



27
TARGETS
1 hr

Clinical Impact of
the FilmArray[®]
Blood Culture
Identification
(BCID) Panel

FilmArray BCID Panel Targets

GRAM-POSITIVE BACTERIA

Enterococcus

*Listeria monocytogenes**

Staphylococcus

Staphylococcus aureus

Streptococcus

Streptococcus agalactiae

*Streptococcus pneumoniae**

*Streptococcus pyogenes**

GRAM-NEGATIVE BACTERIA

Acinetobacter baumannii

*Haemophilus influenzae**

*Neisseria meningitidis**

Pseudomonas aeruginosa

Enterobacteriaceae

Enterobacter cloacae complex

Escherichia coli

Klebsiella oxytoca

Klebsiella pneumoniae

Proteus

Serratia marcescens

YEAST

Candida albicans

Candida glabrata

Candida krusei

Candida parapsilosis

Candida tropicalis

ANTIMICROBIAL RESISTANCE GENES

mecA – methicillin resistance

vanA/B – vancomycin resistance

KPC – carbapenem resistance

*Nationally Notifiable Conditions.¹⁵ Refer to your state health lab for requirements pertaining to state-reportable pathogens.

Overall Performance of the FilmArray BCID Panel¹⁶

- 98.0% Sensitivity
- 99.9% Specificity

Sample Requirements:

0.2 mL of positive blood culture

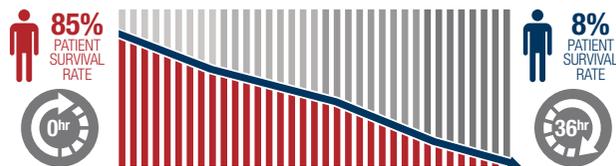
Early Pathogen Identification is Essential

Sepsis is one of the leading causes of hospital patient deaths.¹ The FilmArray BCID Panel is the fastest and most comprehensive FDA-cleared molecular diagnostic test available to identify sepsis-causing pathogens.

The FilmArray BCID Panel identifies bloodstream pathogens 70% sooner than conventional methods.² It enables clinicians to rapidly identify the pathogens that cause sepsis, allowing for quick initiation of pathogen-directed therapy.

Timely and Effective Therapy is Critical

For every hour of delay in initiation of effective antimicrobial treatment following onset of septic shock, patient survival declines 7.6%.³



Sepsis Quick Facts

- Sepsis results in over 1.2 million hospital stays in the US annually.⁴
- Sepsis is responsible for 6.2% of all US hospital costs, totaling ~\$24 billion.⁴
- In-hospital sepsis related mortality ranges from 10% to 50%.^{5,6}

Syndromic Testing

BioFire's syndromic testing allows clinicians to quickly identify infectious agents that produce similar symptoms in patients. BioFire's innovative PCR technology provides answers in a clinically actionable timeframe.



Antimicrobial Stewardship

Antimicrobial stewardship programs (ASP) optimize antimicrobial use to achieve the best clinical outcomes. The FilmArray BCID Panel rapid pathogen identification, in combination with locally-derived treatment guidelines set by an ASP, can result in appropriate antimicrobial interventions.⁷

Combined with appropriate antimicrobial stewardship, the FilmArray BCID Panel:



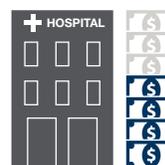
Decreases time to effective therapy,^{2,8,9} which can improve patient survival.^{3,10}

Lessens unnecessary antibiotic use.^{2,11,12,13}



Improves time to antimicrobial de-escalation.^{2,9,12}

Reduces hospital costs.^{2,8,13}



IDSA Guidelines^{A,B}

Rapid diagnostic testing of positive blood cultures in addition to conventional culture is helpful and it should be guided by the antimicrobial stewardship team for maximum benefit to the patient.

ASPs must develop processes and interventions to assist clinicians in interpreting and responding appropriately to rapid diagnostic test results.

Please refer to the clinical guidelines for a complete list of recommendations.

Clinical Impact

A recent meta-analysis study on patients with bloodstream infections concluded that molecular rapid diagnostic testing along with stewardship significantly reduced risk of mortality, time to effective therapy, and length of stay.¹⁰

At the Children's Hospital of Colorado, the median time to optimal antimicrobial therapy decreased from 60.2 hours with traditional testing to 26.7 hours with the FilmArray BCID Panel.¹⁴

At the Hershey Medical Center, implementation of the FilmArray BCID Panel resulted in a trend toward lower mortality, ICU stay, length of hospital stay, and time to microbiological cure for patients with *Staphylococcus aureus* bloodstream infections.⁹

"The rmPCR test [FilmArray BCID Panel] enabled clinicians to quickly initiate 'pathogen-directed' therapy and appropriately scale up or scale down antibiotic therapy, as needed."¹²

References & Guidelines

REFERENCES

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GUIDELINES

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Additional guidelines can be found on Surviving Sepsis Campaign website: <http://www.survivingsepsis.org/Guidelines/Pages/default.aspx>



Syndromic Testing: The Right Test, The First Time.

Respiratory • Blood Culture Identification • Gastrointestinal • Meningitis/Encephalitis

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