501MCQs
REVIEW IN CLINICAL PHARMACY

For post-graduates

Editor
Hassan AL-Temimi
PhD Clinical Pharmacy

Series ...H001
First Edition

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بسم الله الرحمن الرحيم

{فَأَمَّا الزَّبَدُ فَيَذْهَبُ جُفَاءً وَأَمَّا مَا يَنْفَعُ النَّاسَ فَيَمْكُثُ فِي الأَرْضِ}
[الرعد: 17]

قال رسول الله (ص)

إذا مات الإنسان انقطع عنه عمله إلا من ثلاثة: إلا من صدقة جارية ، أو علم ينتفع به ، أو ولد صالح يدعو له

الفاتحة
على روح والدي وامواتنا وشهداء العراق

"نسالكم الدعاء"

This book is one of the series edited by Hassan AL-Temimi and reviewed by academic advisor in the field of internal medicine and clinical pharmacy. The main aim of this series is to provide a guide in clinical pharmacy for internal medical students and clinical pharmacy students. the series (001) is a part of clinical pharmacy board review.

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NOTICE

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Editor
2014

DIRECTIONS: Each item contains a question or incomplete statement that is followed by several responses. Select the one best response to each question.

1-Which of the following drug properties contributes to the ability of a drug to readily transfer across the placenta?

A-Low protein binding
B-Molecular weight greater than 500 daltons
C-Hydrophilicity
D-Weak acid

2-The most effective strategy to reduce the occurrence of neural tube defects in infants is:

A-Use medications not known to cause neural tube defects
B-Take folic acid 4 mg daily during the first trimester
C-Take folic acid 400 mcg daily throughout the reproductive years
D-Increase dietary intake of folic acid

3-Which of the following medications is not preferred for treatment of pregnant patients with nausea and vomiting who have failed non pharmacologic therapy?

A-Pyridoxine
B-Doxylamine
C-Prednisone
D-Metoclopramide
E-Prochlorperazine

4-Which of the following interventions decreases the risk of preeclampsia?

A-Bed rest
B-Oral methyldopa
C-Oral calcium supplementation
D-Oral lisinopril
E-Intravenous magnesium sulfate infusion

5-The most appropriate management for a pregnant patient diagnosed with Neisseria gonorrhea during pregnancy is:

A-Ceftriaxone 250 mg IM as a single dose
B-Ceftriaxone 125 mg IM plus azithromycin 1 g orally, both as a single dose
C-Cefixime 400 mg orally as a single dose plus erythromycin estolate 250 mg orally 4 times a day for 7 days
D-Amoxicillin 500 mg orally 3 times a day for 7 days

6-Which of the following adverse effects can occur with hydroxychloroquine but not with other commonly used agents in SLE?

A-Decreased glomerular filtration
B-Macular damage
C-Leukopenia
D-Diabetes mellitus

7-Management strategies to reduce the risk of congenital malformations in infants born to mothers with epilepsy include all of the following except:

A-Switch drug therapy to Phenobarbital
B-Folic acid 4 mg daily during the first trimester
C-Use only one antiepileptic drug, if possible
D-Attempt drug withdrawal at least 6 months before trying to conceive

8-An appropriate preventive treatment regimen for a pregnant woman who has four migraine headaches per month is:

A-Sumatriptan
B-Ergotamine
C-Caffeine
D-Ibuprofen
E-Propranolol

9-The most appropriate treatment regimen for a pregnant woman with persistent asthma previously maintained on fluticasone, salmeterol, and albuterol is:

A-Change from fluticasone to budesonide
B-Use only albuterol for the duration of the pregnancy
C-Change regimen to budesonide and albuterol
D-Continue current treatment regimen
E-Continue current treatment regimen and add cromolyn

10-Antenatal corticosteroids are administered to:

A-Prevent preterm premature rupture of the membranes
B-Provide tocolysis in the setting of preterm labor
C-Promote fetal lung maturity in premature infants
D-Ripen the cervix in pregnant women beyond 40 weeks of gestation
E-Prevent postpartum hemorrhage

11-Which of the following agents is the most effective for cervical ripening and labor induction?

A-Oral misoprostol

B-Intravaginal misoprostol
C-DinoprostoneD-Oxytocin
E-Mifepristone

12-First-line therapy for a woman diagnosed with gestational diabetes mellitus is:

A-Recombinant insulin
B-Exercise
C-Glyburide
D-Metformin
E-Diet modification

13-Colonization of pregnant women with group B Streptococcus can cause all of the following except:

A-Meningitis if transmitted to neonates
B-Increased risk of premature delivery
C-Neonatal fatality
D-Maternal fatality

14-All of the following properties contribute to the ability of a drug to pass readily into breast milk except:

A-Lipophilicity
B-Low molecular weight
C-High protein binding
D-Maternal serum concentration
E-Weakly basic pH

15-Appropriate antibiotic treatment for the breast-feeding woman with mastitis is:
A-Vancomycin 1 g orally every 12 hours for 7 days
B-Amoxicillin 500 mg orally 3 times a day for 10 days
C-Dicloxacillin 250 mg orally every 6 hours for 5 days
D-Cephalexin 500 mg orally every 6 hours for 14 days

16-A woman who is 6 weeks postpartum and breastfeeding seeks contraception. She would like to have another child in 1 year. **Which of the following is the preferred method of contraception?**
A-Combined oral contraceptive
B-Progestin-only oral contraceptive
C-Depo-medroxyprogesterone acetate
D-Transdermal contraceptive

17-A 32-year-old obese woman comes to the pharmacy to pick up her prescription for norgestimate/ethinyl estradiol (Ortho-Cyclen). A pack of cigarettes falls out of her purse. **This is a concern because:**

A-Smoking increases the risk of venous thromboembolism.
B-Smoking inhibits the metabolism of oral contraceptives.
C-Smoking increases the risk of ovarian cancer.
D-Oral contraceptives increase the risk for smoking-related gastrointestinal ulcers.

18-A 21-year-old woman comes to the pharmacy for her second refill of norethindrone/ethinyl estradiol (Ortho-Novum 7/7/7). She is complaining of nausea and breast tenderness and wonders if you can recommend something for this problem. **You recommend that she:**

A-Call her physician to change her prescription to another oral contraceptive with less estrogen
B-Buy a home pregnancy test to rule out pregnancy
C-Wait another 1 to 2 months to see if symptoms improve on her condition
D-Take a multivitamin rich in B vitamins to treat her symptoms

19- An 18-year-old woman with a seizure disorder and active STD seeks contraception today. She is taking carbamazepine and azithromycin. **Which of the following contraceptive methods would be most appropriate?**
A-Combined oral contraceptive (with 35 mcg of ethinyl estradiol)
B-Depo-medroxyprogesterone acetate
C-Transdermal contraceptive
D-Levonorgestrel intrauterine device

20- A 23-year-old frantic woman comes to the pharmacy asking for help in choosing a home pregnancy test. She says that her partner's condom broke during intercourse last night and that she's worried that she might be pregnant. She started her last period 18 days ago. **You recommend that she:**

A-Not worry; chances are she is not pregnant
B-Buy emergency contraception
C-Make an appointment with her physician to discuss an additional method of contraception
D-Purchase a home pregnancy test to use if her period is late

21- A 22-year-old woman has been using Depo-Provera for the past year. She comes to the office for her quarterly injection (her last injection was 13 weeks ago). **The nurse asks you about the administration of Depo-Provera, and you recommend that she:**

A-Have the patient wait until her next menses before receiving the injection
B-Return to the office next week for her injection

C-Give the injection today but use a second method of contraception for the next cycle
D-Do a pregnancy test and if negative give the injection today

22-In which of the following situations would it be inappropriate to recommend combined oral contraceptives?

A-Sickle cell disease.
B-Hypertension treated with a diuretic and an average blood pressure of 172/92 mm Hg
C-History of migraines without aura in women younger than 35 year of age
D-Dyslipidemia without coronary artery disease treated to goal LDL with a statin

23- Oral contraceptives are associated with a known decreased risk for which of the following conditions?

A-Breast cancer
B-Pelvic inflammatory disease
C-Hepatic adenomas
D-Cerebrovascular disease

24- L.R. is a 27-year-old woman who started on a low-dose combined oral contraceptive containing 20 mcg ethinyl estradiol 2 months ago. She went out of town for the weekend and missed two doses of her medication. It is the third week of her cycle. She is now asking for your opinion on how she should handle the situation. **What would be the most appropriate response?**

A-Take an active tablet as soon as possible (two tablets on that day) and then continue taking tablets daily, one each day. No additional contraceptive protection is recommended.
B-Take an active tablet as soon as possible (two tablets on that day) and then continue taking tablets daily, one each day. Use condoms or abstain from sex until tablets have been taken for 7 days in a row. Finish the active tablets in the current pack and start a new pack the next day (i.e., do not take the seven inactive tablets).
C-Discard the current pack, allow bleeding to occur and then restart a new pack, taking one tablet each day. Use condoms or abstain from sex until the new pill pack has been taken for 7 days in a row.
D-Take an active tablet as soon as possible (two tablets on that day) and then continue taking tablets daily, one each day. Use condoms or abstain from sex until tablets have been taken for 7 days in a row.

25-Levonorgestrel intrauterine devices (MirenA- should not be used in which of the following groups of women?

A-Those with pelvic inflammatory disease within the last 3 months
B-Those who desire passive, long-term contraception
C-Those with contraindications to estrogen

D-Those with heavy menstrual bleeding

26-Which of the following mechanisms of action is unique to progesterone in preventing pregnancy?

A-Inhibition of implantation
B-Accelerated ovum transport
C-Inhibition of ovulation
D-Production of thick cervical mucous

27-Depo-medroxyprogesterone acetate is an appropriate contraceptive choice in women who:
A-Have history of antiphospholipid syndrome and history of deep vein thrombosis
B-Desire contraception that is rapidly reversible
C-Have menstrual irregularities (frequent breakthrough bleeding and spotting)
D-Are obese and desire a contraceptive that does not cause weight gain

28-Use of the vaginal contraceptive ring would be most appropriate in which of the following women?

A-30-year-old woman with hypothyroidism
B-38-year-old woman who smokes one-pack-per-day
C-36-year-old woman with migraines
D-39-year-old woman with obesity

29-Which of the following statements is true regarding emergency contraception?

A-Levonorgestrel/ethinyl estradiol oral contraceptive (AlessE- can be used with a dose of two tablets within 72 hours of unprotected intercourse and repeated 12 hours lat
B-Progestin-only emergency contraception should be taken with an antiemetic in most women to reduce the incidence of vomiting
C-Combined oral contraceptives taken as emergency contraception (Yuzpe method- is preferred over progestin-only emergency contraception due to reduced adverse effects
D-Levonorgestrel emergency contraception can be taken as a single dose (1.5 mg) within 72 hours of unprotected intercourse

30-A 25-year-old, 103-kg (227 lbs) woman requests hormonal contraception. **Which method would be inappropriate and should not be considered?**

A-Vaginal contraceptive ring
B-Transdermal contraceptive
C-Combined oral contraceptive (35 mcg ethinyl estradiol)
D-Levonorgestrel intrauterine device

31-S.T. is a 17-year-old female who complains of amenorrhea for 3 months. She experienced menarche at the age of 14 years. **What is the first step in evaluating this complaint?**

A-Perform a pregnancy test
B-Check her TSH concentration
C-Quantify her level of exercise
D-Evaluate whether she may have anorexia

32-Regardless of the etiology of amenorrhea, **which of the following lifestyle interventions is most appropriate?**

A-Increase the level of exercise
B-Increase the intake of dietary calcium and vitamin D
C-Decrease the intake of alcohol
D-Decrease the level of exercise

33-R.D. is a 40-year-old female who has not had a period for 7 months. She is not pregnant, and her TSH and prolactin concentrations are within normal ranges. She displays no symptoms of PCOS. **Which of the following is most appropriate for RD at this time?**

A-An oral contraceptive containing 30 mcg ethinyl estradiol plus levonorgestrel
B-Bromocriptine 2.5 mg by mouth 3 times daily
C-Medroxyprogesterone acetate 10 mg by mouth for 10 days
D-Metformin 1,000 mg by mouth twice daily

34-A.B. is a 35-year-old female who presents complaining of worsening menorrhagia. Her menses last approximately 7 days per month. A CBC shows a 2 g/dL (20 g/L; 1.24 mmol/L) drop in hemoglobin over the past 15 months. A pap smear and endometrial biopsy are both negative. Her past medical history is significant for a deep vein thrombosis 3 years ago secondary to her oral contraceptive. **Which of the following is the most appropriate first line therapy for A.B.?**

A-A combination oral contraceptive with 50 mcg ethinyl estradiol plus desogestrel
B-Mefenamic acid 500 mg by mouth followed by 250 mg by mouth 4 times daily during menses
C-Levonorgestrel IUD releasing 20 mcg levonorgestrel daily
D-Medroxyprogesterone acetate 10 mg by mouth on days 5 to 26 of the menstrual cycle

35-Which of the following statements is true regarding the levonorgestrel IUD in women with menorrhagia?

A-It should never be used in nulliparous women.
B-It reduces menstrual flow by a maximum of 25%..

C-It is a therapeutic option for any woman at low risk for sexually transmitted diseases
D-Its use increases the need for hysterectomy.

36-The most common cause of nonphysiologic ovulatory dysfunction is:

A-Hyperprolactinemia
B-Hyperthyroidism
C-PC
D-Primary pituitary disease

37-B.B. is a 32-year-old female who presents with complaints of irregular menses. She is hirsute around the jaw line, her BMI is 32 kg/m2, and her waist circumference is 40 inches (102.6 cm). A pelvic ultrasound reveals polycystic ovaries**. Which of the following is most appropriate for B.B.?**

A-A combination oral contraceptive containing ethinyl estradiol and drospirenone
B-A combination oral contraceptive containing ethinyl estradiol and levonorgestre
C-Metformin 850 mg by mouth twice daily
D-Pioglitazone 15 mg by mouth daily

38-Hyperkalemia is most likely to result from which of the following products used in the management of PCOS?

A-A combination oral contraceptive containing ethinyl estradiol and drospirenone
B-A combination oral contraceptive containing ethinyl estradiol and levonorgestre
C-Metformin 850 mg by mouth twice daily
D-Pioglitazone 15 mg by mouth daily

39-Improved insulin sensitivity in patients with PCOS may result in a reduction in circulating androgen concentrations, increased ovulation rates, and improved glucose tolerance. **This may occur with:**

A-Estrogen therapy alone
B-Combination oral contraceptive
C-Medroxyprogesterone acetate.
D-Metformin

40-Excessive anovulatory bleeding in the adolescent population should result in an evaluation for:

A-Hypoprothrombinemia
B-Hyperandrogenism
C-Hypoestrogenism
D-Hypothyroidism

41-Which of the following agents is most appropriate for the management of dysmenorrhea in an adolescent who is not sexually active?

A-Depomedroxyprogesterone acetate 150 mg intramuscularly every 12 weeks
B-Ibuprofen 800 mg by mouth 3 times daily during menses
C-Levonorgestrel IUD releasing 20 mcg levonorgestrel daily
D-Oral contraceptive with 35 mcg ethinyl estradiol plus norgestimate daily

42-The most cost-effective treatment for menorrhagia is:

A-A combination oral contraceptive
B-Levonorgestrel IUD
C-Oral medroxyprogesterone acetate
D-Depot medroxyprogesterone acetate

43-Which of the following non-pharmacologic options is effective for the treatment of dysmenorrhea?
A-High protein diet
B-Topical ice packs
C-Reduced exercise
D-Topical heat

44-Dysmenorrhea is experienced by as many as _____% of women of childbearing age.

A-20
B-40
C-70
D-90

45-For a woman diagnosed with PMDD, following two cycles of charting her symptoms and attempting (and failing) non-pharmacologic interventions, a SSRI is initiated. **Which of the following is a clinical controversy surrounding the use of this drug class in PMDD?**

A-Treatment during luteal phase versus continuously
B-When it is best to discontinue treatment so as not to relapse
C-Treatment only after symptoms occur
D-All of the above

46-RT is a 36-year-old woman with known endometriosis. Oral contraceptives successfully treated her painful symptoms for years, but this therapy was discontinued 24 months ago so that she could conceive a child. She gave birth 6 months ago, and now her painful symptoms have returned. Her medical history is positive for tobacco use (currently one pack per day), aspirin-sensitive asthma, and seasonal allergic rhinitis. She also states that she may want another child in the future. **Based on these**

given patient characteristics, which of the following is the best choice of therapy for RT's painful symptoms?

A-Naproxen
B-Leuprolide
C-Oral contraceptive
D-Medroxyprogesterone depot injection

47-Women with endometriosis may present with which of the following symptoms?
I: Dysuria
II: Dysmenorrhea
III: Infertility

A-I and II only
B-I and III only
C-II and III only
D-I, II, and III

48-RW is a 30-year-old woman recently diagnosed with endometriosis. She desires a child as soon as possible but has been unable to conceive over the past 3 years. She also experiences severe acyclic pelvic pain. Her medical history is otherwise negative. **The best initial endometriosis therapy for RW is which of the following?**

A-Ibuprofen
B-Danazol
C-Conservative surgery
D-Nonconservative surgery

49-AH is a 37-year-old woman with endometriosis. She is currently receiving treatment targeted at endometriosis-related pain and infertility**. Which of the following parameters are useful in evaluating the therapeutic response to treatment in AH?**
I: Successful conception
II: Decreased painful symptoms
III: Decreased size and number of lesions

A-I and II only
B-I and III only
C-II and III only
D-I, II, and III

50-A 40-year-old woman with endometriosis is being treated with goserelin, and her physician wishes to start add-back therapy to relieve her hot flashes and prevent bone loss. **The purpose of using add-back therapy includes which of the following?**
I: Improved efficacy

II: Decreased incidence of hot flashes
III: Decreased loss of bone mineral density

A-I and II only
B-I and III only.
C-II and III only
D-I, II, and III

51-KH is a 13-year-old female patient with endometriosis. Her pain failed to respond to therapy with ibuprofen**. Which of the following agents is the best to recommend for KH at this time?**

A-Danazol
B-Levonorgestrel intrauterine system
C-Nafarelin
D-Ethinyl estradiol/norgestimate contraceptive pill

52-Which of the following medications treats endometriosis by creating a "functional oophorectomy" through inhibition of most follicle-stimulating hormone and luteinizing hormone secretion?

A-Danazol
B-Medroxyprogesterone acetate.
C-Nafarelin
D-Naproxen

53-TS is a 30-year-old woman who recently started danazol for the treatment of endometriosis-related pain**. Which of the following is an appropriate monitoring plan for this patient?**

A-Pain relief at 2 months; incidence of hot flashes, vaginal dryness, and insomnia
B-Pain relief at 2 months; incidence of weight gain, acne, and hirsutism
C-Pain relief at 6 months; incidence of hot flashes, vaginal dryness, and insomnia
D-Pain relief at 6 months; incidence of weight gain, acne, and hirsutism

54-All of the following mechanisms likely contribute to endometriosis-related pain except

A-Prostaglandin release
B-Bleeding
C-Compression of nerve fibers
D-Increased levels of substance P

55-HS is a 32-year-old woman with a medical history of venous thromboembolism, rheumatoid arthritis, a corticosteroid-induced vertebral compression fracture, and endometriosis. Her current medications include prednisone 5 mg daily, naproxen 500

mg twice daily, methotrexate 7.5 mg weekly, and norethindrone 15 mg daily. Norethindrone has failed to help HS's endometriosis-related pain. She may want to have children in the future. **Which of the following is the best choice for treatment of her endometriosis at this time?**

A-Subcutaneous medroxyprogesterone monotherapy
B-Leuprolidemonotherapy
C-Conservative surgical therapy
D-Non-conservative surgical therapy

56-SM is a 32-year-old woman who received conservative surgical therapy for treatment of her endometriosis-related infertility 8 months ago. She has not yet conceived a child. **The most appropriate step for SM is to**

A-Refer for assisted reproductive technology consultation.
B-Repeat conservative surgery to remove more endometrial lesions.
C-Start a 6-month course of oral contraceptives to "reset" her system.
D-Encourage her to adopt because it is not likely that she will be able to conceive.

57-Which of the following mechanisms of action is unique to danazol therapy as compared with the other drugs used to treat endometriosis?

A-Atrophy of endometrial tissue
B-Immunosuppressive activity
C-Induction of amenorrhea
D-Induction of anovulation

58-Which of the following are proposed mechanisms for development of endometriosis?
I: Immunologic abnormalities
II: Lymphatic spread
III: Retrograde menstrual flow
A-I and II only
B-I and III only
C-II and III only
D-I, II, and III

59-Which of the following regimens would be reasonable to recommend as add-back therapy for a woman taking a gonadotropin-releasing hormone agonist (GnRH-A-?
A-Estradiol 1 mg orally daily
B-Norethindrone 5 mg orally daily
C-Ethinyl estradiol 20 mcg/drospirenone 3 mg orally daily
D-Conjugated equine estrogens 0.3 mg/medroprogesterone 1.5 mg orally daily

60-Which of the following patients would be the best candidate for use of an aromatase inhibitor in treating endometriosis pain?

A-Age 14, never treated in past
B-Age 18, history of deep vein thrombosis and uncontrolled acne
C-Age 25, failed combined hormonal contraceptives
D-Age 30, history of deep vein thrombosis and GnRH-a failure
Hormone Therapy in Women

61-The most effective treatment to alleviate postmenopausal vasomotor symptoms (hot flushes and night sweats) is:

A-Estrogen therapy
B-Selective estrogen-receptor modulators (SERMs)
C-Testosterone therapy
D-Clonidine

62-In order to prevent future coronary events in a 65-year-old woman who recently underwent coronary artery bypass grafting**, the following hormone therapy regimen should be initiated:**

A-High doses of estrogen with a progestin
B-Low doses of estrogen with a progestin
C-High doses of estrogen without a progestin
D-Low doses of estrogen without a progestin
E-None of the above choices is correct

63-Continued vasomotor symptoms in a 52-year-old postmenopausal woman receiving 0.3 mg of oral conjugated equine estrogens can be managed by:

A-Changing to an equivalent transdermal estrogen regimen
B-Changing to a selective estrogen-receptor modulator
C-Increasing the daily estrogen dose
D-Decreasing the daily estrogen dose

64-Non-oral forms of estrogens available in the United States include:
A-Transdermal
B-Topical
C-Intra-vaginal
D-All of the above

65-Conjugated equine estrogen and medroxyprogesterone therapy can increase the risk of:

A-Venous thromboembolism
B-Stroke

C-Colon cancer
D-Both a and b
E-Both a and c

66-For the management of severe menopausal symptoms, the best choice for a 55-year-old woman with breast cancer is:

A-Estrogen
B-Progestogen
C-Venlafaxine
D-Tibolone

67-Elevation in the serum concentrations of which of the following hormones in a 30-year-old woman can aid in confirming the diagnosis of primary ovarian insufficiency premature ovarian failure:

A-FSH
B-LH
C-estradiol
D-TSH

68-Long-term hormone therapy can be routinely prescribed for which of the following conditions?

A-Severe coronary heart disease
B-Dementia unresponsive to other therapies
C-Severe osteoporosis
D-Choices b and c only
E-None of the above choices is correct

69-According to the results of the Women's Health Initiative, short-term combined estrogen/progestogen therapy (2 years or less) increases the risk of:

A-Breast cancer
B-Thromboembolic disease events
C-Coronary heart disease events
D-Both choices a and c
E-Both choices b and c

70-Raloxifene increases the risk for which of the following?

A-Venous thromboembolism
B-Breast cancer
C-Colon cancer
D-Inflammatory bowel disease
E-None of the above choices is correct

71-For osteoporosis prevention, a 65-year-old woman at high risk for breast cancer may receive:

A-Estrogen
B-Raloxifene
C-Clonidine
D-Testosterone

72-A common adverse effect experienced by women taking raloxifene is:

A-Gastrointestinal upset
B-Hot flushes
C-Vaginal spotting
D-Headache

73-Which of the following statement is false?

A-The three main classes of phytoestrogens are isoflavones, lignans, and coumesta
B-Hepatotoxicity has been reported with black cohosh administration.
C-Red clover leaf contains phytoestrogens.
D-Herbal products marketed for the relief of menopausal symptoms have been shown to be effective and therefore should be recommended.

74-Young women with primary amenorrhea in whom secondary sex characteristics have failed to develop should initially receive:

A-High doses of estrogen with a progestin
B-Low doses of estrogen with a progestin
C-High doses of estrogen without a progestin
D-Low doses of estrogen without a progestin
E-None of the above choices is correct

75-Which of the following statements regarding hormone therapy and its relationship to mood, cognition, and dementia is true?

A-Hormone therapy decreases the risk of dementia.
B-Hormone therapy improves cognition in older women with mild or absent vasomotor symptoms.
C-Hormone therapy improves mood and well-being mainly in women with vasomotor symptoms and sleep disturbance.
D-Hormone therapy improves symptoms of Alzheimer's disease in women over the age of 78 years.

76-All of the following are potential risks for plasma-derived factor concentrates, except:

A-HIV contamination
B-Hepatitis contamination
C-Development of factor inhibitor
D-Renal toxicity
E-Allergic reaction

77-The dose of recombinant Factor IX concentrate (BeneFix) for an 8-year-old male who weighs 25 kg to target a 50% correction is:

A-2,000 units
B-1,750 units
C-1,250 units
D-1,000 units
E-625 units

78-A potential advantage to using recombinant factor concentrate instead of plasma-derived product is:

A-Decreased risk of viral contamination
B-Decreased risk of inhibitor development
C-Increased efficacy
D-Easier administration
E-Decreased cost

79-Which of the following is not an appropriate choice for the acute treatment of a patient with hemophilia A who is bleeding and has a high titer inhibitor?

A-Cyclophosphamide
B-Factor VIIa concentrate
C-PCCs
D-Porcine factor VIII
E-aPCCs

80-When counseling a patient on potential side effects of desmopressin, you should include:

A-Facial flushing
B-Water retention
C-Headache
D-Seizures
E-All of the above

81-Which of the following is least likely to occur in a patient with type 1 von Willebrand disease?

A-Bleeding after dental extraction

B-Menorrhagia
C-Postoperative bleeding
D-Nosebleed
E-Joint hemorrhage

82-A patient with type 2N von Willebrand disease is receiving a plasma derived von Willebrand factor containing product. You can monitor all of the following, for efficacy except:

A-von Willebrand antigen
B-von Willebrand activity (ristocetin cofactor)
C-Prothrombin time
D-Factor VIII activity
E-Symptoms

83-Which of the following is the least likely to occur in a patient with mild factor VIII deficiency?

A-Bleeding after dental extraction
B-Spontaneous joint hemorrhage
C-Bleeding after tonsillectomy
D-Easy bruising
E-Bleeding after trauma

84-Which laboratory tests can aid in the diagnosis of disseminated intravascular coagulation?

A-Fibrinogen
B-D-dimer
C-Bleeding time
D-A and B
E-A and C

85-A patient presents with septic shock and disseminated intravascular coagulation from bacterial sepsis. **Which of the following agents is most likely to have the greatest impact on the patient's outcome?**

A-Activated protein C
B-Antithrombin
C-Heparin
D-Antibiotics
E-Fresh frozen plasma

86-The following are possible etiologies for vitamin K deficiency:

A-Age <1 month

B-Acute diarrhea
C-Cystic fibrosis
D-A and B
E-A and C

87-The standard of care for the prevention of hemorrhagic disease of the newborn in the United States is:

A-Subcutaneous phytonadione
B-Intramuscular phytonadione
C-Oral phytonadione
D-Intramuscular menadion
E-Oral menadiol

88-All of the following are possible methods of viral inactivation for plasma derived factor replacement products except:

A-Recombinant technology
B-Solvent detergent
C-Dry heat
D-Pasteurization
E-Monoclonal antibody

89-Which common laboratory test is abnormal in patients with hemophilia?

A-Bleeding time
B-Thrombin time
C-Activated partial thromboplastin time (aPTT)
D-Prothrombin time (PT)
E-Platelet count

90-Which of the following is a false statement?

A-Desmopressin is frequently used for patients with von Willebrand disease
B-Anti-inhibitor coagulant complex (Feiba VH Immuno) can be effective in patients with factor VIII inhibitors
C-Recombinant antihemophilic factor concentrate (BioclatE- is a plasma-derived factor IX product
D-Heat-treated anti-inhibitor coagulant complex (Autoplex T) is neither a recombinant nor a monoclonal product
E-The dose of nonacog alfa (BeneFix) would be higher than a dose of factor IX concentrate (MononinE- to treat the same patient

91-Which of the following statement is incorrect?

A-Sickle cell disease is a hereditary disorder involving abnormal hemoglobin.
B-Patients with sickle cell trait usually are asymptomatic but can become symptomatic in extreme conditions.
C-Sickle cell disease is only seen in those with African ancestry.
D-The primary clinical manifestations of sickle cell disease are hemolysis and vaso-occlusion.
E-Patients with fetal hemoglobin 20% or higher generally have a milder disease.

92-Patients with sickle cell anemia have increased risk of the following infection:

A-Streptococcus pneumonia
B-Candida species
C-Aspergillus species
D-Pseudomonas species
E-Enterobacter species

93-Prevention of pneumococcal infection in sickle cell disease includes

A-Influenza vaccine annually starting at age 6 months
B-Haemophilus influenza vaccine (HiB- starting at age 2 months
C-Tetanus toxoid every 10 years
D-23-valent pneumococcal polysaccharide vaccine, 7-valent pneumococcal conjugated vaccine, and oral penicillin
E-Meningococcal vaccine

94-The appropriate penicillin prophylaxis regimen in sickle cell disease is:-

A-Penicillin 125 mg twice daily by mouth from 5 years of age to adolescent
B-Penicillin 125 mg once a day by mouth begin at diagnosis until 5 years of age
C-Penicillin 125 mg twice a day by mouth beginning at diagnosis until 3 years of age, then 250 mg twice daily until age 5
D-Penicillin 125 mg twice a day by mouth until first dose of pneumococcal vaccine
E-Penicillin 250 mg twice a day by mouth beginning at diagnosis until first dose of pneumococcal vaccine then once daily

95-Hydroxyurea is useful in management of sickle cell disease because

A-It is a chemotherapeutic agent.
B-It increases fetal hemoglobin production.
C-It suppresses bone marrow production of sickle hemoglobin.
D-It inhibits the cation transport in red blood cell membrane.
E-It has the potential of cure the disease.

96-Which of the following statements is correct?

A-Hydroxyurea is useful in the management of sickle cell disease because the agent is efficacious in reducing pain crisis and has no toxicities.
B-Hydroxyurea is preferred over butyrate because of its sustained effect on fetal hemoglobin and lack of side effects with long-term use.
C-Hydroxyurea reduces painful crisis but close monitoring is needed because of its effect on the bone marrow.
D-Chronic transfusion is the therapy of choice to increase fetal hemoglobin.
E-Penicillin prophylaxis can be discontinued once fetal hemoglobin inducer is initiated.

97-The appropriate management of sickle cell patients presented with fever includes the following except:

A-Cefotaxime or ceftriaxone ± vancomycin
B-Ibuprofen or Tylenol for fever
C-Fluid
D-Frequent monitoring
E-Pneumococcal vaccine

98-The primary indication for chronic transfusion program is

A-Prevention of infection
B-Prevention of organ damage
C-Lack of fetal hemoglobin response to hydroxyurea
D-Bone marrow suppression secondary to hydroxyurea
E-Prevention of stroke

99-Patients admitted with signs and symptoms of acute chest syndrome should

A-Avoid narcotic analgesics because those agents may suppress ventilation
B-Receive twice maintenance fluid to prevent dehydration from hyperventilation
C-Not receive bronchodilators because those agents cause excessive relaxation of airway leading to collapse of the airway
D-Receive appropriate pain management, oxygen, balanced fluid, and antimicrobial agents
E-Be given corticosteroids because the agents reduce hospital stay, need for transfusions, and supportive care and readmission

100-The most common cause for aplastic crisis is

A-Pneumococcal infection
B-ASPEM syndrome occurred after partial exchange transfusion in patients with priapism
C-Parvovirus B19
D-Sequestration of red blood cells in the spleen
E-Splenectomy

101-Which of the followings is true in regard to the management of vaso-occlusive pain crisis?

A-Hydration and aggressive analgesics are the primary treatment. Analgesic therapy should be individualized.
B-Narcotic analgesics should be minimally used because patients can become addicted to those agents.
C-Patients who require narcotic analgesics more than 24 hours are drug-seeking.
D-All patients with pain crisis should be hospitalized.
E-Fluid restriction should be initiated to prevent fluid overload.

102-Analgesic choices for sickle cell patients with mild to moderate pain include the following except:

A-Nonsteroidal anti-inflammatory drugs (NSAIDS)
B-Acetaminophen
C-Narcotic analgesics
D-Combination of NSAIDS and narcotic analgesics
E-Intramuscular meperidine

103-Analgesic choices for sickle cell patients with severe pain include the followings except:

A-Morphine
B-Hydromorphone
C-Fentanyl
D-Acetaminophen
E-Methadone

104-Patient-controlled analgesic (PCA- is useful in management for sickle cell pain crisis because

A-It limits the allowable amount that can be delivered to the patient; therefore, avoiding confrontations with the patient.
B-This method of delivery resulted in increased duration of action.
C-Intramuscular administration of narcotic agents should be avoided, especially for young children.
D-It gives the patient control over the analgesic therapy.
E-It minimize addition potential.

105-Epidemiologic data suggest that the drug-induced hematologic disorder which causes the greatest number of deaths is:

A-aplastic anemia
B-thrombocytopenia
C-agranulocytosis

D-hemolytic anemia
E-megaloblastic anemia

106-Chloramphenicol is thought to cause aplastic anemia through the following mechanism(s):

A-dose-dependent
B-idiosyncratic
C-metabolite-induced immune reaction
D-a and b
E-a and c

107-The major cause of mortality among patients with aplastic anemia is:

A-bleeding
B-thrombosis
C-embolism
D-infection
E-hypoxia

109-A 67-year-old patient complains to you of gastrointestinal (GI) symptoms. **Which of the following symptoms would not require an immediate referral for further diagnostic interventions?**

A-Weight loss
B-Anemia
C-Sore throat
D-Dysphagia

110-The cornerstone in the evaluation of the patient with digestive complaints is:

A-Comprehensive patient history
B-Colonoscopy
C-Endoscopy
D-Magnetic resonance imaging

111-Bleeding from the GI tract may lead to elevations in which of the following laboratory tests?

A-Prealbumin
B-Serum creatinine
C-Serum potassium
D-Blood urea nitrogen

112-Low albumin may be indicative of **which of the following GI tract disorders?**

A-Hepatic dysfunction
B-Malnutrition
C-Protein losing-enteropathies
D-All of the above

113-A gastrointestinal organism associated with MALT lymphomas is:

A-Helicobacter pylori
B-Escherichia coli
C-Cytomegalovirus
D-Clostridium difficile

114-Which of the following GI diagnostic tests does not require an 8 to 12 hour fast and administration of a bowel-cleansing agent prior to the procedure?

A-Lower GI series with barium
B-Ultrasonography
C-Flexible sigmoidoscopy
D-Capsular endoscopy

115-A noninvasive GI procedure that provides images of deeper structures like the gallbladder or liver is:

A-Small bowel enteroclysis
B-Barium in a lower GI series
C-Capsular endoscopy
D-Ultrasonography

116-A radiologic imaging method to detect GI hemorrhages is:

A-Radionuclide imaging
B-Computed tomography
C-Magnetic resonance imaging
D-None of the above

117-To improve patient acceptance with upper endoscopy, which of the following agents can be used to achieve conscious sedation?

A-Lorazepam
B-Midazolam
C-Propofol
D-All of the above may be used

118-The most common method to visually evaluate a patient with Barrett's esophagus is:
A-Upper GI series with gastrografin

B-Endoscopy
C-Magnetic resonance imaging
D-All of the above may be used

119-In patients with gastroesophageal reflux symptoms not receiving a proton pump inhibitor therapy, up to what percentage will have normal findings?

A-10 %
B-25%
C-50%
D-75%

120-Which of the following gastrointestinal tract test will evaluate diseases of esophageal dysmotility?

A-Capsule endoscopy
B-Enteroscopy
C-Manometry
D-Upper GI series

121-The gold standard procedure for patients that complain of gastroesophageal reflux is:

A-Capsule endoscopy
B-Flexible sigmoidoscopy
C-Magnetic resonance imaging
D-Esophageal pH monitoring

122-Multichannel intraluminal impedance is a procedure that:

A-Allows for staging of inflammatory bowel disease
B-Assesses both acid and nonacid reflux
C-Will visualize gastrointestinal tumors
D-All of the above are correct

123-Aggressive factors that can promote esophageal damage include all of the following except:

A-Bicarbonate
B-Gastric acid
C-Pancreatic enzymes
D-Bile acids
E-Pepsin

124-What is the appropriate treatment for a newly diagnosed patient with advanced-stage diffuse large B-cell lymphoma?

A-Rituximab and CHOP chemotherapy (R-CHOP)
B-Bendamustine
C-CHOP chemotherapy
D-Bexxar or Zevalin

125-Which of the following statements best describe the results of appropriate treatment in patients with advanced-stage diffuse large B-cell lymphoma?

A-About 60–90% of patients can be cured of their cancer
B-Patients are not cured of their disease, but they will probably live longer may have improved quality of life
C-About 30–60% of patients can be cured of their cancer
D-Patients will probably not live longer, but they

126-Which of the following chemotherapy regimens warrant granulocyte colony-stimulating factor support?

A-Dose-dense CHOP
B-Escalated-dose BEACOPP
C-BEACOPP-14
D-All of the above

127-Symptoms found in patients with myelodysplastic syndrome may include which of the following?

A-Dysphagia
B-Fatigue
C-Painless lymphadenopathy
D-All of the above

128-Which of the following tests is routinely done in the diagnosis of patients with MDS?

A-Bone marrow aspiration and biopsy
B-Computed tomography of the chest, abdomen and pelvis
C-Lymph node biopsy
D-Magnetic resonance imaging of the brain

129-Which of the following agents are most likely to cause hyperlipidemia, hyperglycemia, and hypercholesterolemia?

A-Bevacizumab
B-Pazopanib
C-Sorafenib
D-Sunitin

E-Temsirolimus

130-KR is a 36-year-old female with a history of stage 2A breast cancer. She underwent radical mastectomy, radiation, and adjuvant chemotherapy with doxorubicin, cyclophosphamide, and paclitaxel. She then received 5 years of tamoxifen. On routine follow-up, 7 years after her diagnosis of breast cancer, she was found to have a hemoglobin on 9.8 g/dL, neutrophil count of 1.7 x109 cells/L, and platelets of 67 x 109 cells/L. Bone marrow biopsy was consistent with MDS-refractory anemia with excess blasts-2 (RAEB-2). Her cytogenetics revealed a 7q chromosomal deletion. **Which of the following medications is her therapy-related MDS most likely related to?**

A-Doxorubicin
B-Cyclophosphamide
C-Paclitaxel
D-Tamoxifen

131-MB is a 74-year-old male with MDS. His hemoglobin is 6.8 g/dL, neutrophil count is 0.8 * 10^9cells/L, and platelets are 43 ? 109 cells/L. Bone marrow biopsy reveals 9% blasts. His cytogenetics are normal. **What is his IPSS score?**

A-0
B-1
C-1.5
D-2

132-Treatment goals in MDS may include
A-Altering the natural history of the disease
B-Reducing transfusions
C-Improving quality of life
D-All of the above

133-What is the most appropriate therapy for a 72-year-old male with myelodysplastic syndrome associated with an isolated chromosomal 5q deletion?

A-Antithymocyte globulin 40 mg/kg/day intravenously for 4 days
B-Azacitidine 75 mg/m2 SQ daily for 7 days
C-Lenalidomide 10 mg PO daily
D-Thalidomide 200 mg PO every night at bedtime

134-What is the most effective therapy for a 37-year-old female with refractory anemia with excess blasts-2 (RAEB-2) noted to have a chromosome 7 abnormality?

A-Matched sibling donor allogeneic hematopoietic stem cell transplan
B-Autologous hematopoietic stem cell transplant

C-Lenalidomide
D-Darbepoetin

135-Which of the following therapies demonstrated improvement in overall survival in patients with MDS?

A-Azacitidine
B-Lenalidomide
C-AML-type induction chemotherapy
D-Romiplostim

136-Which of the following patients is most likely to respond to antithymocyte globulin?

A-A 45-year-old female with refractory anemia with an isolated chromosomal 5q deletion, who has required transfusions for the past 2 years
B-A 35-year-old female with HLA DR15 expression who has required transfusions for the past month.
C-A 72-year-old male with a serum erythropoietin level of 237 mIU/mL who has required red blood cell transfusions for the past 4 months
D-None of the above

137-Mr. Smith is a 78-year-old male with a past medical history of heart failure, type II diabetes, and myelodysplastic syndrome-refractory anemia with excess blasts-2 (RAEB-2). He read about iron overload on the MDS foundation website and would like to know what benefits he would have from receiving deferasirox. **You explain to him that treatment of MDS with deferasirox has been shown to do which of the following?**

A-Decrease serum ferritin, a blood test that indicates iron overload
B-Reverse congestive heart failure and improve shortness of breath
C-Decrease insulin requirements and lower hemoglobin A1C
D-Prolong life by 2–3 years

138-Which of the following patients is most likely to respond to erythropoietin therapy?

A-A 27-year-old female requiring 6 red blood cell transfusions/month for the past 3 months with a serum erythropoietin level of 672 MIU/mL
B-A 63-year-old male requiring 3 red blood cell transfusions/month for the past 2 years with a serum erythropoietin level of 512 MIU/mL
C-A 72-year-old female requiring 1 red blood cell transfusion/month for the past 3 months with a serum erythropoietin level of 172 MIU/mL
D-A 63-year-old male requiring 1 red blood cells transfusions/month for the past 2 years with a serum erythropoietin level of 430 MIU/mL

139-M.K. is a 64-year-old male with refractory anemia with ringed sideroblasts (RARS). He has normal cytogenetics. His hemoglobin is 9 g/dL, neutrophil count is 2.7 * 10^9 cells/L and platelets are 107 * 10^9 cells/L. **Which of the following regimens would you recommend for him?**

A-Erythropoietin 40,000 units SQ + filgrastim 100 mcg SQ twice weekly
B-Erythropoietin 40,000 units SQ every 2 weeks
C-Darbepoetin 200 mcg SQ every 2 weeks
D-Filgrastim 480 mcg SQ once daily

140-Common adverse effects of lenalidomide include which of the following?

A-Rash and peripheral neuropathy
B-Rash and peripheral cytopenias
C-QTc interval prolongation and peripheral neuropathy
D-Peripheral cytopenias and QTc prolongation

141-Notable adverse effects of DNA hypomethylating agents include which of the following?

A-QTc interval prolongation and hepatotoxicity
B-Peripheral neuropathy and QTc interval prolongation
C-Peripheral cytopenias and hepatotoxicity
D-QTc interval prolongation and hepatotoxicity

142-All of the following patients would be at an increased risk of renal cell carcinoma except:

A-A male with a 50-pack-per-year smoking history who continues to smoke
B-A male who uses 2 g of acetaminophen daily for his osteoarthritis
C-An obese male with a BMI of 31
D-A male with a 20-year history of poorly controlled hypertension

143-Compared with hereditary RCC, sporadic RCC is more likely to be:

A-Diagnosed in younger patients
B-Seen concurrently with other malignancies
C-Multicentric rather than unicentric
D-Present in one kidney rather than in both kidneys

144-Von Hippel–Lindau (VHL) can best be described as:

A-Oncogene
B-Tumor suppressor gene
C-Receptor tyrosine kinase endothelial growth factor (VEGF)
D-Substrate for vascular

145-The current treatment of RCC has shifted towards targeted therapy against a variety of substances that play a role in the pathogenesis of the disease. **All of the following are genes that are directly activated by the HIF complex except:**

A-Glucose transporter-1
B-Vascular endothelial growth factor (VEGF)
C-Mammalian target of rapamycin (mTOR)
D-Platelet-dependent growth factor (PDGF)

146-Though frequently utilized in the management of RCC, which of the following therapies is not FDA-approved for the treatment of this disease?

A-Bevacizumab
B-Interleukin-2
C-Interferon
D-Pazopanib
E-Everolimus

147-Capillary leak syndrome is seen mostly commonly in patients treated with which of the following agents?

A-Sorafenib
B-Sunitinib
C-Interferon
D-Interluekin-2
E-Temsirolimus

148-Which of the following targeted therapies is the best choice for the first-line treatment of metastatic RCC in a patient with an MSKCC risk classification of poor risk (three or four of five factors)?

A-Sunitinib
B-Temsirolimus
C-Sorafenib
D-Bevacizumab
E-Everolimus

149-Which of the following targeted therapies is the best choice for the second-line treatment of metastatic RCC in an individual who has experienced disease progression on a tyrosine kinase inhibitor?

A-Temsirolimus
B-Bevacizumab
C-Sorafenib
D-Pazopani
E-Everolimus

150-A 32-year-old woman treated with hydrocortisone 10 mg in the morning and 10 mg in the evening for Addison's disease, presents to the clinic with poor compliance. She feels that the hydrocortisone upsets her stomach and wants to switch to enteric coated prednisolone. **What would be the appropriate corresponding daily dose of prednisolone?**

A- 4 mg daily
B- 5 mg daily
C- 7 mg daily
D- 10 mg daily
E- 15 mg daily

151-Side effects of recombinant human growth hormone (rhGH) therapy include which of the following?
A- Aplastic anaemia
B- Benign intracranial hypertension (BIH)
C- Creutzfeldt-Jakob disease (CJD-
D- Leukaemia
E- Proliferative retinopathy

152-A 55-year-old male with type 2 diabetes is seen at annual review. His glycaemic control is sub-optimal on diet alone and his most recent HbA1c is 7.9% (3.8-6.4). You elect to treat him with metformin 500 mg BD. **Which of the following would be the most appropriate interval to re-check his HbA1c?**

A- Two weeks
B- One month
C- Two - three months
D- Four - six months
E- Six - twelve months

153-What is the most effective bisphosphonate for use in reducing bone pain and preventing pathological fractures in patients with metastatic breast cancer?

A- Alendronic acid
B- Ibandronic acid
C- Olpadronate
D- Pamidronate
E- Zoledronic acid

154-A 72-year-old man presents to the hematology clinic. He has suffered increasing headaches over the past few weeks, and unfortunately suffered a myocardial infarction some four weeks ago. He has been buying anti-histamines over the counter because of increasing itching. During his admission it was noted that he had a marked elevation in hemoglobin, white cells and platelets. He is a non-smoker with no history of chest disease. On examination in the clinic today he is hypertensive with a BP of 155/90

mmHg. Heart sounds are normal and his chest is clear. He looks plethoric with a ruddy complexion, and you notice that he has splenomegaly on abdominal examination. Investigations show
Hemoglobin 19.8 g/dl(13.5-18)
Staining for estrogen and progesterone receptors is negative.
Which of the following additional treatment options is most appropriate, based upon these findings?

A- Radical mastectomy
B- St John's wort
C- Tamoxifen
D- Trastuzumab
E- Vancomycin

155-A 28-year-old pregnant woman is being treated for a deep vein thrombosis with unfractionated heparin. A recent blood test shows:
Hemoglobin 9.8 g/dl(11.5-16.5)
White cell count 9.5 x 109/L (4-11)
Platelets 35 x 109/L (150-400)
What would be the best course of action for this woman?

A- Change to hirudin
B- Change to low molecular weight heparin
C- Change to warfarin
D- Danaparoid
E- No change in treatment and observe

156-In the consideration of disseminated intravascular coagulation (DIC-, **which of the following statements is most correct?**

A- In DIC associated with sepsis secondary to retained products of conception, treatment of antibiotics will alleviate the process
B- Organ failure is a common finding in DIC
C- The intrinsic pathway is not involved in the pathophysiology of DIC
D- The presence of DIC does not increase mortality from the underlying disease
E- There are no randomized control trials to guide treatment in DIC

157-A 68-year-old female with terminal bowel cancer is receiving optimal doses of morphine sulphate therapy. **Which of the following effects may be expected with the addition of a partial opioid agonist?**

A- Increased analgesia
B- Increased respiratory depression
C- Increased sedation
D- No change
E- Reduced analgesia

158-Which of the following does not have a role in the management of chronic cancer pain?
A- Carbamazepine
B- Clodronate
C- Dexamethasone
D- Nifedipine
E- Pinavarium

159-A previously fit 30-year-old male presents with a two month history of weight loss, tiredness and nausea.
Investigations show:
Haemoglobin 10.5 g/dL (13.0-18.0)
MCV 88 fL (80-96)
White cell count 6.0 x 109/L (4-11 x109)
Platelets 450 x 109/L (150-400 x109)
Serum Sodium 130 mmol/L (137-144)
Serum Potassium 5.7 mmol/L (3.5-4.9)
Serum Urea 3.0 mmol/L (2.5-7.5)
Serum creatinine 78 μmol/L (60-110)
Serum total T4 55 nmol/L (50-150)
Serum TSH 8 mU/L (0.4-5)
Which of the following is the most useful diagnostic investigation?

A- Anti-thyroid peroxidase antibody titer
B- Free thyroxin concentration
C- Insulin tolerance test
D- Short Synacthen test
E- TRH test

160-By what mechanism do the platinum based chemotherapies cause DNA damage and cell death?

A- Alkylating agent
B- Antimetabolite
C- DNA cross linkage
D- Inhibition of topoisomerase
E- Unknown

161-A 35-year-old woman is diagnosed with a below knee deep vein thrombosis (DVT). She is currently undergoing endocrine treatment for breast cancer. **Which agent is she likely to have been prescribed?**

A- Anastrozole
B- Exemestane
C- Fulvestrant
D- Megace

E- Tamoxifen

162-Which of the following infusion times would be appropriate during the transfusion of a blood product in a stable patient?

A- A platelet transfusion should be given over 90 minutes
B- A packed cell transfusion should be given over 20 minutes
C- A platelet transfusion should be given over 60 minutes
D- A packed cell transfusion should be given over 90 minutes
E- A platelet transfusion over 120 minutes

163-A 48-year-old woman with a history of epilepsy and ischemic heart disease presented with the following full blood count.
Hemoglobin 7.4 g/dL(11.5 - 16.5)
Mean cell volume 125 fL(80 - 96)
White cell count 2.5 x 109/L(4 - 11)
Platelet count 130 x 109/L(150 - 400)
Which of the following medications is the most likely cause?

A- Carbamazepine
B- Clopidogrel
C- Furosemide
D- Phenytoin
E- Spironolactone

164-A 28-year-old primi-gravid woman developed a swollen painful left leg at 12 weeks gestation. Doppler ultrasound of her leg venous system showed a left popliteal vein thrombosis. **Which one of the following treatments is associated with the greatest risk to the fetus?**

A- Aspirin
B- Intravenous unfractionated heparin
C- Warfarin
D- Subcutaneous low molecular weight heparin
E- Subcutaneous unfractionated heparin

165-What is the mechanism of action of low molecular weight heparin?

A- Activation of plasminogen
B- Chelation of calcium
C- Inhibition of activated factor X
D- Inhibition of antithrombin
E- Inhibition of vitamin K-dependent carboxylase

166-A 73-year-old man presented with a two weeks history of breathlessness and easy bruising. Investigations show:

Hemoglobin 6.9 g/dL (13.0-18.0)
White cell count 0.4 x 109/L (4-11)
Platelet count 9 x 109/L (150-400)
Bone marrow aspirate all cellular elements reduced.
Which drug is the most likely cause of these abnormalities?

A- Aciclovir
B- Amiloride
C- Amoxicillin
D- Paracetamol
E- Trimethoprim

167-A 45-year-old man is to undergo knee surgery. He has a history of factor IX deficiency. You are concerned about the prospect of significant bleeding during surgery. **Which of the following is most likely to reduce his risk of bleeding?**

A- Mefenamic acid
B- Tranexamic acid
C- Vasopressin
D- Vitamin K
E- von Willebrand factor

168-A 35-year-old male with a long history of ulcerative colitis is treated for an acute exacerbation which settles following an alteration of his medication. Six weeks after discharge he is re-admitted with sepsis and his results show:
Haemoglobin 10.5 g/dl(13.0-18.0)
White cell count 2.0 x 109/L (4-11)
Platelets 90 x 109/L (150-400)
Which one of the following drugs is most likely to be the cause of his pancytopenia?

A- Azathioprin
B-Mesalazine
C-Metronidazole
D-Pamidronate
E- Prednisolone

169-A 19-year-old male with glucose-6-phosphate dehydrogenase deficiency wishes to travel to Africa. **Which one of the following should he be advised to avoid?**

A- Ibuprofen
B- Loperamide
C- Mefloquine
D- Primaquine
E- Yellow fever vaccine

170-In porphyria, which of the following is least likely to precipitate an acute attack?

A- Aspirin
B- Menstruation
C- Phenytoin
D- Starvation
E- Thiopentone

171-Which is the most important pharmacodynamic factor in determining the appropriate timing between doses?

A- Bioavailability
B- First pass metabolism
C- Gastric emptying
D- Plasma half life
E- Renal clearance

172-Which of the following statements is true about the storage conditions and shelf life of blood products?
A- Fresh frozen plasma is stored at -30c for up to 24 months
B- Fresh frozen plasma is stored at -30c for 12 months
C- Packed red cells are stored at 4c for up to 25 days
D- Platelets are stored at 22c for up to 10 days
E- Platelets are stored at 4c for up to five days

173-A 70-year-old woman is on multiple medications for various conditions and she is found to have a macrocytic anemia with a low serum B12.
Which of the following medications is a possible cause of the B12 deficiency?
A- Amiodarone
B- Ezetimibe
C- Metformin
D- Nicotinic acid
E- Sodium valproate

174-A 20-year-old man presented to hospital two days after returning from visiting his family in Bangladesh. Within a day of his return to the United Kingdom he suddenly developed profuse watery diarrhea. He says there had been an outbreak of diarrhea in his family's village in the week before his return. Stool culture revealed a growth of Vibrio cholera. **Which one of the following blood types is associated with the greatest susceptibility to severe cholera?**

A- Blood Group A
B- Blood Group AB
C- Blood Group B
D- Blood Group O

E- Rhesus –ve

175-A 28-year-old, primigravid woman developed a swollen painful left leg at 12 weeks gestation. Doppler ultrasound of her leg venous system showed a left popliteal vein thrombosis. **Which one of the following treatments is associated with the greatest risk to the foetus?**

A- Aspirin
B- B- Intravenous unfractionated Heparin
C- Subcutaneous low molecular weight Heparin
D-Subcutaneous unfractionated Heparin
E-Warfarin

176-The drug of choice for the treatment of Chlamydia trachomatis infection during pregnancy is:

A- Metronidazole.
B- Cephazolin
C- Amoxicillin
D-Tetracycline
E- Clindamycin

177-A young teenager presents with fever and headache. He has received oral Amoxicillin for 3 days. **Which of the following CSF findings would exclude a partially treated meningitis?**

A- Negative gram stain
B- A CSF glucose of 45% of blood glucose
C- A white cell count of 50
D- A negative CSF culture
E- Negative Kernig's Sign

178-Which of the following statement is true of infections with Mycobacterium tuberculosis:

A- non-sputum producing patients are non-infectious
B- a positive tuberculin test indicates active disease
C- lymph node positive disease requires longer treatment than pulmonary disease
D- in pregnant women treatment should not be given until after delivery
E- pyrazinamide has high activity against active extracellular organisms

179-An 18-year-old male presented with a two-week history of dysuria and purulent penile discharge. Gram stain of a urethral swab showed Gram-negative intracellular diplococci. **What specific treatment should he receive?**

A- Cefixime

B- Cephradine
C- Ciprofloxacin
D- Co-amoxiclav
E- Crystalline penicillin

180-A 35-year-old man presented with cellulitis of his right leg. On examination he was mildly confused and febrile (40.1?) with a pulse was 120 / minute and BP 80/55 mmHg. He was treated with intravenous benzylpenicillin and flucloxacillin. Group A Streptococcus was isolated from two sets of blood cultures. There was no significant clinical improvement after 24 hours. **What antibiotic should be added?**

A- Ciprofloxacin
B- Clindamycin
C- Gentamicin
D- Rifampicin
E- Vancomycin

181-Which of the following is a feature of Vancomycin-resistant enterococci?

A- cause resistant infective diarrhea
B- produce an enzyme that inactivates vancomycin
C- may be found in healthy community volunteers not recently hospitalized
D- high dose ampicillin is the treatment of choice
E- are commonly vancomycin-dependent

182-A 57-year-old woman develops a blistering rash around the mid riff and is diagnosed with herpes zoster. She is treated with acyclovir. **Through inhibition of which of the following does acyclovir function?**

A- Integrase
B- Polymerase
C- Protease
D- Reverse transcriptase
E- Thymidine kinase

183-A 62-year-old lady is due to attend her dentist for a hygiene appointment for scaling. She has a history of mitral valve prolapse with regurgitation and is allergic to penicillin. **Which of the following antibiotics would be the most appropriate choice for prophylaxis in this lady?**

A- Oral clindamycin
B- Oral doxycycline
C- Oral erythromycin
D- Oral ofloxacin
E- No antibiotic prophylaxis

184-A 17-year-old girl presents with 3 day history of vaginal discharge. **What is the most likely causative organism?**

A- Candida albicans
B- Bacterial vaginosis
C- Chlamydia trachomatis
D- Neisseria gonorrhoea
E- Trichomonas vaginalis

185-A 15-year-old female is a close contact of a student who has developed meningitis C. The last contact she had with her friend was two days ago when her friend developed headache. She has not received any previous vaccination for meningitis.
What is the most appropriate action for this girl?

A- No treatment is required and the girl can be reassured
B- Treat with rifampicin only
C- She should receive the meningococcal A and C vaccination only
D- She should receive meningococcal immunoglobulin only
E- She should receive the meningococcal A and C vaccination plus rifampicin

186-A 28-year-old man had been treated for pulmonary tuberculosis with rifampicin, isoniazid, pyrazinamide and ethambutol for four weeks. Pre-treatment liver function tests were normal but his most recent investigations revealed:
serum total bilirubin 98 micromol/l (0-18)
serum alanine aminotransferase 620u/l (5-45)
serum aspartate aminotransferase 450 u/l (5-45)
serum alkaline phosphatase 720 u/l (40-110)
Which one of the following is the most appropriate next step?

A- Stop all treatment
B- Stop ethambutol
C- Stop isoniazid
D- Stop pyrazinamide
E- Stop rifampicin

187-A 23-year-old female presents 16 weeks into her pregnancy with a vaginal discharge. Further investigation confirms infection with Chlamydia trachomatis.
Which of the following is the most appropriate treatment for this patient?

A- Azithromycin
B- Ciprofloxacin
C- Co-trimoxazole
D- Doxycycline
E- Metronidazole

188-A 16-year-old boy presented with fever, headache and neck stiffness for 24 hours. He had an identical illness requiring admission to hospital for 1 year previously. Cerebrospinal fluid analysis shows White cells of 400/ml with a 90% neutrophilia and gram stain revealed scanty gram-negative diplococci. Which component of the immune system is likely to be defective?

A- B lymphocytes
B- Complement pathway
C- Immunoglobulin
D- Neutrophils
E- T lymphocytes

189-A 82-year-old lady is admitted from her nursing home with headache, photophobia and neck stiffness. Her temperature is 39.0 C, pulse rate 115 beats/min. There is no skin rash or focal neurological signs and her Glasgow coma scale is 15/15. A CT scan shows no contraindication to lumbar puncture. CSF is obtained and Gram stain shows Gram negative cocc-bacilli, subsequent culture confirms a Haemophilus influenza meningitis. **What chemoprophylaxis should be offered to the nurses at her home?**

A- Azithromycin
B- Ceftriaxone
C- Ciprofloxacin
D- no chemoprophylaxis required
E- Rifampicin

190-A 45-year-old man presented with a three day history of headache and increasing confusion. On examination he was febrile with marked neck stiffness. Investigations revealed:
Cerebrospinal fluid analysis (normal ranges are shown in brackets):
White cell count 600 /ml (< 5)
White cell differential > 90% neutrophils
Gram stain Gram-negative diplococci
Which one of the following antibiotics, given intravenously, is the most appropriate treatment?

A- Ampicillin
B- Benzylpenicillin
C- Cefuroxime
D- Ciprofloxacin
E- Gentamicin

191-Transplacental transmission of all of the following organisms is a recognized cause of fetal malformations and disease **EXCEPT:-**

A- Cytomegalovirus

B- Mumps
C- Rubella
D- Toxoplasma gondii
D- Varicella zoster virus

192-A 27-year-old female presents with persistent fatigue, myalgia, poor concentration and irritability following a flu like illness 18 months previously. A diagnosis of chronic fatigue syndrome is made. **What is the appropriate initial management of this patient?**

A- Antidepressants
B- Cognitive behavioral therapy
C- ECT
D- Reversion therapy
E- Psychoanalysis

193-A 18-year-old male presents with a 6 week history of a painful swollen right knee. He had been treated for a sexually transmitted disease 3 months ago. On examination there was a large effusion in the right knee. Synovial fluid analysis revealed a white cell count of 16 x 109/L but culture was negative. **Which one of the following organisms is the most likely cause?**

A- Chlamydia trachomatis
B- Herpes simplex
C- Neisseria gonorrhoea
D- Treponema pallidum
E- Trichomonas vaginalis

194-A 19-year-old man presented with purulent urethral discharge. Microscopy of an urethral swab showed neutrophils but no organisms .**Which of the following antibiotics should be started?**

A- Ciprofloxacin
B- Co-amoxiclav
C- Doxycycline
D- Metronidazole
E- Penicillin

195- A 17-year-old male from India presents with fever of 4 months duration and splenomegaly. **What is the most likely diagnosis?**

A- Coccidiomycosis
B- Giardiasis
C- Tropical sprue
D- Typhoid
E- Visceral leishmaniasis

196-A 55-year-old female is admitted with a chest infection. Investigations reveal consolidation in the right base on the chest X-ray and urinary legionella antigen is found to be positive. **Which one of the following is the most appropriate treatment for this woman?**

A- Cefotaxime
B- Clarithromycin
C- Co-Amoxiclav
D- Minocycline
E- Vancomycin

197-A 72-year-old gentleman presents with increasing shortness of breath, fever and cough. A chest X-ray shows findings consistent with a right middle lobe pneumonia. **Which factor is associated with a worse prognosis?**

A- Blood pressure of 120/80 mmHg
B- Respiratory rate of 18/min
C- Temperature of 37.2
D- Urea of 18 mmol/l
E- White cell count of 15x109

198-A 15 year-old girl presented with a 12-hour history of fever and global headache. On examination she was febrile (37.5oC-. She was fully conscious. Mild neck stiffness was noted but there were no other neurological signs. Cerebrospinal fluid analysis showed:
Cell count 200 /mL (60% lymphocytes)
Protein 0.8 g/L
Glucose 4.3 mmol/L
Gram stain No organisms seen
What is the most likely diagnosis?

A- Bacterial meningitis
B- Cryptococcal meningitis
C- Lymphomatous meningitis
D- Tuberculous meningitis
E- Viral meningitis

199-Which of the following micro-organisms is generally sensitive to Benzylpenicillin?

A- Bordetella pertussis
B- Cryptococcus neoformans
C- Mycoplasma pneumoniae
D- Legionella pneumophila
E- Streptococcus Pneumonaie

200-A 17-year-old man presented with a widespread maculopapular rash. He had been prescribed Amoxicillin for exudative tonsillitis. **What is the most likely diagnosis?**

A- acute HIV infection
B- cytomegalovirus infection
C- infectious mononucleosis
D- parvovirus infection
E- streptococcal infection

201-Type 2 diabetes mellitus is characterized by:

A-An autosomal dominant pattern of inheritance from one of six loci
B-A relative insulin deficiency with peripheral insulin resistance
C-Autoimmune destruction of ?cells in the pancreas
D-The problem of subcutaneous insulin resistance, which often results in poor glucose control
E-Altered insulin levels in the brain

202-If one screening plasma glucose was diagnostic for diabetes mellitus, the diagnosis of diabetes mellitus could be confirmed if the second laboratory reading was a:

A-Fasting plasma glucose of 123 mg/dL
B-Casual plasma glucose of 206 mg/dL without symptoms
C-Plasma glucose of 141 mg/dL at 2 hours on a oral glucose tolerance test (OGTT)
D-Fasting plasma glucose of 139 mg/dL
E-Two-hour plasma glucose level on a 75 gram OGTT of 140 mg/dL

203-Pathophysiologically, the reason fasting plasma glucose levels are high in diabetes mellitus is because:

A-The muscle is deficient of GLP-1 made in the gut
B-The liver is producing too much glucose (increased hepatic glucose production)
C-The fat tissue is exclusively allowing triglyceride breakdown resulting in higher free fatty acid levels
D-The brain is already saturated with glucose which does not allow further uptake
E-The L-cells in the gut are deficient in GIP

204-When comparing and contrasting glucagon-like peptide-1 (GLP-1) and glucose-dependent insulin-releasing peptide (GIP) in regards to their incretin mechanism of action, it is clear that:

A-GLP-1 is advantageous as a therapeutic target because people with type 2 DM are resistant to its effects
B-GIP has no effect on insulin secretion, a distinct advantage for GIP-1 or GIP

C-GLP-1, but not GIP reduces postprandial insulin resistance, improving insulin secretion
D-GLP-1, but not GIP enhances satiety, lowers postprandial glucagon, and enhances satiety
E-GIP and GLP-1 have identical mechanisms of action

205-H.A. is a 44-year-old newly diagnosed with type 2 diabetes. He is of Mexican American heritage. He has had hypertension (HTN) for 8 years and is obese. His family history shows that he has two brothers and one sister who have diabetes. His brother died suddenly approximately 6 years ago when he was 52 years old. H.A. is currently a lawyer and runs a real estate business with his wife as a second job. His current medications are hydrochlorothiazide 25 mg daily, amlodipine 10 mg daily, and rosuvastatin 5mg daily. His vital signs are as follows: pulse, 81 beats/min; blood pressure, 136/82 mm Hg; other vitals are within normal limits. His laboratory examination results show the following:
Hemoglobin A1c (HbA1C-, 8.2%
Liver function tests within normal limits (WNL)
Urinalysis, normal but [+/-]2 glucose
Body mass index (BMI), 33 kg/m2
Potassium, 3.7 mEq/L
Eye examination, dilated/WNL
Creatinine, 0.6 mg/dL
Fasting plasma glucose (FPG), 239 mg/dL
Rest of examination is normal
H.A. has started to implement dietary changes and exercise, but after 1 month is still having FPG readings of 130 to 160 mg/dL. **What would the most appropriate intervention be for H.A.?**

A-Continue current dietary changes for up to 1 year
B-Start metformin 500 mg twice daily, titrate to 2 g/day as tolerated
C-Start pramlintide 15 mcg before each meal
D-Start 70/30 insulin 10 units twice daily with meals
E-Start glyburide 10 mg twice daily

206-Over the past 6 years, the dose of exenatide has been 10 mcg twice daily. H.A. had an HbA1cof 7.2% 6 months ago, and pioglitazone 30 mg was added to the regimen. **The clinician should be aware that with the addition of pioglitazone:**

A-The risk of hypoglycemia substantially increases, and this combination is not recommended at this HbA1c level
B-The HbA1c will not decrease significantly because exenatide has a similar mechanism of action to pioglitazone
C-There is significant drug-drug interaction with pioglitazone, which may prolong exenatide's action
D-The risk of congestive heart failure can increase, and the clinician should watch for signs and symptoms

207-A.J. is a 37-year-old female who has had type 1 DM since she was 9 years old. She states that she currently has neuropathic gastroparesis and mild nonproliferative background retinopathy. She controls the blood glucose by the following insulin regimen: insulin glargine 20 units at bedtime and insulin lispro 1 unit for every 15 grams of carbohydrate at breakfast (~8 AM), lunch (~1 PM), dinner (~6 PM). In her average glucose readings over last 2 weeks prior to meals and at bedtime, no low glucose readings are noted:
morning, 182 mg/dL;
noon, 125 mg/dL;
afternoon, 120 mg/dL;
bedtime, 167 mg/dL.
Your first intervention for A.J. is that she should:

A-Test a 2 to 3 AM blood sugar to ascertain if she is having low blood sugar reactions in the middle of the night, which is likely
B-Be testing her blood sugar 2 hours after her evening meal to ascertain if her blood sugar is high
C-Increase the morning insulin lispro dose (by changing the insulin ratio with breakfast)
D-Increase her glargine insulin to lower the fasting plasma glucose readings
E-Not be taking insulin lispro; it is better to switch her to insulin glulisine

208-X.M. is a 64-year-old African American male who has had type 2 DM for 22 years. Currently to control his blood sugar he takes 70/30 insulin twice daily before breakfast and his evening meal. His average glucose readings over the last 2 weeks (taken prior to meals and at bedtime)- are as follows:
morning, 99 mg/dL;
noon, 103 mg/dL;
afternoon, 62 mg/dL;
bedtime, 180 mg/dL.
Your first intervention is to:

A-Reduce the dose of 70/30 insulin in the morning
B-Reduce the dose of 70/30 insulin in the evening
C-Increase the dose of 70/30 insulin in the evening
D-Increase the dose of 70/30 insulin in the morning

209-The treatment of choice when dietary interventions have not normalized glucose levels in pregnancy is:

A-To continue diet
B-Glyburide
C-Pioglitazone
D-Insulin
E-None of the above

210-The only medication recommended by the American Diabetes Association for the prevention of diabetes is:
A-Metformin
B-Acarbose
C-Orlistat
D-Rosiglitazone
E-None of the above

211-A person with diabetes mellitus has had two urine microalbumin/creatinine ratios of 35 and 45 mcg/mg with no other transient reasons to have these microalbumin readings. **The correct intervention at this time is to:**

A-Obtain a third microalbumin/creatinine sample, and average the three numbers
B-Start hydrochlorothiazide, but only if hypertensive
C-Start ramipril, even if the person is not hypertensive
D-Repeat the urine microalbumin/creatinine sample in 1 year

212-A person with diabetes mellitus, currently with excellent glycemic control, presents to your clinic. A workup is done including a nerve conduction study, and it is ascertained that the patient likely has peripheral neuropathy caused by diabetes. You interview the patient and find numbness in the feet but no pain. **You decide to:**

A-Do nothing, as you do not treat numb variant peripheral neuropathy if glycemic control is excellent
B-Start gabapentin 300 mg three times daily and titrate to 900 mg three times daily as tolerated as it has been shown to be superior to duloxetine treatment
C-Allow glucose control to get slightly worse, as this has been documented to lessen symptoms
D-Start duloxetine 60 mg at bedtime, as it has been shown to be superior to gabapentin treatment

213-A subject with type 2 DM is referred to you for evaluation of diabetes. Currently this patient takes no medications and has no allergies. The laboratory examination results reveal the following:
Sodium (NA- = 140 mmol/L
Potassium (K) = 4.4 mmol/L
Blood urea nitrogen (BUN) = 13 mg/dL
Creatinine (Cr) = 0.5 mg/dL
Chloride (Cl) = 101mmol/L
FBG = 220 mg/dL
Fasting lipid profile:
Total cholesterol (TC- = 228 mg/dL
Low-density lipoprotein (LDL) = 138 mg/dL
High-density lipoprotein (HDL) = 40 mg/dL
Triglyceride (TG) = 250 mg/dL
Urinalysis = WNL

HbA1c =9.1%
Your interventions are:

A-Metformin 500 mg twice daily, atorvastatin 20 mg daily
B-Glyburide 5 mg twice daily, gemfibrozil 600 mg twice daily, aspirin 325 mg daily
C-Metformin 500 mg twice daily, pravastatin 40 mg daily, fish oil 4 g daily
D-Acarbose 100 mg three times daily with meals, rosuvastatin 5 mg daily, and aspirin 81 mg daily
E-Metformin 500 mg twice daily, simvastatin 20 mg daily, and aspirin 325 mg daily

214-Monitoring of the pharmaceutical care plan for the patient with diabetes includes all of the following except:

A-Foot exam at each clinician visit
B-HbA1c values at least two to four times a year
C-Blood pressure evaluation at each visit
D-Dilated eye examination every 3 to 5 years
E-All of these are part of the pharmaceutical care plan

215-Thionamides (methimazole and propylthiouracil) act by doing which of the following

A-Interfere with thyroglobulin resorption into thyroid follicles
B-Inhibit iodine incorporation into tyrosine residues
C-Inhibit the sodium iodide transporter
D-Increase thyroglobulin stores
E-Cause destruction of thyroid follicular cells

216-Which of the following is true regarding the medical treatment of hyperthyroidism

A-Methimazole has a shorter half-life than propylthiouracil
B-A common side effect of these agents is renal impairment
C-Both propylthiouracil and methimazole are concentrated within the thyroid gland
D-It takes 4–8 months of thionamide therapy before thyroid hormone levels begin to decrease
E-Methimazole is strongly bound to plasma proteins

217-The following statements about thionamides (propylthiouracil (PTU) and methimazole- are correct EXCEPT:
A-Methimazole can be administered once daily
B-Methimazole and PTU reduce the stores of thyroglobulin within the thyroid gland
C-PTU use is contraindicated during the first trimester of pregnancy
D-Methimazole is considerably more potent than propylthiouracil
E-The side effects of PTU and methimazole can include gastrointestinal symptoms

218-The following statements about thionamides (propylthiouracil (PTU) and methimazole are correct EXCEPT:

A-Mild leukopenia can be seen with PTU, methimazole, and with Graves' disease itself
B-Methimazole and PTU serve as substrates for the iodinating intermediate of thyroid peroxidase
C-PTU may increase the efficacy of later treatment with radioactive iodine
D-Methimazole is generally considered first-line therapy for hyperthyroidism
E-The side effects of PTU and methimazole can include development of a rash

219-Which of the following statement about radioactive iodine therapy of hyperthyroidism is INCORRECT:

A-Men are less likely to become hypothyroid after radioactive iodine therapy
B-Treatment doses of radioiodine may be based on a fixed-dose approach or a calculated-dose approach, using calculations based on thyroid gland size and iodine uptake and turnover
C-Hypothyroidism generally occurs approximately 6 days after radioiodine administration
D-Radioactive iodine therapy is contraindicated during pregnancy and lactation
E-If a first dose of radioactive iodine is ineffective, a second radioactive iodine dose may be given

220-Which of the following statement about thyroid hormones is correct:

A-T4 has a half-life about a day
B-T3 is not usually chosen for treatment of hypothyroidism because it has to be given subcutaneously
C-T4 can be thought of as a prohormone as it is converted into the active hormone T3
D-The thyroid gland produces mostly T3 and a small amount of T4
E-TSH concentrations are generally not helpful when titrating a hypothyroid patient's dose of thyroid hormone

221-Which of the following is NOT a potential cause of hypothyroidism

A-Hashimoto's thyroiditis
B-Radioactive iodine therapy
C-Pituitary failure
D-Beta-blocker therapy
E-Over-treatment with thionamides.

222-Which are the following is NOT true about levothyroxine (synthetic thyroid hormone?

A-It has a half-life of 7 days, which allows it to be administered once daily.
B-It is active when taken orally.
C-It produces stable serum levels of both T4 and T3.

D-Its side effects can include hepatitis and agranulocytosis.
E-New steady-state levels of T4 are reached about 6 weeks after a levothyroxine dosage change.

223-Which are the following is NOT true about liothyronine (synthetic T3)?

A-It has a half-life of about one day, which means it has to be administered several times a day to maintain steady levels of T3.
B-It has been used in combination with levothyroxine therapy
C-It produces stable serum levels of both T4 and T3.
D-The side effects can include palpitations and insomnia.
E-It is not the treatment of choice for hypothyroidism.

224-Which of the following are not true regarding the use of recombinant hTSH (rhTSH)

A-rhTSH can be used to prepare patients with thyroid cancer for diagnostic radioiodine whole body scanning.
B-rhTSH cannot be used to stimulate thyroglobulin production as part of the diagnostic testing of patients with thyroid cancer.
C-Preparation with rhTSH avoids the morbidity of hypothyroidism.
D-rhTSH is given as an intramuscular injection.
E-Post-thyroidectomy adjuvant radioiodine therapy can be delivered following rhTSH administration.
F-The sensitivity of diagnostic testing using radioiodine scanning and thyroglobulin measured after withdrawal from thyroid hormone and after rhTSH are similar.

225-Which of the following physiologic functions is not regulated by anterior pituitary hormones?

A-Growth
B-Thyroid function
C-Ovulation
D-Uterine contraction

226-Which of the following clinical characteristics is common to acromegalic patients?

A-Diarrhea
B-Increased shoe size
C-Weight loss
D-Alopecia

227-The preferred initial treatment option for a patient recently diagnosed with acromegaly is:
A-Bromocriptine

B-Lanreotide
C-Transsphenoidal surgery
D-Radiation therapy

228-K.L. a 58-year-old man who was recently diagnosed with acromegaly. His past medical history is significant for type 2 diabetes and obesity. He is currently complaining of fatigue, joint pain, increased sweating and headaches. **Which of the following medical treatments is most appropriate for first-line treatment of K.L.'s symptoms?**

A-Bromocriptine
B-Cabergoline
C-Octreotide
D-Pegvisomant

229-Which of the following information is most important to provide to an acromegalic patient with a new prescription for lanreotide?

A-Concomitant therapy with ursodeoxycholic acid is needed to prevent gallstones.
B-The most common adverse effect of lanreotide therapy is headache.
C-A standard multiple vitamin is recommended during therapy.
D-Gastrointestinal adverse effects should subside within 10 to 14 days of therapy.

230-Which of the following clinical characteristics is common to patients with GH-deficient short stature?

A-Normal GH serum concentrations
B-Physical height <2 standard deviations below the population mean
C-Malnutrition
D-None of the above

231-Which of the following assessments need to be considered for the diagnosis of GH deficiency?

A-Bone age and growth velocity
B-GH response to provocative stimuli
C-Serum IGF-1 concentrations
D-All of the above

232-For which of the following conditions does recombinant human growth hormone therapy have a definitive role?

A-Chronic fatigue syndrome
B-GH-deficient short stature
C-Natural aging
D-None of the above

233-Which of the following parameters should be monitored in a patient receiving recombinant human growth hormone therapy?

A-Alkaline phosphatase
B-Blood glucose
C-Thyroid function
D-All of the above

234-Which of the following clinical characteristics is common in women with hyperprolactinemia?

A-Menstrual irregularities
B-Darkened skin
C-Dry mouth
D-Increased blood glucose

235-Which of the following classes of medications is most likely to cause drug-induced hyperprolactinemia?

A-Beta-blockers
B-Antidepressants
C-Antihistamines
D-Oral contraceptives

236-L.J. is a 29-year-old woman who has been diagnosed with a prolactin-secreting adenoma that is 8 mm in diameter. She complains of amenorrhea for 1 year and galactorrhea from both breasts. **Which of the following treatments is most appropriate for first-line treatment of L.J.'s symptoms?**

A-Radiation therapy
B-Transsphenoidal surgery
C-Dopamine agonist therapy
D-Somatostatin analog therapy

237-Which of the following dopamine agonists would be an appropriate choice for a patient trying to conceive?

A-Cabergoline
B-Pergolide
C-Bromocriptine
D-Pramipexole

238-C.M. is a 30-year-old woman diagnosed with hyperprolactinemia. She recently began therapy with cabergoline. **Which of the following medications should be considered as adjunctive therapy in C.M.?**

A-Human growth hormone
B-Oral contraceptives
C-Multivitamins
D-Antacids

239-Which of the following treatments may be required for patients with panhypopituitarism?

A-Thyroid replacement
B-Recombinant human growth hormone
C-Glucocorticoids
D-All of the above

240-A male patient complains that he is unable to have satisfactory intercourse with his wife because his penis cannot get erect. **This patient has which type of sexual dysfunction?**

A-Decreased libido
B-Erectile dysfunction
C-Premature ejaculation
D-Retrograde ejaculation
E-Infertility

241-The principal neurotransmitter responsible for increased arterial flow into the corpora cavernosa is:

A-Acetylcholine
B-Serotonin
C-Dopamine
D-Histamine
E-Aspartate

241-Which one of the following statements about pathophysiology of erectile dysfunction is correct?

A-Erectile dysfunction occurs in all men as they age.
B-Erectile dysfunction results from decreased venous outflow from the corpora.
C-Hypogonadism always leads to erectile dysfunction.
D-Chronic cigarette smoking is thought to lead to erectile dysfunction.
E-Drugs with cholinergic effects can cause erectile dysfunction.

242-The Second Princeton Consensus Conference provides guidelines for the use of this medical treatment for erectile dysfunction:

A-Testosterone replacement regimens
B-Phosphodiesterase inhibitors

C-Alprostadil
D-Papaverine
E-Phentolamine

243-The principal neurotransmitter responsible for increased arterial flow into the corpora cavernosa is:
A-Acetylcholine
B-Serotonin
C-Dopamine
D-Histamine
E-Aspartate

244-All phosphodiesterase inhibitors for erectile dysfunction work by enhancing cavernosal tissue concentrations of:
A-Acetylcholine
B-Nitric oxide
C-GTP
D-cGMP
E-Prostaglandin E1

245-Patients who use phosphodiesterase inhibitors must be counseled to:
A-Engage in foreplay prior to intercourse
B-Take sildenafil or vardenafil with meals
C-Take the drug for a minimum clinical trial of 50 doses
D-Take the drug every day for the best effect
E-Double the dose if the clinical response is unsatisfactory

246-Which of the following statements about the commercially available phosphodiesterase inhibitors is correct?
A-Sildenafil is more effective than tadalafil.
B-Vardenafil has the longest duration of action.
C-By inhibiting phosphodiesterase type 11, these agents increase cavernosal filling.
D-Tadalafil exhibits the most interaction with the P450 enzyme system.
E-Cyanopsia is caused by inhibition of phosphodiesterase type 6.

247-Which one of the following statements about the nitrate-phosphodiesterase inhibitor interaction is correct?
A-Sildenafil is the only phosphodiesterase inhibitor that is contraindicated with nitrates.
B-Only oral and intravenous nitrates are contraindicated with phosphodiesterase inhibitors.
C-If a patient has taken tadalafil, a nitrate should be withheld for at least 7 days.
D-A clinically significant interaction would present as gastroesophageal reflux.
E-Both nitrates and phosphodiesterase inhibitors can produce hypotension.

248-Which one of the following statements about testosterone replacement regimens is correct?

A-They are indicated in patients who complain of erectile dysfunction and have normal serum testosterone concentrations.
B-They can cause leukopenia and thrombocytopenia.
C-An ideal regimen would mimic the normal physiologic secretion pattern of testosterone, which is associated with peak concentrations in the evening.
D-Transdermal testosterone products bypass first-pass hepatic catabolism.
E-Oral alkylated derivatives of testosterone are not preferred because they have a short duration of action.

249-An advantage of testosterone gel over the nonscrotal skin patch is that the gel:

A-Is more effective than the patch
B-Produces less contact dermatitis than the patch
C-Is dosed less frequently during the day than the patch
D-Has greater bioavailability than the patch
E-Is applied at bedtime so that the patient can sleep through most of the adverse effects

250-Which one of the following statements about alprostadil is correct?

A-Alprostadil produces erections by stimulating phosphodiesterase.
B-Intraurethral alprostadil is less effective than intracavernosal alprostadil.
C-Intracavernosal alprostadil is associated with a low dropout rate with continuous use.
D-The duration of erection is unrelated to the dose of intracavernosal alprostadil.
E-Systemic adverse effects are common with intracavernosal alprostadil.

251-Which one of the following statements about administration of intracavernosal alprostadil is correct?
A-It should be injected into the dorsal surface of the penis.
B-When administering a dose, the dose should be split in half so that half the dose can be injected into the right and left corpora.
C-Optimal administration is injection into the corpus spongiosum.
D-Manual pressure should be applied after the injection to minimize hematoma formation.
E-Aseptic technique is not required because the drug is being injected into the penis.

252-Which treatment for erectile dysfunction is associated with the highest patient satisfaction rate?
A-Phosphodiesterase inhibitors
B-Alprostadil
C-Testosterone-replacement regimen
D-Vacuum erection device

E-Penile prosthesis

253-Which one of the following statements about the natural history of benign prostatic hyperplasia (BPH) is correct?

A-All patients with microscopic disease will eventually develop symptomatic disease.
B-BPH symptoms typically develop in men beginning at age 30 years.
C-All men who live to age 80 years will require a prostatectomy for symptom control.
D-Men with mild BPH symptoms may not require specific treatment.
E-All patients with symptomatic disease have an enlarged prostate.

254-A 60-year-old man with moderate BPH symptoms and a prostate size of 25 g seeks treatment. He has essential hypertension, which is controlled with sodium restriction, exercise, and weight control. **The best initial choice for management would be**

A-Watchful waiting
B-a-Adrenergic antagonist
C-5a-Reductase inhibitor
D-a-Adrenergic receptor antagonist plus 5a-reductase inhibitor
E-Surgery

255-A 70-year-old man presents with severe BPH symptoms and a history of persistent severe, gross hematuria, and recurrent urinary tract infection. **The best treatment would be**

A-Watchful waiting
B-a-Adrenergic antagonist
C-5a-Reductase inhibitor
D-a-adrenergic receptor antagonist plus 5a-reductase inhibitor E-Surgery

256-A patient with decreased force of urinary stream and mild BPH symptoms presents for treatment. His prostate size is 25 g. **The best treatment would be**

A-Watchful waiting
B-a-Adrenergic antagonist
C-5a-Reductase inhibitor
D-a-Adrenergic receptor antagonist plus 5a-reductase inhibitor E-Surgery

257-A predictor for a positive response to finasteride is

A-Positive digital rectal examination
B-Prostate size >40 g
C-American Urological Association symptom score >18
D-Urinary flow rate g>10 mL/s
E-Post void residual urine volume of at least 50 mL.

258-To minimize hypotensive adverse effects of a-adrenergic receptor antagonists, the following approach is recommended:

A-Start immediate release terazosin at a dose of 1 mg at bedtime.
B-Slowly titrate up to the daily dose of alfuzosin at 0.5- to 1-week intervals.
C-Switch the patient from an extended-release to an immediate-release formulation of doxazosin.
D-Avoid concurrent use of diuretics and tamsulosin.
E-Use a transdermal rather than an oral formulation of terazosin.

259-Which of the following drug classes may worsen BPH symptoms?
A-Estrogens
B-Diuretics
C-Corticosteroids
D-Insulin
E-Angiotensin-converting enzyme inhibitors

260-Which of the following agents is considered to be pharmacologically uroselective?

A-Terazosin
B-Alfuzosin
C-Doxazosin
D-Tamsulosin
E-Prazosin

261-At the time of diagnosis, a patient with BPH has a PSA of 2 ng/mL. Six months after initiating treatment with finasteride 5 mg orally daily, a repeat PSA is 1 ng/mL. **Based on this laboratory test result, the following action should be taken:**

A-Discontinue finasteride.
B-Continue finasteride 5 mg daily
C-Increase finasteride to 10 mg daily
D-Switch to dutasteride 0.5 mg daily
E-Switch to tamsulosin 0.4 mg daily

262-A patient with BPH is receiving tamsulosin. He needs to undergo cataract surgery in 4 weeks. **The patient informs his ophthalmologist that he is taking tamsulosin. The ophthalmologist should**

A-Cancel surgery
B-Hold tamsulosin for 2 weeks prior to surgery
C-Hold tamsulosin for 1 day prior to surgery
D-Take precautions during surgery
E-Discontinue tamsulosin postoperatively

263-A patient has BPH for which he is receiving doxazosin. He now sees his doctor for new-onset erectile dysfunction, for which he is prescribed sildenafil. **The pharmacist should counsel the patient to**

A-Take these medications at least 12 hours apart.
B-Take medications as prescribed but with caution.
C-Avoid taking these drugs on the same day. Concurrent use is contraindicated.
D-Contact the physician so his doxazosin daily dose can be halved.
E-Contact the physician so that finasteride can replace doxazosin.

264-The most common type of sexual dysfunction associated with a-adrenergic receptor antagonists is

A-Decreased libido
B-Increased libido
C-Erectile dysfunction
D-Ejaculation disorder
E-Infertility

265-For patients with BPH, the reason for the addition of tolterodine to tamsulosin is to

A-Reduce irritative voiding symptoms
B-Reduce obstructive voiding symptoms
C-Delay disease progression
D-Decrease need for surgical intervention
E-Shrink an enlarged prostate

266-Which of the following is an indication for surgical treatment of BPH?

A-American Urological Association symptom score of 8
B-Prostate volume 30 g
C-Urinary flow rate of 12 mL/s
D-Renal failure
E-Post void residual volume of 30 mL

267-The pharmacologic target of finasteride in the management of BPH is

A-Phosphodiesterase
B-ATPase
C-5a-Reductase
D-Serotonin
E-Dopamine

268-Urethral underactivity causes the following:

A-Urge urinary incontinence
B-Stress urinary incontinence
C-Overflow (obstructive- urinary incontinence
D-Overflow (poorly contractile- urinary incontinence
E-Functional urinary incontinence

269-Bladder over activity causes the following:

A-Urge urinary incontinence
B-Stress urinary incontinence
C-Overflow (obstructive- urinary incontinence
D-Overflow (poorly contractile- urinary incontinence
E-Functional urinary incontinence

270-Prostate cancer causes the following:

A-Urge urinary incontinence
B-Stress urinary incontinence
C-Overflow (obstructive- urinary incontinence
D-Overflow (poorly contractile- urinary incontinence
E-Functional urinary incontinence

271-For bladder over activity, which drug class constitutes the treatment of choice in the majority of cases?

A-Tricyclic antidepressants
B-Estrogens
C-alpha-Adrenergic receptor agonists
D-Anticholinergics
E-Bethanechol

272-For urethral underactivity, which drug class is clinically most useful?

A-Anticholinergics
B-Oral estrogens
C-Topical (vaginal) estrogens
D-Dual-reuptake inhibitors
E-?-Adrenergic receptor agonists

273-Which one of the following is considered the cornerstone of management of urethral underactivity?
A-Behavioral interventions
B-Oral estrogens
C-Topical (vaginal) estrogens
D-alpha-Adrenergic receptor agonists
E-Dual-reuptake inhibitors

274-Which one of the following is least effective in the management of bladder over activity?

A-Oxybutynin
B-Tolterodine
C-Flavoxate
D-Fesoterodine
E-Trospium chloride

275-Which one of the following is the preferred agent for the treatment of urethral underactivity?

A-Ephedrine
B-Pseudoephedrine
C-Phenylpropanolamine
D-Midodrine
E-Duloxetine

276-Which one of the following would be the drug of choice in a 45-year-old woman with diabetes mellitus, painful diabetic neuropathy, and bladder over activity?

A-Imipramine
B-Oxybutynin
C-Tolterodine
D-Solifenacin
E-Any of the above

277-Which one of the following medication–lower urinary tract function effect pairings is incorrect?

A-alpha-Adrenergic receptor antagonists–urethral underactivity in women
B-Angiotensin-converting enzyme inhibitors–urinary retention
C-alpha-Adrenergic receptor antagonists–urethral underactivity in me
D-Anticholinergics urinary retention
E-Sedative-hypnotics–functional incontinence

278-Periurethral injections are most useful for which one of the following?

A-Overflow (obstructive- urinary incontinence
B-Stress urinary incontinence
C-Urge urinary incontinence
D-Overflow (poorly contractile- urinary incontinence
E-Overflow (obstructive- urinary incontinence + overflow (poorly contractile- urinary incontinence

279-Kegel (pelvic floor muscle- exercises are indicated in which of the following circumstances?

A-Overflow (obstructive- urinary incontinence
B-Stress urinary incontinence
C-Urge urinary incontinence
D-Overflow (poorly contractile- urinary incontinence
E-Both B and C are correct

280-Urethral underactivity can be associated with all of the following risk factors except which one?

A-Childbirth
B-Radical prostatectomy
C-Surgery for benign prostatic hyperplasia
D-alpha-Adrenergic receptor antagonist therapy of hypertension
E-All of the above can be associated with urethral underactivity

281-Which one of the following antihypertensives is least likely to have adverse effects on the lower urinary tract?

A-Diuretics
B-alpha-Adrenergic receptor antagonists
C-Calcium channel blockers
D-Angiotensin-converting enzyme inhibitors
E-Angiotensin receptor blockers

282-Which one of the following would be the best pharmacotherapy option for a 75-year-old male with bladder over activity and mild Alzheimer disease who is currently taking donepezil?

A-Imipramine
B-Oral oxybutynin
C-Tolterodine
D-Topical oxybutynin
E-All of the above can be difficult to use because of pharmacologic antagonism

283-The body's homeostatic mechanisms for maintaining sodium and water balance control what aspects of the body?

A-Blood volume and plasma osmolality
B-Serum sodium concentration and total body water
C-Blood volume and serum sodium concentration
D-Total body water and plasma osmolality
E-Extracellular fluid volume and serum sodium concentration

284-A.S. is a 56-year-old woman who presents with nausea, malaise, and disorientation of 2 days duration. Her laboratory examination results include the following:
serum sodium, 120 mEq/L;
serum glucose, 110 mg/dL;
serum BUN, 14 mg/dL;
serum cholesterol, 240 mg/dL;
serum triglycerides, 175 mg/dL.
What is this patient's estimated plasma osmolality?

A-131 mOsm/kg
B-185 mOsm/kg
C-251 mOsm/kg
D-280 mOsm/kg
E-355 mOsm/kg

285-Both plasma osmolality and effective circulating volume influence AVP release from the posterior pituitary, thereby influencing the reabsorption of water in the collecting ducts. **What direction of change in these two variables stimulates increased release of AVP?**

A-Decreased osmolality and decreased effective circulating volume
B-Increased osmolality and increased effective circulating volume
C-Decreased osmolality and increased effective circulating volume
D-Increased osmolality and decreased effective circulating volume

286-C.D. is a 64-year-old man with trigeminal neuralgia who has been diagnosed with carbamazepine-induced syndrome of inappropriate antidiuretic hormone (SIADH). **What clinical and laboratory findings would be consistent with this diagnosis?**

A-Clinical hypovolemia
B-Clinical hypervolemia
C-Maximally dilute urine
D-Urine sodium concentration >20 mEq/L
E-Urine sodium concentration <20 mEq/L

287-R.C. is a 72-year-old woman who was started on hydrochlorothiazide for the treatment of hypertension 8 days ago. She presents today with thiazide-induced hyponatremia. **What are the most likely characteristics of this patient on presentation?**
A-Hypovolemia
B-Increased plasma osmolality
C-Moderate to severe neurologic symptoms
D-Urine osmolality of 100 mOsm/kg
E-Serum sodium concentration <20 mEq/L

288-What are the usual signs and symptoms of hyponatremia?

A-Muscular weakness
B-Restlessness
C-Diarrhea
D-Cardiac arrhythmias
E-Bronchospasm

289-K.N. is a 54-year-old woman with fluoxetine-induced SIADH. Her serum sodium concentration is 118 mEq/L, and she is experiencing moderate to severe symptoms. **Appropriate treatment of this patient might include what steps?**

A-Fluid restriction alone
B-Fluid restriction plus demeclocycline administration
C-0.45% sodium chloride infusion
D-0.9% sodium chloride infusion
E-3% sodium chloride infusion

290-L.C. is an 85-year-old, 55-kg, 5 ft–4 in woman, who presented with moderate to severe symptoms because of a relatively abruptly developing hypovolemic hypotonic hyponatremia. Her serum sodium concentration is 118 mEq/L. **Approximately how many liters of 0.9% sodium chloride would be required to increase this patient's serum by 5%?**
A-0.5
B-0.8
C-1.4
D-4.2
E-4.7

291-What are the likely causes of an isovolemic hypernatremia?

A-Ingestion of large amounts of sodium
B-Diabetes insipidus
C-Prolonged diarrhea
D-Hyperaldosteronism
E-High fever without access to fluids

292-Signs and symptoms of hyperkalemia are typically associated with what organ system?

A-Cardiovascular
B-Gastrointestinal
C-Nervous
D-Pulmonary
E-Urinary

293-Too rapid correction of chronic hypernatremia can cause brain ……..?? that can result in seizures, neurologic damage, and potentially death.

A-Swelling
B-Dehydration
C-Exsanguination
D-Degeneration

294-J.S. is a 36-year-old man whose bipolar disorder has been treated with lithium for several years. He now reports that he has had to urinate more frequently than normal over the past several weeks. This has been getting progressively worse and has been accompanied by increasing thirst. The patient's serum sodium is 146 mEq/L and his 24-hour urine output is 5 liters. **What is an appropriate treatment of this patient's condition?**

A-Intranasal desmopressin acetate 10 mcg once daily
B-Intravenous D5W at 48 mL/h over the next 24 hours
C-Water restriction to <1,000 mL per day
D-Demeclocycline 300 mg three times daily
E-Amiloride 5 mg daily

295-What fluid and electrolyte abnormality is characteristic of patients with severe hyperglycemia?

A-Hypovolemic hypotonic hyponatremia
B-Hypervolemic hypotonic hyponatremia
C-Isovolemic hypotonic hyponatremia
D-Hypovolemic hypernatremia
E-Hypervolemic hypernatremia

296-Which diuretic has the greatest ability to increase the fractional excretion of sodium?

A-Hydrochlorothiazide
B-Furosemide
C-Metolazone
D-Spironolactone
E-Acetazolamide

297-J.V. is a 68-year-old man with severe congestive heart failure who currently lives at home with his wife. His GFR is 60 mL/min. J.V.'s physician has progressively increased his dose of furosemide to 120 mg every 6 hours to control his edema, without success. **What is the most appropriate change to this patient's diuretic therapy at this point?**
A-Increasing the dose of furosemide
B-Switching to a continuous infusion of furosemide

C-Adding metolazone
D-Adding torsemide

298-A 72 year old female with a past medical history of hypertension and type 2 diabetes mellitus presents with fatigue, bone pain and feeling weak. On examination there is evidence of bony tenderness in her spine and legs and proximal muscle weakness. Bloods reveal elevated creatinine, phosphate and parathyroid hormone levels and a low calcium**. Which of the following should be commenced?**

A-.Cholecalciferol
B- Cinacalcet
C-Alfacalcidol
D- Risedronate
E-Strontiumranelate

299.A gentleman has recently been commenced on a new anti-anginal medication. He has noticed that he has begun to develop ulcers in his mouth. **Which of the most following is the likeliest cause?**

A- Atenolol
B- Amlodipine
C- IsosorbideMononitrate
D- Nicorandil
E- Diltiazem

300-Which of the following drug is not associated with a survival benefit in congestive cardiac failure?

A- Carvedilol
B- Digoxin
C- Nitrates and hydralazine
D- Ramipril
E- Spironolactone

301-A patient presents with compensated cardiac failure. **Which of the following medications is commenced initially and will most likely improve symptoms and prognosis?**

A- Furosemide
B-Spironolactone
C-Digoxin
D-Amlodipine
E-Ramipril

302.Which of the following clotting factors is not inhibited by warfarin?

A- Factor IX
B- Factor X
C- Factor VII
D- Factor II
E- Factor VIII

303-A patient is commenced on isoniazid and is a fast acetylator. **Which of the following is this patient more likely to develop than a slow acetylator?**

A- Hepatotoxicity
B- Peripheral Neuropathy
C- Nausea
D- Treatment failure
E- None of these

304- A 64 year old gentleman has recently been commenced on an antihypertensive medication. He then presents to hospital with facial swelling with the tongue and lips markedly swollen. There is no evidence of urticaria. **What is the most likely cause of his facial swelling?**

A- ACE Inhibitor induced angioedema
B- Latex allergy
C- Anaphylaxis
D- Thiazide induced angioedema
E- NSAID induced angioedema

305-A patient has recently underwent a liver transplant and is found to have hyperkalaemia. He is on anti rejection drugs but is otherwise well and is on no other medications. **What is the most likely cause of his hyperkalaemia?**

A- Ramipril
B- Tacrolimus
C- None of these
D- Ciclosporin
E- NSAIDs

306-A patient who has recently undergone a renal transplant presents with excessive hair growth.
Which of the following medications is the most likely cause?
A- Azathioprine
B- Corticosteroids
C-Mycophenolatemofetil
D-Ciclosporin
E-Tacrolimus

307-Which of the following antihypertensives is most appropriate for use during pregnancy?

A- Atenolol
B- Losartan
C- Labetalol
D- Ramipril
E- Bendroflumethiazide

308-A 72 year old male with type 2 diabetes mellitus is found to be hypertensive. Over the last few months there has been protein in his urinalysis persistently. You decide to commence an antihypertensive. **Which of the following is the most appropriate?**

A- Amlodipine
B- Atenolol
C- Losartan
D- Ramipril
E- Bendroflumethiazide

309-A 28 year old gentleman is commenced on ifosfamide for testicular cancer . **Which other drug should be commenced and for what reason?**

A- Amifostine to prevent mucositis
B- Nil required
C- Allopurinol to prevent TumourLysis Syndrome
D- Mesnaifosfamide induced hemorrhagic cystitis
E- Amifostine to prevent nephrotoxicity

310-A patient is found to have a broad complex tachycardia. **Which of the following is contraindicated?**

A- Verapamil
B- DC Cardioversion
C- Lidnocaine
D- Amiodarone
E- Adenosine

311-Which of the following is most likely to lead to hypercalcaemia?

A- Spironolactone
B- Furosemide
C- Amiloride
D- Bendroflumethiazide
E- Ramipril

312-What is the mechanism of action of sumatriptan?

A- Dopamine antagonist
B- Dopamine agonist
C- 5-HT1D receptor antagonist
D- 5-HT1D receptor agonist
E- Calcium channel blocker

313-A patient with rheumatoid arthritis presenting with increasing dyspnea. **Which of the following drugs is most likely responsible?**

A- Gold
B- Methotrexate
C- NSAIDs
D- Hydroxychloroquine
E- Sulphasalazine

314-A 68 year old male is being treated for a UTI. He suffers an Achilles tendon rupture. **Which of following antibiotic is he most likely to be taking?**

A- Coamoxiclav
B- Amoxicillin
C- Ciprofloxacin
D- Trimethoprim
E- Nitrofurantoin

315- In angina, which of the following accounts for some of the therapeutic effect of beta blockers?

A- Coronary artery vasodilatation
B- Peripheral vasoconstriction
C- Increased heart rate
D- Decreased heart rate
E- Peripheral vasodilatation

316-A 19 year old is brought to A+E. He was on a night out 2 nights ago and is described by his friend as a "party animal". He is now acting very oddly. He is clearly hallucinating and is speaking rapidly. He is euphoric and laughing inappropriately. He appears agitated and his affect is blunted. His pupils are dilated and he is tachycardic. **What is the most likely diagnosis?**

A- Heroin use
B- Cannibas induced psychosis
C- Bipolar disorder
D- Schizophrenia
E- Amphetamine induced psychosis

317- A 45 year old patient who is known to drink excessively presents in acute alcohol withdrawal. On examination he appears malnourished. He is commenced on diazepam. His BM is 4.2mmol/l. **What is the next course of action?**

A- IM glucagon
B- IV dextrose
C- Commence IV Thiamine
D- Liaison psychiatry
E- IV magnesium

318-A patient with a 6-months history of low mood and some suicidal thoughts is discussing her treatment options. **Which of the following is the best pharmacological treatment?**

A- Amitriptyline
B- Selegiline
C- Lorazepam
D- Haloperidol
E- Fluoxetine

319-What is the best treatment for severe agitation in an elderly patient overnight?

A- Haloperidol
B- Diazepam
C- Doxylamine
D- Temazepam
E- Chlorpromazine

320-A newborn baby has thin lips, a smooth philtrum, small eyes and a small head. Whilst examining him he suffers a seizure. **What is the diagnosis?**

A- Fetal alcohol syndrome
B- Down syndrome
C- Aarskog syndrome
D- Williams syndrome
E- Noonan syndrome

321-Which of the following is a long acting opioid antagonist ?

A- Naltrexone
B- Nalorphine
C- Oxymorphone
D- Naloxone
E- Buprenorphine

322-What is acamprosate used for?

A- Maintaining abstinence from benzodiazepines
B- Inducing rapid alcohol withdrawal
C- Alcohol intoxication
D- Smoking cessation
E- Maintaining abstinence from alcohol

323-What receptor does buspirone exert it action?

A- Noradrenaline
B- Serotonin
C- GABA
D- Adenosin
E- Histamine

324-What medication type is the first line treatment for schizophrenia?

A-Depot typical antipsychotic
B-Oral atypical antipsychotics
C-Depot atypical antipsychotic
D-Fluoxetine

325-What treatment should be administered for an aggressive, potentially psychotic patient with no history of mental illness?

A-Quetiapine
B-Clozapine
C-Lorazepam
D-Haloperidol
E-Diazepam

326-If lithium fails, what is the next treatment of choice for bipolar syndrome?

A-Oxcarbazepine
B- Risperidone
C- Valproate
D- Imipramine
E- Quetiapine

327-Which of the following medications is mostly likely to cause galactorrhoea as a side effect?
A-Quetiapine
B- Risperidone
C- Olanzapine
D- Fluoxetine

E- Clozapine

328-What is the most appropriate management of a DVT during pregnancy?
A- Dalteparin
B- Monitoring
C- Aspirin
D- Warfarin
E- IVC filter

329-What is an appropriate treatment regime for someone diagnosed with pulmonary tuberculosis?
A- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 2 months then isoniazid an rifampicin for further 10 months.
B- Initially rifampicin, isoniazid, and ethambutol for 2 months then isoniazid an rifampicin for further 4 months.
C- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 6 months
D- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 4 months then isoniazid an rifampicin for further 2 months.
E- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 2 months then isoniazid an rifampicin for further 4 months.

330-What is an appropriate treatment regime for someone diagnosed with tuberculosis meningitis?

A- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 2 months then isoniazid an rifampicin for further 4 months.
B- Initially rifampicin, isoniazid, and ethambutol for 2 months then isoniazid an rifampicin for further 4 months.
C- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 4 months then isoniazid an rifampicin for further 2 months.
D- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 2 months then isoniazid an rifampicin for further 10 months.
E- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 6 months

331-A 58 year old male with COPD, has been admitted several times over the last 6 months with non-infective exacerbation of COPD. He is currently on seretide. **Which of the following is the next appropriate stage in management?**

A- Nebulized salbutamol
B- Tiotropium
C- Ipratropium
D- Maintenance dose oral steroids
E- Salbuatmol Prn

332-A 32 year old presents with a one week history of malaise, fever, headache, myalgia with a sore throat, dry cough and pleuritic chest pain. On examination there is

bibasal crepitations. There is evidence of erythema nodosum and bloods reveal a hemolytic anemia and cold agglutinins**. Given the most likely diagnosis, what treatment should be commenced?**

A- Co amoxiclav
B- Doxycycline
C- Erythromycin
D- Amoxicillin
E- Ciprofloxacin

333-Which of the following organisms is one of the most common colonizing agents in cystic fibrosis?
A- Mycobacteria species
B- Pseudomonas aeruginosa
C- Streptococcus pneumoniae
D- Moraxella catarrhalis
E- Burkholderiacepacia

334-Which of the following drugs utilized for the management of Tuberculosis, can lead to dizziness and balance disturbance?

A- Pyrazinamide
B- Rifampicin
C- Isoniazid
D- Ethambutol
E- Streptomycin

335-A 52 year old gentleman has been unwell for the last couple of weeks with a viral illness. He is now very unwell with a high grade fever, productive cough and type 1 respiratory failure. A chest X-ray reveals multilobular patchy consolidation. There is also evidence of a pleural effusion. **Given the most likely causative agent, which antibiotic is a useful addition?**

A- Flucloxacillin
B- Metronidazole
C- Ceftriaxone
D- Erythromycin
E-Doxycycline

336-A 28 year old female with asthma which is normally well controlled presents with worsening wheeze. She states this is associated with a productive cough and on occasion the sputum has been blood stained. This is also associated with malaise and severe headache. This has occurred on several occasions over the last few months. Her family owns a farm. As her father died recently she has been helping out on the farm. Bloods reveal an eosinophilia and raised IgE. A CXR shows evidence of pulmonary infiltrates. **Given the most likely diagnosis, what treatment should be commenced?**

A-Salbutamol inhaler
B- Azathioprine
C- Nil specific
D- Prednisolone
E- Amoxicillin

337-A 25 year old female has an acute asthma attack. She is tachycardic and is tachypnoeic with a respiratory rate of 35. On auscultation she is very wheezy but is beginning to tire. Her peak flow is bout one third of her normal. She is commenced on both salbutamol and ipratropium nebulizers and IV hydrocortisone however has not greatly improved. Her gases reveal a high normal CO2 level and low normal O2 level on a trauma mask. **Which other treatment option is the most appropriate to be be tried whilst waiting for ITU to assess the patient?**

A- IV aminophylline
B- IV magnesium sulphate
C- CPAP
D- IV salbutamol
E- BiPAP

338-A 30 year old male with asthma who has a regular steroid inhaler and uses salbutamol PRN, presents with worsening asthma. Despite his current management and good inhaler technique, he is having to use his salbutamol inhaler approximately four times a day. **What is the next appropriate addition to his current medication?**

A- Theophylline
B- Increased steroid dose
C-Trial of addition of long acting beta agonist
D- Sodium cromoglycate
E- Montelukast

339-Which of the following does not interact with theophylline levels?

A- Alcohol
B- Amoxicillin
C- Smoking
D- Carbamazepine
E- Clarithromycin

340-What advice should be given to patients specifically after using a steroid inhaler?
A- Rinse out mouth after use
B- Shake inhaler before use
C- Hold breath for 10 seconds after inhaling
D- Sit or stand up when using
E- Simultaneously press inhaler as breath is taken in

341-Which of the following drugs utilized for the management of Tuberculosis, can lead to a visual disturbance?
A- Ethambutol
B- Isoniazid
C- Pyrazinamide
D- Rifampicin
E- Streptomycin

342-Risk factors for the development of OA include
A-Smoking
B-Participation in running
C-Being underweight
D-Advanced age
E-b and d

343-Patient education for OA, such as programs in which volunteers regularly contact patients,

A-Has not yet been demonstrated to provide benefit to OA patients
B-Is too expensive to recommend for general use by OA patients
C-Should emphasize the "wear and tear" nature of OA as part of the educational message
D-Has been shown to improve pain and functional status of OA patients
E-All of the above

344-Matrix metalloproteinases (MMPs) ?

A-Are naturally occurring chemokines that work primarily by recruiting neutrophils and macrophages to the inflamed synovium
B-Help trigger degradation of articular cartilage by cleaving peptide bonds in proteoglycans
C-Are stimulated by tissue inhibitors of metalloproteinases (TIMPs)
D-Must be activated before they can ease the pain of
E-b and c

345-Which of the following are required for an accurate and appropriate diagnosis of OA?

A-Patient history and physical exam
B-Patient history, physical exam, and radiologic evaluation
C-Physical examination and magnetic resonance imaging
D-Patient history, physical exam, and positive response to pharmacologic treatment
E-Any of the above is accurate and appropriate

346-Acetaminophen :

A-Is recommended as an appropriate initial treatment in OA
B-Should be given on a scheduled basis for optimal pain control
C-Can be associated with hepatotoxicity at doses below 4 g/day
D-Provides mild analgesia and potent anti-inflammatory relief
E-All of the above

347-Traditional, nonselective NSAIDs:
A-Block access of arachidonic acid to both COX-1 and COX-2 enzyme
B-Promote platelet aggregation through blockade of COX-2 activity
C-Promote prostaglandin and bicarbonate production in gastric mucosa through blockade of COX-2 activity
D-Counteract t renal vasoconstriction by promoting formation of renal prostaglandins
E-Are anti-inflammatory at low doses and analgesic at higher doses

348-NSAIDs:
A-Are associated with thousands of serious or life-threatening GI adverse events every year
B-Provide superior relief of OA pain in some individuals
C-Will usually produce symptoms of dyspepsia or abdominal discomfort as a prelude to serious GI adverse events
D-When used in anti-inflammatory doses, should be consistently monitored by serum levels
E-a and b

349-NSAIDs :

A-Are recommended as an alternative to acetaminophen for controlling inflammation associated with OA
B-Provide pain relief by the inhibition of prostaglandins
C-Provide cardio-protective effects similar to aspirin
D-Increase renal blood flow, causing sodium and potassium excretion
E-b and c

350-Celecoxib, a COX-2–selective inhibitor,

A-Blocks the COX- 2 enzyme with little or no inhibition of COX-1
B-Is more effective at relieving pain than nonselective NSAIDs
C-Is much safer to use for patients with compromised circulatory function
D-Carries a manufacturer’s warning against use in sulfa-allergic patients
E-a and d

351-Intraarticular corticosteroids
A-Have no role in OA, as this disease does not have any inflammatory component
B-Are recommended as maintenance therapy for patients who can not tolerate NSAIDS and who have severe OA
C-Can be administered up to 12 times per year for the treatment of severe OA pain

D-Are associated with hyperglycemia for patients without diabetes mellitus
E-None of the above

352-Hyaluronate injectable material

A-Is made using recombinant technology
B-Provides a long-term increase in viscosity of synovial fluid
C-Is a low cost pharmacologic therapy
D-Is highly effective when compared with placebo vehicle injections
E-None of the above

353-Chondroitin and glucosamine sulfate

A-Must be injected into the joint
B-Has been evaluated in a large, well-controlled trial
C-Have limited efficacy in mild to moderate OA
D-Are available by prescription only
E- **A and C**

354-Recommended treatment options for OA patients who have failed acetaminophen include

A-Nonselective NSAIDs used at analgesic doses, if the patient is not at high risk for GI bleeding
B-Nonselective NSAIDs with an H2 antagonist to prevent GI bleeding in the high-risk patient
C-COX-2–selective inhibitors with sucralfate in the high-risk patient
D-COX-2–selective inhibitors with misoprostol in the high-risk patient
E-None of the above

355-Surgery should be considered for the patient with OA
A-If the patient prefers not to try oral medications such as acetaminophen
B-If there is disability and interference with daily functioning
C-If the patient refuses treatment with low-dose NSAIDs
D-If the patient is at high-risk for NSAID-related GI bleeding
E-Any of the above

356-Topical capsaicin therapy for the treatment of OA pain
A-Produces systemic adverse effects
B-Provides therapeutic results within 48 hours
C-Is most effective when used on an as needed basis
D-Provides therapeutic results after 14 days of treatment
E-Must be used four times daily for best results

357-Which of the following is not a clinical manifestation of hyperuricemia?
A-Acute gouty arthritis

B-Nephrolithiasis
C-Osteoarthritis
D-Gouty nephropathy
E-Tophaceous gout

358-Hyperuricemia may result from the following mechanisms except

A-Increased phosphoribosyl pyrophosphate (PRPP) synthetase activity
B-Deficiency of hypoxanthine guanine phosphoribosyl transferase (HGPRT)
C-Underexcretion of uric acid
D-Myeloproliferative disorders
E-Decreased purine metabolism

359-Which of the following is the most likely site for acute mono-articular gouty arthritis?

A-First metatarsophalangeal joint
B-Instep
C-Ankle
D-Heel
E-Knee

360-All of the following are risk factors for uric acid nephrolithiasis except

A-Hyperuricemia
B-Alkaline urine
C-Highly concentrated urine
D-Increased urinary excretion of uric acid
E-Uricosuric therapy

361-Which of the following is false regarding the epidemiology of gout?

A-Prevalence increases with age.
B-Excessive alcohol intake is a risk factor.
C-Incidence varies from 20 to 35 per 100,000 persons
D-Women are affected three times more often than men.
E-Family history of gout is a risk factor.

362-Serum urate concentrations are correlated with all of the following except

A-Alcohol intake
B-Body weight
C-Increasing age
D-Serum cholesterol
E-Blood pressure

363-Which of the following is not recommended as an initial therapy in the management of gout?

A-Reduced amount of purines in the diet
B-Weight reduction
C-Colchicine
D-Decrease alcohol intake
E-Local ice therapy

364-Colchicine is associated with all of the following adverse effects except ?

A-Axonal neuromyopathy
B-Constipation
C-Renal toxicity
D-Hepatotoxicity
E-Bone marrow toxicity

365-The preferred treatment option for a patient with acute gouty polyarticular arthritis who presents 36 hours after the onset of pain is ?

A-Allopurinol
B-Sulfinpyrazone
C-Colchicine
D-Naproxen
E-Triamcinolone intra-articular injection

366-Which of the following is not recommended in the acute management of uric acid nephrolithiasis?

A-Maintain a 2 to 3 L 24-hour urine volume
B-Sodium bicarbonate
C-Potassium citrate
D-Acetazolamide
E-Potassium bicarbonate

367-Uricosuric agents are contraindicated in all of the following patients except those with a history of

A-Impaired renal function
B-History of uric acid kidney stones
C-Asymptomatic hyperuricemia
D-Myeloproliferative disorders
E-Underexcretion of uric acid

368-Which of the following statements is false regarding the use of xanthine oxidase inhibitors in the management of gout?

A-They should be given twice a day.
B-Start with a low dose after the acute attack has resolved.
C-Adjust the dose until the serum urate concentration is <6 mg/dL (<357 µmol/L).
D-They are the drugs of choice for patients with a history of urinary stones.
E-Coadminister colchicine or an NSAID during the first 8 weeks of therapy following an acute gouty arthritis attack

369-Which of the following is false regarding asymptomatic hyperuricemia?

A-There is no justification for treating most patients.
B-It may be caused by diuretic therapy.
C-It could lead to chronic urate nephropathy if left untreated.
D-Treatment is not warranted to prevent acute attacks of gout.
E-It may be caused by nicotinic acid therapy.

370-The preferred treatment option for a patient with polyarticular acute gouty arthritis of 3 days duration who can not tolerate an NSAID is?

A-Intravenous colchicines
B-Corticosteroids
C-Oral colchicine
D-Probenecid
E-Sulfinpyrazone

371-Controlled clinical trials have shown which of the following drugs to be effective in treating lupus nephritis?
A-Methotrexate
B-Chlorambucil
C-Hydroxychloroquine
D-Cyclophosphamide

372-Which of the following has been shown to be safe to use during pregnancy in a women with SLE?

A-Methotrexate
B-Chlorambucil
C-Hydroxychloroquine
D-Cyclophosphamide

373-Which of the following are the most common symptoms for drug-induced lupus?

A-Psychosis
B-Musculoskeletal
C-Depression
D-Nephritis

374-Which of the following is most effective in treating systemic sclerosis?

A-Prednisone
B-Hydroxychloroquine
C-Methotrexate
D-D-penicillamine

375-Which of the following is most effective in treating polymyalgia rheumatica?

A-Prednisone
B-Hydroxychloroquine
C-Methotrexate
D-D-penicillamine

376-The glomerulus is primarily responsible for _____ of unbound drug in the kidney:

A- Filtration
B- Reabsorption
C- Secretion
D- Endocytosis

377-Active drug secretion occurs most often in which of the following nephron segments:
A- Glomerulus
B- Proximal tubule
C- Loop of Henle
D- Distal tubule

378- According to the intact nephron hypothesis, reabsorption _____ and single nephron GFR _____ in the surviving nephrons:

A- increases, increases
B- decreases, decreases
C- increases, decreases
D- decreases, increases

379-The kidney is responsible for synthesizing each of the following hormones, EXCEPT:

A- Erythropoietin
B- Prostaglandin
C- PTH
D- Renin

380-The decreased serum creatinine values observed during dobutamine therapy are likely due to:

A- analytical interference
B- increased tubular secretion of creatinine
C- increased GFR caused by dobutamine
D- increased muscle breakdown

381- Which of the following renal function indices is least influenced to changes in fluid or volume status:

A- Serum creatinine
B- Blood urea nitrogen
C- Urine specific gravity
D- Urine sodium

382-Which of the following renal function indices is least affected by dietary protein intake:

A- Serum creatinine
B- Blood urea nitrogen
C- Creatinine clearance .
D- Urine sodium

383-The most appropriate index for quantifying proteinuria in a patient with CKD risk factors is:

A- Total protein dipstick
B- Protein:albumin ratio
C- Albumin:creatinine ratio
D- 24-hour protein excretion

384-The least accurate method for measuring GFR is:

A-Iohexol clearance
B-Iothalamate clearance
C-Inulin clearance
D-Creatinine clearance

385- J.R. is a 68 year-old Caucasian man (60 kg, 5'7") with a history of hypertension, cerebral stroke and benign prostatic hypertrophy. He presents to the ambulatory care clinic today for evaluation of a viral infection to be treated with acyclovir. His serum creatinine value today is 0.63 mg/dL. **Which one of the following approaches should be used to assess this patient's renal function for the purpose of renal dose adjustment for acyclovir?**

A- Measure a chromium-labeled ethylenediaminetetraacetic acid GFR.
B- Estimate creatinine clearance using the CG equation.
C- Estimate GFR using the MDRD equation.

D- Conduct a timed 24-hour urine collection.

386 -An appropriate clinical monitoring plan to evaluate renal protective therapy in patients with CKD should include each of the following items EXCEPT:

A- estimated creatinine clearance
B- urinary albumin:creatinine
C- urinary Cystatin C
D- estimated GFR

387- In the clinical setting, the renal clearance of PAH is considered an index of _____.

A- Fractional excretion of sodium
B- Renal plasma or blood flow
C- Glomerular filtration rate
D- Renal tubular reabsorption

388-Which of the following is the least common type of true acute kidney injury (AKI)?

A- Prerenal AKI
B- Pseudorenal AKI
C- Intrinsic AKI
D- Postrenal AKI

389-A 60-year-old long-term care resident is admitted to the hospital with altered mental status. His admission laboratory values show a blood urea nitrogen (BUN) of 30 mg/dL (10.7 mmol/L), serum creatinine (Scr) of 2 mg/dL (177 µmol/L), a fractional excretion of sodium (FeNa- of 2.5% (0.025), and granular casts on urine sediment. **The most likely etiology of his AKI is?**

A- Acute tubular necrosis
B- Bladder obstruction
C- Nonsteroidal antiinflammatory drug (NSAID-–induced renal hypoperfusion
D- Volume depletion

390-Which of the following parameters are used to determine the stage of severity of a patient's AKI by means of Risk, Injury, Failure, Loss of Kidney Function, and End-Stage Renal Disease (RIFLE- and Acute Kidney Injury Network (AKIN) classification systems?

A- Serum creatinine and blood urea nitrogen
B- Serum creatinine and urine output
C- Glomerular filtration rate and blood urea nitrogen
D- Glomerular filtration rate and cystatin C

391-A 56-year-old (71 kg) man is admitted to the intensive care unit with sepsis. His serum creatinine increased from a baseline of 0.9 mg/dL (80 µmol/L) to 1.6 mg/dL (141 µmol/L), and his blood urea nitrogen (BUN) increased from 15 mg/dL (5.4 mmol/L) to 30 mg/dL (10.7 mmol/L). His urine output in the last 24 hours was 500 mL. Per RIFLE criteria, **which stage does this patient's AKI belong to?**

A- Risk
B- Injury
C- Failure
D- Loss of kidney function
E- End-stage kidney disease

392-Which of the following markers allows for a significantly earlier diagnosis of AKI compared with serum creatinine?

A- Blood urea nitrogen
B- Glomerular filtration rate
C- Neutrophil gelatinase-associated lipocalin
D- Urinary creatinine levels

393-A 66-year-old woman with a history of diabetes and chronic kidney disease is scheduled for diagnostic imaging requiring contrast dye administration. Her serum creatinine is 2 mg/dL (177 µmol/L), blood urea nitrogen (BUN) is 30 mg/dL (10.7 mmoL/L), and urine output in the last 24 hours is 1,500 mL. Her complete blood count and electrolytes are all within normal range. **Which of the following medications would you recommend to decrease the risk of contrast-induced nephropathy in this patient?**

A- Tight glycemic control
B- Sodium bicarbonate infusion
C- Hemodialysis
D- Furosemide infusion
E- None of the above

394-Which of the following medications should not be used for prevention of AKI in high-risk individuals?
A- Ascorbic acid
B- Sodium bicarbonate
C- Dopamine
D- N-acetylcysteine

395-Which of the following pathophysiologic processes are involved in the development of prerenal AKI?

A- Glomerular damage secondary to severe inflammation
B- Tubular epithelial cell necrosis due to ischemia

C- Drug hypersensitivity reaction leading to interstitial inflammation
D- Decreased renal perfusion secondary to volume depletion

396-Which of the following pharmacotherapeutic interventions is used to reverse AKI in hospitalized patients?

A- Saline hydration
B- Intermittent hemodialysis
C- Continuous renal replacement therapy
D- None of the above; supportive care is the mainstay of therapy

397-Compared with intermittent hemodialysis, one of the main advantages of continuous renal replacement therapy is that ?

A- It is associated with fewer hypotensive episodes
B- It is associated with lower rates of thrombosis
C- It is less labor intensive
D- It does not require anticoagulation

398-Diuretic resistance to furosemide may be overcome by ?

A- Switching to a different loop diuretic
B- Increasing the furosemide dose and decreasing the frequency
C- Adding a thiazide diuretic
D- Adding a second loop diuretic

399-Which of the following electrolyte abnormalities are most commonly found in patients with AKI?

A- Hypophosphatemia
B- Hyperkalemia
C- Hyponatremia
D- None of the above; electrolytes are usually unaffected

400-All of the following factors can make drug dosing a challenge in a critically ill patient with established AKI except the ?
A- Presence of edema, which can significantly increase the volume of distribution of a drug
B- Presence of residual non-renal clearance
C- Need for constant reassessment of the patient's renal function and status
D- Presence of electrolyte abnormalities

401-In continuous renal replacement therapy (CRRT), the following statement is true regarding drug clearance?

A- Increasing CRRT ultrafiltration rate will generally result in increased drug clearance.
B- Decreasing the CRRT ultrafiltration rate will generally result in increased drug clearance.
C- Decreasing the CRRT dialysate rate will generally result in increased drug clearance.
D- Increasing the CRRT dialysate rate will generally result in decreased drug clearance.

402-Which of the following medications are associated with the development of prerenal AKI?

A- Valsartan
B- Acyclovir
C- Lithium
D- Gentamicin

403-Which of the following secondary complications can usually be effectively treated with chronic dialysis therapy (either peritoneal dialysis or hemodialysis) alone?

A- Iron deficiency anemia
B- Metabolic acidosis
C- Renal osteodystrophy
D- Hyperlipidemia

404- Which of the following diuretic regimens would likely be required to optimize diuresis in an individual with stage 4 CKD (GFR 20 mL/min/1.73 m2 [0.19 mL/s/m2]) requiring volume removal?

A- Metolazone alone
B- Hydrochlorothiazide + metolazone
C- Furosemide + metolazone
D- Furosemide + spironolactone

405- Which of the following regimens is most appropriate for management of severe hyperkalemia in a patient with ESRD and no residual kidney function?
A- Loop diuretic and dialysis
B- Sodium polystyrene sulfonate and dialysis
C- IV calcium gluconate and loop diuretic
D- Insulin and glucose

406-Which of the following is the recommended total daily energy intake for a patient with ESRD on chronic hemodialysis?

A- 35 kcal/kg (147 kJ/kg)

B- 25 kcal/kg (105 kJ/kg)
C- 40 kcal/kg (167 kJ/kg)
D- 20 kcal/kg (84 kJ/kg)

407-A patient with ESRD and the associated secondary complications would likely present with which of the following laboratory data?

A- Phosphorus 2.0 mg/dL (0.65 mmol/L), Hb 13 g/dL (8.07 mmol/L)
B- PTH 275 pg/mL (275 ng/L), Hb 11 g/dL (110 g/L; 6.83 mmol/L)
C- Phosphorus 6.0 mg/dL (1.94 mmol/L), serum bicarbonate 15 mEq/L (15 mmol/L)
D- PTH 110 pg/mL (110 ng/L), serum bicarbonate 22 mEq/L (22 mmol/L)

408-According to the K/DOQI guidelines for anemia management which of the following is the preferred route of iron administration in the non dialysis CKD population?

A- Intravenous
B- Oral
C- Either oral or intravenous
D- Intramuscular

409-Achievement of a higher target hemoglobin level (> 12 g/dL [>120 g/L; 7.45 mmol/L]) in the CKD population has been associated with which of the following?

A- Higher risk of mortality
B- Improved survival
C- Decrease in quality of life
D- Lower risk of cardiovascular events

410-Which of the following is a typical repletion dose of IV iron recommended in the hemodialysis population with absolute iron deficiency?

A- 100 mg per week for 8 weeks
B- 250 mg administered over 1 hour
C- 500 mg administered in divided doses
D- 1000 mg administered in divided doses

411-ES is a 45-year-old male on HD started on an epoetin dose of 5,000 Units intravenously Twice weekly, 1 week ago. The Hb at the time of initial dosing was 10 g/dL (100 g/L; 6.21 mmol/L). The current Hb is 10.3 g/dL (103 g/L; 6.39 mmol/L). Iron indices reveal the following: ferritin 250 ng/mL (250 ?g/L), transferrin saturation 30% (0.30). **Which of the following options is most appropriate for ES?**

A- Oral ferrous sulfate 325 mg three times per day
B- 1 g of iron sucrose divided over 10 hemodialysis sessions
C- Increase the dose of epoetin alfa by 50% to achieve the target Hb

D- No change is necessary based on Hb response after 1 week of epoetin alfa

412-Which of the following iron preparations requires a test dose because of the association with anaphylactic reactions?

A- Iron dextran
B- Sodium ferric gluconate
C- Iron sucrose
D- Ferumoxytol

413-Which characteristics define CKD-mineral and bone disorder?

A- Abnormal calcium, phosphorus, PTH and vitamin D levels
B- Presence of anemia, CKD and renal osteodystrophy
C- Low phosphorus and osteoporosis
D- Failure to correct 25-hydroxyvitamin D levels with vitamin D supplementation

414-TR is an ESRD patient just starting peritoneal dialysis. The most recent laboratory analysis reveals the following:
phosphorus 7.4 mg/dL (2.39 mmol/L),
calcium 9.0 mg/dL (2.25 mmol/L),
albumin 2.5 g/dL (25 g/L), iPTH 500 pg/mL (500 ng/L),
25-OH D 40 ng/mL (100 nmol/L).
TR is on sevelamer carbonate as a phosphate binder and no other therapy to address CKD-MBD. **Which of the following is the most appropriate vitamin D therapy?**

A- Calcitriol
B- Ergocalciferol
C- Paricalcitol
D- Cholcalciferol

415- In addition to lowering PTH, the calcimimetic agent cinacalcet causes which of the following changes in laboratory parameters?

A- Increase in phosphorus, decrease in calcium
B- Decrease in phosphorus, increase in calcium
C- Increase in phosphorus and calcium
D- Decrease in phosphorus and calcium

416- Which of the following phosphate-binding agents would be recommended for an individual who has difficulty swallowing larger pills?

A- Lanthanum carbonate tablets
B- Aluminum hydroxide liquid
C- Calcium carbonate tablets
D- Sevelamer carbonate tablets

417-The most common manifestation of drug-induced kidney disease is

A- Proteinuria
B- Pyuria
C- Hematuria
D- A decline in the glomerular filtration rate (GFR)
E- A reduction in tubular secretion

418-Regarding drug-induced kidney disease, all of the following are applicable except

A- Temporal relationship with potentially toxic agent
B- The offending agent is rarely identified
C- Significant source of morbidity in the hospital setting
D- Abrupt and sustained reduction in GFR
E- The most common presentation in the hospital setting is acute tubular necrosis

419-Which of the following drugs would be the most likely culprit in a patient with newly diagnosed renal intratubular obstruction?

A-Ibuprofen
B-Losartan
C-Amphotericin B
D-Ciprofloxacin
E-Acyclovir

420-Hemodynamically mediated kidney injury induced by angiotensin-converting enzyme inhibitors involves all of the following except
A- Enhanced efferent arteriolar constriction
B- Patients with renal artery stenosis at increased risk
C- Decrease in glomerular capillary hydrostatic pressure
D- Reduced glomerular ultrafiltration
E- None of the above

421-Which of the following drugs has been associated with chronic interstitial nephritis?
A-Cyclosporine
B-Ifosfamide
C-Lithium
D-Streptozotocin
E-All of the above

422-Which of the following drugs has been associated with collapsing glomerulosclerosis?

A-Propylthiouracil

B-Aminoglycosides
C-Pamidronate
D- Radiographic contrast media
E- Hydralazine

423-The following renal structural–functional alteration is associated with exposure to radiographic contrast media:

A-Allergic interstitial nephritis
B-Intratubular obstruction
C-Glomerulosclerosis
D- Acute tubular necrosis
E- Papillary necrosis

424-All of the following strategies may be used to prevent radiographic contrast media nephrotoxicity except

A- Amifostine
B- Acetylcysteine
C- Low-osmolality agents
D- Hydration
E- Reduced doses of contrast

425-The preferred agent for preventing cisplatin induced nephrotoxicity is ?
A- Fenoldopam
B-Amifostine
C-Dopamine
D-Acetylcysteine E-Mesna

426-All of the following drugs are linked to the development of ANCA-positive vasculitis except ?
A-Hydralazine
B- Allopurinol
C-Warfarin
D-Propylthiouracil
E- Penicillamine

427-Each of the following statements regarding aminoglycoside-induced acute tubular necrosis (ATN) is true except
A- Risk factors include prolonged therapy and increased age.
B- It manifests as a gradual rise in serum creatinine 4 to 6 weeks after exposure to the drug.
C- Patients typically present with non-oliguria, maintaining urine volumes >500 mL/day.
D- Toxicity of various aminoglycosides is related to cationic charge of the drug.

E- "Once daily" dosing may be one method to maintain antimicrobial efficacy while reducing nephrotoxicity.

428-The preferred treatment for a patient with drug-induced minimal change glomerular injury accompanied by interstitial nephritis is
A-Amifostine
B-Cyclophosphamide
C-Pamidronate
D-Prednisone
E-Hydration

429-The signs and symptoms of penicillin-induced allergic interstitial nephritis include all of the following except
A- Rash, eosinophilia, pyuria
B- Fever, eosinophilia, reduced intraglomerular pressure
C- Fever, rash, eosinophilia
D- Elevated serum creatinine, rash, eosinophilia
E- Hematuria, proteinuria, oliguria

430-A 60-year-old woman with a 5-year history of NSAID use is prescribed enalapril and develops acute kidney injury. What is the most likely cause of her acute kidney injury?
A- Acute allergic interstitial nephritis
B- Chronic interstitial nephritis
C- Minimal change glomerular injury
D- Focal segmental glomerulosclerosis
E- Hemodynamically mediated kidney injury

431-The calcineurin inhibitor cyclosporine has been implicated in which of the following?
A-Allergic interstitial nephritis
B- Thrombotic microangiopathy
C- Chronic interstitial nephritis
D- Hemodynamically mediated kidney injury
E- All of the above

432-In a patient with nephrotic syndrome, which of the following is not expected to be present?
A-Proteinuria
B-Edema
C-Hyperlipidemia
D-Hypercoagulable state
E-Hematuria

433-Which of the following is not expected to reduce proteinuria when used for patients with glomerulonephritis?

A- Angiotensin-converting enzyme (ACE- inhibitors)
B- Angiotensin II receptor blockers
C- Nondihydropyridine calcium channel blockers (eg, diltiazem)
D- Dihydropyridine calcium channel blockers (eg, nifedipine, amlodipine-
E- All of the above are expected to reduce proteinuria

434-Treatment of which of the following is expected to reduce the progression of renal failure in patients with glomerulonephritis?
A-Edema
B-Proteinuria
C-Hyperlipidemia
D-Coagulopathy
E-Hematuria

435-Angiotensin-converting enzyme (ACE- inhibitors are often used in patients with glomerulonephritis because of their ability to reduce:
A-Proteinuria
B-Blood pressure
C- Immunologically induced glomerular damage
D- Both a and b
E- All a, b, and c

436 -Intravascular thrombosis is a common and serious complication of nephrotic syndrome associated with which of the following glomerular disease?

A- Minimal-change nephropathy
B- Focal segmental glomerulonephritis
C- Membranous nephropathy
D- Immunoglobulin A nephropathy
E- Membranoproliferative glomerulonephritis

437- Which of the following glomerulonephritis is more commonly seen in pediatric patients?

A- Minimal-change nephropathy
B- Focal segmental glomerulonephritis
C- Immunoglobulin A nephropathy
D- Membranous nephropathy
E- Membranoproliferative glomerulonephritis

438- Which of the following agent is known to be most effective in inducing remission in patients with recently diagnosed minimal-change nephropathy?

A- Steroid
B- Cyclosporine
C- Azathioprine

D- Cyclophosphamide
E- Levamisole

439-Which of the following is not correct regarding the use of cyclosporine for the treatment of minimal-change nephropathy?

A- Cyclosporine may reduce lymphokine production by activated T lymphocytes
B- Cyclosporine may improve the permselectivity of GBM
C- Cyclosporine is often effective in preventing relapse
D- Cyclosporine is often effective in inducing remission during relapse
E- Cyclosporine is useful for patients who are steroid dependent

440-Compared with minimal-change nephropathy, patients with focal segmental glomerulonephritis are:

A- More likely to be adults
B- Less responsive to steroid treatment
C- More likely to develop progressive renal failure
D- Only a and b above are correct
E- All a, b, and c above are correct

441-In patients with mild focal segmental glomerulonephritis, which of the following is/are commonly used?

A- Angiotensin-converting enzyme (ACE- inhibitors
B- Angiotensin II receptor blockers
C- Immunosuppressive agents
D- Both a and/or b may be used
E- All a, b, and c may be used

442-A 56-year-old woman has been on dialysis for the past 10 years due to chronic renal failure from cystic kidney disease. Which of the following is the most reliable treatment for the peripheral neuropathy associated with her condition?

A. Thiamine supplements
B. Clonazepam
C. Phenytoin
D. Minoxidil
E. Renal transplant

443- Fish oil may be beneficial in certain patients with which of the following types of glomerulonephritis?

A- Minimal-change nephropathy
B- b. Focal segmental glomerulonephritis
C- Immunoglobulin A nephropathy
D- Membranous nephropathy

E- Membranoproliferative glomerulonephritis

444-Which of the following is correct with respect to treatment for membranous nephropathy?

A- Spontaneous remission is common and steroid treatment alone is commonly used to reduce proteinuria and progression of disease
B- Spontaneous remission is common and steroid treatment alone is not effective in reducing proteinuria and progression of disease
C- Spontaneous remission is unlikely and steroid treatment is needed to reduce proteinuria and progression of disease
D- Spontaneous remission is unlikely and steroid treatment alone is not effective in reducing proteinuria and progression of disease
E- Steroid and cytotoxic agents are commonly needed to induce remission

445-A patient with IgA nephropathy who has normal renal function, isolated micro-hematuria, and proteinuria less than 1 g/day should be:

A- Observed closely without specific treatment
B- Given fish oil
C- Given steroid treatment
D- Given cytotoxic agents
E- Given cyclosporine

446-Which of the following is not normally considered when selecting the optimal treatment for patients with lupus nephritis?
A- Type of underlying lesion
B- Disease activity according to pathologic findings
C- Severity of symptoms
D- Duration of symptoms
E- All of the above are commonly considered

447-Which of the following is frequently used for chronic maintenance treatment of lupus nephritis?

A- Steroid
B- Cytotoxic agent
C- Cyclosporine
D- Mycophenolate mofetil
E- Fish oil

448-Monoclonal antibodies have been evaluated for the treatment of which of the following glomerular disease?

A- Minimal-change nephropathy
B- Focal segmental glomerulonephritis

C- IgA nephropathy
D- Lupus nephritis
E- Poststreptococcal glomerulonephritis

449-Which of the following is/are known to cause glomerulonephritis?

A- Group A streptococci
B- Hepatitis C virus
C- HIV
D- Parasites
E- All of the above

450-Antibiotic treatment after poststreptococcal glomerulonephritis may:

A- Prevent subsequent poststreptococcal glomerulonephritis
B- Reduce severity of disease
C- Prevent the spread of infection to family members
D- Both b and c
E- Both a and c

451-Which of the following medications would not be likely to interfere with allergy skin testing?

A-Loratadine
B-Diphenhydramine
C-Montelukast
D-Levocetirizine
E-Cetirizine

452-Parasympathetic stimulation of the vascular tissue in the nose results in

A-Vasoconstriction
B-Reduction in erectile tissue size
C-Airway widening
D-Vasodilation
E-All of the above except d

453-Mediators of immediate hypersensitivity after allergen exposure include

A-Cytokines
B-Histamine
C-Leukotriene C4
D-Prostaglandin D2
E-Tryptase

454-Which of the following antihistamines has the most anticholinergic side effects in normal doses?

A-Cetirizine
B-Cyproheptadine
C-Loratadine
D-Diphenhydramine
E-Chlorpheniramine

455-For a patient receiving nasal steroids, which of the following agents would be helpful for a patient that also had ocular symptoms?
A-Azelastine
B-Levocabastine
C-Pseudoephedrine
D-Phenylephrine
E-Montelukast

456-Rhinitis medicamentosa or rebound congestion is a complication from overusing

A-Topical decongestants
B-Systemic decongestants
C-Nasal steroids
D-Nasal antihistamines
E-Cromolyn sodium

457-Pseudoephedrine was placed "behind the counter" in pharmacies primarily due to

A-Changes in blood pressure with high doses
B-Changes in heart rate with high doses
C-Potential for abuse since it is a component in methamphetamine production
D-Drug interactions with other allergic rhinitis treatments
E-A potentially fatal drug interaction with monoamine oxidase inhibitors.

459-Common side effects to immunotherapy include

A-Anaphylaxis
B-Bronchospasm
C-Swelling at the injection sit
D-Generalized urticaria
E-All of the above

460-Montelukast is approved for children with seasonal allergic rhinitis down to the age of

A-2 years
B-1 year
C-6 months
D-2 months
E-Newborns

461-Key elements of evaluating the therapeutic outcome of a patient with allergic rhinitis include which of the following?

A-Effect of the disease on the patient's life
B-Efficacy of the treatment regimen
C-Tolerability of the treatment regimen
D-Patient's satisfaction of the treatment regimen
E-All of the above

462-Differences between available ophthalmic beta-blocking agents are:

A-ß1 specificity
B-Intrinsic sympathomimetic activity
C-Available dosage forms
D-Frequency of local and systemic side effects
E-all of the above

463-Side effects associated with ophthalmic beta-blockers include:

A-Reduced exercise capacity
B-Bronchospasm
C-Heart block
D-Psychosis
E-all of the above

464-Topical carbonic anhydrase inhibitors reduce intraocular pressure by:

A-Increased trabecular outflow
B-Increased uveoscleral outflow
C-Induction of miosis
D-Reduced aqueous production
E-Increased serum osmolarity

465-Caution should be used when administering the following medications to patients being treated for open-angle glaucoma:
A-Systemic agents with anticholinergic effects
B-Topical parasympathomimetics
C-Topical corticosteroids
D-Systemic monoamine oxidase inhibitors
E-None of the above

466-The following statement(s) regarding the drug therapy of open-angle glaucoma is / are true:

A-Reduction of a high intraocular pressure in a patient with glaucoma to normal always results in a halt of visual field loss.
B-Patients with normal intraocular pressures and with early glaucomatous field loss may not be left untreated and should be observed for disease progression
C-Reduction of intraocular pressure below normal provides no benefit to patients with glaucoma and normal intraocular pressure
D-b and c only
E-a and c only

467-Which of the following drugs may precipitate new onset psoriasis?

A-Corticosteroids
B-Azathioprine
C-ß-Adrenergic blocker
D-Thiazide diuretics

468-Which of the following drugs may exacerbate preexisting psoriasis?
A-ß-Adrenergic blocker
B-Lithium
C-Non steroidal anti-inflammatory drugs
D-All of the above

469-Which of the following drugs can reduce serum cyclosporine concentrations?

A-Oral contraceptives
B-Verapamil
C-Valproic acid
D-Clarithromycin

470-Which of the following drugs is not a TNF- a inhibitor?

A-Etanercept
B-Alefacept
C-Adalimumab
D-Infliximab

471-Appropriate use of oral prednisone for atopic dermatitis includes all of the following except:

A-For severe, recalcitrant, chronic atopic dermatitis
B-For rapid relief of severe refractory disease while transitioning to other therapies
C-Discontinue abruptly after a short 5-day course
D-Provide intensified skin care with topical corticosteroids and moisturizers

472- Which of the following does not have a role in the management of chronic cancer pain?

A- Carbamazepine
B- Clodrinate
C- Dexamethasone
D- Nifedipine
E- Pinavarium

473- A 17 year old girl was found collapsed and drowsy. Her 12-lead ECG showed a sinus tachycardia of 120 beats per minute with a corrected QT interval of 500 ms (normal <470). **Which of the following is the most likely cause of her presentation?**
A- Amphetamine
B-Diphenhydramine
C-Glue sniffing
D-Methadone
E- Methanol

474- A 70-year-old woman has a history of dyspnea and palpitations for six months. An ECG at that time showed atrial fibrillation. She was given digoxin, diuretics and aspirin. She now presents with two short-lived episodes of altered sensation in the left face, left arm and leg. There is poor coordination of the left hand. ECHO was normal as was a CT head scan. **What is the most appropriate next step in management?**
A- anticoagulation
B- carotid endarterectomy
C- clopidogrel
D- corticosteroid treatment
E- no action

475 -A 60-year-old man with a past history of controlled hypertension presents with acute onset weakness of his left arm, that resolved over 12 hours. He had suffered two similar episodes over the last three months. Examination reveals a blood pressure of 132/82 mmHg and he is in atrial fibrillation with a ventricular rate of 85 per minute. CT brain scan is normal. **What is the most appropriate management**
A- amiodarone
B- aspirin
C- digoxin
D- dipyridamole
E- warfarin

476- A 30-year-old man presents with a history of transient loss of consciousness and palpitations. His ECG shows ventricular tachycardia. **Which of the following treatments should be avoided?**
A- adenosine
B- amiodarone
C- DC cardioversion

D- flecainide
E- verapamil

477- A 56 year old male with left ventricular systolic dysfunction was dyspnoeic on climbing stairs but not at rest. The patient was commenced on Ramipril and furosemide. **Which one of the following drugs would improve the patient's prognosis?**
A- Amiodarone
B- Amlodipine
C- Bisoprolol
D- Digoxin
E- Nitrate therapy

478- A 60-year-old Chinese man has been started on quinine for leg cramps by his General Practitioner. He presents, a week later, with 5 days of darkened urine and 2 days of increasing breathlessness, back pain and fatigue. Investigations show a hemoglobin of 7.0 g/dl and raised reticulocyte count. **Which of the following best explain this drug reaction?**
A-autoimmune hemolytic anemia
B- glucose-6-phosphate dehydrogenase deficiency
C- hereditary spherocytosis
D- pyruvate kinase deficiency
E- sickle cell disease

497- A 23 year old male presents with a deep vein thrombosis. He has no past medical history but his mother has suffered from deep vein thrombosis. **Which of the following is likely to be found on hematological assessment?**

A- Factor V Leiden mutation
B- Protein S deficiency
C- Protein C deficiency
D- Antithrombin deficiency
E- Lupus anticoagulant

480- Folic acid metabolism can be affected by
A- tetracycline
B- pyrimethamine
C- vitamin B12
D- penicillin
E- brufen

481- Epinephrine is the pre hospital drug of choice in cases of anaphylaxis because it :

A- Bind to both H1- & H2 receptor site.
B- Reverse the chemical actions of histamine.

C- Decrease the O2 requirements of the heart.
E- Constricts peripheral blood vessels & dilates the bronchioles.

482- Hydrocortisone acts in treating anaphylaxis by:

A- Neutralizing histamine.
B- Blocking H1- & H2 receptor site.
C- Promoting dilatation of the bronchioles.
D- Overcoming insufficiencies of the neutrally occurring hormone to suppress the immune reaction.

483- After giving methylprednisolone, the paramedic should frequently asses the patients for:

A- Tachyarrhythmia.
B- Peripheral edema.
C-Hypoglycemia.
D-Hypotension.

484- The adult dosage of hydrocortisone for an allergic reactions :

A- 100 – 500 mg
B-50 – 100 mg
C- 30 – 50 mg
D- 5 mg \ kg

485- In the situation described, you decide your patients has developed moderate case of anaphylaxis. What are the drugs that medical controls likely to order first?

A- Epinephrine & diphenhydramine.
B- Epinephrine & dopamine.
C- Epinephrine & hydrocortisone.
D-Epinephrine & methylprednisolone.

486- The prehospital indication for oxytocin is for the:

A-Control of seizures.
B-Treatment oh hypertension.
C-Control of postpartum hemorrhage.
D-Treatment of sever bronchospasm.

487- A major concern in patients with eclampsia is seizures. The prehospital drug of choice in the treatment of sever eclampsia is :
A-Oxytocin.
B-Magnesium sulfate.

C- Diazepam.
D-Labetolol.

488- The prehospital dosage for magnesium sulfate is:

A-3 – 10 U IV.
B-1mg\ kg IV.
C-10 - 20 mg IV.
D-2 – 4 gm IV.

489- You are called to the home of woman " having seizures. "On arrival you find a woman in her late 20s experiencing active seizures. The patients mother says that her daughter is 7 month pregnant. She also report this is her daughters second seizures since she called for help. Earlier in the day the patient had complained of sever headache, dizziness, nausea, chest pain, & spots before her eyes**. Seizures control for this patients should begin with:**

A-Diazepam.
B-Calcium gluconate.
C-Magnesium sulfate.
D-Oxytocin.

490- Before giving glucose to your patient, you should first:

A-Take a blood sample.
B-Monitor cardiac rhythm
C-Start an IV of D5W
D-- Dilute 1:1 with sterile distilled water.

491- The organ most sensitive to the effects of thiamine deficiency is the:

A- Heart.
B- Liver.
C- Brain.
D- Kidney.

492- You respond to the home of unconscious, unresponsive female patients. Your assessment finds the patients presenting with Kussmal respiration at 40\ min. The ECG monitor shows sinus tachycardia at a rate of 120 bpm.Skin is warm& dry & the patients has a fruity odor on her breath. Her blood pressure is low. **This patients is presenting with classic signs & symptoms of :**

A- Insulin over dose.
B- Ketoacidosis.
C- Metabolic acidosis.
D- Respiratory acidosis.

493- The pancreas is responsible for the production of insulin. Without insulin:
A- Hypoglycemia will result.
B- A build up of CO_2 produces acidosis.
C- Starches cannot be metabolized in to glucose.
D- Glucose cannot be pass in to the body's cells.

494- Aminophylline is contraindicated in patients:
A- Who suffer from uncontrolled cardiac arrhythmia.
B- With CHF
C- Over 60 years old..
D- With hypertension.

495- The recommended initial dose for O_2 when treating a patients with COPD is:
A- 15L \ min.
B- 10L \ min.
C- 4 – 6 L \ min.
D- 2 – 3L \ min.

496- Bronchodilators are used to treat reversible airway obstruction. **They work by:**

A- Decreasing edema.
B- Reducing CO_2 content.
C- Relaxing the bronchial smooth muscle.
D- Increasing breathing by stimulation of the CNS.

497- Why is dopamine one of the drug of choice for the treatment of hemodynamically Significant hypotension in absence of hypovolemia?
I-Dopamine increases blood pressure & cardiac output.
II- Dopamine causes a decrease in preload.
III- Dopamine may decrease oxygen demand on the heart.
A- II & III
B- II & IV
C- I & II
D- I ,III & IV

498- What are the therapeutic benefit of nitroglycerin?
I- It decreases the hearts ventricular work load.
II- It reduces the heart oxygen demands.
III- It increases coronary blood flow.
IV- It act as an antagonist against vasospasm.

A- I & II only
B- II & III only
C-II & IV only
D- All of the above.

499-You have ordered to give lidocaine bolus of 1 mg \ kg to your 180 Ib patient. The correct dosage is :

A- 180 mg
B- 100 mg
C- 82 mg
D- 50 mg

500- You are called to a 67 – years- old woman who say that her heart feels like it is " fluttering." Your ECG monitor indicate the patients is experiencing paroxysmal supraventricular tachycardia at regular rate of 180 bpm. Vital signs are currently within normal limits & she is tolerating the rhythm fairly well. **Which is the drug of choice to treat stable paroxysmal supraventricular tachycardia?**

A- Isoprotrenol.
B- Procainamide.
C- Nitroprusside.
D- Verapamil.

501- Chlorpromazine & haloperidol are classified as antipsychotic, and their use is contraindicated for patients :

A- In mild alcohol withdrawal.
B- With CNS depression.
C- With history of acute psychotic episodes.
D- With a history of seizure disorders.

Answers

1-A-Low protein binding
2-C-Take folic acid 400 mcg daily throughout the reproductive years
3-C-Prednisone
4-C-Oral calcium supplementation
5-A-Ceftriaxone 250 mg IM as a single dose
6- B-Macular damage
7-A-Switch drug therapy to Phenobarbital
8- E-Propranolol
9- D-Continue current treatment regimen
10-C-Promote fetal lung maturity in premature infants
11-B-Intravaginal misoprostol
12-E-Diet modification
13-D-Maternal fatality
14-C-High protein binding
15-D-Cephalexin 500 mg orally every 6 hours for 14 days
16-B-Progestin-only oral contraceptive
17-A-Smoking increases the risk of venous thromboembolism.
18-C-Wait another 1 to 2 months to see if symptoms improve on their own
19-B-Depo-medroxyprogesterone acetate
20-B-Buy emergency contraception
21-D-Do a pregnancy test and if negative give the injection today
22-B-Hypertension treated with a diuretic and an average blood pressure of 172/92 mm Hg
23-B-Pelvic inflammatory disease
24-B-Take an active tablet as soon as possible (two tablets on that day) and then continue taking tablets daily, one each day. Use condoms or abstain from sex until tablets have been taken for 7 days in a row. Finish the active tablets in the current pack and start a new pack the next day (i.e., do not take the seven inactive tablets).
25-A-Those with pelvic inflammatory disease within the last 3 month
26- D-Production of thick cervical mucous
27-A-Have history of antiphospholipid syndrome and history of deep vein thrombosis
28-A-30-year-old woman with hypothyroidism
29-D-Levonorgestrel emergency contraception can be taken as a single dose (1.5 mg) within 72 hours of unprotected intercourse
30- B-Transdermal contraceptive
31- A-Perform a pregnancy test
32- B-Increase the intake of dietary calcium and vitamin D
33-C-Medroxyprogesterone acetate 10 mg by mouth for 10 days
34-B-Mefenamic acid 500 mg by mouth followed by 250 mg by mouth 4 times daily during menses
35-C-It is a therapeutic option for any woman at low risk for sexually transmitted diseases

36-C-PCOS
37-A-A combination oral contraceptive containing ethinyl estradiol and drospirenone
38-A-A combination oral contraceptive containing ethinyl estradiol and drospirenone
39-D-Metformin
40-A-Hypoprothrombinemia
41-B-Ibuprofen 800 mg by mouth 3 times daily during menses
42-B-Levonorgestrel IUD
43-D-Topical heat
44-D-90
45-D-All of the above
46-B-Leuprolide
47-D-I, II, and III
48-C-Conservative surgery
49-A-I and II only
50-C-II and III only
51-D-Ethinyl estradiol/norgestimate contraceptive pill
52-C-Nafarelin
53-B-Pain relief at 2 months; incidence of weight gain, acne, and hirsutism
54-D-Increased levels of substance P
55-C-Conservative surgical therapy
56-A-Refer for assisted reproductive technology consultation.
57- B-Immunosuppressive activity
58-D-I, II, and III
59-D-Conjugated equine estrogens 0.3 mg/medroprogesterone 1.5 mg orally daily
60-D-Age 30, history of deep vein thrombosis and GnRH-a failure
61-A-Estrogen therapy
62-E-None of the above choices is correct
63-C-Increasing the daily estrogen dose
64-D-All of the above
65-D-Both a and b
66- C-Venlafaxine
67-A-FSH
68- None of the above choices is correct
69- E-Both choices b and c
70-A-Venous thromboembolism
71- B-Raloxifene
72- B-Hot flushes
73-D-Herbal products marketed for the relief of menopausal symptoms have been shown to be effective and therefore should be recommended.
74- D-Low doses of estrogen without a progestin
75-C-Hormone therapy improves mood and well-being mainly in women with vasomotor symptoms and sleep disturbance.
76-D-Renal toxicity
77-B-1,750 units
78- A-Decreased risk of viral contamination
79-A-Cyclophosphamide

80- E-All of the above
81-E-Joint hemorrhage
82-C-Prothrombin time
83-B-Spontaneous joint hemorrhage
84-D-A and B
85-D-Antibiotics
86-E-A and C
87-B-Intramuscular phytonadione
88-A-Recombinant technology
89-C-Activated partial thromboplastin time (aPTT)
90-C-Recombinant antihemophilic factor concentrate (BioclatE- is a plasma-derived factor IX product
91-C-Sickle cell disease is only seen in those with African ancestry.
92-Streptococcus pneumonia
93-D-23-valent pneumococcal polysaccharide vaccine, 7-valent pneumococcal conjugated vaccine, and oral penicillin
94-C-Penicillin 125 mg twice a day by mouth beginning at diagnosis until 3 years of age, then 250 mg twice daily until age 5
95- B-It increases fetal hemoglobin production.
96-C-Hydroxyurea reduces painful crisis but close monitoring is needed because of its effect on the bone marrow.
97-E-Pneumococcal vaccine
98-E-Prevention of stroke
99-D-Receive appropriate pain management, oxygen, balanced fluid, and antimicrobial agents
100-C-Parvovirus B19
101-A-Hydration and aggressive analgesics are the primary treatment. Analgesic therapy should be individualized.
102-E-Intramuscular meperidine
103-D-Acetaminophen
104-D-It gives the patient control over the analgesic therapy.
105-A-aplastic anemia
106-D-a and b
107-D-infection
109-C-Sore throat
110-A-Comprehensive patient history
111-C-Serum potassium
112-D-All of the above
113-A-Helicobacter pylori
114-B-Ultrasonography
115-D-Ultrasonography
116-A-Radionuclide imaging
117-D-All of the above may be used
118-B-Endoscopy
119-C-50%
120-C-Manometry

121-D-Esophageal pH monitoring
122-B-Assesses both acid and nonacid reflux
123-A-Bicarbonate
124-A-Rituximab and CHOP chemotherapy (R-CHOP)
125-C-About 30–60% of patients can be cured of their cancer
126-D-All of the above
127-B-Fatigue
128-A-Bone marrow aspiration and biopsy
129-E-Temsirolimus
130-B-Cyclophosphamide
131-B-1
132-D-All of the above
133-C-Lenalidomide 10 mg PO daily
134-A-Matched sibling donor allogeneic hematopoietic stem cell transplant
135-A-Azacitidine
136-B-A 35-year-old female with HLA DR15 expression who has required transfusions for the past month.
137-A-Decrease serum ferritin, a blood test that indicates iron overload
138-C-A 72-year-old female requiring 1 red blood cell transfusion/month for the past 3 months with a serum erythropoietin level of 172 MIU/mL
139-A-Erythropoietin 40,000 units SQ + filgrastim 100 mcg SQ twice weekly
140-B-Rash and peripheral cytopenias
141-C-Peripheral cytopenias and hepatotoxicity
142-B-A male who uses 2 g of acetaminophen daily for his osteoarthritis
143-D-Present in one kidney rather than in both kidneys
144-B-Tumor suppressor gene
145-C-Mammalian target of rapamycin (mTOR)
146-C-Interferon
147-D-Interluekin-2
148-B-Temsirolimus
149-E-Everolimus
150-B- 5 mg daily
151-B- Benign intracranial hypertension (BIH)
152-C- Two - three months
153-E- Zoledronic acid
154-D- Trastuzumab
155-D- Danaparoid
156-B- Organ failure is a common finding in DIC
157-E- Reduced analgesia
158-E- Pinavarium
159-D- Short Synacthen test
160-C- DNA cross linkage
161-E- Tamoxifen
162-D- A packed cell transfusion should be given over 90 minutes
163-D- Phenytoin
164-C- Warfarin

165-C- Inhibition of activated factor
166-E- Trimethoprim
167-B- Tranexamic acid
168-A- Azathioprin
169-D- Primaquine
170-A- Aspirin
171-D- Plasma half life
172-A- Fresh frozen plasma is stored at -30? for up to 24 months
173-C- Metformin
174-D- Blood Group O
175-E- Warfarin
176-C- Amoxicillin
177-C- A white cell count of 50
178-A- non-sputum producing patients are non-infectious
179-A- Cefixime
180-B- Clindamycin
181-C- may be found in healthy community volunteers not recently hospitalized
182-B- Polymerase
183-A- Oral clindamycin
184-A- Candida albicans
185-E- She should receive the meningococcal A and C vaccination plus rifampicin
186-A- Stop all treatment
187-A- Azithromycin
188-B- Complement
189-E- Rifampicin
190-B- Benzylpenicillin
191-B- Mumps
192-B- Cognitive behavioral therapy
193- C- Neisseria gonorrhoea
194- C- Doxycycline
195- E- Visceral leishmaniasis
196- B- Clarithromycin
197- D- Urea of 18 mmol/l
198-E- Viral meningitis
199-E- Streptococcus Pneumonia
200-C- infectious mononucleosis
201-B-A relative insulin deficiency with peripheral insulin resistance
202-D-Fasting plasma glucose of 139 mg/dL
203-D-The brain is already saturated with glucose which does not allow further uptake
204-D-GLP-1, but not GIP enhances satiety, lowers postprandial glucagon, and enhances satiety
205-B-Start metformin 500 mg twice daily, titrate to 2 g/day as tolerate
206-D-The risk of congestive heart failure can increase, and the clinician should watch for signs and symptoms
207-D-Increase her glargine insulin to lower the fasting plasma glucose readings
208-A-Reduce the dose of 70/30 insulin in the morning

209-D-Insulin
210-A-Metformin
211-C-Start Ramipril, even if the person is not hypertensive
212-A-Do nothing, as you do not treat numb variant peripheral neuropathy if glycemic control is excellent
213-E-Metformin 500 mg twice daily, simvastatin 20 mg daily, and aspirin 325 mg daily
214-D-Dilated eye examination every 3 to 5 years
215-B-Inhibit iodine incorporation into tyrosine residues
216-C-Both propylthiouracil and methimazole are concentrated within the thyroid gland
217-C-PTU use is contraindicated during the first trimester of pregnant
218-C-PTU may increase the efficacy of later treatment with radioactive iodine
219-C-Hypothyroidism generally occurs approximately 6 days after radioiodine administration
220-B-T3 is not usually chosen for treatment of hypothyroidism because it has to be given subcutaneously
221-D-Beta-blocker therapy
222-D-Its side effects can include hepatitis and agranulocytosis.
223-C-It produces stable serum levels of both T4 and T3.
224-B-rhTSH cannot be used to stimulate thyroglobulin production as part of the diagnostic testing of patients with thyroid cancer.
225-D-Uterine contraction
226- B-Increased shoe size
227-C-Transsphenoidal surgery
228-C-Octreotide
229-Gastrointestinal adverse effects should subside within 10 to 14 days of therapy.
230-B-Physical height <2 standard deviations below the population mean
231-D-All of the above
232-B-GH-deficient short stature
233-D-All of the above
234-A-Menstrual irregularities
235-B-Antidepressants
236-C-Dopamine agonist therapy
237-C-Bromocriptine
238-B-Oral contraceptives
239- D-All of the above
240-B-Erectile dysfunction
241-D-Chronic cigarette smoking is thought to lead to erectile dysfunction.
242-B-Phosphodiesterase inhibitors
243-A-Acetylcholine
244-D-cGMP
245-A-Engage in foreplay prior to intercourse
246-E-Cyanopsia is caused by inhibition of phosphodiesterase type 6.
247-E-Both nitrates and phosphodiesterase inhibitors can produce hypotension.
248-D-Transdermal testosterone products bypass first-pass hepatic catabolism.

249-B-Produces less contact dermatitis than the patch
250-B-Intraurethral alprostadil is less effective than intracavernosal alprostadil.
251-D-Manual pressure should be applied after the injection to minimize hematoma formation.
252-E-Penile prosthesis
253-D-Men with mild BPH symptoms may not require specific treatment.
254-B-a-Adrenergic antagonist
255-E-Surgery
256-A-Watchful waiting
257-B-Prostate size >40 g
258-Start immediate release terazosin at a dose of 1 mg at bedtime.
259-B-Diuretics
260-D-Tamsulosin
261-B-Continue finasteride 5 mg daily
262-D-Take precautions during surgery
263-A-Take these medications at least 12 hours apart.
264-D-Ejaculation disorder
265-A-Reduce irritative voiding
266-D-Renal failure
267-C-5a-Reductase
268- B-Stress urinary incontinence
269-A-Urge urinary incontinence
270-C-Overflow (obstructive- urinary incontinence)
271-D-Anticholinergics
272-D-Dual-reuptake inhibitors
273-A-Behavioral interventions
274-C-Flavoxate
275-E-Duloxetine
276-A-Imipramine
277-B-Angiotensin-converting enzyme inhibitors–urinary retention
278-B-Stress urinary incontinence
279-E-Both B and C are correct
280-E-All of the above can be associated with urethral underactivity
281-E-Angiotensin receptor blockers
282-E-All of the above can be difficult to use because of pharmacologic antagonism
283-A-Blood volume and plasma osmolality
284-C-251 mOsm/kg
285-D-Increased osmolality and decreased effective circulating volume
286-D-Urine sodium concentration >20 mEq/L
287-A-Hypovolemia
288-B-Restlessness
289-E-3% sodium chloride infusion
290-D-4.2
291-B-Diabetes insipidus
292-C-Nervous
293-A-Swelling

294-E-Amiloride 5 mg daily
295-D-Hypovolemic hypernatremia
296-B-Furosemide
297-C-Adding metolazone
298-C-Alfacalcidol
299-D- Nicorandil
300-B- Digoxin
301-E-Ramipril
302- E- Factor VIII
303-E- None of these
304-A- ACE Inhibitor induced angioedema
305-B- Tacrolimus
306-D-Ciclosporin
307-C- Labetalol
308-D- Ramipril
309-D- Mesnaifosfamide induced hemorrhagic cystitis
310-A- Verapamil
311-D- Bendroflumethiazide
312-D- 5-HT1D receptor agonist
313-B- Methotrexate
314-C- Ciprofloxacin
315-D- Decreased heart rate
316-E- Amphetamine induced psychosis
317-C- Commence IV Thiamine
318-E- Fluoxetine
319-A- Haloperidol
320-A- Fetal alcohol syndrome
321-A- Naltrexone
322-E- Maintaining abstinence from alcohol
323-B- Serotonin
324-B-Oral atypical antipsychotics
325-C-Lorazepam
326-C- Valproate
327-B- Risperidone
328-A- Dalteparin
329-E- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 2 months then isoniazid an rifampicin for further 4 months.
330-E- Initially rifampicin, isoniazid, ethambutol and pyrazinamide for 6 months
331-B- Tiotropium
332-C- Erythromycin
333-B- Pseudomonas aeruginosa
334-E- Streptomycin
335-A- Flucloxacillin
336-D- Prednisolone
337-B- IV magnesium sulphate
338-C-Trial of addition of long acting beta

339-B- Amoxicillin
340-A- Rinse out mouth after use
341-A- Ethambutol
343-D-Has been shown to improve pain and functional status of OA patients
344-B-Help trigger degradation of articular cartilage by cleaving peptide bonds in proteoglycans
345-B-Patient history, physical exam, and radiologic evaluation
346-E-All of the above
347-A-Block access of arachidonic acid to both COX-1 and COX-2 enzymes
348-E-a and b
349-B-Provide pain relief by the inhibition of prostaglandins
350-C-Is much safer to use for patients with compromised circulatory function
351-D-Are associated with hyperglycemia for patients without diabetes mellitus
352- A-Is made using recombinant technology
353-E-b and c
354-A-Nonselective NSAIDs used at analgesic doses, if the patient is not at high risk for GI bleeding
355-B-If there is disability and interference with daily functioning
356-C-Is most effective when used on an as needed basis
357-C-Osteoarthritis
358-E-Decreased purine metabolism
359-A-First metatarsophalangeal joint
360-B-Alkaline urine
361-D-Women are affected three times more often than men.
362-D-Serum cholesterol
363-C-Colchicine
364-B-Constipation
365-D-Naproxen
366-B-Sodium bicarbonate
367-E-Underexcretion of uric acid
368-A-They should be given twice a day.
369-C-It could lead to chronic urate nephropathy if left untreated.
370-B-Corticosteroids
371-D-Cyclophosphamide
372-C-Hydroxychloroquine
373-B-Musculoskeletal
374-D-D-penicillamine
375-A-Prednisone
376-A- Filtration
377-B- Proximal tubule
378-D- decreases, increases
379-C- PTH
380- A- analytical
381- A- Serum creatinine
382- D- Urine sodium
383- C- Albumin:creatinine ratio

384- D- Creatinine clearance
385- B- Estimate creatinine clearance using the CG equation.
386 -C- urinary Cystatin C
387- B- Renal plasma or blood flow
388- D- Postrenal AKI
389- A- Acute tubular necrosis
390- B- Serum creatinine and urine output
391- C- Failure
392-C- Neutrophil gelatinase-associated lipocalin
393- B- Sodium bicarbonate infusion
394- C- Dopamine
395- D- Decreased renal perfusion secondary to volume depletion
396- D- None of the above; supportive care is the mainstay of therapy
397- A- It is associated with fewer hypotensive episodes
398-C- Adding a thiazide diuretic
399- B- Hyperkalemia
400- D- Presence of electrolyte abnormalities
401- A- Increasing CRRT ultrafiltration rate will generally result in increased drug clearance.
402- A- Valsartan
403- B- Metabolic acidosis
404- C- Furosemide + metolazone
405- B- Sodium polystyrene sulfonate and dialysis
406- A- 35 kcal/kg (147 kJ/kg)
407- C- Phosphorus 6.0 mg/dL (1.94 mmol/L), serum bicarbonate 15 mEq/L (15 mmol/L)
408- C- Either oral or intravenous
409- A- Higher risk of mortality
410- D- 1000 mg administered in divided doses
411- D- No change is necessary based on Hb response after 1 week of epoetin alfa
412- A- Iron dextran
413- A- Abnormal calcium, phosphorus, PTH and vitamin D levels
414- C- Paricalcitol
415- D- Decrease in phosphorus and calcium
416- A- Lanthanum carbonate tablets
417- D- A decline in the glomerular filtration rate (GFR)
418- B- The offending agent is rarely identified
419- E-Acyclovir
420- A- Enhanced efferent arteriolar constriction
421- E-All of the above
422- C-Pamidronate
423- D- Acute tubular necrosis
424- A- Amifostine
425- B-Amifostine
426- C-Warfarin

427- B- It manifests as a gradual rise in serum creatinine 4 to 6 weeks after exposure to the drug.
428- D-Prednisone
429- B- Fever, eosinophilia, reduced intraglomerular pressure
430- E- Hemodynamically mediated kidney injury
431- E- All of the above
432- E-Hematuria
433- D- Dihydropyridine calcium channel blockers (eg, nifedipine, amlodipine-
434- B-Proteinuria
435- D- Both a and b
436- C- Membranous nephropathy
437- A- Minimal-change nephropathy
438- A- Steroid
439- C- Cyclosporine is often effective in preventing relapse
440- E- All a, b, and c above are correct
441- D- Both a and/or b may be used
442- E. Renal transplant
443- C- Immunoglobulin A nephropathy
444-B- Spontaneous remission is common and steroid treatment alone is not effective in reducing proteinuria and progression of disease
445-A- Observed closely without specific treatment
446- E- All of the above are commonly considered
447- A- Steroid
448- D- Lupus nephritis
449- E- All of the above
450- D- Both b and c
451- C-Montelukast
452- D-Vasodilation
453- A-Cytokines
454- D-Diphenhydramine
455- B-Levocabastine
456- C-Nasal steroids
457- C-Potential for abuse since it is a component in methamphetamine production
459- C-Swelling at the injection site
460- A-2 years
461- E-All of the above
462-E-all of the above
463- E-all of the above
464-D-Reduced aqueous production
465-C-Topical corticosteroids
466-B-Patients with normal intraocular pressures and with early glaucomatous field loss may not be left untreated and should be observed for disease progression
467- C-ß-Adrenergic blocker
468- D-All of the above
469- C-Valproic acid
470- B-Alefacept

471- C-Discontinue abruptly after a short 5-day course
472- E- Pinavarium
473- B-Diphenhydramine
474- A- anticoagulation
475 -E- warfarin
476- E- verapamil
477- C- Bisoprolol
478- B- glucose-6-phosphate dehydrogenase deficiency
479- D- Antithrombin deficiency
480- B- pyrimethamine
481- E-- Constricts peripheral blood vessels & dilates the bronchioles.
482- D-- Overcoming insufficiencies of the neutrally occurring hormone to suppress the immune reaction.
483- B- Peripheral edema.
484- A- 100 – 500 mg
485- A- Epinephrine & diphenhydramine.
486- C-Control of postpartum hemorrhage. .
487- B-Magnesium sulfate.
488- D-2 – 4 gm IV.
489- A-Diazepam.
490- A-Take a blood sample. .
491- C-- Brain.
492- B-- Ketoacidosis.
493- D-- Glucose cannot be pass in to the body's cells.
494- A- Who suffer from uncontrolled cardiac arrhythmia
495- D- 2 – 3L \ min.
496- C- Relaxing the bronchial smooth muscle.
497- D- I ,III & IV
498- D- All of the above.
499-C- 82 mg
500- D- Verapamil.
501- B- With CNS depression.

References

1-Pharmacology, pretest self-assessment & review .marshal shlafar 14th edition 2013
2-Pass medicine 2009
3-Clinical pharmacology and therapeutics: questions for self-assessment. timothy gk mant 2008. 3rd edition
4- Accp 2012 pharmacotherapy - mock exam
5- Harrison's internal medicine
principles of 15thedition. self-assessment and board review for use with the 15th edition of Harrison's principles of internal medicine edited by Richard m. stone, md.2001