

Scan QR for
 Digital
 Protocols



SCAN ME

Acute CP / ischemic equivalent

Presenting ECG

Follow STEMI protocol

ECG meets STEMI criteria

New acute signs of ischemia²

No significant ST deviation

Draw 0h hs-Tnl

0h Trop ≥ 100 ng/L

SXS ≥ 3 hrs &
 HEART score 0-3 &
 0h Trop < 5 ng/L

SXS < 3 hrs; OR
 HEART score ≥ 4; OR
 0h Trop ≥ 5 and < 100 ng/L

Draw 1h hs-Tnl

Any Trop ≥ 100; OR
 1h delta ≥ 15 ng/L

HEART score 0-6 &
 0h Trop < 5 ng/L &
 1h delta < 5 ng/L

HEART score ≥ 7; OR
 0h Trop ≥ 5 ng/L and < 100 ng/L; OR
 1h delta ≥ 5 and < 15; OR

Draw 3h hs-Tnl

Any Trop ≥ 100; OR
 Any delta³ ≥ 25 ng/L

HEART score 0-6 &
 All Trops < 15(F)/20(M) &
 No delta³ > 5 ng/L

LOW RISK
 • Consider discharge and OP follow-up

INTERMEDIATE RISK
 Consider:
 • Shared decision making
 • OP follow-up for HEART score 0-3
 • Observation and stress testing / CTA
 • If hs-Tnl 50-100 and high suspicion for NSTEMI, may manage as high-risk

HIGH RISK
 Consider:
 • Cardiology consult
 • Admission
 • Follow treatment guidelines for most likely diagnosis (Type 1 NSTEMI, Type 2 MI, or nonischemic myocardial injury)

Footnotes:
 1. Beckman UniCel Dxl Access analyzer "abnormal" (>99th percentile) cut points: >14.9 mg/L (women); >19.8 ng/L (men)
 2. Refers to acute findings not seen on prior ECGs, and not associated with LVH, LBBB, RBBB, or early repolarization
 3. "No delta", "All deltas", or "Any delta" includes 0→1h, 1→3h, and 0→3h changes in hsTnl
 CP chest pain; Dx diagnosis; OP outpatient; SXS symptoms
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Summary of dispositions:

Discharge:

- Symptoms >3hr, initial hsTn <5, HEART score <4
- Initial hsTn <5, 1hr delta <5, HEART score 0-6
- 0, 1, 3hr hsTn normal*, all deltas <5, HEART score <7
- Intermediate risk and shared decision making chooses home with outpatient follow-up

Admit / consult:

- Usual indications (STEMI, etc.)
- Any hsTn delta >25
- Any hsTn >100 (T0hr, T1hr, or T3hr)
- hsTn of 50 – 100 (indeterminate range) with high suspicion for ACS

Intermediate risk

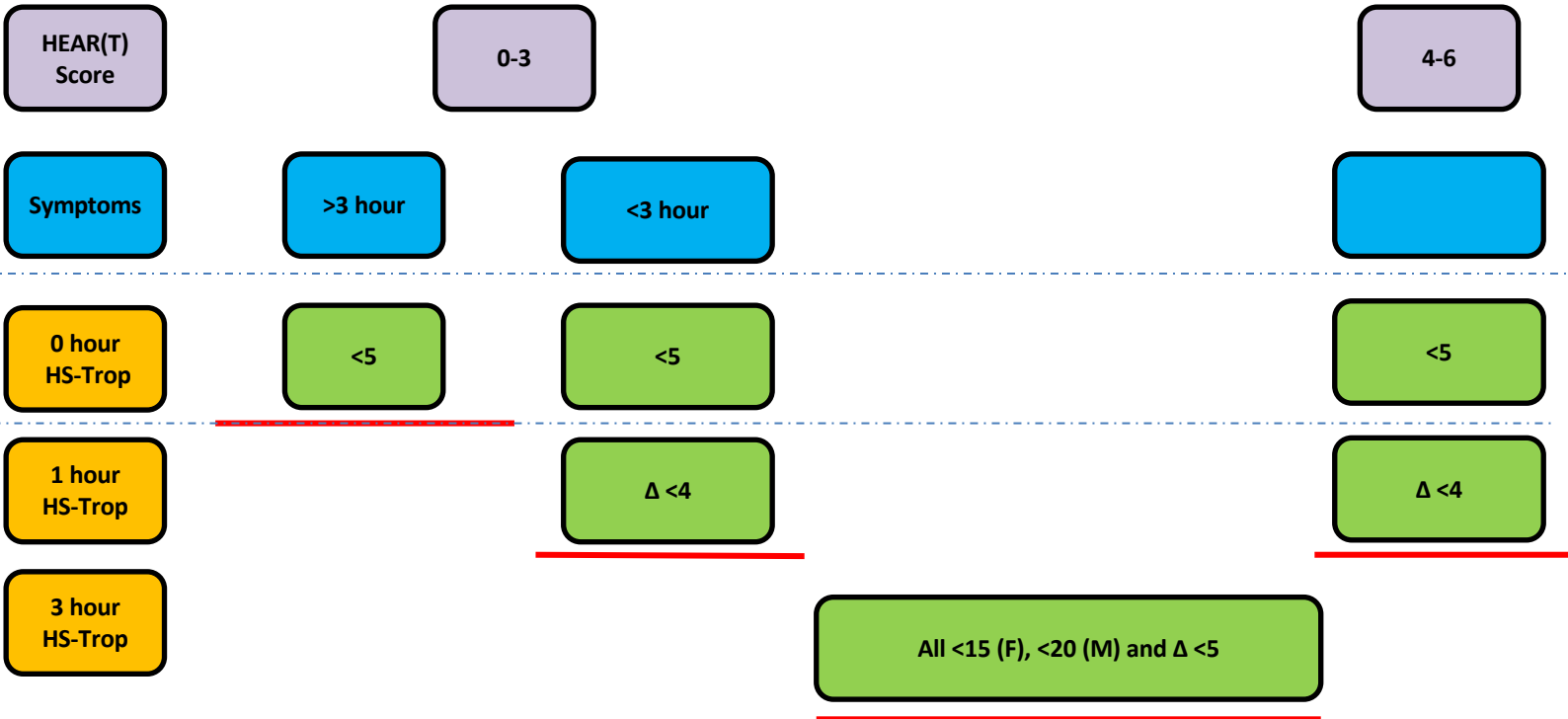
(CDU or Shared Decision Making):

- hsTn between normal* and 50
- hsTn between normal* and 100 and low suspicion of ACS
- hsTn delta between 5 – 25 (5-15 at 1hr)
- HEART score >3 with clinical concern

* Normal = 99%ile, sex based = <15(F) / <20(M) ng/L
hsTn levels above are in ng/L

LOW RISK

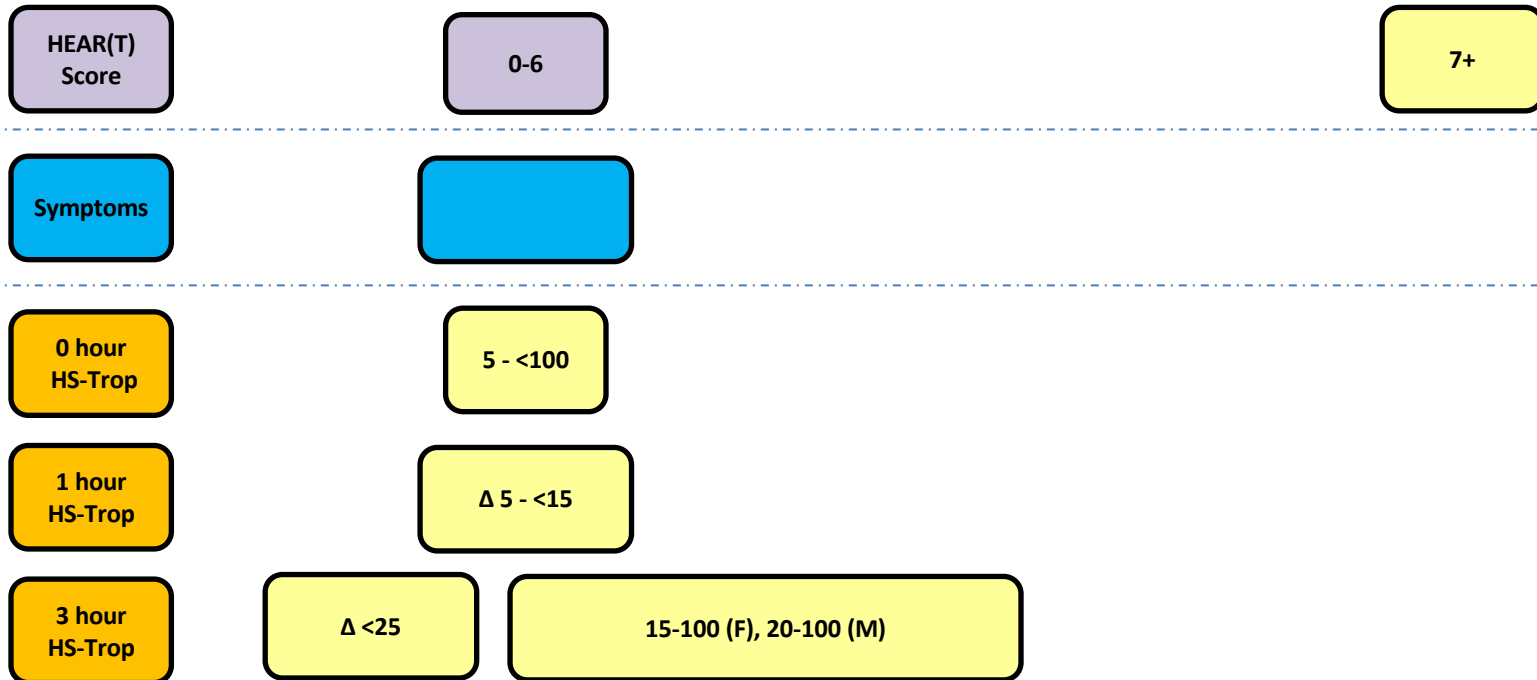
- Consider discharge and OP follow-up



INTERMEDIATE RISK

Consider:

- Shared decision making
- OP follow-up for HEART score 0-3
- Observation and stress testing / CTA
- If hs-Tnl 50-100 and high suspicion for NSTEMI, may manage as high-risk



HIGH RISK

Consider:

- Cardiology consult
- Admission

• Follow treatment guidelines for most likely diagnosis (Type 1 NSTEMI, Type 2 MI, or nonischemic myocardial injury)

HEAR(T)
Score



Symptoms



0 hour
HS-Trop

>100

1 hour
HS-Trop

$\Delta >15, >100$

3 hour
HS-Trop

$\Delta >25$

>100

Equivalency of values: Tnl vs. hs-Tnl (EUH, EUHM, ESJH, EJCH, Grady) *

Note the following differences between standard troponin I and high-sensitivity troponin I (hs-Tnl):

1. Units of measurement are different. hs-Tnl is reported **as integers in ng/L** (whereas Tnl was in ng/mL)
2. To convert from hs-Tnl to standard Tnl (for clinical context), **divide by 1000**. Example: hs-Tnl value of 100 ng/L corresponds to a standard Tnl value of 0.1 ng/mL. See table below.
3. hs-Tnl has different “abnormal” cut point, (or 99th percentile value) in women and men.

standard Tnl (ng/mL)	hs-Tnl (ng/L)	Notes
0.0023	< 2.3	LOQ** for hs-Tnl
0.015	15	99 percentile (abnormal) hs-Tnl value for women
0.02	20	99 percentile (abnormal) hs-Tnl value for men
0.03	30	
0.04	40	99 percentile (abnormal) standard Tnl value
0.05	50	
0.1	100	
0.5	500	
1	1000	
10	10000	
25	> 25000	Highest reportable value of analytic range for hs-Tnl
>70		Highest reportable value of analytic range for Tnl

These Tnl values are reported as < 0.03 ng/mL

* Grady, EUH, EUHM, ESJH, and EJCH use a Beckman Coulter UniCel Dxl analyzer with the following “abnormal” (>99th percentile) cut points: >14.9 mg/L in women; >19.8 ng/L in men. These cut points do NOT apply for EUOSH, EDH, EHH, or ELTAC (see separate protocols for these operating units).

** LOQ: Lowest hs-Tnl concentration that is reportable as a number with specified certainty

hs-Tnl: high-sensitivity troponin I