



### CHALLENGES

### RECOMENDATIONS FOR BIOMARKER TESTING

Early diagnosis and initiation of appropriate antibiotic therapy.<sup>3</sup>  
**The first hours are decisive.**

#### Procalcitonin (PCT)

- Early detection of sepsis
- Monitoring of response to treatment<sup>4</sup>
- Antibiotic stewardship: START or DISCONTINUE

Most of LRTIs are of viral origin.<sup>36</sup>  
**Does your patient really need antibiotics?**

#### Procalcitonin (PCT)

- Identify patients that would benefit from not starting antibiotic therapy
- Determine when it is safe to discontinue treatment

In acute heart failure, any delay in initiation of treatment increases mortality<sup>15</sup>.  
**Prompt and adequate diagnosis is a clinical challenge.**

#### NT-proBNP

- Diagnosis: Exclusion or confirmation of HF in patients with acute dyspnea and suspected acute HF<sup>16</sup>
- Prognosis and evaluation of response to therapy<sup>17</sup>



*Natriuretic peptides (NPs) are also considered as first-line tools for the diagnosis of chronic HF.*

**How can you quickly and safely exclude VTE in suspected outpatients?**

#### D-Dimer

- Safe PE/DVT exclusion in suspected patients with low and intermediate PTP\*
- Highly sensitive D-dimer with clinical assessment as first investigation step in patients with suspected VTE<sup>9,10,11</sup>

\* Pre-Test Probability



*In unprovoked VTE, D-Dimer is part of the HERDOO2 rule that identifies low-risk patients who can safely discontinue anticoagulants after short-term therapy.*

Shortening diagnosis. Timely and appropriate intervention.  
**So, AMI or not AMI?**

#### Cardiac Troponins

- Distinction between NSTEMI and unstable angina<sup>21</sup>
- Rapid rule-out and rule-in strategies including high-sensitivity assays<sup>22,23</sup>
- Recommended in all patients with suspected NSTEMI-ACS<sup>21</sup>

## VIDAS® EMERGENCY PANEL



### BECAUSE IT MAKES SENSE ON VIDAS®

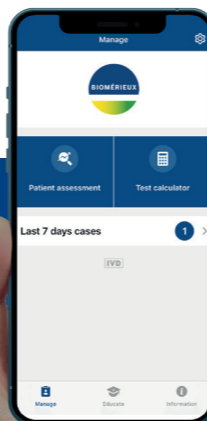
All key emergency tests on a **single instrument**, allowing you to manage the STAT samples apart from your routine activity

<b>24/7</b> On-demand automated testing	<b>Rapid results, easy-to-use</b> benchtop instrument	<b>All-inclusive kits, limited calibrations and controls</b>	<b>MTBF &gt;700 days</b>	<b>1 patient 1 test</b>
<b>No biotin interference tested up to 2,000 ng/mL</b>	<b>High-quality and cost-effective diagnostic tests for rapid, safe and efficient patient triage</b>			

Discover bioMérieux range of clinical booklets for diagnostics support on <https://www.biomerieux-diagnostics.com/clinician-booklets>

	VIDAS® Emergency panel	
VIDAS® B.R.A.H.M.S PCT™	30450	60 tests
VIDAS® NT-proBNP2	30458	60 tests
VIDAS® High sensitive Troponin I	415386	60 tests
VIDAS® CK-MB	30421	30 tests
VIDAS® Myoglobin	30446	30 tests
VIDAS® D-DIMER EXCLUSION™ II	30455-02	60 tests
VIDAS® Protein C	30115	30 tests
VIDAS® vWF	30436	30 tests

Some of these reagents have not yet obtained regulatory clearance in some countries and some references may vary according to the country. Please contact your local bioMérieux representative for further information and product availability.



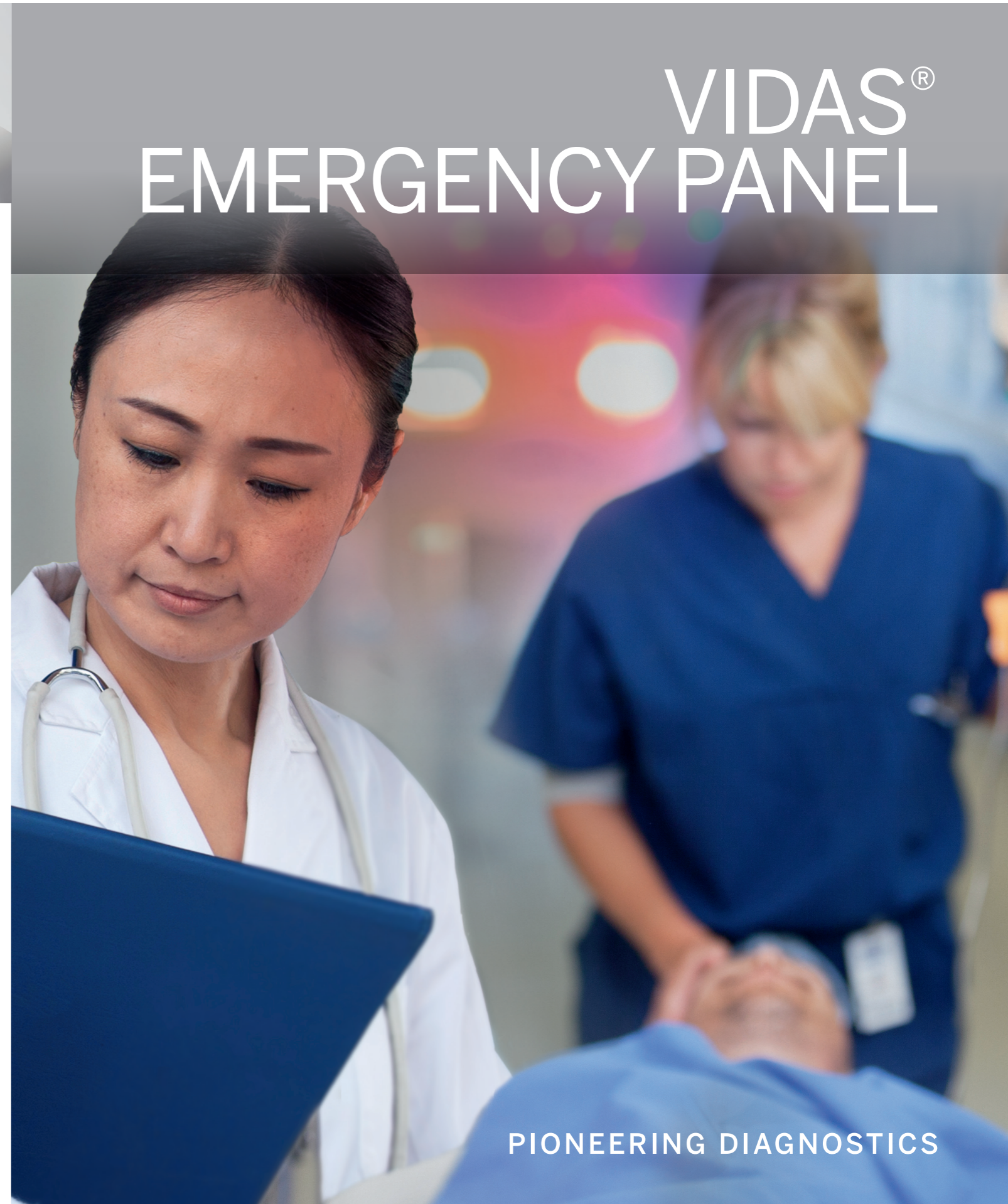
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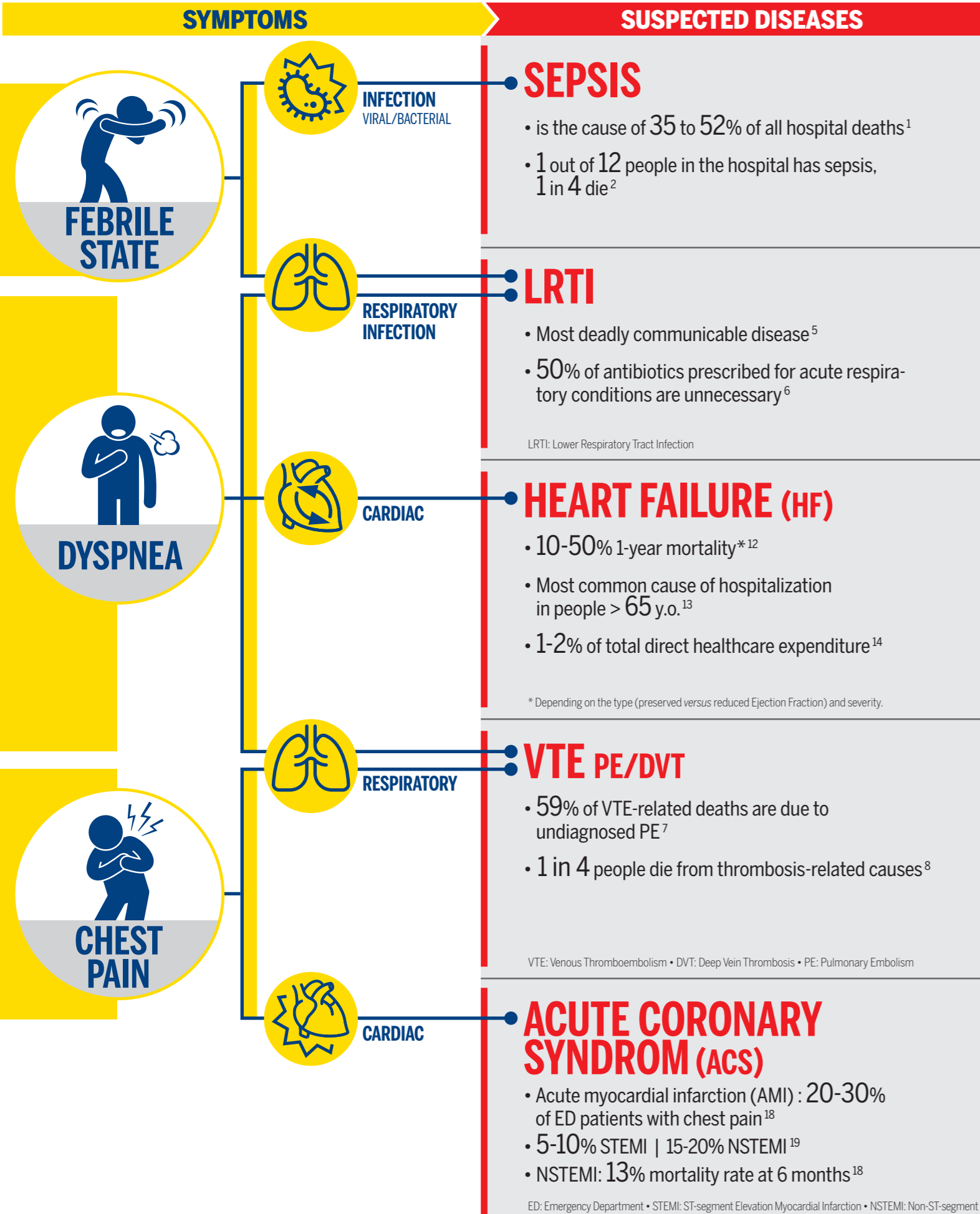
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# VIDAS® EMERGENCY PANEL

# WHEN TIME MATTERS

How do you rapidly and accurately identify life-threatening emergencies to initiate appropriate treatment?



# VIDAS® EMERGENCY PANEL

Improve patient outcomes and optimize patient management in the Emergency Department.

**BIOMÉRIEUX SOLUTION**

SYMPTOM	SUSPECTED DISEASE	VIDAS® TEST	BIOMÉRIEUX SOLUTION	OUTCOMES												
FEBRILE STATE	SEPSIS	VIDAS® B.R.A.H.M.S PCT	<p><b>1 EVALUATE</b> Assess sepsis risk &amp; severity</p> <ul style="list-style-type: none"> <li>&gt; 2.0 ng/mL: High risk for progression to severe sepsis and/or septic shock</li> <li>0.5-2.0 ng/mL: Sepsis should be considered</li> <li>&lt; 0.5 ng/mL: Low risk for progression to severe sepsis and/or septic shock</li> </ul> <p><b>2 MONITOR</b> Assess risk over time</p> <p>Once every 1-2 days</p> <p><b>3 DISCONTINUE*</b> Assess when to discontinue antibiotics</p> <p>≤ 0.5 ng/mL or ΔPCT &gt; 80% Discontinuation is encouraged</p> <p><small>* FDA approved.</small></p>	<ul style="list-style-type: none"> <li>Reduced antibiotic exposure with PCT-guided therapy<sup>24</sup>:                             <ul style="list-style-type: none"> <li>↓ 23% use</li> <li>↓ 1.5 days duration<sup>25</sup></li> </ul> </li> </ul> <p><i>Sepsis is deadly...Acute Kidney Injury + Sepsis is deadlier! Hospital mortality raises from 28% (sepsis) to 57% (sepsis &amp; AKI)<sup>37</sup>. NEPHROCHECK® Test helps to early identify the risk of AKI. Keep an eye on the kidneys!</i></p>												
	LRTI	VIDAS® B.R.A.H.M.S PCT	<p><b>1 EVALUATE</b> Determine if antibiotics are necessary</p> <ul style="list-style-type: none"> <li>&lt; 0.10 ng/mL: Antibiotics are strongly discouraged</li> <li>0.10-0.25 ng/mL: Antibiotics are discouraged</li> <li>0.26-0.50 ng/mL: Antibiotics are recommended</li> <li>&gt; 0.50 ng/mL: Antibiotics are strongly recommended</li> </ul> <p><small>Based upon physician discretion.</small></p> <p><b>2 MONITOR</b> Assess therapy effectiveness over time</p> <p>Once every 1-2 days</p> <p><b>3 DISCONTINUE*</b> Assess when to discontinue antibiotics</p> <p>≤ 0.25 ng/mL or ΔPCT &gt; 80% Discontinuation is encouraged</p> <p><small>* FDA approved.</small></p>	<ul style="list-style-type: none"> <li>Reduced antibiotic exposure with PCT-guided therapy:<sup>26,27</sup> <ul style="list-style-type: none"> <li>↓ 16% of initiation</li> <li>↓ 1.4 days duration</li> </ul> </li> </ul> <p><i>In conjunction with the comprehensive bioMérieux solution and clinical assessment, VIDAS B.R.A.H.M.S PCT aids in clinical decision making on antibiotic therapy for patients with LRTI.</i></p>												
DYSPNEA	HEART FAILURE (HF)	VIDAS® NT-PROBNP2	<p><b>SUSPECTED HF – ACUTE ONSET OF SYMPTOMS</b></p> <p><b>PATIENT ASSESSMENT</b> BASIC WORKUP: Physical exam and history, ECG, Chest X-ray, Lab tests</p> <p><b>NT-PROBNP2</b></p> <ul style="list-style-type: none"> <li><b>HF UNLIKELY</b>: &lt; 300 pg/mL Consider other diagnosis</li> <li><b>GREY ZONE</b>: &gt; 300 pg/mL but under age-adjusted cut-offs Confirm by imaging / Echocardiography</li> <li><b>HF CONFIRMED</b>:                             <ul style="list-style-type: none"> <li>&gt; 450 pg/mL &lt; 50 years</li> <li>&gt; 900 pg/mL 50-75 years</li> <li>&gt; 1,800 pg/mL &gt; 75 years</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Less time spent in the ED</li> <li>Less re-hospitalizations</li> <li>Contained medical costs<sup>33</sup></li> </ul> <p><i>In the non-acute setting, a cut-off of 125 pg/mL is recommended for HF exclusion in patients &lt; 75<sup>31</sup> and of 450 pg/mL in patients ≥75 years<sup>32</sup>.</i></p>												
	VTE PE/DVT	VIDAS® D-DIMER EXCLUSION™ II	<p><b>1<sup>st</sup> CLINICAL PRE-TEST PROBABILITY</b></p> <ul style="list-style-type: none"> <li>LOW or MEDIUM (Unlikely)</li> <li>HIGH (Likely)</li> </ul> <p><b>2<sup>nd</sup> VIDAS® D-DIMER EXCLUSION™ II</b></p> <ul style="list-style-type: none"> <li>&lt; 500 µg/L: RULE-OUT PE/DVT</li> <li>≥ 500 µg/L: Continue examination for PE/DVT</li> </ul> <p><b>WELLS SCORE</b></p> <table border="1"> <thead> <tr> <th>DVT WELLS SCORE</th> <th>PE WELLS SCORE</th> <th>Revised PE Geneva score</th> </tr> </thead> <tbody> <tr> <td>● Low ≤0</td> <td>● Low 0-1</td> <td>● Low 0-3</td> </tr> <tr> <td>● Medium 1 or 2</td> <td>● Medium 2-6</td> <td>● Medium 4-10</td> </tr> <tr> <td>● High ≥3</td> <td>● High ≥7</td> <td>● High ≥11</td> </tr> </tbody> </table> <p>Age x10 µg/L (age adjusted cut-off)</p>	DVT WELLS SCORE	PE WELLS SCORE	Revised PE Geneva score	● Low ≤0	● Low 0-1	● Low 0-3	● Medium 1 or 2	● Medium 2-6	● Medium 4-10	● High ≥3	● High ≥7	● High ≥11	<ul style="list-style-type: none"> <li>Safe exclusion of ~50% of outpatients with suspected VTE in low &amp; medium PTP groups<sup>28</sup></li> <li>Cost-effective and efficient solution<sup>29</sup> that prevents unnecessary radiation exposure</li> <li>Most tested and referenced D-dimer assay available</li> </ul> <p><i>VIDAS® D-DIMER EXCLUSION™ II is the only assay validated in the HERDOO2 clinical decision rule to assess the risk of VTE recurrence in women with unpovoked VTE<sup>30</sup></i></p>
DVT WELLS SCORE	PE WELLS SCORE	Revised PE Geneva score														
● Low ≤0	● Low 0-1	● Low 0-3														
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CHEST PAIN	ACUTE CORONARY SYNDROM (ACS)	VIDAS® HIGH SENSITIVE TROPONIN I	<p><b>1<sup>st</sup> VIDAS® HS-TNI at T0 IN SUSPECTED NSTEMI</b></p> <ul style="list-style-type: none"> <li>&lt; 2 ng/L: RULE-OUT</li> <li>≥ 2 ng/L: OBSERVATIONAL ZONE</li> <li>&lt; 100 ng/L: OBSERVATIONAL ZONE</li> <li>&gt; 100 ng/L: RULE-IN</li> </ul> <p><b>2<sup>nd</sup> VIDAS® HS-TNI at T2h</b></p> <ul style="list-style-type: none"> <li>T0 &amp; T2h &lt; 6 ng/L: RULE-OUT (54.6%)</li> <li>Others: OBSERVATIONAL ZONE (29.6%)</li> <li>ΔT0-T2h ≥ 10 ng/L: RULE-IN (15.8%)</li> </ul>	<ul style="list-style-type: none"> <li>Safe rule-out and accurate rule-in of AMI (NSTEMI) in 70% of suspected chest pain patients<sup>34</sup></li> <li>2 hrs and 3 hrs validated algorithms to deliver a reliable diagnosis</li> <li>Aid in risk stratification of patients with symptoms suggestive of ACS with respect to MACE* rate at 30 days</li> </ul> <p><small>* Major Adverse Cardiovascular Event</small></p>												