

- Another option (that surely wasn't adenoid cystic carcinoma, so that mucoepidermoid carcinoma was the only malignant salivary gland tumor available)

Woman with diarrhea, steatorrhea, weight loss. Histology of the duodenum shows villous blunting, crypt hyperplasia and elevated IELs. What's the diagnosis?

- Celiac disease → right answer
- Other options..

What's required for diagnosis of celiac disease?

- Anti-TG2 antibodies
- Duodenal biopsy
- Genetic analysis of DQ2 and DQ8 alleles
- A+B
- A+B+C → right answer

What's true about PBC histology?

- Cholestasis + steatosis
- Cholestasis + granuloma → right answer
- Other options..

What's the most important predictor of immunotherapy response in CRC?

- MMR gene status → right answer
- Other options..

All of these are indolent lymphomas except?

- MALToma
- Follicular lymphoma
- African Burkitt Lymphoma → right answer
- Other options..

15. a 40yo man complains of retrosternal burning sensation following meals. What is the most likely cause?:
- adenocarcinoma
 - SCC
 - gastroesophageal reflux disease
 -
16. which is the most common neoplasm of the nasal cavity?
- SCC
 - angiofibroma
 - adenocarcinoma
 -
17. what is wrong about leukoplakia (possibly multiple):
- all are precancerous
 - all must be evaluated histologically
 - variable percentages have dysplasia
 -
18. thyroid cancer - T o F:
- follicular thyroid cancer has great prognosis, irrespective of capsular/vascular invasion F
 - papillary has great prognosis, with 1-2% death rate in 20y T
 - medullary has 5% death in 10y F
19. which is not a precursor of pancreatic cancer?
- IPMN
 - Pancreatic intraepithelial neoplasia
 - mucinous cystadenoma
 - serous cystadenoma
20. A case with an alcohol abuser that stopped drinking after discovering he has a cirrhotic liver. What is he still at risk to develop?
- HCC (correct answer)
 - Hemangioma
 - Hepatic adenoma
 - other hepatic lesions (I don't remember)
21. What is correct about pleomorphic adenoma of the salivary glands:
- common in the minor salivary glands - PARATHYR
 - rare – COMMON IN 60% OF CASE OF PARATHYR CANC
 - contains a partial capsule
 - it is a teratoma NO
22. Image that was clearly oligodendroglioma (fried eggs):
- 1p-19q+ IDH mutation SI
 - common in children NO

- c. located in the cerebral hemispheres SI
 - d. presents calcifications SI
- the answer was a combination of the options (A+C+D- something like that)

23. a 31 year old girl with a histologic image of her BM (abundant adipose tissue):

- a. normal BM
- b. aplastic anemia**
- c. myeloproliferative disorder
- d. myelofibrosis

24. which is true regarding follicular lymphoma?

- a. It is highly aggressive
- b. involves the BM in 80% of cases SI
- c. it is usually extranodal
- d. it derives from immature B cells with no mutation NO (?) (CONTROLLARE)**

25. Burkitt lymphoma- True or false:

- affects people 65 years old or older F
- the endemic type does not involve EBV F
- it has a rapid onset of symptoms that varies depending on the site of origin T

26. Which site of CRC carries the worse prognosis?

- a. left colon
- b. right colon**
- c. transverse colon
- d. other option

27. Sessile serrated adenoma- True or False

- more common on the right colon T
- associated with the CIMP pathway F
- arises from the pathway that is more probable to develop into a malignant cancer T

28. True or False::

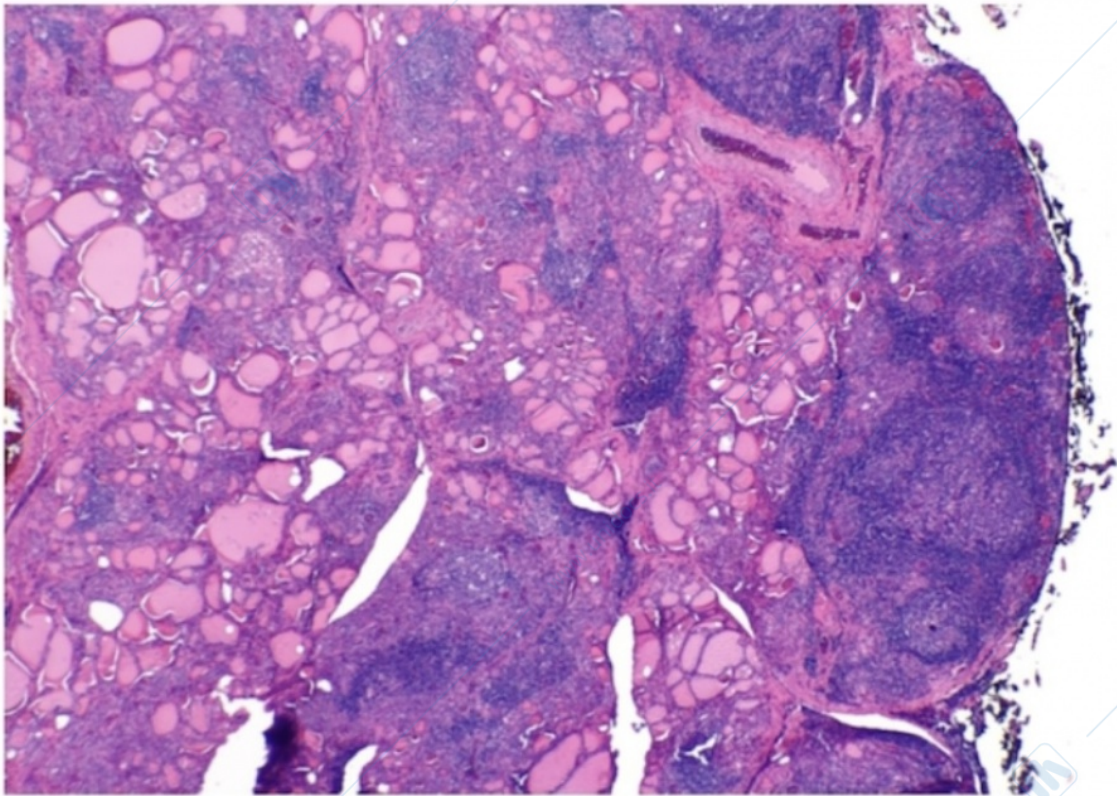
- a. Primary myelofibrosis is associated with proliferation of myeloid cells T
- b. Chronic myeloproliferative conditions are not associated with spent phase (fibrosis and hypocellularity of the BM) and peripheral cytopenia. F
- c.

29. Follicular lymphoma - which one is correct:

- a. involves naive lymphocytes
- b. present in the BM in 80% of the cases**
- c. has an aggressive course
- d.

30. MSI analysis is useful for: ALL CORRECT

- a. diagnostic, prognostic and therapeutic value
- b. MSI-high grade 2 CRC will respond poorly to 5-FU chemotherapy



What is most probable to find on serological examination:

- a. anti-AMA
- b. anti-ANA
- c. Anti-Jo
- d. Anti-TPO

5. what is your diagnosis? _____ HASHIMOTO'S THYROIDITIS (GERMINAL CENTER)

6. possible complication:

- a. Follicular carcinoma
- b. papillary carcinoma
- c. Extranodal MZL
- d. Nodal marginal lymphoma (FORSE)
- e. all

7. What organs are affected in MEN1:

- a. Pituitary, Pancreas, Parathyroid
- b. Pituitary, Adrenals, Parathyroid
- c. Adrenals, Pancreas, Thyroid
- d.

8. What is wrong about NEN:

- a. appendix and intestinal NEN are mostly very aggressive F
- b. pancreatic NEN have worse prognosis than GI ones T
- c. Jejunal and Ileal NEN are mostly indolent F
- d. something about gastric NEN (?) REMEMBER: GASTRIC NEC ARE NON INDOLENT AND RARELY METASTASIZES / GASTRIC NET WITHOUT

PREDISPOSING FACTORS ARE AGGRESSIVE

9. Medullary thyroid cancer - what is correct (possibly multiple):

- a. Neuroendocrine T
- b. never spreads lymphatically F
- c. Not familial F
- d. Can be multifocal T
- e.

10. 16yo with knee pain, radiology shows bone cortex lesion with reactive periosteum, histology shows osteoid-depositing osteoblasts. Diagnosis:

- a. osteochondroma
- b. osteosarcoma
- c. chondrosarcoma
- d. Ewing sarcoma

11. Diffuse gastric cancer:

- a.
- b.
- c.
- d. associated with E-cadherin loss

12. Intestinal gastric cancer - which is the most frequent sequelae of events:

- a. H pylori > antritis > higher acidity > carcinoma
- b. H pylori > multifocal gastritis > lower acidity > carcinoma
- c. autoimmune gastritis > lower acidity > carcinoma
- d. adenoma > dysplasia > carcinoma

13. what is early gastric cancer:

- a. only mucosa, without lymph nodes involvement
- b. only mucosa, irrespective of lymph nodes involvement
- c. only mucosa and submucosa, without lymph nodes involvement
- d. only mucosa and submucosa, irrespective of lymph nodes involvement

14. A 66-year-old man living in Tehran, Iran, has been bothered by difficulty swallowing for the past year. He is now consuming liquid food. Yesterday he regurgitated food stained with blood. On esophagoscopy, there is an ulcerated obstructing lesion 20 cm from the lips. Biopsies are taken and on microscopy show infiltrating nests of keratinized cells with distinct cell borders and hyperchromatic, angulated nuclei. Which of the following is the most likely risk factor for his disease?

- a. Genetic susceptibility
- b. Autoimmunity
- c. Diet
- d. Infection (?)
- e. Reflux

ii) Other options

- 15) Bones: A patient has a bone lesion that consists of a bony stalk with a cartilage cap that arises from the metaphysis. What is the diagnosis ?
- i) Osteoid osteoma correct
- 16) Bones: Which of the following is true about giant cell tumours?
- a) They arise in the metaphysis and extend to the epiphysis correct
- b) They present osteoclasts I believe this is correct (although the neoplastic cells actually derive from osteoblasts precursors)
- c) They are usually found around the knee correct
- d) They arise in patients 20-40 years old correct
- 17) Thyroid: a patient has a growing nodule in the thyroid. Fine needle aspirations showed nuclear inclusions and papillary clusters (and other features typical of papillary carcinoma). What is the right classification for this nodule?
- a) Thy 1
- b) Thy2
- c) Thy 3
- d) Thy 4
- e) Thy5 probably the correct one
- 18) Which of the following is **wrong** about papillary thyroid cancer
- a) It tends to be angioinvasive correct (This means that papillary thyroid cancer is NOT angioinvasive)
- 19) A woman has an enlarging nodule (follicular neoplasms) what is the best way to proceed?
- a) Follow-up
- b) Fine needle aspiration
- c) Lobectomy/thyroidectomy and analysis of biopsy correct one (in order to observe if there is capsule invasion)
- 20) Brain: Which of the following is correct about Berry aneurism
- a) They rupture only in the elderly wrong
- b) They are associated w/ amyloid angiopathy I believe this is wrong
- c) They are generally asymptomatic I wrote that this was correct...although sometimes there are some generic symptoms 2 weeks before a catastrophic even. However, there were different combinations of answers and only the one that included this options seemed correct to me
- d) Another option (maybe: they commonly arise in the middle cerebral artery) correct
- 21) Brain: Which one is correct about red neurons
- a) It is reversible wrong
- b) It is the first observable sign correct
- c) They arise following a toxic injury wrong (they arise following an ischemic event)
- 22) Brain: what is the most common location for medulloblastoma?

- d) Ulcers
- 6) Celiac disease: what are the microscopic features of celiac disease?
- a) Immune infiltration, villi atrophy, crypt hyperplasia true
 - b) Immune infiltration, villi atrophy, cryptitis
 - c) Immune infiltratio, villi atrophy, crypt dysplasia
- 7) Image of Primary sclerosing cholangitis (there was very evident fibrosis around the duct) ... I cannot recall if they wrote also a medical history. Which of the following is the correct diagnosis:
- a) PSC correct
 - b) PBC
 - c) Other options
- 8) Question about autoimmune hepatitis. Which of the following is true about autoimmune hepatitis
- a) Type 1 is more common in children wrong
 - b) The lesion usually presents plasma cell clusters true
 - c) Type 1 is associated w/ higher levels of ANA and anti-SMA true
 - d) Another option ...
- 9) Liver: Which of the following is not a precursor lesion of hepatocellular carcinoma?
- a) Adenoma expressing HNF-1
 - b) Cellular atypia (small and large cells)
 - c) Dysplastic nodules
 - d) Adenoma expressing beta catenin
- 10) Stomach: a patient experiences a 9kg weight and muscle wasting. Her stomach mucosa shows areas of loss of rugosal folds and a cobblestone appearance. What is the most probable diagnosis?
- a) Chronic atrophic gastritis
 - b) Lymphoma
 - c) GIST
 - d) Signet ring cells adenocarcinoma correct
- 11) Larynx: which of the following is correct?
- a) It is usually located on the rugosal folds correct
 - b) It is associated w/ HPV false
 - c) When it is infraglottic it has a bad prognosis correct
- 12) What's the risk factor for developing lymphoma of the parotid?
- a) Sjogren disease correct
 - b) Other options
- 13) What is true about pleomorphic adenoma?
- a) It does not have a complete capsule correct answer
- 14) Bones: A patient has a bone lesion with osteoblasts with nuclear pleomorphisms that deposit osteoid. A microscopic image of the bone tumour was shown:
- i) Osteosarcoma correct

- a) Midline of cerebellum
b) Other locations
- 23) Blood: What is true about myeloproliferative disorders
- a) They cause aplasia of the bone marrow false
 - b) They induce hepatosplenomegaly true
 - c) They induce haematopoiesis in secondary organs true
 - d) They can progress to fibrosis and peripheral cytopenia true
 - e) They can progress to acute leukemia true
- 24) Blood: What is true about Burkitt lymphoma
- a) It has a wide spectrum of clinical presentation, depending on the location of the tumour true
 - b) In endemic areas it is not associated w/ EBV wrong
 - c) It arises in patients older than 65 wrong
 - d) Other options
- 25) Blood: What is the best way to diagnose Hodgkin lymphoma?
- a) Immunohistochemistry of fine needle aspiration
 - b) Node biopsy correct answer
- 26) Which of the following is correct about DLBCL
- a) It does not express a MYC overexpression wrong
 - b) Other options
- 27) Neuroendocrine tumours: A patient has a lesion on the adrenal gland and is experiencing paroxysmal events of hypertension (and other presentations that I cannot recall now). What is the most probable diagnosis?
- i) Pheochromocytoma
- 28) What is true about sessile serrated lesions
- a) There is a high recurrence upon removal because it does not have well defined borders true
 - b) It is diagnosed by occult bleeding in the feces false (it rarely causes occult bleeding in the feces)
 - c) Other options

NB: Very often, the questions were like: which of the following statements is correct?

- 1) A+C+E
- 2) All
- 3) None
- 4) A+C

Online exam (24/07/20) with both practical written and written combined in 33 MCQ.

Here are almost all the questions from the exam.

Personally I would recommend to look at the Webpath website for images and exercise questions, and use the Robbins review book for other exercise questions. Some MCQs are taken from these 2 sources. Good luck!!

images:

1. Larynx: 3 macro images [papilloma - singers's nodule - SCC] to be matched with the 3 micro slides (same exercise as the one in the practice lecture about head & neck cancers)
2. Rx of an osteoid osteoma to be matched with the right microscopy slide among 3
3. FNA of papillary thyroid cancer cells to be matched with the right microscopy slide among 3 (other 2 options were Hashimoto and micro-invasive follicular carcinoma)

T/F

Red Neurons:

- indicate reversible injury: F
- Are a sign of neuronal toxicity: F (they indicate neuronal ischemia)
- Are the first microscopically visible change: T

Giant cell tumor:

- Are made of osteoclasts: T
- Peak incidence btw 50-70 Y/o: F
- Most common site is the knee: T

Laryngeal cancer

- Most common site is the vocal cords: T
- HPV is a risk factor: F
- in the subglottis has the worst prognosis: T

clinical case of a 60yo patient with progressive pain in the hip joint. Rx shows a mass with calcifications in the femur extending into the joint. Gross anatomy shows a mass with bluish areas. What's the most likely diagnosis?

- Chondroma
- Chondrosarcoma → right answer
- Osteosarcoma
- Other options..

a man with long history of alcohol abuse quits drinking. He remains at risk for the development of:

- HCC → right answer
- angioma

PA2 exam 20-21/7/21

Practical -

1.
 - a. Story of an old man with occult blood in the stool. Colonoscopy with image of the rectum, showing a polypoid pedunculated lesion. Describe it
 - b. Match a histological image associated with the previous gross appearance. Suggest a diagnosis and explain

2.
 - a. Old woman with back pain for 1 month, radiology shows lytic lesions of T10 with soap-bubble appearance. BM smear was shown, with multiple plasma cells. Diagnose (MM)
 - b. several months later the lady develops acute renal failure. A biopsy of the kidney was shown, with casts occluding the tubular system. Describe and diagnose (myeloma kidney)

3.
 - a. A 25yo man with hip pain. Gross image of osteoblastic lesion. Diagnose (osteosarcoma).
 - b. there were 2 lung images (gross), and you had to match the one more likely to be found in this patient. One was with multiple metastases (correct), the second one was a smoker's lung, maybe with necrosis. explain your answer.

MCQ:

1. 35yo woman develops severe headache and collapses after 1h. MRI shows bleeding at the base of the brain. CSF contains blood but no bacteria, normal glucose, protein slightly elevated:
 - a. Bacterial meningitis
 - b. Berry aneurysm rupture
 - c. Bridging veins rupture
 - d. something else

2. 70yo man arrives to the hospital after loss of consciousness. radiology shows subdural hematoma. what is the cause?:
 - a. Aneurysm rupture
 - b. HTN
 - c. Amyloid
 - d. Bridging veins rupture

3. Fridrich-waterhouse syndrome is (T or F):
 - a. associated with pneumococcal septicemia F (meningococcc septic)
 - b. associated with DIC T
 - c. associated with renal hemorrhagic infarction T

4. A 43yo woman has progressive fatigue for 3 years, with poor concentration and cold intolerance. she had many lab tests done that were detailed (mostly normal, low core temp). This histology was shown: