



**Danbury Hospital**  
 Department of Pathology & Laboratory Medicine  
***Technically Speaking***

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### REVIEW OF LABORATORY CRITICAL/ALERT VALUES

The following is a list of DANBURY HOSPITAL LABORATORY'S CRITICAL/ALERT VALUES, which will initiate a direct call to our clients. To reduce errors with verbal reporting & in compliance with various regulatory agencies the laboratory is required to

- Verify the identity of the person accepting the results
- Provide two patient identifiers (patient's full name and medical record number or date of birth)
- Request the individual taking the call to confirm accuracy of the information by requesting that the information be repeated back (readback)

The list will be updated periodically to include additions or changes in current values. Critical values are called to inpatient nursing units, physician offices and extended care facilities unless otherwise indicated.

#### CRITICAL/ALERT VALUES

TEST	LOW	HIGH	UNITS
Acetaminophen		>150 (4h post ingestion)	mg/L
Ammonia		>100 (pediatric only)	µmol/L
APTT		>40 >100.0 if on anticoagulant	Seconds
Bilirubin (neonatal only)		>15.0	mg/dL
<b>Blood Gases:</b>			
pH	<7.20	>7.60	
PCO <sub>2</sub>	<20	>65	mmHg
PO <sub>2</sub>	<40	>150 (neonatal only)	mmHg
Calcium, Ionized	<0.80	>1.60	mmol/L
Calcium, Total	<7.0	>13.0	mg/dL
Carbamazepine		>15.0	mg/L
Carboxyhemoglobin		>20	%
Cyclosporine		>400	ng/mL
D-Dimer		>494	ng/mL
Digoxin		>3.0	ng/mL
Direct Antiglobulin Test (DAT), Cord Blood	Positive Results		
<b>Electrolytes:</b>			
Sodium	<120	>160	mmol/L
Potassium	<2.5	>6.0	mmol/L
Chloride	<75	>125	mmol/L
CO <sub>2</sub>	<10	>40	mmol/L

Critical Alert Values (cont.)

TEST	LOW	HIGH	UNITS
Ethanol (EtOH)		>400	mg/dL
Factors (Coagulation) Assay	<2.5		%
Fibrinogen	≤100		mg/dL
Gentamicin		>2.0 (trough)	mg/L
		>12.0 (peak)	mg/L
Glucose, serum	<45	>500	mg/dL
	<35 (newborn)	>350 (newborn)	
Glucose, CSF	<40	>400	mg/dL
Hemoglobin	<8.0		g/dL
Hbcore Ab	Positive IgM Results		
HbsAg	Positive Results		
Hep A Ab	Positive IgM Results		
Hep C	Positive Results		
HIV Ab	Positive Results to ordering MD		
Lactate (except pulmonary lab)		>3.5	mmol/L
Lead, Whole Blood		≥45	μg/dL
Lithium		>1.5	mmol/L
Magnesium	<1.0	>5.0	mg/dL
Malaria/Babesia/Ehrlichia	Positive Results		
Neutrophils	<500		Absolute Count
Osmolality, serum	<250	>325	mOsm/kg
Phenobarbital		>50.0	mg/L
Phenytoin		>30.0	mg/L
Phosphorus	<1.0		mg/dL
Platelet Count	<50,000 all	>1,000,000 if new finding	/mm <sup>3</sup>
INR/Prothrombin	>5.5		
<u>RPR</u>	Positive Results		
<u>Salicylate</u>		>30	mg/dL
Theophylline		>25.0	mg/L
Valproic Acid		>200	mg/L

### Critical Alert Values (cont).

TEST	LOW	HIGH	UNITS
Vancomycin		>40 (trough)	mg/L
WBC Diff	<1,500	>25,000  >15 immature cells – new finding (bands, metas, myelos, promyelos, atypical lymphs)  Any blasts or <REVIEW> smear.	/mm <sup>3</sup>

### **ANATOMIC PATHOLOGY**

1. Intraoperative consultation and frozen section results are called to the physician (TAT standard 20 minutes from specimen arrival to Histology Lab).
2. Critical microscopic results (such as new diagnosis of malignancy, opportunistic infection in immuno-compromised host, temporal arteritis) are called to the patient's ordering physician. Biopsies ordered as STAT have a standard verbal result TAT of less than 24 hours. Other critical biopsy results (not ordered by physician as a STAT test) will be called to clinician as soon as diagnosis is made by the pathologist (24-48 hours).
3. Preliminary autopsy results are called to a physician within 24 hours of autopsy completion.

Note: If the patient's primary physician is unavailable to receive the above verbal critical results at the time the telephone call is made by the pathologist, verbal results may be given either to a covering physician or the primary physician's office nurse/P.A. (with documented verbal readback of result).

### **BLOOD BANK**

1. "Positive" transfusion reaction work-ups.
2. When a blood component is not available to meet a specific demand.
3. When availability of blood will be delayed due to red cell antibody(s) in STAT request.

### **CYTOGENETICS**

1. Results of all prenatal cytogenetics testing are called/faxed to the physician's office. Abnormal results are given directly to the physician or designee.

### **CYTOLOGY**

1. GYN cases with results diagnosed as high grade squamous intraepithelial lesion or malignant are called directly to the physician or nurse/office manager.
2. Non-GYN cases with results diagnosed as malignant are called directly to the physician or the nurse/office manager.

### **NUCLEAR MEDICINE**

1. All potentially significant abnormal results are called to a physician.

## **MICROBIOLOGY**

1. Inpatient positive blood and CSF cultures are called to the attending physician or to a resident if the patient is on a teaching floor. If outpatient, results are called to ordering physician. If ED patient that was not admitted, results are called to a PA in the ED.
2. MRSA, VRE and penicillin resistant Pneumococci are called to the nursing unit and Infection Control. Isolates from Nursing Homes are called to the patient's nurse.
3. Positive AFB smears are called to the attending physician, Infectious Disease Department, Infection Control practitioner and the Public Health Department.
4. Any possible agent of bioterrorism is to be called to Infectious Disease physician, attending physician, infection control and CT state stat hot line.
5. Cultures and rapid strep-positive results (Group A beta Strep) received from OP locations.
6. Positive Shiga toxin, E coli 0157
7. Positive Genprobes – all positive probes for N. gonorrhoeae and/or Chlamydia
8. Positive C. Difficile, positive legionella antigen (Called to inpatients and nursing home locations.)
9. Positive RSV, Influenza A or B.

## **OTHER ROUTINELY CALLED TEST RESULTS**

1. All critical alert values on tests sent to reference laboratories.
2. All SUDS, whether they are positive or negative.
3. STAT Tests
4. If requested

Critical values last reviewed: April 2007

**Approved by Executive Committee:** April 2000, 2001,2002, 2003, 2004, 2005, 2007

**Replaces:** October, 1995 Procedure