

New MiChart order pathways for the BioFire® Meningitis/Encephalitis PCR Panel (MEPAN)

Effective April 16, 2025

DETAILS:

The clinical microbiology team is proud to announce that the **BioFire® Meningitis/Encephalitis PCR Panel (MEPAN)** is now available for use at Michigan Medicine through a new reflex testing algorithm for cerebrospinal fluid (CSF) specimens. The MEPAN can also be ordered directly with appropriate infectious disease approval or when used as indicated by the febrile infant guidelines (<https://michmed-clinical.policystat.com/policy/12261468/latest/>).

- The BioFire ME Panel detects **14 common viral, bacterial, and fungal pathogens** that cause meningitis and encephalitis.
- It provides **rapid results** (within 1–2 hours of receipt) and will be available 24 hours a day, 7 days a week.
- Standalone testing for Enterovirus has been discontinued by the manufacturer but is available as a routine part of this panel.

Reflex Criteria:

When “CSF Analysis with Reflex to MEPAN” is selected, MEPAN add-on testing will be automatically performed on CSF specimens that meet **any** of the following criteria:

- WBC > 5 cells/mm³
- Protein > 50 mg/dL
- Glucose < 40 mg/dL

Non-reflexed Order Options:

- Order MEPAN with Infectious Disease Approval
- Order MEPAN as recommended by febrile infant guidelines (0-60 days old)

Questions:

See next page for MiChart screen shot of MEPAN order pathway. Questions regarding MEPAN should be directed to the Clinical Microbiology Lab.

MiChart Screenshot:

Meningitis Encephalitis CSF Panel ✓ Accept

The FilmArray Meningitis/Encephalitis Panel (MEPAN) is a qualitative multiplexed nucleic acid amplification *in vitro* diagnostic test capable of simultaneous detection and identification of multiple bacterial, viral, and yeast nucleic acids directly from cerebrospinal fluid (CSF) specimens obtained via lumbar puncture from individuals with signs and/or symptoms of meningitis and/or encephalitis. The following organisms are identified using the FilmArray ME Panel:

Bacteria

- Escherichia coli K1
- Haemophilus influenzae
- Listeria monocytogenes
- Neisseria meningitidis (encapsulated)
- Streptococcus agalactiae
- Streptococcus pneumoniae

Viruses

- Cytomegalovirus
- Enterovirus
- Herpes simplex virus 1 & 2
- Human herpesvirus 6
- Human parechovirus
- Varicella zoster virus

Yeast

- Cryptococcus neoformans/gattii

When Cryptococcal disease is suspected, direct testing for Cryptococcus is advised due to a higher published sensitivity than the MEPAN.

When HSV meningoencephalitis is suspected, direct testing for HSV in the CSF is advised due to a higher published sensitivity than the MEPAN.

Meningitis/Encephalitis Test Options

Next Required ✓ Accept

Meningitis/Encephalitis Test Options

The CSF analysis with reflex to MEPAN can be ordered without ID approval and will reflex the MEPAN testing if WBC (>5) OR protein (>50) OR glucose (<40)

CSF Analysis with Reflex to MEPAN

Order MEPAN testing with required ID approval

Order MEPAN directly as recommended by febrile infant guidelines (0 to 60 days old)

No approval needed if patient falls within criteria.
- Infant febrile guidelines (0-60 days old)

Meningitis Encephalitis Panel, CSF
STAT, today at 1529, For 1 occurrence