Memorandum

**Department of Pathology & Laboratory Medicine**

**Date: April 4, 2022
To: Medical Staff and Nursing Staff
From: Vasu Maganti, PhD, Laboratory Director**

**David Gray, MD, Medical Director**

 **Holly Lapierre, MT, Clinical Laboratory Supervisor**

**Subject: New Cardiac Highly Sensitive Troponin T Test**

Dear Colleagues,

Expected Effective 4/11/2023, the WDH Laboratory will switch to a new highly sensitive Troponin T assay.  The new test will be performed on the Roche chemistry line of instruments.  These instruments are standardized among the MGB laboratories as are the new Troponin assay parameters.  The reference ranges, cut off points, and interpretive guidelines will now be standardized across MGB.  This new assay offers improved precision to improve discrimination at diagnostic decision levels. It also allows for the detection of smaller infarcts and potential use of accelerated diagnostic protocols, which will lead to more efficient and better patient care.  The new Gen 5 Troponin-T assay is the first true highly sensitive troponin to be marketed in the U.S.  It has been used throughout Europe, Canada, and the rest of the world since 2009.

Current and new reference ranges for both biomarkers are listed below.

Specimen requirements **(PST; lithium heparin plasma)** and **Epic lab order code (LAB139)** remain unchanged.

|  |  |  |
| --- | --- | --- |
| Biomarker | Expected Results | Interpretation |
| **ROCHE****New method**High sensitive Troponin-T | **Negative:**<0-9 ng/L Negative (Females)<0-14 ng/L Negative (Males)**Grey zone:**Delta increase of 5 to 7 ng/L from baseline**Critical:**>52 ng/L Specific indicator of AMI withConfirmatory Delta value | Normal Troponin T level indicates a low risk for acute myocardial injury. *Please see attached MGB ED and IP algorithm for testing guidance.**Please see attached MGB ED and IP algorithm for testing guidance*. The positive predictive value for acute myocardial injury rises with increasing baseline and delta troponin values.Suggestive of acute myocardial injury (eg,acute MI, myocarditis, pulmonary embolism, acute heart failure). To confirm acute myocardial injury, repeat according to testing algorithm and evaluate the delta value.***Interpretive guidelines are the same from the old and new assay. Please note the reference intervals have changed.*** |
| **SIEMENS** **Old method**High sensitive Troponin – I | **Negative:**<0-54 ng/L Negative (Females)<0-78 ng/L Negative (Males)**Grey zone:**Delta increase of 5 to 7 ng/L from baseline**Critical:**>120 ng/L and above |

Please see attached MGB Enterprise best practice algorithms/guidance for ED and Inpatient setting for interpreting hsTroponin T.

For more laboratory information please contact:

* Holly Lapierre, MT, Clinical Laboratory Supervisor, Holly.Lapierre@wdhospital.org or at 603740 3296
* Vasu Maganti, PhD, Laboratory Director, Srinivas.Maganti@wdhospital.org or 603 740 2552

