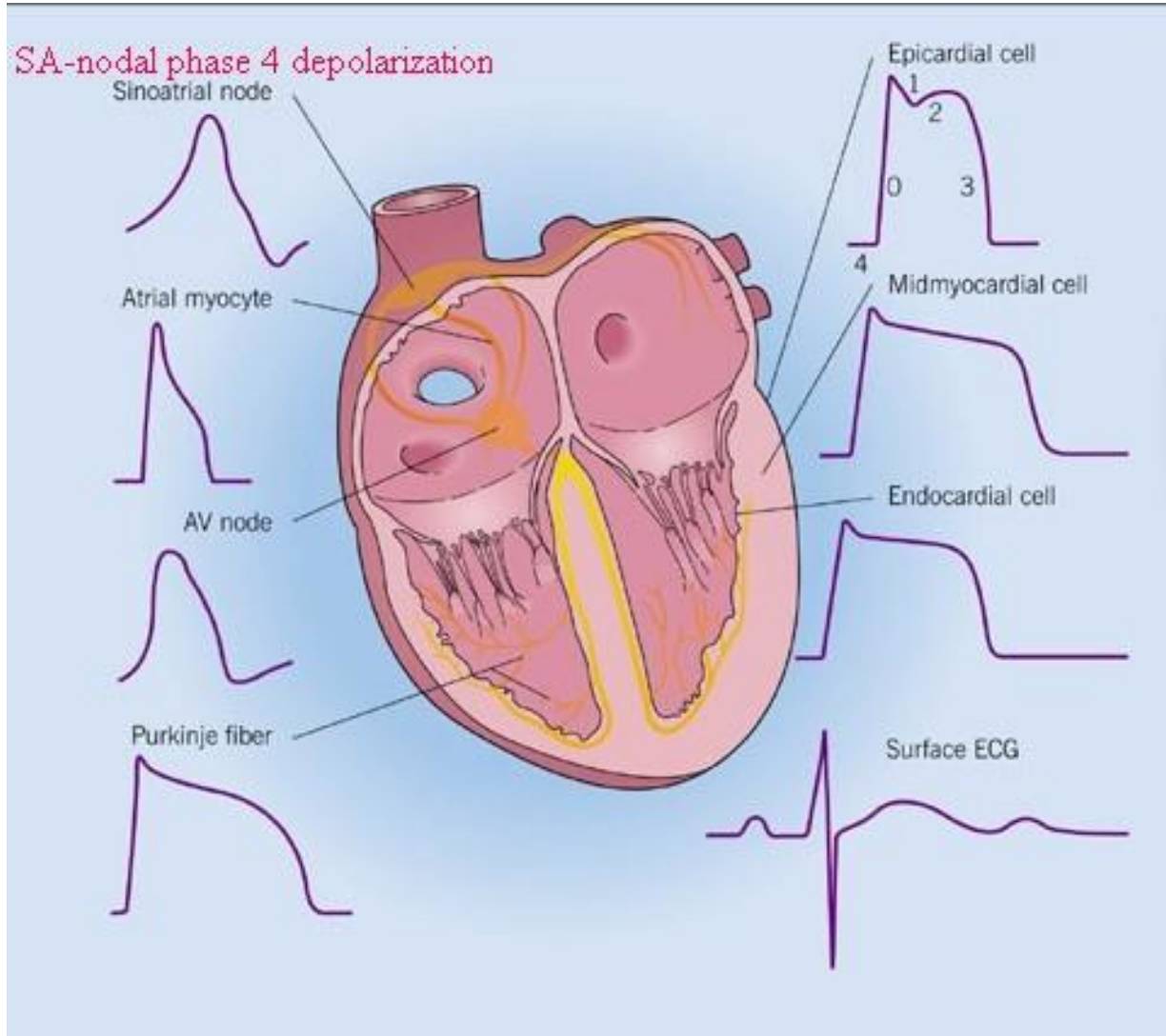


Essentials of ECG Interpretation for the Non- Cardiologist

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강동경희대학교병원 심장혈관내과
진 은 선

심전도



- 심장의 전기적 활성을
- 체표면에서
- 더해서 기록하는 것
- ≠ Intracardiac electrogram

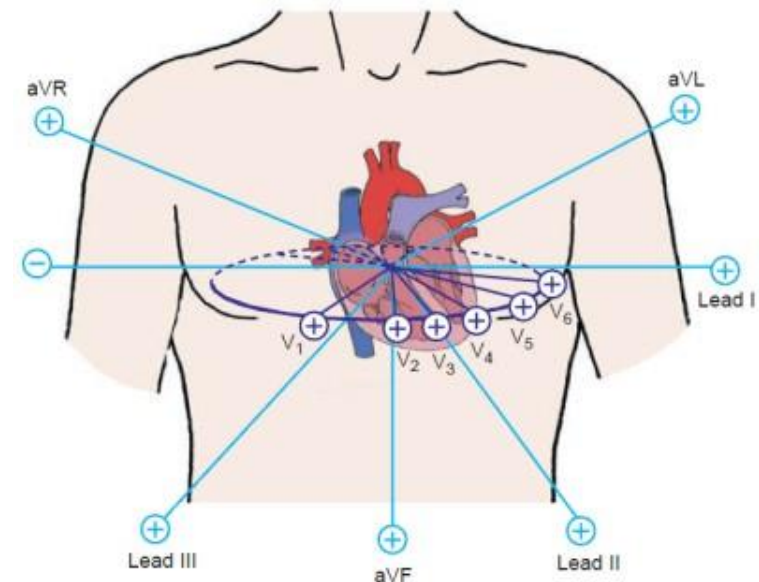
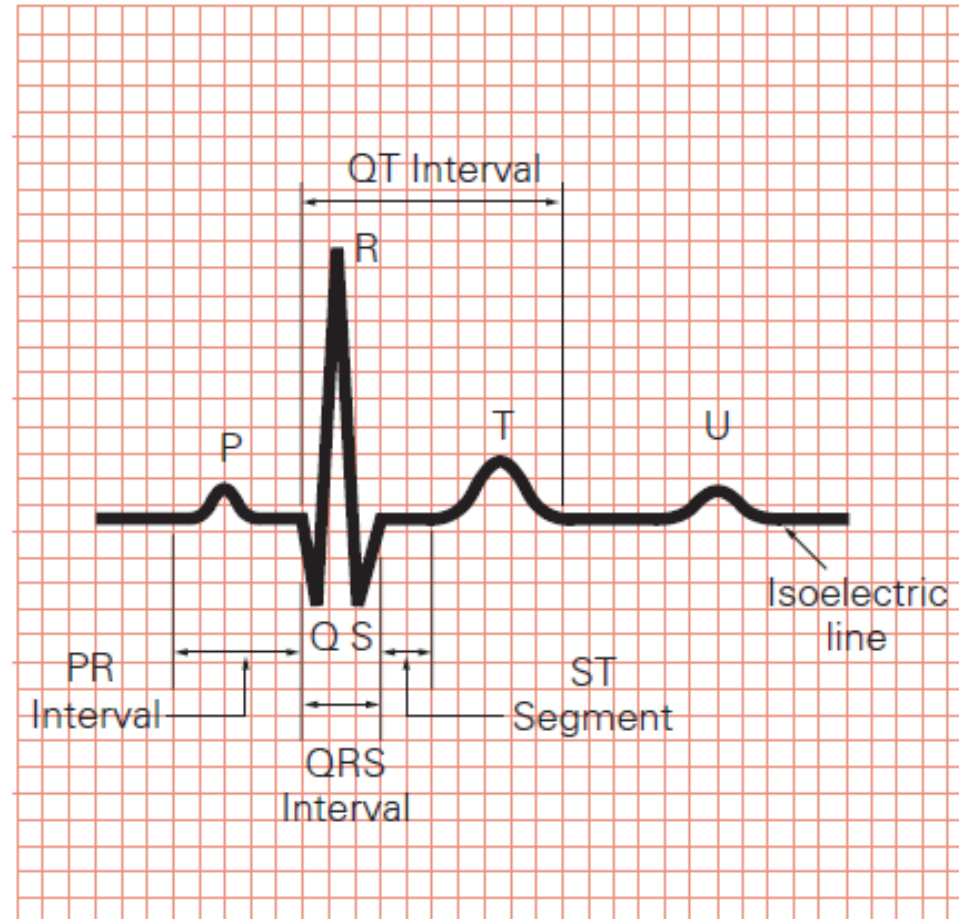
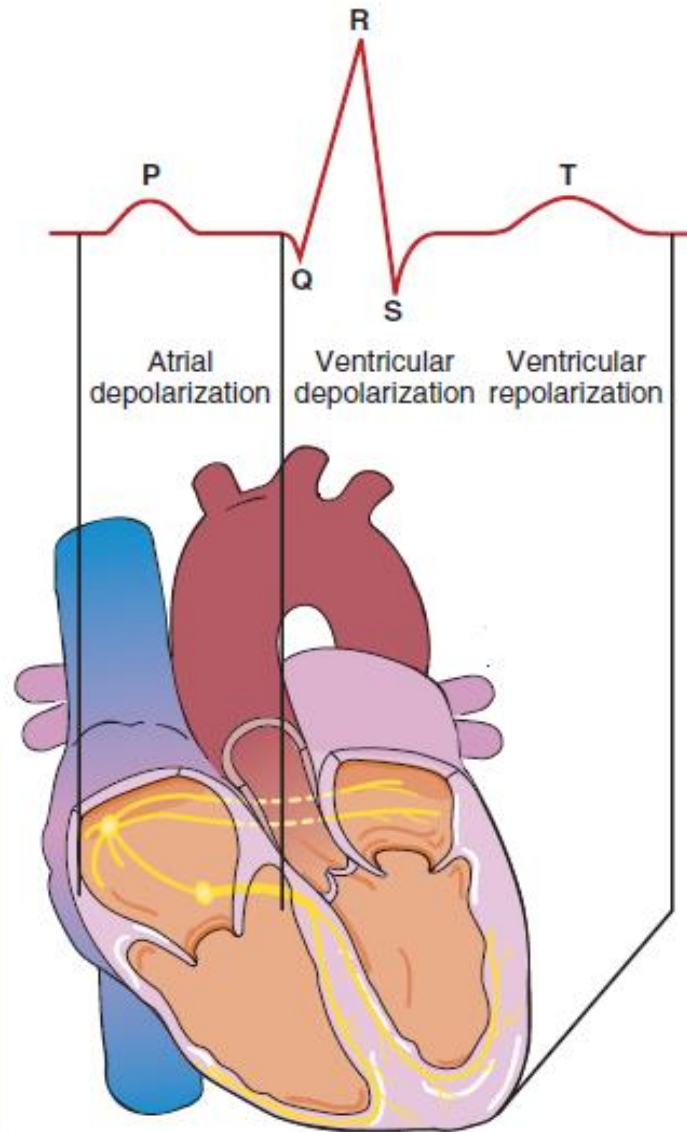


FIGURE 17-32 ▲ Electrocardiographic views of the heart.

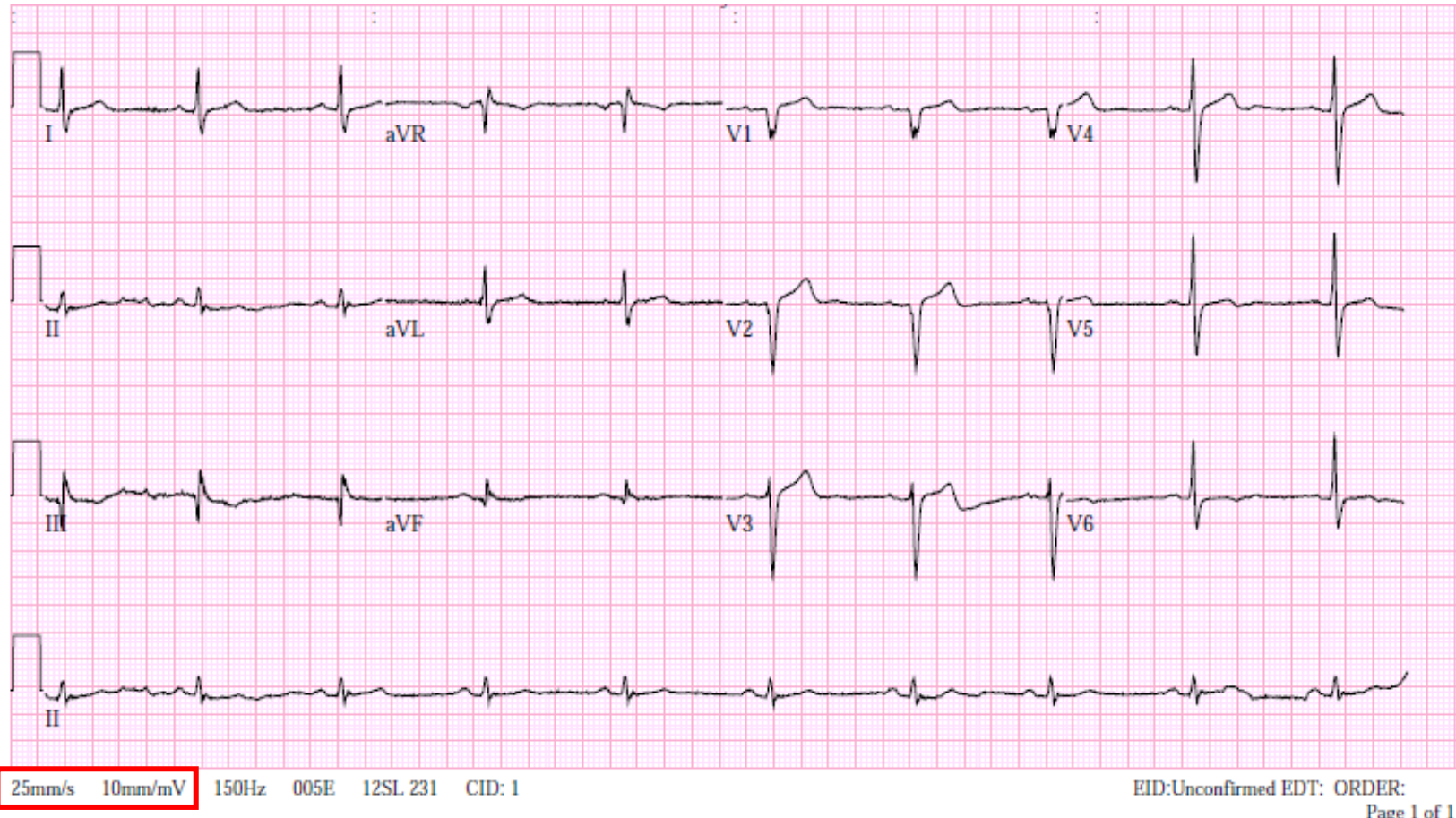
Electrocardiography

Components of an ECG Tracing



Rhythm

- Atrium – Ventricle 의 연속적 activation
- *P – QRS wave 는 1:1 짝지어지는 것이 정상*

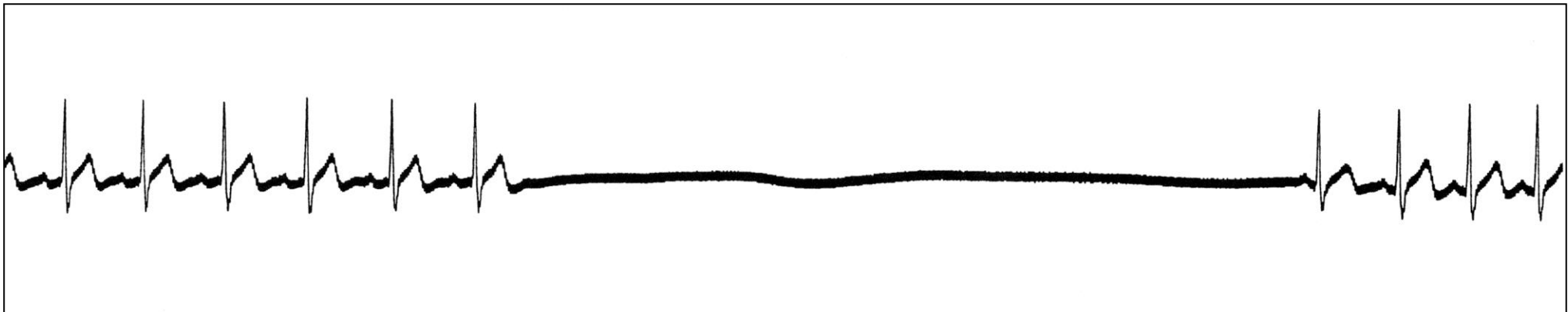


Bradycardia – Sick sinus

- Sinus bradycardia (동성 서맥)

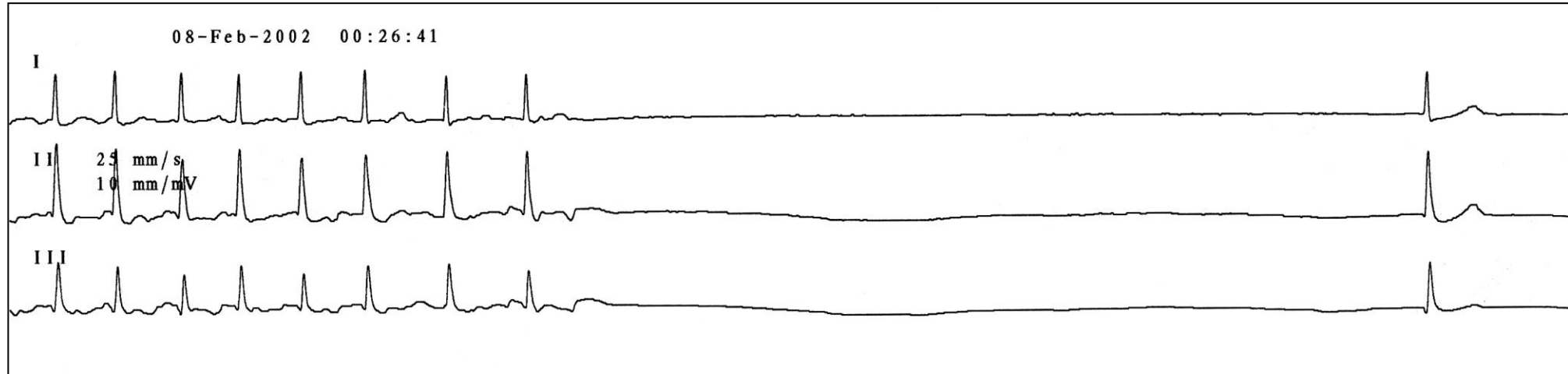


- Sinus pause or arrest



Bradycardia – Sick sinus

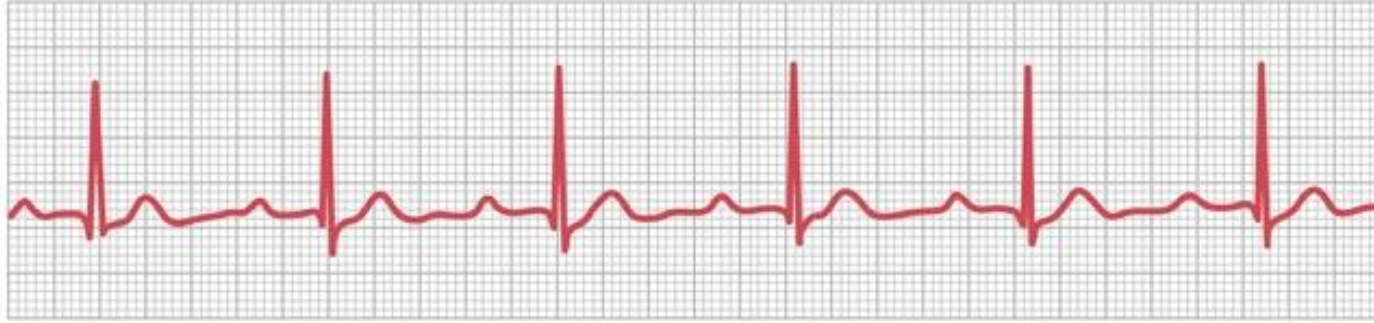
- Tachycardia-bradycardia syndrome



- Chronotropic insufficiency (incompetence)
 - 예) 안정시 60회/분, 운동시 70회/분
- Sick sinus syndrome 위험도?
 - 급사(X), 실신 또는 어지럼증 발생 가능성 있음.

AV Block – 덜 위험한 것

- 1st degree



- 2nd degree, Mobitz I

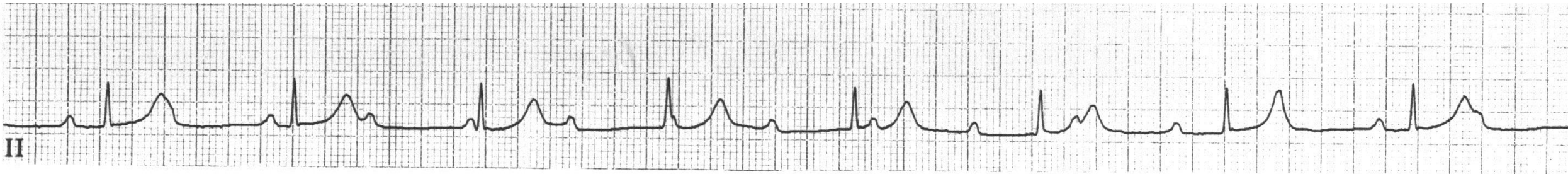


AV Block – 위험한 것

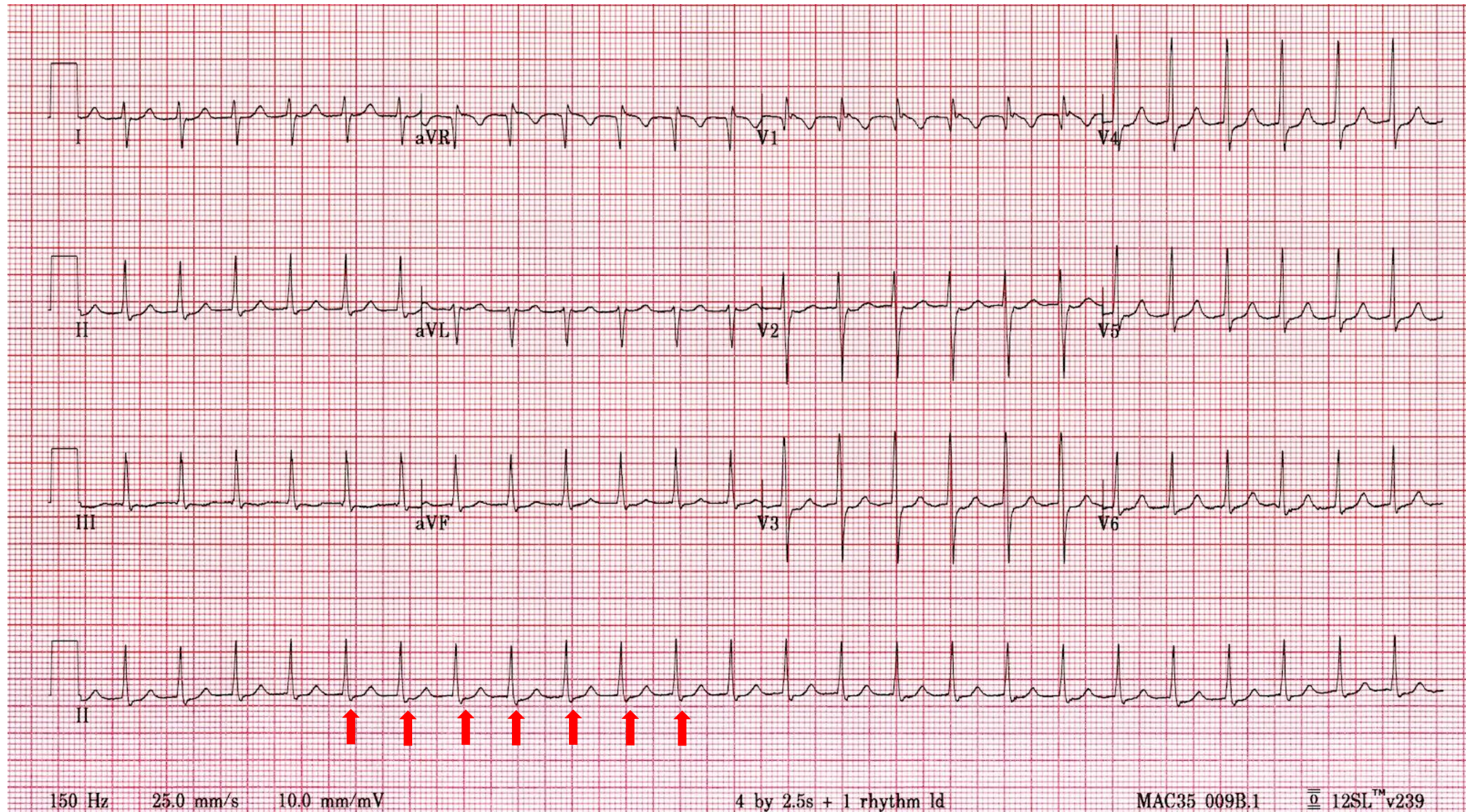
- 2nd degree, Mobitz II



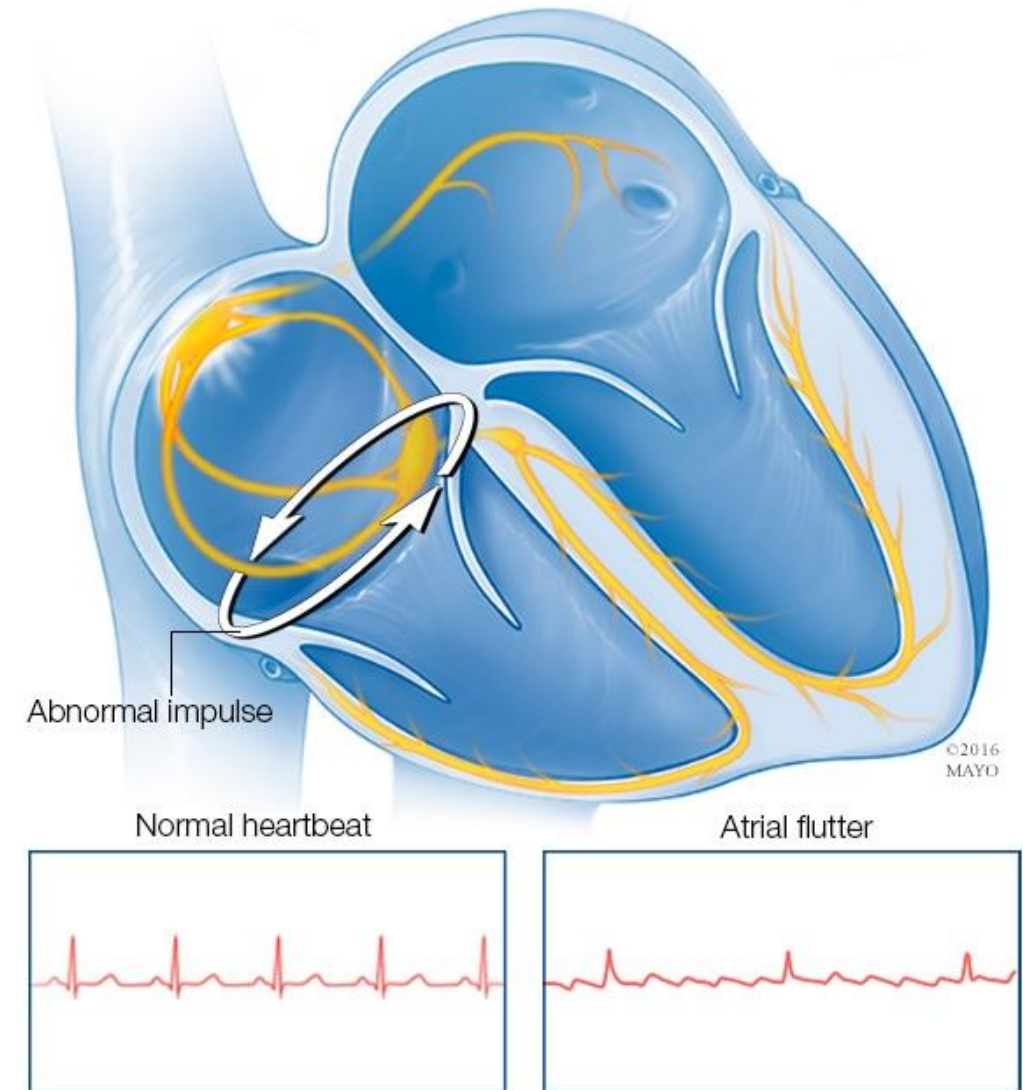
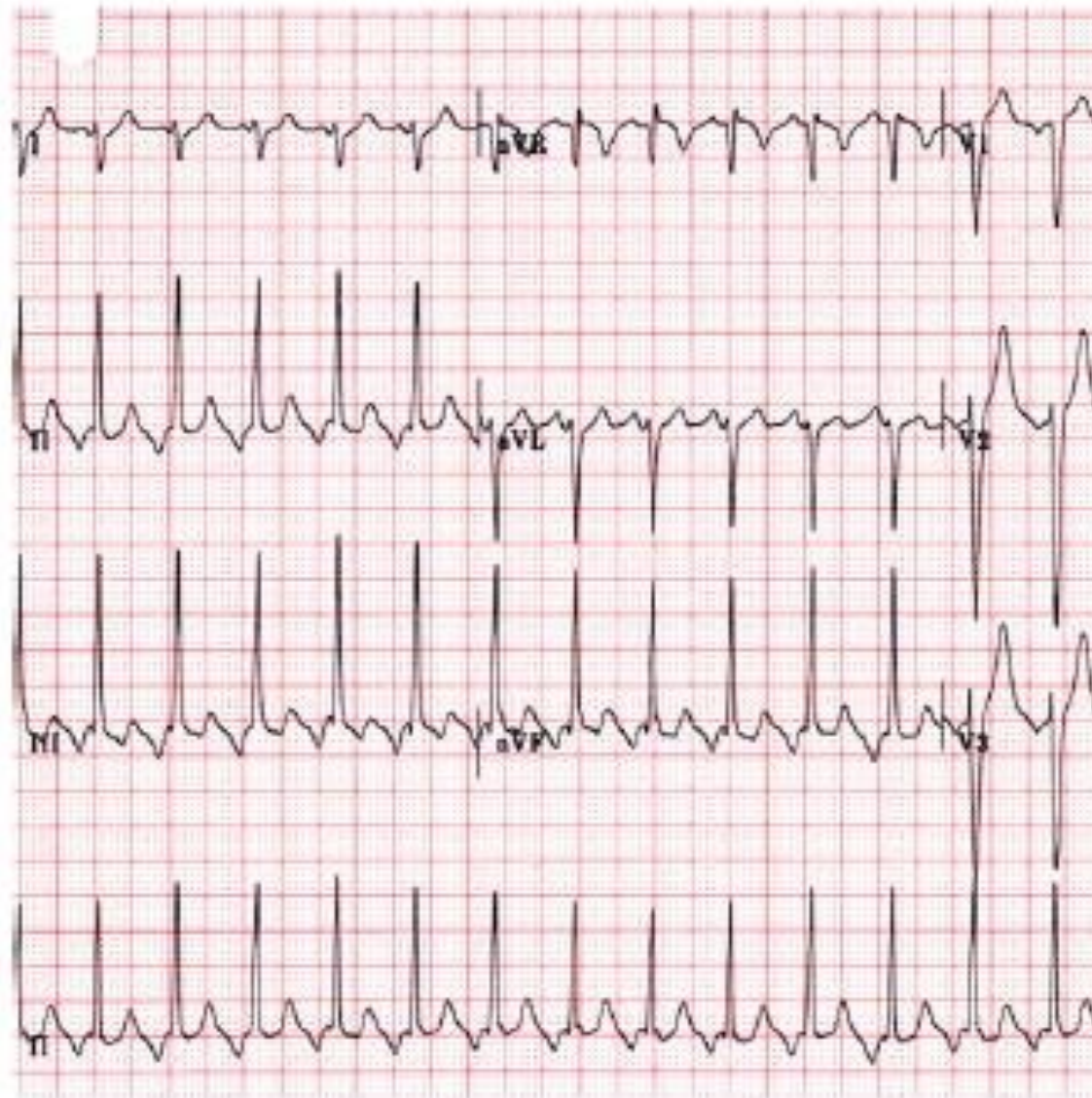
- 3rd degree



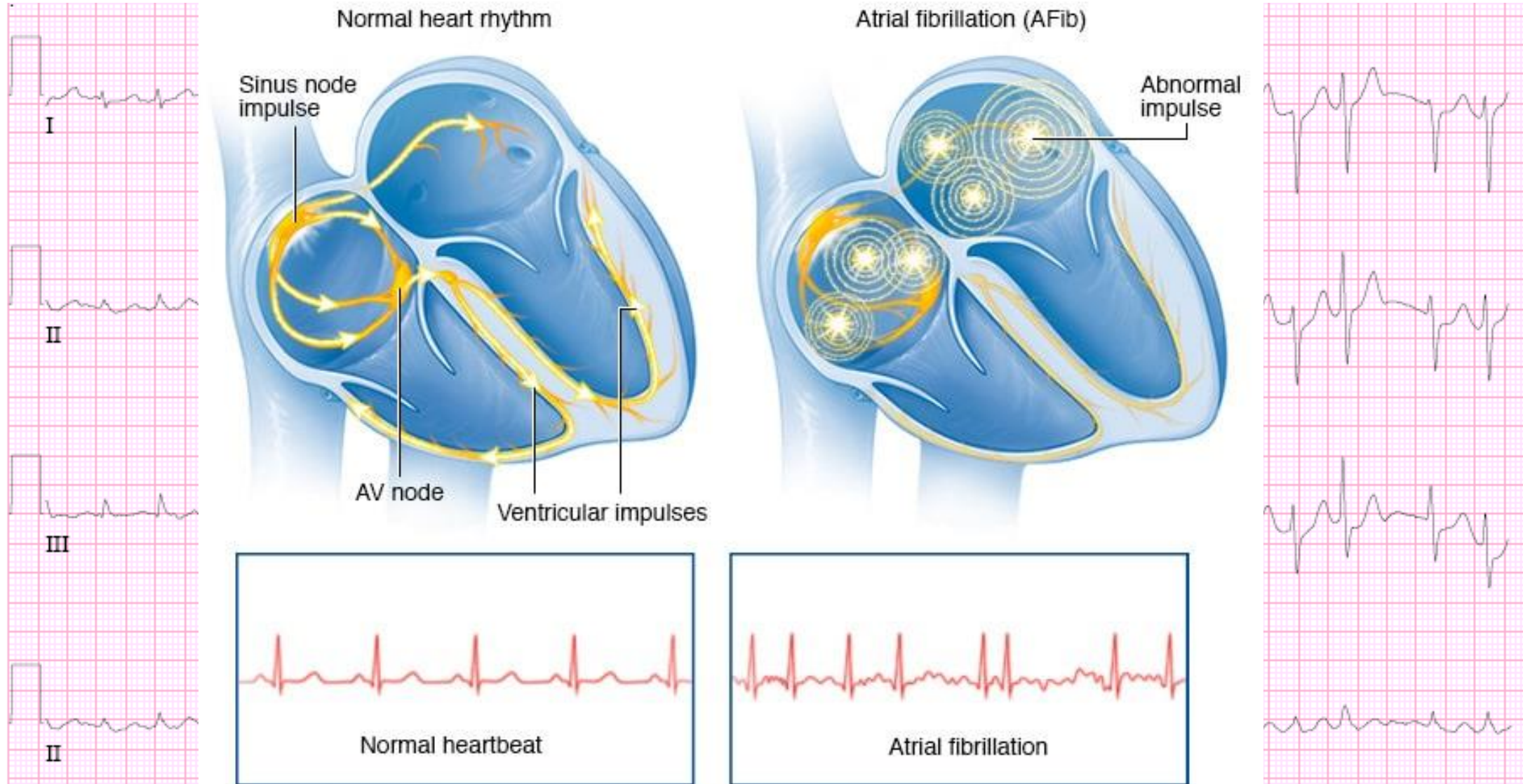
Tachycardia - PSVT



Tachycardia - AFL



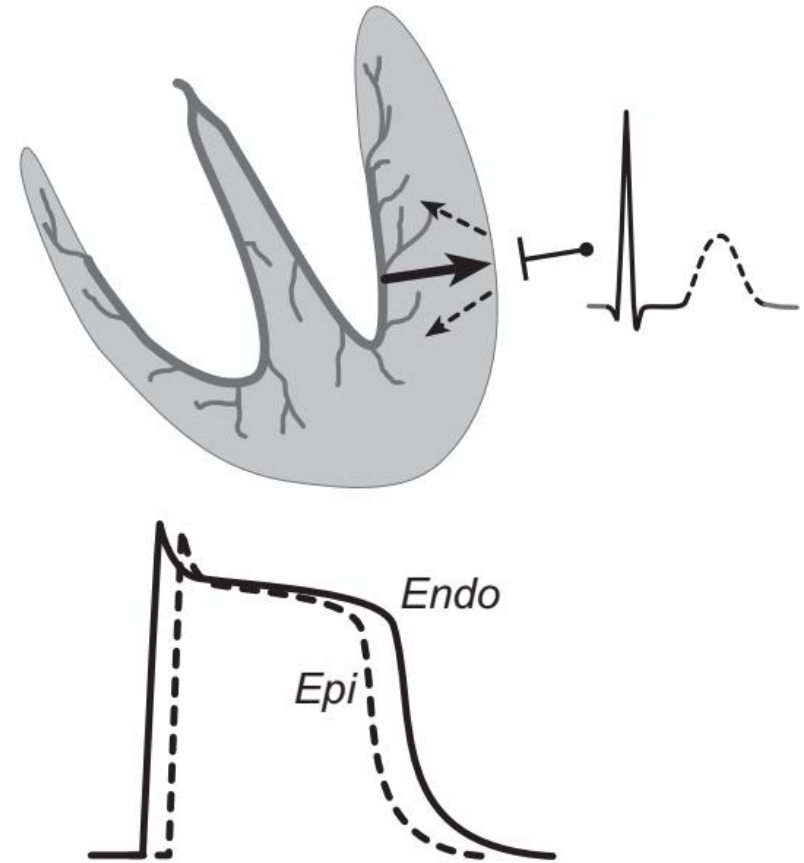
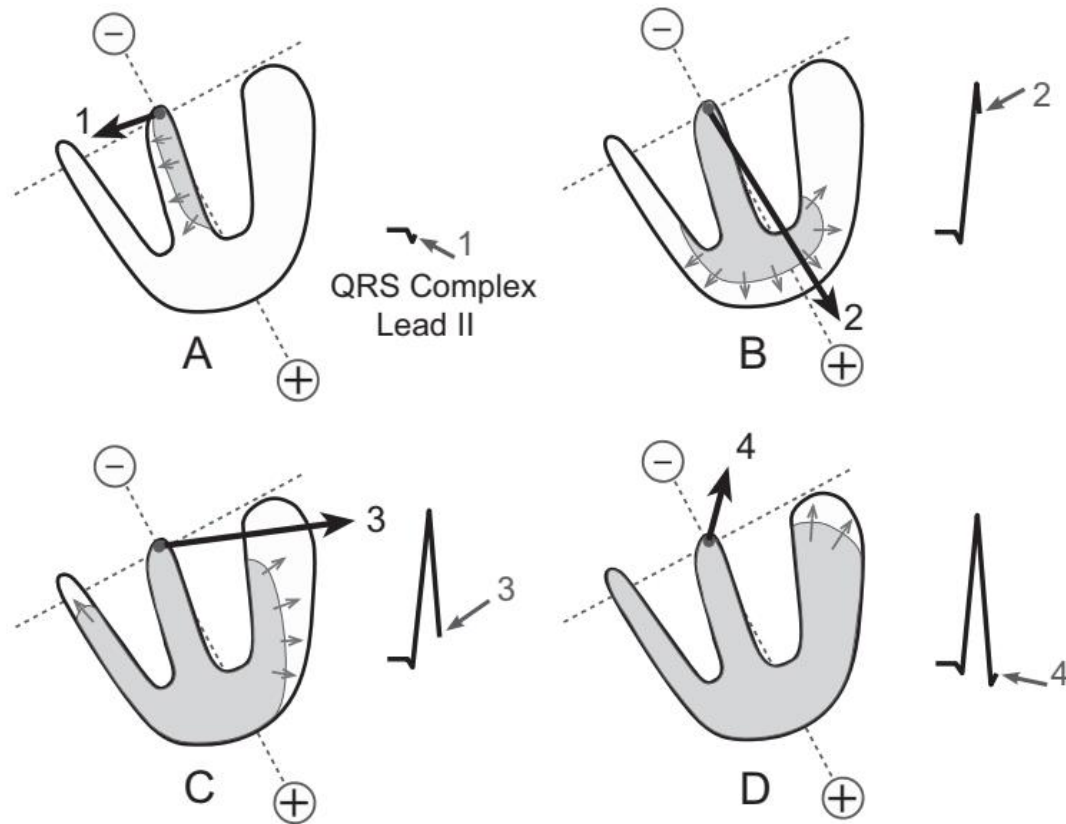
Tachycardia



ST segment & T wave

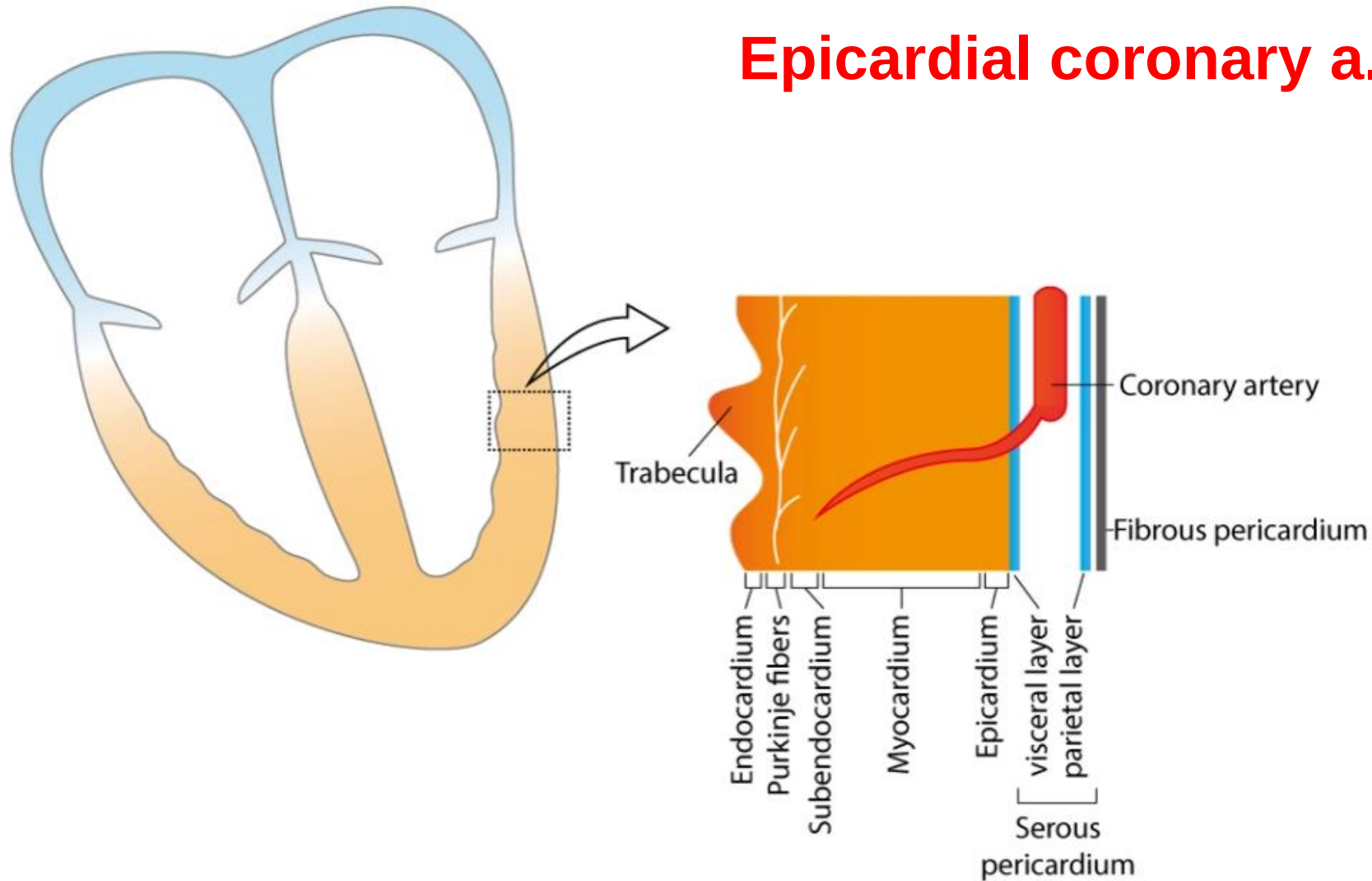
Generation of ST segment and T wave

- Cardiac depolarization & repolarization

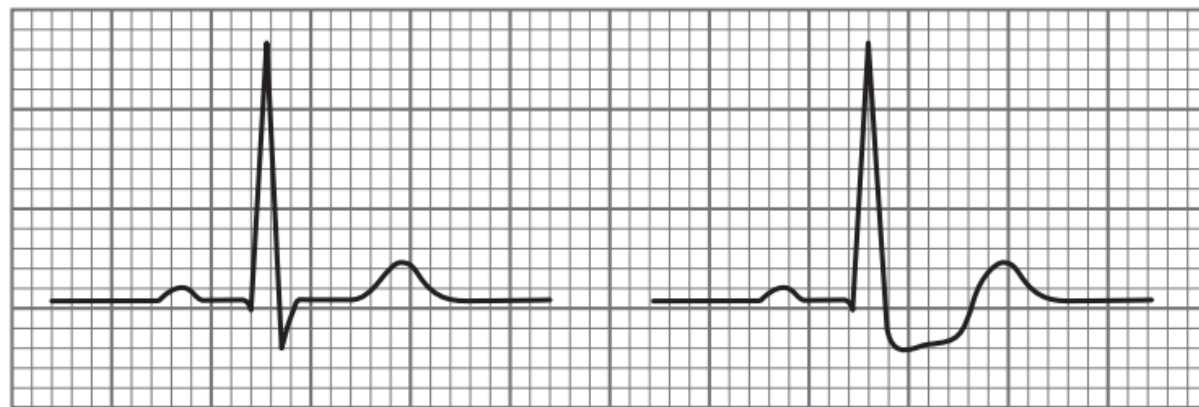
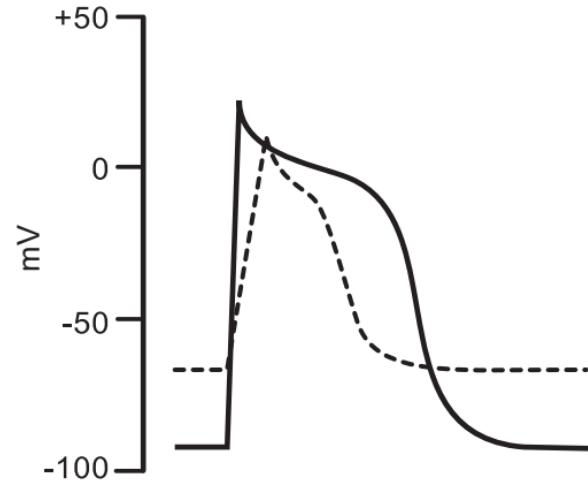


Myocardial Ischemia

The layers of the left ventricular myocardium



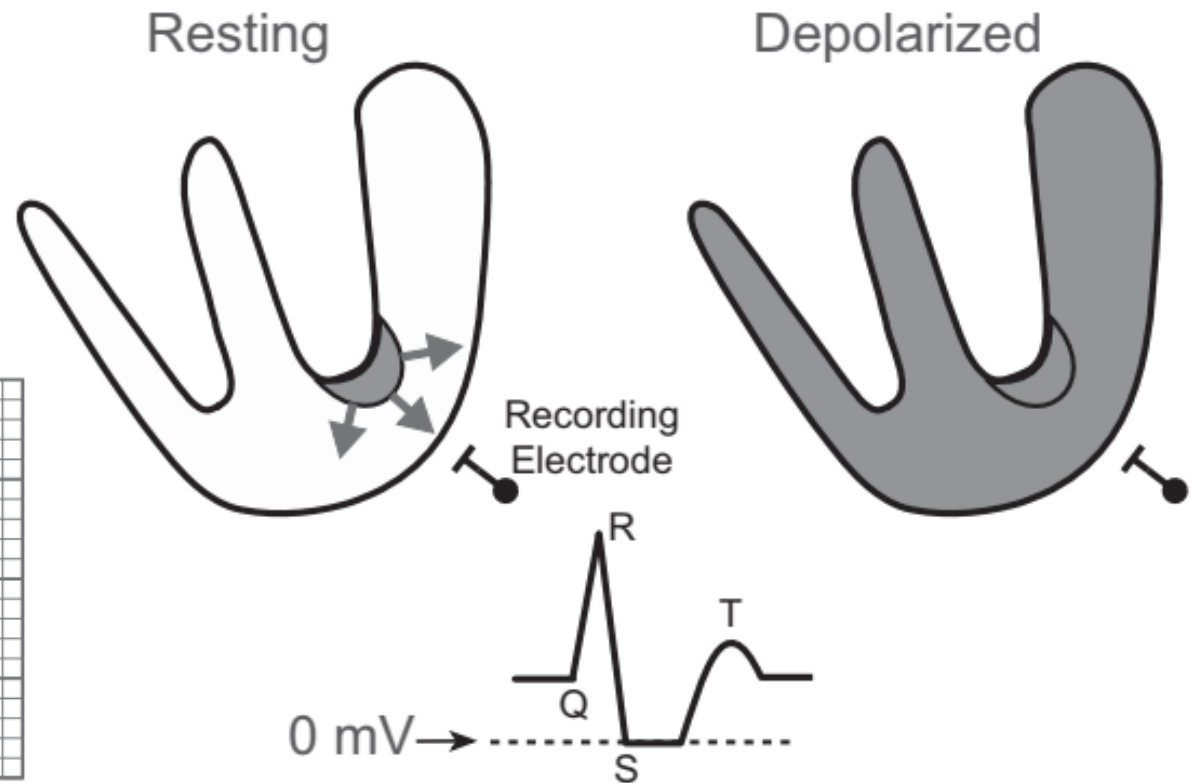
ST-T Change in Myocardial Ischemia



Normal

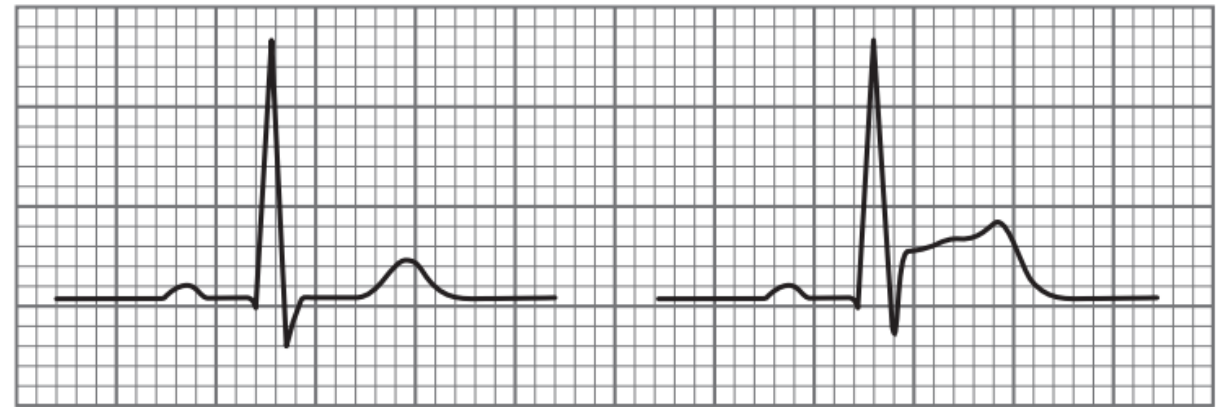
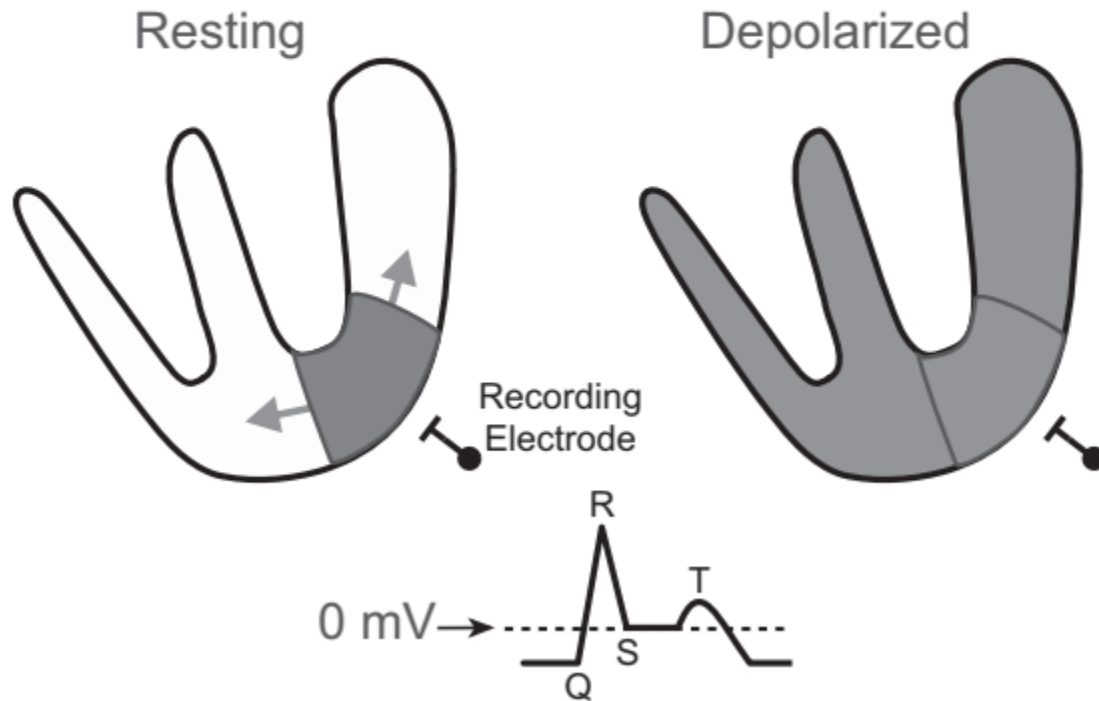
ST Depression

Model for ST Segment Depression
Associated with Subendocardial Ischemia



ST-T Change in Myocardial Ischemia

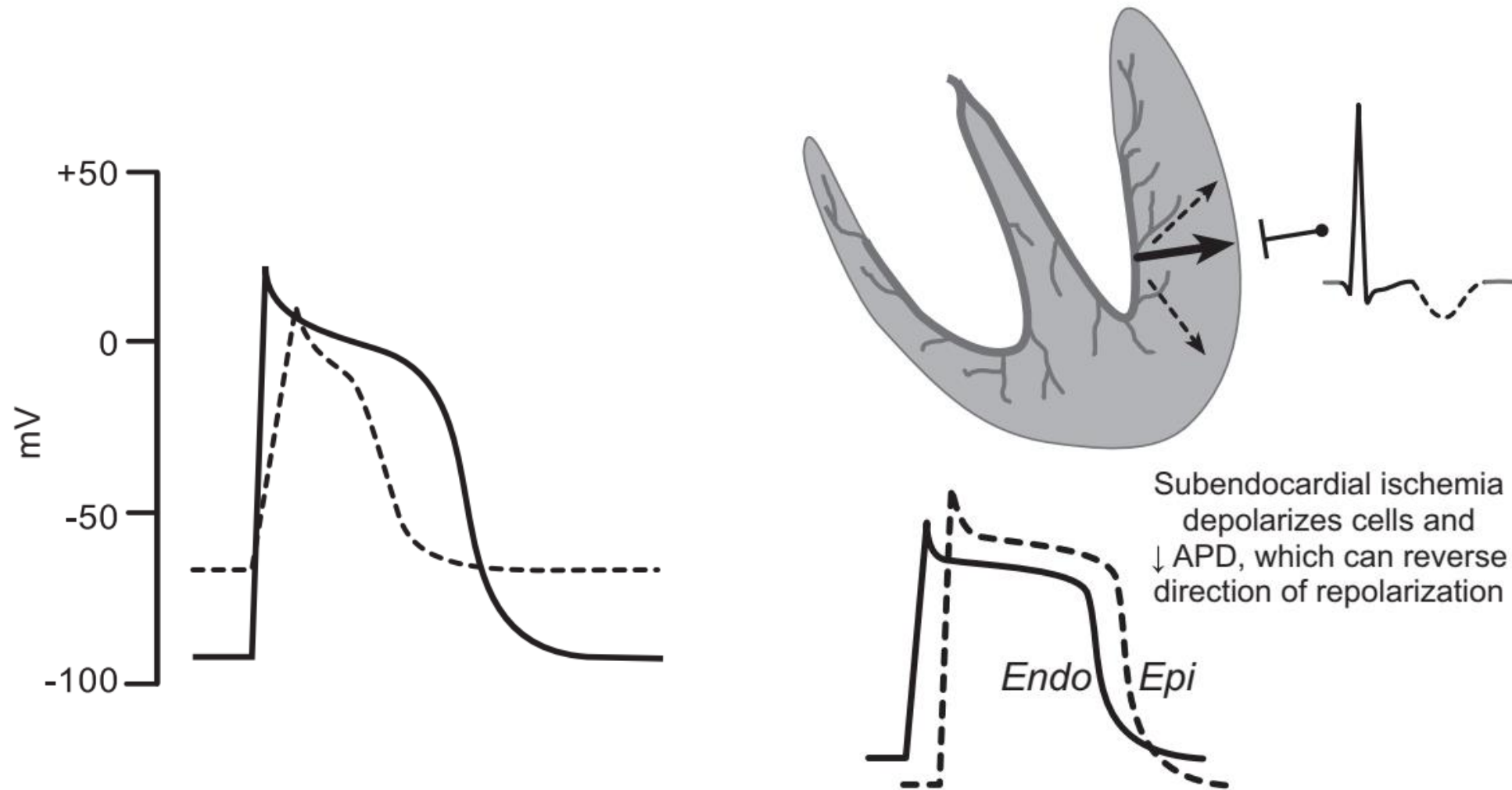
Model for ST Segment Elevation
Associated with Transmural Ischemia



Normal

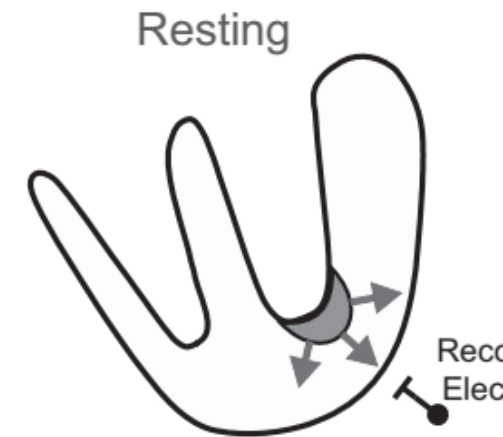
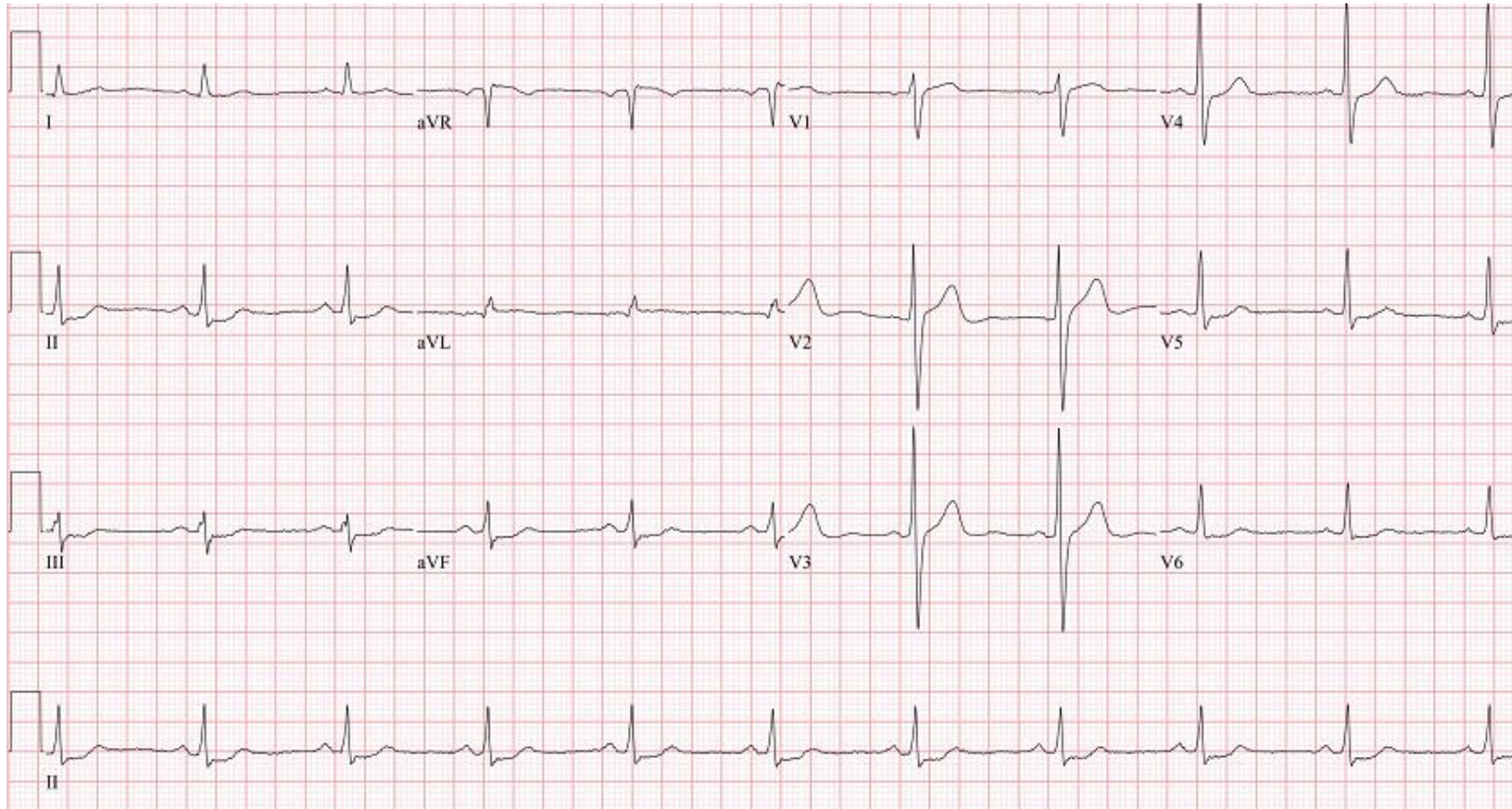
ST elevation

ST-T Change in Myocardial Ischemia

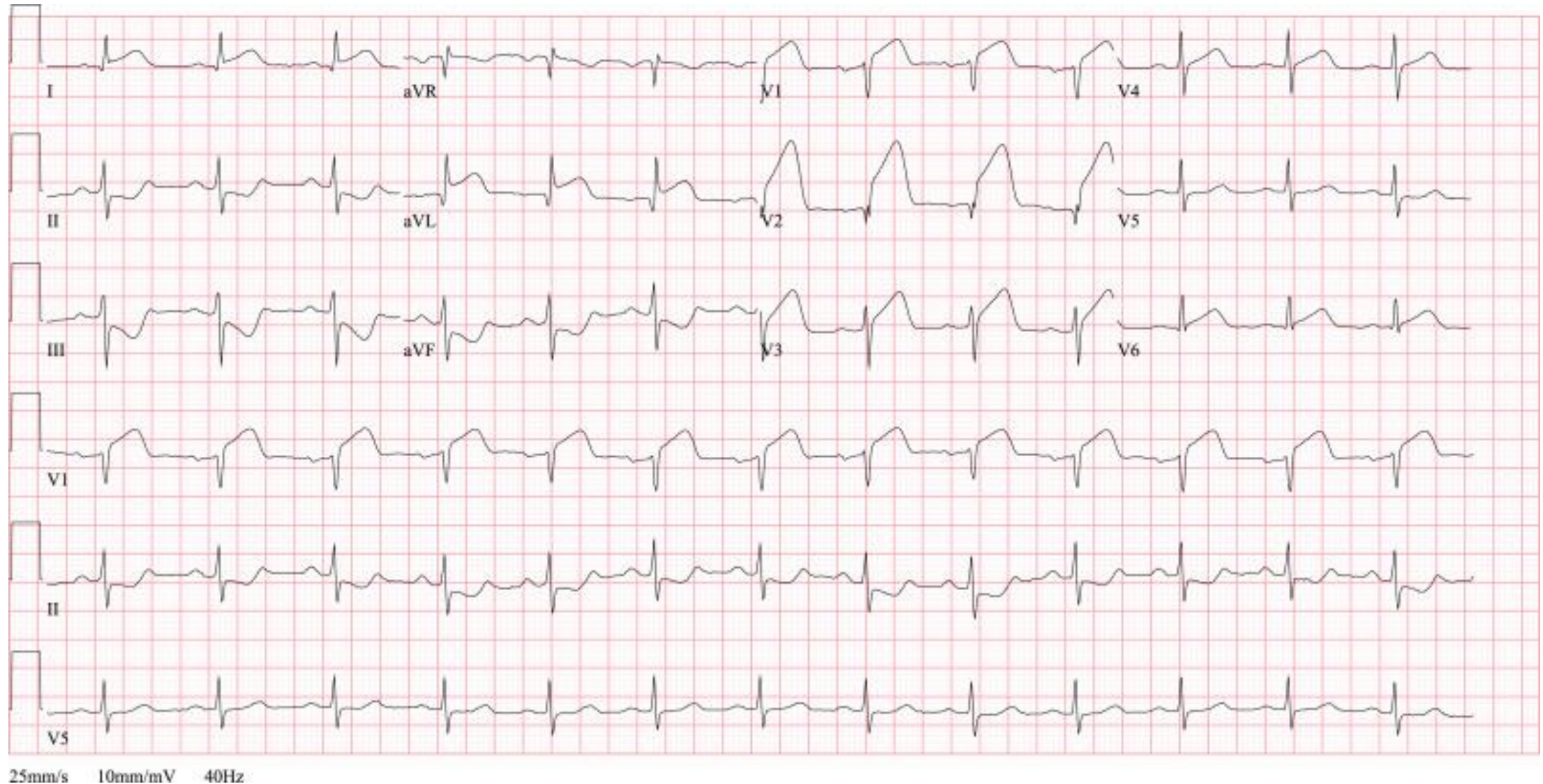


Chest pain, ST depression – Unstable AP

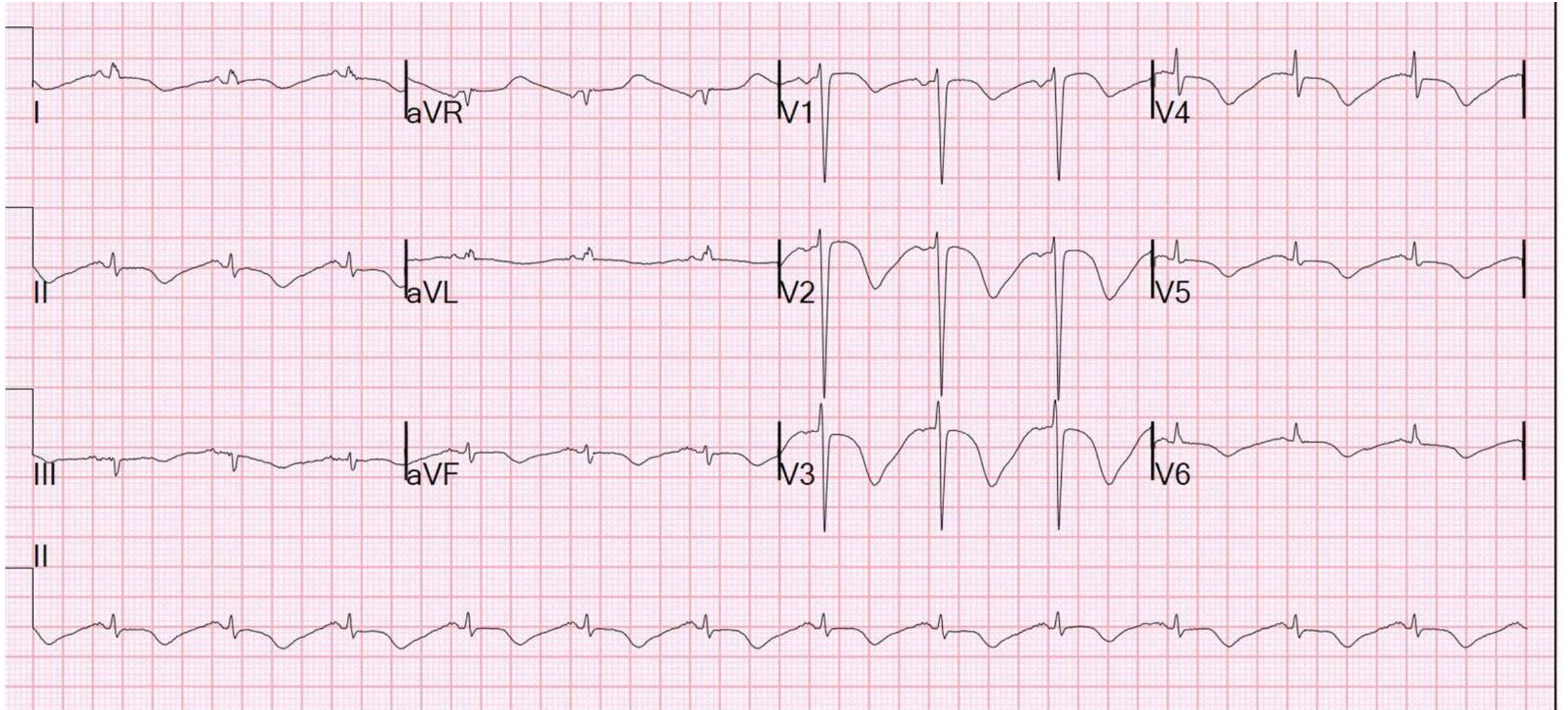
- M/66, DM, HTN, smoking, anterior chest pain



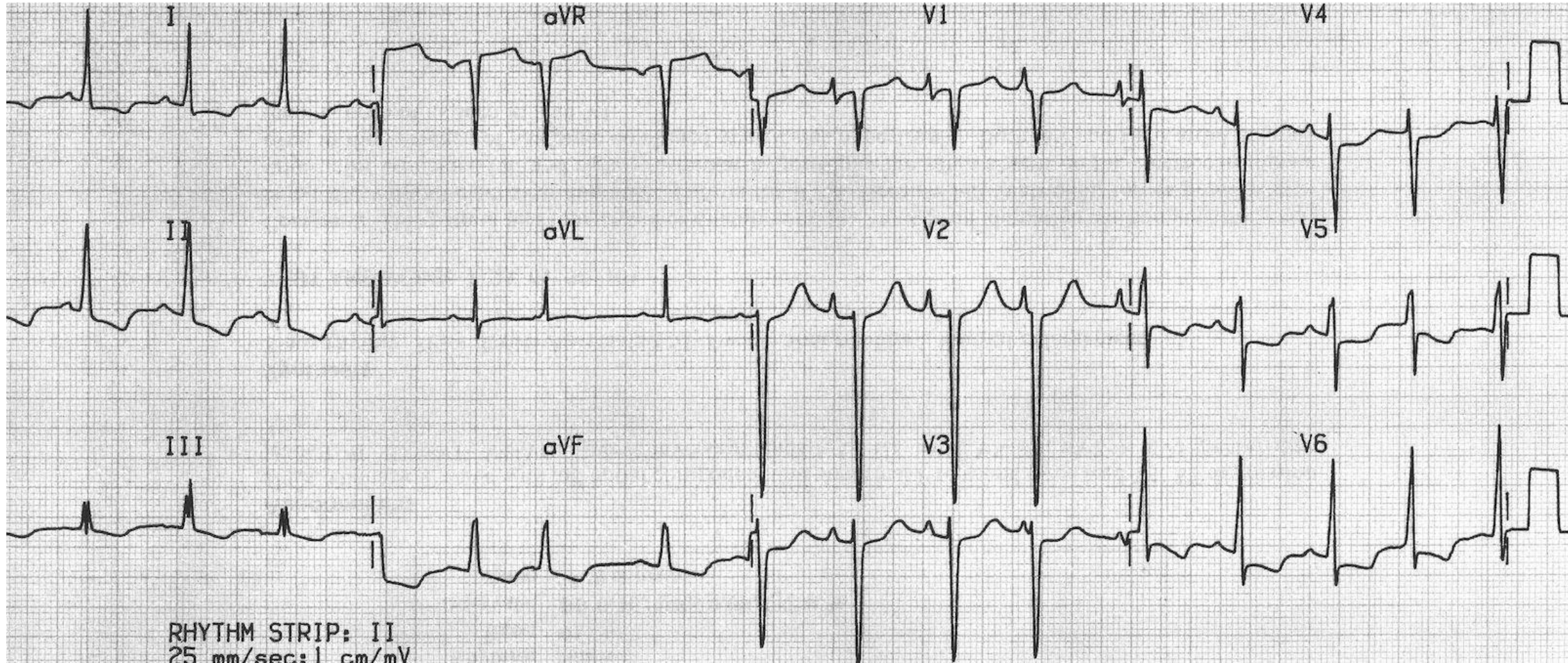
Chest pain, ST elevation - Emergency



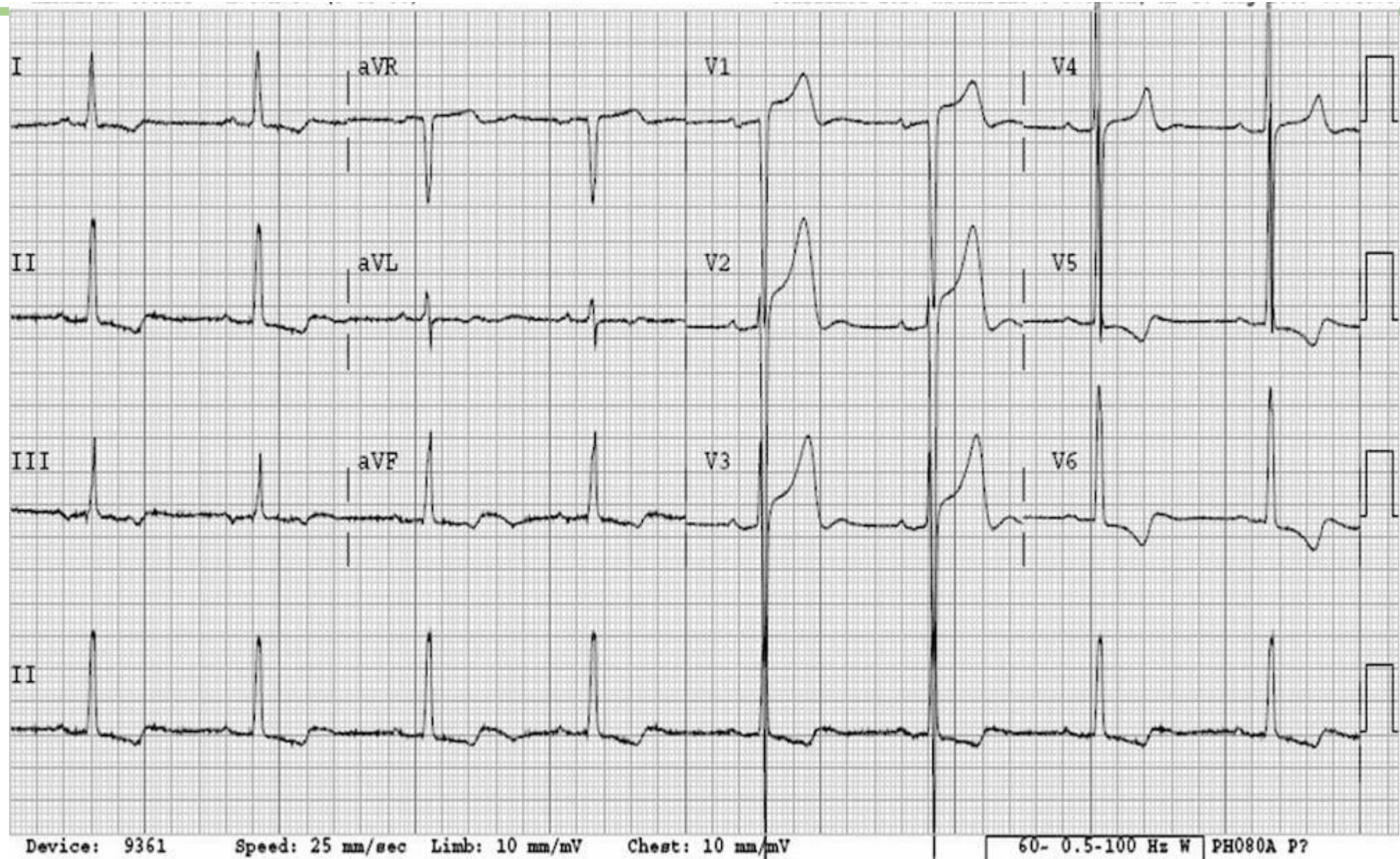
Stress-induced Cardiomyopathy



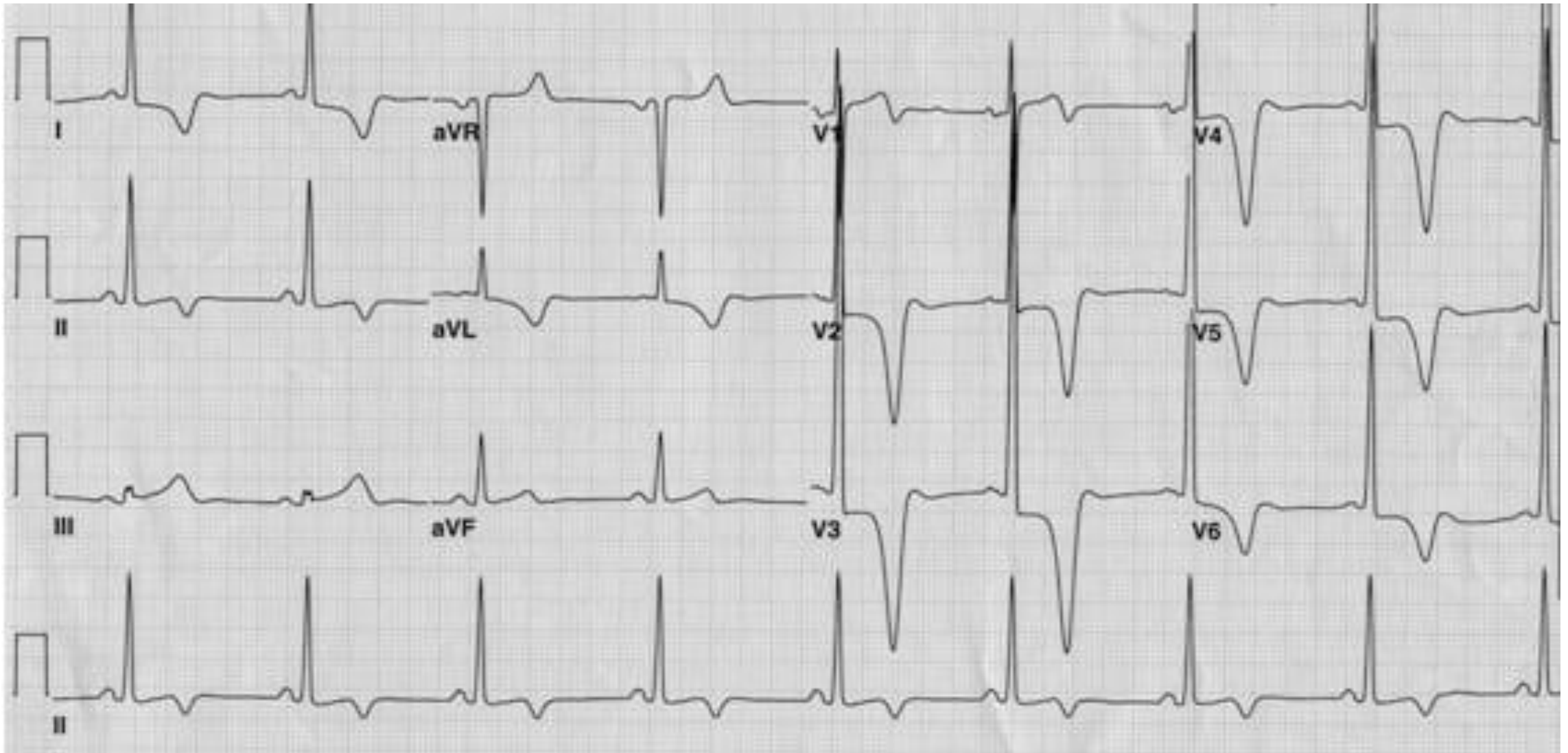
Dilated Cardiomyopathy



LVH



Hypertrophic Cardiomyopathy



Summary

- 심전도는 심장의 전기적 활성을 더해서 체표면에 기록하는 것
- P – QRS 는 1:1 로 짝지어진다
- P wave는 심방의 활동, 눈 여겨 보자
- ST 분절 변화가 모두 MI는 아니다