

BIOMÉRIEUX



# Clinical Impact of the BIOFIRE<sup>®</sup> FILMARRAY<sup>®</sup> Pneumonia (PN) Panel

**33**

TARGETS

~**1**hr

PIONEERING DIAGNOSTICS

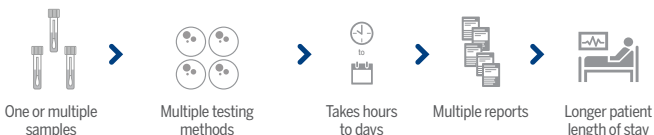
# BIOFIRE® Syndromic Testing

## The right test, the first time

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

## Traditional testing methods

Traditional methods of pathogen identification can be time consuming and lack sensitivity.



## Fast. Easy. Comprehensive.

Syndromic testing provides a streamlined workflow and fast, comprehensive results.



## Get Results Faster

In a pediatric study, the BIOFIRE® FILMARRAY® Pneumonia (PN) Panel results were available in 1–1.5 hours, as compared to 48–72 hours for standard-of-care results.<sup>1</sup>



**1–1.5 hrs**  
BIOFIRE PN Panel results



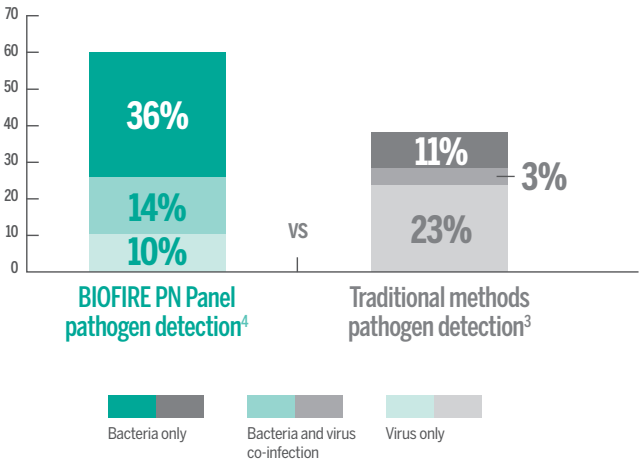
**48–72 hrs**  
standard-of-care results

# Who Should Get Tested

The BIOFIRE® FILMARRAY® Pneumonia (PN) Panel is intended to be used for patients with a suspected lower respiratory tract infection where BAL-like or sputum-like samples are available.<sup>2</sup>

## Detects More Organisms

In a CDC-sponsored study of the etiology of community-acquired pneumonia requiring hospitalization, a bacterial agent was only identified in 14% of patient samples.<sup>3</sup> The BIOFIRE PN Panel is more sensitive and can detect more organisms than traditional culture.<sup>4</sup>



# Aid Antimicrobial Stewardship



Using the BIOFIRE® FILMARRAY® Pneumonia (PN) Panel results, 42% of patients had antibiotics de-escalated compared to 8% without using the Panel.<sup>5</sup>

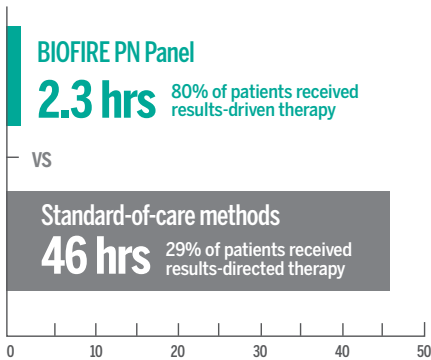


**42%**  
of patients had  
antibiotics de-escalated

Antibiotics were changed based on panel results in 60% of PICU patients. Length of stay was shortened from 9 days to 5 days.<sup>6</sup>

## Superior Clinical Outcomes

80% of patients received results-driven therapy in approximately 2.3 hours vs. SOC where 29% of patients received results-directed therapy after approximately 46 hours.<sup>5</sup>





## BIOFIRE® FILMARRAY® PNEUMONIA (PN) Panel

1 Test. 33 Targets. ~1 Hour.

### BACTERIA (Semi-Quantitative)

*Acinetobacter calcoaceticus-  
baumannii* complex  
*Enterobacter cloacae* complex  
*Escherichia coli*  
*Haemophilus influenzae*  
*Klebsiella aerogenes*  
*Klebsiella oxytoca*  
*Klebsiella pneumoniae* group  
*Moraxella catarrhalis*  
*Proteus* spp.  
*Pseudomonas aeruginosa*  
*Serratia marcescens*  
*Staphylococcus aureus*  
*Streptococcus agalactiae*  
*Streptococcus pneumoniae*  
*Streptococcus pyogenes*

### ATYPICAL BACTERIA (Qualitative)

*Chlamydia pneumoniae*  
*Legionella pneumophila*  
*Mycoplasma pneumoniae*

### VIRUSES

Adenovirus  
Coronavirus  
Human metapneumovirus  
Human rhinovirus/enterovirus  
Influenza A virus  
Influenza B virus  
Parainfluenza virus  
Respiratory syncytial virus

### ANTIMICROBIAL RESISTANCE GENES

Carbapenemases  
IMP  
KPC  
NDM  
OXA-48-like  
VIM

ESBL  
CTX-M

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

US FDA-cleared |  2797

Product availability varies by country. Consult your bioMérieux representative.

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



## Guidelines

- BTS Guidelines for the management of CAP in adults WS Lim, Thorax 2009; 64 (Suppl. III).
- BTS Guidelines for the management of CAP in adults M. Harris, Thorax 2011; 66.
- Guidelines for the management of adult lower respiratory tract infections – Woodhead, 2011, European Respiratory Journal 2011 38: 112-118.
- NICE Clinical Guideline: Pneumonia in Adults : diagnosis and management, 2014.
- International ERS/ESICM/ALAT guidelines for the management of hospital-acquired pneumonia and ventilator-associated pneumonia. Torres A. Eur Respir J. 2017 Sep 10;50(3). pii: 1700582. doi: 10.1183/13993003.00582-2017. Print 2017 Sep.

## References

1. El-Nawawy A.A. *et al.* Comparison of a Point-of-Care FilmArray Test to Standard-of-Care Microbiology Test in Diagnosis of Healthcare Associated Infections in a Tertiary Care Pediatric Intensive Care Unit Antibiotics 2022, 11, 453. doi:10.3390/antibiotics11040453.
2. BIOFIRE® FILMARRAY® Pneumonia *plus* Panel Instructions for Use.
3. Jain S, Self WH, *et al.* Community-Acquired Pneumonia Requiring Hospitalization among U.S. Adults. The New England journal of medicine. 2015;373(5):415-427. doi:10.1056/NEJMoa1500245.
4. Data on file, bioMérieux. The stated performance is the overall aggregate performance of the prospective clinical study data presented in the IFU. Performance data is for pathogen detection only.
5. Poole S., *et al.* Molecular point-of-care testing for lower respiratory tract pathogens improves safe antibiotic de-escalation in patients with pneumonia in the ICU: results of a randomised controlled trial. Journal of Infection 2022. Dec;85(6):625-633. doi:10.1016/j.jinf.2022.09.003.
6. Fireizen, Y *et al.* The Impact of Pneumonia PCR Panel Testing in the PICU: A Quality Improvement. J Pediatr Intensive Care 2022, <https://doi.org/10.1055/s-0042-1743178>.

## Performance

**BAL-like (including BAL and mini-BAL): 96.2% sensitivity, 98.3% specificity; Sputum-like (including ETA): 96.3% sensitivity, 97.2% specificity<sup>4</sup>**

## Panel Specifications

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**Sample Type:** BAL-like (including BAL and mini-BAL), Sputum-like (including ETA)

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**Sample Volume:** 0.2 mL

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