

# Chest Pain: Suspected Cardiac or STEMI

### History

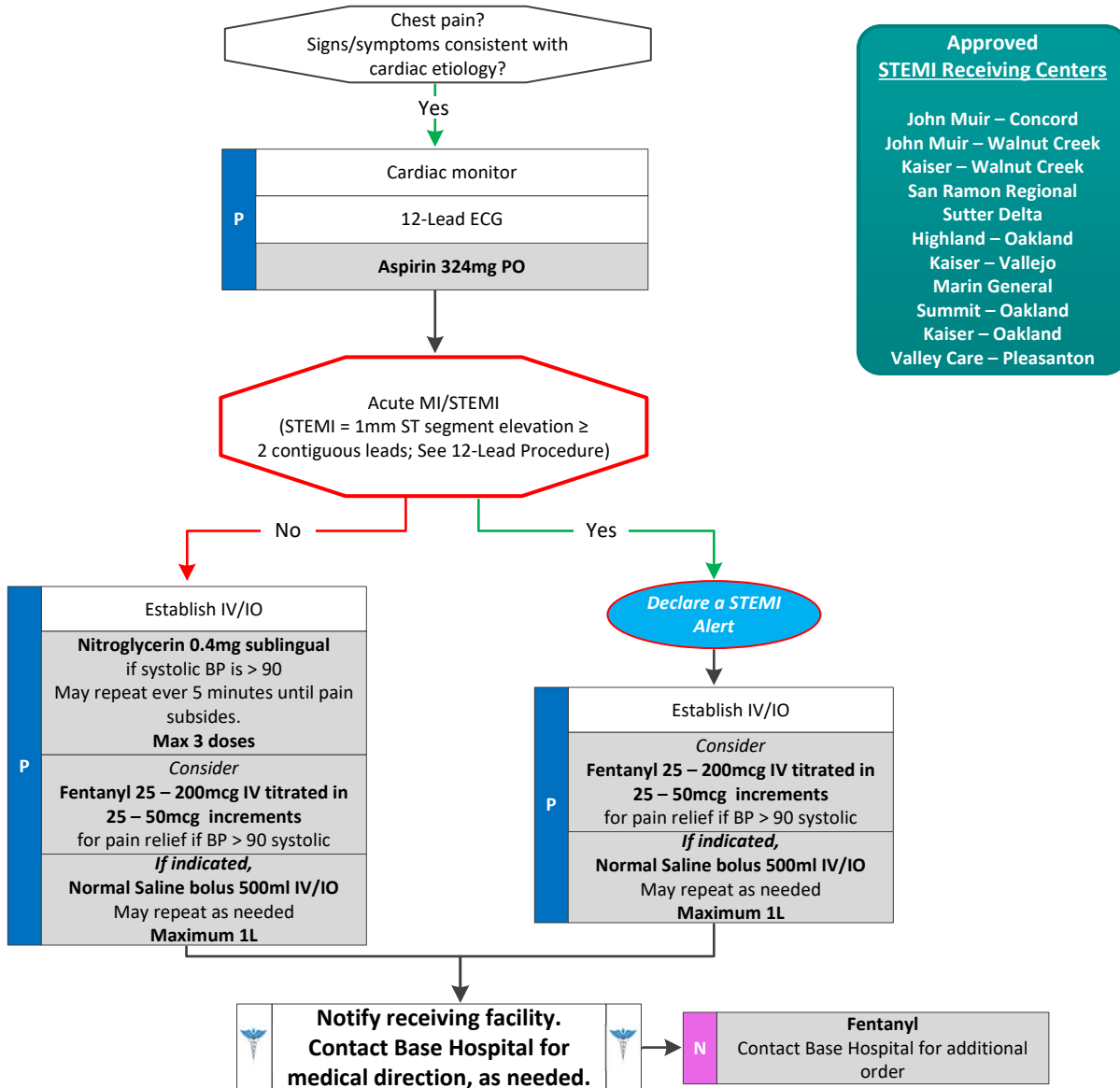
- Age
- Medications (e.g. Viagra, Sildenafil, Levitra, Vardenafil, Cialis or Tadalafil)
- Past medical history (e.g. MI, angina, diabetes, or post menopausal)
- Allergies
- Recent physical exertion
- Provocation
- Quality (e.g. pressure, constant, sharp, dull, etc.)
- Region/Radiation/Referred
- Severity (0 – 10 scale)
- Time (onset/duration/repetition)

### Signs and Symptoms

- Heart rate < 60 with associated hypotension, acute altered mental status, chest pain, acute CHF, seizures, syncope, or shock secondary to bradycardia
- Chest pain
- Respiratory distress
- Hypotension or shock
- Altered mental status
- Syncope

### Differential

- Acute myocardial infarction
- Hypoxia
- Pacemaker failure
- Hypothermia
- Sinus bradycardia
- Athletes
- Head injury (elevated ICP) or stroke
- Spinal cord lesion
- Sick sinus syndrome
- AV blocks (e.g. 1°, 2°, or 3°)
- Overdose

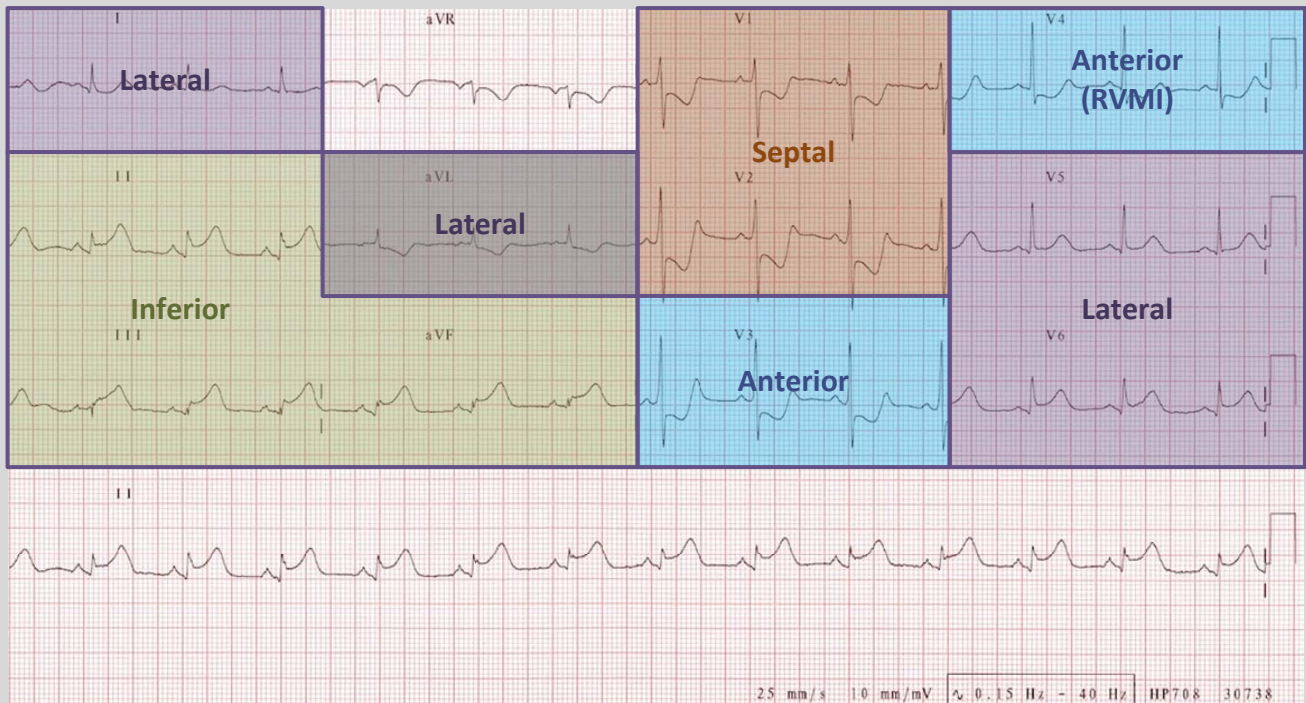


- Approved STEMI Receiving Centers**
- John Muir – Concord
  - John Muir – Walnut Creek
  - Kaiser – Walnut Creek
  - San Ramon Regional
  - Sutter Delta
  - Highland – Oakland
  - Kaiser – Vallejo
  - Marin General
  - Summit – Oakland
  - Kaiser – Oakland
  - Valley Care – Pleasanton

Adult Cardiac Treatment Guidelines



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- ST Elevation in 2 or more leads: Leads II, III, aVF → Inferior wall MI (vessel likely RCA or LCx)
- ST Elevation in 2 or more leads: Leads I, aVL, V<sub>5</sub>, V<sub>6</sub> → Lateral wall MI (vessel likely LCx or LAD branch)
- ST Elevation in 2 or more leads: Leads V<sub>1</sub>, V<sub>2</sub> → Septal wall MI (vessel likely LCx or LAD branch)
- ST Elevation in 2 or more leads: Leads V<sub>3</sub>, V<sub>4</sub> → Anterior wall MI (vessel likely LCx or LAD branch)

\*\*Look for ST DEPRESSION in reciprocal leads (opposite wall) to confirm diagnosis.

\*\*Isolated ST elevation in aVR with ST depression in all other leads should raise suspicion for a proximal LAD Artery injury or Left Main Coronary Artery abnormality. This is not STEMI criteria, but the 12-Lead ECG should be transmitted to the ED for consultation. Consider transport to a STEMI receiving center.

### Pearls

- Avoid Nitroglycerin in any patient who has used Viagra (Sildenafil) or Levitra (Vardenafil) in the past 24 hours or Cialis (Tadalafil) in the past 36 hours due to the potential of severe hypotension.
- Patients with a STEMI should be transported to the closest most appropriate STEMI receiving center.
- Many STEMIs evolve during prehospital care and may not be noted on the initial 12-Lead ECG.
- An ECG should be obtained prior to treatment for bradycardia if patient condition permits.
- Transmit all 12-Lead ECGs whether STEMI is detected or not.
- If a patient has taken their own Nitroglycerin without relief, consider potency of medication. Provider maximum doses do not include patient administered doses.
- Monitor for hypotension after administration of nitroglycerin and opioids.
- Diabetics, geriatric, and female patients often have atypical pain, or only generalized complaints. Suspect cardiac etiology in these patients, and perform a 12-Lead ECG.
- Document the time of the 12-Lead ECG in the EHR as a procedure along with the interpretation.

