



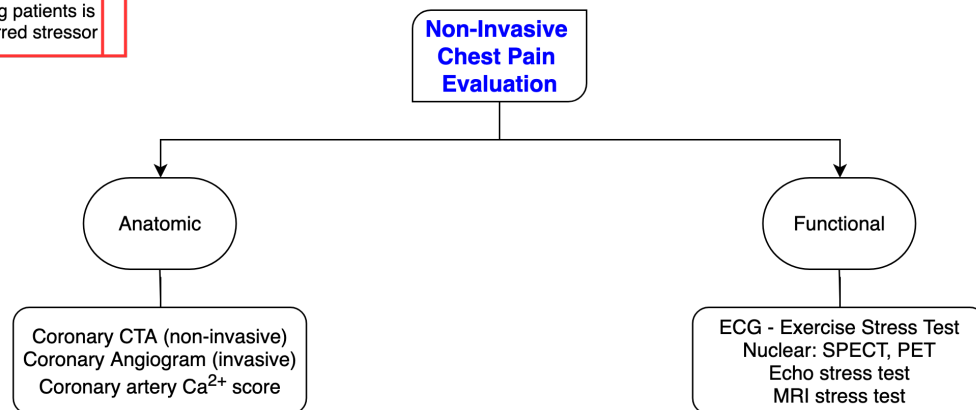
Non-Invasive Evaluation of Chest Pain

Handout compiled by Moses Murdock (@haematognomist)
Discussant: Dr. Sanjay Divakaran



1. Bayes' Theorem: In patients at extremes of pre-test probability (very high or low), diagnostic testing may not affect clinical management. Testing can change management for those at intermediate risk.
 - In coronary artery disease (CAD), intermediate risk range is broad in American cardiology guidelines, 10 – 90%
 - Diamond-Forrester: character of pain, sex, age
 - [CAD consortium](#): character of pain, sex, age, clinical factors
2. What question are we trying to answer? For example:
 - For my patient with no known CAD, are his/her symptoms due to flow-limiting CAD?
 - For my patient with known CAD, are the return of his/her anginal symptoms from flow-limiting CAD, and if so, in what myocardial territory is the ischemia?
 - In asymptomatic severe aortic stenosis, is the patient truly asymptomatic with exercise?

Pearl: If it is safe, exercising patients is the preferred stressor



3. Deciding between tests:
 - Anatomic:
 - In lower-intermediate risk patients, coronary CTA can help in guiding nuanced discussions of risk-factor modification as non-obstructive plaque can be visualized
 - In a young patient with typical angina, coronary CTA may be useful to rule out an anomalous coronary artery with a malignant course as the cause of symptoms
 - Functional: what's the visualization?
 - Abnormal ECG at baseline (LBBB, ST changes etc.) – ETT-ECG will be non-diagnostic
 - Visualize myocardium, known CAD diagnosis – nuclear, echo, or MRI
4. Things to think about when interpreting the report:
 - How much did the patient exercise? Did the patient have symptoms during the stress test? Was there evidence of ischemia?
5. Counseling patients: when to come back. If pain is worse, changes in quality, occurs at lower exercise thresholds, or occurs at rest.