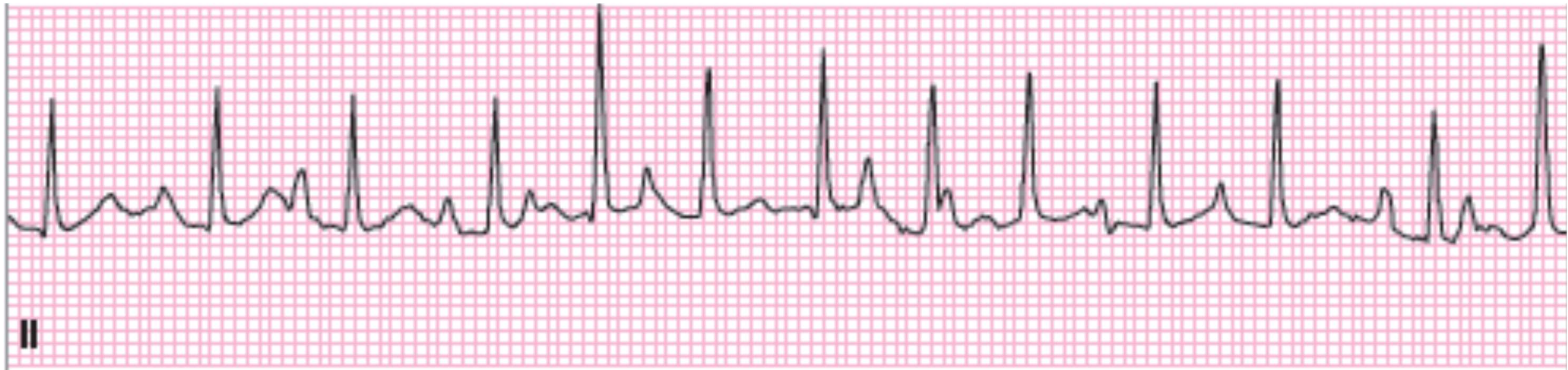
• Multifocal Atrial tachycardia (MAT)



- Atrial rate > 100 BPM
- Ectopic P waves with ≥ 3 morphologies (each originating from a separate atrial focus)

  Tall upright and/or inverted ectopic P waves may be present in lead II and V1, respectively, but should not be coded as right or left atrial enlargement, which requires the presence of sinus rhythm.

- Varying PP and PR intervals
- P waves may be blocked (i.e., not followed by a QRS complex), or may be conducted with a narrow or wide QRS complex (if underlying BBB or aberrancy)

MAT may be confused with:

- Sinus tachycardia with multifocal APCs, which demonstrates one dominant atrial pacemaker (i.e., the sinus node). In contrast, in MAT *no* dominant atrial pacemaker (i.e., no dominant P wave morphology) is present.
- AFIB/flutter, in which there is lack of an isoelectric baseline. In contrast, MAT demonstrates a distinct isoelectric baseline and P waves.

MAT usually associated with some form of lung disease. Etiologies include:

- COPD/pneumonia
- Cor pulmonale
- Aminophylline therapy
- Hypoxia
- Heart disease
- Heart failure
- Post-operative state
- Sepsis
- Pulmonary edema