D-Dimer testing: Reference ranges adjusted for patient age

**WHAT’S NEW?**
Effective Tues., Feb. 9, 2016, the reference ranges for D-Dimer testing (25280/LAB313), will be adjusted upward for patients age >50 resulting in increased accuracy of abnormal flagging.

This adjustment should also result in improved screening efficiency for venous thromboembolism (VTE), resulting in fewer false positive screening results for pulmonary embolism (PE) and deep vein thrombosis (DVT).

**WHAT’S CHANGED?**
Multiple studies for patients age >50 show normal D-Dimer levels climb gradually, resulting in increased numbers of normal patients exceeding the fixed 0.5 μg/mL FEU cutoff for PE screening.

The ADJUST study¹ (which included the D-Dimer method used at PeaceHealth Laboratories) demonstrated that using age adjusted cutoffs for PE exclusion dramatically increased (463%) the number of patients excluded for PE, with a negligible increase in false negatives (0.3%). This approach to PE screening has received support from multiple physician groups.²³

Based on this study, and in response to physician requests, the reference range reported on D-Dimer tests for patients age >50 will use a new formula (see next column).

**BACKGROUND**
The D-Dimer ordered as a standalone test includes an interpretive comment (see below) with added highlight to note reference range adjustment:

<table>
<thead>
<tr>
<th>Patient Age</th>
<th>Reference Range (μg/mL FEU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0.50</td>
</tr>
<tr>
<td>51</td>
<td>0.51</td>
</tr>
<tr>
<td>60</td>
<td>0.60</td>
</tr>
<tr>
<td>86</td>
<td>0.86</td>
</tr>
</tbody>
</table>

D-Dimer testing, if elevated, indicates active fibrinolysis seen in many clinical settings (malignancy, infection, trauma, prior surgery, DVT/PE, etc.). A positive D-Dimer is not specific for a thromboembolic process. A negative D-Dimer (value less than 0.5 μg/mL FEU) is useful to exclude diagnosis of DVT/PE or as an aid in the diagnosis of DVT in patients with low or moderate clinical suspicion.

Published studies using this method have shown that higher D-Dimer cutoffs in older patients effectively improve screening efficiency without significant loss in sensitivity (cutoff = age divided by 100 for patients above age 50). The reported reference range above has been adjusted to reflect the influence of patient age.

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QUESTIONS?
Michael Suter, MT(ASCP) SH
Senior Clinical Scientist, Hematology
541-687-2134 ext. 8182 Springfield
msuter@peacehealthlabs.org

Melissa Eiene, MT(ASCP), MBA
Bellingham Core Testing Supervisor, Hematology
360-788-6300 ext. 2971 Bellingham
meiene@peacehealthlabs.org

Sue Pierce, MT(ASCP)
Technical Specialist, Hematology
360-514-4423 Vancouver
spierce@peacehealthlabs.org

References:

