



# Clinical Impact of the BIOFIRE<sup>®</sup> FILMARRAY<sup>®</sup> Gastrointestinal (GI) Panel

22

TARGETS

~1 hr

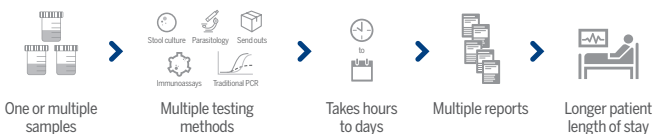
# BIOFIRE® Syndromic Testing

## The right test, the first time

A significant clinical overlap is seen between pathogens causing gastrointestinal disease, making it very difficult to select the right traditional test to perform on stool samples.<sup>1</sup>

## Traditional stool testing methods

Traditional methods of pathogen identification can be time consuming and lack sensitivity.<sup>2</sup>



## Fast. Easy. Comprehensive stool testing.

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



## Get Faster Patient Results



# 84%

**Reduction  
in Time  
to Result**

An 84% reduction in time to result, and a 69% reduction in time to treatment (for pediatric patients) was demonstrated by the BIOFIRE® Gastrointestinal (GI) Panel compared to traditional testing.<sup>3,4</sup>

## Who Should Get Tested

According to common clinical guidelines\*, stools from individuals at high risk of spreading disease to others and during known or suspected outbreaks should be tested.



Children and adults



Travelers



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



Critically ill patients



Elderly patients

The test should be performed on patients, including pediatric patients, who display one or more of the following criteria:

- Community acquired diarrhea for  $\geq 7$  days
- Traveler's diarrhea, untreated or following treatment failure
- Diarrhea with warning signs/risk factors for severe disease
- Suspicion of nosocomial outbreaks
- Persistent diarrhea

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## Aid Antimicrobial Stewardship



### Improved antibiotic use

Compared to traditional testing, BIOFIRE® GI Panel patients were less likely to be prescribed antibiotics: from 40.9% to 36.2% ( $p < 0.001$ )<sup>5</sup> and from 71.8% to 35.3% ( $p < 0.001$ ) for pediatric patients.<sup>6</sup>



### Increased targeted therapy

Clinicians increased the use of targeted therapy thanks to the BIOFIRE GI Panel compared to traditional testing.<sup>2</sup>



# Superior Clinical and Economic Outcomes

## Identify what traditional testing is missing

The BIOFIRE GI Panel increased the diagnostic yield by more than 30% vs traditional testing.<sup>7</sup>



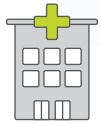
## Reduce length of stay

The length of hospital stay was shorter with the BIOFIRE GI Panel: 3 days vs 7.5 days compared to traditional testing.<sup>8</sup>



## Decrease hospital admissions

The number of patients admitted from ED to the hospital decreased from 87.8% to 62.8% ( $p < 0.0001$ ) thanks to the BIOFIRE GI Panel, compared to traditional testing.<sup>8</sup>



## Cut unneeded downstream procedures

Patients were shown to be 12.5% less likely to undergo endoscopy and 7.3% less likely to receive abdominal imaging vs traditional testing.<sup>5</sup>



## Rule in/out infectious causes

The BIOFIRE GI Panel can help differentiate between enteric infection and relapse of inflammatory bowel disease.<sup>9,10</sup>



## Improve infection control

The BIOFIRE GI Panel enabled early adequate infection precaution and isolation in the pediatric population.<sup>6</sup>



## \*Guidelines

- Riddle, M. S. *et al.* (2016). "ACG Clinical Guideline: Diagnosis, Treatment, and Prevention of Acute Diarrheal Infections in Adults." *Am J Gastroenterol* 111(5): 602-622.
- Shane, A. L. *et al.* (2017). "2017 Infectious Diseases Society of America Clinical Practice Guidelines for the Diagnosis and Management of Infectious Diarrhea." *Clin Infect Dis* 65(12): e45-e80.
- Riddle, M. S. *et al.* (2017). "Guidelines for the prevention and treatment of travelers' diarrhea: a graded expert panel report." *J Travel Med* 24(suppl\_1): S57-s74.
- Guarino, A., S. *et al.* (2014). "European Society for Pediatric Gastroenterology, Hepatology, and Nutrition/European Society for Pediatric Infectious Diseases evidence-based guidelines for the management of acute gastroenteritis in children in Europe: update 2014." *J Pediatr Gastroenterol Nutr* 59(1): 132-152.

## References

1. Dien Bard J., *et al.* (2020), *Clin Lab Med* 40(4): 393-420.
2. Cybulski R. J. Jr., *et al.* (2018), *Clin Infect Dis* 67(11): 1688-1696.
3. Beal S. G., *et al.* (2018), *J Clin Microbiol* 56(1).
4. Cotter J. M., *et al.* (2021), *Pediatrics* 147(5).
5. Axelrad J. E., *et al.* (2019), *J Clin Microbiol* 57(3).
6. Yoo, I. H., *et al.* (2021), *Diagnostics (Basel)* 11(7).
7. Meyer J., *et al.* (2020), *Scand J Gastroenterol* 55(12): 1405-1410.
8. Torres-Miranda D., *et al.* (2020), *BMC Gastroenterol* 20(1): 246.
9. Hong S., *et al.* (2021), *Inflamm Bowel Dis* 27(10): 1634-1640.
10. Axelrad J. E., *et al.* (2017), *Inflamm Bowel Dis*. 23(6): 1034-1039.
11. Data on file, BioFire Diagnostics. The stated performance is the overall aggregate performance of the prospective clinical study data presented in the IFU.

## Performance

98.7% sensitivity and 99.2% specificity<sup>11</sup>

## Panel Specifications

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**Sample Type:** stool sample in Cary Blair

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**Sample Volume:** 0.2 mL

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## BIOFIRE® FILMARRAY® GASTROINTESTINAL (GI) PANEL

1 Test. 22 Targets. ~1 Hour.

### BACTERIA

*Campylobacter* (*C. jejuni*/*C. coli*/  
*C. upsaliensis*)  
*Clostridioides* (*Clostridium*) *difficile*  
(toxin A/B)<sup>†</sup>  
*Plesiomonas shigelloides*  
*Salmonella*  
*Vibrio* (*V. parahaemolyticus*/  
*V. vulnificus*/*V. cholerae*)  
*Vibrio cholerae*  
*Yersinia enterocolitica*  
Diarrheagenic *Escherichia coli*/*Shigella*  
Enteroaggregative *E. coli* (EAEC)  
Enteropathogenic *E. coli* (EPEC)  
Enterotoxigenic *E. coli* (ETEC) *lt/st*  
Shiga-like toxin-producing *E. coli*  
(STEC) *stx1/stx2*  
*E. coli* O157  
*Shigella*/Enteroinvasive *E. coli* (EIEC)

### VIRUSES

Adenovirus F40/41  
Astrovirus  
Norovirus GI/GII  
Rotavirus A  
Sapovirus (I, II, IV, and V)

### PARASITES

*Cryptosporidium*  
*Cyclospora cayetanensis*  
*Entamoeba histolytica*  
*Giardia lamblia*

FDA cleared |  2797

<sup>†</sup> Selective reporting available for *C. diff.*

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.

