

A Systematic Approach to Pediatric EKG Workshop

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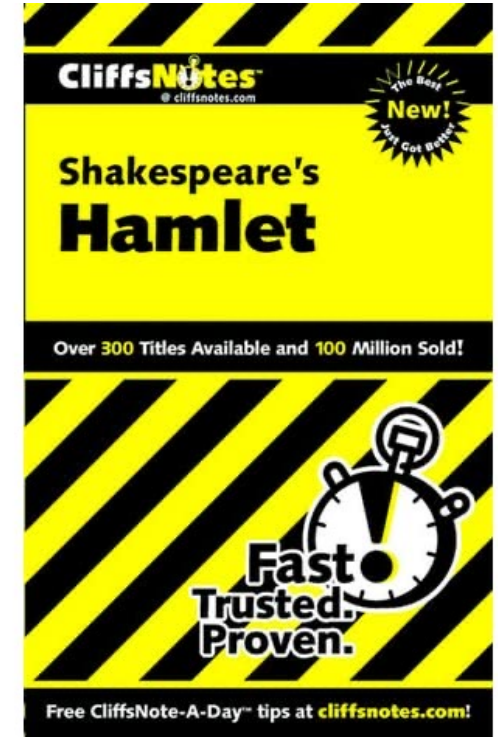
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I have no financial disclosures

I have other disclosures

- EKG's used to freak me out
- I hate textbooks
- I used to love Cliff's Notes

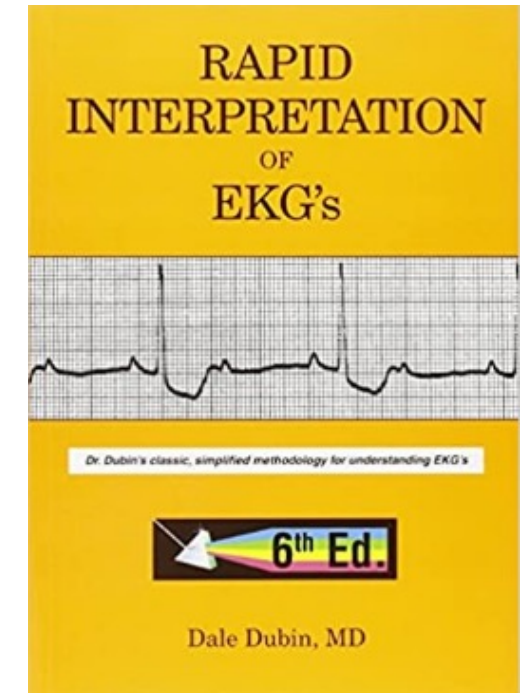


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Cliff's Notes for Pediatric EKG

- Created my own system for Pediatric EKG
- Derived from “Rapid Interpretation of EKG’s” by Dale Dubin
 - 368 pages
- Shrank it down to 1 page!

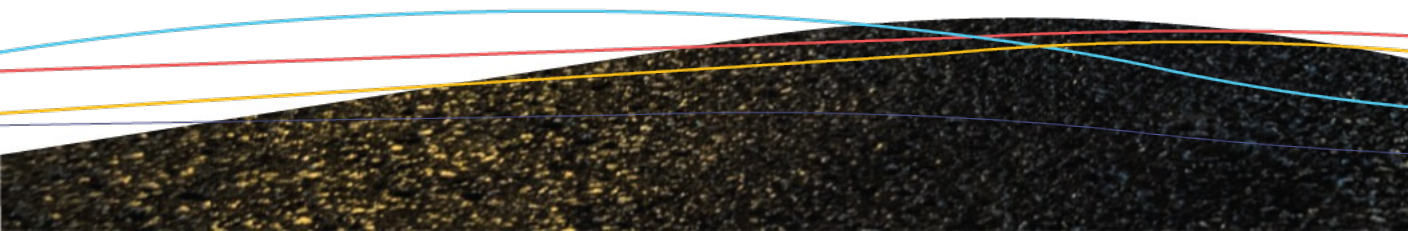




EKG checklist

- I use this system for *every* EKG
- Will take time in the beginning
- With practice....1-2 minutes

<p>Rate</p> <ul style="list-style-type: none"> ▪ 300-150-100-75-60-50 for each large box ▪ Correlate with calculated rate 	
<p>Rhythm</p> <ul style="list-style-type: none"> ▪ Sinus? <ul style="list-style-type: none"> ▪ P before each QRS ▪ QRS after each P 	
<p>Axis</p> <ul style="list-style-type: none"> ▪ Use leads I and AVF ▪ Is QRS above/below baseline? ▪ If above, it's considered "+" ▪ If below, it's considered "<u>-</u>" ▪ If I = +, and AVF = +, NORMAL axis ▪ Or can use thumbs trick: <ul style="list-style-type: none"> ▪ L thumb is lead I, R thumb is AVF ▪ If both thumbs are + ("thumbs up") = <u>q</u>l axis! ▪ If L thumb +, R thumb -, then L axis deviation ▪ If R thumb +, L thumb -, then R axis deviation 	
<p>Intervals</p> <ul style="list-style-type: none"> ▪ Correlate with age limits in Harriet Lane ▪ Small box = 0.04 sec, Large <u>box</u> = 0.2 sec ▪ PR 0.12-0.2s (shorter in infants) ▪ QRS < 0.12s ▪ $QT_c = \frac{(\text{Begin Q to End of T}) \times 0.04}{\text{Square root of (Previous R-R} \times .04)} = < 450-460\text{ms}$ 	
<p>Hypertrophy</p> <ul style="list-style-type: none"> ▪ P wave for atrial hypertrophy ▪ QRS complex for ventricular hypertrophy <ul style="list-style-type: none"> ▪ Measure V1 and V6 ▪ Use "20,20,20,5" trick for normal values <ul style="list-style-type: none"> ○ R < 20 in V1 ○ S < 20 in V1 ○ R < 20 in V6 ○ S < 5 in V6 ▪ If break 20,20,20,5 rule, then <u>compare</u> to <u>q</u>l values in Harriet Lane 	
<p>Ischemia / Infarction</p> <ul style="list-style-type: none"> ▪ Look for Q waves (>1mm or >1/3 QRS amplitude) ▪ Also look for ST elevation, T-wave inversions ▪ Divide EKG into contiguous leads for MI <ul style="list-style-type: none"> ▪ II, III, AVF = Inferior ▪ V1-V4 = Anterior ▪ V5, V6, I, AVL = Lateral ▪ Findings only "real" if they occur in 2 or more contiguous leads ▪ Diffuse = pericarditis/myocarditis 	



EKG checklist

1. Rate
2. Rhythm
3. Axis
4. Intervals
5. Hypertrophy
6. Ischemia



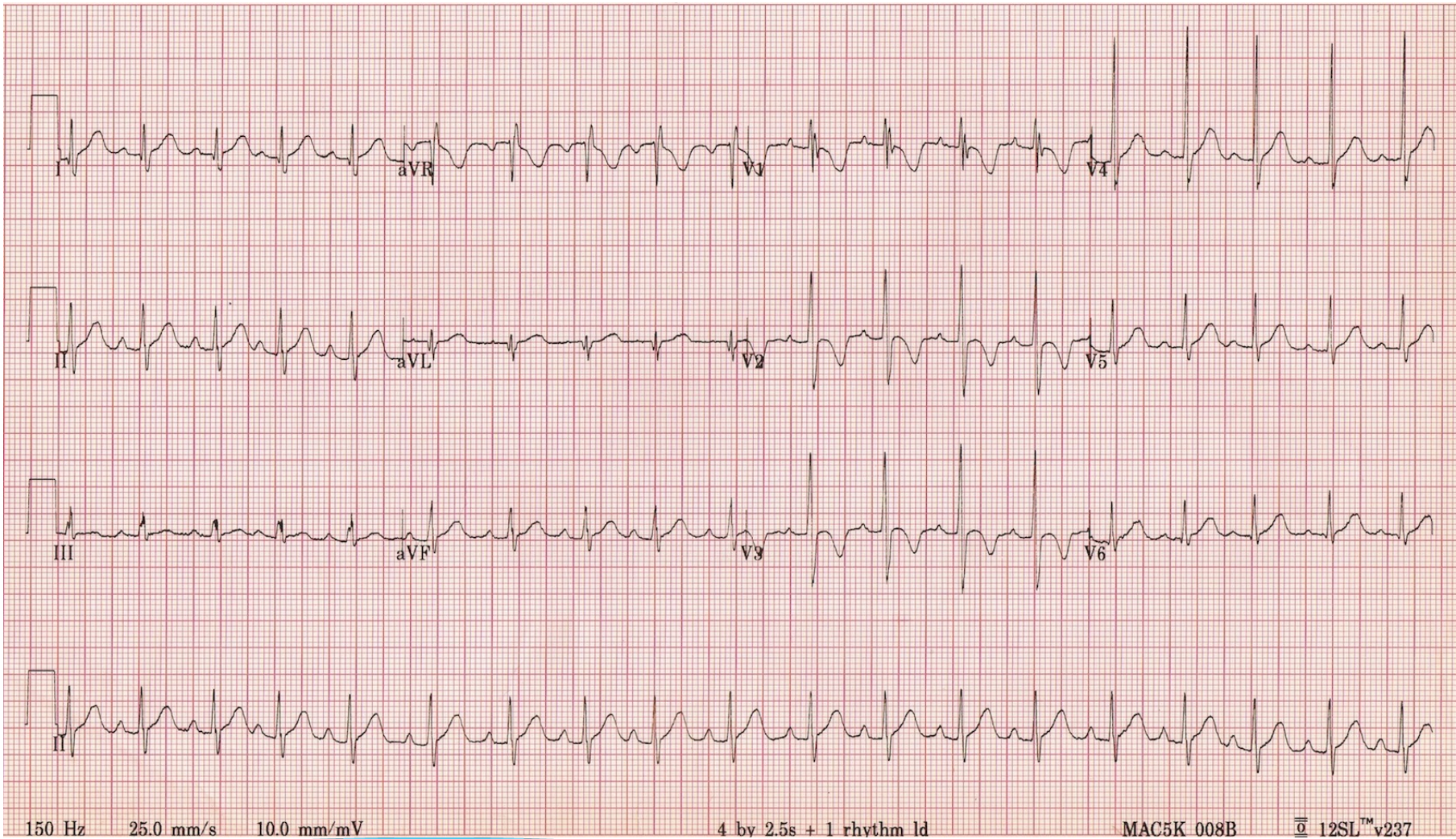
Best way to learn is to practice, so let's do it!

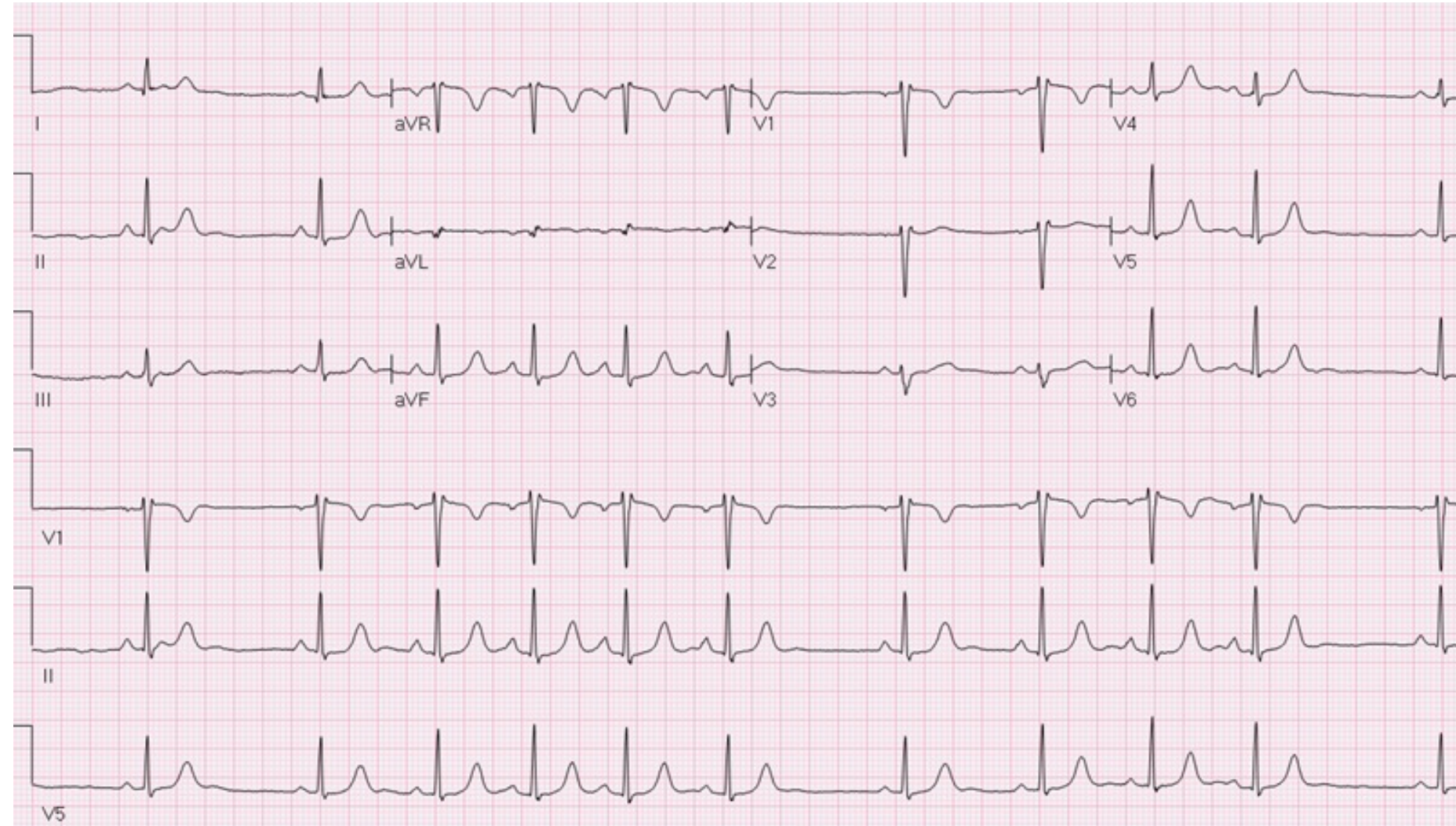
11 y.o. female
with palpitations

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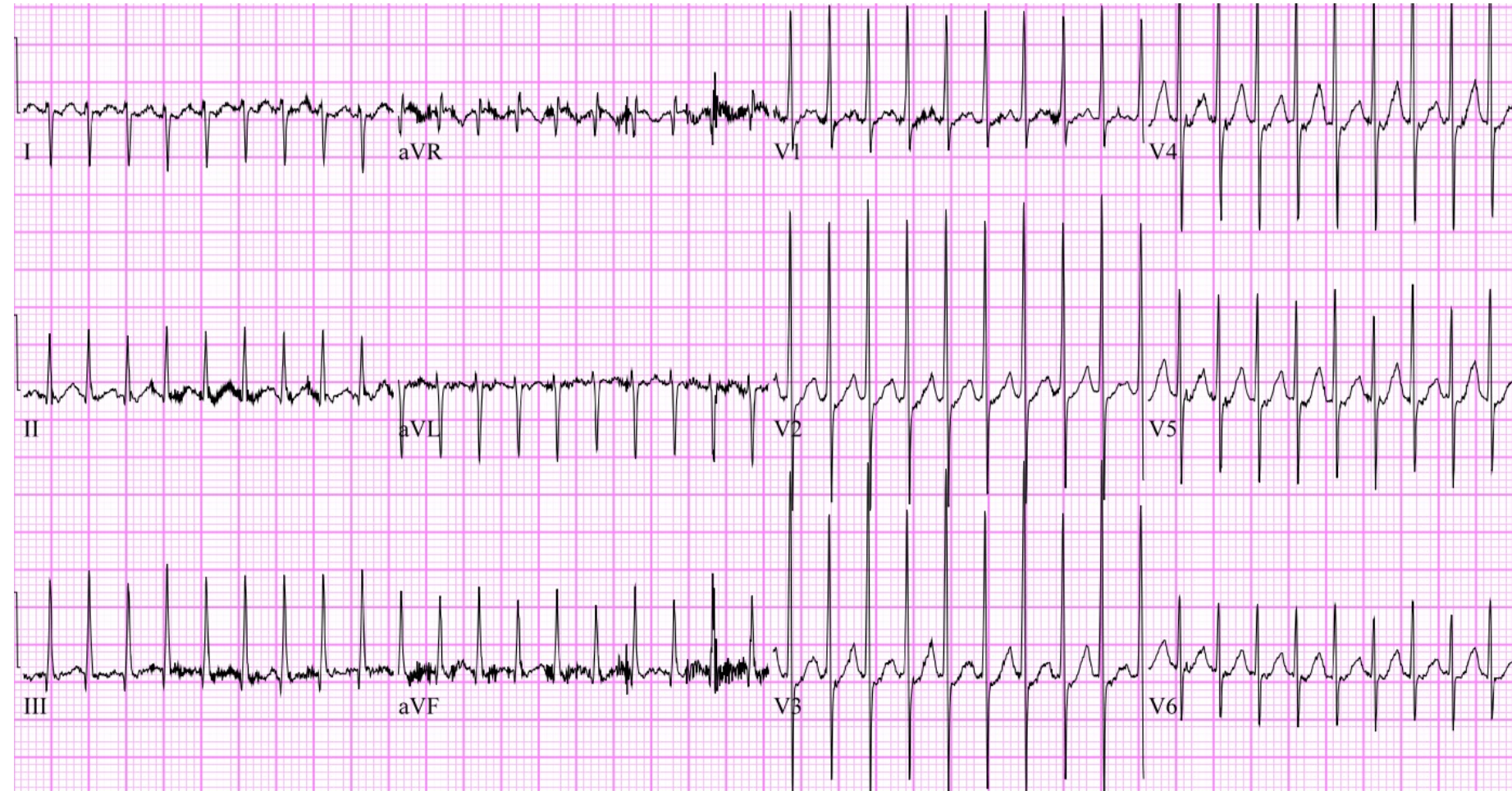


12 y.o. male
with chest
pain

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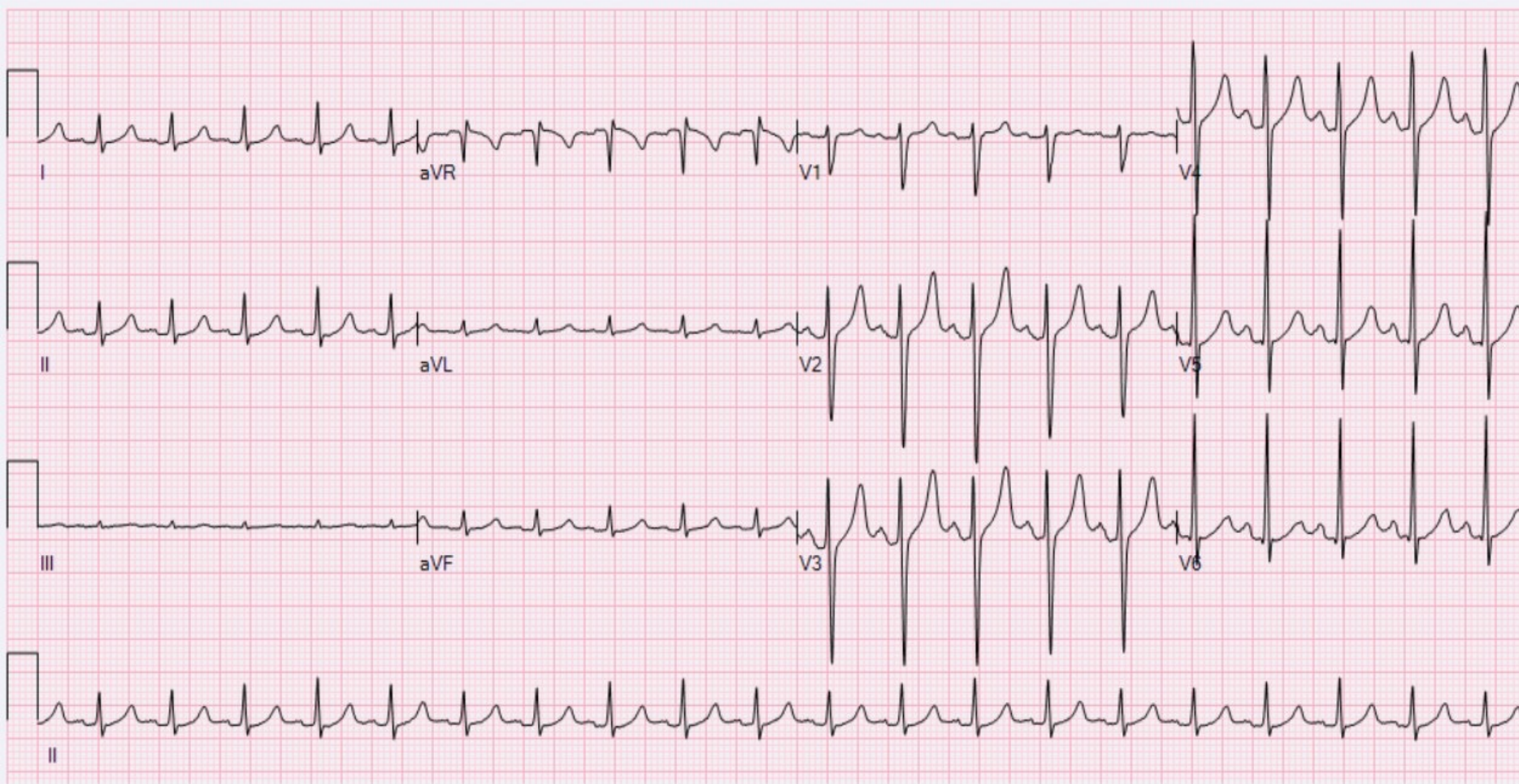


2 y.o. male
with poor
feeding and
irritability

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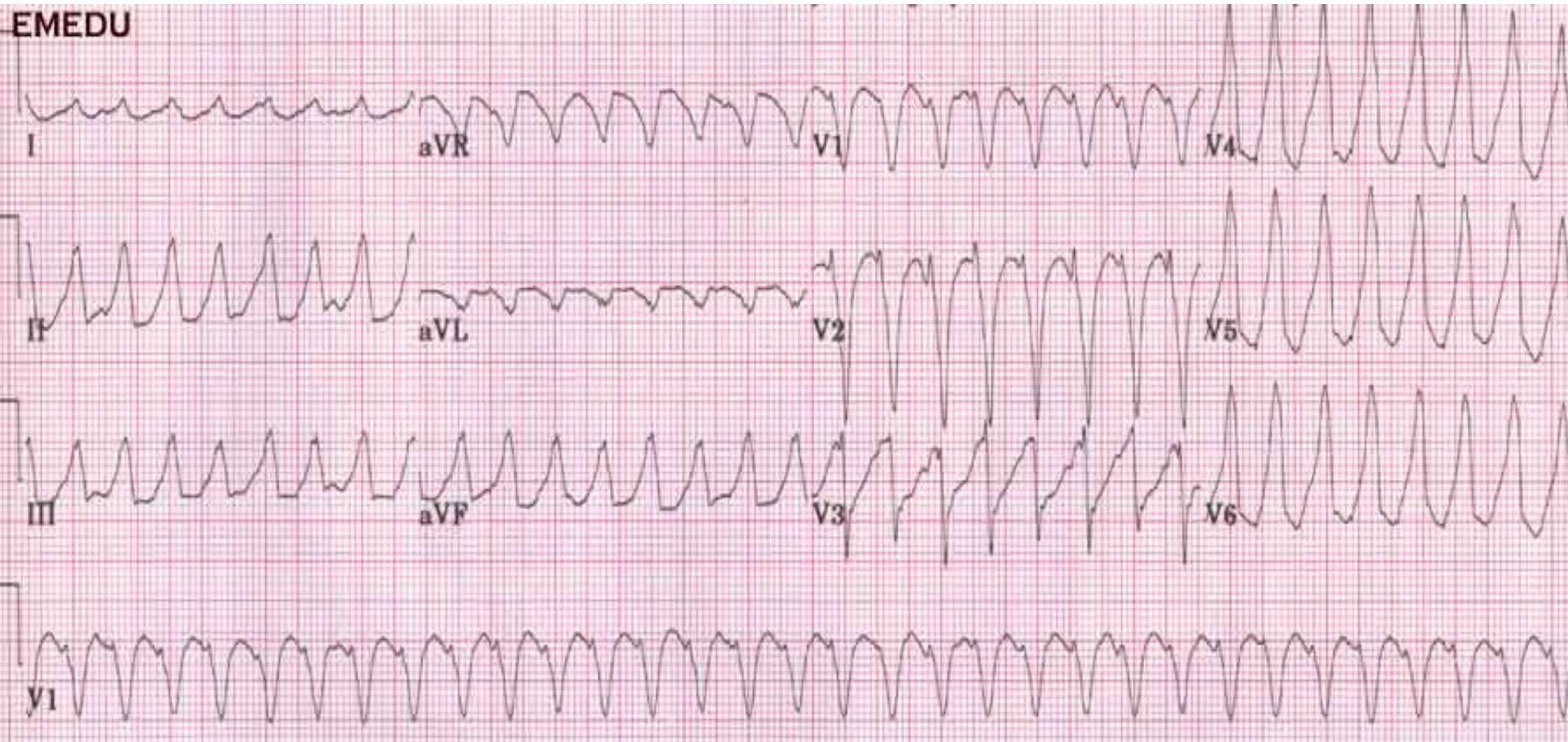
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16 y.o. female
with syncope in
school



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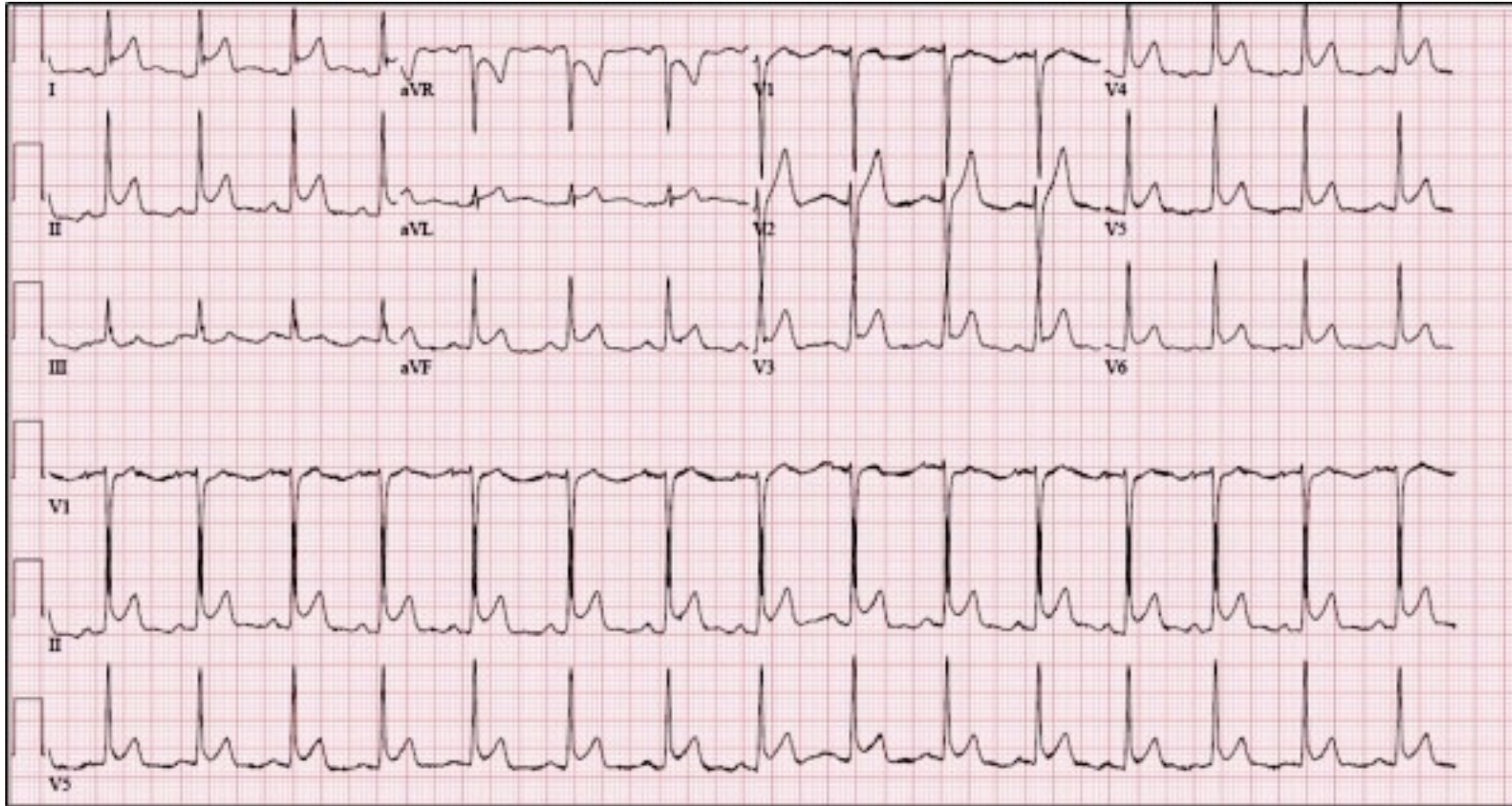


18 yo male
with chest
pain,
dizziness

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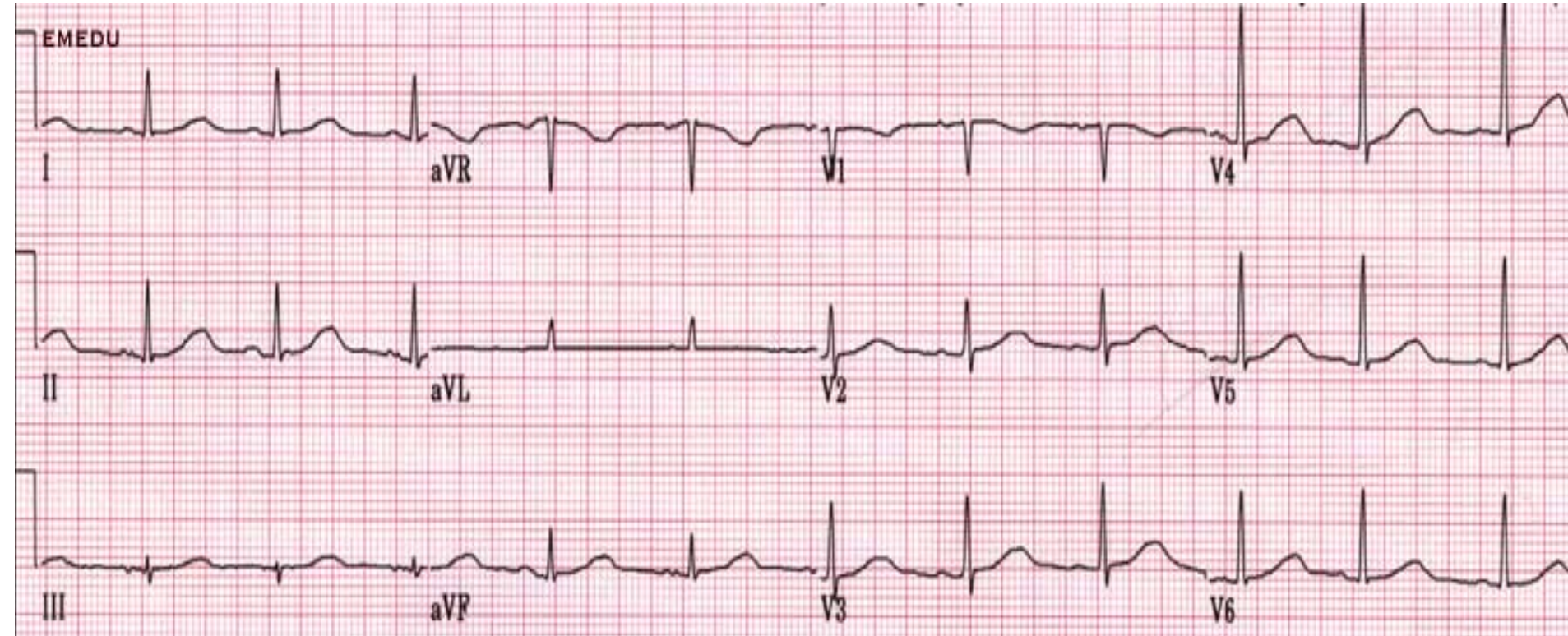
13 yo male
with chest
pain

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<https://JUCM.com>

17 yo
female with
syncope at
home



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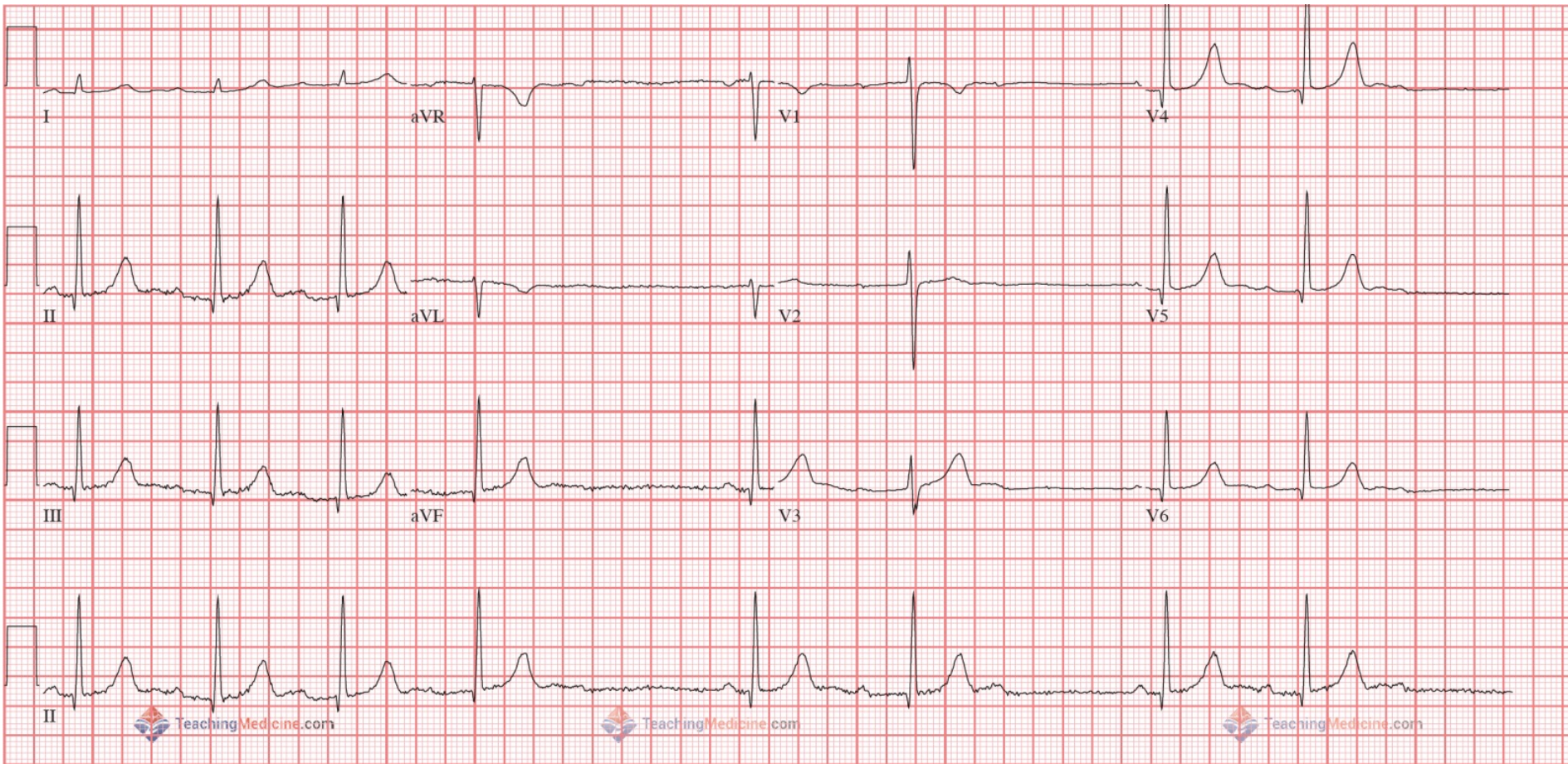
10 yo
female with
chest pain

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14 yo
female with
dizziness



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Teachingmedicine.com

22 yo female
with chest
pain

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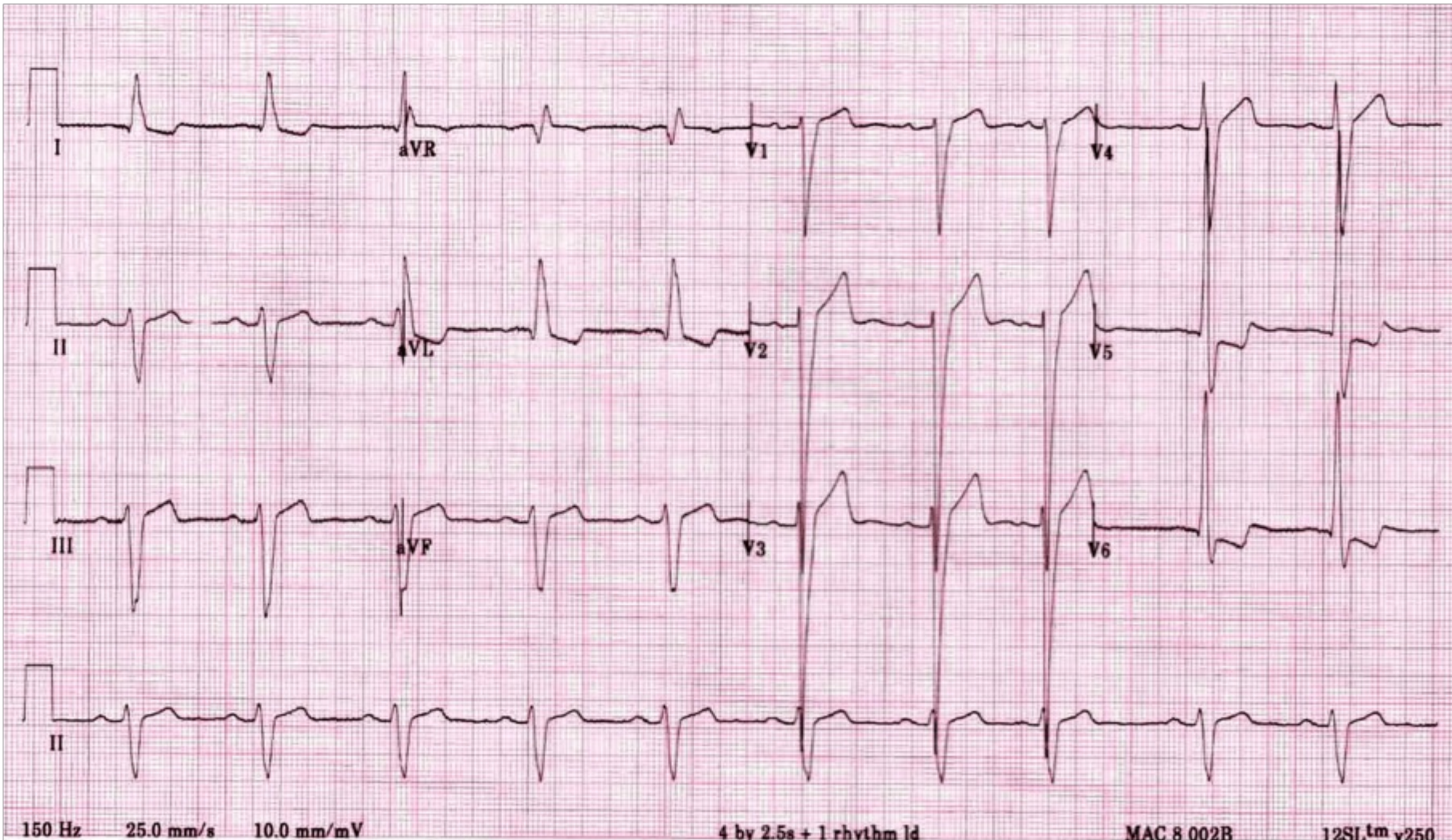
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17 yo male
with chest
pain

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How you can drive change:

- Practice interpreting every EKG you see!
- Use the checklist every time
- Don't be afraid to phone a friend

DRIVING **CHANGE2023**

Session Evaluation

- Your feedback is valuable, take a moment to complete the survey for this session.
- To claim CME, you must complete a separate survey available after the convention.

* How likely are you to recommend this **content** to a colleague?

Not likely at all Neutral Extremely likely

0 1 2 3 4 5 6 7 8 9 10

What did you find most valuable about this **content**?

What would have made this **content** better?

Thank you!

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