

Male

Vent. rate 78 bpm
 PR interval 154 ms
 QRS duration 94 ms
 QT/QTc 346/394 ms
 P-R-T axes 10 -15 37

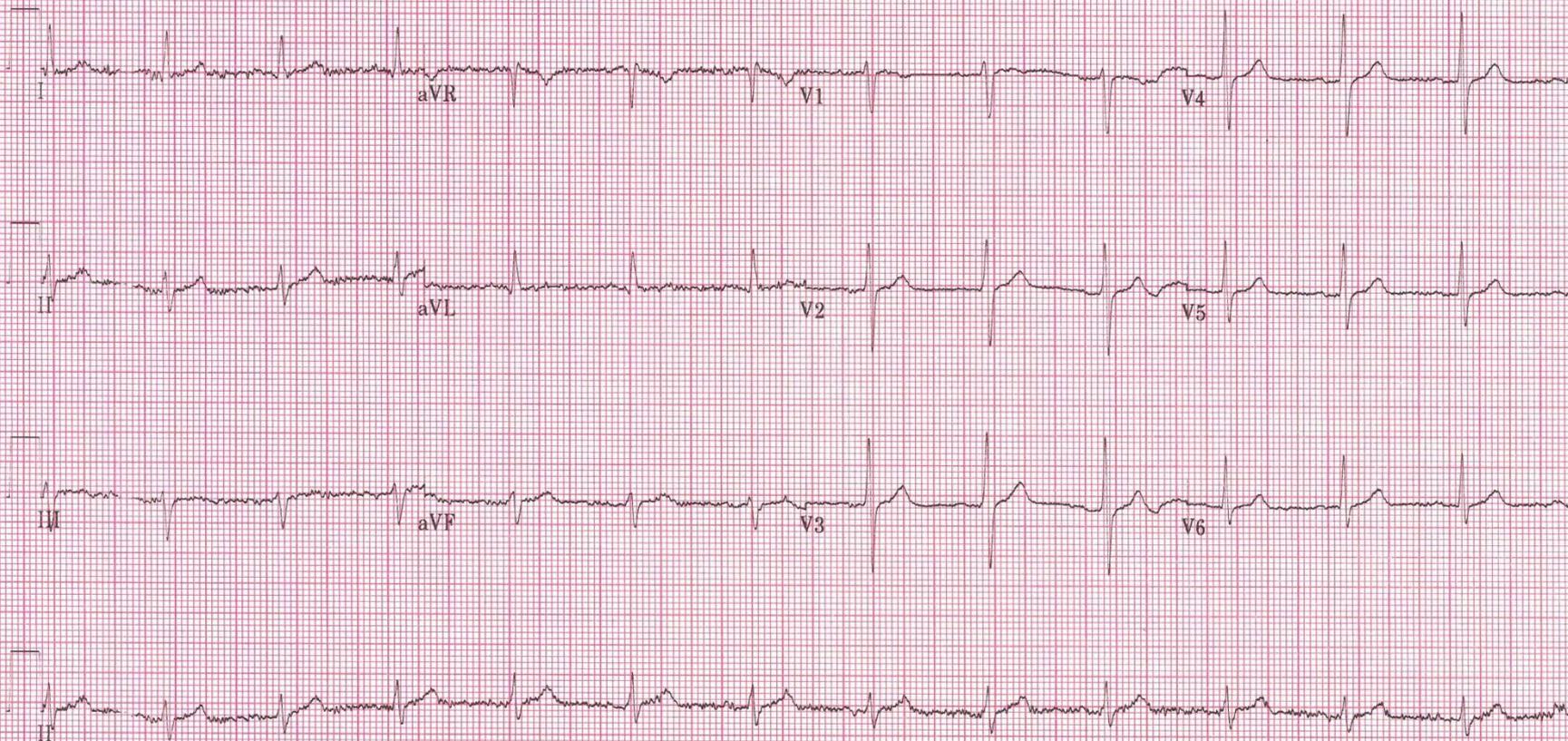
Normal sinus rhythm
 Normal ECG

Technician: WR

FIN#: 123456780

DEPT: EKGCLASS

Unconfirmed



40 Hz 5.0 mm/s 10.0 mm/mV

4 by 2.5s + 1 rhythm ld

MAC55 010B

12SL™ v241 HD

Male

Vent. rate 86 bpm
 PR interval 156 ms
 QRS duration 94 ms
 QT/QTc 348/416 ms
 P-R-T axes 16 -10 62

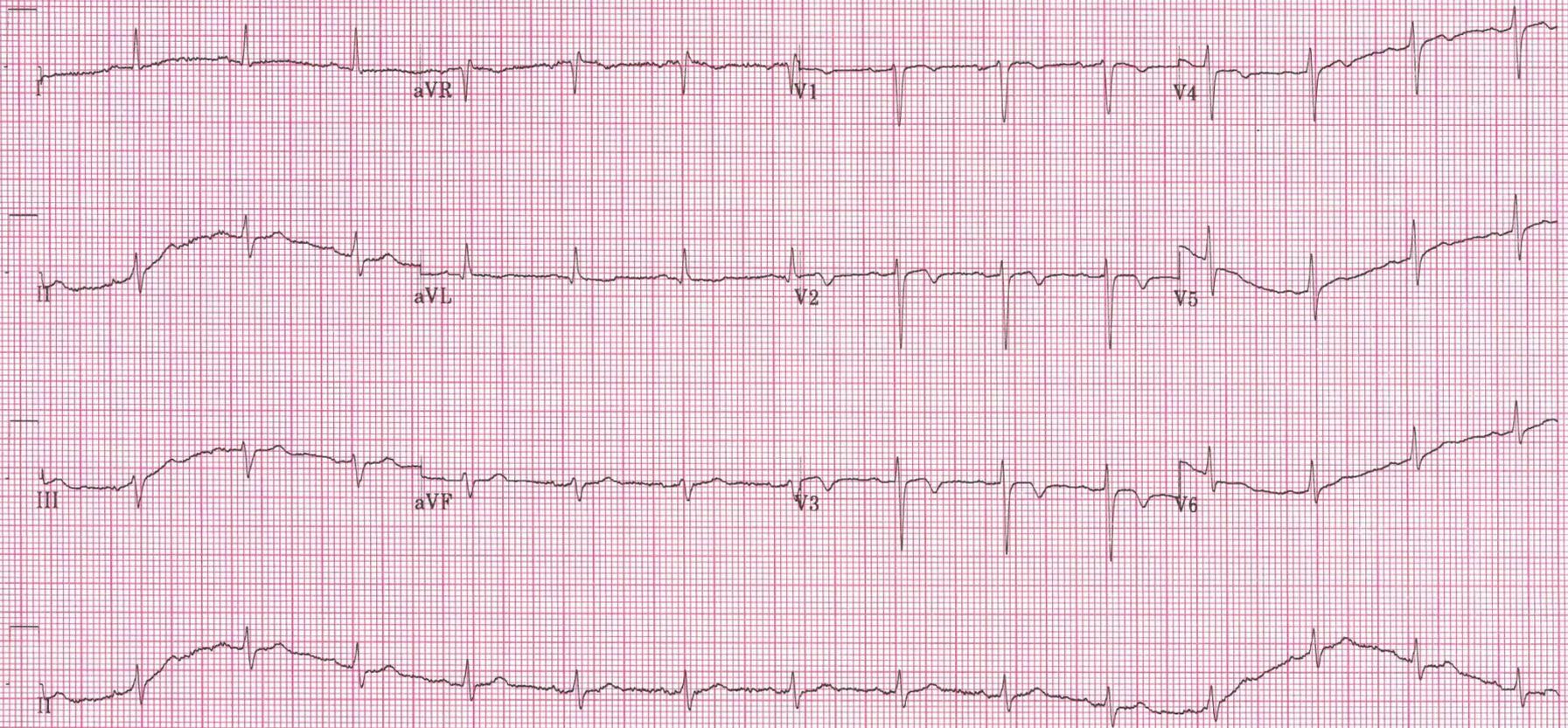
Normal sinus rhythm
 T wave abnormality, consider anterior ischemia
 Abnormal ECG

Technician: WR

FIN#: 111

DEPT: EKG

Unconfirmed



Male

Vent. rate 86 bpm
 PR interval 156 ms
 QRS duration 94 ms
 QT/QTc 348/416 ms
 P-R-T axes 16 -10 62

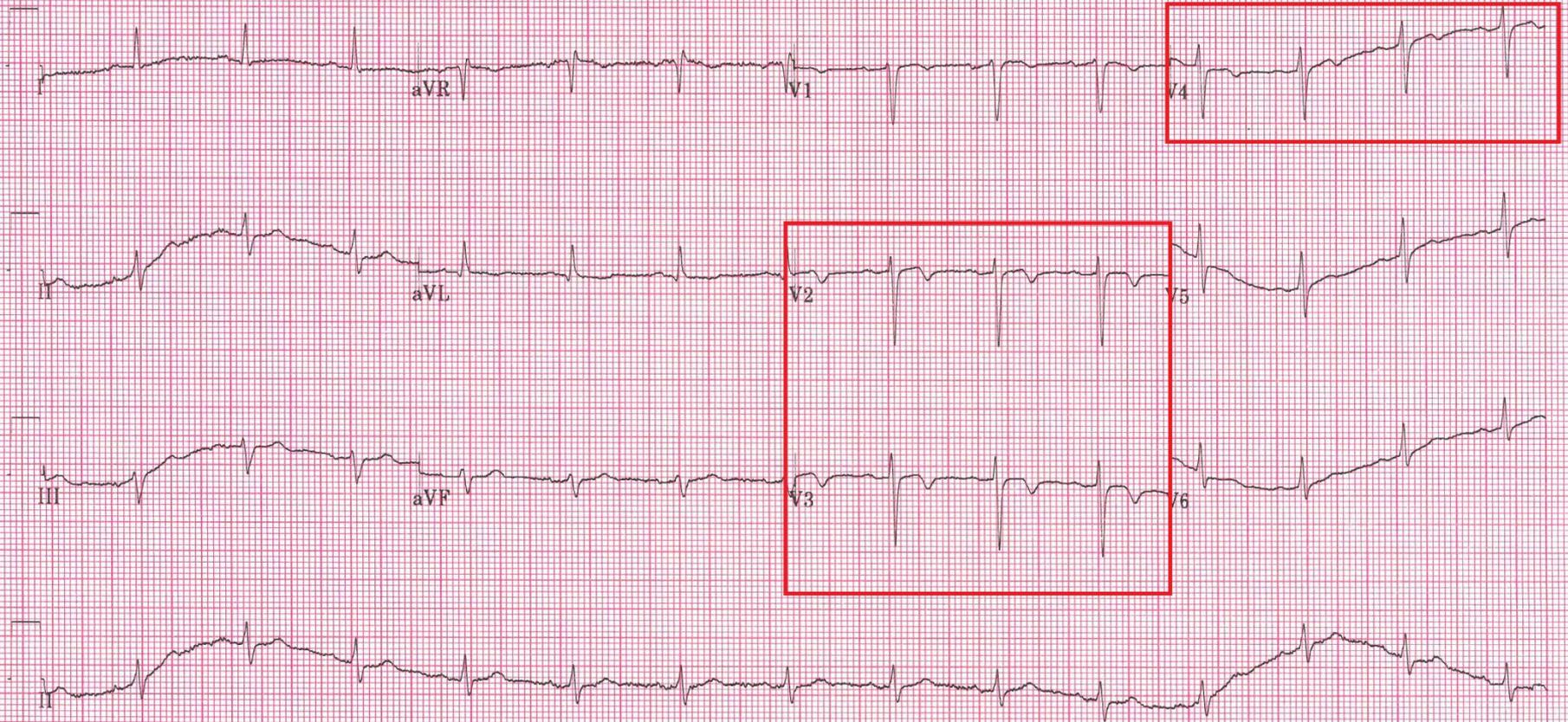
Normal sinus rhythm
 T wave abnormality, consider anterior ischemia
 Abnormal ECG

Technician: WR

FIN#: 111

DEPT: EKG

Unconfirmed

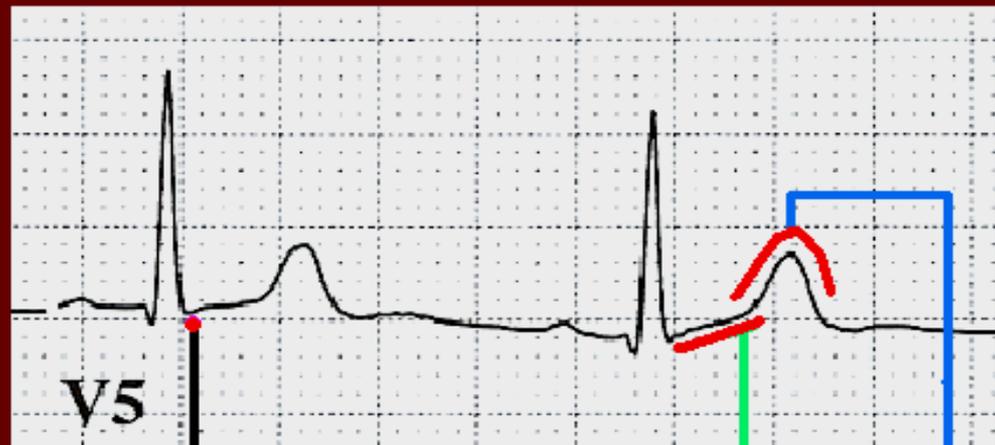


Serial ECGs

- Use the first ECGs as your “baseline.”
- ECGs obtained later, compare them to the first (baseline) ECG.
- Look for changes to the J Point, ST Segment and T waves of every lead.
- Your patient’s J Points, ST Segments and T waves **SHOULD NEVER CHANGE.**
- Changes to the patients J Points, ST Segments and T waves are indicative of **EVOLVING ISCHEMIA.** Cardiologist should be notified **ASAP**

NORMAL ST - T WAVES

- WHEN QRS WIDTH IS NORMAL (< 120 ms)



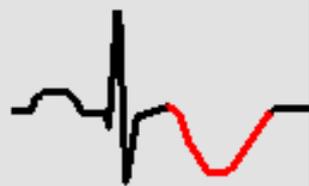
ASSESS:

- J POINT: ISOELECTRIC (or < 1 mm dev.)
- ST SEG: SLIGHT, POSITIVE INCLINATION
- T WAVE: UPRIGHT, POSITIVE



in EVERY LEAD EXCEPT aVR !!

INVERTED
T WAVE



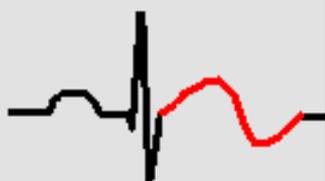
- **MYOCARDITIS**
- **ELECTROLYTE IMBAL.**
- **ISCHEMIA**

SHARP S-T
T ANGLE



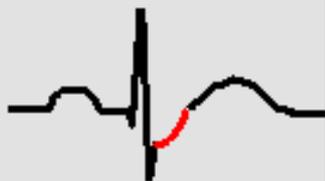
- **ACUTE MI (NOT COMMON)**
- **ISCHEMIA**

BI-PHASIC
T WAVE
(WELLEN'S)



- **SUB-TOTAL LAD LESION**
- **VASOSPASM**
- **HYPERTROPHY**

DEPRESSED J
POINT with
UPSLOPING ST



- **ISCHEMIA**

DOWNSLOPING
S-T SEGMENT



- **ISCHEMIA**

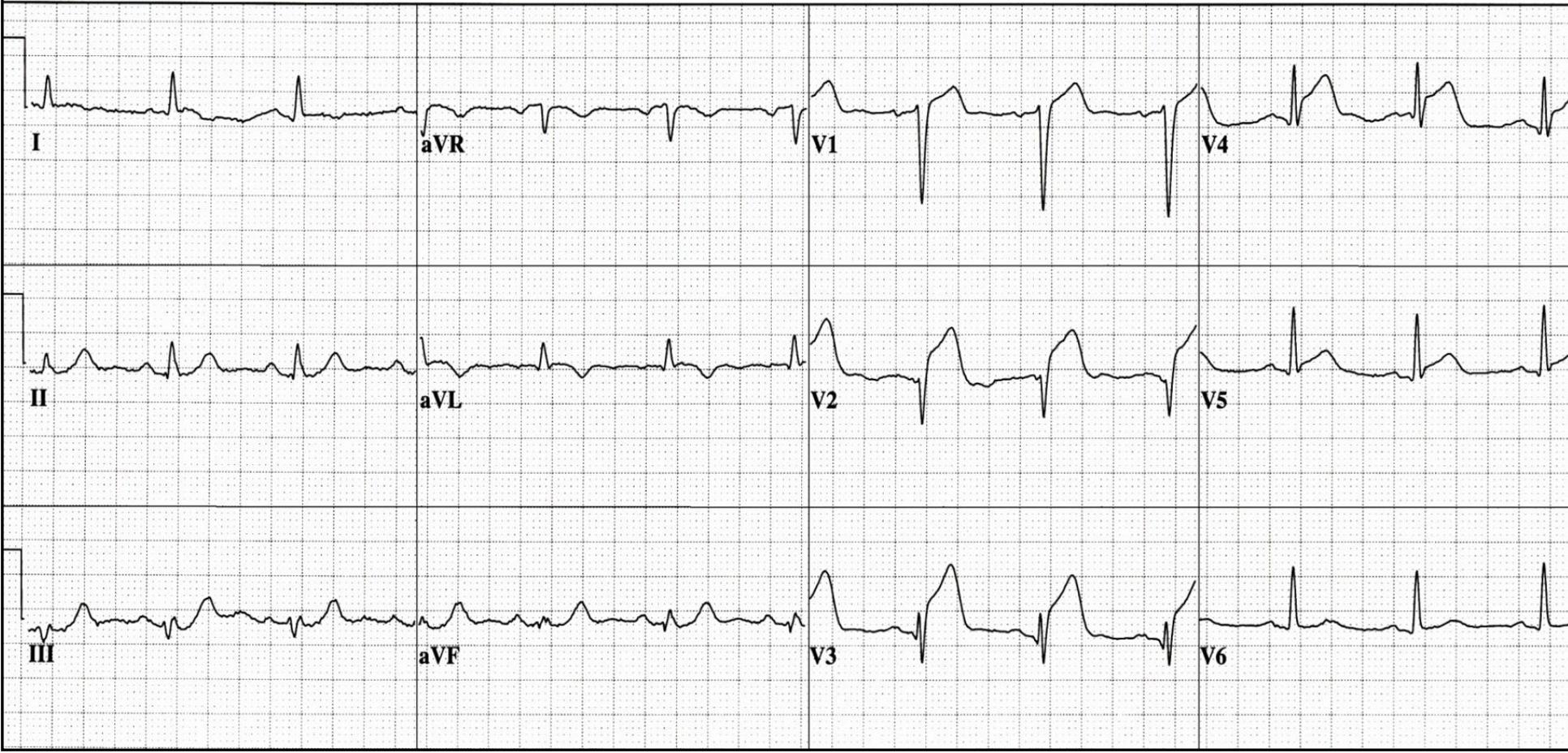
72 yr
Male Caucasian
Loc:3 Option:23

Vent. rate	75	BPM
PR interval	162	ms
QRS duration	98	ms
QT/QTc	382/426	ms
P-R-T axes	72 13	83



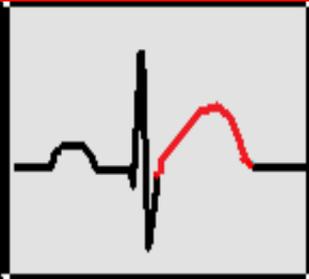
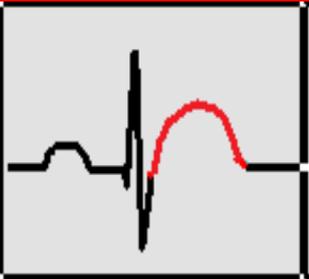
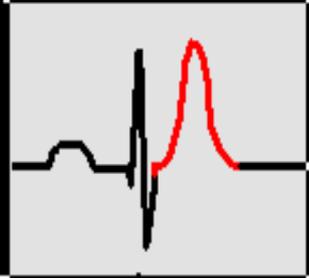
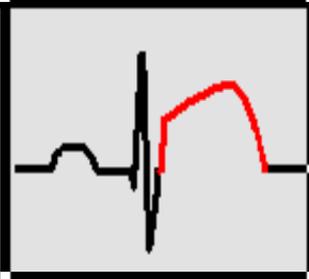
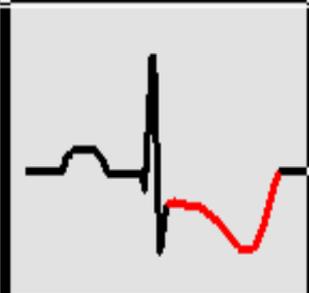
EVALUATE EKG for indicators of ACS:

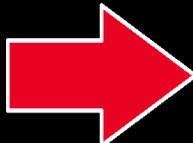
- ST SEGMENT ELEVATION / DEPRESSION
- HYPERACUTE T WAVES
- CONVEX ST SEGMENTS
- OTHER ST SEGMENT / T WAVE ABNORMALITIES



PATTERNS of ACS & ISCHEMIA

-- J POINT, ST SEGMENT, and T WAVE ABNORMALITIES --

! FLAT or CONVEX J-T APEX SEGMENT			<i>ACUTE MI</i> <i>EARLY PHASE</i>
! HYPER-ACUTE T WAVE			<i>ACUTE MI</i> <i>EARLY PHASE</i>
! S-T SEGMENT ELEVATION at J POINT			<i>ACUTE MI</i>
! DEPRESSED J pt. DOWNSLOPING ST and INVERTED T			- ACUTE (NON-Q WAVE) MI - ACUTE MI - (RECIPROCAL CHANGES) - ISCHEMIA



56 yr
Male Caucasian
Room:A9
Loc:3 Option:23

Vent. rate 80 BPM
PR interval 154 ms
QRS duration 78 ms
QT/QTc 380/438 ms
P-R-T axes 51 -24 38

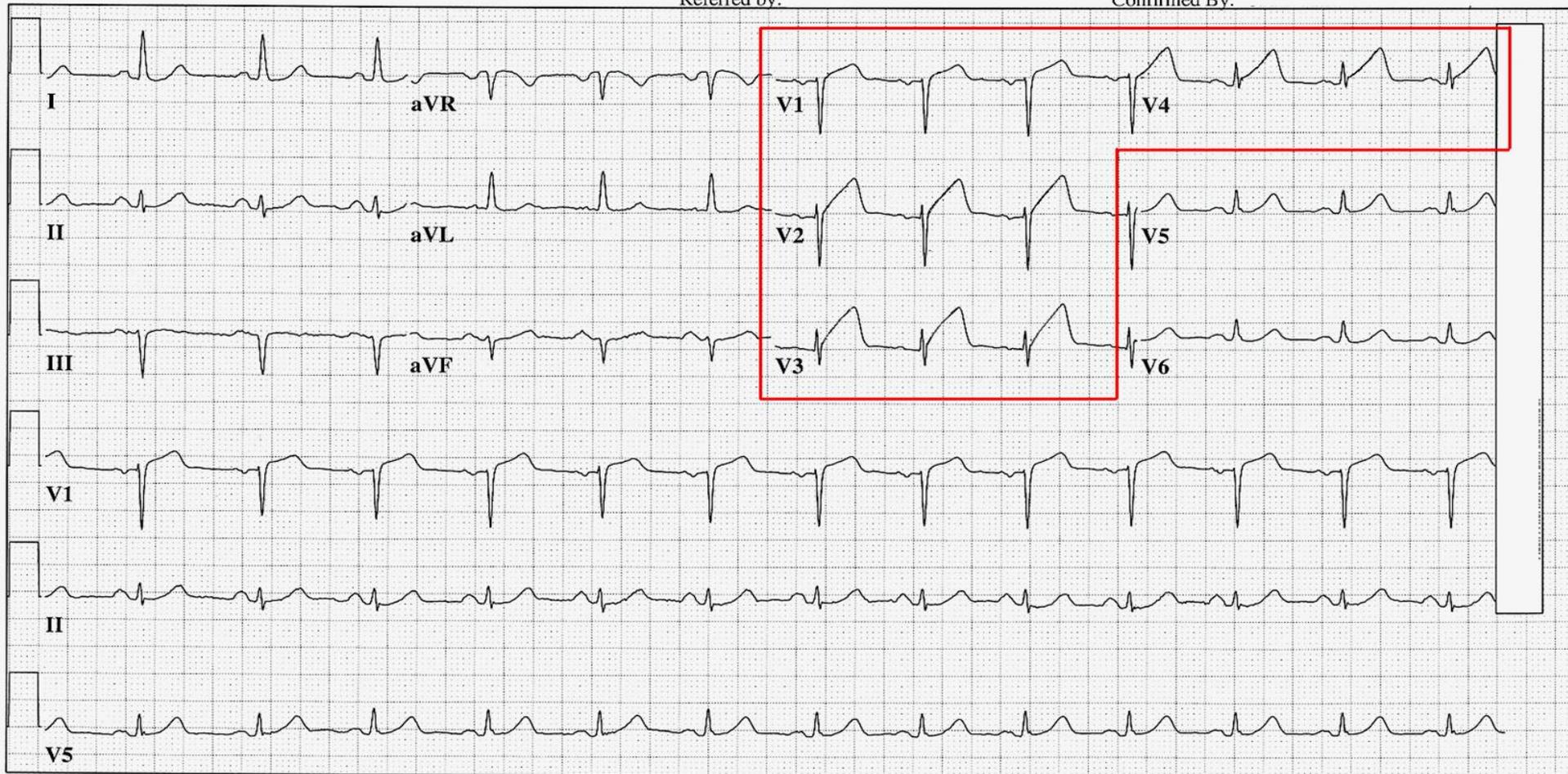
****UNEDITED COPY – REPORT IS COMPUTER GENERATED ONLY, WITHOUT PHYSICIAN INTERPRETATION**

Normal sinus rhythm
Normal ECG
No previous ECGs available

Technician: W Ruppert

Referred by:

Confirmed By:

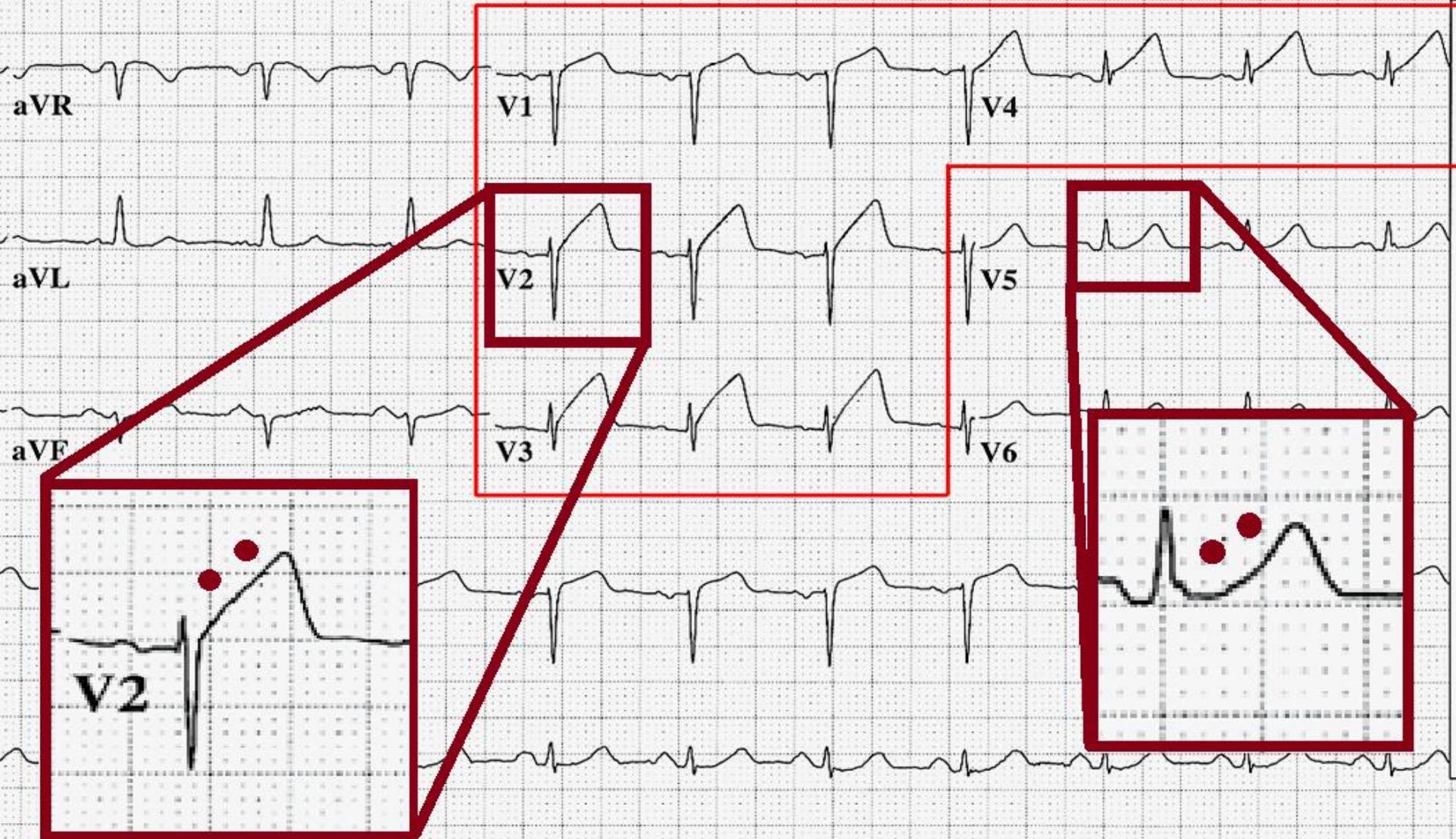


380/438 ms
51 -24 38

Normal sinus rhythm
No previous ECGs available

Referred by:

Confirmed By:



CHANGES ASSOCIATED WITH CELLULAR PERFUSION INVOLVING THE:

- QRS
- J POINT
- ST SEGMENT
- T WAVE

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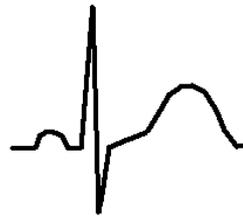
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NORMAL STATE OF PERFUSION

ARTERIAL BLOCKAGES → NONE SIGNIFICANT
 CELLULAR OXYGENATION → NORMAL
 CELLULAR METABOLISM → AEROBIC
 CELLULAR FUNCTION → NORMAL CONTRACTION

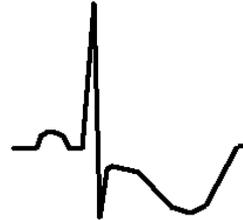
EKG: J POINT ISOELECTRIC, ST SEG "SLIGHT, POSITIVE INCLINATION, T WAVE POSITIVE, UPRIGHT.



ISCHEMIA

ARTERIAL BLOCKAGES → PARTIAL OBSTRUCTION
 CELLULAR OXYGENATION → INSUFFICIENT
 CELLULAR METABOLISM → AEROBIC
 CELLULAR FUNCTION → REDUCED CONTRACTION
 PATIENT SYMPTOMS → POSSIBLE, WITH EXERTION

EKG: J POINT DEPRESSED, ST SEGMENT VARIES, T WAVE VARIES



INFARCTION

ARTERIAL BLOCKAGES → TOTAL OBSTRUCTION
 CELLULAR OXYGENATION → NONE
 CELLULAR METABOLISM → ANAEROBIC CELL BEGINS TO BURN GLYCOGEN RESERVES
 CELLULAR FUNCTION → STOPS CONTRACTING
 PATIENT SYMPTOMS → TYPICAL or ATYPICAL ACS Sx

EKG - INDICATIVE: J POINT ELEVATES, ST SEGMENT CONVEX, T WAVE POSITIVE, MAY ENLARGE
 EKG - RECIPROCAL: J POINT DEPRESSES, ST SEGMENT DOWNSLOPING, T WAVE INVERTED



NECROSIS

ARTERIAL BLOCKAGES → TOTAL OBSTRUCTION
 CELLULAR OXYGENATION → NONE
 CELLULAR METABOLISM → CELL DIES WHEN GLYCOGEN RESERVES DEPLETED.
 CELLULAR FUNCTION → NONE. CELL DEAD.
 PATIENT SYMPTOMS → POSS. HYPOTENSION, DEATH

EKG - INDICATIVE: J POINTS, ST SEGMENTS NORMALIZE; ABNORMAL Q WAVES FORM
 EKG - RECIPROCAL: J POINTS, ST SEGMENTS NORMALIZE; ABNORMAL TALL R WAVES FORM

