

IUHPL Critical Values

1. **Critical values, also known as alert or panic values, are laboratory results that indicate a possible life-threatening situation for the patient.**
 - Because of their critical nature, critical values require urgent notification of the appropriate healthcare professional.
 - The critical values in use are based on national published standards and have been approved by the medical directors of the laboratories in consultation with the medical executive committee of the Indiana University Health hospitals.
2. **The Laboratory's Responsibility:**
 - When a critical value has been obtained (and verified as critical) the laboratory will notify the requesting physician or the physician's office immediately. The caller will identify the result as a critical result.
 - When the clinic or office is closed the laboratory will attempt to contact the physician or the person designated as being on-call for that physician.
 - *The laboratory will make all reasonable attempts to contact the patient's physician or another member of the patient's healthcare delivery team.*
3. **The requesting physician's responsibility:**
 - *Provide the laboratory with a current means to contact him/her in an emergency.*
4. **The laboratory will maintain documentation of the notification process:**
 - *Date and time that the notification occurred.*
 - *Name of the individual that was contacted.*
 - *Read back verification of the critical value*

If all reasonable attempts to contact the patient's physician and healthcare delivery team are unsuccessful, the laboratory will keep a record of all attempts that were made to contact the physician.

Critical Values List

Anatomic Pathology

Test Name	Critical/Alert Value
Herpes on PAP	Positive in Pregnancy

Blood Bank/Transfusion Services

Test Name	Critical/Alert Value
Direct Coombs	Positive
Indirect Coombs	Positive
Crossmatch	Incompatible

Hematopathology

Test Name	Critical/Alert Value	
APTT	< 18 seconds and >125 seconds	
INR	>5.0	
Fibrinogen	< 70 mg/dL	
Hemoglobin	All Ages	< 6.0 G/dL
	>90 days old	> 20 G/dL
Hematocrit	All Ages	< 18%
	>90 days old	> 60%
White Blood Cell Count	Non Hem/ONC	< 2,000/mm ³ and > 30,000/mm ³
	Hem/ONC	<1,000/mm ³ and >100,000/mm ³
Platelet Count	Non Hem/ONC	≤ 20,000/mm ³ and ≥ 1,000,000/mm ³
	Hem/ONC	≤ 10,000/mm ³ and ≥ 1,000,000/mm ³

Microbiology & Serology

Test Name	Critical/Alert Value
AFB smear/culture	Positive
Blastomycoses Cultures	Positive
Blood Cultures	Positive
Blood & Tissue Parasites	Positive
Coccidioides Cultures	Positive
Dialysate Cultures	Positive
Herpes (Brain)	Positive
Histoplasmosis capsulatum Cultures	Positive
Joint/Sterile Fluid, Stain/Culture	Positive (source dependent) Positive (CSF)
N. Meningitidis	Positive (sterile body sites)
Pseudomonas (Eye)	Positive
Spinal Fluids (culture/gram stain)	Positive

Chemistry & Point of Care

Test Name	Critical/Alert Value
Acetaminophen (µg/mL)	>200
Amikacin - Peak (µg/mL)	>35
Amikacin - Trough (µg/mL)	>10
Bilirubin, neonates (mg/dL)	>15
Caffeine (µg/mL)	>50
Calcium (mg/dL)	<6 or >13
Carbamazepine (µg/mL)	>15
CO ₂ (mmol/L)	<10 or >40
Digoxin (ng/mL)	>2.5
Ethanol (mg/dL)	>300
Ethylene Glycol (mg/dL)	≥10
Gentamicin - Peak (µg/mL)	>20
Gentamicin - Trough (µg/mL)	>4
Glucose (>1 month) (mg/dL)	<50 or >500
Glucose (<1 month) (mg/dL)	<30 or >300
Ionized Calcium	<0.9 or >1.5 (mmol/L)
Lidocaine (µg/mL)	>6
Lithium (mmol/L)	>2.0
Magnesium (mg/dL)	<1 or >4
Methanol (mg/dL)	≥10
Osmolality (mOsmol/kg)	<250 or >325
Pentobarbital (µg/mL)	>40
pH	<7.2 or >7.6
pCO ₂ (mmHg)	<20 or >60
pO ₂ , Arterial (mmHg)	<40
Phenobarbital (µg/mL)	>50
Phenytoin (µg/mL)	>20
Phosphorus (mg/dL)	<1 or >9
Potassium, Adults (mmol/L)	<3 or >6
Procainamide (µg/mL)	>10
Procainamide + NAPA (µg/mL)	>40
Quinidine (µg/mL)	>6
Salicylate	>30 mg/dL
Secobarbital (ug/mL)	>5
Secobarbital, coma (µg/mL)	>40
Sodium (mmol/L)	<120 or >160
Theophylline (µg/mL)	>20
Tobramycin - Peak & Random(µg/mL)	>20
Tobramycin - Trough (µg/mL)	>4
Valproic Acid (µg/mL)	>100
Vancomycin - Peak (µg/mL)	>80
Vancomycin - Trough (µg/mL)	>25

Critical Values: Other (includes Reportables to the State (ISDH, Cancer Registry))

Crescents in kidney biopsy specimens
Fat in endometrial curettage
Significant disagreement between the frozen section and final diagnosis
Unexpected diagnosis of malignancy (as determined by clinical information provided)
Acute cellular rejection in a renal transplant biopsy specimen
Significant discrepancy between outside diagnosis and the review diagnosis on outside cases being reviewed for patients referred for treatment at Indiana University Health
Any tissue or FNA diagnosis in clinically critical cases (e.g. superior vena cava syndrome, spinal cord compress)
New melanoma diagnosis on biopsy
New diagnosis of cutaneous malignancies with a high potential for metastasize (e.g. Merkel cell carcinoma)
Significant discrepancy between excision and original biopsy diagnosis
Calciophylaxis
New diagnosis of syphilis
Any diagnosis of acute leukemia
Myeloid malignancies in transformation to acute leukemia
Any diagnosis of hematologic malignancy in children
Unexpected malignancies diagnosed by FNA rapid assessment diagnosis and the final diagnosis
Significant discrepancy between the FNA rapid assessment diagnosis and the final diagnosis
Identification of fungi in a CSF specimen