



Laboratory Communiqué

Volume 10 , Number 1

January 2016

The Laboratory Communiqué is a quarterly publication released by Billings Clinic Laboratory Services as an informational tool for medical staff and laboratorians.

In This Issue

NEW TESTS

PCR CSF Panel

Test Code: 1192

CPT Codes (14)

Bacteria 87798 X 5
87653

Viruses 87496
87498
87529 X 2
87532

87798 x 2
Yeast 87798

Coming Soon

Blood Bank Automation
Grifols Erytra®

New Tests

PCR CSF Panel

Laboratory Services has implemented the first FDA approved cerebrospinal fluid (CSF) nucleic acid-based test for the simultaneous detection of multiple pathogens that cause central nervous system infections. Central nervous system (CNS) infections are responsible for causing inflammatory conditions of the brain and/or meningeal tissues surrounding the brain (i.e. meningitis, encephalitis and meningoencephalitis. Approximately 15% of cases are fatal and many other cases result in life-long disabilities such as loss of limbs, visual and hearing deficits, seizures and altered learning and memory.

The PCR CSF Panel tests for a comprehensive group of (6) bacterial, (7) viral and (1) yeast nucleic acids. The FilmArray extracts and purifies all nucleic acids from the CSF sample. During the first stage PCR, the FilmArray performs a single large volume, massively multiplexed reaction. Last, individual singleplex second-stage PCR reactions detect the products from the first stage. The following organisms are identified using the FilmArray ME Panel:

Bacteria:

Escherichia coli K1
Haemophilus influenza
Listeria monocytogenes
Neisseria meningitidis
Streptococcus pneumonia

Viruses:

Cytomegalovirus (CMV)
Enterovirus (EBV)
Herpes simplex virus 1
Herpes simplex virus 2
Human herpesvirus 6
Human parechovirus
Varicella zoster virus (VZV)

Yeast:

Cryptococcus neoformans/gatti

NOTE: Negative results do not preclude central nervous system infection. Not all agents of CNS infections are detected by this test or provide information about which antimicrobial drugs may be most effective for treating bacterial infections.

Specimen: Cerebrospinal Fluid (CSF) collected via lumbar puncture from patients with signs and or symptoms of meningitis and/or encephalitis. The CSF sample



Billings Clinic

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should be tested as soon as possible and not centrifuged.

Interpretation:

- Pathogens Found (Specific Pathogen is listed)
- No Pathogens
- Indeterminate

The following comment is attached to the result and indicates the scope of testing:

Testing was performed using multiplex qualitative PCR for the detection of: Escherichia coli K1, Haemophilus influenzae, Listeria monocytogenes, Neisseria meningitidis, Streptococcus agalactiae, Streptococcus pneumoniae, Cytomegalovirus (CMV), Enterovirus, Herpes simplex virus (HSV-1), Herpes simplex virus (HSV-2), Human herpesvirus 6 (HHV-6), Human Parechovirus, Varicella zoster (VZV) and Cryptococcus neoformans/gatti.

Coming Soon!

Blood Bank Automation

Blood Bank will soon join the majority of the laboratory departments and have automation! Historically in our blood bank, testing has been manually performed requiring Medical Technologists to pipette samples, add reagents, read reactions and interpret/enter/verify results. In the future, with our recent decision to implement the Grifols Erytra[®] instrument, we will automate many of these processes. Automation will allow us to handle the increasing workload, improve turn-around times and most of all, give much needed relief to the blood bank staff who can then focus on the more complicated antibody identifications and transfusion needs.

The Erytra[®] is a fully automated instrument with a high processing capacity for performing pre-transfusion compatibility tests and pre-natal testing using the gel agglutination technique. Erytra[®] combines Grifols' experience and technology with the advantages of the unique Grifols DG Gel[®] 8-column cards. The Erytra[®] is a walk-away autoanalyzer with self-organizing capacity that manages and executes all necessary steps when performing blood typing techniques and investigation of unexpected antibodies. A date has not been set for install and implementation but plans are underway.

For more information about Billings Clinic Laboratory please call (406) 657-4060.
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