

## Bridgeport Hospital Laboratory Critical values (5/2025)

### **Bridgeport Hospital Campus:**

#### **CORE LAB MICROBIOLOGY**

- 1) CSF: positive Gram stain.
- 2) Positive PCR: *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*, *E. coli O157:H7*, *Vibrio*, *Rotavirus*, *Shigatoxin* (inpatient only).
- 3) Positive *Malaria/Babesia/Ehrlichia* blood film

#### **BLOOD BANK**

DAT positive results

Critical Situations as defined in Immunohematology Policy (Critical alerts in Blood Bank)

#### **CHEMISTRY**

Acetaminophen		>150 µg/mL
Ammonia		>100 µmol/L
Glucose	<=50	>=400 mg/dL
Sodium	<=120	>=160 mmol/L
Potassium	<=2.5	>=6.0 mmol/L
Calcium	<=6.5	>=13.0 mg/dL
Creatinine delta		>=1.50mg/dL for all patients with a baseline creatinine of <= 1.50 mg/dL >=3.00 mg/dL for all patients with a baseline creatinine of 1.50-5.00 mg/dL.
Phosphorus	<=1.2 mg/dL	
Magnesium	<=1.0	>=5.0 mg/dL
CO <sub>2</sub>	<=12	>=45 mmol/L
Bilirubin, Total (< 1 year)		>=10.0mg/dL
Bilirubin, Total (1-17 years)		>=15.0mg/dL
Iron (< 1 year)		>=180 µg/dL
Carbamazepine		>=15.0 µg/mL
Digoxin		>=3.0 ng/mL

Ethanol	$\geq 400$ mg/dL
Gentamicin, Trough	$> 2.0$ $\mu\text{g/mL}$
Gentamicin, Peak	$> 12.0$ $\mu\text{g/mL}$
Lactic acid	$\geq 4.0$ mmol/L
Lithium	$\geq 2.00$ mmol/L
Phenobarbital	$\geq 45.0$ $\mu\text{g/mL}$
Phenytoin	$\geq 30.0$ $\mu\text{g/mL}$
Salicylate	$> 30.0$ mg/dL
High Sensitivity Troponin T	$\geq 100$ ng/L (once daily per patient)
Valproic Acid	$\geq 200.0$ $\mu\text{g/mL}$
Vancomycin, Random	$\geq 60.0$ $\mu\text{g/mL}$
Vancomycin, Trough	$\geq 20.0$ $\mu\text{g/mL}$

**\*\*BLOOD GASES**

pH	$< 7.20$	$> 7.60$
PCO <sub>2</sub>	$< 20$	$> 70$ mmHg
PO <sub>2</sub>	$< 55$ mmHg (arterial samples)	
Glucose	$\leq 50$	$\geq 400$ mg/dL
Sodium	$\leq 120$	$\geq 160$ mmol/L
Potassium	$\leq 2.5$	$\geq 6.0$ mmol/L
MetHb		$> 5.0$ %
COHb		$> 15$ %
Ionized Calcium	$< 3.3$	$> 6.2$ mg/dL

\*\* Repeat phone calls are not necessary for blood gases, except for the operating room, and when values return to normal and are now critical again.

**Urine (Newborns only)**

Reducing substances	Trace positive or more
Glucose	1/20 or greater
Ketones	1+ or more

<b>SURGICAL PATHOLOGY</b>	
Frozen section results	
Fat on endoscopic biopsy or endometrial curettage	Positive
Uterine contents without villi or trophoblast	Positive
Mesothelial cells in a heart biopsy	Positive

### **Pathology**

Crescents in >50% of glomeruli in a kidney biopsy

Unexpected finding of Leukocytoclastic vasculitis

Transplant rejection

Malignancy in superior vena cava syndrome

Neoplasms causing paralysis

Significant disagreement between frozen section and final diagnosis, or in clinical and pathologic diagnosis

Unexpected malignancy on pathology

Unexpected or discrepant findings

Significant disagreement between immediate interpretation and final FNA diagnosis

Significant disagreement between primary pathologist and outside pathologist consultation

Herpes in Pap smears of near-term pregnant patients

Invasive organism in unexpected clinical site, clinically significant site, or immunocompromised patients (e.g. bacteria in heart valve or bone marrow)

Pneumocystis, fungi or viral cytopathic changes in BAL. or brush cytology specimens

Unexpected findings of Toxic Epidermal necrolysis, erythema multiforme, or Stevens-Johnson syndrome

Pathologic diagnosis with immediate implications for clinical management.

**Hematology critical values at Bridgeport Hospital & Milford Campus Bridgeport Hospital:**

Test	Population	Critical Type	Critical
ANC	ED and Outpatient (Excluding Smilow)	Low	$\leq 0.5$ - Call every occurrence
WBC	All (cancel call and comment for known lymphoproliferative disease)	High	$> 50.0$
HGB	15 days - 199 years	High	$> 20.0$
	0 - 14 days	High	$\geq 22.0$
	15 days - 199 years	Low	$< 6.5$
	0 - 14 days	Low	$< 8.9$
	All	Delta	$< 6.5$ and decrease $\geq 1.5$ - Call every occurrence
PLT	15 days - 199 years	High	$\geq 1000$
	0 - 14 days	High	$\geq 800$
	15 days - 199 years (Non Smilow)	Low	$\leq 30$
	0 - 14 days	Low	$\leq 50$
	Smilow	Low	$\leq 10$
	L&D	Low	$\leq 100$
	All	Delta	10 – 40 and 50% Decrease – Call every occurrence
Band %	All	High	$> 40$
Parasite	All	High	Present - Call first occurrence of stay
Bacteria/Yeast	All	High	Present - Call every occurrence
<b>Body Fluids</b>			
Fluid ANC- BH only	Peritoneal and Ascites only	High	$> 250$

Bacteria/ Yeast	All	High	Present-Call every occurrence
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**BH & MCBH Coagulation: call each occurrence:**

PTT  $\geq 120$  seconds/ “no clot”

INR  $\geq 5$

Fibrinogen  $< 100$  mg/dL

**Unless noted in the table above Hematology critical will be called first occurrence then every 5 days afterwards.**

**B. Other Significant Data**

**a. Blasts Present**

- i. First time finding will be escalated to the pathologist for review. The Pathologist will communicate findings with the care team.

**Critical Values at the Milford Campus:**

<b>CHEMISTRY</b>	<b>LOW</b>	<b>HIGH</b>
Ammonia		$> 100 \mu\text{mol/L}$
Sodium	$< 120 \text{ mmol/L}$	$> 160 \text{ mmol/L}$
Potassium	$< 2.5 \text{ mmol/L}$	$> 6.5 \text{ mmol/L}$
Total CO <sub>2</sub>	$< 10 \text{ mmol/L}$	$> 40 \text{ mmol/L}$
Chloride	$< 80 \text{ mmol/L}$	$> 115 \text{ mmol/L}$
Creatinine delta		$\geq 1.50 \text{ mg/dL}$ for all patients with a baseline creatinine of $\leq 1.50 \text{ mg/dL}$ $\geq 3.00 \text{ mg/dL}$ for all patients with a baseline creatinine of $1.50\text{-}5.00 \text{ mg/dL}$ .
Ethanol		$\geq 400 \text{ mg/dL}$
Glucose	$\leq 50 \text{ mg/dL}$	$\geq 400 \text{ mg/dL}$
Calcium	$< 6.9 \text{ mg/dL}$	$\geq 12.1 \text{ mg/dL}$
Phosphorus	$< 1.0 \text{ mg/dL}$	$> 10 \text{ mg/dL}$
Magnesium	$< 1.0 \text{ mg/dL}$	$> 4.1 \text{ mg/dL}$
Total Bilirubin (0-1 month)		$> 19 \text{ mg/dL}$
Acetaminophen		$> 150 \mu\text{g/mL}$

Gentamicin, Trough	>2.0 µg/mL
Gentamicin, Peak or Random	>12.0 µg/mL
High Sensitivity Troponin T	>=100 ng/L (once daily)
Vancomycin, Random	>=60.0 µg/mL
Vancomycin, Trough	>=20.0 µg/mL

### **BLOOD BANK**

Any undue delay in the blood bank under the following circumstances:

- 1) Before surgery
- 2) Inability to crossmatch
- 3) Inability to procure blood

### **BLOOD GASES**

pH	<7.20	>7.60	
PCO <sub>2</sub>	<20	>70	mmHg
PO <sub>2</sub>	<55 mmHg (arterial samples)		
MetHb	>5.0%		
COHb	>15%		
Ionized Calcium	<3.3	>6.2	mg/dL
Lactic Acid	≥ 4.0		Mmol/L

### **ANATOMIC PATHOLOGY**

Pathology “criticals” will be called immediately to the submitting or attending physician by the pathologist.

- 1) The discovery of any unexpected malignancy or other life-altering pathology

### **REFERRED TESTING**

- 1) Any positive HIV antibody