

News

Clinical Laboratory Test Update Troponin Reporting Changes

Effective 11/15/17, the reference range and interpretive comment provided with Troponin (Tn) test results will be updated as indicated below.

Troponin I (Clinical Laboratory)	
Reference Range	≤ 0.04 ng/mL
Interpretive Comment	A single troponin result greater than 0.04 ng/mL, the upper reference limit (URL), suggests myocardial injury, but is not diagnostic. Clinical evidence of acute myocardial ischemia with a rise and/or fall in troponin and at least one value above the URL is necessary to support a diagnosis of myocardial infarction (MI). The Third Universal Definition Myocardial Infarction details separate requirements for diagnosing an MI associated with a revascularization procedure. The URL reported here is the best estimate of the 99th percentile value for an apparently normal reference population measured with the ADVIA Centaur method.

POCT Troponin	
Reference Range	≤ 0.08 ng/mL
Interpretive Comment	A single troponin result greater than 0.08 ng/mL, the upper reference limit (URL), suggests myocardial injury, but is not diagnostic. Clinical evidence of acute myocardial ischemia with a rise and/or fall in troponin and at least one value above the URL is necessary to support a diagnosis of myocardial infarction (MI). The Third Universal Definition Myocardial Infarction details separate requirements for diagnosing an MI associated with a revascularization procedure. The URL reported here is the best estimate of the 99th percentile value for an apparently normal reference population measured with the i-STAT method.

While the reference ranges being replaced were verified consistent with regulatory requirements, studies of our assay results in apparently healthy individuals and good laboratory practice, the European Society of Cardiology, the American College of Cardiology Foundation, the American Heart Association, and the World Heart Federation produced consensus recommendations for reporting Tn results in the Third Universal Definition of Myocardial Infarction (2012). Data from our laboratory indicates that adjusting our reporting to be consistent with this guidance is practicable.

Regardless of whether the initial Tn result is within the reference range or increased, an essential component for the diagnosis of an acute MI is observation of at least one abnormal value in the context of either a rising or falling pattern over the initial 6–9 hours after patient presentation. Serial troponin orders are expected, because at least two Tn measurements are necessary to identify the trend in Tn. Our laboratory will not call to report either individual abnormal Tn results or trends in Tn results.



As can be inferred from the different reference ranges indicated above, results of different Tn assays are not interchangeable and the same sample measured by two different methods may not yield identical values. Therefore, it is strongly recommend that the same assay be used for serial measurements to facilitate the interpretation of results.

Please call Gregory Bocsi, DO at 720-848-7050 if you have any questions or visit our website at <https://www.uchealth.org/professionals/uch-clinical-laboratory/> for additional information.
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