

Microbiology-Anatomy 2.0 BTR Test

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Cerebellum
Get the balance right

1. A 3-year-old girl is brought to the emergency department with abrupt-onset vomiting followed by frequent, large-volume, watery diarrhea for the last day. She has no prior medical conditions but has not received recommended vaccinations. Physical examination shows mild dehydration. The abdomen is soft and mildly tender to palpation throughout. Bowel sounds are increased. Polymerase chain reaction testing of the stool sample yields a virus with a segmented, double-stranded RNA genome. Which of the following pathologic findings is most likely to be present in this patient?

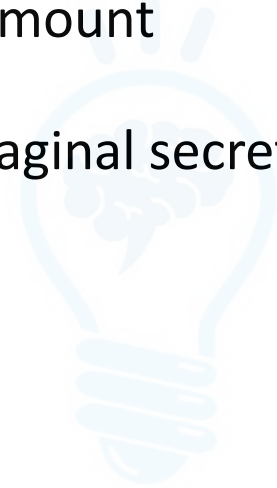
- A. Blunting of the villi in the duodenum and proximal jejunum
- B. Extensive colonic injury with yellow-white adherent layer
- C. Flask-shaped ulcerations in the cecum and ascending colon
- D. Foamy macrophages in the small intestinal lamina propria

2. A 40-year-old nulligravida woman comes to the office with a 2-month history of worsening right pelvic pain. She experiences the pain daily, and its intensity does not vary during her menstrual cycle. In addition, the patient's waist size has increased despite a decreased appetite. Pelvic examination shows an irregularly shaped, fixed adnexal mass. One week later, she undergoes surgery to remove a large ovarian neoplasm. Within the true pelvis, the surgeon can most likely palpate the right ureter immediately anterior to which of the following structures?

- A. Gonadal vein
- B. Inferior vena cava
- C. Internal iliac artery
- D. Uterine artery

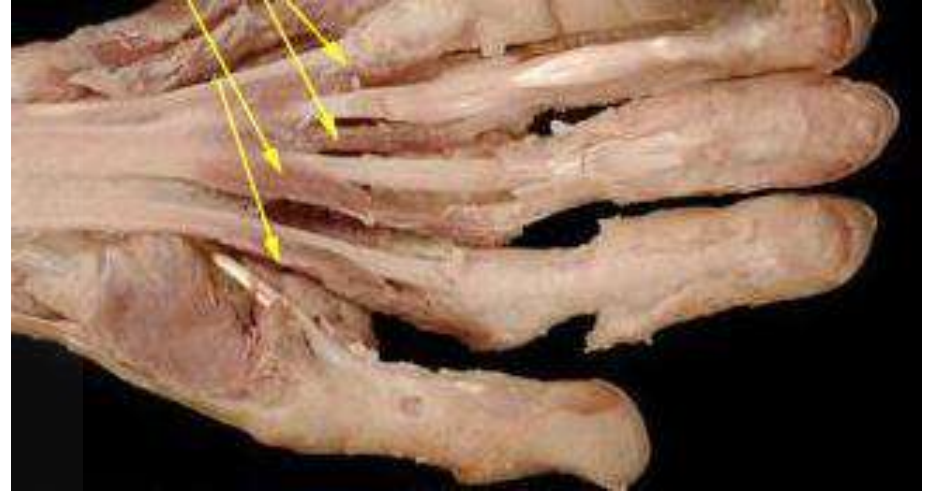
3. Which of the following statements is true about *Trichomonas vaginalis*?

- A. It cannot be cultured
- B. Twitching motility is seen on wet saline mount
- C. Cysts are seen on wet saline mount of vaginal secretions
- D. It is not a sexually transmitted infection



4. What is the function of the muscle marked in the image below, at the metacarpophalangeal joint?

- A. Flexion
- B. Extension
- C. Adduction
- D. Abduction



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5. A 24-year-old female presents to your office with burning urination, urgency and frequency. She is sexually active. Urine cultures show catalase-positive, gram-positive cocci. The organism responsible for this patient's symptoms is most likely to be:

- A. Coagulase positive
- B. Hemolytic
- C. Novobiocin resistant
- D. Yellow pigment producer



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6. A student got his jaw locked while yawning. Identify the muscle attached to the articular disc of the temporomandibular joint?

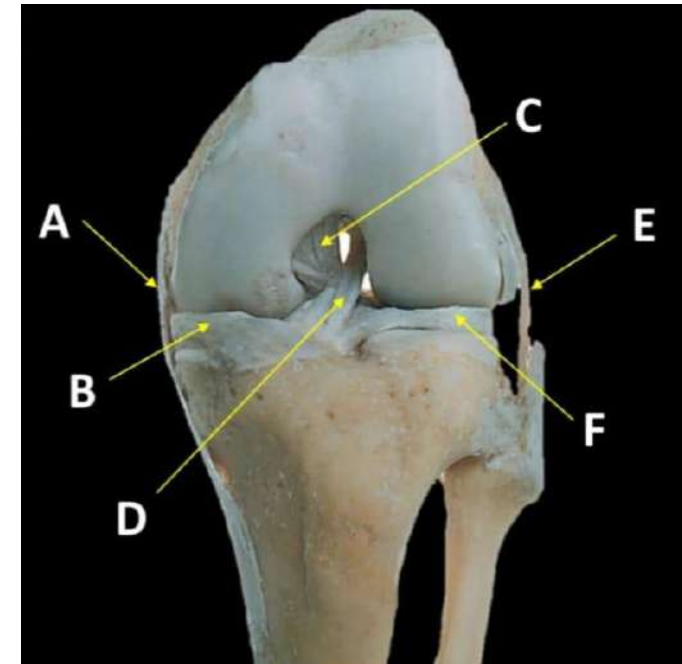
- A. Lateral pterygoid
- B. Temporalis
- C. Medial pterygoid
- D. Masseter



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7. O Donoghue triad of the knee joint involves which of the following structures:

- A. A, B, C
- B. A, C, E
- C. C, E, F
- D. B, D, A



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8. A technician wants to sterilize the material of the laboratory. Which of the following is a correct combination for him to use?

- A. Liquid paraffin- Hot air oven
- B. Heat sensitive vaccine: Pasteurisation
- C. LSS medium- Autoclave
- D. Catgut sutures- Autoclave



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9. A 23-year-old woman is brought to the emergency department unconscious after a motor vehicle accident. NCCT is shown here. A branch of which of the following arteries is most likely severed in this patient?

- A. Facial
- B. Maxillary
- C. Middle cerebral
- D. Sphenopalatine



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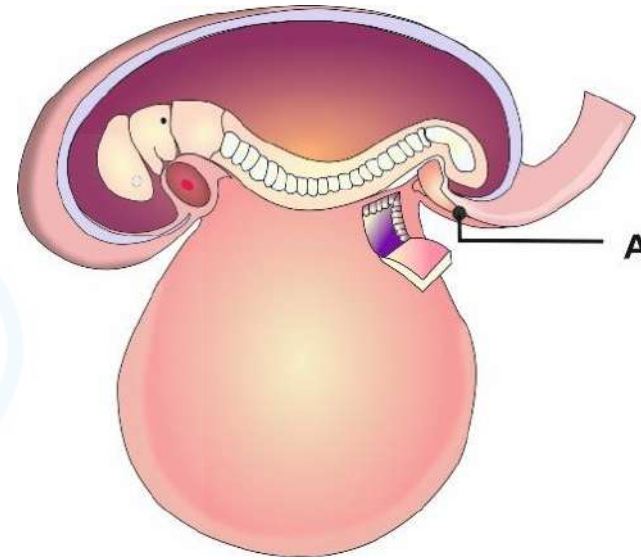


10. A 26-year-old man develops dysuria and purulent urethral discharge following unprotected sex with a new partner. Nucleic acid amplification testing is positive for *Neisseria gonorrhoea* infection. The patient develops antibody against the bacterial pili that enhance attachment to host cells. His symptoms resolve with adequate treatment. His partner does not receive treatment. Several weeks later, the patient develops *N. gonorrhoeae* reinfection after repeat exposure to the same partner. Which of the following is the most likely reason for the lack of long-lasting immunity against the bacteria despite antibody formation in this patient?

- A. Antigenic mimicry
- B. Antigenic variation
- C. Conjugative plasmid
- D. Low molecular weight antigen

11. Mark the option which develops from the structure marked A?

- A. Medial umbilical ligament
- B. Median umbilical ligament
- C. Meckel's diverticulum
- D. Ligamentum teres



12. A 63-year-old male with a history of gastrointestinal bleed has developed a sudden onset shortness of breath. Evaluation shows pulmonary embolism. A filter placement is planned to prevent further embolization. The filter will most likely be placed in which of the following structures?

- A. A
- B. B
- C. C
- D. D



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13. A lady from West Rajasthan presented with an ulcer surrounded by erythema on the right leg. Microscopy of the biopsy from the edge of the ulcer showed organisms with dark staining nuclei and kinetoplast. What is the most likely causative agent?

- A. *Leishmania tropica*
- B. *Babesia*
- C. *Trypanosoma*
- D. *Histoplasma*



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14. A 23-year-old primigravida woman vaginally delivers a 3600-g girl after a protracted labor. The patient sustains second-degree laceration and repair is planned. Prior to administering local anesthesia, the operator intravaginally palpates bony protrusions located posterolateral to the vaginal sidewalls that are distinct from the rest of the pelvic sidewall. A firm band can also be palpated running medially and posteriorly from the bony prominence to the sacrum. Anesthetic agent is injected around the bony prominence. Which of the following nerves is blocked by the injection?

- A. Genitofemoral
- B. Iliohypogastric
- C. Obturator
- D. Pudendal

15. The culture media shown in the image is an example of:

- A. Blood agar for Staphylococcus
- B. Selective media for EHEC
- C. Enriched media for Proteus
- D. Selective media for Vibrio cholerae

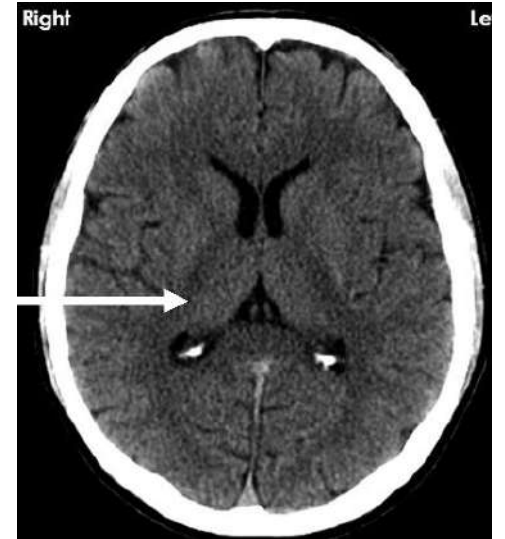


16. A 66-year-old man hospitalized 3 days ago for left lower lobe pneumonia is evaluated for persistent fever. He has been receiving the appropriate intravenous antibiotics as determined by antibiotic susceptibility testing of his sputum cultures. The patient has a history of diabetes mellitus and hypertension. His temperature is 38 C (100.4 F) and pulse is 87/min. Examination shows dullness to percussion and decreased breath sounds over the left lower lung. Imaging studies reveal a loculated, left-sided pleural effusion. A tube is placed to drain the fluid via an incision at the 5th intercostal space in the midaxillary line. Which of the following muscles is most likely to be dissected during the procedure?

- A. External oblique
- B. Latissimus dorsi
- C. Pectoralis major
- D. Serratus anterior

17. Which of the following statement is correct about the marked area in the given section?

- A. Charcot's artery supplies its posterior limb
- B. Sub lenticular portion contains optic radiation
- C. Largest association fibres in the cerebrum
- D. Injury to the genu will cause I/L facial paralysis



18. Identify the method of sterilization used below?

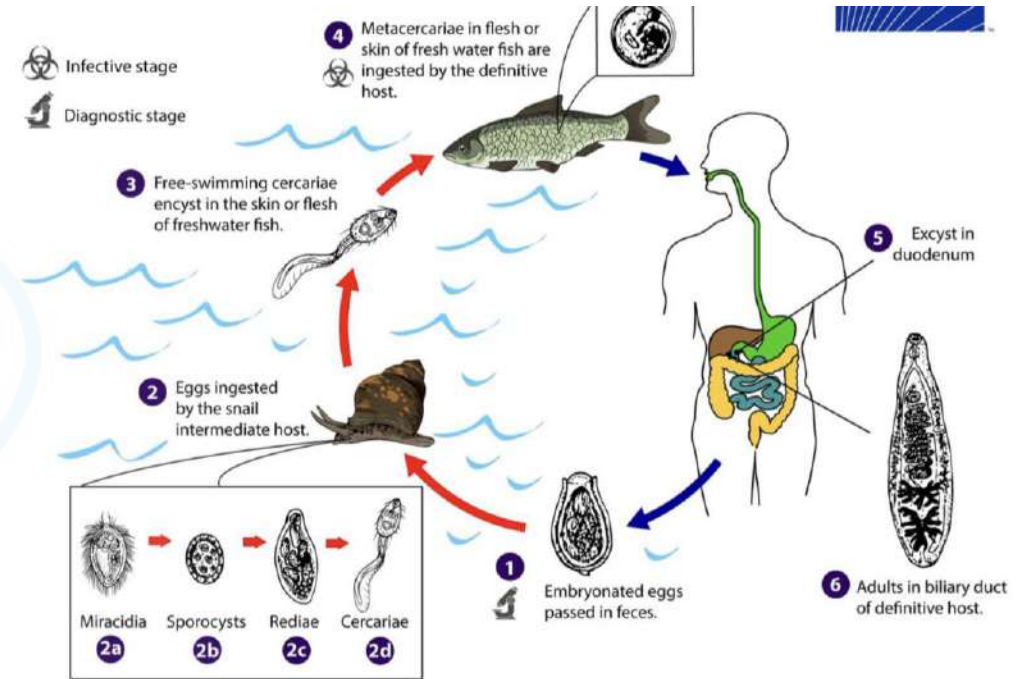
- A. Gas sterilization
- B. Plasma sterilization
- C. Pasteurisation
- D. Radiation



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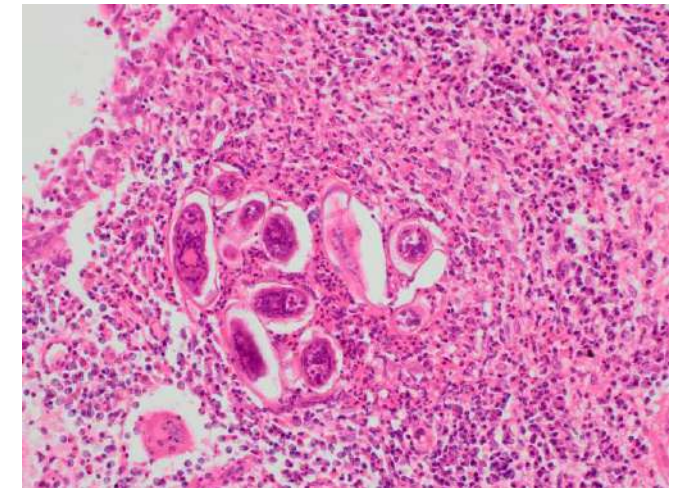
19. The organism whose life cycle is shown below is associated with which of the following malignancies?

- A. HCC
- B. Cholangiocarcinoma
- C. Gastric carcinoma
- D. Bladder carcinoma



20. A 54-year-old male is evaluated for several months of intermittent dysuria and gross hematuria. The patient notes that he passes blood at the end of urination but has no associated pain. Cystoscopy reveals erythematous areas in the bladder mucosa. Multiple biopsies are taken from the affected sites; histopathological findings are shown in the image below. Which of the following most likely predisposed this patient to his current condition?

- A. Chronic urinary tract obstruction
- B. Contaminated water exposure
- C. Cytotoxic immunosuppressant use
- D. Extensive cigarette smoking



21. Identify the correct statement

1. Type I collagen is seen in bone and elastic cartilage
2. Reticular fibres are present in lymph nodes, bone marrow and thymus
3. Right-left movement is by atlanto-axial joint
4. Costo-transverse joints are plane synovial joints

A. 1, 2, 3

B. 2, 3, 4

C. 3, 4

D. 1, 2, 3



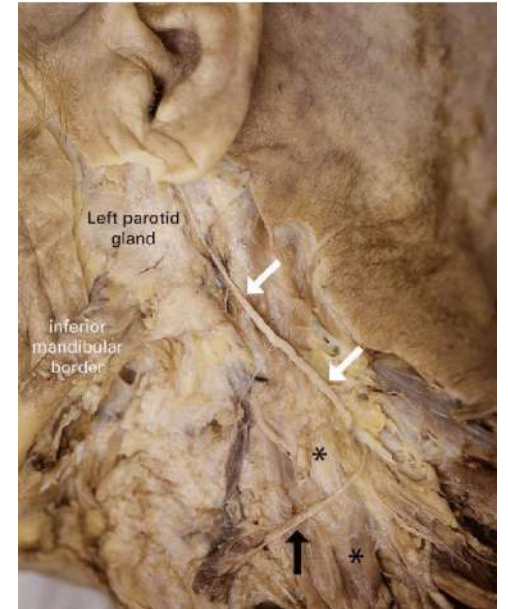
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22. Which of the given statement is INCORRECT regarding the marked nerve in the given cadaveric image?

- A. Supplies lobule of ear
- B. Secretomotor to parotid gland
- C. Runs with EJV in neck
- D. Innervates the angle of mandible

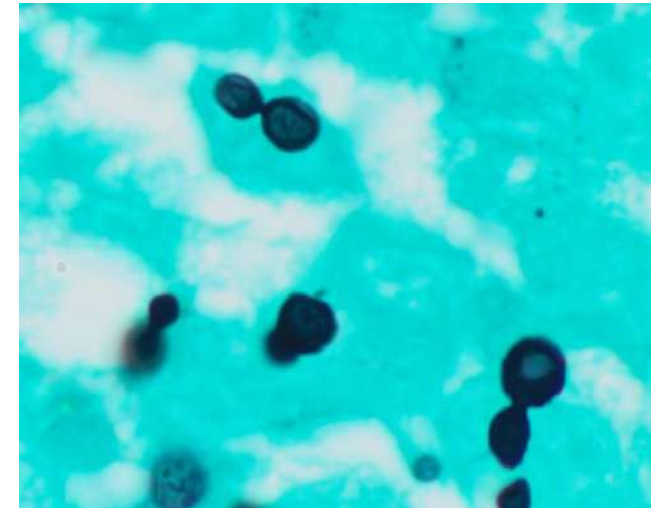


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23. A patient presented with complaints of persistent cough and weight loss. He had a history of contact with multiple sexual partners. He was diagnosed as HIV positive 6 months back and is poorly adherent to his medications. The fungal culture of sputum was negative. GMS staining is shown here. What is the most likely causative organism?

- A. *Paracoccidioides brasiliensis*
- B. *Histoplasma capsulatum*
- C. *Coccidioides immitis*
- D. *Pneumocystis jirovecii*



24. A 63-year-old woman has a right-sided ovarian mass found incidentally on transvaginal ultrasound. Surgery is planned to remove the right ovary, including the mass. To avoid excessive bleeding during the oophorectomy, the surgeon should ligate which of the following structures?

- A. Mesosalpinx
- B. Ovarian ligament
- C. Round ligament of the uterus
- D. Suspensory ligament of the ovary

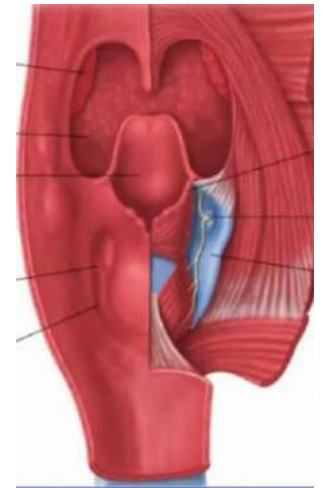


25. A 22-year-old male is brought to the hospital due to fever, frontal headache, photophobia, nausea and vomiting. Lumbar puncture was done and CSF analysis shows protein-20mg/dl, glucose-65mg/dl, total leukocyte count-200 with lymphocytic predominance. What is the most likely organism implicated in causing the above condition

- A. Neisseria meningitidis
- B. TB
- C. Enterovirus
- D. HSV-1

26. A 23-year-old man comes to the emergency department complaining that he has food stuck in his throat. His symptoms started 2 hours ago after eating fish at a local seafood restaurant. He has tried coughing and swallowing multiple times in an attempt to clear the food, but has so far been unsuccessful. The patient denies any difficulty with breathing. He does not appear to be in any distress on physical examination. Laryngoscopy reveals a fish bone lodged in the area marked by blue. During an attempt to retrieve the fish bone, a nerve is injured deep to the mucosa. Which of the following is most likely to be impaired in this patient?

- A. Cough reflex
- B. Gag reflex
- C. Mastication
- D. Salivation



27. A 70-year-old man comes to the office due to 3 weeks of unrelenting low back pain. He was grocery shopping when he first noticed the pain. The patient reports no trauma or leg weakness but describes having to strain to urinate. He has a history of hypertension and hyperlipidemia and has not seen a doctor in the past 5 years. His wife died a year ago, and he now lives alone. The patient is a retired construction worker and has a history of tobacco and marijuana use. There is tenderness in the lower vertebral area. Imaging study of the spine reveals several osteoblastic lesions in the lumbar vertebrae. Which of the following structures was most likely involved during the spread of this patient's disease?

- A. Azygos veins
- B. Internal iliac lymph nodes
- C. Pampiniform plexus
- D. Prostatic venous plexus

28. A microbiologist intern wanted to study cells and microorganisms. His senior advised him to use a light microscope. What is the correct arrangement from eye to the light source in a light microscope?

- A. Objective lens-> condenser-> eyepiece lens
- B. Condenser lens-> objective lens- eyepiece lens
- C. Eyepiece lens-> objective lens-> Condenser
- D. Eyepice-> Condensor -> Objective lens

29. A patient underwent surgery for the varicose vein. He now complains of sensory loss over the medial aspect of the leg and foot. Which of the following nerves is most likely to be injured?

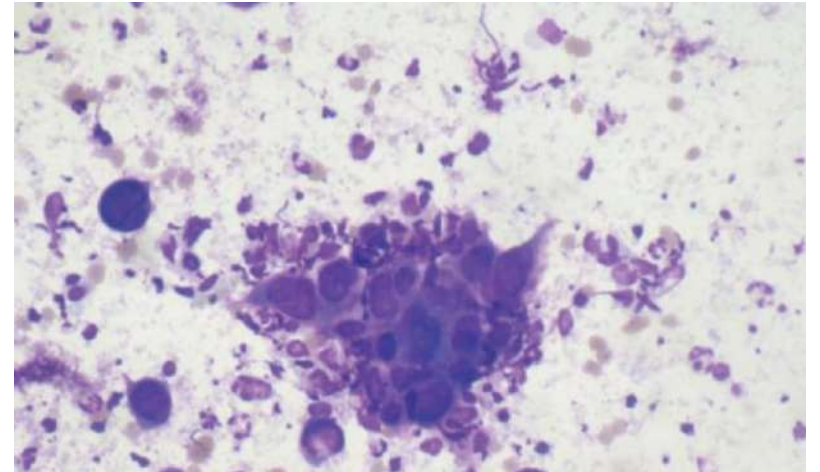
- A. Sural nerve
- B. Superficial peroneal nerve
- C. Deep peroneal nerve
- D. Saphenous nerve



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30. A 23-year-old man comes to the OPD due to penile ulcers that appeared after unprotected sexual intercourse. Physical examination shows 3 subcentimeter ulcers on the penile shaft. Microscopic examination of a scraping from an ulcer base reveals the following. Which of the following medications is most appropriate for this patient?

- A. Acyclovir
- B. Azithromycin
- C. Fluconazole
- D. Penicillin



31. A medical resident performs a diagnostic procedure on 32-year-old male. He inserts a needle along the upper border of the 10 rib at the right midaxillary line. Which of the following is most likely to be punctured as a result of the intervention?

- A. Right lower lung lobe
- B. Liver
- C. Intercostal artery
- D. Intercostal nerve



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32. A chest CT scan is performed on a 35-year-old man who presented with chronic cough and weight loss. Which of the following structures labelled below is a derivative of the common cardinal veins?

- A. A
- B. B
- C. C
- D. D



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33. A sewage worker presented with abdominal pain, jaundice, conjunctival suffusion, and blood in the urine for the past 5 days. Which of the following is the investigation of choice?

- A. Widal test
- B. Microscopic agglutination test
- C. Weil-Felix reaction
- D. Paul-Bunnell test



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34. An 82-year-old woman is sent to the hospital from a nursing home after 2 days of fever, confusion, and lethargy. The patient has a history of mild dementia, hypertension, and osteoarthritis. Her temperature is 38.8 C (102 F), blood pressure is 90/60 mm Hg, and pulse is 116/min. She has mild suprapubic and right costovertebral angle tenderness. Her leukocyte count is 18,000/mm, and urinalysis is consistent with acute cystitis. A femoral venous access is planned for administration of intravenous fluids and antibiotics. The femoral artery pulsation is palpable immediately below the inguinal ligament. Which of the following describes the optimal cannulation site for the femoral vein?

- A. Immediately lateral to the femoral artery
- B. Immediately medial to the femoral artery
- C. Midway between the iliac crest and the femoral artery
- D. Superior and medial to the pubic tubercle

35. All of the following are true about endotoxin except

- A. Composition includes lipopolysaccharide
- B. Heat stable
- C. High Antigenicity
- D. Produced by gram negative bacteria



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36. A 71-year-old man comes to the emergency department due to sudden-onset vision loss in his left eye for one hour. He has a history of coronary artery disease, hypertension, and type 2 diabetes mellitus. On examination, the patient can see only hand motions through the left eye. Funduscopic evaluation of the eye shows a cherry-red spot in the macula with surrounding retinal whitening. Cranial nerve examination is otherwise unremarkable. There is a left-sided neck bruit on cardiovascular examination. Which of the following is the most likely path of the embolus causing this patient's symptoms?

- A. External carotid artery, facial artery, ophthalmic artery, retinal artery
- B. External carotid artery, ophthalmic artery, retinal artery
- C. Internal carotid artery, anterior cerebral artery, retinal artery
- D. Internal carotid artery, ophthalmic artery, retinal artery

37. 52-year-old postmenopausal woman comes to the office due to leakage of a few urine drops with coughing and sneezing. She has no dysuria, urgency, or changes in urinary frequency. The patient has had 3 spontaneous vaginal deliveries. Physical examination is notable for a mild cystocele. The patient is advised to perform exercises to strengthen her pelvic floor as part of treatment for her symptoms. Which of the following structures is the most likely target of the exercise?

- A. Bulbospongiosus muscle
- B. Detrusor muscle
- C. External urethral sphincter
- D. Levator ani muscle

38. Which of the following laboratory test is used to diagnose rotavirus diarrhea?

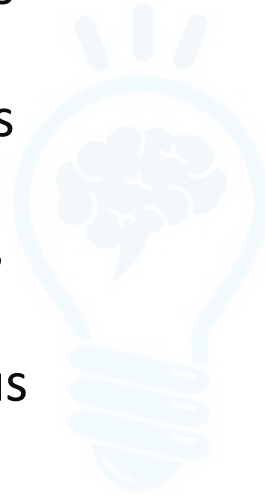
- A. Antigen detection in the stool sample
- B. Antigen detection in blood
- C. Antibody detection in serum
- D. Light microscopy of stool specimen



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39. Correct sequence of the muscles forming the floor of the femoral triangle in thigh from medial to lateral is-

- A. Adductor Longus-Pectineus-Psoas-Iliacus
- B. Adductor Longus-Psoas-Pectineus-Iliacus
- C. Iliacus-Pectineus-Psoas-Adductor longus
- D. Adductor Longus- Iliacus-Psoas-Pectineus



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40. A 36-year-old man comes to the OPD due to 2 months of fatigue, intermittent arthralgias, and poor appetite. Liver aminotransferases are elevated. Hepatitis serology shows the following:

Hepatitis A virus antibody: negative

Hepatitis B surface antibody (HBsAb): negative

Hepatitis B core antibody (HBcAb), total: positive

Hepatitis B surface antigen (HBsAg): positive

Hepatitis B E antigen (HBeAg): positive

Hepatitis C virus antibody: negative

Which of the following genome replicative processes is most likely used by the virus infecting this patient?

A. Double-stranded DNA -> double-stranded DNA template -> double-stranded DNA progeny

B. Double-stranded DNA -> RNA template -> partially double-stranded DNA progeny

C. Single-stranded DNA -> double-stranded DNA template -> single-stranded DNA progeny

D. Single-stranded RNA -> double-stranded DNA template -> single-stranded RNA progeny

41. The given condition is due to persistence of which of the following embryonic vessel?

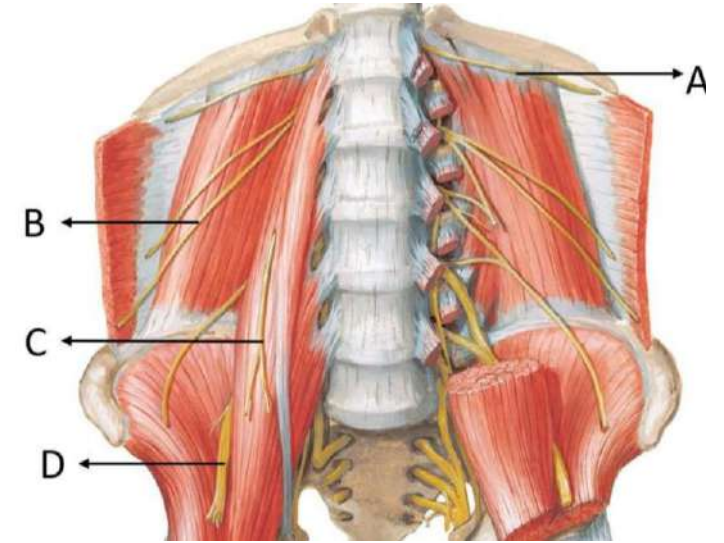
- A. Persistence of right dorsal aorta
- B. Persistence of left 4th arch artery
- C. Persistence of left dorsal aorta
- D. Persistence of left 6th arch artery



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42. Absent cremasteric reflex could be a result of injury to which of the following nerve?

- A. A
- B. B
- C. C
- D. D



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43. boy presented with a fever and chills. Rapid test was done and shown below. Which of the following antigens of Plasmodium is used?

- A. HRP-2
- B. LDH
- C. Aldolase-A
- D. Aldolase-B



44. A 34-year-old man presented with fever and massive splenomegaly. On palpation, the spleen was 15 cm and directed obliquely when measured from the right iliac fossa. Which of the following structures prevent the vertical and downward descent of the spleen?

- A. Lienorenal ligament
- B. Gastrosplenic ligament
- C. Phrenicocolic ligament
- D. Lienophrenic ligament



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45. Arrange the following in order of being most to least resistant

- A. Spores>Prions>Mycobacterium>Naked virus>Enveloped virus
- B. Prions>Spores>Mycobacterium>Naked virus>Enveloped virus
- C. Spores>Mycobacterium>Enveloped virus> Prions
- D. Mycobacterium>Naked Virus> Spores>Enveloped virus

46. 55-year-old female has been diagnosed with nasopharyngeal carcinoma that has spread to the sinus of Morgagni. Which of the following structures will be affected due to the spread in the sinus of Morgagni?

- A. Ascending palatine branch of facial artery
- B. Glossopharyngeal nerve
- C. Stylopharyngeus muscle
- D. Recurrent laryngeal nerve



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47. Which of the following is/are incorrectly matched?

- 1. Sternoclavicular joint – Plane synovial joint**
- 2. Wrist and knuckle joints – Hinge variety of synovial joints**
- 3. Middle tibiofibular joint – Syndesmosis**
- 4. Calcaneocuboid joint – Saddle synovial joint**
- 5. Elbow and ankle joint – Ellipsoid synovial joint**

A. 1,2,4

B. 2,3,5

C. 1,3,4,5

D. 1,2,5

48. A child was brought with complaints of high fever, multiple seizures, headache, and neck rigidity. CS analysis showed low glucose, high protein, and many polymorphs. The CSF culture showed pleomorphic gram-negative bacilli. What is true about the causative organism?

- A. It is bacitracin sensitive
- B. Produces non-lactose fermenting colonies on MacConkey agar
- C. Exhibits satellitism around *Staphylococcus aureus* colonies
- D. It exhibits alpha hemolysis on sheep blood agar

49. Pasteurization is done at?

- A. 73 degrees Celsius for 20 minutes
- B. 63 degrees Celsius for 30 minutes
- C. 72 degrees Celsius for 30 seconds
- D. 63 degree Celsius for 30 seconds



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50. A 6-year-old boy is brought to the OPD due to sore throat and fever. Examination shows mild tonsillar erythema with exudates. A sample from the exudates is obtained. On microscopic evaluation, there are clumped, gram-positive bacteria with polar granules that stain deeply with aniline dyes. Which of the following best explains the pathogenicity of the organism most likely responsible for this patient's condition?

- A. Increase cAMP
- B. Blockade of neurotransmitter release
- C. Widespread T cell activation
- D. Impairment of protein synthesis

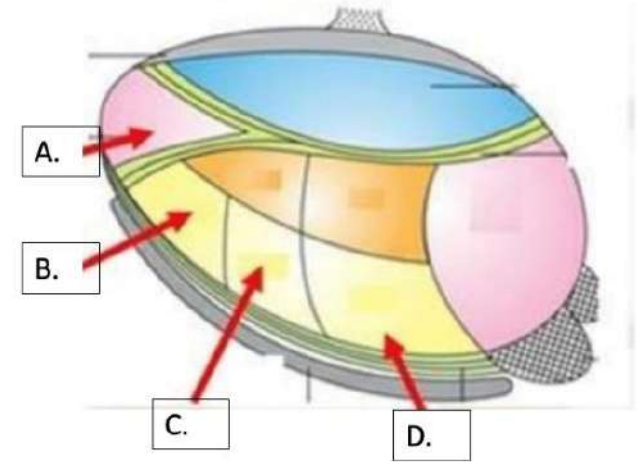


51. Fibres from mamillary bodies terminate at which of the following points?

- A. A
- B. B
- C. C
- D. D



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52. During the clinical examination of the nervous system, which of the following nerves can be tested by touching the highlighted structure?

- A. IX
- B. X
- C. XI
- D. XII



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53. Match the following

- | | |
|--------------------|------------------|
| A. BCYE agar | 1. Legionella |
| B. EMJH agar | 2. Campylobacter |
| C. PEMBA agar | 3. Leptospira |
| D. Butzler's agar. | 4. B.cereus |

A. A-1, B-2, C-3, D-4

B. A-1, B-3, C-2, D-4

C. A-1, B-3, C-4, D-2

D. A-3, B-2, C-1, D-4



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54. A 40-year-old female with breast cancer was taken for radical mastectomy and axillary lymph node dissection. A few weeks after surgery, she presents with weakness in overhead abduction and winging of the scapula. Which nerve is likely to be injured?

- A. Intercostobrachial nerve
- B. Long thoracic nerve
- C. Thoracodorsal nerve
- D. Axillary nerve



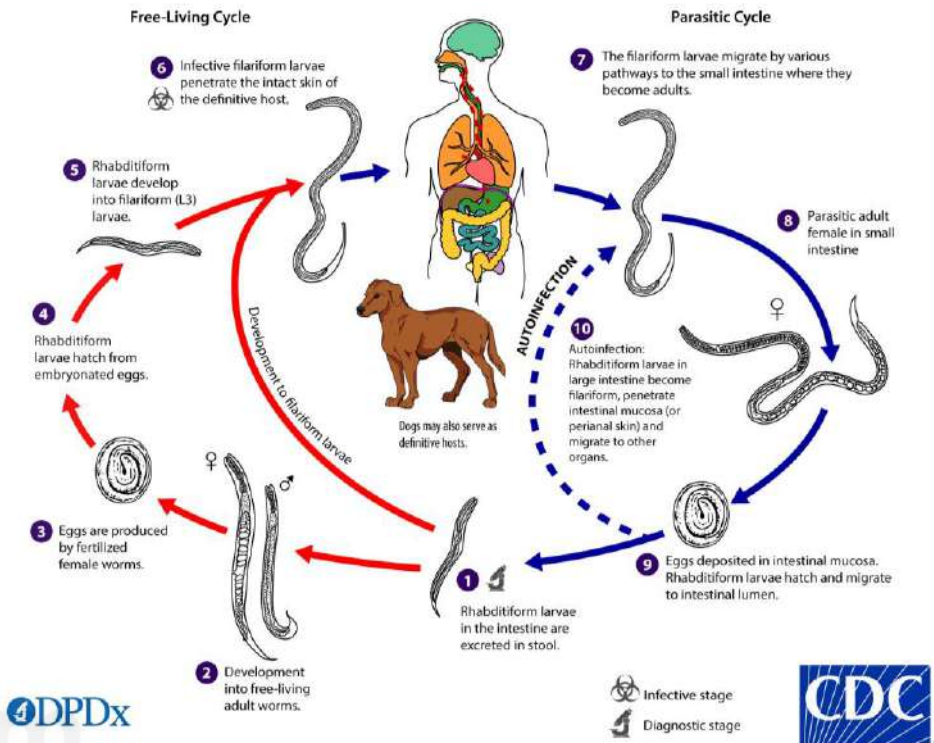
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55. 27-year-old man comes to the clinic due to abdominal discomfort and diarrhea. He informed that his symptoms began after he returned from vacation in Thailand two days back. On enquiry it was found that he happened to eat a lot of seafood. Stool sample was collected that revealed pink colored rods on gram stain. On wet mount, fish in stream appearance was seen. The causative agent acts on which of the following receptors?

- A. GM1 ganglioside receptor
- B. GM2 ganglioside receptor
- C. Sphingomyelin
- D. Cerebroganglioside

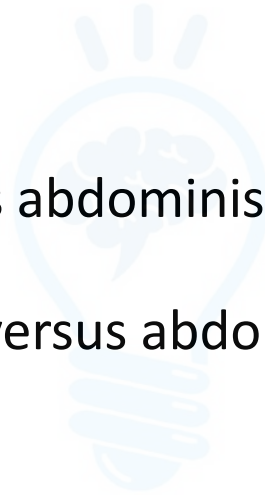
56. Identify the organism from the life cycle

- A. *Ancylostoma duodenale*
- B. *Strongyloides stercoralis*
- C. *Ascaris lumbricoides*
- D. *Enterobius vermicularis*



57. The neurovascular plane of the abdominal wall lies in?

- A. Between the internal oblique and external oblique
- B. Deep to transversus abdominis
- C. Between the internal oblique and rectus abdominis
- D. Between the internal oblique and transversus abdominis



58. A patient presents with gastrointestinal problems including abdominal pain and distension, bloody and mucus-filled diarrhea, and tenesmus, with rectal prolapse. A stool examination is shown. What is the possible causative agent?

- A. *Giardia lamblia*
- B. *Trichuris trichiura*
- C. *Ascaris lumbricoides*
- D. *Ancylostoma duodenale*



59. A 45-year-old patient presented with difficulty in foot eversion and sensory loss on the lateral leg & dorsum of foot. Which nerve lesion will lead to the following condition:

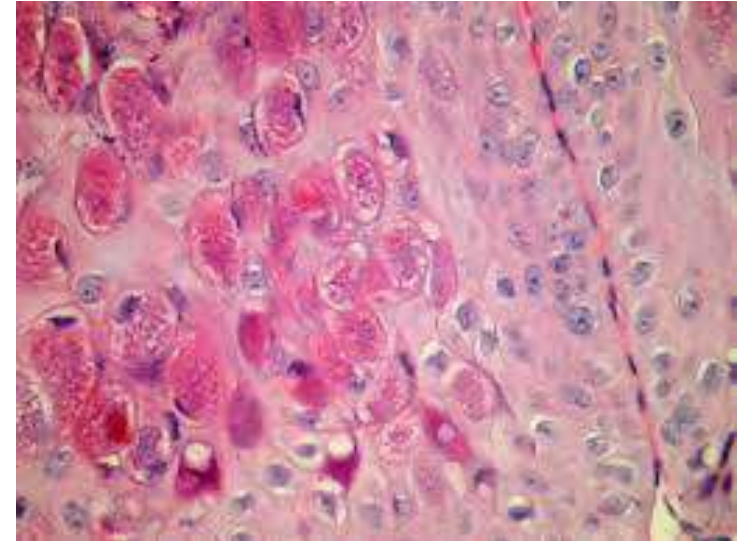
- A. Deep peroneal nerve
- B. Sural nerve
- C. Superficial peroneal nerve
- D. Saphenous nerve



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60. A 43-year-old, HIV-positive woman comes to the OPD due to lesions on her vulvar and perineal areas for the past 4 weeks. On examination, there are clusters of firm, shiny, round papules that are each 2-6 mm in diameter with central indentation. Microscopic examination of a lesion is shown in the image below: Which of the following is the most likely cause of this patient's presenting condition?

- A. Herpes simplex virus
- B. Human herpesvirus 8
- C. Human papillomavirus
- D. Poxvirus



61. Which of the following is not used for the identification of the facial nerve trunk?

- A. Retrograde dissection from distal branch
- B. Tragal pointer
- C. Inferior belly of omohyoid muscle
- D. Posterior belly of digastric



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Get the balance right

62. Identify the function of the muscle attached in the given pointed structure of femur bone:

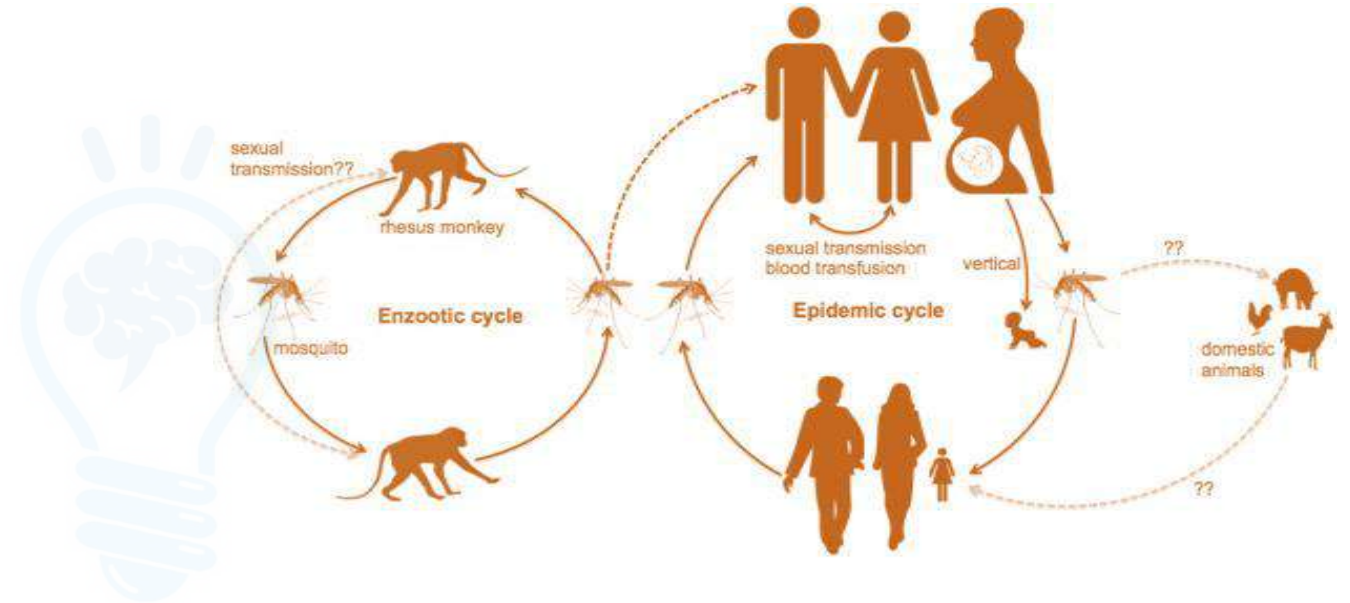
- A. Flexion of hip
- B. Extension and ER of hip
- C. Adduction of hip
- D. Knee extension



Cerebellum
Get the balance right

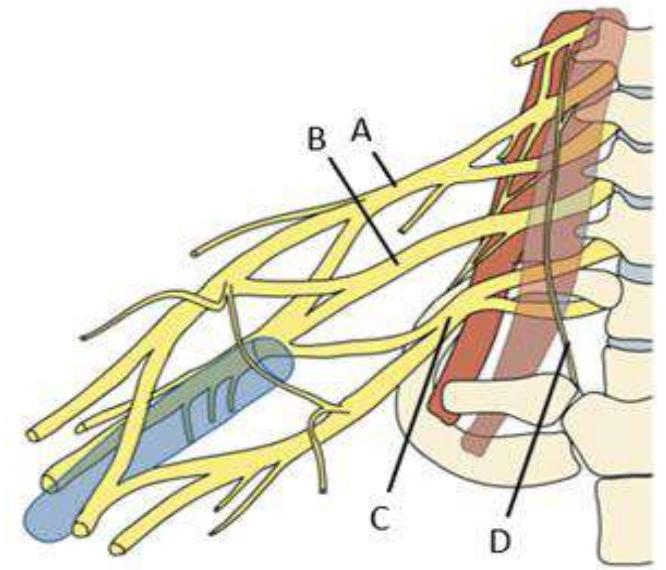
63. The infection whose life cycle is shown below is transmitted by:

- A. *Aedes aegypti*
- B. *Culex*
- C. *Anopheles*
- D. *Phlebotomus papatasi*



64. The man present with a case of cervical rib has tingling sensation and paresthesia on the medial side of arm. Which of the marked structure is most likely affected?

- A. A
- B. B
- C. C
- D. D



65. A 5-year-old child presented to emergency department with history of rhinorrhea and a mild non-productive cough and red eyes. He hasn't received his due vaccinations. On examination white lesions against red background seen on buccal mucosa as shown below. What is the likely cause?

- A. SS-RNA enveloped virus
- B. SS-RNA non- enveloped virus
- C. DS-RNA non-enveloped virus
- D. DS-DNA enveloped virus



66. Which artery can be palpated by gently pressing your fingers between the medial malleolus and the calcaneal (Achilles) tendon?

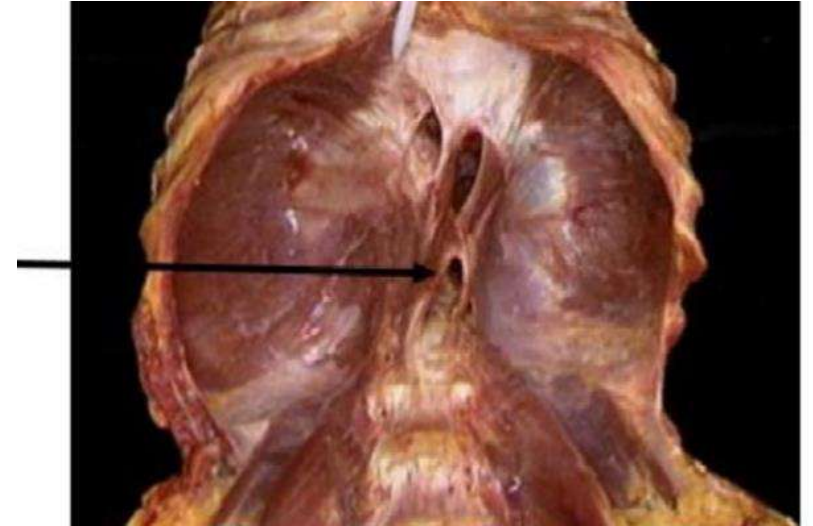
- A. Anterior tibial artery
- B. Posterior tibial artery
- C. Dorsalis pedis artery
- D. Popliteal artery



Cerebellum
Get the balance right

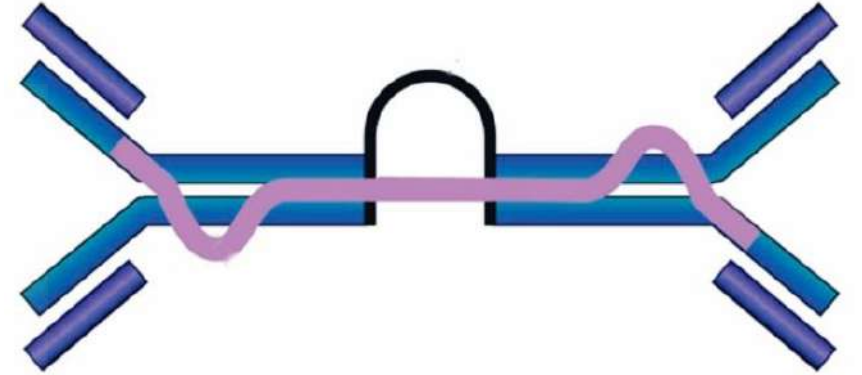
67. Which structure passes through the marked opening?

- A. Vena cava
- B. Thoracic duct
- C. Esophagus
- D. Phrenic nerve



68. Identify the class of immunoglobulin shown in the image below.

- A. Ig A
- B. Ig G
- C. Ig M
- D. Ig E



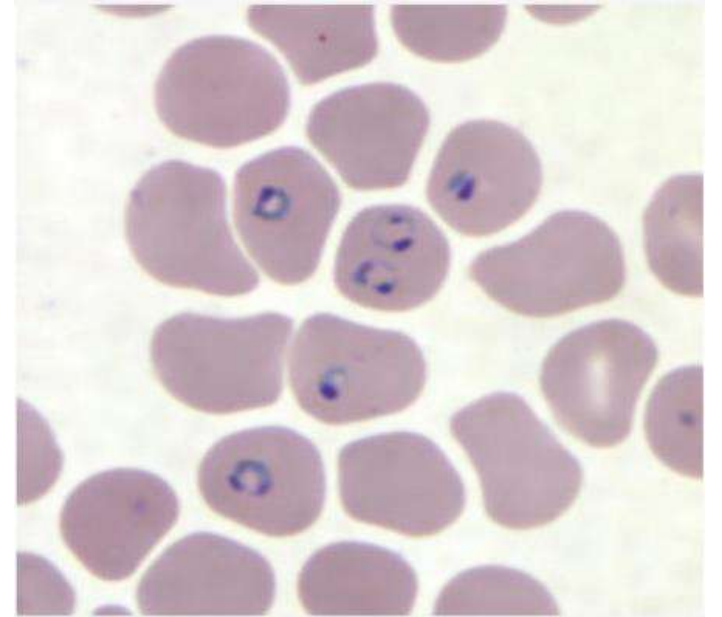
Cerebellum
Get the balance right

69. In a 30-year-old female from a tribal area who presents with fever for the last 3 days, which of the following is the most likely causative agent of her illness based on the peripheral smear?

- A. *P. falciparum*
- B. *P. malariae*
- C. Babesiosis
- D. *P. vivax*



Cerebellum
Get the balance right



70. A 65-year-old man comes to the emergency department with a sore on his right hand. The lesion began as a small, painless papule 3 days ago and rapidly enlarged and ulcerated. He is in the wool business and recently returned from a tour of wool-processing plants in several Asian countries. Physical examination is shown below. The toxin causing edema around this patient's ulcer has a mechanism of action most similar to a different toxin produced by which of the following bacteria?

- A. *Bordetella pertussis*
- B. *Clostridium botulinum*
- C. *Clostridium difficile*
- D. *Shigella dysenteriae*



71. Identify the true statements:

- 1. IVC passes through the central tendon of diaphragm**
- 2. Left superior intercostal vein drains into the azygos vein**
- 3. There are two dorsal interossei at the middle finger**
- 4. Superior relation of epiploic foramina is formed by the hepatoduodenal ligament and right adrenal**

A. 1,2,3,4

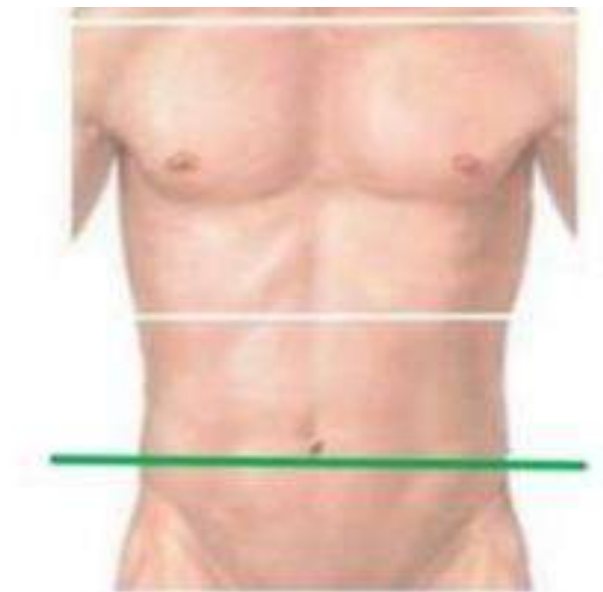
B. 1,2,3

C. 1,3

D. 2,4

72. The green line corresponds to which vertebral level?

- A. L5
- B. T12
- C. L1
- D. T10



Cerebellum
Get the balance right

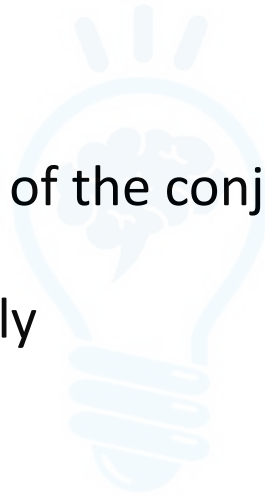
73. Which of the following is not true about Japanese encephalitis?

- A. Transmitted by Culex vishnui
- B. Pig is the amplifier host
- C. Man acts as the reservoir
- D. Vaccinating pigs is helpful in disease control



74. Which of the following statements is true about the iliopubic tract?

- A. It is a thickening of the lumbar fascia
- B. It lies anterior to the Poupart's ligament
- C. It inserts into the pubic tubercle in front of the conjoint tendon
- D. Its fibers fan out with fascia illaca laterally



75. Which of the following is not a β -haemolytic bacteria?

- A. Staphylococcus aureus
- B. Streptococci pyogenes
- C. Streptococcus viridans
- D. Streptococcus agalactiae



Cerebellum
Get the balance right

76. The following image is due to defect in fusion of?

- A. Medial nasal and maxillary process
- B. Medial nasal and lateral nasal process
- C. Maxillary and mandibular process
- D. Lateral nasal and maxillary process



Cerebellum
Get the balance right

77. The false statement about fetal circulation is:

- A. Anatomical closure of foramen ovale is by 3 to 5 days
- B. Anatomical closure of ductus venosus is by 3 to 7 days
- C. Right umbilical vein is absent
- D. Anatomical closure of ductus arteriosus is by 2 to 3 weeks

78. Which of the following is a bioterrorism category A agent?

A. Nipah virus

B. Yersinia pestis

C. Coxiella

D. Brucella



Cerebellum
Get the balance right

79. All of the following cranial nerve nuclei are part of special visceral afferent column except?

- A. Facial nerve
- B. Trochlear nerve
- C. Vagus nerve
- D. Glossopharyngeal nerve



Cerebellum
Get the balance right

80. A 3-year-old boy is brought to the emergency department due to high fever, vomiting, and lethargy. His symptoms started 1 day ago but rapidly worsened over the last few hours. Physical examination shows hypotension, tachycardia, neck stiffness, and a petechial rash over the trunk and lower extremities. While being evaluated, the patient develops apnea and systole. Despite aggressive resuscitation efforts, the patient dies. Autopsy would most likely reveal which of the following?

- A. Adrenal hemorrhage
- B. Cardiac tamponade
- C. Intracerebral hemorrhage
- D. Necrotizing pancreatitis

81. All of the following structures are derived from the aponeurosis of the external oblique muscle except:

- A. Pectineal ligament
- B. Inguinal ligament
- C. Lacunar ligament
- D. Linea semilunaris



Cerebellum
Get the balance right

82. Which of the following structures is responsible for the movement of the thyroid gland during deglutition?

- A. Pretracheal fascia
- B. Sternothyroid
- C. Thyrohyoid membrane
- D. Ligament of berry



Cerebellum
Get the balance right

83. A 3-year-old child presents with fever, loose stools, and blood in the stool. What is the enrichment medium used to isolate the organism from the stool sample?

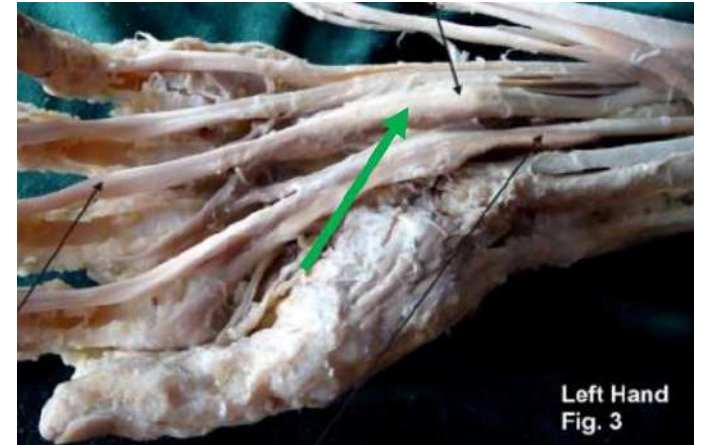
- A. Robertson cooked meat broth
- B. Alkaline peptone water
- C. Tetrathionate broth
- D. Brain heart infusion broth



Cerebellum
Get the balance right

84. What is the nerve supply of the structure marked by blue arrow in the image below?

- A. Posterior interosseus nerve
- B. Median nerve
- C. Anterior interosseus nerve
- D. Ulnar nerve



Cerebellum
Get the balance right

85. Match the following

A. Borrelia recurrentis

B. Rickettsia prowazekii

C. Rickettsia typhi

D. Rickettsia rickettsii

1. Flea

2. Louse

3. Soft tick

4. Hard tick

A. A-1, B-2, C-3, D-4

B. A-3, B-2, C-1, D-4

C. A-3, B-2, C-4, D-1

D. A-2, B-1, C-3, D-4



86. All are true about the part labelled here except:

- A. Derived from a type of atavistic epiphyses
- B. Gives insertion to pectoralis major muscle
- C. Short head of biceps takes origin from here
- D. Can be felt in the infraclavicular fossa on examination



87. Identify the microfilaria from the image:

- A. *Wuchereria bancrofti*
- B. *Brugia malayi*
- C. *Loa loa*
- D. *Mansonella perstans*



Cerebellum
Get the balance right



88. All of the following are true except:

- A. Dermis has dense irregular connective tissue
- B. Fibrocartilage, bones, tendons have collagen type I
- C. Hyaline cartilage has perichondrium with 2-4 chondrocytes in each lacuna
- D. Fibres from Inferior olivary nucleus directly reach the purkinje cells in cerebellum, which constitute the largest neurons in human brain

89. In a case of tinea capitis, white powdery colonies were isolated from the hair specimen. The hair perforation test was positive on the isolate. Which of the following is the likely etiology?

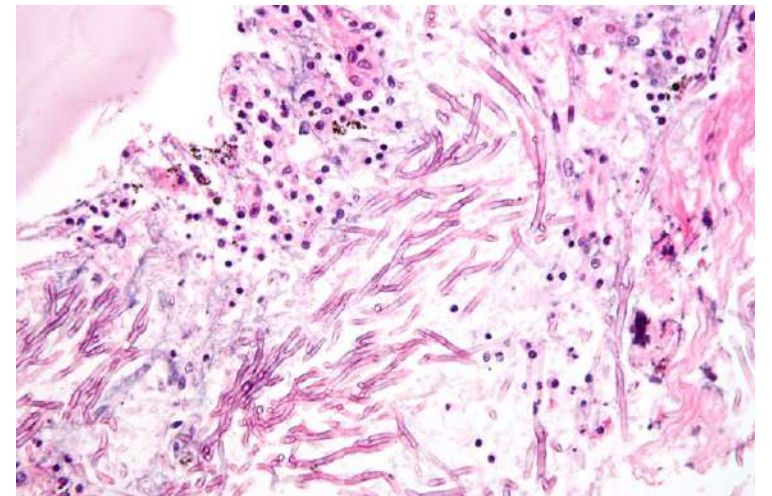
- A. Epidermophyton floccosum
- B. Microsporum audonii
- C. Trichophyton mentagrophytes
- D. Microsporum gypseum



Cerebellum
Get the balance right

90. A 47-year-old man initially comes to his primary care physician with persistent fever, night sweats, and fatigue. Thorough evaluation yields a diagnosis of chronic myeloid leukemia. While undergoing treatment for his malignancy, the patient comes to the oncologist complaining of headaches, scant nasal discharge, and a problem with his left eye. Physical examination reveals tenderness over the paranasal sinuses in addition to left-sided orbital swelling and cellulitis. Mild proptosis and ptosis of the left eye are also present. Biopsy of his sinus mucosa is shown below. What is the likely cause?

- A. *Aspergillus fumigatus*
- B. *Blastomyces dermatitidis*
- C. *Mucor*
- D. *Coccidioides immitis*



91. A patient presented with weakness of the right side of the face with the loss of pain and temperature. Pain and temperature sensation of the left leg is also lost. The lesion is most likely located at?

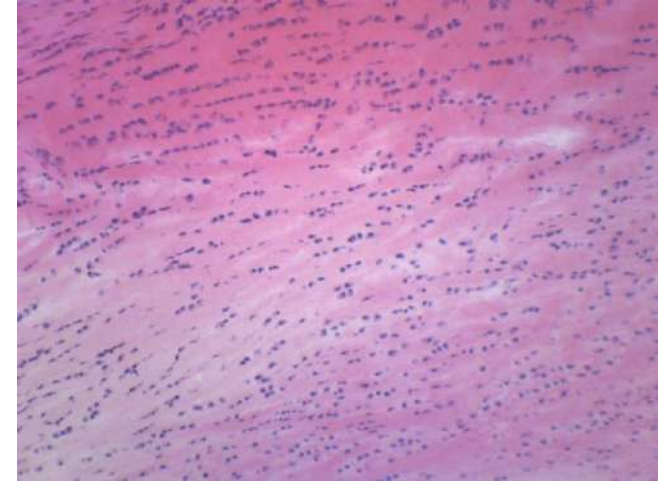
- A. Medial medulla
- B. Lateral pons
- C. Medial pons
- D. Lateral medulla



Cerebellum
Get the balance right

92. Identify the type of cartilage shown in the image below:

- A. Hyaline cartilage
- B. Elastic cartilage
- C. Articular cartilage
- D. Fibrocartilage



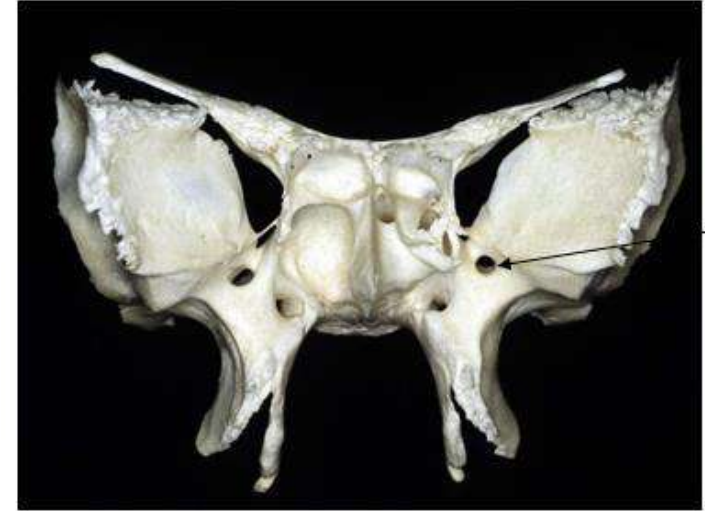
Cerebellum
Get the balance right

93. Which of the following statements is true regarding antigenic drift?

- A. There is a gradual sequential change in antigenic structure
- B. It doesn't account for the periodic epidemics of influenza
- C. The new antigens thus formed are totally unrelated to the previous antigens
- D. Antigens to the predecessor viruses do not neutralize the new variants

94. Identify the foramen marked in the image below.

- A. Foramen rotundum
- B. Foramen ovale
- C. Vidian canal
- D. Foramen spinosum



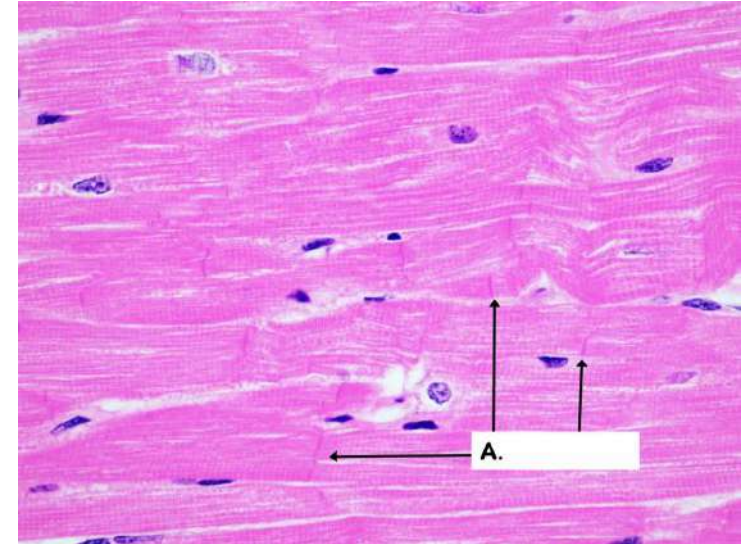
Cerebellum
Get the balance right

95. A 45-year-old man comes to the physician due to pain, swelling, and erythema affecting his right leg. He says that he suffered a minor cut to his leg a few days ago while cleaning his garage. Physical examination shows an indurated region surrounding a minor laceration that is draining a purulent exudate. He is diagnosed with cellulitis and started on the appropriate treatment. Gram stain of the exudate shows gram-positive cocci in clusters. The organism most likely responsible for this patient's infection synthesizes Protein A as part of its peptidoglycan cell wall that does which of the following?

- A. Activates complement
- B. Binds the Fc portion of IgG
- C. Causes hemolysis
- D. Cleaves IgA

96. Area marked A in the given figure contain all the following, except:

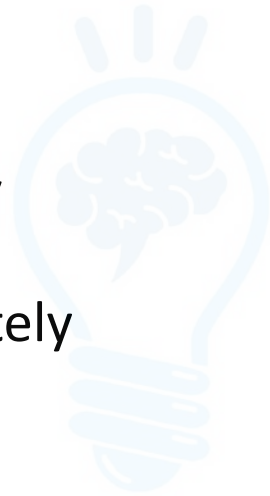
- A. Zonula occludens
- B. Zonula adherens
- C. Macula adherens
- D. Gap junction



Cerebellum
Get the balance right

97. Ligation of common hepatic artery will impair blood supply in?

- A. Lesser curvature of stomach
- B. Greater curvature of stomach
- C. Both curvatures of the stomach partially
- D. Both curvatures of the stomach completely



98. Arrange the steps for the Ziehl-Neelsen (ZN) staining technique in the correct order:

A. Methylene blue

B. Heat

C. Carbol fuchsin

D. Acid-alcohol

A. B-D-C-A

B. C-D-B-A

C. B-C-D-A

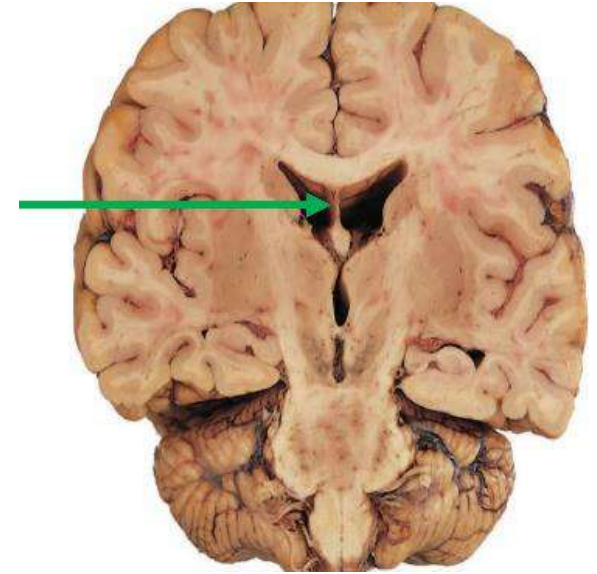
D. C-B-D-A



Cerebellum
Get the balance right

99. The structure marked with the blue arrow in the given picture terminates in:

- A. Mamillary body
- B. Hippocampus
- C. Thalamus
- D. Amygdala



Cerebellum
Get the balance right

100. A 26-year-old man comes to the OPD due to a 3-day-history of dysuria and urethral discharge. Gram stain of the discharge reveals numerous neutrophils with intracellular diplococci. A sample of the discharge is placed on an antibiotic-containing medium, and bacterial colonies are cultured. Which of the following terms best describes the medium?

- A. Differential
- B. Enrichment
- C. Reducing
- D. Selective



Cerebellum
Get the balance right

A lightbulb icon with a brain inside, symbolizing an idea or thought.

Thank You!

Cerebellum
Get the balance right

Microbiology-Anatomy 2.0 BTR Test

Dr. Zainab Vora

Cerebellum
Get the balance right

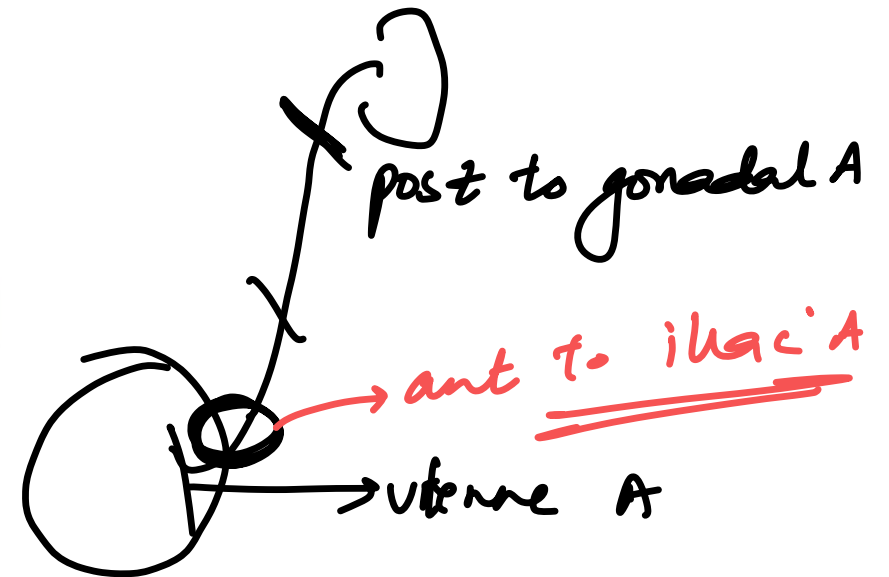
1. A 3-year-old girl is brought to the emergency department with abrupt-onset vomiting followed by frequent, large-volume, watery diarrhea for the last day. She has no prior medical conditions but **has not received recommended vaccinations**. Physical examination shows mild dehydration. The abdomen is soft and mildly tender to palpation throughout. Bowel sounds are increased. Polymerase chain reaction testing of the stool sample yields a virus with a **segmented, double-stranded RNA genome**. Which of the following pathologic findings is most likely to be present in this patient?

- ✓ A. Blunting of the villi in the duodenum and proximal jejunum ← EPEC B-3
1-8
- B. Extensive colonic injury with yellow-white adherent layer → C. difficile R-11
- C. Flask-shaped ulcerations in the cecum and ascending colon → E. histolytica A-2
- D. Foamy macrophages in the small intestinal lamina propria → Whipple's

2. A 40-year-old nulligravida woman comes to the office with a 2-month history of worsening right pelvic pain. She experiences the pain daily, and its intensity does not vary during her menstrual cycle. In addition, the patient's waist size has increased despite a decreased appetite. Pelvic examination shows an irregularly shaped, fixed adnexal mass. One week later, she undergoes surgery to remove a large ovarian neoplasm. Within the true pelvis, the surgeon can most likely palpate the right ureter immediately anterior to which of the following structures?

- A. Gonadal vein
- B. Inferior vena cava
- C. Internal iliac artery
- D. Uterine artery

ut
ureter



3. Which of the following statements is true about Trichomonas vaginalis?

A. It cannot be cultured → Diamond medium

~~B. Twitching motility is seen on wet saline mount~~

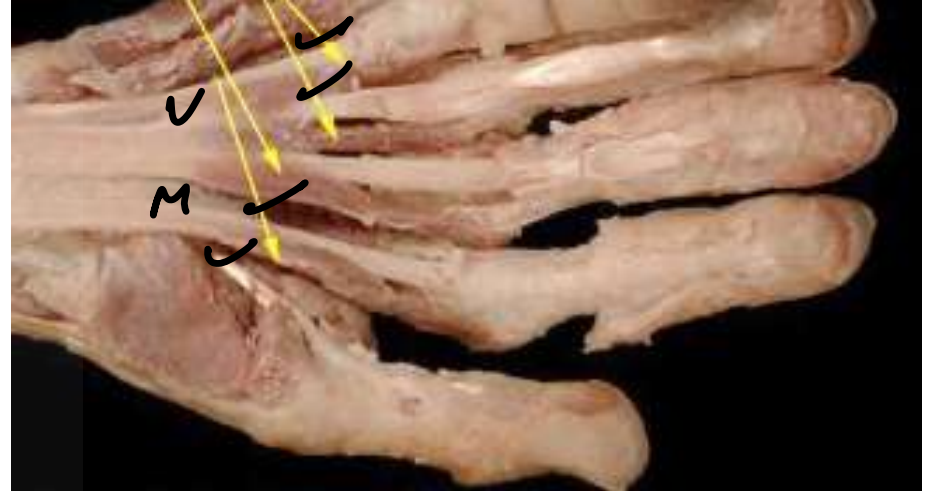
C. Cysts are seen on wet saline mount of vaginal secretions - *trophozoite only*

D. It is ~~not~~ a sexually transmitted infection ✕



4. What is the function of the muscle marked in the image below, at the metacarpophalangeal joint?

- ~~A. Flexion~~
- B. Extension
- C. Adduction
- D. Abduction



Lumbricals

5. A 24-year-old female presents to your office with burning urination, urgency and frequency. She is sexually active. Urine cultures show catalase-positive, gram-positive cocci. The organism responsible for this patient's symptoms is most likely to be:

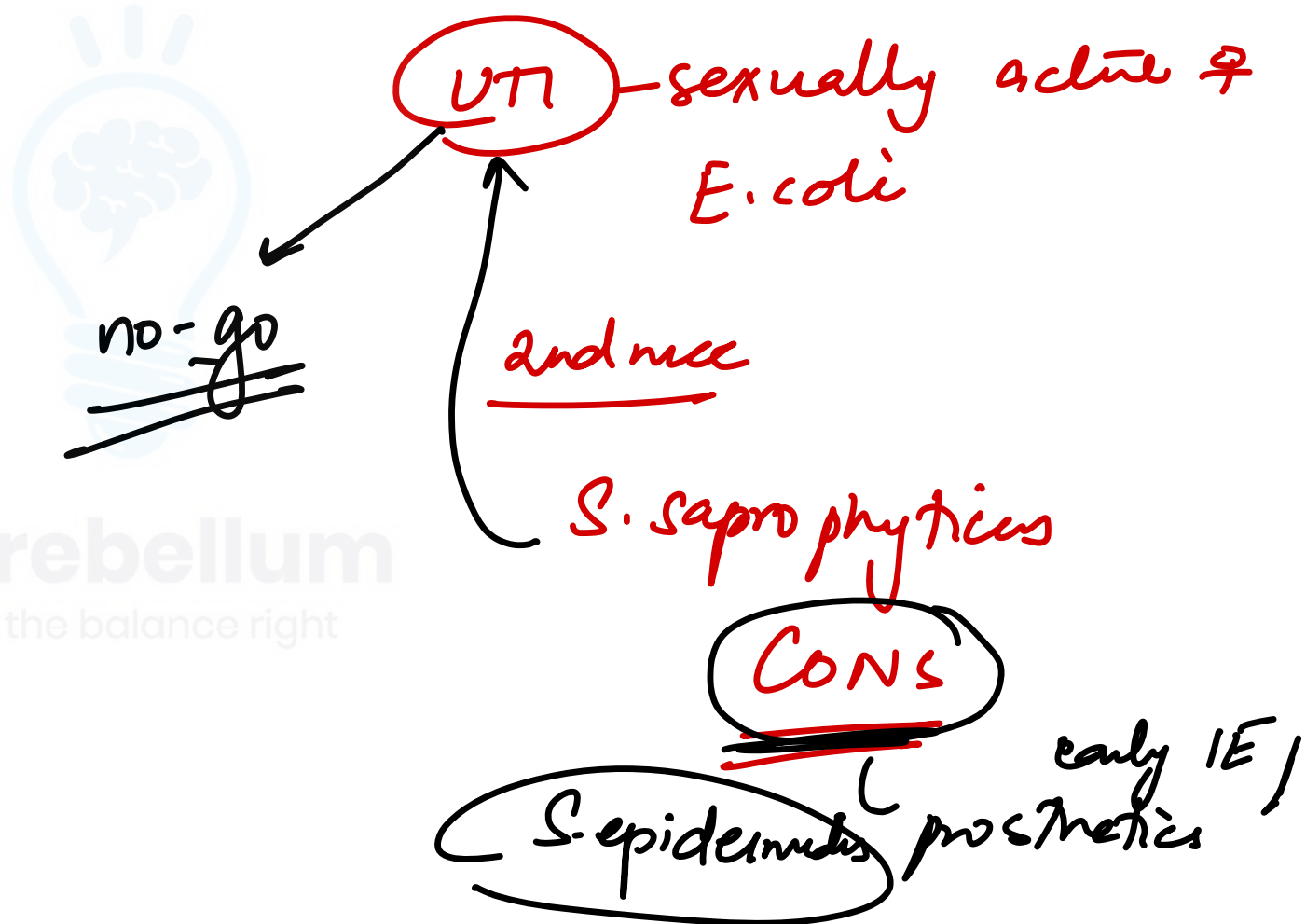
A. Coagulase positive ✗

B. Hemolytic ✗

C. Novobiocin resistant

D. Yellow pigment producer

S. aureus



6. A student got his jaw locked while yawning. Identify the muscle attached to the articular disc of the temporomandibular joint?

~~A. Lateral pterygoid~~

B. Temporalis

C. Medial pterygoid

D. Masseter



Cerebellum
Get the balance right

7. O Donoghue triad of the knee joint involves which of the following structures:

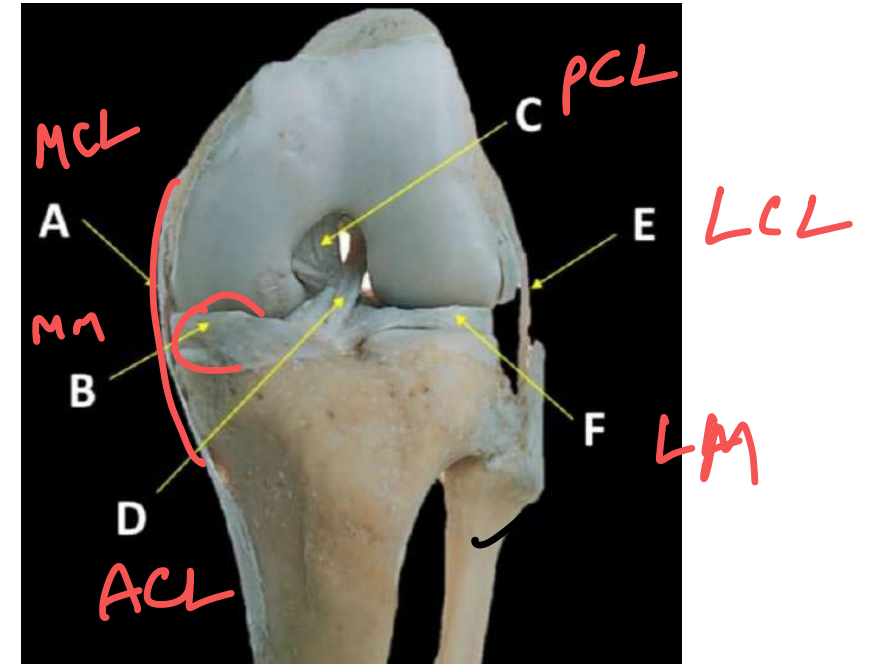
A. A, B, C

B. A, C, E

C. C, E, F

~~D. B, D, A~~

↓
M A M
— | —
M M | M C L
A C L



8. A technician wants to sterilize the material of the laboratory. Which of the following is a correct combination for him to use?

A. Liquid paraffin- Hot air oven ✓✓

B. Heat sensitive vaccine, Pasteurisation ~~xx~~

C. LSS medium- Autoclave *culture*

D. Catgut sutures- Autoclave *sutures*

membrane filters

LSS
LJ } → *Inspissation*

Gamma sterilis?

9. A 23-year-old woman is brought to the emergency department unconscious after a motor vehicle accident. NCCT is shown here. A branch of which of the following arteries is most likely severed in this patient?

A. Facial ~~X~~

B. Maxillary

C. Middle cerebral ~~X~~

D. Sphenopalatine ~~X~~



Cerebellum
Get the balance right



Swirl sign
active
bleed
☹️

EDH → MMA → ant ÷
Pterion

x capsule *x ferment* *maltese*

10. A 26-year-old man develops dysuria and purulent urethral discharge following unprotected sex with a new partner. Nucleic acid amplification testing is positive for Neisseria gonorrhoea infection. The patient develops antibody against the bacterial pili that enhance attachment to host cells. His symptoms resolve with adequate treatment. His partner does not receive treatment. Several weeks later, the patient develops N gonorrhoeae reinfection after repeat exposure to the same partner. Which of the following is the most likely reason for the lack of long-lasting immunity against the bacteria despite antibody formation in this patient?

A. Antigenic mimicry *xx*

S. pyogenes - ARF - PSGN

B. Antigenic variation

C. Conjugative plasmid

→ Pili - *Antigenic*

D. Low molecular weight antigen *xx*

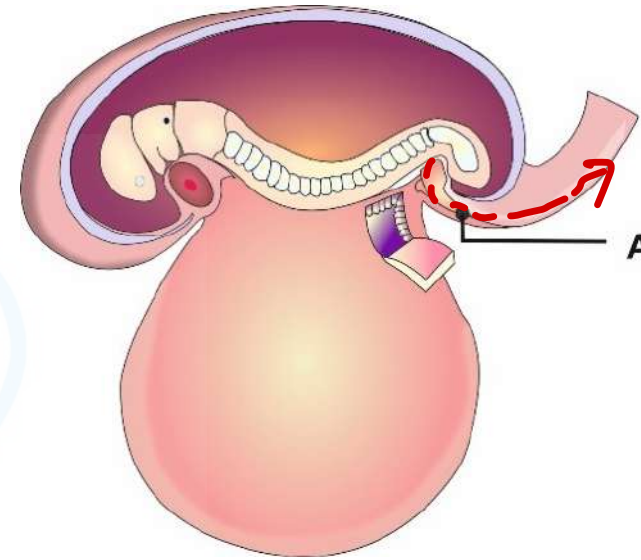
11. Mark the option which develops from the structure marked A?

A. Medial umbilical ligament → *umb A*

B. Median umbilical ligament

C. Meckel's diverticulum ✓ ✓

D. Ligamentum teres ✓



LT Umb vein

*0
00*

SVA

→ ↑ r/o cong anomalies
✓/✓

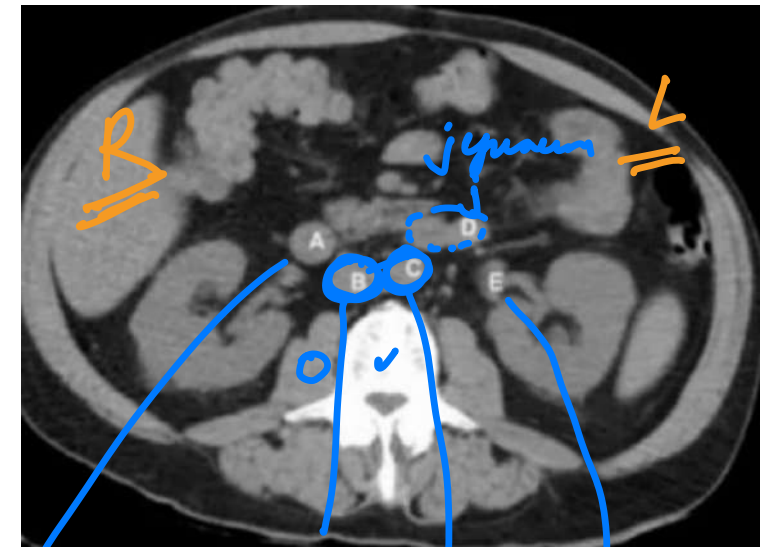
12. A 63-year-old male with a history of gastrointestinal bleed has developed a sudden onset shortness of breath. Evaluation shows pulmonary embolism. A filter placement is planned to prevent further embolization. The filter will most likely be placed in which of the following structures?

A. A

B. B

C. C

D. D



NCCT

Duodenum

NC

AO

LRV

Cerebellum
Get the balance right

13. A lady from West Rajasthan presented with an ulcer surrounded by erythema on the right leg. Microscopy of the biopsy from the edge of the ulcer showed organisms with dark staining nuclei and kinetoplast. What is the most likely causative agent?

A. ~~Leishmania tropica~~

B. Babesia

C. Trypanosoma

D. Histoplasma

RK 39 / Amastigotes / Montenegro test

Sandfly

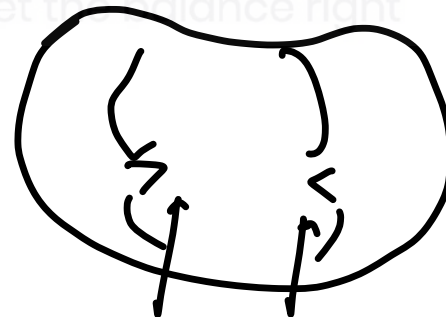
roya French fever

14. A 23-year-old primigravida woman vaginally delivers a 3600-g girl after a protracted labor. The patient sustains second-degree laceration and repair is planned. Prior to administering local anesthesia, the operator intravaginally palpates bony protrusions located posterolateral to the vaginal sidewalls that are distinct from the rest of the pelvic sidewall. A firm band can also be palpated running medially and posteriorly from the bony prominence to the sacrum. Anesthetic agent is injected around the bony prominence. Which of the following nerves is blocked by the injection?

- A. Genitofemoral
- B. Iliohypogastric
- C. Obturator

~~D. Pudendal~~ (S2-S4)

Pudendal block



ischial spine

15. The culture media shown in the image is an example of:

- A. Blood agar for Staphylococcus
- B. Selective media for EHEC
- C. Enriched media for Proteus
- D. Selective media for Vibrio cholerae



Soybilol

EHEC O157:H7

x ferment

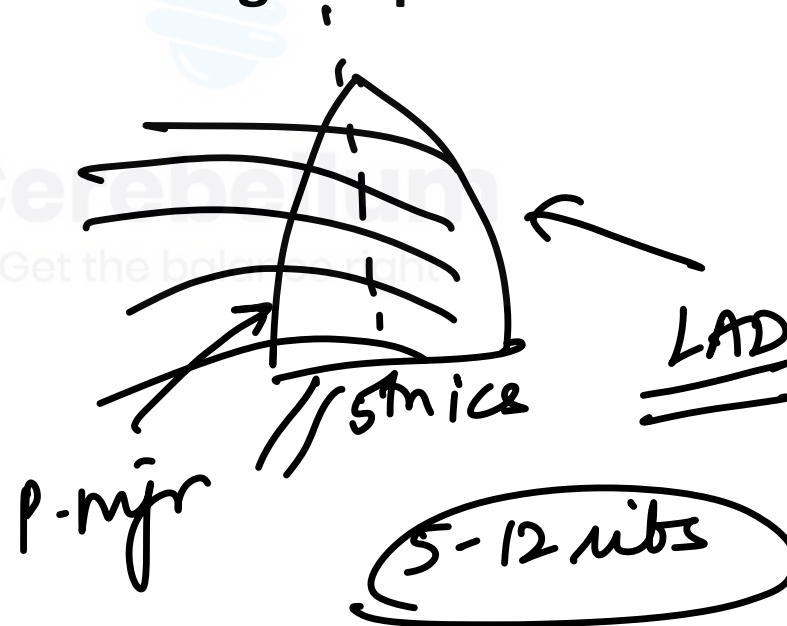


Unlike most other E.Coli serotypes, **the STEC 0157:H7 does not use sorbitol and produces clear colonies on the Sorbitol MacConkey agar.**

0157: H7 strains **also are negative for -glucuronidase using the substrate 4-methylumbelliferyl-B-glucuronide test.** More than 90 per cent of other E. coli tests positive with this substrate.

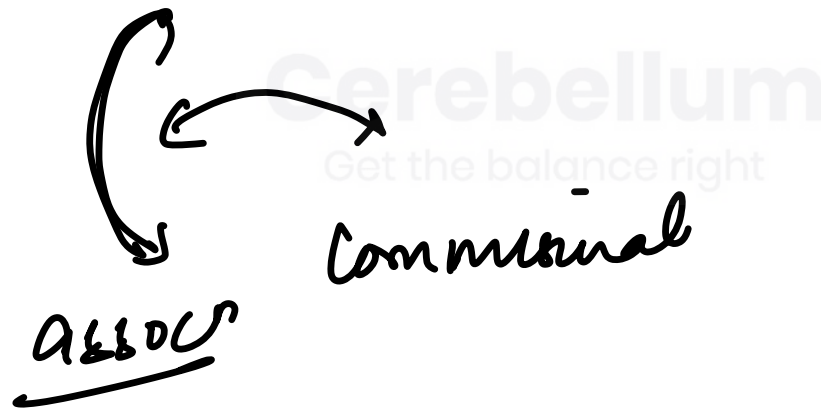
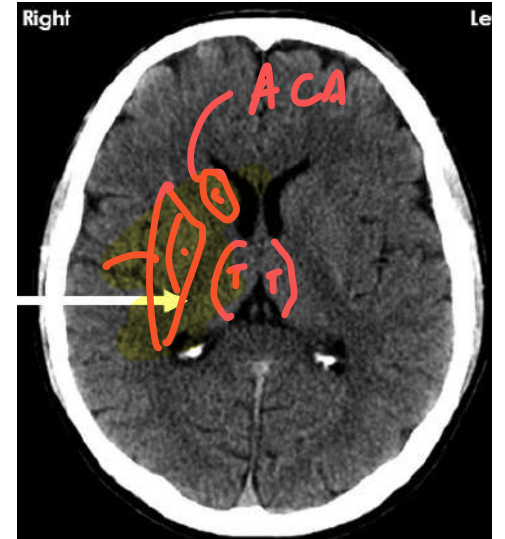
16. A 66-year-old man hospitalized 3 days ago for left lower lobe pneumonia is evaluated for persistent fever. He has been receiving the appropriate intravenous antibiotics as determined by antibiotic susceptibility testing of his sputum cultures. The patient has a history of diabetes mellitus and hypertension. His temperature is 38 C (100.4 F) and pulse is 87/min. Examination shows dullness to percussion and decreased breath sounds over the left lower lung. Imaging studies reveal a loculated, left-sided pleural effusion. A tube is placed to drain the fluid via an incision at the 5th intercostal space in the midaxillary line. Which of the following muscles is most likely to be dissected during the procedure?

- A. External oblique
- B. Latissimus dorsi, ✕
- C. Pectoralis major ✕
- D. ~~Serratus anterior~~



17. Which of the following statement is correct about the marked area in the given section?

- A. Charcot's artery supplies its posterior limb (T)
- B. (C) Sub lenticular portion contains ~~optic~~ radiation auditory PCA
- C. Largest assoc fibres in the cerebrum
- D. Injury to the genu will cause ~~CL~~ facial paralysis 'retro-lentic'



18. Identify the method of sterilization used below?

A. Gas sterilization

~~B. Plasma sterilization~~ (H₂O₂)

C. Pasteurisation

D. Radiation

→ Δ sensitive
→ Arfmoscope
Ureleroscope



19. The organism whose life cycle is shown below is associated with which of the following malignancies?

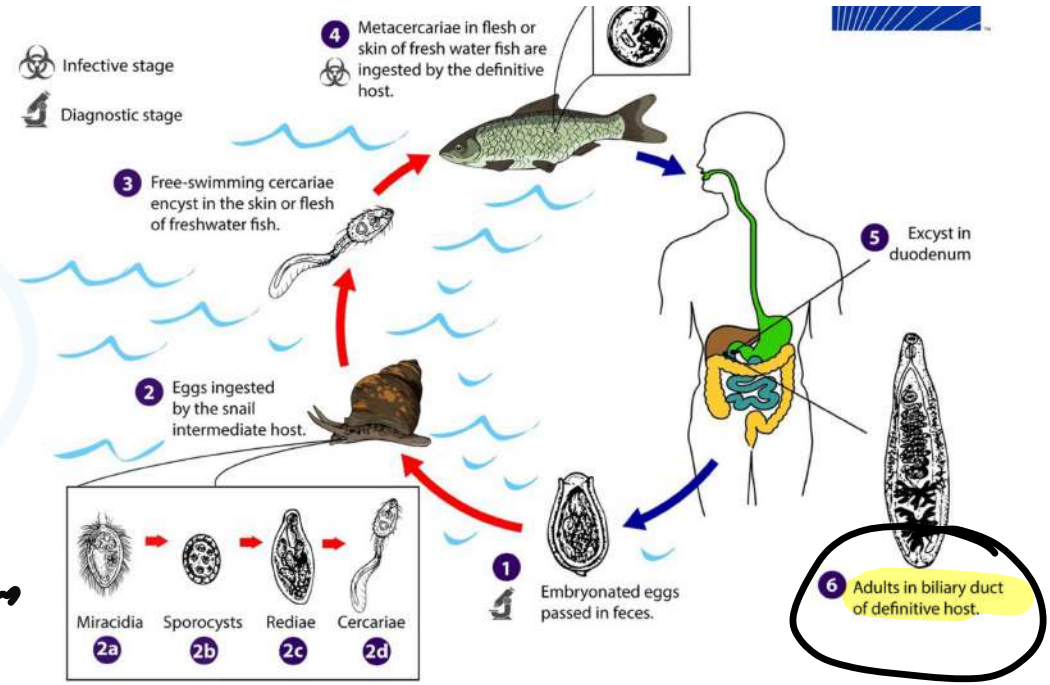
- A. HCC ~~x~~
- B. Cholangiocarcinoma
- C. Gastric carcinoma ~~x~~
- D. Bladder carcinoma ~~x~~

Hep C

S. japonicum
Leptotol nylu
~~*Aflatoxins*~~

H. pylori

Schistosoma
heminal
hematobium



Clonorchis

20. A 54-year-old male is evaluated for several months of intermittent dysuria and gross hematuria. The patient notes that he passes blood at the end of urination but has no associated pain. Cystoscopy reveals erythematous areas in the bladder mucosa. Multiple biopsies are taken from the affected sites; histopathological findings are shown in the image below. Which of the following most likely predisposed this patient to his current condition?

A. Chronic urinary tract obstruction ^x

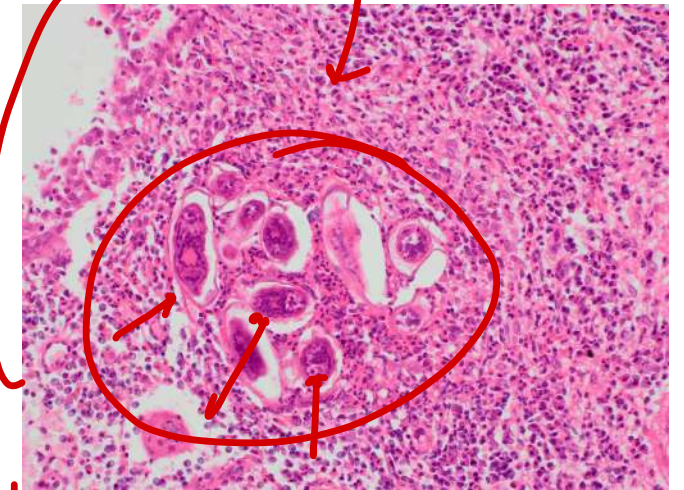
~~B. Contaminated water exposure~~

C. Cytotoxic immunosuppressant use ^x

D. Extensive cigarette smoking ^x

terminal hematuria

VB
urethra



Cerebellum
Get the balance right

21. Identify the correct statement

1. Type I collagen is seen in bone and elastic cartilage
2. Reticular fibres are present in lymph nodes, bone marrow and ~~thymus~~
3. Right-left movement is by atlanto-axial joint
4. Costo-transverse joints are plane synovial joints

A. 1, 2, 3

B. 2, 3, 4

C. 3, 4

D. 1, 2, 3

②

fibro

⑦

⑦

Ellipsoid

occipito atlantal

①

Atlanto-axial

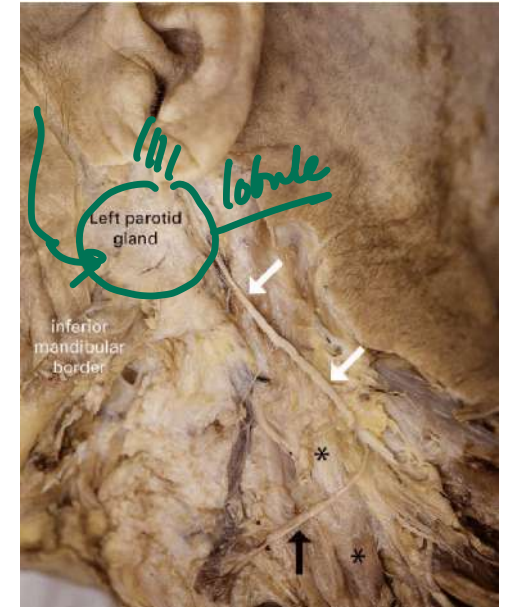
①

PIVOT

22. Which of the given statement is **INCORRECT** regarding the marked nerve in the given cadaveric image?

- A. Supplies lobule of ear ✓
- B. Secretomotor to parotid gland ✓
- C. Runs with EJV in neck ✓
- D. Innervates the angle of mandible ✓

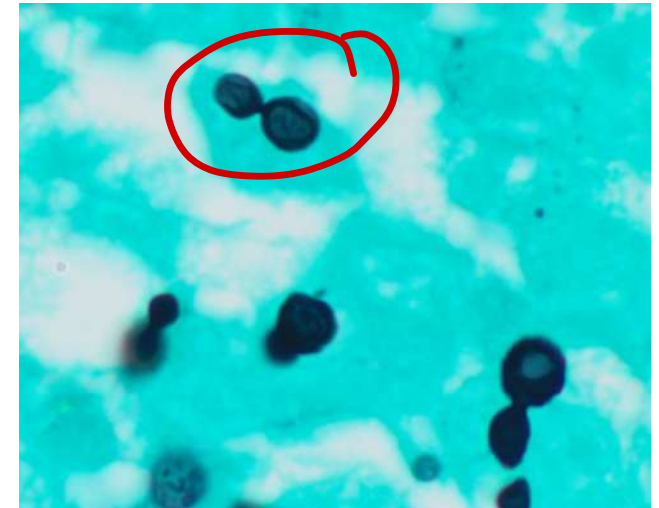
Auriculotemporal N



GAN

23. A patient presented with complaints of persistent cough and weight loss. He had a history of contact with multiple sexual partners. He was diagnosed as HIV positive 6 months back and is poorly adherent to his medications. The fungal culture of sputum was negative. GMS staining is shown here. What is the most likely causative organism?

- A. Paracoccidioides brasiliensis
- B. Histoplasma capsulatum
- C. Coccidioides immitis
- D. Pneumocystis jirovecii



24. A 63-year-old woman has a right-sided ovarian mass found incidentally on transvaginal ultrasound. Surgery is planned to remove the right ovary, including the mass. To avoid excessive bleeding during the oophorectomy, the surgeon should ligate which of the following structures?



- A. Mesosalpinx
- B. Ovarian ligament
- C. Round ligament of the uterus

antley of Sampson

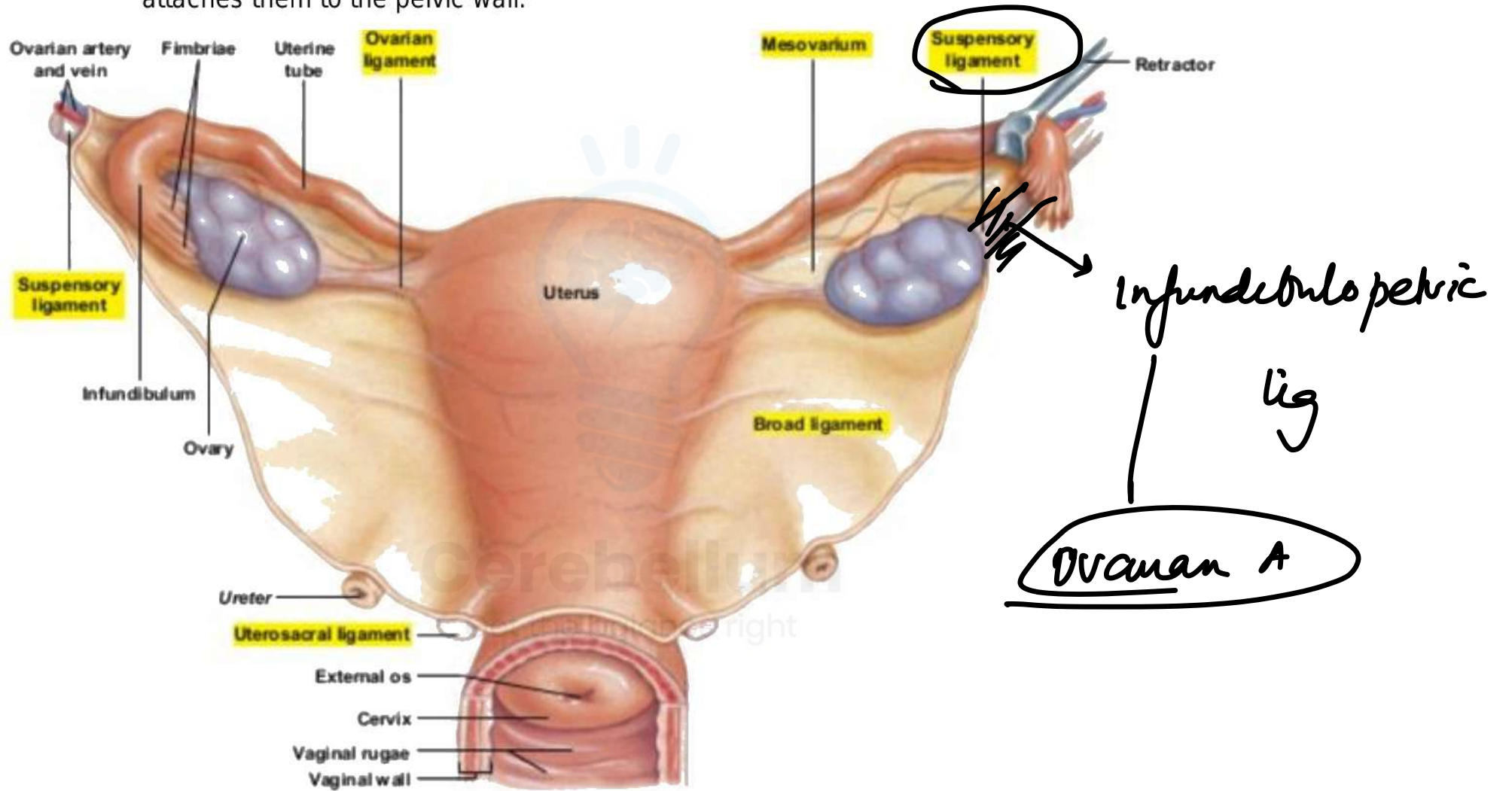


D. Suspensory ligament of the ovary

ovarian A

Cerebellum
Get the balance right

The ovarian ligament anchors the ovaries to the uterus, and the suspensory ligament attaches them to the pelvic wall.



25. A 22-year-old male is brought to the hospital due to fever, frontal headache, photophobia, nausea and vomiting. Lumbar puncture was done and CSF analysis shows protein-20mg/dl, glucose-65mg/dl, total leukocyte count-200 with lymphocytic predominance. What is the most likely organism implicated in causing the above condition

A. Neisseria meningitidis ^X

B. TB ^X

C. Enterovirus me

D. HSV-1 - encephalitis
one

(4)

CSF: <100

40-80

VIRAL >
FUNGAL

HSV-2: meningitis

Cerebellum
Get the brain right

26. A 23-year-old man comes to the emergency department complaining that he has food stuck in his throat. His symptoms started 2 hours ago after eating fish at a local seafood restaurant. He has tried coughing and swallowing multiple times in an attempt to clear the food, but has so far been unsuccessful. The patient denies any difficulty with breathing. He does not appear to be in any distress on physical examination. Laryngoscopy reveals a fish bone lodged in the area marked by blue. During an attempt to retrieve the fish bone, a nerve is injured deep to the mucosa. Which of the following is most likely to be impaired in this patient?

~~A. Cough reflex~~

B. Gag reflex

IX → ~~X~~

C. Mastication

x

D. Salivation

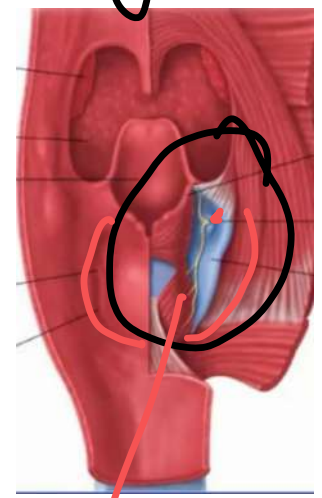
→

ILN — SLN
IX

Supraglottis sn

Cough reflex

Party



PK

27. A 70-year-old man comes to the office due to 3 weeks of unrelenting low back pain. He was grocery shopping when he first noticed the pain. The patient reports no trauma or leg weakness but describes having to strain to urinate. He has a history of hypertension and hyperlipidemia and has not seen a doctor in the past 5 years. His wife died a year ago, and he now lives alone. The patient is a retired construction worker and has a history of tobacco and marijuana use. There is tenderness in the lower vertebral area. Imaging study of the spine reveals several osteoblastic lesions in the lumbar vertebrae. Which of the following structures was most likely involved during the spread of this patient's disease?

A. Azygos veins X

B. Internal iliac lymph nodes ↑

C. Pampiniform plexus XXXX ←

D. Prostatic venous plexus → epidural Batson's

Prostate
Breast

varicocele

Cerebellum
Get the balance right

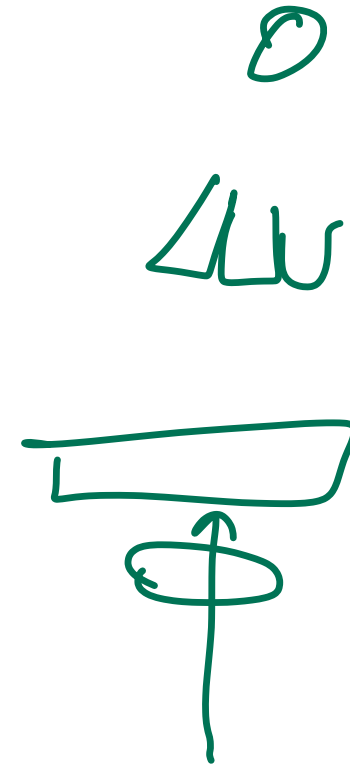
28. A microbiologist intern wanted to study cells and microorganisms. His senior advised him to use a light microscope. What is the correct arrangement from eye to the light source in a light microscope?

A. Objective lens-> condenser-> eyepiece lens

B. Condenser lens-> objective lens- eyepiece lens XXX

C. Eyepiece lens-> objective lens-> Condenser

D. Eyepice-> Condensor -> Objective lens



29. A patient underwent surgery for the varicose vein. He now complains of sensory loss over the medial aspect of the leg and foot. Which of the following nerves is most likely to be injured?

A. Sural nerve

B. Superficial peroneal nerve

C. Deep peroneal nerve

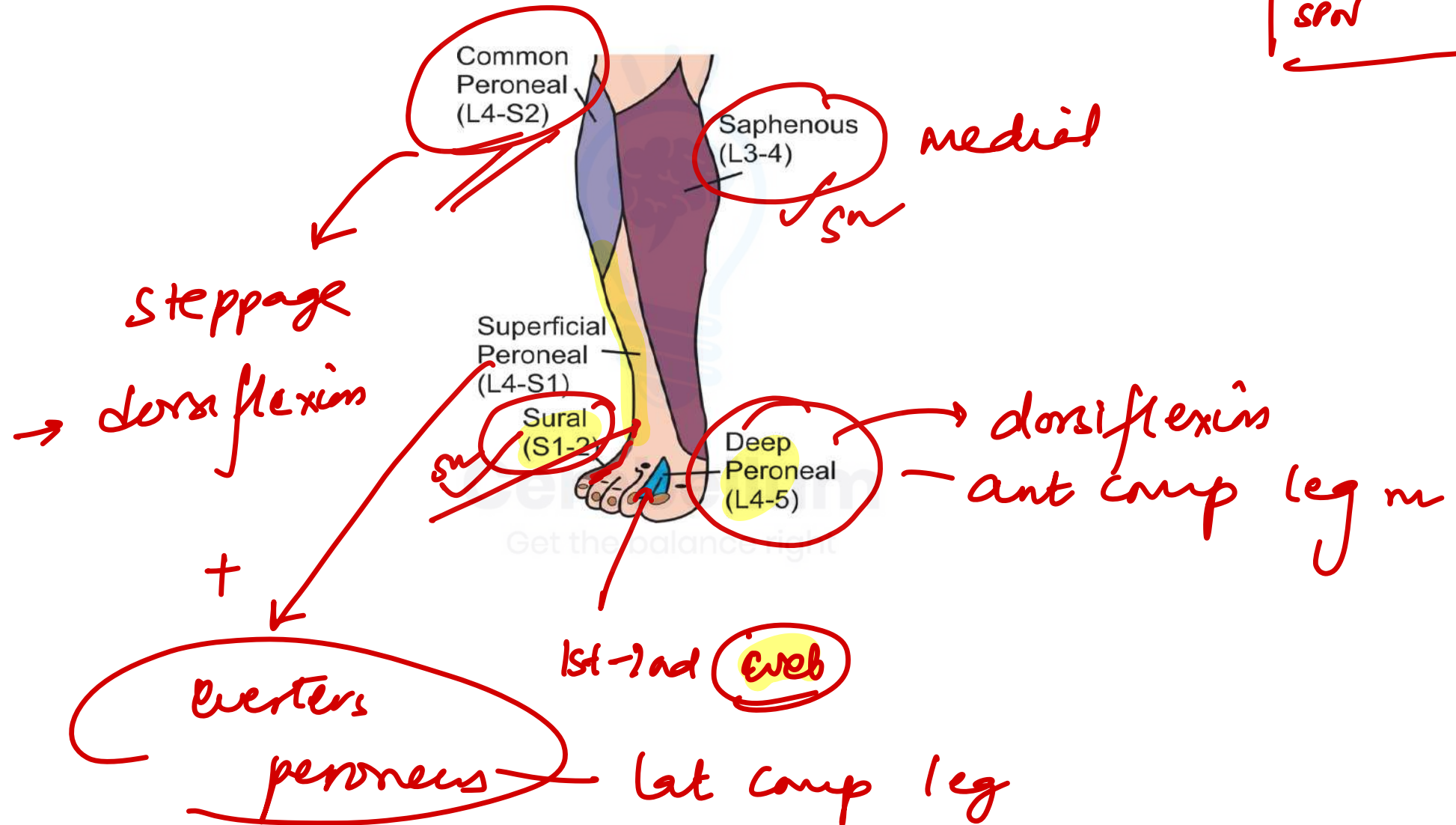
D. Saphenous nerve



Cerebellum
Get the balance right

CPN	L
DPN	S
SPN	

QQQ



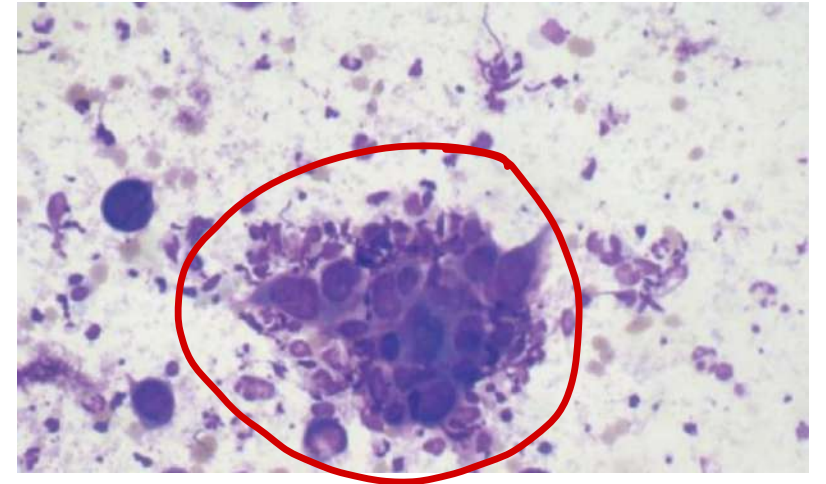
30. A 23-year-old man comes to the OPD due to penile ulcers that appeared after unprotected sexual intercourse. Physical examination shows 3 subcentimeter ulcers on the penile shaft. Microscopic examination of a scraping from an ulcer base reveals the following. Which of the following medications is most appropriate for this patient?

~~A. Acyclovir~~

B. Azithromycin

C. Fluconazole

D. Penicillin



HSV

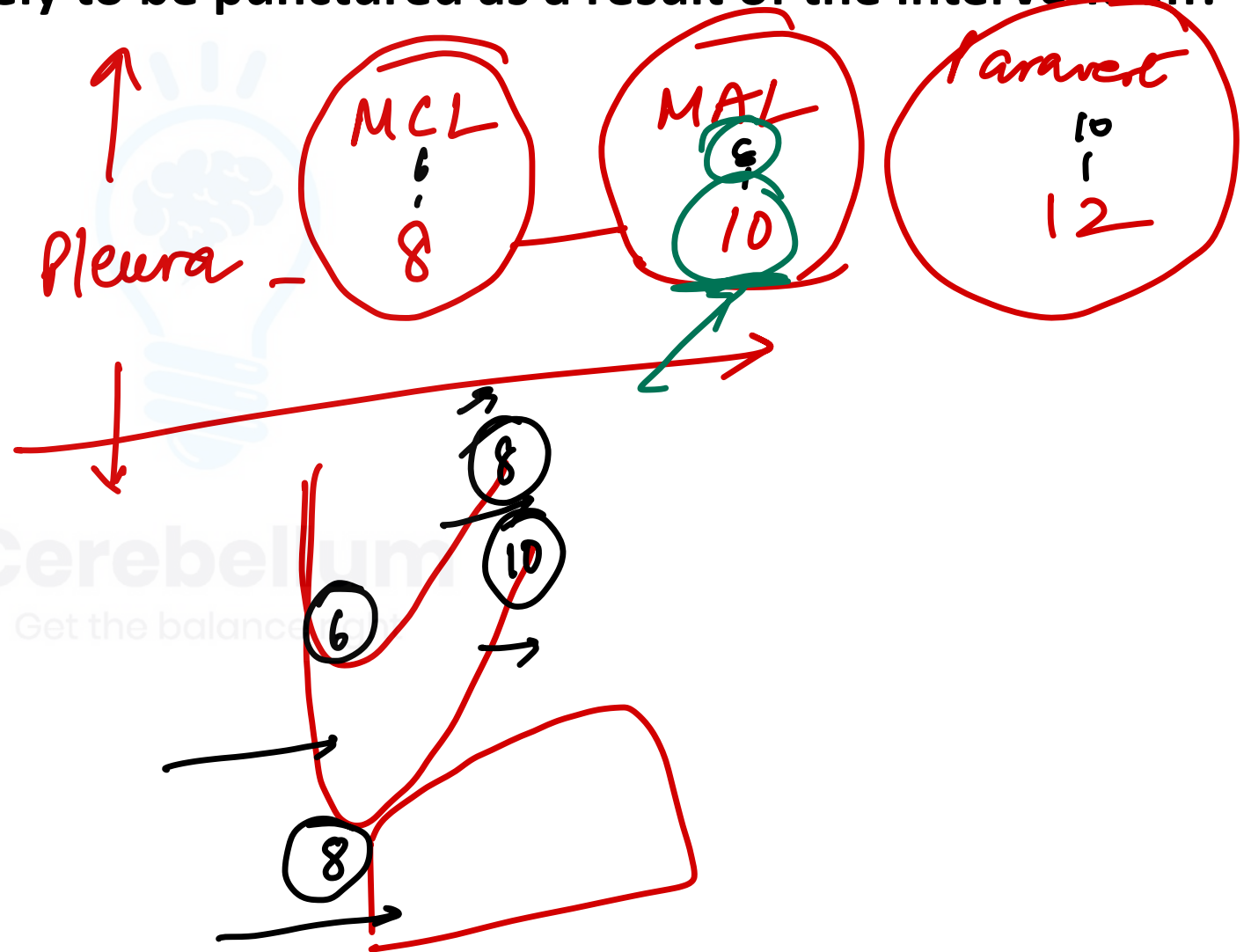
31. A medical resident performs a diagnostic procedure on 32-year-old male. He inserts a needle along the upper border of the 10 rib at the right midaxillary line. Which of the following is most likely to be punctured as a result of the intervention?

A. Right lower lung lobe

B. Liver

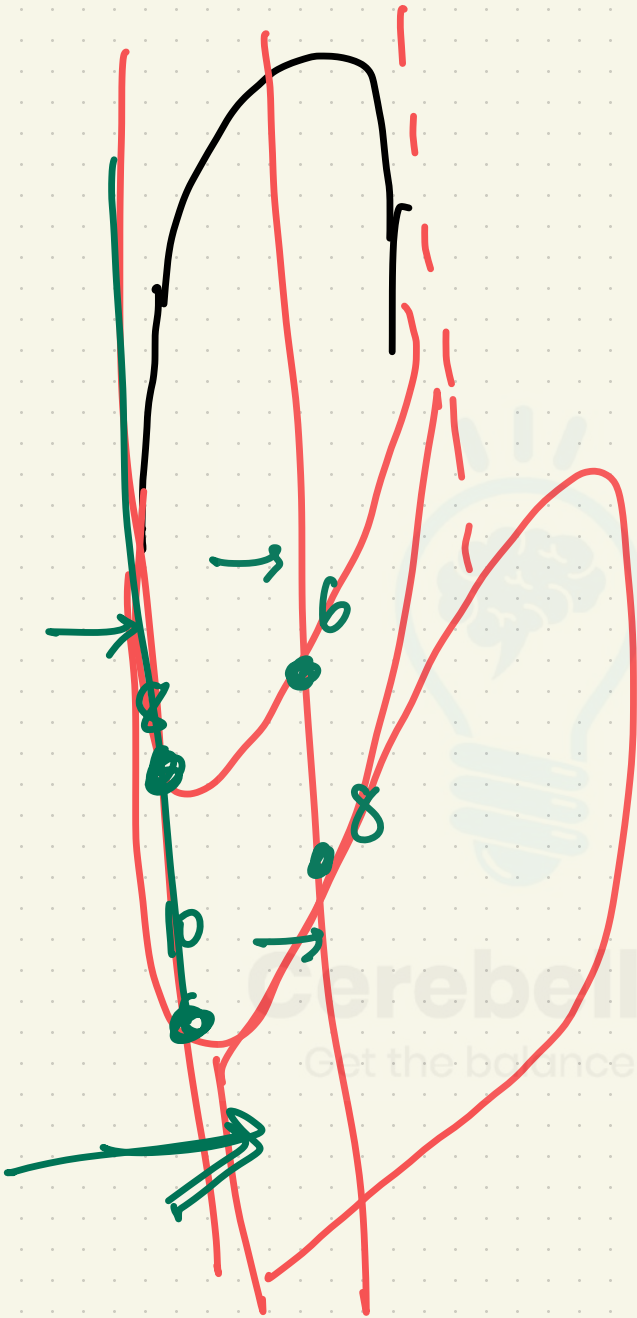
C. Intercostal artery ✗

D. Intercostal nerve ✗



MCL
6
8

MAL
E
10

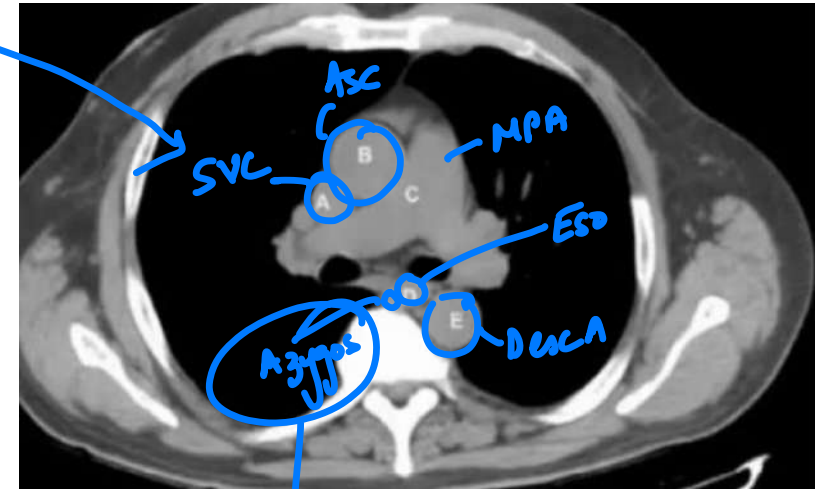



Cerebellum
Get the balance right

32. A chest CT scan is performed on a 35-year-old man who presented with chronic cough and weight loss. Which of the following structures labelled below is a derivative of the common cardinal veins?

- ~~A. A~~
- B. B
- C. C
- D. D

SVC



Supra

33. A sewage worker presented with abdominal pain, jaundice, conjunctival suffusion, and blood in the urine for the past 5 days. Which of the following is the investigation of choice?

A. Widal test

B. Microscopic agglutination test

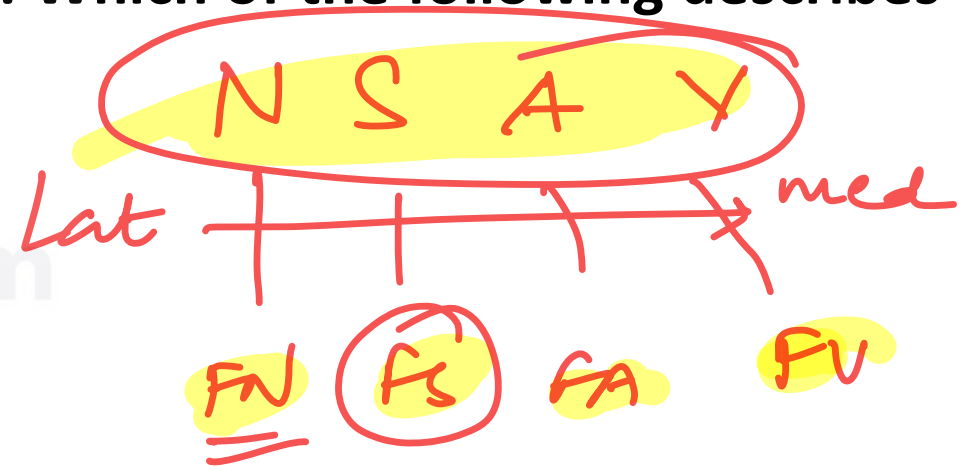
C. Weil-Felix reaction

D. Paul-Bunnell test



34. An 82-year-old woman is sent to the hospital from a nursing home after 2 days of fever, confusion, and lethargy. The patient has a history of mild dementia, hypertension, and osteoarthritis. Her temperature is 38.8 C (102 F), blood pressure is 90/60 mm Hg, and pulse is 116/min. She has mild suprapubic and right costovertebral angle tenderness. Her leukocyte count is 18,000/mm, and urinalysis is consistent with acute cystitis. A femoral venous access is planned for administration of intravenous fluids and antibiotics. The femoral artery pulsation is palpable immediately below the inguinal ligament. Which of the following describes the optimal cannulation site for the femoral vein?

- A. Immediately lateral to the femoral artery
- B. Immediately medial to the femoral artery
- C. Midway between the iliac crest and the femoral artery
- D. Superior and medial to the pubic tubercle



35. All of the following are true about endotoxin except

A. Composition includes lipopolysaccharide ✓

B. Heat stable ✓

~~C. High Antigenicity~~

Low

⊗ toward

A ✓

D. Produced by gram negative bacteria only

Listeria

36. A 71-year-old man comes to the emergency department due to sudden-onset vision loss in his left eye for one hour. He has a history of coronary artery disease, hypertension, and type 2 diabetes mellitus. On examination, the patient can see only hand motions through the left eye. Fundusoscopic evaluation of the eye shows a cherry-red spot in the macula with surrounding retinal whitening. Cranial nerve examination is otherwise unremarkable. There is a left-sided neck bruit on cardiovascular examination. Which of the following is the most likely path of the embolus causing this patient's symptoms?

A. External ~~carotid~~ artery, facial artery, ophthalmic artery, retinal artery

B. External ~~carotid~~ artery, ophthalmic artery, retinal artery

C. Internal carotid artery, anterior cerebral artery, retinal artery

D. Internal carotid artery, ophthalmic artery, retinal artery

CRAO

37. 52-year-old postmenopausal woman comes to the office due to leakage of a few urine drops with coughing and sneezing. She has no dysuria, urgency, or changes in urinary frequency. The patient has had 3 spontaneous vaginal deliveries. Physical examination is notable for a mild cystocele. The patient is advised to perform exercises to strengthen her pelvic floor as part of treatment for her symptoms. Which of the following structures is the most likely target of the exercise?

- A. Bulbospongiosus muscle
- B. Detrusor muscle
- C. External urethral sphincter
- D. Levator ani muscle

SUI

urethral hypermobility

38. Which of the following laboratory test is used to diagnose rotavirus diarrhea?

A. Antigen detection in the stool sample

B. Antigen detection in blood

X

C. Antibody detection in serum

X

D. Light microscopy of stool specimen

X



Cerebellum
Get the balance right

39. Correct sequence of the muscles forming the floor of the femoral triangle in thigh from medial to lateral is-

A. Adductor Longus-Pectineus-Psoas-Iliacus

B. Adductor Longus-~~Psoas~~-Pectineus-~~Iliacus~~

C. ~~Iliacus~~-Pectineus-~~Psoas~~-~~Adductor longus~~

D. Adductor Longus- Iliacus-Psoas-Pectineus

Ps ← Pectineus ← adductor

↓

Iliacus

40. A 36-year-old man comes to the OPD due to 2 months of fatigue, intermittent arthralgias, and poor appetite. Liver aminotransferases are elevated. Hepatitis serology shows the following:

Hepatitis A virus antibody: negative

Hepatitis B surface antibody (HBsAb): negative

Hepatitis B core antibody (HBcAb), total: positive

Hepatitis B surface antigen (HBsAg): positive

Hepatitis B E antigen (HBeAg): positive

Hepatitis C virus antibody: negative

Which of the following genome replicative processes is most likely used by the virus infecting this patient?

Hep B

RNA intermediate

A. Double-stranded DNA → double-stranded DNA template → double-stranded DNA progeny

B. Double-stranded DNA → RNA template → partially double-stranded DNA progeny

C. Single-stranded DNA → double-stranded DNA template → single-stranded DNA progeny

D. Single-stranded RNA → double-stranded DNA template → single-stranded RNA progeny

41. The given condition is due to persistence of which of the following embryonic vessel?

- A. Persistence of right dorsal aorta
- B. Persistence of left 4th arch artery
- C. Persistence of left dorsal aorta
- D. Persistence of left 6th arch artery



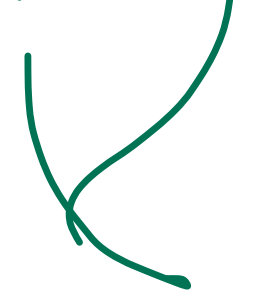
Double aortic arch

Rt - RSCA

Lt - Arch



BOVINE



42. Absent cremasteric reflex could be a result of injury to which of the following nerve?

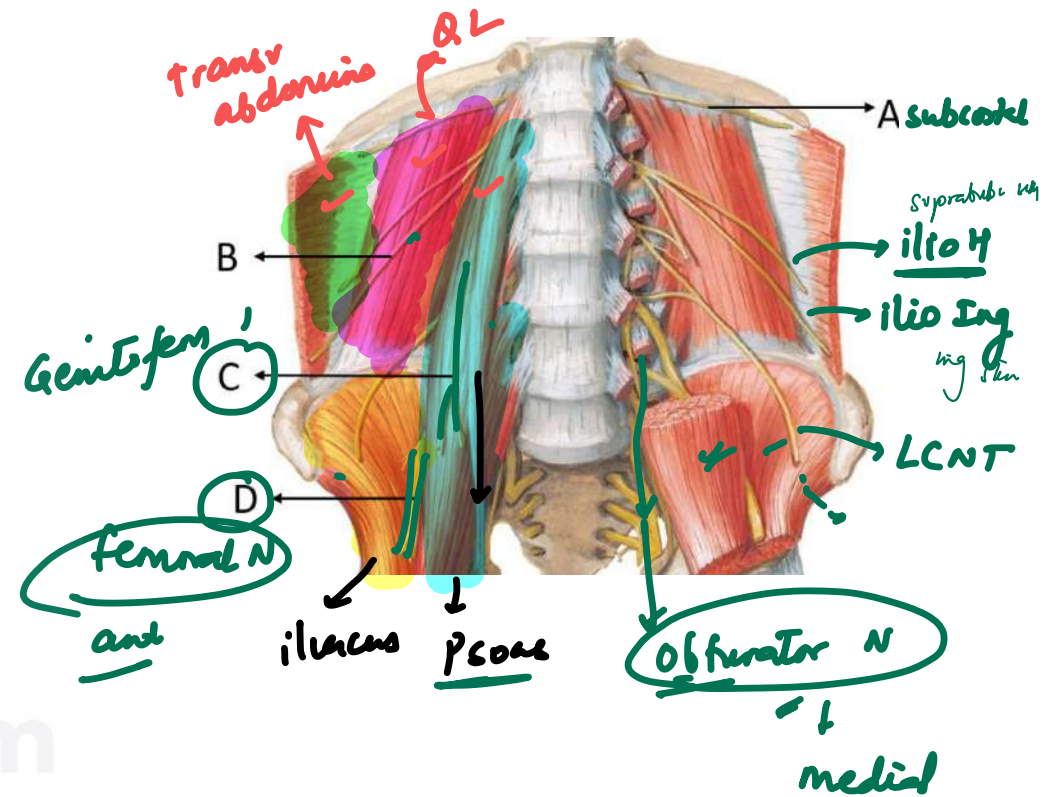
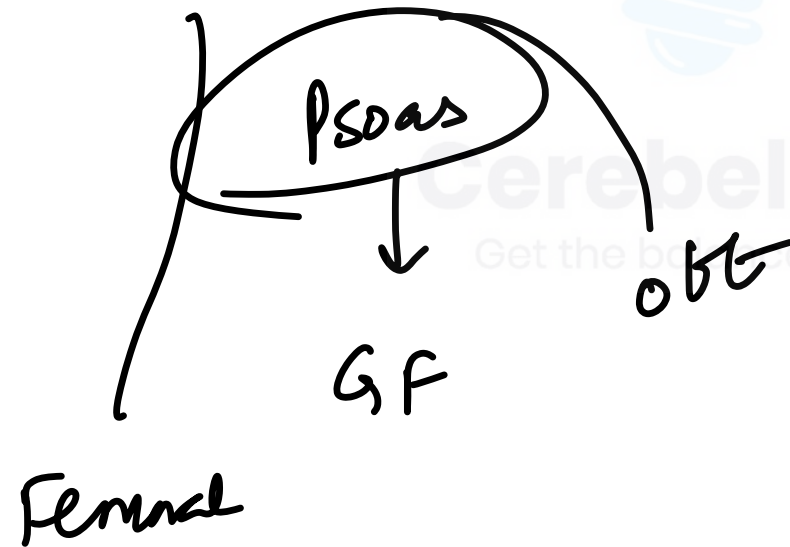
↳ GF nerve
afferent

A. A

B. B

C. C

D. D



Cerebellum
 Get the base right

43. boy presented with a fever and chills. Rapid test was done and shown below. Which of the following antigens of Plasmodium is used?

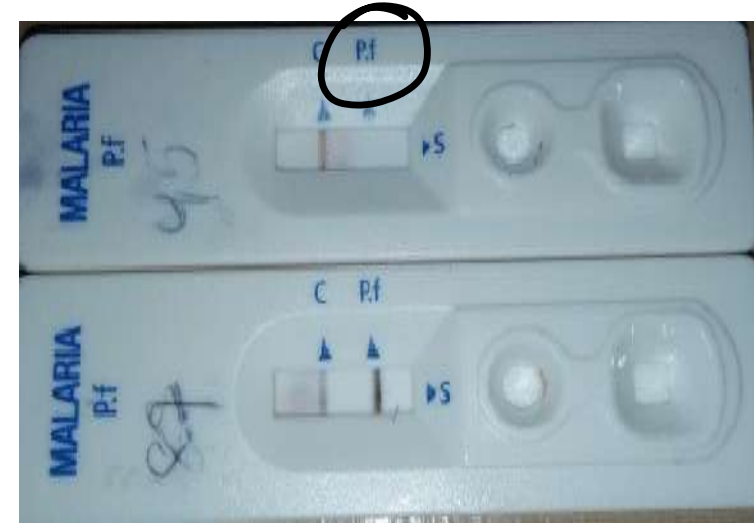
A. HRP-2

B. LDH

C. Aldolase-~~A~~

D. Aldolase-~~B~~

p. vivax / ovale



44. A 34-year-old man presented with fever and massive splenomegaly. On palpation, the spleen was 15 cm and directed obliquely when measured from the right iliac fossa. Which of the following structures prevent the vertical and downward descent of the spleen?

- A. Lienorenal ligament
- B. Gastrosplenic ligament
- C. Phrenicocolic ligament
- D. Lienophrenic ligament



45. Arrange the following in order of being most to least resistant

A. Spores>Prions>Mycobacterium>Naked virus>Enveloped virus

~~B. Prions>Spores>Mycobacterium>Naked virus>Enveloped virus~~

C. Spores>Mycobacterium>Enveloped virus> Prions

D. Mycobacterium>Naked Virus> Spores>Enveloped virus

46. 55-year-old female has been diagnosed with nasopharyngeal carcinoma that has spread to the sinus of Morgagni. Which of the following structures will be affected due to the spread in the sinus of Morgagni?

A. Ascending palatine branch of facial artery

B. Glossopharyngeal nerve ✗

C. Stylopharyngeus muscle ✗

D. Recurrent laryngeal nerve ✗



- Cartilaginous part of auditory tube A
- Levator veli palatini muscle L
- Ascending palatine artery A
- Palatine branch of Ascending pharyngeal artery A
- Tensor veli palatini muscle T

LATAA

47. Which of the following is/are incorrectly matched?

1. Sternoclavicular joint – Plane synovial joint

Saddle



T

2. Wrist and knuckle joints – Hinge variety of synovial joints

ellipsoid

3. Middle tibiofibular joint – Syndesmosis

T

4. Calcaneocuboid joint – Saddle synovial joint

T

5. Elbow and ankle joint – Ellipsoid synovial joint

hinge

A. 1,2,4

B. 2,3,5

C. 1,3,4,5

D. 1,2,5

JTs

1

Saddle

- MIS
- C-C

BBs
(IBS
T-C-N

- 1st CMC
- Sternoclavicular jt

48. A child was brought with complaints of high fever, multiple seizures, headache, and neck rigidity. CS analysis showed low glucose, high protein, and many polymorphs. The CSF culture showed pleomorphic gram-negative bacilli. What is true about the causative organism?

H. influenzae

A. It is bacitracin sensitive

S. pyogenes GPC

B. Produces non-lactose fermenting colonies on MacConkey agar

GNB

C. Exhibits satellitism around Staphylococcus aureus colonies

D. It exhibits alpha hemolysis on sheep blood agar

GPC

49. Pasteurization is done at?

- A. 73 degrees Celsius for 20 minutes
- B. 63 degrees Celsius for 30 minutes
- C. 72 degrees Celsius for 30 seconds
- D. 63 degree Celsius for 30 seconds



MILK PASTEURISATION:

63 X 30min — Holder

72 X 15s — Flash

125 X 3s — UHT

Coliform, standard plate, phosphatase test

50. A 6-year-old boy is brought to the OPD due to sore throat and fever. Examination shows mild tonsillar erythema with exudates. A sample from the exudates is obtained. On microscopic evaluation, there are clumped, gram-positive bacteria with polar granules that stain deeply with aniline dyes. Which of the following best explains the pathogenicity of the organism most likely responsible for this patient's condition?

- A. Increase cAMP
- B. Blockade of neurotransmitter release
- C. Widespread T cell activation

D. Impairment of protein synthesis

EF 2 (-)

Cerebellum
Get the balance right

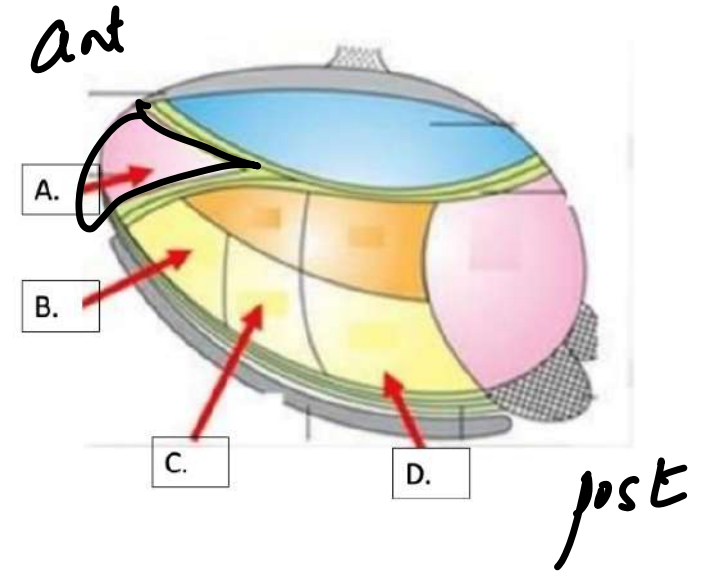
51. Fibres from mamillary bodies terminate at which of the following points?

~~A. A~~

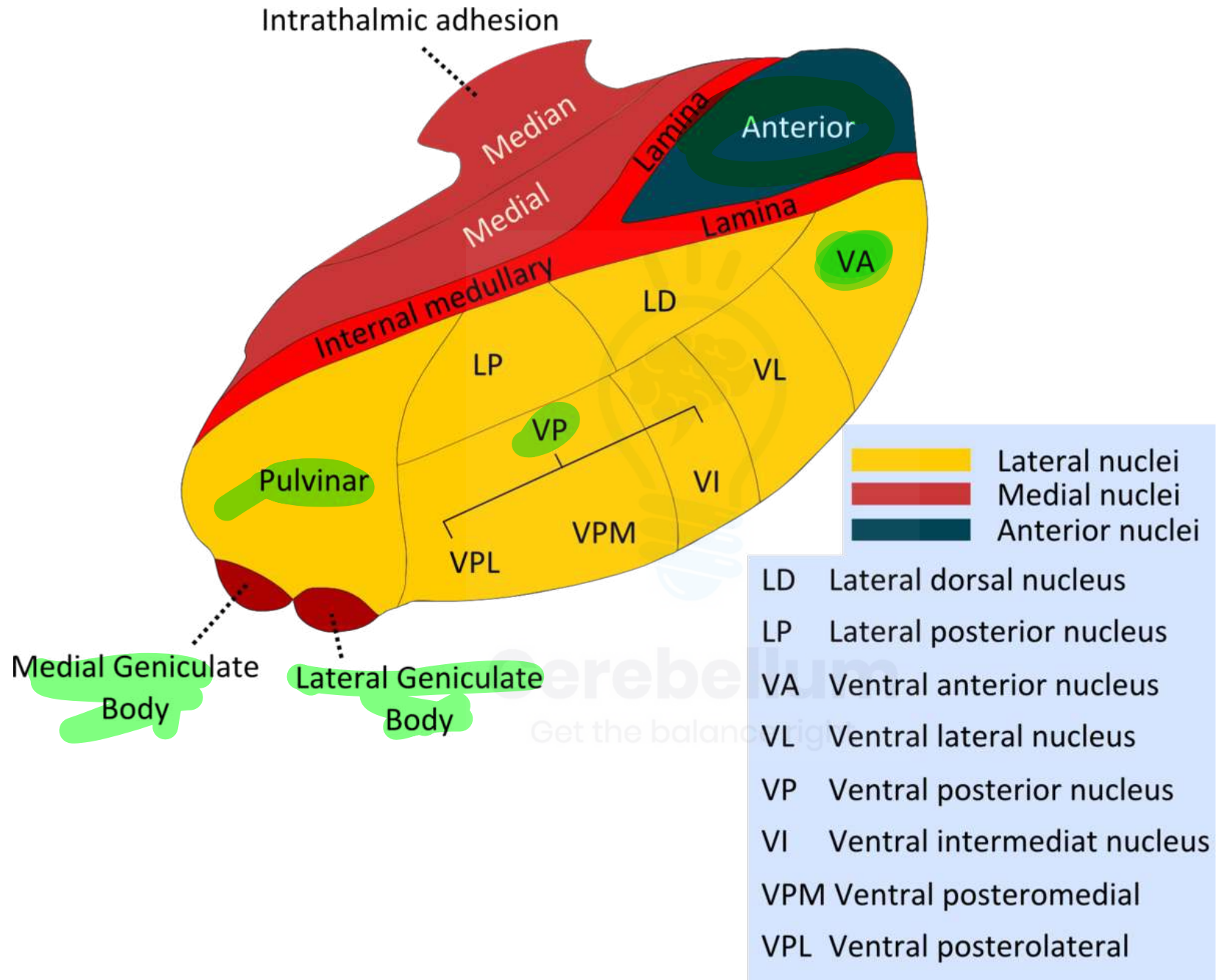
B. B

C. C

D. D



Cerebellum
Get the balance right



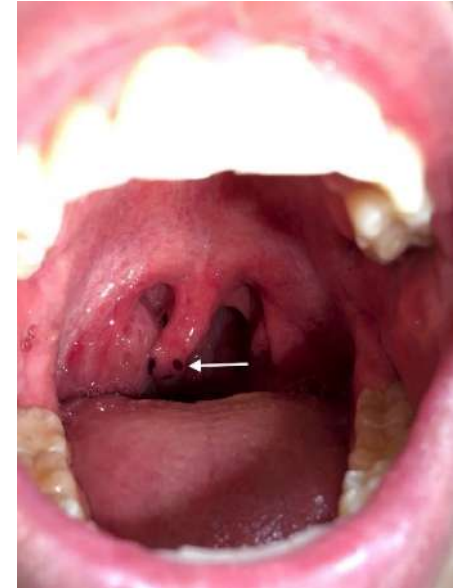
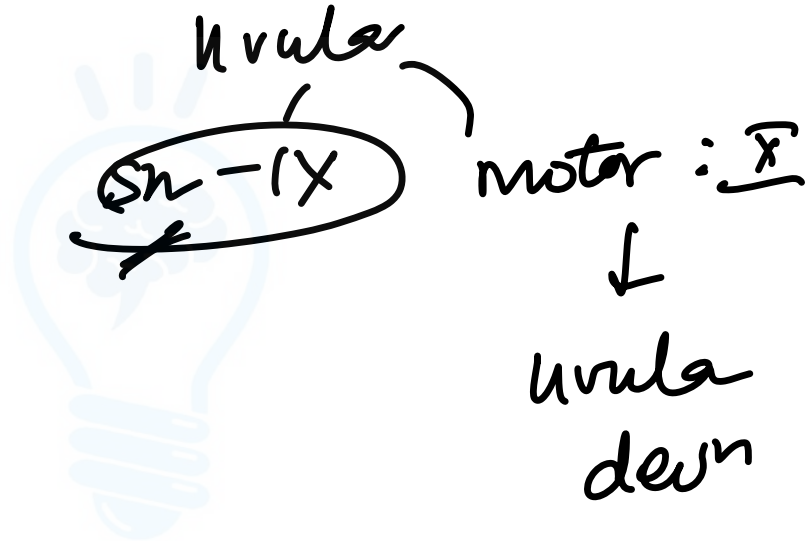
52. During the clinical examination of the nervous system, which of the following nerves can be tested by touching the highlighted structure?

A. IX

B. X

C. XI

D. XII



53. Match the following

- | | | |
|----------------------|---|------------------|
| A. BCYE agar | — | 1. Legionella |
| B. EMJH agar | | 2. Campylobacter |
| C. <u>PEMBA</u> agar | | 3. Leptospira |
| D. Butzler's agar. | | 4. B.cereus |

A. A-1, B-2, C-3, D-4

B. A-1, B-3, C-2, D-4

~~C. A-1, B-3, C-4, D-2~~

D. A-3, B-2, C-1, D-4

B-C - Skerrin

(party)

54. A 40-year-old female with breast cancer was taken for radical mastectomy and axillary lymph node dissection. A few weeks after surgery, she presents with weakness in overhead abduction and winging of the scapula. Which nerve is likely to be injured?

trapezius

Gen anti

A. Intercostobrachial nerve

B. Long thoracic nerve

C. Thoracodorsal nerve

D. Axillary nerve

55. 27-year-old man comes to the clinic due to abdominal discomfort and diarrhea. He informed that his symptoms began after he returned from vacation in Thailand two days back. On enquiry it was found that he happened to eat a lot of seafood. Stool sample was collected that revealed pink colored rods on gram stain. On wet mount, fish in stream appearance was seen. The causative agent acts on which of the following receptors?

V. cholerae

GN

A. GM1 ganglioside receptor

TaqI binds



↑ cAMP

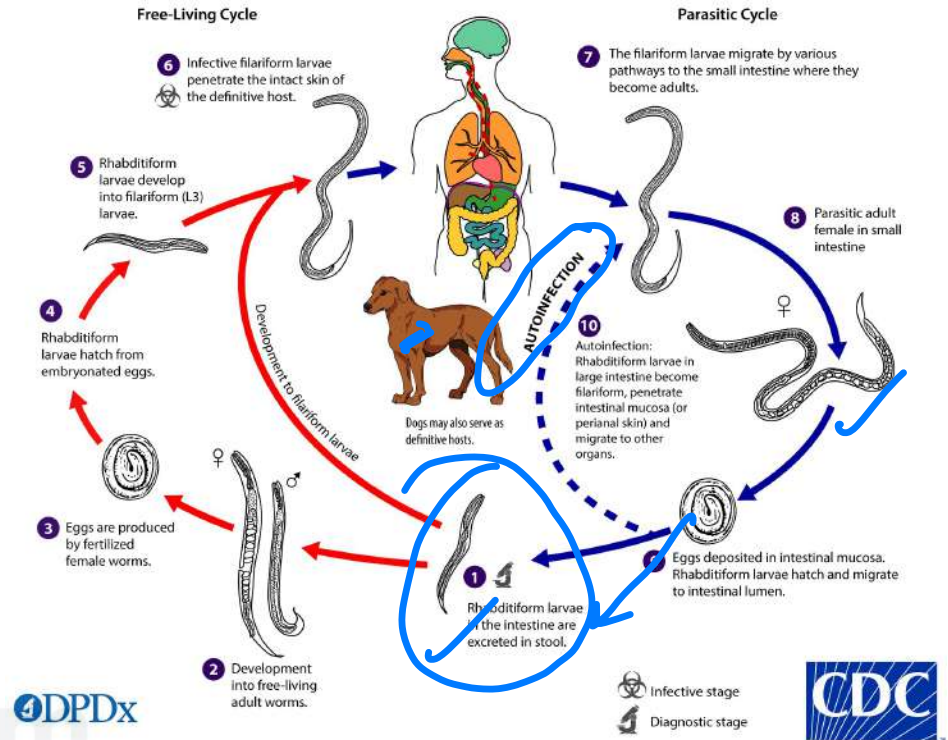
B. GM2 ganglioside receptor

C. Sphingomyelin

D. Cerebroganglioside

56. Identify the organism from the life cycle

- A. *Ancylostoma duodenale*
- B. *Strongyloides stercoralis***
- C. *Ascaris lumbricoides*
- D. *Enterobius vermicularis*



Cerebellum
Get the balance right

Strongyloides
CHEST - Triclor
Cystosp -
U-nana
Enterobius

57. The neurovascular plane of the abdominal wall lies in?

- A. Between the internal oblique and external oblique
- B. Deep to transversus abdominis
- C. Between the internal oblique and rectus abdominis

D. Between the internal oblique and transversus abdominis

TAP block

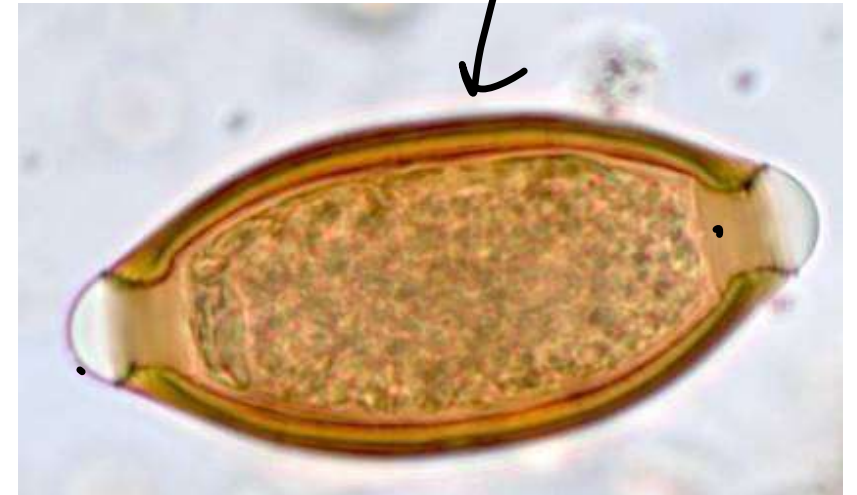
58. A patient presents with gastrointestinal problems including abdominal pain and distension, bloody and mucus-filled diarrhea, and tenesmus, **with rectal prolapse**. A stool examination is shown. What is the possible causative agent?

A. *Giardia lamblia*

B. *Trichuris trichiura*

C. *Ascaris lumbricoides*

D. *Ancylostoma duodenale*



59. A 45-year-old patient presented with difficulty in foot eversion and sensory loss on the lateral leg & dorsum of foot. Which nerve lesion will lead to the following condition:

A. Deep peroneal nerve

B. Sural nerve

~~C. Superficial peroneal nerve~~

D. Saphenous nerve

SPN

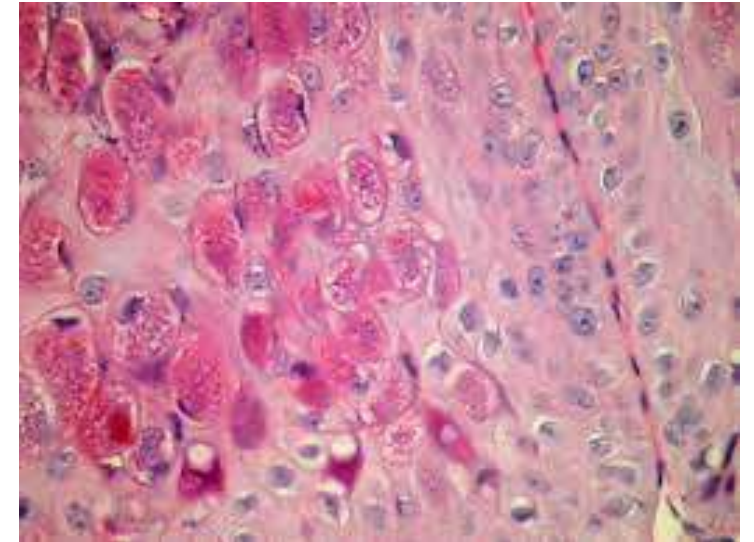


60. A 43-year-old, HIV-positive woman comes to the OPD due to lesions on her vulvar and perineal areas for the past 4 weeks. On examination, there are clusters of firm, shiny, round papules that are each 2-6 mm in diameter with central indentation. Microscopic examination of a lesion is shown in the image below: Which of the following is the most likely cause of this patient's presenting condition?

- A. Herpes simplex virus
- B. Human herpesvirus 8
- C. Human papillomavirus

D. Poxvirus

MCV



H-P bodies



H-P

Get the balance right

61. Which of the following is not used for the identification of the facial nerve trunk?

A. Retrograde dissection from distal branch ✓

B. Tragal pointer ✓

~~C. Inferior belly of omohyoid muscle~~

D. Posterior belly of digastric ✓



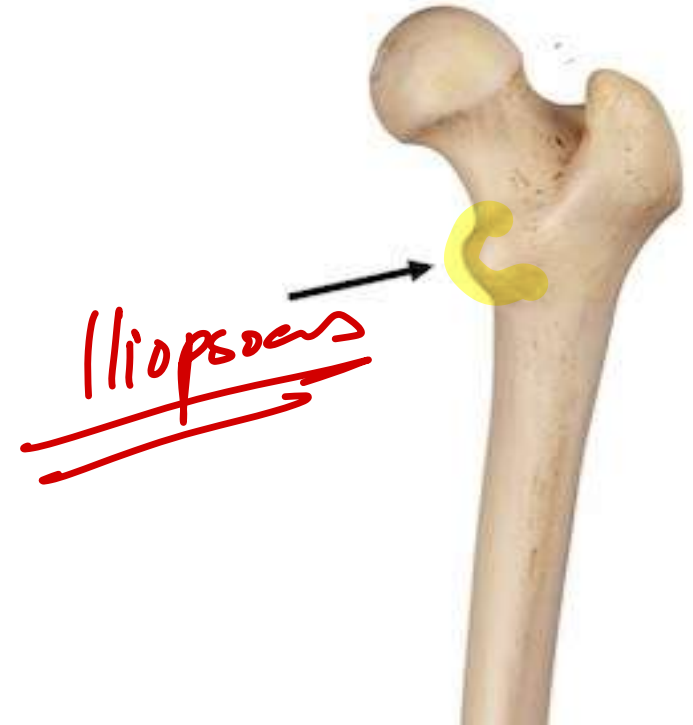
Cerebellum
Get the balance right

Surgical landmarks of facial nerve in parotid surgery

- 1. Cartilaginous pointer –Tragus/ Conley's pointer**
- 2. Tympanomastoid suture**
- 3. Styloid process**
- 4. Posterior belly of digastric**
- 5. Squamotympanic fissure**
- 6. Retrograde method**

62. Identify the function of the muscle attached in the given pointed structure of femur bone:

- A. Flexion of hip
- B. Extension and ER of hip
- C. Adduction of hip
- D. Knee extension



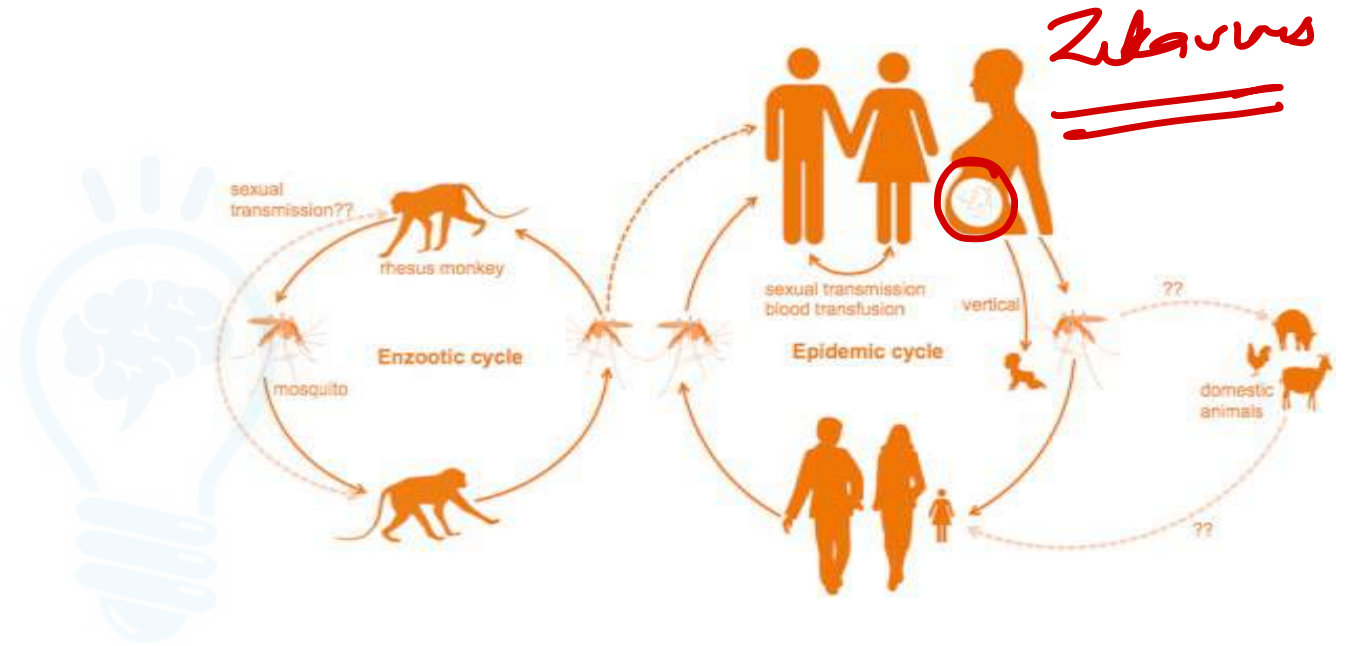
63. The infection whose life cycle is shown below is transmitted by:

A. Aedes aegypti

B. Culex

C. Anopheles

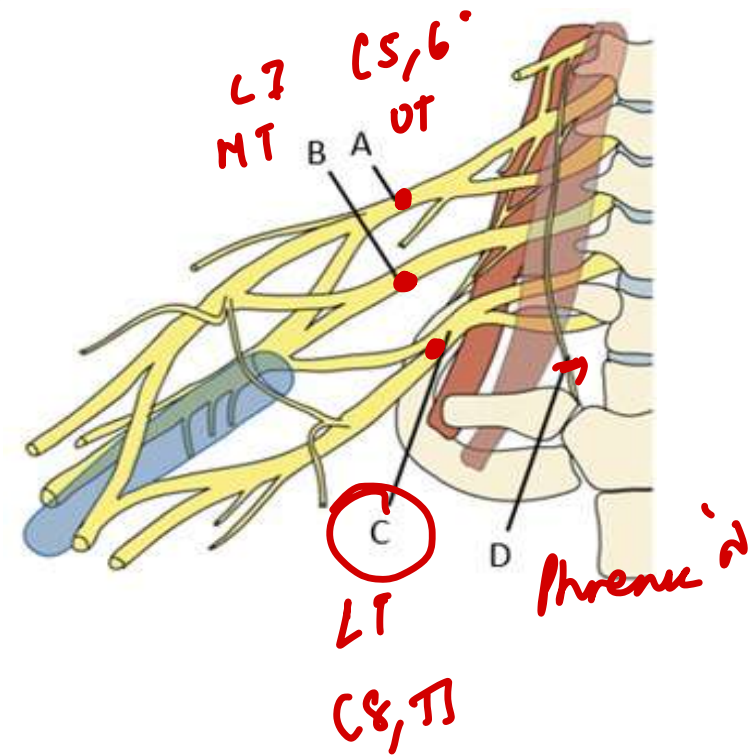
D. Phlebotomus papatasi



64. The man present with a case of cervical rib has tingling sensation and paresthesia on the medial side of arm. Which of the marked structure is most likely affected?

- A. A
- B. B
- ~~C. C~~
- D. D

C8, T1 - trunk



65. A 5-year-old child presented to emergency department with history of rhinorrhea and a mild non-productive cough and red eyes. He hasn't received his due vaccinations. On examination white lesions against red background seen on buccal mucosa as shown below. What is the likely cause?

- A. SS-RNA enveloped virus
- B. SS-RNA non-enveloped virus
- C. DS-RNA non-enveloped virus
- D. DS-DNA enveloped virus



non-enveloped RNA

PERCH

Hep A

Coxsackie

Polio

ECHO

Rhino

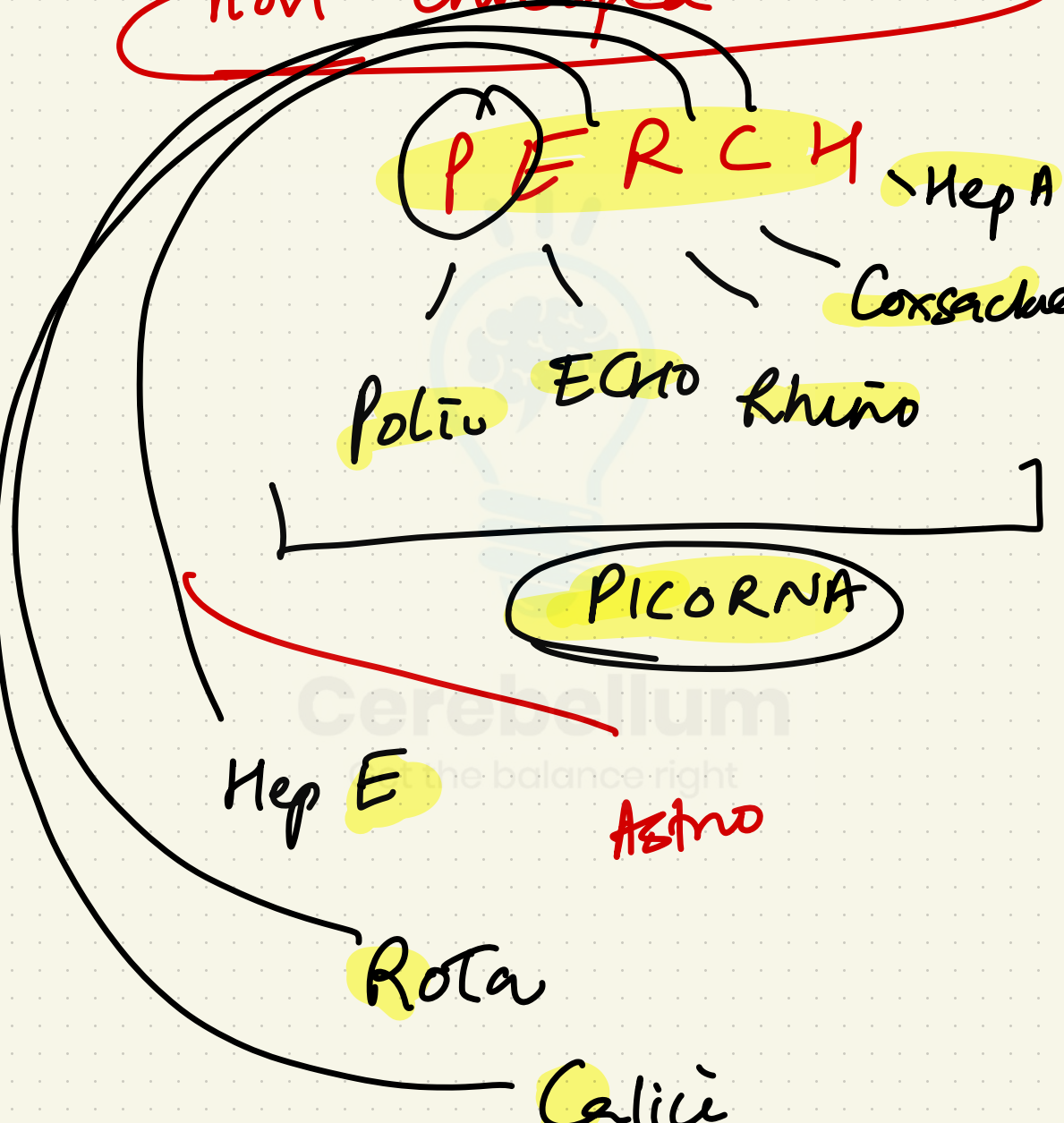
PICORNA

Hep E

Astro

ROTA

Calici



66. Which artery can be palpated by gently pressing your fingers between the medial malleolus and the calcaneal (Achilles) tendon?

A. Anterior tibial artery

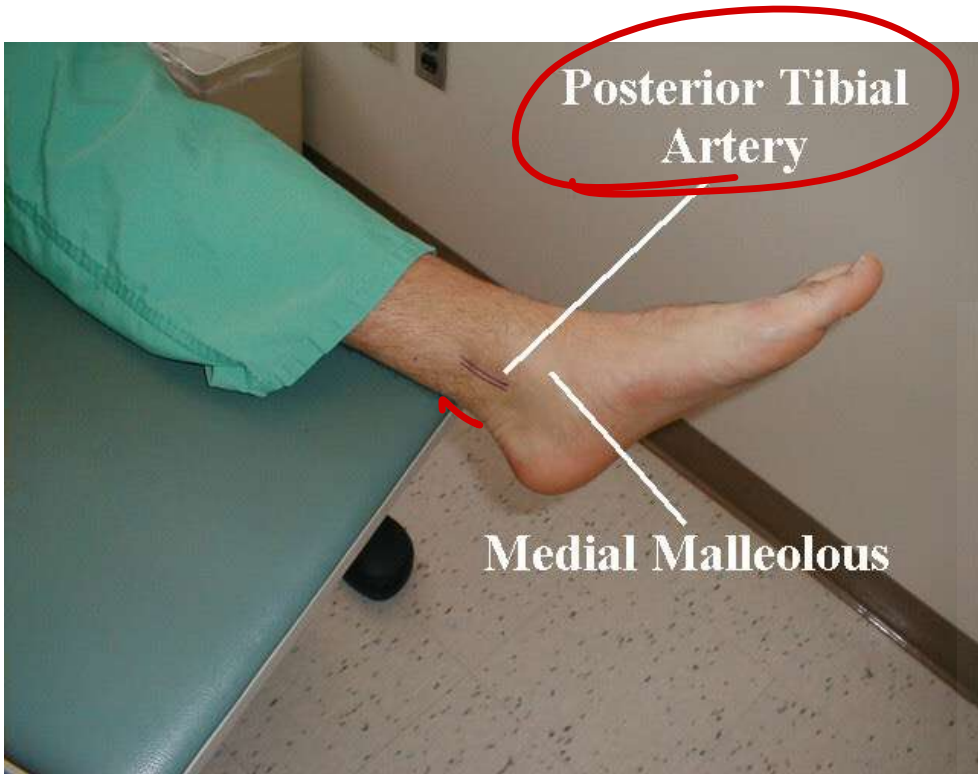
B. Posterior tibial artery

C. Dorsalis pedis artery

D. Popliteal artery



Cerebellum
Get the balance right



Cerebellum
Get the balance right

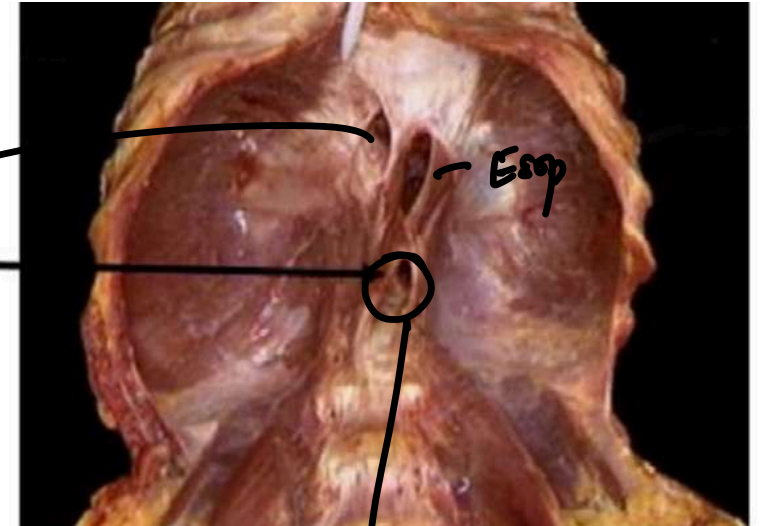
67. Which structure passes through the marked opening?

A. Vena cava

B. Thoracic duct

C. Esophagus

D. Phrenic nerve



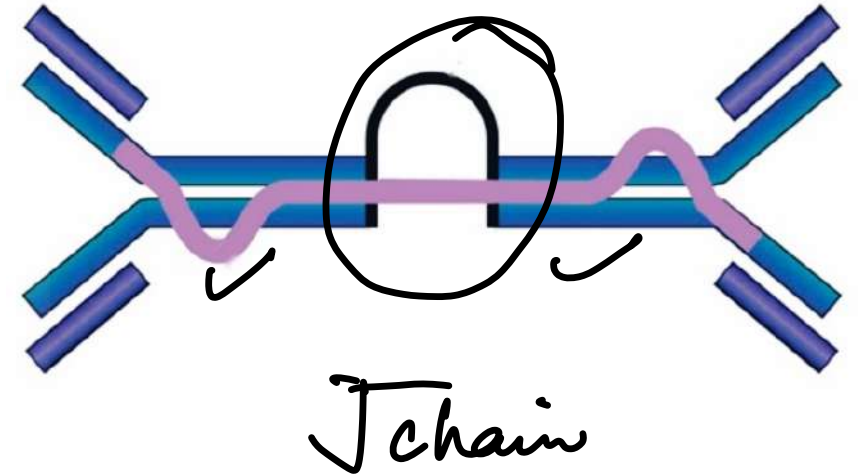
68. Identify the class of immunoglobulin shown in the image below.

A. Ig A *dimer*

B. Ig G

C. Ig M

D. Ig E



69. In a 30-year-old female from a tribal area who presents with fever for the last 3 days, which of the following is the most likely causative agent of her illness based on the peripheral smear?

A. *P. falciparum*

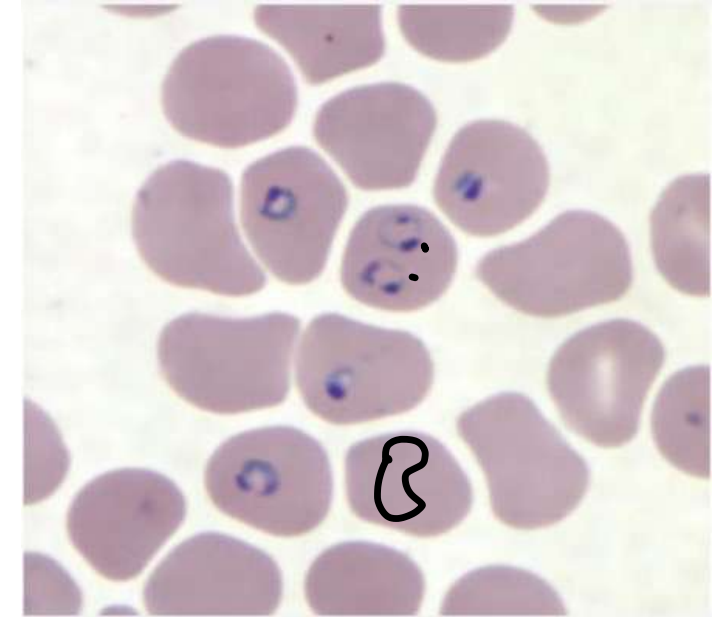
B. *P. malariae*

C. Babesiosis

D. *P. vivax*



Cerebellum
Get the balance right



70. A 65-year-old man comes to the emergency department with a sore on his right hand. The lesion began as a small, painless papule 3 days ago and rapidly enlarged and ulcerated. He is in the wool business and recently returned from a tour of wool-processing plants in several Asian countries. Physical examination is shown below. The toxin causing edema around this patient's ulcer has a mechanism of action most similar to a different toxin produced by which of the following bacteria?

A. Bordetella pertussis

B. Clostridium botulinum

C. Clostridium difficile

D. Shigella dysenteriae



cut antmax

71. Identify the true statements:

1. IVC passes through the central tendon of diaphragm (T)
2. Left superior intercostal vein drains into the azygos vein Lt BCV
3. There are two dorsal interossei at the middle finger (T)
4. Superior relation of epiploic foramina is formed by the hepatoduodenal ligament and right adrenal
Candide L
Lant

A. 1,2,3,4

B. 1,2,3

~~C. 1,3~~

D. 2,4

PAD DAB

Cerebellum
Get the balance right

middle
Dorsal Do

72. The green line corresponds to which vertebral level?

~~A. L5~~

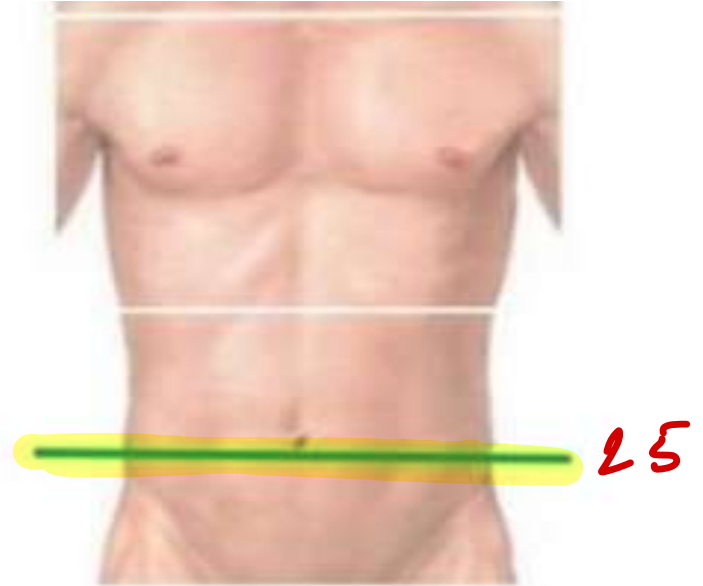
B. T12

C. L1

D. T10 - Dermatome

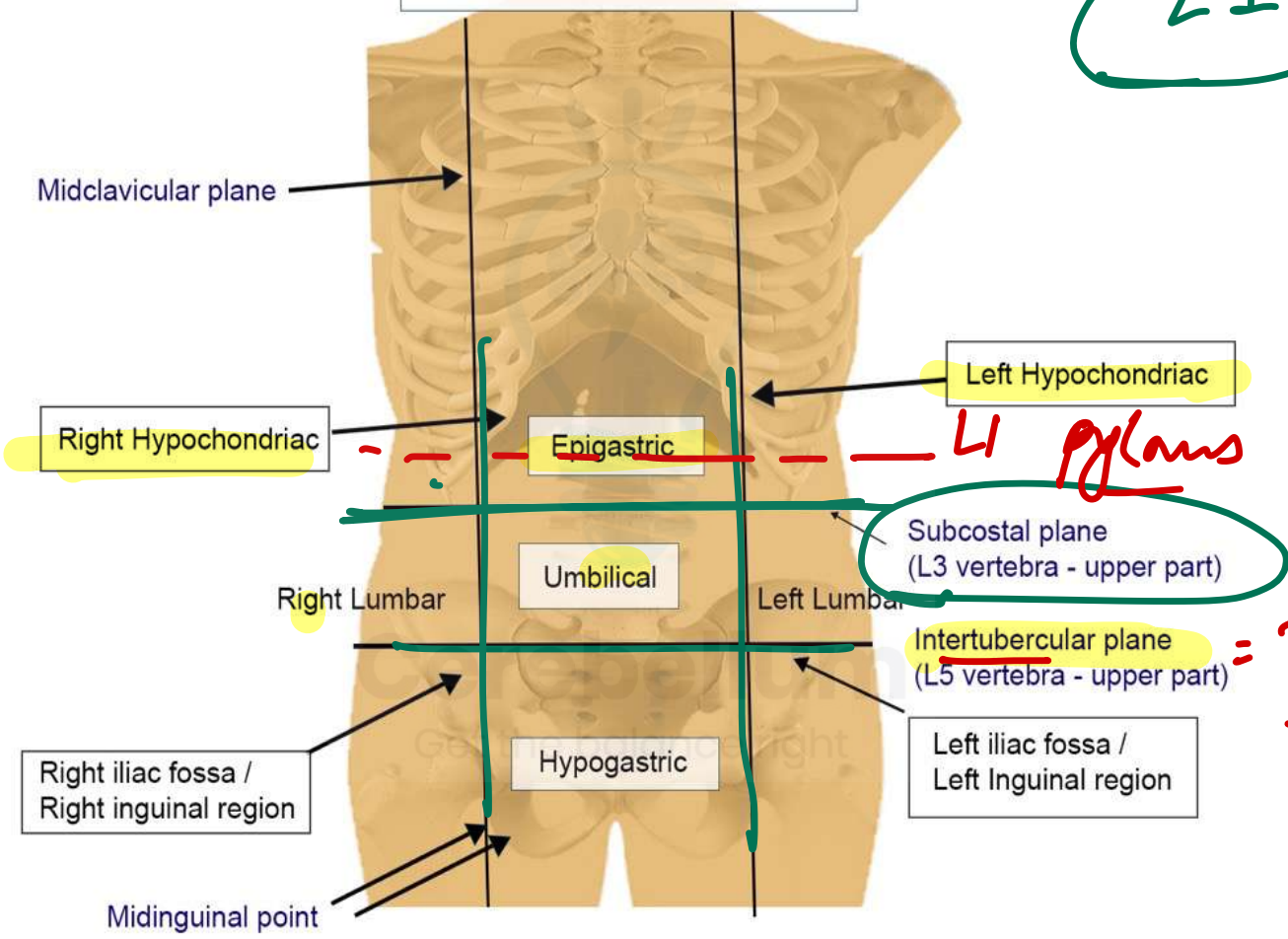


Cerebellum
Get the balance right



Abdominal Regions

L1



L1 pylorus - SMA - DJ flexure

Tuffier's line

L5

73. Which of the following is not true about Japanese encephalitis?

- A. Transmitted by Culex vishnui ✓
- B. Pig is the amplifier host ✓
- C. ~~Man acts as the reservoir~~
- D. Vaccinating pigs is helpful in disease control ✓



74. Which of the following statements is true about the iliopubic tract?

A. It is a thickening of the ~~lumbar fascia~~

Fr

B. It lies ~~anterior~~^{post} to the Poupart's ligament

C. It inserts into the pubic tubercle in ~~front~~^{Behind} of the conjoint tendon

D. ~~Its~~ fibers fan out with fascia illaca laterally

75. Which of the following is not a β -haemolytic bacteria?

A. Staphylococcus aureus — β hemolytic

B. Streptococci pyogenes ✓

~~C. Streptococcus viridans~~ α

D. Streptococcus agalactiae ✓



76. The following image is due to defect in fusion of?

- A. Medial nasal and maxillary process**
- B. Medial nasal and lateral nasal process
- C. Maxillary and mandibular process
- D. Lateral nasal and maxillary process



Cerebellum
Get the balance right

77. The false statement about fetal circulation is:

~~A. Anatomical closure of foramen ovale is by 3 to 5 days~~

1yr

B. Anatomical closure of ductus venosus is by 3 to 7 days

1wk

C. Right umbilical vein is absent

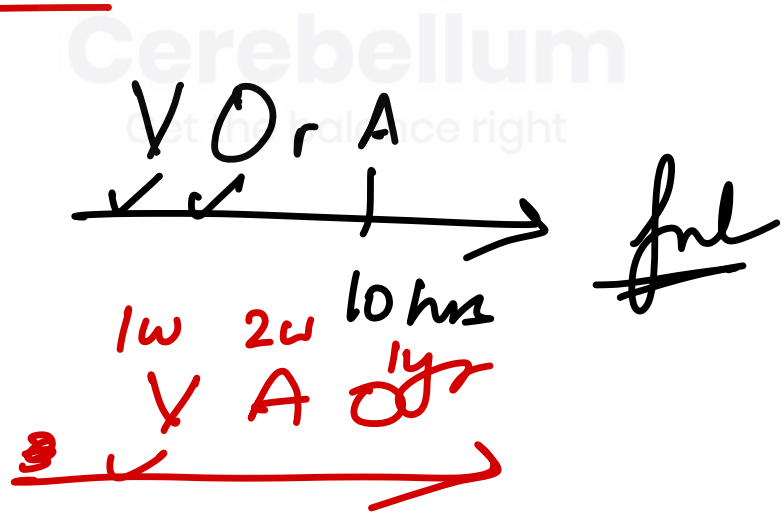
T

D. Anatomical closure of ductus arteriosus is by 2 to 3 weeks

2w

Changes After Birth: Closing of Shunts			
Shunt	Functional closure	Anatomical closure	Remnant
Ductus arteriosus	10 – 96 hrs after birth	2 – 3 wks after birth	Ligamentum arteriosum
Foramen ovale	Within several minutes after birth	One year birth	Fossa ovalis
Ductus venosus	Within several minutes after birth	3 – 7 days after birth	Ligamentum venosum

Umbilical arteries Umbilical ligaments *medial*
Umbilical Vein Ligamentum teres



78. Which of the following is a bioterrorism category A agent?

A. Nipah virus

B. **Yersinia pestis**

C. Coxiella

D. Brucella



Cerebellum
Get the balance right

Category A

Anthrax

Botulism

Plague

Smallpox

Tularemia

Viral hemorrhagic fevers

Category B

Brucellosis (*Brucella* species)

Epsilon toxin of *Clostridium perfringens*

Food safety threats (e.g., *Salmonella* species)

Glanders (*Burkholderia mallei*)

Melioidosis (*Burkholderia pseudomallei*)

Psittacosis (*Chlamydia psittaci*)

Q fever (*Coxiella burnetii*)

Ricin toxin from *Ricinus communis*

Staphylococcal enterotoxin B

Typhus fever (*Rickettsia prowazekii*)

Viral encephalitides (*alphaviruses*)

Water safety threats (e.g., *Vibrio cholerae*)

Category C

Emerging infectious diseases (e.g., *Nipah virus*, *hantavirus*)

Emerging future toxins

79. All of the following cranial nerve nuclei are part of special visceral afferent column except?

A. Facial nerve

~~B. Trochlear nerve~~

C. Vagus nerve

D. Glossopharyngeal nerve

7-9-10



80. A 3-year-old boy is brought to the emergency department due to high fever, vomiting, and lethargy. His symptoms started 1 day ago but rapidly worsened over the last few hours. Physical examination shows hypotension, tachycardia, neck stiffness, and a petechial rash over the trunk and lower extremities. While being evaluated, the patient develops apnea and systole. Despite aggressive resuscitation efforts, the patient dies. Autopsy would most likely reveal which of the following?

- A. Adrenal hemorrhage
- B. Cardiac tamponade
- C. Intracerebral hemorrhage
- D. Necrotizing pancreatitis

81. All of the following structures are derived from the aponeurosis of the external oblique muscle except:

A. Pectineal ligament

B. Inguinal ligament

C. Lacunar ligament

D. Linea semilunaris

- Int oblique



82. Which of the following structures is responsible for the movement of the thyroid gland during deglutition?

~~A. Pretracheal fascia~~

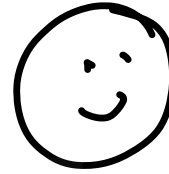
B. Sternothyroid

- prevents upward

C. Thyrohyoid membrane

D. Ligament of berry

(+) prevents sinking



83. A 3-year-old child presents with fever, loose stools, and blood in the stool. What is the enrichment medium used to isolate the organism from the stool sample?

A. Robertson cooked meat broth

B. Alkaline peptone water

C. Tetrathionate broth, *Selenite F*

D. Brain heart infusion broth



84. What is the nerve supply of the structure marked by blue arrow in the image below?

A. Posterior interosseus nerve

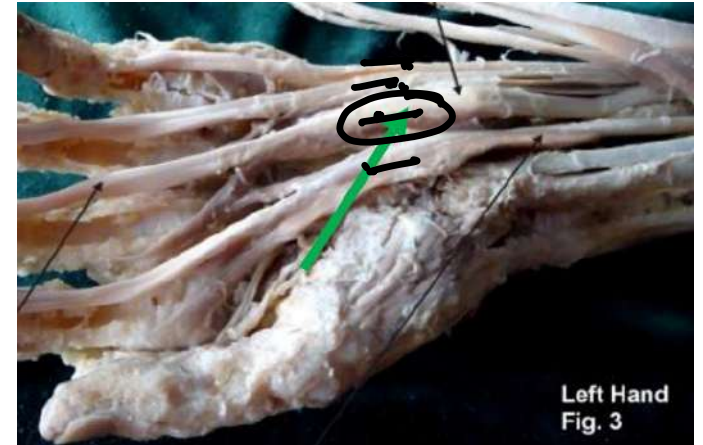
X

B. Median nerve

C. Anterior interosseus nerve

X

D. Ulnar nerve



Cerebellum
Get the balance right

85. Match the following

A. Borrelia recurrentis

B. Rickettsia prowazekii

C. Rickettsia typhi

D. Rickettsia rickettsii

1. Flea

~~2. Louse~~

~~3. Soft tick~~

4. Hard tick

Louse / soft tick

A. A-1, B-2, C-3, D-4

B. A-3, B-2, C-1, D-4

C. A-3, B-2, C-4, D-1

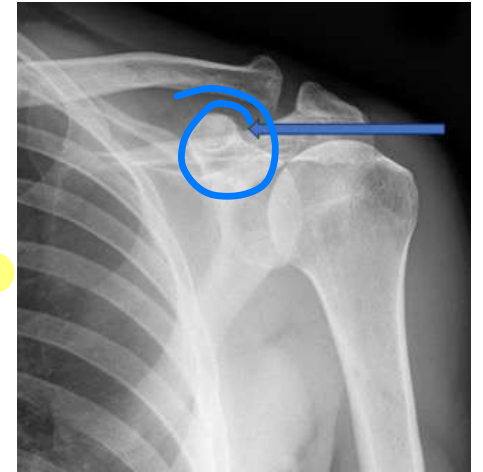
D. A-2, B-1, C-3, D-4

Ep ≠ Louse

End typhus

86. All are true about the part labelled here except:

- A. Derived from a type of atavistic epiphyses
- B. Gives insertion to pectoralis major muscle p. minor
- C. Short head of biceps takes origin from here + Coracobrachialis
- D. Can be felt in the infraclavicular fossa on examination



87. Identify the microfilaria from the image:

A. Wuchereria bancrofti

B. Brugia malayi

~~C. Loa loa~~

~~D. Mansonella perstans~~



L B W

Cerebellum
Get the balance right



88. All of the following are true except:

- A. Dermis has dense irregular connective tissue (T)
- B. Fibrocartilage, bones, tendons have collagen type I (one) (T)
- C. Hyaline cartilage has perichondrium with 2-4 chondrocytes in each lacuna (T)
- D. Fibres from Inferior olivary nucleus directly reach the purkinje cells in cerebellum, which constitute the largest neurons in human brain

→ Climbing
Cerebellum
Get the balance right
Massy

89. In a case of tinea capitis, white powdery colonies were isolated from the hair specimen. The hair perforation test was positive on the isolate. Which of the following is the likely etiology?

A. Epidermophyton floccosum

B. Microsporum audonii

C. Trichophyton mentagrophytes

D. Microsporum gypseum



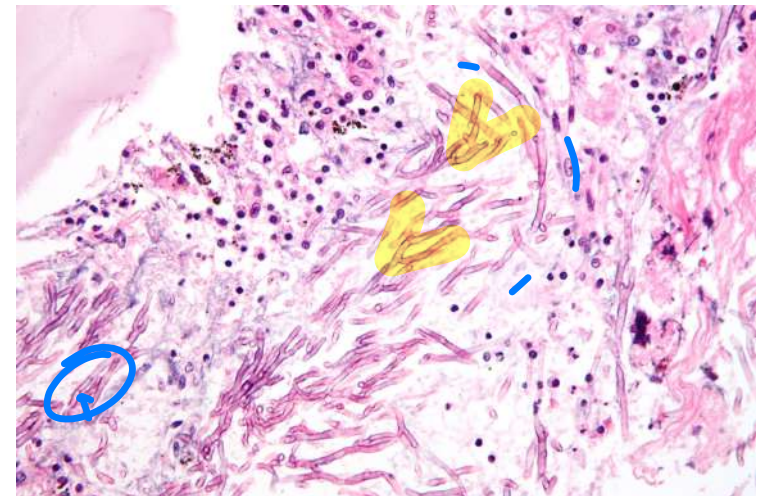
90. A 47-year-old man initially comes to his primary care physician with persistent fever, night sweats, and fatigue. Thorough evaluation yields a diagnosis of chronic myeloid leukemia. While undergoing treatment for his malignancy, the patient comes to the oncologist complaining of headaches, scant nasal discharge, and a problem with his left eye. Physical examination reveals tenderness over the paranasal sinuses in addition to left-sided orbital swelling and cellulitis. Mild proptosis and ptosis of the left eye are also present. Biopsy of his sinus mucosa is shown below. What is the likely cause?

A. *Aspergillus fumigatus*

B. *Blastomyces dermatitidis*

C. *Mucor*

D. *Coccidioides immitis*



91. A patient presented with weakness of the right side of the face with the loss of pain and temperature. Pain and temperature sensation of the left leg is also lost. The lesion is most likely located at?

A. Medial medulla

~~B. Lateral pons~~

C. Medial pons

D. Lateral medulla

Spinoth
5

3, 4

5-6-7-8

9-12

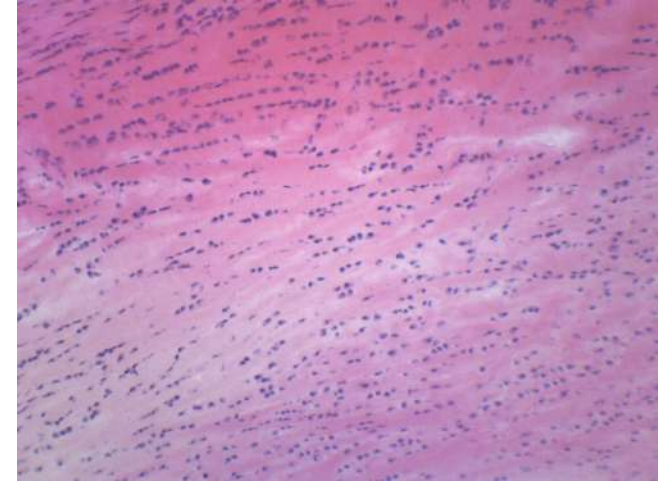
92. Identify the type of cartilage shown in the image below:

A. Hyaline cartilage

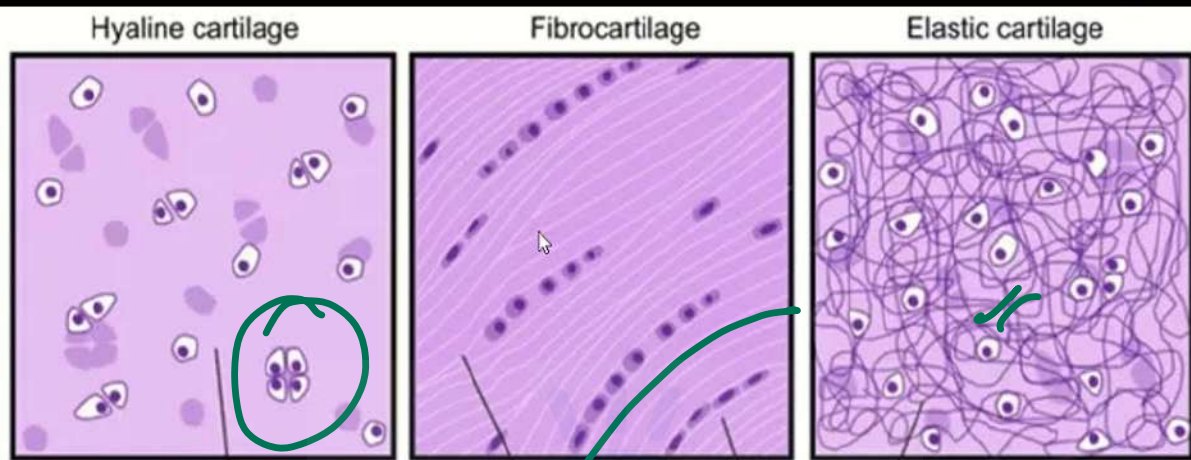
B. Elastic cartilage

C. Articular cartilage

D. Fibrocartilage



Cerebellum
Get the balance right

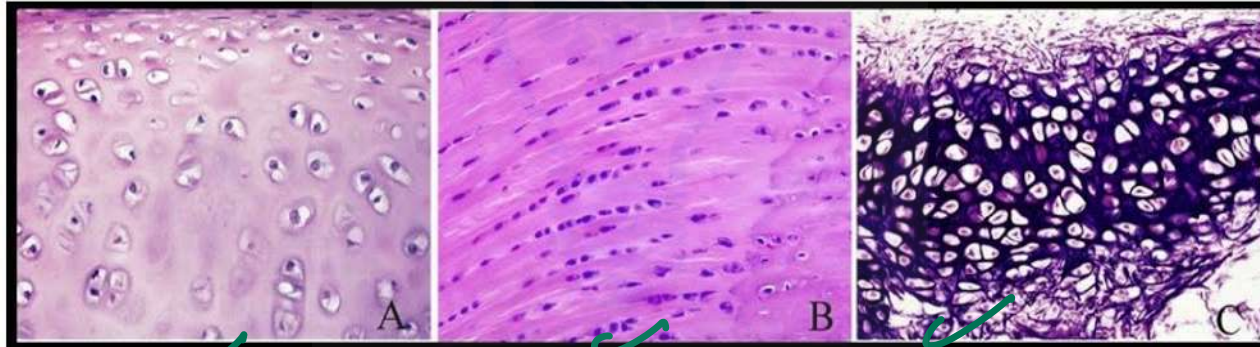


Clearer looking ground substance

Densely layered collagen fibers

More flattened and organized cell rows

Visible elastic fibers in matrix



Cerebellum
Get the balance right

93. Which of the following statements is true regarding antigenic drift?

A. There is a gradual sequential change in antigenic structure

B. It doesn't account for the periodic epidemics of influenza

C. The new antigens thus formed are totally unrelated to the previous antigens

D. Antigens to the predecessor viruses do not neutralize the new variants

S
~~SR~~
✓✓

DP
~~DP~~
=

xx

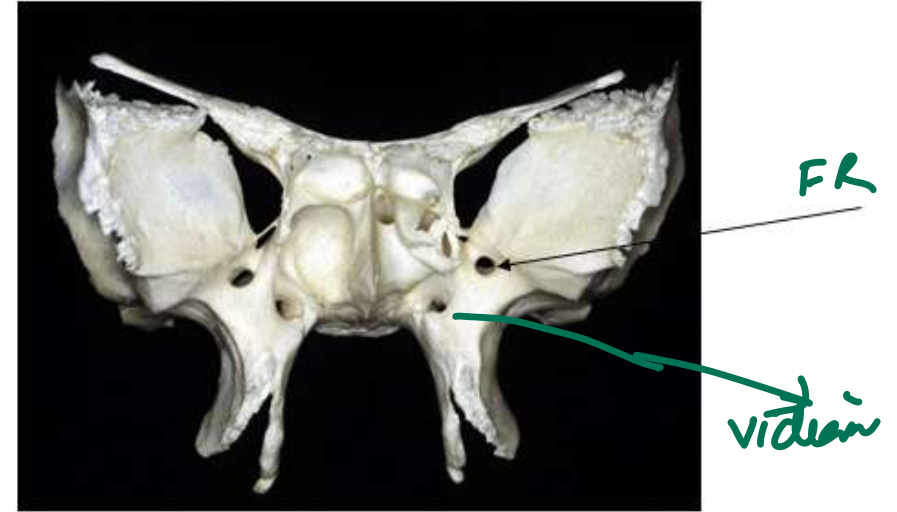
94. Identify the foramen marked in the image below.

A. Foramen rotundum

B. Foramen ovale

C. Vidian canal

D. Foramen spinosum



Cerebellum
Get the balance right

95. A 45-year-old man comes to the physician due to pain, swelling, and erythema affecting his right leg. He says that he suffered a minor cut to his leg a few days ago while cleaning his garage. Physical examination shows an indurated region surrounding a minor laceration that is draining a purulent exudate. He is diagnosed with cellulitis and started on the appropriate treatment. Gram stain of the exudate shows gram-positive cocci in clusters. The organism most likely responsible for this patient's infection synthesizes Protein A as part of its peptidoglycan cell wall that does which of the following?

A. Activates complement ~~xx~~

~~B. Binds the Fc portion of IgG~~

prevents opsoninⁿ

C. Causes hemolysis

D. Cleaves IgA

96. Area marked A in the given figure contain all the following, except:

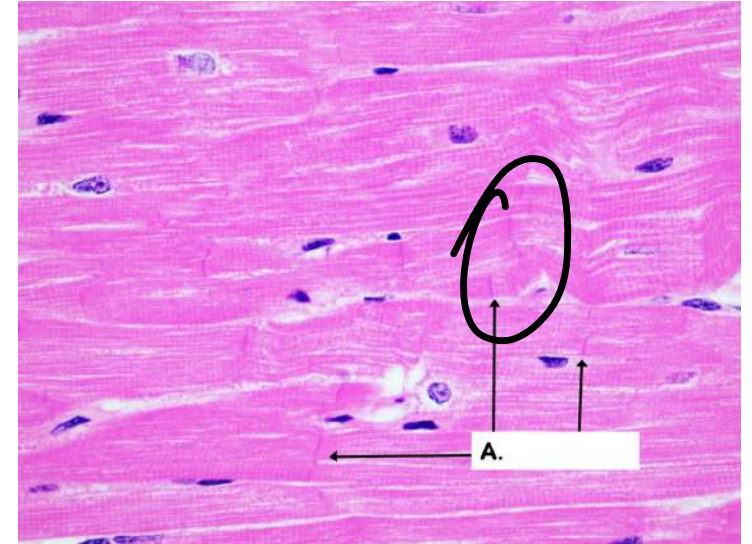
A. Zonula occludens

B. Zonula adherens

C. Macula adherens

D. Gap junction

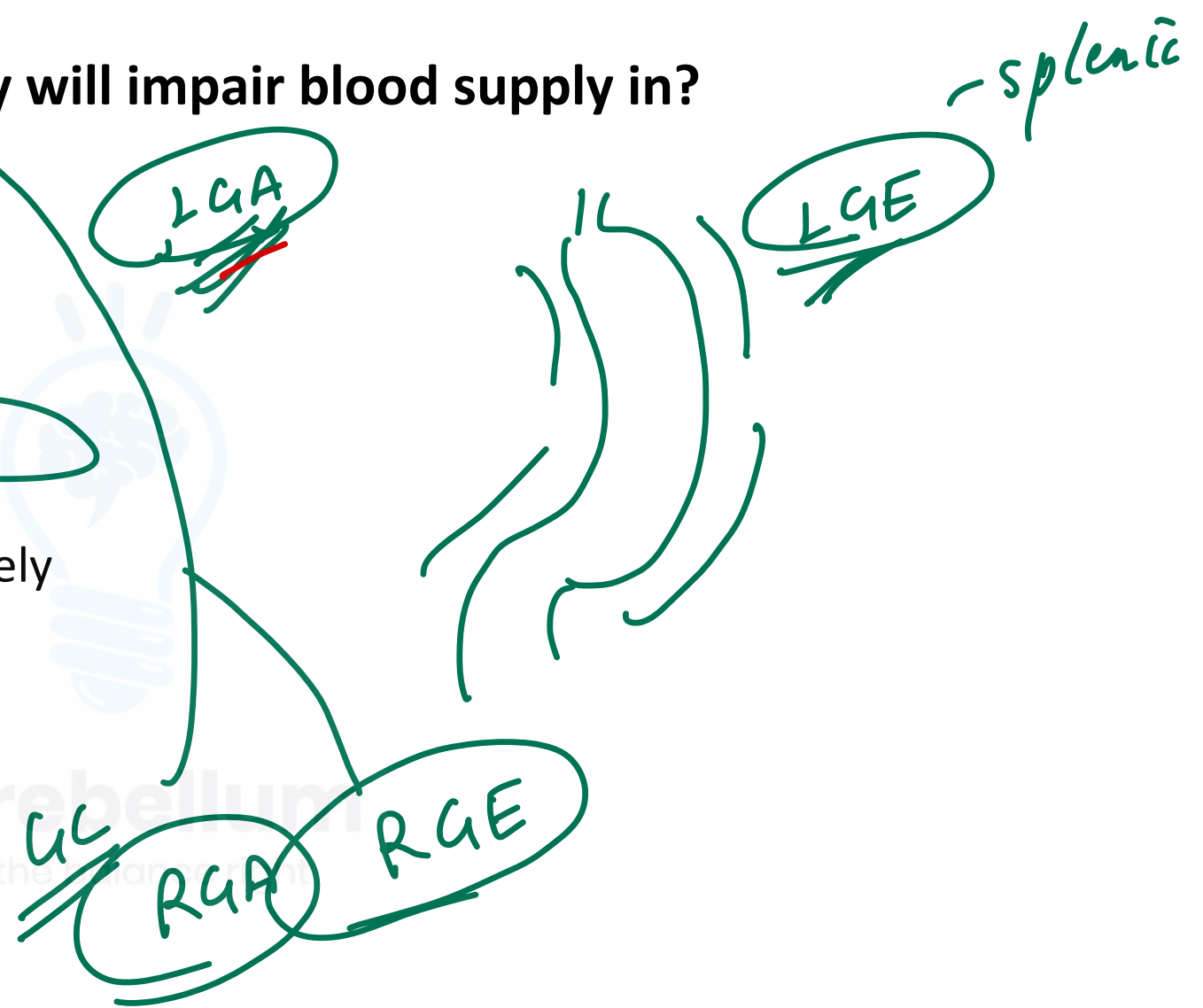
ZOT COT



*intercalated
disc*

97. Ligation of common hepatic artery will impair blood supply in?

- A. Lesser curvature of stomach ~~XX~~
- B. Greater curvature of stomach ~~XX~~
- C. Both curvatures of the stomach partially
- D. Both curvatures of the stomach completely



Cerebellum
Get the

98. Arrange the steps for the Ziehl-Neelsen (ZN) staining technique in the correct order:

A. Methylene blue

B. Heat

C. Carbol fuchsin

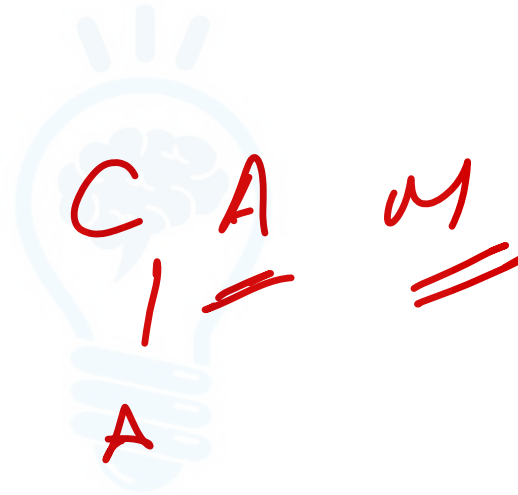
D. Acid-alcohol

A. B-D-C-A

B. C-D-B-A

C. B-C-D-A

D. C-B-D-A



Cerebellum
Get the balance right

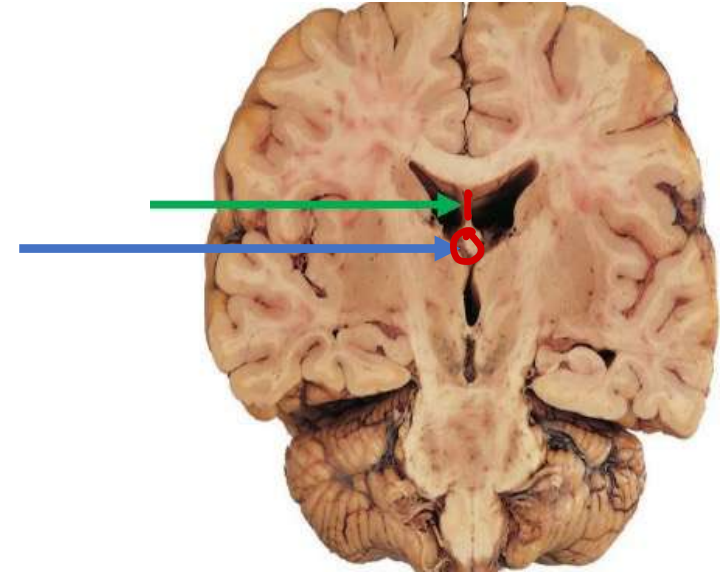
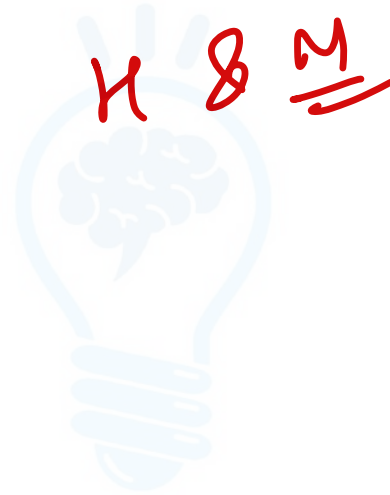
99. The structure marked with the blue arrow in the given picture terminates in:

~~A. Mamillary body~~

B. Hippocampus

C. Thalamus

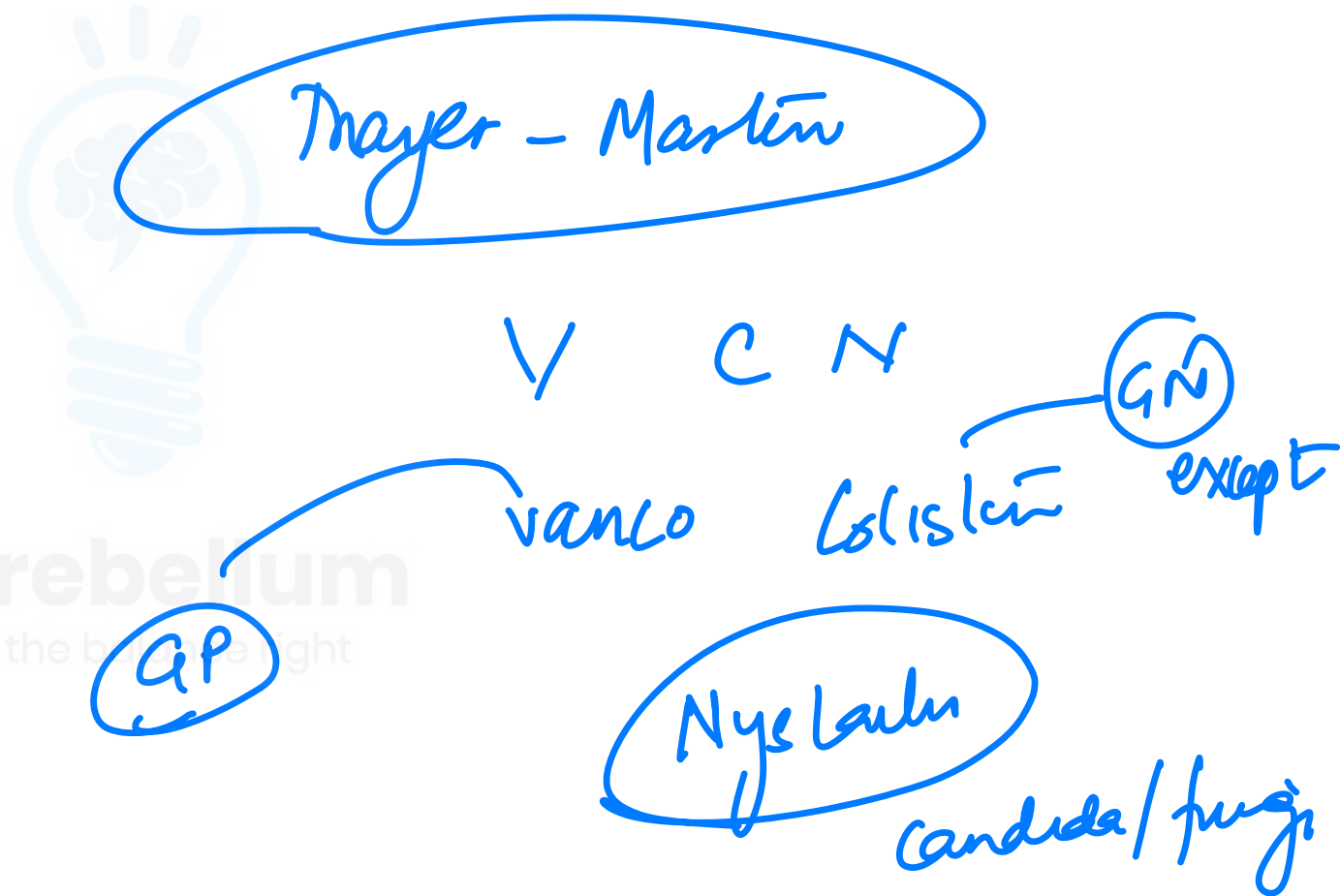
D. Amygdala



Cerebellum
Get the balance right

100. A 26-year-old man comes to the OPD due to a 3-day-history of dysuria and urethral discharge. Gram stain of the discharge reveals numerous neutrophils with intracellular diplococci. A sample of the discharge is placed on an antibiotic-containing medium, and bacterial colonies are cultured. Which of the following terms best describes the medium?

- A. Differential //
- B. Enrichment ✓
- C. Reducing ✗
- D. Selective //



Cerebellum
Get the brain right

A lightbulb icon with a brain inside, symbolizing ideas and thought.

Thank You!

Cerebellum
Get the balance right