## NEW: Blood Culture Identification Panel (BCID2)

**Who this message is for**: All healthcare providers who order blood cultures.

**What this message is about:**
**Effective immediately**, the Clinical Microbiology Services at NYPH will begin testing blood cultures that have flagged as positive using an updated version of the BioFire® FilmArray Blood Culture Identification panel (BCID2), which is a multiplex nucleic amplification test.

The 43 organisms and antimicrobial resistance genes detected by the BCID2 panel are tabulated on figure 1.1

**Why this information is important:**
Implementation of the BCID2 panel will permit earlier detection of the most common clinical pathogens and antimicrobial resistance determinants and can lead to improved antimicrobial prescribing and outcomes for patients with bacteremia.

**What we need from you:**
Carefully review this information including the FAQs on page 2. Clinicians are strongly encouraged to refer to clinical guidelines *"Antimicrobial Recommendations Based on Results from Rapid Identification of Organisms from Positive Blood Cultures"* **and/or consult with Infectious Diseases when needed to assist with result interpretation and antimicrobial management.** Please refer to the relevant campus-specific and patient population (adult or pediatric) versions of these guidelines that can be found on the infonet (https://infonet.nyp.org/Id/pages/antimicrobialthera.aspx).

**For questions about testing approaches or results please contact:**
Dr. Lars Westblade (Director, Clinical Microbiology Service) at (212) 746-0833 or Dr. Rebecca Marrero Rolon (Associate Director, Clinical Microbiology Service) at (212) 746-6898.

**For questions about treatment recommendations, please contact:**
**NYP-WC Adult: Epic chat:** Mon-Fri 8AM-4PM WC ID Antibiotic Approval
**After hours**: WC ID Consult
**Peds: Epic chat:** WC Peds ID Consul**t**

You can also contact our **Client Services Dept:** 212-746-0670.

## Frequently asked questions:

**What specimen can be tested?**
The first blood culture that becomes positive with a given bacterial morphotype on Gram stain (e.g., gram-positive cocci in clusters).

**Note:** Subsequent blood cultures collected from a given patient exhibiting an organism with the same morphology on Gram stain will not be tested. However, if the Gram stain morphology changes (e.g., gram-positive cocci in clusters and gram-negative bacilli) the BCID2 panel will be performed again.

**How should you order these tests?**
It is not necessary to order this testing. It will be automatically performed on positive blood cultures in the clinical microbiology laboratory following the above algorithm.

**How will results be reported?**
All organisms and antimicrobial resistance genes tested on the BCID2 panel will be reported as either "Not Detected" or "Detected".

**When will the test be performed?**
The assay will be performed 24 hours/day, 7 days/week. Results of the BCID2 test will be available approximately 2 hours after a positive blood culture broth. Final culture identification and antimicrobial susceptibility testing results will still be available within 48-72 hours of the blood culture flagging positive.

**What organisms and resistance mechanisms are detected with the BCID2 assay?**
Figure 1.1

| Organism | Resistance Mechanism |
|---|---|
| • *Enterococcus faecalis*<br>• *Enterococcus faecium* | • *van*A/B (vancomycin resistance gene) |
| • *Listeria monocytogenes* | |
| • *Staphylococcus aureus*<br>• *Staphylococcus epidermidis*<br>• *Staphylococcus lugdunensis*<br>• *Staphylococcus* species | • *mec*A/C and MREJ (MRSA)<br>• *mec*A/C (methicillin-resistance gene) |
| • *Streptococcus agalactiae* (Group B *Streptococcus*)<br>• *Streptococcus pneumoniae*<br>• *Streptococcus pyogenes* (Group A *Streptococcus*)<br>• *Streptococcus* species | |
| • *Acinetobacter calcoaceticus-baumannii* complex<br>• *Bacteroides fragilis*<br>• *Enterobacter cloacae* complex<br>• *Enterobacterales*<br>• *Escherichia coli*<br>• *Haemophilus influenzae*<br>• *Klebsiell*a (*Enterobacter*) *aerogenes*<br>• *Klebsiella oxytoca*<br>• *Klebsiella pneumoniae* group<br>• *Neisseria meningitides* (encapsulated)<br>• *Proteus* species<br>• *Pseudmonas aeruginosa*<br>• *Salmonella* species<br>• *Serratia marcescens*<br>• *Stenotrophomonas maltophilia* | • CTX-M (cephalosporin/ESBL-resistance gene)<br>• IMP (carbapenem resistance gene)<br>• KPC (carbapenem resistance gene<br>• NDM (carbapenem resistance gene)<br>• OXA-48 (carbapenem resistance gene)<br>• VIM (carbapenem resistance gene)<br>• mcr-1 (polymyxin resistance gene) |
| • *Candida albicans*<br>• *Candida auris*<br>• *Candida glabrata*<br>• *Candida krusei*<br>• *Candida parapsilosis*<br>• *Candida tropicalis*<br>• *Cryptocuccus Neoformans/Gatti* | |