

YR 2 ENDOCRINE UNIT EXAMINATION -- February 24, 1999.

CHOOSE THE SINGLE BEST ANSWER FOR QUESTIONS 1 - 100.

1. Which of the following is not a clinical manifestation of hypercalcemia?
 - A. Nausea
 - B. Seizure
 - C. Constipation
 - D. Weakness
 - E. Thirst

2. PTHrP is:
 - A. A calcium sensing receptor
 - B. A precursor of PTH
 - C. A common cause of kidney stones
 - D. A common cause of hypercalcemia in cancer
 - E. The cause of hypocalcemia in idiopathic hypoparathyroidism

3. The biologically most active form of vitamin D is:
 - A. Dihydrotachysterol
 - B. Cholecalciferol (25 OH vitamin D)
 - C. Calcitriol (1,25 (OH)₂ Vitamin D₃)
 - D. 7-dehydrocholesterol
 - E. 25 hydroxy- 1- alpha - hydroxylase

4. An inborn error of metabolism resulting from absence of 25(OH)D-1-alpha-hydroxylase in the kidney is:
 - A. Vitamin D resistant rickets
 - B. Vitamin D dependent rickets
 - C. X-linked hypophosphatemic rickets
 - D. Di George syndrome
 - E. Fanconi syndrome

5. Hypocalcemia is associated with:
 - A. Cataracts
 - B. Constipation
 - C. Kidney stones
 - D. Tetanus
 - E. None of the above

6. The ionized calcium is what proportion of the total serum calcium in healthy people:
 - A. 100%
 - B. 45%
 - C. 67%
 - D. 33%
 - E. 15%

7. A 30 year old male who recently married was unable to impregnate his wife. He has azoospermia and pea sized testicles. Chromosomal analysis reveals 46XXY. This presentation is most likely consistent with which of the following:
 - A. Eunuchoidism
 - B. Hypogonadism
 - C. Both
 - D. Neither

8. A 29 year old male with impotence and gynecomastia. Symptoms started 2 years after he developed mumps at the age of 25 during which he had orchitis. This presentation is most likely consistent with which of the following:
- A. Eunuchoidism
 - B. Hypogonadism
 - C. Both
 - D. Neither
9. A 56 year old man with impotence. He is a heavy smoker and has severe peripheral vascular disease and intermittent claudication. Testicular size is normal and he has normal secondary sexual characteristics. This presentation is most likely consistent with which of the following:
- A. Eunuchoidism
 - B. Hypogonadism
 - C. Both
 - D. Neither

REFER TO THE FOLLOWING TO ANSWER QUESTIONS 10 - 12.

A 31 year old man recently experienced an episode of testicular swelling and pain associated with mumps. He complains of decreased libido and sexual performance. On physical examination, the testicles are soft and smaller than normal. Expected findings would most likely include:

10. Gynecomastia.
- A. True
 - B. False
11. An enlarged sella turcica.
- A. True
 - B. False
12. Decreased plasma testosterone concentration.
- A. True
 - B. False

13. Which of the following statements regarding pheochromocytoma is INCORRECT?
- A. Headaches, palpitations and hypertension are common presenting symptoms.
 - B. Orthostatic hypotension may be one of the presenting signs.
 - C. Magnetic resonance imaging (MRI) detects and localizes many adrenal pheochromocytomas.
 - D. 60% of pheochromocytomas are extra adrenal.
 - E. Pheochromocytomas (familial) may be a component of MEN-2 syndrome.
14. Primary hyperaldosteronism typically manifests all of the following EXCEPT:
- A. Urinary potassium wasting.
 - B. Low levels of plasma renin activity and high plasma aldosterone.
 - C. High plasma aldosterone to plasma renin activity ratio.
 - D. High plasma renin levels.
 - E. Volume expansion form of hypertension.
15. Addison's Disease or Primary Adrenal Insufficiency may manifest which of the following:
- A. Low levels of plasma ACTH.
 - B. Hypertension.
 - C. Low levels of plasma potassium.
 - D. An association with Hashimoto thyroiditis, pernicious anemia, type 1 diabetes, and premature gonadal failure.

16. Syndrome of apparent mineralocorticoid excess (11 hydroxysteroid dehydrogenase deficiency) is characterized by which of the following?
- A. Early onset of severe hypertension mediated via the mineralocorticoid receptor.
 - B. Hypokalemia, suppressed plasma renin and aldosterone.
 - C. Genetics involves a mutation in the renal isoform of 11-beta-hydroxysteroid dehydrogenase.
 - D. Deficiency of active 11-beta-hydroxysteroid dehydrogenase allows cortisol, which is present in 1000-fold higher concentrations than aldosterone to bind to renal mineralocorticoid receptors and behave as a potent mineralocorticoid.
 - E. All of above
17. Which of the following laboratory results are consistent with Cushing's disease (Pituitary Etiology)?
- A. Low plasma ACTH levels and high urinary ketosteroids
 - B. High ACTH and appropriate suppression of 24 hour urinary 17-hydroxysteroid on the second day of high dose dexamethasone (2 mg every 6 hours over 2 days)
 - C. Lowering of 24 hour urine 17-hydroxysteroid and 11 deoxycortisol occurs after metyrapone administration
 - D. Plasma ACTH levels would not change following corticotropin releasing hormone
 - E. 8 AM plasma cortisol is suppressed to less than 5 mg/dl following overnight dexamethasone suppression (0.5 mg on evening before measurement)
18. Hypertension is typically a component of which 2 of the following congenital adrenal hyperplasia syndromes?
- A. 11-beta-hydroxylase and 17-alpha-hydroxylase deficiency
 - B. 21 hydroxylase and 3-beta HSD deficiency
 - C. Cholesterol side-chain cleavage deficiency and 3-beta HSD deficiency
 - D. 21 hydroxylase and cholesterol side-chain cleavage deficiency

19. Hyperthyroidism can result from all of the following EXCEPT:
- A. Thyroid adenoma
 - B. Pituitary adenoma
 - C. Myoma of the uterus
 - D. Trophoblastic tumor of the uterus
 - E. Thyroid inflammation
20. All of the following are true of hypothyroid patients EXCEPT:
- A. Pericardial effusion may occur
 - B. Atrial fibrillation is common
 - C. Serum cholesterol is often increased
 - D. Thyroid gland may be enlarged
 - E. Serum TSH is not increased in all cases
21. Serum total T4 is increased in all of the following EXCEPT:
- A. Acute hepatitis
 - B. Normal pregnancy (2nd trimester)
 - C. Molar pregnancy with high hCG levels
 - D. Treatment with estrogens
 - E. Treatment with androgens
22. The following statements are true EXCEPT:
- A. Both hyper-and hypothyroidism may occur in the course of subacute thyroiditis
 - B. Both hyper-and hypothyroidism can result from treatment with excess iodine
 - C. Neonates can develop either hyper or hypothyroidism if the mother has autoimmune thyroid disease
 - D. Exophthalmos can occur in both Graves disease and toxic nodular goiter
 - E. Thyromegaly can occur in both Graves disease and Hashimoto s thyroiditis

23. Serum total T3 is decreased in all of the following EXCEPT:
- A. Prolonged illness
 - B. Treatment with androgens
 - C. Treatment with estrogens
 - D. Treatment with high dose glucocorticoids
 - E. Iodinated radiocontrast media
24. A 30 year old female has clinical and laboratory evidence of hyperthyroidism. Which of the following would be most useful in determining the underlying etiology:
- A. Thyroid ultrasound
 - B. Radioiodine scan and uptake of the thyroid
 - C. Total T4
 - D. Serum antithyroglobulin antibody
 - E. Serum TSH
25. A 60-year-old woman with no history of coronary artery disease has a total cholesterol of 265 mg/dl, HDL cholesterol 45 mg/dl, and triglycerides 100 mg/dl. Her blood pressure is 160/95 mmHg and her mother died of a heart attack at age 60. She does not smoke and does not have diabetes mellitus. Which of the following statements is CORRECT?
- A. Estrogen therapy could increase her risk of coronary artery disease.
 - B. If after an appropriate trial of diet therapy, her LDL is not <160 mg/dl, she should be started on gemfibrozil
 - C. She should immediately be started on treatment with L-thyroxine.
 - D. Her LDL cholesterol meets the suggested criteria for initiating dietary therapy for cholesterol lowering.

26. A 60-year-old woman with diet-controlled diabetes mellitus has an LDL cholesterol of 190 mg/dl despite a 6-month trial of an American Heart Association (AHA) Step I diet. Her triglyceride level is 100 mg/dl. Treatment with which one of the following drugs is relatively contraindicated?
- A. Lovastatin
 - B. Nicotinic Acid
 - C. Cholestyramine
 - D. Pravastatin
 - E. Simvastatin
27. Which of the following is not consistent with a diagnosis of familial hypercholesterolemia (Type II a)?
- A. Strong family history of coronary disease.
 - B. The presence of tendon xanthomas on physical examination.
 - C. A documented deficiency of LDL receptors.
 - D. The presence of lipemia retinalis on physical examination.
 - E. A normal level of triglycerides and HDL cholesterol.
28. Which type of LDL particles are associated with the greatest increased risk of coronary artery disease?
- A. Small, dense particles
 - B. Large, fluffy particles
 - C. Intermediate type particles
 - D. Both a and b equally

29. Which of the following is recommended by the National Cholesterol Education Program (NCEP) guidelines?
- A. Achieve an LDL <130 mg/dl in a 50-year-old male with a history of stable angina.
 - B. Initiate pharmacologic therapy at an LDL >130 mg/dl in a patient without coronary disease and < 2 cardiac risk factors.
 - C. Initiate pharmacologic therapy in a patient with coronary disease and LDL 130 mg/dl.
 - D. Achieve an LDL < 130 mg/dl in a 38-year-old healthy female who smokes and whose HDL is 66 mg/dl.
30. Calculate the LDL cholesterol for the following lipid profile: Total cholesterol = 316 mg/dl, triglycerides = 280 mg/dl, HDL = 45 mg/dl.
- A. 205
 - B. 225
 - C. 215
 - D. 187
31. Which of the following is TRUE?
- A. Blood pressure is a risk factor for congestive heart failure, stroke, myocardial infarction, renal insufficiency and cognitive dysfunction.
 - B. Systolic blood pressure is a stronger risk factor for adverse pressure-related sequelae than diastolic blood pressure.
 - C. Amongst older persons with isolated systolic hypertension, low diastolic blood pressure [< 70 mm Hg] is associated with an increased risk of large vessel atherosclerosis.
 - D. All of the above are true.

32. Which of the following is CORRECT?
- A. Hypothyroidism is not associated with hypertension.
 - B. Overweight persons are less salt sensitive than lean individuals.
 - C. The hallmark hemodynamic abnormality associated with diastolic hypertension is increased peripheral vascular resistance.
 - D. Most patients with hypertension have high circulating plasma renin activity
 - E. None of the above is true.
33. Choose the single best answer.
- A. A common hemodynamic abnormality in persons with isolated systolic hypertension is reduced arterial compliance.
 - B. Pheochromocytoma is the most common form of secondary or surgically curable hypertension
 - C. Renovascular hypertension is much less common in African-Americans than Whites
 - D. None of the above is true.
34. Which of the following fasting plasma glucose values satisfy the criteria for the diagnosis of diabetes mellitus?
- A. Greater than or equal to 126 mg/dl
 - B. Greater than or equal to 126 mg/dl on more than one occasion
 - C. Greater than or equal to 116 mg/dl
 - D. Greater than or equal to 116 mg/dl on more than one occasion
 - E. Greater than or equal to 140 mg/dl on more than one occasion

35. A thirty year old non-pregnant woman presents with complaints of fatigue, polyuria, polyphagia, and nocturia. Her random plasma glucose would most likely be which of the following?
- A. 150 mg/dl
 - B. 110 mg/dl
 - C. 300 mg/dl
 - D. 180 mg/dl
 - E. 90 mg/dl
36. Which of the following symptoms of diabetic ketoacidosis can be most likely attributed to the metabolic acidosis?
- A. Kussmaul respiration
 - B. Mental obtundation
 - C. Thirst
 - D. Polyuria
 - E. Polyphagia
37. Which of the following ethnic groups has the greatest prevalence of type 2 diabetes mellitus in the US?
- A. Non-Hispanic Whites
 - B. African-Americans
 - C. Hispanic Americans
 - D. Asian Americans / Pacific Islanders
 - E. Native Americans

38. Which of the following is true about the relationship of insulin resistance, insulin secretion and glucose tolerance?
- A. Insulin resistance may be compensated by hyperinsulinemia to produce normal glucose tolerance.
 - B. Insulin resistance may be compensated by insulin deficiency to produce normal glucose tolerance.
 - C. Impaired glucose tolerance is usually associated with insulin sensitivity and hypoinsulinemia.
 - D. Type 2 diabetes mellitus is usually associated with insulin sensitivity and hyperinsulinemia.
 - E. Type 1 diabetes mellitus is usually associated with insulin sensitivity and hyperinsulinemia.
39. A 42 year old man with type 1 diabetes of 25 years duration has peripheral edema and hypertension (BP 175/100 mmHg) and is blind following laser therapy. His urine dipstick is positive for large amounts of albumin. This patient most likely has which of the following?
- A. Incipient diabetic nephropathy
 - B. No complications of diabetes
 - C. Diabetic neuropathy
 - D. Non-proliferative diabetic retinopathy
 - E. Diabetic nephropathy
40. Insulin resistance may be best described by which of the following?
- A. Increased hepatic glucose production and increased peripheral glucose utilization
 - B. Increased hepatic glucose production and decreased peripheral glucose utilization
 - C. Decreased hepatic glucose production and increased peripheral glucose utilization
 - D. Decreased hepatic glucose production and decreased peripheral glucose utilization
 - E. None of the above

41. A 25 year old man with type 1 diabetes of 12 years duration has dot/blot hemorrhages, and hard exudates on ophthalmoscopic examination of both retinae. What is the most likely diagnosis?
- A. Non-proliferative diabetic retinopathy
 - B. Proliferative diabetic retinopathy
 - C. Fibrous band formation
 - D. Retinal detachment
 - E. Normal
42. The Dawn Phenomenon is attributable to which of the following counterregulatory hormones?
- A. Cortisol
 - B. Epinephrine
 - C. Norepinephrine
 - D. Glucagon
 - E. Growth hormone
43. A 62 year old woman has hypertension with episodes of tachycardia, sweating, and light-headedness. Which of the following is the most likely diagnosis?
- A. Hyperparathyroidism
 - B. Hypoparathyroidism
 - C. Pheochromocytoma
 - D. Gastrinoma
 - E. Prolactinoma

44. A 36 year old man has been gaining weight. Last week he skipped breakfast and got lost driving to his workplace which is 2 miles from his home. He cannot recall the episode. His wife says that he is constantly eating. What is the most likely diagnosis?
- A. Pheochromocytoma
 - B. Gastrinoma
 - C. Reactive (functional) hypoglycemia
 - D. Gastric dumping syndrome
 - E. Insulinoma
45. Multiple Endocrine Neoplasia type 1 (MEN 1) is consistent with which of the following?
- A. Hyperparathyroidism, insulinoma, medullary carcinoma of the thyroid
 - B. Hyperparathyroidism, colonic adenocarcinoma, medullary carcinoma of the thyroid
 - C. Prolactinoma, insulinoma, medullary carcinoma of the thyroid
 - D. Hyperparathyroidism, insulinoma, prolactinoma
 - E. Hypoparathyroidism, insulinoma, medullary carcinoma of the thyroid
46. A 35 year old man was seen in the ER after a motor vehicle accident, where he was side swiped by another car. The CAT scan failed to demonstrate a subdural hematoma but did note a large pituitary mass with extension into the suprasellar area. On physical exam you would expect to find the following EXCEPT:
- A. Atrophic testicles
 - B. Bitemporal hemianopia
 - C. Gynecomastia
 - D. Prostatic hypertrophy

47. Elevated levels of prolactin can be caused by which of the following:
- A. Medication that activate the dopamine receptor in the pars median
 - B. Estrogen which directly inhibits the release of dopamine
 - C. Tumors which co-secrete both growth hormone and prolactin
 - D. Medications which inhibit the P450 degradation system in the liver
48. All of the following are associated with acromegaly EXCEPT:
- A. Carpal tunnel syndrome
 - B. Sleep apnea
 - C. Congestive heart failure
 - D. Dry thin skin
49. Triphasic pattern of diabetes insipidus (DI) is classically described as:
- A. DI, followed by SIADH, then permanent DI
 - B. SIADH, followed by transient DI, then permanent DI
 - C. SIADH, followed by severe DI, then return to normal function
 - D. DI, followed by severe DI, then SIADH
50. Pit 1 is a protein which stimulates transcription of all the following hormones EXCEPT:
- A. Growth hormone
 - B. TSH \hat{a}
 - C. Prolactin
 - D. ACTH

51. All of the following may be a consequence of prolactinoma EXCEPT:
- A. Diabetes mellitus
 - B. Amenorrhea
 - C. Galactorrhea
 - D. Infertility
 - E. Blindness
52. The best test to demonstrate pathological release of cortisol is:
- A. 1 mg overnight dexamethasone study
 - B. 2 day-low dose dexamethasone study (0.5 mg every 6 hours for 2 days)
 - C. 2 day- high dose dexamethasone (2.0 mg every 6 hours for 2 days)
 - D. CRH stimulation study
53. A 24 year old woman comes into office with complaints of galactorrhea for 1 month. Her menses are irregular but she admits to taking oral contraceptives intermittently. Her prolactin level is 40 ng/ml (normal 4-24 ng/ml). The following possibilities are true EXCEPT:
- A. Pregnant
 - B. Hypothyroid
 - C. Macroprolactinoma
 - D. Stalk compression
54. Acromegalics have increased mortality which is a result of the chronic stimulation of growth hormone on the following cells:
- A. Melanocytes leading to melanoma
 - B. Myocytes leading to cardiac disease
 - C. Osteocytes leading to osteocarcinoma
 - D. Parietal cells leading to gastric cancer

55. You work as a reproductive endocrinologist for a health maintenance organization. Since there is strict utilization review of all tests you order, you must be relatively certain that a medical problem exists before you initiate a diagnostic evaluation. Which of the following patients requires diagnostic evaluation at this time?
- A. A 9 year old girl who has not yet menstruated.
 - B. An 11 year old girl with early pubertal changes who has not yet menstruated.
 - C. A 13 year old girl with a 4 month history of irregular menstrual cycles and otherwise normal pubertal development.
 - D. A 15 year old girl with primary amenorrhea who has normal secondary sexual characteristics.
 - E. A 15 year old girl with primary amenorrhea who does not have secondary sexual characteristics.
56. You are evaluating a 17 year old woman for primary amenorrhea. Gonadotropin levels are normal, and appropriate secondary sexual characteristics are present. She has never had any surgery. Which of the following conditions is most likely present?
- A. Mullerian agenesis.
 - B. Intrauterine adhesions.
 - C. Turner syndrome.
 - D. Kallman syndrome.
 - E. Klinefelter syndrome.

57. A 34 year old woman presents with secondary amenorrhea. She is not pregnant, and her serum FSH level is 65 mIU/ml on three occasions each one week apart (normal < 12 mIU/ml). You diagnose premature ovarian failure, and recommend starting her on estrogen replacement therapy. Since she is concerned with starting on this medication, you emphasize that estrogen therapy in her situation is important for all of the following EXCEPT:
- A. Treatment of hypoestrogenic symptoms.
 - B. Restoration of normal fertility.
 - C. Prevention of osteoporosis.
 - D. Prevention of early cardiovascular disease.
58. A woman is seen for evaluation of secondary amenorrhea. Her previous menstrual history is unremarkable, and she has had two normal pregnancies. Her serum FSH, LH and prolactin levels are normal. You diagnose hypothalamic-pituitary dysfunction. Which of the following is a potential cause of her condition?
- A. Kallman syndrome.
 - B. Premature ovarian failure.
 - C. Testicular feminization syndrome.
 - D. Anorexia nervosa.
 - E. Prolactinoma.
59. You diagnose polycystic ovarian syndrome in a 24 year old woman with a 10 year history of menstrual dysfunction. You recommend treatment with oral contraceptive pills at this time to prevent:
- A. Endometrial hyperplasia
 - B. Obesity
 - C. Galactorrhea
 - D. Infertility
 - E. Headaches

60. Which of the following is NOT a cause of hyperprolactinemia?
- A. Herpes zoster infection
 - B. Pituitary adenoma
 - C. Pituitary stalk transection
 - D. Neuroleptic medication
 - E. Hyperthyroidism
61. The best diagnosis for the photomicrography of the breast biopsy shown in **Figure 1** is:
- A. Infiltrating lobular carcinoma
 - B. Atrophic breast tissue
 - C. Lactation
 - D. Ductal hyperplasia
 - E. Apocrine metaplasia

THE FOLLOWING IS RELATED TO QUESTIONS 62 AND 63.

A 22 year old woman presents in the Emergency Room with a 4 day history of dull, constant lower abdominal pain, a temperature of 102 degrees F, and a white blood cell count of 20,000. Physical exam reveals direct abdominal tenderness and cervical motion and adnexal tenderness, plus a purulent cervicovaginal discharge.

62. Microscopic examination of a smear of the purulent vaginal discharge would likely show:
- A. Numerous spores and pseudohyphae
 - B. Gram negative diplococci
 - C. Gram positive cocci
 - D. Gram negative rods
 - E. A picture similar to that shown in **Figure 2**.

63. The most likely organism to grow on culture of the vaginal discharge would be:
- A. Chlamydia trachomatis
 - B. Mycobacterium tuberculosis
 - C. Streptococcus viridans
 - D. Neisseria gonorrhoea
 - E. Enterococci

THE FOLLOWING IS RELATED TO QUESTIONS 64 AND 65.

A 31 year old diabetic woman presented to her gynecologist with severe vulvovaginal itching and burning associated with marked erythema and a creamy, thick white vaginal discharge.

64. Which of the following statements concerning this patient is LEAST likely to be TRUE?
- A. She is a healthy, sexually active female
 - B. She is an HIV positive female
 - C. A wet prep would show large tennis racquet shaped organisms
 - D. A wet prep of 10% potassium hydroxide would show a picture similar to **Figure 3**.
 - E. She could either be pregnant or taking oral contraceptives

THE FOLLOWING IS RELATED TO QUESTIONS 65 AND 66.

A 21 year old woman developed malaise, fever, generalized lymphadenopathy, and a macular rash that was also present on the palms of her hands and soles of her feet. She presented to her family doctor for treatment.

65. Examination of her genitalia would most likely show:
- A. Vulvovaginal and cervical lesions similar to those shown in **Figure 4**.
 - B. Condyloma lata
 - C. A painless, shallow, clean-based ulcer
 - D. No clinically obvious lesion(s)
 - E. A painful, shallow, clean-based ulcer
66. A proper workup and treatment for this particular disease would likely include all of the following EXCEPT:
- A. Treatment with high dose penicillin
 - B. A pregnancy test
 - C. An HIV test
 - D. Tracing and treating her partner
 - E. Treatment with acyclovir

DIRECTIONS: For each of the following diseases numbered 67-69, select the MOST LIKELY etiologic HPV serotype from the choices listed and A - B below.

A. HPV 16

B. HPV 6

67. Fungating anogenital warts in a 30 year old female.
68. A 6 cm in greatest diameter cervical squamous cell carcinoma present on the anterior cervical lip of a 42 year old female.
69. Clinical examination of the vulva of a 39 year old woman showed the picture depicted in **Figure 5-1**; biopsy revealed a histopathologic picture shown in **Figure 5-2**.
70. All of the following American College of Obstetrics and Gynecology recommendations and statements concerning the pap smear are true EXCEPT:
- A. It is the best screening method for cervical carcinoma
 - B. Should begin when the patient becomes 18 or sexually active and then annually, if no abnormalities
 - C. Acceptable to perform every 2 years after 3 normal smears (with one sex partner)
 - D. Follow up on abnormal smears annually
 - E. Decreases invasive disease by about 50% through the mechanism of early detection

THE FOLLOWING IS RELATED TO QUESTIONS 71 AND 72.

A 34 year old woman presented to her gynecologist with a stage I cervical tumor; the gross findings are shown in **Figure 6-1** and the microscopic findings in **Figure 6-2**. Her clinical and social history included: onset of menses at 12; first intercourse at 14; multiple and frequent sexual partners over the next 20 years; a 2 pack per day smoking history; an affinity for bowling.

71. Her most significant risk factor MOST LIKELY was:
- A. Early onset of menses
 - B. Early age at first intercourse
 - C. Affinity for bowling
 - D. Heavy smoking history
 - E. Multiple and frequent sexual partners
72. Which of the following best describes the viral DNA within the cervical tumor cells?
- A. Episomal (extrachromosomal) circular DNA
 - B. Within viral capsids
 - C. Serotype 11 of the causative agent
 - D. Integrated into host DNA
 - E. Extranuclear (intracytoplasmic) location

DIRECTIONS: Match the following endometrial diagnoses, A - E below with their matching histopathologic appearance or description numbered 73-75.

- A. Malignant mixed mullerian tumor
- B. Atypical endometrial hyperplasia
- C. Clear cell carcinoma
- D. Simple hyperplasia without atypia
- E. Contraceptive steroid (pill) effect

73. The microscopic picture shown in **Figure 7**.

74. A lesion with severely atypical "hobnail" cells.

75. The microscopic picture shown in **Figure 8**.

THE FOLLOWING IS RELATED TO QUESTIONS 76 AND 77.

Case: a moderately differentiated endometrioid adenocarcinoma, invasive into the outer half of the myometrium, without vascular space or endocervical canal invasion.

76. If a tumor with identical histopathologic parameters as above were found in a 40 year old woman and a 77 year old woman:

- A. There would be no difference in prognosis between the two
- B. The older woman would have a better prognosis
- C. The younger woman would have a better prognosis

77. The above mentioned designation "moderately differentiated" in this tumor refers to:

- A. Tumor grade (equivalent to grade I)
- B. Tumor grade (equivalent to grade II)
- C. Tumor stage (equivalent to stage I)
- D. Tumor stage (equivalent to stage II)
- E. None of the above

78. A 22 year old female is seen in the emergency room with severe abdominal pain and signs of shock; a presumptive diagnosis of ruptured ectopic pregnancy (later estimated to be around 6 weeks gestation) is confirmed at exploratory laparoscopy.

The most likely site where the rupture has occurred is:

- A. The tubal fimbriae
- B. The tubal ampulla
- C. The tubal isthmus
- D. The uterine cornu
- E. The tubal infundibulum

DIRECTIONS: Using the following laterality choices, A - B below match the following patients and their ovarian disease with that condition's USUAL tendency toward laterality.

- A. Bilateral
- B. Unilateral

79. A 32 year old woman with polycystic ovarian disease.
80. A 66 year old woman with gastric carcinoma and metastatic ovarian disease.
81. A 44 year old woman with ovarian mucinous borderline neoplasia

THE FOLLOWING IS RELATED TO QUESTIONS 82 AND 83.

A 69 year old woman is diagnosed with ovarian "cancer" after a 6 month history of vague abdominal complaints and increasing girth.

82. Which of the following combinations of "histologic tumor type-serum tumor marker-parity status" is MOST LIKELY to be found in this patient?
- A. Mucinousadenocarcinoma-carcinoembryonic antigen-multiparous
 - B. Serous carcinoma-carcinoembryonic antigen-nulliparous
 - C. Clear cell carcinoma-CA 125-nulliparous
 - D. Yolk sac tumor-alpha fetoprotein-multiparous
 - E. Serous carcinoma-CA 125-nulliparous
83. An ovarian serous borderline tumor would differ histologically from the above "cancer" primarily because the serous borderline tumor:
- A. Has a longer period of growth before detection
 - B. Is less mitotically active
 - C. Lacks stromal invasion
 - D. Makes large pools of extraovarian mucin
 - E. Does not make psammoma bodies

84. A 55 year old female noted the onset of uterine bleeding 7 years after she had undergone menopause. A large unilateral pelvic mass was detected at pelvic examination and she underwent surgical removal of the ovary and uterus. A gross photograph of the cut section of the tumor is shown in **Figure 9-1** and a photomicrograph of the microscopic appearance is shown in **Figure 9-2**.

Of the following choices, the MOST LIKELY combination of diagnoses to be found in this patient is:

- A. Thecoma-endometrial carcinoma
 - B. Dysgerminoma-endometrial hyperplasia
 - C. Sertoli-Leydig cell tumor-endometrial carcinoma
 - D. Granulosa cell tumor-endometrial hyperplasia
 - E. Yolk sac tumor-endometrial carcinoma
85. A 17 year old Asian-American woman was examined in the emergency room for the recent onset of heavy vaginal bleeding. The year IV WSUSOM student, having just finished a jumbo Tubby's coffee, ordered a pregnancy test and the serum hCG was found to be 800,000 mIU/ml (markedly elevated). An ultrasound showed a "snowstorm" effect. The most important complication of the condition diagnosed in this case is:
- A. Spontaneous abortion
 - B. Uterine perforation
 - C. Uterine infection
 - D. Embolism of component tissue
 - E. Development into a malignant tumor

86. A 28 year old executive vice president of a computer firm complained to her reproductive endocrinologist (whom she had been seeing for infertility) of pelvic pain that was routinely worse with her menstrual periods. On pelvic exam, the uterus was not enlarged but both ovaries contained a unilocular cyst. The gynecologist found the serum CA 125 to be slightly elevated. The MOST LIKELY cause of the aforementioned pain in this patient is:
- A. Cyclic bleeding into pelvic and peritoneal tissues
 - B. Adenomyosis
 - C. Leiomyomas
 - D. Serous carcinoma of the ovary
 - E. Gates' disease (poor posture from sitting in front of a computer screen all day)
87. Which of the following statements regarding prostatic carcinoma is TRUE?
- A. The incidence of prostate cancer continues to rise in the US.
 - B. In recent years, more patients are diagnosed with locally advanced or metastatic disease rather than organ confined cancer.
 - C. Prognosis is dependent on the tumor stage, Gleason score and serum PSA.
 - D. Caucasian men in the U.S. have higher incidence and mortality rate due to prostate cancer compared to African-American males.
88. Which of the following statements regarding testicular seminoma is NOT TRUE?
- A. It is the most common histologically pure 'composed of one cell type' testicular tumor.
 - B. The majority of patients are diagnosed while the tumor is still confined to the testis.
 - C. Most seminomas respond poorly to radiation therapy.
 - D. Serum markers are usually not elevated in association with this tumor.

89. The following statements regarding high grade prostatic intraepithelial neoplasia (PIN) are TRUE EXCEPT:
- A. It is considered a precursor lesion of prostate cancer.
 - B. PIN is a histologic component of nodular "benign" prostatic hyperplasia (BPH)
 - C. PIN is also a marker for the presence of cancer with 50% of patients who have PIN without cancer on the first biopsy showing carcinoma on a subsequent biopsy
 - D. The lesion shares overlapping molecular features with prostate cancer.
90. Hashimoto's thyroiditis is characterized by all EXCEPT:
- A. Prominent lymphocytic and plasma cell infiltrate
 - B. Hurthle cell metaplasia
 - C. Disrupted follicles replaced by neutrophils
 - D. Variable degree of fibrosis
91. Most well differentiated follicular carcinomas of the thyroid are:
- A. More common in men than women
 - B. Aggressive and metastasize early
 - C. Associated with **MEN** syndromes
 - D. Generally well encapsulated
92. Anaplastic carcinoma of the thyroid gland most often:
- A. Affects adults under age 50
 - B. Occurs in older adults with a long history of goiter
 - C. Arises in a background of chronic lymphoid thyroiditis
 - D. Responds dramatically to radiation therapy

93. A 30 year old woman presents to your care with a painless, 1.5 cm well circumscribed, mobile, firm but yielding nodule in the upper outer quadrant of her breast. She has no family history of breast carcinoma. Physical examination of the breast is otherwise unremarkable. Which of the following diagnoses is most likely?
- A. Lobular carcinoma-in-situ
 - B. Fibroadenoma
 - C. Ductal carcinoma-in-situ
 - D. Atypical ductal hyperplasia
 - E. Adenosis
94. You aspirate a 1.2 cm cystic breast lesion in a 45 year old woman and then send the fluid to pathology for cytologic examination. Her mammogram showed, in addition to the lesion, changes compatible with fibrocystic disease. Which of the following diagnoses is most likely to be made on the specimen?
- A. Ductal carcinoma-in-situ
 - B. Invasive ductal carcinoma
 - C. Apocrine metaplasia
 - D. Intraductal papilloma
 - E. Medullary carcinoma
95. A patient is referred to you for planning of therapy for ductal carcinoma-in-situ, high grade, which was diagnosed on biopsy. Which of the following treatment options is the most reasonable?
- A. Mastectomy with axillary node dissection
 - B. Mastectomy with adjuvant chemotherapy
 - C. Mastectomy with radiation therapy
 - D. Lumpectomy with axillary node dissection
 - E. Lumpectomy with radiation therapy

96. Which of the following was the most likely presentation of the above patient?
- A. Hard 2.5 breast mass in a 60 year old
 - B. Erythema (redness) of the skin overlying the breast in a 35 year old
 - C. 24 year old with vague "thickening" of breast tissue
 - D. Asymptomatic 55 year old with abnormality detected on screening mammogram
 - E. Dimpling of skin overlying the breast in a 58 year old
97. A patient has a 1.9 cm upper outer quadrant infiltrating ductal carcinoma which, on histologic examination, invades the overlying skin. The axillary lymph nodes are negative for metastases and the nipple/areola are normal. What stage is this patient?
- A. O
 - B. I
 - C. II
 - D. III
 - E. IV
98. You are examining tissue sections from a patient who has an inflammatory breast carcinoma. Which of the following findings is most likely?
- A. Abundant lymphocyte infiltrates admixed with neoplastic cells
 - B. Abundant PMN infiltrates admixed with neoplastic cells
 - C. "Comedo" necrosis
 - D. Skin ulceration
 - E. Antilymphatic tumor cell emboli in the dermis

99. After biopsy of a breast lesion and consultation with an "expert", a patient of yours is told that she has a 20-30% chance of developing a breast carcinoma in the next 10-15 years. Further, there is a 40% chance that the malignancy would occur in the breast contralateral to the one biopsied. What lesion did this patient most likely have?
- A. Fibroadenoma
 - B. Adenosis
 - C. Ductal hyperplasia, moderate
 - D. Lobular carcinoma-in-situ
 - E. Apocrine metaplasia
100. After undergoing axillary dissection, the pathology report on one of your patients documents the presence of metastatic breast carcinoma in two lymph nodes. Which of the following statements about your patient is CORRECT?
- A. The primary tumor could not have been smaller than 1 cm.
 - B. The patient's likelihood of 5 year survival is <10%.
 - C. Since axillary nodes are involved, tumor grade is not prognostically relevant.
 - D. The tumor is more likely to be poorly differentiated than well differentiated.
 - E. The prognosis is the same whether 2 or more nodes contain metastases.