

## **RESPONSIBILITIES OF CARDIOLOGY FELLOWS DURING GRAPHICS AND NUCLEAR IMAGING ROTATION**

**Locations:** Nuclear Stress Lab, 9<sup>th</sup> floor Nuclear Medicine (West Pavilion) and Washington University Heart Care Institute in South County.

**Directors:** Philip Barger, Robert Kleiger, Sudhir Jain, and Robert Gropler

### **Objectives:**

1. Basic and advanced ECG interpretation.
2. Interpretation of ambulatory ECGs (Holter) and blood pressure monitoring tests.
3. Monitoring and interpretation of exercise and pharmacologic stress tests.
4. Develop a basic understanding of image acquisition and interpretation of nuclear cardiology studies.

### **Description:**

The graphics rotations provide fellows the opportunity to develop skills in ECG interpretation at both the basic and advanced levels. Fellows will develop an in-depth understanding of the performance and interpretation of exercise-and-pharmacologic stress tests, and participate in the diagnosis and management of complications of stress testing, including arrhythmias, early onset myocardial injury, hypo-and hypertensive responses. Fellows are encouraged to attend the daily 8:30 am Nuclear Medicine conferences on the 9<sup>th</sup> floor West Pavilion especially when topics pertaining to nuclear cardiology are discussed (the conference schedule can be obtained from Andrea M Sykes, [sykesa@mir.wustl.edu](mailto:sykesa@mir.wustl.edu), 362-1474).

During the 3 year fellowship training period, trainees will:

1. Interpret a minimum of 3500 ECGs
2. Interpret a minimum of 150 ambulatory ECG monitors
3. Interpret a minimum of 200 exercise or pharmacologic ECGs

### **1st Year Fellow:**

During this rotation fellow responsibilities include:

1. ECG interpretation 5 mornings per week with Dr. Kleiger (**Fellow is to contact Dr. Kleiger to arrange days and times by calling Marge Leaders (mleaders@dom.wustl.edu) at 454-8146.**) Fellows should plan to meet with Dr. Kleiger between 8:30 am and 10:30 am.
2. When not reading with Dr. Kleiger, fellows should report each morning to the Nuclear Stress Lab, 9th floor Nuclear Medicine to read ECGs (responsibilities also include interpretation of ambulatory monitors, 30 day event monitors, interpretation the ECG portion of stress tests).
3. The fellow will read Holter monitors twice weekly with either Dr. Barger or Dr. Schwartz. Monitor reports are picked up in the CDL. The fellow will arrange a reading schedule with Dr. Barger or Dr. Schwartz on a weekly basis.
4. The fellow will report to the nuclear cardiology reading room each afternoon by 1 PM. There they will meet with the 3<sup>rd</sup> year Cardiology Fellow to review the reading schedule. They will participate in the reading session of cases for the day over the course of the afternoon.

### **2<sup>nd</sup> Year Fellow:**

The majority of the second year graphics rotation will take place at the Washington University Heart Care Institute in South County under the supervision of **Dr. Sudhir Jain**. Stress tests are performed on Tuesdays, Thursday and Fridays. Fellows will also participate in **Angela Brown's Hypertension Clinic during this rotation (please determine day with Dr. Brown, pager: 424-5046; email albrown@dom.wustl.edu)**.

In addition to ECG interpretation, during this rotation fellow responsibilities include:

1. Two days of observing procedures related to set-up, quality control and image acquisition by gamma cameras.
2. Interpretation of the imaging portion of nuclear cardiology studies.
3. Documentation of the completion of these tasks.

**Suggested Reading:**

1. Ellestad: Stress Testing: Principals and Practice, Edition 5. Oxford University Press, 2003.
2. Wasserman et al.: Principles of Exercise Testing and Interpretation: Including Pathophysiology and Clinical Applications, Fourth Edition. 2004. Lippincott, Williams and Wilkins
3. 2010 ACCF/AHA Guideline for Assessment of Cardiovascular Risk in Asymptomatic Adults: Full Text
4. 2010 AHA Clinician's Guide to Cardiopulmonary Exercise Testing in Adults
5. ACCF/ASNC/ACR/AHA/ASE/SCCT/SCMR/SNM 2009 Appropriate Use Criteria for Cardiac Radionuclide Imaging
6. AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram  
Part I: The Electrocardiogram and Its Technology  
Part II: Electrocardiography Diagnostic Statement List  
Part III: Intraventricular Conduction Disturbances  
Part IV: The ST Segment, T and U Waves, and the QT Interval  
Part V: Electrocardiogram Changes Associated With Cardiac Chamber Hypertrophy  
Part VI: Acute Ischemia/Infarction
7. Marla: Cardiac Stress Testing and Imaging. Churchill Livingstone, 1996.
8. Wackers: Nuclear Cardiology: The Basics. Emana Press, 2004.
9. Heller: Nuclear Cardiology: Practical Applications. McGraw-Hill, 2004.

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