

Current Diagnosis and Treatment Cardiology

Chapter 1

1. Exogenous metabolic pathway is the transportation of dietary lipids to the peripheral tissues and the _____.
 - a. Brain
 - b. Heart
 - c. Liver
 - d. Kidneys
2. HDL is synthesized mostly in the liver, but also in the _____.
 - a. Kidney
 - b. Pancreas
 - c. Intestines
 - d. Adrenal
3. What commonly results in dyslipidemia due to a decrease in hepatic LDL receptor activity and delayed clearance of LDL?
 - a. Hypothyroidism
 - b. Hyperthyroidism
 - c. Type 2 diabetes
 - d. Hypertriglyceridemia
4. Low _____ is an independent risk factor for increased cardiovascular disease and mortality.
 - a. HDL
 - b. LDL
 - c. Triglycerides
 - d. Lipid metabolism

Chapter 2

5. In recent years resistant hypertension has doubled to what percent?
 - a. 15%
 - b. 24%
 - c. 28%
 - d. 32%
6. Obstructive sleep apnea affects what percent of the U.S. population?
 - a. 10 – 20%
 - b. 21 – 28%
 - c. 29 – 36%
 - d. 37 – 45%
7. Treatment for hypertension includes sodium restriction less than _____g/day.
 - a. 0.5 – 1.0
 - b. 1.5 – 2.0
 - c. 2.5 – 3.0
 - d. 3.5 – 4.0

8. Which of the below are contraindications and side effects for nitroprusside?
- Renal failure
 - Headache
 - Cyanide toxicity
 - A & C

Chapter 3

9. What is the standard aspirin dosage recommendation for routine management of patients with stable angina?
- 75 mg
 - 81 mg
 - 75 – 162 mg
 - 325 mg
10. Which of the following are contraindications to P2Y12 receptor blockers?
- Active bleeding
 - Previous anaphylactic reaction
 - PVD
 - A & B
11. Dipyridamole in combination with aspirin is superior to aspirin alone in secondary prevention of stroke.
- True
 - False
12. What is the daily oral dosage for vorapaxar?
- 1.2 mg
 - 1.6 mg
 - 2.08 mg
 - 2.11 mg

Chapter 4

13. The ACT for unfractionated heparin (UFH) should be kept within what range?
- 50 – 100 seconds
 - 125 – 175 seconds
 - 200 – 225 seconds
 - 250 – 300 seconds or greater
14. Low-molecular- weight heparins **are not** a breakdown product of UFH.
- True
 - False
15. Vitamin K antagonists have been the mainstay for long-term oral anticoagulation for more than _____ years.
- 50
 - 55
 - 60
 - 65

16. What is the most feared complication of anticoagulant therapy?
- Intracranial hemorrhage
 - GI bleed
 - Heparin-induced thrombocytopenia
 - Hyperkalemia
17. What is the warfarin INR goal for bioprosthetic valves for the first 3 months after surgery?
- 1.0 – 1.5
 - 1.6 – 2.0
 - 2.0 – 3.0
 - > 3.0

Chapter 5

18. What is the most common type of dyspnea?
- Exertional dyspnea
 - Paroxysmal dyspnea
 - Orthopnea dyspnea
 - resting dyspnea
19. Atherosclerotic cardiovascular disease is the most common form of heart disease in industrialized nations.
- True
 - False
20. The first heart sound has two components in up to _____ of normal individuals.
- 30%
 - 40%
 - 50%
 - 60%
21. What are the most common tracers used in myocardial perfusion imaging?
- Thallium-201
 - Technetium-99m
 - Caesium-137
 - A&B

Chapter 6

22. Which of the following is not a predisposed risk factor for coronary heart disease?
- Abdominal obesity
 - Ethnic characteristics
 - Diabetes
 - Metabolic syndrome
23. C-reactive protein (CRP) values greater than _____ predict coronary events.
- 1mg/L
 - 2mg/L
 - 3mg/L
 - 4mg/L

24. What is the most frequently used diagnostic method for detecting myocardial ischemia?
- Echocardiogram
 - ECG
 - Cardiac CT
 - Stress test
25. Drug eluting stents have reduced the restenosis rate to what percentage?
- 3%
 - 7%
 - 10%
 - 12%

Chapter 7

26. What percent of patients with USA/NSTEMI present without chest pain?
- 26.2%
 - 31.3%
 - 39.4%
 - 43.6%
27. What percentage of patient undergoing angiography with unstable angina had left main disease?
- 5 – 10%
 - 10 – 15%
 - 15 – 20%
 - 20 – 25%
28. Patients with negative biomarkers within 6 hours of symptom onset need to have them remeasured within _____ hours?
- 2 – 4
 - 6 – 8
 - 8 – 10
 - 8 – 12

Chapter 8

29. How many people experience an MI in the United States each year?
- 1.0 million
 - 1.2 million
 - 1.4 million
 - 1.6 million
30. Total thrombotic occlusion occurs most commonly in distal coronary arteries.
- True
 - False
31. What are the definitive reperfusion therapies for STEMI?
- CABG
 - PCI
 - Fibrinolysis
 - B & C

32. What is the most serious complication of treatment with thrombolytic agents?

- a. Restenosis
- b. Seizure
- c. Intracranial bleeding
- d. Infarct

Chapter 9

33. What percentage of patients with cardiogenic shock do not survive to hospital discharge?

- a. 20%
- b. 30%
- c. 40%
- d. 50%

34. Right ventricular infarctions occur in approximately what percent of patients with inferior MIs?

- a. 30%
- b. 35%
- c. 40%
- d. 45%

35. What are the indications for use of an intra-aortic balloon pump?

- a. STEMI
- b. Cardiogenic shock
- c. Acute mitral regurgitation
- d. B & C

Chapter 10

36. Cardiac deaths account for what percent of all perioperative mortality?

- a. 35%
- b. 40%
- c. 45%
- d. 50%

37. What is the major cardiac complication rate for a patient in risk class IV?

- a. 5.4%
- b. 6.1%
- c. 6.6%
- d. 11.0%

38. What medications are a first line therapy to reduce perioperative morbidity and mortality?

- a. Beta blockers
- b. Statins
- c. Aspirin
- d. Clonidine

39. Moderate aortic stenosis has been associated with an adjusted relative risk of _____ for perioperative cardiac complications.

- a. 5.2
- b. 5.7
- c. 6.2
- d. 6.7

Chapter 11

40. Sinus node reentry accounts for what percentage of SVTs?
- 3%
 - 5%
 - 7%
 - 9%
41. Controlling the ventricular rate in atrial flutter is more difficult than in atrial fibrillation.
- True
 - False
42. What is the success rate for atrial tachycardia ablations?
- 42 – 53%
 - 55 – 62%
 - 73 – 85%
 - 77 – 100%
43. Which of the following pharmacologic therapies are effective in terminating atrioventricular nodal reentrant tachycardia (AVNRT)?
- Adenosine
 - Verapamil
 - Diltiazem
 - All the above

Chapter 12

44. What percent of the population over the age of 60 has sustained an episode of atrial fibrillation?
- 4%
 - 5%
 - 6%
 - 7%
45. What is the recurrence rate per year for drug therapy for the treatment of atrial fibrillation?
- 40%
 - 50%
 - 60%
 - 70%
46. What is the risk of CVA in patients with nonrheumatic atrial fibrillation?
- 1 – 2%
 - 3 – 5%
 - 4 – 7%
 - 8 – 10%
47. The mainstay of catheter ablation for atrial fibrillation is pulmonary vein isolation.
- True
 - False

Chapter 13

48. Which of the following are clinical manifestations of ventricular tachycardia (VT)?
- Ventricular fibrillation
 - Syncope
 - Wide QRS
 - All the above
49. What percent of VT episodes are idiopathic VT?
- 5 – 10%
 - 15 – 20%
 - 25 – 30%
 - 35 – 40%
50. What is the most common form of monomorphic ventricular tachycardia?
- Associated with chronic coronary artery disease
 - Associated with idiopathic dilated cardiomyopathy
 - Associated with arrhythmogenic right ventricular cardiomyopathy
 - Associated with congenital heart disease
51. Right ventricular outflow tract VT is more common in men than women.
- True
 - False
52. Which of the following is the most effective therapy for preventing sudden cardiac death (SCD) in patients with VT?
- Surgical ablation
 - Catheter ablation
 - ICD
 - Medication therapy

Chapter 14

53. Sinus bradycardia is a sinus rate of less than _____ bpm.
- 70
 - 65
 - 60
 - 55
54. First-degree atrioventricular (AV) block is characterized by a prolonged PR interval that exceeds _____ ms.
- 185
 - 190
 - 195
 - 200
55. What is the typical successful capture rate for temporary transmyocardial pacing?
- 11 – 30%
 - 12 – 35%
 - 21 – 40%
 - 25 – 53%

Chapter 15

56. How many people in the United States die suddenly each year from some form of cardiovascular disease?
- 300,000
 - 350,000
 - 400,000
 - 450,000
57. Nonischemic dilated cardiomyopathy is the primary diagnosis in what percent of patients who have been resuscitated after cardiac arrest?
- 5%
 - 7%
 - 9%
 - 10%
58. Which of the following is the most common cause of cardiac arrest and sudden death?
- Supraventricular arrhythmias
 - Ventricular tachycardia
 - Ventricular fibrillation
 - B & C
59. What year was the first ICD implanted for clinical use?
- 1980
 - 1982
 - 1984
 - 1986

Chapter 16

60. What is the lifetime cumulative incidence of syncope?
- $\geq 30\%$
 - $\geq 35\%$
 - $\geq 40\%$
 - $\geq 45\%$
61. What is the prevalence of reflex-mediated vasovagal syncope in loss of consciousness?
- 14%
 - 15%
 - 18%
 - 20%
62. What is the main challenge in assessing syncope patients?
- Determining type of syncope
 - Defining risk of recurrence
 - Promptly identifying subjects at risk of sudden cardiac death
 - B & C
63. The prognosis for untreated cardiac syncope mortality can be _____ at 6 months.
- $> 7\%$
 - $> 8\%$
 - $> 9\%$
 - $> 10\%$

Chapter 17

64. What is the transaortic jet velocity of a patient with severe aortic stenosis?
- < 2.0
 - 2.0 – 2.9
 - 3.0 – 3.9
 - ≥ 4.0
65. Which of the following is an indicator of low EF area-gradient mismatch?
- Effective orifice area < 1.0 cm²
 - Left ventricular EF < 45%
 - Mean gradient < 30 – 40 mm Hg
 - All the above
66. What percentage of patients with aortic stenosis and heart failure will die within 2 years without valve replacement?
- 50%
 - 55%
 - 60%
 - 65%
67. The multidisciplinary approach and the TAVR heart team has been one of the greatest collaborative successes in the field of cardiovascular diseases.
- True
 - False

Chapter 18

68. Which of the following is a description of the De-Musset sign of aortic regurgitation?
- To and from head bobbing
 - Visible pulsation of the uvula
 - Capillary pulsations seen on light compression of the nail bed
 - Bruits heard over femoral artery on light compression by stethoscope
69. What is the imaging method of choice for evaluating patients with aortic regurgitation (AR)?
- Cardiac catheterization
 - Echocardiography
 - CT
 - MRI
70. A regurgitant fraction greater than _____ denotes severe AR.
- 30%
 - 40%
 - 50%
 - 60%
71. Aortic valve replacement is recommended in patients with chronic severe AR and left ventricular ejection fraction of _____.
- 50%
 - 55%
 - 60%
 - 65%

Chapter 19

72. Mitral stenosis accounts for what percentage of native valve pathology?
- 5%
 - 7%
 - 10%
 - 12%
73. What percentage of mitral stenosis cases are associated with rheumatic fever or rheumatic heart disease?
- 75%
 - 80%
 - 85%
 - 90%
74. What is a classic symptom of mitral stenosis?
- Dyspnea
 - Fatigue
 - Hypertension
 - A & B
75. What is the mortality rate for surgical commissurotomy in isolated mitral valve repair or replacement?
- 0.5 – 1.5%
 - 1.75 – 3.0%
 - 2.0 – 3.5%
 - 2.0 – 5.0%

Chapter 20

76. Degenerative mitral regurgitation is also called what?
- Primary
 - Secondary
 - Functional
 - A & C
77. Which of the following is a possible medical history of chronic mitral regurgitation?
- Acute rheumatic fever
 - Coronary artery disease
 - Cardiomyopathy
 - All the above
78. Color-flow Doppler of a systolic regurgitant jet across the mitral valve into the left atrium is diagnostic of mitral regurgitation.
- True
 - False
79. A clinical indicator for the need for tricuspid valve repair or replacement is a mean right atrial pressure of more than ____ mm Hg.
- 13
 - 14
 - 15
 - 16

80. What is the estimated life span of a bioprosthetic valve?

- a. 5 – 8 years
- b. 10 – 15 years
- c. 17 – 20 years
- d. 22 – 25 years

Chapter 21

81. Tricuspid valve prolapse seen in patients with mitral valve prolapse occurs in what percent of cases?

- a. 45%
- b. 50%
- c. 55%
- d. 60%

82. Tricuspid valve disease **is not** difficult to clinically recognize.

- a. True
- b. False

83. A valve orifice area of _____ is considered consistent with severe tricuspid stenosis.

- a. > 180 ms
- b. > 185 ms
- c. > 190 ms
- d. > 195 ms

84. Which of the following are indications for surgery for patients with tricuspid valve endocarditis?

- a. Apnea
- b. Uncontrollable infection
- c. Septic emboli
- d. B & C

85. What percent of pulmonic stenosis is due to a congenital disorder?

- a. 75%
- b. 80%
- c. 85%
- d. 95%

86. Balloon valvotomy is recommended if the RV-to-pulmonary artery peek-to-peek gradient is greater than what?

- a. 20 mm Hg
- b. 25 mm Hg
- c. 30 mm Hg
- d. 35 mm Hg

Chapter 22

87. What valve has vegetations that are typically attached within 1-2 cm of the leaflet tip on the left side?

- a. Aortic
- b. Mitral
- c. Tricuspid
- d. Pulmonic

88. Which of the following **is not** a characteristic of acute endocarditis?
- a. Shaking chills
 - b. Fever
 - c. Normal gamma globulins
 - d. Weight loss
89. *S aureus* accounts for _____ of all cases of endocarditis in the developed world.
- a. One eighth
 - b. One fourth
 - c. One third
 - d. One half
90. *S aureus* causes valve destruction in approximately what percentage of left-sided cases?
- a. 30%
 - b. 32%
 - c. 34%
 - d. 36%
91. What is the mortality rate of pacemaker endocarditis?
- a. 25%
 - b. 27%
 - c. 30%
 - d. 33%

Chapter 23

92. How many people in the United States have hypertrophic cardiomyopathy (HCM)?
- a. 700,000
 - b. 750,000
 - c. 800,000
 - d. 850,000
93. What is the success rate of surgical septal myectomy to relieve HCM outflow obstruction?
- a. 95%
 - b. 96%
 - c. 97%
 - d. 98%

Chapter 24

94. What percent of primary restrictive cardiomyopathy (RCM) may be due to hereditary contractile protein mutations?
- a. 40%
 - b. 45%
 - c. 50%
 - d. 55%

Chapter 25

95. What percent of patients with myocarditis will progress to dilated cardiomyopathy (DCM)?
- 30%
 - 32%
 - 34%
 - 35%
96. Toxic cardiomyopathy develops as a result of exposure to which of the following?
- Illicit drugs
 - Alcohol
 - Chemotherapy drugs
 - B & C

Chapter 26

97. What is the 5-year mortality after a heart failure diagnosis?
- 45%
 - 50%
 - 55%
 - 60%
98. During physical examination of patients with systolic HF there is evidence of which of the following symptoms?
- Diaphoresis
 - Pallor
 - Peripheral cyanosis
 - All the above

Chapter 27

99. What percentage of patients have elevated pulmonary artery systolic pressure (PASP) on echocardiography?
- 75%
 - 78%
 - 82%
 - 85%
100. What is the most important risk factor for heart failure with preserved ejection fraction?
- Age
 - Hypertension
 - Obstructive sleep apnea
 - Coronary artery stenosis

Chapter 28

101. What is the most common cause of pericardial disease?
- Bacteria
 - Fungus
 - Virus
 - Parasite

102. The cornerstone therapy for pericardial fluid is drainage.

- a. True
- b. False

Chapter 29

103. Which of the following **is not** a common risk factor for VTE?

- a. Factor V Leiden
- b. Protein C deficiency
- c. Prothrombin gene mutation
- d. Hyperhomocysteinemia

104. Which of the following is the first choice for anticoagulation for acute PE?

- a. Low-molecular weight heparin
- b. Unfractionated heparin
- c. Coumadin
- d. Fondaparinux

Chapter 30

105. What diagnostic test is considered the gold standard to diagnosis pulmonary hypertension (PH)?

- a. ECG
- b. Pulmonary function test
- c. Right heart catheterization
- d. Lung biopsy

106. What is the 6-month survival prognosis for a patient with PH and interstitial lung disease?

- a. 38%
- b. 40%
- c. 42%
- d. 45%

Chapter 31

107. Congenital aortic stenosis constitutes what percentage of all forms of congenital heart disease?

- a. 5%
- b. 6%
- c. 7%
- d. 8%

108. What is the average life expectancy for severe untreated pulmonary valve stenosis?

- a. 20 years
- b. 25 years
- c. 30 years
- d. 35 years

Chapter 32

109. Approximately 50% of all primary cardiac tumors are _____.
- Fibromas
 - Teratomas
 - Papillary fibroelastomas
 - Myxomas
110. What is the most common malignant tumor of the heart?
- Sarcoma
 - Lymphoma
 - Malignant fibrosis histiocytoma
 - Lipoma

Chapter 33

111. Which of the following high-risk conditions have a 50% risk of inheriting the syndrome and warrant advice against pregnancy?
- Eisenmenger syndrome
 - Marfan syndrome
 - Loeys-Dietz syndrome
 - B & C
112. Hypertension is responsible for what percentage of maternal deaths in the United States?
- 18%
 - 20%
 - 22%
 - 24%

Chapter 34

113. What is the most common cause of hypothyroidism in the United States?
- Iodine deficiency
 - Thyroid hormone resistance
 - Hashimoto thyroiditis
 - Infiltrative diseases
114. Parathyroidectomy **is not** a difficult surgery.
- True
 - False

Chapter 35

115. What disease is clinically the most important and frequent of systemic lupus erythematosus (SLE)?
- Valvular heart disease
 - Myocarditis
 - Cardiomegaly
 - Cardiac arrhythmias
116. Deep venous thrombosis, pulmonary embolism and peripheral or cerebral thrombosis **are not** common in SLE patients.
- True
 - False

Chapter 36

117. In the United States, what is the most common cause of sudden cardiac death in athletes younger than 35 years of age?
- Myocarditis
 - Aortic rupture
 - Hypertrophic cardiomyopathy
 - Coronary artery disease
118. Which of the following ECG findings common in athletes is not a cause for concern if the athlete is asymptomatic?
- Bradycardia as low as 30 bpm
 - Sinoatrial block
 - Prolonged PR interval up to 300ms
 - All the above

Chapter 37

119. What is the overall survival rate for ascending aortic aneurysm repair at experienced centers?
- 80%
 - 85%
 - 90%
 - 95%
120. The subacute and chronic stages of aortic dissection are managed differently from acute dissection.
- True
 - False