BIOMÉRIEUX

Clinical Impact of the BIOFIRE® Respiratory 2.1 *plus* (RP2.1*plus*) Panel

23
TARGETS
~45 min

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.

One or multiple samples

Multiple testing methods

Takes hours to days

Multiple reports

Longer patient length of stay

Fast. Easy. Comprehensive.

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

0.3mL of nasopharyngeal swab in transport media or saline

2 minutes hands-on time

Results in about 45 minutes

Comprehensive results in a single report

Improved Patient Management[2-7]

Get Test Results Faster

The BIOFIRE RP Panel* enables clinicians to diagnose patients faster and get them on the road to recovery more quickly.[3]

Turnaround time before BIOFIRE RP Panel adoption

Turnaround time after BIOFIRE RP Panel adoption

89.3% drop in turnaround time

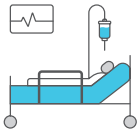
Who Should Get Tested

All patients with signs/symptoms (syndrome) suggestive of an RTI, especially in hospitalized immune-compromised patients and with not immune-compromised hospitalized patients if it might influence care (e.g., aid in cohorting decisions, reduce testing, or decrease antibiotic use).[1]

Children and adults

Elderly patients

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



Critically ill patients

Superior Clinical and Economic Outcomes

It is difficult to deliver the highest quality healthcare at a low cost. Studies show that the BIOFIRE RP Panel* can deliver excellent clinical and economic outcomes and has been shown to:

- Dramatically reduce time to diagnosis.[4-6,8]
- Improve patient management.[4-8]
- Reduce total cost of care and resource utilization.[8]
- Prevent secondary spread of infection.[7,8]
- Prevent exposure to unnecessary antibiotics.[5-8]
- Detect more positives and co-infections than non-panel assays.[9]
- Provide more timely and effective treatment.[5-8]
- Result in shorter hospital stays.[6,8]
- Reduce unnecessary or ancillary testing.[6,7]

Aid Antimicrobial Stewardship

Reduce antibiotic use

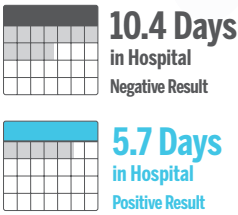
The BIOFIRE RP Panel* resulted in decreased antibiotic use in 23% of pediatric patients tested.[10]

Antibiotic duration

The BIOFIRE RP Panel decreased the duration of antibiotic use by an average of 2.4 days in infants with positive panel results.[11]

Hospital length of stay

Decreased hospital length of stay of infants by an average of 4.7 days with a positive BIOFIRE RP Panel result vs a negative result.[11]



"Getting an answer within an hour is something that's very powerful to clinicians: it gives us actionable information right away."

Dr. Tufik Assad, MD, MSCI
Pulmonary and Critical Care Physician

*Data generated using previous versions of this product.

BIOFIRE® RESPIRATORY 2.1 *PLUS* (RP2.1*plus*) PANEL

1 Test. 23 Targets. ~45 Minutes.

VIRUSES

Adenovirus
Coronavirus 229E
Coronavirus HKU1
Coronavirus NL63
Coronavirus OC43
Middle East respiratory syndrome coronavirus (MERS-CoV)
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
Human metapneumovirus
Human rhinovirus/enterovirus
Influenza A virus
Influenza A virus A/H1
Influenza A virus A/H3
Influenza A virus A/H1-2009
Influenza B virus
Parainfluenza virus 1
Parainfluenza virus 2
Parainfluenza virus 3
Parainfluenza virus 4
Respiratory syncytial virus

BACTERIA

Bordetella parapertussis
Bordetella pertussis
Chlamydia pneumoniae
Mycoplasma pneumoniae

CE 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

- Infectious Disease Society of America. Guidelines on the Diagnosis of COVID-19 https://www.idsociety.org/COVID19guidelines/dx
- Infectious Disease Society of America. Lower and Upper Respiratory Guidelines. http://www.idsociety.org/Organ_System/#Lower/Upper Respiratory.
- CDC Guidelines for preventing Health-Care Associated Pneumonia, 2003: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5303a1.htm
- ESCMID Guidelines for the management of adult lower respiratory tract infections, M. Woodhead et al, Clin Microbiol Infect 2011; 17 (Suppl. 6): 1–24.B
- European Respiratory Society – ERS Guidelines for Respiratory Medicine - https://www.ers-education.org/guidelines/all-ers-guidelines/
- NICE guidelines on antimicrobial prescribing (APGs): https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/antimicrobial-prescribing-guidelines

References

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2. Xu M, *et al.* Am J Clin Pathol. 2013(1);139:118-123.
3. Poelman R, *et al.* Future Microbiol., 2020 June; 15(8):623-632.
4. Pettit N, *et al.* J. Med Microbiol., March 2015 64:312-313.
5. Gelfer G, *et al.* Diag Micro Infect Dis. 2015;83:400-406.
6. Rappo U, *et al.* J. Clin. Microbiol. JCM.00549-16.
7. Subramony A, *et al.* J Pediatr. 2016; doi:10.1016/jpeds. 2016.02.050.
8. Rogers BB, *et al.* Arch Pathol Lab Med. 2015;139:636-641.
9. Kitano, Taito *et al.* J Infect Chemother. 2020;26(1):82-85. doi:10.1016/j.jiac.2019.07.014
10. Echavarria M, *et al.* (2018) Journal of Clinical Virology. 108:90.
11. McFall, *et al.* Pediatrics. 2017 Feb;:000992281774066.
12. Overall performance based on prospective clinical study for the BIOFIRE® FILMARRAY® Respiratory 2 Panel, Data on file, BioFire Diagnostics.
13. Overall performance based on prospective SARS-COV-2 clinical study for the BIOFIRE® Respiratory 2.1 Panel in comparison to 3 EUA tests, Data on file, BioFire Diagnostics.

Performance

Overall Performance: 97.1% sensitivity, 99.3% specificity[12]
SARS-CoV-2 Performance: 98.4% PPA, 98.9% NPA[13]

Panel Specifications

Sample Type: nasopharyngeal swab in transport media or saline

Sample Volume: 0.3 mL