Alberta Health Services
Laboratory Services

Laboratory Bulletin

Date: **January 4, 2019**
To: **North Zone - Grande Prairie Physicians and Nursing Staff**
From: **AHS Laboratory Services**
Re: **Changes to Quantitative D-Dimer Testing - QEII Hospital Only**

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Key Message:

- Effective **January 15, 2019** there will be a change to the D-Dimer testing method and reporting units for testing completed at the QEII Hospital Laboratory.
- D-Dimer results are currently reported in ng/mL DDU and will change to mg/L FEU (Fibrinogen Equivalent Units).
- The new reference interval will be: 0 - 0.50 mg/L FEU. The previous interval is <243 ng/mL.
- The new D-Dimer method has superior sensitivity and specificity compared to the previous method.

Indications for Ordering D-Dimer Testing:

- The only clinical indication for D-Dimer testing is to aid in excluding deep vein thrombosis (DVT) or pulmonary embolism (PE) in conjunction with a standardized D-Dimer pre-test probability assessment for DVT or PE risk score (such as the Well's Score). This clinical indication is unchanged.
- A normal D-Dimer test result (less than or equal to 0.50 mg/L FEU) **excludes** DVT and PE in patients with a low pre-test probability assessment.
- A normal D-Dimer test result (less than or equal to 0.50 mg/L FEU) **is not useful** to exclude DVT and PE in patients with a high pre-test probability assessment.
- A positive D-Dimer test result (greater than 0.50 mg/L FEU) **is not diagnostic** of DVT or PE, as a D-Dimer can be elevated in a variety of clinical conditions.
- D-Dimer testing will be resulted with the following interpretive comment:

> A D-Dimer below the 0.50 mg/L FEU cutoff may be used with a standardized clinical assessment and/or imaging studies to help exclude venous thromboembolism (VTE). Values above the cutoff are not diagnostically useful in VTE assessment.

Why this is important:

- The established cut-off value of 0.50 mg/L FEU has been validated to rule out DVT and PE in patients with a low pre-test probability assessment risk score with a negative predictive value of 100%.
- The new D-Dimer method has superior sensitivity and specificity compared to the previous method.

Action Required:

- A pre-test probability assessment risk score should be determined prior to ordering D-Dimer testing: https://www.albertahealthservices.ca/assets/wf/lab/wf-lab-dvt-and-pe-assessment.pdf
- Patients with a high pre-test probability assessment risk score should **not** have quantitative D-Dimer testing. If DVT or PE is suspected in these patients, they should be referred directly for diagnostic imaging (DI).

Inquiries and feedback may be directed to:

- Dr. Brent Mendez, Pathologist, Regional Lab Medicine Site Chief Grande Prairie

This bulletin has been reviewed and approved by:

- Dr. Carolyn O'Hara, Deputy Zone Clinical Department Head - Laboratory Medicine and Pathology, North Zone