

# Welcome!

## Top Tips from the 2023 UCA Convention

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**Moderator:**

**Host:**

May 18, 2022

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# Corticosteroid Stewardship

## **Benefit > Risk for parenteral corticosteroids**

- Adrenocortical insufficiency
- Some allergic reactions, anaphylaxis
- RAD/COPD exacerbations
- Toxic pulmonary edema
- Nephrotic syndrome, rheumatoid diseases
- Cerebral edema
- Organ transplant
- Preterm delivery
- Bells palsy
- Gout

# Corticosteroid Stewardship

## Risks

- Fractures, AVN, thrombotic disease, sepsis, GI bleeding, CHF
- Inhaled steroids – thrush, glaucoma, cataracts
- The risk is cumulative – as little as 500 mg of lifetime prednisone/prednisolone
- Insurance database study, 5-90 days after use – sepsis 5x, VTE 3x, fractures 2x
- CS are the third most common medication involved in malpractice claims
- Consider documenting specific consent in situations where the Rx is appropriate

# Corticosteroid Stewardship

## **Do not use for**

- Acute bronchitis/sinusitis
- RTIs in general
- Allergic rhinitis
- Carpal tunnel syndrome

## **Insufficient evidence for**

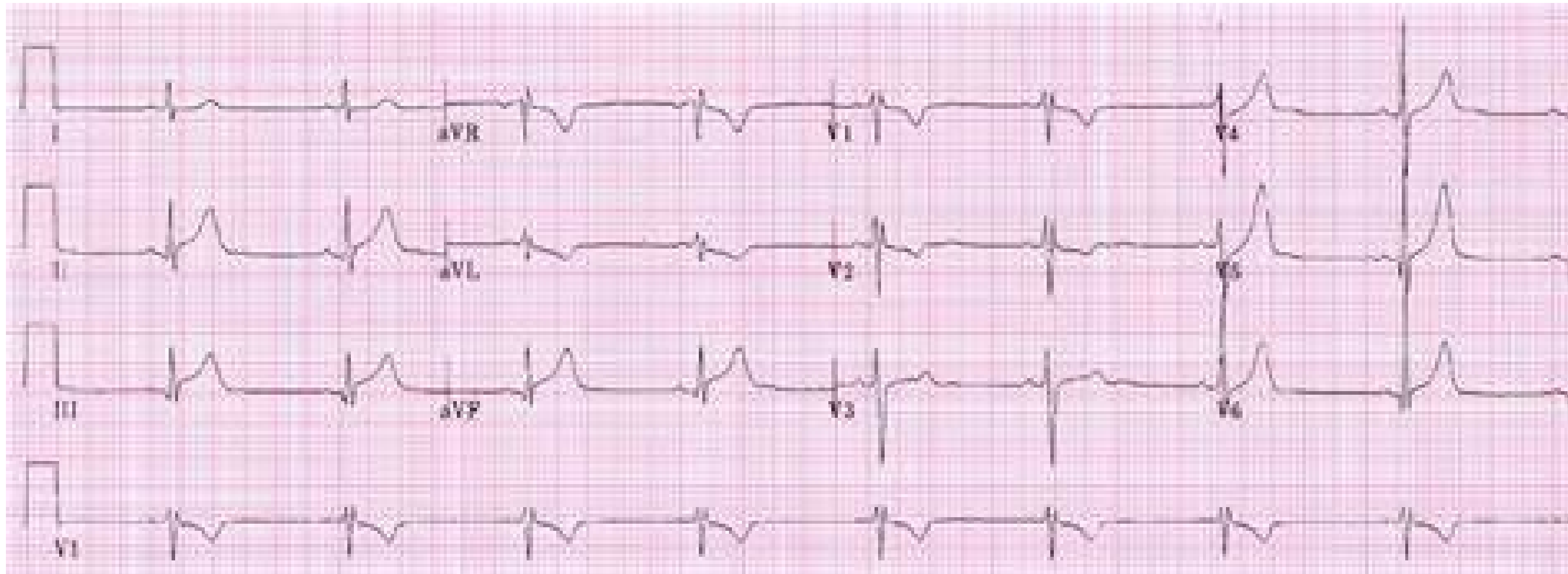
- Acute pharyngitis
- Zoster
- Radiculopathy

# Diagnosing Urinary Tract Infection

- Dysuria + LH 1.5
  - Frequency + LH 1.8
  - Back pain + LH 1.6
  - Hematuria + LH 2.0
  - Self-diagnosis + LH 4.0
  - No discharge + LH 3.1
  - No irritation + LH 2.7
- Cystitis, pyelonephritis
  - Vaginitis, urethritis
  - Kidney stone
  - Functional bladder issue
  - Interstitial cystitis

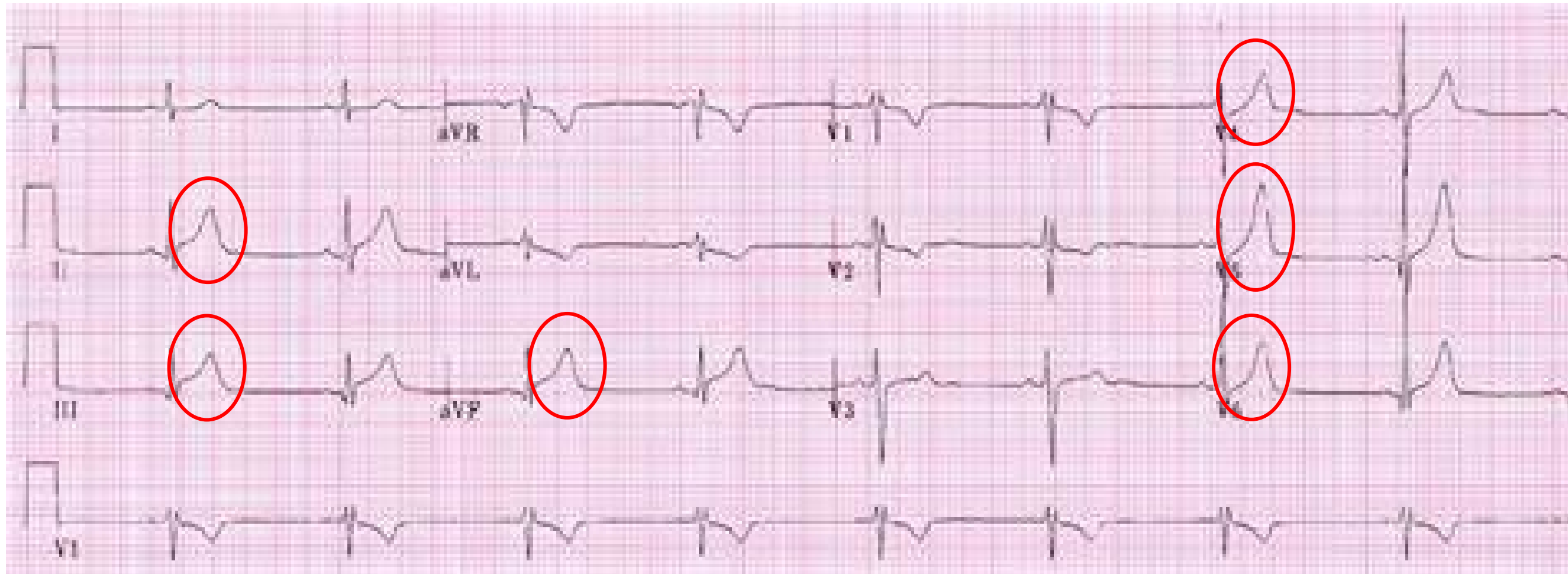
# EKG Interpretation – “Obstructive MI Patterns”

## Hyperacute T waves



# EKG Interpretation – “Obstructive MI Patterns”

## Hyperacute T waves

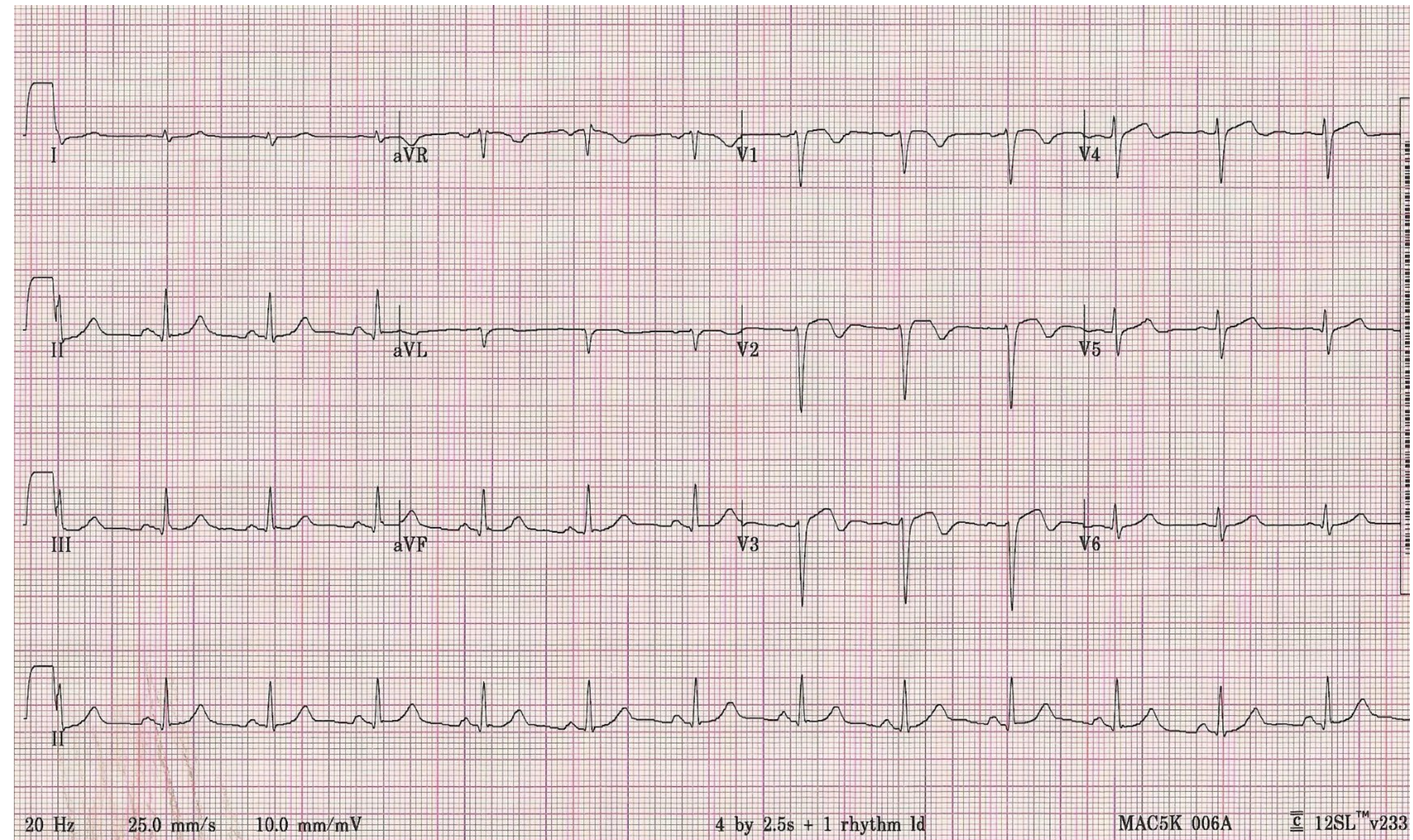




# EKG Interpretation – “Obstructive MI Patterns”

## Wellens Syndrome

- Precordial changes
- Biphasic ST/T

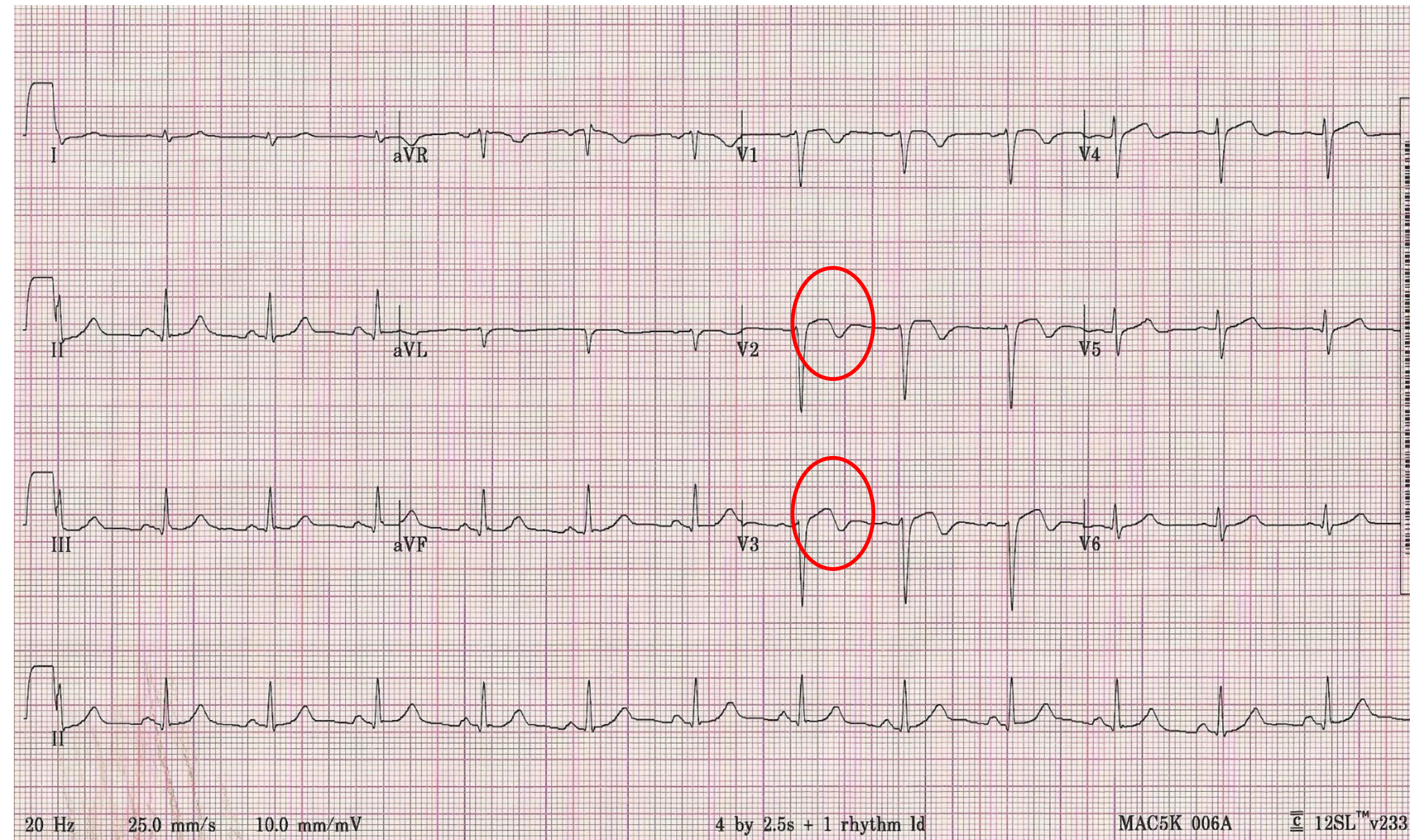




# EKG Interpretation – “Obstructive MI Patterns”

## Wellens Syndrome

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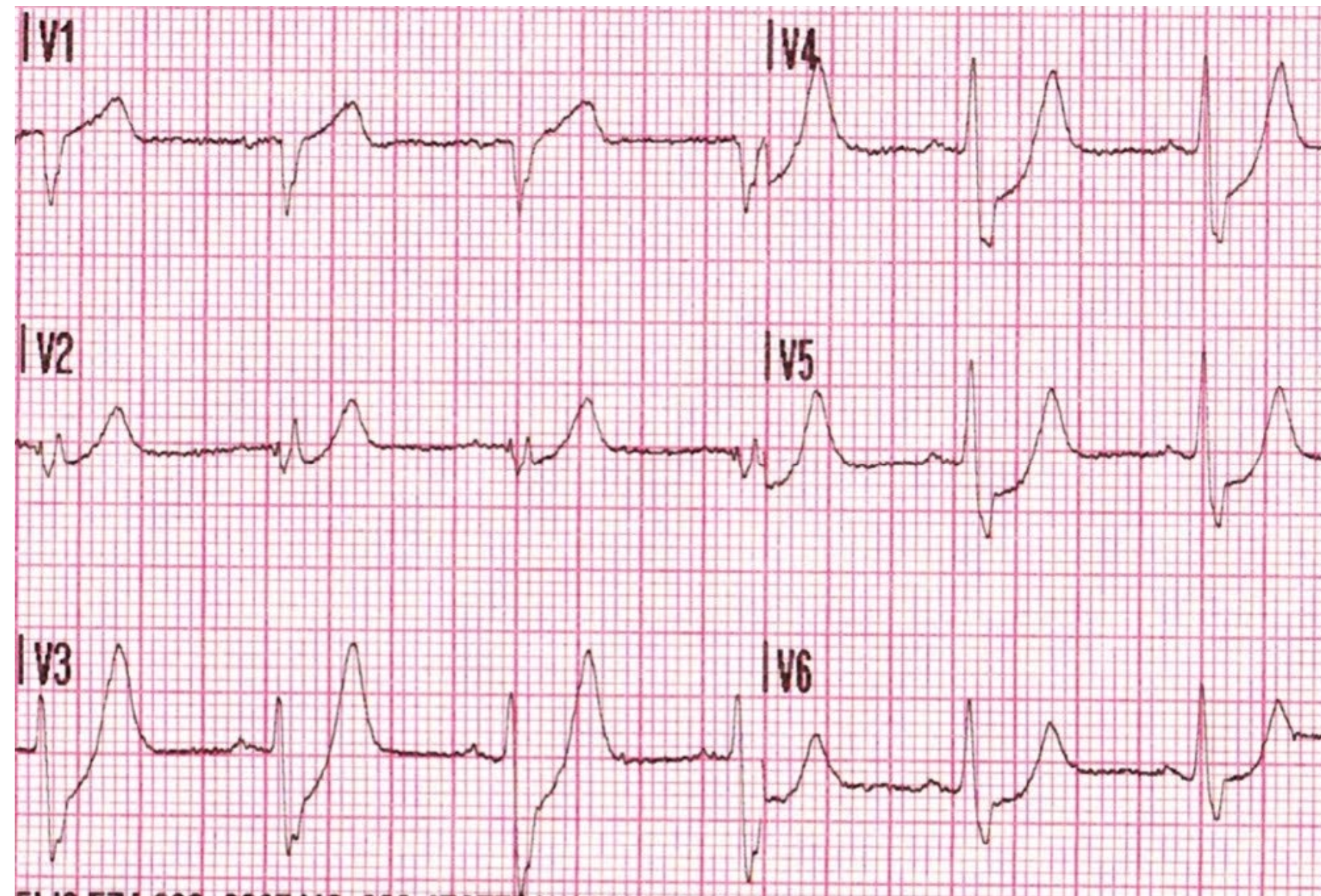




# EKG Interpretation – “Obstructive MI Patterns”

## deWinter T waves

- Precordial changes
- $> 1$  mm ST depression
- Tall T wave
- +/- STE in aVR

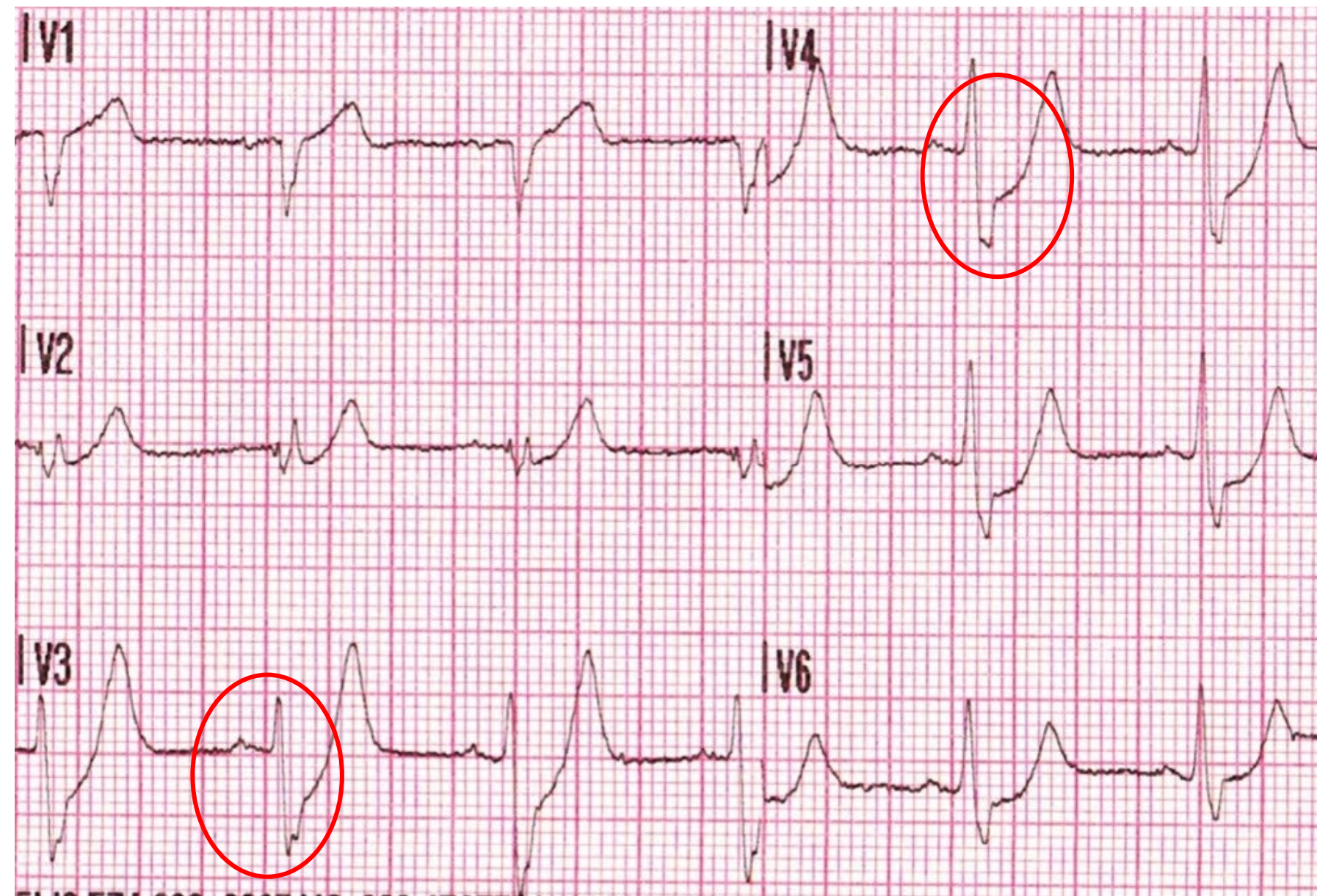




# EKG Interpretation – “Obstructive MI Patterns”

## deWinter T waves

- Precordial changes
- $> 1$  mm ST depression
- Tall T wave
- +/- STE in aVR



# EKG Interpretation – “Obstructive MI Patterns”

## Others

- ST elevation in 2 inferior leads with ST depression in aVL
- New RBBB and LAHB
- > 1 mm ST elevation in aVR
- Isolated posterior MI – ST depressions in V1-V4 but not V5-6 and not needed in V7-9



# Medicolegal Pitfalls

- For DC instructions, no difference between written vs computerized
- There DO need to be: time- and action-specific, verbal and on paper
- Use fluoroquinolones only when there is a clear advantage or no alternative and document why as well as patient understanding
- Know the boundaries of being recorded (audio, video) by patients
- Be careful what you post on social media

# Bulletproof Charting

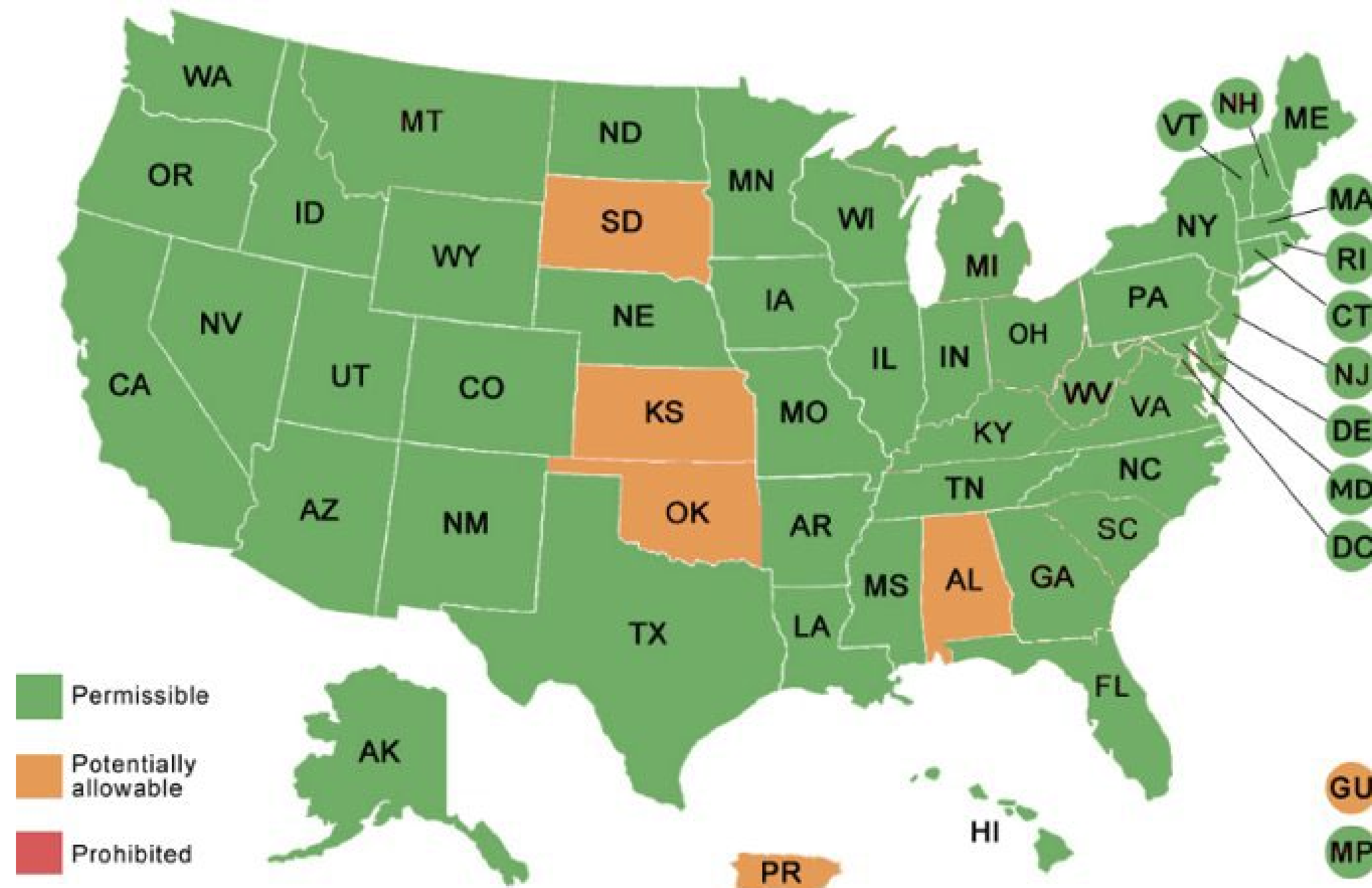
- Check the vitals
- Address the chief complaint
- Think “What could go wrong?”
- Beware the template
- Use algorithms appropriately
- Re-examine patients when needed

# Treating Sexually Transmitted Infections

## 2021 update

- Ceftriaxone 500 mg is the new dose (1 g if body weight  $\geq$  150 kg)
- Doxycycline is preferred to azithromycin for chlamydial infections
- For PID – ceftriaxone IM, doxy and metronidazole x 14 day
- The alcohol ingestion advisement is no longer needed for metronidazole
- *Mycoplasma genitalium* incidence is on the rise → AMR testing
- Screen for Hep C and HIV in anyone seeking treatment for STI
- HSV is still a clinical diagnosis
- Be familiar with your state's expedited partner treatment status
- <https://www.cdc.gov/std/treatment-guidelines/default.htm>

# Treating Sexually Transmitted Infections



As of:  
April 2021

<https://www.cdc.gov/std/ept/legal/default.htm>



# Community-acquired Pneumonia

- 2019 IDSA/ATS Guideline
- Cover atypical and typical organisms
- Consider drug-resistant *S. pneumoniae* (DRSP) factors
  - age < 2 or > 65
  - comorbidities, immune-suppression
  - *B*-lactam exposure within prior 3 months
  - children in day-care and exposure to them
- For exposure to **any** antimicrobials within the prior 3 months
  - choose a medication from a different class

# Community-acquired Pneumonia

- 1<sup>st</sup> line: Amoxicillin 1g TID or Doxy 100 BID
- High-risk: Amoxicillin/clavulanate OR Cefpodoxime or Cefuroxime + Macrolide
- High-risk: Levofloxacin, Moxifloxacin, Gemifloxacin
- Treat for 5 days and reassess
- Risk-stratify for disposition (CURB-65, PORT/PSI)
  - Confusion, BUN > 19, RR  $\geq$  30, BP < 90 sys  $\leq$  60 dias, age  $\geq$  65

# Using Clinical Calculators

## PECARN Pediatric Head Injury/Trauma Algorithm ☆

Predicts need for brain imaging after pediatric head injury.

### INSTRUCTIONS

Note: This only applies to children with **GCS** scores of 14 or greater.

When to Use ▾

Pearls/Pitfalls ▾

Why Use ▾

Age

<2 Years

≥2 Years

GCS ≤14 or signs of basilar skull fracture or signs of AMS

AMS: Agitation, somnolence, repetitive questioning, or slow response to verbal communication

No

Yes

History of LOC or history of vomiting or severe headache or severe mechanism of injury

Motor vehicle crash with patient ejection, death of another passenger, or rollover; pedestrian or bicyclist without helmet struck by a motorized vehicle; falls of more than 1.5m/5ft; head struck by a high-impact object

No

Yes

### Result:

Please fill out required fields.

## Canadian C-Spine Rule ☆

Clinically clears cervical spine fracture without imaging.

When to Use ▾

Pearls/Pitfalls ▾

Why Use ▾

Age ≥65 years, extremity paresthesias, or dangerous mechanism

Fall from ≥3 ft (0.9 m) / 5 stairs, axial load injury, high speed MVC/rollover/ejection, bicycle collision, motorized recreational vehicle

No

Yes

Low risk factor present

Sitting position in the ED, ambulatory at any time, delayed (not immediate onset) neck pain, no midline tenderness. Simple rear-end motor vehicle collision (MVC) (not simple if pushed into traffic, hit by bus/large truck, rollover, hit by high-speed vehicle)

No

Yes

### Result:

Please fill out required fields.

[www.mdcalc.com](http://www.mdcalc.com)

# Using Clinical Calculators

## HEART Score for Major Cardiac Events ☆

Predicts 6-week risk of major adverse cardiac event.

### INSTRUCTIONS

Use in patients  $\geq 21$  years old presenting with symptoms suggestive of ACS. Do not use if new ST-segment elevation  $\geq 1$  mm or other new EKG changes, hypotension, life expectancy less than 1 year, or noncardiac medical/surgical/psychiatric illness determined by the provider to require admission.

When to Use ▾

Pearls/Pitfalls ▾

Why Use ▾

History

<b>Slightly suspicious</b>	<b>0</b>
Moderately suspicious	+1
Highly suspicious	+2

EKG

1 point: No ST deviation but LBBB, LVH, repolarization changes (e.g. digoxin); 2 points: ST deviation not due to LBBB, LVH, or digoxin

<b>Normal</b>	<b>0</b>
Non-specific repolarization disturbance	+1
Significant ST deviation	+2

**0 points**

Low Score (0-3 points)

Risk of MACE of 0.9-1.7%.

Copy Results 📋

Next Steps >>>

## PERC Rule for Pulmonary Embolism ☆

Rules out PE if no criteria are present and pre-test probability is  $\leq 15\%$ .

When to Use ▾

Pearls/Pitfalls ▾

Why Use ▾

Age  $\geq 50$

**No 0**

Yes +1

HR  $\geq 100$

**No 0**

Yes +1

O<sub>2</sub> sat on room air  $< 95\%$

**No 0**

Yes +1

Unilateral leg swelling

**No 0**

Yes +1

Hemoptysis

**No 0**

Yes +1

Recent surgery or trauma

Surgery or trauma  $\leq 4$  weeks ago requiring treatment with general anesthesia

**No 0**

Yes +1

[www.mdcalc.com](http://www.mdcalc.com)





## Paper Chase

- *JAMA Netw Open.* 2022;5(10):e2234459 – Topical ophthalmic antibiotics were associated with a significantly shorter duration of conjunctival symptoms in children with acute infective conjunctivitis.
- *CJEM.* 2023 Jan;25(1):22-30 – Pilot RCT, 1000 mg QID vs 500 mg QID, both x 7 days, resulted in fewer (3.2% vs 14.2%) treatment failures but higher minor adverse events.
- *Acad Emerg Med.* 2023 May;30(5):541-551 – Canalith repositioning maneuvers are superior to vestibular suppressants for most outcomes in BPPV.

## Paper Chase

- *CJEM*. 2022 Dec;24(8):809-819 – Intraarticular lidocaine showed similar reduction success for anterior shoulder dislocations as IV sedation, with fewer adverse reactions and shorter LOS and no difference in pain scores.
- *Clin Infect Dis*. 2023 Jan 13;76(2):185-191 – 25 mg Zn BID x 15 d resulted in lower ICU admit rates, shorter hospital LOS and decreased sx's for Covid 19
- *J Asthma Allergy*. 2021 Jan 18;14:31-46 – Incidence of true beta-lactam allergic cross-reactivity is low.

# Paper Chase – Penicillin-allergic cross-reactivity

- *JAMA Int Med.* 2020;180(5):745-752 – Validated the PEN-FAST Decision Rule
- 0 points < 1% penicillin skin test allergy (very low risk)
- 1-2 points 5% penicillin skin test allergy (low risk)
- 3 points 20% penicillin skin test allergy (moderate risk)
- 4-5 points 50% penicillin skin test allergy (high-risk)
- Educate patients; trial of cephalosporin (or even PCN) is OK for very low risk patients; refer those with moderate or high risk for testing
- <https://www.mdcalc.com/calc/10422/penicillin-allergy-decision-rule-pen-fast>

## Penicillin Allergy Decision Rule (PEN-FAST)



Identifies low-risk penicillin allergies.

### INSTRUCTIONS

Apply this calculator to patients who have reported a penicillin allergy.

When to Use ▾

Five years or less since reaction

No 0

Yes +2

Anaphylaxis or angioedema

OR

Severe cutaneous adverse reaction

No 0

Yes +2

Treatment required for reaction

No 0

Yes +1

**0** points

PEN-FAST Score

**<1** %

Very low risk of positive penicillin allergy test

Copy Results 📄

Next Steps >>>

## Important Papers from the Literature

- *Lancet*. 2022 Jul 2;400(10345):39-47 – Ace wrap equivalent to rigid support in the treatment of torus fractures
- *Acad Emerg Med*. 2022 Aug;29(8):1027-1032 – Nontoxic patients with prepatellar bursitis that seemed infectious did OK with empiric antibiotics without aspiration (retrospective)
- *JAMA Netw Open*. 2022 Oct 3;5(10):e2234588 – POC testing (blood CRP and myxovirus resistance protein A) performed similar to lab testing, a more complicated algorithm and clinical followup in distinguishing between acute viral and bacterial RTIs.



## Important Papers from the Literature

- *European Journal of Emergency Medicine*. 2021, 28:432–439 – Modified Valsalva maneuver > 4 times more likely to convert SVT than usual VM
  - Patient sits up straight and performs a forced expiration for about 15 sec
  - Then patient is brought into a supine position with the legs raised (45°) for another 15 sec
- *Pediatric Emergency Care*. 2022 Oct 1;38(10):477-480 – At 2 month followup, there was no cosmetic difference in pediatric patients with facial wounds randomized to repair with tissue adhesive alone vs adhesive over skin strips. And using strips took longer, but.....

# Non-opioid Pain Management

- Start simple – hot/cold therapy, movement
- Combination of ibuprofen 400 mg q3-4 hour and APAP 500 mg q3-4 hours almost equivalent to opioid analgesia
- Good data for topical diclofenac, lidocaine, capsaicin
- Consider dental blocks
- Consider occipital nerve block for migraine headache

# A Non-dizzying Approach to Dizziness

- Evaluate for central findings early
  - diplopia, dysphagia, ataxia
  - dysmetria (FNF, HKS), gait and truncal ataxia
- Use Dix Halpike maneuver to diagnose BPPV
- To confirm vestibulopathy, use the HINTS exam
  - Nystagmus is usually only horizontal, and is never bidirectional or vertical
  - Test of skew – no eye movement with uncovering eye in fixed gaze
  - Catch-up saccades occur with head impulse testing

# A Non-dizzying Approach to Dizziness

	Peripheral	Central
<b>Nystagmus</b>	horizontal, unidirectional	vertical, bidirectional
<b>Test of skew</b>	no eye movement	vertical eye movement
<b>Head impulse</b>	catch-up saccades	no saccades

# Cellulitis

- Over-diagnosed and over-treated
- One study: 84% did not need to be admitted, 93% received unnecessary antibiotics

## **ALT-70 Prediction rule:**

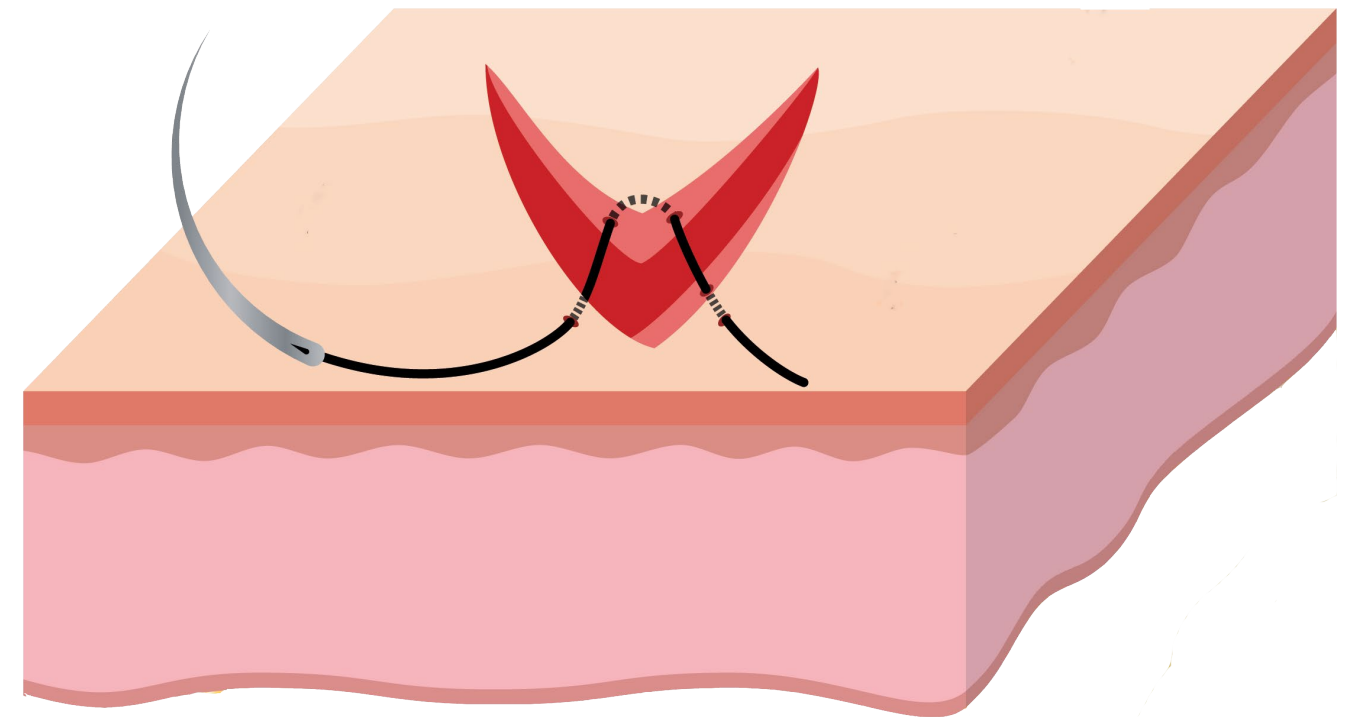
- Asymmetric – 3 pts
- Age  $\geq 70$  – 2 pts
- WBCs  $\geq 10k$  – 1 pt
- HR  $\geq 90$  – 1 pt
- Score 0-2 ~82% pseudo-cellulitis
- Score 5 82% cellulitis

<https://www.mdcalc.com/calc/3998/alt-70-score-cellulitis>



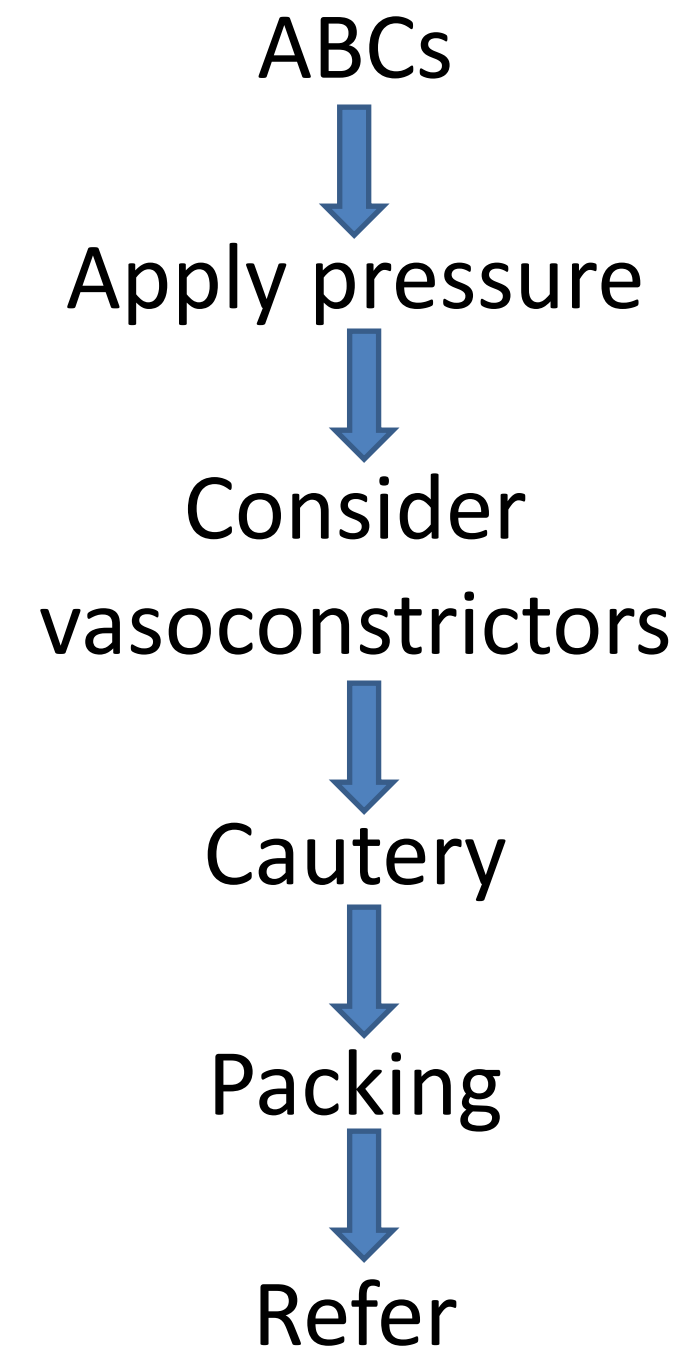
# Procedure Pearls

- Try dermabond for nailbed injuries
- Use the “corner stitch” to close the apex of a V-shaped wound
- Use scapular rotation with shoulder reductions
- Consider Los Davos, FARES, or “chair reductions
- For oral mucosal bleeding, try lido with epi injection or 4-5% TXA swish (2 mins) and spit



# Handling the Patient with Epistaxis

- ABCs first
- Stepwise approach – benefit vs. harm
- Hold pressure (correctly) – 5 mins or longer
- Determine whether this is going to be more difficult than “usual”
  - tumor or vascular malformation
  - recent trauma or surgery
  - anticoagulation or other bleeding disorder
- Equipment and meds



## Wound Care – Diabetic foot ulcers

- > 2 cm diameter: + LR 7 - LR 0.5
- Probe to bone: + LR 6.5 - LR 0.4
- ESR > 70 mm/hr: + LR 11.3 - LR 0.3
- Changes on xray: + LR 2.3 - LR 0.6
- MRI: + LR 3.8 - LR 0.14
- Positive xray and positive probe to bone: + LR 12
- Negative xray and negative probe to bone: - LR 0.02