

Endocrine System MID EXAM , HOPE BATCH 25/11/2018

Pathology : Dr. Nisreen + Dr. Anwar. Anatomy : Dr. Ramada + Dr. Jamal. Physiology : Dr. Fatimah.

Pharmacology : Dr. Laila. Biochemistry : Dr. Zaid. Community : Dr. Reema + Dr. Moaoeaa.

Lab : Osama (Histology) , Doaa (pathology).

A- Anatomy : (1-2 : Dr. Jamal), (3-6 Dr. Ramada)

- 1- Case about a patient has hypertension due to pheochromocytoma, and we have to do laparoscopic adrenalectomy. Which fibers should we cut ? **preganglionic sympathetic fibers (because they innervate the adrenal medulla)**
- 2- Case about a patient who has to have tracheotomy. Which vessels should you take care off to avoid bleeding ? **inferior thyroid vein and thyroid ima artery (this was the only choice which included ima artery so we chose it)**
- 3- All of the following correct EXCEPT : **The pars distalis accounts for 75% of the adenohypophysis and has a thick fibrous capsule. -__-**
- 4- All of the following correct EXCEPT : **In the 4th week the ectoderm invaginates into the mesoderm. There was another answer incorrect (the thyroglossal duct degenerates completely and doesn't form any adult structure).**
- 5- All of the following are correct about oxyphil cells EXCEPT : **They show high levels of PTH**
- 6- Zona reticularis is present at : **year 3**

B- Biochemistry :

- 7- Which of the following determine the concentration of a hormone on a target cell :
 - a- the rate of synthesis and secretion of the hormone
 - b- the proximity of target cell to the hormone source
 - c- the conversion of inactive form to the fully active form of the hormone
 - d- **all of above**
- 8- An orphan receptor :
 - a- is an apparent receptor that has a similar structure to other identified receptors
 - b- its endogenous ligand has not yet been identified.
 - c- If a ligand for an orphan receptor is later discovered, the receptor is referred to as an "adopted orphan.
 - d- **all of above**
- 9- The enzyme that converts norepinephrine to epinephrine : **PNMT**

- 10- The POMC family consists of peptides that act as hormones such as : ACTH, LPH, MSH .. طبعا صيغة السؤال كان فيها غلط وهاض تصحيح إليه
- 11- PEPTIDE & CATECHOLAMINE HORMONES HAVE MEMBRANE RECEPTORS & USE INTRACELLULAR MESSENGERS : True
- 12- Which of the following is NOT true : the beta subunit of G-protein bind and activates the effector
- 13- cAMP activates : protein kinase A
- 14- In adrenal steroidogenesis, Mitochondrial, cytochrome P450 side chain cleavage enzyme : converts cholesterol to pregnenolone.
- 15- Testosterone is converted to its active form (DHT) in the peripheral tissue by : 5-alpha reductase
- 16- The difference between direct and indirect ELISA : Indirect ELISA use primary and secondary antibodies.
- 17- Steps in insulin secretion : endoplasmic reticulum, transport vesicles, Golgi apparatus, transport vesicles, plasma membrane
- 18- Which of the following is NOT true : peptide hormones bind to carrier protein in plasma

C- Introduction + SGD

- 19- All of the following are complaints of pituitary apoplexy EXCEPT :
- a- headache
 - b- loss of consciousness
 - c- Oculomotor nerve palsy
 - d- bitemporal hemianopia
 - e- increased cortisol
- 20- All of the following are found in Cushing's disease EXCEPT : low cortisol in urine
- 21- Case about MODY
- 22- All of the following tests can be found in postpartum thyroiditis EXCEPT :
- a- High T4, High T3, Low TSH
 - b- Low T4, Low T3, High TSH
 - c- Normal T4, Normal T3, Normal TSH
 - d- normal parathyroid hormone
 - e- low T3, low T4, low TSH

D- Pathology : (24-29 Dr. Anwar), (30-37 Dr. Nisreen)

- 23- The most common cause of hyperpituitarism : **pituitary adenoma**
- 24- More aggressive behavior of pituitary adenoma is seen in :
- a- inactivation of RAS
 - b- activation of retinoblastoma gene
 - c- decreased expression of Cyclin D1
 - d- **inactivation of P53**
- 25- Reticulin stain is used in the diagnosis of pituitary adenoma because : **Loss of reticulin stain is characteristic of pituitary adenoma.**
- 26- Which of the following is correct :
- a- **lactotroph adenoma is the most common pituitary adenoma**
 - b- Nelson's syndrome is mass affecting the pituitary with hypercortisolism
 - c- Growth hormone secreting adenoma is rarely associated with GNAS1 mutation
 - d- Sheehan's Syndrome is associated with hypertension
- 27- Primary hyperthyroidism lab test : **High T4, High T3, Low TSH**
- 28- Case : symmetrical diffuse enlargement of thyroid gland, Dense infiltration by lymphocytes and plasma cells, Formation of lymphoid follicles with germinal centers : **Hashimoto's thyroiditis**
- 29- All of the following are thyroiditis (by their names) EXCEPT :
- a- Hashimoto's
 - b- palpation
 - c- Reidel
 - d- **Grave's**
 - e- De Quervain
- 30- All of the following are correct about Grave's disease EXCEPT : **TSI induces TSH secretion**
- 31- Which of the following is true : **thyroid carcinoma has capsular invasion, adenoma does not.**
- 32- The first evidence of hyperparathyroidism is :
- a- diarrhea
 - b- tetany
 - c- bone metastasis
 - d- **elevated Ca**
- 33- Glucose load of 75 g and assess glucose levels after 2 hours is : **Oral glucose tolerance test**

- 34- Type II diabetes is linked to all of the following EXCEPT : **autoimmunity**
- 35- All of the following correct EXCEPT : **amyloid deposition is seen in 90% of cases of type I diabetes**
- 36- Advanced Glycosylation End Products leads to:
- a- Release of pro-inflammatory cytokines
 - b- Generation of reactive oxygen species
 - c- Increased procoagulant activity
 - d- AGEs can directly cross-link extracellular matrix enhancing LDL deposition
 - e- **all of above**
- 37- All of the following are characteristics of diabetic microangiopathy EXCEPT :
- a- Kimmelstiel - Wilson lesion
 - b- Hyaline arteriosclerosis
 - c- Renal atherosclerosis
 - d- papillary necrosis
 - e- **arteriolitis**
- 38- Crooke's Hyaline Change is increased in all of the following EXCEPT: **increased endogenous or exogenous cortisol.**
- 39- All of the following are correct about MEN1 EXCEPT : **less aggressive than sporadic سنوات مكرر .**
- E- Pharmacology :**
- 40- The best treatment for acromegaly : **Pegvisomant**
- 41- The best treatment for a woman with infertility, galactorrhea and hyperprolactinemia is : **Cabergoline**
- 42- Which of the following is NOT true about Desmopressin :
- a- Treatment of central Diabetes Insipidus and bedwetting
 - b- It is longer-acting than vasopressin
 - c- **cause hypotension and hypernatremia**
 - d- administered intranasally
 - e- selective to V2 receptor.

- 43- When you give levothyroxine, You have to monitor all of the following EXCEPT :
- a- heart palpitation and tachycardia
 - b- unexplained weight loss
 - c- serum TSH
 - d- T4 concentrations
 - e- liver function test
- 44- Which of the following is NOT true in treatment of hyperthyroidism : iodide for chronic treatment
- 45- All of the following are used to treat hyperparathyroidism EXCEPT : give calcium and vitamin D to prevent osteoporosis
- 46- All of the following correct EXCEPT :
- a- When pramlintide is initiated, the dose of mealtime insulin should be decreased by 50%
 - b- Long insulin needles are inserted at a 45-degree angle
 - c- Site rotation in insulin injection prevents lipodystrophy
 - d- NPH has a flat prolonged hypoglycemic effect with no peak
 - e- Humulin R is given in acute ketoacidosis
- 47- All of the following about insulin regimens are correct EXCEPT :
- a- Three doses regular insulin before each meal and NPH at bed time
 - b- Three doses of Lispro before each meal and NPH twice daily
 - c- 70:30 NPH/regular twice daily
 - d- 3 regular insulin before each meal and glargine at bed time
 - e- 3 lispro insulin before each meal and glargine at bed time
- 48- All of the following oral hypoglycemic drugs are contraindicated in pregnancy EXCEPT : glyburide
- 49- Which of the following is NOT true about Metformin :
- a- doesn't cause hypoglycemia
 - b- contraindicated in patients with CHF
 - c- can be used with other oral agents or insulin.
 - d- doesn't need dose adjustment in renal impairment
- 50- Which of the following is NOT true about Exenatide :
- a- given SQ
 - b- given twice daily
 - c- increase insulin secretion in insulin-dependent diabetes mellitus
 - d- should be stopped when the patient has abdominal pain.

51- Glucocorticoids can be used for all of the following EXCEPT : **mycosis**

52- All of the following about glucocorticoids are correct EXCEPT : **can be used to treat Cushing's syndrome**

53- All of the following are recommended in glucocorticoid treatment EXCEPT :

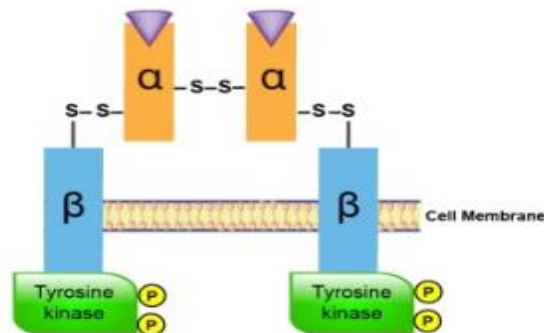
- a- give calcium and vitamin D
- b- give omeprazole
- c- **give bisphosphonate in all cases to prevent osteoporosis**
- d- give in alternate day
- e- give in early morning

54- Which of the following about glucocorticoids is correct : **dexamethasone is the most potent anti-inflammatory without mineralocorticoid activity.**

F- **Physiology** : أسئلة كثير دقيقة ومعلومات كثيرة صعب تذكرها

55- Regarding the following picture, which of the following is true :

- a- heterodimeric receptor
- b- **activation of the receptor leads to autophosphorylation of some of its residues.**



56- Which of the following is an example of positive-feedback mechanism:

- a- Thyroid hormones and TSH
- b- **secretion of LH before ovulation**
- c- oxytocin release due to suckling
- d- Growth hormone secretion

57- Which of the following is true : **GHRH use cAMP**

58- Which of the following is true :

- a- ADH and oxytocin are synthesized and secreted by posterior pituitary gland
- b- hypothalamus is connected by vascular-link to anterior and posterior pituitary glands
- c- magnocellular neurons are glial-like cells that support terminal nerve fibers and endings descending from the hypothalamus.
- d- **The cells that synthesize ADH and oxytocin can be considered as neuroendocrine cells**

59- All of the following are correct about GH EXCEPT : **decrease rate of reproduction of chondrocytes.**

60- Somatomedins : **their deficiency lead to dwarfism**

61- Regarding the following picture, which of the following is NOT true :

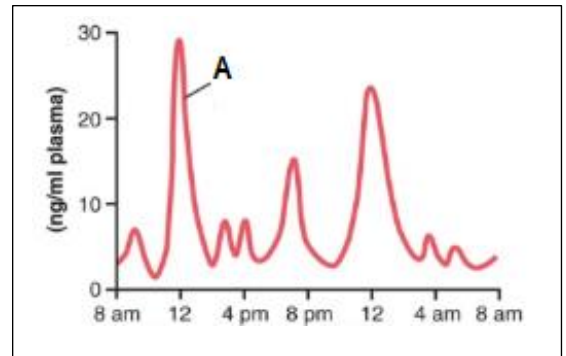
a- it demonstrates the cyclical pattern of a hormone

b- this hormone is cortisol

c- peak "A" could be strenuous exercise

d- peak "A" could be stress, trauma

e- at 2 pm, there is probably hyperglycemia



62- Prolactin :

a- synthesized by lactotropes of the anterior pituitary

b- synthesized exclusively in females

c- After birth of the baby, the basal level of prolactin secretion returns to the nonpregnant level immediately.

63- Which of the following is NOT true about ADH : **lead to very dilute urine**

64- Which of the following is true about thyroid hormones : **Almost all the thyroxine is eventually converted to triiodothyronine.**

65- Which of the following is true about thyroid hormones :

a- they increases the need for parathyroid hormone due to bone formation

b- they decrease insulin

c- they decrease ACTH

66- Which of the following is true : **PTH causing release of osteoprotegerin ligand that activates receptors on preosteoclast cells, causing them to differentiate into mature osteoclasts.**

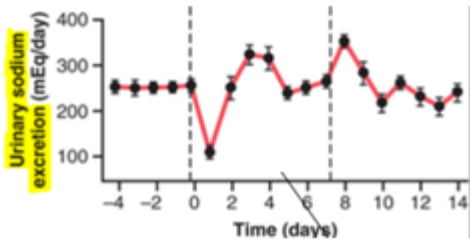
67- Which of the following is true : **1,25-dihydroxycholecalciferol synthesized in kidney**

68- Which of the following is NOT true : **insulin increases cholesterol and phospholipids in blood**

69- All of the following correct EXCEPT : **insulin shock is due to hypoinsulinemia**

70- All of the following correct EXCEPT : **Aldosterone largely increases sodium concentration**

71- Which of the following is true : **at day (1), aldosterone escape begins**



72- Which of the following is NOT true : **ACTH → adrenal medulla → cortisol**

G- Public Health : (73-74 Dr. Reema), (75-76 Dr. Moa'aea)

73- All of the following correct EXCEPT : **1/15 adults have diabetes**

74- All of the following correct EXCEPT : **prediabetes is when you have normal blood glucose**

75- Which of the following is NOT true :

- a- For any given degree of overweight, younger adults generally had greater YLL than did older adults.
- b- The maximum YLL for white men aged 20 to 30 years with a severe level of obesity (BMI >45) is 13
- c- For adults over the age of 40 years, more than 40% are affected
- d- The highest prevalence of metabolic syndrome in Jordan is in women +60 years.
- e- According to Predictors of obesity among Jordanian children, children whose father is obese are six times at risk to obesity more than children whose father is normal.

كلهم صح واخذناه بونص ^^

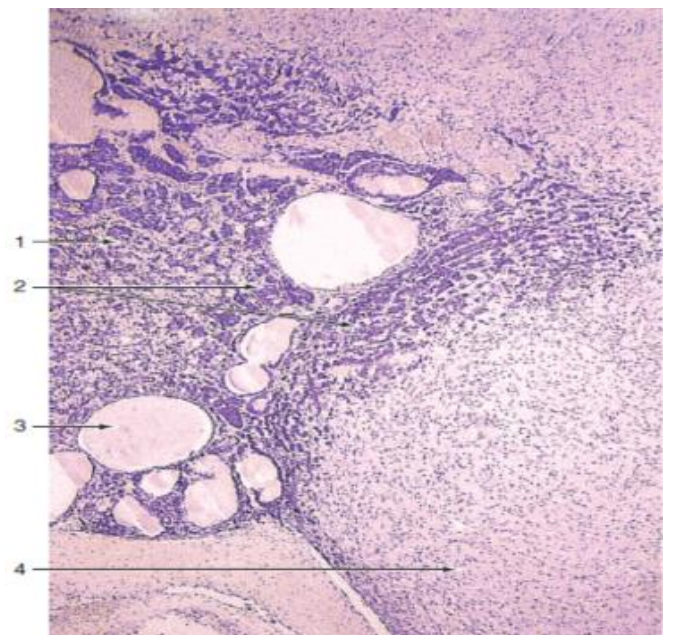
76- Which of the following is NOT true :

- a- the prevalence of obesity in adolescents in Jordan is 17%**
- b- according to IDF criteria obesity is when a woman has a waist circumference over 88cm
- c- people who have syndrome x are 3.6 more likely to have mortality from CVD**
- d- the prevalence of obesity in school age is 6%

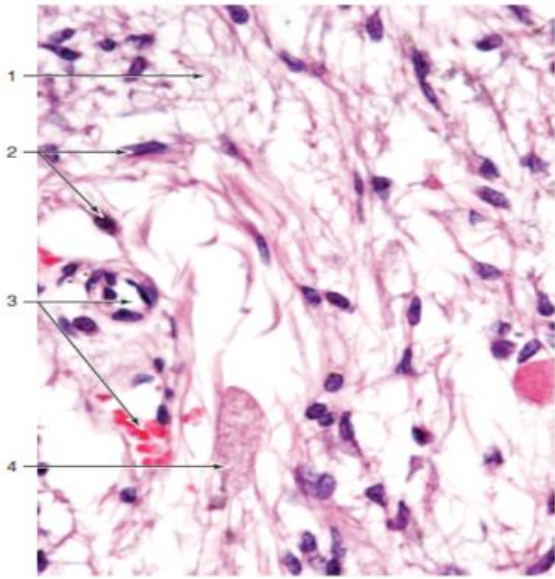
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H- Labs : (77-83 Osama), (84-96 Doaa)

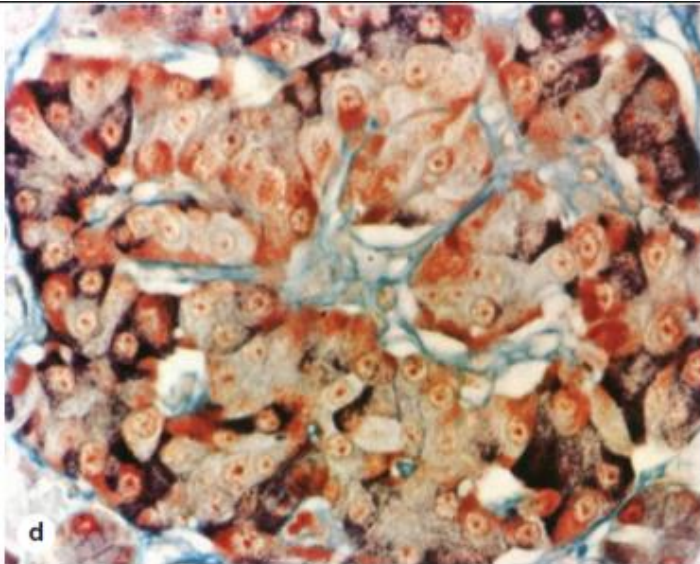
77- Number 1 : pars distalis



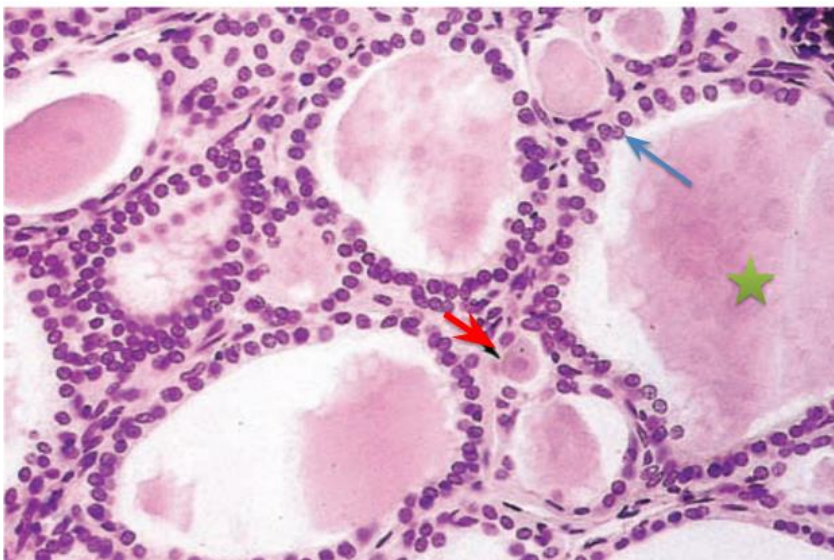
78- Number 2 : pituicytes



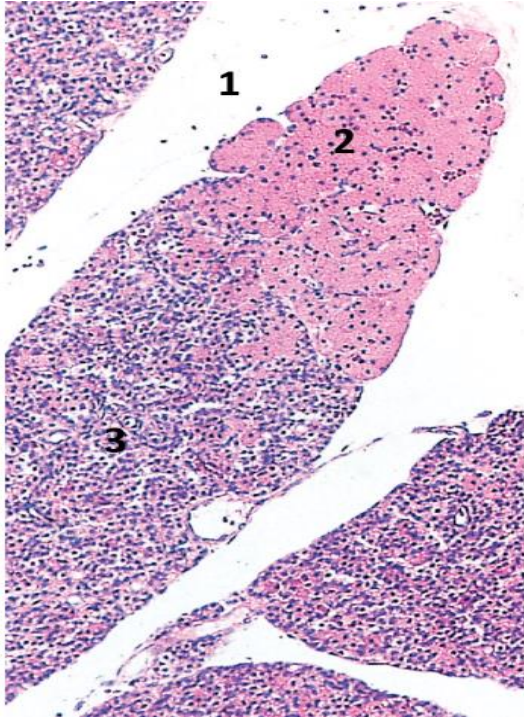
79- DEEP BROWNISH ORANGE : BEEEEEEETT TTTTAAAAAAA CELLS انتبهوا منيح



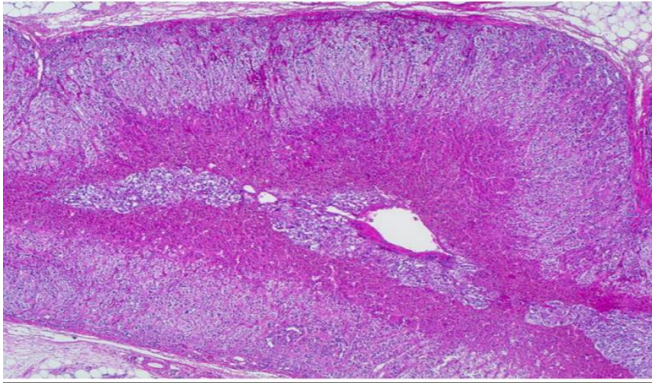
80- Red arrow : parafollicular cells



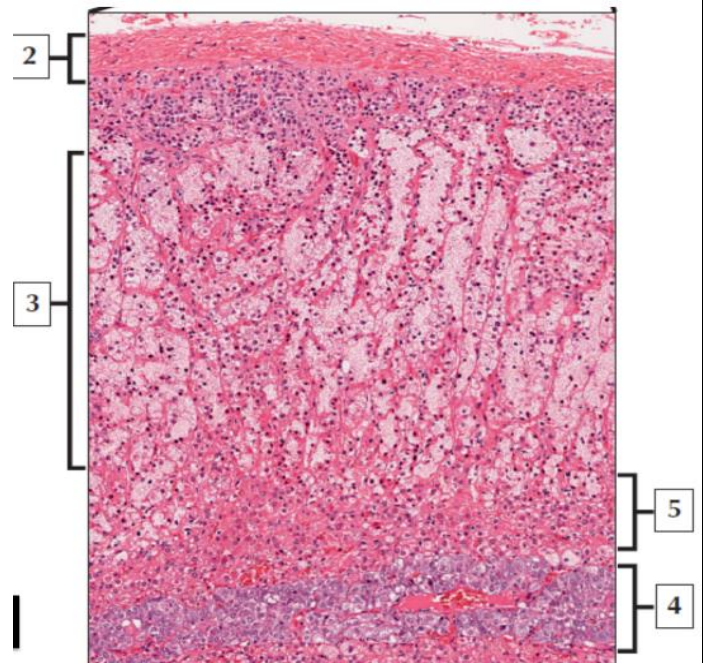
81- Parathyroid gland



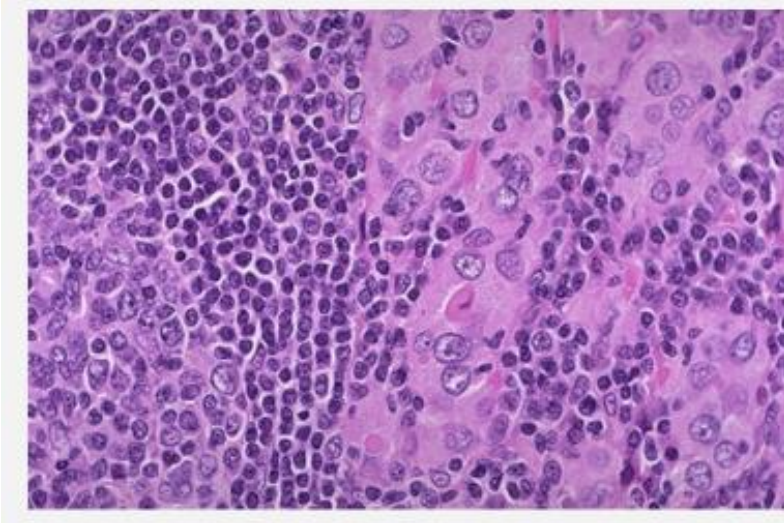
82- Adrenal gland



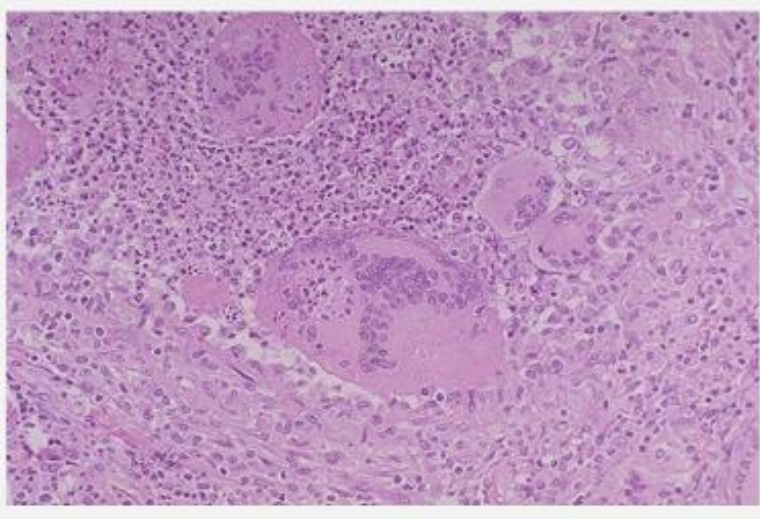
83- Chromaffin cells : 4



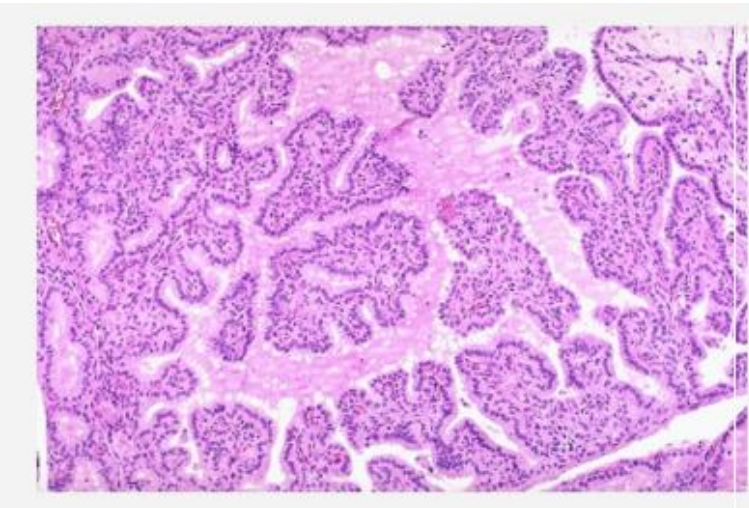
84- Follicular adenoma with Hurthle cell metaplasia



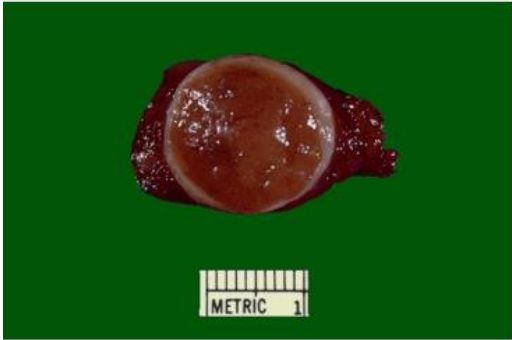
85- Subacute granulomatous thyroiditis



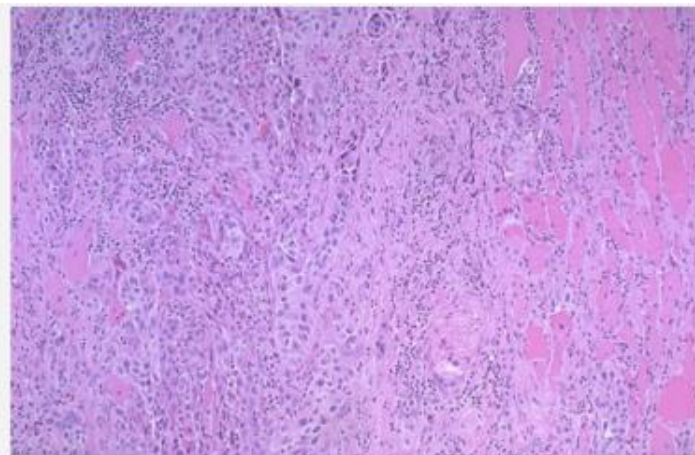
86- Grave's disease (the choice was describing the picture rather than mentioning the disease itself)



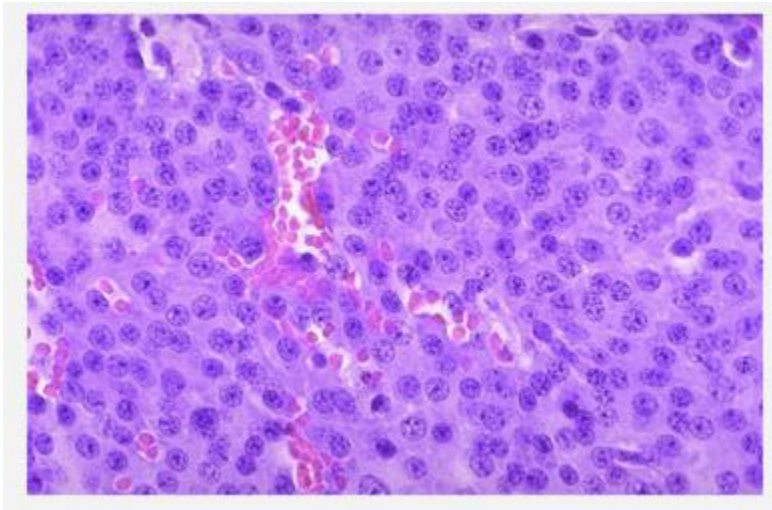
87- Follicular adenoma



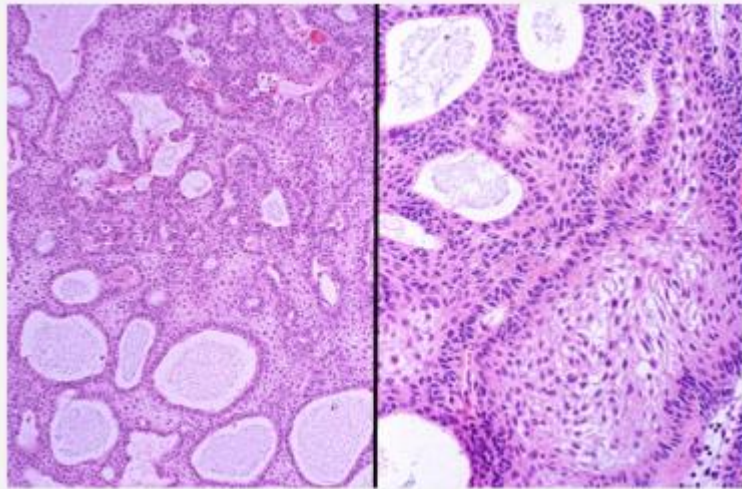
88- Anaplastic carcinoma (the question tells you that the tissue is from thyroid and invading the skeletal tissue at right)



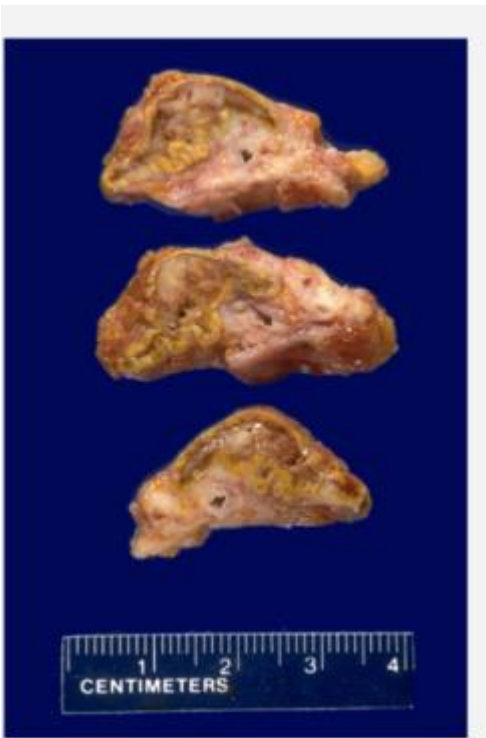
89- Pituitary adenoma



90- Craniopharyngioma



91- Metastatic carcinoma



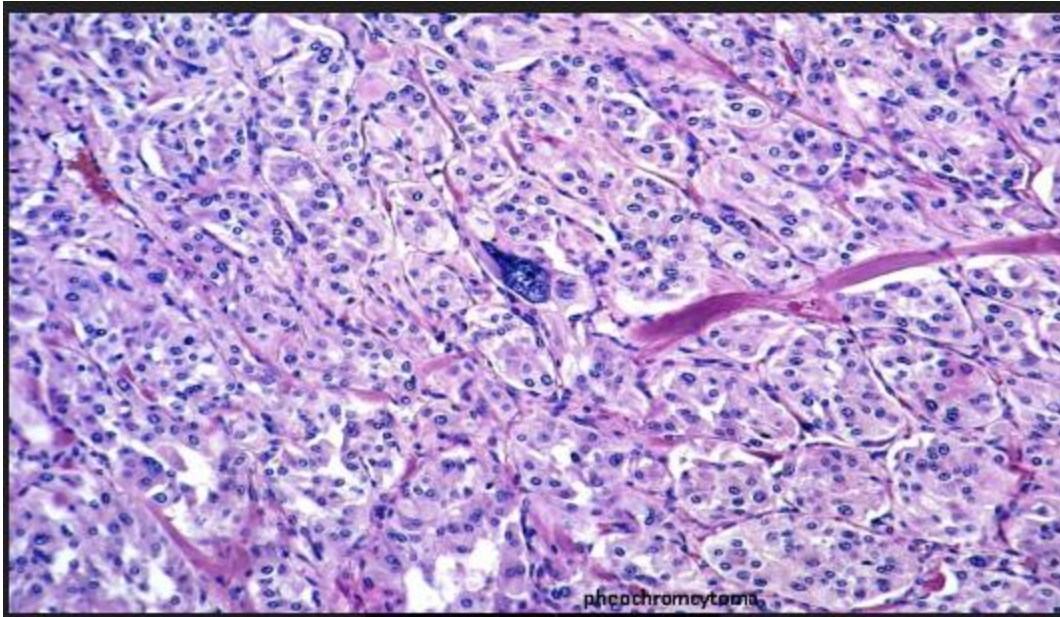
92- This adrenal gland removed surgically in a patient with Cushing's syndrome : adrenocortical adenoma



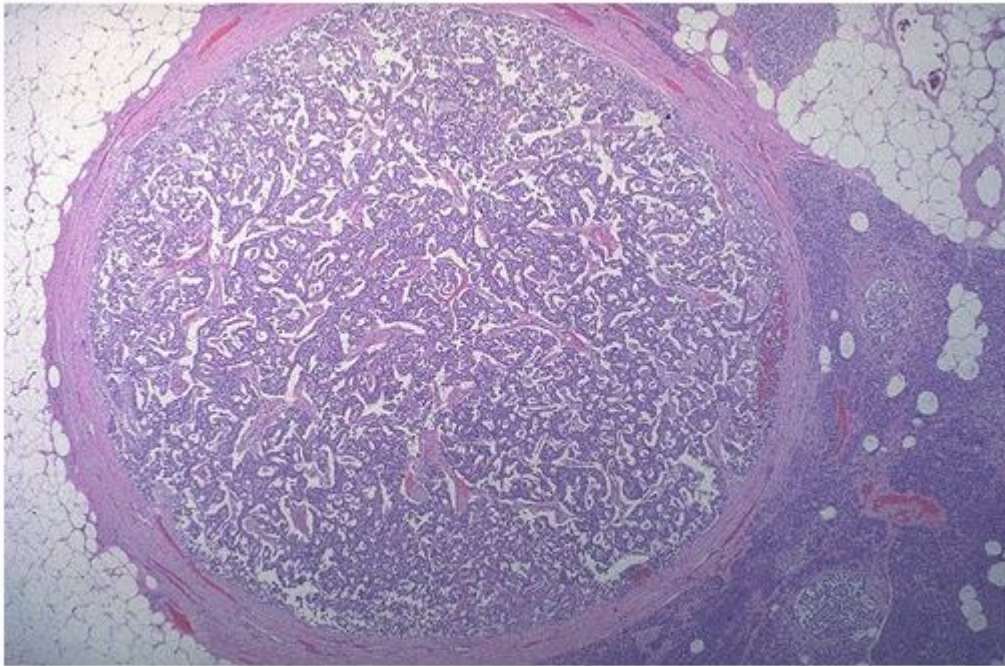
93- Adrenal gland carcinoma



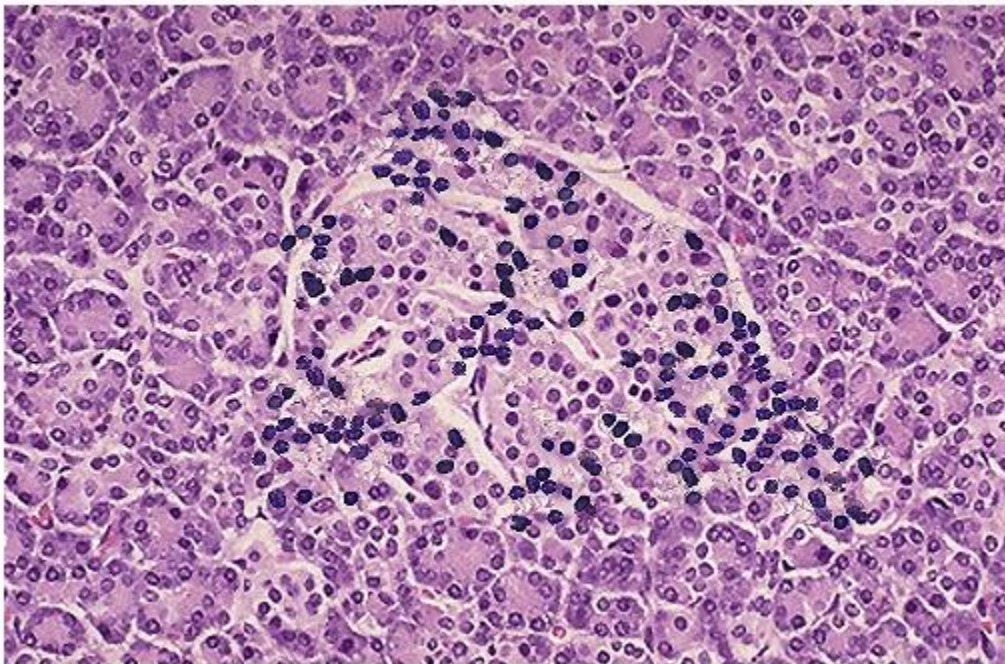
94- Pheochromocytoma



95- Islet cell adenoma



96- Insulinitis



COLLECTED BY : Ammar Al-Zubeidy

sorry for the forgotten 4 questions :p

sorry for any mistake

♥ Good luck ♥