

Stress Test Algorithm Flow Chart

Patient presents with symptoms where a stress test is deemed appropriate to assess for coronary artery disease

Regular Stress Test

- Normal baseline EKG – no LBBB, nor LVH with repolarization abnormalities
- Low risk/degree of suspicion
- Without known CAD or other severe systemic illness
- Able to exercise to achieve target heart rate (THR) $220 - \text{age} / 85\%$ which is 85% age predicted
- Beta blocker/Calcium Channel blocker can be held for 24 hours if deemed safe

If the patient unable to qualify for a Regular Stress Test or Stress Echo, then:

Nuclear Perfusion Stress Test

- Preferred for higher risk patients
- Preferred in women
- Normal baseline EKG
- Able to exercise to achieve THR ($220 - \text{age} / 85\%$)
- Hold beta-blocker for 24 hours if deemed safe
- CT shows coronary artery calcification
- Can be converted to Regadenoson (Lexiscan) easily if THR not achieved
- All nuclear studies should be prepped as regadenoson

If cannot qualify for Nuclear Perfusion Stress test, then:

Regadenoson (Lexiscan) Nuclear Perfusion Stress test

- Abnormal resting EKG, such as LBBB, paced
- Inability to exercise to achieve THR, such as elderly, fall risk, COPD, etc.
- Regadenoson is a vasodilator, no need to hold beta blocker
- No caffeine for 12 hours prior, including medications such as Excedrine migraine
- Aggrenox, dipyridamole, theophylline must be held for 48 hours prior to study
- Caution in patients with asthma or wheezing
- Contraindications with hypotension, sick sinus syndrome, heart block, active or uncontrolled seizure disorder.

Stress ECHO

- Assess Wall Motion + ECG for ischemia
- Must be able to exercise and achieve THR
- Test is limited by body habitus or pulmonary expansion, such as COPD
- If previous ECHO is described as “limited,” so will the Stress ECHO
- No LBBB or paced rhythms or with pts who have previous MI with known wall motion defect.

Dobutamine Stress ECHO or Nuclear Perfusion Scan

- Inotropic and Chronotropic effects
- Proarrhythmic – contraindicated with history of ventricular tachycardia or atrial fibrillation
- Beta blockers should be held for 24 hours
- Consider in patients with severe reactive airway disease who are at risk for exacerbation with regadenoson