Jessica Rando, R2
CAT 1 Due block 3
Academic Emergency Medicine

Article: Korley, F., Schulman, S. et al. Troponin Elevations Only Detected With a High-sensitivity Assay: Clinical Correlations and Prognostic Significance. Academic Emergency Medicine. July 2014. 21:7. 728-735.
Clinical Question: What implications does the use of the high-sensitivity troponin have when it comes to patient management?
Introduction: Many hospitals are now utilizing a high-sensitivity troponin (hsTnI) assay. Invariably, this means more patients will have elevated troponins. This study sought to quantify the prevalence of elevated hsTnI in patients presenting with chest pain who did not have elevated troponin utilizing the non-high-sensitivity assay (cTnI) and the impact of the elevation on all-cause mortality.
Methods: This was a prospective observational study of 808 patients evaluated for chest pain and followed for up to 1 year. Outcomes looked at patients hospitalized for ACS, revascularization, acute heart failure, or arrhythmia.
Results: 40 (5%) of patients were eventually diagnosed with ACS. On the initial sample, hsTnI elevation without cTnI elevation was 9.2%. Other patients that had high hsTnI but normal cTnI included: 3 (4.6%) ACS, 15 (23.1%) AHF, 3 (4.6%) volume overload etiology unclear/noncardiac, 3 (4.6%) cardiac non-ACS, and 41 (63.1%) other. Subjects with elevated hsTnI but normal cTnI had a higher risk of all-cause mortality and subsequent cardiac hospitalization.
Discussion: hsTnI may have a fair amount of false positives but it can be used when deciding dispo on a patient when you take into account the fact that it is associated with higher risk for all-cause mortality. Furthermore, it caught 3 ACS patients prior to the cTnI did so that could mean more timely care for those individuals. Limitations included patients lost to follow up (52), diagnostic eval differed depending on ER provider, prevalence of ACS in the urban population was low, and you need to account for differences in their labs vs the labs we use.