



On-demand PCR test for improving  
women's health by uncomplicating  
the diagnosis of vaginitis

■ **Xpert® Xpress MVP**



US-IVD. In Vitro Diagnostic Medical Device.



## The Need

Vaginitis is a leading cause of clinic visits by women, with more than 10 million per year in the United States.<sup>1</sup> Limitations with traditional test methods contribute to poor diagnosis, inappropriate treatment, and persistent symptoms.<sup>2</sup> High performing PCR tests are available for large, batch analyzers but have limited practical use for clinicians due to a lag in reportable results, making appropriate same day treatment a challenge.<sup>3</sup>

### Challenges remain:

- Detection and differentiation of bacterial vaginosis (BV), vulvovaginal candidiasis (VVC), and trichomoniasis (TV), which all present with similar symptoms
- Mixed and co-infections of BV, VVC, and TV are common, further complicating diagnosis and the guidance of appropriate treatment<sup>4,5</sup>
- Insights for effective triage and patient management
- Testing options that offer accurate and objective test results to drive timely and appropriate treatment for improved patient management



## The Impact

The Xpert **Xpress** MVP test, performed on Cepheid's GeneXpert systems, delivers an accurate, simple, and flexible solution for uncomplicating the diagnosis of vaginitis.

**It delivers single-test confidence aiding clinicians in diagnosing three distinct conditions from one sample.**



## The Solution

The Xpert® **Xpress** MVP test is a new, FDA cleared on-demand PCR test to aid in the diagnosis of vaginal infections in symptomatic women within an hour. This test introduces a BV flora specific algorithm for bacterial vaginosis combined with the detection of *Candida* species (*Candida* group and *Candida glabrata/krusei*) and *Trichomonas vaginalis*, from a single sample on Cepheid's easy-to-use GeneXpert® systems.

### On-demand molecular testing — an ideal solution:

- Actionable diagnostic aid for bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis within 60 minutes, including potential co-infections
- On-demand results for 4 separate callouts, bacterial vaginosis, *Candida* group,\* *C. glabrata/krusei*, and *T. vaginalis* from a single sample collection
- Implementing easy-to-use testing with GeneXpert technology

- Easy to use multiplex, real-time PCR panel test
- Less than 1 minute hands-on-time and objective PCR results within 60 minutes
- Detect mixed and diverse vaginal conditions from one sample
- Designed to enable appropriate treatment the first time

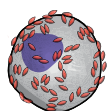


Coverage, plus  
Accuracy, plus  
Peace of mind

That's the **PCR**plus advantage.  
From Cepheid.

## Multi-Organism Bacterial Vaginosis Algorithm: Designed to Detect Key Organisms Strongly Associated with BV

### BV Flora



*Atopobium vaginae*  
BVAB2  
*Megasphaera-1*

- Highly associated with BV<sup>6</sup>
- Combination offers optimal sensitivity, specificity and accuracy for BV<sup>6-9</sup>



*Gardnerella vaginalis*

- Sensitive but not specific for BV<sup>6-8</sup>
- Variable amounts in BV flora
- Found in 70% of women without BV<sup>6-9</sup>



*Mobiluncus* sp.  
*Prevotella* sp.

- Variable amounts in BV flora
- Low sensitivity for BV<sup>6</sup>

### Normal/Healthy Flora



*Lactobacillus crispatus*  
*L. jensenii*  
*L. gasseri*

- Type and distribution varies by ethnicity
- Limited utility as a negative indicator of BV<sup>7</sup>



*L. iners*

- More common in some ethnicities
- Found equally in BV and healthy flora<sup>9</sup>

## Clinical Performance

|                                                | Clinician-collected               |                                     | Self-collected                    |                                     |
|------------------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|
|                                                | Sensitivity/PPA<br>(95% CI)       | Specificity/NPA<br>(95% CI)         | Sensitivity/PPA<br>(95% CI)       | Specificity/NPA<br>(95% CI)         |
| <b>BV</b>                                      | 93.8%<br>531/566<br>(91.5%-95.5%) | 93.8%<br>808/861<br>(92.0%-95.3%)   | 94.0%<br>533/567<br>(91.7%-95.7%) | 92.9%<br>794/855<br>(90.9%-94.4%)   |
| <b>Candida group*</b>                          | 98.0%<br>396/404<br>(96.1%-99.0%) | 94.6%<br>984/1040<br>(93.1%-95.8%)  | 97.5%<br>393/403<br>(95.5%-98.7%) | 92.1%<br>954/1036<br>(90.3%-93.6%)  |
| <b>Candida glab-krus<br/>Fresh Prospective</b> | 93.6%<br>44/47<br>(82.8%-97.8%)   | 99.6%<br>1392/1397<br>(99.2%-99.9%) | 97.8%<br>45/46<br>(88.7%-99.6%)   | 99.4%<br>1384/1393<br>(98.8%-99.7%) |
| <b>Candida glab-krus^<br/>Contrived</b>        | 99.0%<br>98/99<br>(94.5%-99.8%)   | 96.4%<br>27/28<br>(82.3%-99.4%)     | N/A                               | N/A                                 |
| <b>TV</b>                                      | 97.3%<br>73/75<br>(90.8%-99.3%)   | 99.6%<br>1332/1337<br>(99.1%-99.8%) | 97.3%<br>72/74<br>(90.7%-99.3%)   | 99.8%<br>1330/1333<br>(99.3%-99.9%) |

## Workflow: 3 Easy Steps

1

Obtain swab samples in the Cepheid Transport Reagent



2

Transfer sample to cartridge



3

Insert cartridge and start test



## Catalog Information

|                            |          |              |
|----------------------------|----------|--------------|
| Xpert® Xpress MVP          | 10 tests | XPRSMVP-10   |
| Xpert® Swab Collection Kit | 50 swabs | SWAB/G-50-US |

US-IVD. *In Vitro* Diagnostic Medical Device.

\* Target includes *C. albicans*, *C. tropicalis*, *C. parapsilosis*, and *C. dubliniensis*.

^ Contrived specimens were prepared using individual negative clinical CVS and SVS specimens. Refer to table 14 within the package insert for stratified.

### References:

- 1 Brown H, et al. Improving the Diagnosis of Vulvovaginitis: Perspectives to Align Practice, Guidelines, and Awareness. *Population Health Management* 2020 23:S1, S-3-S-12
- 2 Hillier SL, et al. Diagnosis and treatment of vaginal discharge syndromes in community practice settings. *Clin Infect Dis*. 2021 May 04; 72(9) 1538-1543
- 3 Gaydos CA, et al. Use of a Rapid Diagnostic for Chlamydia trachomatis and Neisseria gonorrhoeae for Women in the Emergency Department Can Improve Clinical Management: Report of a Randomized Clinical Trial. *Ann Emerg Med*. 2019 Jul; 74(1) 36-44
- 4 Gaydos CA, et al. Clinical Validation of a Test for the Diagnosis of Vaginitis. *Obstetrics & Gynecology*: July 2017 - Volume 130 - Issue 1 - p 181-189 doi: 10.1097/AOG.0000000000002090
- 5 Schwabke J, et al. Clinical Validation of the Aptima Bacterial Vaginosis and Aptima Candida/Trichomonas Vaginitis Assays: Results from a Prospective Multicenter Clinical Study. *J Clin Microbiol* 58:e01643-19.
- 6 Fredricks DN, et al. Targeted PCR for detection of vaginal bacteria associated with bacterial vaginosis. *J Clin Microbiol*. 2007 Oct; 45(10) 3270-3276
- 7 Cartwright CP, et al. Development and validation of a semiquantitative, multitarget PCR assay for diagnosis of bacterial vaginosis. *J Clin Microbiol*. 2012 Jul; 50(7) 2321-2329
- 8 Hilbert DW, et al. Development and Validation of a Highly Accurate Quantitative Real-Time PCR Assay for Diagnosis of Bacterial Vaginosis. *J Clin Microbiol*. 2016;54:1017-24
- 9 Fredricks DN. Molecular methods to describe the spectrum and dynamics of the vaginal microbiota. *Anaerobe*. Volume 17, Issue 4, August 2011, Pages 191-195

### CORPORATE HEADQUARTERS

904 Caribbean Drive  
Sunnyvale, CA 94089 USA

TOLL FREE +1.888.336.2743  
PHONE +1.408.541.4191  
FAX +1.408.541.4192

### EUROPEAN HEADQUARTERS

Vira Solelh  
81470 Maurens-Scopont France

PHONE +33.563.82.53.00  
FAX +33.563.82.53.01  
EMAIL cepheid@cepheid.eu

www.Cepheid.com

© 2022-2023 Cepheid 0958-02