



High Stakes ECGs

Syncope and Presyncope

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CCFP-EMs

1

Faculty/Presenter Disclosure



Faculty: Fil Gilic and Elizabeth Blackmore



Conflicts of Interest: We teach some of this material as part of commercial RuralResus.com courses



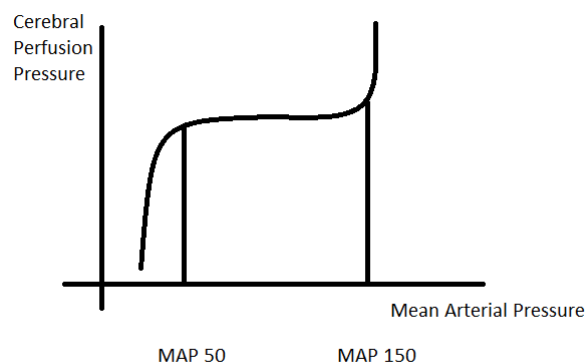
Relationships with financial sponsors: None

2

Learning objectives

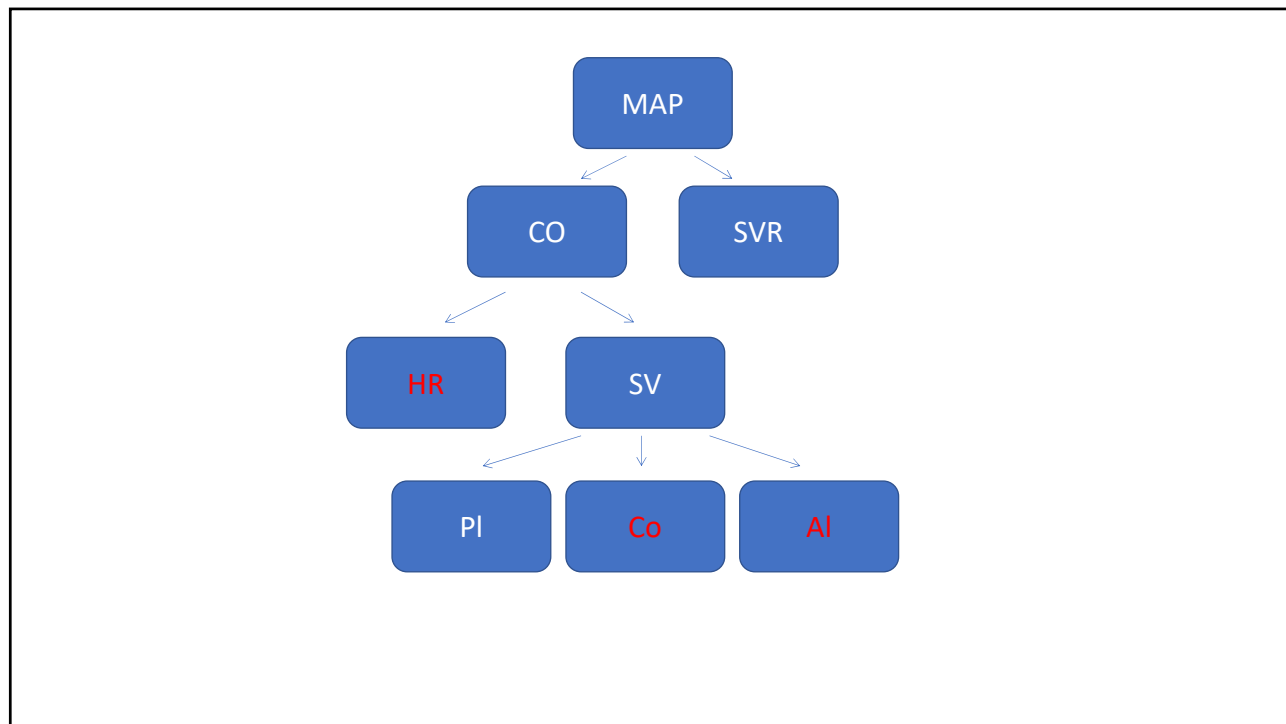
- Describe the role of ECGs in an office-based approach to patients with presyncope or syncope
- Develop a structured approach to ECG interpretation in the setting of presyncope or syncope
- Apply and reinforce a structured approach by using ECG interpretation tool to case study discussions

3



Syncope = transient & significant loss of MAP

4



5

HR

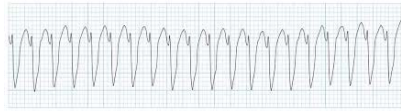
- Increased HR


→
 Unlikely, AHA 2022

- VT

6

VT



- Chronic Low EF (<35%)

- Previous MI, CHF

} 5X times the chance of arrhythmias compared to N EF

- Acutely within 48h of ACS

- STEMI

} 6% of STEMI

- Inherited predisposition

- Long or short QT, Brugada, WPW, HCM, ARVD

Euro Int 2014

7

HR



- Decreased HR

- **ANY Bradycardia**

- Acutely, DIE (drugs, infarct, electrolytes)
- But also old age, conduction blocks
- Many are episodic

8

The Key Questions

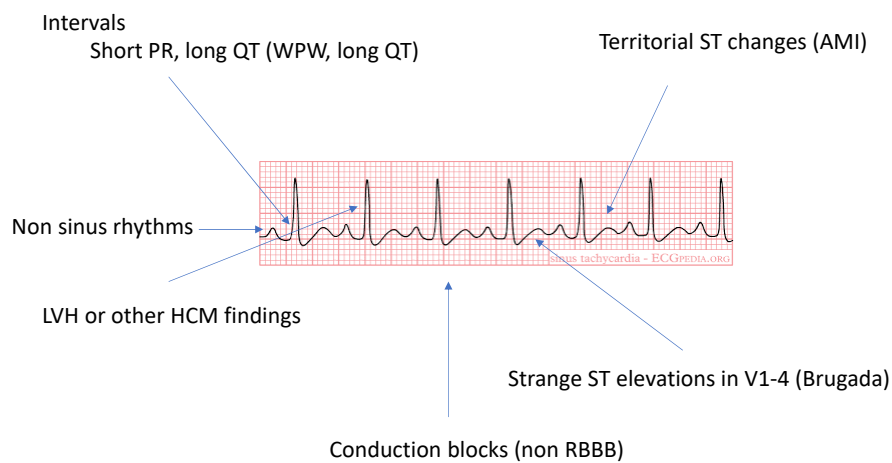
- No prodrome
- Reclined
- Exertional
- Palpitations
- FH SCD
- PMH CVD

Cardiac Causes
(mostly VT + Brady)

Int J Card 2013

9

ECG



Acad Em Med 2011, AHA 2022

10

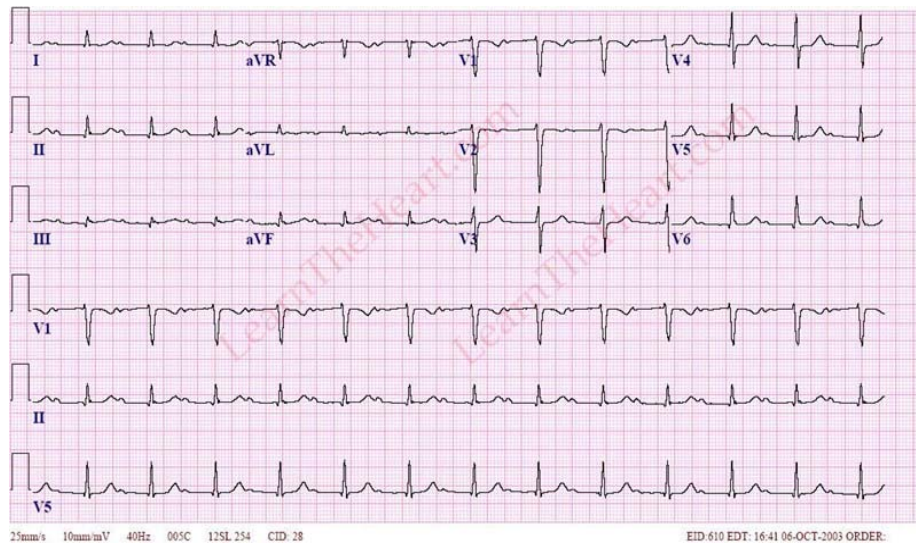
Intervals

PR

QT

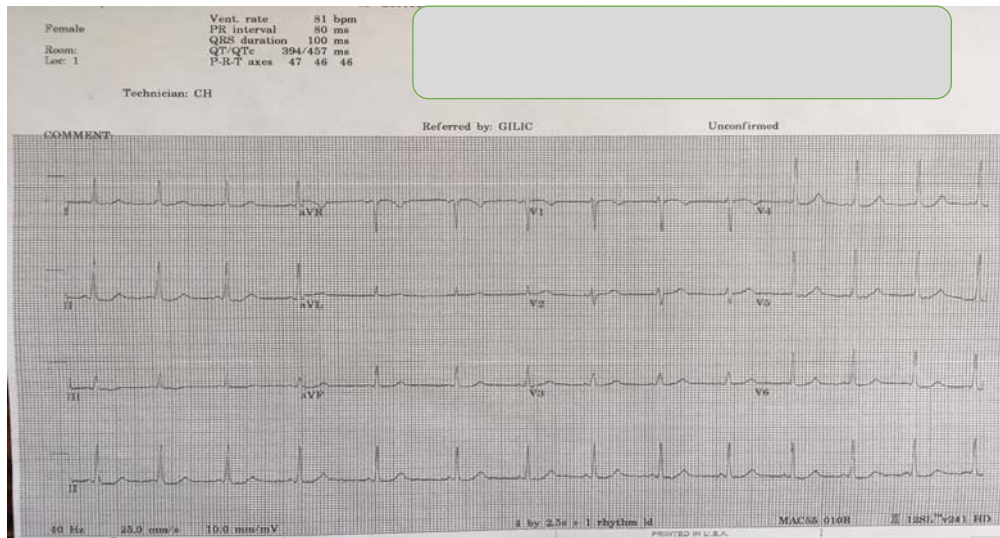
11

1st Degree AVB



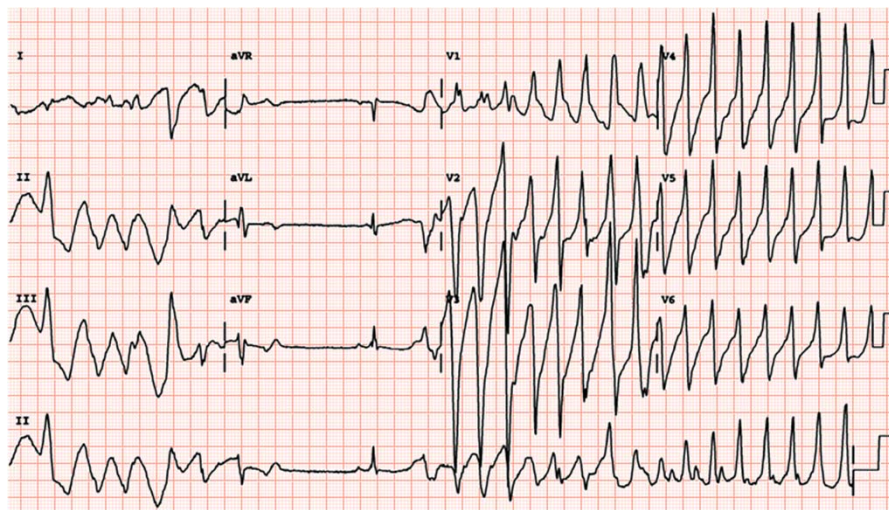
12

WPW



13

Long QT



Life in the Fast Lane

14

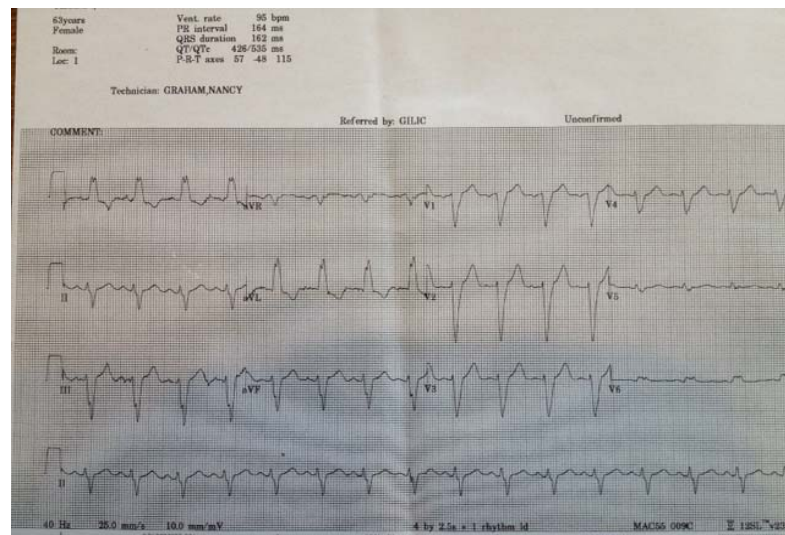
Conduction Blocks

LBBB

RBBB +
LAFB/LPFB

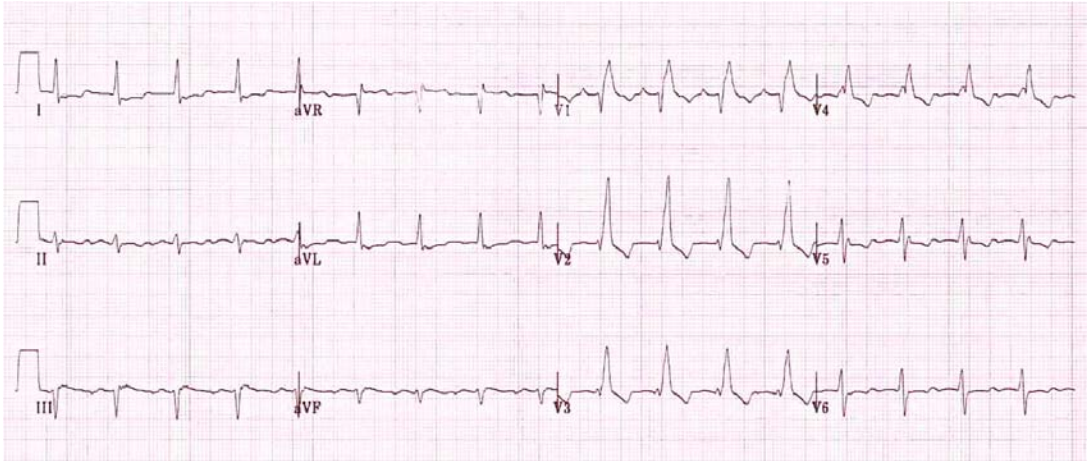
15

LBBB



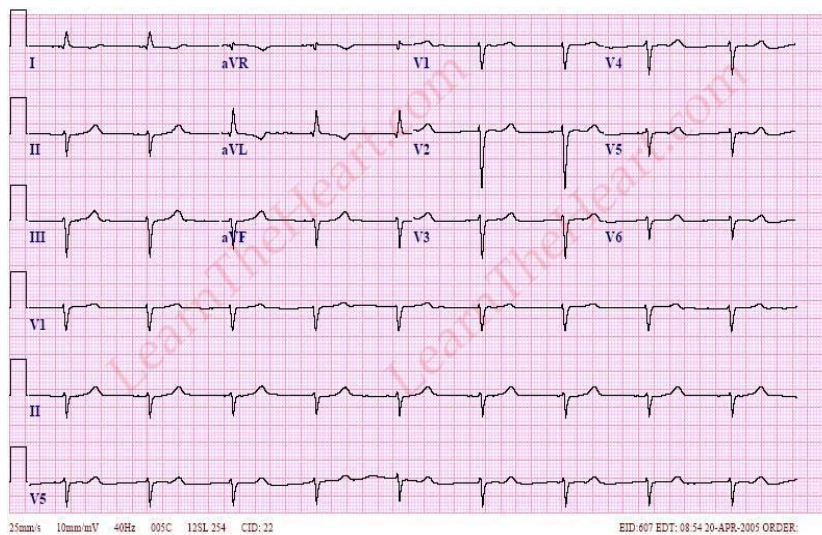
16

RBBB plus



17

LAFB



18

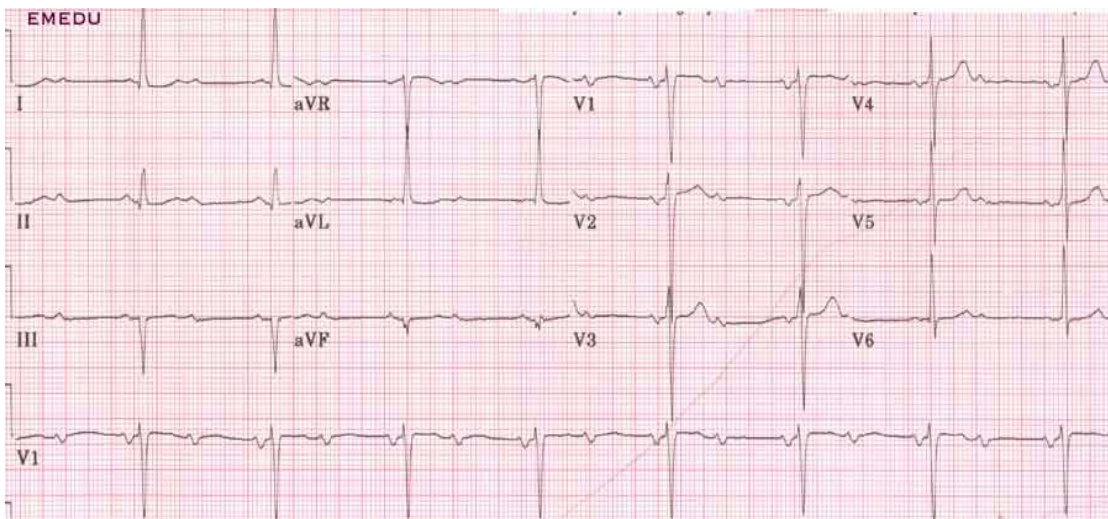
AV Blocks

2nd degree
Type 2

3rd degree

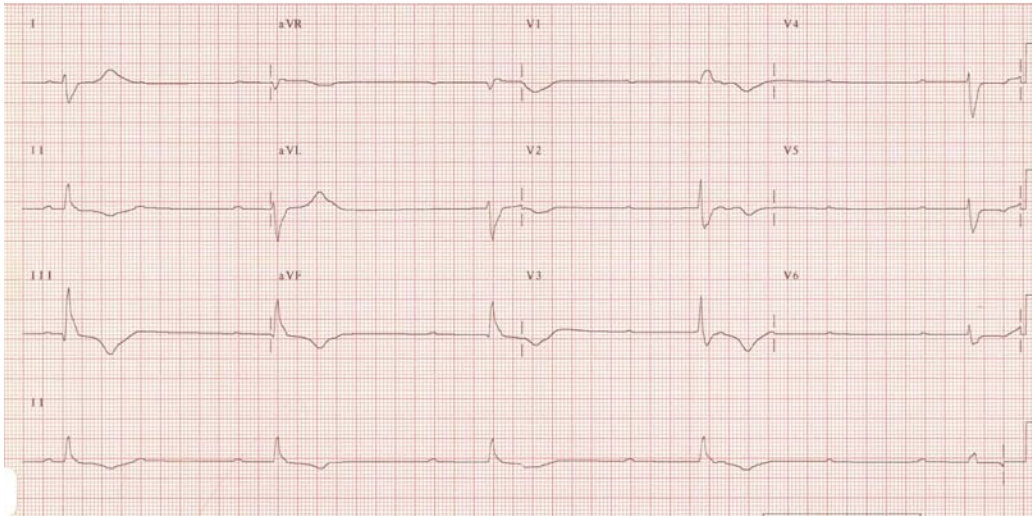
19

2nd degree Type 2 AVB



20

3rd degree AVB



21

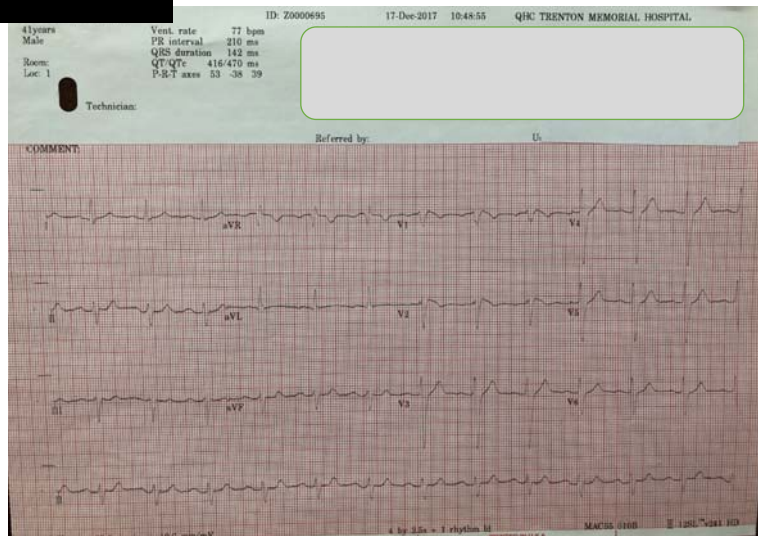
ST segment

Ischemia

Brugada

22

Brugada



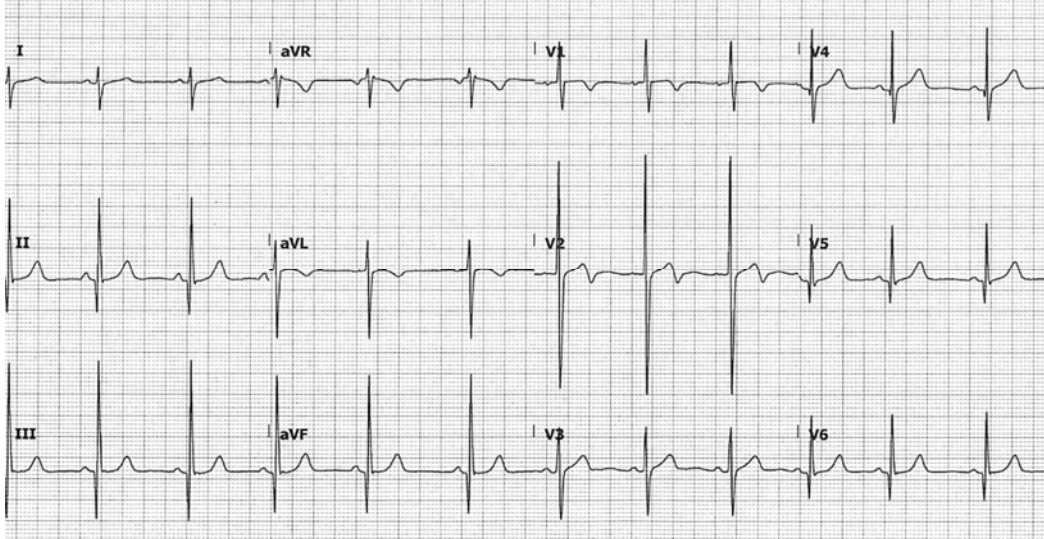
23

LVH

HCM

24

HCM



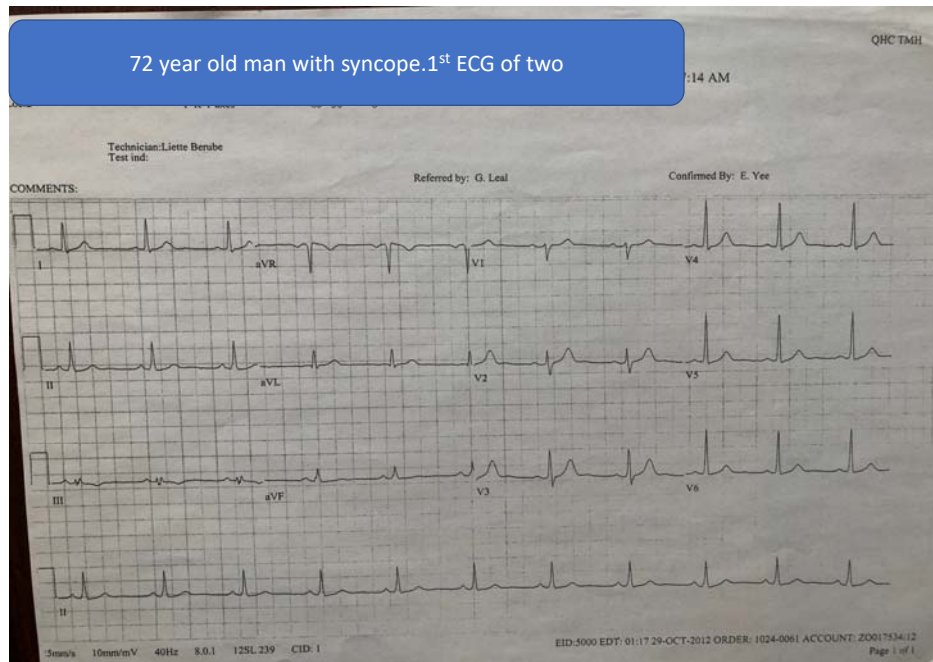
Life in the Fast Lane

25

Cases!

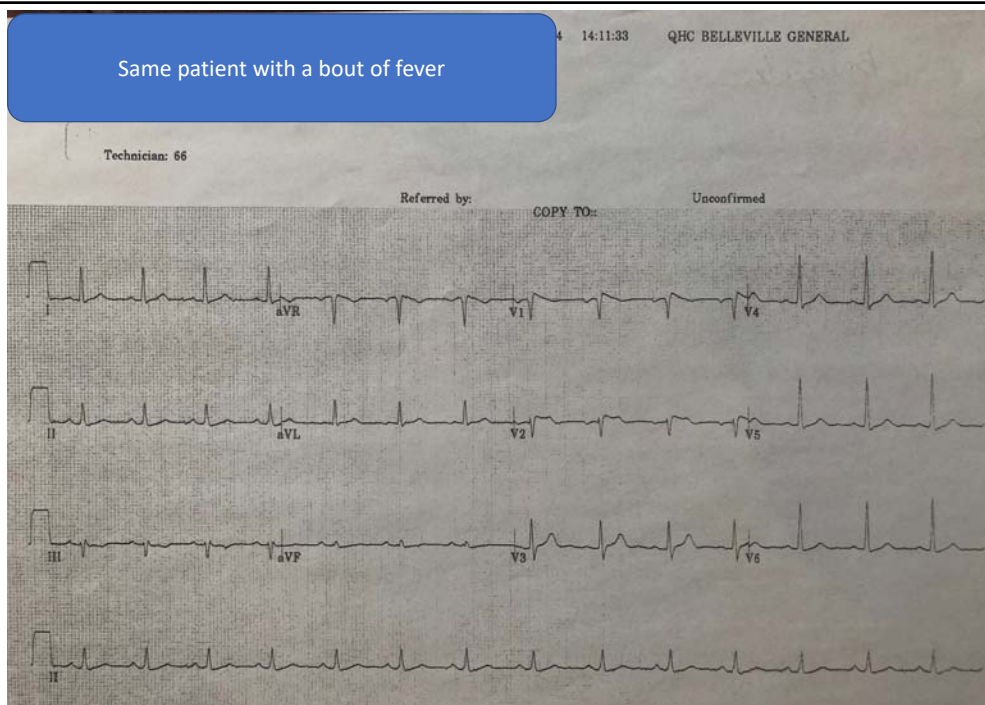
26

72 year old man with syncope. 1st ECG of two

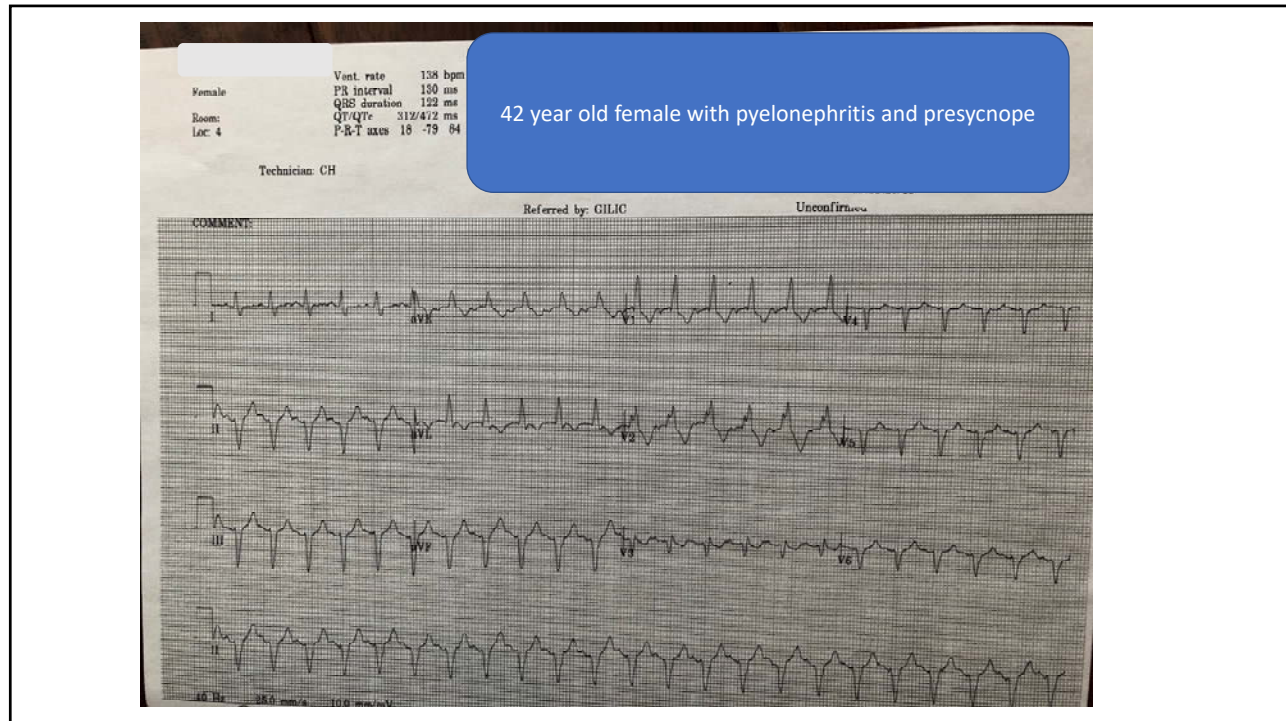


27

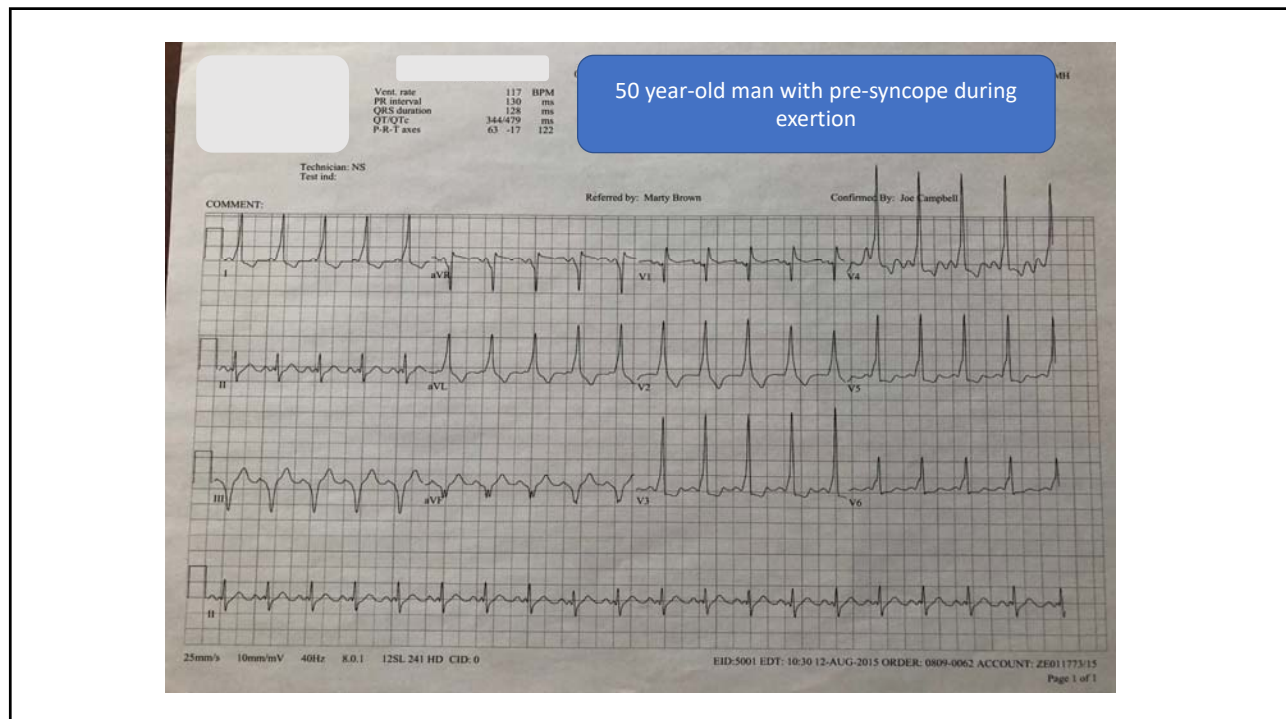
Same patient with a bout of fever



28

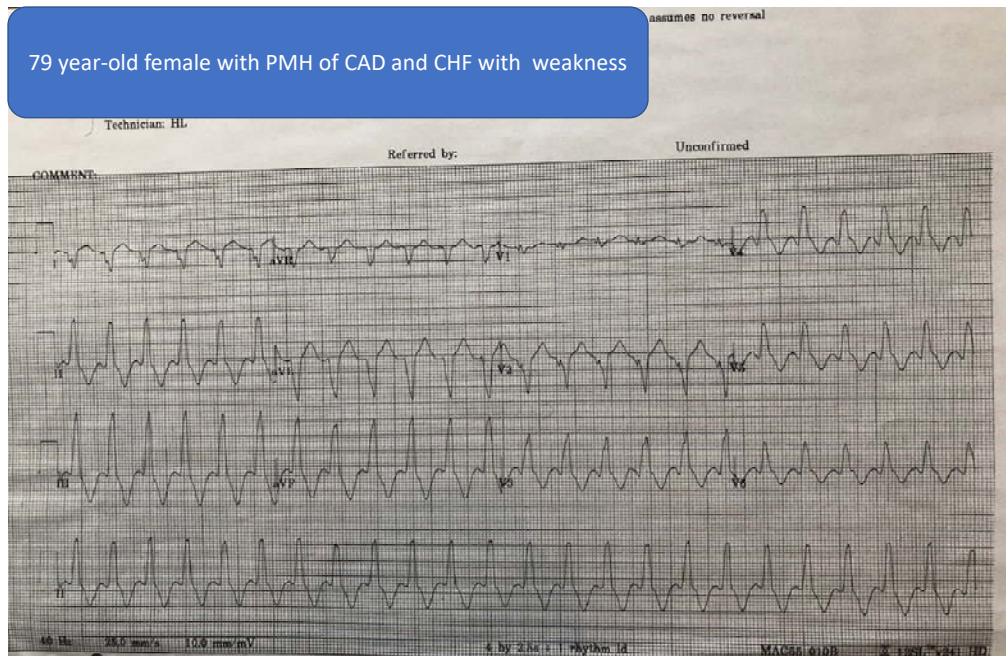


29



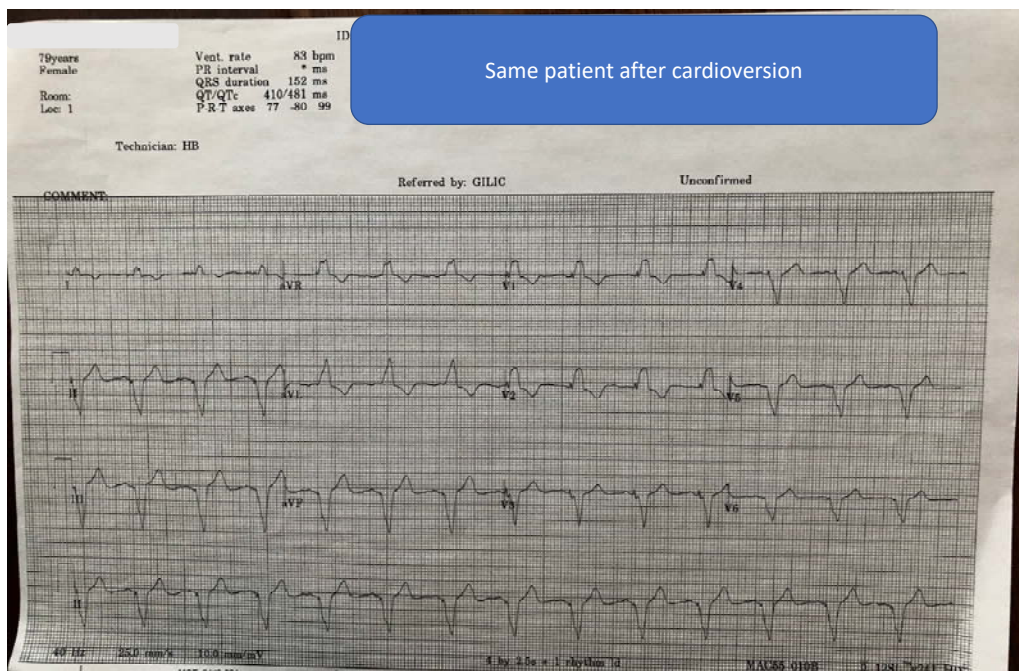
30

79 year-old female with PMH of CAD and CHF with weakness

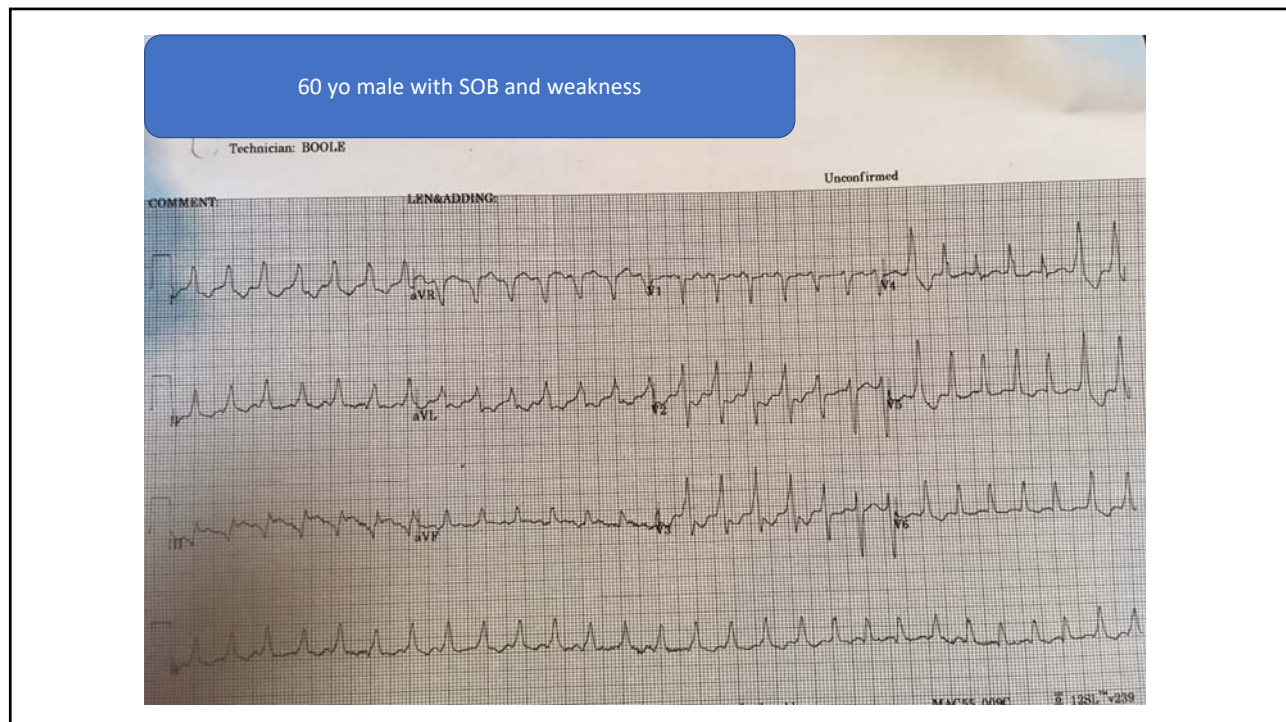


31

Same patient after cardioversion



32



33

Thanks for your time!

- Questions?
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34