



# Clinical Impact of the BIOFIRE<sup>®</sup> Blood Culture Identification 2 (BCID2) Panel

**43**

TARGETS

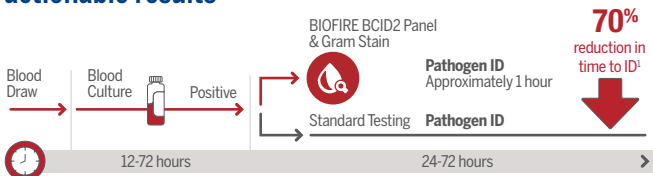
~**1** hr

# BIOFIRE® Syndromic Testing

## The right test, the first time

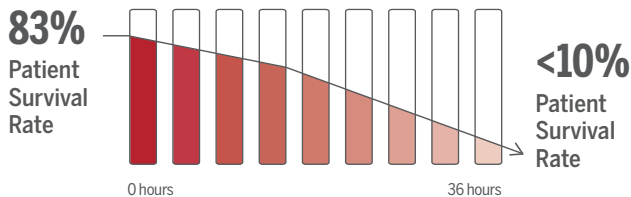
BIOFIRE syndromic testing allows rapid identification of infectious agents that produce similar symptoms in patients.

## Streamline workflow and provide fast, actionable results

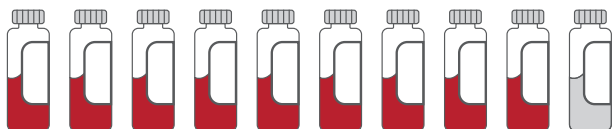


## Early Bloodstream Infection (BSI) Pathogen Identification is Essential

For every hour of delay in initiation of effective antimicrobial treatment following onset of hypotension in patients with septic shock, patient survival declines 7.6%.<sup>2</sup>

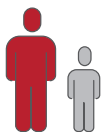


In about an hour, the BIOFIRE® Blood Culture Identification 2 (BCID2) Panel identifies pathogens in more than 9 out of 10 positive blood cultures.<sup>3</sup>



## Who Should Get Tested

Positive blood cultures from adult and pediatric patients with monomicrobial or polymicrobial bloodstream infections.



Children and adults



Elderly patients



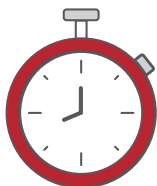
High-risk patients:  
immuno-compromised  
or with co-morbidities



Critically ill patients

## Timely, Accurate Diagnosis Leads to Better BSI Outcomes

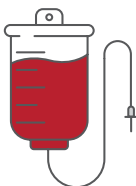
In combination with appropriate antimicrobial stewardship, the BIOFIRE® FILMARRAY® Blood Culture Identification (BCID) Panel:



Decreases time to effective therapy.<sup>4,5</sup>



Reduces hospital costs,<sup>6</sup> including by reducing repeat blood cultures and length of stay.<sup>7</sup>



Improves time to antimicrobial de-escalation.<sup>1,8,9</sup>

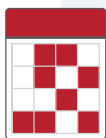


Lessens unnecessary antibiotic use.<sup>4,6,7,8,10</sup>

# Rapid Identification Improves Antimicrobial Stewardship



Rapid organism identification



Local antibiogram



Treatment guidelines

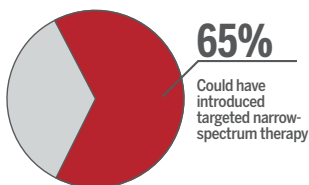
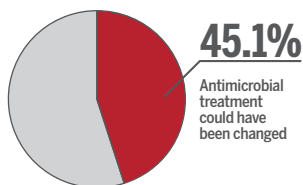


Appropriate treatment decisions

## Recommendations Result In Appropriate Therapy

The rapid results provided by BIOFIRE BCID2 Panel have a substantial impact on decision making:

***“Antimicrobial treatment could have been changed in nearly half (23/51, 45.1%) of the cases, leading either to the introduction of a broader-range antibiotic (7/51, 13.7%) to improve therapy or the use of antibiotic with a narrower spectrum of activity, supporting good antimicrobial stewardship practice.”<sup>11</sup>***





# BIOFIRE® BLOOD CULTURE IDENTIFICATION 2 (BCID2) PANEL

1 Test. 43 Targets. ~1 Hour.

## GRAM-NEGATIVE BACTERIA

*Acinetobacter calcoaceticus-  
baumannii* complex  
*Bacteroides fragilis*  
*Enterobacterales*  
  *Enterobacter cloacae* complex  
  *Escherichia coli*  
  *Klebsiella aerogenes*  
  *Klebsiella oxytoca*  
  *Klebsiella pneumoniae* group  
  *Proteus* spp.  
  *Salmonella* spp.  
  *Serratia marcescens*  
*Haemophilus influenzae*  
*Neisseria meningitidis*  
*Pseudomonas aeruginosa*  
*Stenotrophomonas maltophilia*

## GRAM-POSITIVE BACTERIA

*Enterococcus faecalis*  
*Enterococcus faecium*  
*Listeria monocytogenes*  
*Staphylococcus* spp.  
  *Staphylococcus aureus*  
  *Staphylococcus epidermidis*  
  *Staphylococcus lugdunensis*  
*Streptococcus* spp.  
  *Streptococcus agalactiae*  
  *Streptococcus pneumoniae*  
  *Streptococcus pyogenes*

## YEAST

*Candida albicans*  
*Candida auris*  
*Candida glabrata*  
*Candida krusei*  
*Candida parapsilosis*  
*Candida tropicalis*  
*Cryptococcus* (*C. neoformans*/  
*C. gattii*)

## ANTIMICROBIAL RESISTANCE GENES

### Carbapenemases

IMP  
KPC  
OXA-48-like  
NDM  
VIM

### Colistin Resistance

*mcr-1*

### ESBL

CTX-M

### Methicillin Resistance

*mecA/C*  
*mecA/C* and MREJ (MRSA)

### Vancomycin Resistance

*vanA/B*

US FDA-cleared |  2797

Product availability varies by country. Consult your bioMérieux representative.

## Contact Us

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Learn more about the BIOFIRE range of commercially-available panels for syndromic infectious disease diagnostics.



## Guidelines

- Evans, L. et al. Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021. *Intensive Care Med.* 2021; 47:1181-1247.
- Barlam, T et al. Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Disease Society of America and the Society for Healthcare Epidemiology of America. *Clin Infect Dis.* 2016; 62(10)e51-77.

Additional guidelines can be found on the Surviving Sepsis Campaign website: <https://www.sccm.org/survivingsepsiscampaign/guidelines>

## References

1. MacVane S and Nolte F. *J Clin Microbiol.* 2016 Oct;54(10):2455-63.
2. Kumar A, et al. *Crit Care Med.* 2006; 34(6):1589-96.
3. Lu, et al., ID Week 2019, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6811262/>
4. Chiasson J, et al. *J Pharm Prac.* 2021; 35(5):722-729.
5. Verroken A., et al. (2019). *PLOS ONE:* 14(9): e0223122
6. Pardo J, et al. *Diagn Microbiol Infect Dis.* 2016; 84(2):159-164.
7. Hughes J and Barone S. *Hosp Pediatr.* 2021;11(5): 472-477.
8. Banerjee R, et al. *Clin Infect Dis* (2015) 61 (7):1071-1080.
9. Kim J, et al. Poster presented at: American Society of Microbiology; May 30—June 2, 2015; New Orleans, LA. Poster 1071.
10. Messacar K., et al. (2016). *J Pediatric Infect Dis Soc:* pp1-9.
11. Sparks R, et al. *Pathology.* 2021; 53(7): 889-895.
12. Overall performance is the aggregate of the prospective, archived, and seeded data from the clinical studies. Data on file, BioFire Diagnostics.

## Performance

**99.0% sensitivity and 99.8% specificity<sup>12</sup>**

## Panel Specifications

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**Sample Type:** positive blood culture

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**Sample Volume:** 0.2 mL

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