



Three Rivers Medical Center

Laboratory Services

To: Asante Three Rivers Medical Center Providers
From: Bill Bell, Laboratory Technical Supervisor
Date: March 23, 2015
Subject: MRSA & MSSA DNA Detection by PCR in Positive Blood Cultures

ARRMC Microbiology is now offering a PCR test to detect MRSA and MSSA DNA in positive blood cultures. This test will be performed on the Cepheid GeneXpert Dx System, an automated real time PCR system. It will be performed on all positive blood cultures that have direct gram stains showing gram positive cocci resembling Staphylococci. This test cannot be ordered and will not be performed on negative blood cultures, or on positive blood cultures that have organisms in the direct gram stains that do not resemble Staphylococci. It will be reported in the "Gram Stain" section of the Blood Culture report below the direct gram stain results. There are 5 possible reports that you may see after this test is performed:

1. **Negative for Staph aureus and MRSA by PCR method.** This means that the organism seen on the gram stain is not MRSA or MSSA. The most likely organism is a coagulase negative Staphylococcus. Other possibilities include Micrococci, Aerococci, or anaerobic gram positive cocci.
2. **Positive for Staph aureus and MRSA by PCR method.** This means that the organism seen on the gram stain is MRSA or that both MRSA and MSSA are present.
3. **Positive for Staph aureus, Negative for MRSA by PCR method.** This means that the organism seen on the gram stain is MSSA.
4. **Positive for Staph aureus, MRSA indeterminate by PCR method. Antimicrobial susceptibility testing pending.** This means that *Staphylococcus aureus* is present, but, probably due to an interfering substance, we are unable to determine if it is MRSA or MSSA.
5. **Presence or absence of Staph aureus and/or MRSA cannot be determined by PCR method.** This means that we are unable to reach any conclusions about whether or not MSSA or MRSA is present, probably because of an interfering substance. In these cases, the identity of the organism needs to wait for the subculture to grow (18 – 24 hours).

Results will be available approximately 2 hours after the positive blood culture is received by ARPMC. False positive and false negative results can occur, but are uncommon (less than 2% of tests performed).

If you have any questions or concerns, please contact Allan Henrichs, ARPMC Microbiology Technical Specialist 541-789-6300, or Dr. Tom Treger, ARPMC Medical Director 541-789-4191.