

Fourth Universal Definition of Myocardial infarction

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The fourth Universal Definition of Myocardial infarction was necessary for several reasons, including the superiority of high-sensitive troponin (cTn) that changed evaluation of myocardial infarction. Even though myocardial injury is a prerequisite for the diagnosis of myocardial infarction in terms of myocardial ischemia, it is also an entity in itself. Two most important parts of this concept include: 1. presence of myocardial injury and 2. evidence of the presence or absence of acute myocardial ischaemia. Presence of myocardial injury is defined with raised cTn concentrations above 99th percentile upper reference limit. A rising and/or falling pattern of cTn values indicates acute myocardial injury, whereas chronic myocardial injury is characterized by continuing elevated cTn values (less than 20% variation). The Fourth universal definition of myocardial infarction retains the five types of myocardial infarction, as described in the Third universal definition of myocardial infarction, though with modifications. The five types of myocardial infarction represent five separate situations that produce myocardial ischaemia and myocardial necrosis and have different pathological findings, clinical presentation, prognosis, and the treatment strategies.

Key words: myocardial infarction, myocardial ischaemia, troponin, percutaneous coronary intervention, coronary artery bypass