
Date: September 9, 2019
To: South Zone - Physicians and Nursing
From: Alberta Public Laboratories (APL)
Re: Changes to Quantitative D-Dimer Testing- MHRH and Brooks Health Center

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Key Message:

- Effective **September 17, 2019** there will be a change to the D-Dimer testing methodology and reporting units for testing performed at the Medicine Hat Regional Hospital and Brooks Health Center laboratories.
- D-Dimer results currently reported in ug/FEU/ml DDU will change to mg/L FEU (fibrinogen equivalent units).
- The reference interval will be: 0-0.50 mg/L FEU.
- The new D-dimer method has superior sensitivity and specificity to the previous test method in Brooks Health Centre

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 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%.

Action Required:

- As with previous testing, a pre-test probability assessment risk score should be determined prior to ordering D-Dimer testing.
- 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. Michael O'Connor, Pathologist: 403-529-8867 or Michael.O'Connor@albertapubliclabs.ca

This bulletin has been reviewed and approved by:

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