma
234. Osteoarhritis. Where will be defect. Cartilage or synovium. Ans cartilage
235. Treatment for acute goit: ans colchicine
236. Pt with back pain to sign disability form, straight leg examination done. options; is exam p main ni kr sakta(correct), nsaid do aur 2 hafty bad ana
237. Gap junction; connecins
238. Second degree burn due to blisters, pain, pink skin
239. Isoniazid le rhi prophylaxis, acetaminophen bht le rhi, raised lfts. Why ans. due to napqi.
240. Nodes of ranvier, which channels, ans voltage gated na channels
241. Auditory crtex lesion: ans medial geniculate nucleus. Diag similar to pg 489
242. Hippocampus to point out on mri. His given of post hypotension.
243. Pic given and had to diagnose neurofibrillary tangles and asked about tau protein
244. Delivered prematurely, Hypertension. Gross picture given and asked site of bleeding.

Ans: germinal matrix

245. Absence seizure originates. Ans thalamocortical. Frontal was not in option.
246. Ethosuxamide site of action
247. MS diagnosis on history
248. Craniopharyngioma in a kid. Ans bitemporal heminopia
249. Glionlastoma multifirmae is present. If malignant then what will be found on histo. Ans necrosis
250. Absence seizure. Ethosuxamide was not in options. Ans carbamezapine
251. Malignant hyperthermia: where is mutation. And RyR receptor
252. Tactile hallucinations due to what receptor. Ans: Dopamine receptor.(correct), nor epi was also in options
253. Dehydration main gfr kam hota hy.
254. Shock, what found on kidney urinalysis. What casts. Ans granular casts
255. Nephrotic main increased cholestrol
256. Hydronephrosis historry guven what will happen now. Cortical atrophy
257. Stress incontinence. Defect at what level. Ans levator anni
258. Tanner staging. BOY. In stage 3 penile length increases. Little hair but not coarsed. 13 year old. Options confused with breast bud formation.
259. Uterine didelphysis. septum till vagina, pain during intercourse
260. Nipple discharge and all history correlating to pagets disease of breast
261. Peyroine disease. No pain otherwise but pain on erection and deviation
262. Right shift in oxygen dissociation curve. Ans hypercapnia
263. Base of pleura lesions. Ans plumbing
264. Sleep apnea. Options had Raised epo(correct), left ventricular hypertrophy.
265. Chylothorax
266. Small cell carcinoma diagnosis on histo.

- Thumb dermatome ○ Loss of sensation on dorsum of foot.which nerve damage?
- Posterior displacement of knee.which structure damaged?no ligament was mentioned.
- Gout

- Sensation problem in thumb,index and middle finger?median nerve ○ Prepatelar bursa
- Comparment syndrome-a cut is to be given which structure will me damages ○ Lambertaton syndrome
- Polycythemia vera 2 questions- JAK 2 mutation, 1 was itching after bath ○ AML 2 questions

Hereditary spherocytosis

- G6PD
- Porhyria ○ Hemolytic anemia 2 questions ○ Malignant melanoma treatment MAO ○ HIT antibody
- 2 week starvation what will happen to levels of glucose, fatty acid,B hydrobutarate ○ CKD ○ AT N ○ AIT ○ Calcium oxalate stone ○ Stone in kidney of pregnant patient ○ biostat questions were tough ○ One was sensitivity and specificity is 0.95,prevalnce is 50%.what is PPV?
- Incidence
- One was about mortality rate after 4 years(randy neil video) ○ Positive skewed ○ 2 3 bias question
- Bradford hill criteria ○ CI ○ ADH> SUPRAOPTIC NUCLEI
- Effe t of OCP on free T4,total T4,TSH ○ 1 1 B hydroxylase deficiency ○ Central DI >damage to hypothalamus ○ Hyperthyroidism ○ Medullary carcinoma ○ Anaplastic carcinoma ○ Hyperaldosteroneism ○ Neural tube defect ○ Gliosis cell involved>astrocytes ○ Slow wave sleepstage 3 non rem ○ Bedwetting, drug given will effect which sleep stage.
- Truncal ataxia,finger nose test affected.forgort what they asked ○ Which nerve supplies sensory to lateral forehead and eyelid ○ Trigeminal neuralgia
- Corneal reflex impaired,nerve damages ○ Subarachinoid hemorrage case what will you ask in family history>ADPKD ○ Creutzfeldt Jakob disease>spongiform cortex ○ MS,oligocolonal bands>oligodendrocytes damaged ○ 2 3 CNS tumors with histo pics,difficult to diagnose ○ Explosion,now difficulty hearing>weber and rinnes will be localized where ○ Glucoma drugs will acts on which receptor? Alpha,beta?
  Shortest acting benzodiazepines?
- Malignant hyperthermia>ryanodine receptor ○ Operant conditioning
- Child abuse ○ ADHD drug MAO ○ Mania>pressured speech
- Schizoaffective/schizophreniform disorder
- MDD
- Panic disorder drug ○ Illness anxiety disorder ○ Gender dysphoria ○ Opiods withdrawal ○ Antidepressants pic in page 598 FA2022.was asked Adhd drug will act where ○ Single kidney..imapired function of what? ○ Duplex collecting system gross pic was given ○ Acidbase disorder 2 questions ○ Crescentic GN..which type of Hypersensitivity reaction?

- Urinary incontenance ○ Hydrochlorothiazide >gout ○ Patient taking multiple drus ○ ACEI,statins...now inc CKB..why? ○ Isotretinoin use till 10 week pregnancy..what defect will happen?
- Fetal alcohol syndrome ○ Patient with difficulty to conceive ,have atropy of testies what will get impaired ○ Poop through umblicum,what defect?
- One CT scan was given in 2 planes was showing vagina and uterus, 1 5F ,no menses and vagina was enlarged.defect in what?i marked hymen option
- Kidney LN drainage
- Another CT scan of lower abdomen with enlarged cyst..wasn't sure about where was it.was asked from which cell it is arised?seemed liked a cyst in
- ovary
- Nbme 28 histo pic of urethra of male.same pic was asked foley will be inserted in which part..same pic in USWA 1
- Kallman syndrome ○ Androgen insensitivity syndrome
- A question from ovarian carcinoma ot sure from where was it ○ Mastitis ○ BPI-H ○ NRDS
- Age related changes in lungs
- CO poisoning
- COPD
- Pulmonary fibrosis and pleura plaques in a female superintendent..marked asbestosis bcz of plaques..plz confirm
  Worsening asthma..already taking corticosteroids and B agonists what other interventio ..? Options:do nth,antileukotrienes,antimonoclonal?
- Acute transplant rejection.Mechanism?
- Acute blood loss,6 bags of blood transfused..suddenly rejection starts..mechanism? ○ Alot of pneumonia questions from micro..i hate micro so didn't like them much ○ 2 murmur audios.one was AS other couldn't diagnose ○ V3-V6 lead changes ○ Atrial flutter ecg..defect where?
- Hot bath..what will happen?was asked about preload,after load ○ Physiological spliting will b heard where?had to mark on chest ○ TOF
- . Atheroseclerotic histo pic
- HF
- CT of aortic dissection

- Dilated cardiomyopathy
- 1 histo pic of heart..what is deposited?was mention about amylodosis
- Most commonly damaged in sternal trauma>AV

- Infective endocarditis 2 3 questions. 1 was a pic of splinter mehorrages,other was asked about organism
- Rheumatic fever murmur was asked
- Drug asked which will help in lowering risk of cardiovascular event but no statins was mentioned1 1 0. Digoxin mechanism asked with pic TIPS procedure done..will drain i to which vein?
- Histo Picture on page 371 of FA 2022 was asked to mark parietal cells
- Lipase deficiency in CF
- Metaplasia in chronic GERD
- Gastritis 2 queations
- Crohns 2 questions
- Celiac disease
- Appendicitis
- Meckel diverticulum Tc pertechnetate scan..which tissue will uptake it?
- Intussusception
- Lynch syndrome
- Liver cirrhosis
- Rotor syndrome
- Wilson disease>decreased excretion in bile
- Acute pancreatitis
- FA 2022 page 407 pic..was asked
    - MAO of omeprazole
- Profuse diarrhea ..which nutrients should be given

- Anemia of chronic disease
- Spleen removal>encapsulated organism infection.s pneumonia was mentioned
- 2 3 hemolytic anemias were asked
- ITP
- Factor v leiden
- CD 15 CD 30 mentioned ,hodfkin lymphoma was also mentions ..forget what was asked
- M M

- Infliximab given..First check for TB

7-June 23

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

1) Nisseria gonorhea (2)

2) → diffuse, joint pain, fever, rash, UTI
recurrent Hx → complement deficiency
→ pictures (2)

2) CMV → AIDs, bloody diarrhea, intracytoplasmic inclusion

3) EBV → ∘ hairy leukoplakia
↓ ∘ latent phase on which cells → B-cells.
Biopsy reside / recurrent T-cell macrophage

4) Hypersensitivity (3)
1) Role of which cells type 1 → mast cells.
2) which protein involved - major basic protein.
3) type 3 - (2)
∘ serum sickness
⊙ CML/CLL - drug given - which reaction - drug reaction or type III

5) tryptase → released from mast cells.

6) CML - long duration
Leukemoid reaction - ~~↓~~ score

7) Multiple Myeloma → lytic bone lesion, old age, bone pain, wt loss, ↑ Ca
↓
Question in UW

From the desk of :

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

69) prions disease.

70) narcolepsy → biopsy → ↓ orexin

71) anorexia nervosa. → ↓ wgt loss, laxative abuse.
↓ what helps w/ diagnosis
✓ body image distortion

72) bulemia → 20s young, stressful job, guilt → vomit?
↓
UW

73) splinter hemorrhage → old pt, confusion, seizures, murmur, fever
↓
infective endocarditis

74) wrinkling w/ age → ↓ elastin.
↓
UW

75) Impetigo (bullous)

76) pampigous vulgaris → S

77) tay sach disease → no hepatosplenomegaly

78) # middle age male sleeping, arm pain
↓ xray → fracture → diagnosis → paget disease

79) hodgkin lymphoma → CD 15-30

80) axillary LAP → follicular Ca → BCL2 → apoptosis

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

54) thiazide diuretics.

55) ECG 3-4 (pericarditis

56) sotelol → Q-T prolongation.

57) biopsy
Wilsons disease — Cal oxalate kidney stones

58) trauma Hx, renal issue, granular casts.
↑ are → regeneration of tubules.
↓
UW

59) wilms tumor → (R) side limb hypertrophy
organomegaly.
macroglossia

60) thiazide diuretic → muscle weakness → K ↓
UW

61) atherosclerosis → chest pain
↓
which cells involved
↓
monocyte.

62) hypocalcemia, (N) PTH → PTH rec: ?
vit D rec:

63) holoprosencephaly → defect
↓
biopsy

64) down synd → congenital toxic megacolon

65) achalasia → bird beak appearance.

66) Schizophrenia → social withdraw.

67) PTSD → nightmare, quick Hx

68) ADHD → mechanism of drug action.

92) hyperthyroism → typical finding
(2) ques → what additional finding
↓ lid lag.

93) ↓ phosphate ✓

94) DM → old age on metformin, wgt loss, ↓ apetite → 2° to ? → gastroparesis (of DM)

95) SLE → nephropathy, proteinuria
↓ against which antibody → SS

96) ovarian Ca → ascites, origin of tumor cells
↓ fibroblast or epithelial ?

97) ~~HPV — experimental — E7 supression~~
which cells affected → squamous cells.

98) pic of nerve →

99) restrictive lung disease — graph
↑ old age progressive SOB — changes due to ?

100) 32 weeks pregnant pt, labour,
1 drug given → muscle relaxant →
next drug to given → glucocorticoid

101) epidural

102) ~~Pneumocystic jiroveci~~ (2) ques.
pictures- ~~[illegible]~~ silver stain
methenamine

81) polyarthritis nodosa → transmural inf
↓ biopsy → additional hep B Hx.

82) Sarcoidosis →

83) pregnant pt → U/S prenatal → ileal atresia → drug abuse → cocaine ~~[illegible]~~ abuse

84) ~~inhalant~~ CNS depressing symptom
acts on rec → GABA.

85) alcohol withdrawal synd → benzo.
control by

86) azathioprine → bone marrow supression

87) fem, breast lump, Hx of mother, paternal uncle prostate Ca, which cancer is ass: → ovarian.

88) Lynch → microsatellite instability

89) PNH → cytopenia, ~~[illegible]~~ urine dark colour — flow cytometry → CD55
↓ biopsy

90) Nerves → thumb dermatome — C6
→ median nerve damage

91) MELAS → lactic acidosis, stroke,
↓ mitochondria

Date: Monday Saturday

131) postmenopausal changes → hormonal changes.

↓ estro pros
↑ LH FSH.

132) unprotected sex → pregnancy → how to stop 6hrs back

↓

progestin only pill.
~~group~~ ○ Spermicide
asked target → ✓ progesterone

133) Aortic Stenosis → can cause HOCM → S4 sound → concentric

134) Maneuvers where asked generally

135) Polycythemia Vera → Typical features
JAK-2 Mutation

136) JAK-2 → Receptor Mechanism
↳ non-Tyrosin rec. kinase

137) Middle aged women → MDD diagnosed and also have IBS, what drug was given which help in IBS symptoms.
May be: Serotonin Ans.

From the desk of:
million Smiles FOUNDATION

Date: Monday Tuesday Wednesday Thursday Friday Saturday

121) Schistosoma → U/S migrated pt, kids played in ponds, periportal fibrosis

↓
mansoni.

122) Atrial fibrilation

123) Pneumothorax → trauma Hx, chest hyperresonant, complication?

↓
↓ breath sound
↓ fremitus.

124) old pt 70y, taking aspirin, FOB test +ve + another day. anemia, fatigue

↓
aspirin induced
or
malignancy

125) forgetfullness, 80y, movement abnormal
↳ daughter gave Hx.
parkinsons or alzheimer

~~126) testicular torsion~~ - rete testis.

~~127) cryptoorchidism~~ → undescended testis now
Hx

↓
gubernaculum
or
urogenital groove.

128) measles

129) epididymitis. → scrotal swelling ± pain, inflammation.

130) endometrial Ca → postmenopausal bleeding
50+ve pt - reason of bleeding
Risk factor → BMI.

From the desk of:
million Smiles FOUNDATION

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

111) pt ē advance melanoma. mets to lungs, reason of mets → invasion of basement membrane.

112) fibroid ↔ confusing question. uterus → enlarged. or adenomyosis

113) bias → lengthy scenario, controlling BMI maldjusted ??? ↓ aspect of confounding.

114) cohort

115) 2ndary prevention → doctor contracts ē goal to ↓ incidence of advance lung cancer. ↓ early screening

116) pancreatitis case (Q) ↓ pt admitted for 3 days → respiratory symp, ARDS → damage to endothelium

117) pt operated for pancreatic Ca → pancreatico duodenectomy, colectomy → ↓ absorption

118) gastric ca → cells → desmin +ve, spindle cells ↓ Rhabdomyoma.

119) female pt 1° burns, Hx of multiple hospital admissions. → factitious

120) young pt ē seizures → but all test normal ↓ psychiatric nonepileptic seizures. benign epileptic

From the desk of: million Smiles FOUNDATION

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

103) Candidas thrush

104) hypovolemic shock ↓ reason → preload (biopsy or UW)

105) minimal change disease

106) Reinforcement - child goes shopping ē mother → ask to buy toy cry - dragged more than beating then next time gives him the toy

107) avoidant → 18 y old boy ē mother to door but doesnot talk to girls, shy,

108) child abuse → 9 months child, fall from bed to ER, ecchymosis on body, multiple #s what wideall nonaccidental injury → multiple injury

109) ethics → 35 y old breast Ca, on chemo frustrated, want to stop Tx doctor response ↓ think of children.

110) Interpreter → female for delivery, no contractions, C/section planned language barrier ↓ call inter preter ↓ medical student.

From the desk of: million Smiles FOUNDATION

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

150/ Lenia Corporis → treatment
MOA ?

151/ patient went on trip → drug abuser → findings Na^{+} : 140
Hcarb : ↓
Metabolic Acidosis

What could be the drug ?
Answer: Methanol toxicity.

152/ pt undergoing surgery → diagnosed case of ↓ close Angle glaucoma
which drug would be avoided ?
Ans: Muscarinic Antagonist

153/ Allergic Rhinitis typical hx of allergic → diphenhydramine
? drug was taking what will happen
Ans: ↓ Uterine muscle tone

From the desk of :

Tineal's Test of the ankle

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

143) Ankle problem → Tineal sign ?

144/ Anal fissure → Pain + constipation

145/ Cortisol → Muscle pain, weakness, hypopigmentation. what's the defect ?
Answer → ↓ Cortisol → ↑ACTH

146/ Adrenal medulla → Location of tumor. Pheochromocytoma.

147/ 11β hydroxylase + 21 read aswell.

148/ HmG Co.A patient was taking this drug showing symptoms of myopathy - basically asked cause of myopathy the answer is HmG Co.A reductase.

149/ post. MI finding ?
papillary rupture. other findings were not satisfying.

150/ Anti phospholipid
pt with multiple abortion, thrombosis, ~~pregnancy~~ simply asked the Dx ?

From the desk of :

ate: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

58/ behavioral changes the case was all about frontal temporal dementia what is additional finding?
Ans: ↓ marked language.

59/ pt was taking OCPs sth found on ultrasound there was hepatic mass. hepatic adenomas.
Ans: ~~hepatoadenocarcinoma~~

160/ typical case of Anaphylatic case which structure involves
C3, C5 activates chemotatic (factors)

161/ ate shellfish from local rest: Now

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

154/ Congenital diaphragmatic hernia.
all typical feature what is defect? or maybe complication → Ans: pulmonary hypoplasia.

155/ Gall bladder :)
- Cholesterol stone

156/ post surgical pt, IV supplements taking ↑ risk of what?
Ans: Cholestasis → stone formation.

157/ pt with Abdominal bruit, Hypertension
Answer: Renal artery stenosis
CT was given (it was confusing IdK exactly)

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

138) B/L Wheezing and Desloflurane given Before/after surgery → Ans: Bronchocontriction.

139) Malignant hyperthermia → Young male pts → ~~after~~ surgery was planned, gave history of fathers death due to Malignant hyperthermia (mechanism asked)

140) Young Boy → swimmer → Thin Body and taking cimentidine → why creatine kinase is not raised in serum?
a) Exercise b) Decr Muscle Mass

141) Acute Dystonia → hx of hallucination, or any ~~Dy~~ Psychotic Disorder and drug given which caused Muscle spasms.

142) Young pts → Back pain at night/Morning and ↓ with exercise
what can be further findings?
→ Ank wrists

From the desk of : _____

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

→ child come with mother → not taking vitals → nurse (natho wathar dhe). doctor enters what will be ~~epic~~ response, what brought you today.

→ transgender come → wants to change gender, doctor suggest papsmear. doctor said → pt says → previous emprince saky nahe rahyo.

a) tell me about your past emperince
b) explain to pt about procedure.

From the desk of :

million Smiles FOUNDATION

Date: ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

Axillary nerve → abduction + lateral area sensation loss.

→ Duptrens contracture → hand picture → fibroblast Proliferation.

→ Zinc → taste sensation loss, ganadal atrophy.

→ Relative Risk

trgp = 0.08 Cr = 0.14 =
Cr = 0.22
Ans = 0.3

→ 2 gps → Disease lung → pts and control gp → siblings → risk factor also present →
a) Slection bias b)

→ Study → end results seen by 3rd party → benefit → dec risk of bias

From the desk of :

million Smiles FOUNDATION

Date: ______ ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

→ Hydatidiform mole

→ Isolation → moth- Pregnant lady taken →
cranial-caudal axis

→ Striatum nigra → Dopamine.

→ lung capacity.

→ picture → leg swelling → pain
factor v leiden mutation.

→ copd → muscranic antagonist →
tiotropium ?

→ Hamestatis → pressure greater
in left gastric vein ~~artery~~

→ Descending colon → collateral
supply → a) splenic artery b) SMA
c) IMA d) rectal

From the desk of: ______

Date: ______ ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

Pt taking shellfish and taking multiple drugs taking also ACEI having edema of lips
→ Drug Induced.

→ baby → high saturation →
Inferior vena cava.

→ Multiple sclerosis → multiple history, optic nerve atrophy, parathesia → degeneration of Oligodendrocytes.

→ Question related to artery of adamkuteab. **Complete occlusion of anterior spinal artery**

→ Hämaturia → Pelvic straddle injury + pain → anterior urethral injury

From the desk of: ______

Date: ______ ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

19) Kernicterus →

20) Yersenia pestis → female, flue like sympt
2 cats infected by flea

21) Chlamydia – 2 questions.
– 7 weeks baby, atypical pulmonary symptoms, mode of transmission
↓
vaginal delivery

22) Shingles.

23) ~~giardia → pic~~
Giardia → young child; restricted growth
malabsorption, 2 graphs diarrhea.
↓
cyst in stool.

24) Skin lesion – histo pic
on ankle • Kaposi sarcoma
CD4 < 13 → ✓ bacillary

25) toxoplasma — CT scan pic

26) Spirochete ← arm lesion, erythema migrans
Lyme disease redness.

27) Mcardle – enzyme → muscle phosphorylase (venous lactate curve flat)

28) ~~[illegible]~~ → Pompe → cardiomyopathy, enlarge tongue. lysosomal α 1-4 glucosidase.

29) G6 Phosphase deficiency

30) FA oxidation → hypoglycemia, ketones
B-oxidation

31)

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From the desk of: ______

Date: ______ ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

8) 59 y old colonic malignancy family Hx –ve.
[Q in UW] → sporadic mutation development.

9) Skin infection (lesion), cardiac issue
asked about mutation → TS 1 – hamartin

10) MEN 2B → mucosal neuroma.

11) Fragile X synd → large jaw,
(2) maternal uncle autism
MVP.

12) ~~[illegible]~~ Vit K → bleeding, post translation
→ and ~~glycosylation~~

13) vWB disease → young boy, trauma, joint swelling, family Hx +ve
↓
[UW] similar Hx
↑PTT ↑BT (not ↑ in hemophilia).

14) Vit C → clear case.
perifollicular, periosteal hemorrhage, course hair.

15) Iron deficiency anemia – absorption in → dud

16) Giardia lamblia – clear case pic
Q → how mechanism of cause of diarrhea.
→ ✓ villi atrophy

17) Babesiosis → flue like symptoms, travel Hx to certain area, rapidly progressive,
where travel?

18) ~~histoplasma → typical finding, pulmonary sym location.~~
[UW]

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From the desk of: ______

3rd June 2024

Asbestosis question..

TIPS

ANOSMIA.

GLANS PENIS…NO

DEEP.CERVIC Mcardle

Crepitus

Before commencing TNF A…DO

Like 5 ethics each

Hyoeracute…Preformed against donor or recipient

Influenza vaccine against (deleted,repressed or methylated heamaglutinase) Marked elevated beta HCG following Dnc ..diagnosis.

Chronic fatigue syndrome

Sarcoid…what's responsible for the hyeprcalcemia?..no macrophage related option Lung cancer…What is responsible for hyperglycemia.

3 easy case of AIN

Serum sickness

Adrenal cancer ,drains to paraotic? PNH..complement mediated

intramuscular hemolysis TNF alpha…fever..no IL

1 in the option

PPD 2 questions on type 3

Wescott aldrich…eczema..very confusing

Bruton…I failed this

Visted Kenya and malaria…without prophylaxis

PCP..MOA OF TX..

T.GONDI…mulptie ring enhancing lesion

Ascari lumbricoides…very t

Lateral spine for S.mansoni..what to do to reduce it..something about treating snail contaminated water or something KS ..HH8

EBV…NASOPHARYGEAL CANCER..I failed this

Classic case of dengue with retro orbital pains Intravenous drug

use…with TB…deranged liver enzymes.

Micorenencphaly…periventricula calcifi..what other hand

DDapsone.methhemoglobinemai
Blue tinged ..sildanil...then, asked MOA

MoA of NRT DRUGS...was asked in an experimental question

Cancer..decrease e cadherin

Physiology changes in age(Reproductive changee)

Wound healing...after 3weeks..what will you see...scar tissue or granulation? Tumor stage involving Lymph nodes..read around it

Mechanism of sildanil...CGMP

2 QUESTIONS ON MORTALITY CAL TYPE 2

ERROR

ETHICS..Using someone in ICU for a research.....breach

autonomy. Xanthomas..LDL RECEPTOR

3rd degree block

Infective endocarditis case..with GI procedure..organism?
ADH..hypothalamus

21 hydroxylase case

Leptin

Primary hyperthyroidism Men

2B

TIPS

EXTERNAL HEMORRHOIDS

THROMBOSIS Diagram to point where PPI inhibit. Page 406 FA

Foul smelling…lipase Def Celiac dx: Something about gluten.

Tnf alpha…PPD

APPENDICITIES:…very weird. About 3 cases

of iron Def anemia

Hereditary spherocyctosi…Defective protein Senile purpura

Various Forms of vit c question SCD…AVN…? With long hx of intake if prednisone…
PNH.COMPLEMENT. HUS vignette...what other

Which muscle is attached to the 5th metatarsal bone..Peroneaus brevis.

Poplitary artery Kahala

Osteoid osteoma…respond to Nsaid

Vignette if pseudogout

TX of RA

SEPTIC ARTHRITIS

Knee Picture looking psoriasis..I chose something like hyperkeratosis

Glomus…smooth muscle cell3

Multiple sclerosis…Oligodendrocyte

Gliosis…astrocyte

REM…Nightmare

Brachioradialis reflexe..C5

REACTIVE GLIOSIS..ASTROCYTE MALIGNANT

HYPERTHEMIA..RYANODINE ADPKD..SACCULAR

ANEURYSM

Inferior alveolar nerve..3rd molar tooth..branch of trigeminal

Increased 14-3-3…spongiform cortex

Read up pilocytic astrocytoma

Fragile..CGG..hypermethylation Weber

test..AC >BC Benzodia..Flumezenil

Popular pst questions of MDD Case of brief

psychotic

Anorexia nervosa case…what happens to lab parameters..Na, K

Phenyclidine…Violent nystagmus
Opioid withdrawal. Dilated pupil

Something about antipychotic and gambling reflexe..C5

REACTIVE GLIOSIS..ASTROCYTE MALIGNANT

HYPERTHEMIA..RYANODINE ADPKD..SACCULAR ANEURYSM

Inferior alveolar nerve..3rd molar tooth..branch of trigeminal Increased 14-3-

3…spongiform cortex

Read up pilocytic astrocytoma

Fragile..CGG..hypermethylation Weber test..AC

>BC Benzodia..Flumezenil

Popular pst questions of MDD Case of brief psychotic

DOPAMINE AND NE

Accidental funding of one kidney ..what is reponsible…something about ureteric board.

PDA…NSAID ..GFR, RPF..ARROW QUESTION
Pct wahala..

Simple case MET ACIDOSIS..DAIRRHEA CAUSiNG NOrMAL

ANION GAP Acute interstitial nephritis. .like 3 question..very simple

Renal capillary necrosis…SCD Thin

vermillion…Fetal alcohol syndrome

Leaking feases via abdomen in a child.?

Paramesonephric wahala..mullarisan duct not developd..absent uterus and vaguna

Asthma ptx in crisis already on steroid..what to do jext..option has do nothing ..

Drainage of glans penis..no deep cervical on the option Findings of menopause…dry

vagaina..very confusing options Klinefelter

…dysgenesis of semiferous tubeless

Popular 5 aphasia reduxtase

Risk of choriocarcinoma with markedly elevated beta hcgBPD IN A 75YR OLD MAN..ASKED FOR THE BASIS OF SCREENING…AGE?

RESPIRATORY CHANGES IN ELDERLY with exercise …something about increased physiological dead space.

Methemoglinemia case following dapsone Laryngeal papillomatosis.

.

Asbetosis..lower lung

Many ethics..

This is all I can remember due to ..PTSD

Do Long ques and calculation in last
Confidence interval
PTH calcium absorb Phosphate exctetetion
Tumor met basement membrane or endothelium

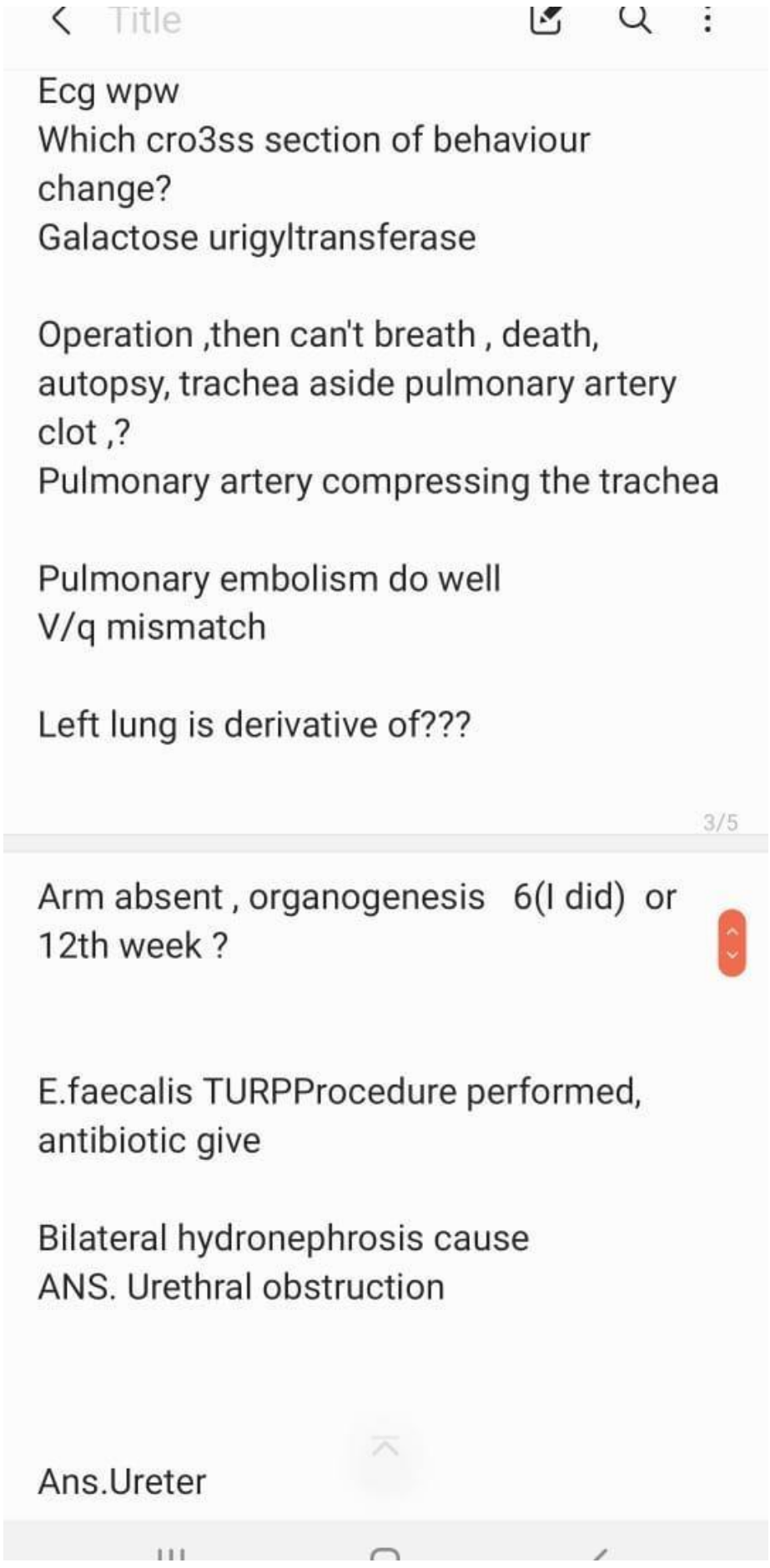
Formala
Ppv
RR
OR
Vitamins
Biochem reactions

2/5

Thenar muscle
Triceps lesion leaion one point C7?
Vertebrae concept
Facial nerve affected b/c forehead involved

Ecg wpw
Which cro3ss section of behaviour change?
Galactose urigyltransferase

Operation ,then can't breath , death, autopsy, trachea as ulmonary artery clot ,?



64) Lung CA → Radon.

65) Pneumoconioses Chant → Do it well
↓ 2 Ques.

66) ARDs → I marked Due to thick membrane formation
↓ they were asking for ↓PCO2 Something

54) Conduct Disorder

55) Conversion Disoder

56) MAO Inhibitors → Serotonin Syndrome

40) Porphyrias Screen. → Enzyme Asked.

41) Hemophilia B U world

42) CLL → Treatment.

Imantinib act on
ber abl

43) Thumb opposition → Median Nerve ?

29) NNT

30) Confidence Interval → Calculation
"n" given "SD given"

31) MRegurgitation → ↑ with ~~Stands~~ Squatting

Decrease with standing and valsalva
Inc with squatting increase

Bacteria → marked Nocardia
Aerobic
Gram - pleomorphic rod

17) Yersinia Enterocolitica scenario
Transmitted via pet feces
Ans Due to Animals.
Can cause acute bloody diaherrea
Can cause right lower quadrant abdominal pain due to mesenteric adenitis, terminal iliatis

18) Candida PH → Ans Neutral PH
options for Acidic & Basic
4.0 - 4.5

Constipation associated with diaherrea
Protraction of rectal mucosa through anus

19) In CV Rectal prolapse
Ans Trichuris tichiura.

20) Spindle cells in ~~Kaposi~~ CV, I dx it as Kaposi SA → HHV-8

Multiple ring enhancing lesion

21) Toxoplasma Gondii scenario → transmitted by Milk

22) Dicloxacillin → MOR
MRSA has altered Pencilin binding protein target site

23) Wound Healing → Proliferative → 3rd Day
Proliferative phase day 3 week after wound

24) Hemangioma → PIC → Derived from mesoderm.

25) Partial Agonist → Graph.

4) CF case → Steatorrhea is due to?
Any no options for Fat Soluble vit.
I marked Lipase.

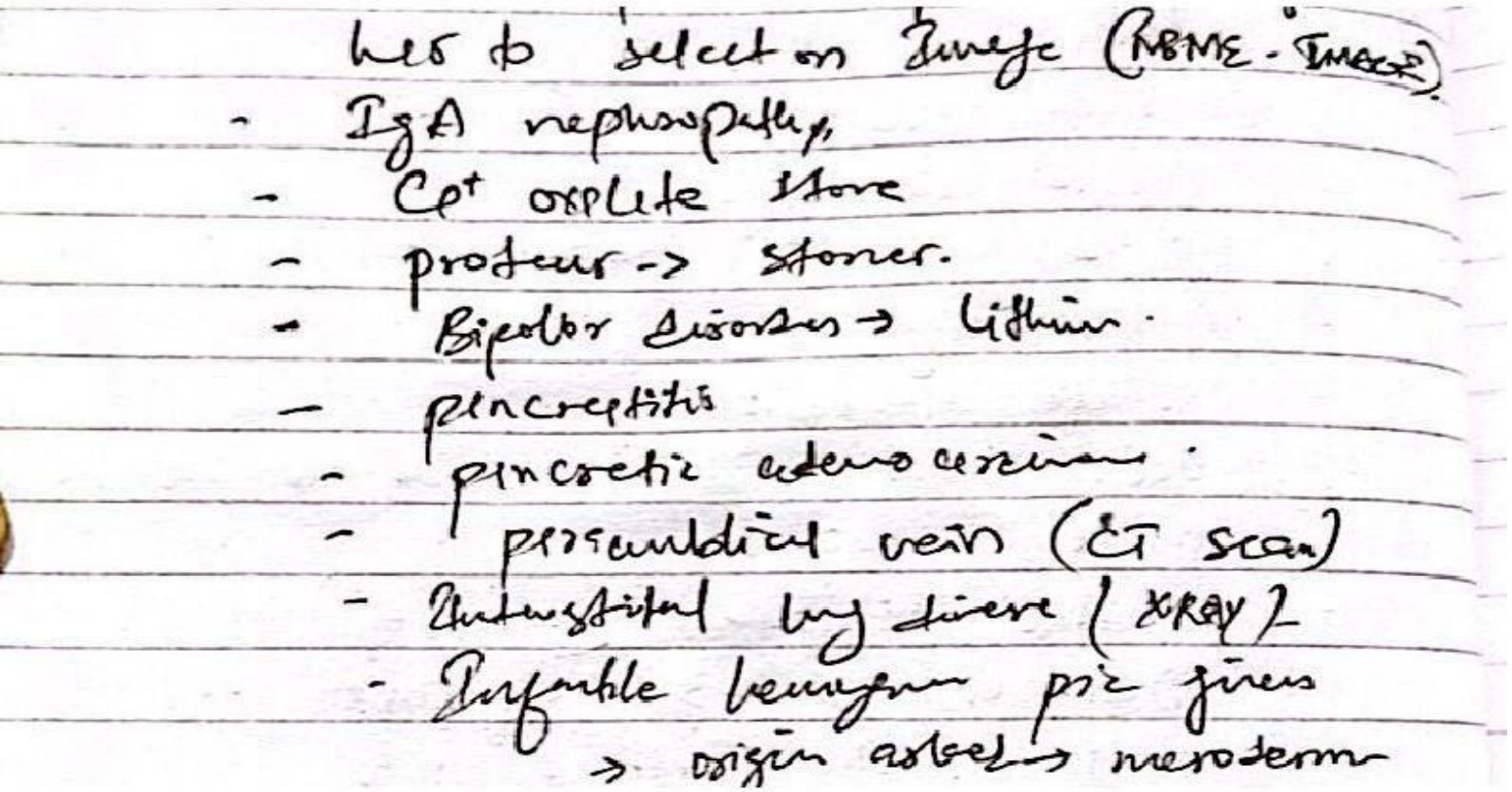
5) Fragile X syndrome → X-Linked Dominant.

:::Vit A -----scaly skin hepatotoxicity

- Squamous cell carcinoma of ~~vagina~~ cervix
- HPV dx
- IV drug abuser → S. aureus
- Leci cleavage - factor V Leiden defi
- Antiphospholipid syndrome
- SLE - dx
- Affinity maturation
- 10-12 new arrows Q (do nehlvam arrow)
- autoimmune hemolytic anemia
- TTP - PQ
- HUS -
- Polycythemia Vera.
- AML - histo dx - histo [illegible]

- 21 α-hydroxylase defe her to dx
- Androgen insensitivity syndrome
- restricted & short brachi at digits.
- " you have done great etc effects PQ.
- ancylostoma → Microcytic anemia.
- Iron def. anemia
- folate defs
- B12 -def
- vit E toxicity
- lysosomal defect → Tay sac disease
- lysosomal defect hunter. (New q)
- CI version
- Case report
- case control (new q: to me) hes to dx
- cross sectional

- reticulocytes - L5-S1
- Free fatty acid oxidation defect
- Beta blocker (New Q)
- Epinephrine + Drug A + Drug B + Drug C -
- Interaction b/w them.
  options were different (New Q)
- Tyrosine kinase inhibitor
- 14 d methylase inhibitor → Candida Q
- Biotin B7 defect/deficiency
- S. pneumoniae
- Wiskott syndrome
- Sub dural hematoma
- H pylori
- medication - central tolerance



- Border line personality (NBME- Q)
- ↑NAPQI
- ↓ glutathione.
- C3 - C5
- Varicocele New Q.

"different way"

- medial geniculate body.

- Dead
- Rehabilitation
- Altruism
- High ALK → lysosome
- glycogen storage disease - Mccardle.
- HSV. encephalopathy.
- Erythema Nodosum
- Alcohol use disorder
- opioid use- (pin point pupil)
- Anti HBs Ag after prick.
- solute transport
- deca Libido ⇒ what is libido acc. to you
- pelvic ischemia.
- cardiac tamponade (New Q)
- Delta wave ECG → wolf-park -
- right colic artery - PQ
- check for "ecchymosis.

Date

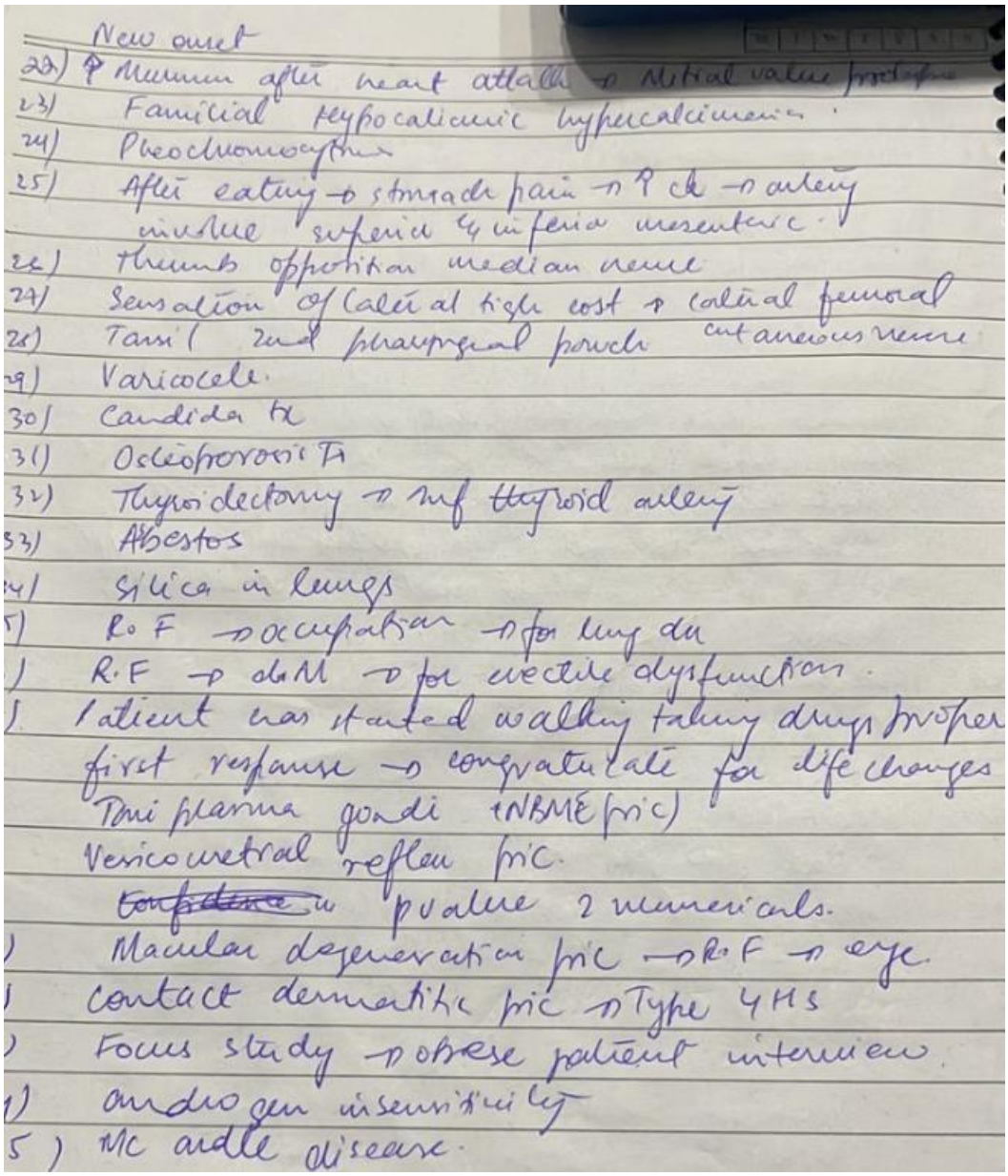
46) Scaphoid ~~fra~~ fracture pic
47) Rheumatoid arthritis patient → IL 17.
48) pancreatic pseudocyst
49) Treatment chemotherapy → 5HT3 antagonist
50) Myasthenia gravis
51) Lambert eaton syndrome.
52) ~~[illegible]~~
53) Recurrent absent seizure → Medial temporal lobe
54) Patient roams naked → histrionic
55) Alchol withdrawal drug → benzodiazepines.
54) Dec gene expression in fragile X → Methylation
55) Myotonic dystrophy → DMPK gene
56) Lynch syndrome.
57) lateral epicondylitis → forced extension causes pain
58) Fibromyalgia
59) Almost 15 ethics Qs
60) Detrusor instability
61) VSD
62) Atrial Myxoma
63) Cow milk large amount diarrhea → galactose / uridyl phosphatase.
64) Squamous cell Ca.
65) Vaginal Yellow discharge trichomonas,
66) MOA in gram -ve organisms → new cell form
67) Glans penis, lymph node superficial inguinal lymph node
68) anti cardiolipin → SLE female abortion

No. ______ Signature ______

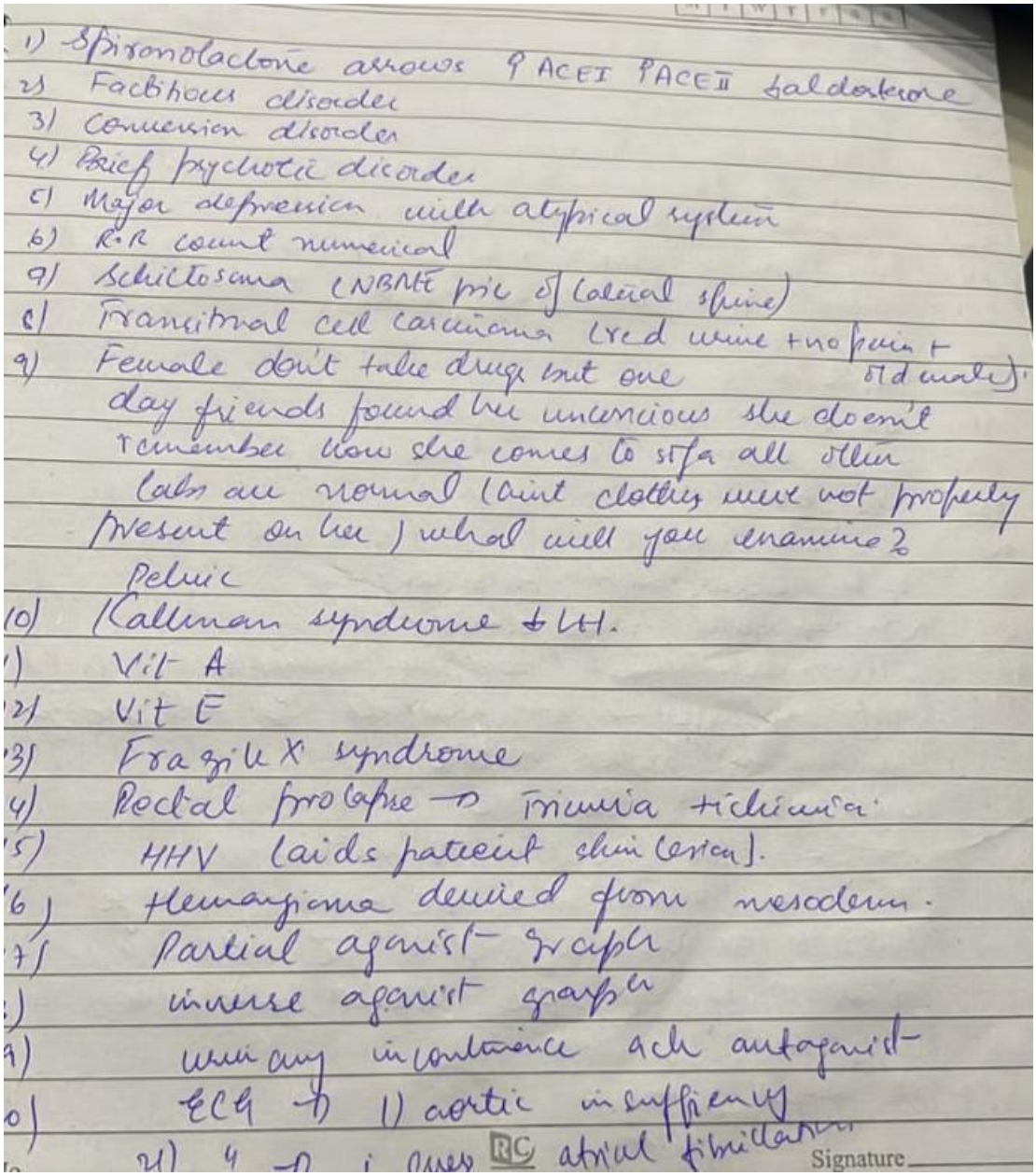
Date

M T W T F S S

69) HTN bu → hyalinosis arterioles in kidney
70) Fibro muscular dysplasia
71) old age female alzeheimer
72) Tetracycline rocky mountain fever → 30S inhibitor.
73) Pseudomonas case.
74) Cystic fibrosis lipase
75) cohort study.
76) ADHD inhibition of NE & dopamine
77) Vit K
78) Vit C.
79) clitoromegaly turner syndrome.
80) CN6 identify on pic
81) Enter room kid playing games dont want to talk first responce → hey I like playing games too.
82) Phase 4 drugs research
83) Interpreter Q → ifon patient interpreter
84) Renal → good will be on call
postture collagen 4.
85) ACEI → lisinopril → ↓ efferent constriction ↓ G.F
86) Benign prostat hyperplasia.
87) Adreno leukodystrophy → VLCFA in adrenal gl
88) Zolinger Ellison syndrome → P gastrin
89) Mixed cryoglobulinemia → hep C
90) Vit B6 ↑homocysteinemia.
91) Rabies uses dynein arm for retrogradetransport.
92) Bladder lymph node iliac.
93) PCO



New onset
22) ↑ Mumm after heart attack → Mitral valve prolapse
23) Familial hypocalciuric hypercalcimeia
24) Pheochromocytoma
25) After eating → stomach pain → ↑ ck → artery involve superior & inferior mesenteric
26) Thumb opposition median nerve
27) Sensation of lateral thigh cost → lateral femoral cutaneous nerve
28) Tarsal 2nd pharyngeal pouch
29) Varicocele.
30) Candida tx
31) Osteoporosis Tx
32) Thyroidectomy → inf thyroid artery
33) Absestos
34) Silica in lungs
35) R.F → occupation → for lung dx
) R.F → dx M → for erectile dysfunction.
) Patient was started walking taking drugs proper first response → congratulate for life changes
Toxoplasma gondi (NBME pic)
Vesicoureteral reflux pic.
~~Confidence~~ p value 2 numericals.
) Macular degeneration pic → R.F → eye.
) Contact dermatitis pic → Type 4 HS
) Focus study → obese patient interview.
1) androgen insensitivity
5) MC ankle disease.



1) Spironolactone arrows ↑ ACEI ↑ ACE II ↑ aldosterone
2) Factitious disorder
3) Conversion disorder
4) Brief psychotic disorder
5) Major depression with atypical system
6) R.R count numerical
7) Schistosoma (NBME pic of lateral spine)
8) Transitional cell carcinoma (red urine + no pain + old male).
9) Female don't take drugs but one day friends found her unconscious she doesn't remember how she comes to st/a all other labs are normal (Joint clothes were not properly present on her) what will you examine?
Pelvic
10) Kallman syndrome ↓ LH.
1) Vit A
2) Vit E
3) Fragile X syndrome
4) Rectal prolapse → Trauma ↑ clitoris.
5) HHV (aids patient skin lesion).
6) Hemangioma derived from mesoderm.
7) Partial agonist graph
) inverse agonist graph
9) urinary incontinence ach antagonist
0) ECG → 1) aortic insufficiency
2) 4 → ↓ RC atrial fibrillation

Signature