



CARDIOLOGY

Goals The goal of the Cardiology rotation is to provide learning opportunities that will enable osteopathic medical students to develop or refine the knowledge, skills, and attitudes necessary to:

1. Identify the diagnostic criteria and principles of management for the most common cardiovascular disorders.
2. Understand the benefits, limitations, and appropriateness of cardiovascular diagnostic studies, including Echo, ETT, Cardiac catheterization, Holter monitoring, Stress electrocardiography).
3. Competently interpret EKG's

Objectives Upon completion of this rotation, student will demonstrate understanding of:

1. How to conduct a complete cardiovascular history and cardiac centered physical examination.
2. The changes in cardiovascular physiology with age.
3. The risk factors for coronary artery disease and the interventions necessary to correct them.
4. Indications for the following examinations:
 - a. Electrocardiography
 - b. Chest X-ray
 - c. Stress testing (including treadmill/bicycle and pharmacological techniques)
 - d. Echocardiography imaging (both rest and stress using treadmill/bicycle or pharmacologic techniques)
 - e. Radioisotope imaging (both rest and stress using treadmill/bicycle or
 - f. Pharmacologic techniques)
 - g. ECG monitoring (in hospital and ambulatory)
 - h. Vascular doppler and ultrasound examinations
5. Indications and complications of the following:
 - a. Diagnostic cardiac catheterization and angiography
 - b. Intracoronary and peripheral vascular intervention using appropriate devices
 - c. Diagnostic carotid and peripheral vascular angiography
 - d. Internal monitoring devices (central venous and peripheral arterial)
 - e. Electrophysiologic studies
6. Indications and contraindications of the following therapeutic interventions:
 - a. Coronary artery bypass
 - b. Stenting
 - c. Angioplasty
 - d. Pacemaker insertion
 - e. Valve replacement or repair, percutaneous balloon valvotomy
 - f. Electrophysiologic ablation
7. Laboratory interpretation of the following:
 - a. Cardiac enzymes
 - b. Lipids

8. The following specific diseases/conditions:
 - a. Coronary artery disease
 - Stable/unstable angina
 - Myocardial infarction with and without complications
 - Sudden death
 - b. Syncope
 - c. Arrhythmias (tachyarrhythmias and bradyarrhythmias)
 - Supraventricular tachycardia, atrial fibrillation, and atrial flutter
 - Ventricular fibrillation and tachycardia, Torsades des pointes
 - d. Hypertension
 - e. Cor Pulmonale
 - f. Congestive heart failure (systolic and diastolic dysfunction)
 - g. Thromboembolic disease
 - h. Congenital heart disease
 - i. Dissecting aneurysm
 - j. Innocent vs significant heart murmurs
 - k. Peripheral vascular disease
 - l. Cardiomyopathies
 - m. Pericardial disease
 - n. Evaluation of cardiac patient for non-cardiac surgery
 - o. Antibiotic prophylaxis for and management of valvular disease
 - Aortic stenosis and Aortic insufficiency
 - Pulsus Paradoxicus
 - Mitral valve Prolapse
 - Mitral valve regurgitation
9. Develop the basic skills to perform the following:
 - a. A focused cardiology exam
 - b. Recognizing cardiac risk factors and the interventions necessary to correct them
 - c. Identify the importance of a fixed split S2, diminished S1
 - d. Performing and interpreting EKG's
 - e. Acute MI protocol
 - f. ACLS
 - g. Use of common cardiac medications
 - h. Interpret cardiac enzymes
 - i. The cardiac history and physical for surgery clearance
10. Demonstrate understanding of the following techniques and procedures:
 - a. 2 D Echo
 - b. Stress Echo
 - c. TEE
 - d. Cardiac stress testing
 - e. Cardiac catheterization
 - f. Cardioversion
 - g. Pacers
11. Effectively integrate osteopathic philosophies and clinical skills in the practice of cardiology by
 - a. Assuring the patient is considered as the whole person and each system that may be affected by cardiac disease

- b. Understanding and treating the psychosocial impact of chronic disease
- c. Utilize Chapman's points for diagnosis and treatment that relate to cardiovascular disease
- d. Identify the T1-T4 components of the cardiac system as it relates to abnormalities that may occur within the system in relation to both diagnosis and treatment.