

Szombath D.–Tornóci L.: EKG workbook

All tracings

September 13, 2006.

This study aid has been prepared for classroom projection and not for printing. If you need a paper copy, you can buy the one published by Semmelweis Kiadó. The quality of this is far superior than what you can get by printing it yourself.

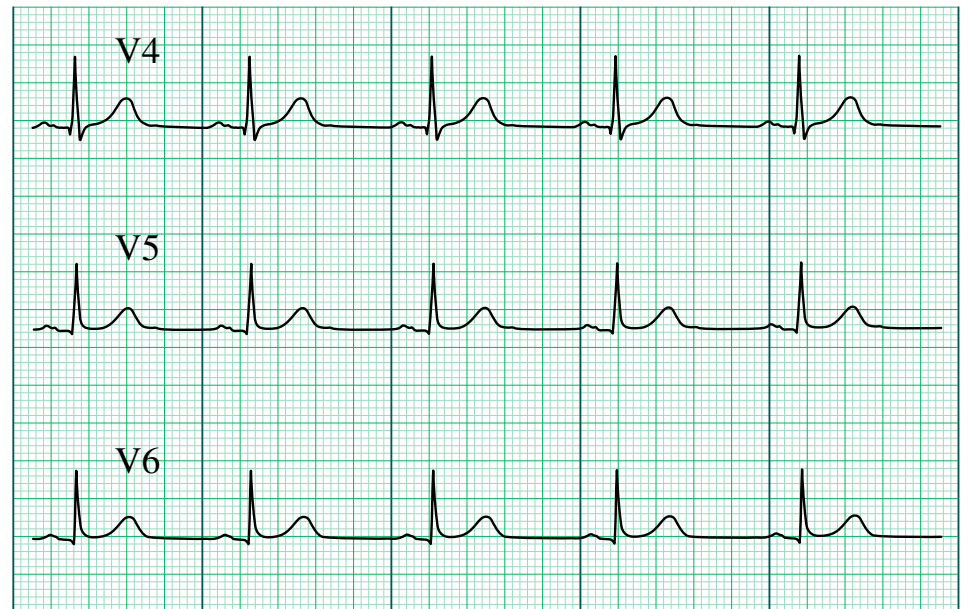
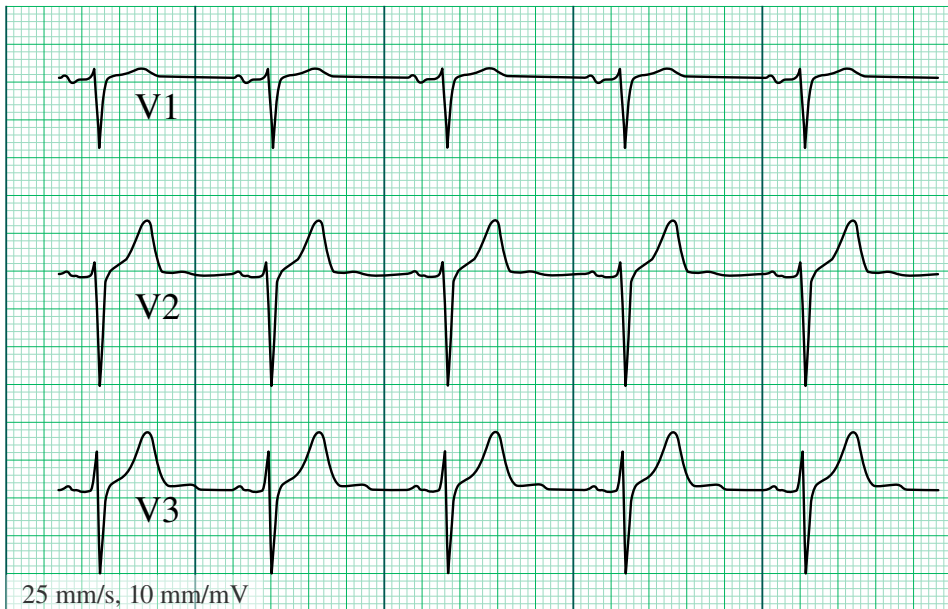
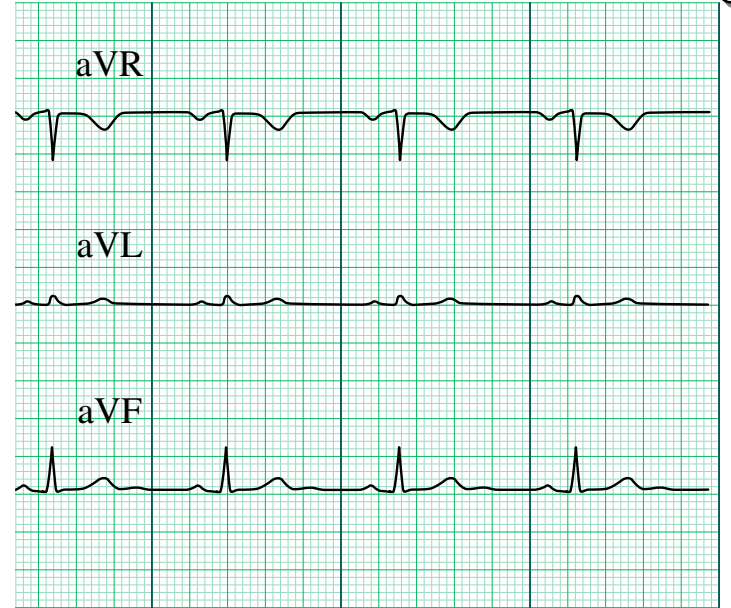
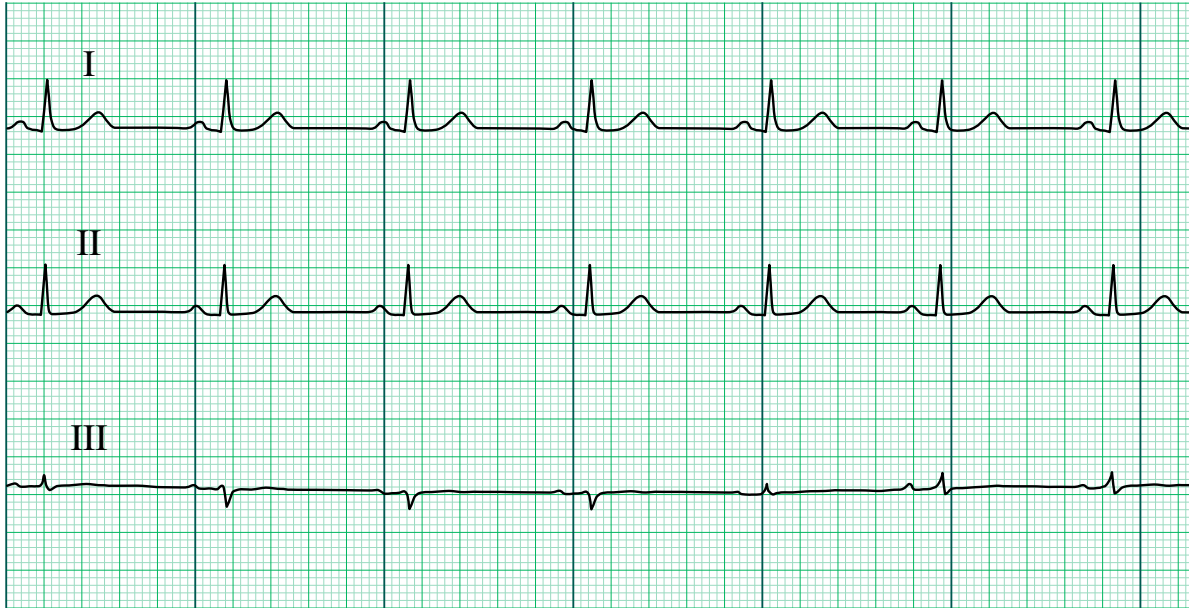
Click on the selected item in the contents to get to the ECG you want.
You can get back to the contents page by clicking on the page number.

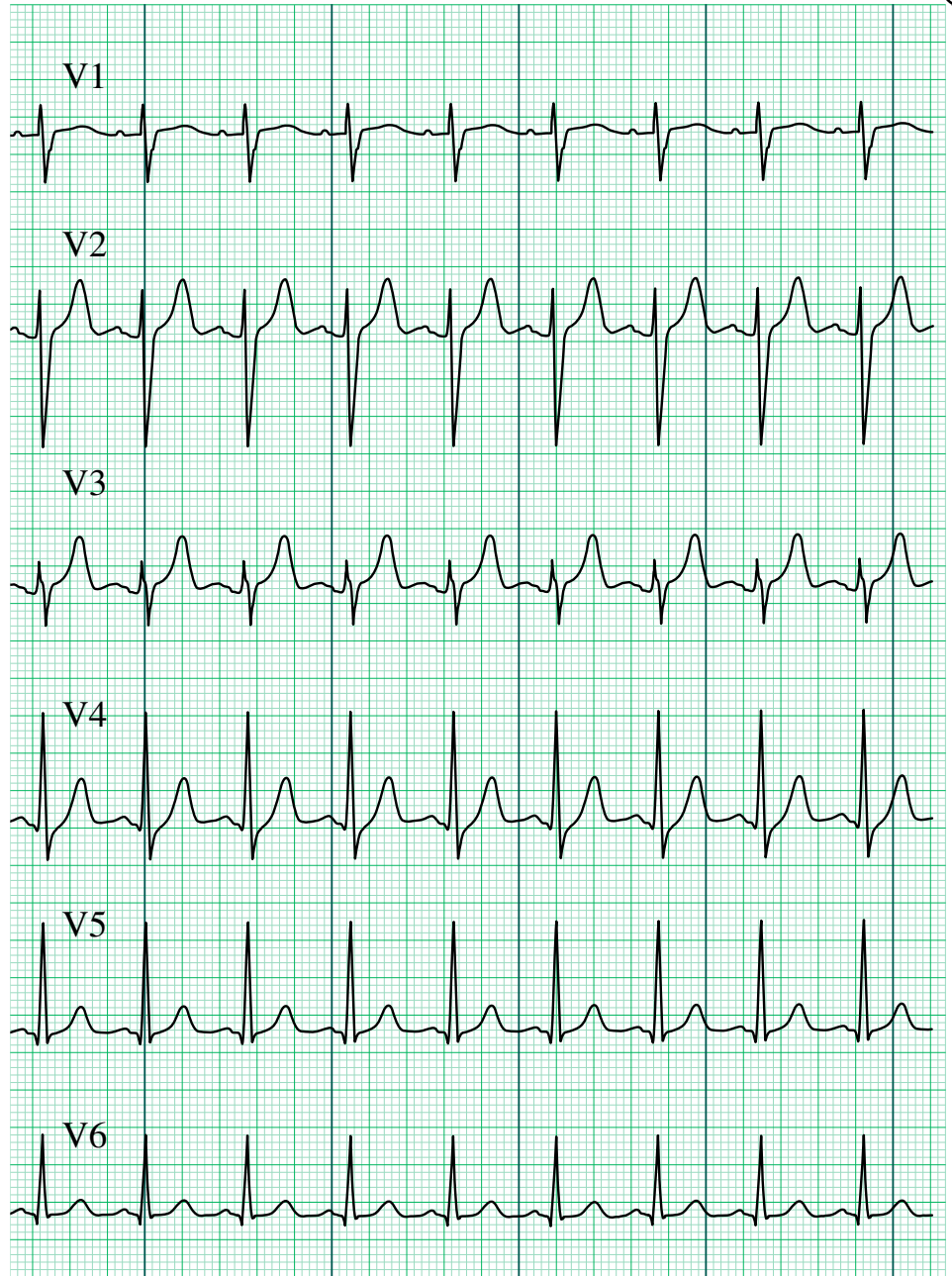
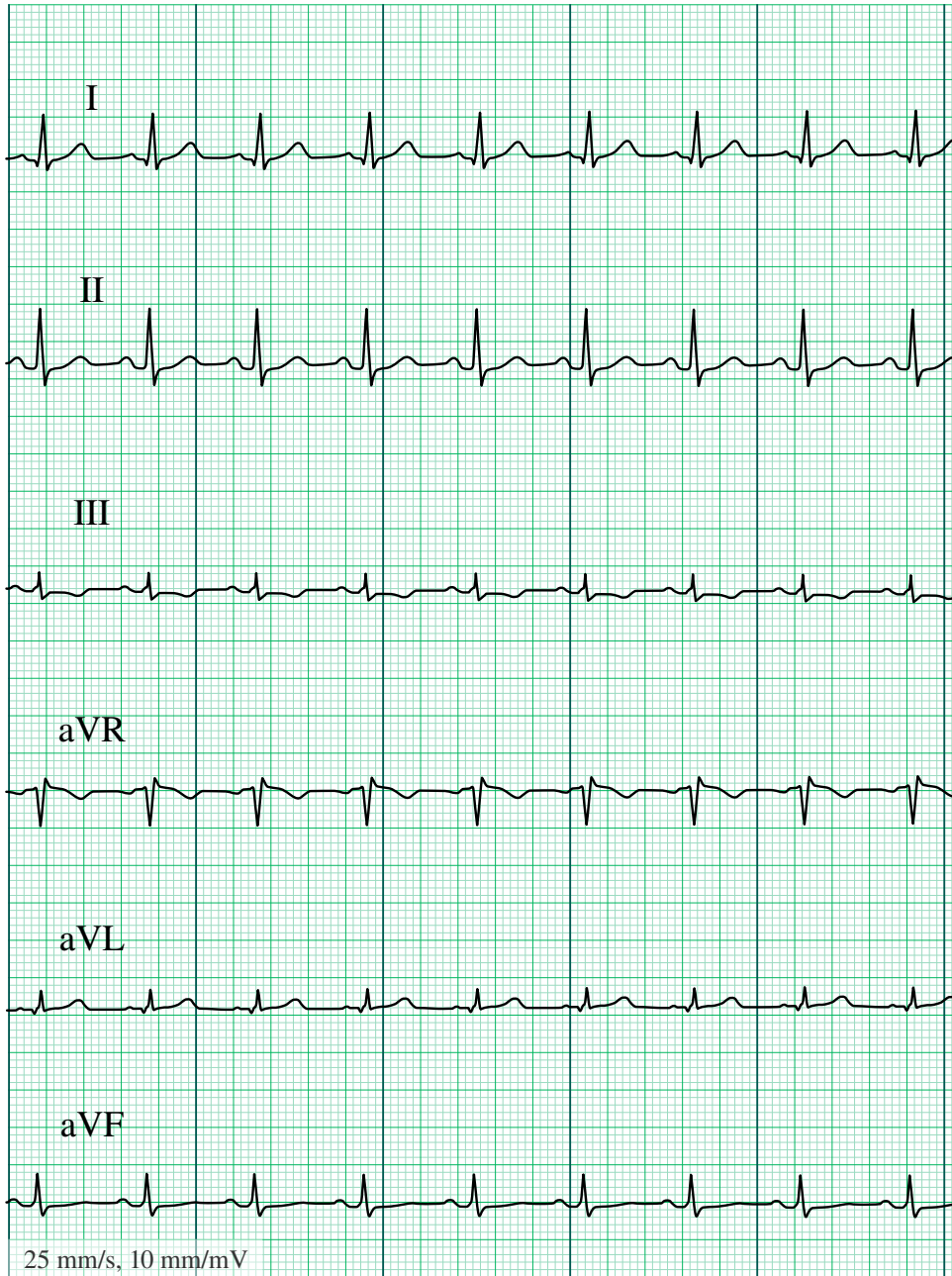
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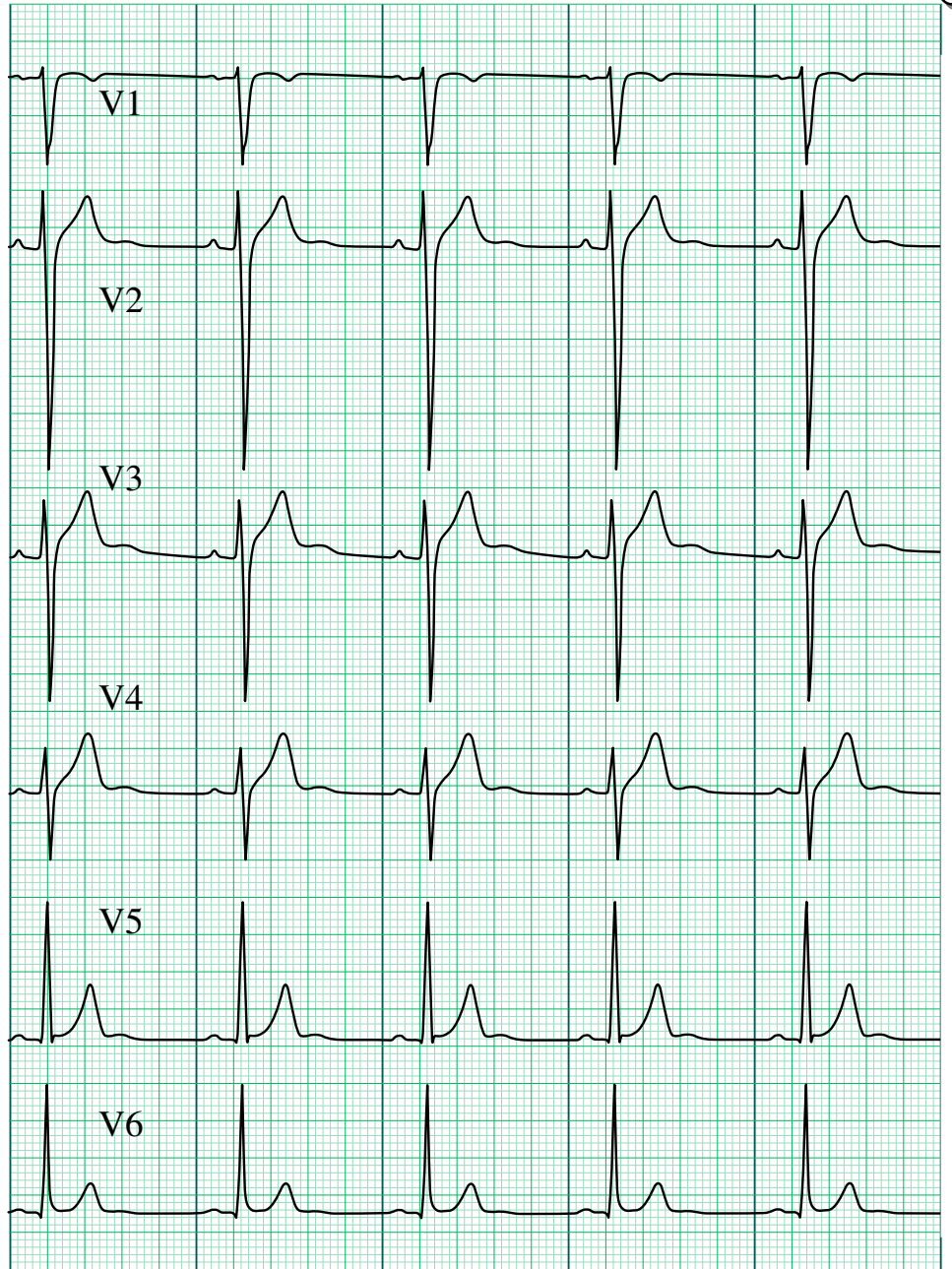
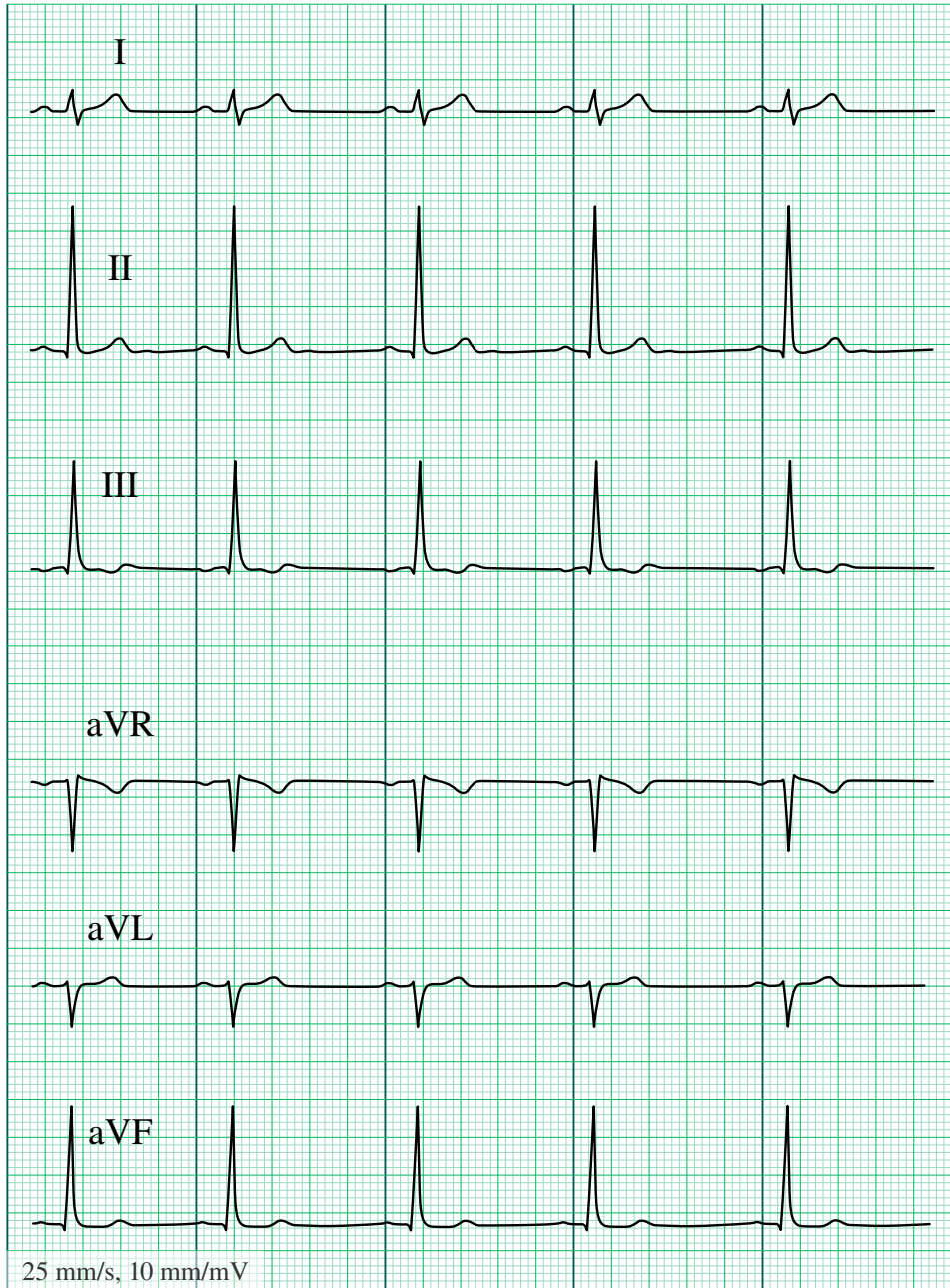
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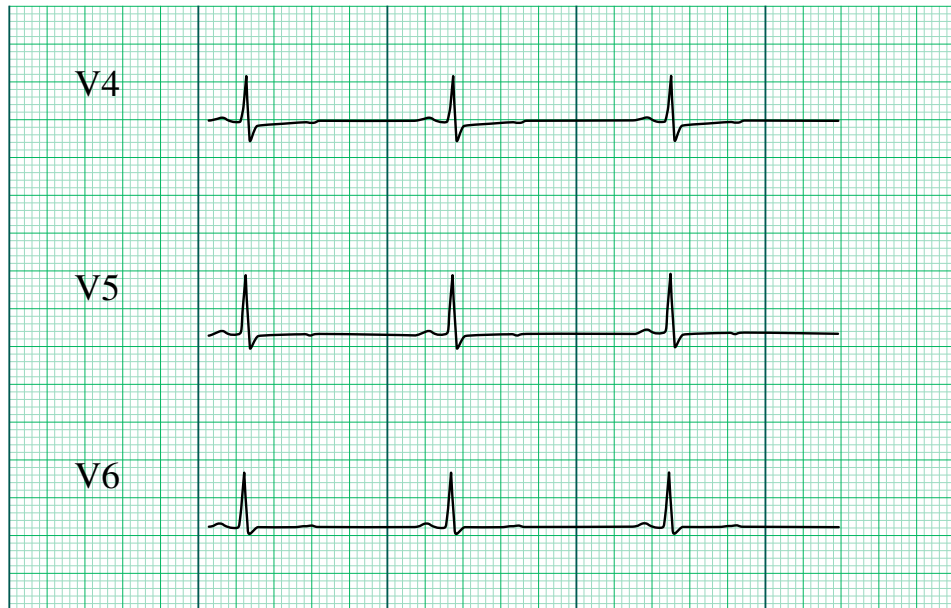
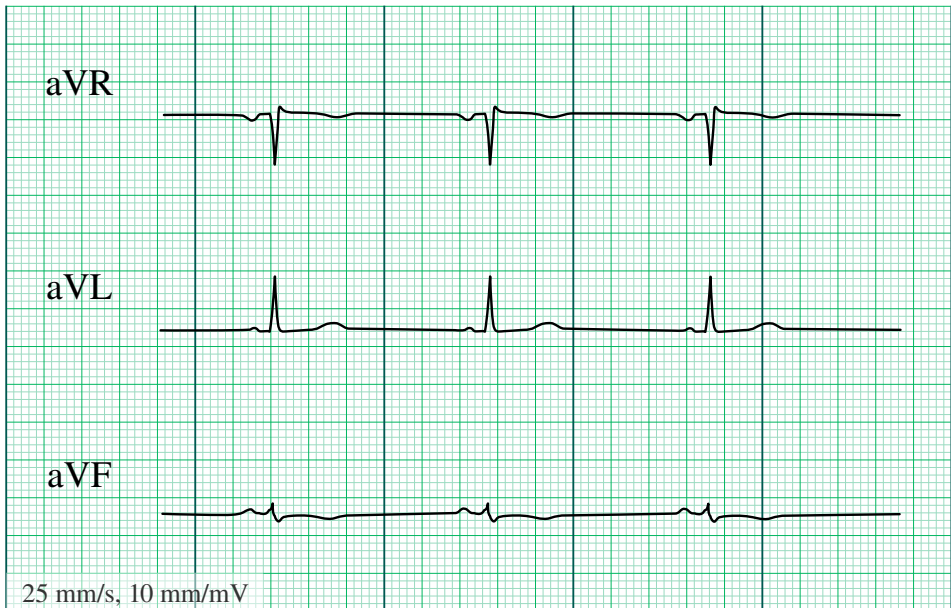
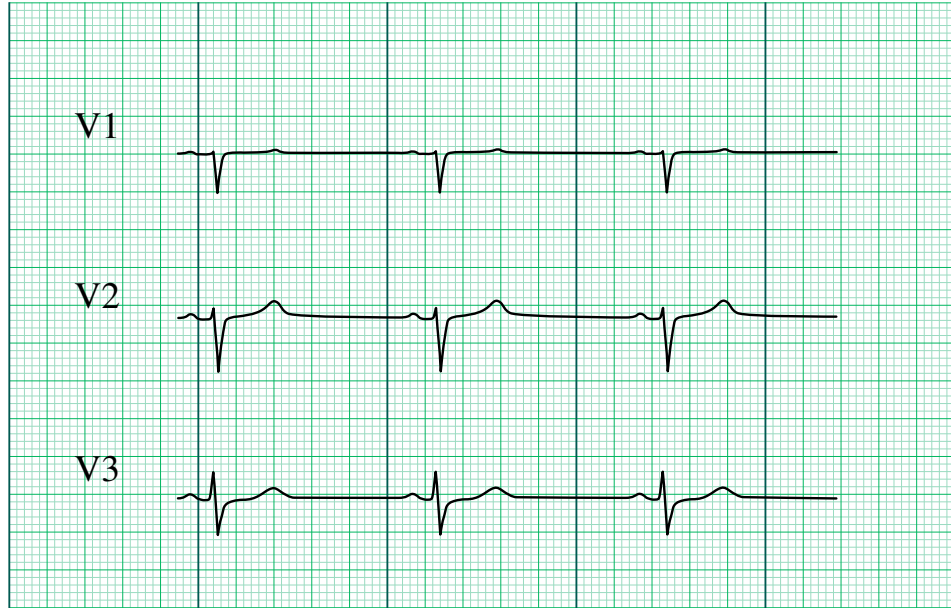
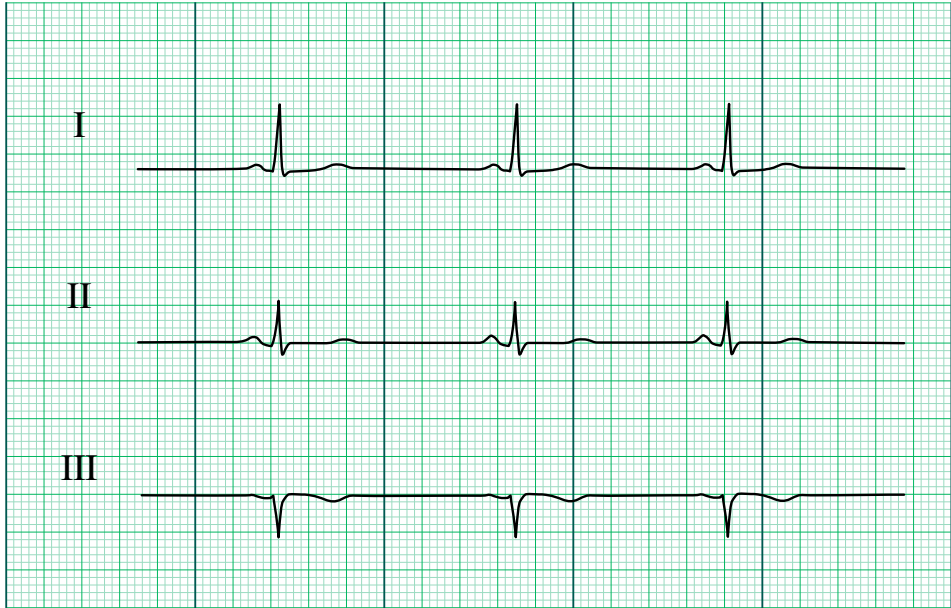
- E01 Normal ECG
- E02 Normal tracing (mean axis $\approx 45^\circ$) + sinus tachycardia
- E03 Normal tracing, right deviation (mean axis $\approx 80^\circ$)
- E04 Normal tracing, left deviation (mean axis $\approx 10^\circ$) + sinus bradycardia, flat T waves
- E05 Effect of respiration on the mean axis (0° – 30°). The positional Q wave disappears during inspiration.
- E06 Sinus tachycardia, frequency: $\approx 120/\text{min}$
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- E08 Respiratory sinus arrhythmia (mean axis $\approx 90^\circ$, right deviation)
- E09 Sinus arrest, junctional escape beat
- E10 Sick Sinus Syndrome: sinus bradycardia, intermittent atrial flutter with AV block
- E11 Atrial premature contractions (APCs) with variable PR interval and aberrant conduction
- E12 Multifocal atrial tachycardia
- E13 Atrial fibrillation, aberrantly conducted ventricular complexes, tachyarrhythmia
- E14 Atrial fibrillation, absolute arrhythmia
- E15 Atrial flutter
- E16 Junctional (or atrial) premature contractions in a 4:1 (quadrigeminy) pattern
- E17 Junctional escape rhythm (mesonodal beats), frequency $\approx 40/\text{min}$
- E18 Accelerated junctional rhythm, (inverted P waves precede the QRSs)
- E19 Accelerated junctional rhythm, (inverted P waves come after the QRSs)
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- E21 Ventricular bigeminy (2:1)
- E22 Fully compensated ventricular premature contractions (VPCs, 3:1 = trigeminy)
- E23 Fully compensated ventricular premature contractions (VPCs, 4:1 = quadrigeminy), sinus tachycardia
- E24 Short runs of VPCs
- E25 Nonsustained ventricular tachycardia following bigeminy
- E26 Runs of ventricular tachycardia with signs of retrograde conduction to the atria
- E27 Ventricular tachycardia
- E28 Ventricular tachycardia
- E29 Long QT syndrome (QT = 0.56 s, Qtc = 0.50 s)
- E30 “Torsade de pointes” type polymorphic ventricular tachycardia
- E31 Ventricular flutter
- E32 Ventricular flutter, fibrillation and cardiac arrest
- E33 Ventricular parasystole with fusion beats
- E34 First degree atrioventricular (AV) block (PR ≈ 0.33 s)
- E35 Second degree AV block, Wenckebach type (Mobitz I) with a 4:3 conduction ratio. Progressive shortening of the RR interval is seen in the first cycle.
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- E39 Third degree AV block, ventricular escape rhythm
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- E42 Second degree SA block (Mobitz II)
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- E44 Complete left bundle branch block (LBBB) (QRS ≈ 0.12 s)
- E45 Rate dependent LBBB
- E46 Left anterior fascicular block (hemiblock, mean axis $\approx -50^\circ$), APC

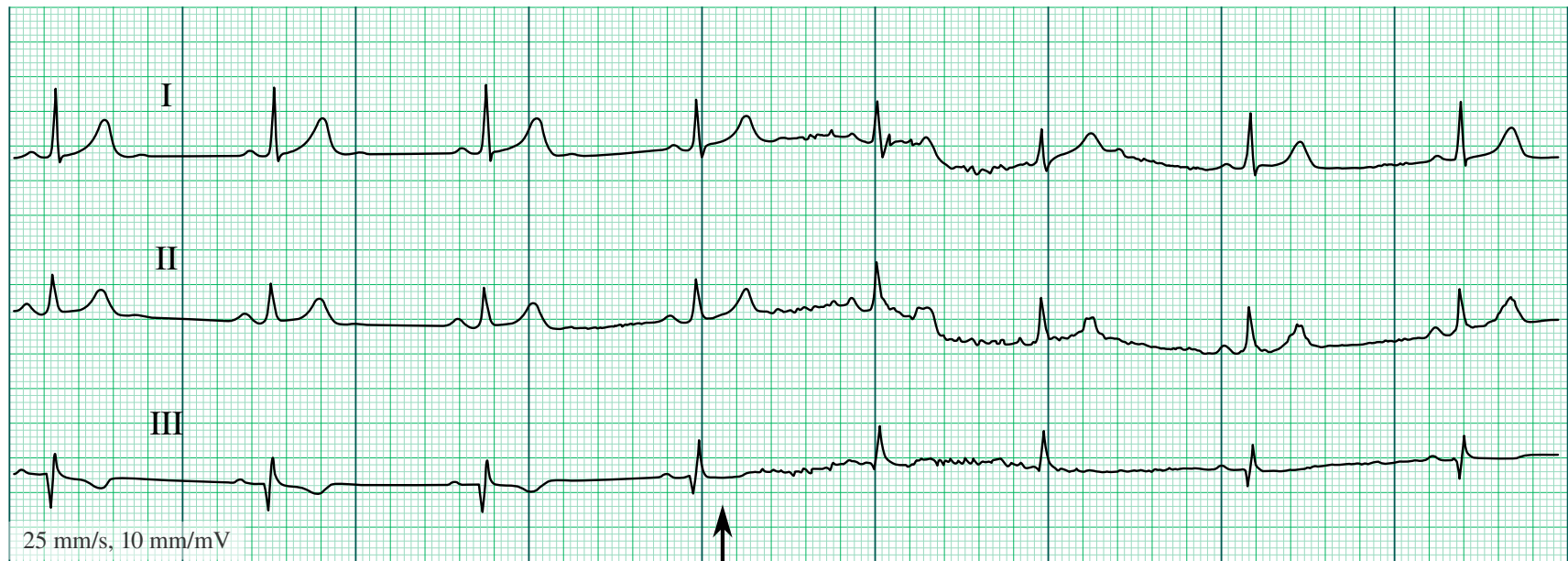
- E47 Right ventricular hypertrophy (mean axis $\approx 100^\circ$), first degree AV block
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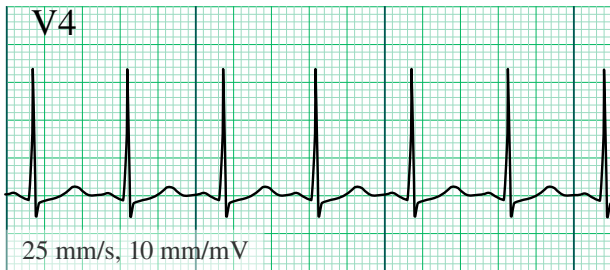
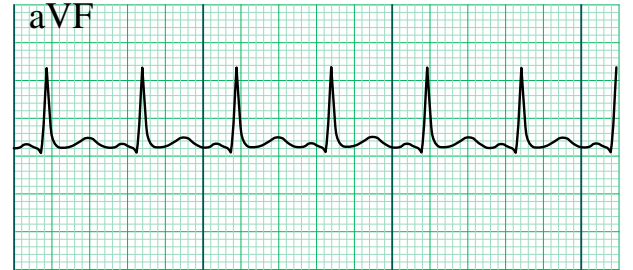
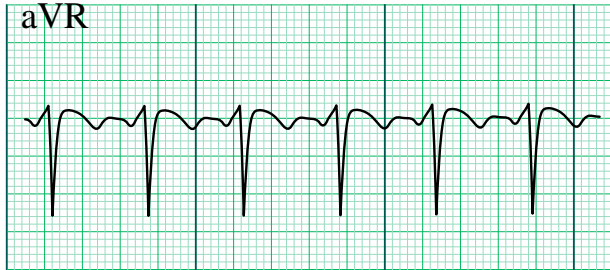
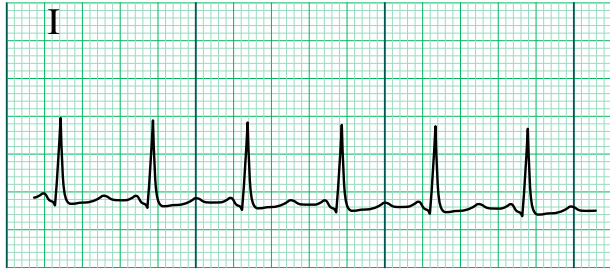


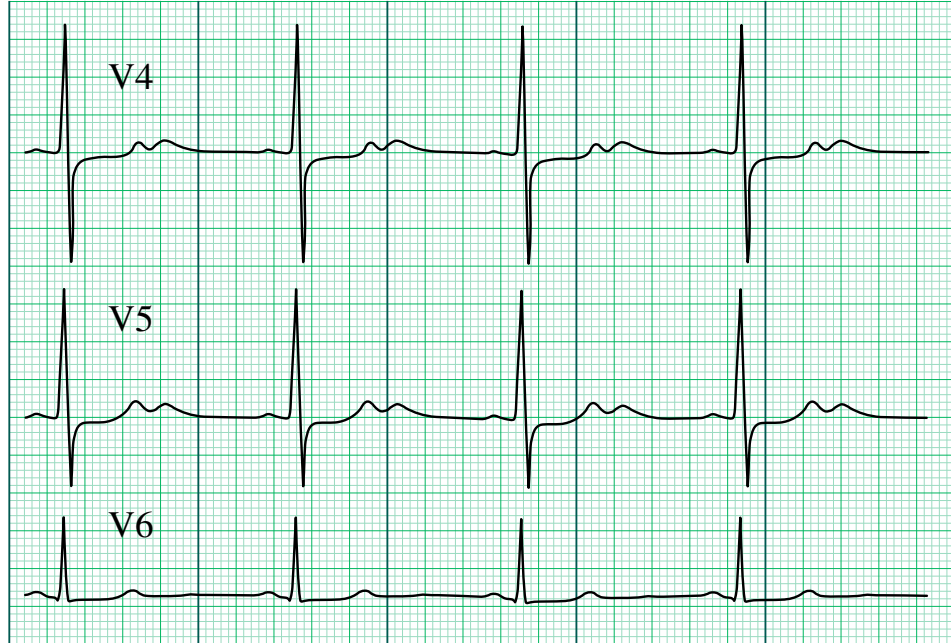
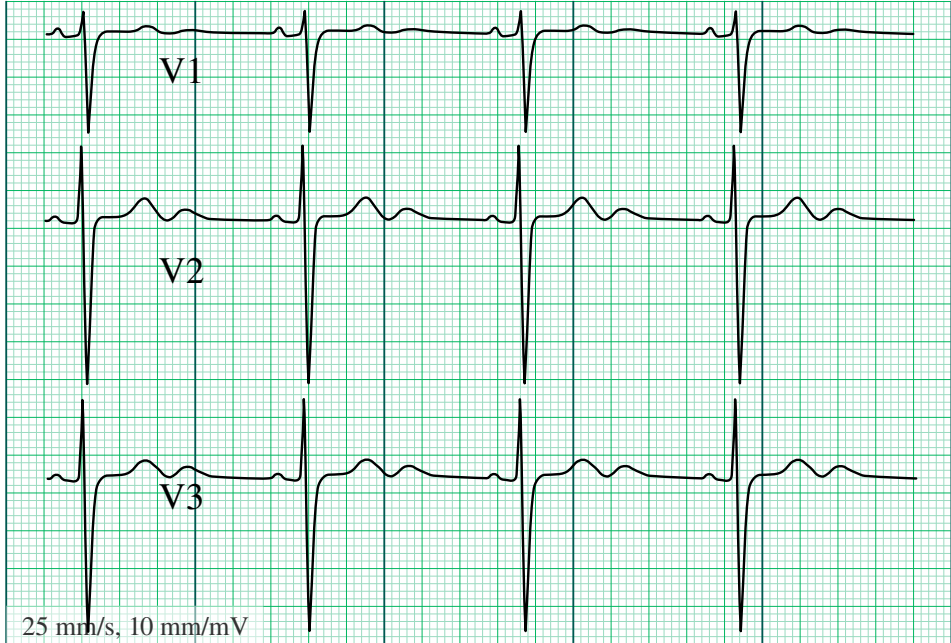
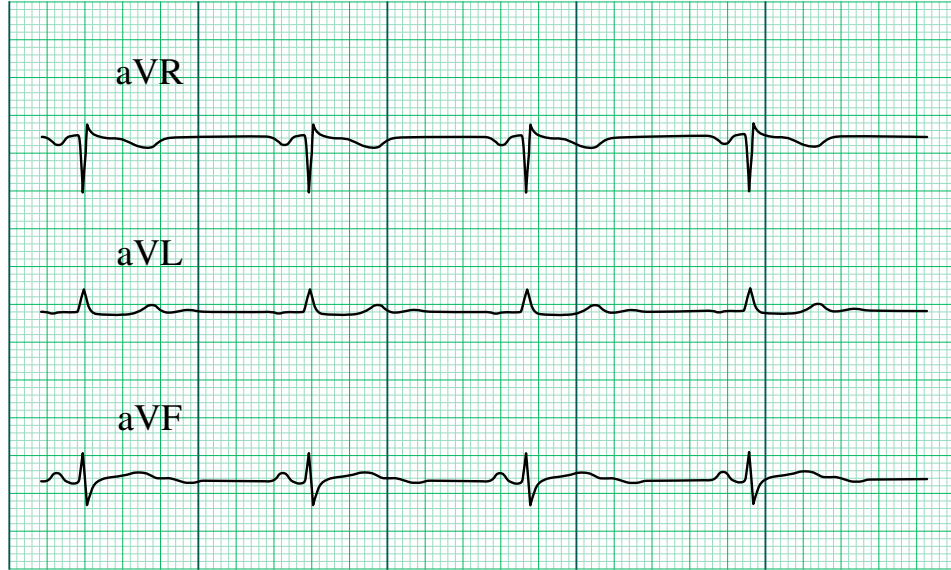
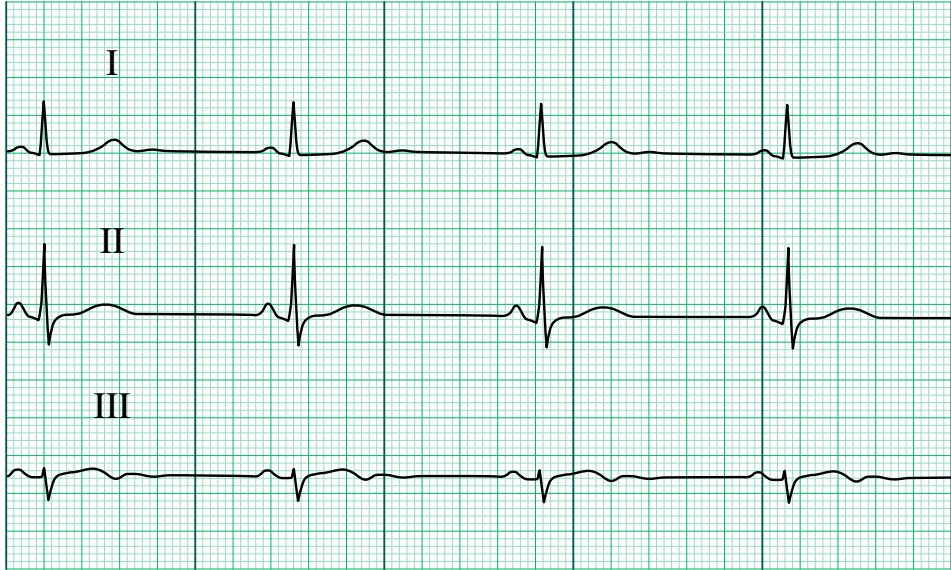




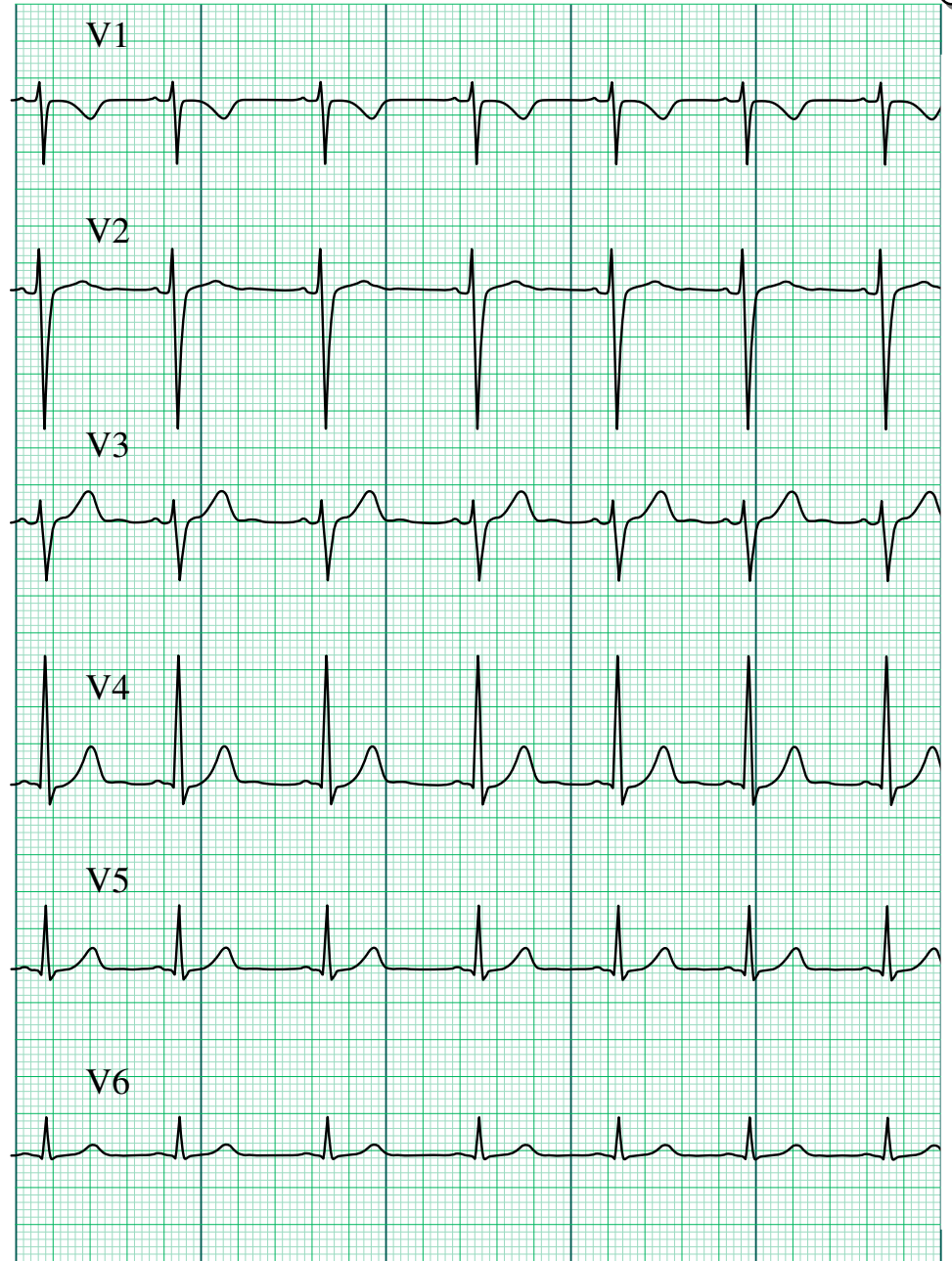
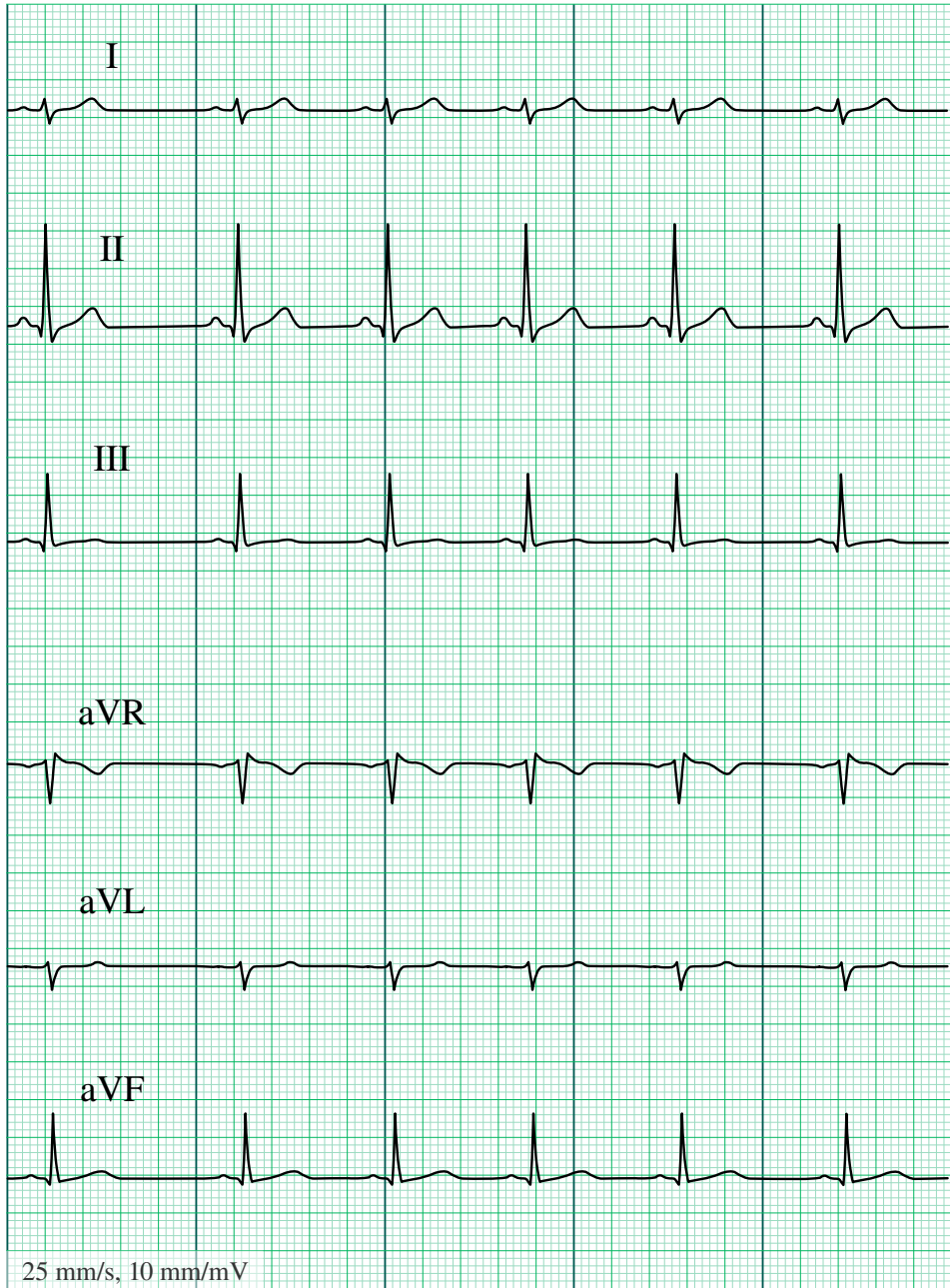


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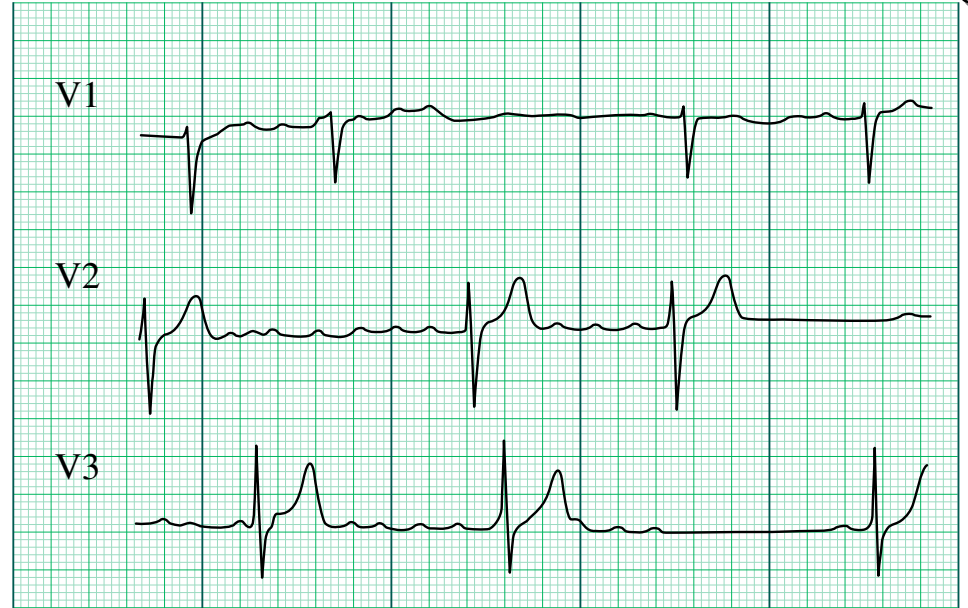
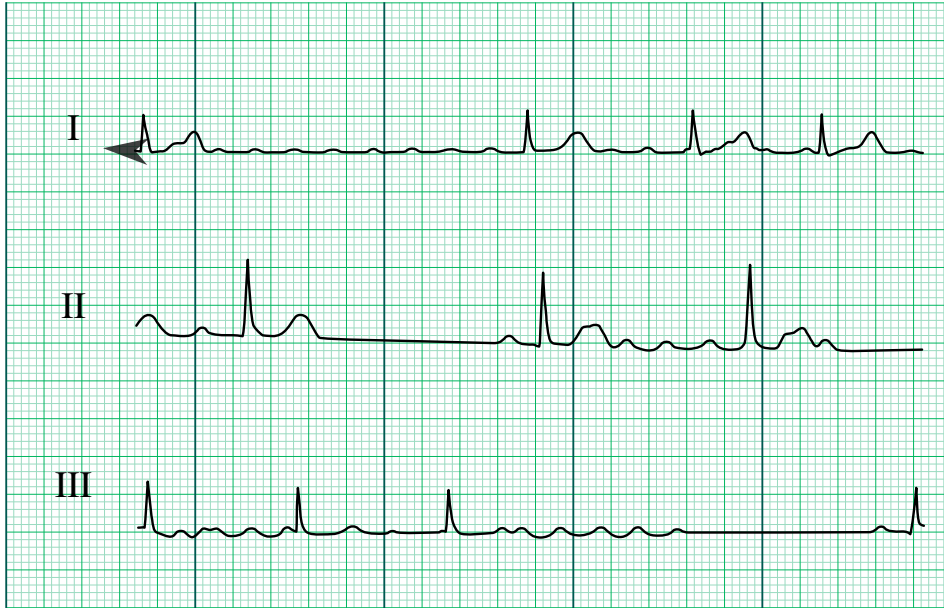




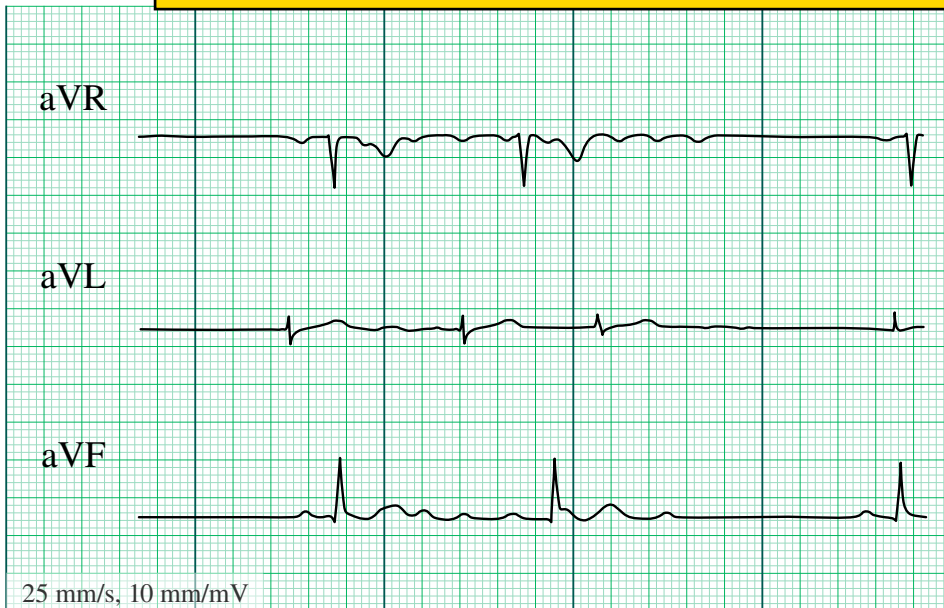
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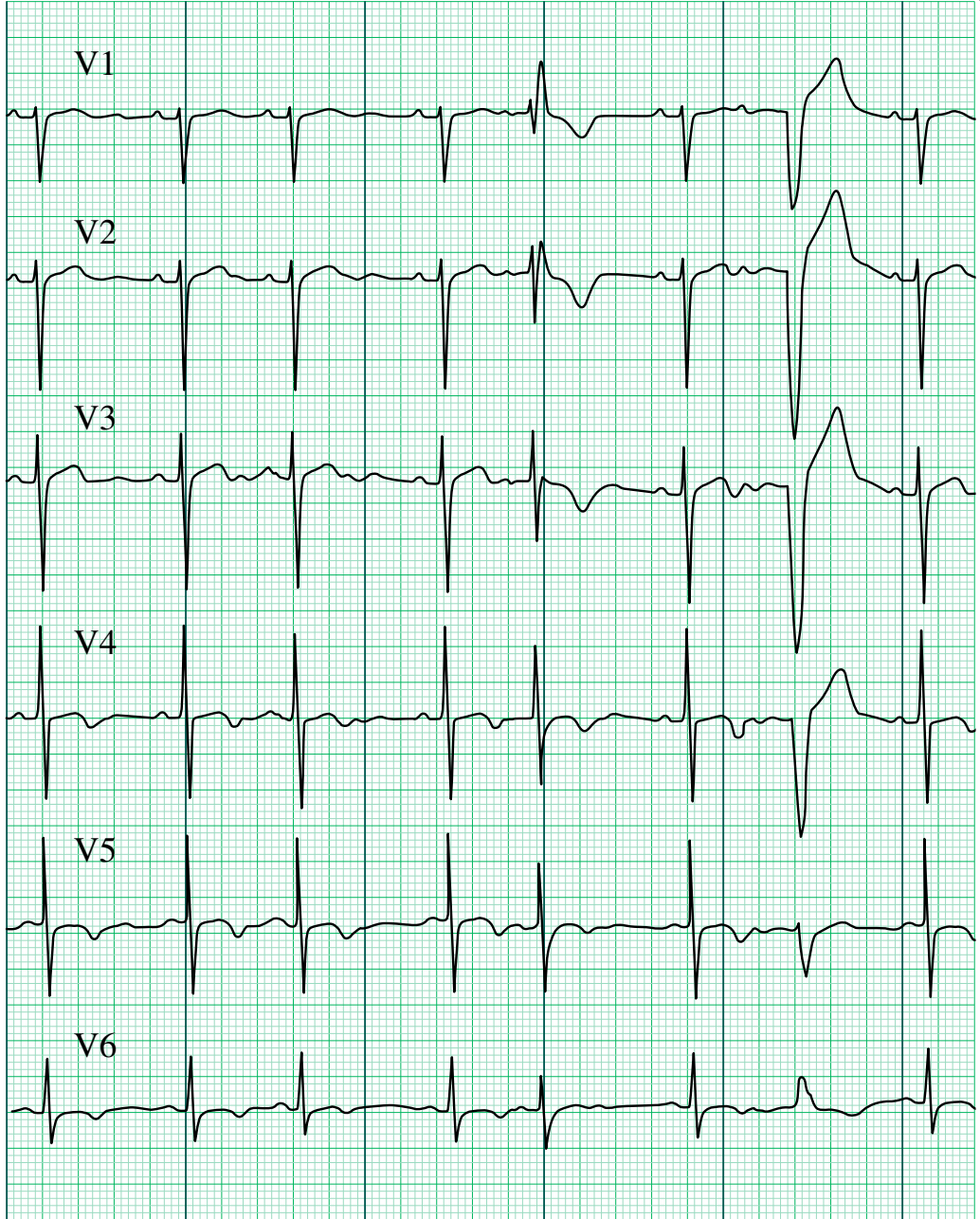
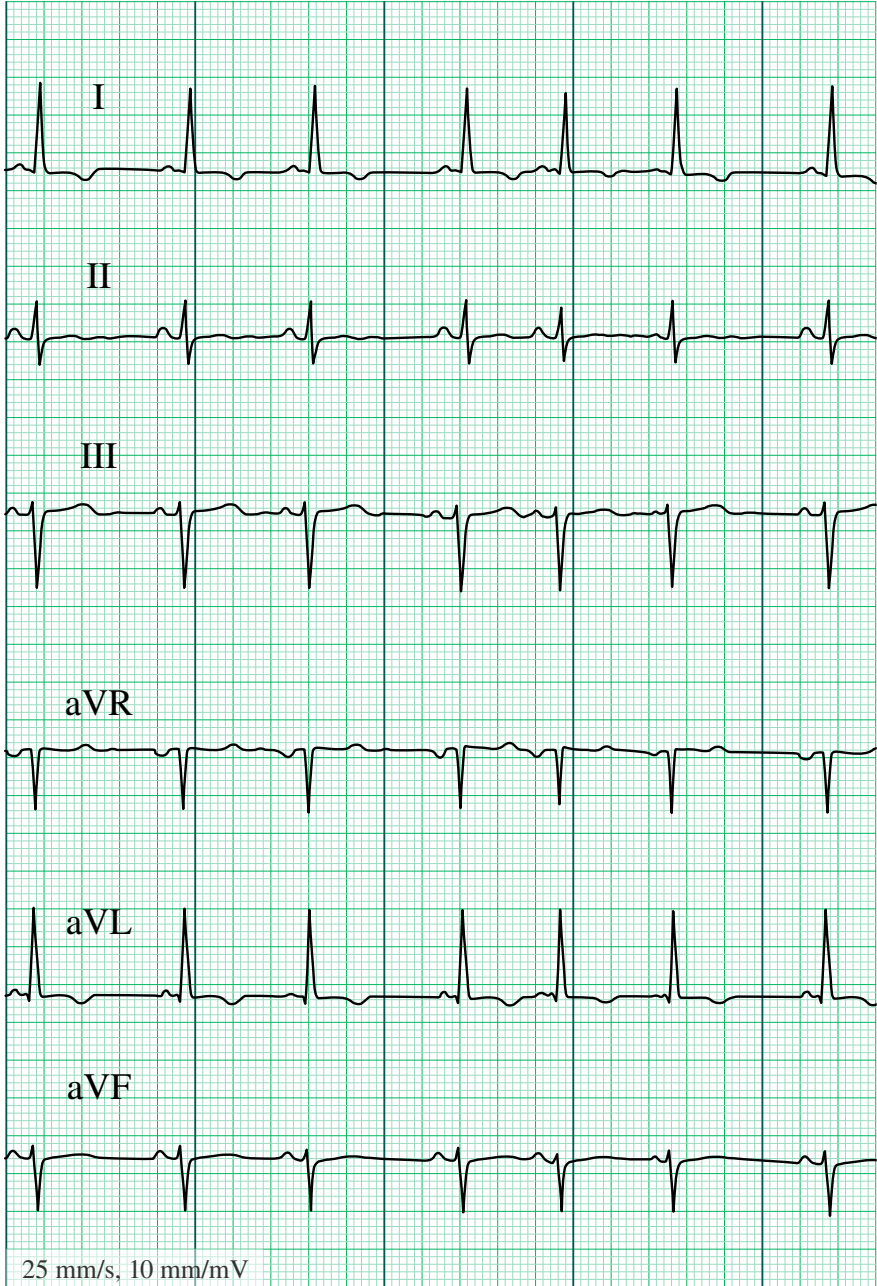


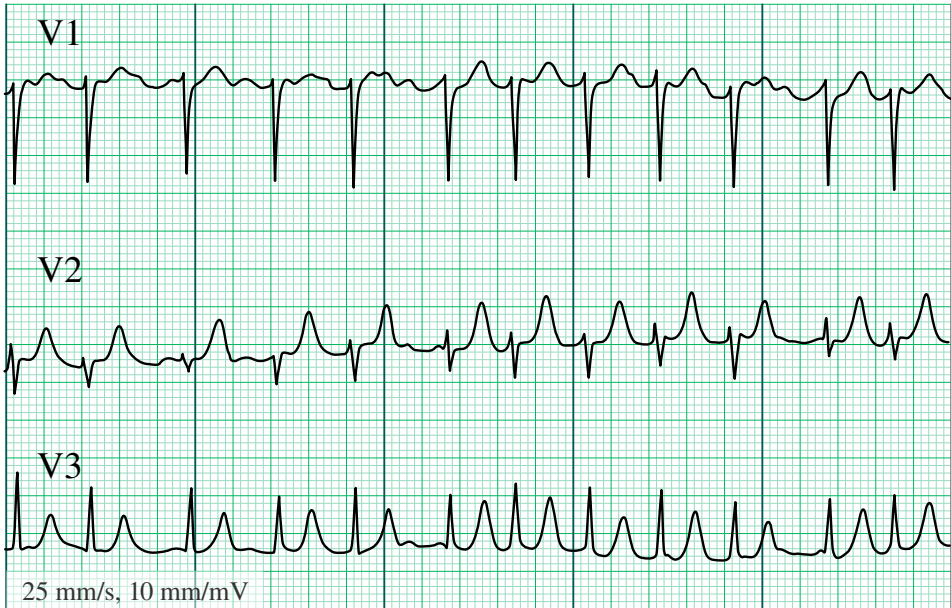
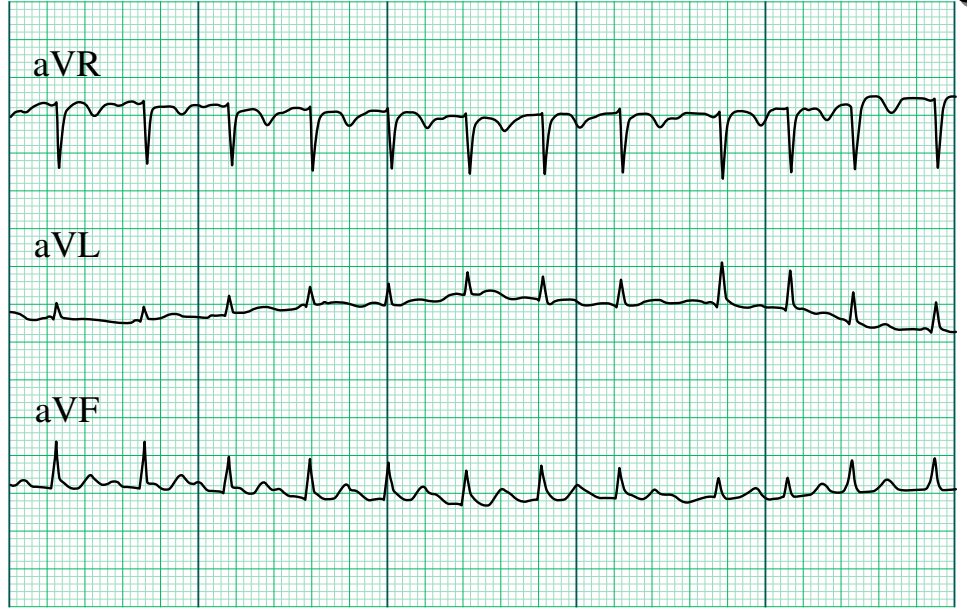
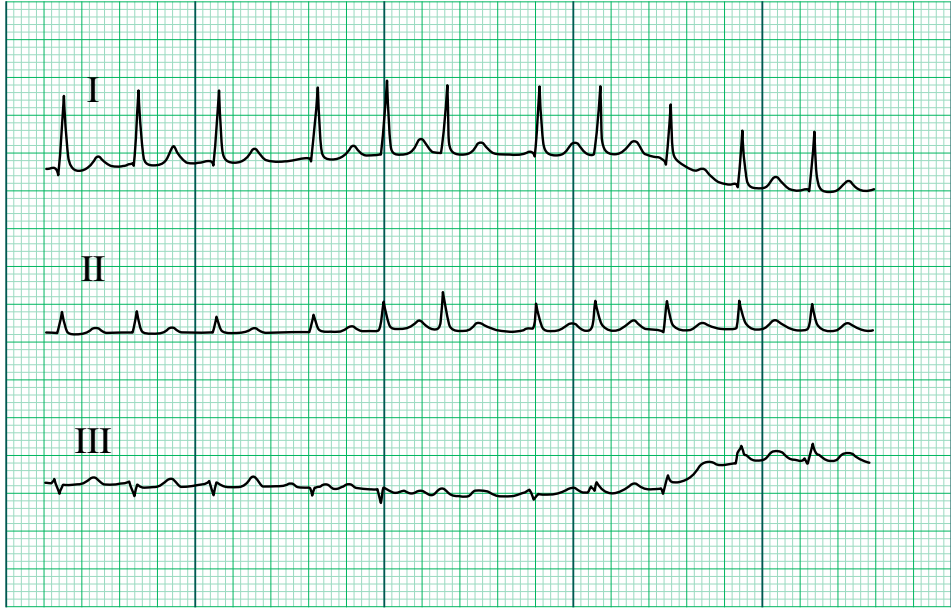




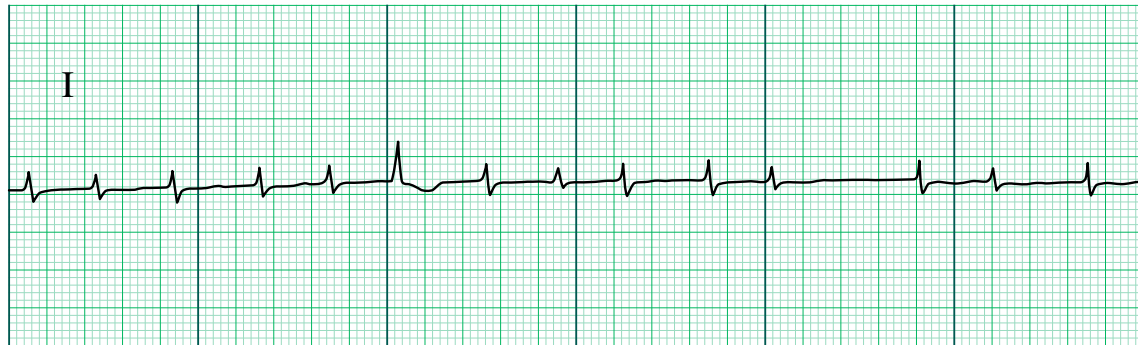
The labels aVR-aVL-aVF and V1-V2-V3 are mixed up in the paper version of the workbook.

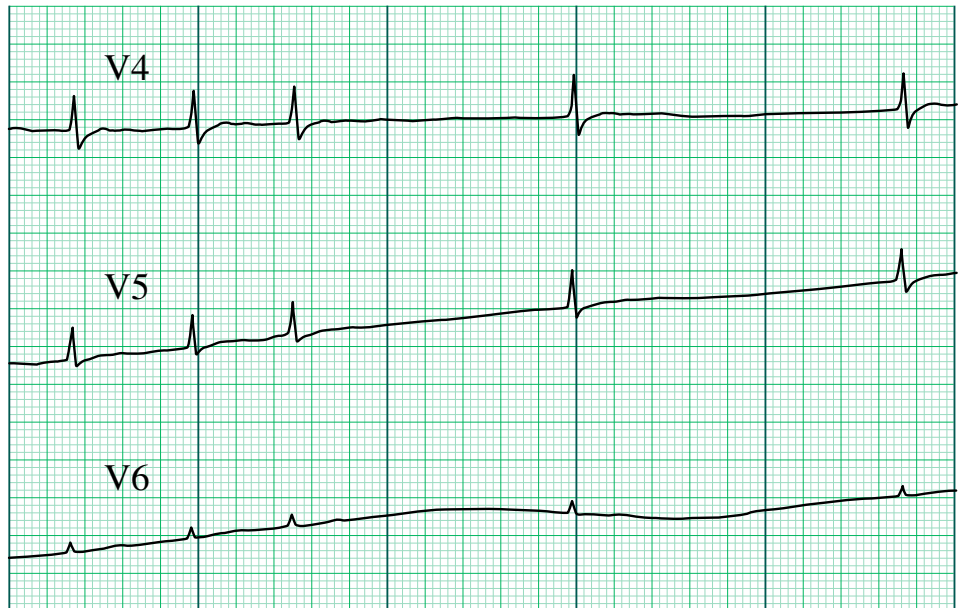
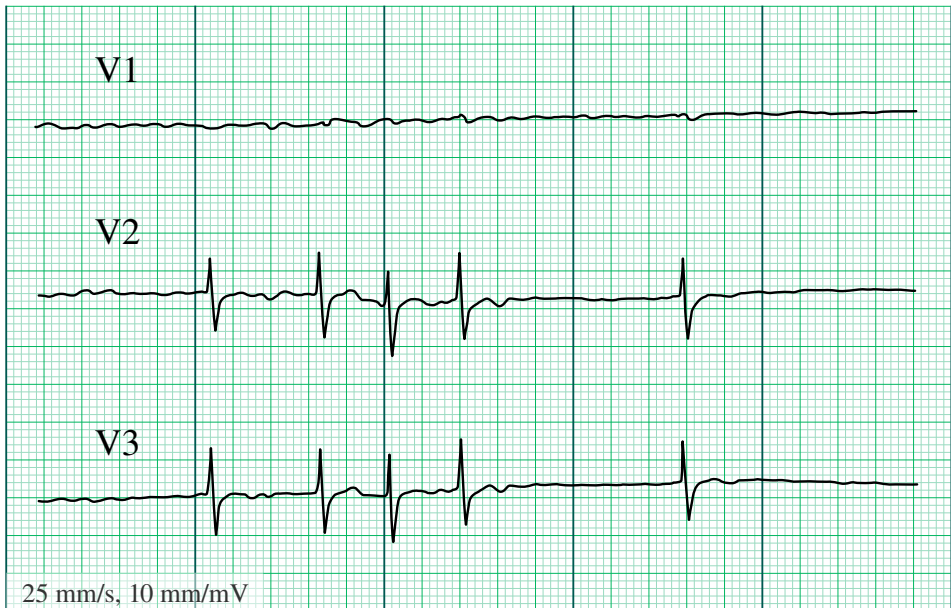
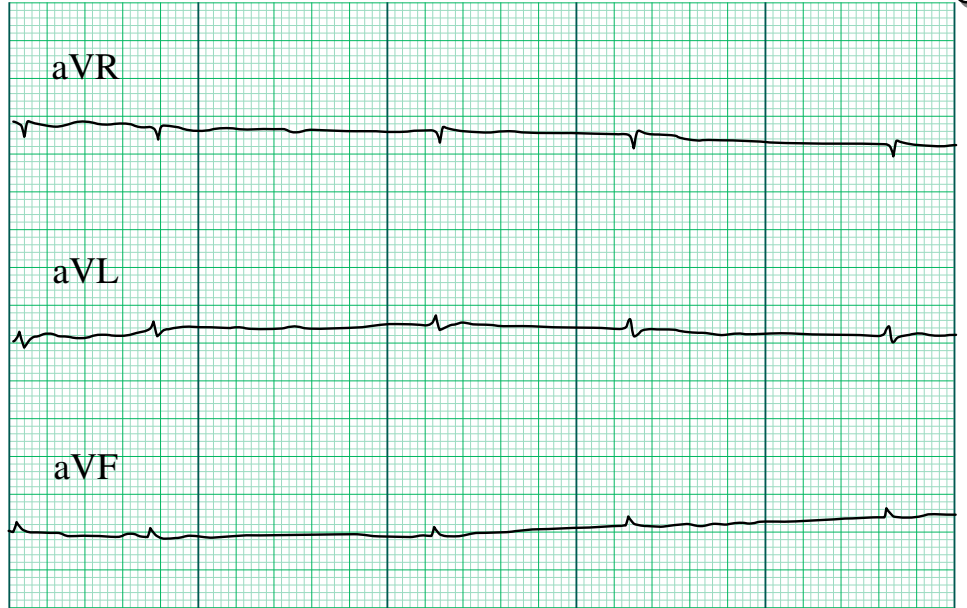
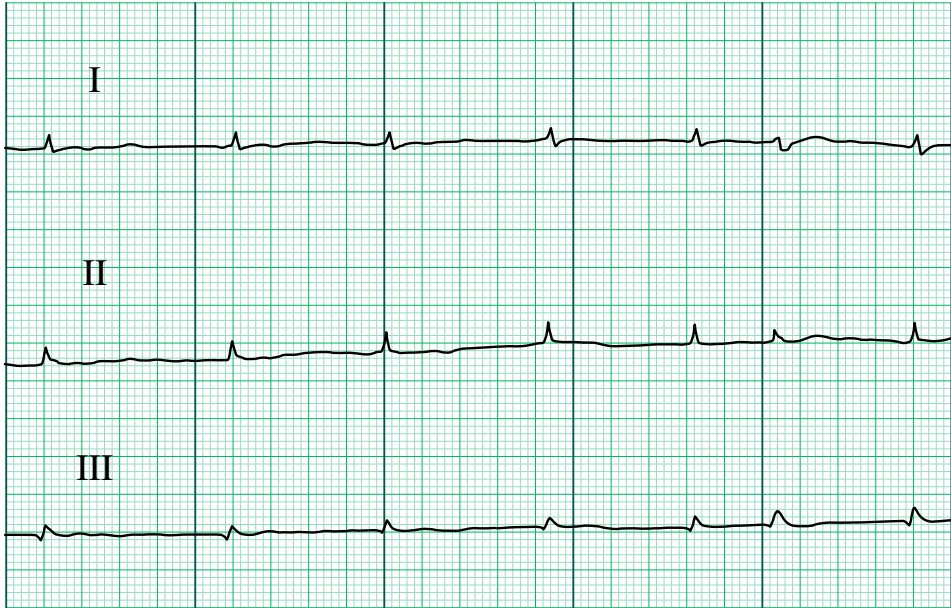




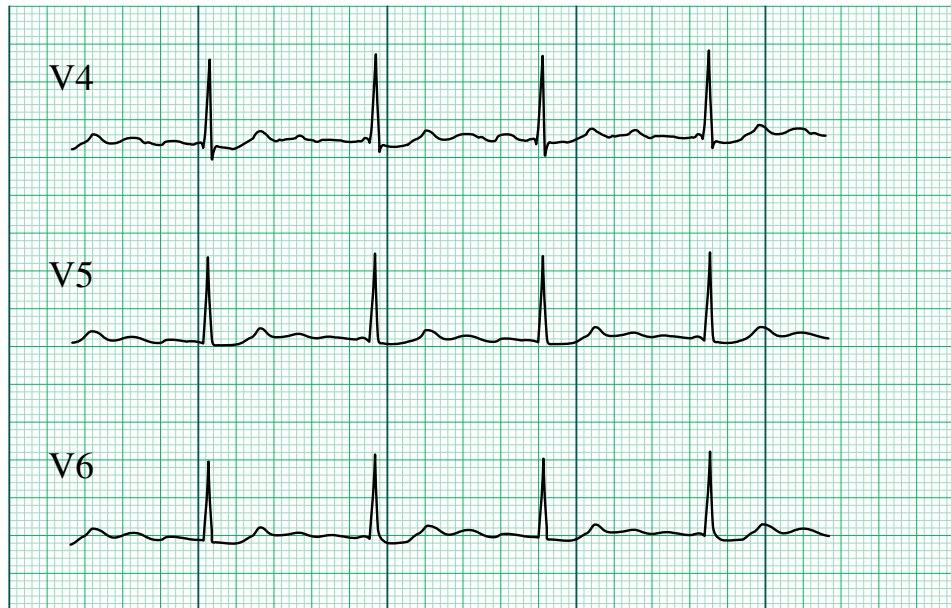
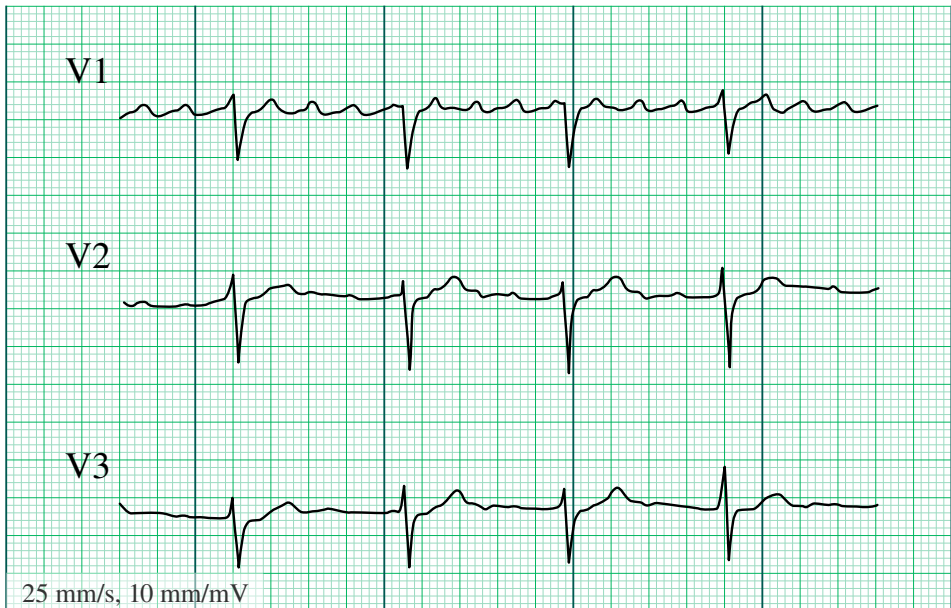
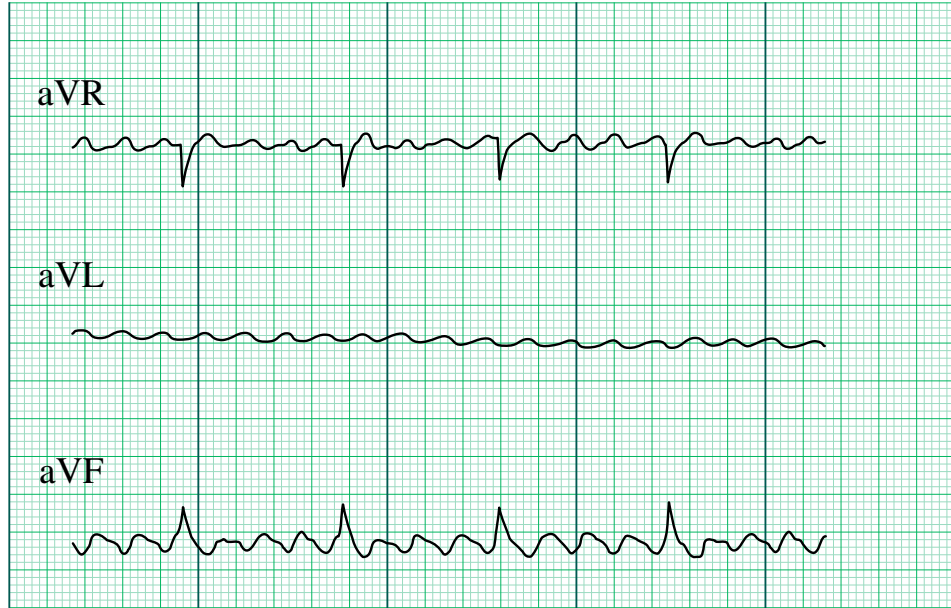
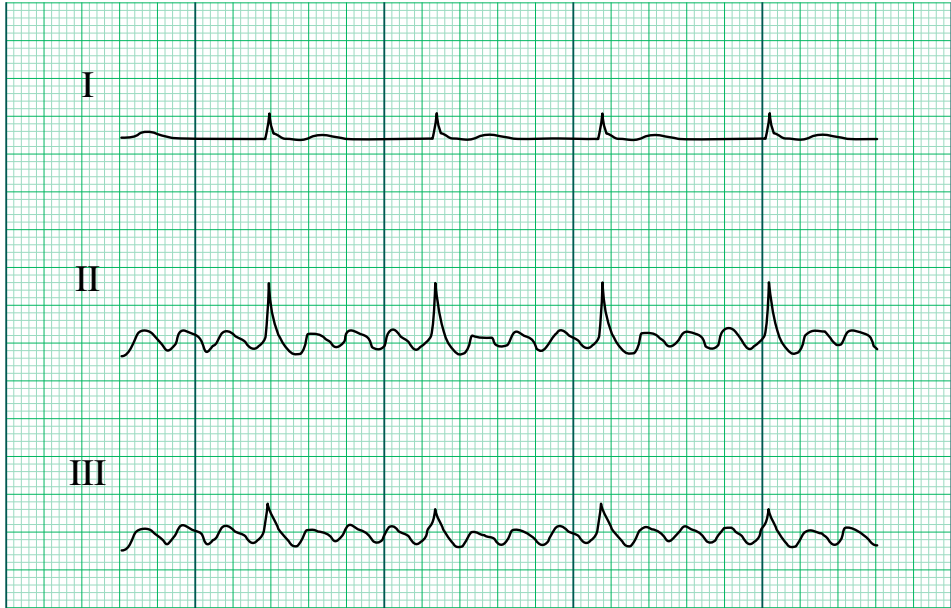


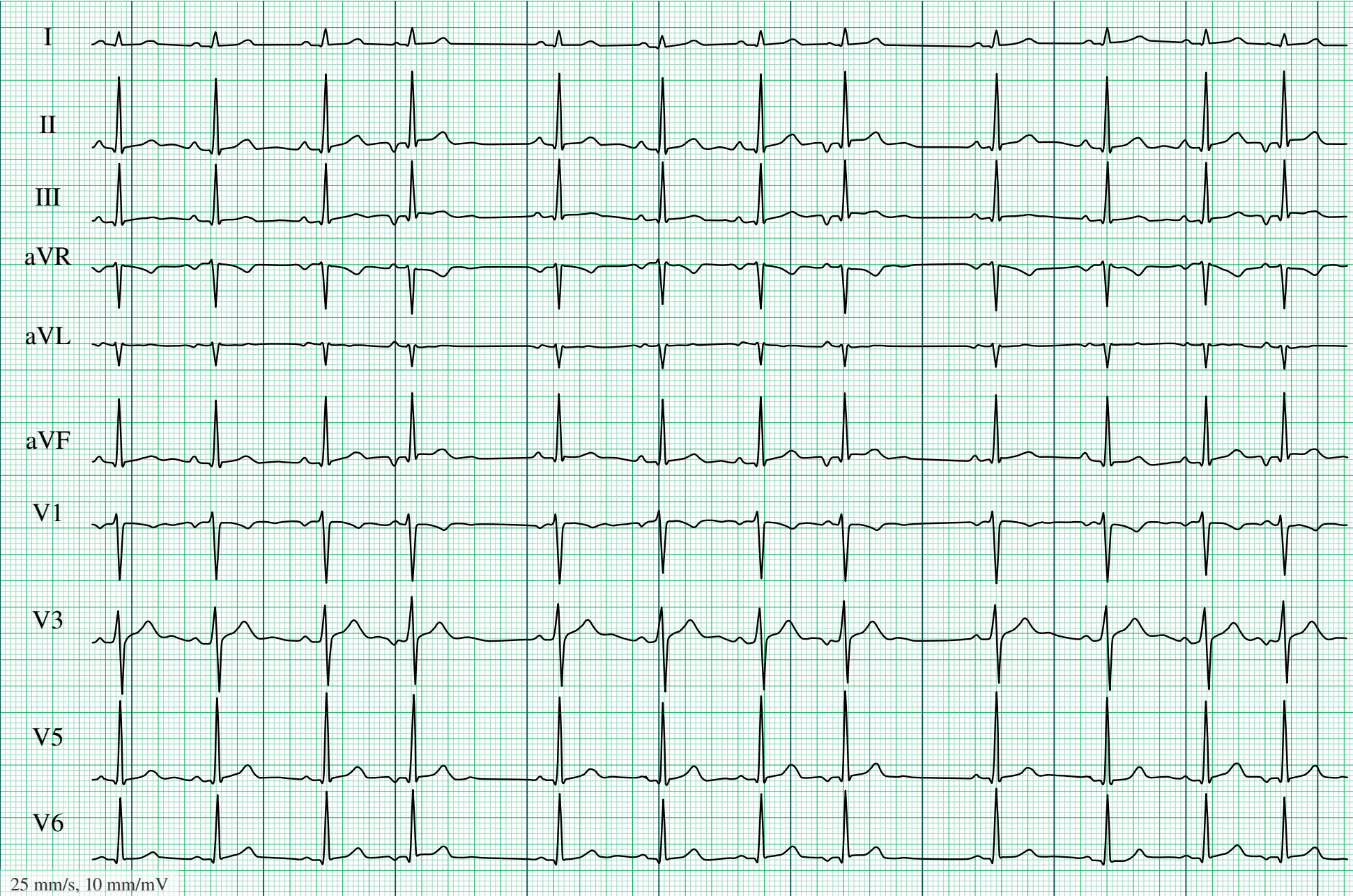
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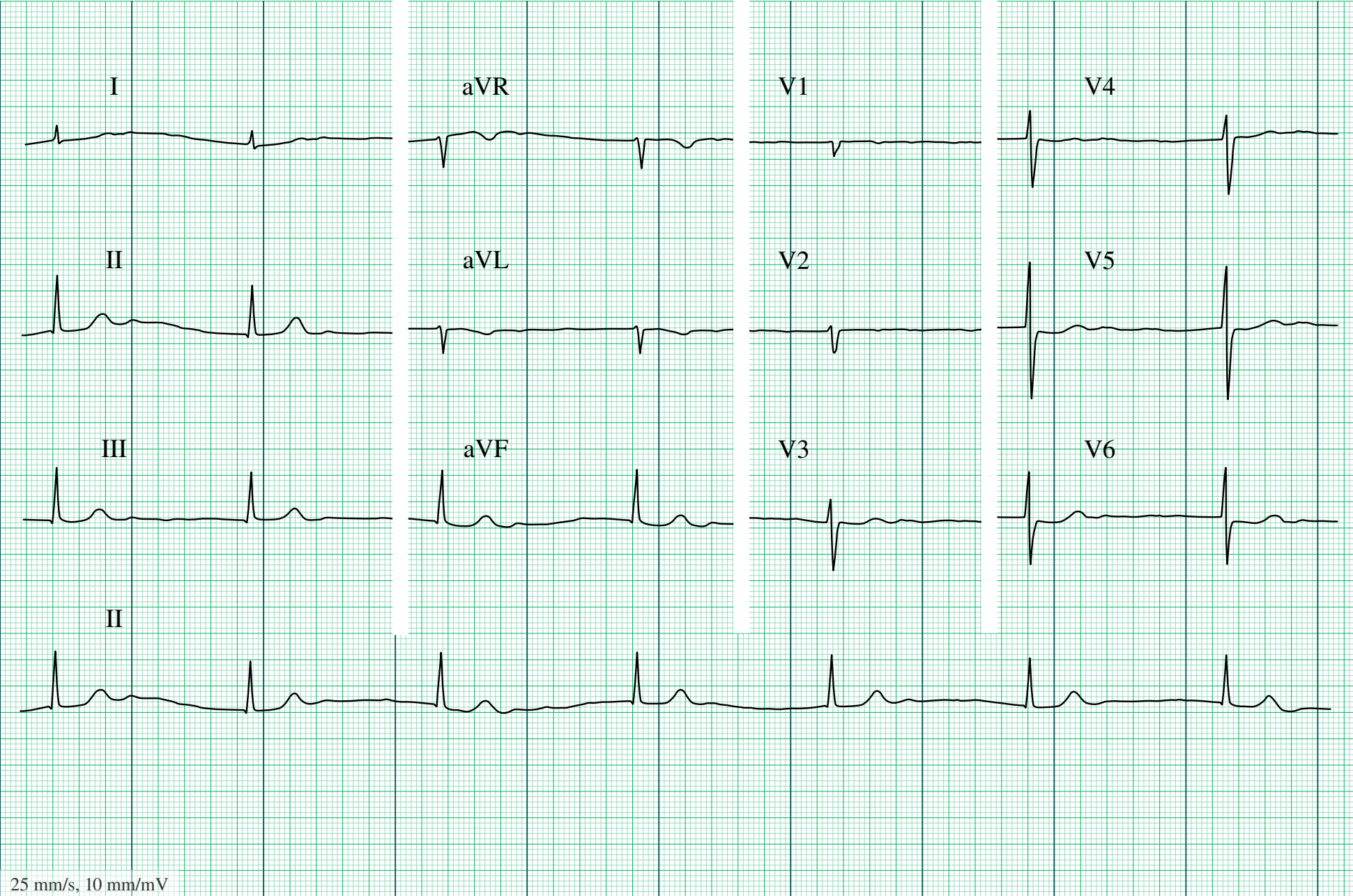




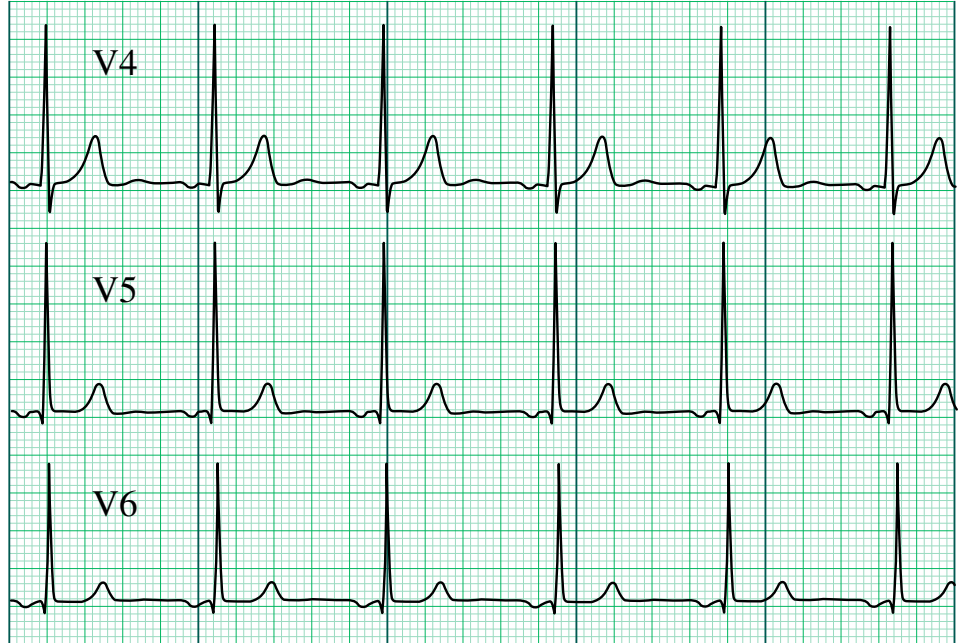
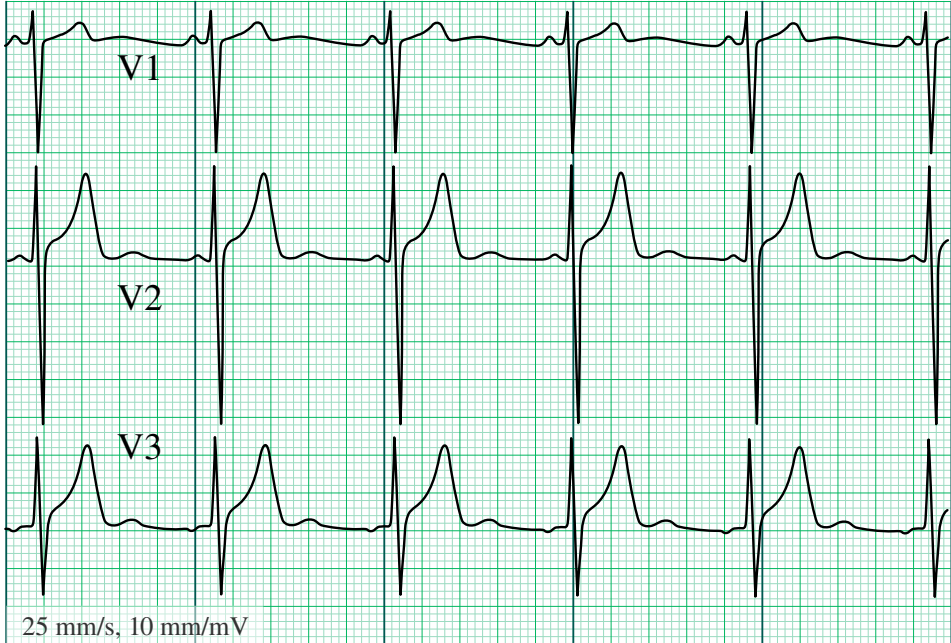
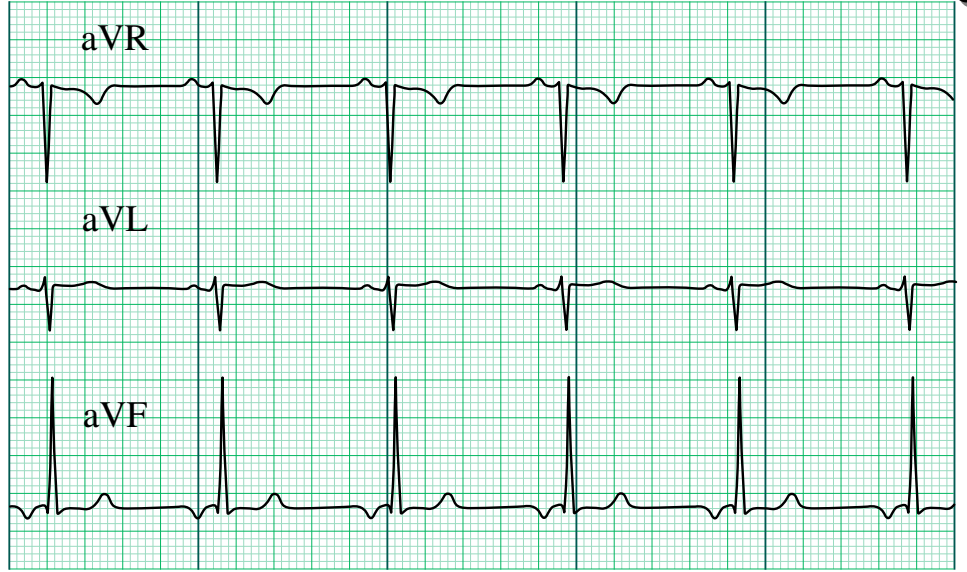
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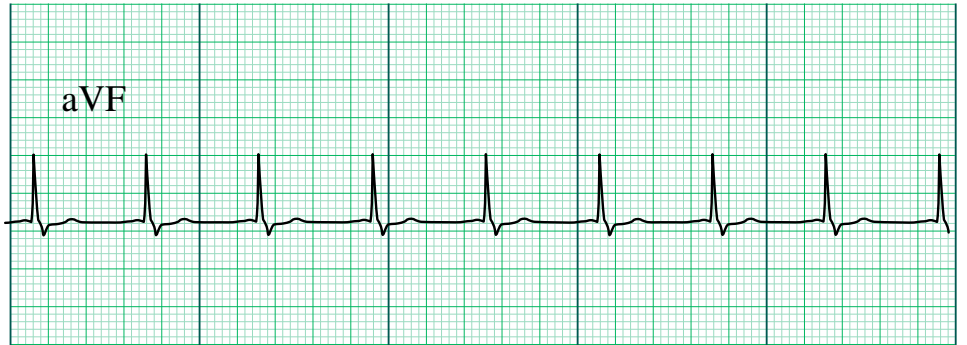
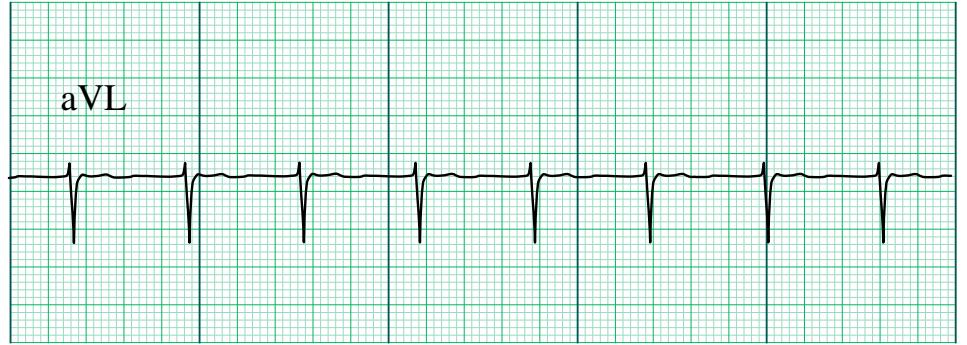
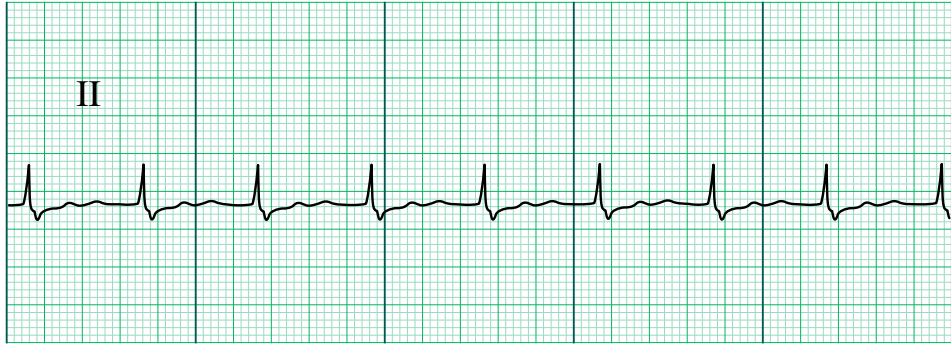
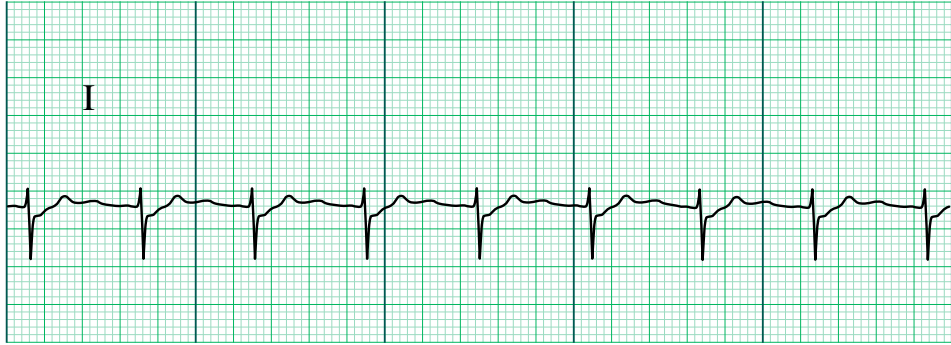


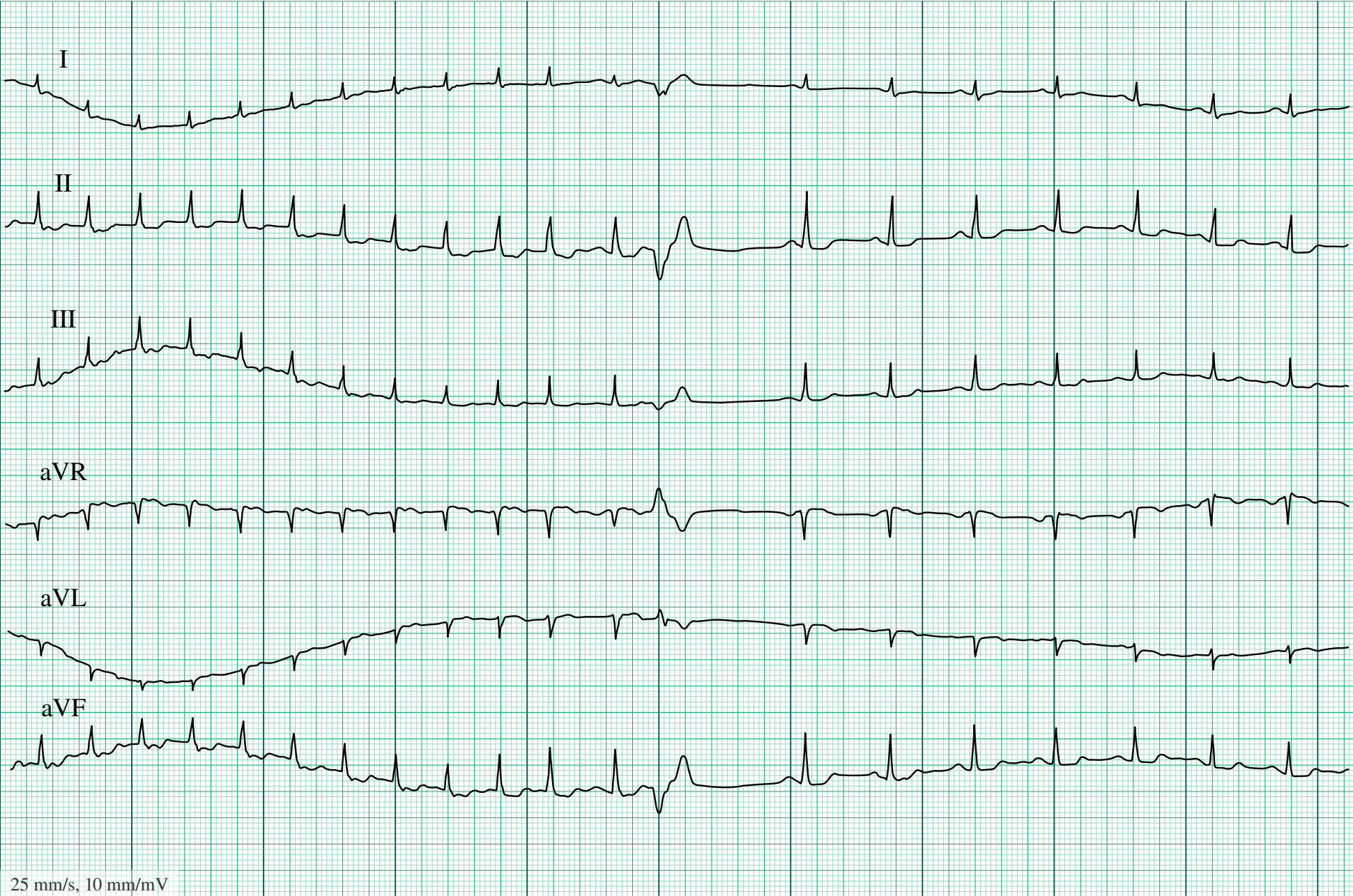


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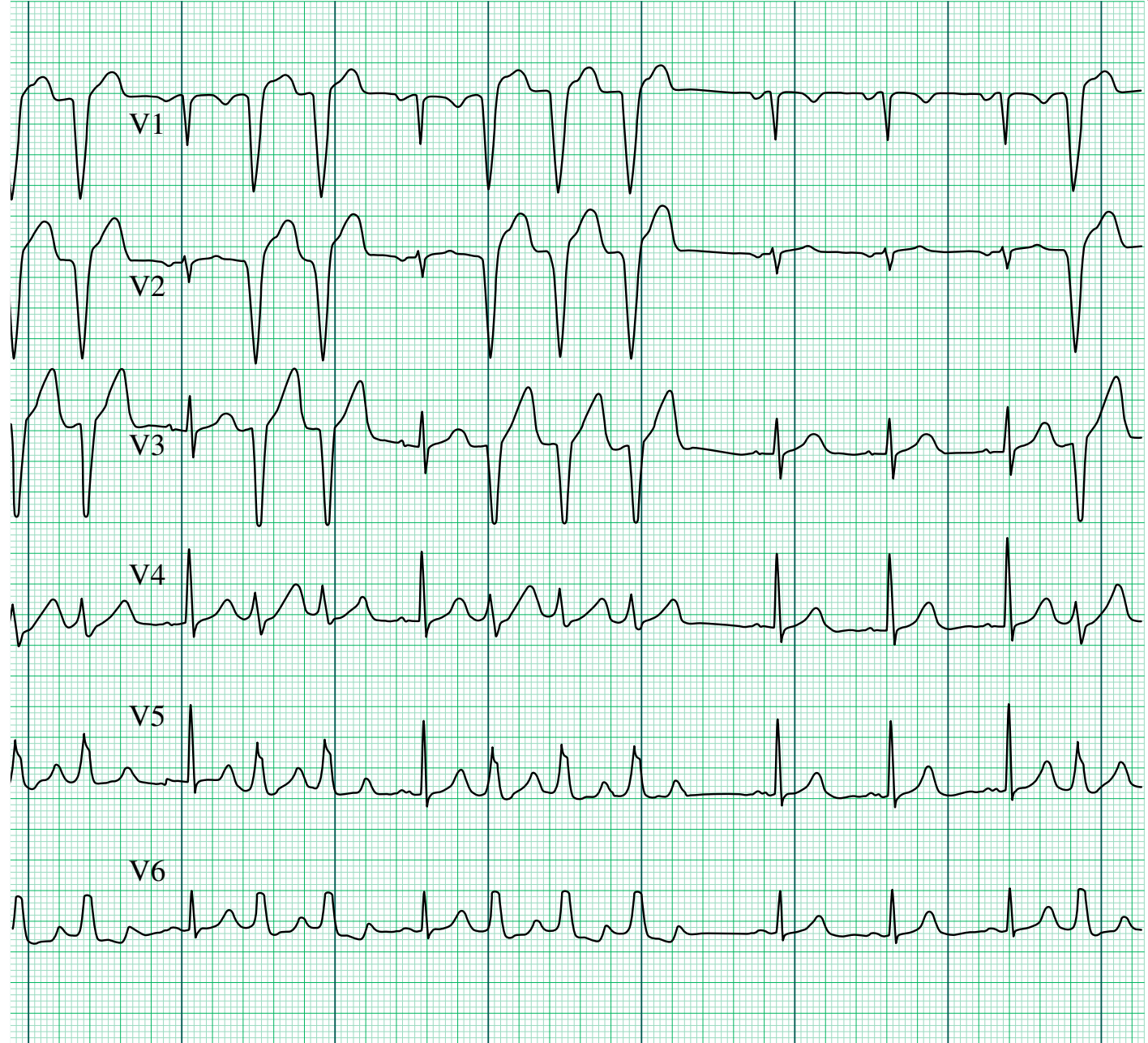
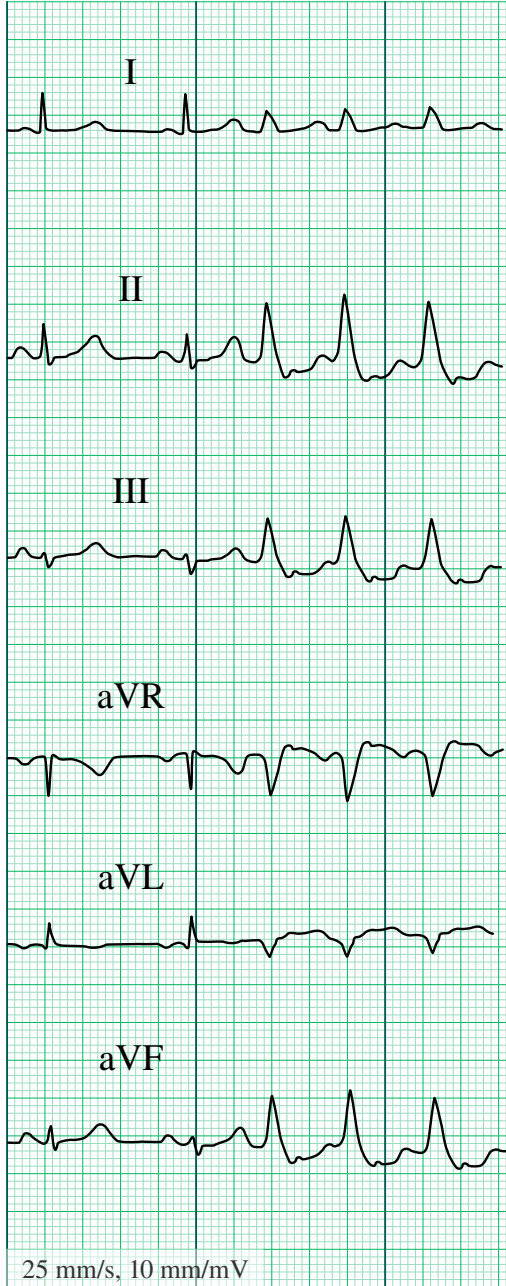


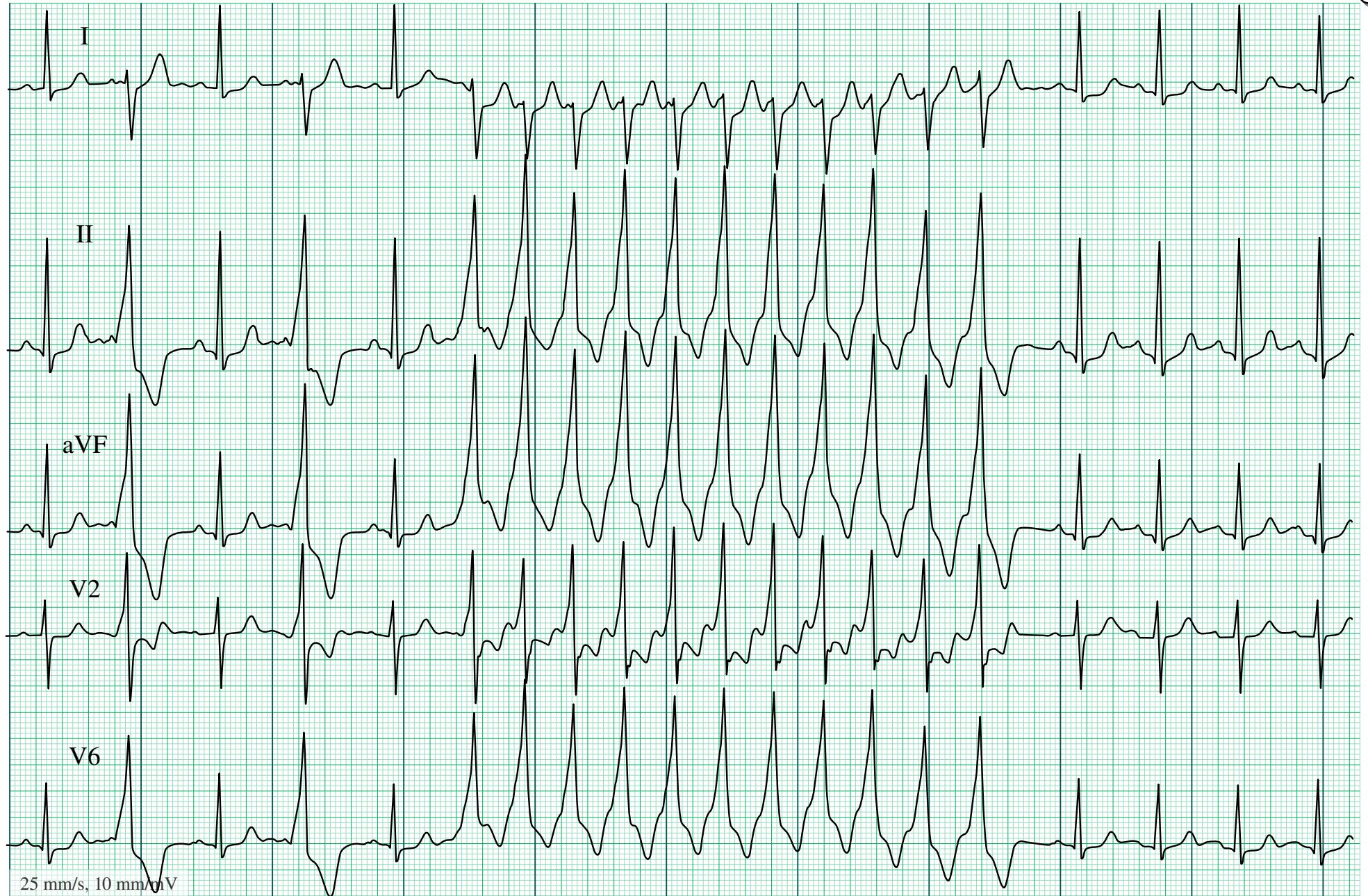
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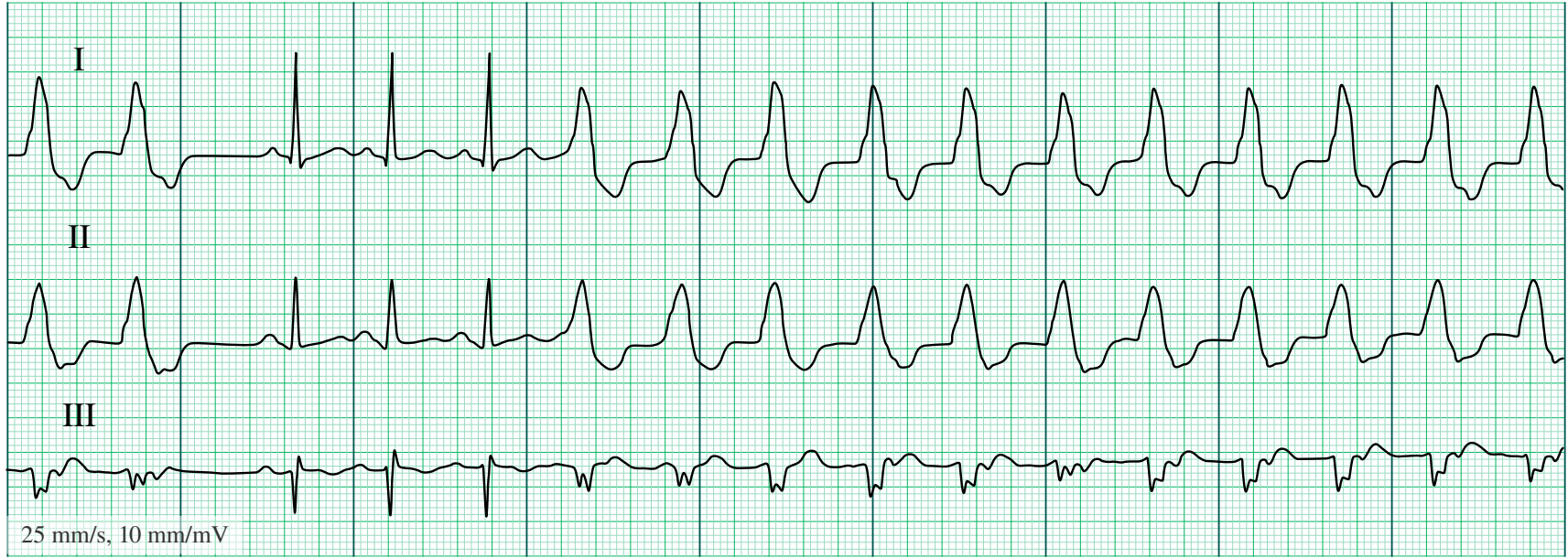


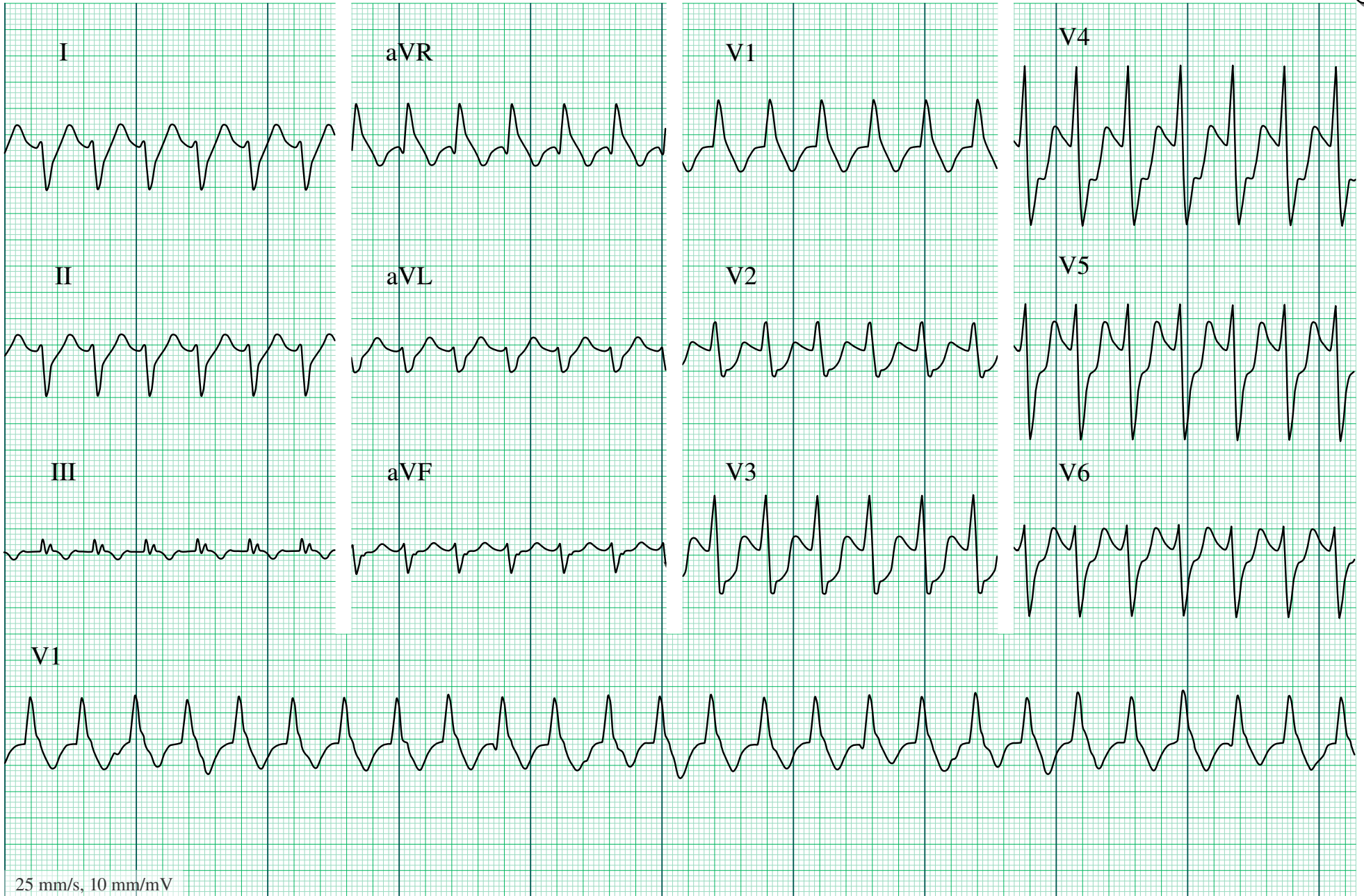


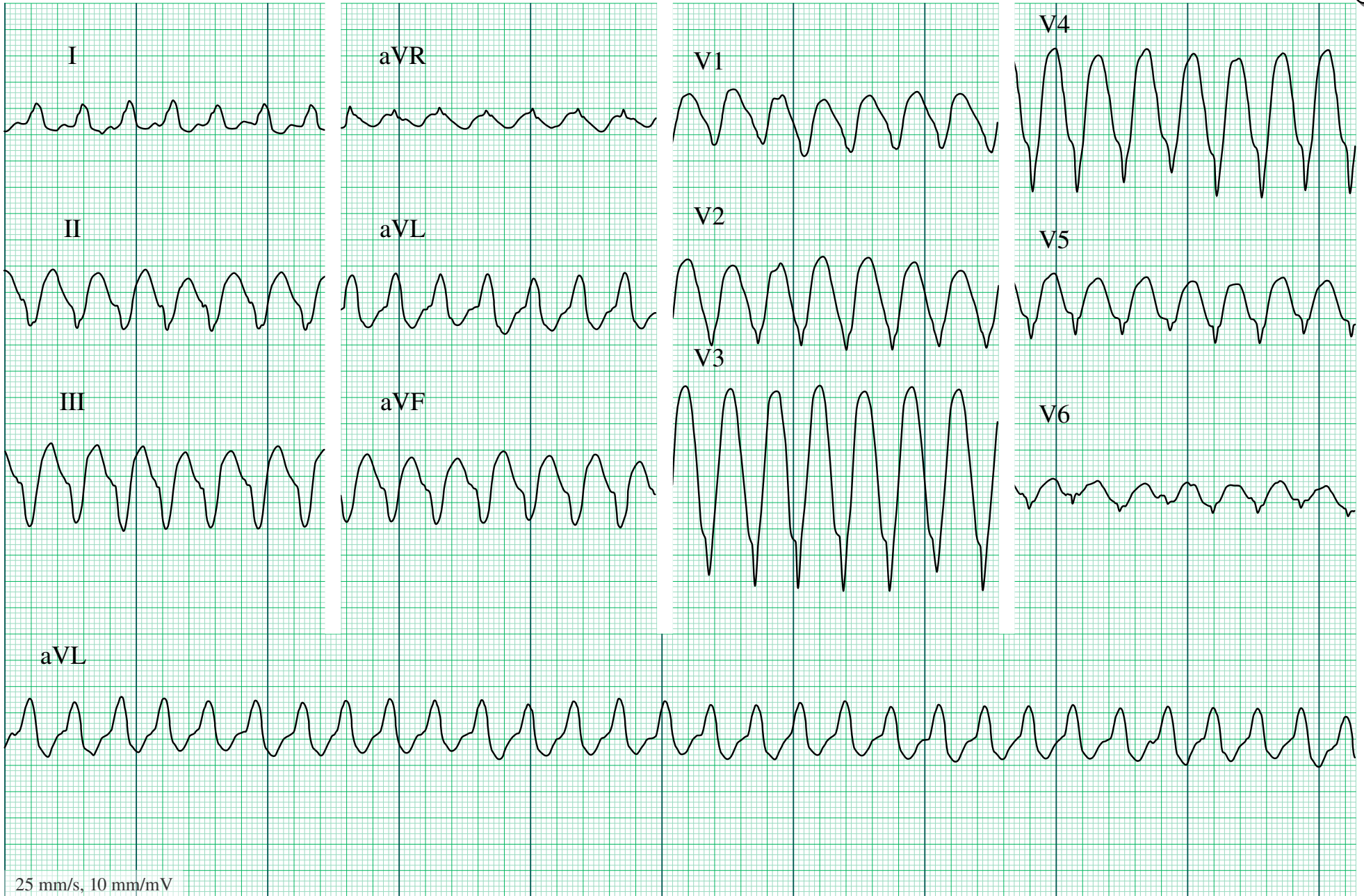




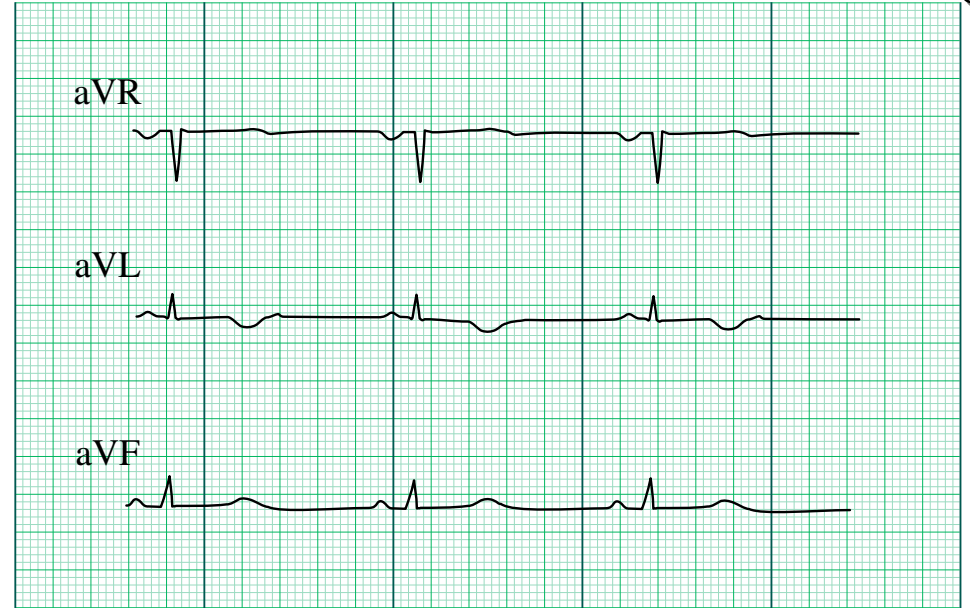
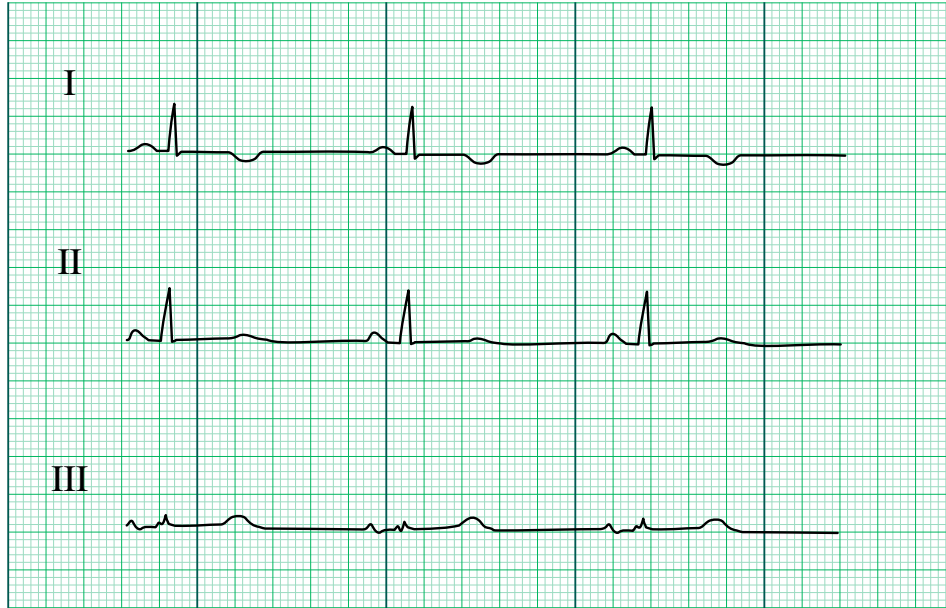




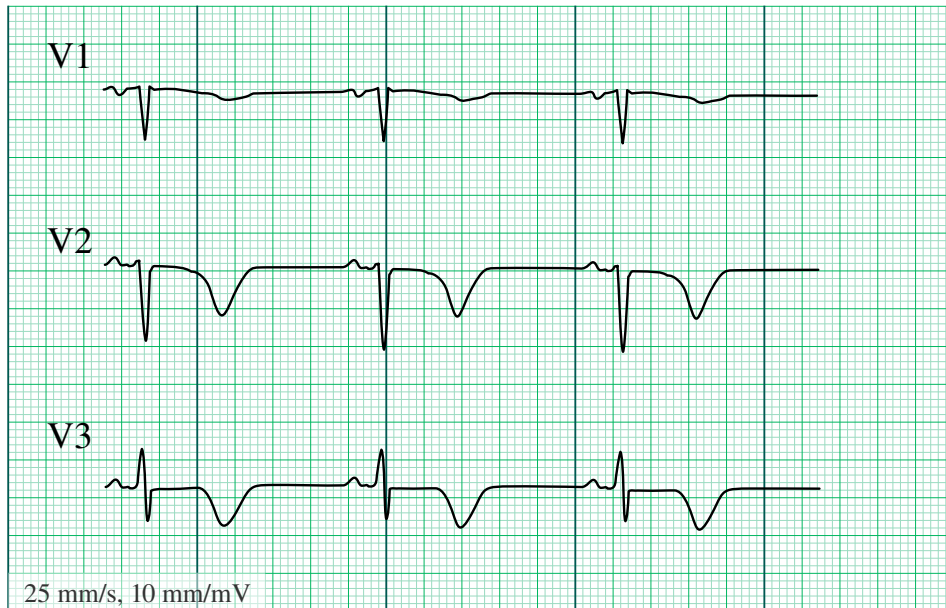




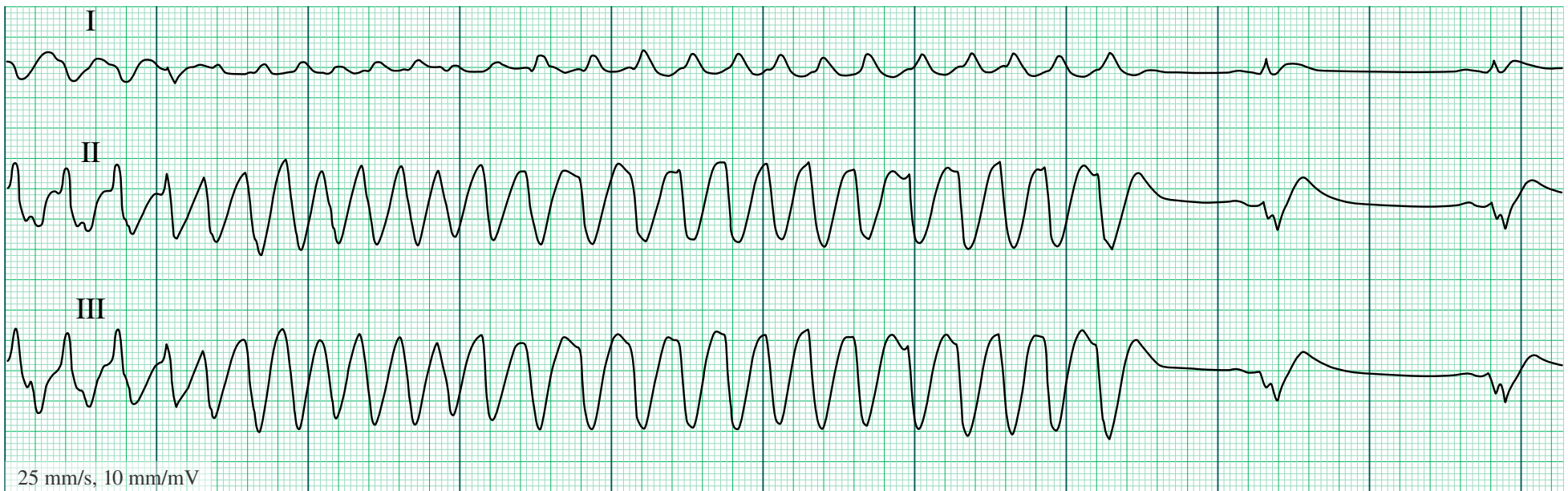
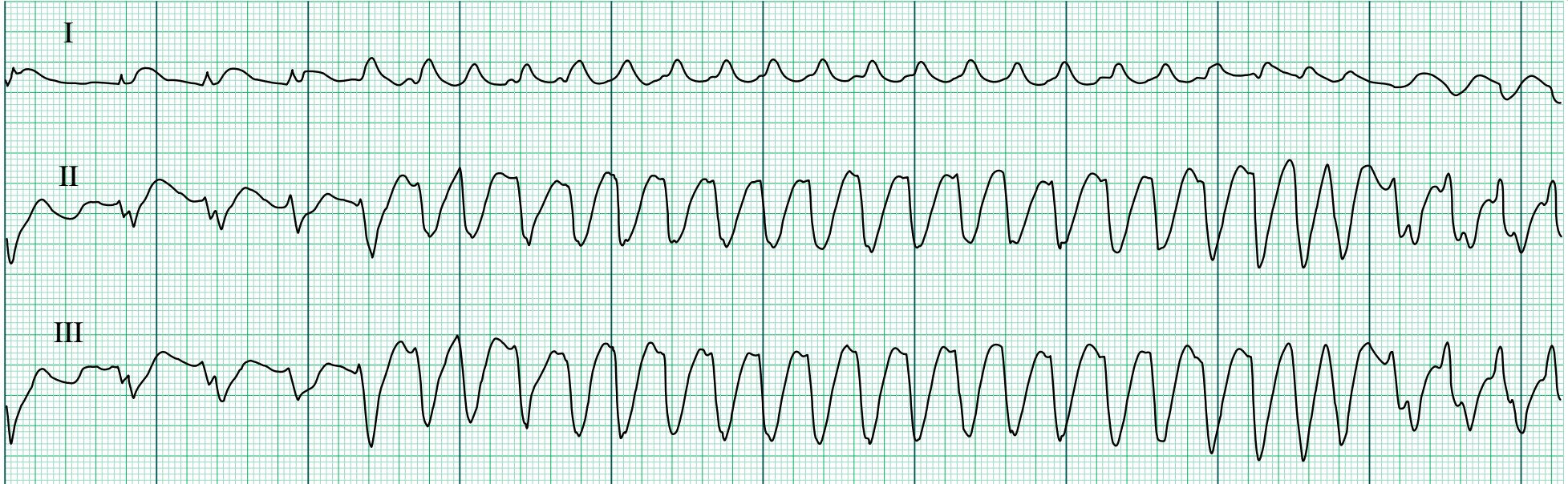
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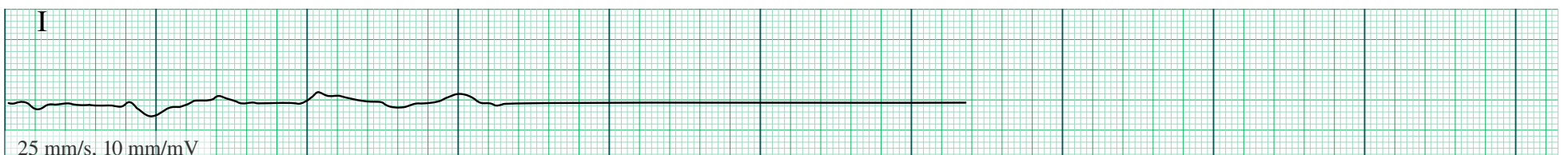
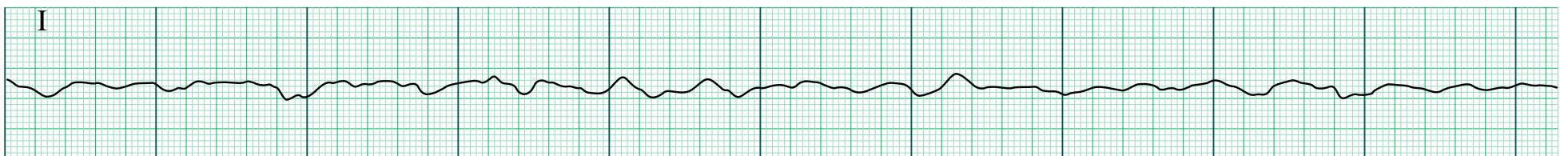
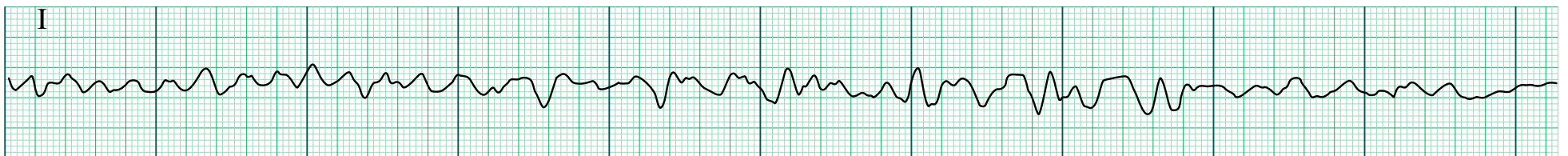
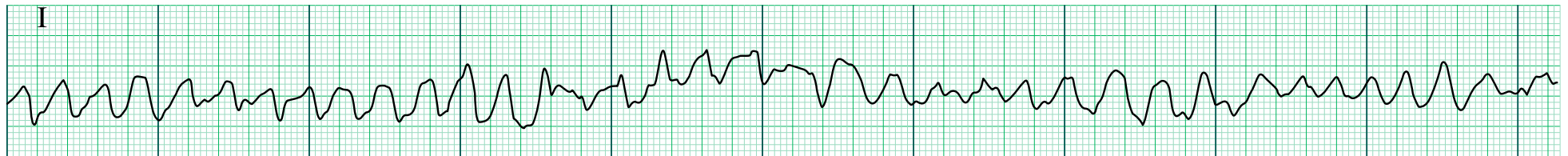
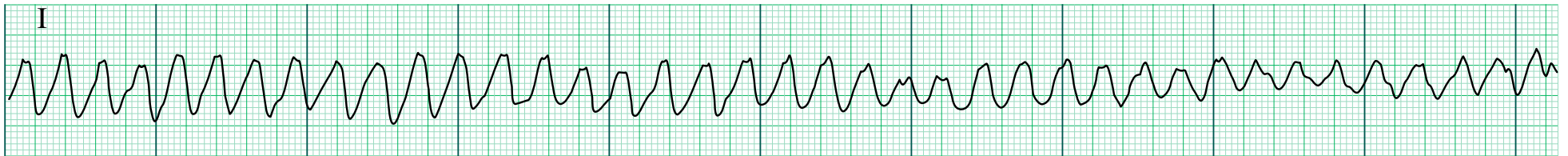
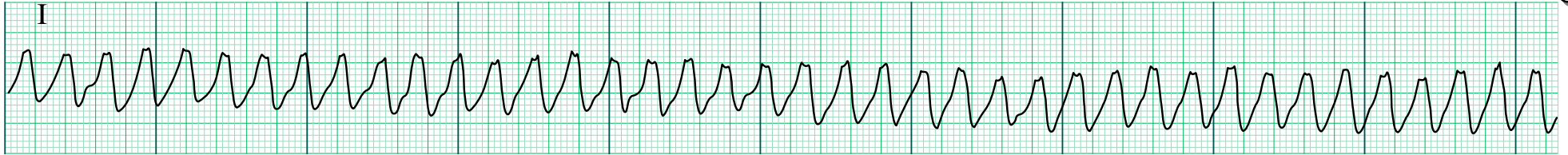


The lead labels are missing in the paper version of the workbook.



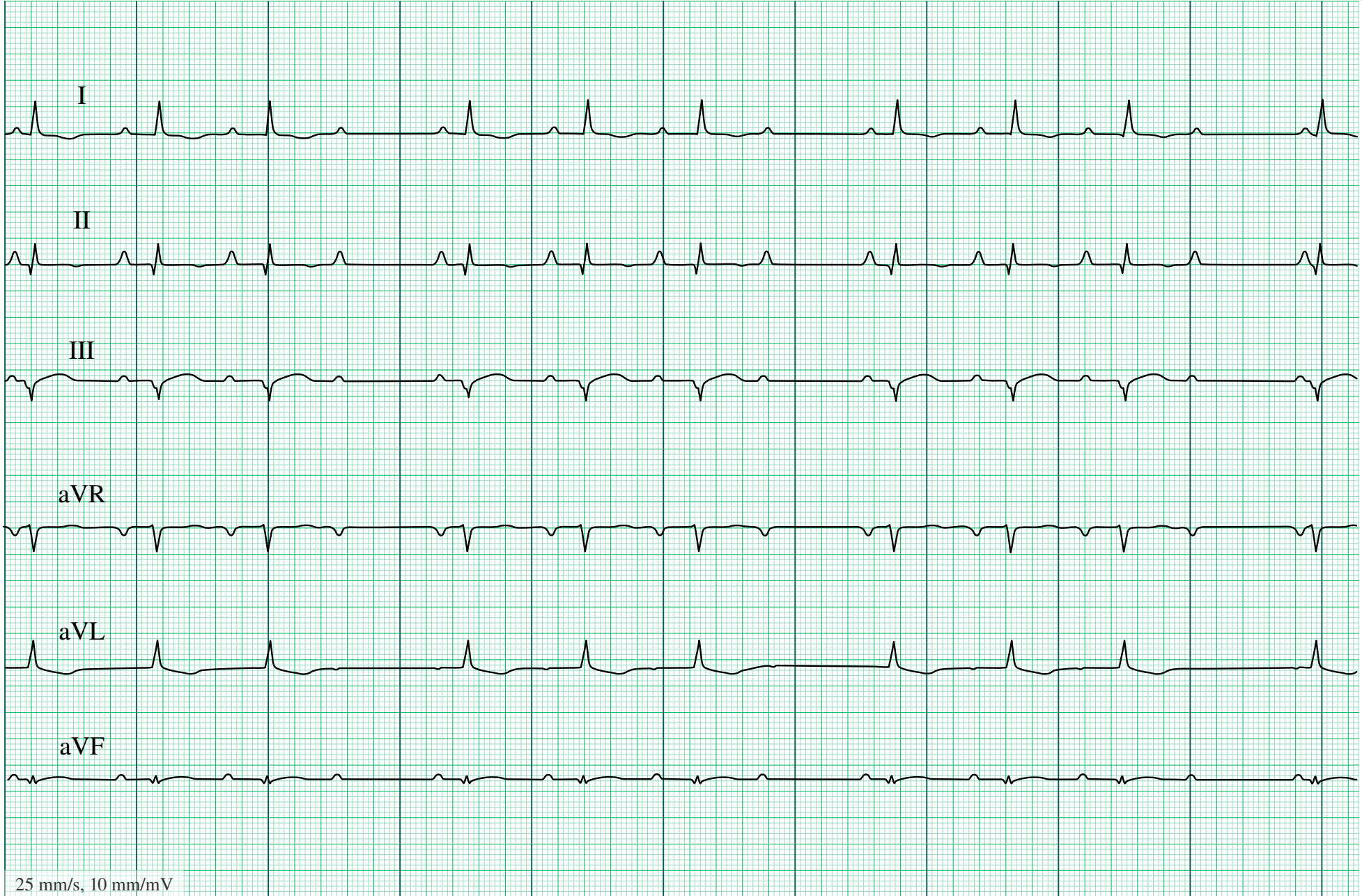






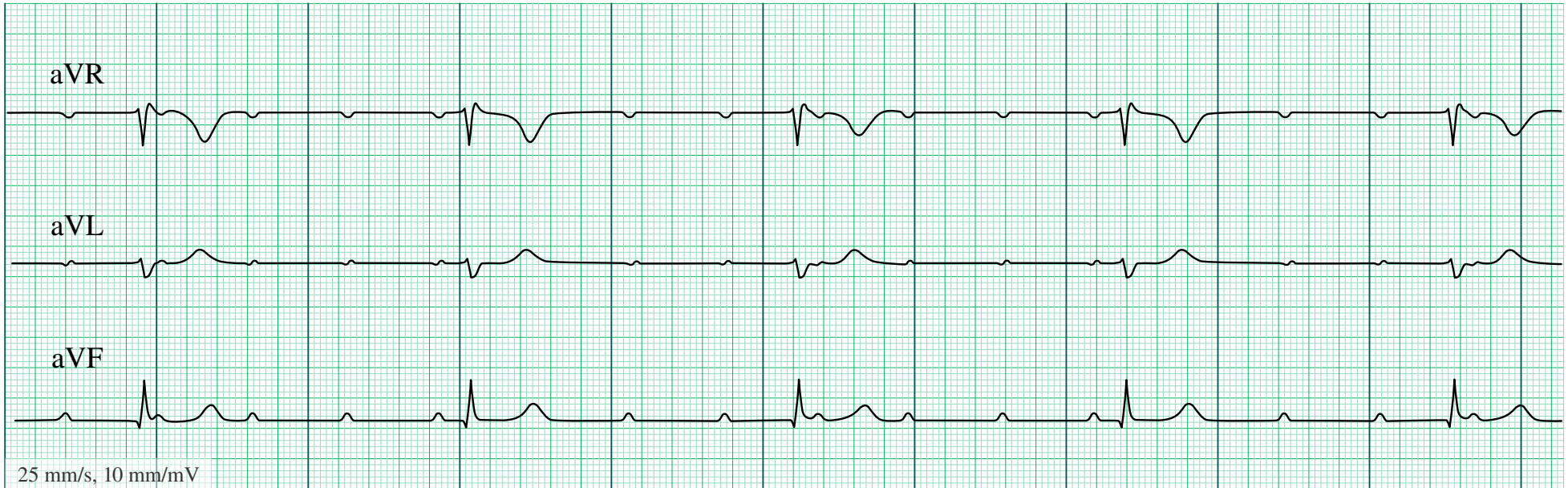
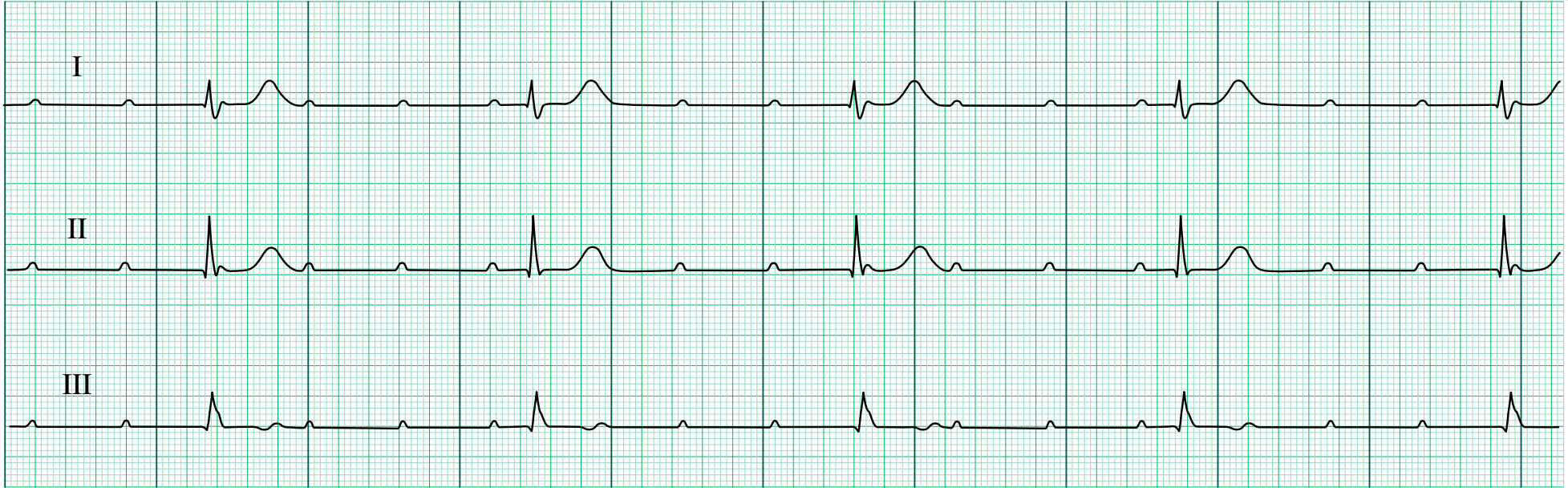




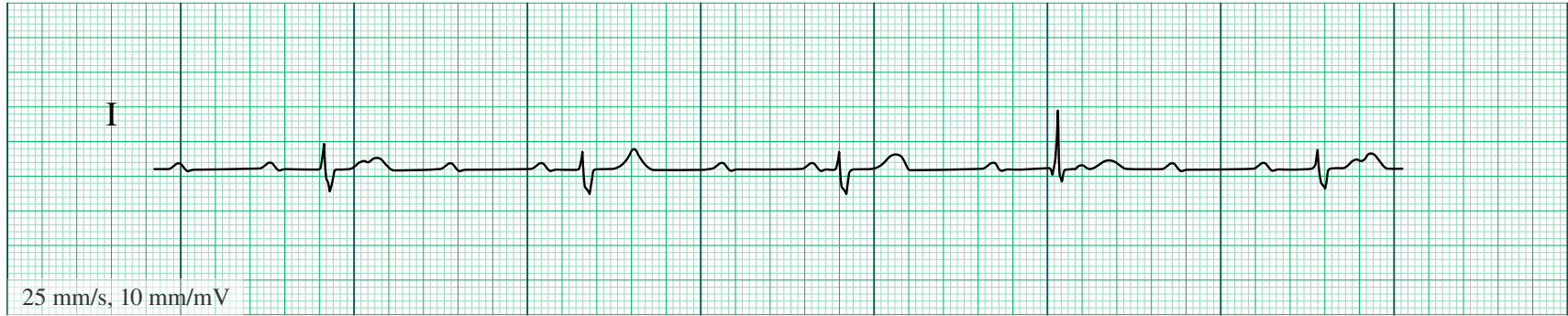




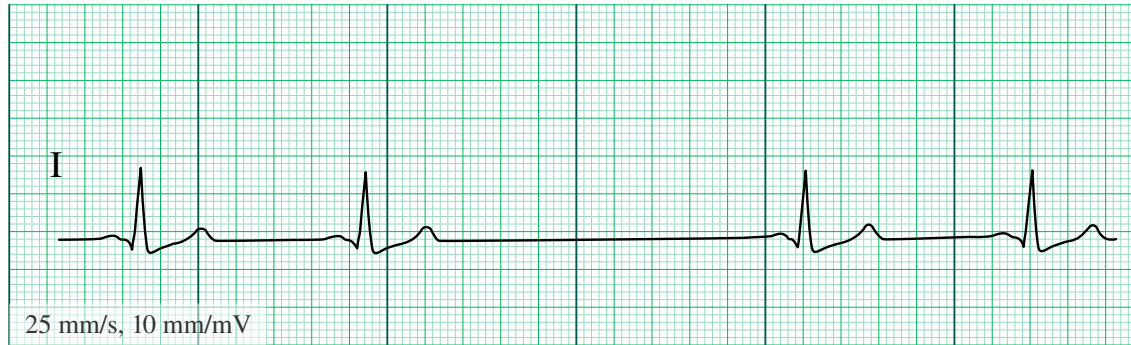


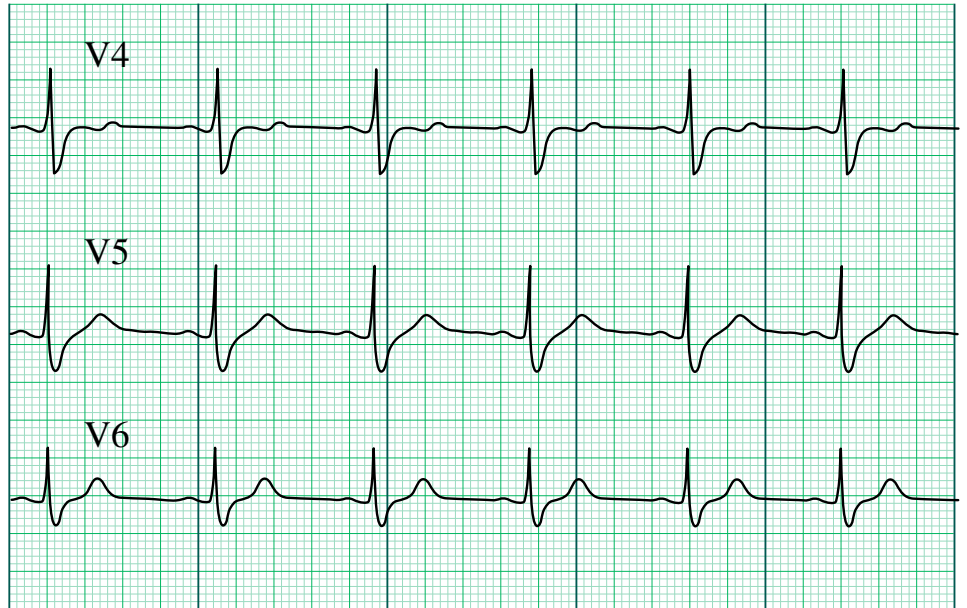
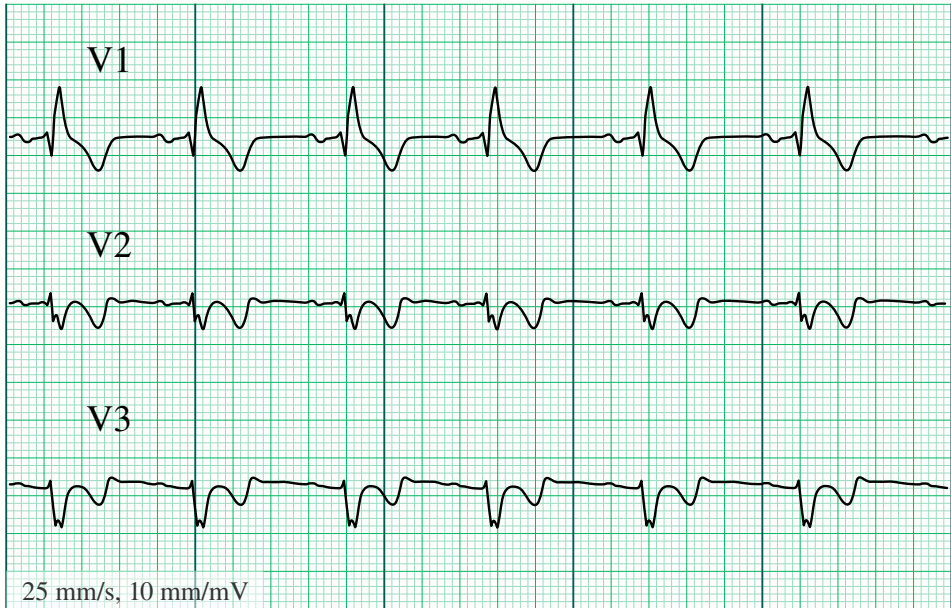
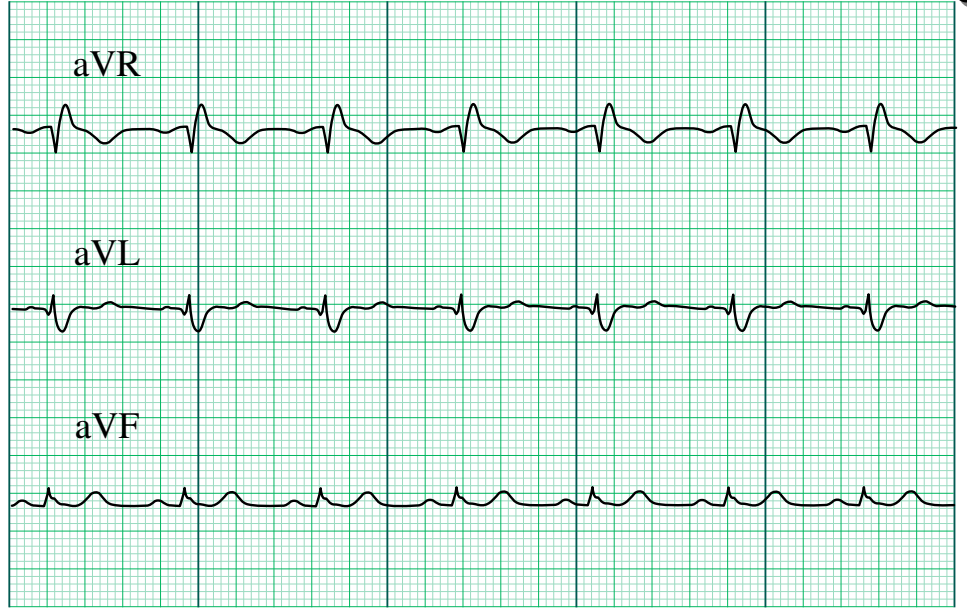
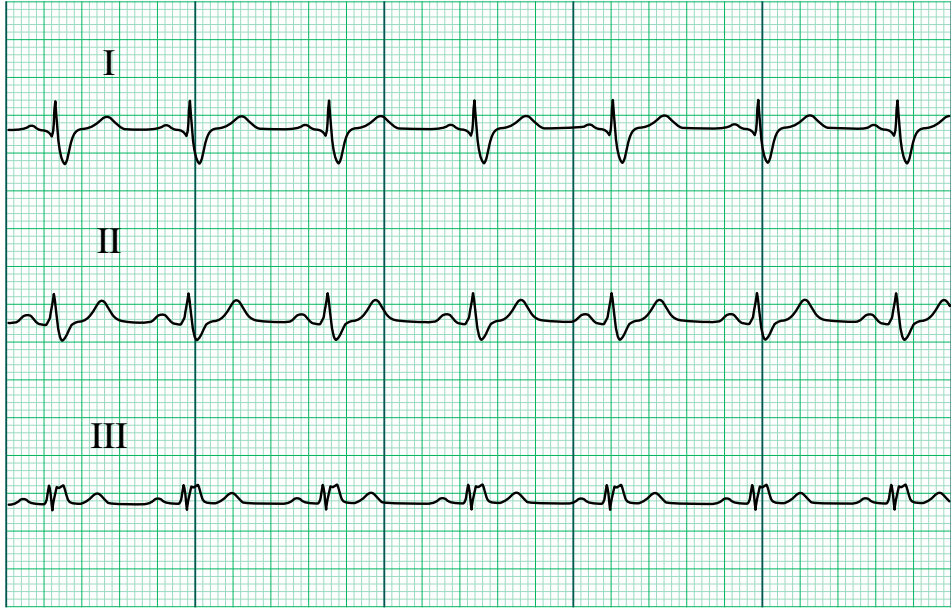




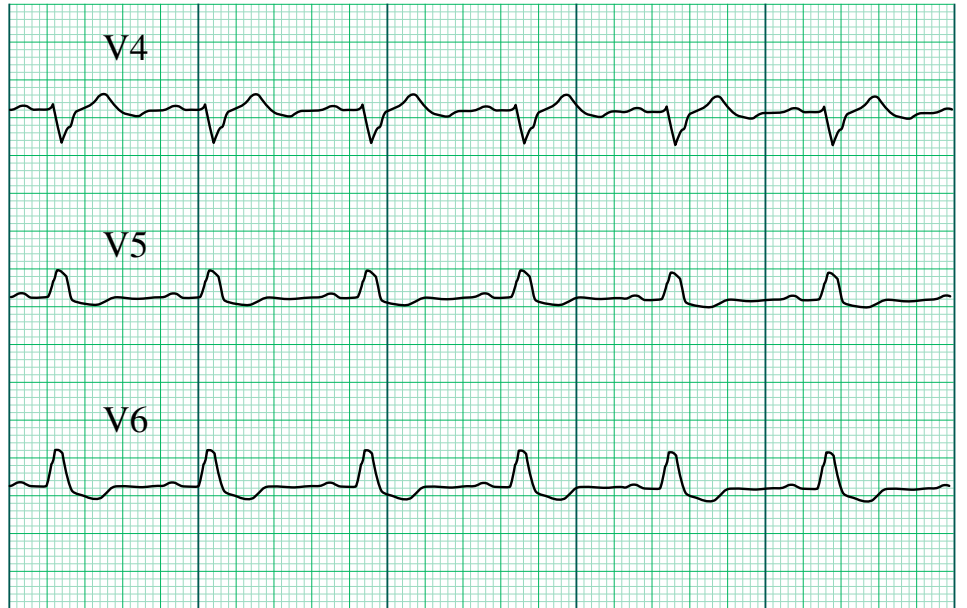
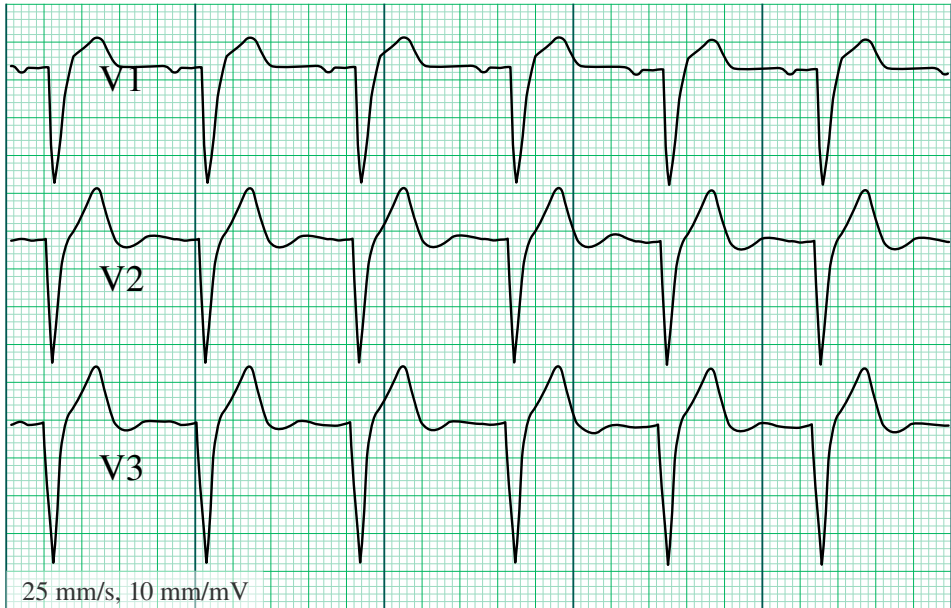
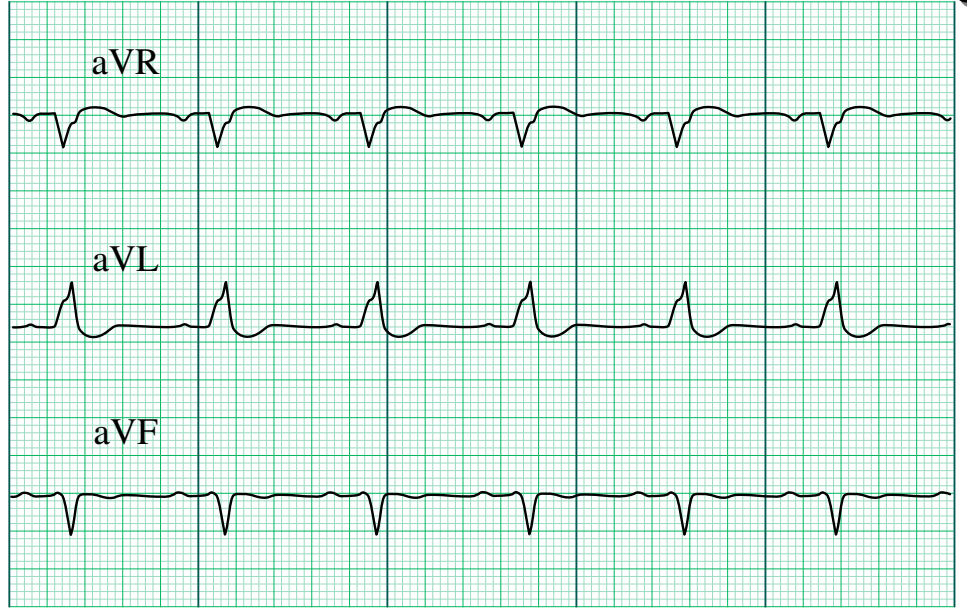
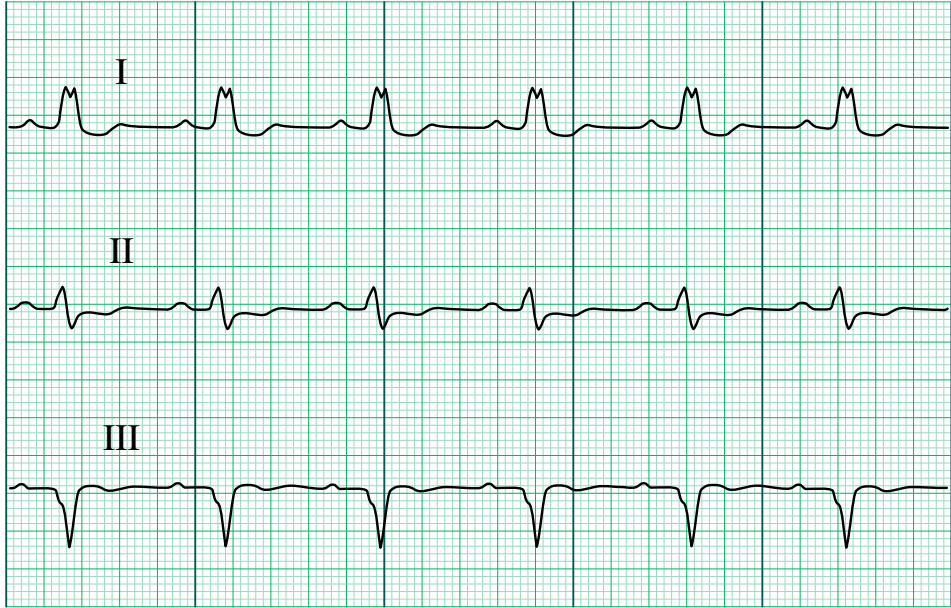






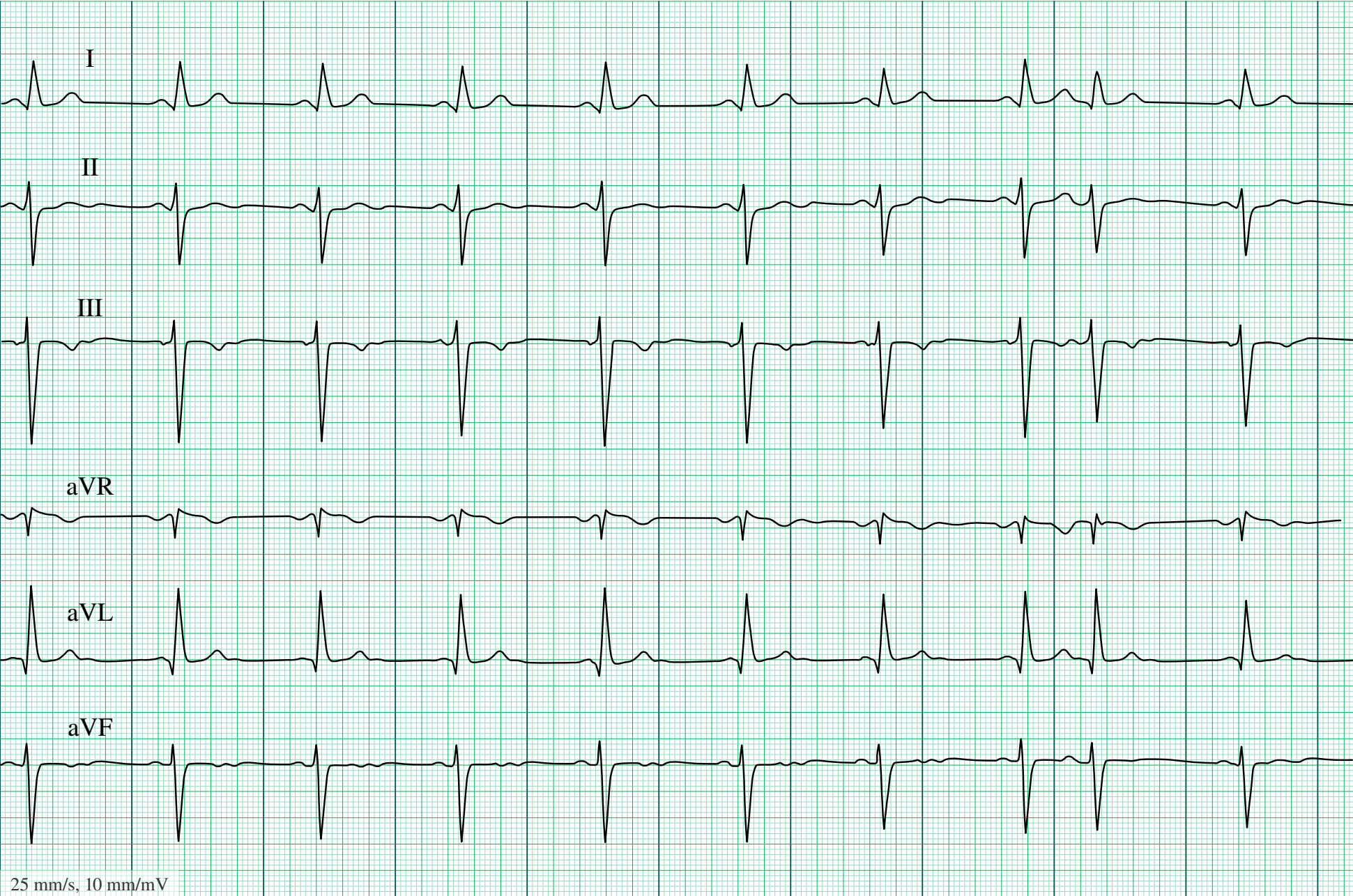


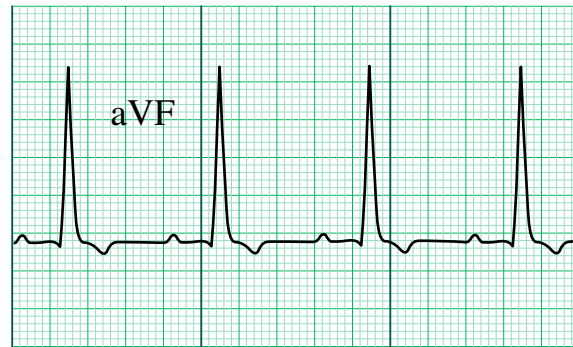
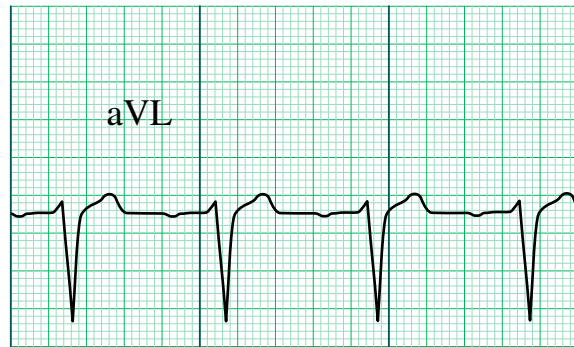
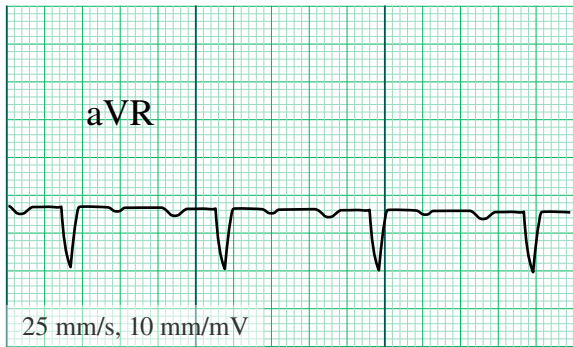
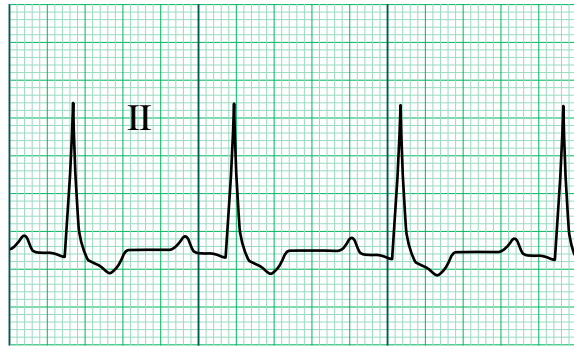
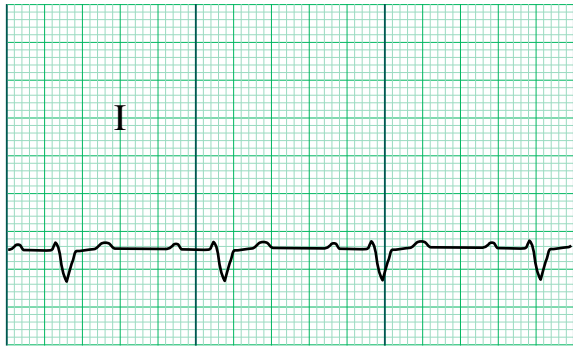
25 mm/s, 10 mm/mV

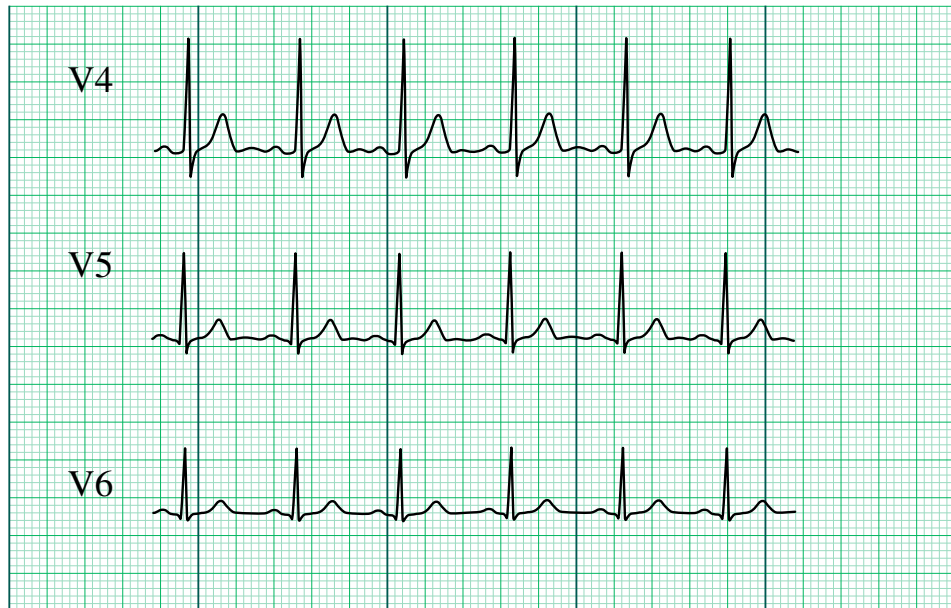
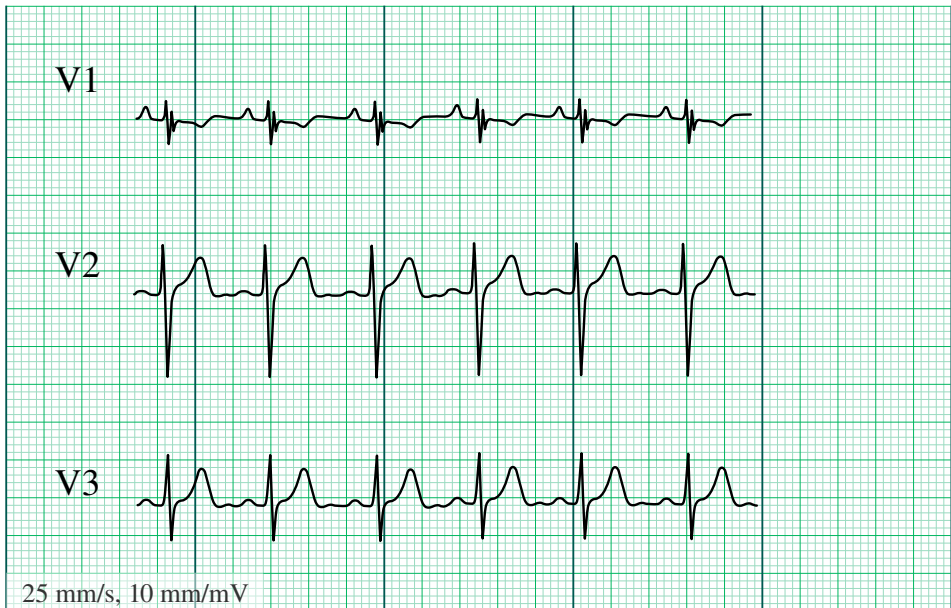
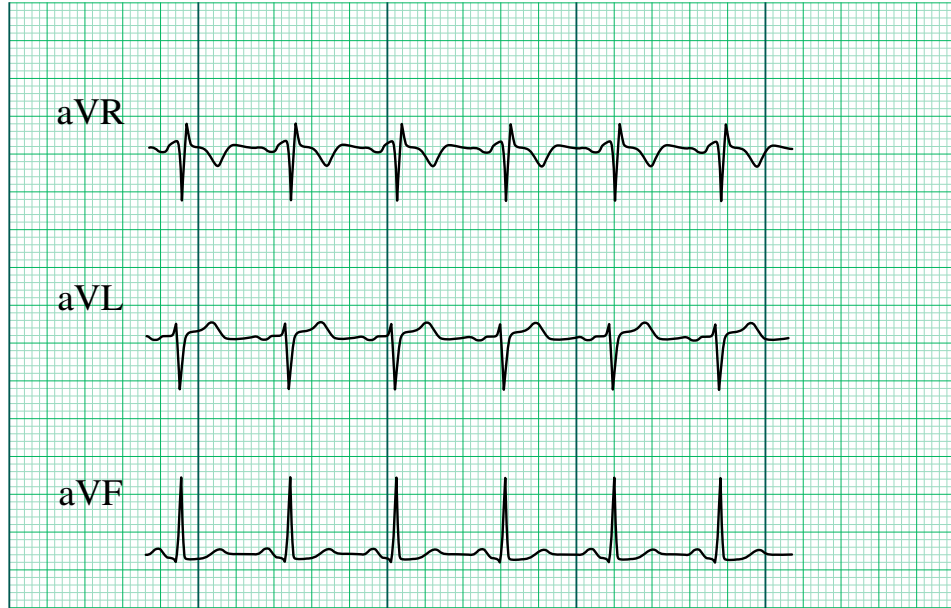
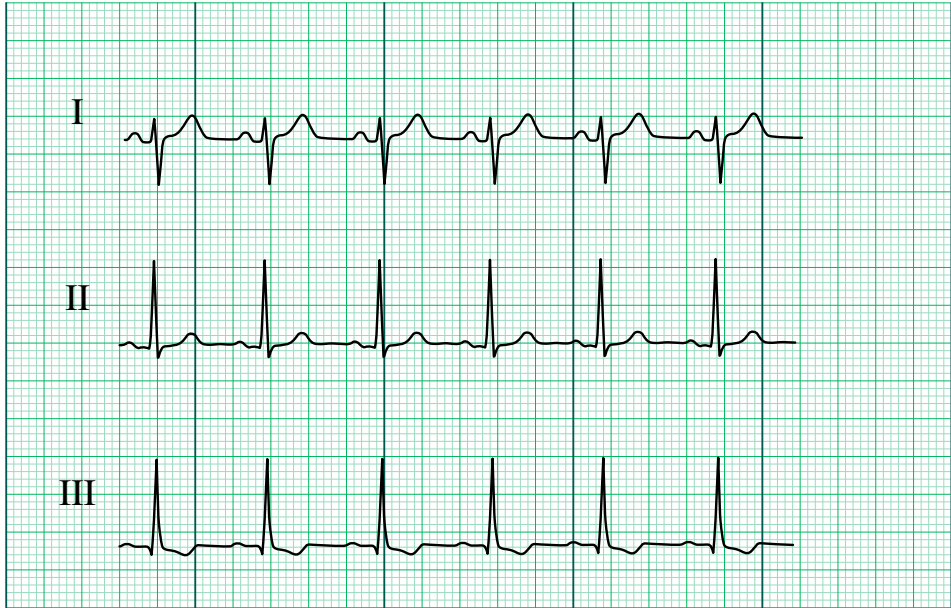


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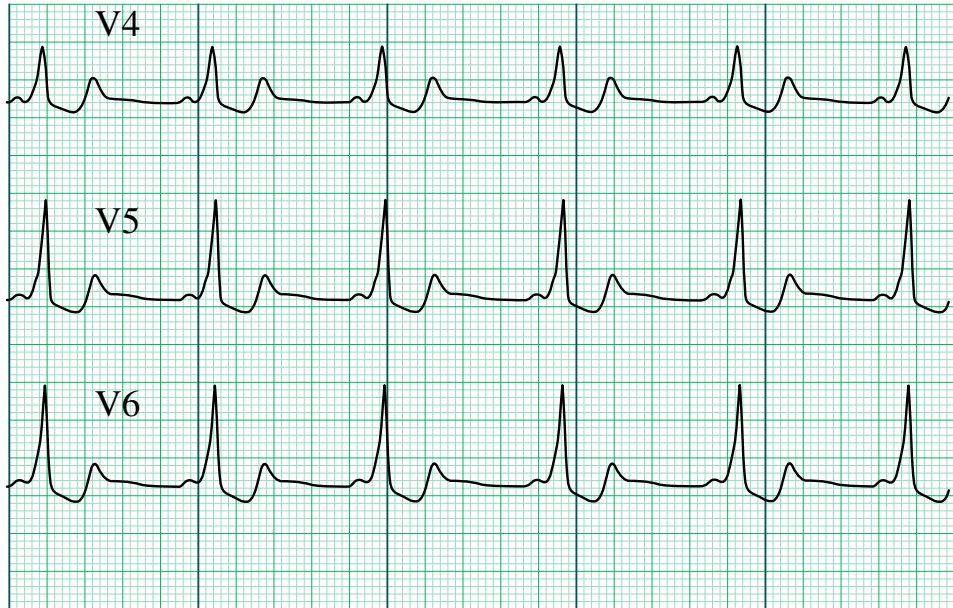
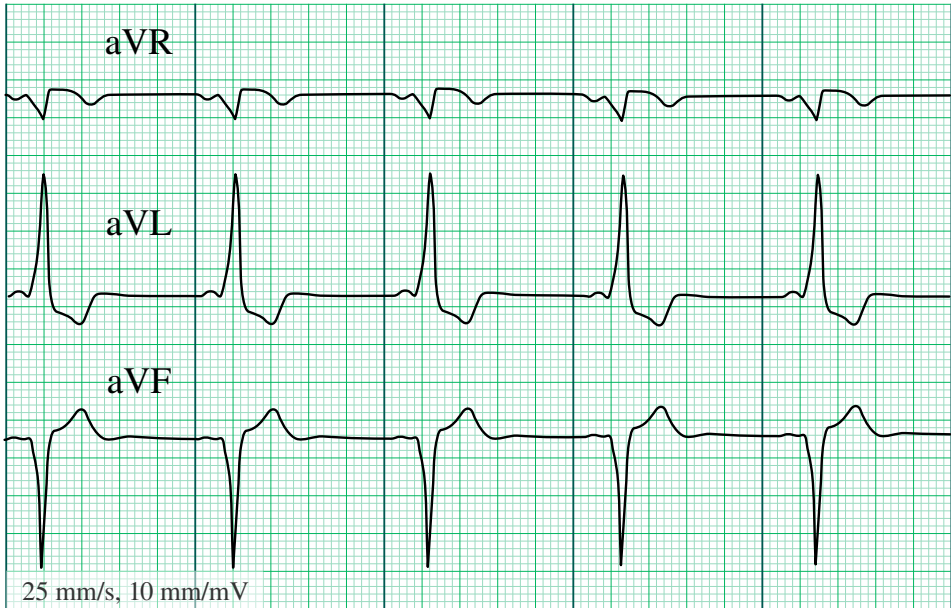
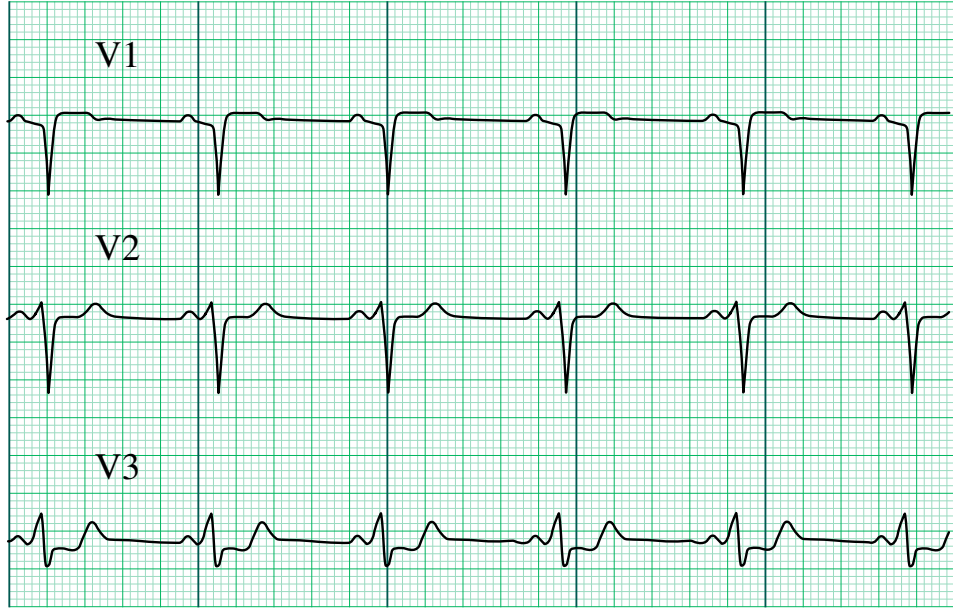
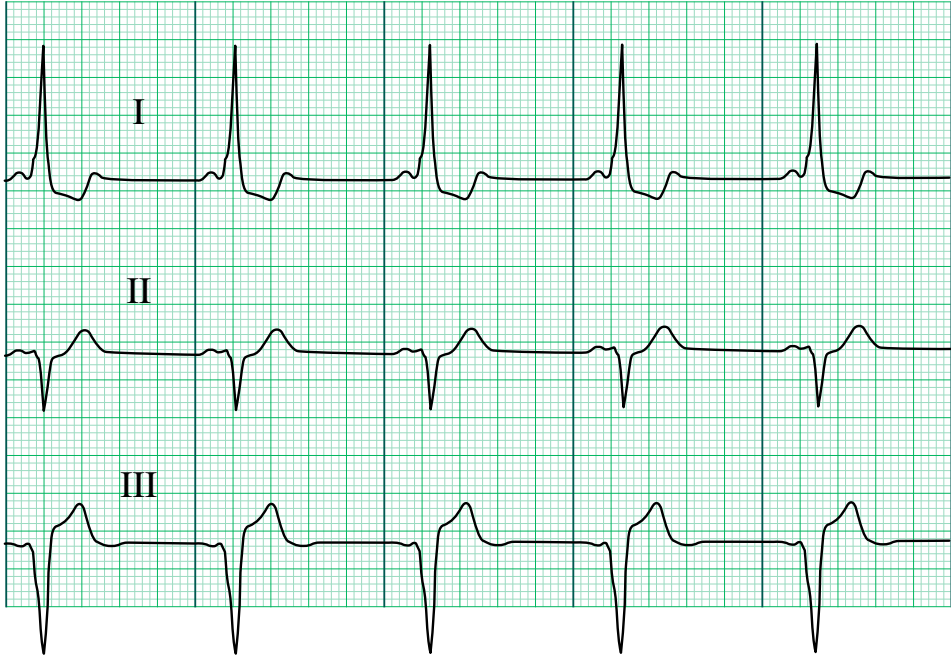




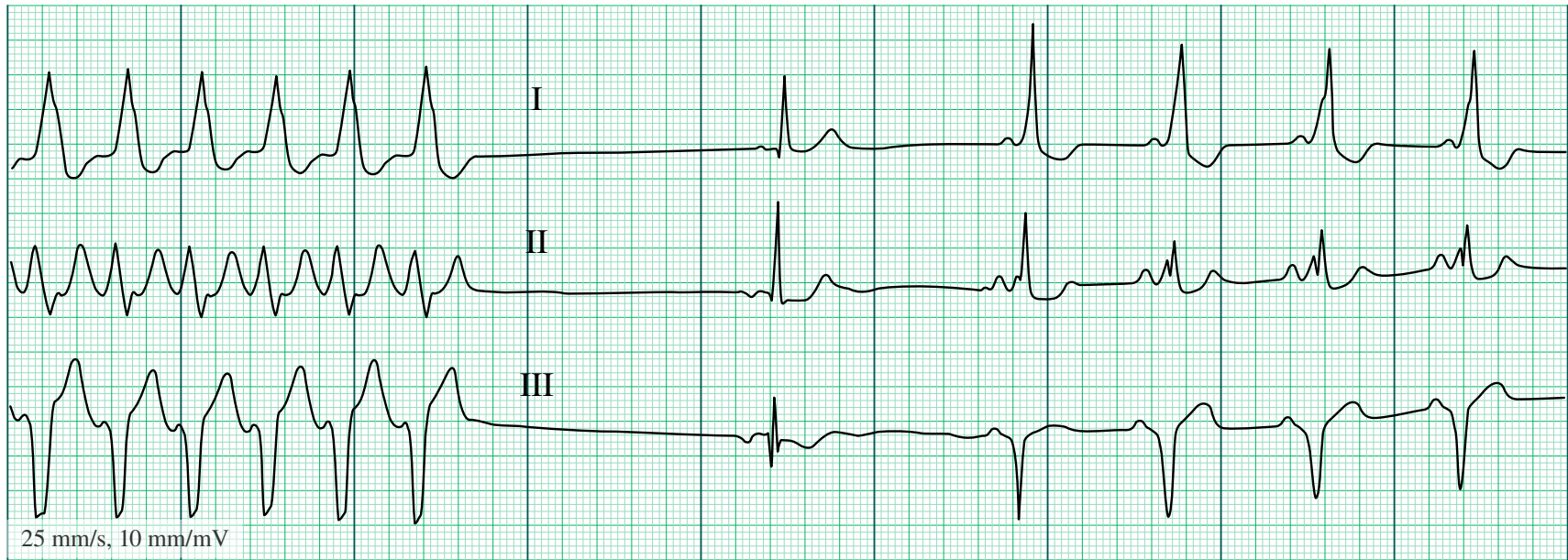


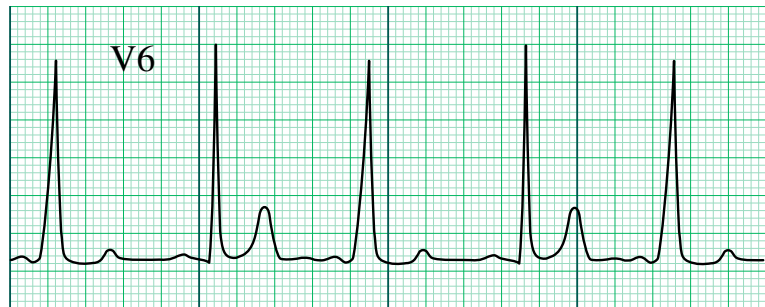
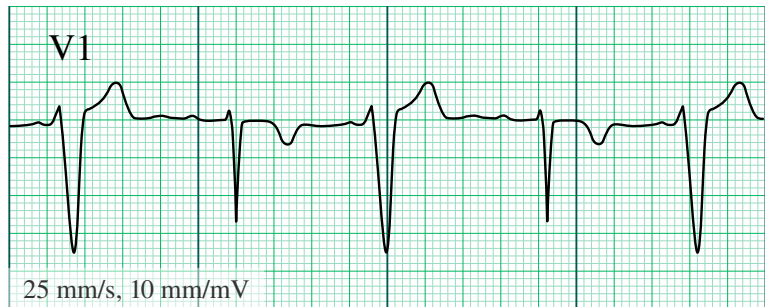
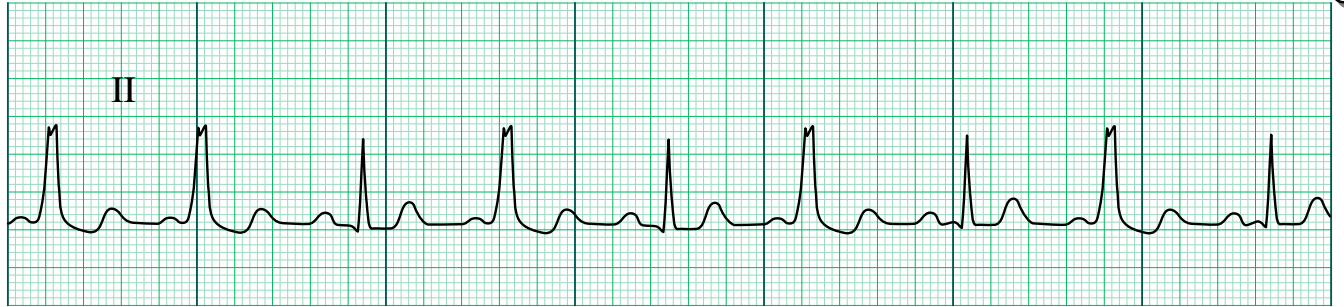


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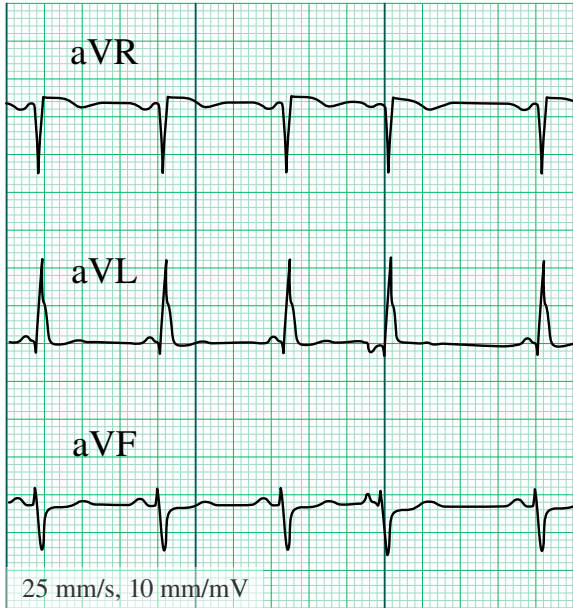
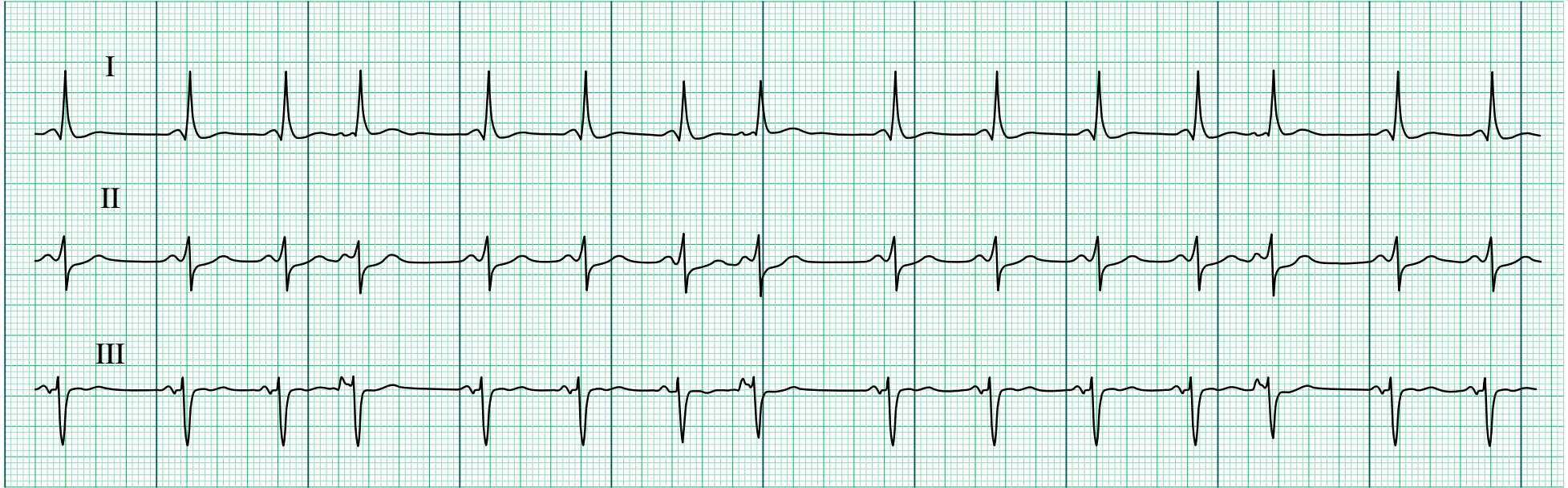


25 mm/s, 10 mm/mV

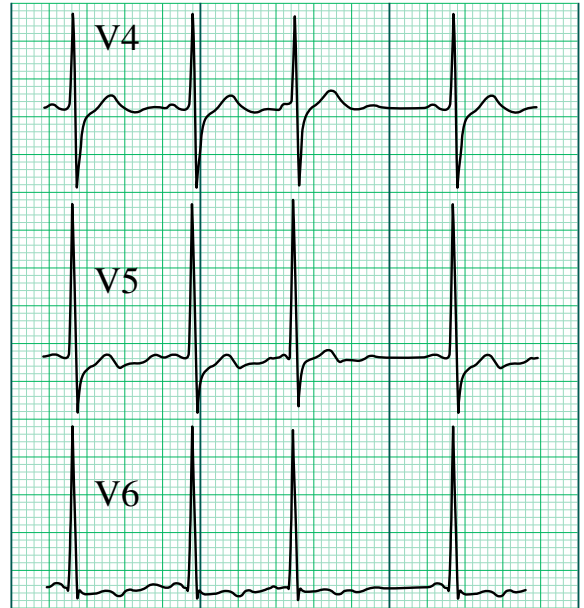
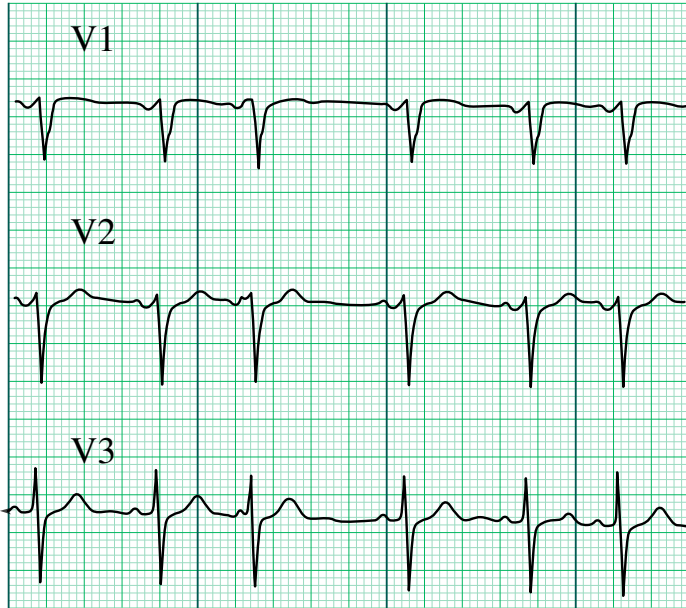


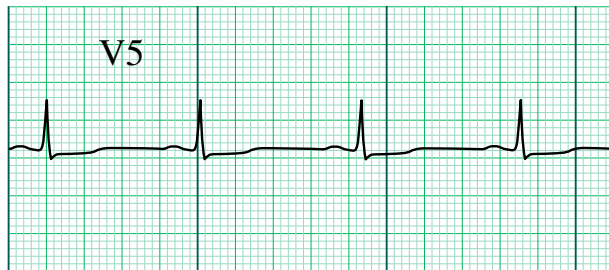
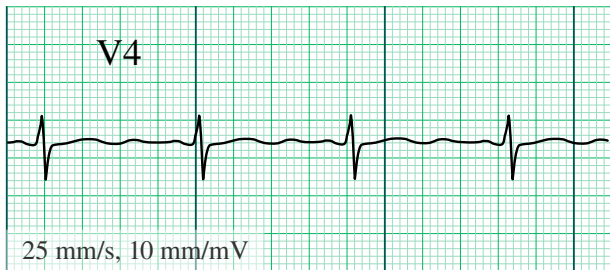
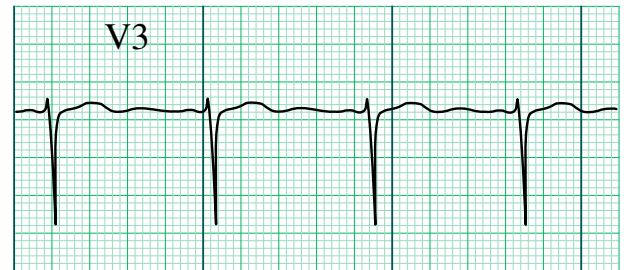
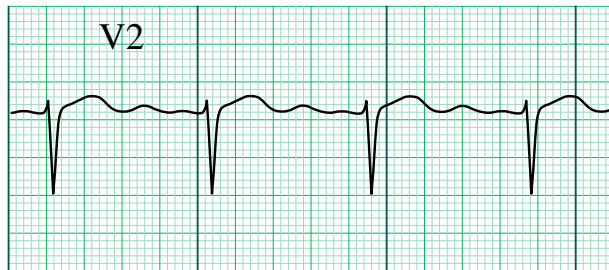
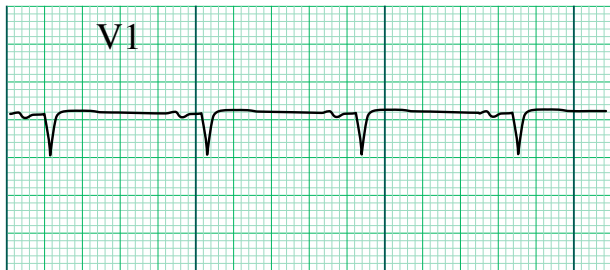
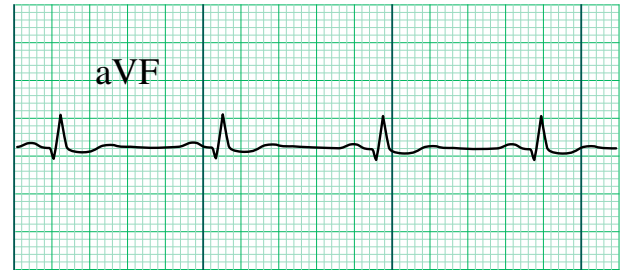
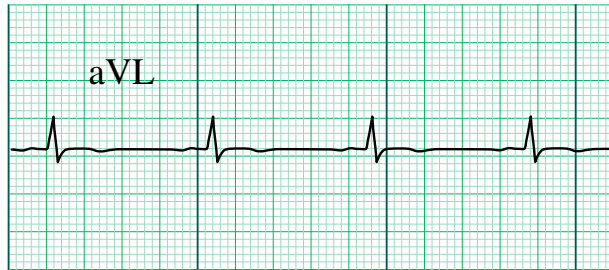
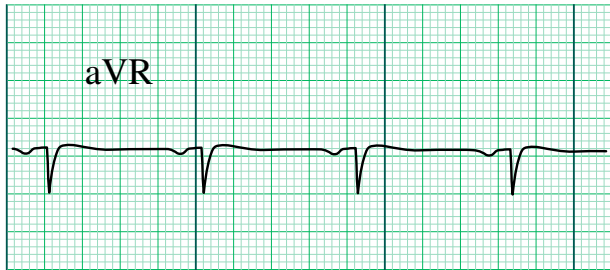
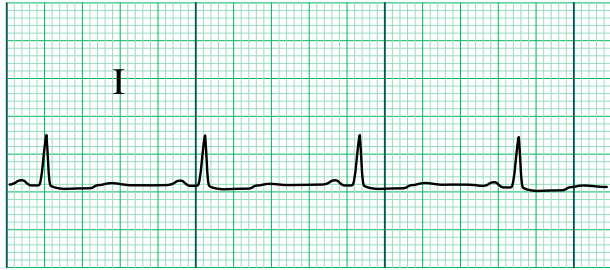


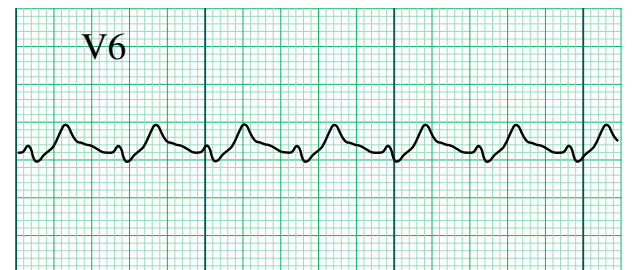
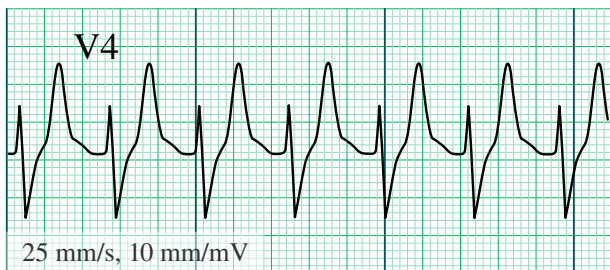
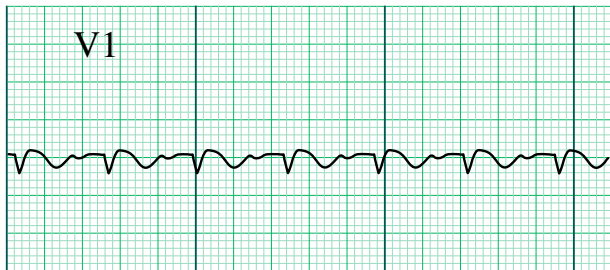
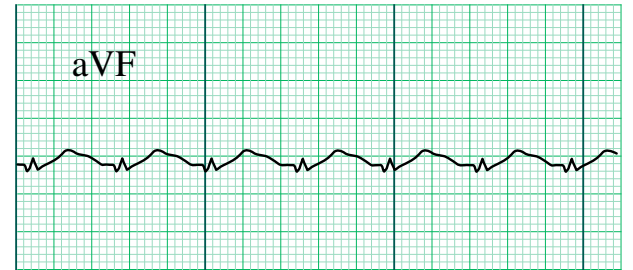
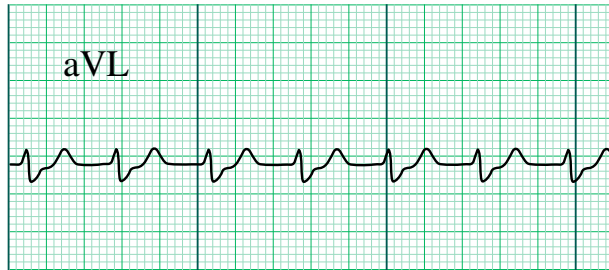
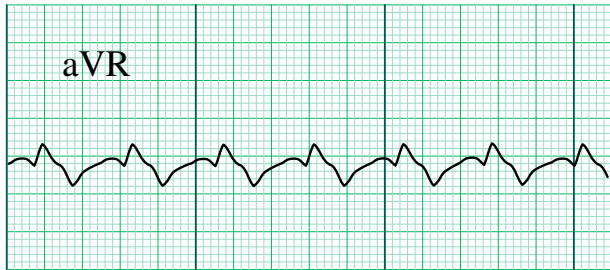
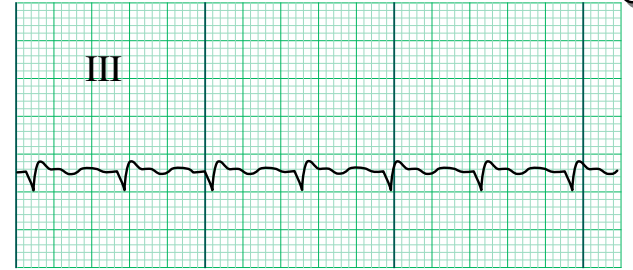
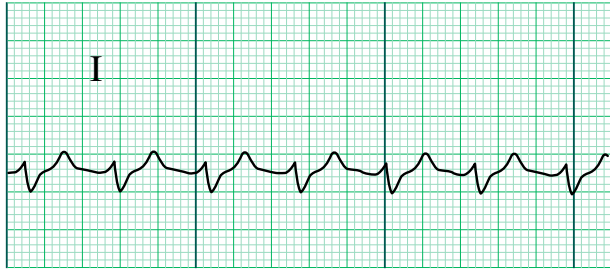
25 mm/s, 10 mm/mV

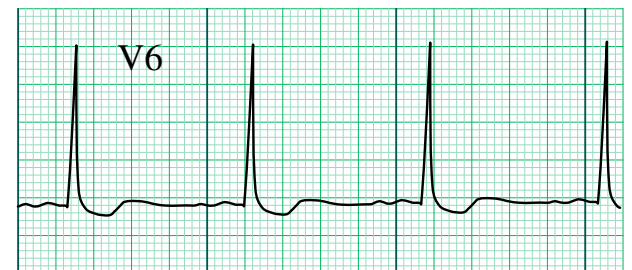
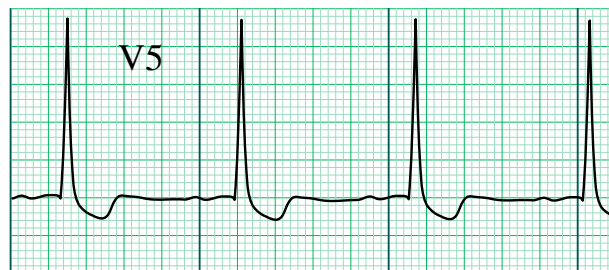
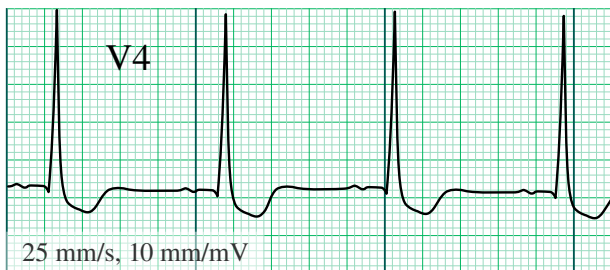
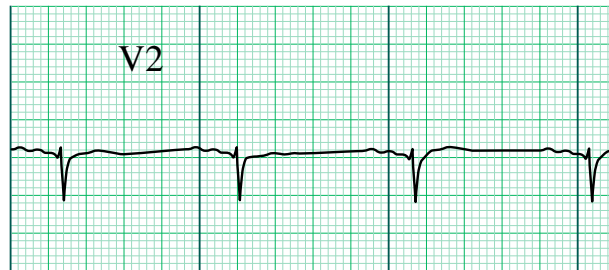
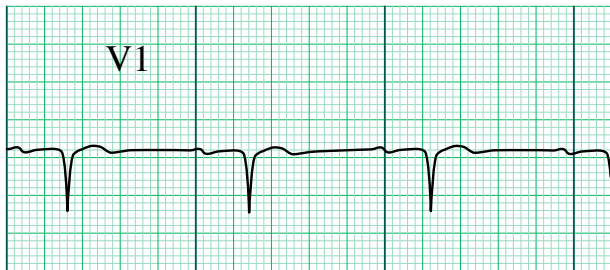
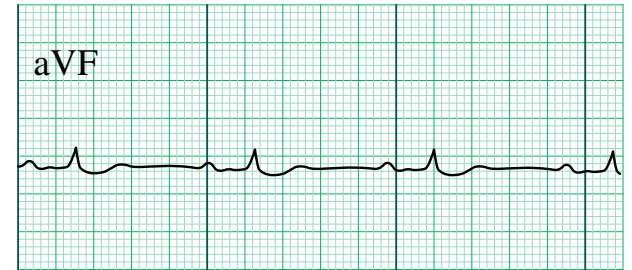
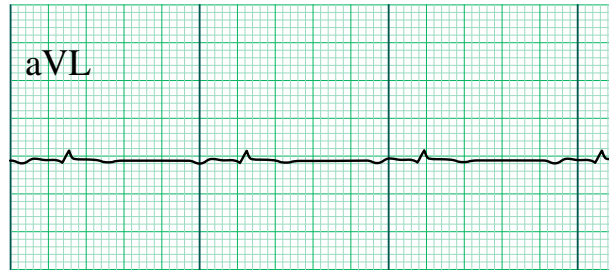
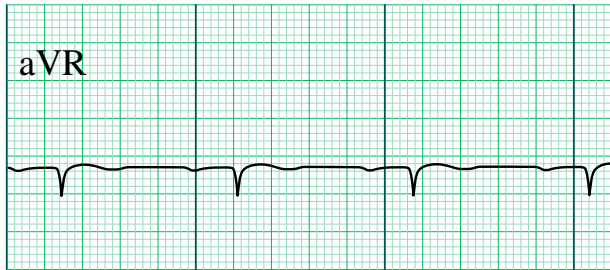
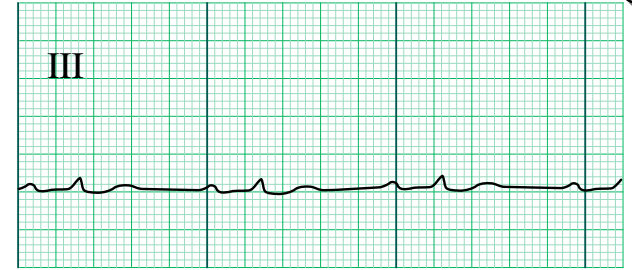
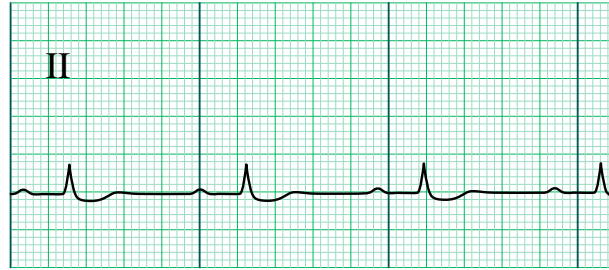


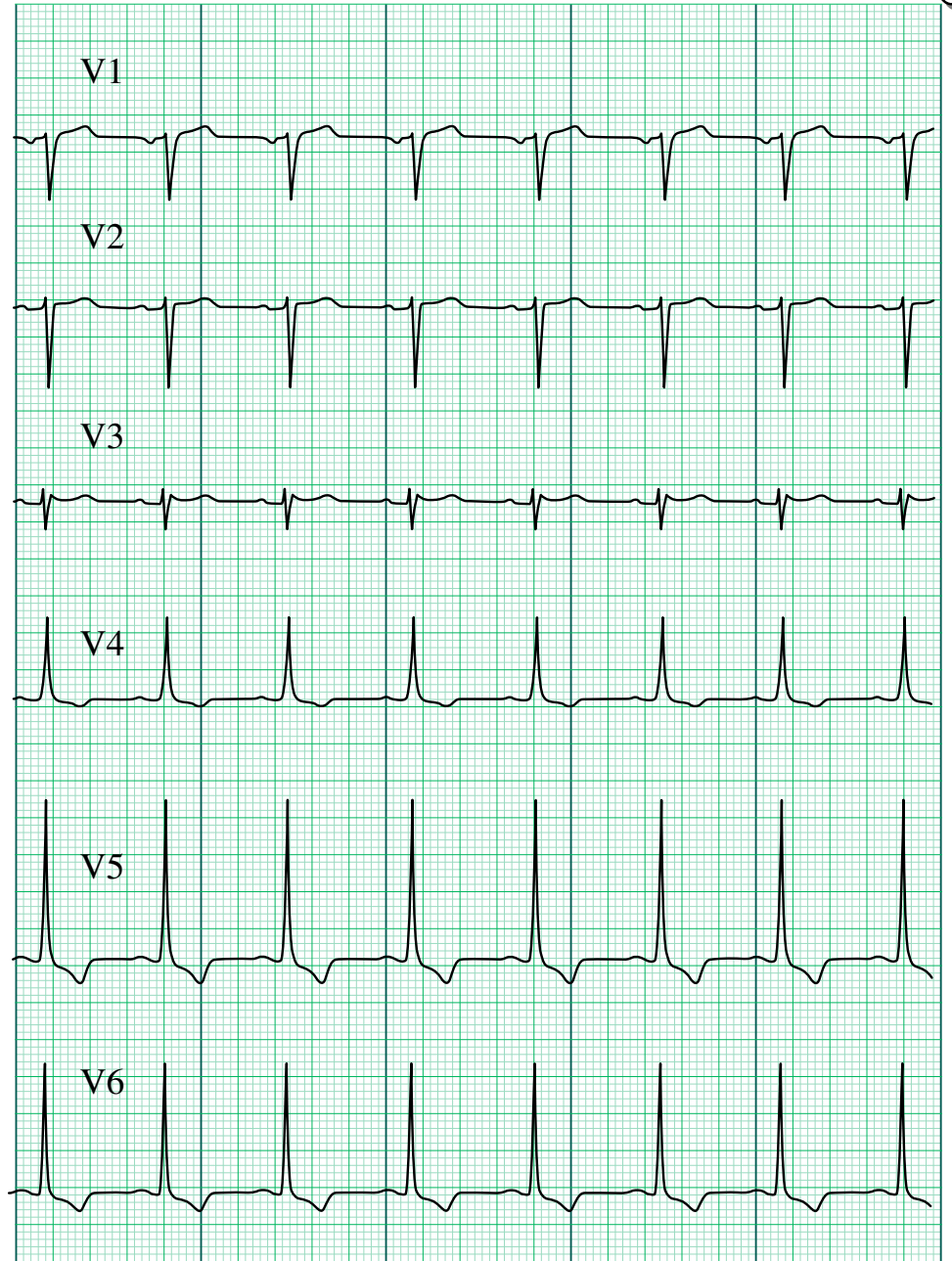
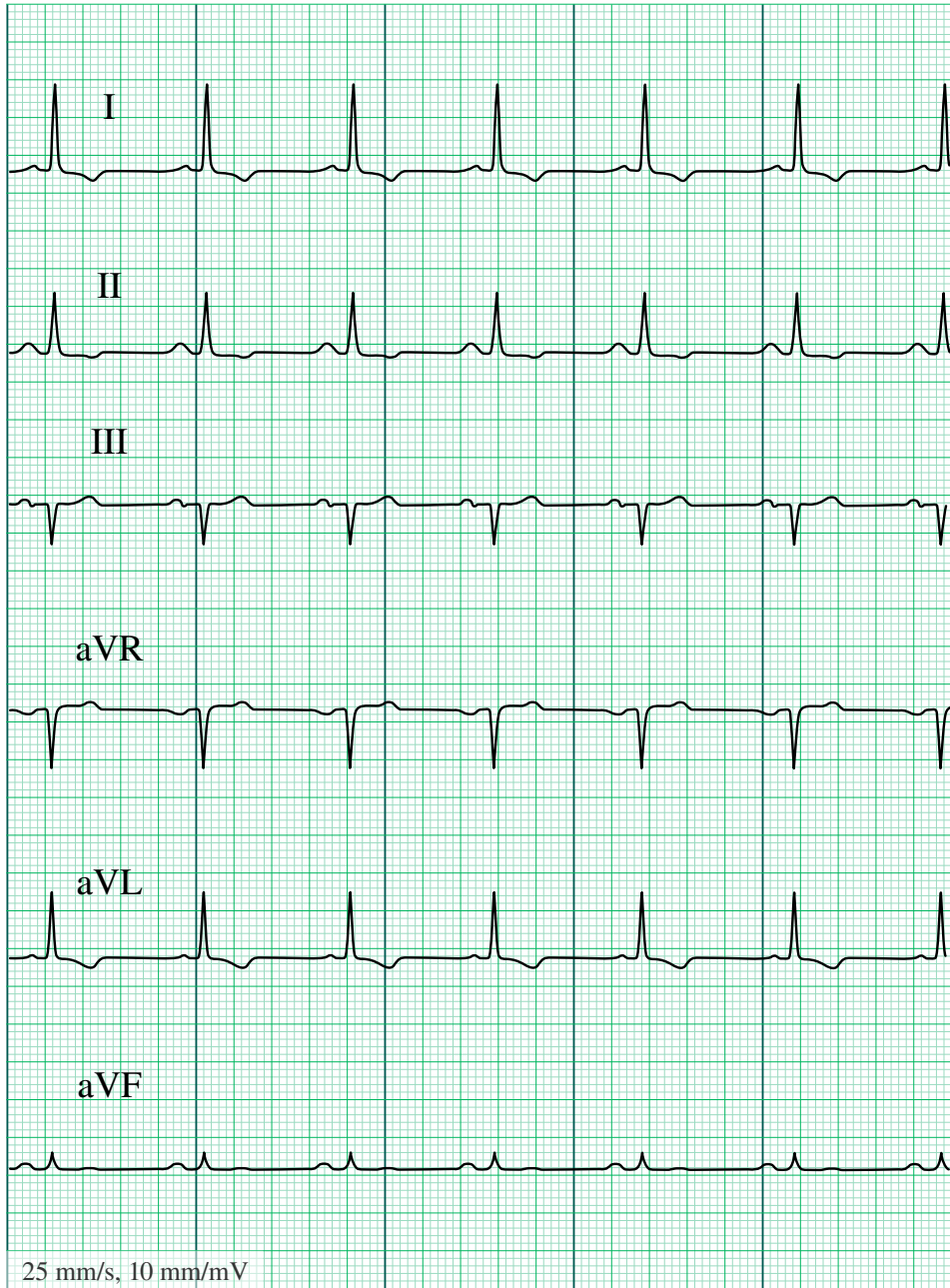
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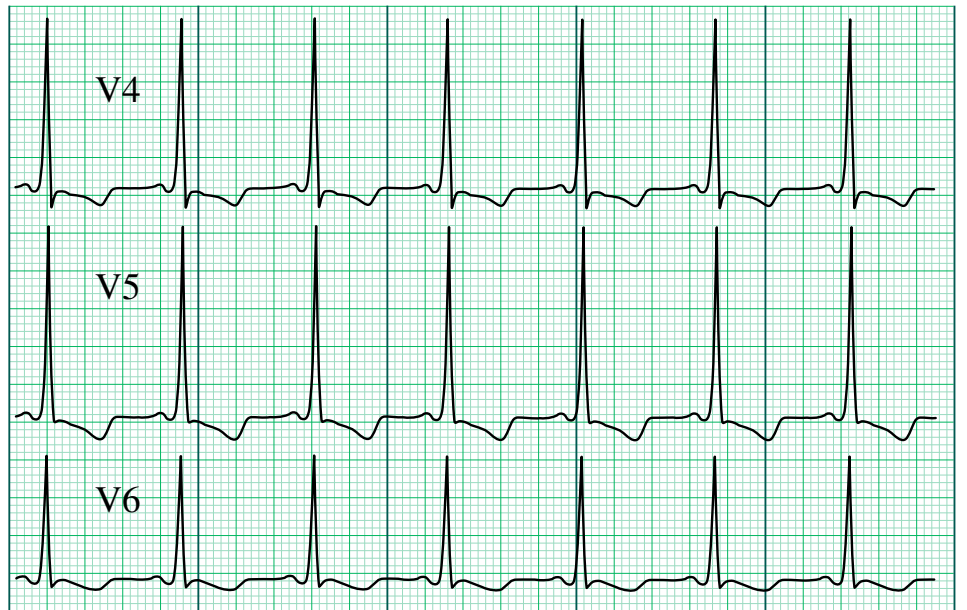
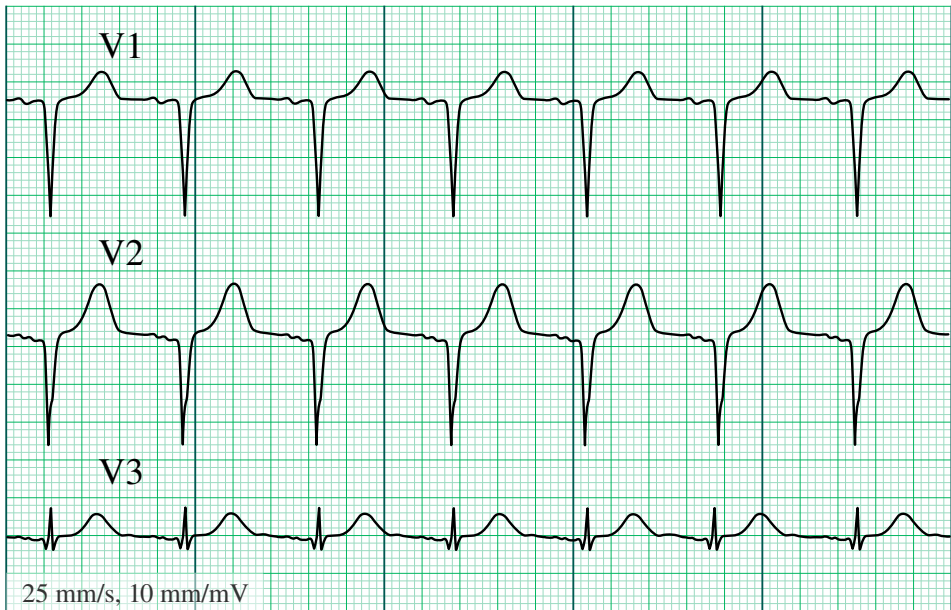
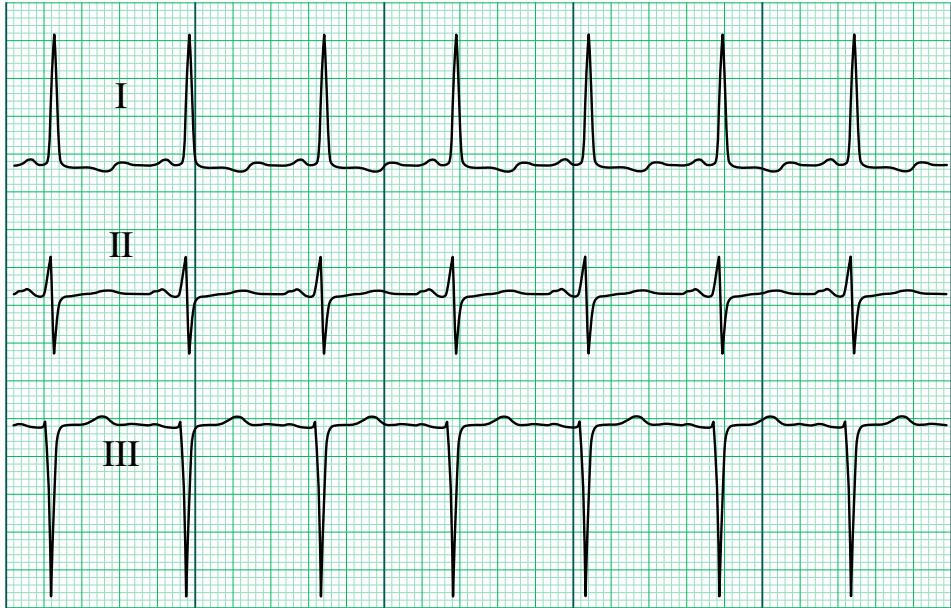


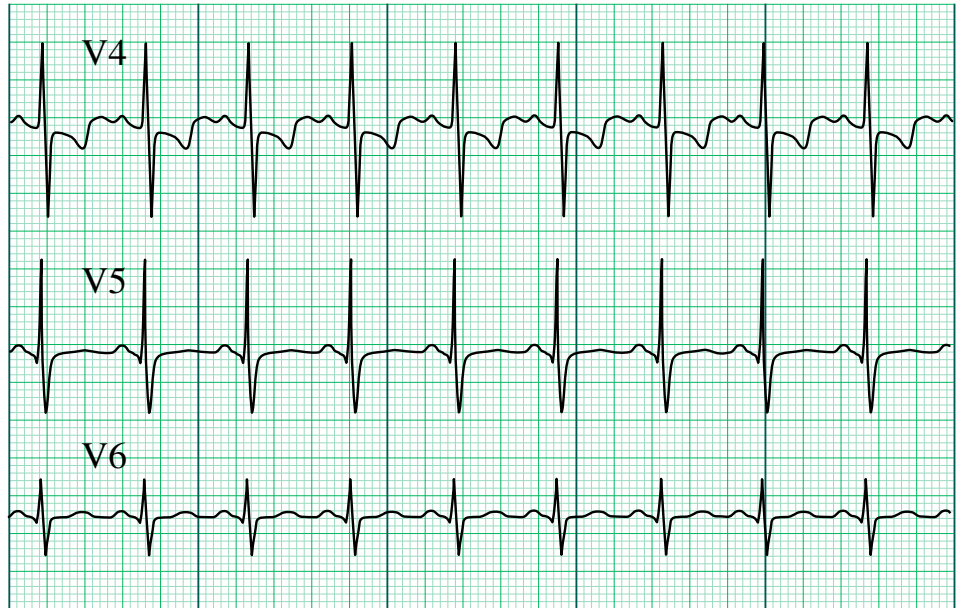
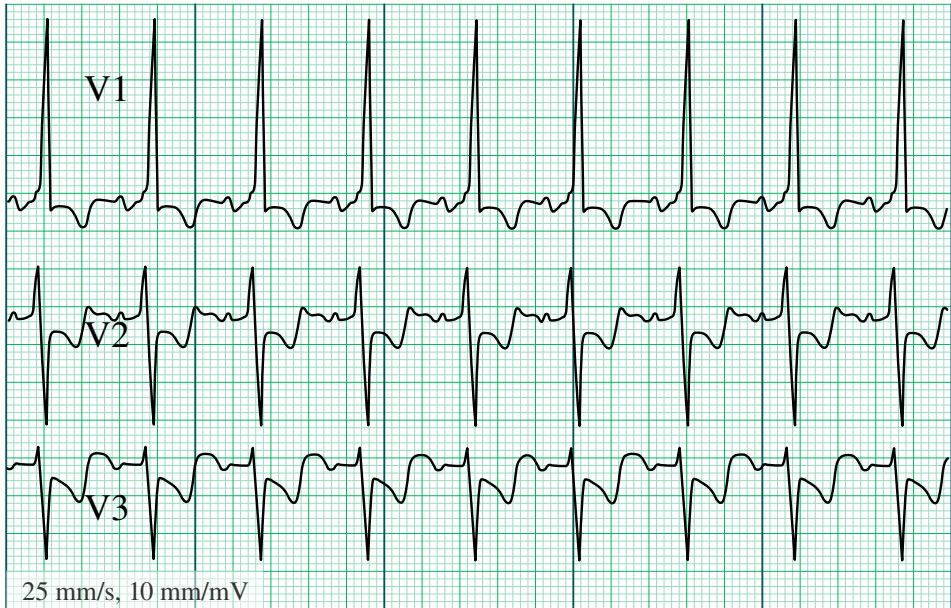
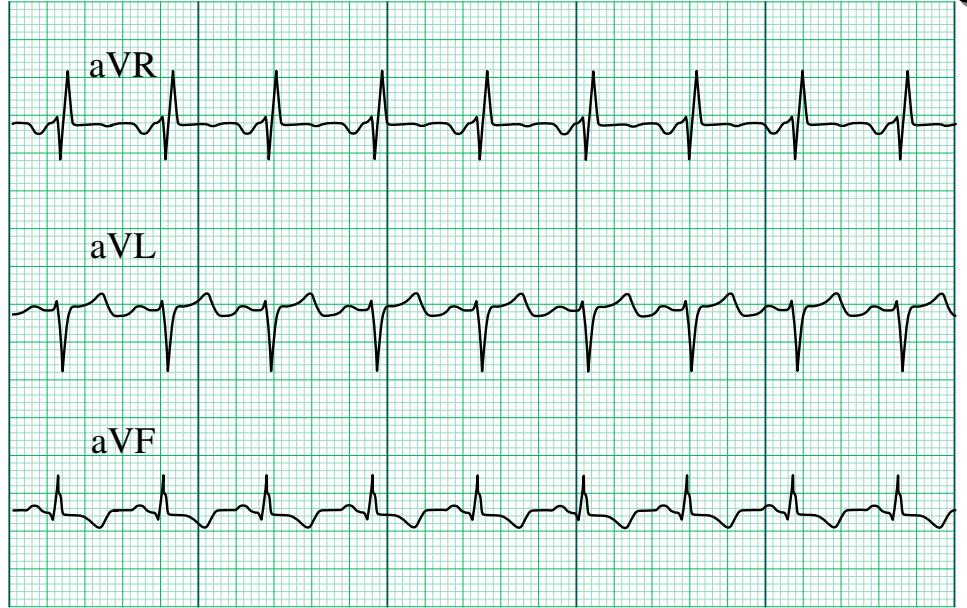
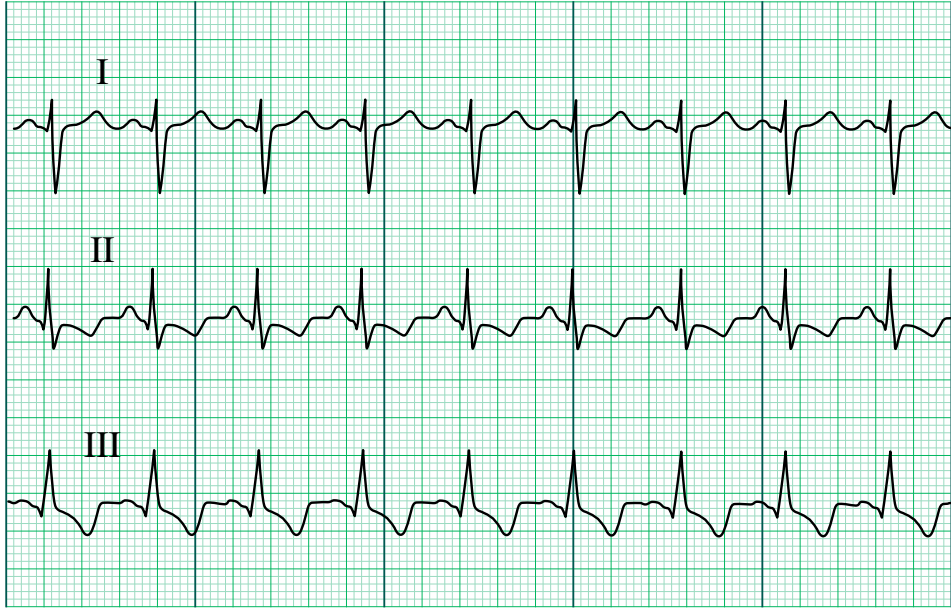




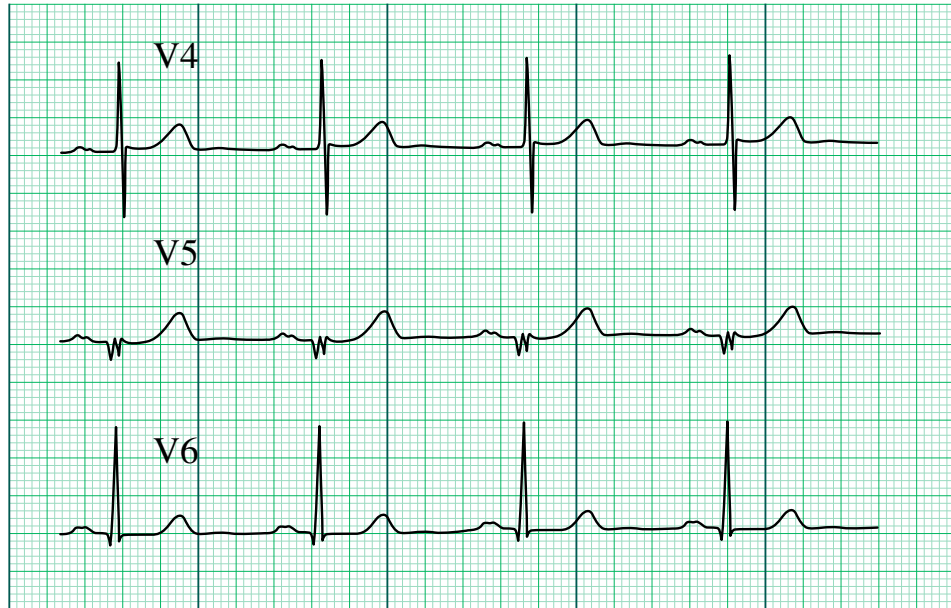
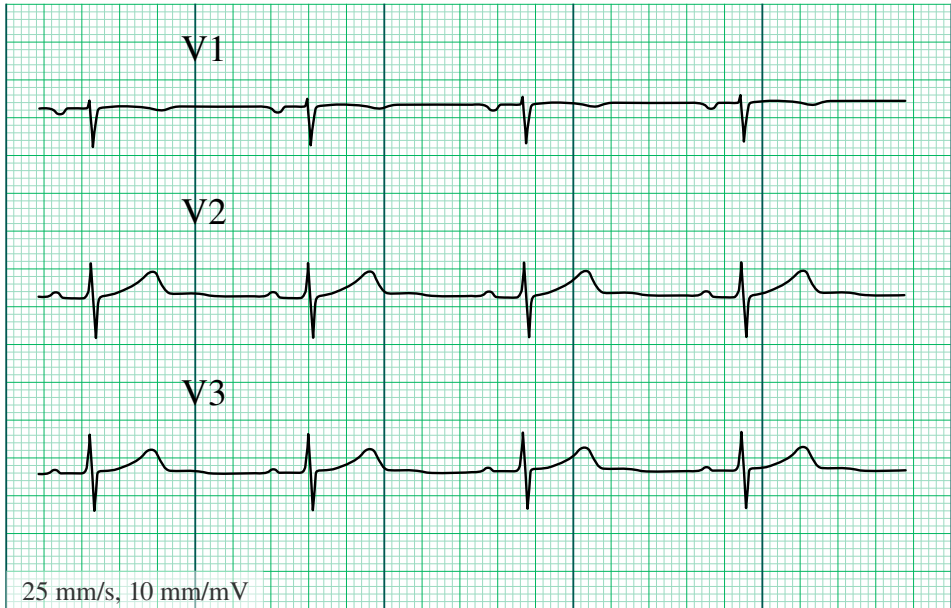
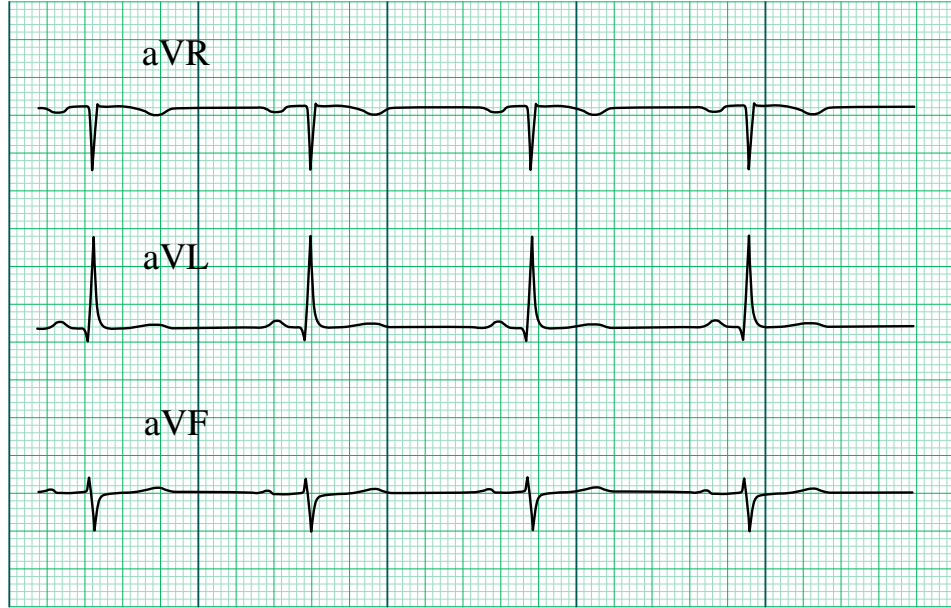
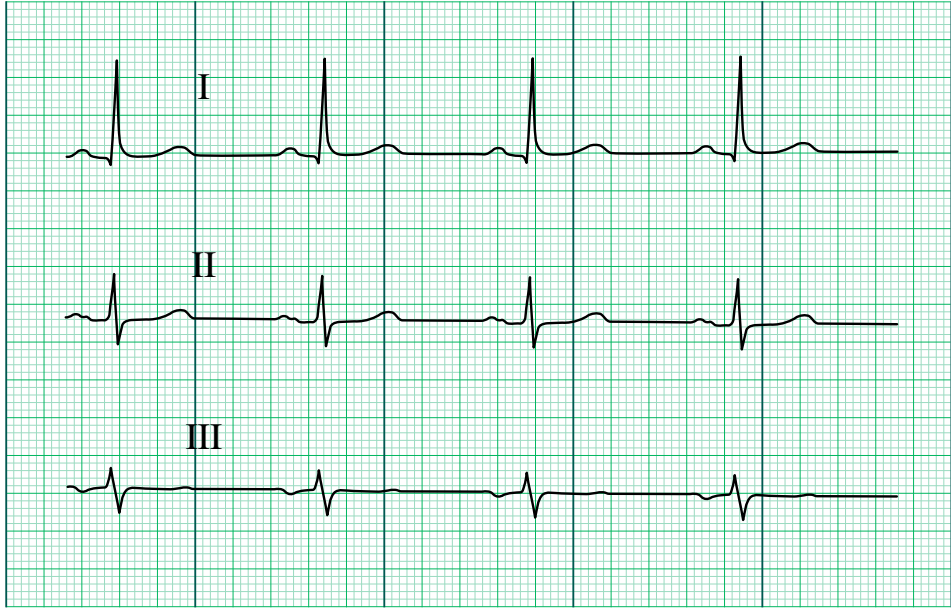




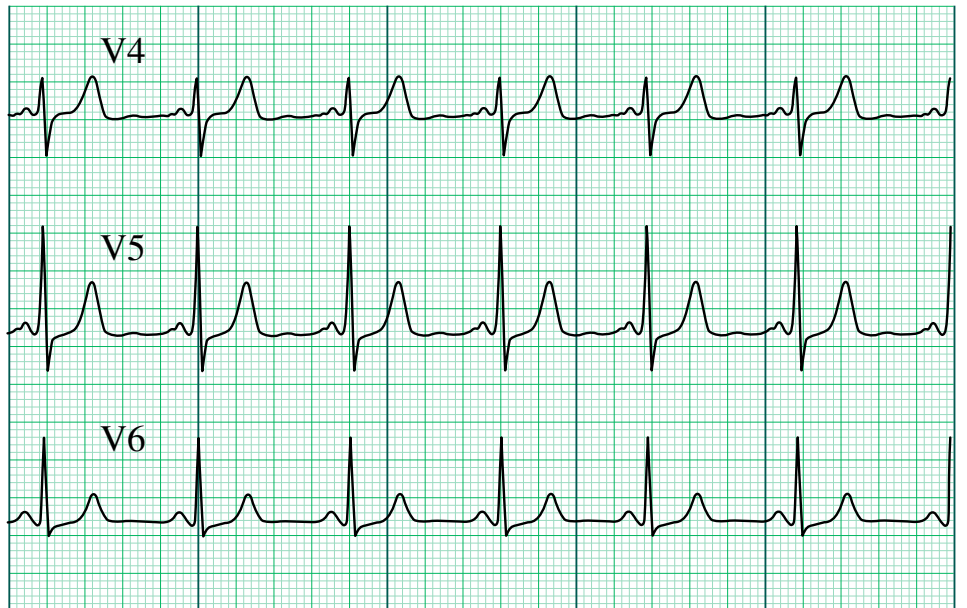
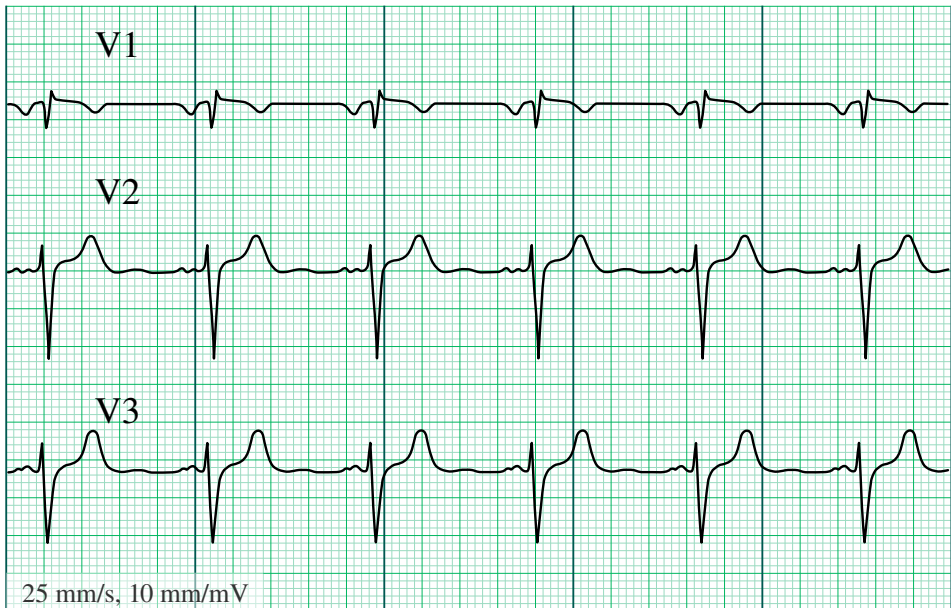
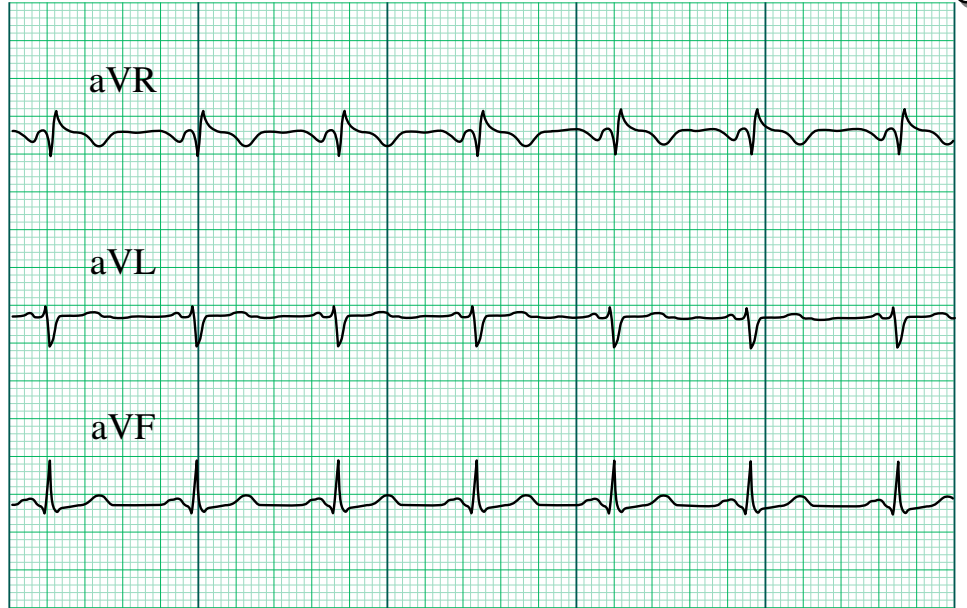
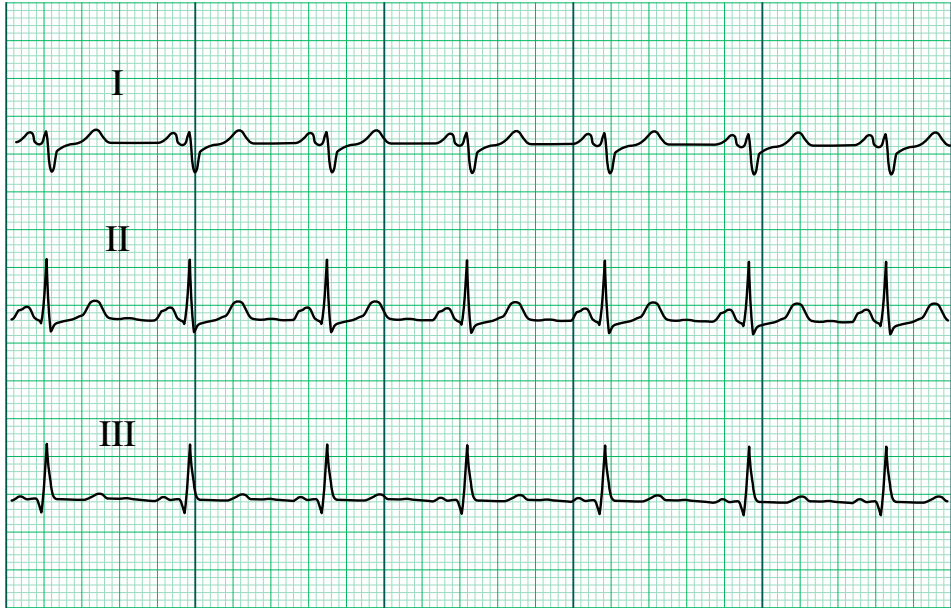




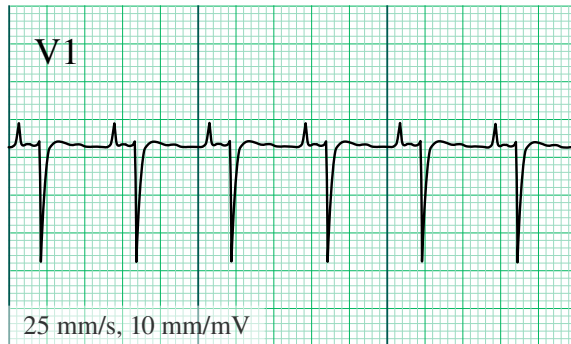
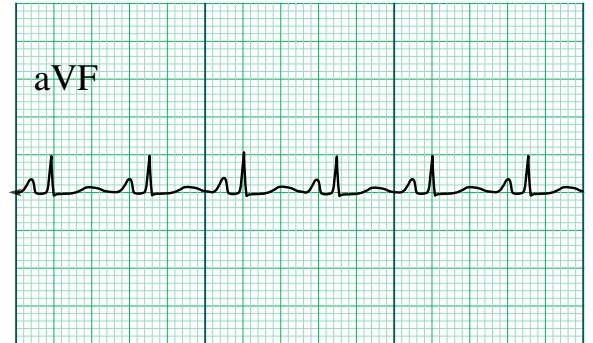
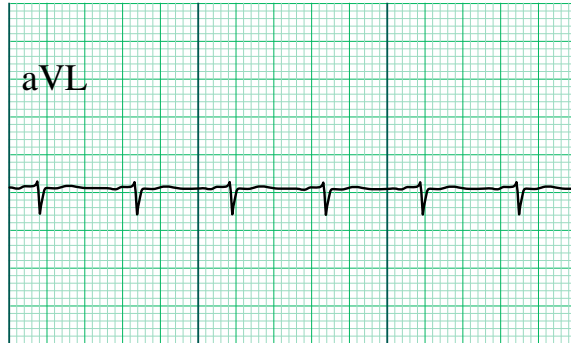
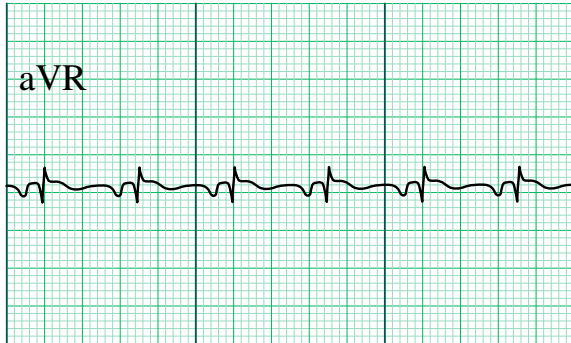
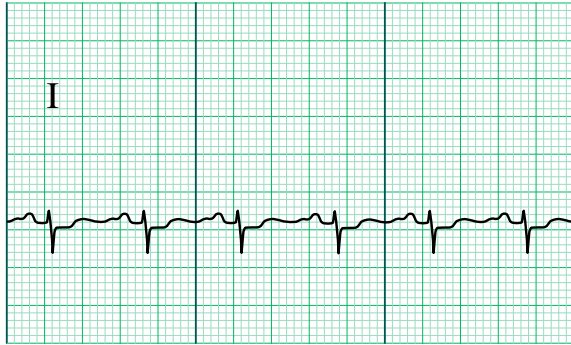
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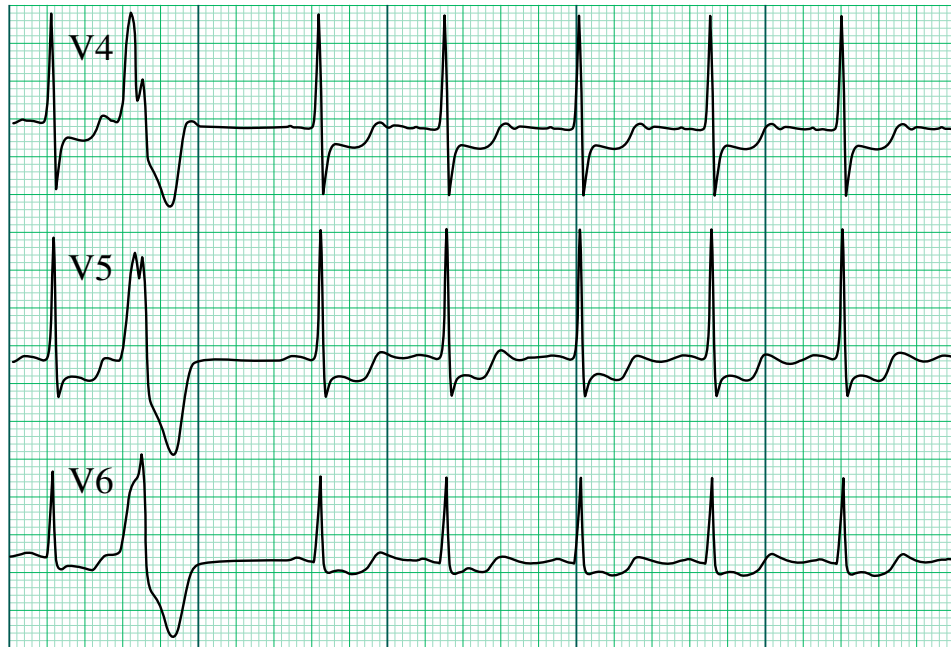
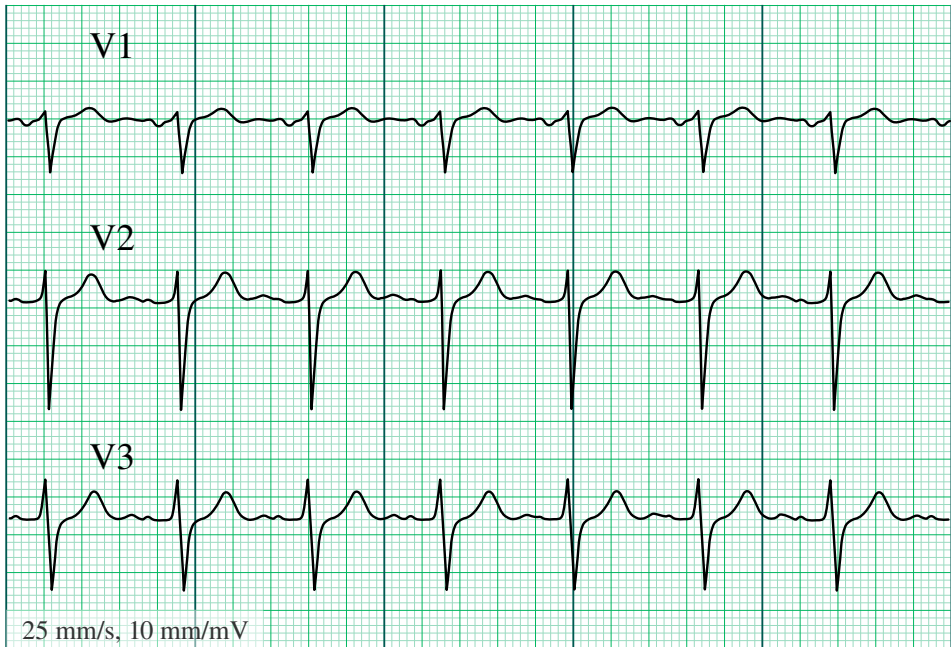
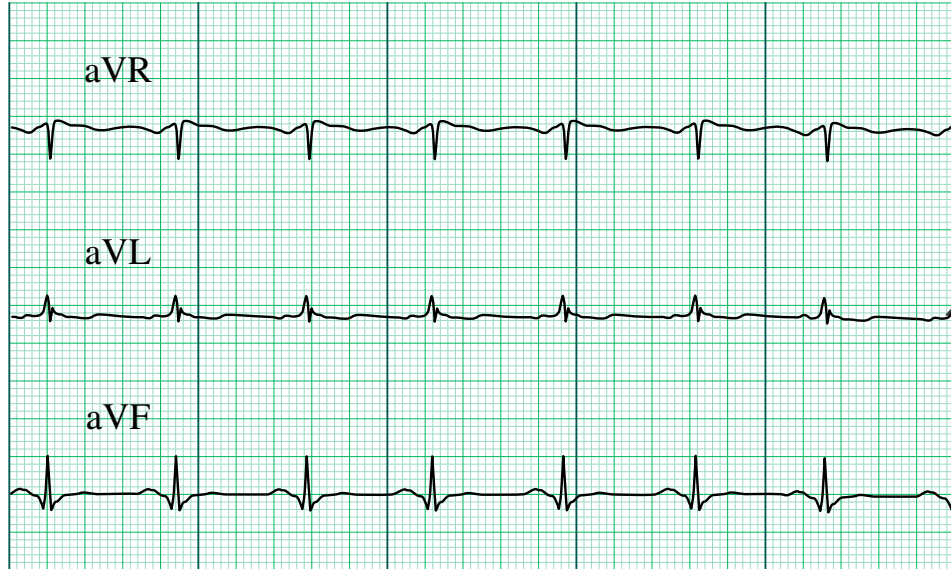
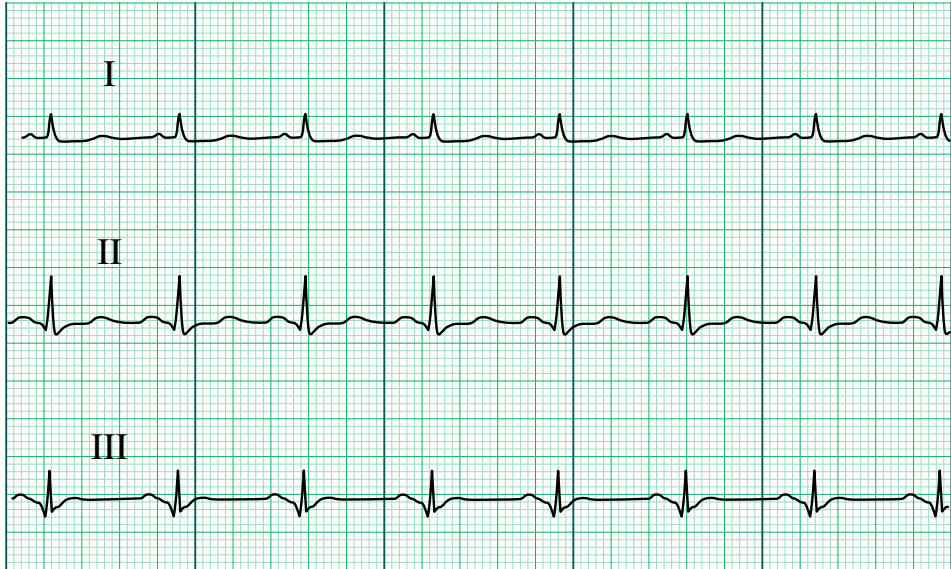


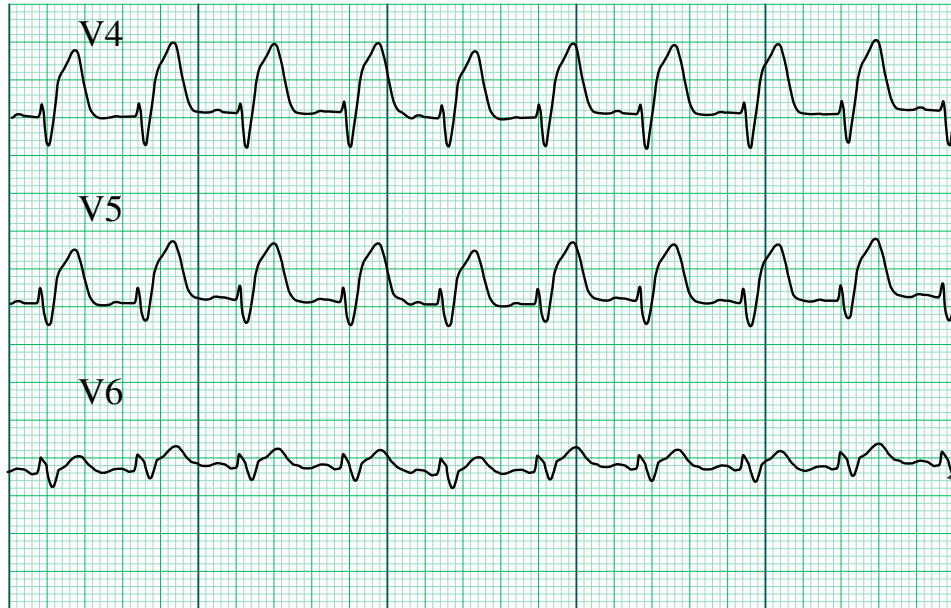
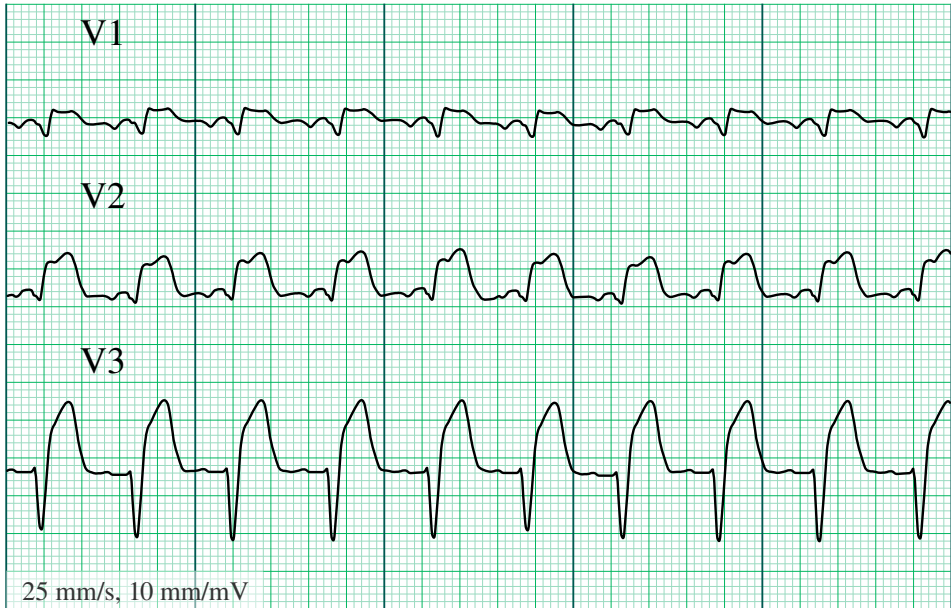
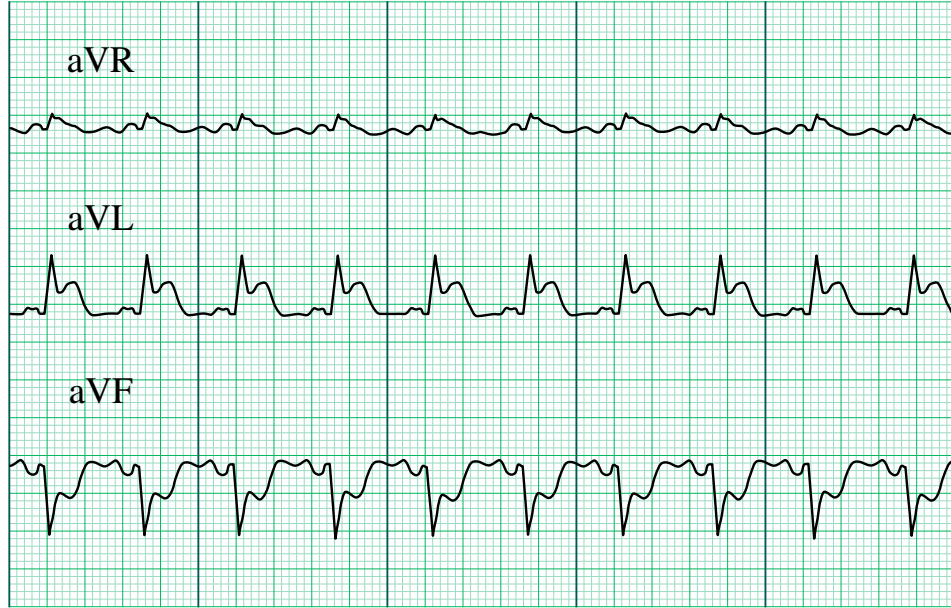
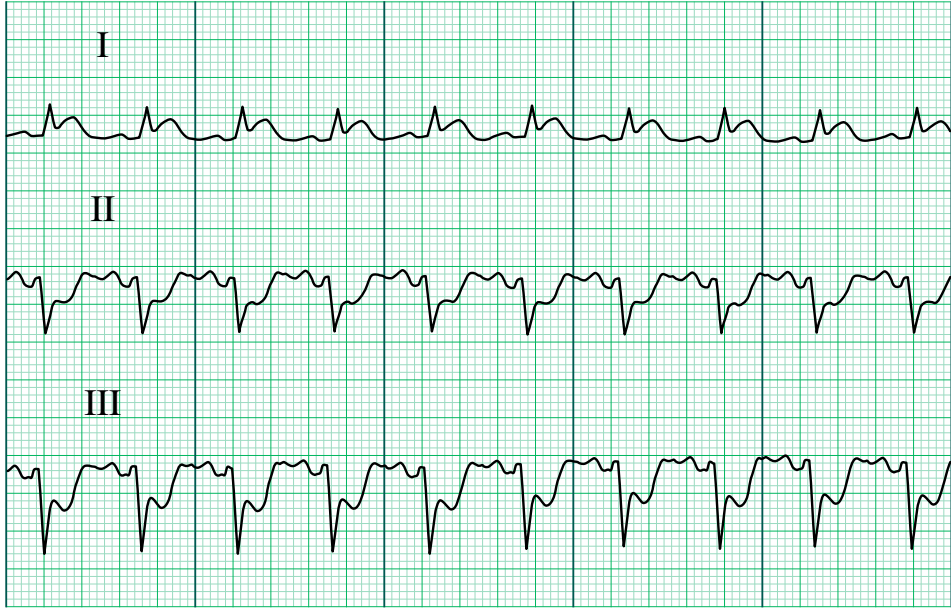
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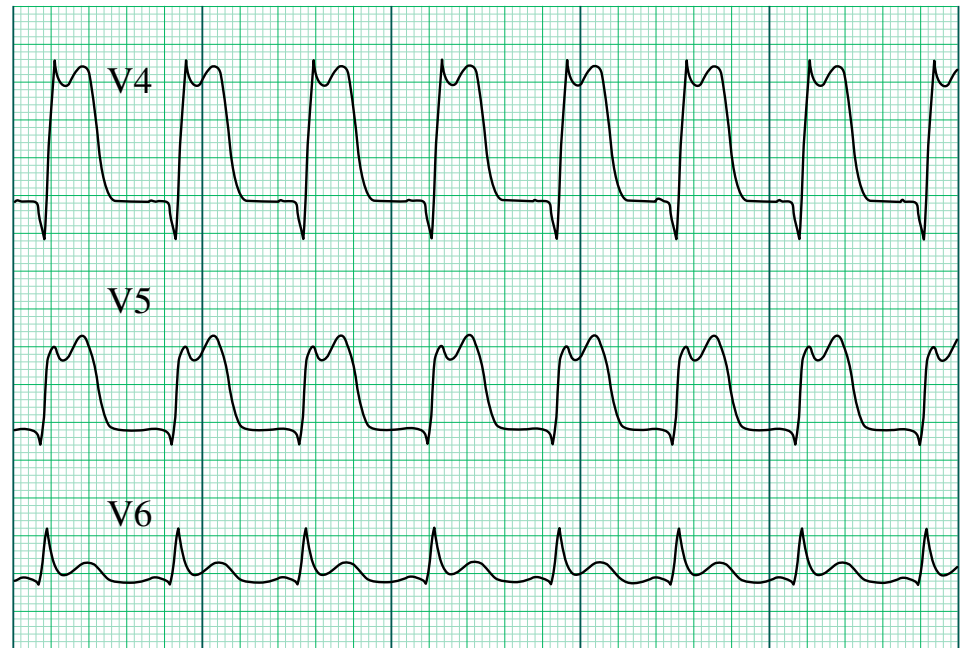
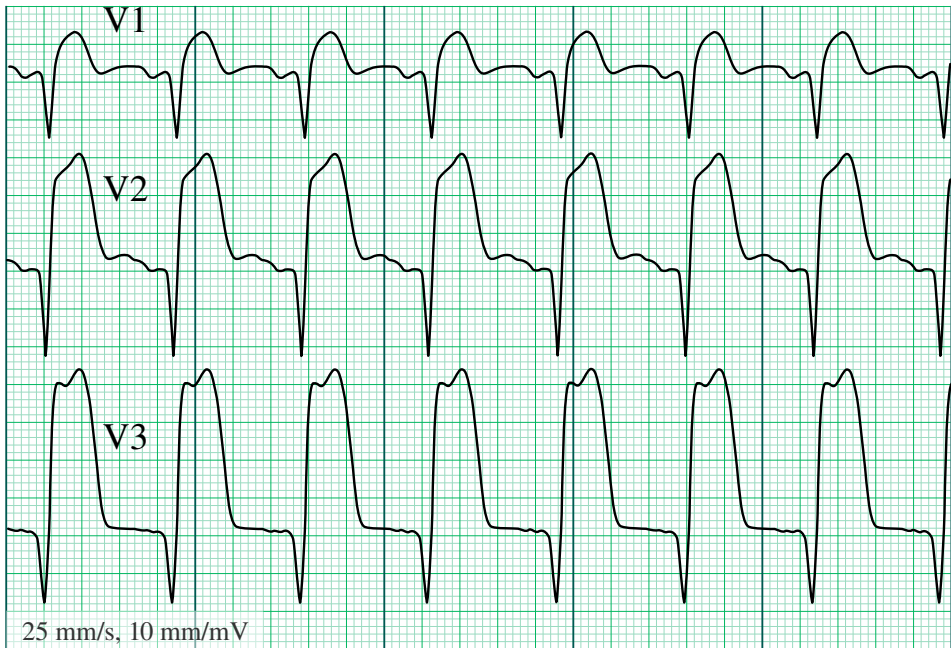
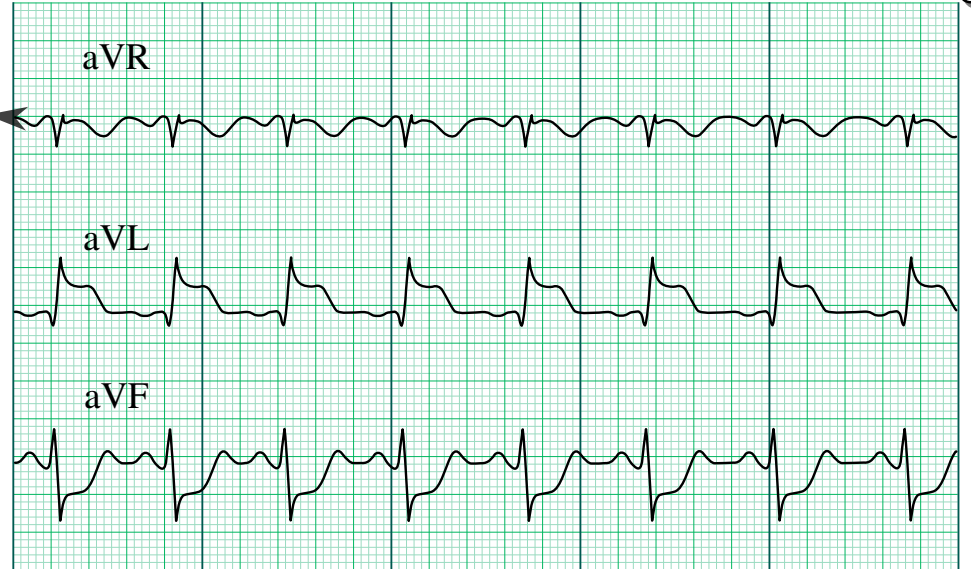
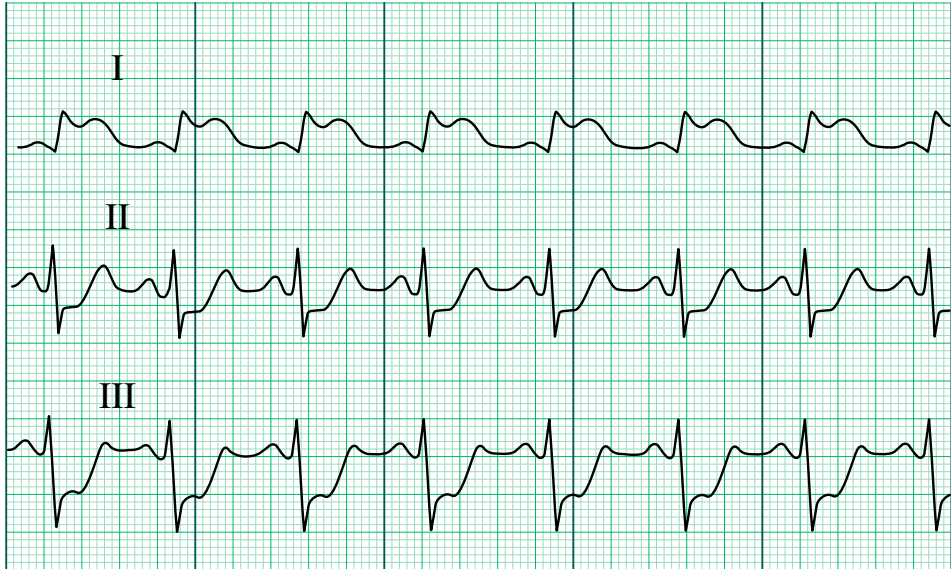


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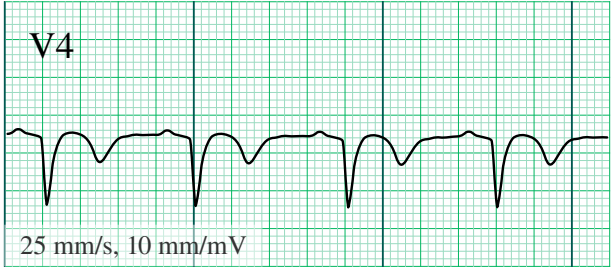
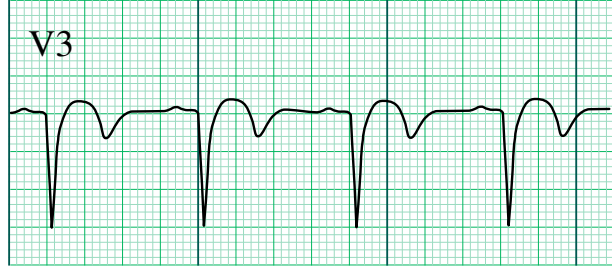
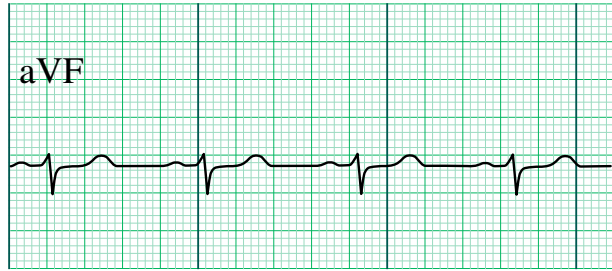
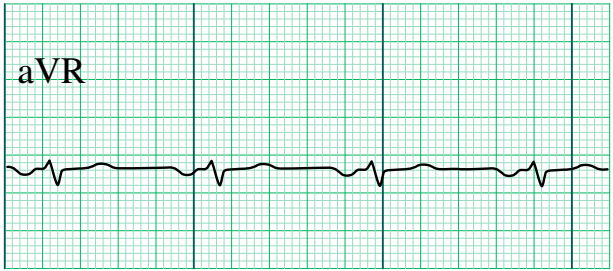
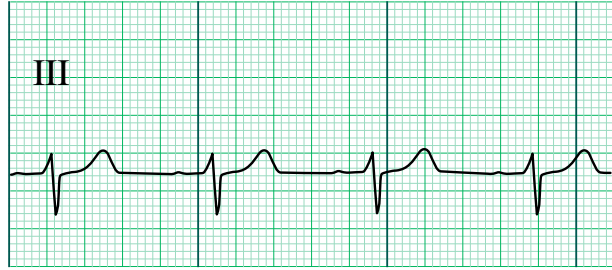
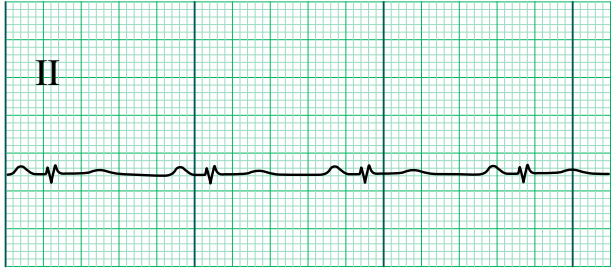


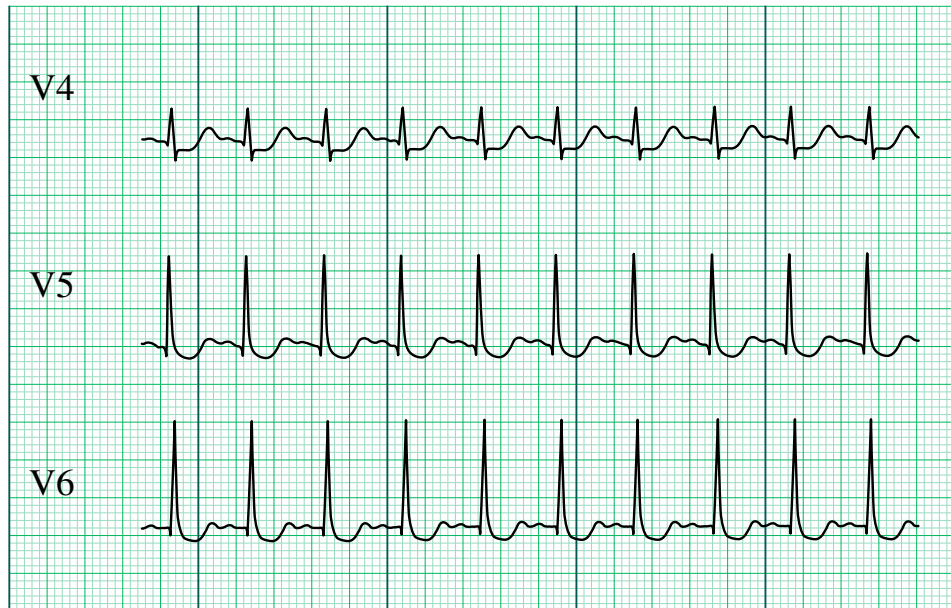
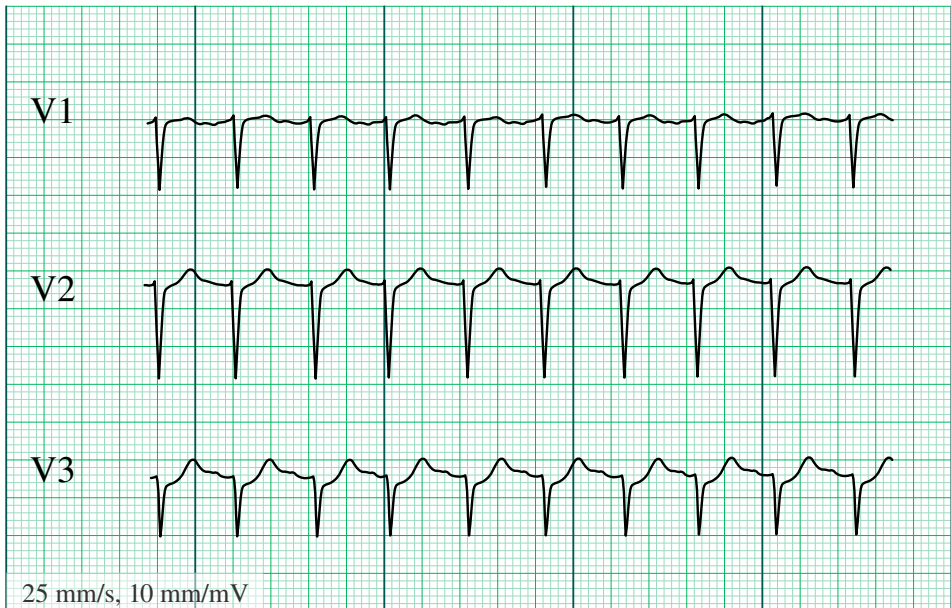
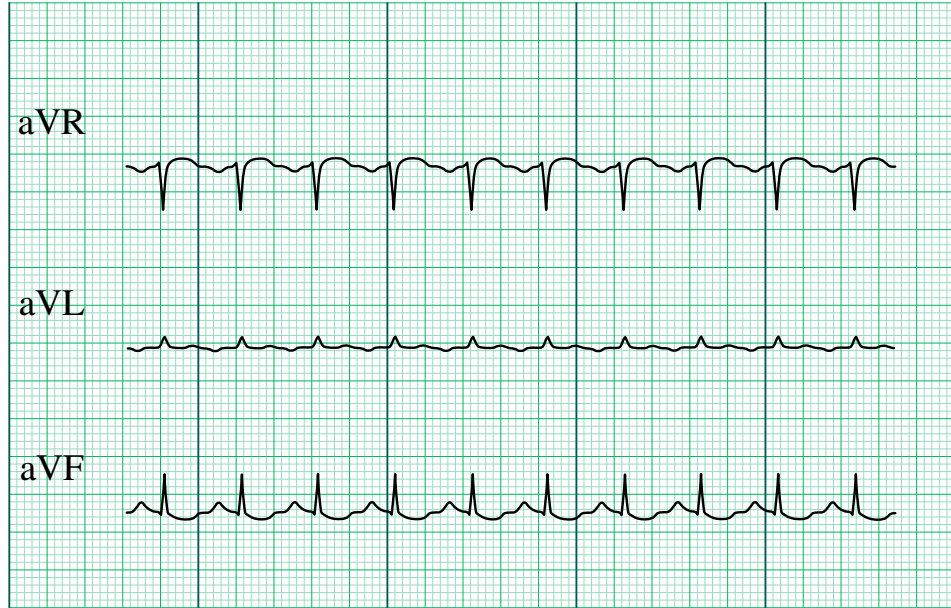
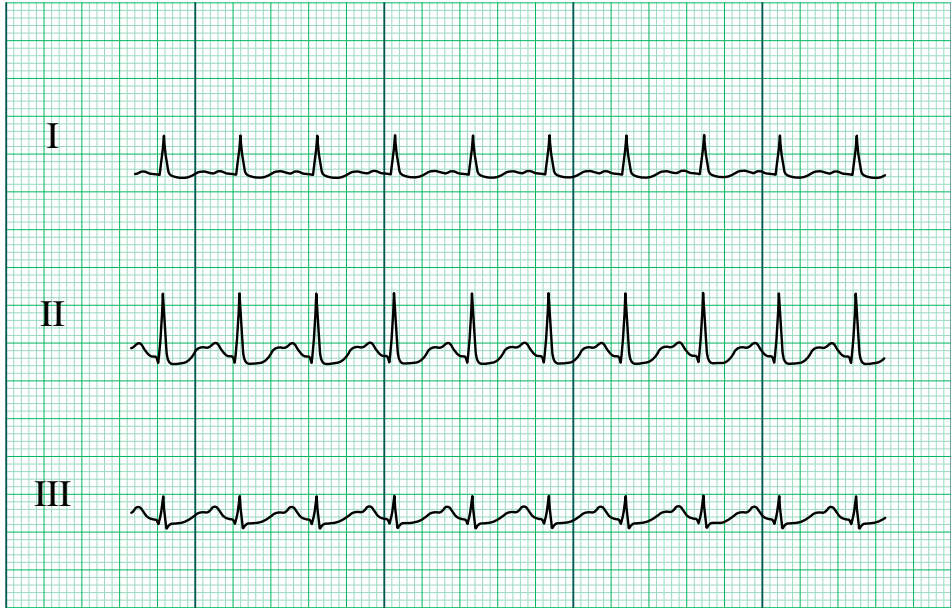




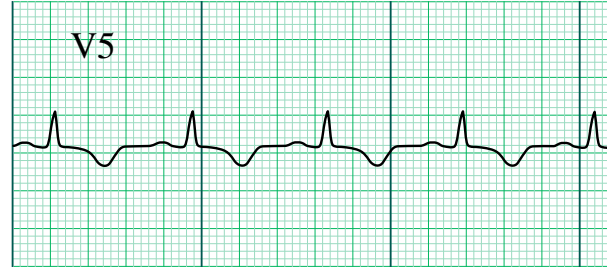
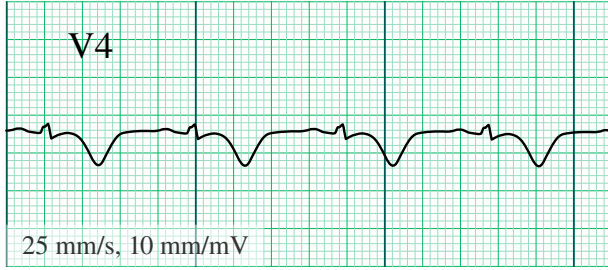
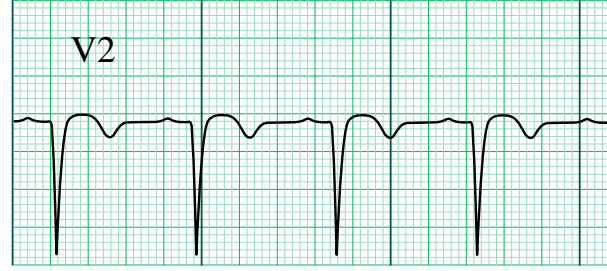
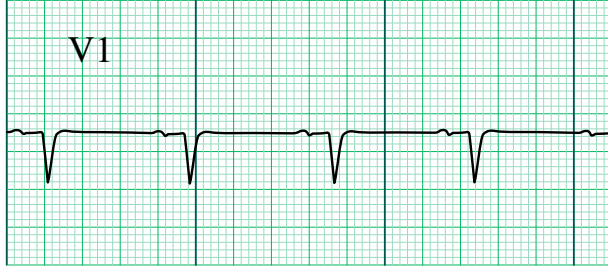
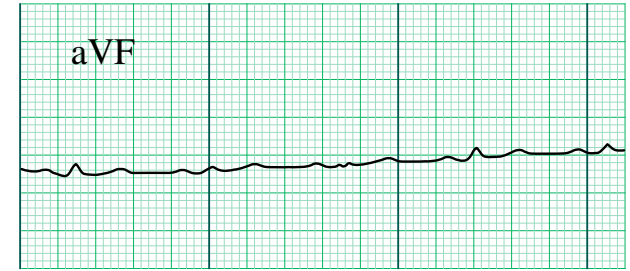
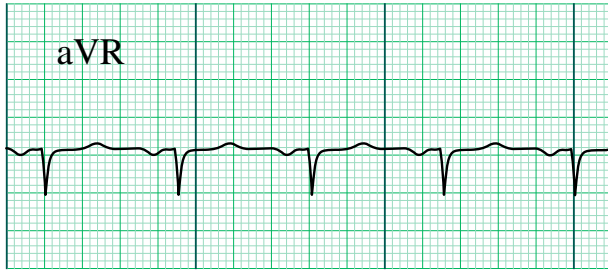
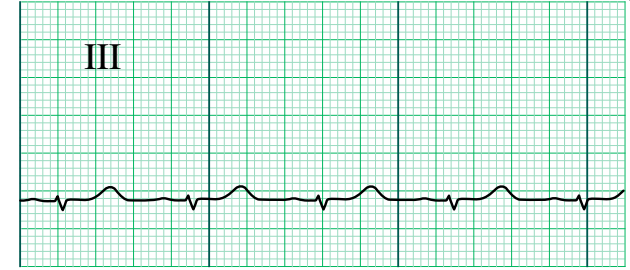


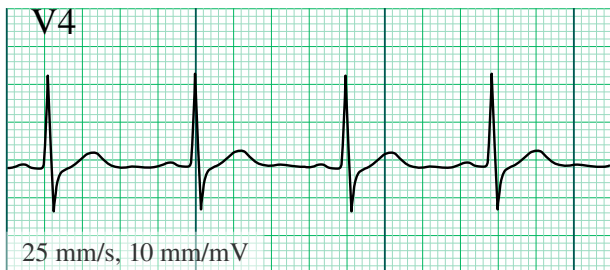
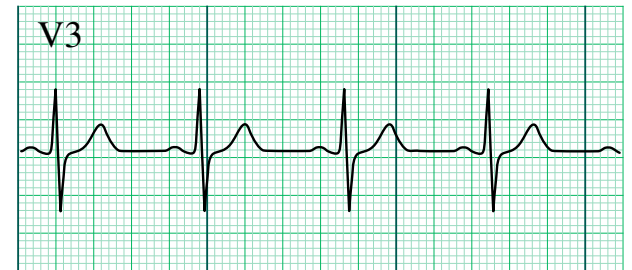
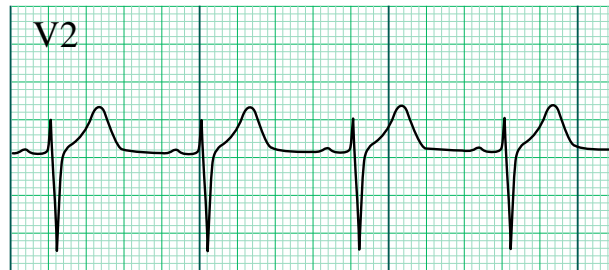
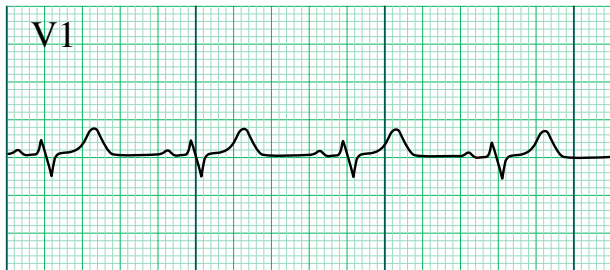
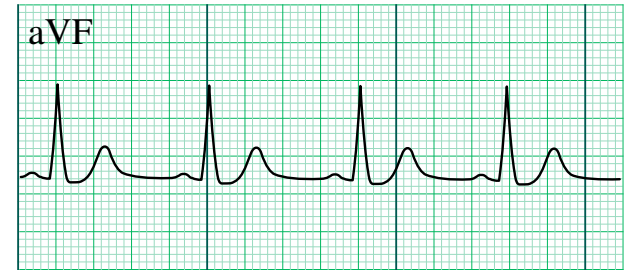
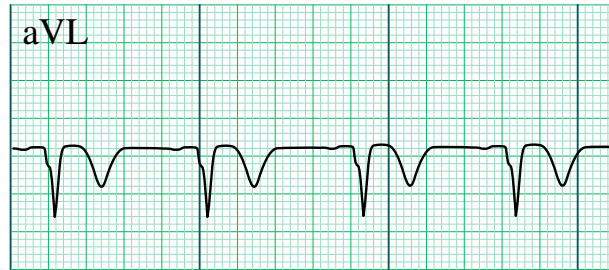
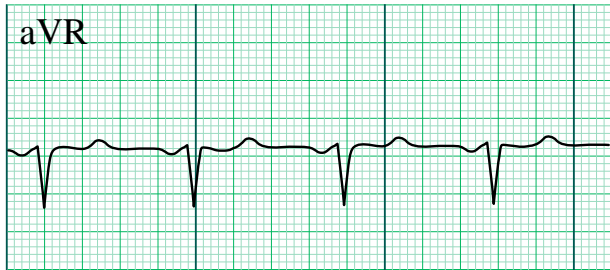
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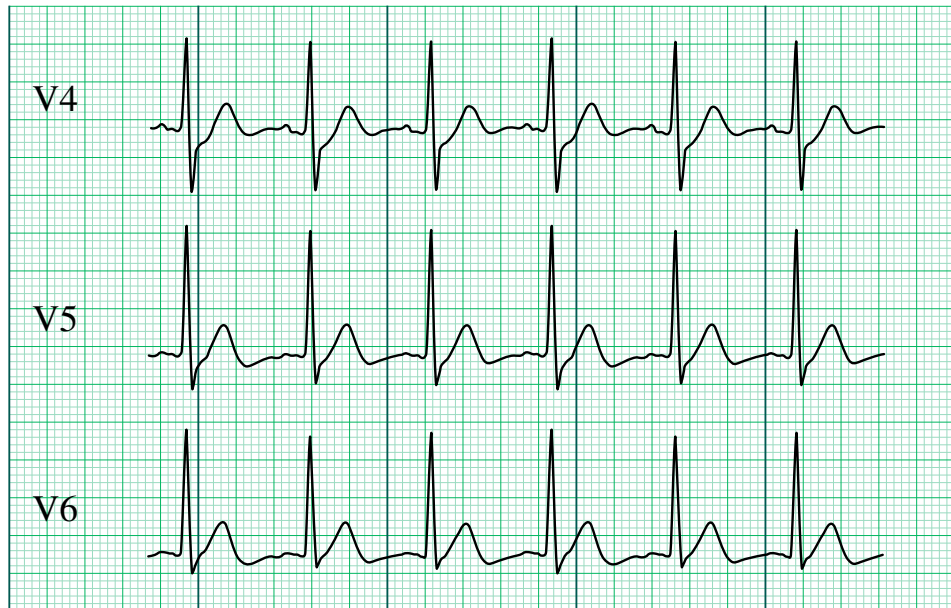
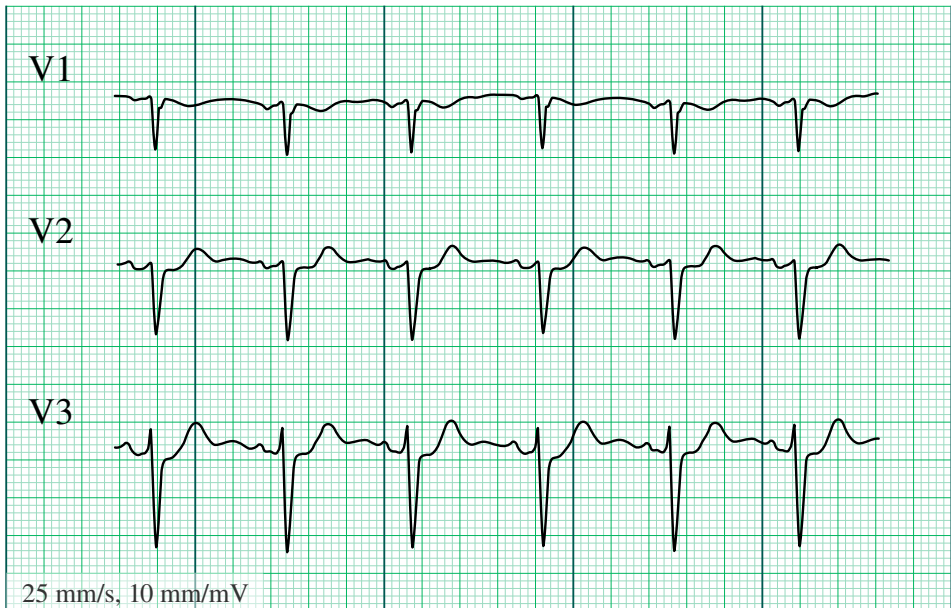
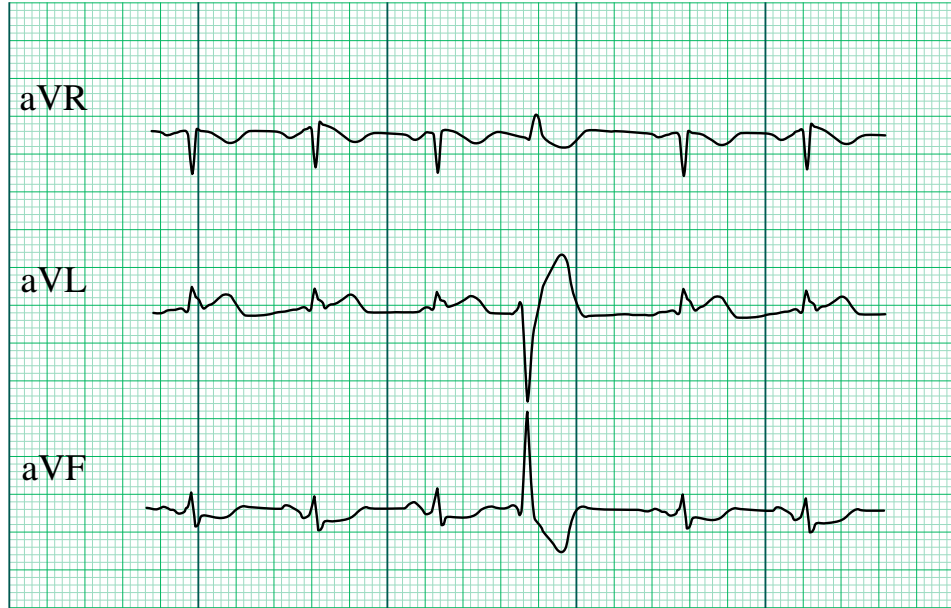
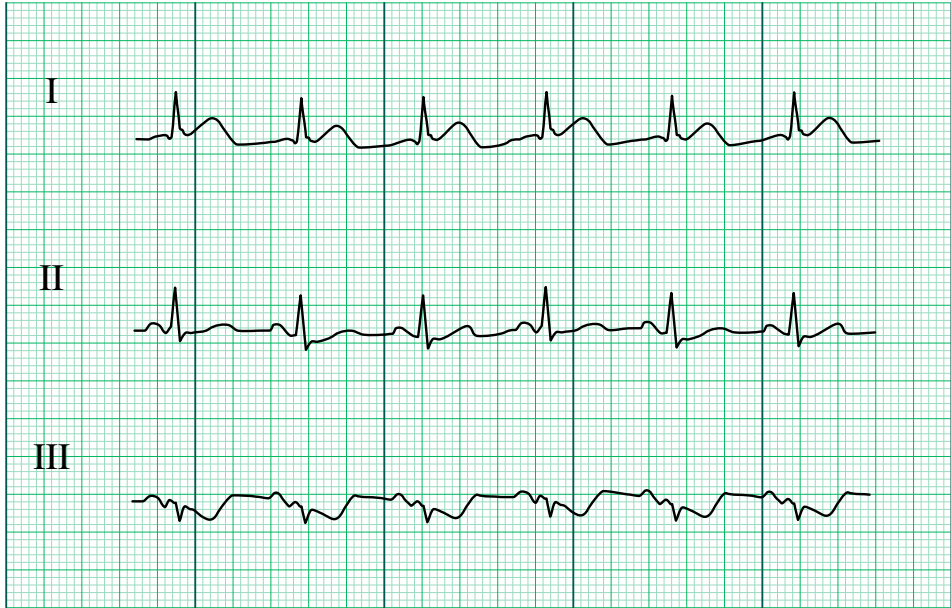


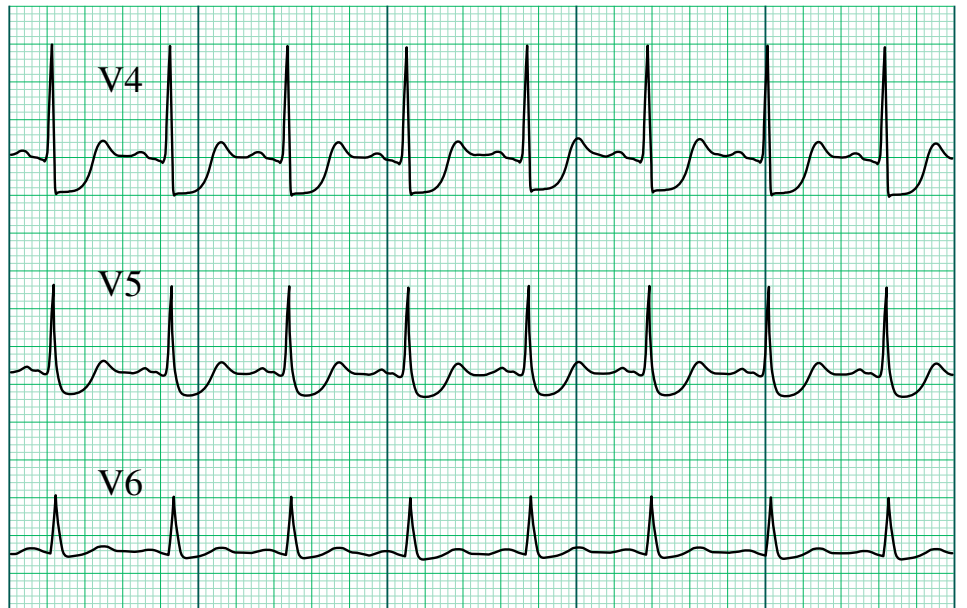
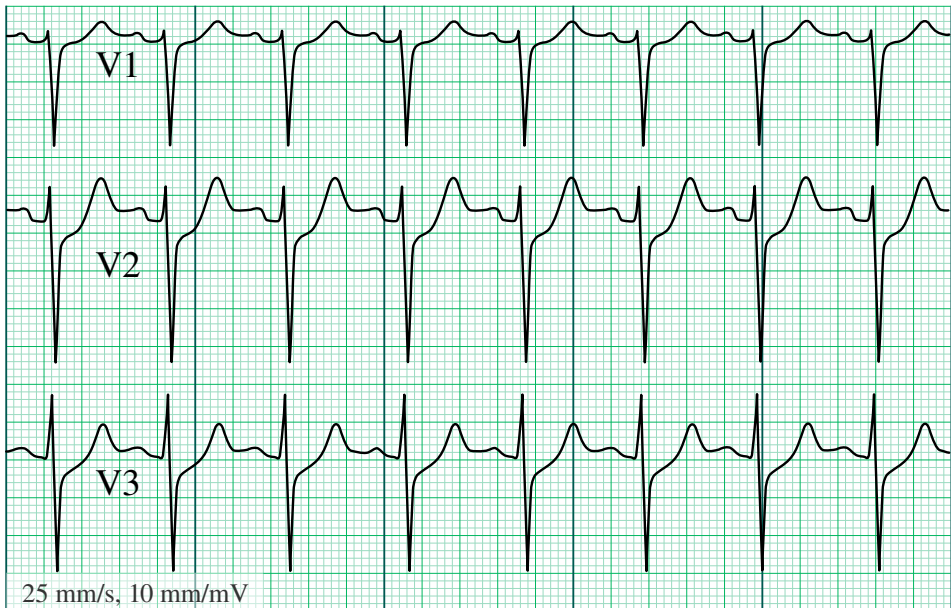


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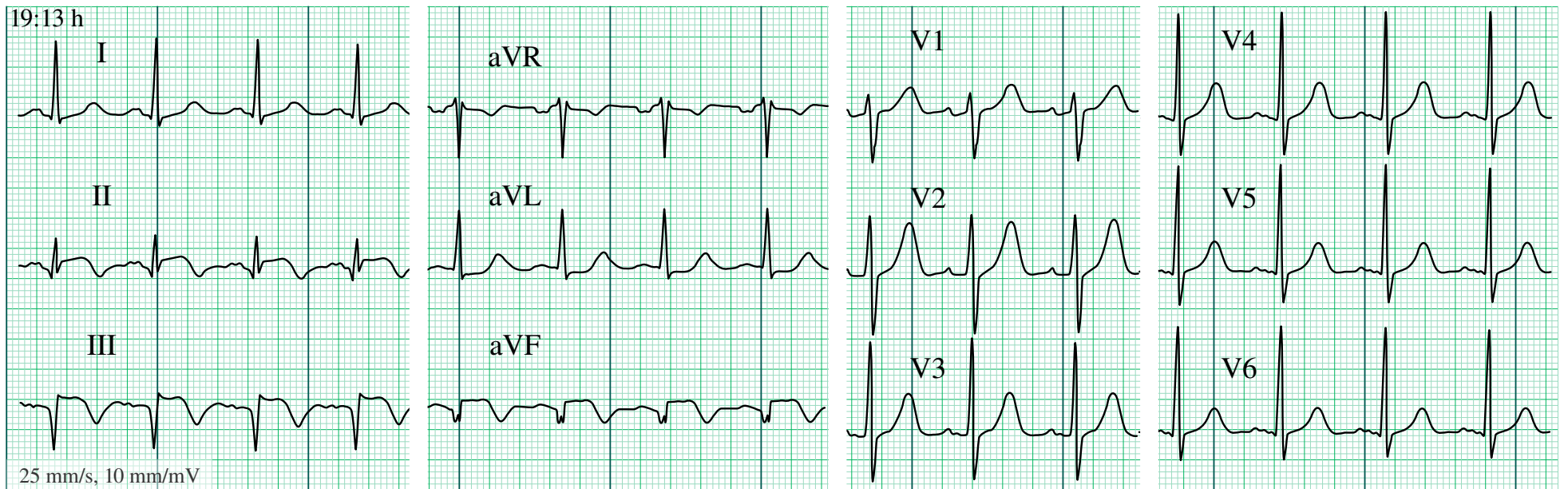
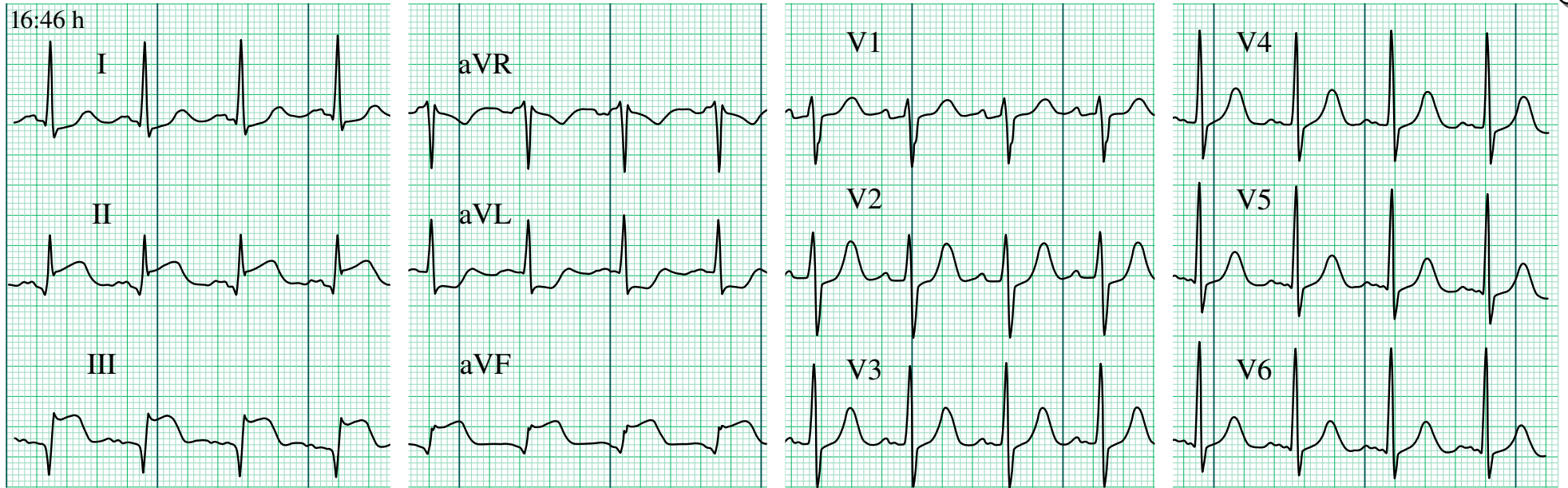


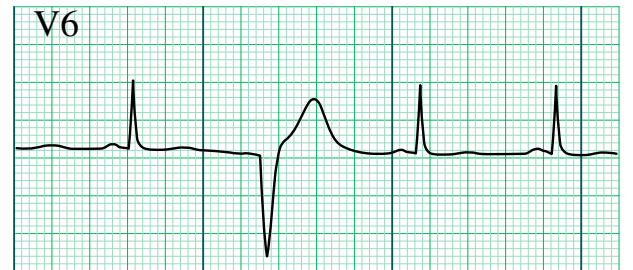
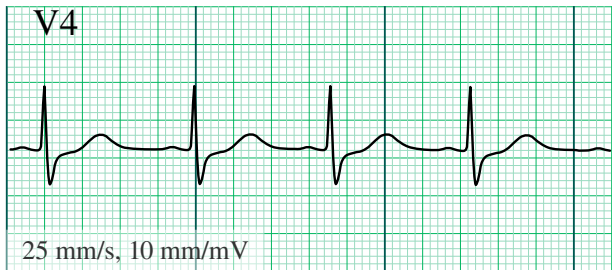
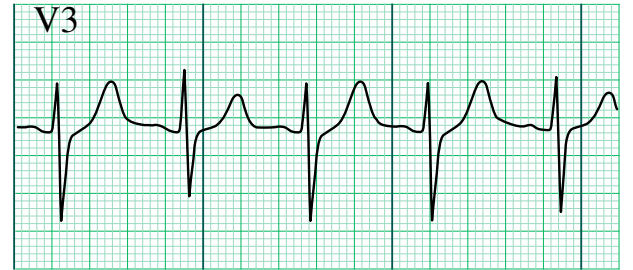
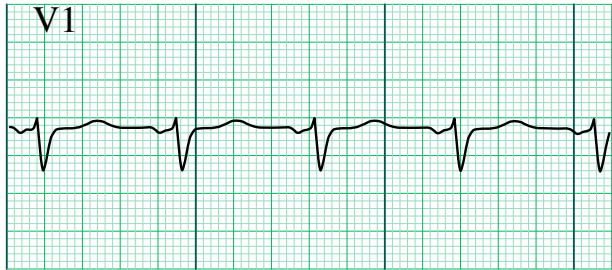
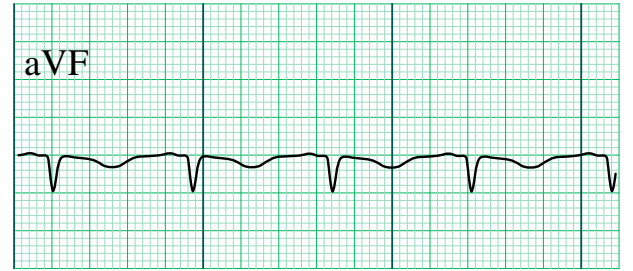
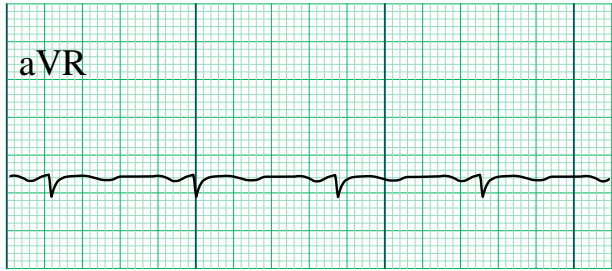
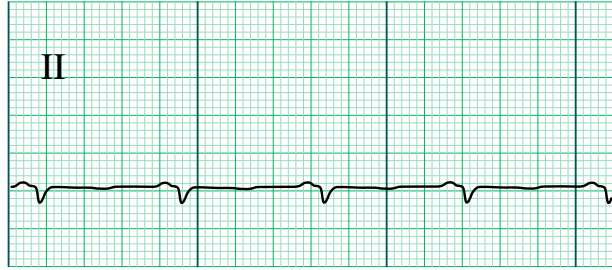


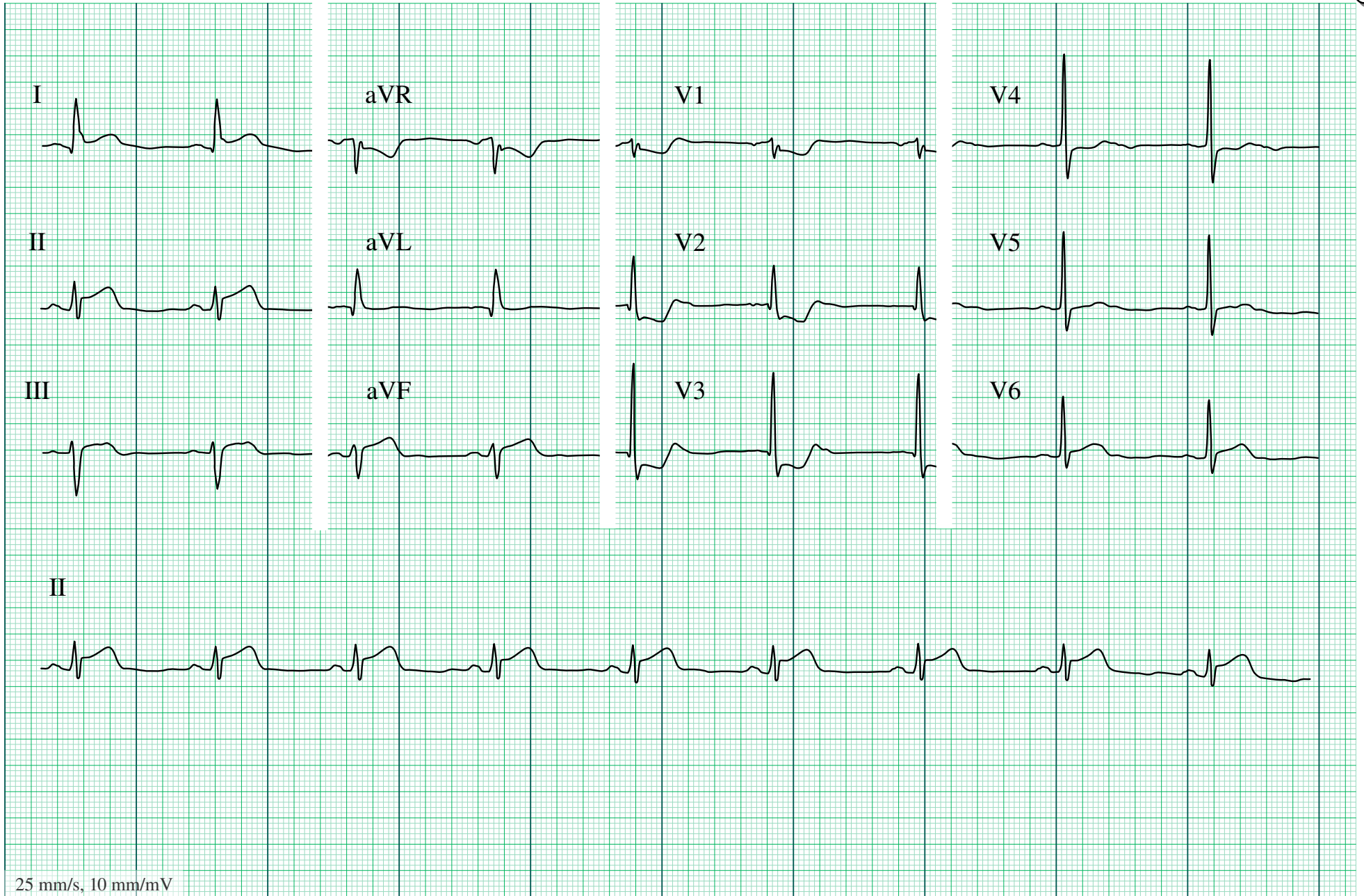


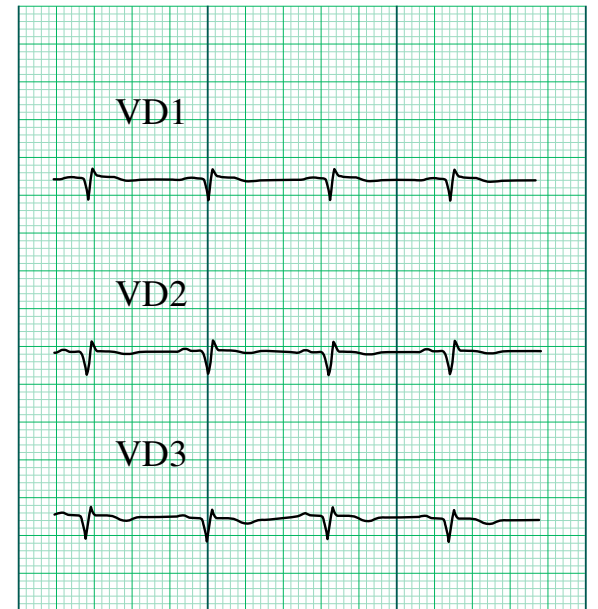
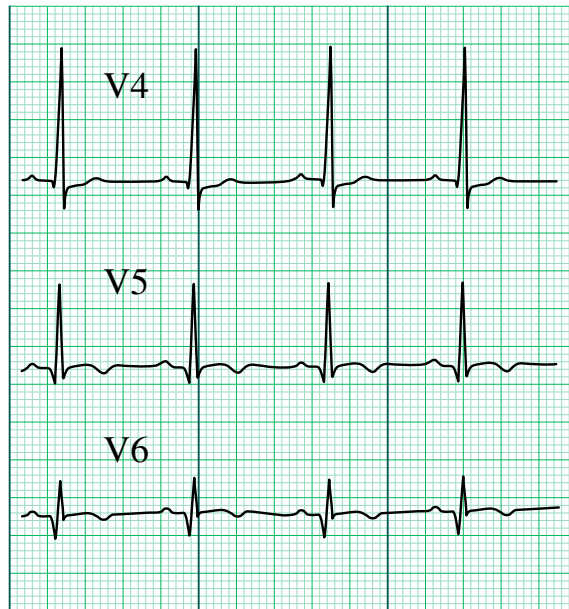
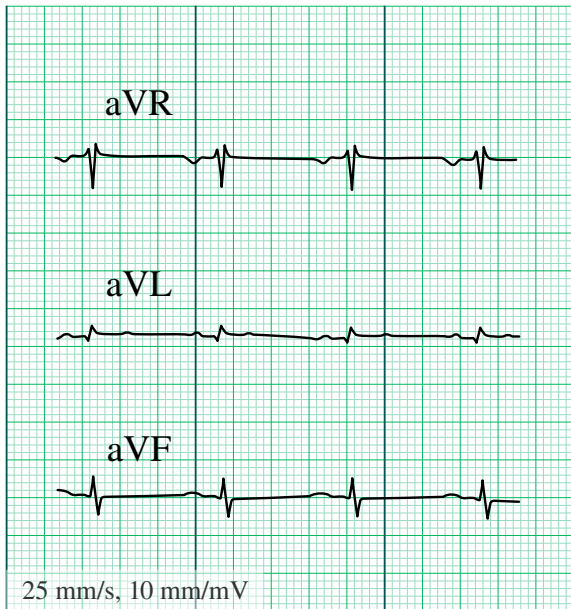
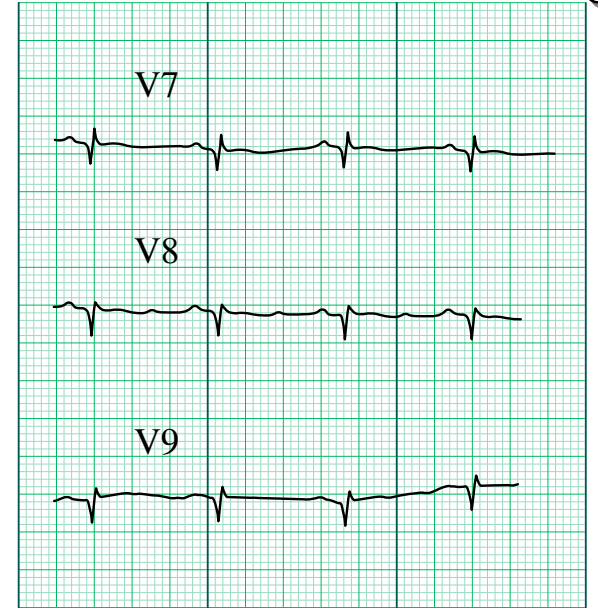
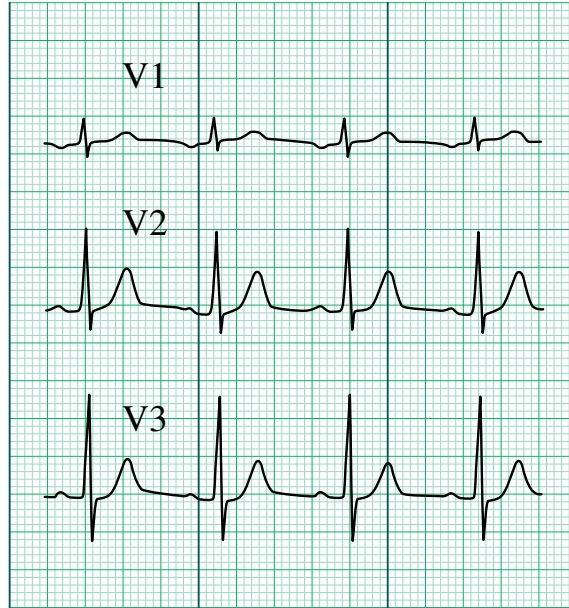
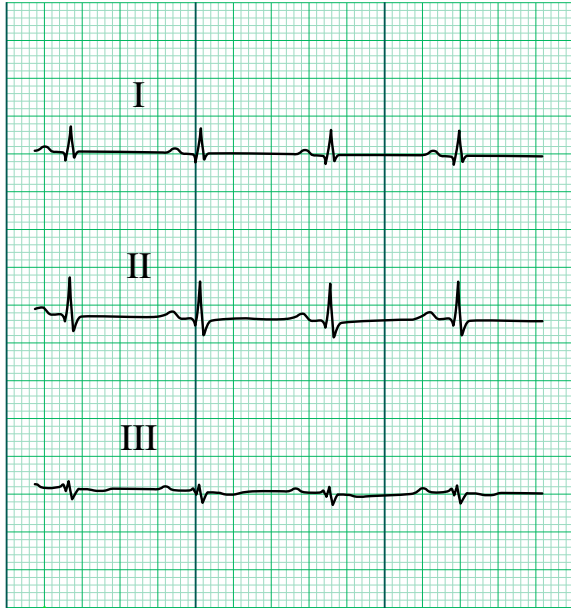


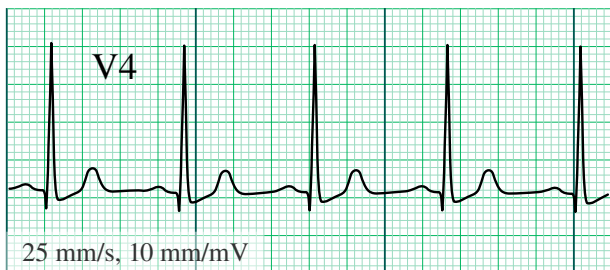
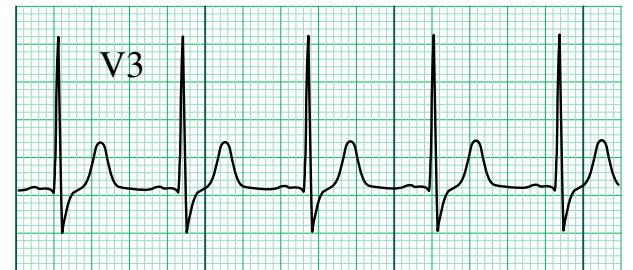
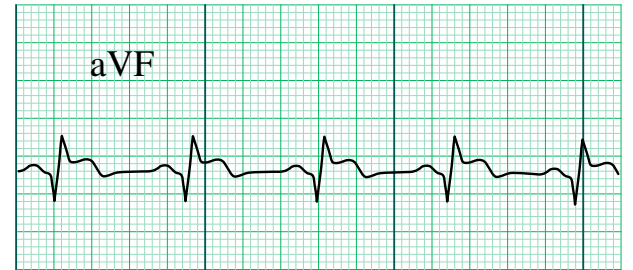
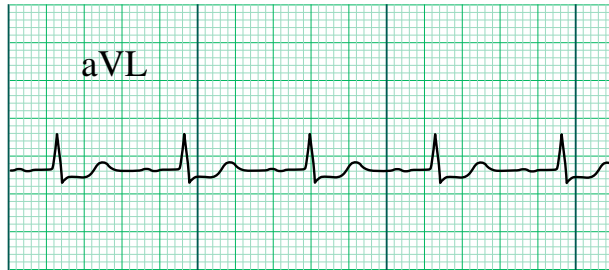
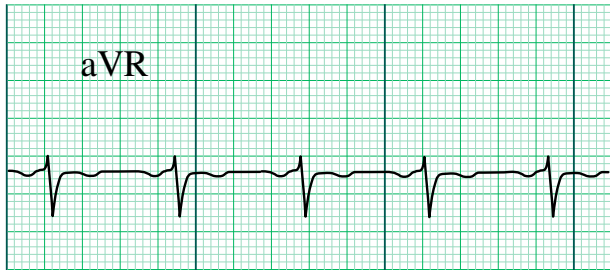
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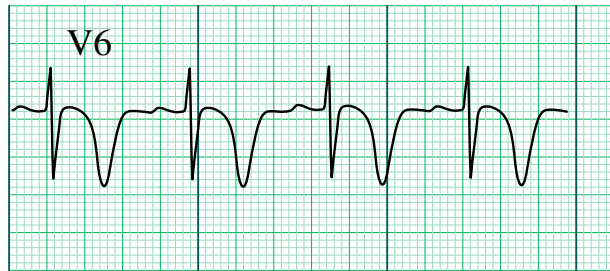
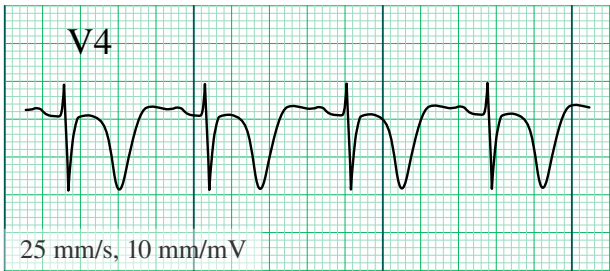
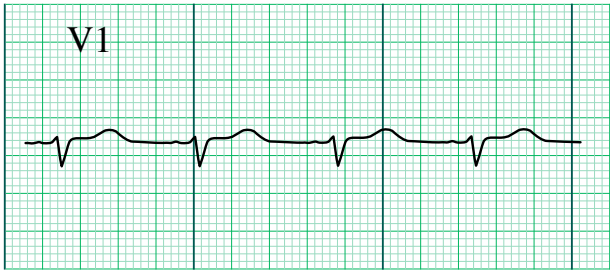
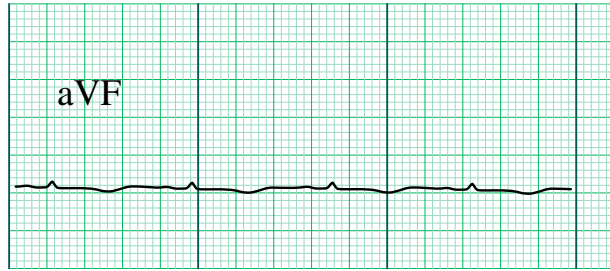
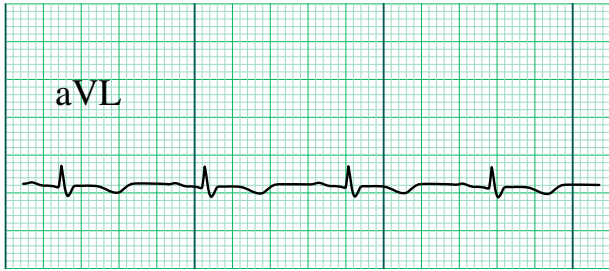
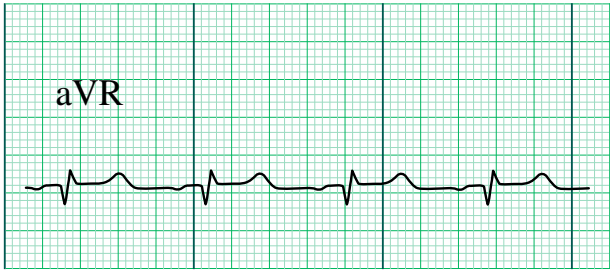
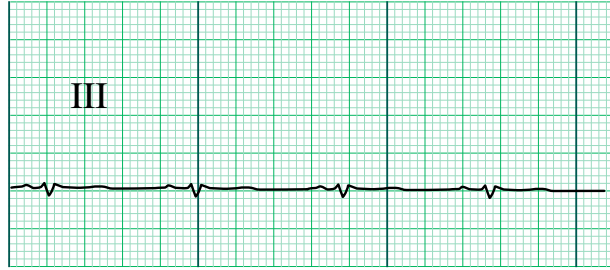
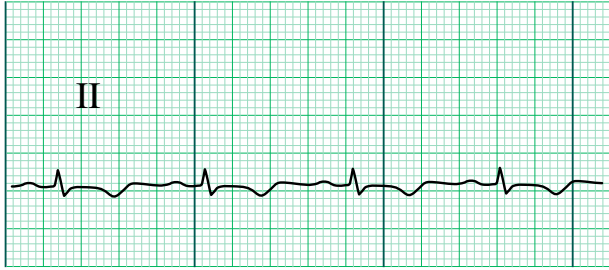
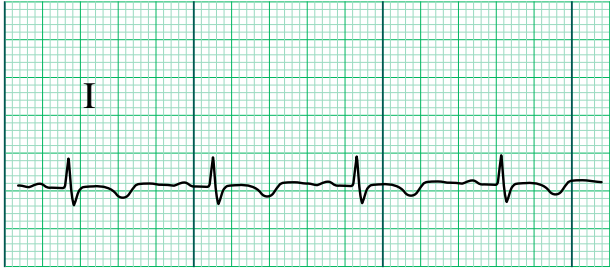


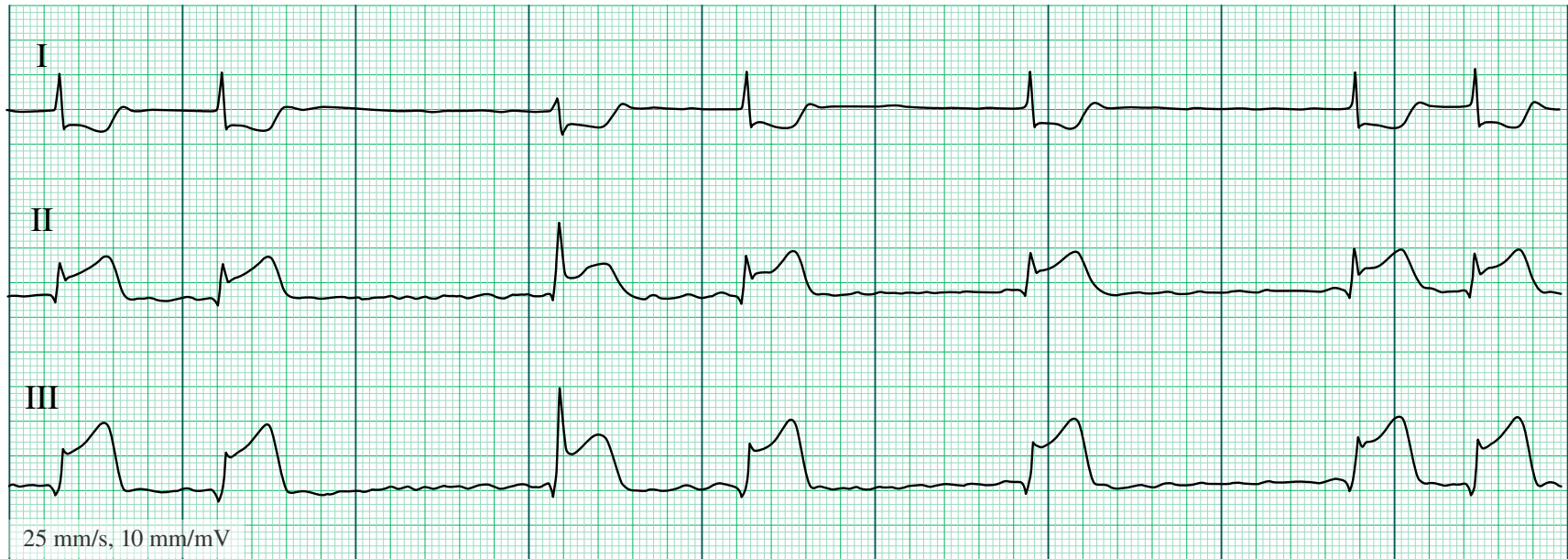


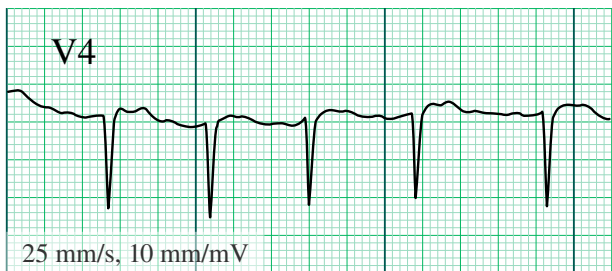
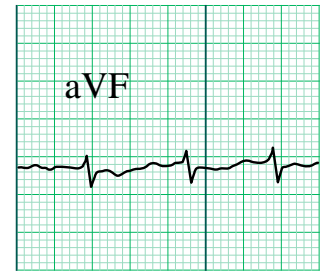
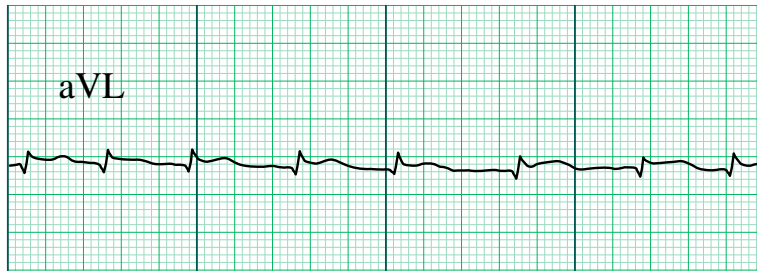
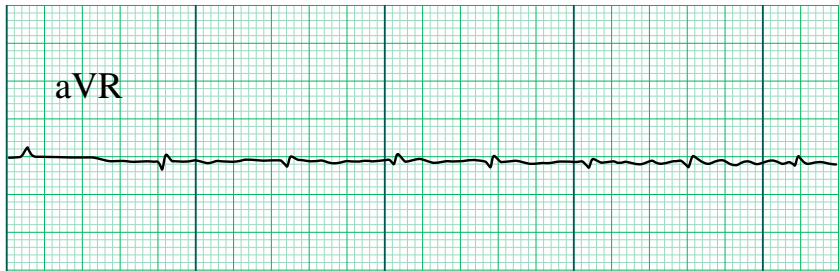
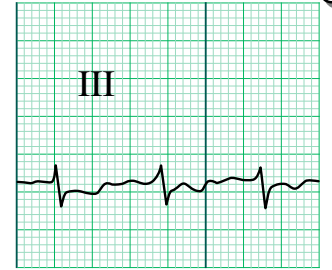
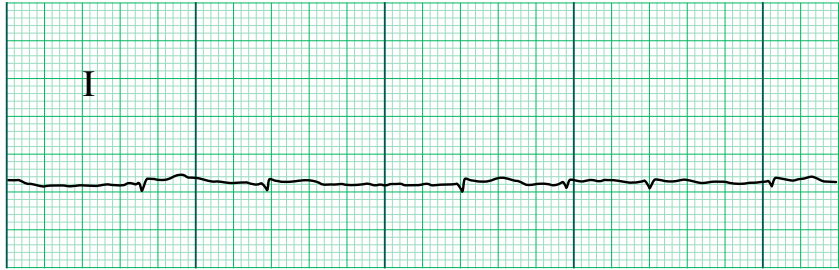


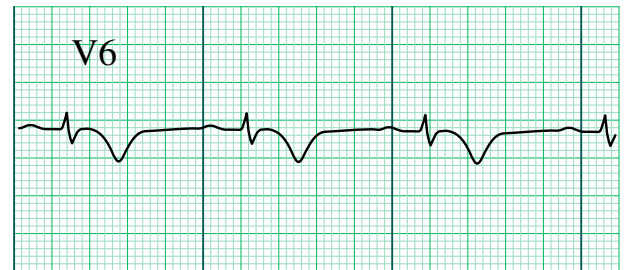
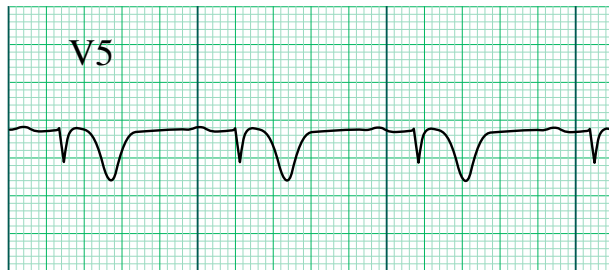
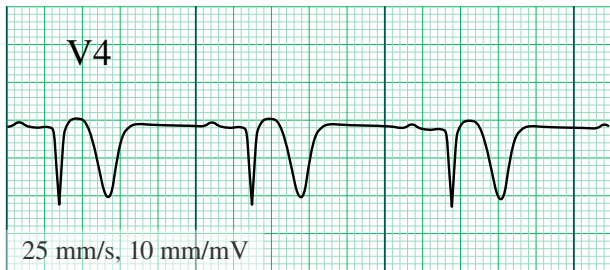
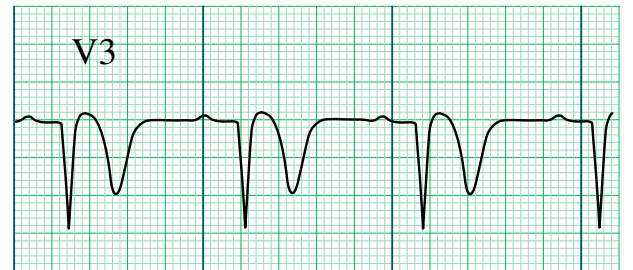
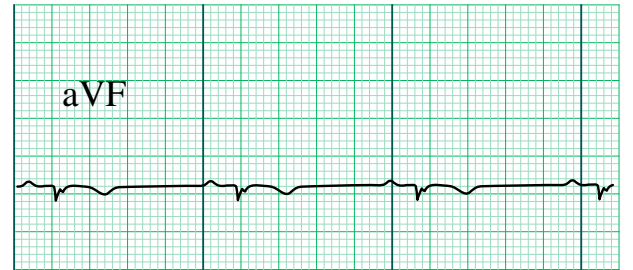
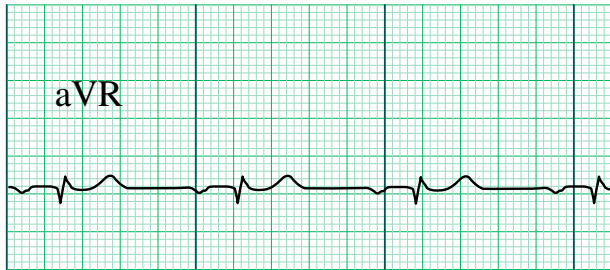
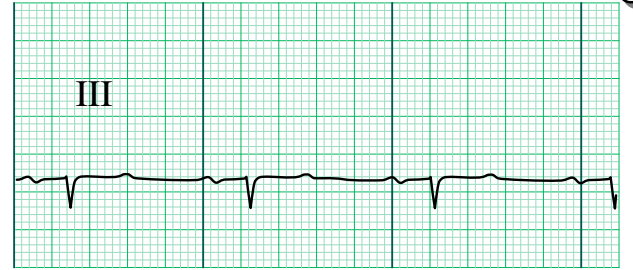
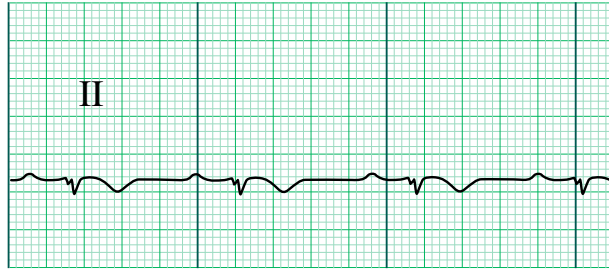
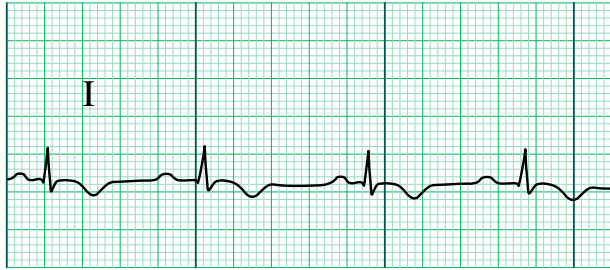


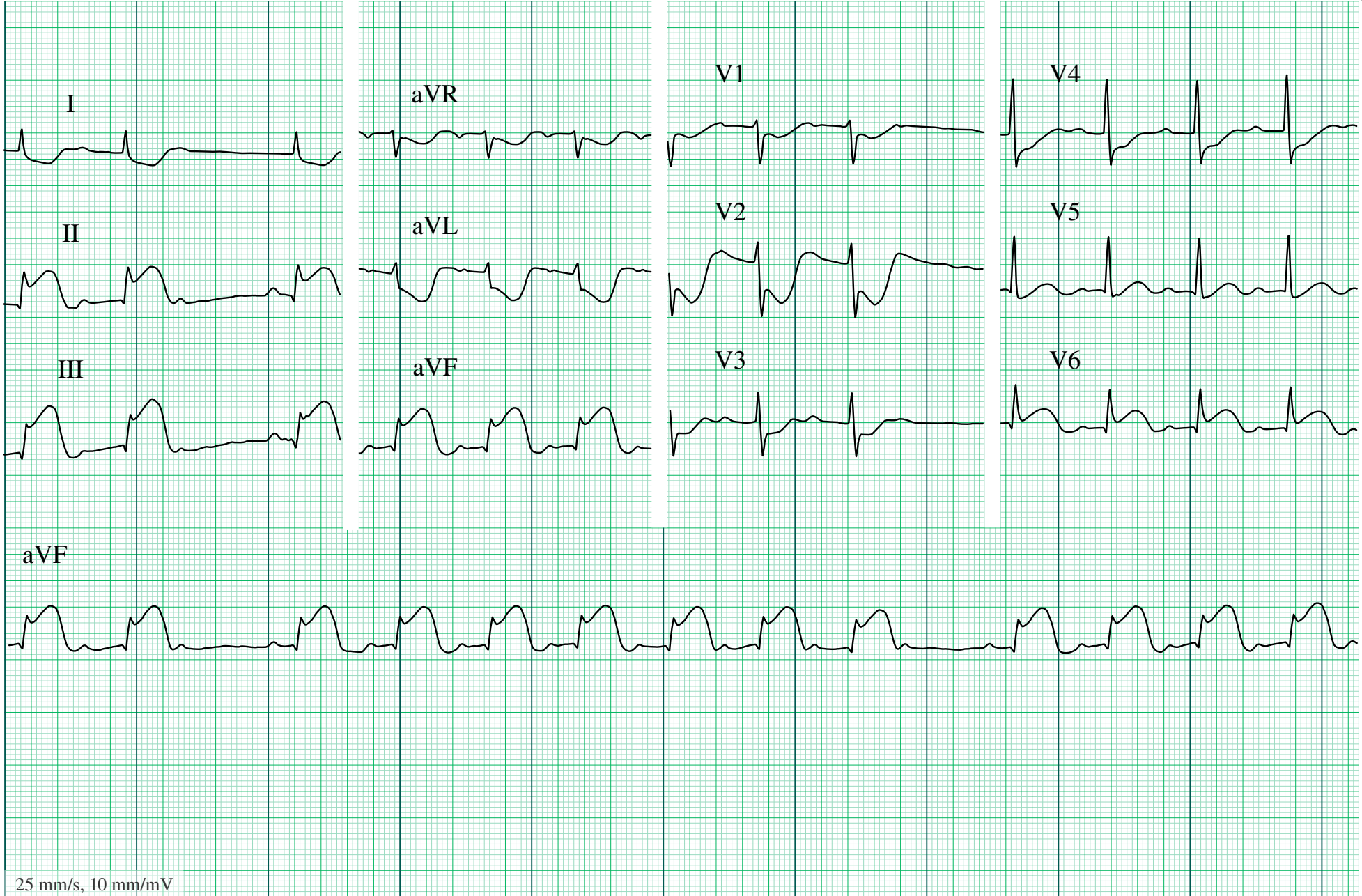




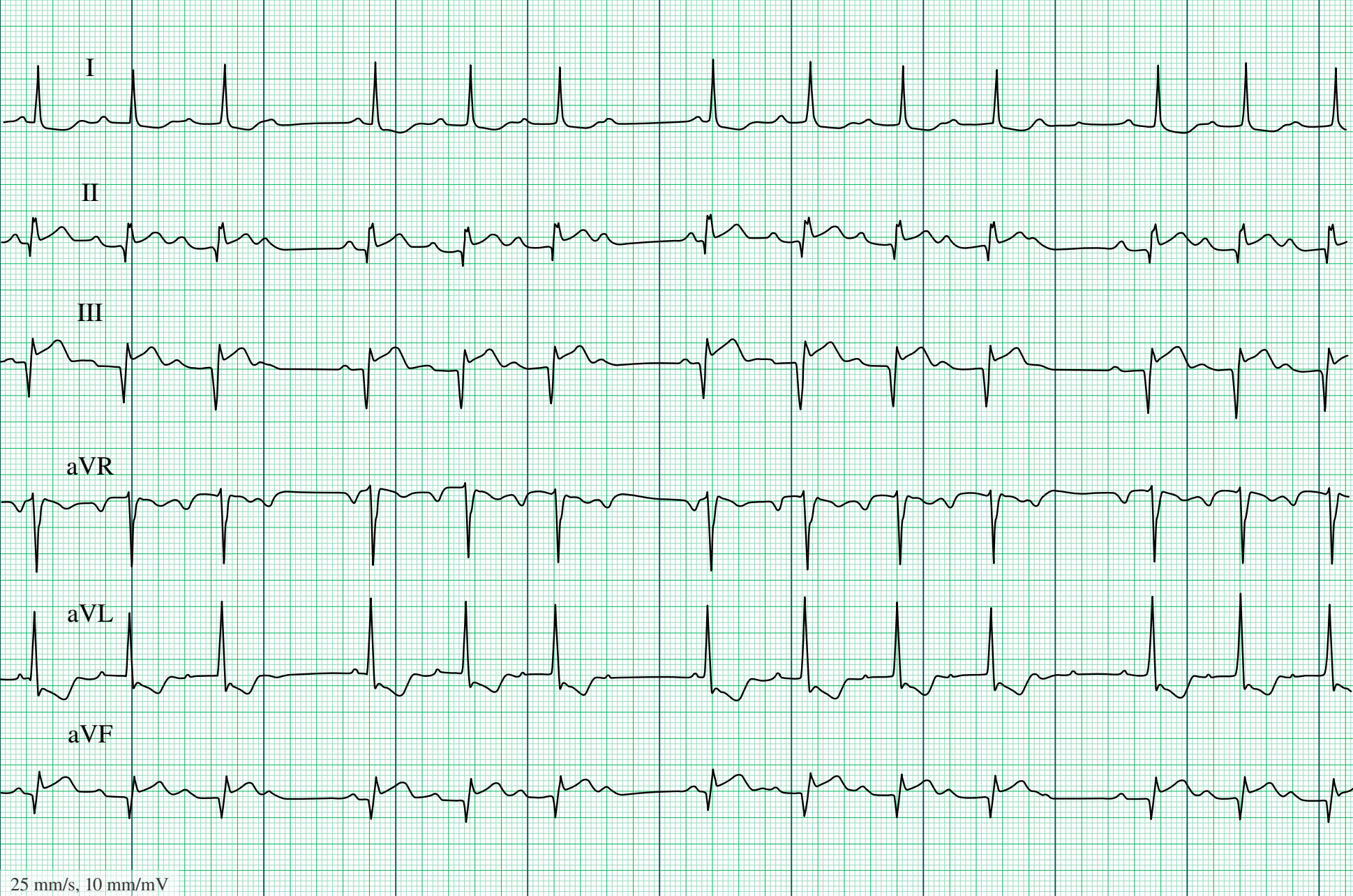


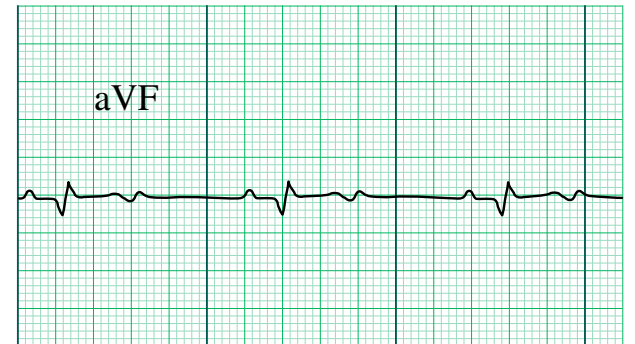
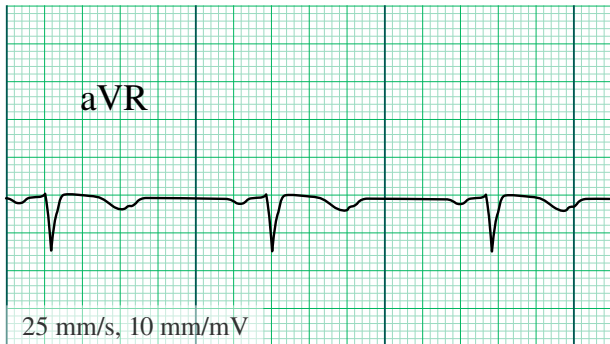
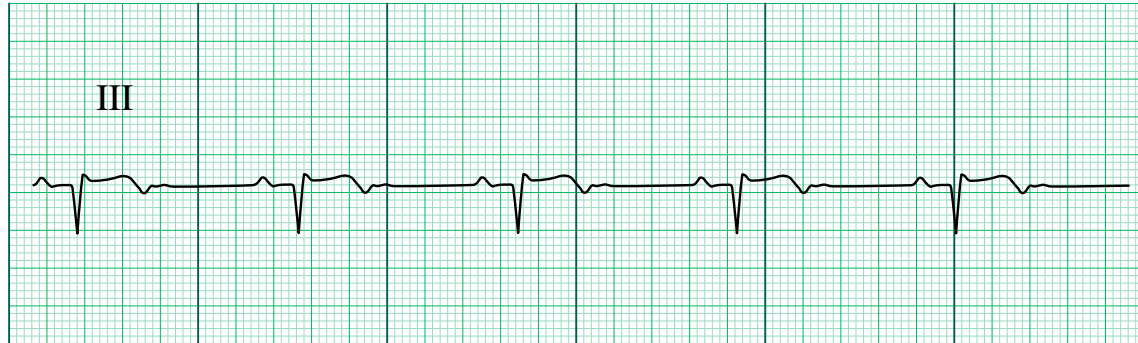


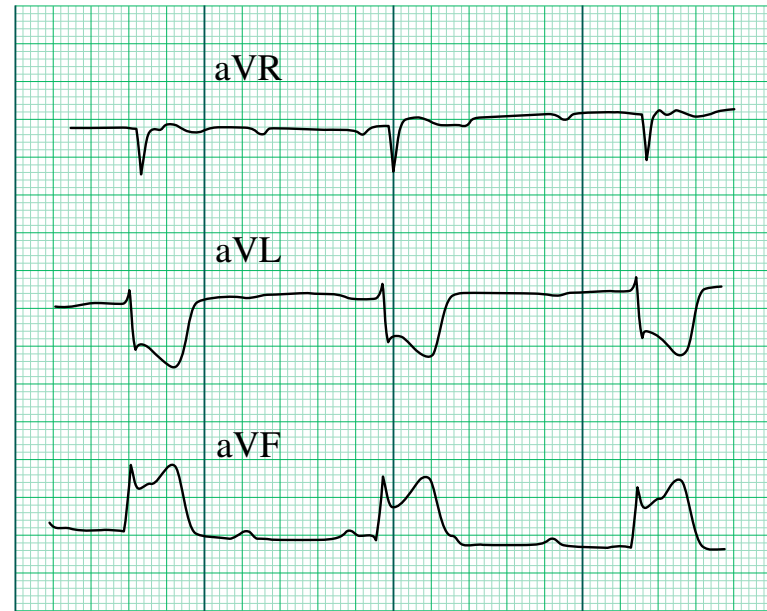
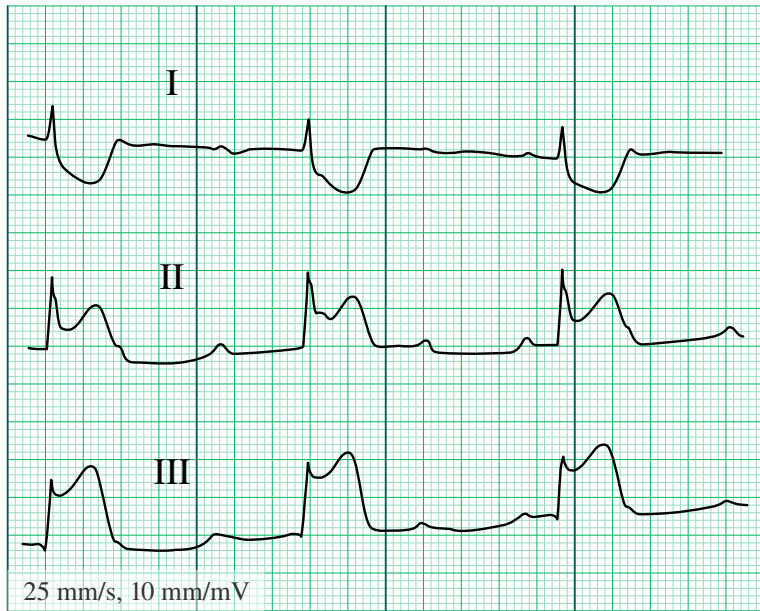


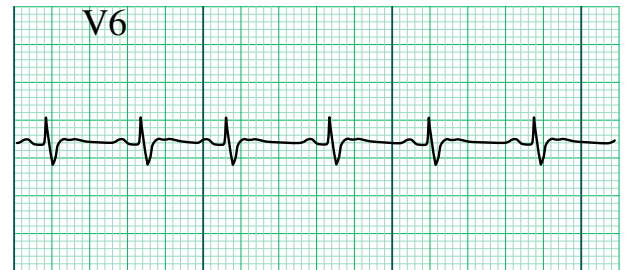
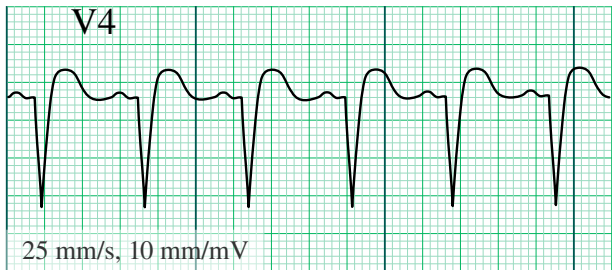
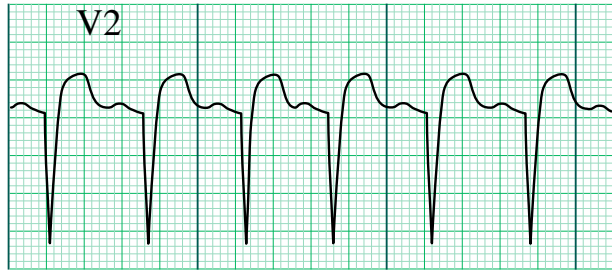


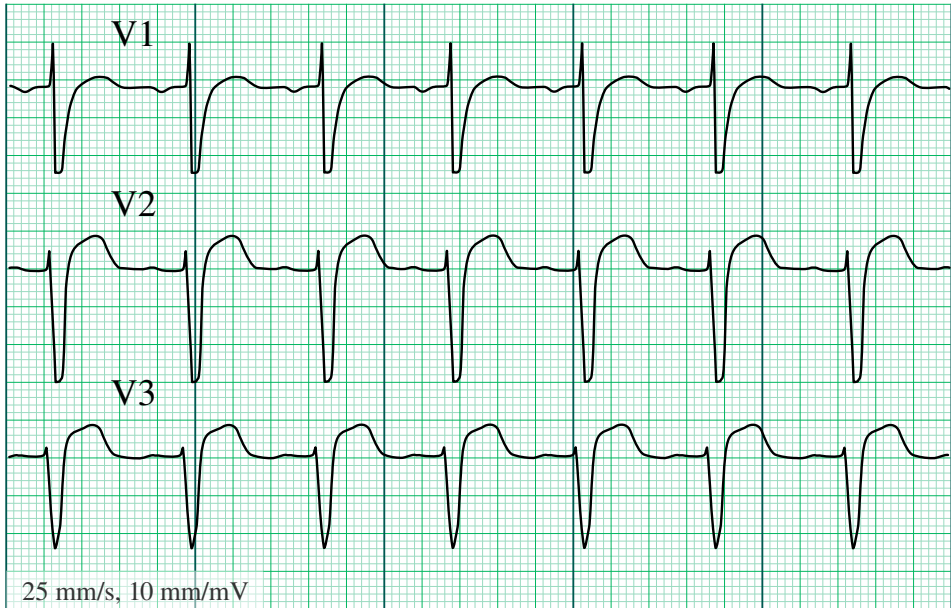
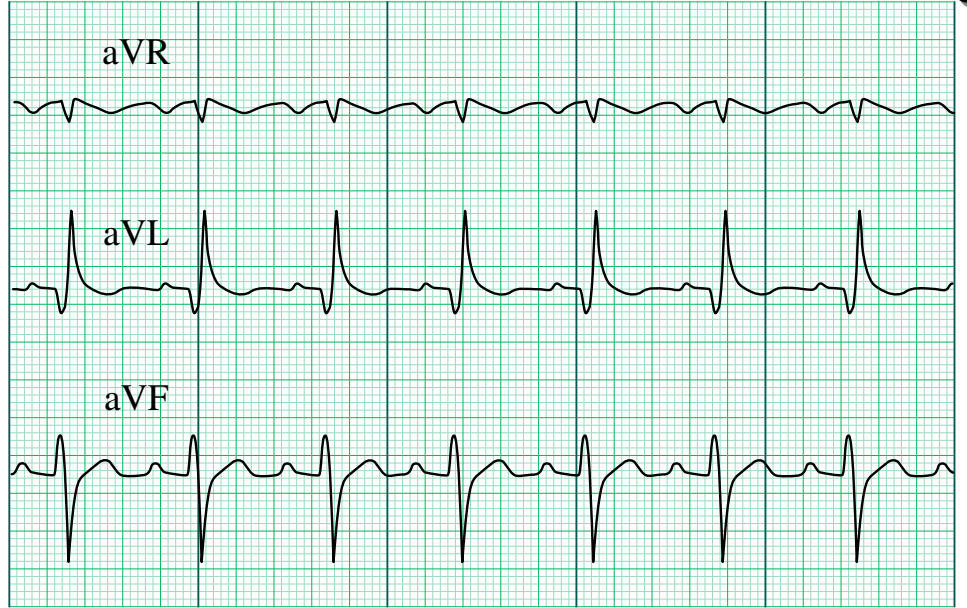
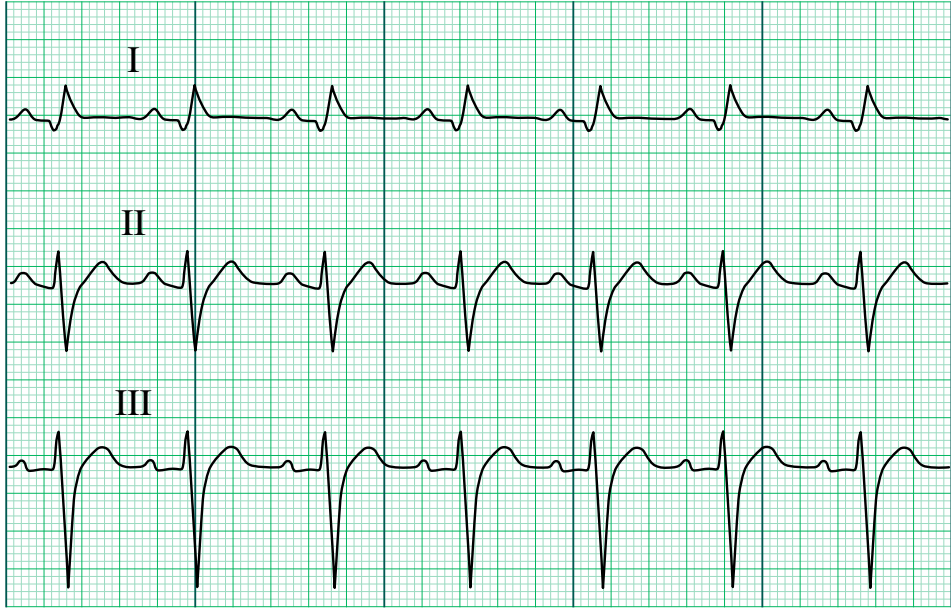
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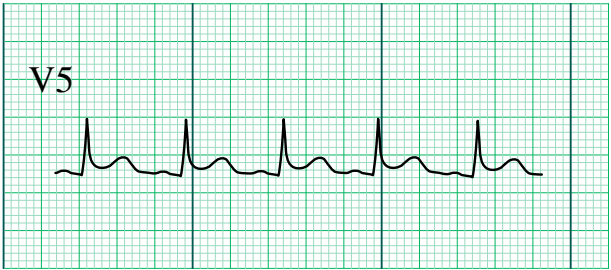
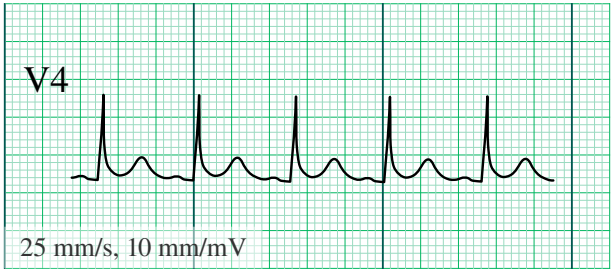
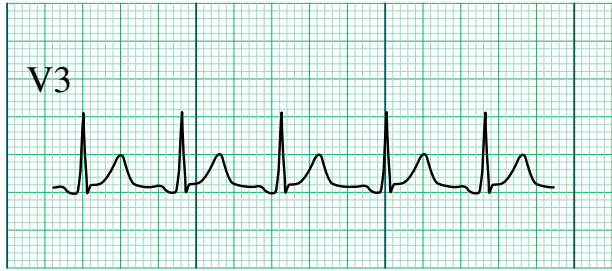
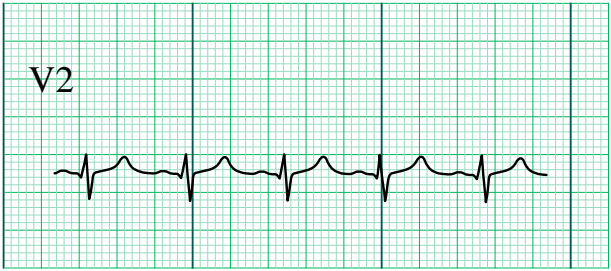
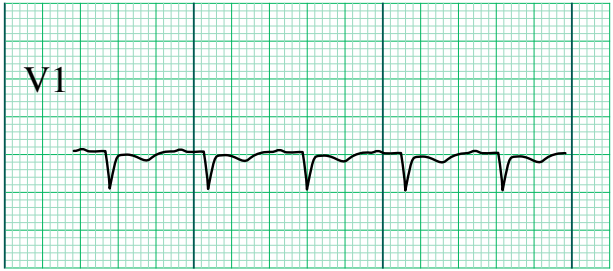
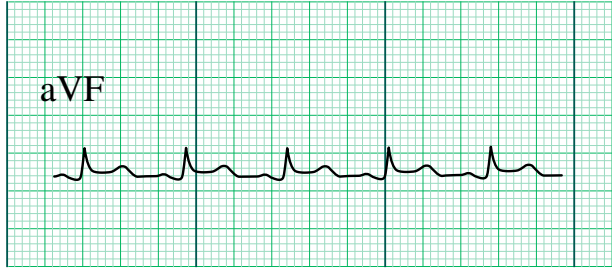
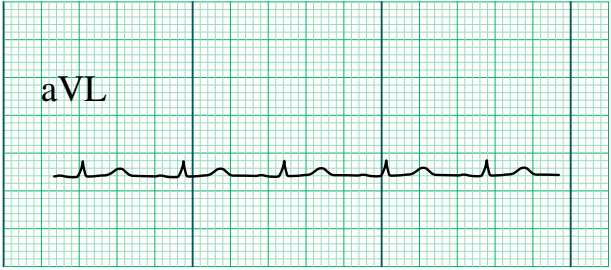
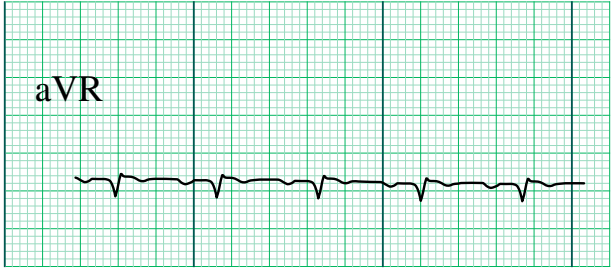
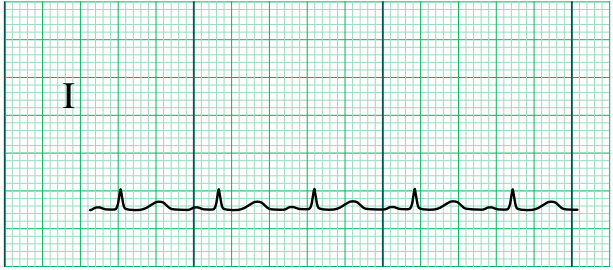


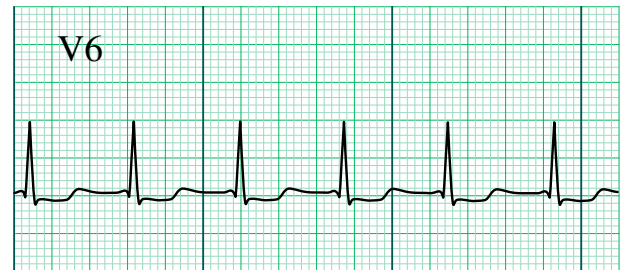
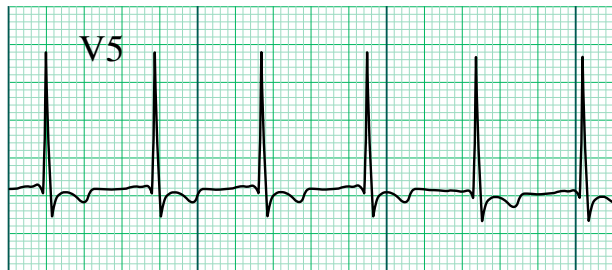
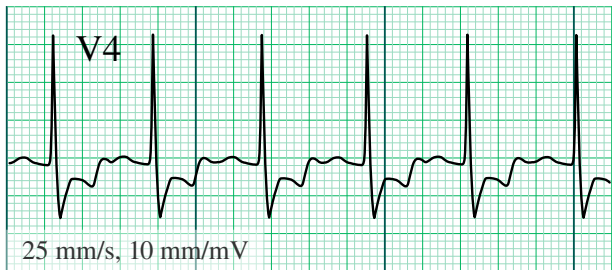
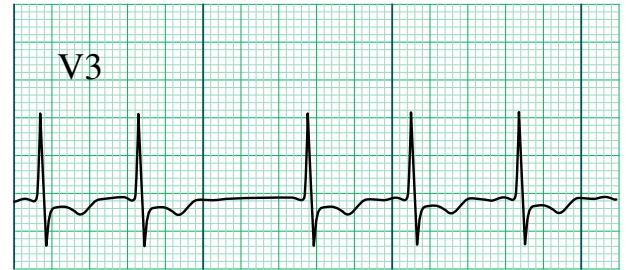
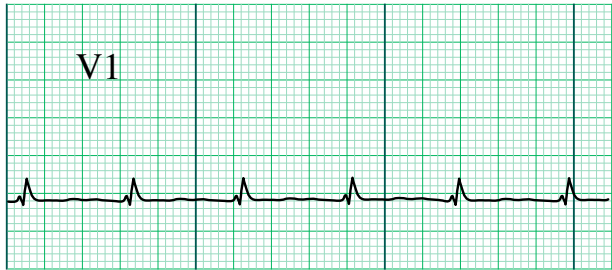


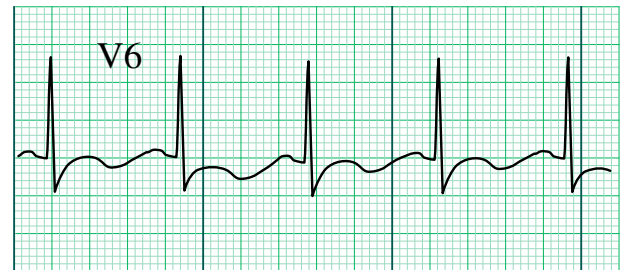
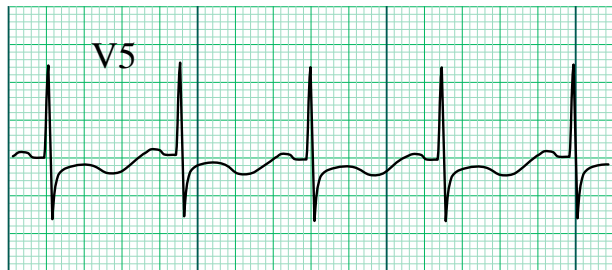
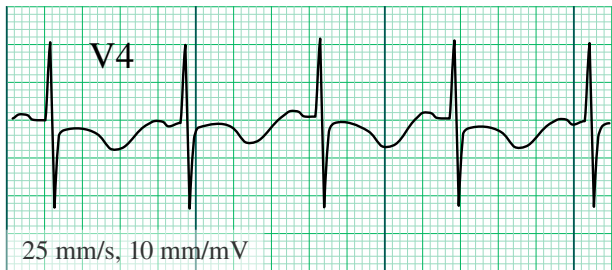
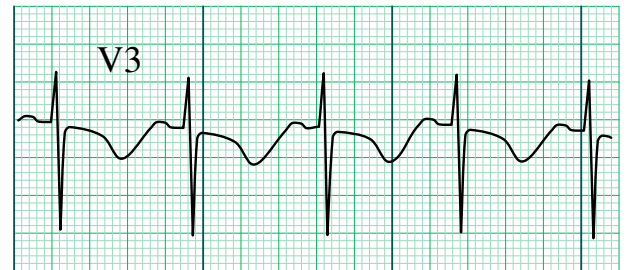
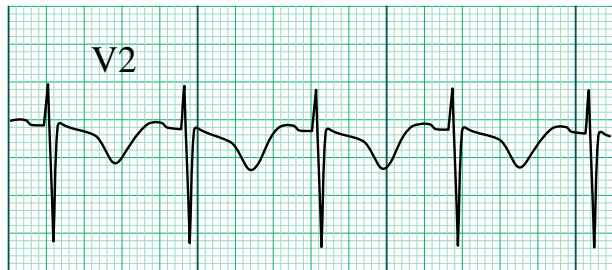
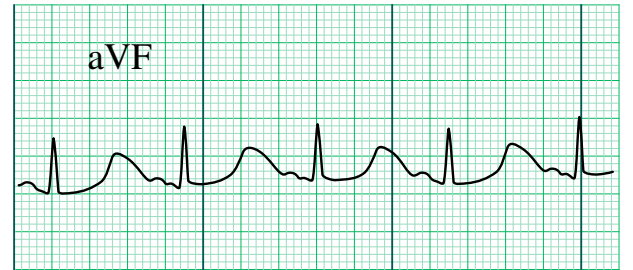
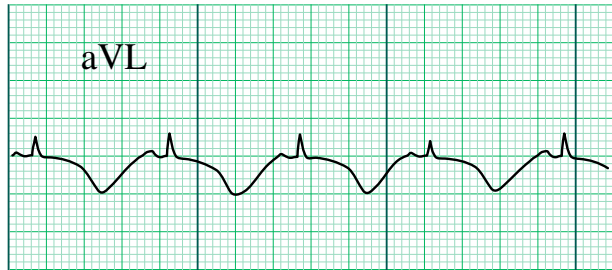
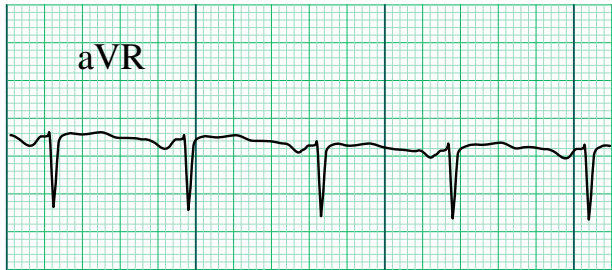


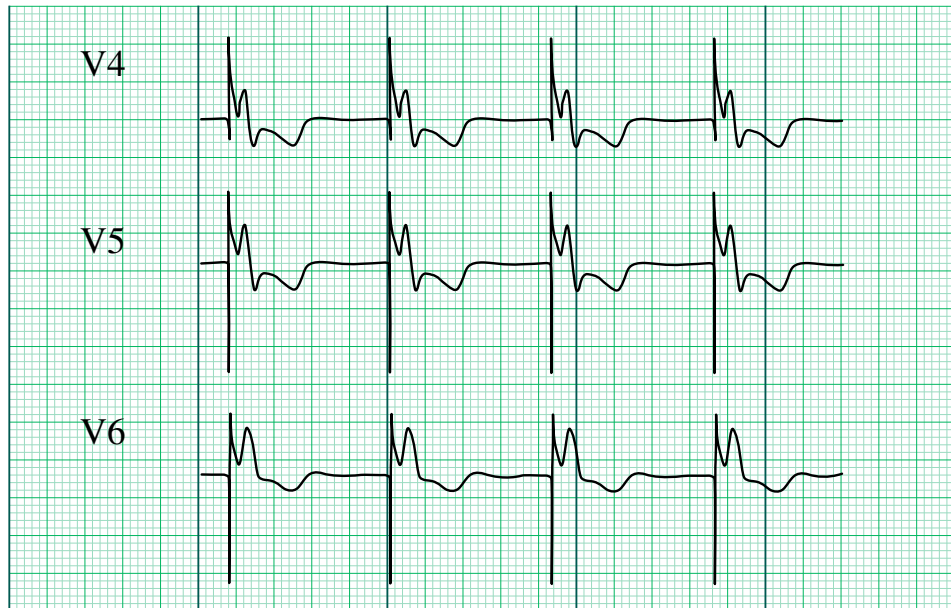
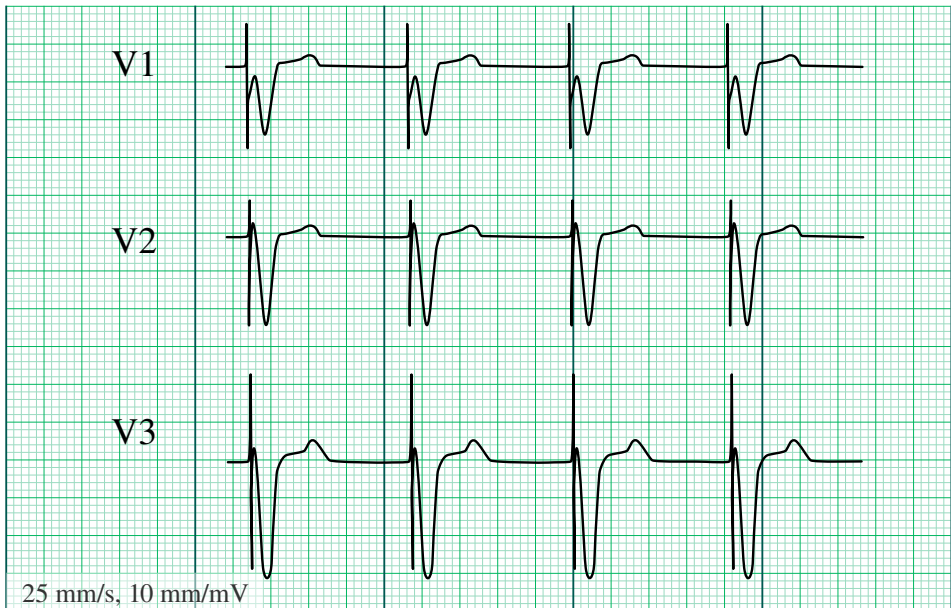
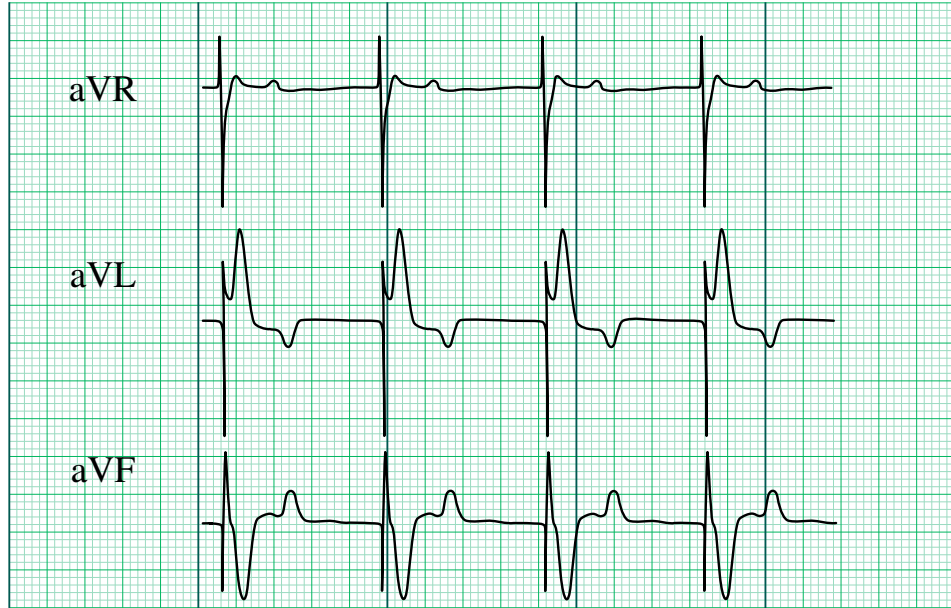
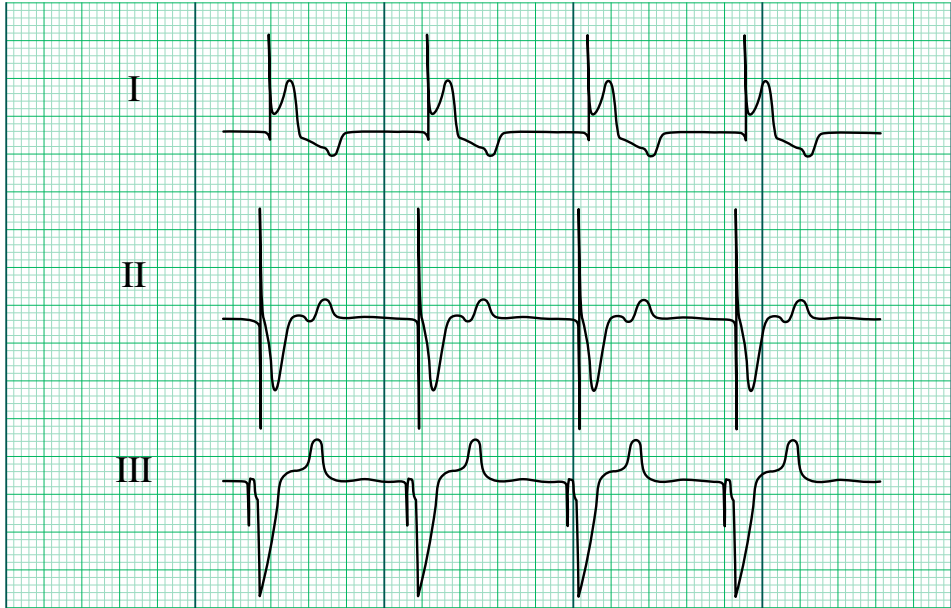


25 mm/s, 10 mm/mV









25 mm/s, 10 mm/mV

