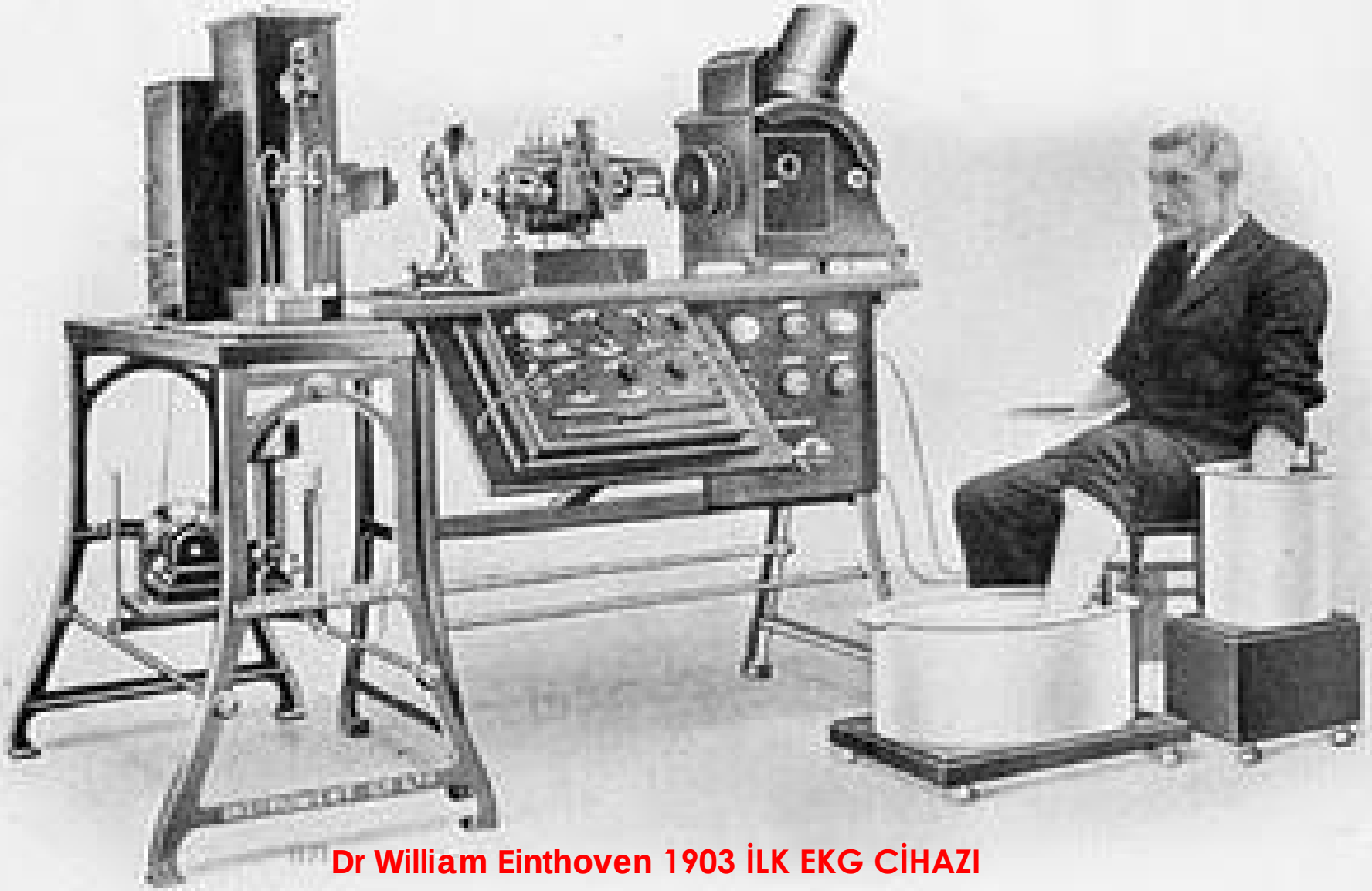
BASIC ECG

Dr BAHADIR DAVUT ŞENOL



Dr William Einthoven 1903 İLK EKG CİHAZI

PHOTOGRAPH OF A COMPLETE ELECTROCARDIOGRAPH, SHOWING THE MANNER IN WHICH THE ELECTRODES ARE ATTACHED TO THE PATIENT, IN THIS CASE THE HANDS AND ONE FOOT BEING IMMERSED IN JARS OF SALT SOLUTION

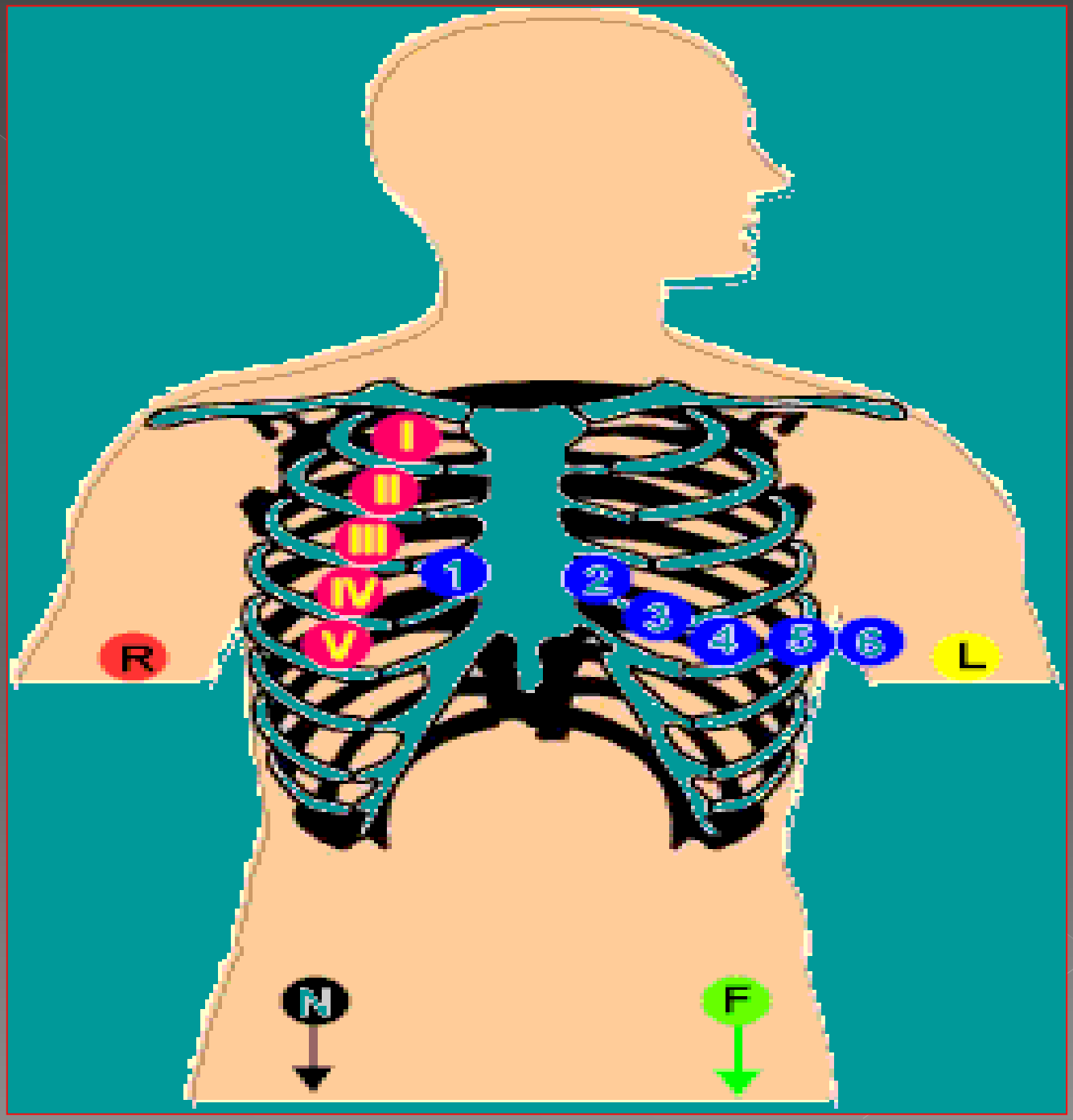
EKG Derivasyonları

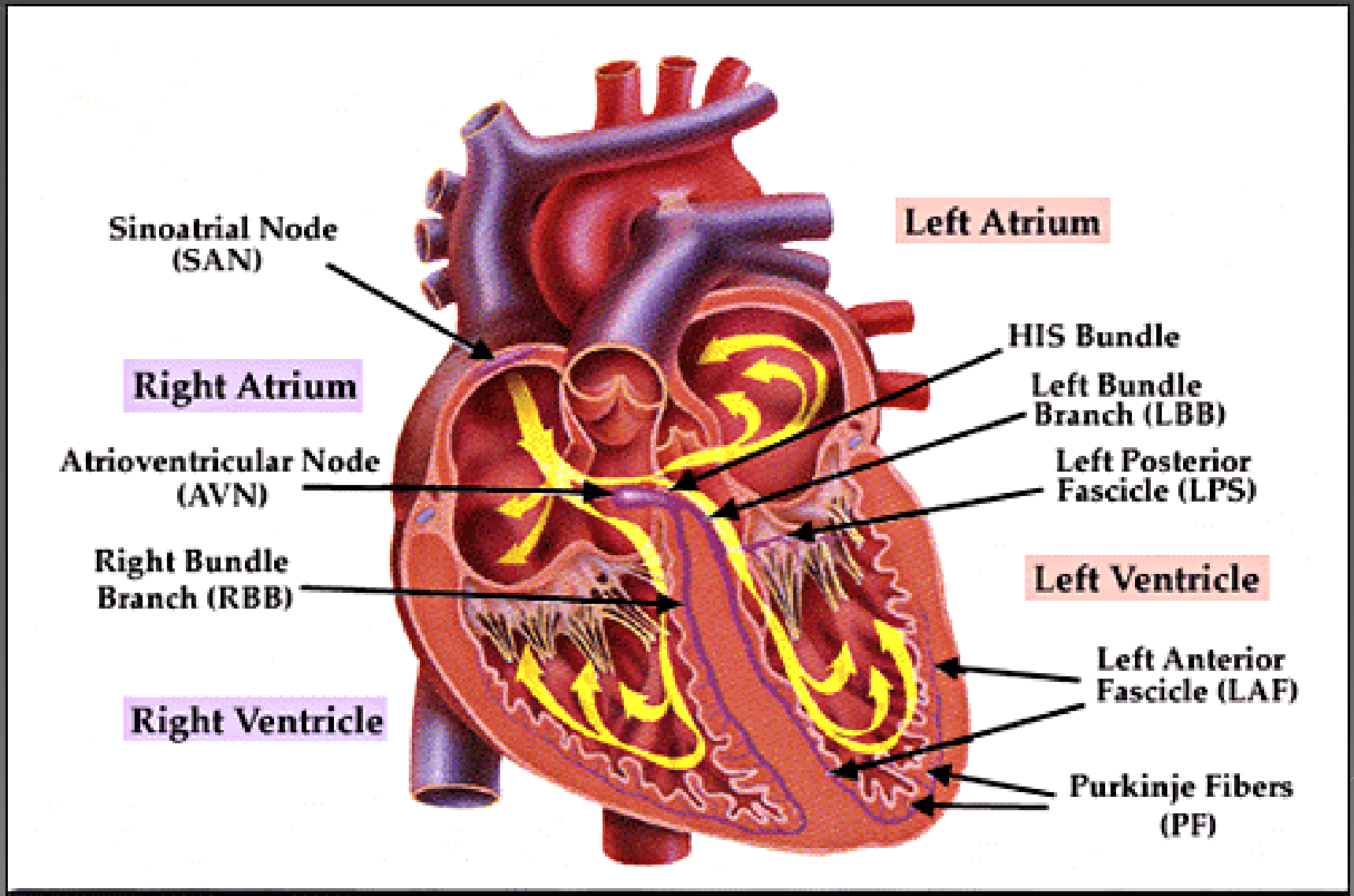
- 3 tip EKG derivasyonu vardır

  EXTREMİTE DERİVATİON
  - Bipolar olanlar (DI, DII, DIII)
  - Unipolar olanlar (AVR, AVL, AVF)

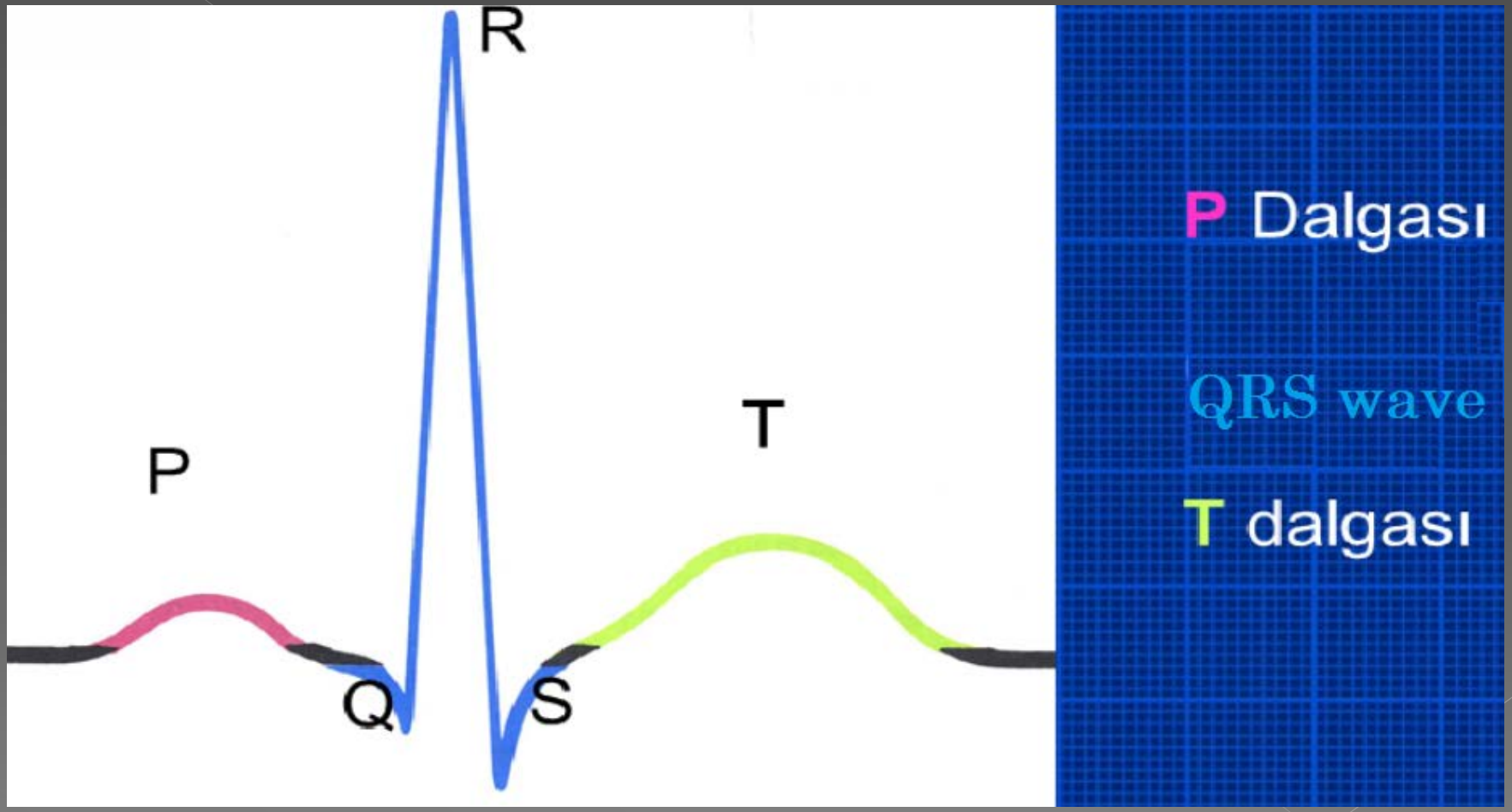
  CHEST DERİVATİON
  - Prekordiyal (V1, V2, V3, V4, V5, V6)

- disritmilerin tanınması için 1 derivasyon yeterlidir
  - En sık tercih edilen **DII**'dir, çünkü kalbin elektriksel aksıyla aynı yöndedir.


I
II
III
IV
V
1
2
3
4
5
6
R
L
N
F



Cardiac Conduction System


R
P
T
Q
S
P Dalgası
QRS wave
T dalgası

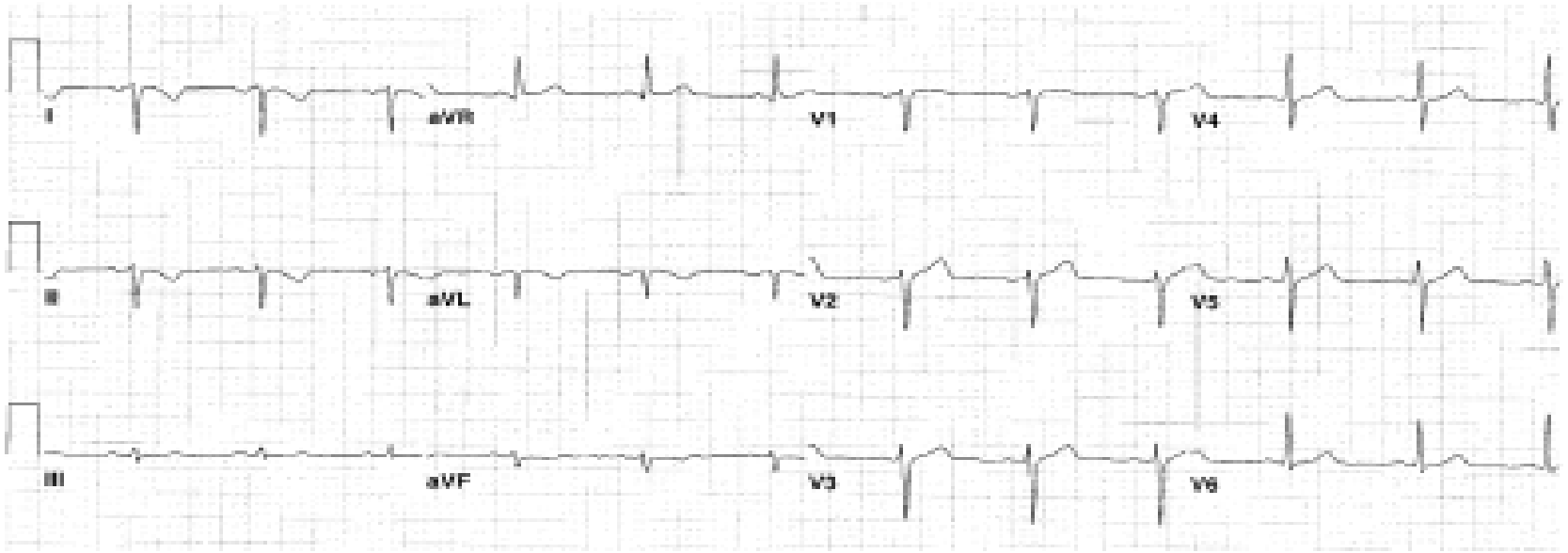
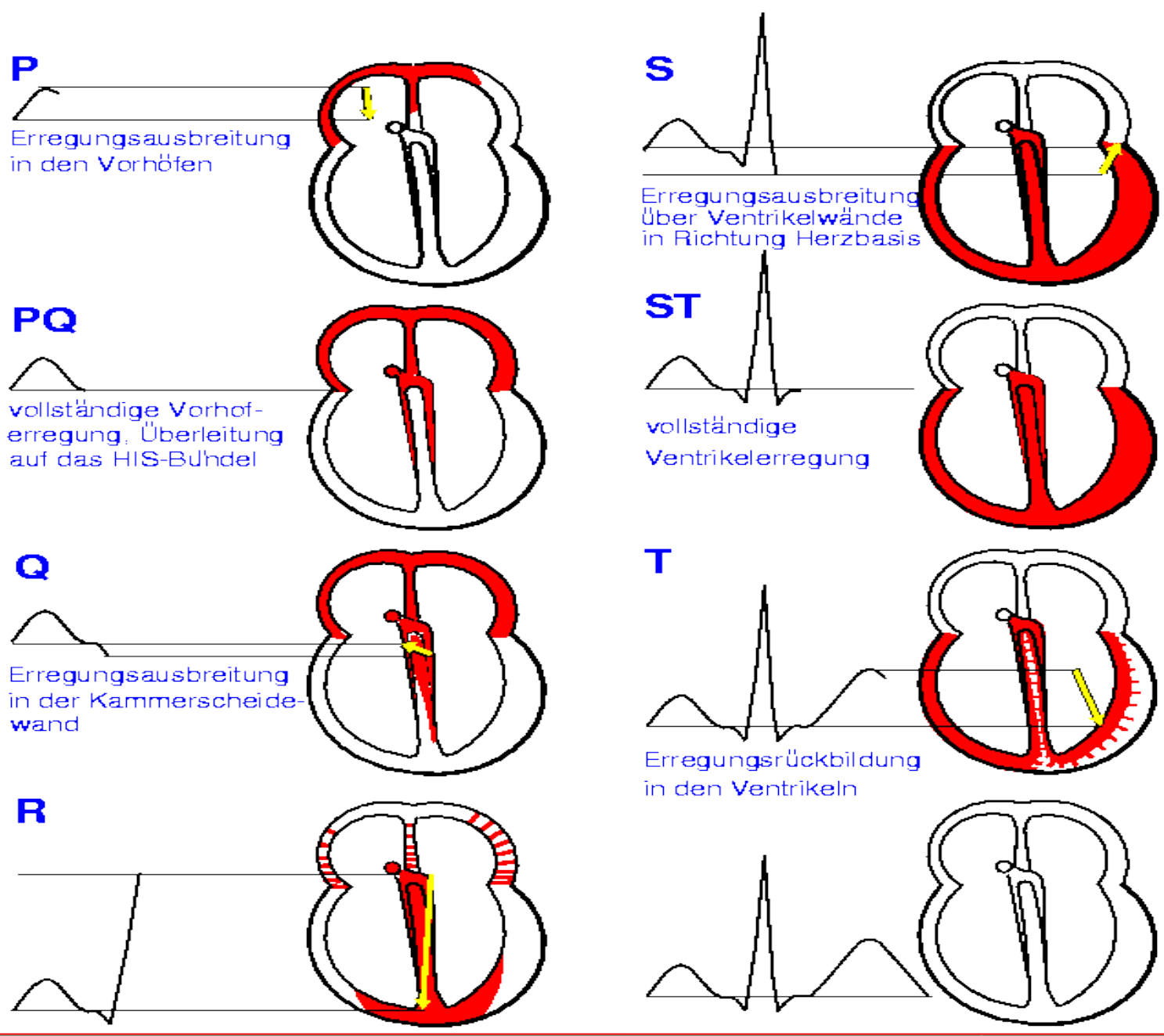
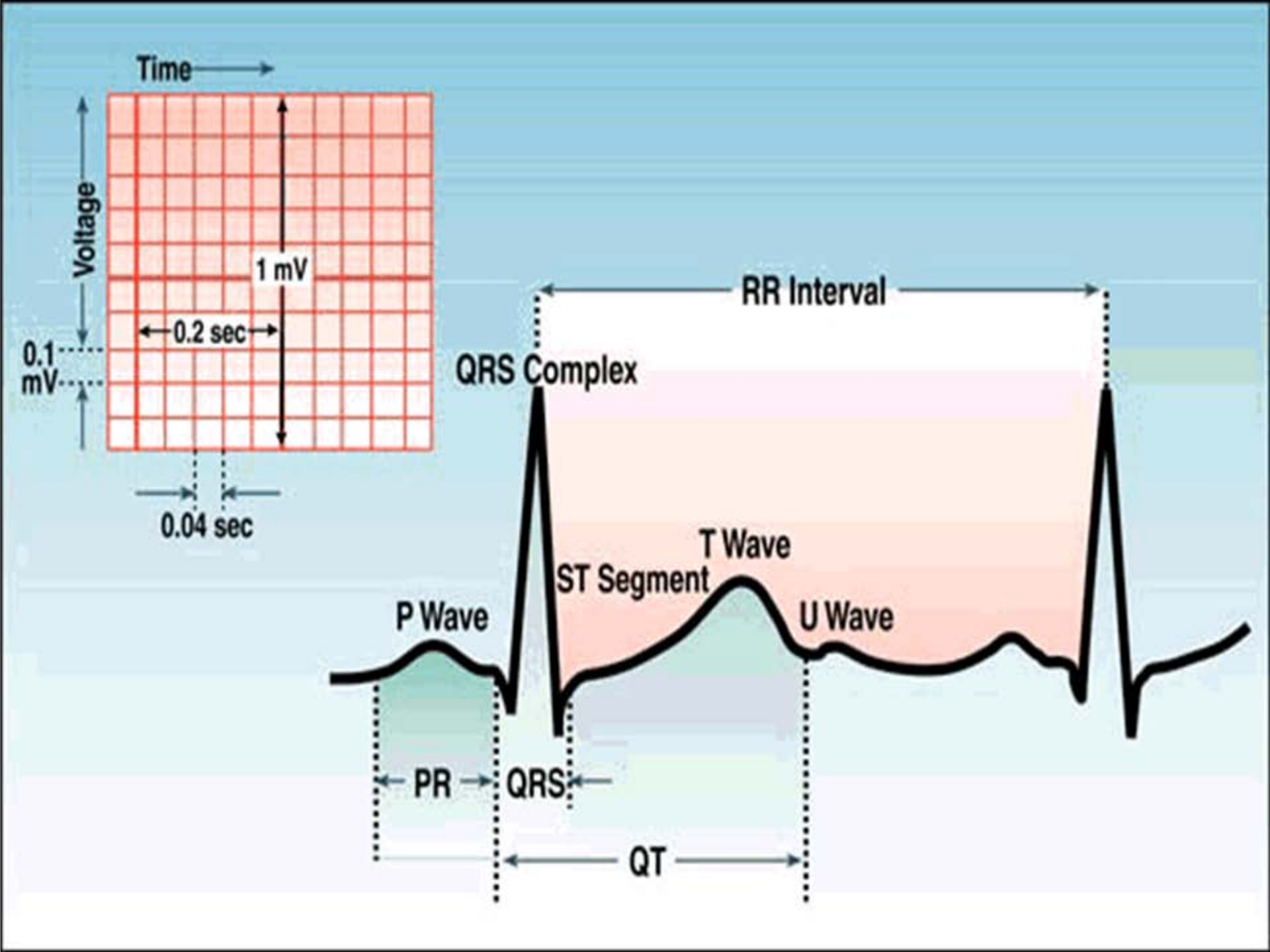


Fig. 3. RA/LA electrode reversal. Note the characteristic changes in this most common lead reversal. Lead I features an upside-down P-QRS-T, and the major vector of its QRS complex is uncharacteristically opposite to that seen in lead V6. The waveforms in lead aVR appear normal and are actually those that appear in aVL when the electrodes are placed properly. Leads II and III also are reversed, which in this tracing yields a principally negative vector in lead II; this is also unusual.


P
Erregungsausbreitung
in den Vorhöfen
PQ
vollständige Vorhof-
erregung, Überleitung
auf das HIS-Bündel
Q
Erregungsausbreitung
in der Kammerscheide-
wand
R
S
Erregungsausbreitung
über Ventrikelwände
in Richtung Herzbasis
ST
vollständige
Ventrikelerregung
T
Erregungsrückbildung
in den Ventrikeln

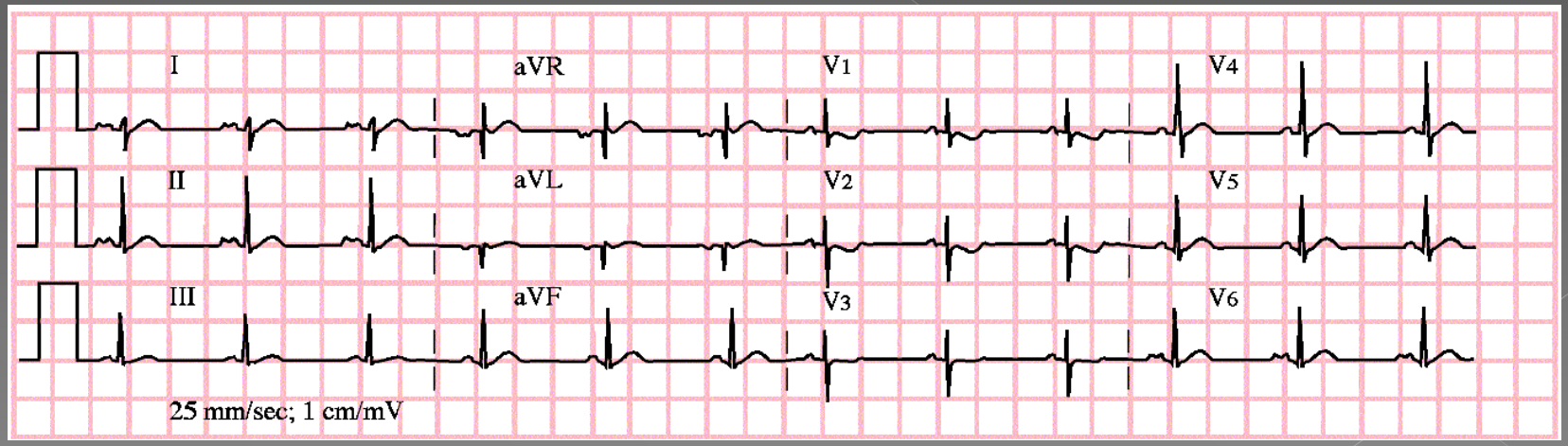
- U Wave

- Atriumların repolarizasyonu sonucu oluşur


Time
Voltage
1 mV
0.2 sec
0.1 mV
0.04 sec
RR Interval
QRS Complex
T Wave
ST Segment
P Wave
U Wave
PR
QRS
QT

Heart Rate

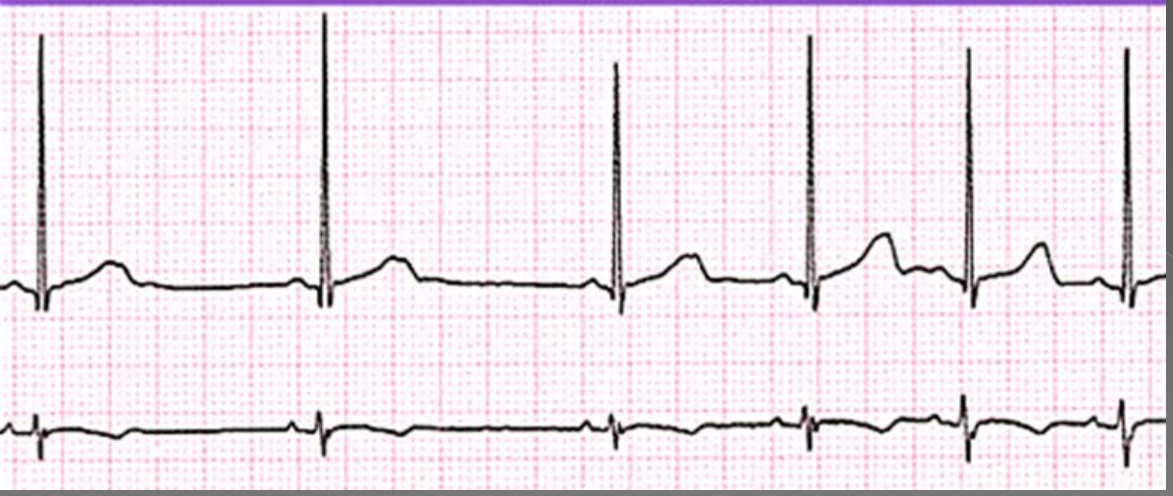
- 1500 / iki RR arası küçük kare sayısı
- 300 / iki RR arası büyük kare sayısı

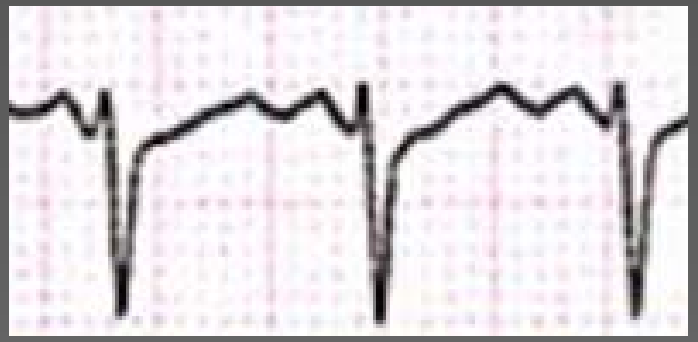


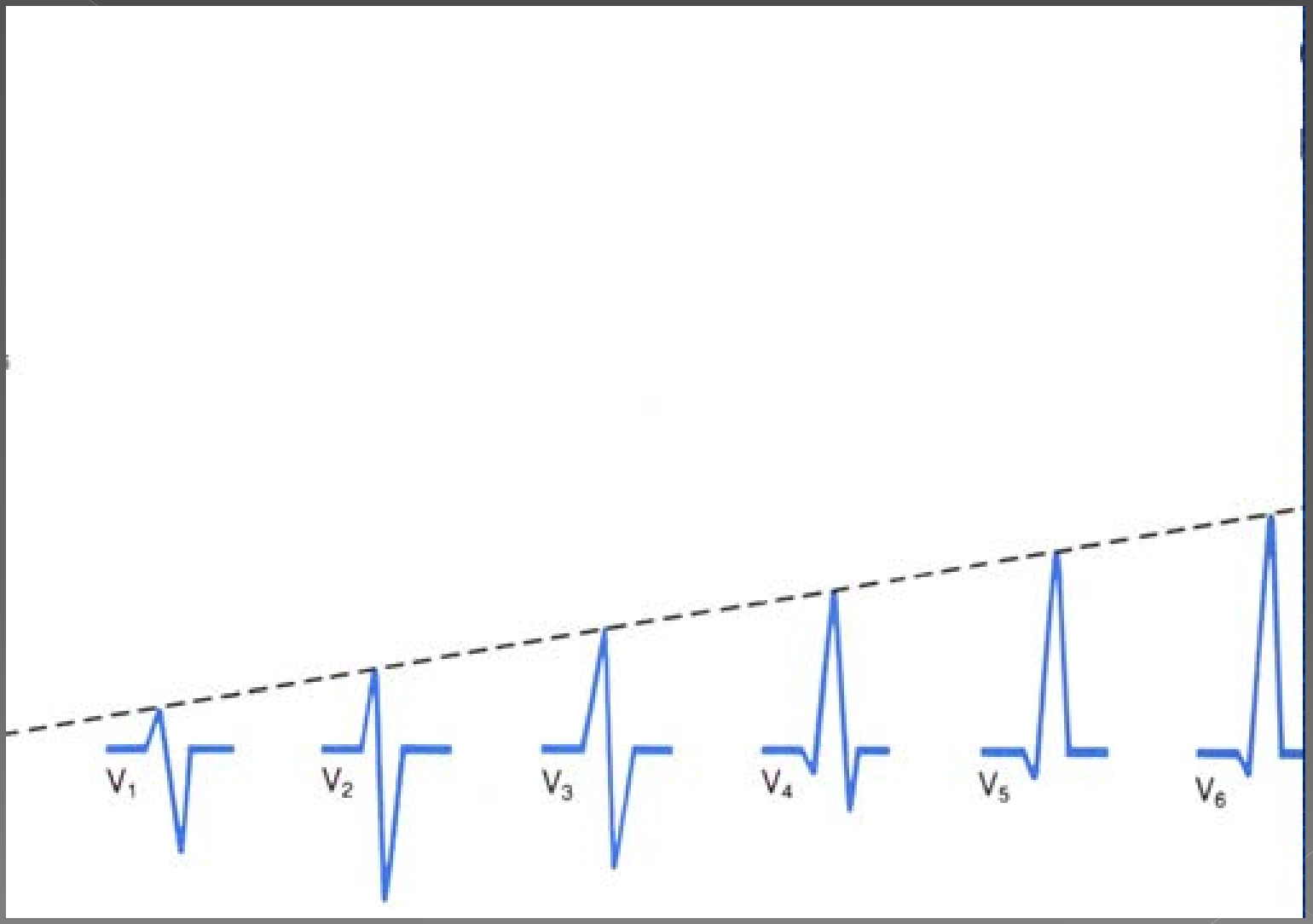
DON'T FORGET

300-150-100-75-60-50

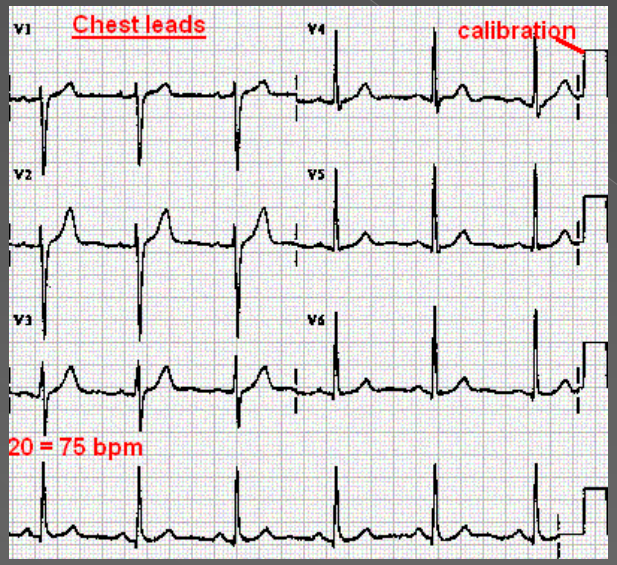
Sinus Arrhythmia

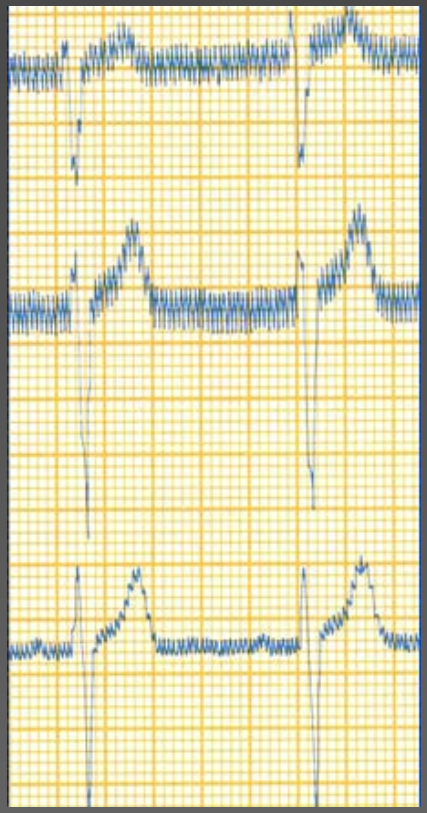


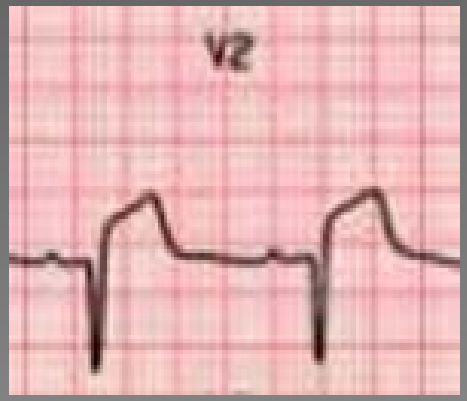


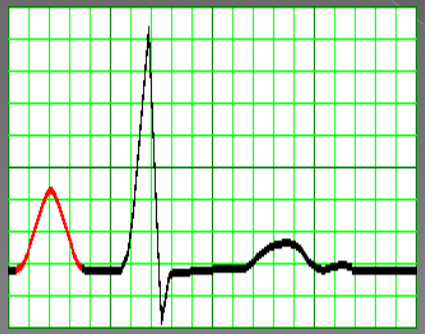

V1
V2
V3
V4
V5
V6

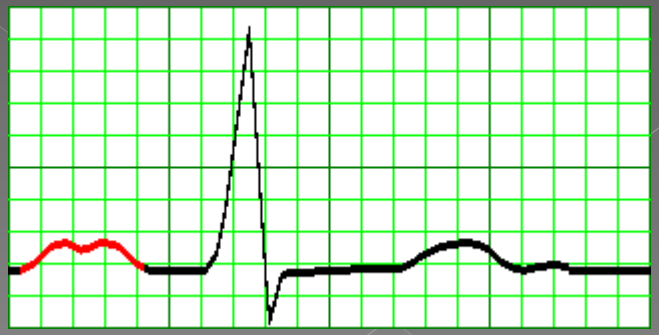
Patolojik wave

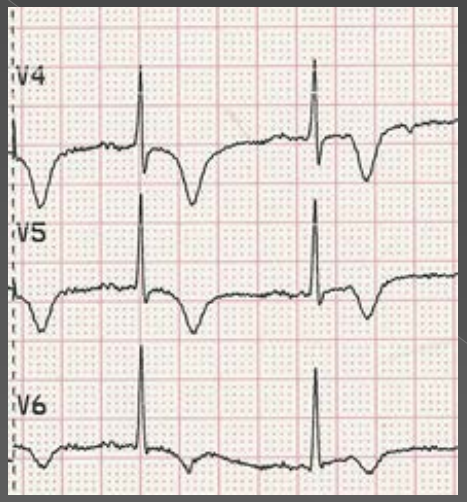


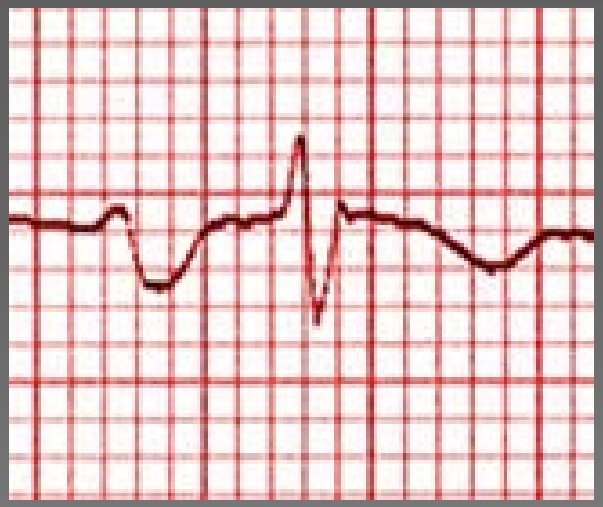


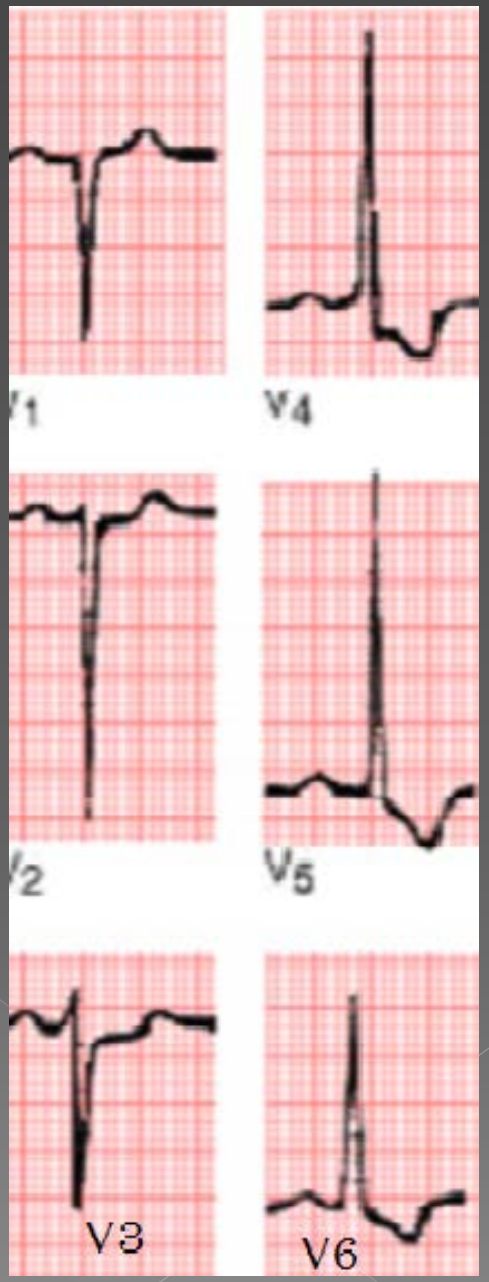







V4
V5
V6




V1
V4
V2
V5
V3
V6

ECG'de Artefakt Sebepleri

- Hastanın hareket etmesi
- Elektrotun çıkması
- Kas tremorları
- Titreme
- Makinenin bozuk olması
- Dışarıdan 60 hertz'lik elektrik dalgası ile etkilenme