

Step wise 4 lead interpretation

1. Is electrical activity present?
2. What is the ventricular QRS rate?
60-100 Normal, < 40 Absolute Bradycardia
3. Is the QRS regular, regularly irregular or irregularly irregular?
4. Is the QRS Wide or Narrow? > 3 small squares
5. Is atrial P wave activity present?
 - a. Relationship between other P waves?
 - b. Relationship between QRS?
 - i. PR interval?
 - ii. Associated?
 - iii. Disassociated?
 - iv. Wandering?
6. P waves before every QRS?
7. QRS after every P wave?

Tachycardia

Sinus 'Normal' rhythm above 100 bpm

SVT Excess Atrial to SA impulses → narrow complex. Can reach 300 bpm. [Attempt vagal manoeuvres](#) → cardioversion.

VT Broad complex tachycardia. Monomorphology (common) or Polimorphology (Torsades).
Decreased CO → ↓ ♥ perfusion → VF.
[Shock if pulseless.](#)

Consider broad complex tachycardias (BCT) as VT first!

VT accounts for 80% of cases of BCT and 95% of cases of BCT in patients with structural ♥ disease. ^[1]

I Lateral Circumflex Artery	aVR	V1 Septal Left Anterior Descending Artery	V4 Anterior Right Coronary Artery
II Inferior Right Coronary Artery	aVL Lateral Circumflex Artery	V2 Septal Left Anterior Descending Artery	V5 Lateral Circumflex Artery
III Inferior Right Coronary Artery	aVF Inferior Right Coronary Artery	V3 Anterior Right Coronary Artery	V6 Lateral Circumflex Artery

References

[1] <http://lifeinthefastlane.com/ecg-exigency-004/>

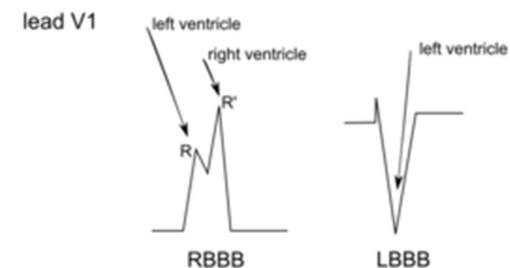
Intrinsic heart rates

Location	Beats Per Minute
Sino Atrial Node	100 - 60
Atrial cells	60 - 55
AV Node	50 - 45
HIS	45 - 40
Bundle branch	45 - 40
Purkinje	40 - 35
Myocardial cells	35 - 30

Heart blocks

- 1° PR > 3 small squares, regular
- 2° I PR widening until skipped QRS and resets, Regularly irregular
- 2° II No pattern to PR interval, Sometimes QRS skipped to **dangerous standstill**. [Atropine if symptomatic.](#)
- 3° Disassociation of atria and ventricles.
Wide QRS. Bradycardic.

Bundle branch blocks



RBBB Wide QRS, RsR 'M shape' in V1-3, Wide slurred S wave in lateral leads

LBBB Wide QRS, Dominant S wave in V1, Broad monophasic S wave in lateral leads, Absent Q wave in lateral leads

Infarct locations

Site	ST ↑	ST ↓
Anterior	I, aVL, V1-6	III and aVF
Lateral	I, aVL, V5-6	II, III and aVL
Inferior	II, III, aVF	I and aVL
Right Ventricle	V1 and V4, III > II	I and aVL

GTN in right ventricular infarcts ? → ↓ ↓ ↓ BP