Fourth Universal Definition of Myocardial Infarction

The fourth universal definition focuses on identification of myocardial injury—elevated troponin—and the process of determining the mechanism as ischemic (infarction) or non-ischemic.

An acute myocardial infarction (AMI) is defined as acute myocardial injury with:

- **Troponin** rise and fall, or fall of already elevated troponin value (with one value above the 99th percentile URL) **and**
- **At least one** of the following:
  - Symptoms of myocardial ischemia;
  - ECG – New ischemic changes;
  - ECG – Development of pathologic Q waves;
  - Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality in a pattern consistent with an ischemic etiology;
  - Identification of a coronary thrombus by angiography or autopsy (not for types 2 or 3 MIs).

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<tr>
<th>Type 1 MI</th>
<th>A coronary artery event via plaque disruption or dissection</th>
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<tr>
<td>Type 2 MI</td>
<td>Not a coronary artery event. Myocardial oxygen demand is not met by oxygen supply. Coronary artery plaque may or may not be present but is unchanged.</td>
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**Demand Ischemia**

Cardiac demand ischemia is the same thing as angina, supply-demand mismatch without infarction:

- Angina + elevated troponin = AMI
- Demand ischemia + elevated troponin = type 2 AMI

**Acute myocardial injury** is defined as ≥ 20% variance in troponin values (to distinguish from stable elevation).

**Coding Rules** allow qualifying a diagnosis as “likely,” “probable,” “suspected” at the time of discharge (i.e., discharge summary).