

# NASIL EKG OKUYALIM? TEMEL PRENSİPLER



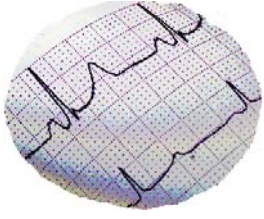
26-29 Mart, 2015  
Hilton İstanbul Bomonti Kongre Merkezi  
İstanbul

**Doç. Dr. Turan SET**

Karadeniz Teknik Üniversitesi Tıp Fakültesi

Aile Hekimliği Anabilim Dalı, Trabzon

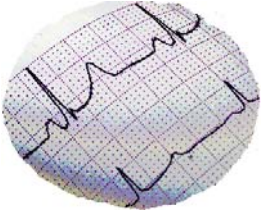
E-mail: turanset@yahoo.com



# AMAÇ

- EKG'nin fizyolojisi ve EKG yorumlamada temel prensipler hakkında bilgi vermek

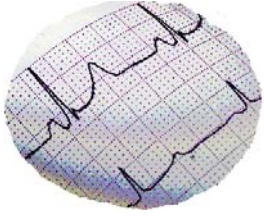




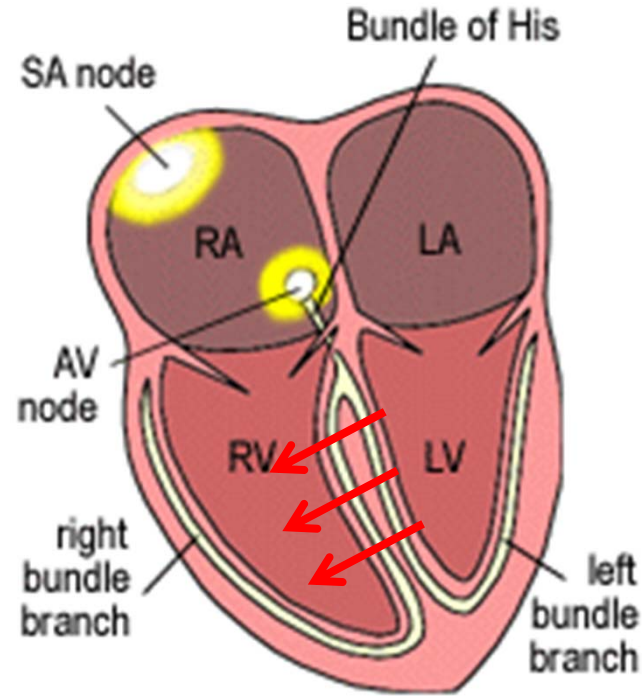
# Öğrenim hedefleri

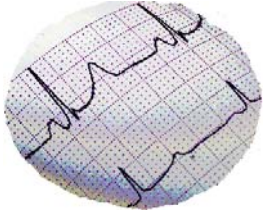
- Kalbin elektrik iletisini açıklayabilmek
- Derivasyonların yerlerini belirtebilmek
- EKG kağıdı üzerinde dalgaların oluşma mekanizmasını açıklayabilmek
- Kalibrasyonu açıklayabilmek
- EKG değerlendirmede temel prensipleri sayabilmek



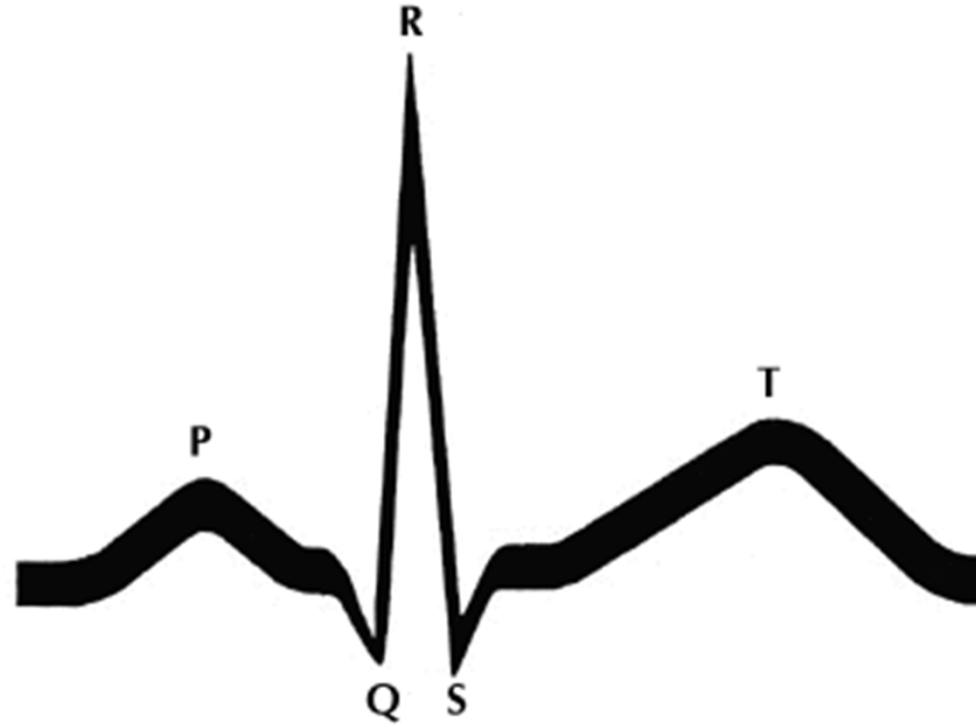


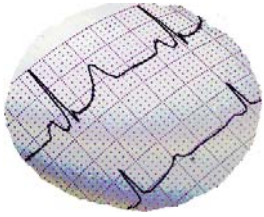
# Kalbin uyarı iletimi



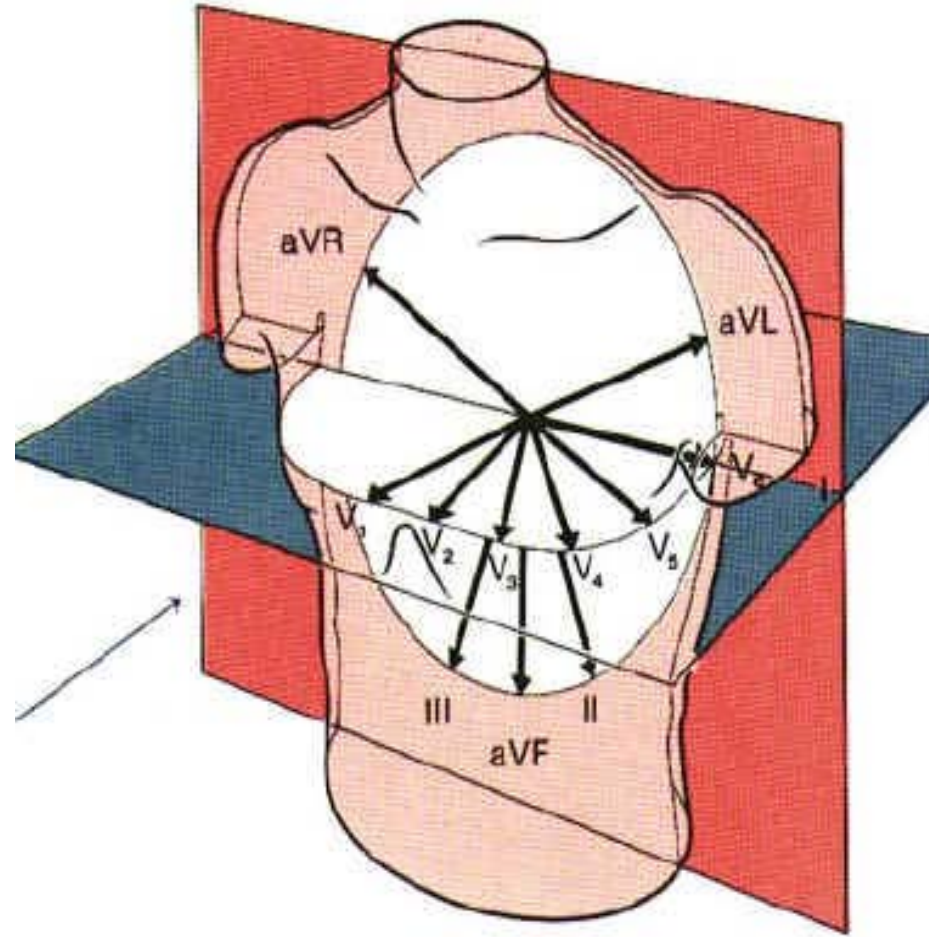


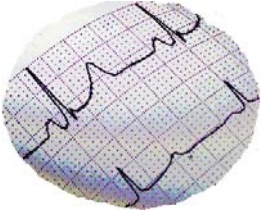
# Dalgaların adlandırılması



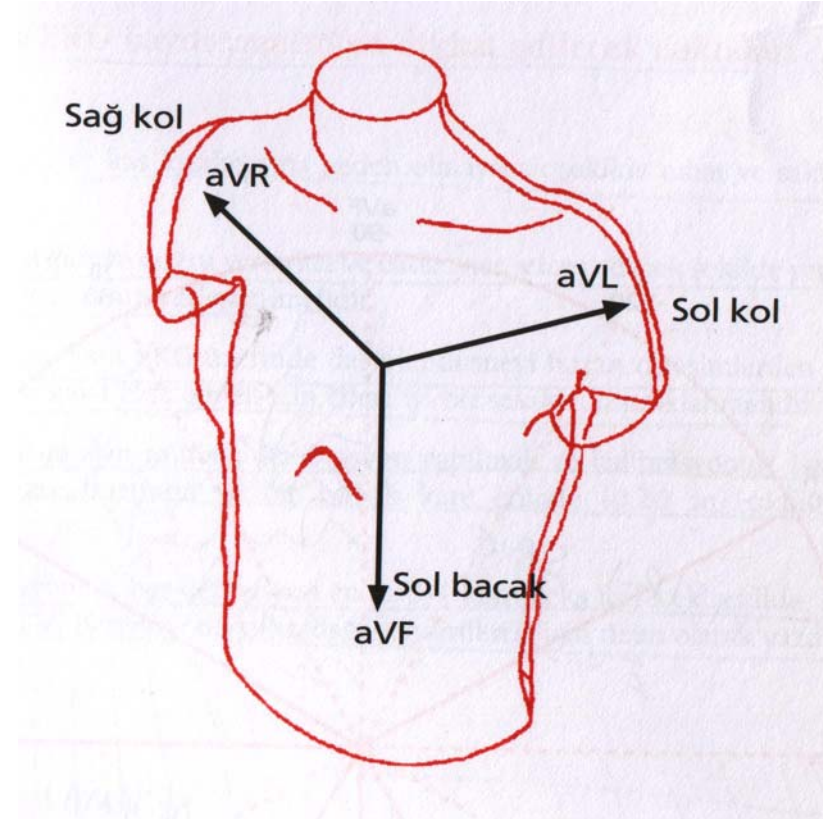
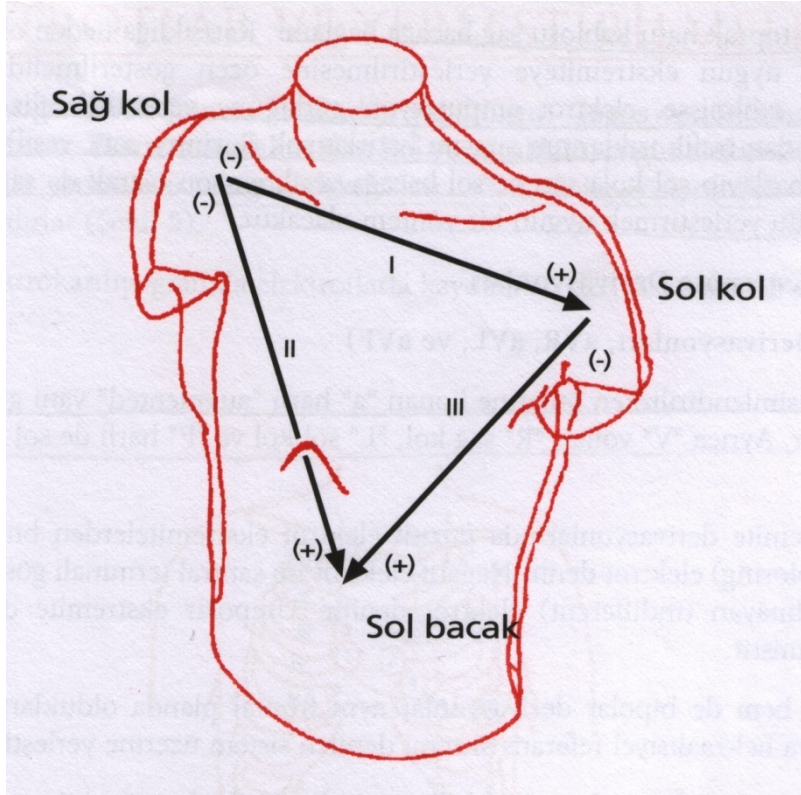


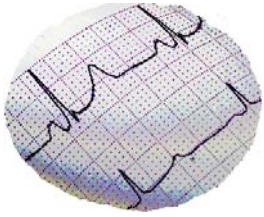
# Derivasyonlar



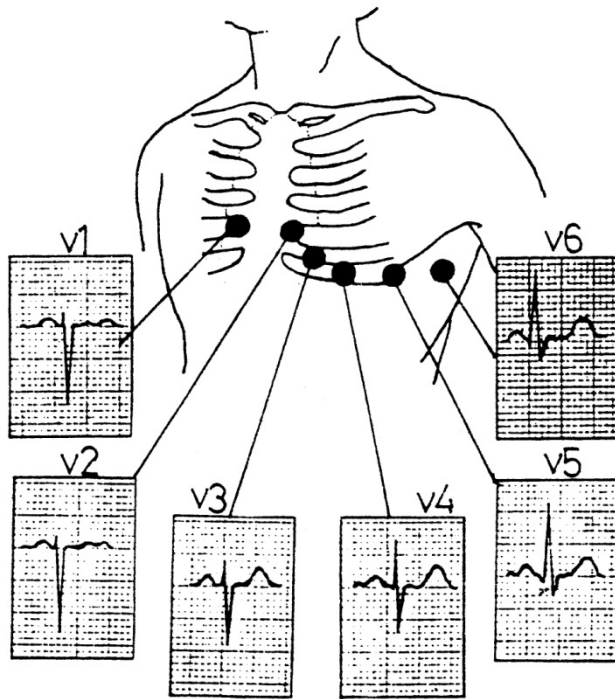


# Derivasyonlar

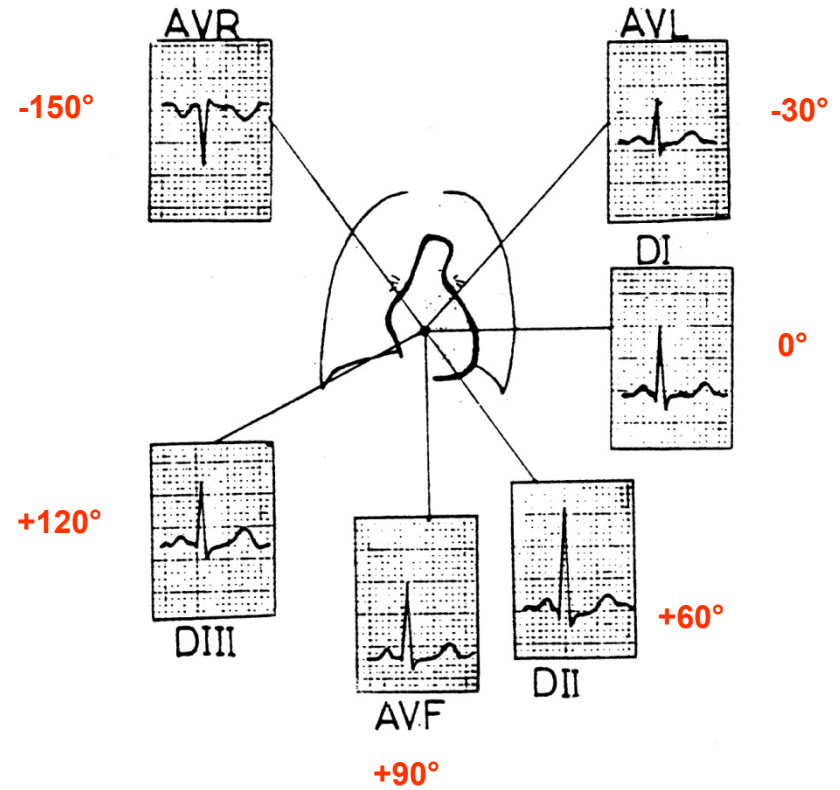




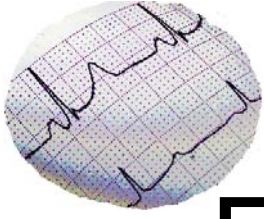
## Göğüs derivasyonları



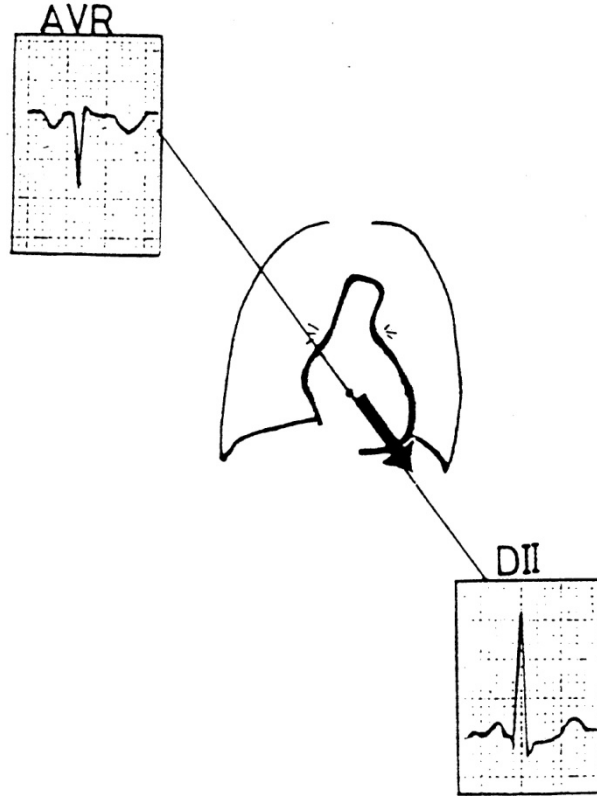
## Ekstremité derivasyonları

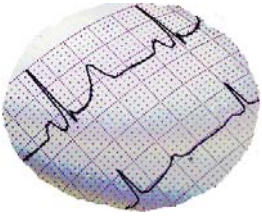




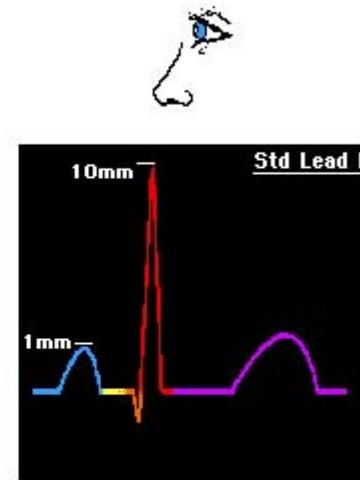
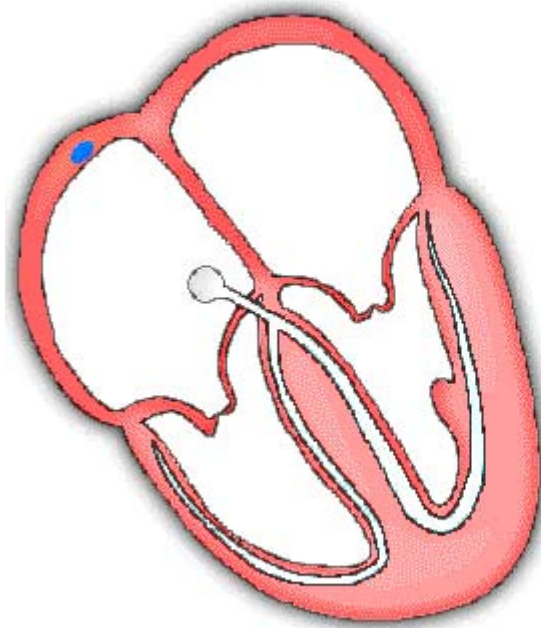


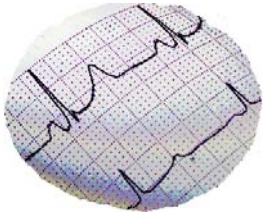
# EKG'de dalgalar nasıl oluşur?



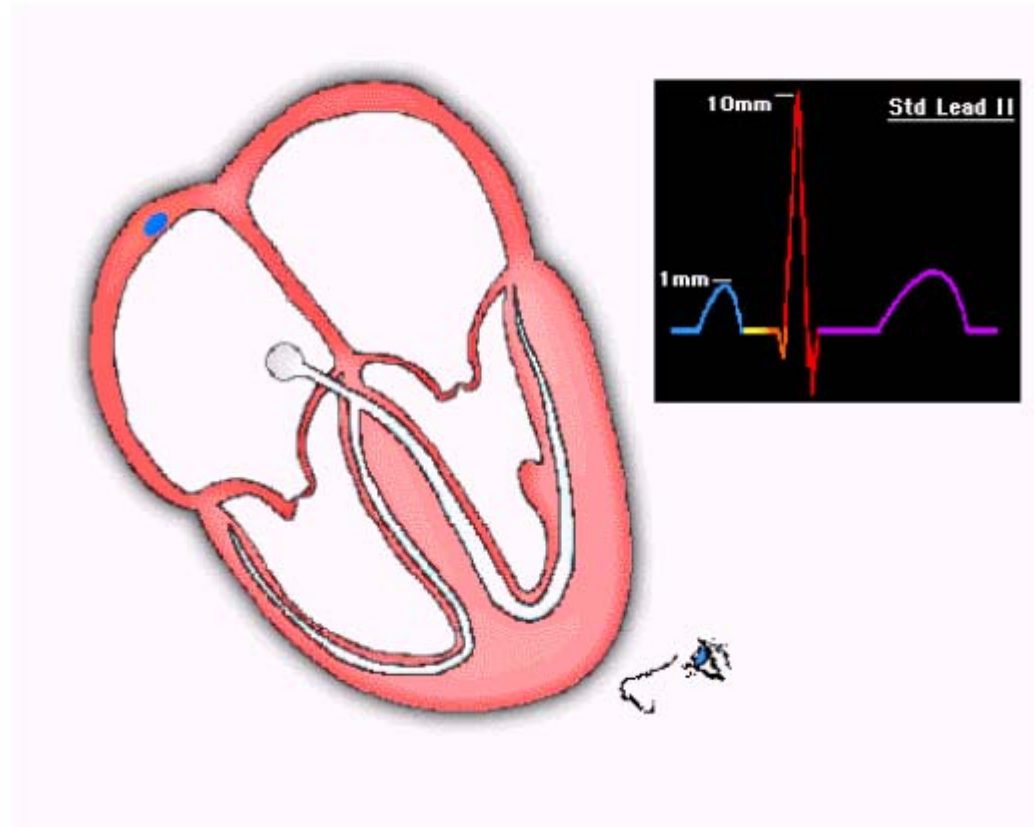


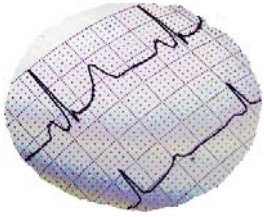
# D I



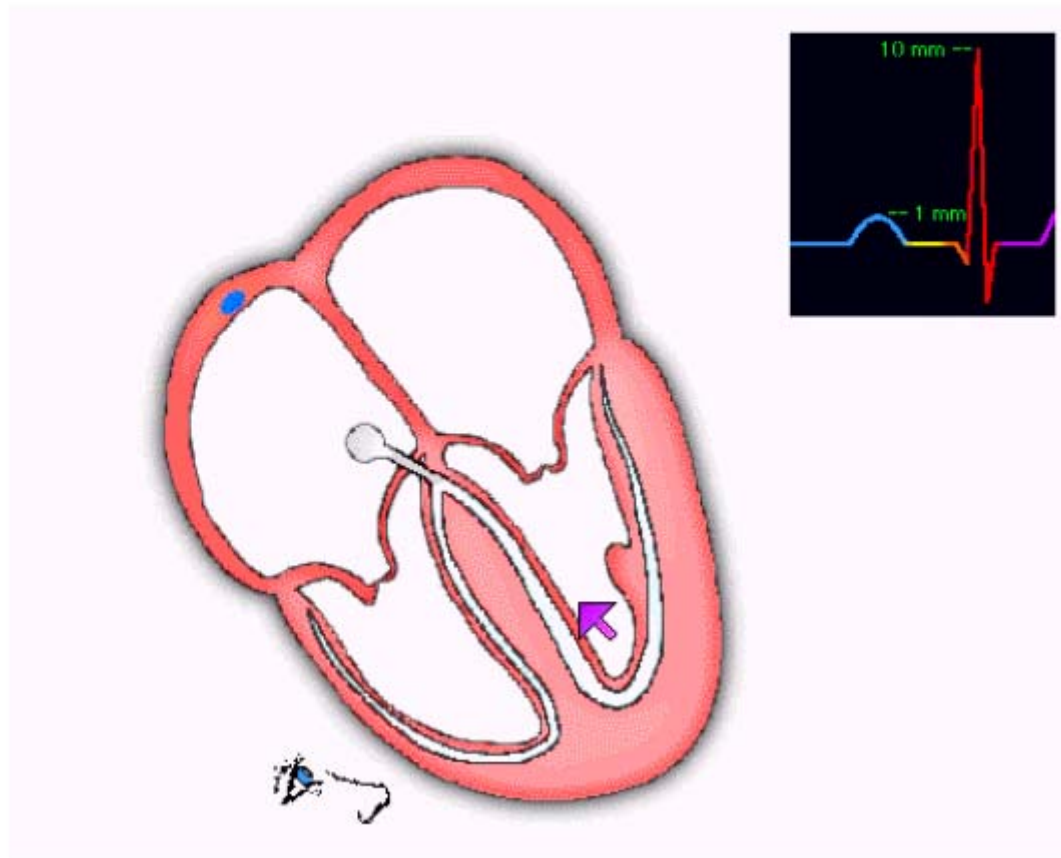


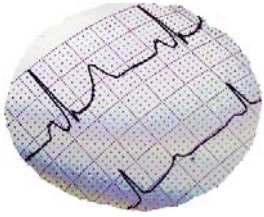
## D II



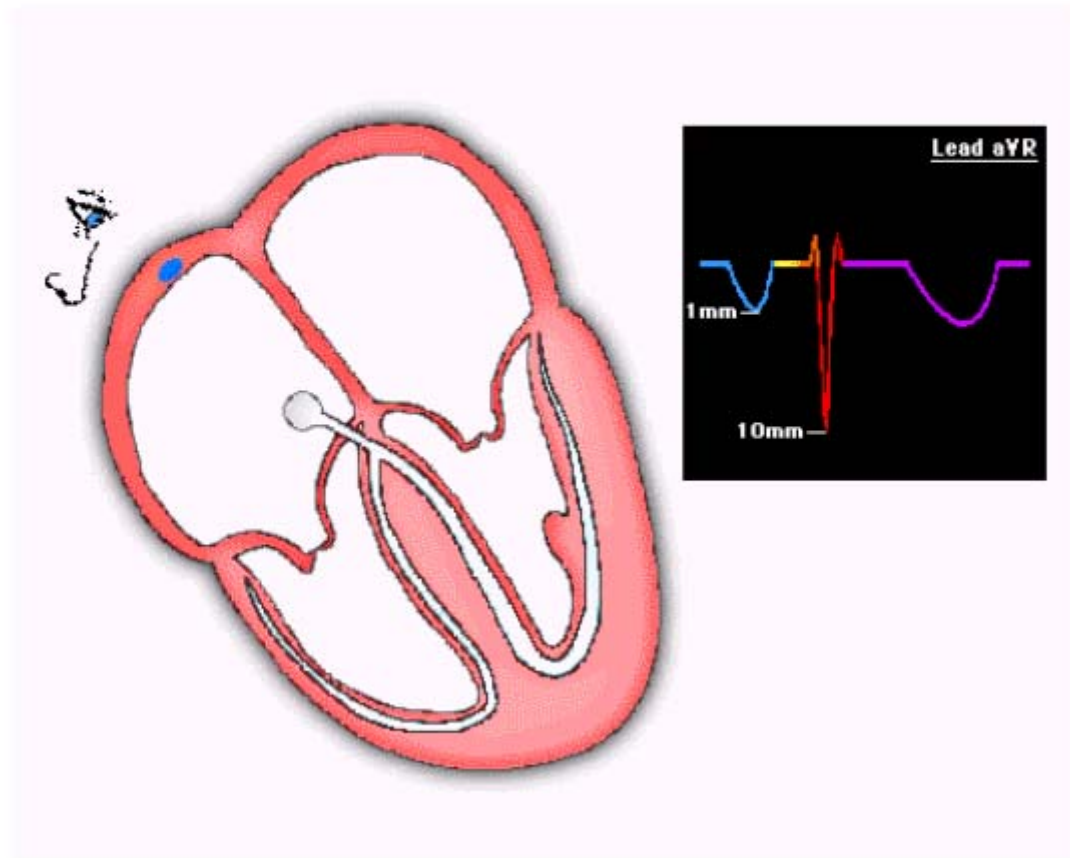


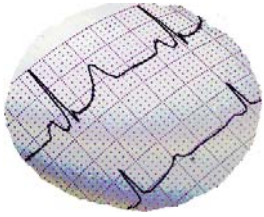
## D III



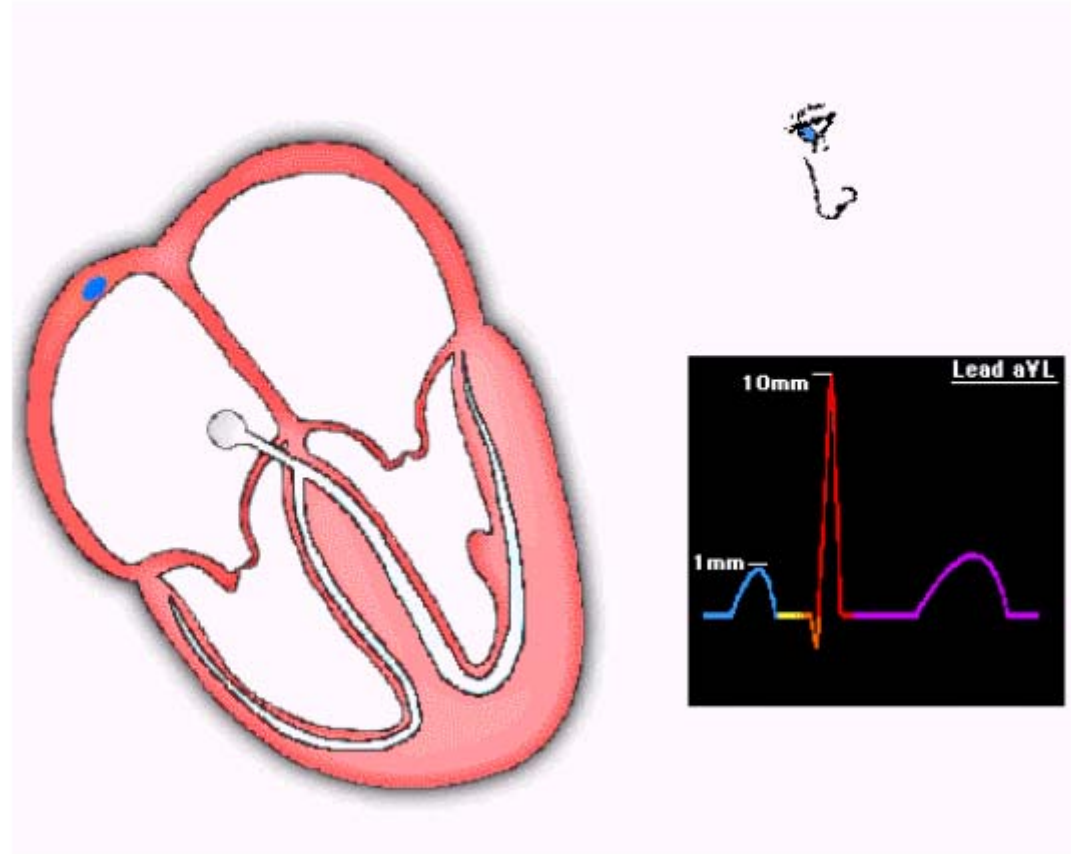


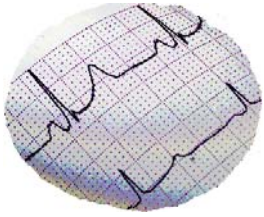
## aVR



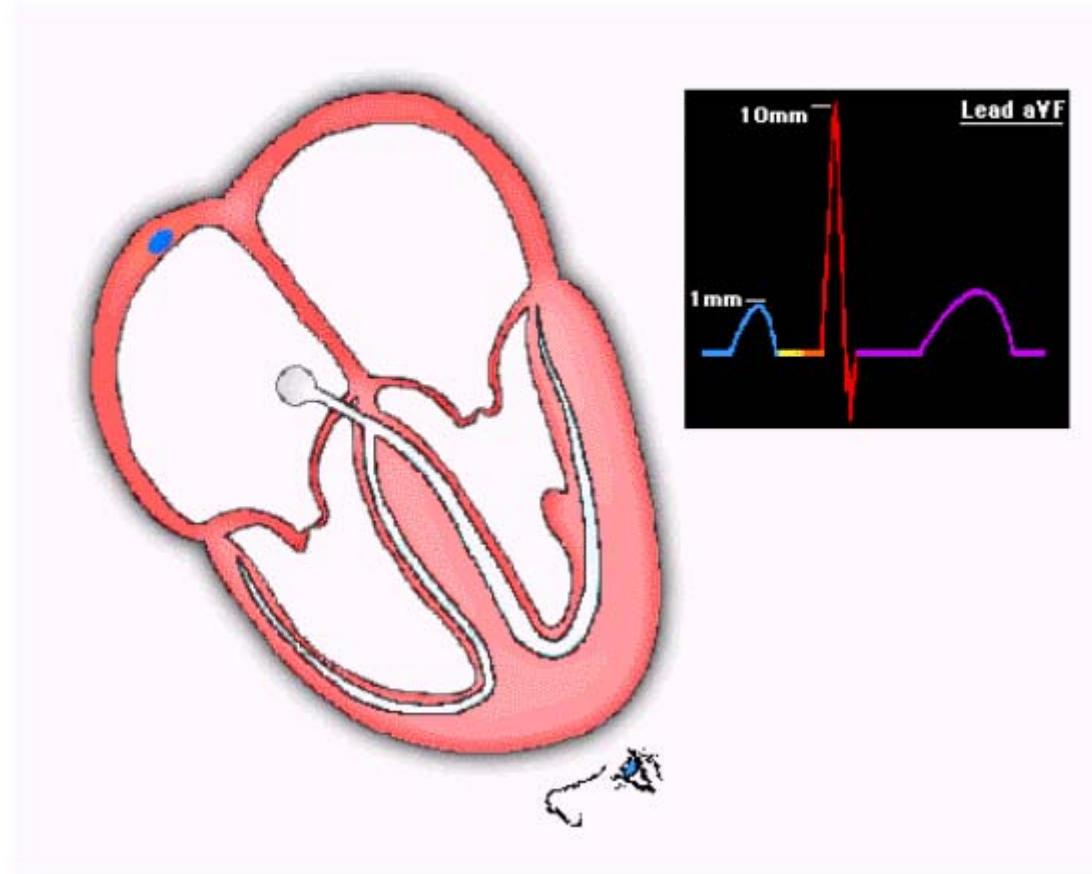


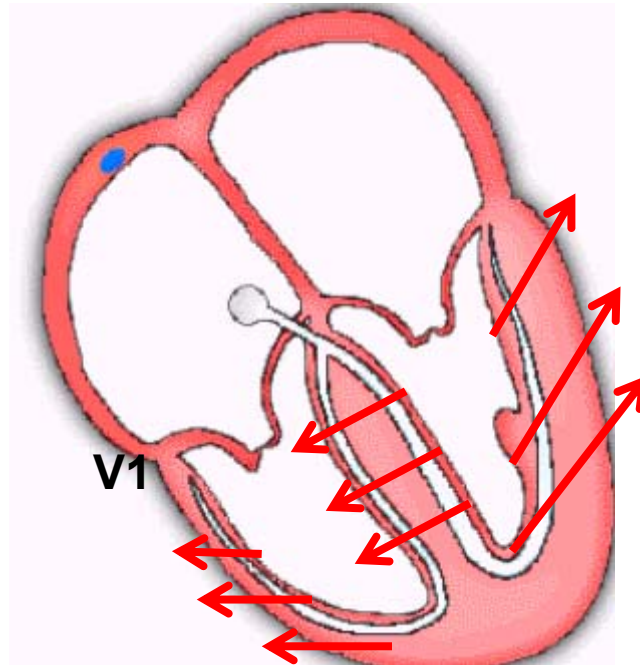
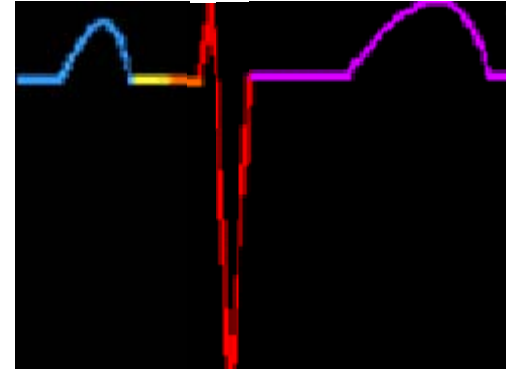
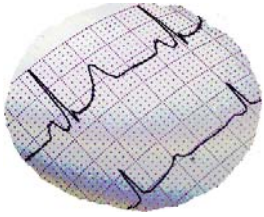
# aVL



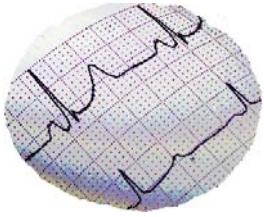


## aVF

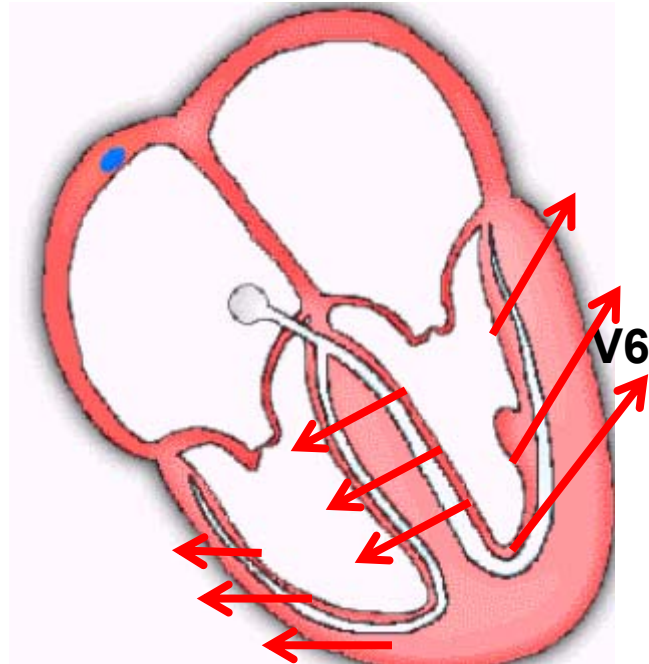
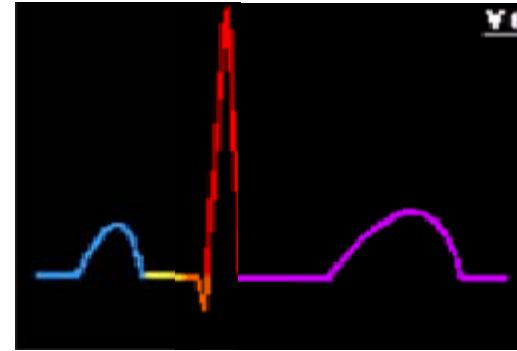


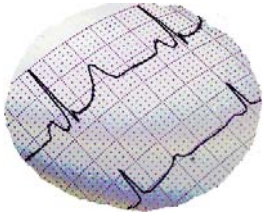




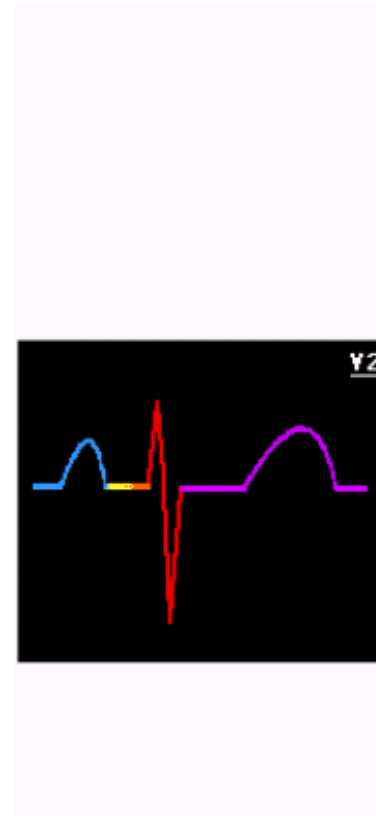
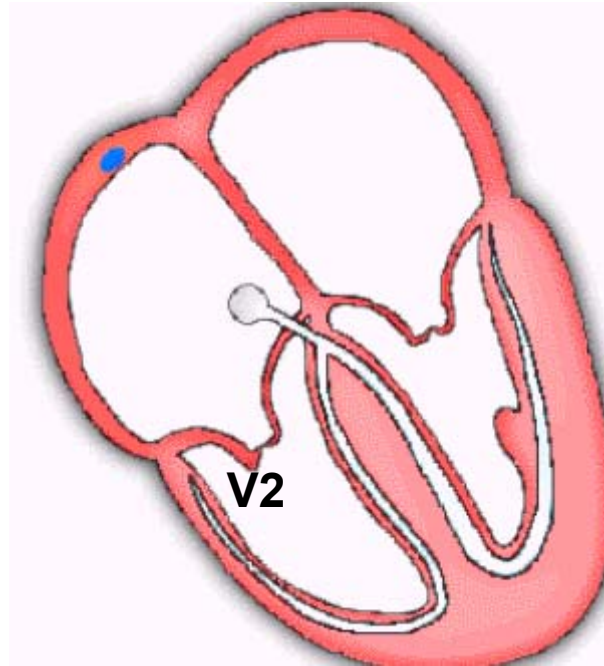


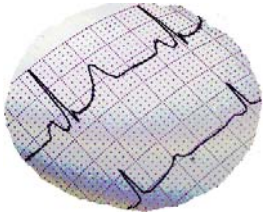
V6



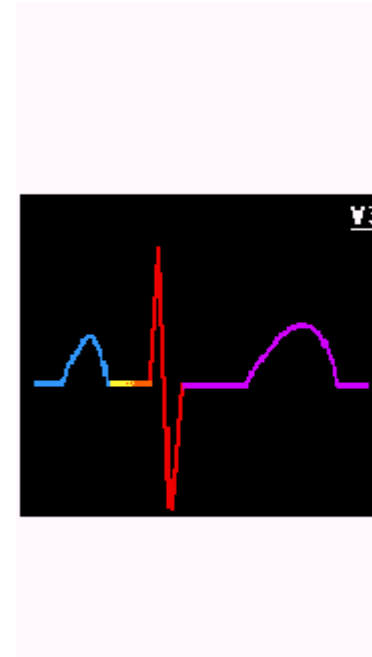
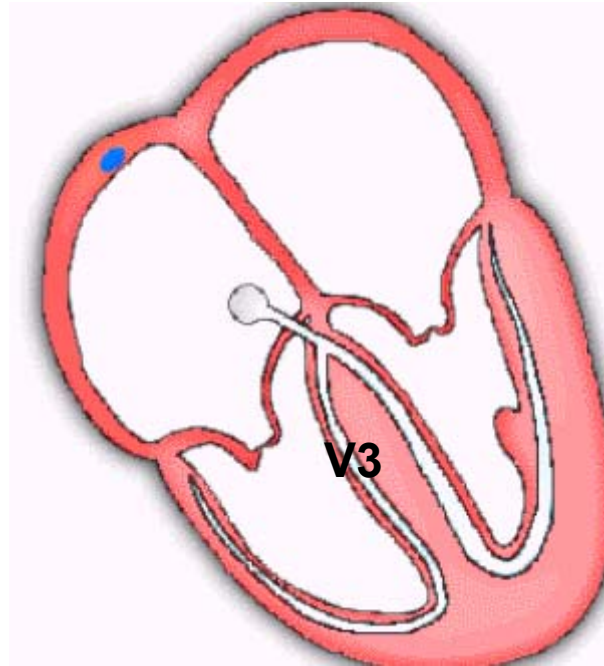


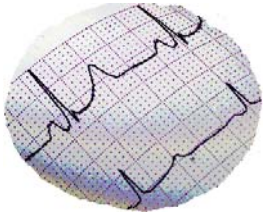
V2



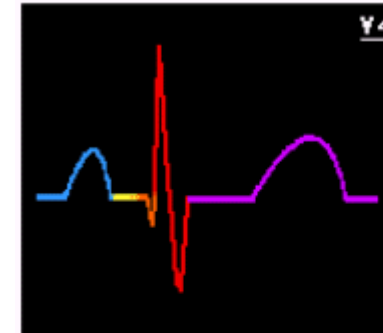
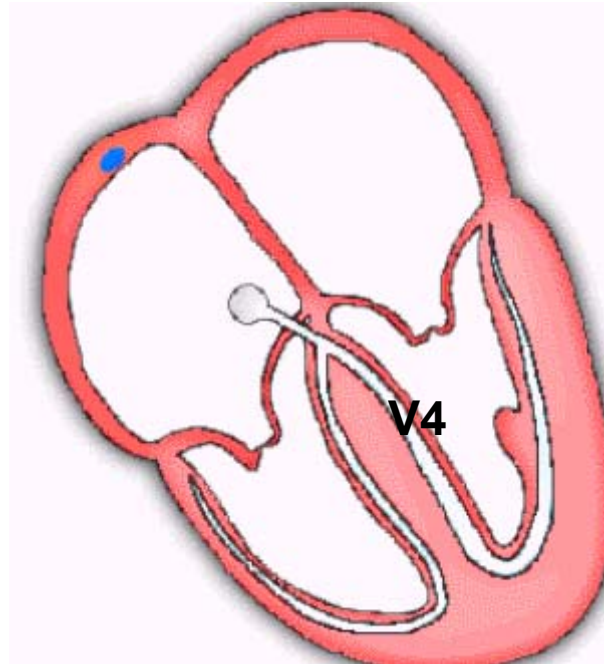


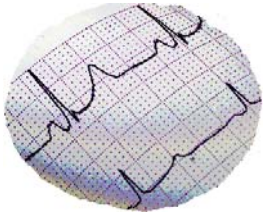
V3



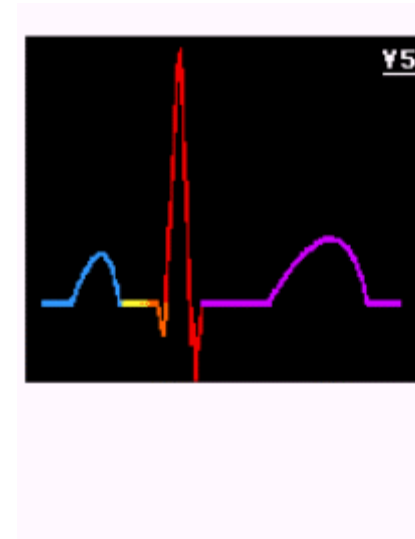
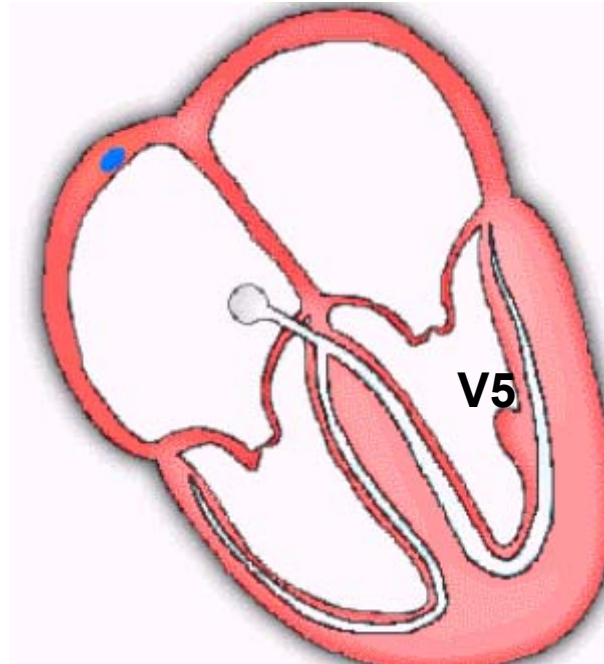


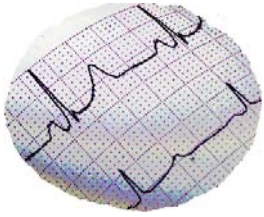
V4



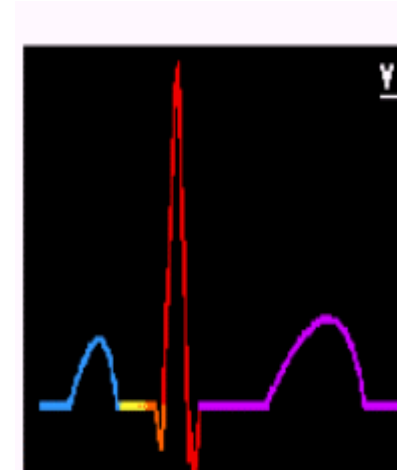
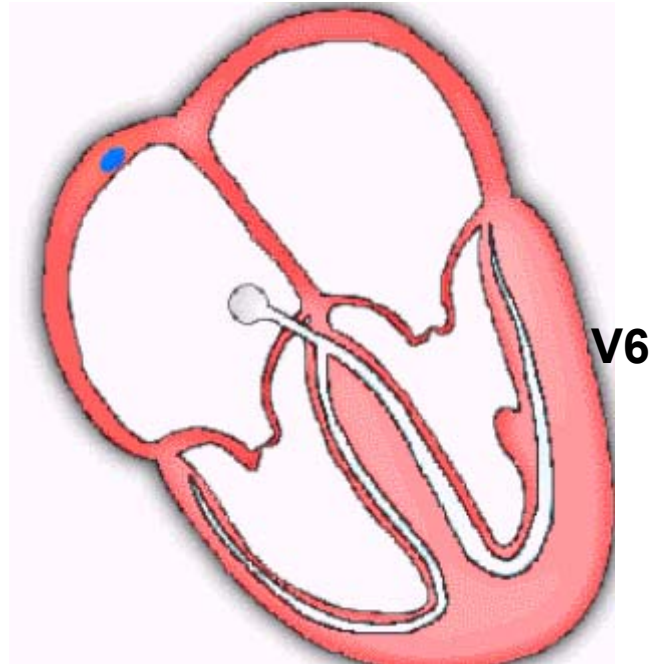


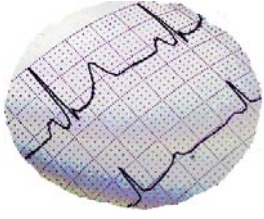
V5





V6

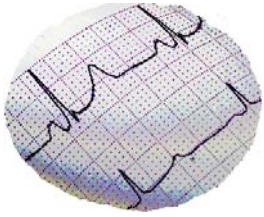




# EKG'yi nasıl deęerlendirelim?

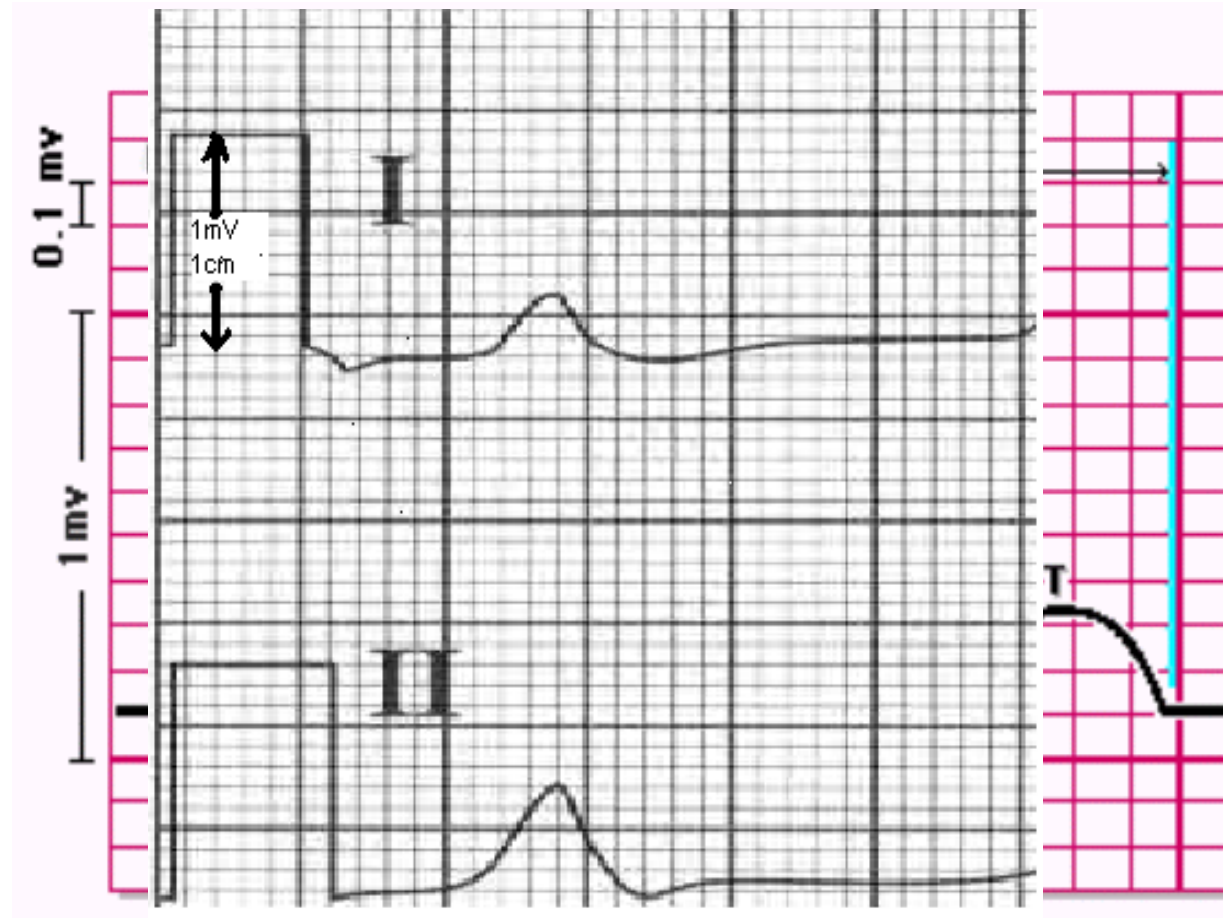
- Ölçümler
- Ritim analizi
- İletim analizi
- Dalgaların şekli
- EKG yorumu
- Önceki EKG ile karşılaştırma



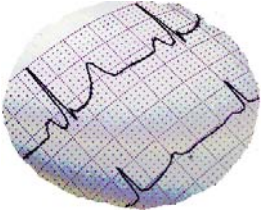


# Ölçümler

## Kalibrasyon



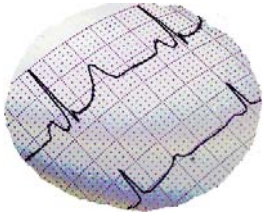




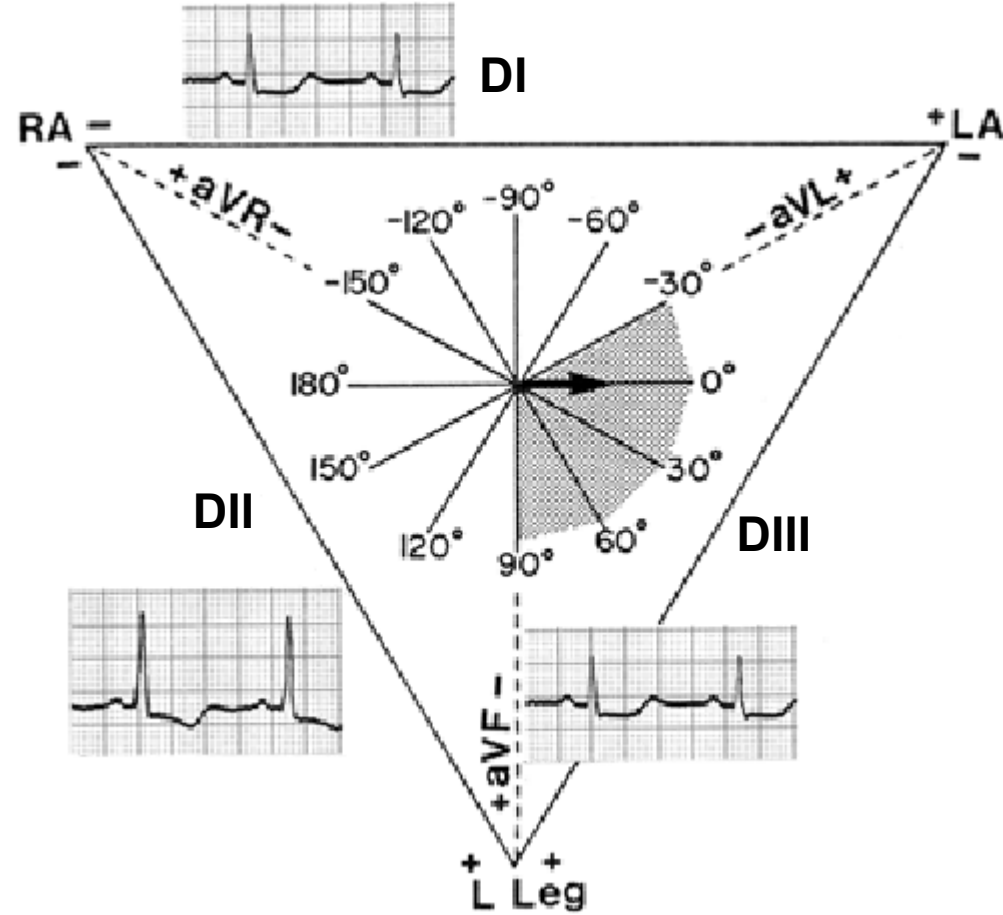
# Normal EKG

- Kalp hızı 60 – 100 / dakika
- PR: 0.12 - 0.20 sn
- QRS: 0.06 - 0.12 sn
- QT  $\leq$  0.42 sn
- Ritim : NSR
- Vertikal plan QRS aksı (+90°) – (-30°)
- İleti : SA – AV – IV



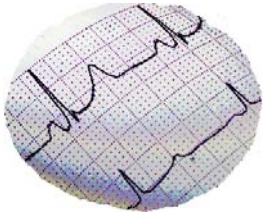


# Normal aks

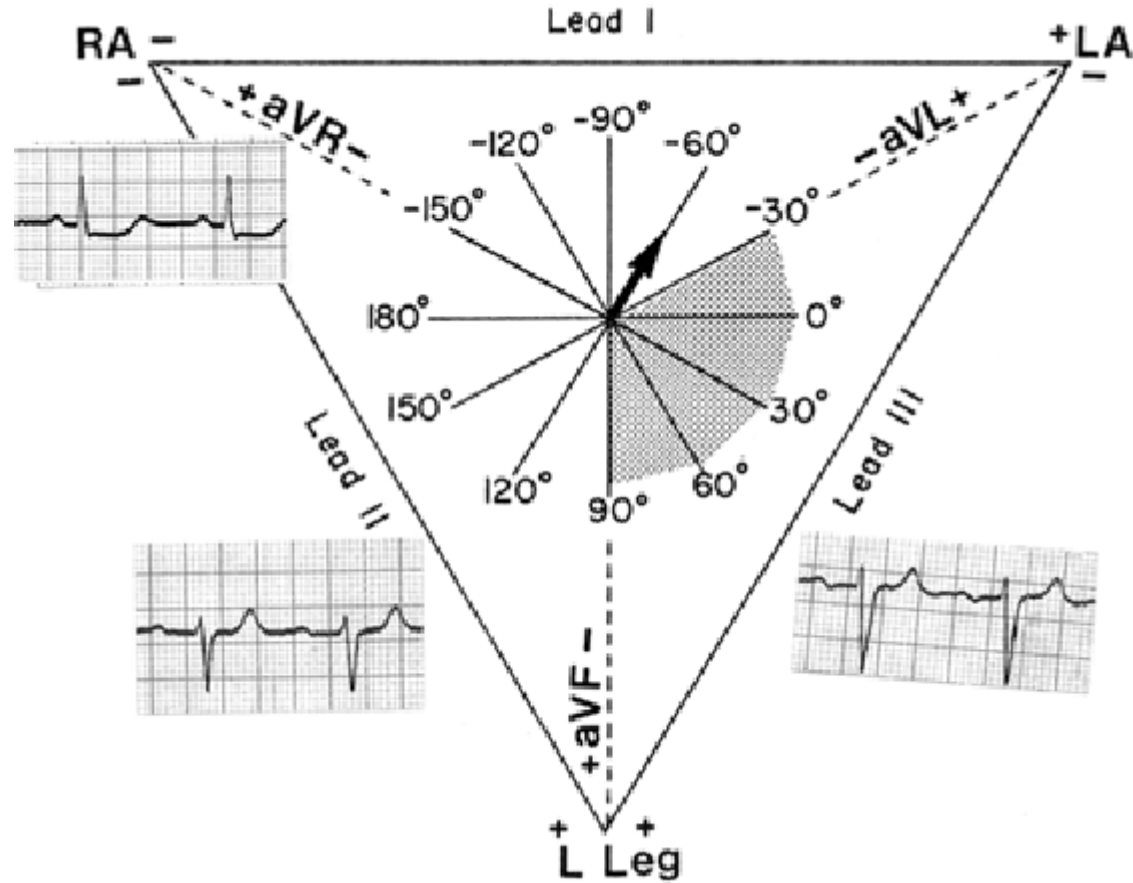


**DII > DI ve DIII**



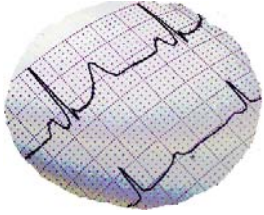


# Sol aks deviasyonu

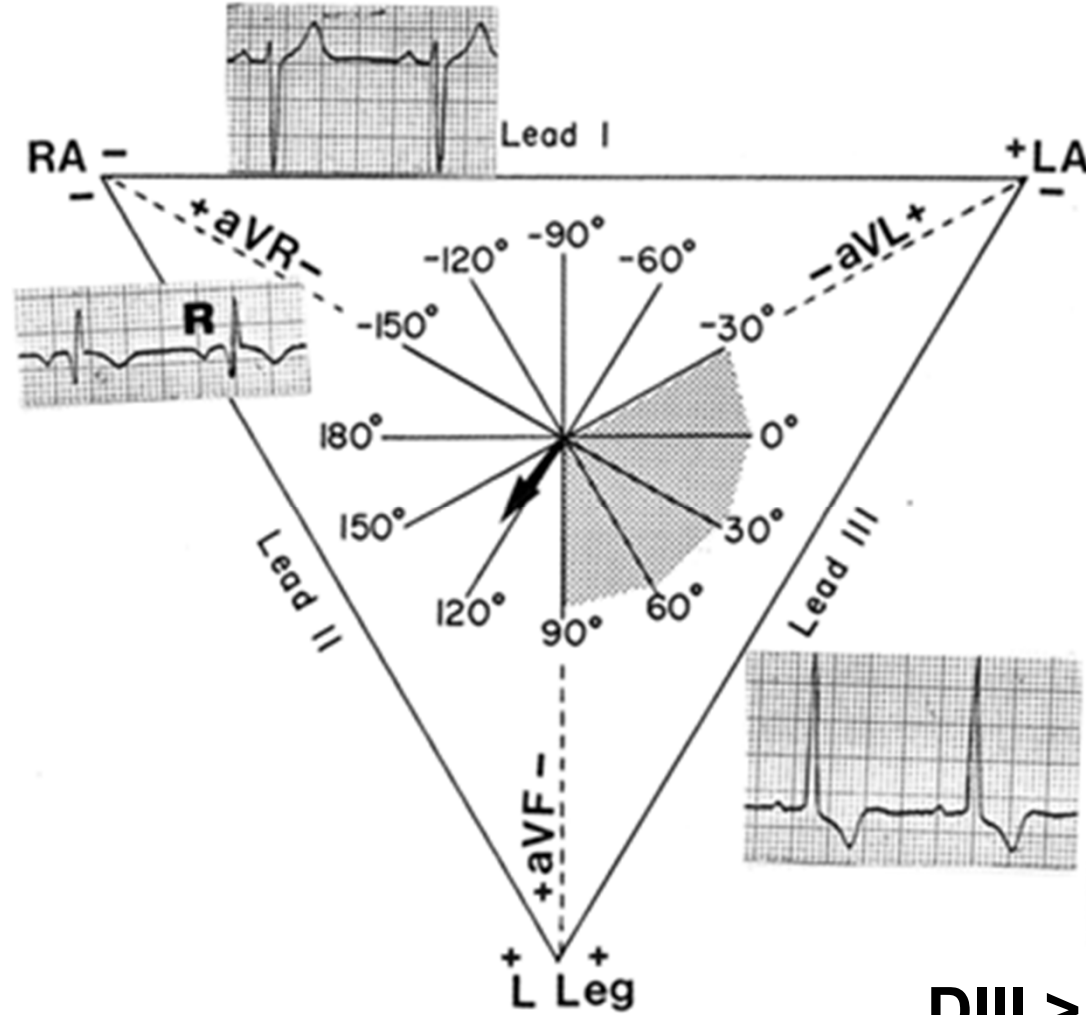


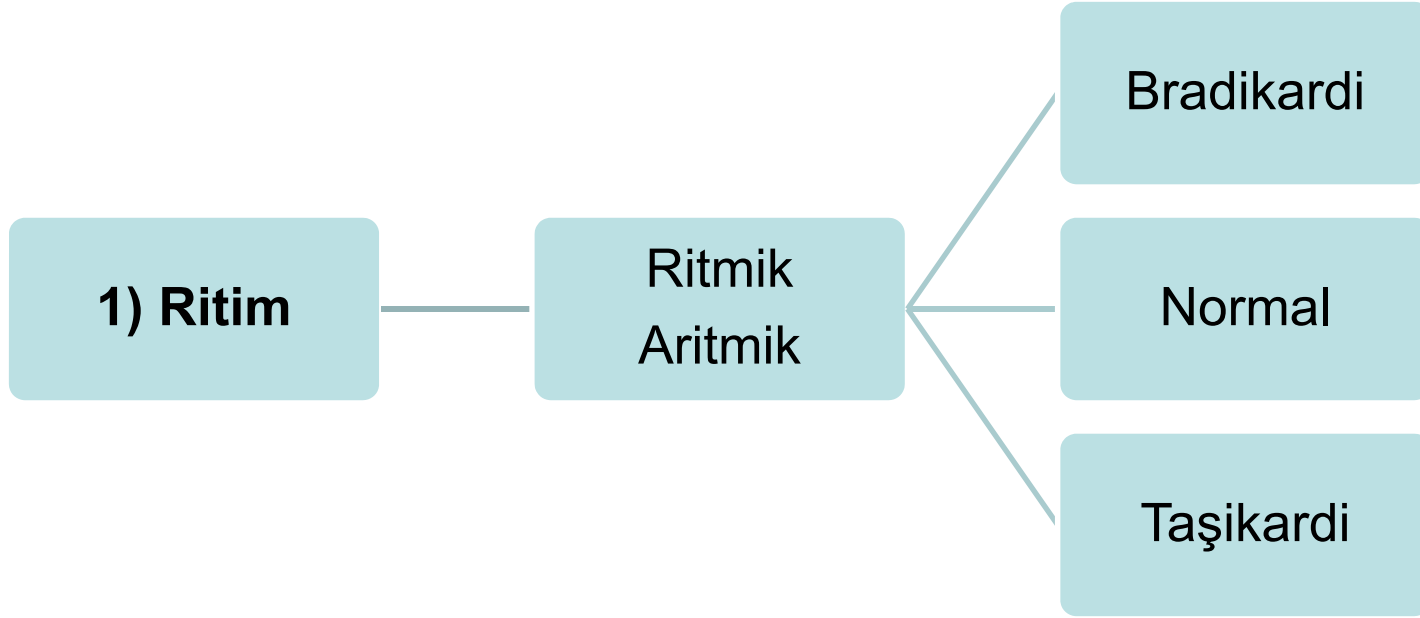
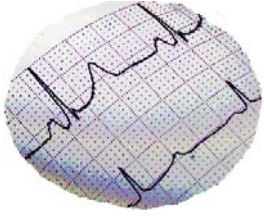
**DI > DII > DIII**

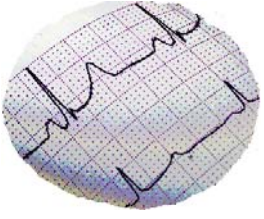




# Sağ aks deviasyonu







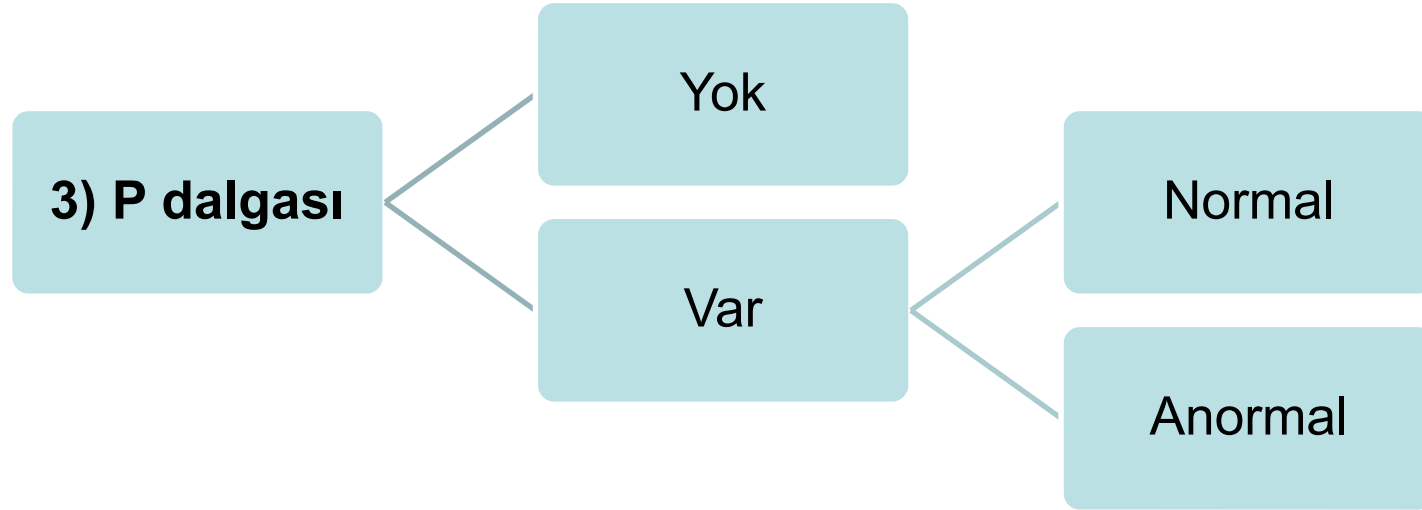
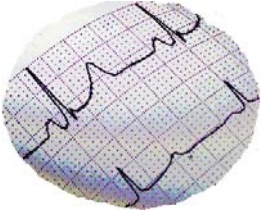
## 2) Kardiyak Aksın Yönü

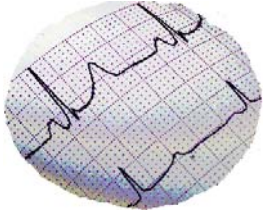
Sağa

Normal

Sola







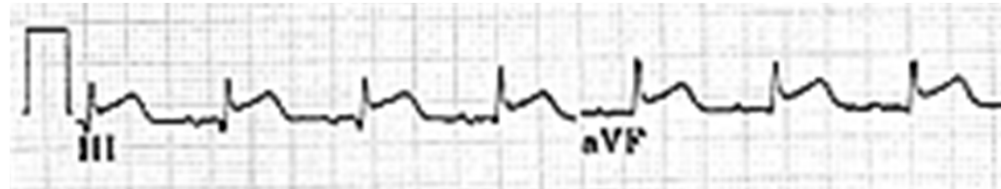
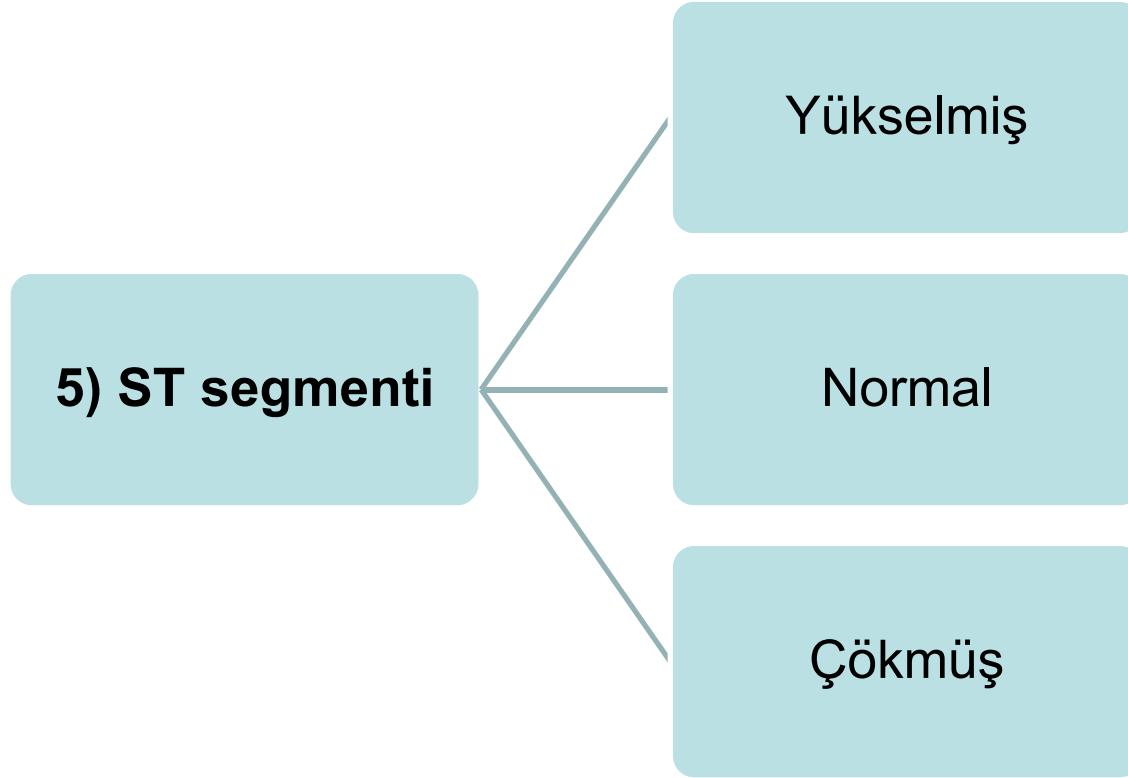
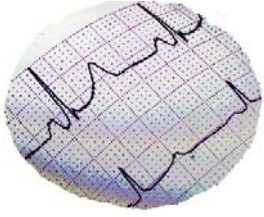
#### 4) QRS kompleksi

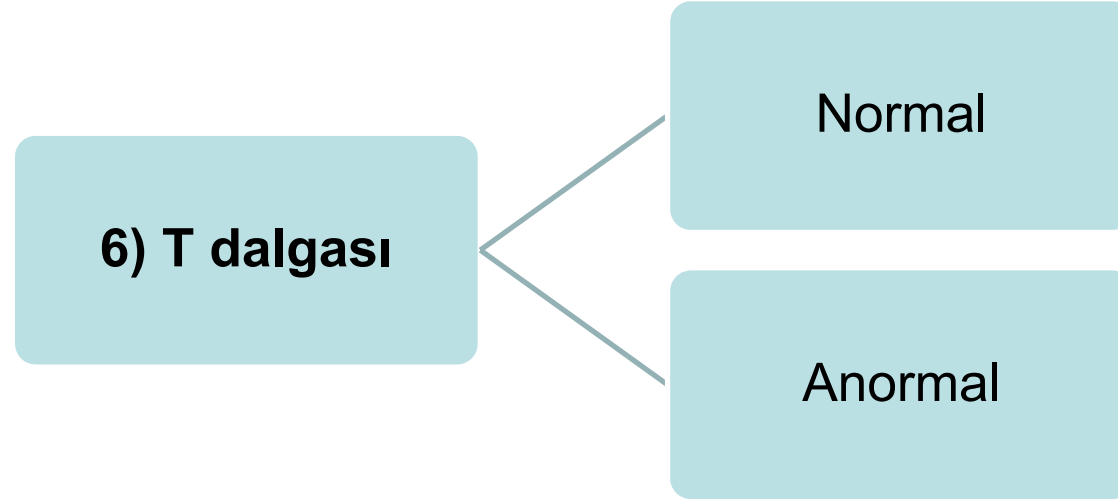
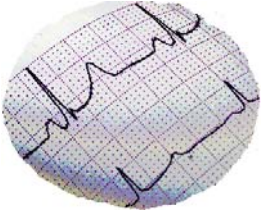
Normal

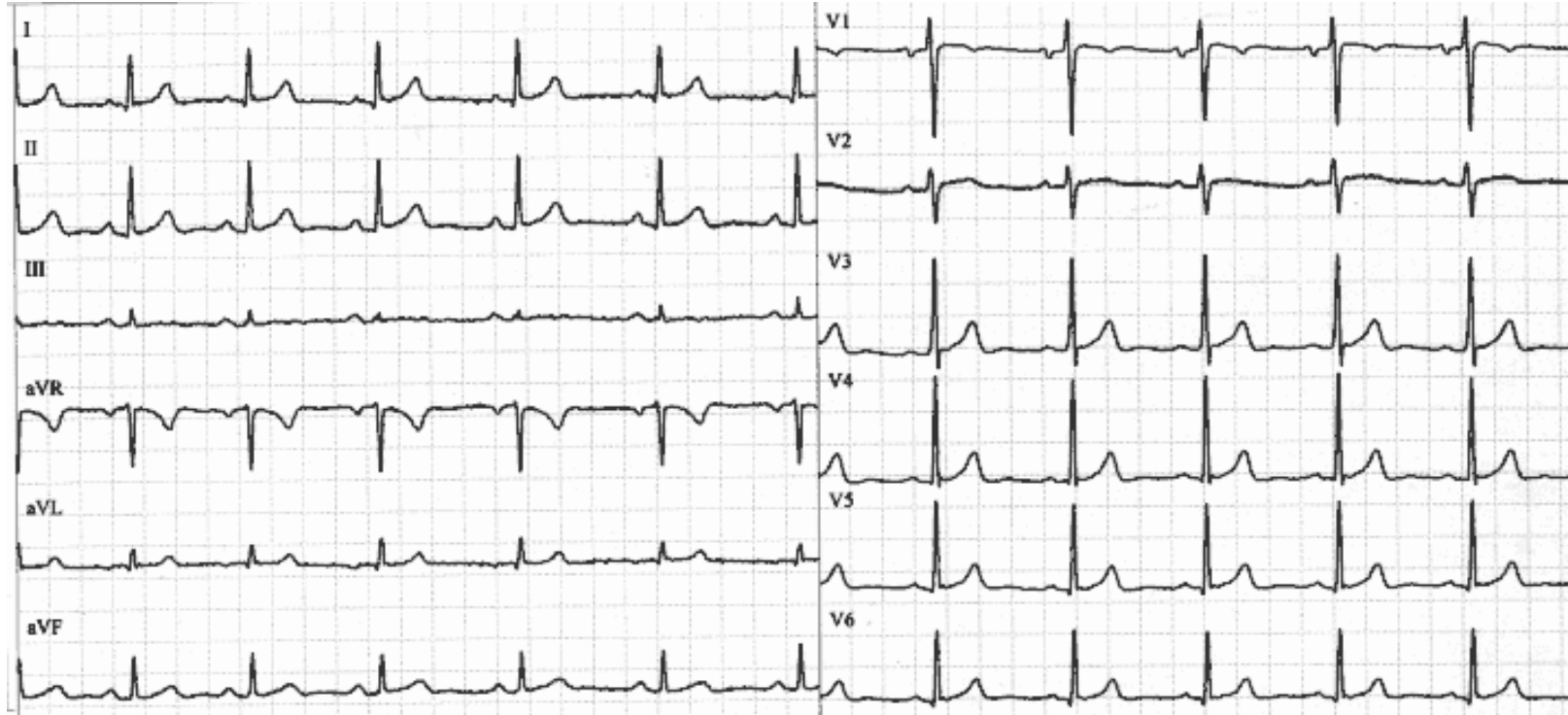
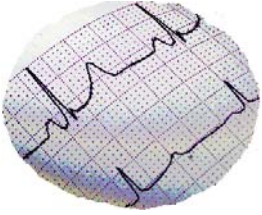
Uzamış





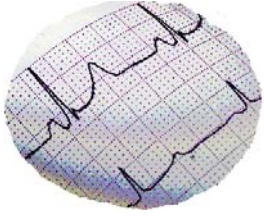






- Ritim sinüs, düzenli, 75/dk
- Aks normal
- P dalgaları var, normal
- QRS normal
- ST normal
- T dalgası normal





# Kaynaklar

1. Acartürk E. Pratik Elektrokardiyografi. İstanbul, Yelken Basım Yayın Sanayi ve Ticaret Ltd. Şti., 2001.
2. Attar E. Özetlenmiş EKG Bilgisi. Ankara, Set Ofset Matbaacılık, 1993.
3. Rutten FH, Kessels AGH, Willems FF, Hoes AW. Electrocardiography in primary care; is it useful? Int J Cardiol 2000;74(199-205)
4. Margolis S, Reed R. ECG analysis skills of family practice residents in the United Arab Emirates: a comparison with US data. Fam Med 2001;33(6):447-52.
5. İlerigelen B, Mutlu H. EKG kursu kitapçığı.  
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6. Dagdeviren N., Akturk Z., Set T., Ozer C., Mistik S., Durmus B. ve Unluoglu I., “ECG Interpretation Skills of Family Physicians: A Comparison with Internists and Untrained Physicians”, Middle-east Journal of Family Medicine.

