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## Critical Values Policy

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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.<sup>1</sup>

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. Laboratory staff are required to document notification and verbal readback in the appropriate computer system.

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/ $\mu$ L	>50 K/ $\mu$ L
Platelet Count	<40 K/ $\mu$ L	>999 K/ $\mu$ 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		

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### **NEONATAL CRITICAL VALUES**

<b>(0-29 days old)</b>	Low	High
WBC	<2.0 K/ $\mu$ L	>50 K/ $\mu$ 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 <sub>2</sub>	<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 $\mu$ g/mL
Amikacin	>15.0 $\mu$ g/mL (trough) >80.0 $\mu$ g/mL (peak) >60.0 $\mu$ g/mL (random)
Carbamazepine	>20 $\mu$ g/mL
Cyclosporine	>400 ng/mL
Digoxin	>2.5 ng/mL
Dilantin	>30 $\mu$ g/mL
Gentamicin	>5 $\mu$ g/mL (trough) >40 $\mu$ g/mL (peak) >25.0 (random)
Lithium	>2.0 mMoL/L
Methotrexate	>5.0 $\mu$ MoL/L
Phenobarbital	>60 $\mu$ g/mL
Salicylate	>30 mg/dL
Theophylline	>25 $\mu$ g/mL
Tobramycin	>5 $\mu$ g/mL (trough) >40.0 $\mu$ g/mL (peak) >25.0 $\mu$ g/mL (random)
Valproic Acid	>200 $\mu$ g/mL

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### **THERAPEUTIC DRUG MONITORING**

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.

## OHS.PALM.LabAdmin.POL.1009 Critical Values Policy

Copy of version 4.0 (approved and current)

**Last Approval or  
Periodic Review Completed** 7/7/2020

**Next Periodic Review  
Needed On or Before** 7/7/2022

**Effective Date** 1/16/2017

**Controlled Copy ID** 52117

**Location** Copy to Collection Manual in  
Ochsweb

**Organization** Ochsner Health System

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### Approval and Periodic Review Signatures

Type	Description	Date	Version	Performed By	Notes
Periodic review	Chairman, Pathology and Laboratory Medicine	7/7/2020	4.0	<i>Gregory Sossaman</i> Gregory Sossaman, M.D.	
Periodic review	VP, Pathology and Laboratory Medicine	7/2/2020	4.0	<i>Evelyn R Smith</i> Evelyn Smith	
Periodic review	Laboratory Medical Director, Southshore Lapalco	6/18/2018	4.0	<i>Donny Dumani, MD, MS, FASCP</i> Donny Dumani, M.D.	
Periodic review	VP, Pathology and Laboratory Medicine	5/29/2018	4.0	<i>Evelyn R Smith</i> Evelyn Smith	
Periodic review	Lab Medical Director, OMCWB and Ochsner St. Anne's	5/28/2018	4.0	<i>Gerald E. Liuzza, M.D.</i> Gerald Liuzza, M.D.	
Periodic review	Chairman, Pathology and Laboratory Medicine	5/24/2018	4.0	<i>Gregory Sossaman</i> Gregory Sossaman, M.D.	
Periodic review	Lab Medical Director, OMC Kenner, River Parishes and Primary Care	5/16/2018	4.0	<i>Elise Occhipinti, M.D.</i> Elise Occhipinti, M.D.	
Periodic review	Lab Medical Director, St. Charles Parish Hospital and HLA	5/7/2018	4.0	<i>Edgar S Cooper, MD, JD</i> Edgar Cooper, M.D.	

Periodic review	Lab Medical Director, Chabert	4/25/2018	4 0
Periodic review	Lab Medical Director, OMC Northshore and Northshore Slidell	4/24/2018	4 0
Periodic review	Lab Medical Director, Northshore Covington	4/24/2018	4 0
Periodic review	Lab Medical Director, Southshore Metairie & Southshore Kenner	4/23/2018	4 0
Periodic review	Lab Medical Director, Southshore Lakeview	4/23/2018	4 0
Periodic review	Lab Medical Director, St Bernard Parish Hospital	4/23/2018	4 0
Periodic review	Lab Medical Director, Ochsner Baptist	4/22/2018	4 0
Periodic review	Lab Medical Director, OMC Hancock, Southshore Pediatrics & Southshore Rothschild	4/20/2018	4 0
Periodic review	Lab Medical Director, OMC Baton Rouge, Iberville, Baton Rouge Hammond, Baton Rouge O'Neal & Baton Rouge Summa	4/20/2018	4 0
Approval	Lab Director	12/19/2016	4 0
Approval	Vice President, Laboratory Service Line Leader	12/13/2016	4 0
Approval	Lab Medical Director, HLA	12/12/2016	4 0
Approval	Lab Medical Director, Ochsner St Anne's	12/12/2016	4 0

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Approval	Lab Medical Director, Ochsner Baptist	12/7/2016	4 0
Approval	Lab Medical Director, Southshore Pediatrics & Southshore Rothschild	12/6/2016	4 0
Approval	Lab Medical Director, OMC Kenner, OMC River Parishes & Southshore Elmwood	12/6/2016	4 0
Approval	Lab Medical Director, Southshore Metairie & Southshore Kenner	12/6/2016	4 0
Approval	Lab Medical Director, Southshore Lakeview	12/6/2016	4 0
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Approval	Lab Medical Director, Chabert	12/6/2016	4 0
Approval	Lab Medical Director, Northshore Covington & Northshore Slidell	12/6/2016	4 0
Approval	Lab Director	12/10/2015	3 0
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Periodic review	Lab Medical Director, OMC Baton Rouge	12/15/2014	2 2
Periodic review	Lab Medical Director, HLA	12/8/2014	2 2
Periodic review	Lab Medical Director, Chabert	12/4/2014	2 2
Periodic review	Chairman, Pathology and Laboratory Medicine	12/1/2014	2 2
Periodic review	Lab Medical Director, Ochsner Baptist	11/29/2014	2 2
Periodic review	Lab Medical Director, OMC Kenner & Southshore Elmwood	11/28/2014	2 2
Periodic review	Lab Medical Director, Southshore Pediatrics & Southshore Rothschild	11/28/2014	2 2
Periodic review	Lab Medical Director, OMC Northshore	11/28/2014	2 2
Periodic review	Lab Medical Director, OMC West Bank & Southshore Lapalco	11/28/2014	2 2
Periodic review	Lab Medical Director, Northshore Covington & Northshore Slidell	11/28/2014	2 2
Periodic review	Lab Medical Director, Southshore Metairie & Southshore Kenner	11/28/2014	2 2
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Periodic review	Designated Reviewer	11/14/2013	2.2	Gregory Sossaman, M.D.	Recorded when document uploaded to MediaLab

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

#### Version History

Version	Status	Type	Date Added	Date Effective	Date Retired
4.0	Approved and Current	Major revision	12/6/2016	1/16/2017	Indefinite