

OHS.OH.POL.1009 Critical Values Policy

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Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Periodic review	Chairman, Pathology and Laboratory Medicine	10/7/2024	1.0	<i>Gregory Sossaman</i> Gregory Sossaman, M.D.	
Periodic review	VP, Pathology and Laboratory Medicine	6/24/2024	1.0	<i>Mike Black</i> Mike Black	
Approval Captured outside MediaLab	Lab Director	9/21/2022	1.0	Gregory Sossaman, M.D.	Recorded on 5/8/2024 by Karen Hoyer when document added to Document Control (previous system of record: Medialab policy moved from SOLA)
Periodic review Captured outside MediaLab	Designated Reviewer	9/21/2022	1.0	Gregory Sossaman, M.D.	Recorded on 5/8/2024 by Karen Hoyer when document added to Document Control (previous system of record: Medialab policy moved from SOLA)

Signatures from prior revisions are not listed.

Approvals and periodic reviews that occurred before this document was added to Document Control may not be listed.

Version History

Version	Status	Type	Date Added	Date Effective	Date Retired
1.0	Approved and Current	First version in Document Control	5/8/2024	5/8/2024	Indefinite

Critical Values Policy

The purpose of this policy is to define the critical values in use in the Ochsner Laboratory System.

A critical value is “a pathophysiological state at such variance with normal as to be life-threatening unless something is done promptly and for which some correction action could be taken.” Those tests on this list are determined by the Pathologists after careful review of published data, and if required, consultation with OCF clinicians.¹

After verification of the test result, laboratory staff will immediately notify the physician or designated staff following the guidelines outlined in the facility’s critical value notification procedure. Notification may occur verbally or via electronic means. Laboratory staff are required to document notification and acknowledgement in the appropriate computer system. Acknowledgement may occur via verbal readback or electronic messaging.

The following laboratory results are called to the requesting physician or to the appropriate contact at the client location.

CRITICAL VALUE LIST

HEMATOLOGY

	Low	High
Hemoglobin	<6.0g/dL	>20.0 g/dL
Hematocrit	<20%	
WBC	<2.0 K/ μ L	>50 K/ μ L
Platelet Count	<40 K/ μ L	>999 K/ μ L
Fibrinogen	<100 mg/dL	
Prothrombin Time (PT)		INR \geq 5.0
Activated Partial Thromboplastin Time (APTT)		\geq 150.0 seconds
Blast cells on blood smear previously undocumented from this patient		
Positive malaria or other parasites noted on peripheral smear		
Organisms of any type in blood, pleural, pericardial or CSF fluids		

NEONATAL CRITICAL VALUES

(0-29 days old)	Low	High
WBC	<2.0 K/ μ L	>50 K/ μ L
Calcium	<7.0 mg/dL	>11.0 mg/dL
Bilirubin		>15.0 mg/dL

CHEMISTRY

	Low	High
Glucose	<50 mg/dL	>450 mg/dL
Sodium	<120 mMoL/L	>160 mMoL/L
Potassium	<2.8 mMoL/L	>6.2 mMoL/L
CO ₂	<10 mMoL/L	>40 mMoL/L
Calcium	<7.0 mg/dL	>12.0 mg/dL
Phosphorus	<1.1 mg/dL	>8.9 mg/dL
Magnesium	<1.0 mg/dL	>4.7 mg/dL
Lactic Acid		>3.4 mMoL/L
Chloride	<75 mMoL/L	>126 mMoL/L
Ionized Calcium	<0.75 mMoL/L	
Serum Osmolality	<260 mMoL/L	>320 mMoL/L

THERAPEUTIC DRUG MONITORING

Acetaminophen	>150 µg/mL
Amikacin	>15.0 µg/mL (trough) >80.0 µg/mL (peak) >60.0 µg/mL (random)
Carbamazepine	>20 µg/mL
Cyclosporine	>400 ng/mL
Digoxin	>2.5 ng/mL
Dilantin	>30 µg/mL
Gentamicin	>5 µg/mL (trough) >40 µg/mL (peak) >25.0 (random)
Lithium	>2.0 mMoL/L
Methotrexate	>5.0 µMoL/L
Phenobarbital	>60 µg/mL
Salicylate	>30 mg/dL
Theophylline	>25 µg/mL
Tobramycin	>5 µg/mL (trough) >40.0 µg/mL (peak) >25.0 µg/mL (random)
Valproic Acid	>200 µg/mL
Vancomycin	>30 µg/mL (trough) >80 µg/mL (peak)
Caffeine	>20 µg/mL
Tacrolimus	>30 ng/mL
Sirolimus	>25 ng/mL
Ethanol	>300 mg/dL

BLOOD BANK

ABO Incompatible Transfusion

MICROBIOLOGY

- Positive Blood Culture
- Positive CSF Gram Stain, India Ink or Culture
- Rhinocerebral Zygomycete or Aspergillus found on any stain
- Pseudomonas aeruginosa from Eye Culture
- Cervical Strep Screens on an OB patient that is Positive for Group B Strep (from Delivery)
- Positive AFB Smear or Culture
- Mycology Cultures Positive for Histoplasmosis, Blastomyces, Zygomycete, Coccidioides, Cryptococcus or Aspergillus from significant source
- NICU and PICU – RSV

ANATOMIC PATHOLOGY

- A significant change of frozen section diagnosis after review of permanent sections.
- Unexpected malignant diagnoses (Example: malignancy seen in a hernia sac, appendix, or resection specimen not clinically taken for suspected neoplasm)
- Unexpected perforations (Example: fat seen in an endometrial curettage)
- Large vessel vasculitis
- Rejection in transplant biopsies (except those already reported from Vanderbilt)
- Deep/Life Threatening Fungal Infections (Example: mucormycosis)
- Previously finalized reports in which the final diagnosis is altered and the report is released.

REFERENCE LABORATORY RESULT

Any value deemed critical by an external reference laboratory.

Reference:

Emancipator, K. Critical Values. American Journal of Clinical Pathology: Vol. 108, No. 3, 1997, pp. 247-253.