

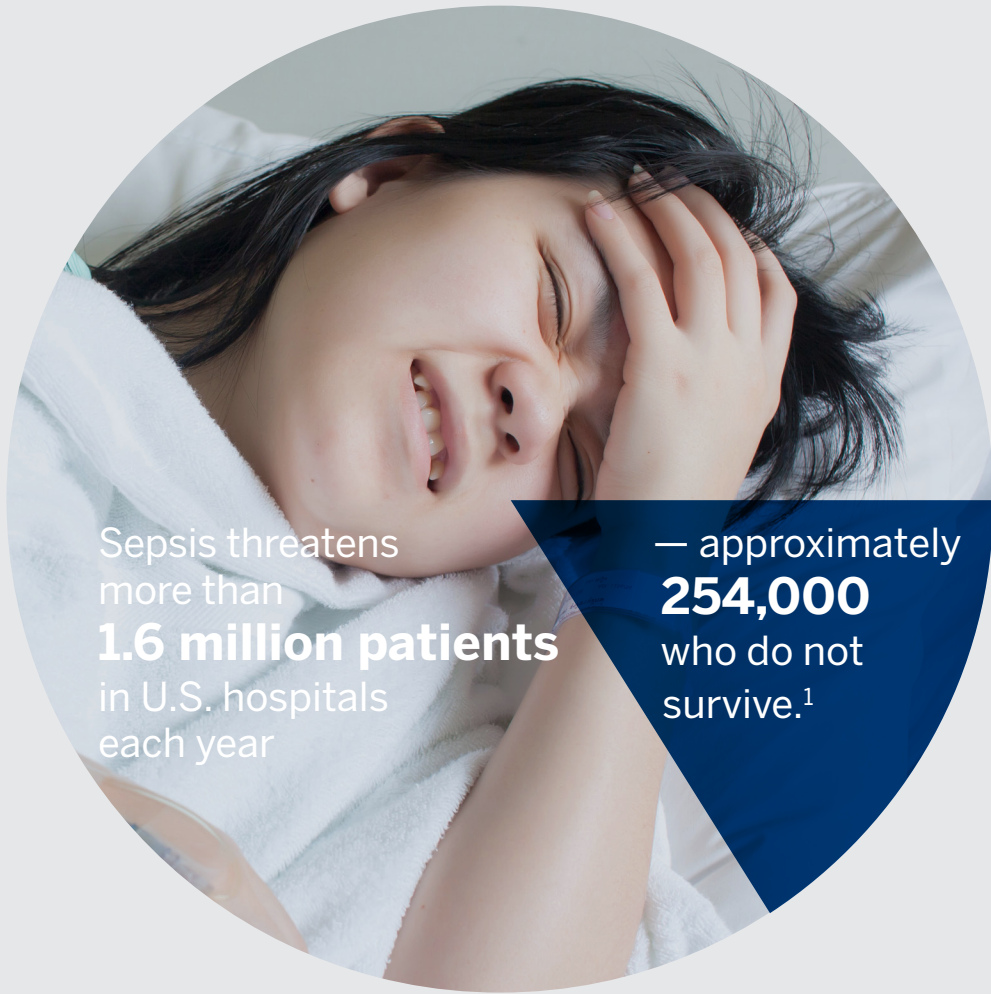


# PCT-GUIDED ANTIBIOTIC THERAPY FOR SEPSIS

Enhancing patient care  
Improving antibiotic stewardship



1 out of every 23 patients  
in the hospital has sepsis



Sepsis threatens more than **1.6 million patients** in U.S. hospitals each year

— approximately **254,000** who do not survive.<sup>1</sup>

## Sepsis is a serious threat

### Sepsis is common

- 6<sup>th</sup> most common principal diagnosis<sup>1</sup>
- Hospital stays for sepsis more than doubled between 2000–2008<sup>1</sup>

### Sepsis is deadly

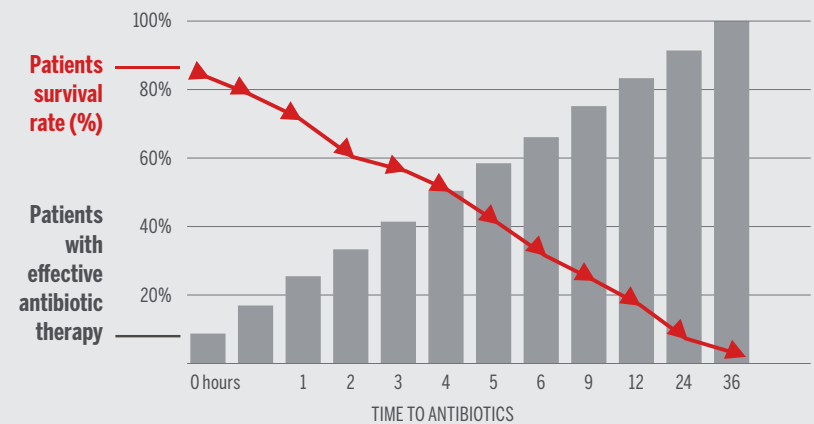
- Overall mortality rate: 14.7% (2009)<sup>1</sup>
- In-hospital mortality rate: 16% (2009)<sup>1</sup>
- 8x higher than overall inpatient rate<sup>1</sup>

## But overexposure to antibiotics is a serious problem

- Early signs and symptoms of sepsis overlap with other conditions
- Unnecessary and prolonged use of antibiotics is common
- Overall safety risk due to the rise of antibiotic resistance, with 2 million illnesses and roughly 23,000 deaths per year in the U.S.<sup>2</sup>

## VIDAS® B·R·A·H·M·S PCT™ helps address both

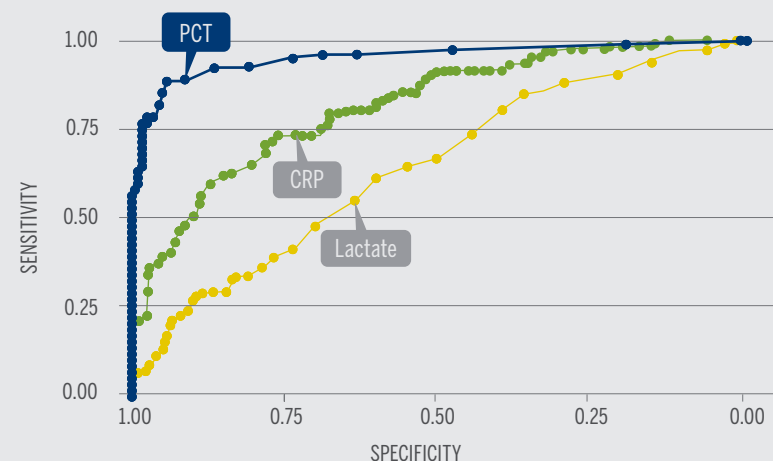
### Delay in antibiotics = higher mortality risk<sup>3</sup>



- Mortality increases 7% for every hour delay in initiation of antibiotics
- Early recognition of sepsis and initiation of appropriate antibiotics can improve the chances for survival<sup>3</sup>
- Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in septic shock

*Procalcitonin provides critical biomarker information that can help increase the accuracy of early sepsis diagnosis and assess host response to bacterial infection.*

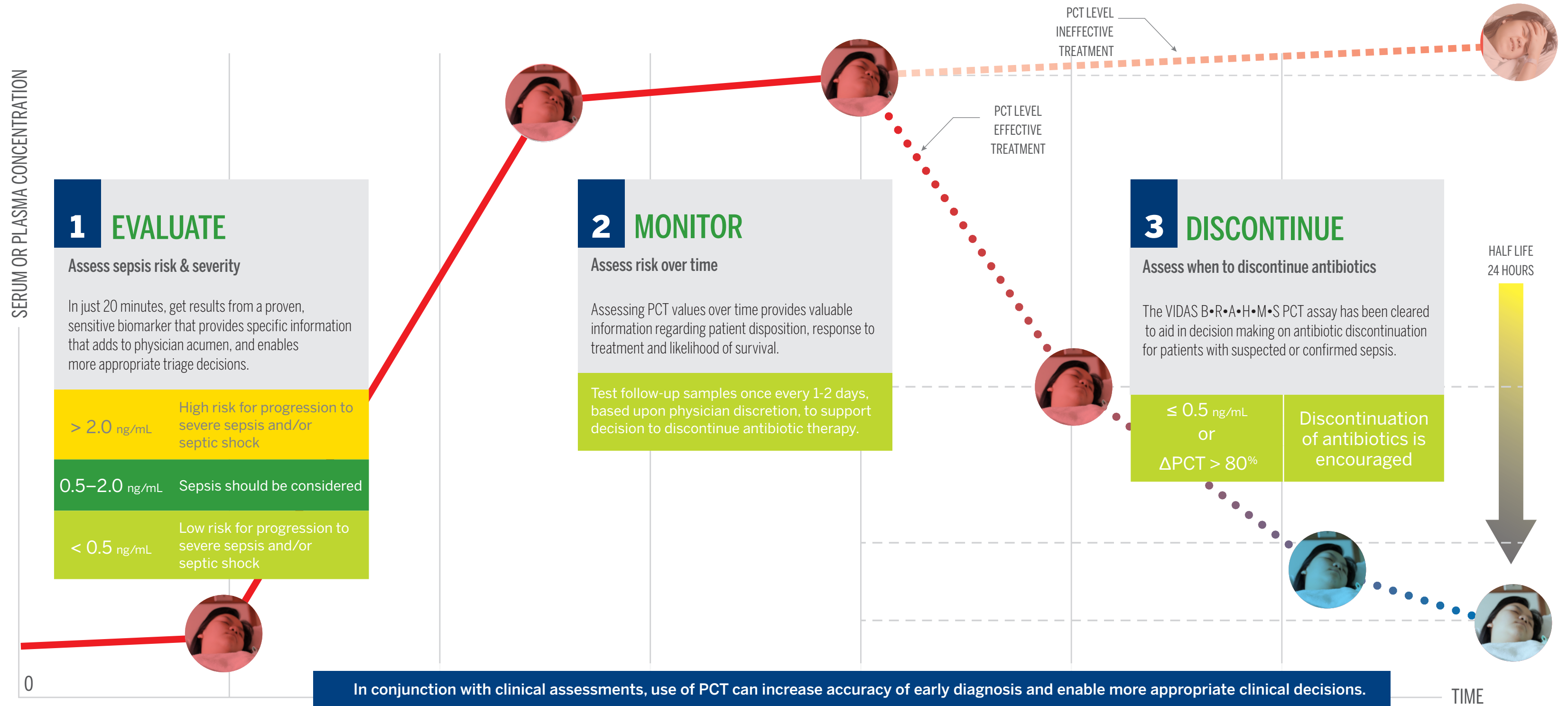
### Increased diagnostic & prognostic value<sup>4-6</sup>



- Among several laboratory parameters, PCT has been shown to be the most useful<sup>5-8</sup>
- PCT showed the best performance for differentiating patients with sepsis from those with a systemic inflammatory response not related to an infectious cause<sup>5</sup>
- PCT is the only laboratory parameter shown to have made a significant contribution to the clinical diagnosis of sepsis<sup>5</sup>
- Compared to serum lactate, PCT has shown to be far more predictive for sepsis

# PCT-GUIDED ANTIBIOTIC THERAPY

VIDAS® B•R•A•H•M•S PCT



For patients with sepsis, the first hour is critical — the first 24 hours can be decisive

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# Sepsis is a dangerous and costly problem

## ANTIBIOTIC MISUSE ADVERSELY IMPACTS PATIENTS

- Antibiotic exposure is the single most important risk factor for the development of *Clostridium difficile* associated disease (CDAD)<sup>9</sup>
- Epidemic strain of *C. difficile* is associated with increased risk of morbidity and mortality<sup>10</sup>
- Can lead to renal injury

**\$17B**

ESTIMATED  
SPENDING PER  
YEAR ON SEPSIS  
IN THE U.S.<sup>1</sup>

# VIDAS® B·R·A·H·M·S PCT™ is an important part of the solution

## FOR CRITICALLY ILL PATIENTS

- Antibiotic therapy is of great importance
- Prolonged duration is associated with development of antimicrobial resistance
- PCT-guided therapy reduces antibiotic exposure and patient length of stay
- No adverse safety signals associated with PCT-guided therapy for sepsis

*Procalcitonin concentrations might help physicians in deciding whether or not the presumed infection is truly bacterial, leading to more adequate diagnosis and treatment, the cornerstones of antibiotic stewardship.* — de Jong<sup>13</sup>

**23%**

REDUCTION  
IN ANTIBIOTIC  
EXPOSURE<sup>11</sup>

**\$3k**

LOWER HOSPITAL  
COST PER PATIENT  
WITH PCT GUIDED  
THERAPY<sup>12</sup>

## PCT & ANTIBIOTIC STEWARDSHIP

- Monitor PCT levels
- Gain needed data to make better, more informed decisions
- Additional guidance for initiation and discontinuation of antibiotic therapy
- Improve prescribing practices to slow rise of resistant bacteria
- Support CMS guidelines for antibiotic stewardship and infection prevention

**So you can achieve the goal of giving antibiotics to the right patients, at the right time, for the right duration**



## THE BIOMÉRIEUX SOLUTION FOR SEPSIS CARE MANAGEMENT



	VIDAS® B•R•A•H•M•S PCT™
Reference number	30450-01
Tests / kit	60

Learn more about VIDAS B•R•A•H•M•S PCT — a proven, sensitive, specific STAT biomarker that can produce results in just 20 minutes. And find out how you can put it to the test.

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## Important Information

The evaluation of VIDAS B•R•A•H•M•S PCT assay results must always be performed taking into consideration the patient's history and the results of any other tests performed.

In certain situations (newborns, polytrauma, burns, major surgery, prolonged or severe cardiogenic shock, etc.), PCT elevation may occur in the absence of infection. The return to normal values is usually rapid. Viral infections, allergies, autoimmune diseases and graft rejection do not lead to a significant increase in PCT. A localized bacterial infection can lead to a moderate increase in PCT levels.

Some patient characteristics, such as severity of renal failure or insufficiency, may influence PCT values and should be considered when interpreting test results. PCT levels tend to be lower in patients infected with certain atypical pathogens, such as Chlamydia pneumoniae and Mycoplasma pneumoniae, compared to those with typical bacterial infections. PCT levels are elevated in both severe and uncomplicated Plasmodium falciparum malaria.

The safety of PCT-guided therapy for individuals younger than 17 years-of-age, pregnant women, immunocompromised individuals or those on immunomodulatory agents, including anti-inflammatories (e.g., NSAIDs), was not analyzed separately in the supportive clinical trials.

Discrepancies between the laboratory and clinical findings should prompt additional evaluations, including repeat PCT testing.

Please see full package insert for VIDAS B•R•A•H•M•S PCT (13975) for additional important information.

## VIDAS® B•R•A•H•M•S PCT™

- Assess initial risk of sepsis
- Monitor patient progress and mortality risk
- Determine when to discontinue antibiotics
- Get rapid results in 20 minutes