

DATE:	12 December 2022
TO:	Outpatient and Emergency Department Physicians and Providers
FROM:	Alberta Precision Laboratories (APL)
RE:	D-Dimer Method Information is Being Included in ConnectCare Result Comments

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

Key Message

- A variety of D-Dimer assays are in use across the province of Alberta.
- The assay method is included as a result comment at ConnectCare sites.
- Providers are advised to be familiar with the evidence for their lab's method when considering whether to apply alternative cutoffs (e.g. Age-Adjusted D-Dimer).

Background

- Across Alberta, there are a variety of different D-Dimer methods in use due to differing analyzers, patient volumes, and contracts.
 - Each method has a single manufacturer-determined clinical cutoff for Venous Thromboembolism (VTE) exclusion, which undergoes a limited verification by the lab prior to test implementation.
- APL does not have the ability to perform the outcomes studies required to validate alternative cutoffs.
- Similar performance between assay methods cannot be guaranteed due to lack of an international D-Dimer reference standard.
 - Some assays are well-studied in the age-adjusted cutoff literature, while evidence for others may be limited or non-existent.
 - Most widely available age-adjustment calculators online do not account for differences between assay types/manufacturers.
 - Even assays with the same VTE cut-off (e.g. 0.50 mg/L FEU) may show very different reactivity at values other than this cut-off.
- In addition to the literature, resources for education and guidance may include Thrombosis Canada.

How this will impact you

- Sites on ConnectCare have the D-Dimer assay method included in the result comment (see appendix).
- Providers should use assay information combined with their knowledge of the literature when considering whether to interpret results using alternative cutoffs.

Action Required

- Be aware of the evidence associated with your local D-Dimer assay if using alternative cutoff values for VTE exclusion, such as those adjusted for age.
- Don't assume that all of your patients will have their D-Dimer testing performed at your local laboratory; always check which D-Dimer assay was used for testing in the appended comment.

Questions/Concerns

- Dr. E. Turley, Coagulation Lead - Edmonton, Elona.Turley@albertaprecisionlabs.ca
- Dr. X. Jiang, Coagulation Lead - Calgary, Xiu.Jiang@albertaprecisionlabs.ca

Approved by

- Dr. A. Szkotak, Associate Hematopathology Sector Chief, Artur.Szkotak@albertaprecisionlabs.ca
- Dr. T. Rad, Hematopathology Sector Chief, meer-taher.shabani-rad@albertaprecisionlabs.ca



APPENDIX

Table 1.: Example of D-Dimer Method information in ConnectCare

D-Dimer, Quantitative (FEU)	>10.00 ^	>10.00 ^ CM	>10.00 ^ CM	>10.00 ^ CM
<0.50 mg/L FEU				

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.

Results obtained using the HemosIL D-Dimer HS 500 (IL Diagnostics/Werfen) assay.

