

## Sgarbossa Criteria

### Definition

Used to identify AMI in the presence of LBBB or a paced rhythm.

### History/Physical Exam

History and findings suggestive of acute coronary syndrome.

### Key 12-Lead Features

ST elevation $\geq 1$ mm in a lead with upward (concordant) QRS complex	5 pts
ST depression $\geq 1$ mm in lead V1, V2, or V3	3 pts
ST elevation $\geq 5$ mm in a lead with downward (discordant) QRS	2 pts

$\geq 3$  points = 90% specificity of STEMI (sensitivity of 36%)

## Smith's Modified Sgarbossa

Replacement of Rule III: discordant ST-elevation measurement of  $> 5$  mm with

Smith's Rule: ST/S ratio greater than 0.25 = STEMI

- Measure the ST Segment Elevation in mm [X]
- Measure the height/depth of the S/R wave in mm [Y]
- $X \div Y = Z$
- $Z > 0.25 = \text{STEMI}$

Sensitivity: 91%

Specificity: 90%

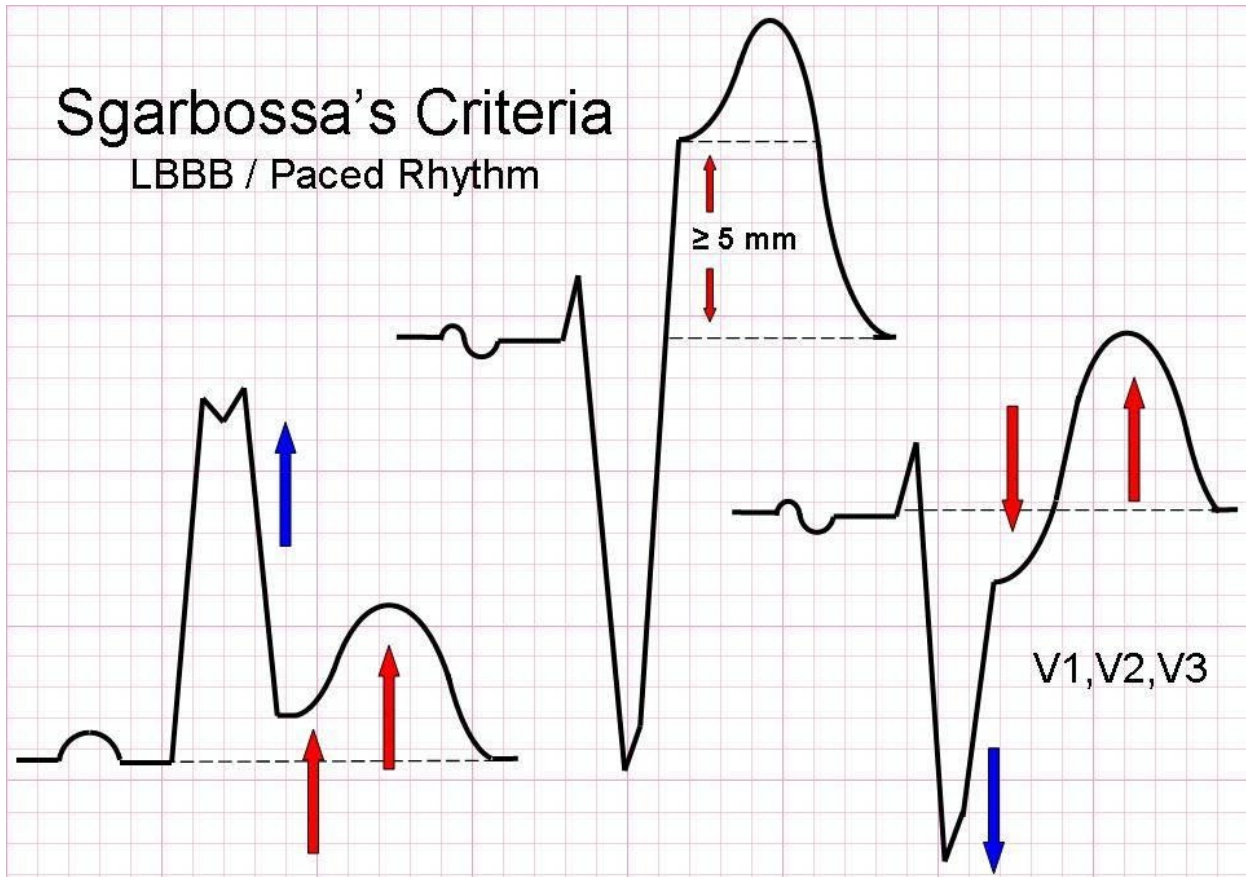
### Key Treatment Points

- Transmit as per current guidelines if believed ischemic
- Convey to PCI capable hospital
- Monitor for 12-lead changes and patient decompensation
- Treat as Acute Coronary Syndrome
- Patient advocacy at the hospital

### 12 Lead ECG Samples

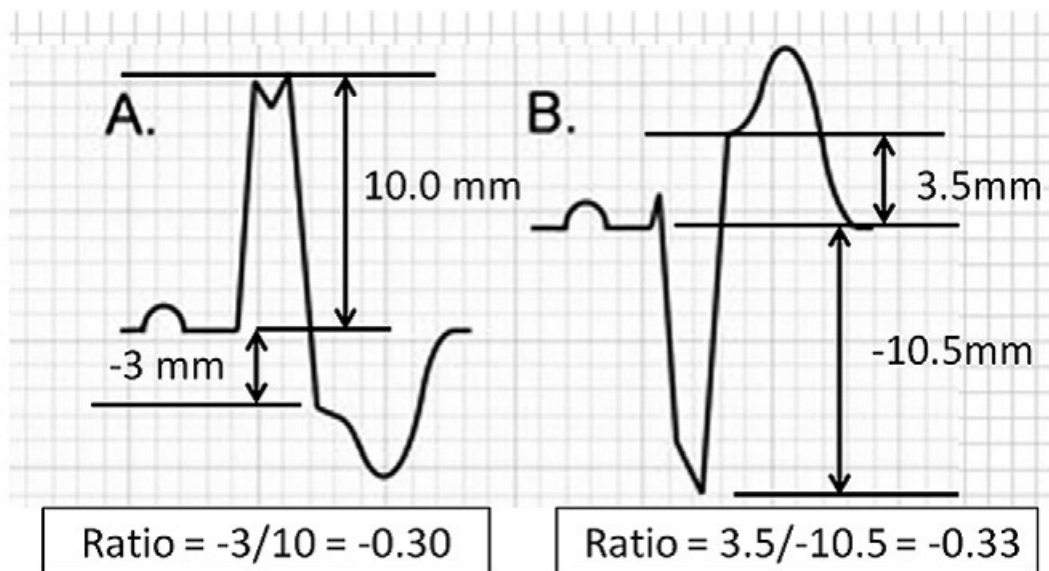
## Sgarbossa's Criteria

### LBBB / Paced Rhythm



### Smith's Modified Sgarbossa

Despite lacking > 5 mm elevation, both complexes below shown are positive for STEMI, due to ratios exceeding 0.25



[Further Reading](#)

### References

1. Rodriguez, RM. Electrocardiographic Criteria for Detecting Acute Myocardial Infarction in Patients With Left Bundle Branch Block: A Meta-analysis. 2006. [\[Link\]](#)

