

DATE:	18 August 2025
TO:	Intensive Care Unit Clinicians at Alberta Children’s Hospital, South Health Campus, and University of Alberta Hospital
FROM:	Clinical Biochemistry, Alberta Precision Laboratories (APL)
RE:	Implementation of Quidel TriageTrue High Sensitivity Troponin I (hs-TnI) Assay for Viral Hemorrhagic Fever (VHF)

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Key Message

- Effective August 21, 2025, a new Quidel TriageTrue high sensitivity troponin I (hs-TnI) assay will be implemented at Alberta Children’s Hospital (ACH), South Health Campus (SHC) and the University of Alberta Hospital (UAH) for Viral Hemorrhagic Fever (VHF) patients.
 - **Note:** this high sensitivity troponin assay (hs-TnI) is different than the assay used for non-VHF patients (hs-TnT) at these designated sites.
 - This troponin assay change will introduce new measurement units, reference interval (i.e. 99th percentile upper reference limit of the assay), reporting limits, critical limits and interpretative comments (see Table 1).

Why this is important

- A conventional sensitivity troponin I assay was previously used for VHF patients.
- This initiative aligns with efforts to use high sensitivity troponin assays and reduce variation in troponin assays available provincially.

Action Required

- When troponin testing is required for VHF patients, order “*Viral Hemorrhagic Fever Panel Adult*”, then choose “*Chemistry and Hematology Labs*”, then choose “*Risk Group 3/4 Troponin-Blood*”
- Be aware of the different troponin assays that are used with Alberta, including this one for VHF patients.
 - Do not interpret serial results from different assays.
- Collect whole blood samples for TriageTrue hs-TnI in lavender-top EDTA tubes ONLY.

Questions/Concerns

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Approved by

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Table 1: Interpretative comments reported with Quidel TriageTrue hs-Tnl

hs-Tnl result (ng/L)	Comment	Flagging
<4	<p>For patients with a non-ischemic ECG, a Troponin I, High Sensitivity of 3 ng/L or less on presentation is highly sensitive for excluding acute myocardial infarction, provided the specimen was collected more than 3-hours from symptom onset. However, for patients with symptoms less than 3-hours duration or concerning clinical presentations, repeat troponin testing at 2-hours after the initial sample is recommended.</p> <p>Please note that patients with ischemic ECG changes and/or high-risk clinical presentations should be considered for further evaluation irrespective of troponin results.</p>	Normal
4-20	<p>Troponin I, High Sensitivity is below the upper reference limit (21 ng/L) and results are not consistent with myocardial infarction (MI) or injury. However, patients with acute symptoms (less than 6-hours) or concerning clinical presentations should undergo repeat troponin testing at 2-hours after the initial sample. - Troponin I, High Sensitivity of 4 ng/L or less on presentation AND a 2-hour delta(change) of 2 ng/L or less is highly sensitive for excluding acute myocardial infarction (MI)</p> <ul style="list-style-type: none">- A 2-hour delta (change) of 3-7 ng/L may indicate acute myocardial injury and suggest an additional troponin measurement 4 hours after the initial sample, serial ECG testing and clinical re-evaluation.- A 2-hour delta (change) of 8 ng/L or more suggests an acute myocardial injury and may represent acute myocardial infarction in the appropriate clinical scenario. <p>Please note that patients with ischemic ECG changes and /or high-risk clinical presentations should be considered for further evaluation irrespective of troponin results</p>	Normal
21-59	<p>Troponin I, High Sensitivity has a non-specific/non-diagnostic elevation. Interpretation is highly dependent on clinical presentation and patient history. New elevations are concerning; however, many patients have chronic elevations in troponin and measured concentrations near the patient's baseline are reassuring. However, patients with acute symptoms (less than 6-hours) or concerning clinical presentations should undergo repeat troponin testing at 2-hours after the initial sample.</p> <ul style="list-style-type: none">- A 2-hour delta (change) of 2 ng/L or less is highly sensitive for excluding acute myocardial infarction.- A 2-hour delta (change) of 3-7 ng/L may indicate acute myocardial injury and suggest an additional troponin measurement 4 hours after the initial sample, serial ECG testing and clinical re-evaluation.- A 2-hour delta (change) of 8 ng/L or more suggests an acute myocardial injury and may represent acute myocardial infarction in the appropriate clinical scenario. <p>Please note that patients with ischemic ECG changes and /or high-risk clinical presentations should be considered for further evaluation irrespective of troponin results</p>	High
60	<p>Clear elevation of Troponin I, High Sensitivity consistent with acute myocardial injury or infarction in the appropriate clinical context Repeat troponin testing at 2-hours after the initial sample may be helpful to assess for ongoing myocardial injury</p>	Critical