TECHNICAL NOTICE
THE MEDICAL FOUNDATION

Cryptococcal Antigen Test Methodology Change

Effective Date: May 15, 2017 **Performing Department:** Chemistry and Immunoassays

Clinical Significance: On May 15, 2017 The Medical Foundation will transition all Cryptococcal Antigen testing (test # 28083 and 28085) from a latex agglutination assay to a Cryptococcal Antigen Lateral Flow Assay. This new FDA-cleared assay has been developed to detect all four serotypes of *Cryptococcus neoformans*, with an advantage over the current assay in detecting serotype C. As a result of the improvement in detection, some patients with previously undetectable or indeterminate Cryptococcal Antigen levels may now have a detectable titer. The following table summarizes the differences between the latex agglutination method and the new lateral flow method.

Parameter	Current Method (Latex Agglutination)	New Method (Lateral Flow Assay)
Sensitivity	Serotype A: 28 ng CrAg/mL B: 47 ng CrAg/mL C: 380 ng CrAg/mL D: 62 ng CrAg/mL	Serotype A: **1** ng CrAg/mL B: **1** ng CrAg/mL C: **9** ng CrAg/mL D: **8** ng CrAg/mL
Titer Range	1:2 – 1:4096 for serum 1:2 – 1:8192 for CSF	**1:5 – >1:2,560 for both serum and CSF**
Capture Method	Polyclonal antibodies to cryptococcal capsular antigen	**Monoclonal antibodies** to cryptococcal capsular antigen
Genetic Coverage	Serotypes A-D	Serotypes A-D
Analytical Specificity	93-100%	95%
CPT Code	Screen: 86403 Titer: 86406	**Screen: 87899** **Titer: 87899-59**

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Method: Semi-Quantitative Lateral Flow Immunochromatographic Assay

Use: Establish the presence of *Cryptococcus neoformans* infection

Reference Range: Negative

SPECIMEN REQUIREMENTS AND COLLECTION:

Collect:	Aseptic collection following accepted Cerebrospinal Fluid (CSF) collection procedures **Preferred Volume**: 0.5 mL **Minimum Volume**: 0.1 mL
Processing:	Centrifuge to remove particulate matter and transfer 0.5 mL to a sterile screw-capped plastic transport container
Storage and Transport:	Refrigerated
Causes for Rejection:	More than slight hemolysis from any RBCs present in CSF
Stability:	Refrigerated: 3 days; Frozen: indefinite (avoid repeated freeze/thaw cycles)

Collect:	Serum, gold top or red top. Mix by inverting tube 5 times. Allow to clot completely at room temperature **Preferred Volume**: 0.5 mL **Minimum Volume**: 0.1 mL
Processing:	Centrifuge to separate serum from cells. For red top, transfer 0.5 mL serum to a plastic transport container. For SST, serum may be transported in original tube
Storage and Transport:	Refrigerated
Causes for Rejection:	More than slight hemolysis
Stability:	Refrigerated: 3 days; Frozen: indefinite (avoid repeated freeze/thaw cycles)

Testing Schedule: Monday through Friday (non-holidays)

Order:

Test Name	Test No.	Mnemonic	CPT
Cryptococcal Antigen Screen with Reflex to Titer, CSF	28083	CSF CRAG	87899
Cryptococcal Antigen Screen with Reflex to Titer, Serum	28085	CRAG SER	87899

CSF Ordering Guidance: Antigen detection methods alone are not sufficient for proper evaluation of meningitis. Culture with Gram stain must also be ordered, as meningitis may be caused by microorganisms which are not detected by this antigen test.

Please direct any questions, or comments regarding this notice to Qing Li, Ph.D. (qli@sbmf.org) at (574) 234-4176 extension 1584, Paul Moorman (pmoorman@sbmf.org) at (574) 234-4176 extension 1415, Patricia Canfield, M.D. (pcanfield@sbmf.org) at (937) 206-4576 or call The Medical Foundation, (574) 234-4176 or (800) 544-0925.