



# **Understanding Supraventricular Tachycardias**

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## Understanding SVT

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- Disclosures:
    - Speakers Bureau – Boston Scientific, Biotronik, Boehringer Ingelheim
    - Research – Boston Scientific, Biotronik
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## Understanding SVT

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- Goals:
    - Understand different mechanisms of SVT
    - Differentiate SVT based on ECG clues
    - Understand therapies for the various SVT's
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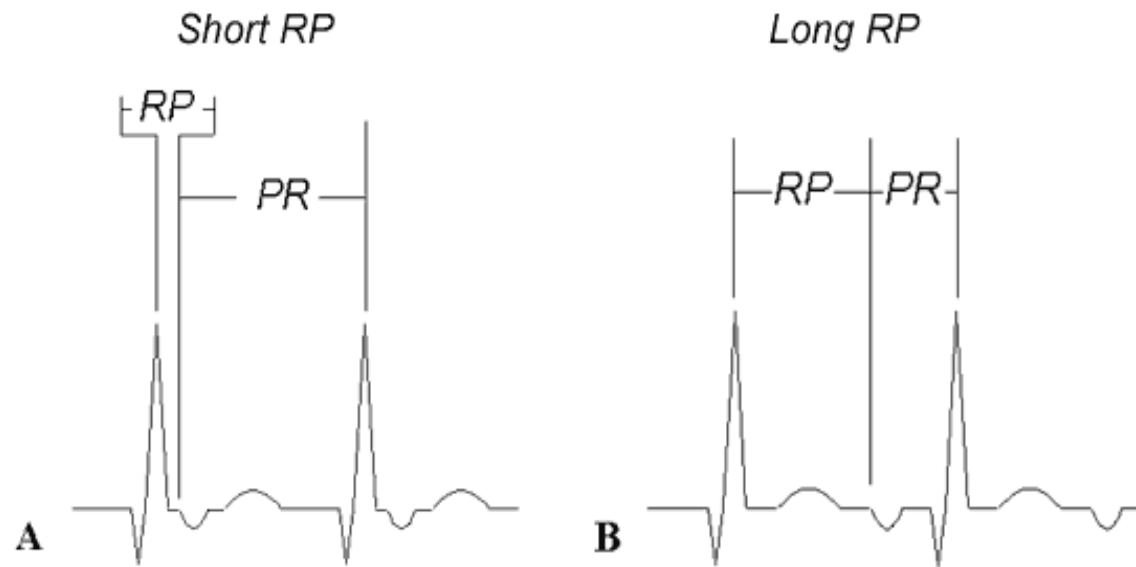
## Types of SVT

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- AV nodal reentrant tachycardia (70%)
  - AV reentrant tachycardia (20%)
  - Atrial tachycardia (9%)
  - Junctional tachycardia (1%)
  
  - Atrial Flutter
  - Atrial Fibrillation
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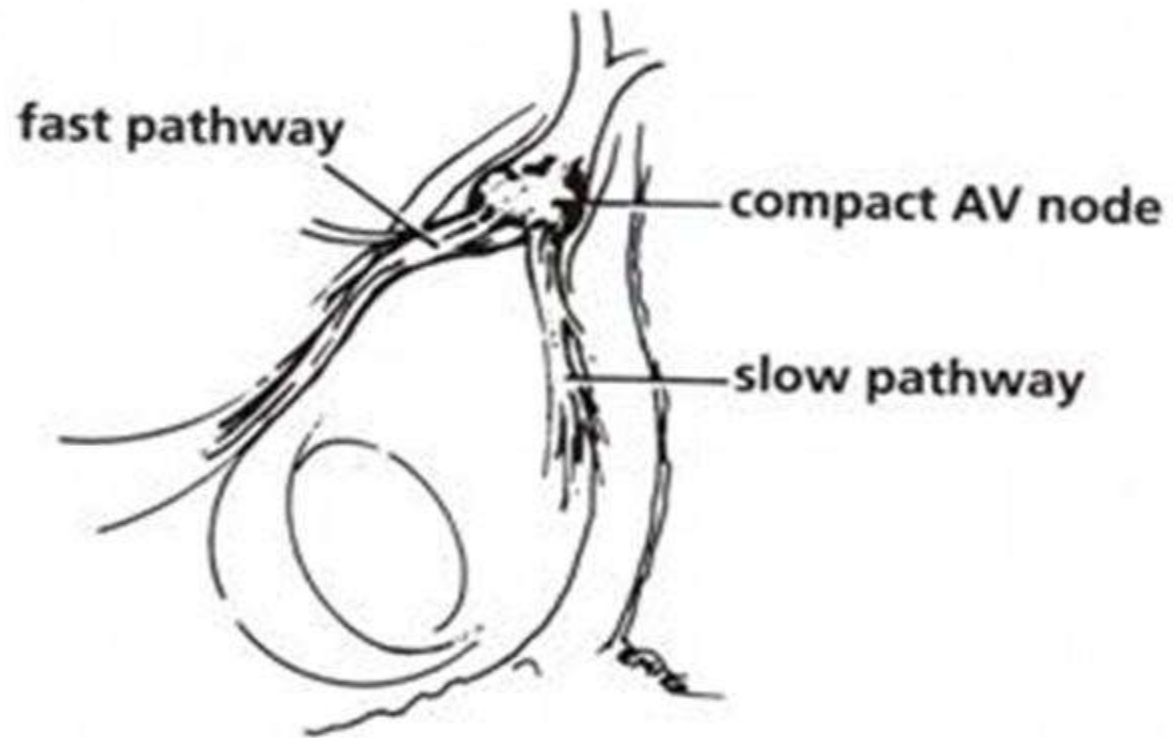


# Long RP vs Short RP



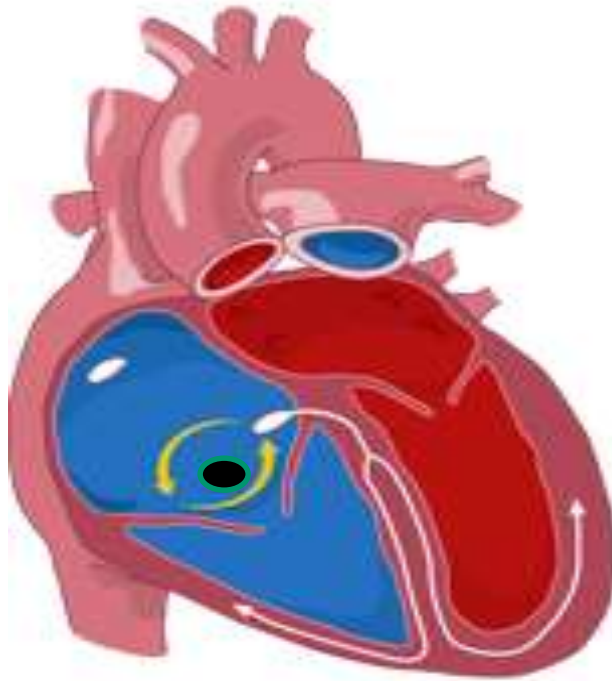


# AVNRT



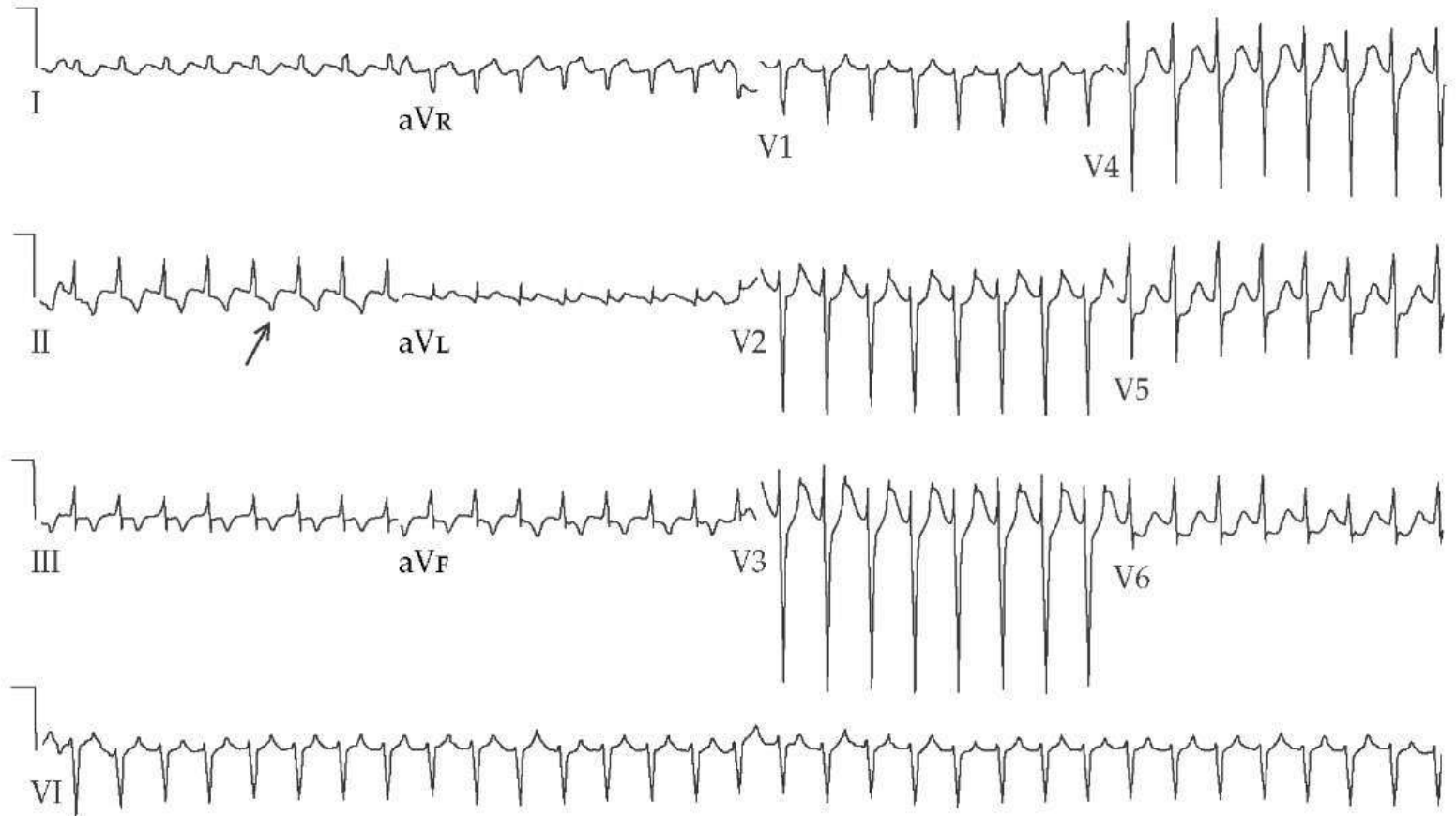


# AVNRT





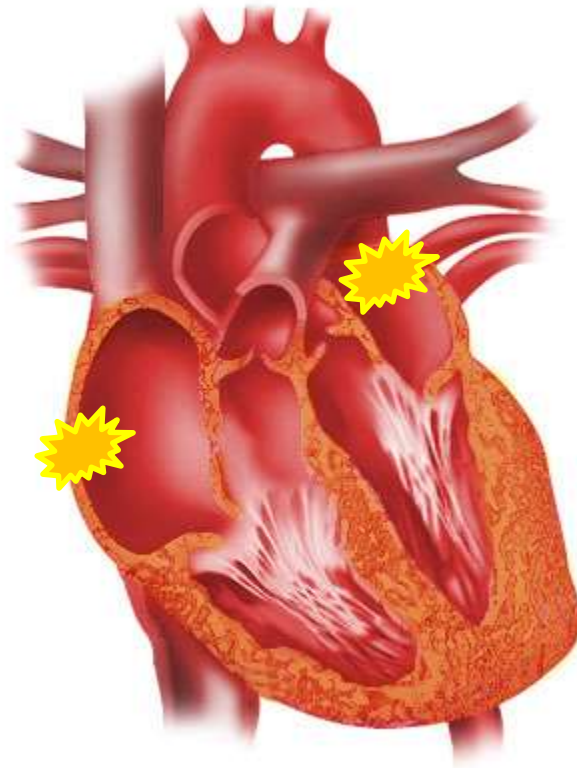
# AVRT





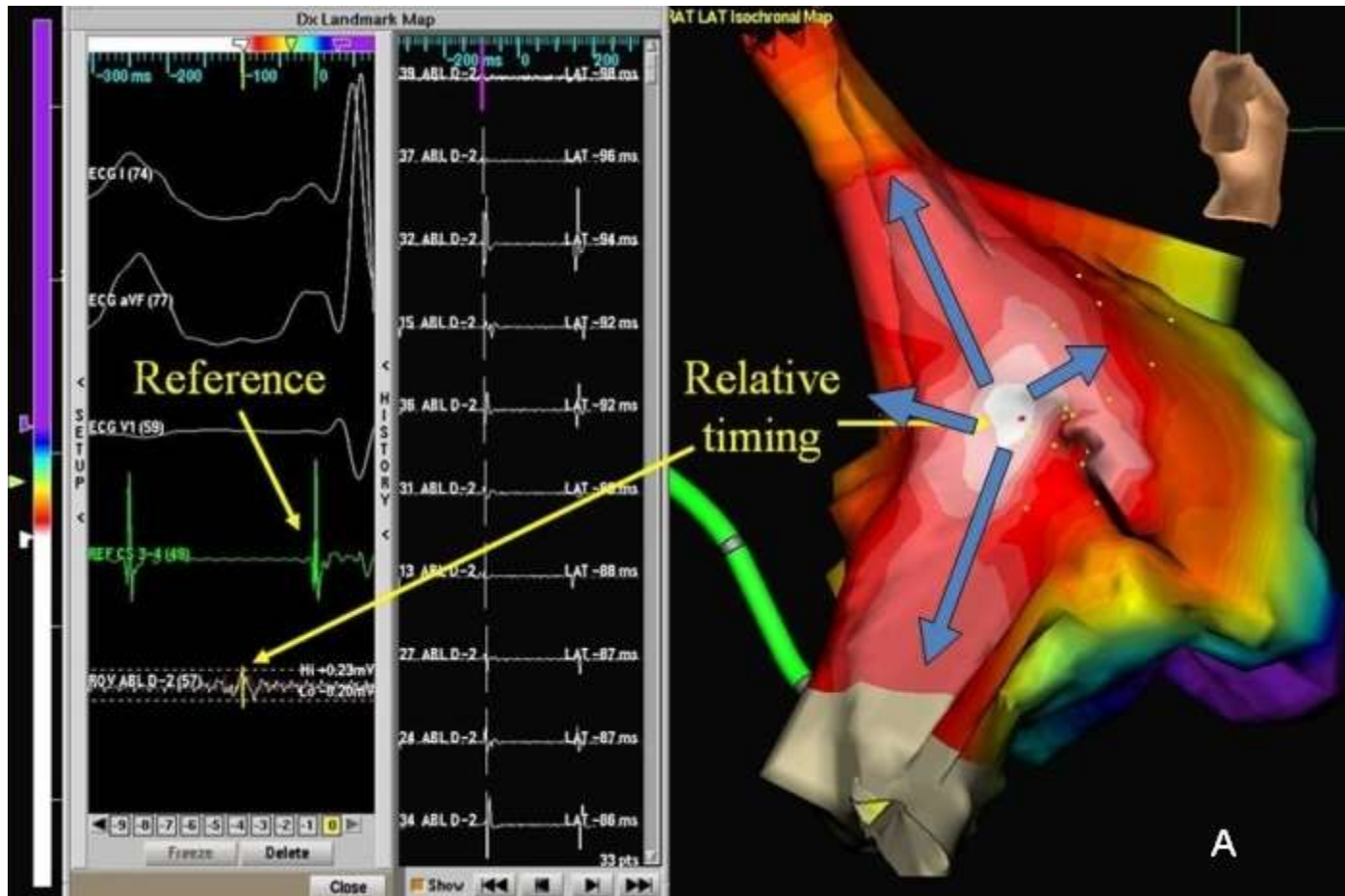


# Atrial Tachycardia





# Atrial Tachycardia





# Understanding SVT



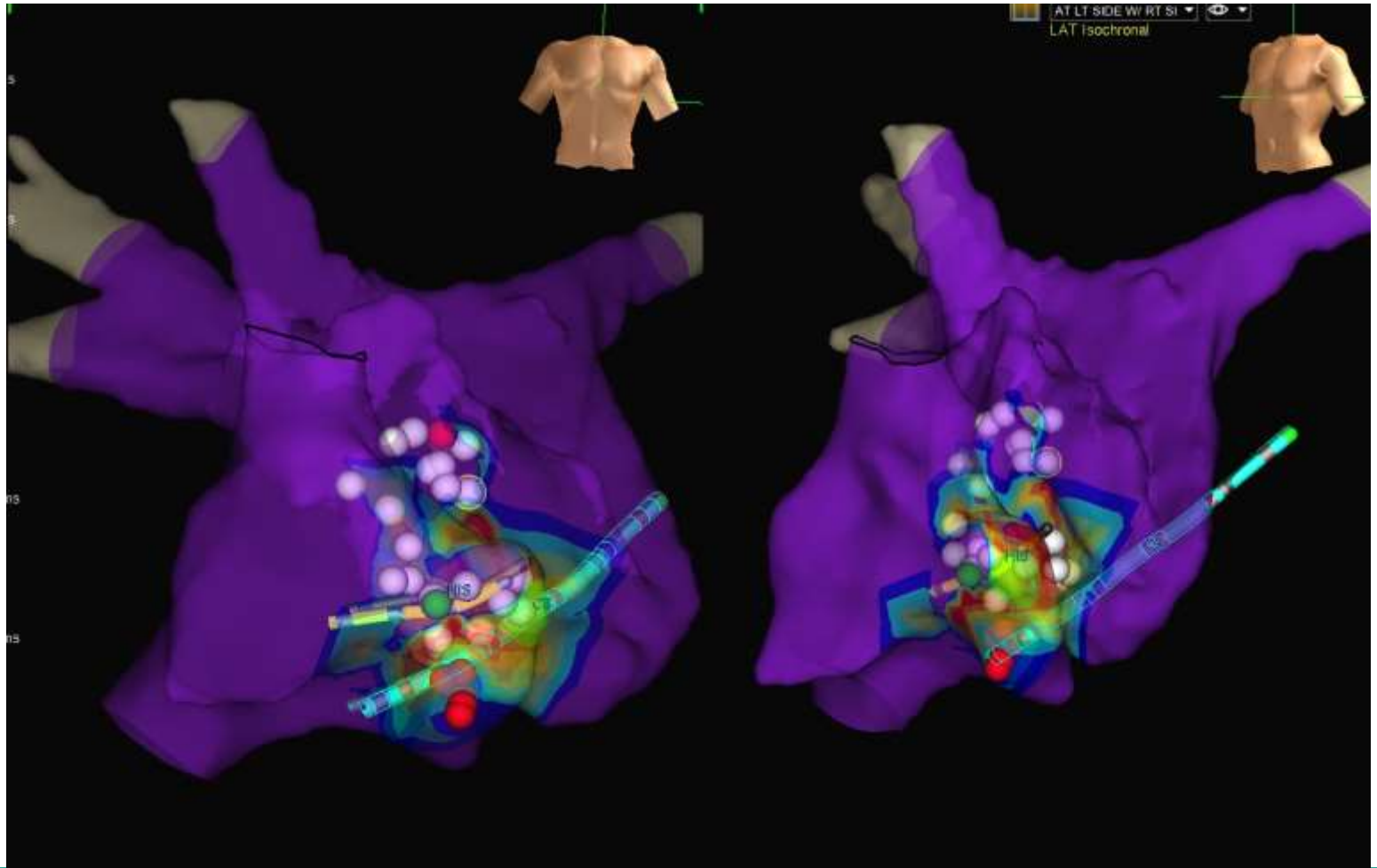


# Understanding SVT - Linkage





# Junctional Tachycardia

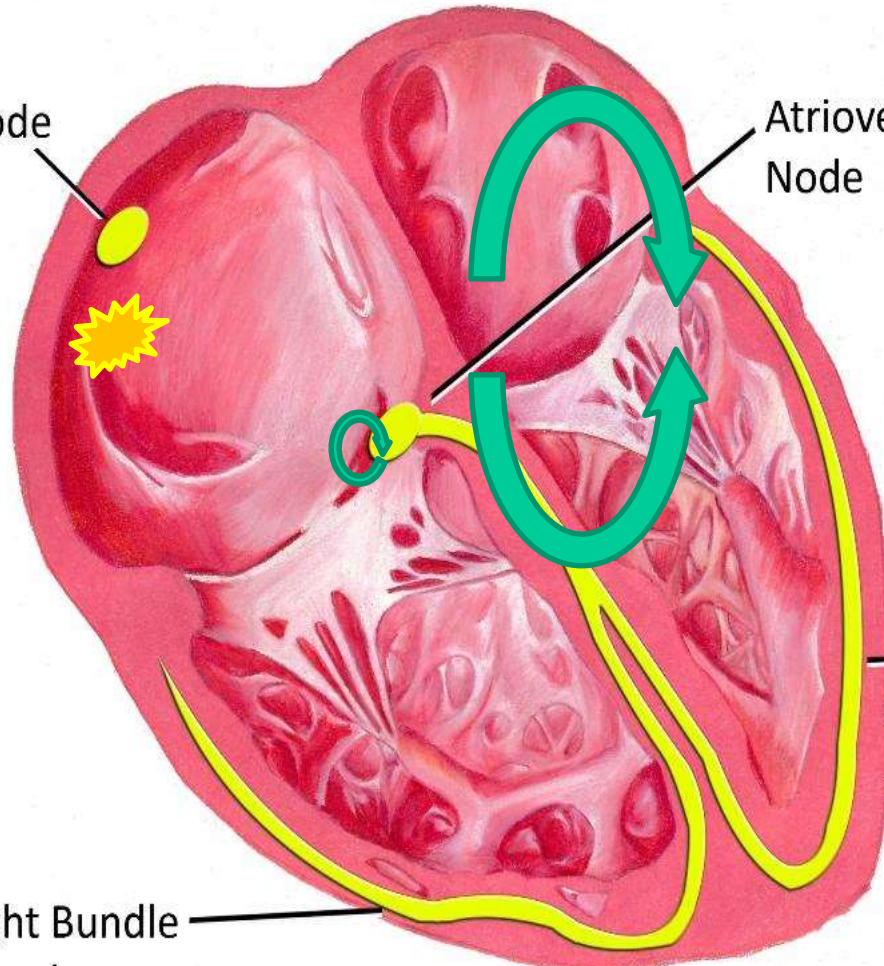






Sinus Node

Atrioventricular Node

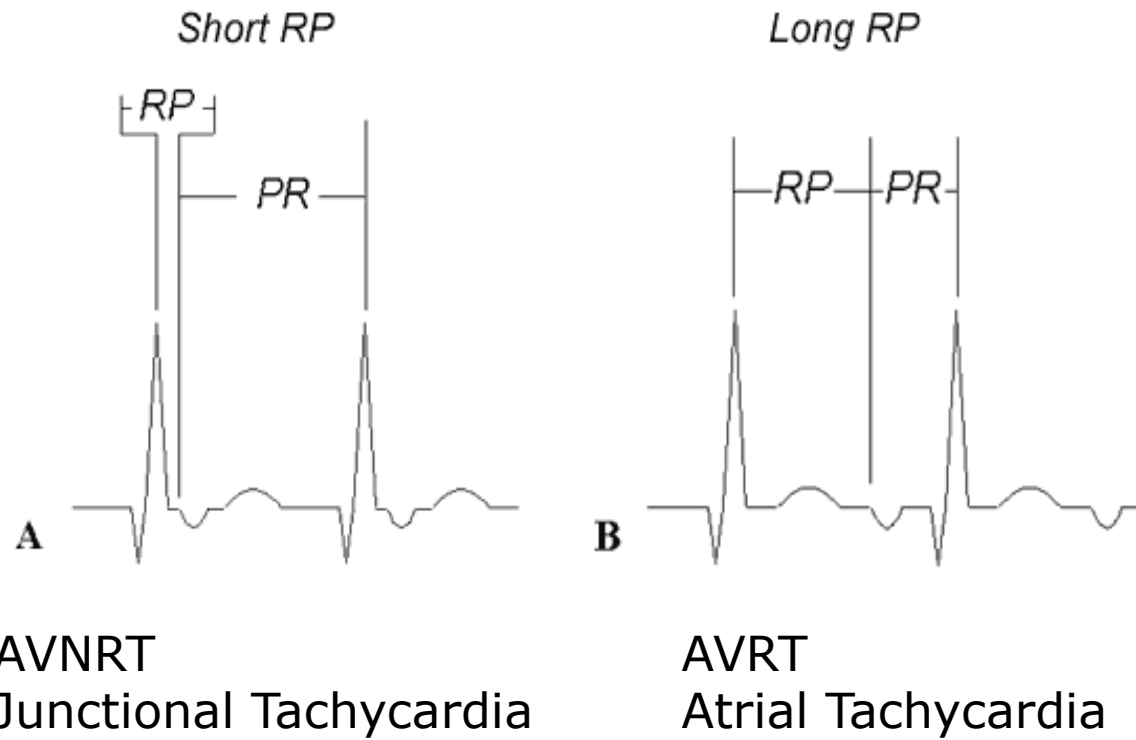


Left Bundle Branch

Right Bundle Branch



## Long RP vs Short RP





## Atrial Flutter

- Typical
  - Counterclockwise/clockwise
- Atypical



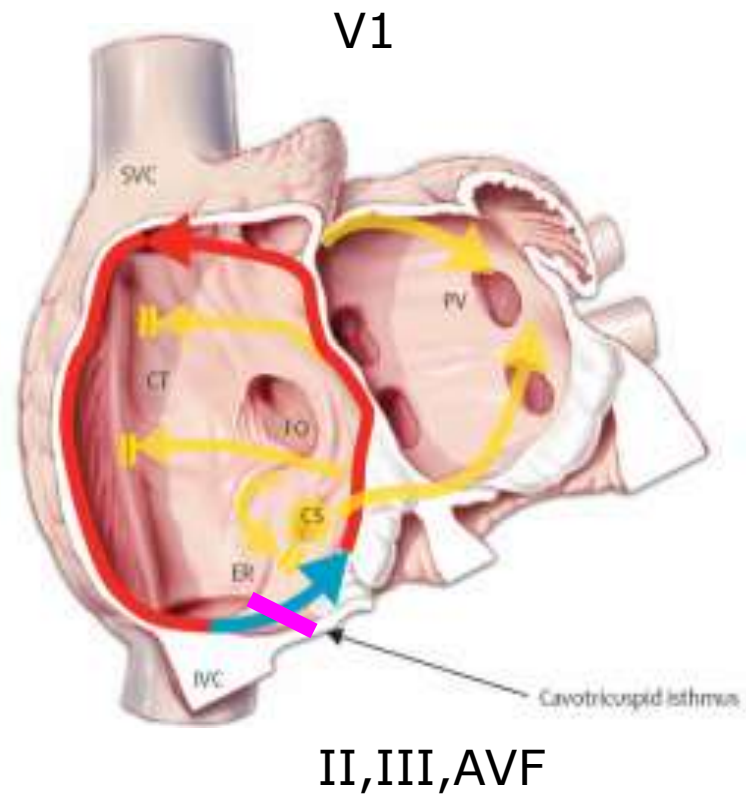


## Atrial Flutter

- 140-160 bpm

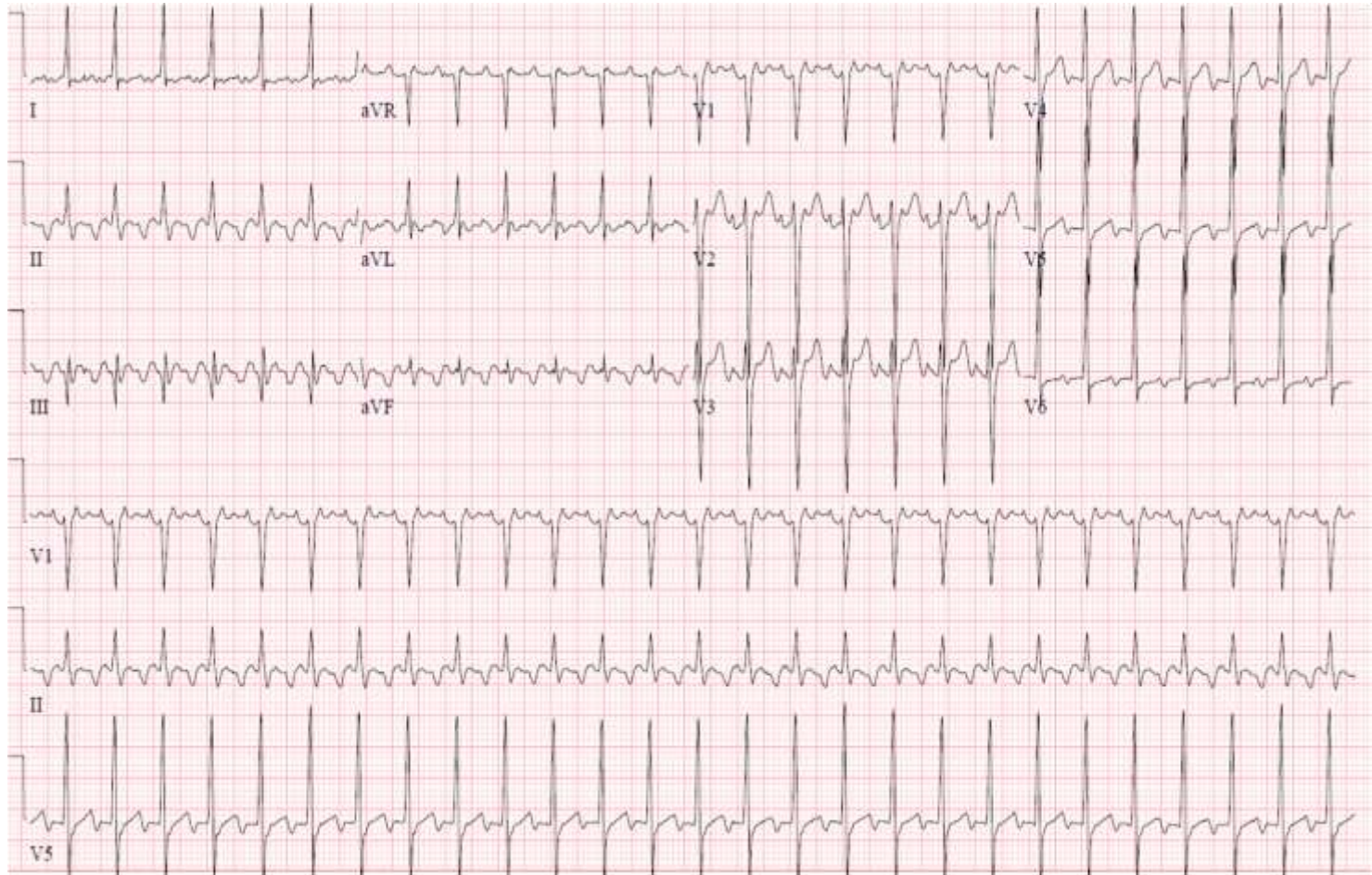


# Atrial Flutter - Typical



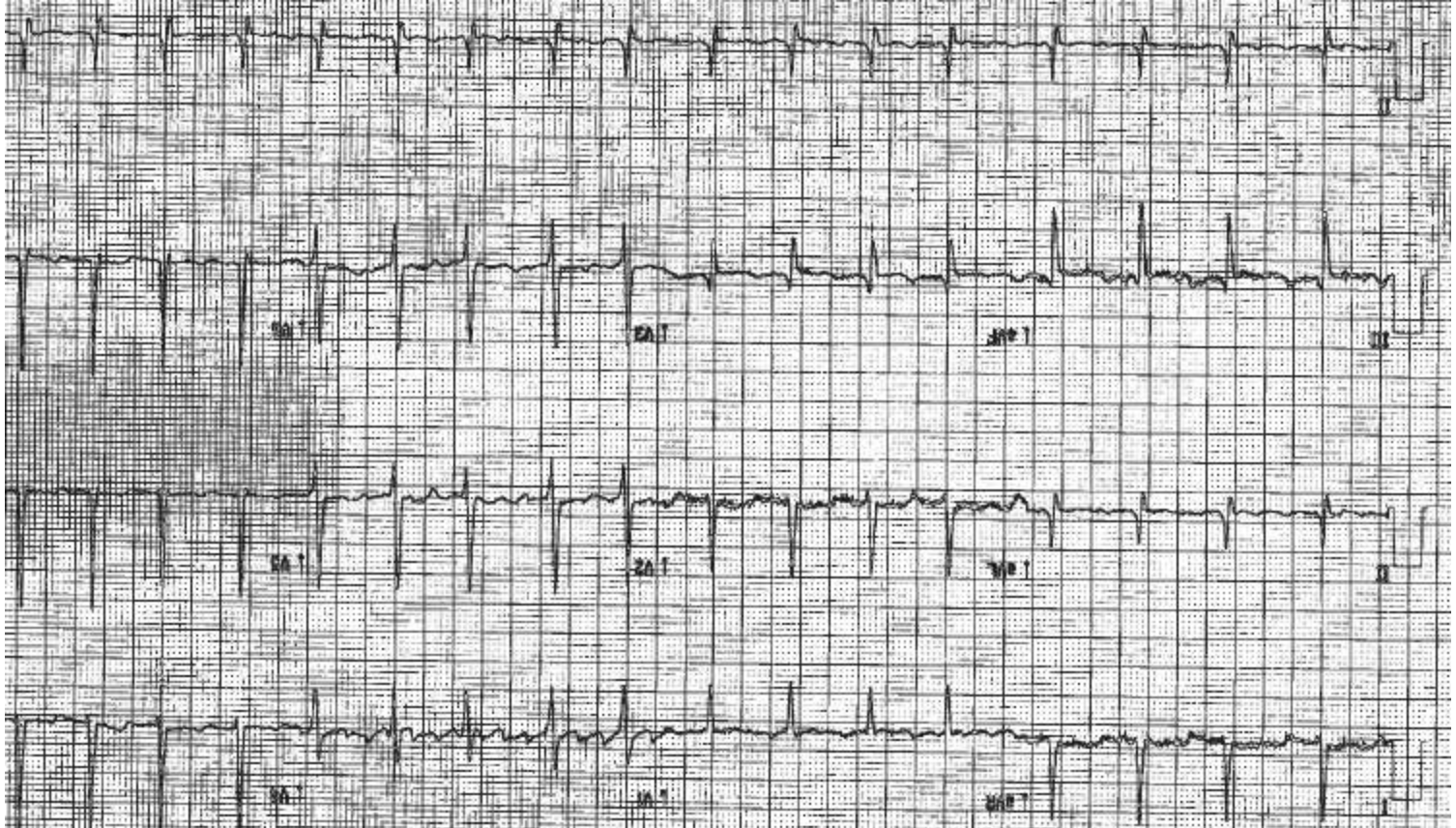


# Atrial Flutter - Typical

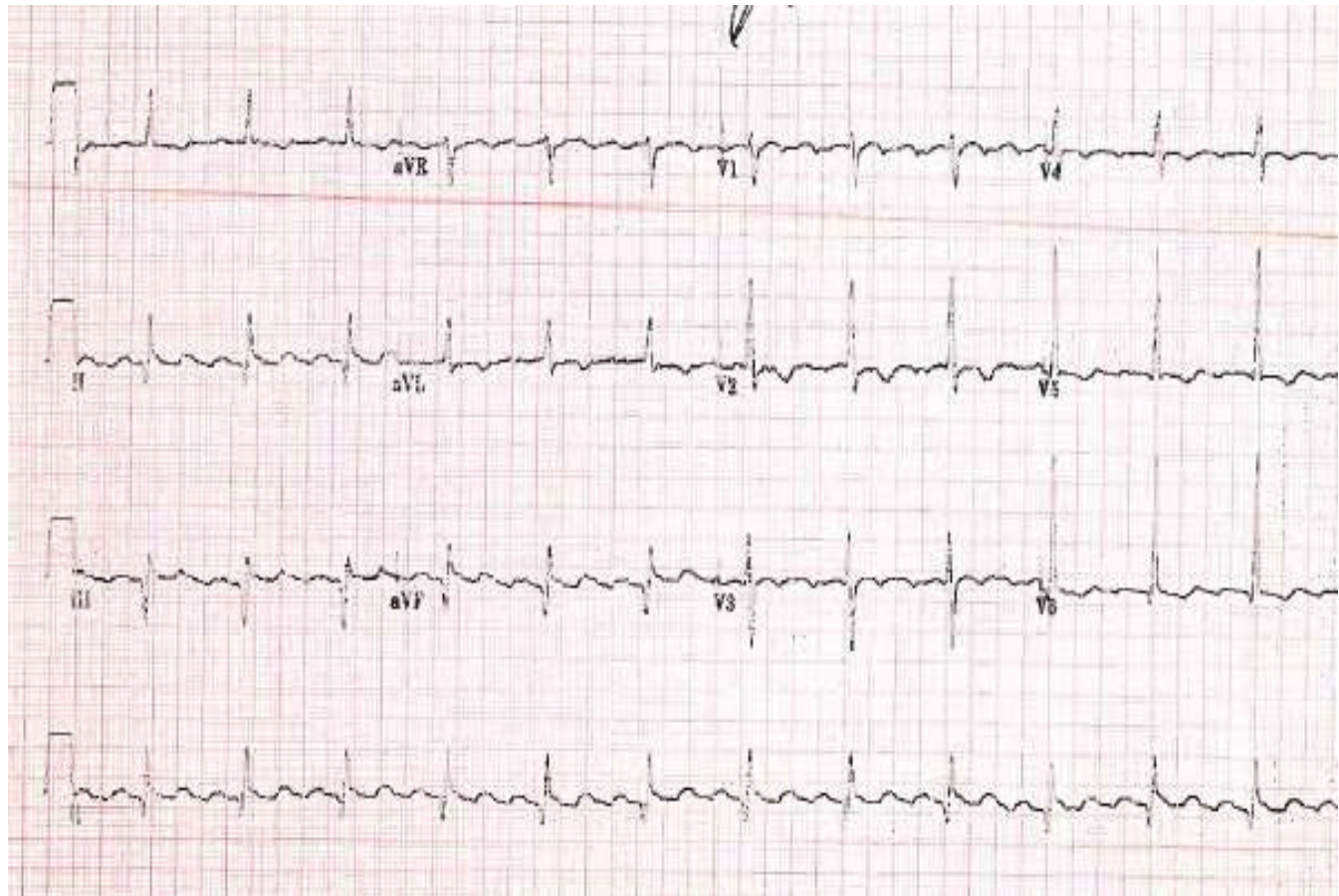




# Atrial Flutter



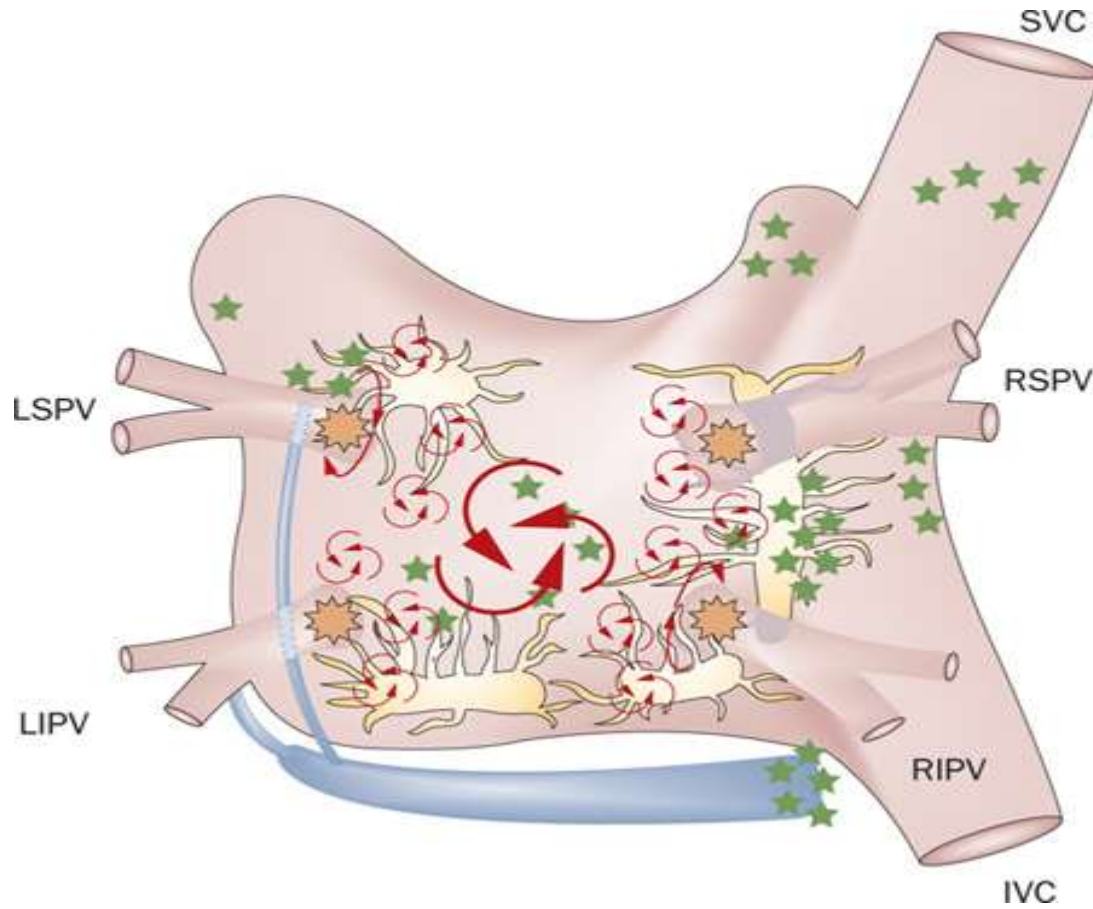






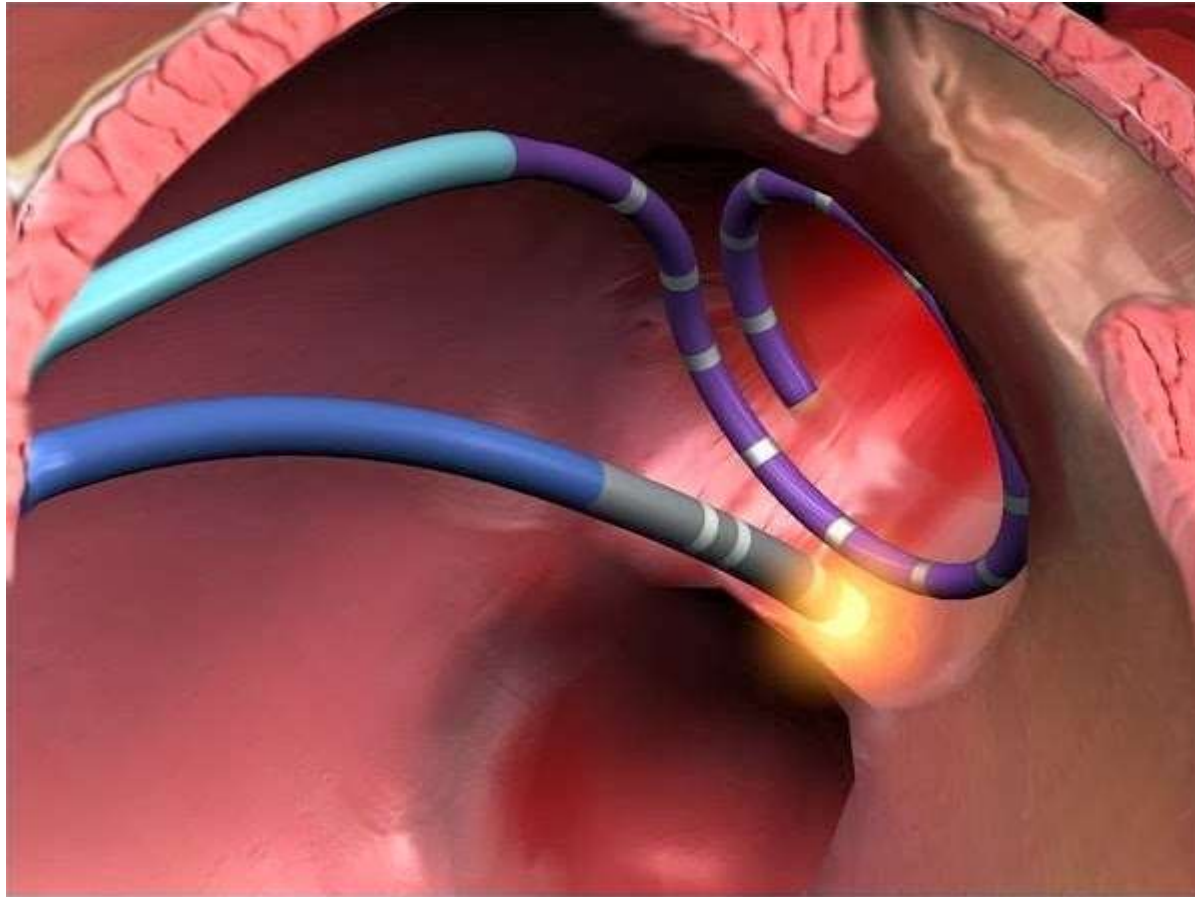


# Atrial Fibrillation





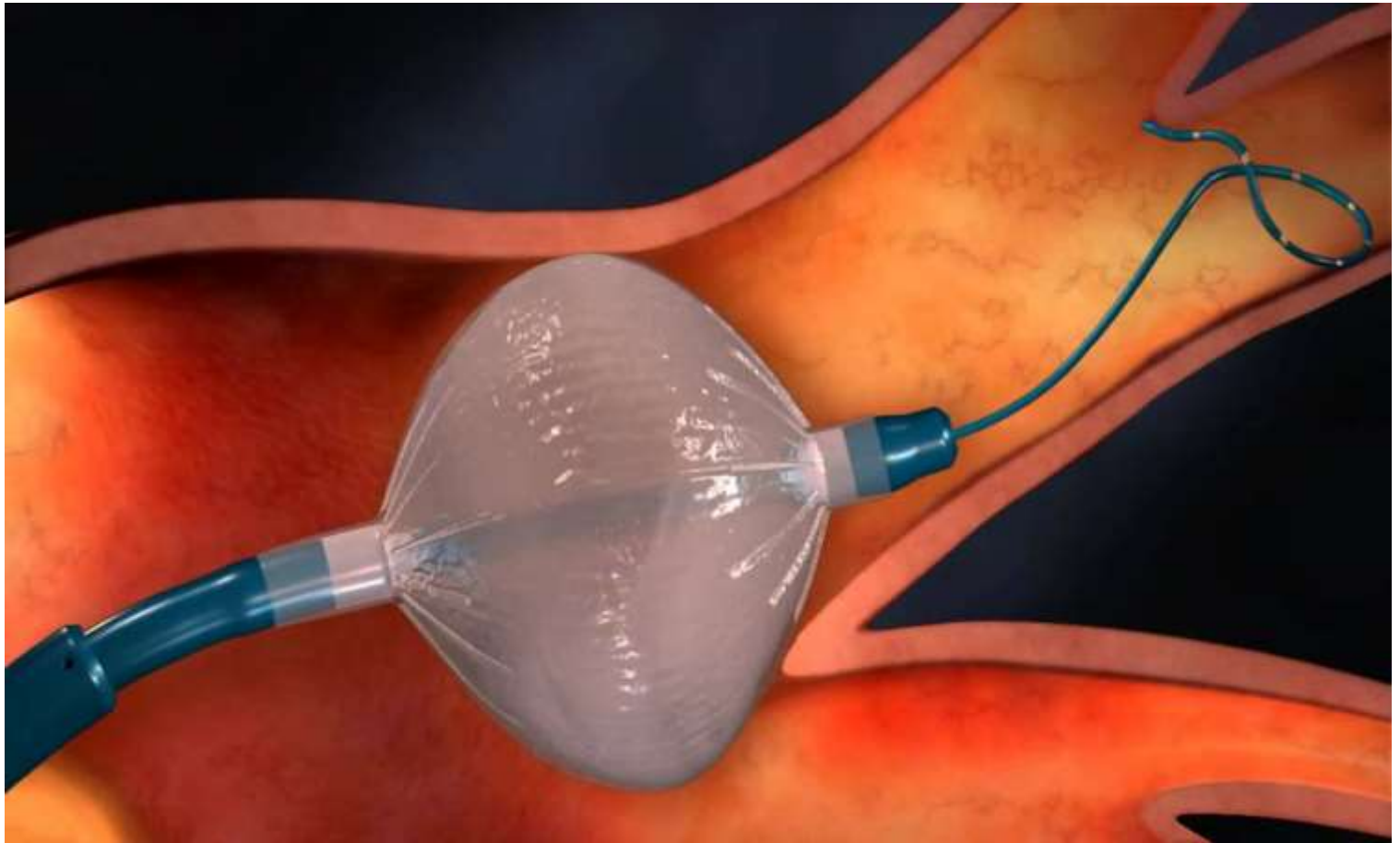
# Atrial Fibrillation







## Atrial fibrillation





## Treatment

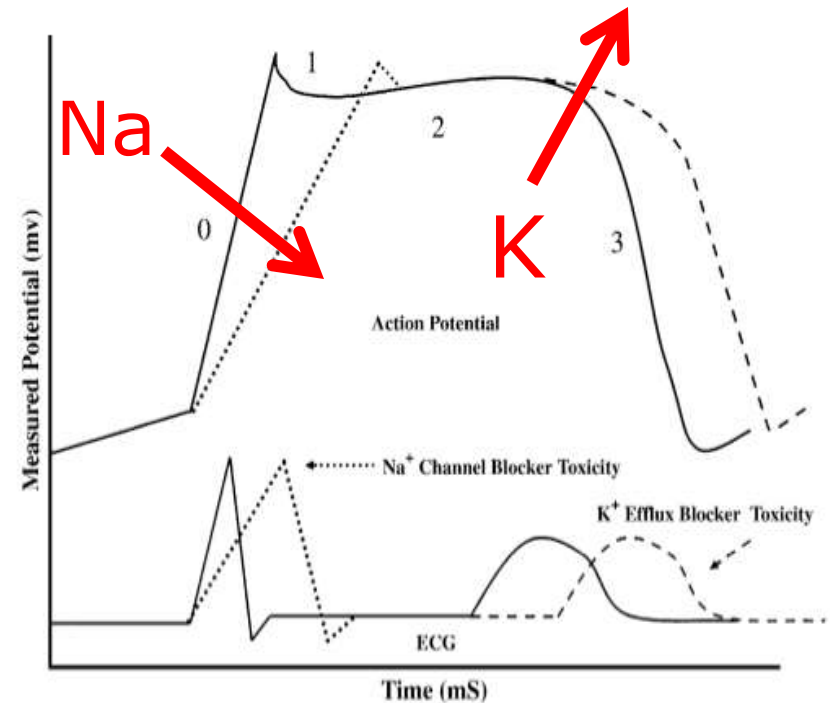
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- Beta blockers
  - Calcium Channel blockers
  - Antiarrhythmic Medications
    - Atrial fibrillation – Amiodarone, Sotalol, Dofetilide, Flecainide, Propafenone
    - AVRT – Flecainide, Propafenone, Amiodarone
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# Antiarrhythmics

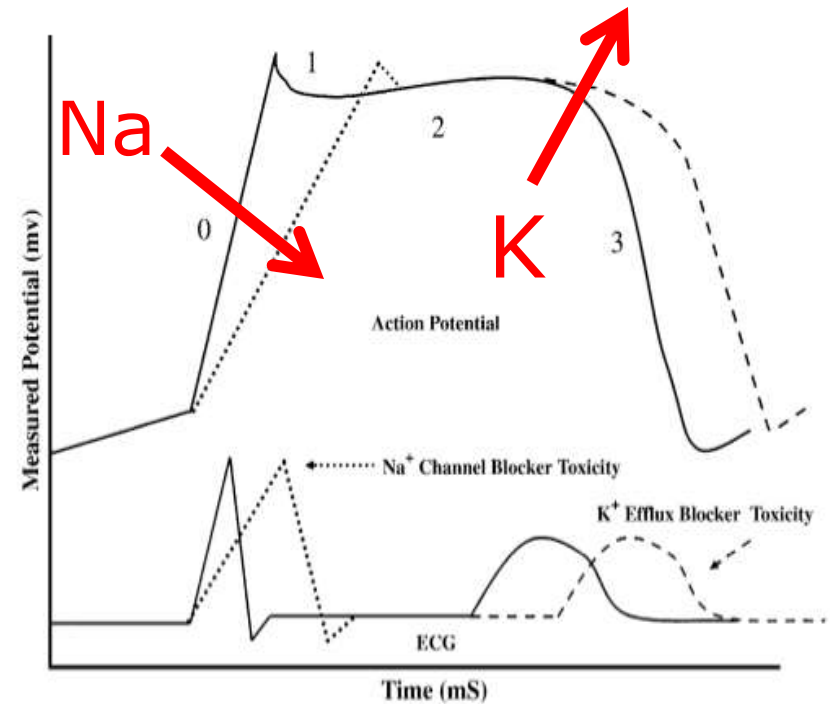
- Sodium Channel Blockers
  - IA – Disopyramide, Quinidine, Procainamide
  - IB – Mexiletine, Lidocaine
  - IC – Flecainide, Propafenone





# Antiarrhythmics

- Potassium Channel Blockers
  - Amiodarone
  - Sotalol
  - Tikosyn (Dofetilide)
  - Dro~~X~~derone





## Conclusion

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- Mechanisms of SVT are few and simple
  - Look for Clues with Long RP – Short RP
  - Treatment is similar
  - Know what is easy to ablate
  - Thanks!
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