Memorandum – Micro #255

To: UNC Medical Center Inpatient Services Attending Physicians, Housestaff, Clinical Nurse Coordinators, Department Heads and Supervisors

From: Melissa B. Miller, PhD
Director, Clinical Microbiology and Medical Microbiology Laboratories

Herbert C. Whinna, MD, PhD
Medical Director, McLendon Clinical Laboratories

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Subject: Rapid Testing on Positive Blood Cultures for Gram-Negative Organisms

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Effective June 29, 2026, the UNC Medical Center Clinical Microbiology Laboratory will begin using a new assay that rapidly identifies multiple Gram-negative organisms and associated resistance genes from positive blood cultures (DiaSorin Liaison Plex, Gram-Negative Blood Culture Assay, BC-N). Details on the new assay can be found online at BC-N Test Information. The BC-N assay is FDA-cleared and will identify:

Organisms		Resistance genes[2]
Acinetobacter baumannii	*Klebsiella variicola*	CTX-M (bla_{CTX-M})
Acinetobacter sp.	*Morganella morganii*	IMP (bla_{IMP})
Citrobacter spp.	*Neisseria meningitidis*	KPC (bla_{KPC})
Enterobacter spp.[3]	*Proteus* spp.	NDM (bla_{NDM})
Enterobacteriaceae/Morganellaceae[1]	*Pseudomonas aeruginosa*	OXA (bla_{OXA})
Escherichia coli[4]	*Pseudomonas* spp.	SME (bla_{SME})
Haemophilus influenzae	*Salmonella* spp.	VIM (bla_{VIM})
Klebsiella oxytoca	*Serratia marcescens*	MCR
Klebsiella pneumonaiae	*Stenotrophomonas maltophilia*	

[1]The family *Enterobacteriaceae/Morganellaceae* will not be reported if a specific organism from that family is also detected.
[2]Resistance genes are not reported if an associated organism is not detected.
[3]Due to reclassification, *Klebsiella aerogenes* will be reported as *Enterobacter* spp.
[4]The BCN assay does not distinguish between *E. coli* and *Shigella* spp.

See here for additional limitations and known cross-reactivity.

Testing will be performed automatically on a patient's first positive blood culture with a Gram-negative organism, provided that other organism morphotypes are not present (e.g., Gram-positive organisms). It will be repeated only after 7 days if the Gram stain result is unchanged. Results will be available in EPIC ~3 hours after the Gram stain result. Culture confirmation and susceptibility testing will still be performed per routine laboratory protocol.

Please refer to the Carolina Antimicrobial Stewardship Program's Gram-negative Treatment Pathway.

Additional information can be found on the McLendon Clinical Laboratories website: Blood Culture Information. Questions not answered by the websites can be directed to the Clinical Microbiology Laboratory at 984-974-1805 or Dr. Melissa Miller at Melissa.Miller@unchealth.unc.edu.