



Xpert<sup>®</sup>  
MRSA/SA  
BC

## Xpert<sup>®</sup> MRSA/SA BC

Detection of Life Threatening MRSA and SA  
in Positive Patient Blood Culture Bottles  
*in About an Hour*

 **Cepheid.**  
A better way.

“In an era of escalating antimicrobial resistance and lack of new antibiotic discovery, the most efficacious and timely method for *S. aureus* bacteremia detection and antibiotic therapy with de-escalation are needed. The Xpert<sup>®</sup> MRSA/SA BC test, in conjunction with an ID PharmD intervention, provides increased clinical and economic benefits in our institution.”



*Debra Goff PharmD.*  
*Infectious Disease Specialist*  
*The Ohio State University Medical Center*

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## The Need

### **Blood stream infections are a major healthcare concern:**

- Severe sepsis strikes 750,000 people annually in the U.S., resulting in mortality rates of up to 50%.<sup>2</sup> MRSA and *S. aureus* are the causative pathogen in up to 35% of severe sepsis cases<sup>3</sup>
- Current culture-based lab testing methods for gram positive blood culture bottles require an additional 18–48 hours for determination of MRSA or SA
- In the absence of timely diagnostic results, clinicians often employ empiric treatment approaches, using broad-spectrum antimicrobial therapies that can be costly, ineffective and contribute to an increase in drug resistance<sup>4</sup>

## The Solution

### **On-demand molecular testing — an ideal solution:**

- One hour positive blood culture bottle results for both MRSA and SA
- Outstanding clinical performance
- Results available around the clock
- Easily integrates into institution septic bundle processes<sup>2</sup>

### **Critical healthcare benefits in rapid detection:**

A recent clinical study (5) showed that using the Xpert MRSA/SA BC test results coupled with an infectious disease pharmacists consultation resulted in:

- Switch to optimum antimicrobial therapy 1.7 days sooner
- Mean length of stay was reduced 6.2 days
- Mean hospital costs were \$21,387 less per bacteremic patient

# Performance

## MRSA/SA PERFORMANCE VS. REFERENCE CULTURE

		Culture			
		MRSA+	SA+/MRSA-	Neg/No Growth	Totals
Xpert	MRSA+	53	0	0	53
	SA+/MRSA-	0	24	1	25
	SA-	0	0	171	171
	Total	53	24	172	249

Performance characteristics of the Xpert® MRSA/SA Blood Culture Assay were determined in a multi-site prospective investigation study at three U.S. institutions by comparing the Xpert MRSA/SA Blood Culture Assay with culture.

### MRSA:

		95% CI
Positive % Agreement	100% (53/53)	93.3-100%
Negative % Agreement	100% (196/196)	98.1-100%

### SA:

		95% CI
Positive % Agreement	100% (77/77)	95.3-100%
Negative % Agreement	99.4% (171/172)	96.8-100%

# Comprehensive

Capable of detecting strains with all SCCmec and PFGE types found in both healthcare-acquired and community-acquired MRSA.

	Type
SCCmec	I, II, III, IVc, V, VI
PFGE	USA 100, 400, 500, 800, 1000

Simplicity.

# Xpert<sup>®</sup> MRSA/SA BC

- Rapid results to improve patient management
- Fully integrated reagent and instrument system for accuracy and reproducibility
- Random access for flexibility and workflow optimization
- Fully automated process reduces handling time to just minutes

## WORKFLOW:

### 5 Easy Steps

Total hands-on time: 2 Minutes

<p>1</p> <p>Transfer one drop of positive blood culture into elution reagent</p> 	<p>2</p> <p>Vortex and dispense Sample into Port S</p> 	<p>3</p> <p>Dispense Reagent 1 into Port 1</p> 	<p>4</p> <p>Dispense Reagent 2 into Port 2</p> 	<p>5</p> <p>Insert Cartridge and start assay</p> 
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## ORDERING INFORMATION

Xpert<sup>®</sup> MRSA/SA BC (10 cartridges with reagents) ..... Catalog No. GXMRSA/SA-BC-10

### References:

1. Sepsis.com
2. www.IHL.org
3. www.thelancet.com Vol 365 Jan 1, 2005; Septic Shock; Djillali Annane, Eric Bellissant, Hean-Marc Caillon
4. Dellinger, R. et al., "Surviving Sepsis Campaign guidelines for management of severe sepsis and septic shock."

Cepheid.



The molecular revolution is here.

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