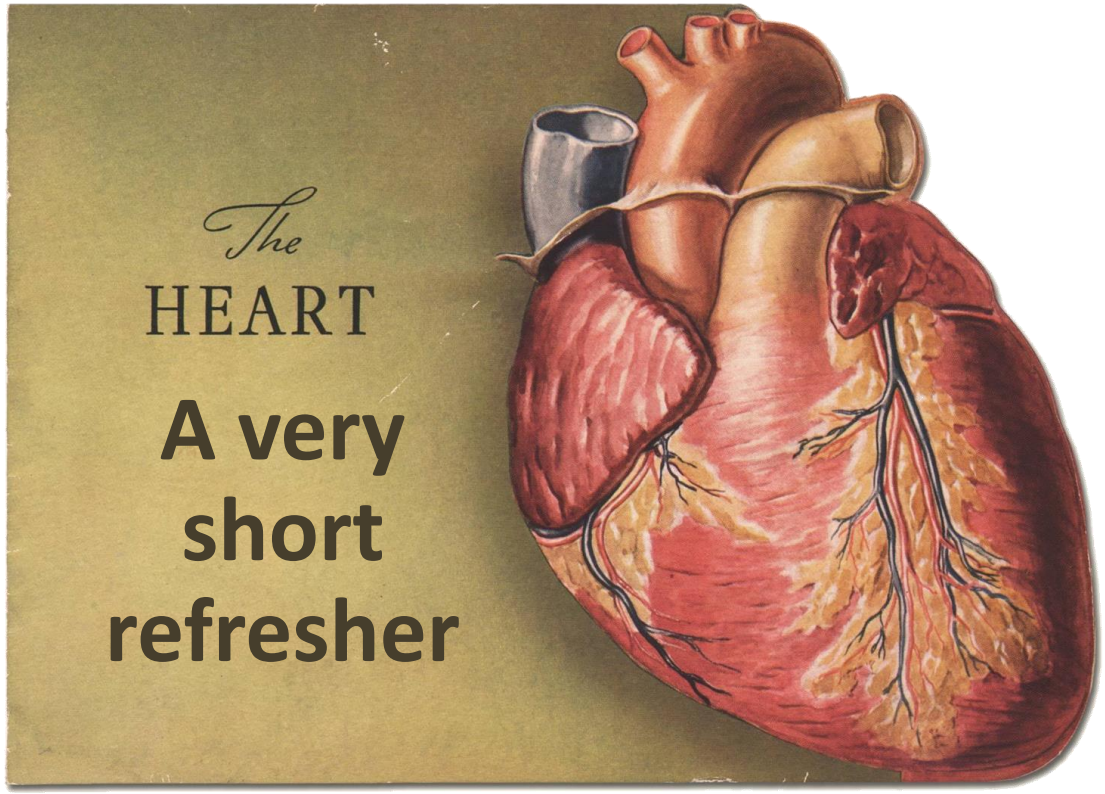
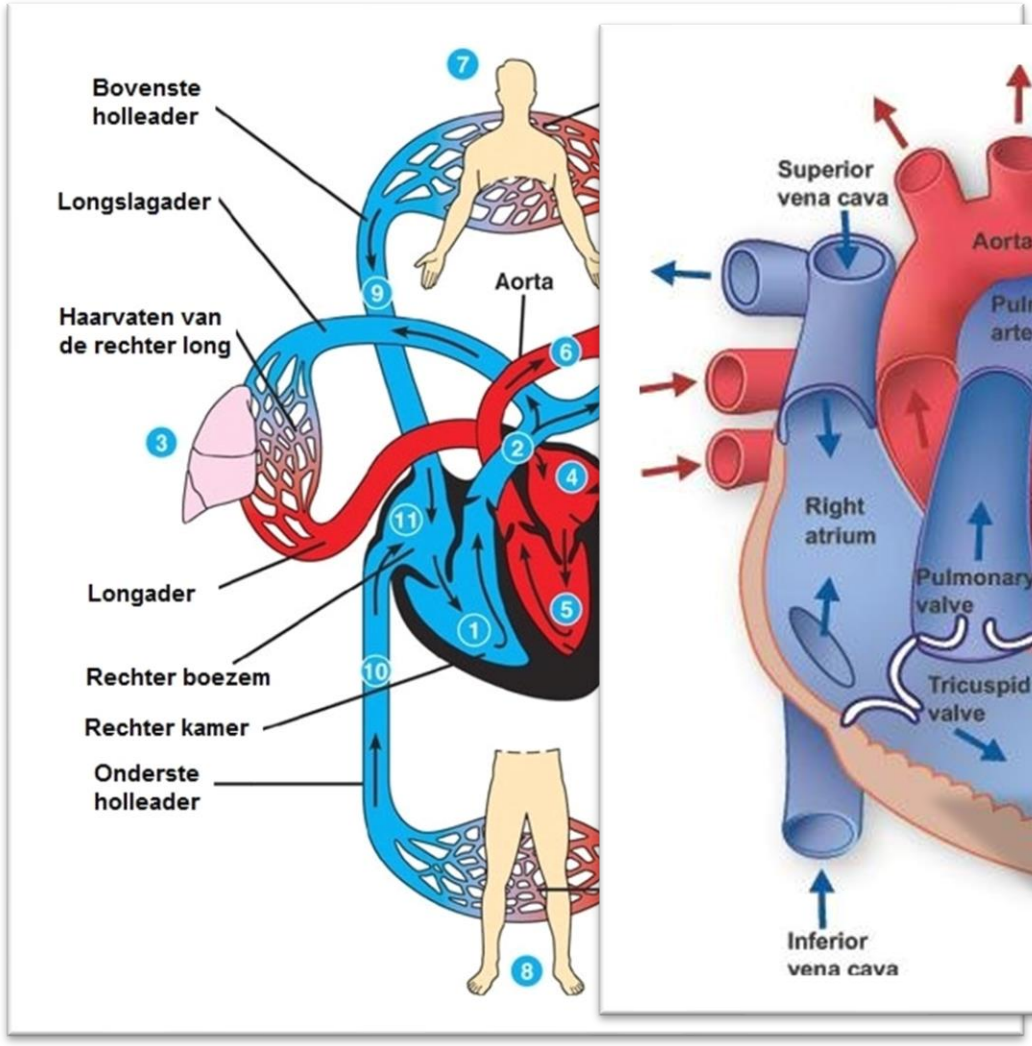
HARTRITMESTOORNISSEN IN VOGELVLUCHT

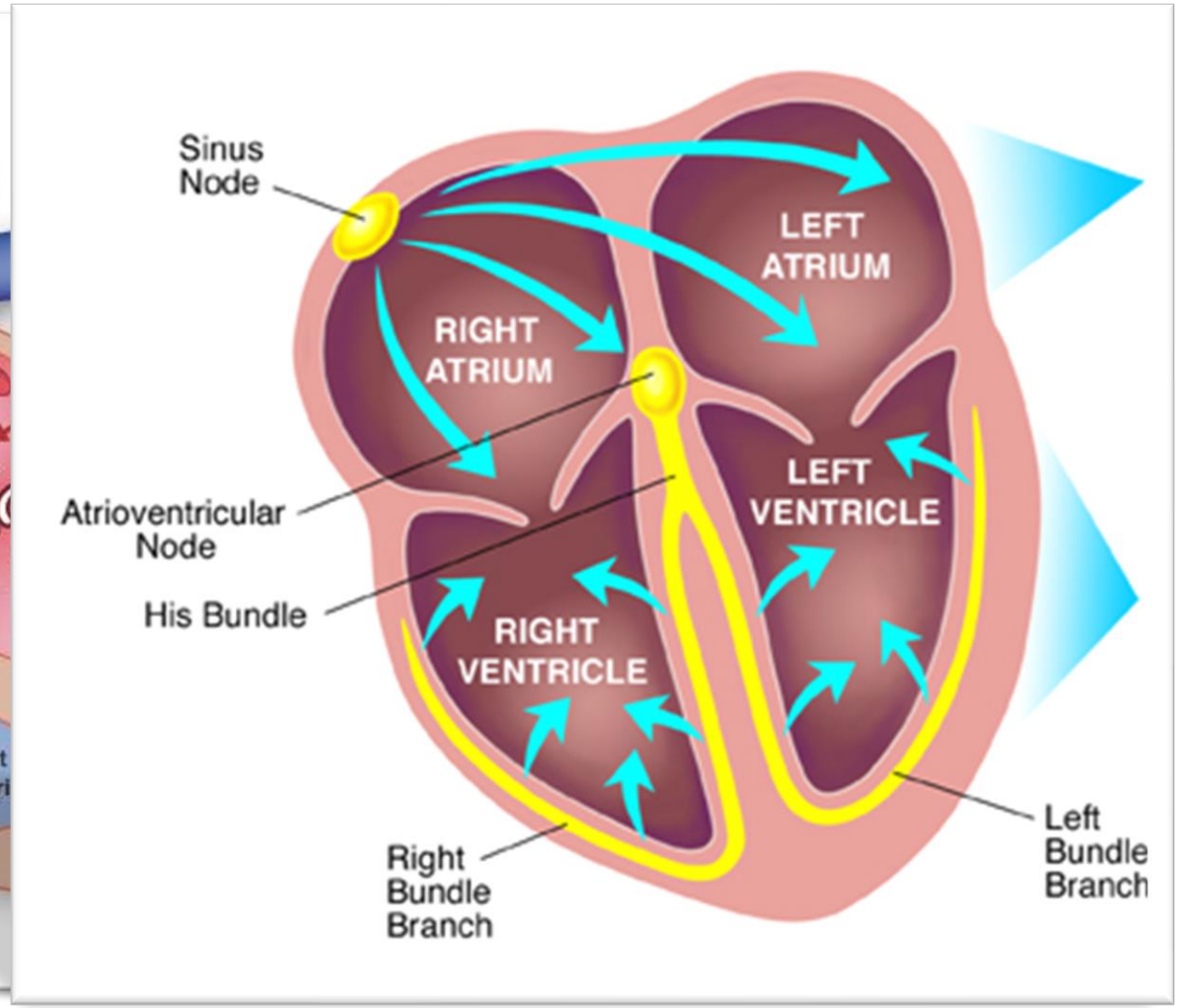
André de Wit
Verpleegkundig Specialist Elektrofysiologie
Erasmus MC

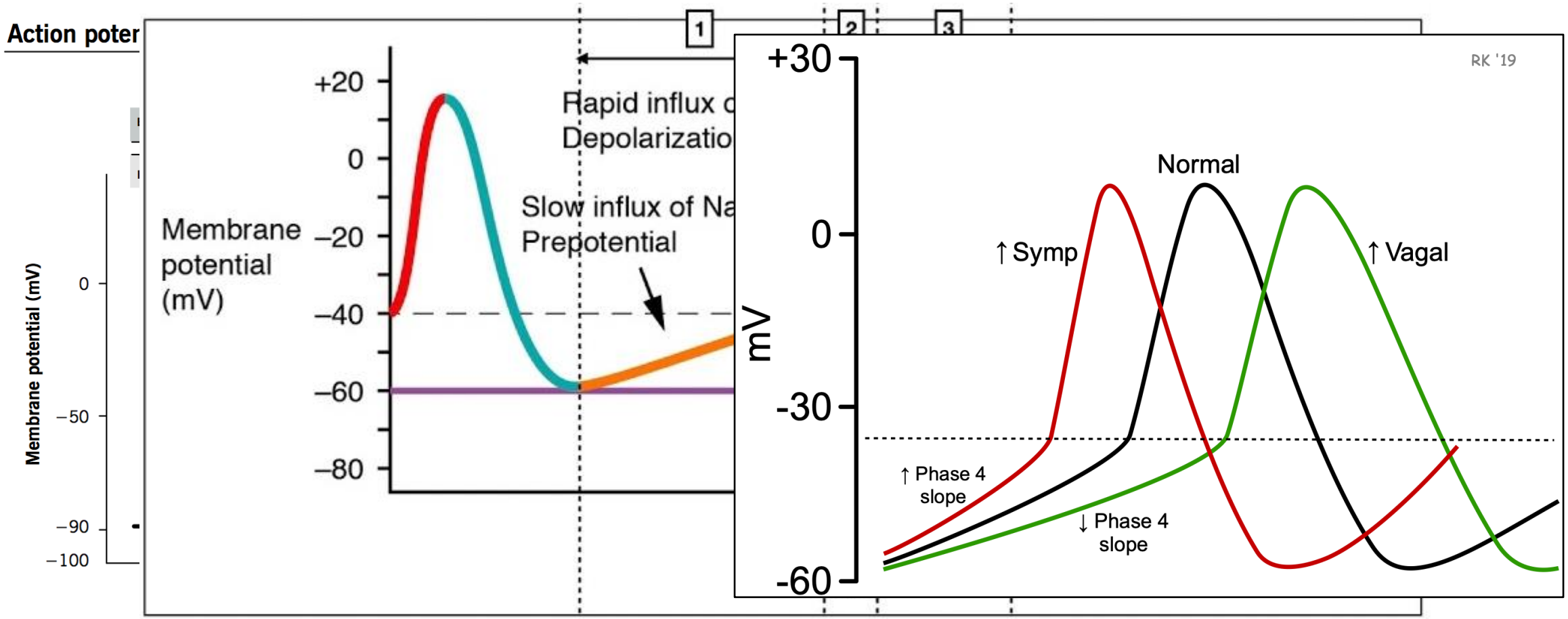
HOE ZAT HET OOK ALWEER




Bovenste holleader
Longslagader
Haarvaten van de rechter long
Longader
Rechter boezem
Rechter kamer
Onderste holleader
Aorta
7
9
6
3
2
4
11
5
1
10
8

Superior vena cava
Aorta
Pulmonary artery
Left atrium
Right atrium
Pulmonary valve
Aortic valve
Tricuspid valve
Right ventri
Inferior vena cava

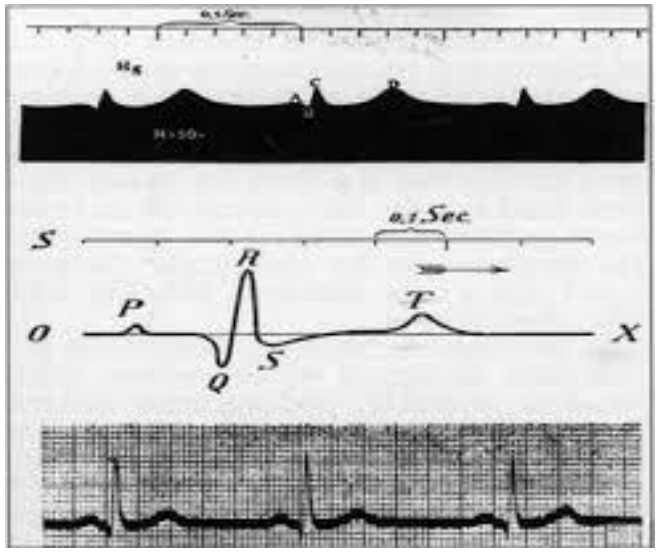

Sinus Node
LEFT ATRIUM
RIGHT ATRIUM
Atrioventricular Node
His Bundle
LEFT VENTRICLE
RIGHT VENTRICLE
Right Bundle Branch
Left Bundle Branch

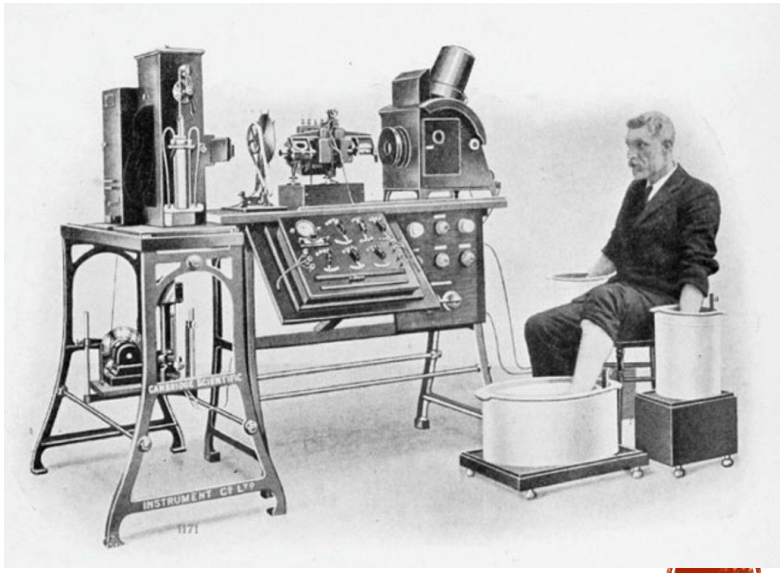

Action poter
1
2
3
+20
0
–20
–40
–60
–80
Membrane potential (mV)
Rapid influx o
Depolarizatio
Slow influx of Na
Prepotential
Membrane potential (mV)
0
–50
–90
–100
RK '19
+30
0
-30
-60
mV
Normal
↑ Symp
↑ Vagal
↑ Phase 4 slope
↓ Phase 4 slope

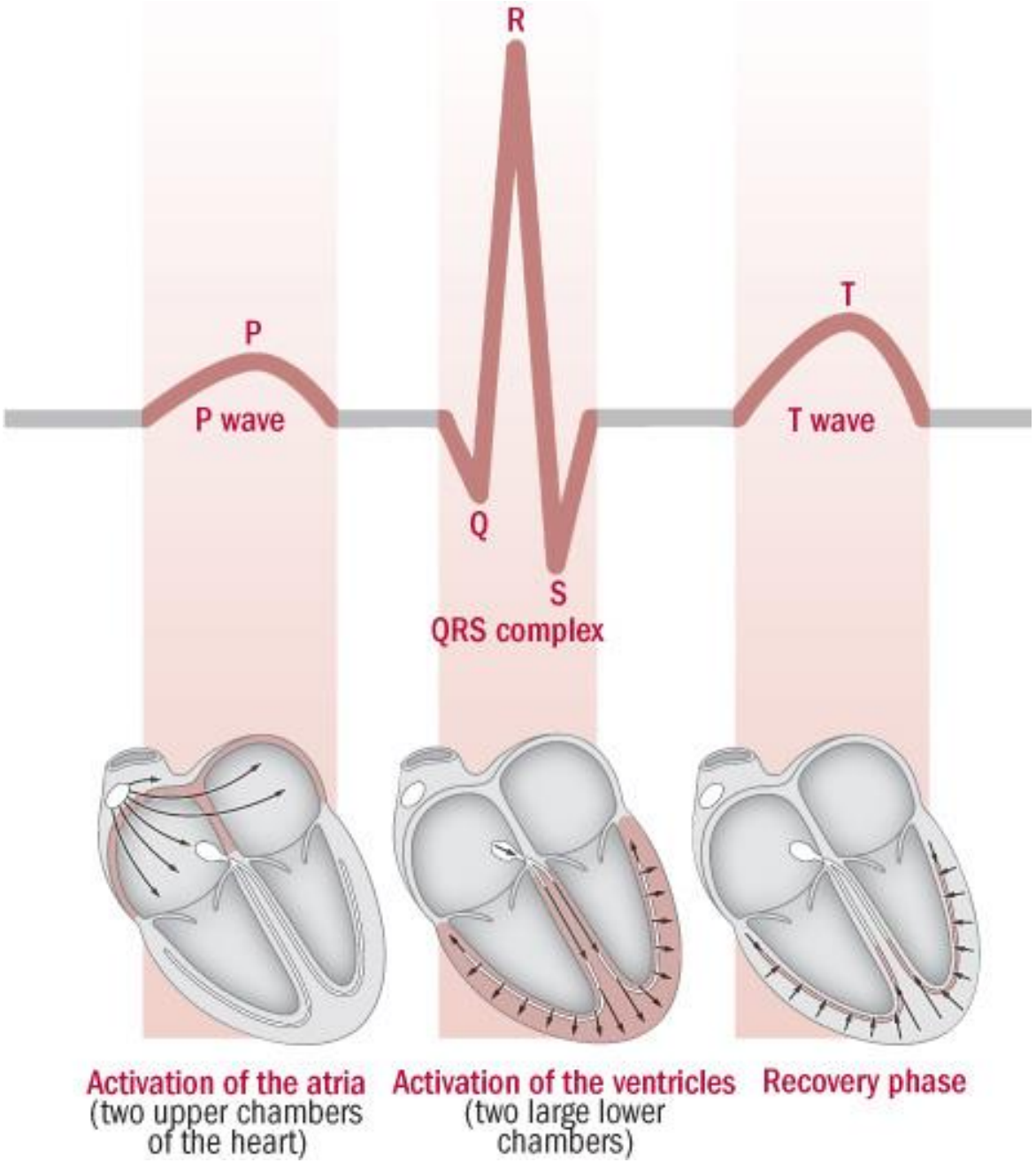
1865 eerste verloop van hartslag juist beschreven door Franciscus Cornelis Donders

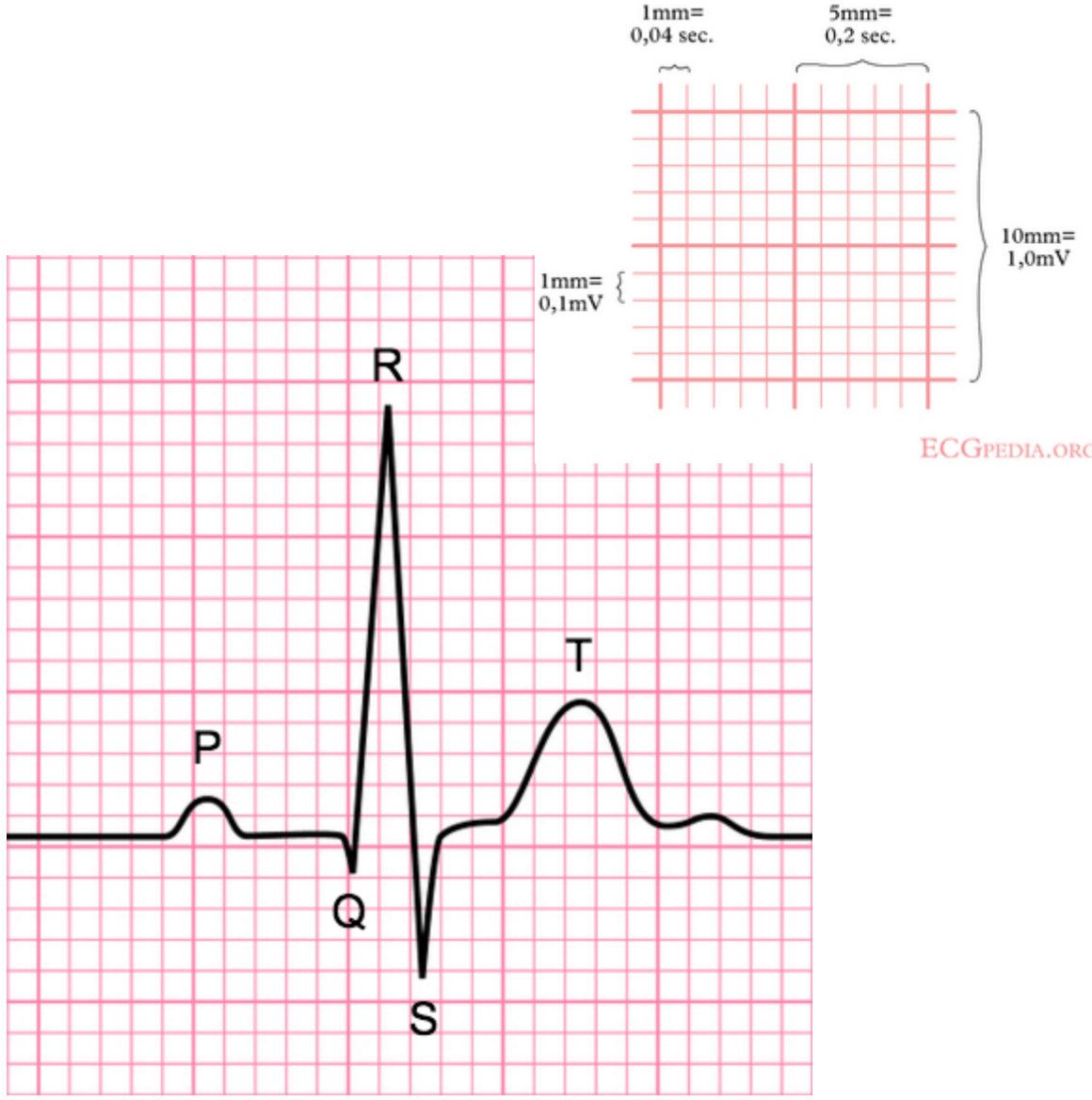
1896 Zelfstandigheid van het hart beschreven door Theodor Wilhelm Engelmann

1902 Eerste ECG vastgeled door Willem Enthoven middels een snaargalvanometer





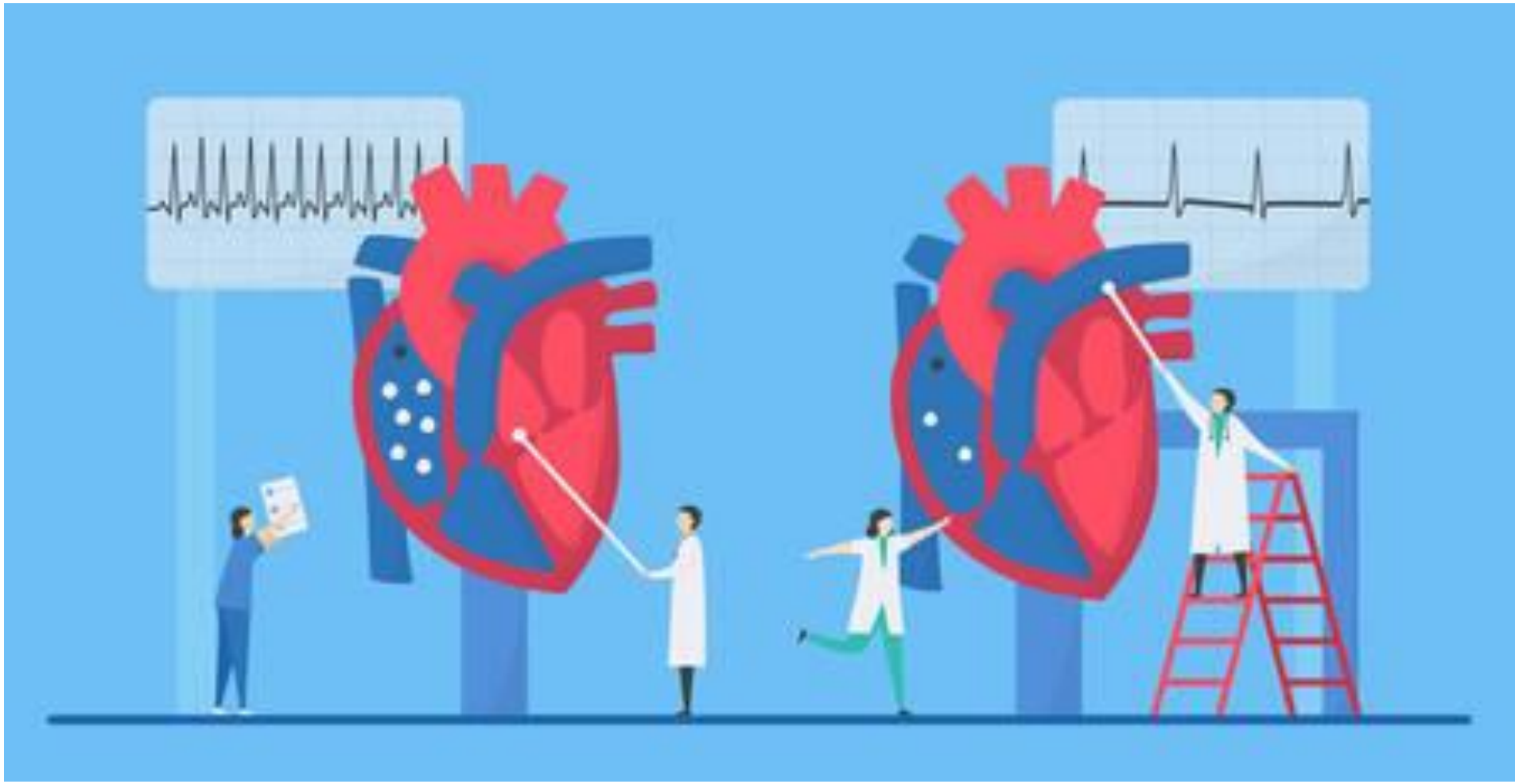

R
P
T
P wave
T wave
Q
S
QRS complex
Activation of the atria
(two upper chambers
of the heart)
Activation of the ventricles
(two large lower
chambers)
Recovery phase


1mm=
0,04 sec.
5mm=
0,2 sec.
10mm=
1,0mV
1mm=
0,1mV
R
T
P
Q
S
ECGpedia.org

VRAGEN?

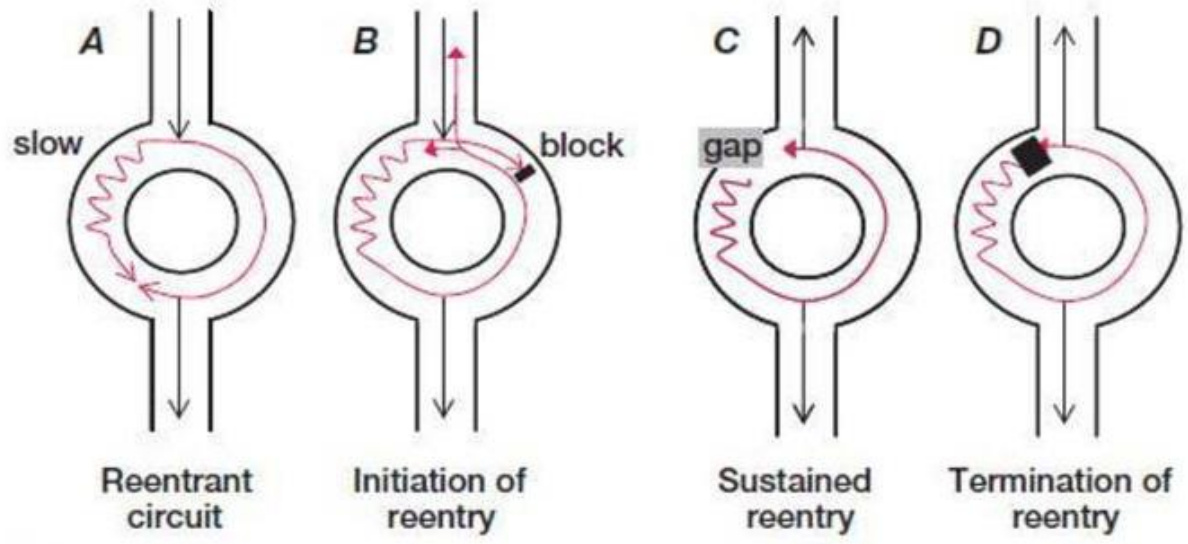
THERE ARE NO STUPID QUESTIONS ONLY STUPID ANSWERS

HARTRITMESTOORNISSEN

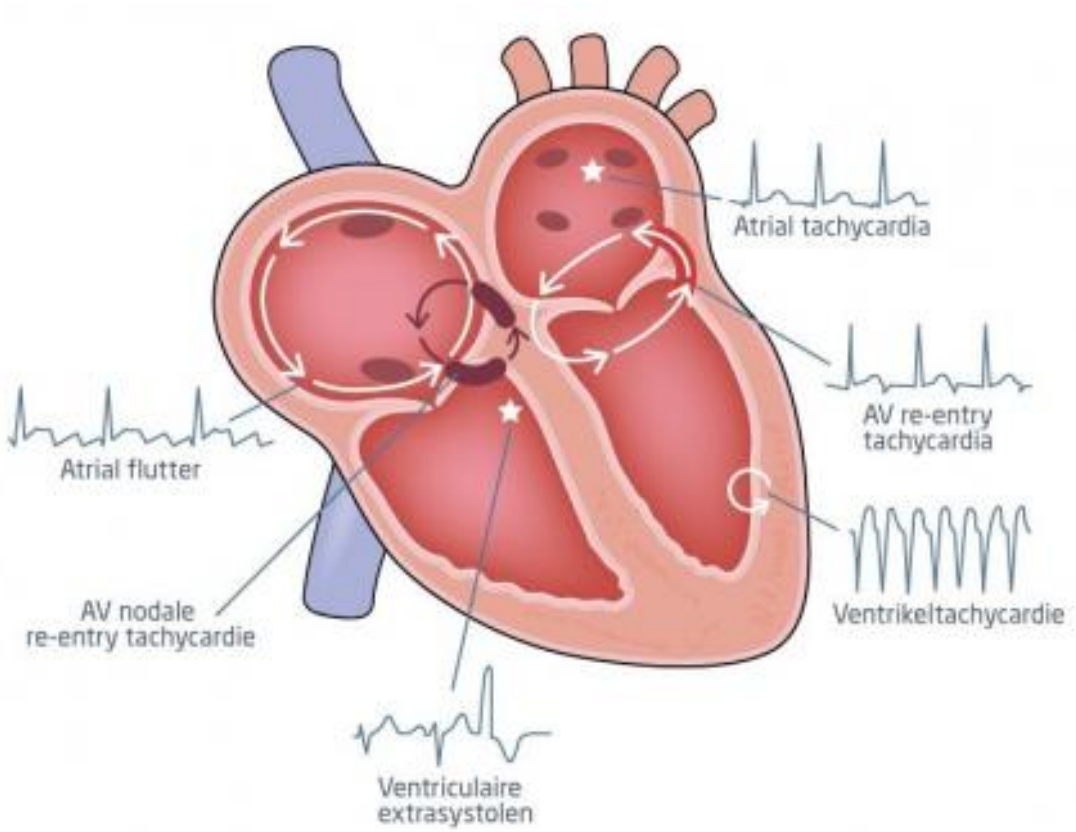


HARTRITMESTOORNISSEN

- Probleem in de impulsvorming
  - Automaticiteit
  - Triggered activity
- Probleem in de voortgeleiding
  - Vertraging/blokkade
  - Re-entry

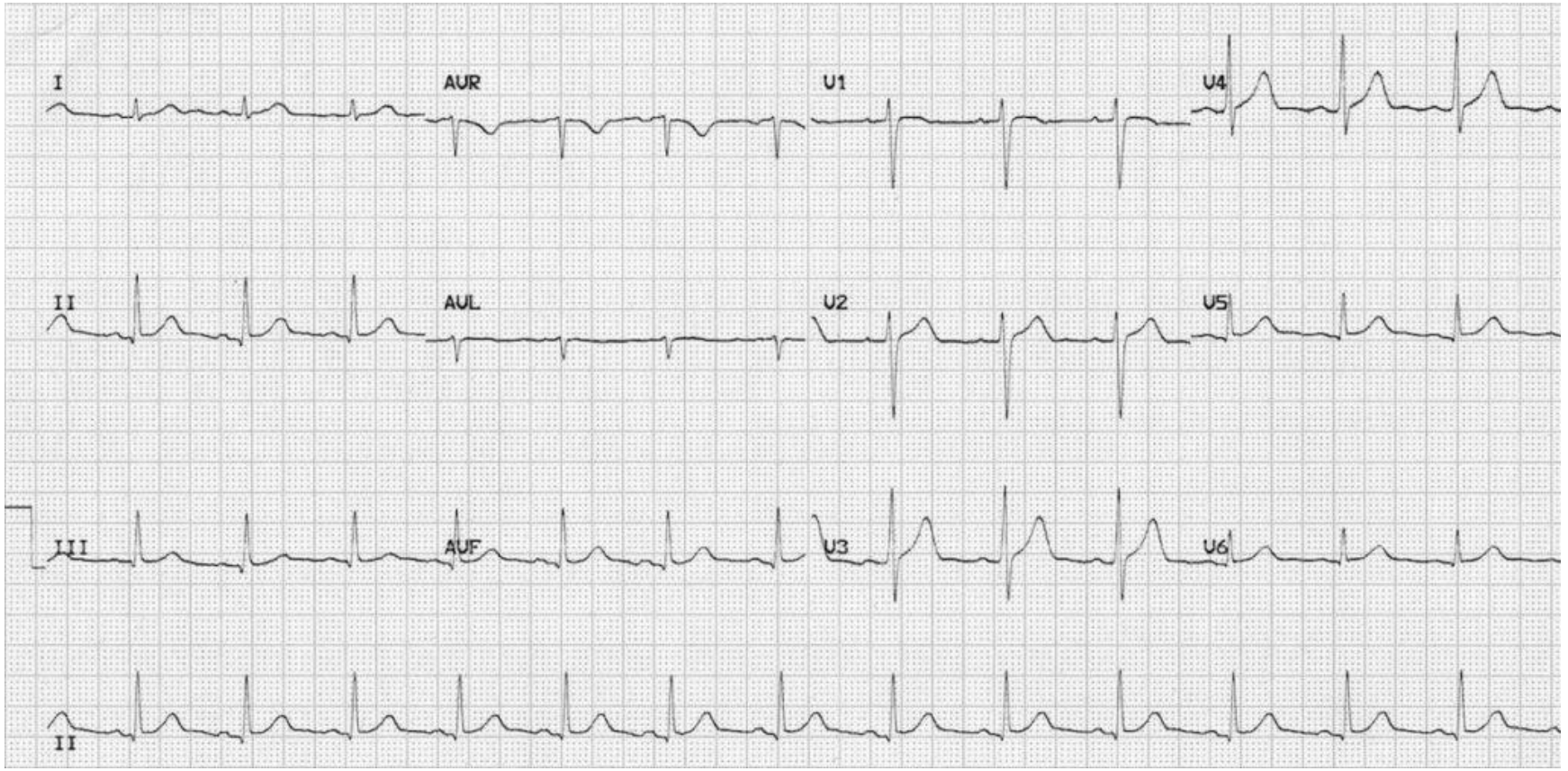


RITMESTOORNISSEN



SINUSRITME

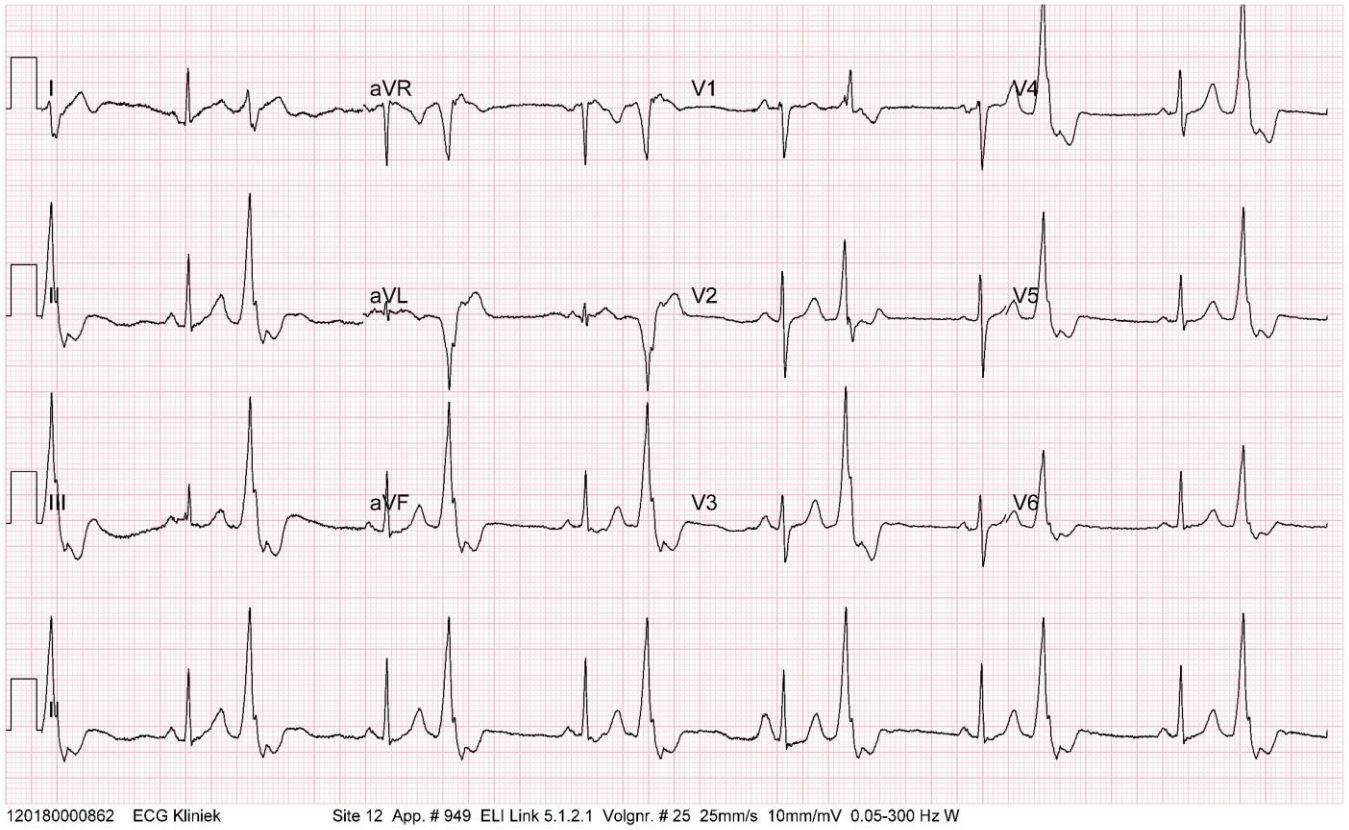
SINUSRITME?



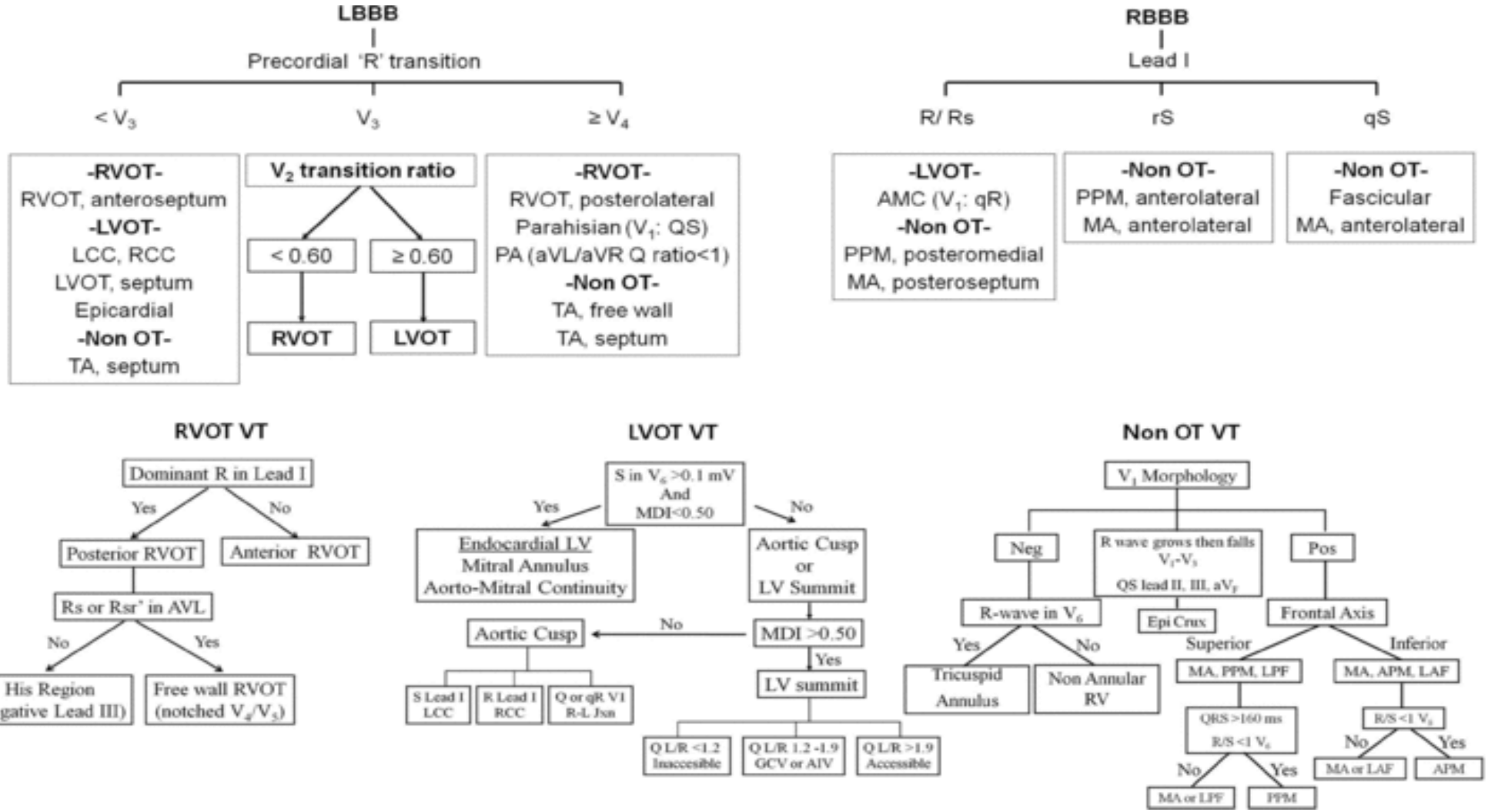
Normaal sinusritme met een positieve P-top in I, II en AVF én een bifasische P-top in V1

SINUSRITME MET PVC

SINUSRITME MET PVC



SINUSRITME MET PVC



Pacing and Clinical Electrophysiology, Volume: 35, Issue: 12, Pages: 1516-1527, First published: 16 August 2012, DOI: (10.1111/j.1540-8159.2012.03488.x)

SINUSRITME MET BLOK

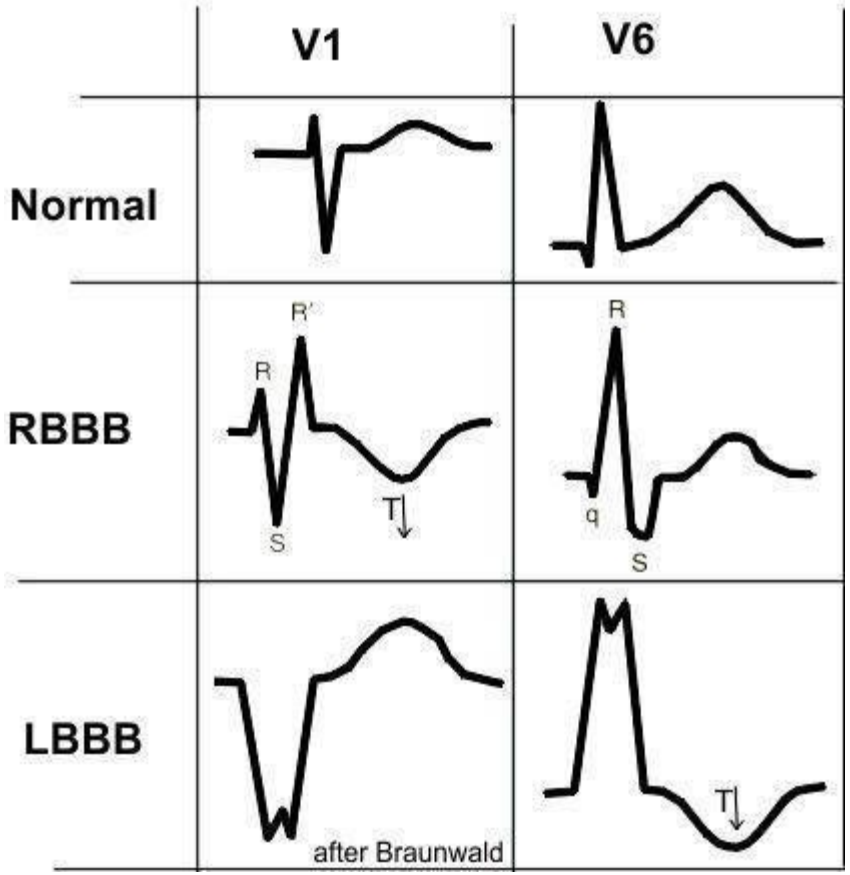
First degree AV block

Second degree AV block (Mobitz I or Wenckebach)

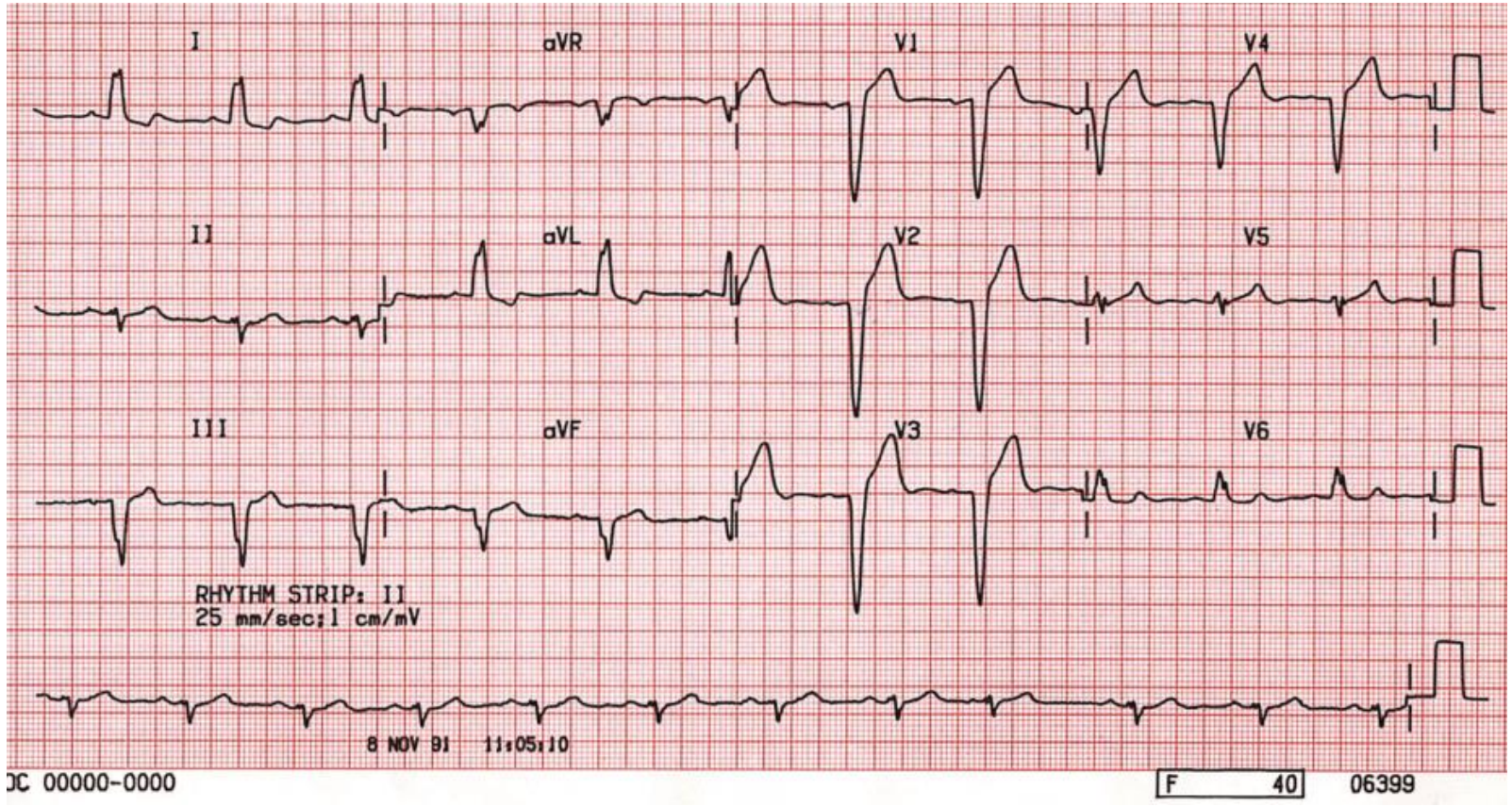
Second degree AV block (Mobitz II)

Second degree AV block (2:1 block)

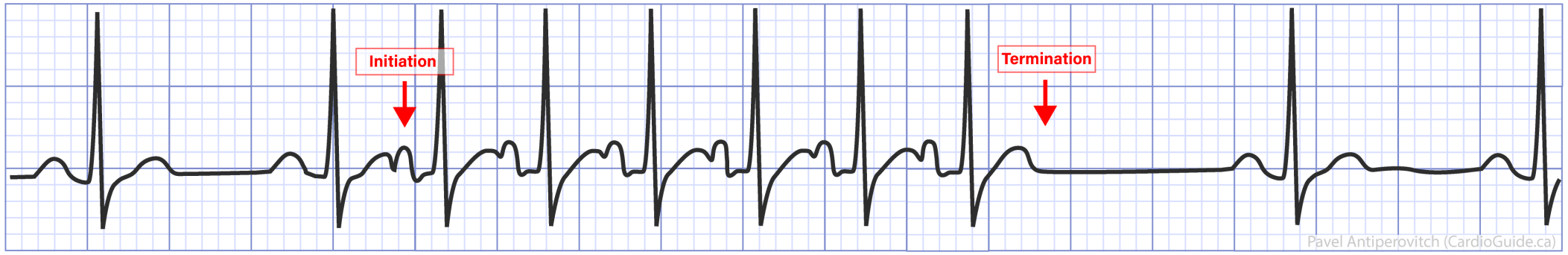
Third degree AV block with junctional escape



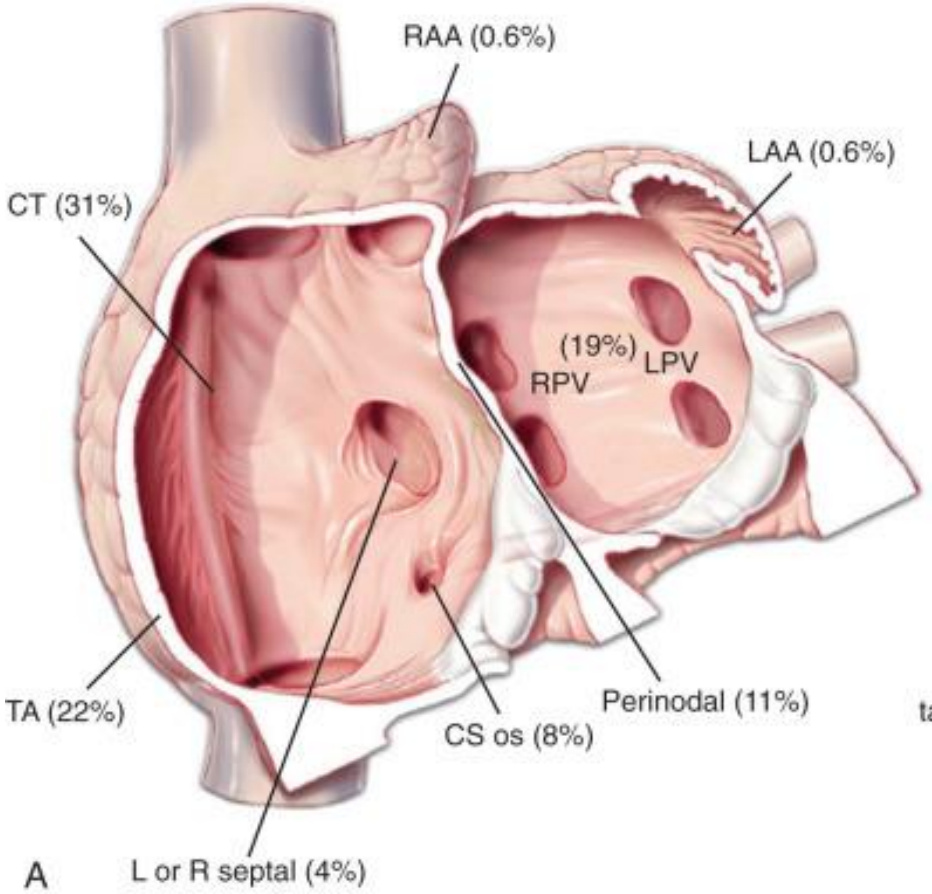
SINUSRITME MET BLOK

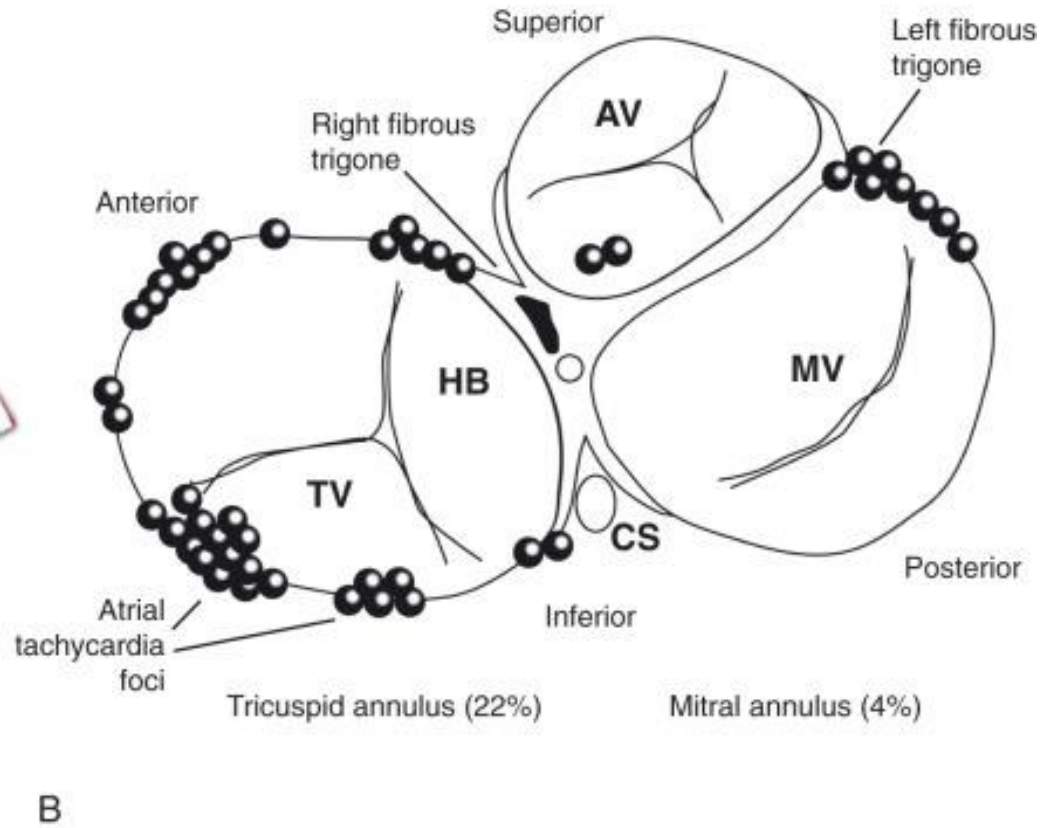


ATRIALE TACHYCARDIE

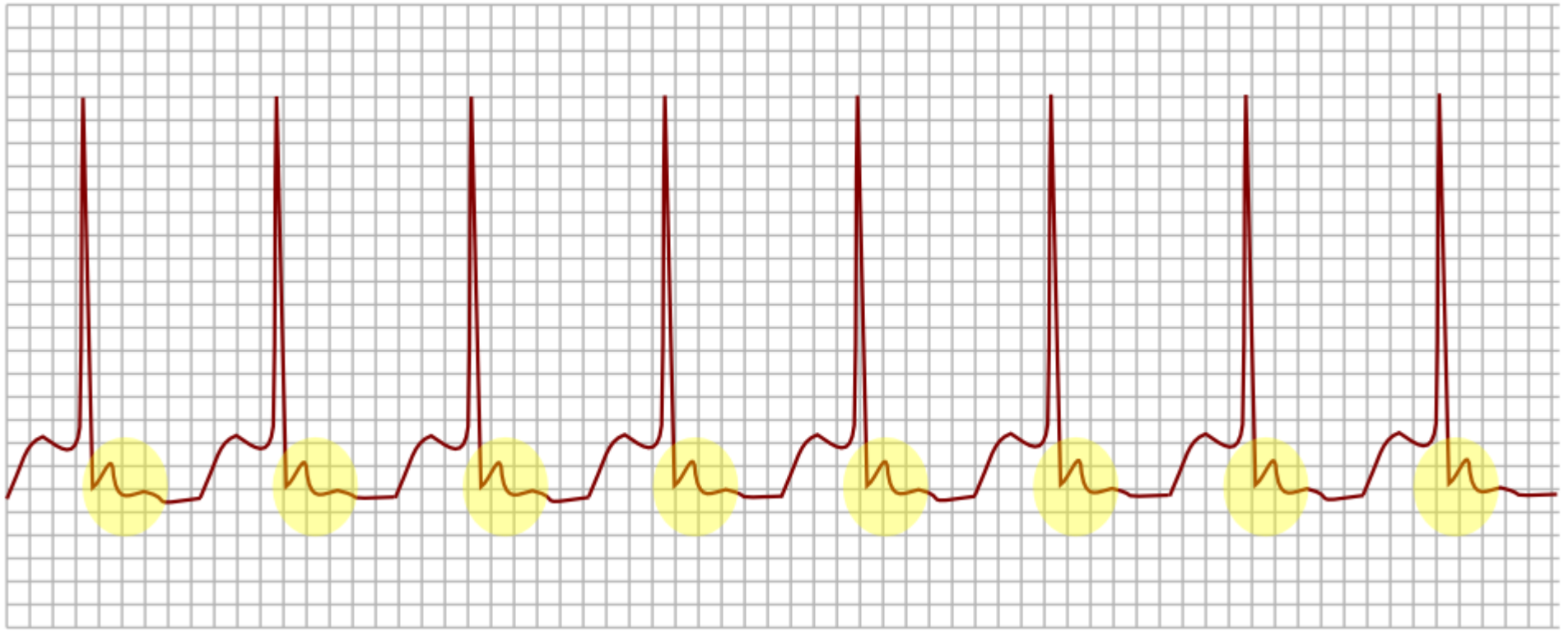


ATRIALE TACHYCARDIE

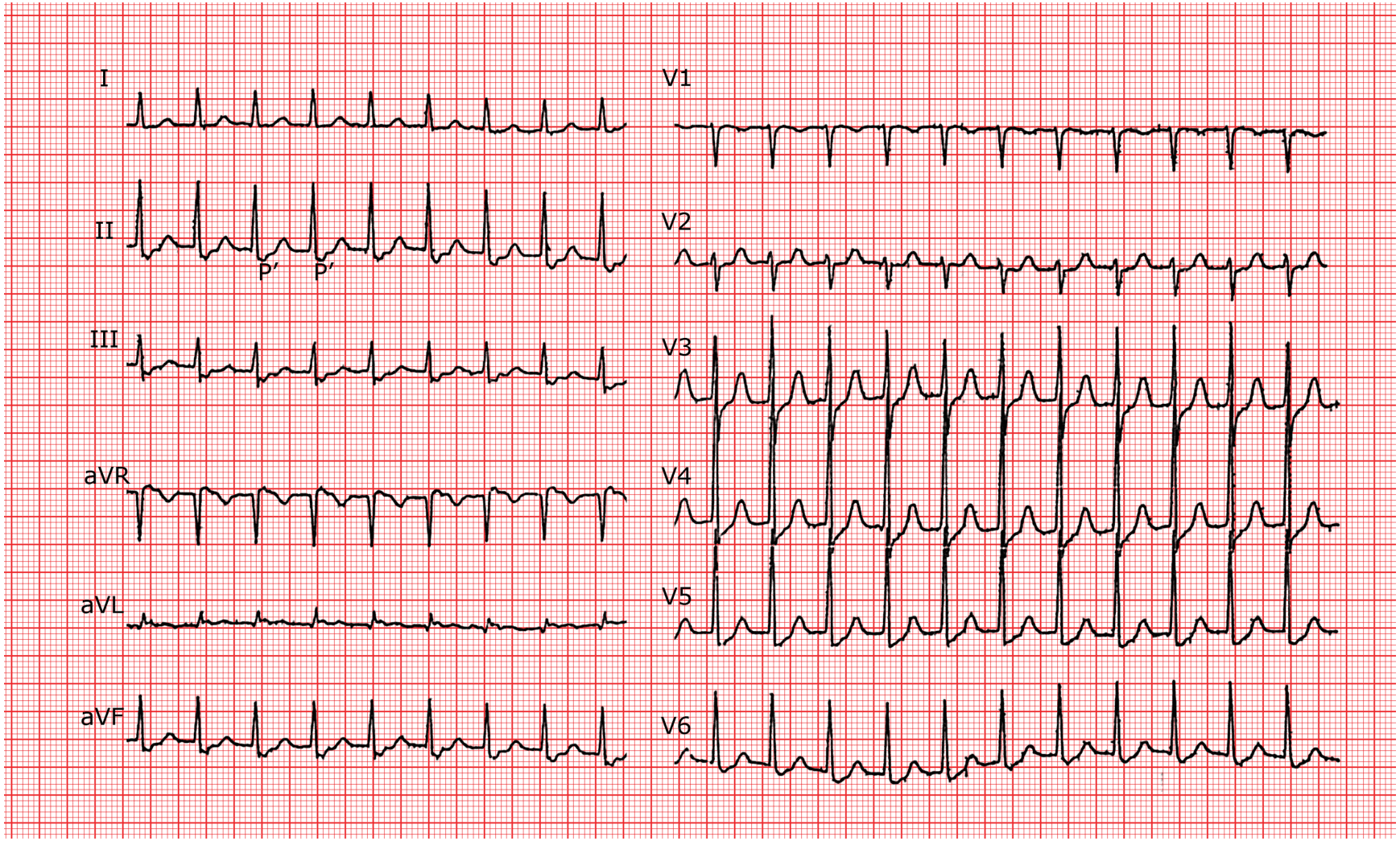


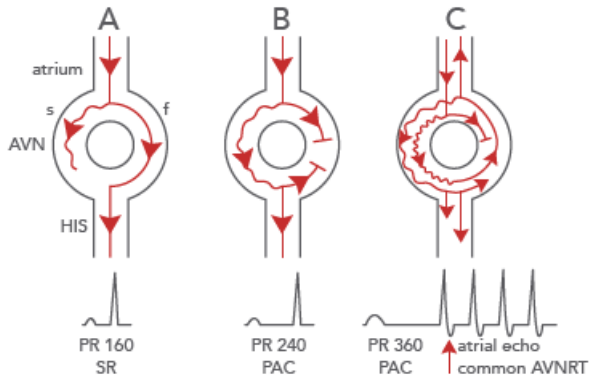


AVNRT



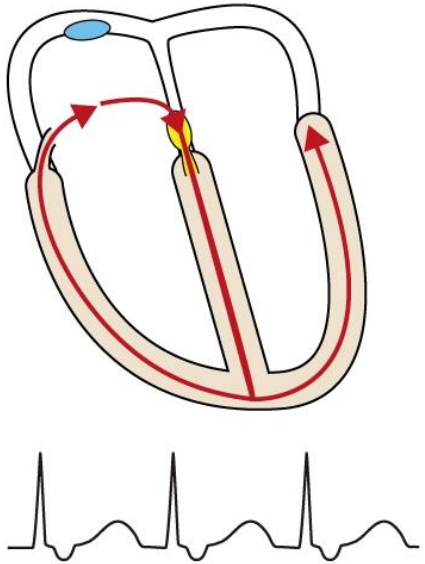
AV(N)RT


I
II
P′
P′
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
V6


A
B
C
atrium
s
f
AVN
HIS
PR 160
SR
PR 240
PAC
PR 360
PAC
atrial echo
common AVNRT

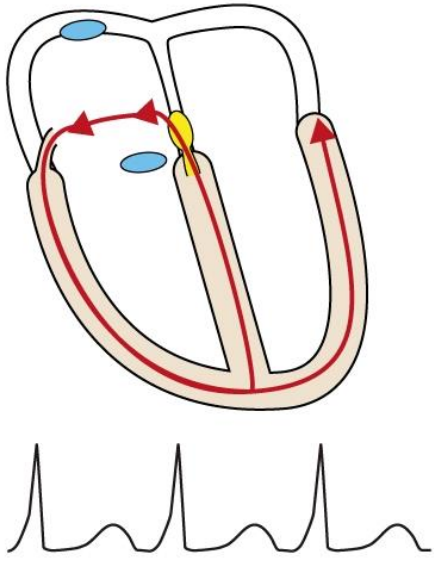
AVRT

Orthodromic AVRT
Antegrade conduction through atrioventricular node

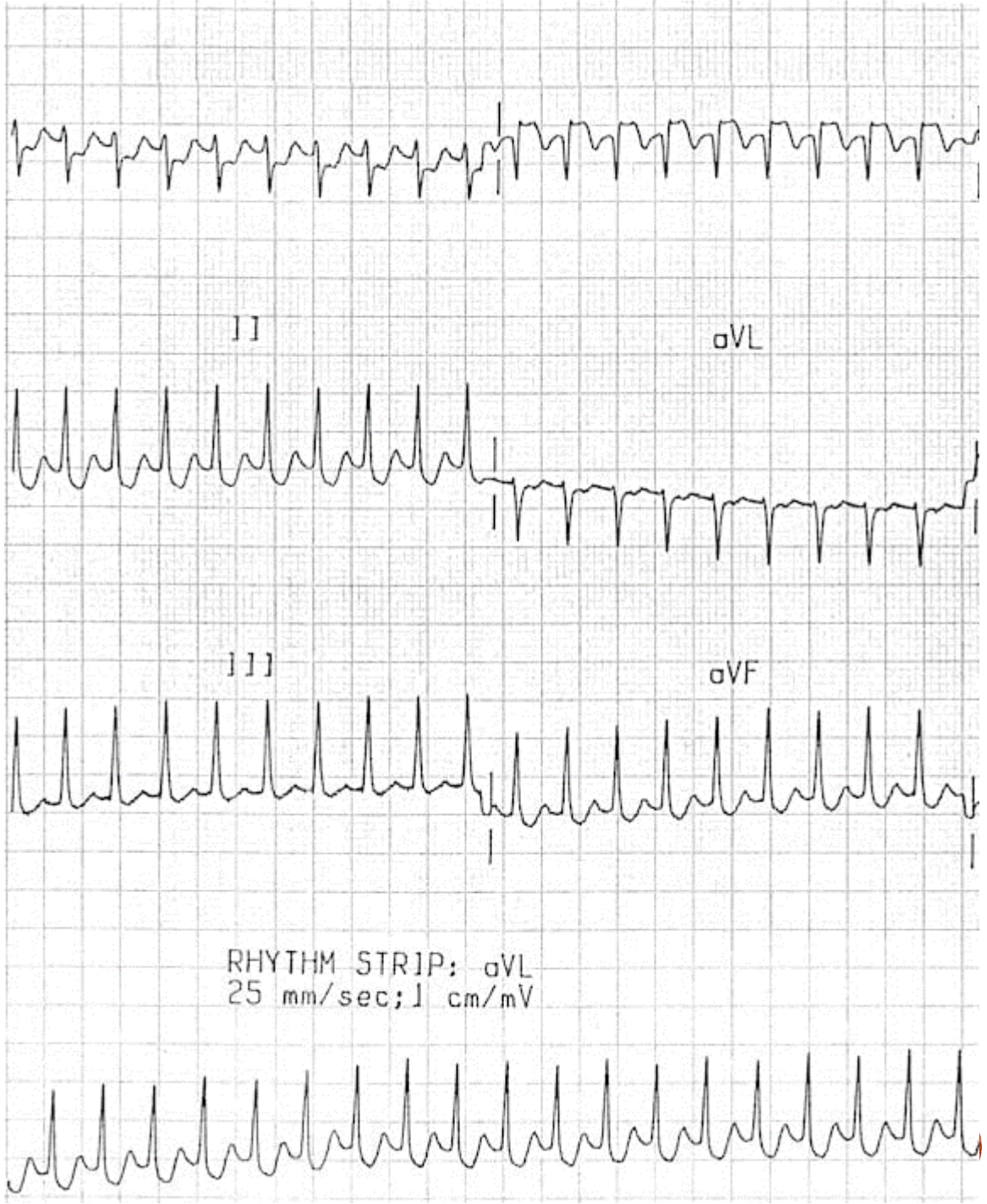


- Normal QRS duration
- No delta wave
- Retrograde P-wave after QRS

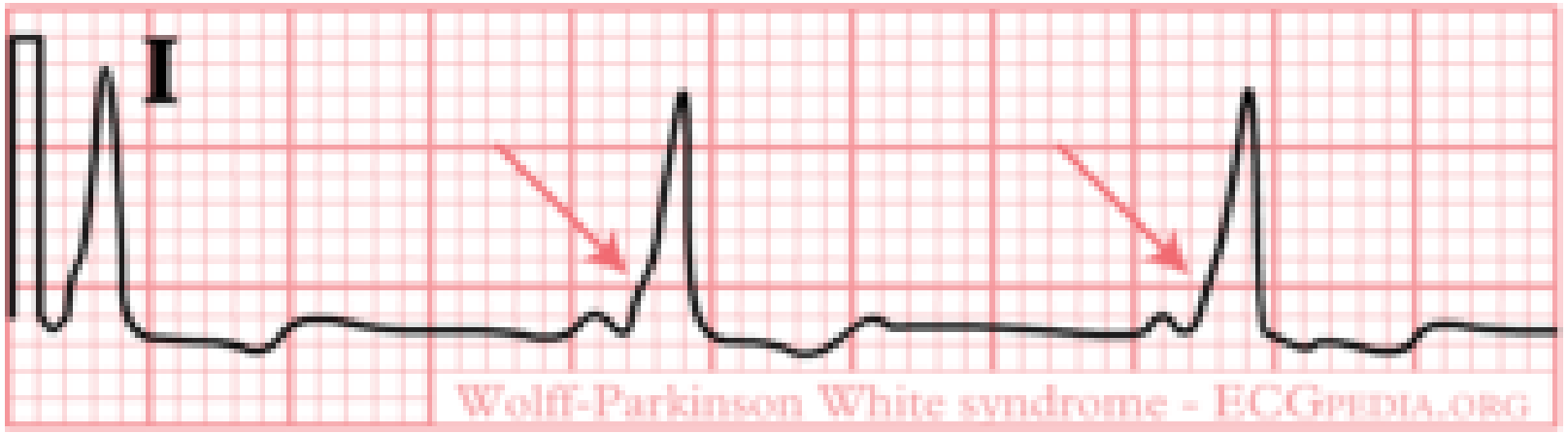
Antidromic AVRT
Retrograde conduction through atrioventricular node



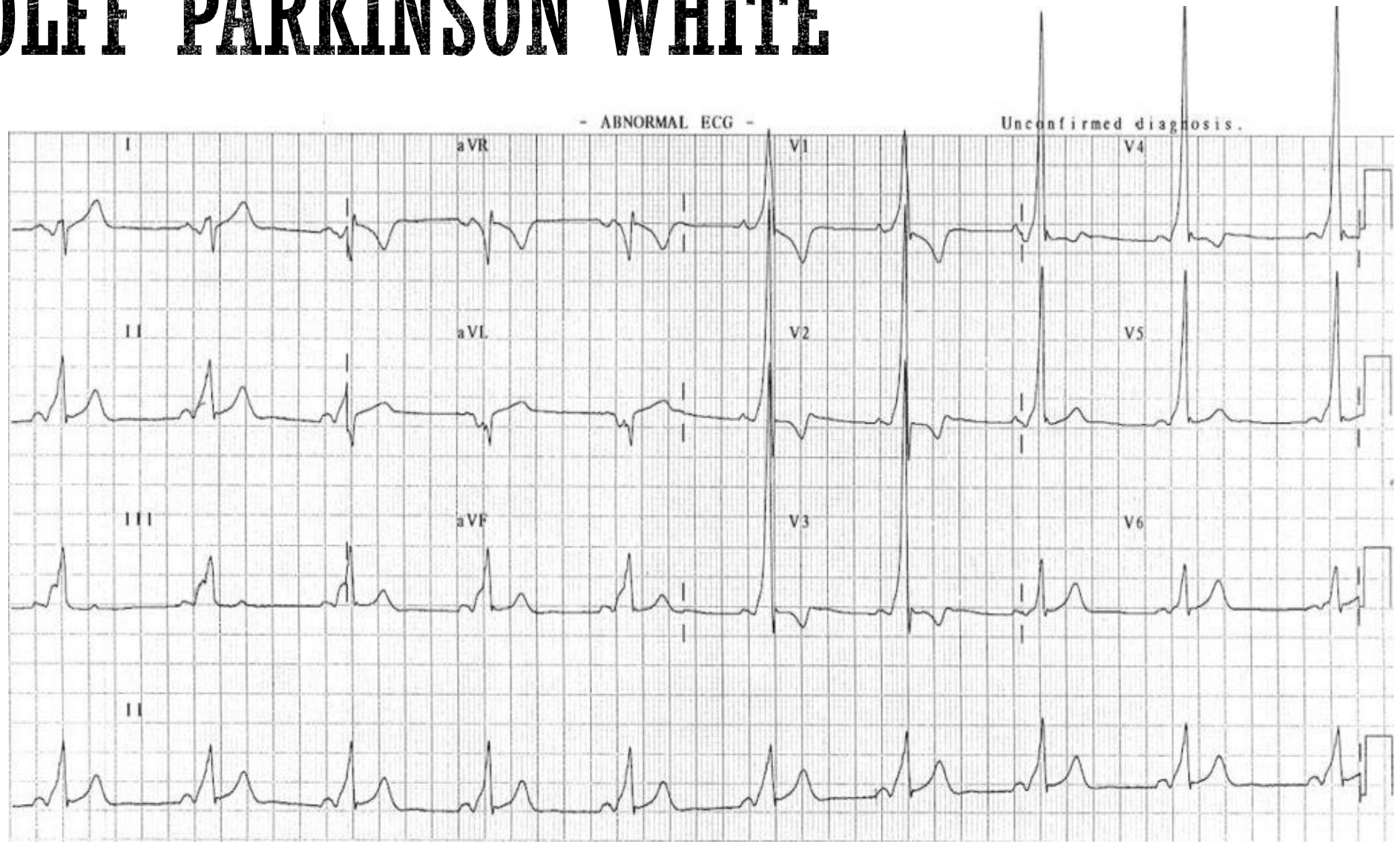
- Wide QRS complex with delta wave
- P-wave rarely seen
- If P-wave visible, it is retrograde and occurs just before the QRS



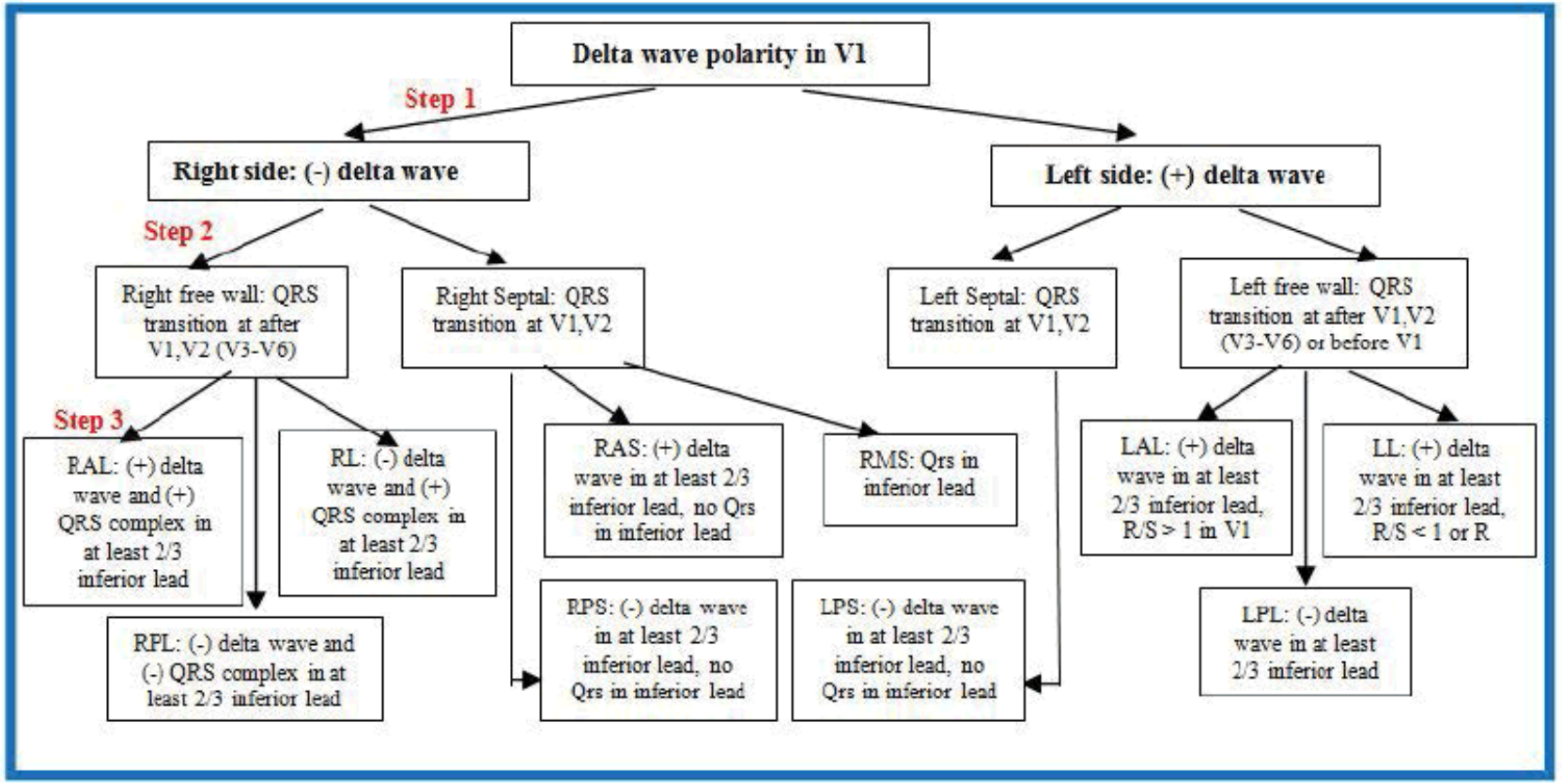
WOLFF PARKINSON WHITE



WOLFF PARKINSON WHITE

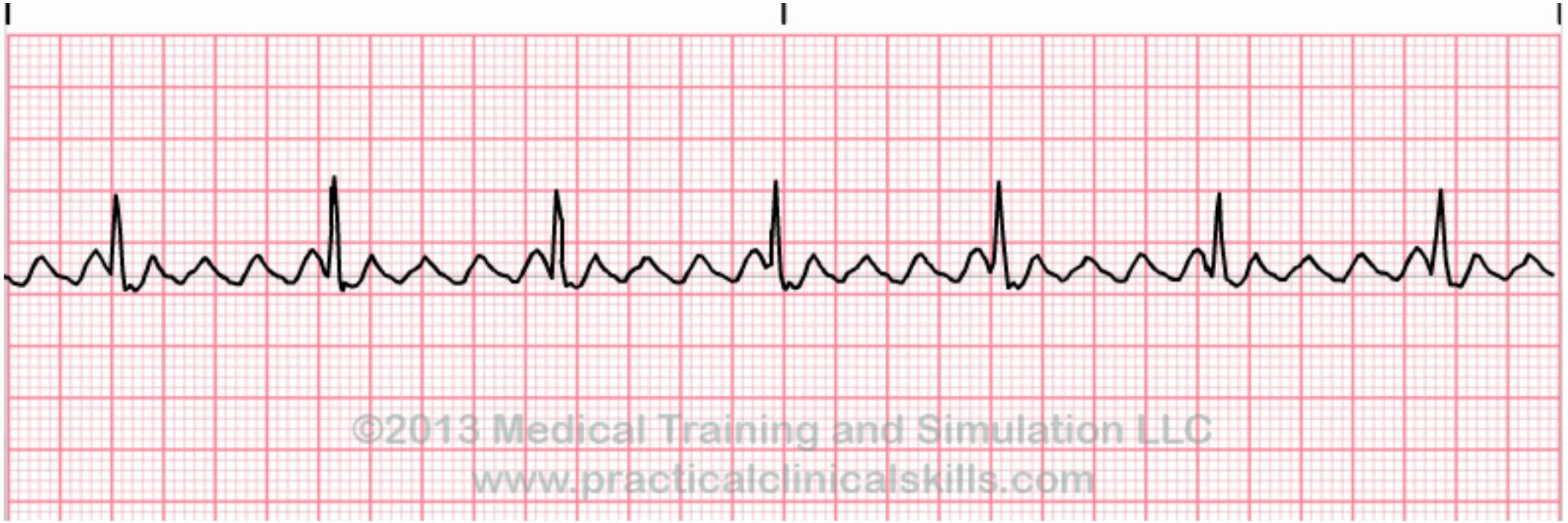


WOLFF PARKINSON WHITE



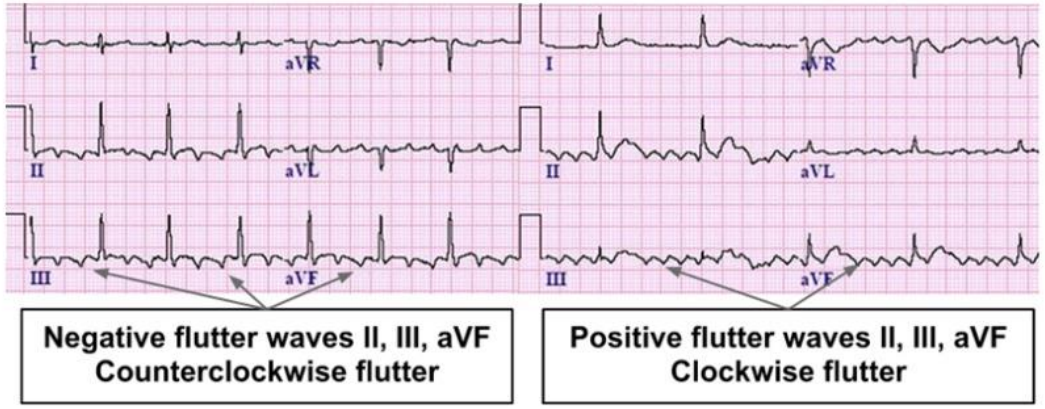
https://doi.org/10.4172/Interventional-Cardiology.1000587

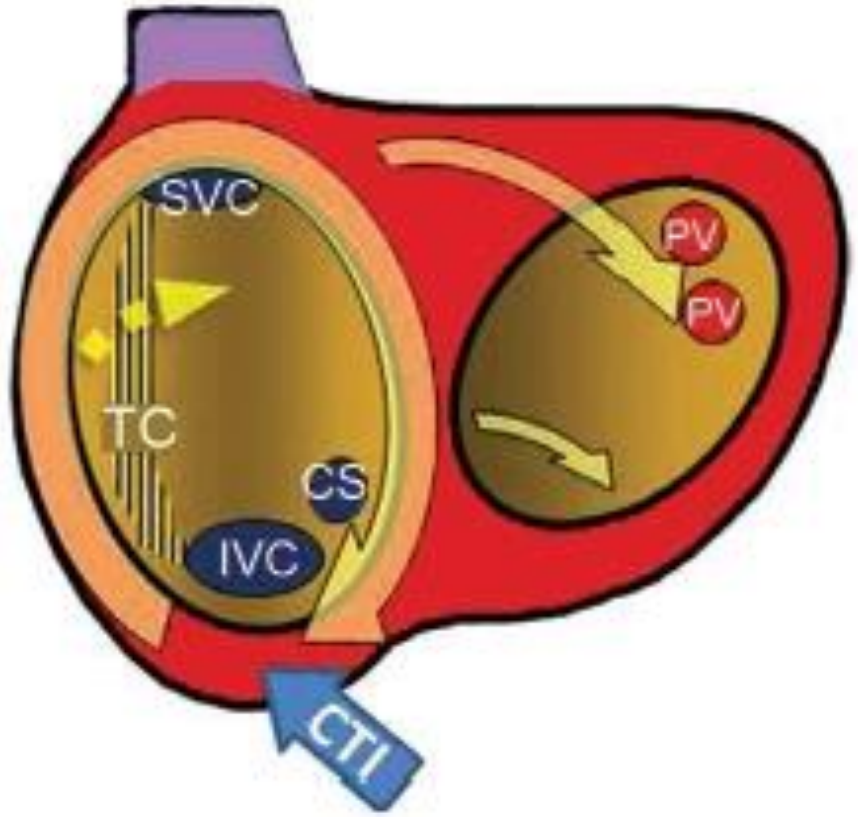
ATRIALE FLUTTER



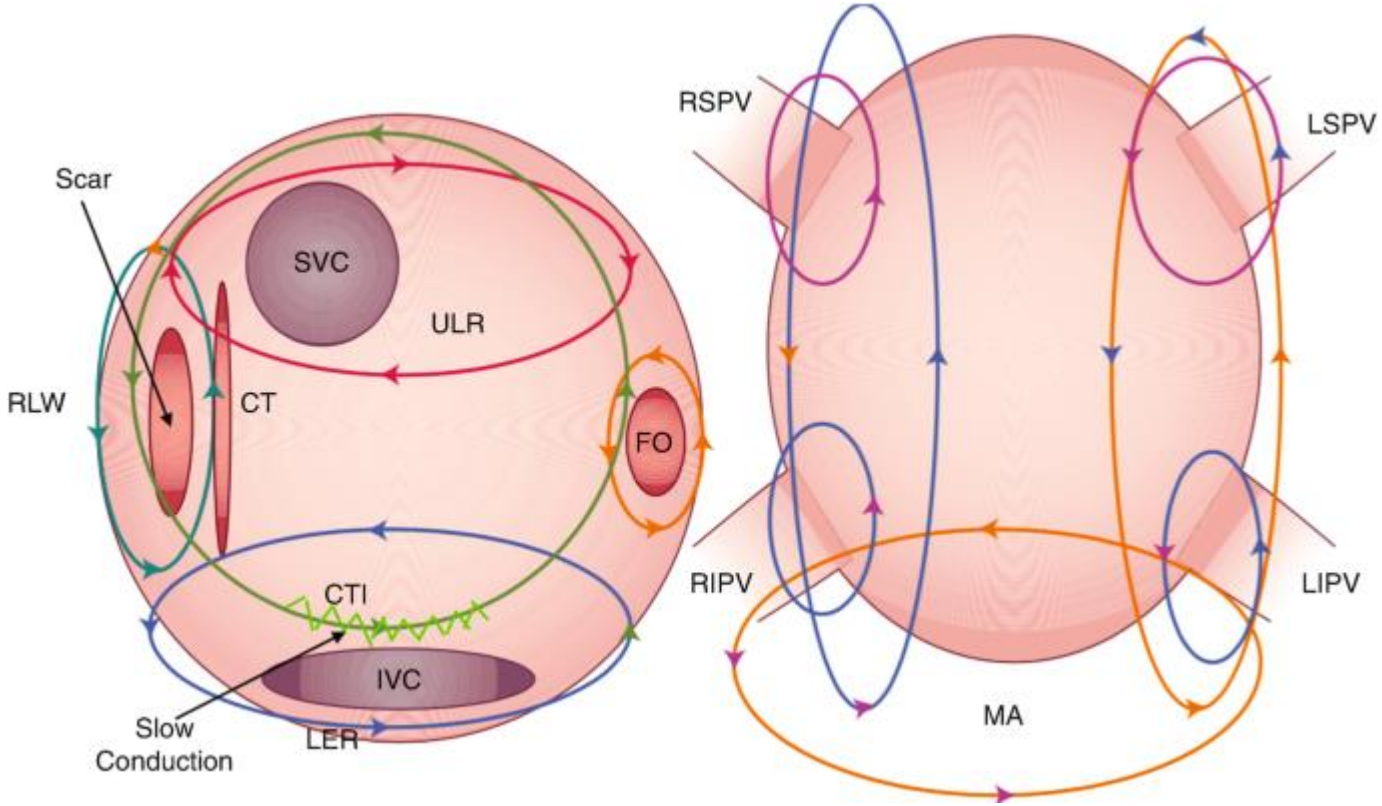
ATRIALE FLUTTER

Typical atrial flutter is counterclockwise in direction and originates from a reentrant circuit around the tricuspid valve annulus and through the cavo-tricuspid isthmus. This results in negatively-directed flutter waves in the inferior leads. At times, the direction of the circuit can reverse, causing clockwise atrial flutter from the same anatomical location. This appears as positively-directed flutter waves in the inferior leads.



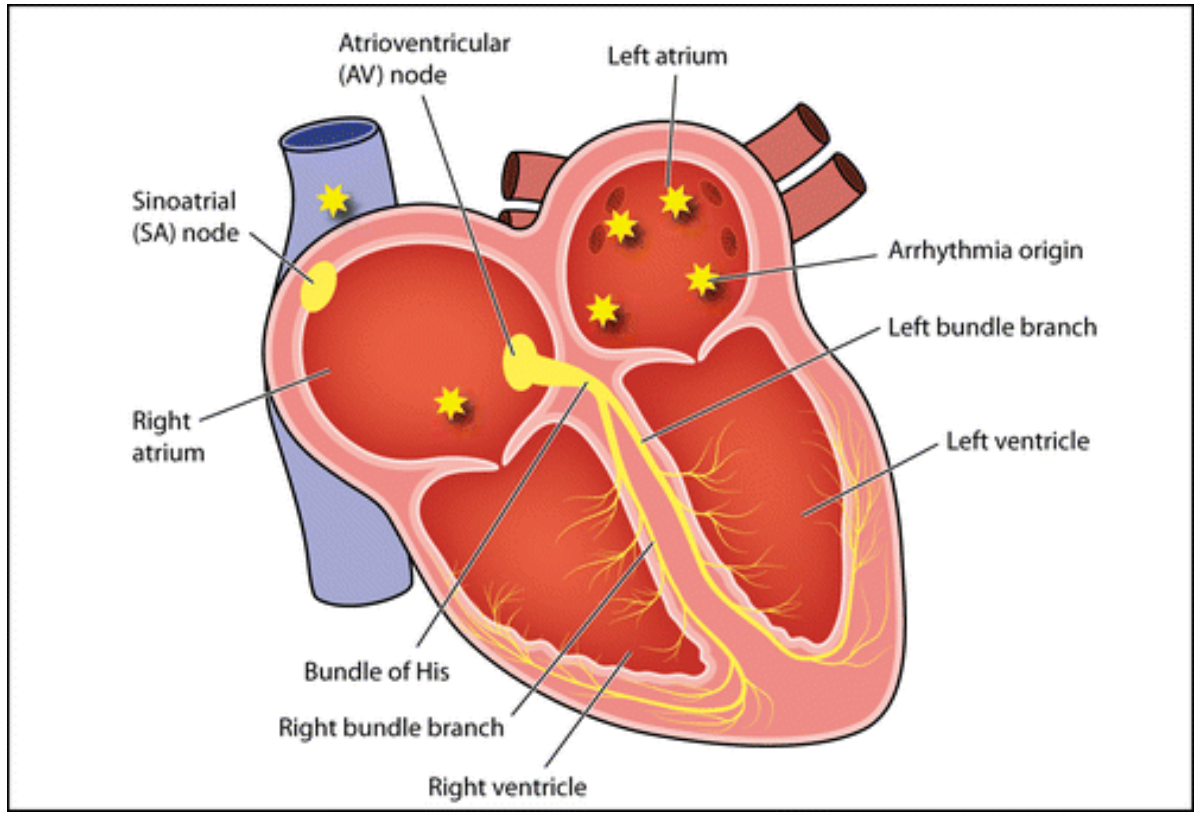


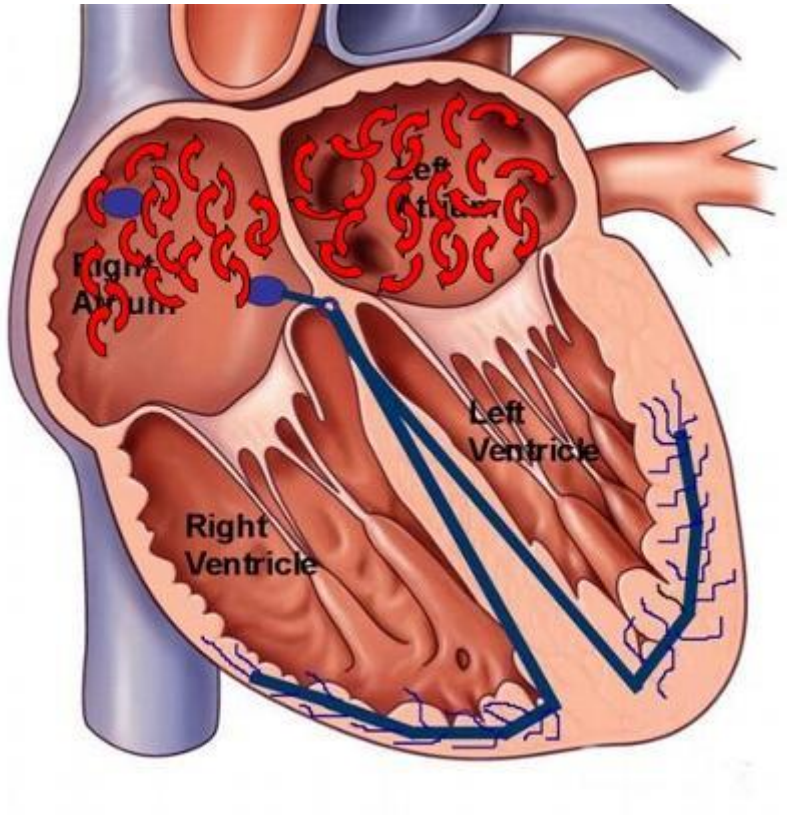
ATRIALE FLUTTER (ATYPISCH)



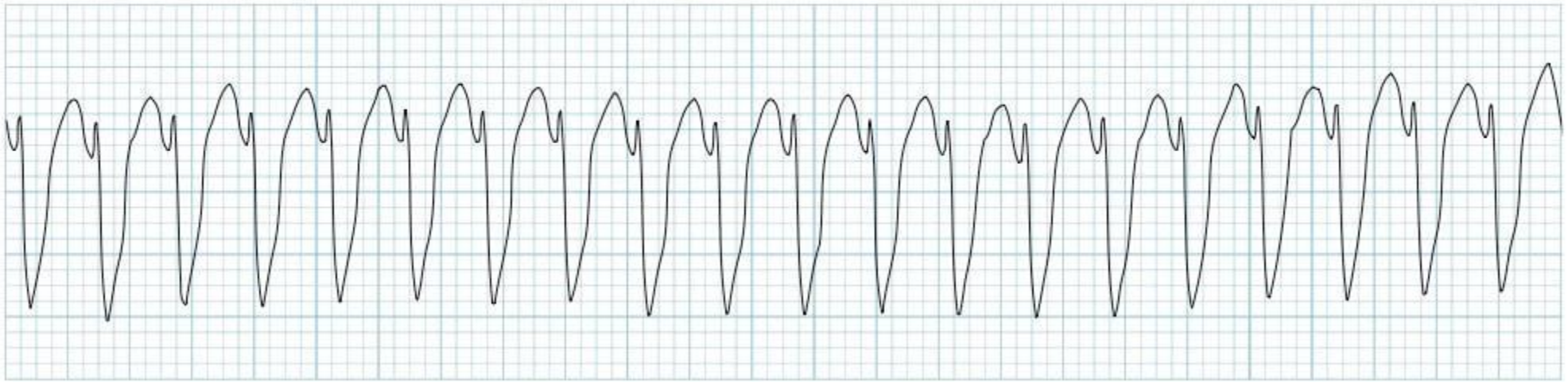
ATRIUM FIBRILLEREN

ATRIUM FIBRILLEREN

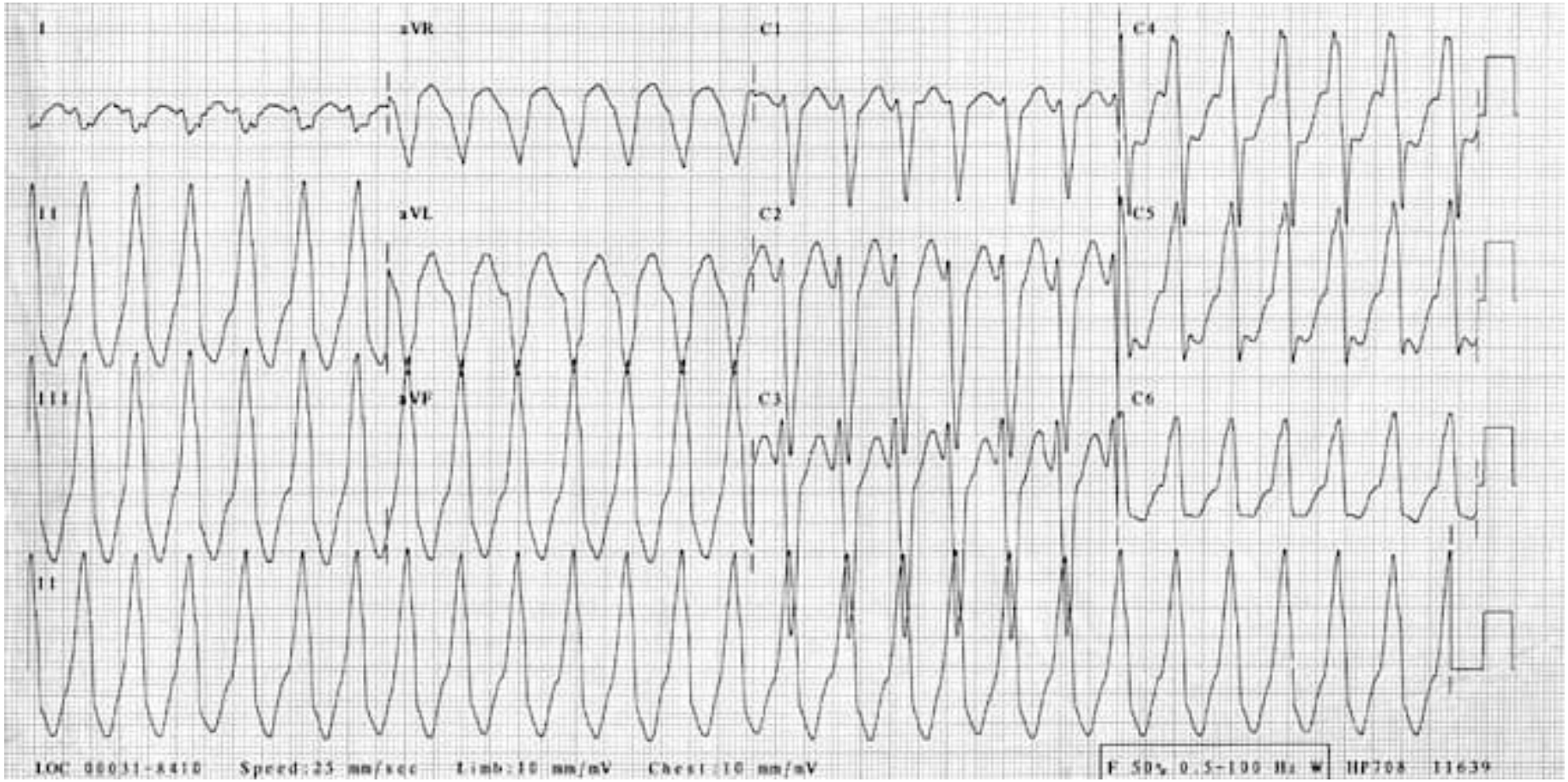




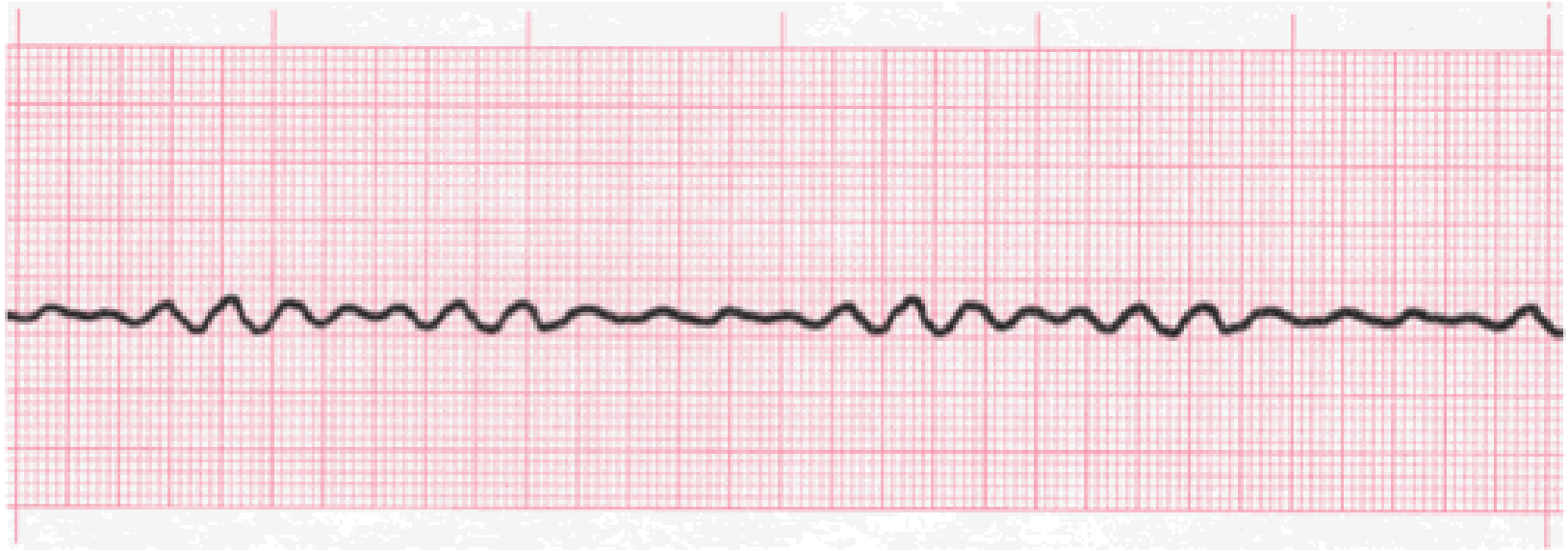
VENTRICULAIRE TACHYCARDIE



VENTRICULAIRE TACHYCARDIE



VENTRIKEL FIBRILLEREN



VENTRIKEL FIBRILLEREN


Bedankt voor jullie aandacht!