

LSA Critical Results Notification

Appendix 2: LSA Hospital Critical Value List

**If no specific age is written, value refers to all age ranges.*

TEST	UNIT	SEX	AGE RANGE	LOW LIMIT	HIGH LIMIT	COMMENTS
HEMATOLOGY						
Hemoglobin	g/dL	M/F	*	< 6.1	none	
Hematocrit	%	M/F	*	< 18.1	none	
Microscopic Examination		M/F	*	Presence of bacteria, fungus, or parasite.		
Platelet Count	K/mm ³	M/F	*	< 31	> 1000	
Platelet Count (BUMC North & Orange Grove Cancer Centers)	K/mm ³	M/F	*	< 21	none	Unless documented exemption
Absolute Neutrophil Count (ANC) – Peritoneal Fluid	K/mm ³	M/F	*	none	> 250	Peritoneal Fluid
COAGULATION						
aPTT	sec	M/F	*	none	> 100.0	
Fibrinogen	mg/dL	M/F	*	< 51	None	
Fibrinogen (WYMC Only)	mg/dL	M/F	*	< 100	None	
Heparin Assay (unfrac) by Anti-Xa	U/mL	M/F	*	none	> 1.2	
LMW Heparin by Anti-Xa	U/mL	M/F	*	none	> 1.5	
International Normalized Ratio (INR)		M/F	*	none	> 5.0	
CHEMISTRY						
Ammonia	μmol/L	M/F	0 - 1 M	none	> 150	
Bilirubin, Total (Neonatal)	mg/dL	M/F	0 - 31 D	none	> 15.0	
Calcium	mg/dL	M/F	*	< 6.6	> 12.9	
Calcium, Ionized	mg/dL	M/F	*	< 3.3	> 6.0	
Carboxyhemoglobin, blood	%	M/F	*	None	> 20.0	
CO2	mmol/L	M/F	*	< 11	> 40	
Glucose	mg/dL	M/F	0 - 31 D	< 40	> 300	
	mg/dL	M/F	31 D - 150 Y	< 50	> 500	
Glucose, CSF	mg/dL	M/F	*	< 30	None	
Magnesium	mg/dL	M/F	*	< 1.0	> 4.9	
Magnesium, OB	mg/dL	M/F	*	< 1.0	> 9.5	
Phosphorus	mg/dL	M/F	*	< 1.1	None	
Potassium (WYMC, BLMC)	mmol/L	M/F	0 - 31 D	< 3.0	> 7.0	
	mmol/L	M/F	31 D - 150 Y	< 3.0	> 6.0	
Potassium	mmol/L	M/F	0 - 31 D	< 3.0	> 7.0	
	mmol/L	M/F	31 D - 7 M	< 3.0	> 6.0	
	mmol/L	M/F	7 M - 1Y	< 3.0	> 6.1	
	mmol/L	M/F	1Y-150 Y	< 3.0	> 6.0	
Sodium	mmol/L	M/F	0 - 64 Y	< 121	> 159	
	mmol/L	M/F	64 - 150 Y	< 126	> 154	

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TEST	UNIT	SEX	AGE RANGE	LOW LIMIT	HIGH LIMIT	COMMENTS
TOXICOLOGY						
Acetaminophen	µg/mL	M/F	*	n/a	> 50	
Acetone	mg/dL	M/F	*	n/a	> 19	
Alcohol, Ethyl Blood	mg/dL	M/F	*	n/a	> 299	
Amikacin, Peak	µg/mL	M/F	*	n/a	> 35	
Amikacin, Trough	µg/mL	M/F	*	n/a	> 10	
Amikacin, Random	µg/mL	M/F	*	n/a	> 35	
Carbamazepine	µg/mL	M/F	*	n/a	> 15.0	
Cyclosporin (BMT)	ng/mL	M/F	*	n/a	> 400	
Digoxin	ng/mL	M/F	*	n/a	> 2.4	
Digoxin, Free	ng/mL	M/F	*	n/a	> 2.2	
Dilantin (Phenytoin)	µg/mL	M/F	*	n/a	> 30.0	
Ethanol, quantitative	mg/dL	M/F	*	n/a	> 299	
Ethylene Glycol	mg/dL	M/F	*	n/a	> 10	
Gentamicin, Peak	µg/mL	M/F	*	n/a	> 12.0	
Gentamicin, Trough	µg/mL	M/F	*	n/a	> 2.0	
Gentamicin, Random	µg/mL	M/F	*	n/a	> 12.0	
Isopropanol	mg/dL	M/F	*	n/a	> 24	
Lithium	mmol/L	M/F	*	n/a	> 1.5	
Methanol	mg/dL	M/F	*	n/a	> 19	
Pentobarbital	µg/mL	M/F	*	n/a	> 10.0	
Phenobarbital	µg/mL	M/F	*	n/a	> 59.9	
Phenytoin (Dilantin)	µg/mL	M/F	*	n/a	> 30.0	
Phenytoin, Free (Dilantin, Free)	µg/mL	M/F	*	n/a	> 3.0	
Propylene Glycol	mg/dL	M/F	*	n/a	> 99	
Salicylates	mg/dL	M/F	*	n/a	> 39.9	
Tacrolimus	ng/mL	M/F	*	n/a	> 20.0	
Theophylline	µg/mL	M/F	0 - 3M	n/a	> 15.0	
	µg/mL	M/F	3M - 150 Y	n/a	> 20.0	
Tobramycin, Peak	µg/mL	M/F	*	n/a	> 12.0	
Tobramycin, Trough	µg/mL	M/F	*	n/a	> 2.0	
Tobramycin, Random	µg/mL	M/F	*	n/a	> 12.0	
Valproic Acid	µg/mL	M/F	*	n/a	> 149	
Vancomycin, Peak	µg/mL	M/F	*	n/a	> 60.0	
Vancomycin, Peak (WYMC Only)	µg/mL	M/F	*	n/a	> 40.0	
Vancomycin, Trough	µg/mL	M/F	*	n/a	> 30.0	
Vancomycin, Trough (WYMC Only)	µg/mL	M/F	*	n/a	> 20.0	
Vancomycin, Random	µg/mL	M/F	*	n/a	> 60.0	

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TEST		UNIT	SEX	AGE RANGE	LOW LIMIT	HIGH LIMIT	COMMENTS
Blood Gas (if site appropriate)							
pH	Arterial	none	M/F	*	≤ 7.3	≥ 7.6	
	Venous	none	M/F	*	≤7.2	≥ 7.55	
	Capillary	none	M/F	*	≤7.2	≥ 7.6	
	Cord Arterial	none	M/F	*	≤7.0	--	
	Cord Venous	none	M/F	*	≤7.0	--	
pCO2	Arterial	mmHg	M/F	*	≤ 25	≥ 60	
	Venous	mmHg	M/F	*	--	≥ 65	
	Capillary	mmHg	M/F	*	--	≥ 60	
pO2	Arterial	mmHg	M/F	*	≤ 50	--	
	Venous	mmHg	M/F	*	--	--	
	Capillary	mmHg	M/F	0-3 Days	--	--	
				3 Days - 150 Years	≤ 40	--	
COHb	Arterial	%	M/F	*	--	≥ 10	
	Venous	%	M/F	*	--	≥ 10	
	Capillary	%	M/F	*	--	≥ 10	
MetHb	Arterial	%	M/F	*	--	≥ 10	
	Venous	%	M/F	*	--	≥ 10	
	Capillary	%	M/F	*	--	≥ 10	
TCO2	Arterial	mmol/L	M/F	*	≤ 11	≥ 40	
	Venous	mmol/L	M/F	*	--	--	
	Capillary	mmol/L	M/F	*	--	--	
Ca++	Arterial	mmol/L	M/F	*	≤ 3.3	≥ 6	
	Venous	mmol/L	M/F	*	≤ 3.3	≥ 6	
	Capillary	mmol/L	M/F	*	≤ 3.3	≥6	
TEST		UNIT	SEX		AGE	COMMENTS	
MICROBIOLOGY							
AFB Smear		N/A	M/F		*	Positive	
AFB Identified as <i>Mycobacterium tuberculosis</i>		N/A	M/F		*	Positive	
Blood culture Initial Gram Stain		N/A	M/F		*	Positive	
Cytomegalovirus CMV (qualitative PCR)		N/A	M/F		≤ 1M	Positive	
RPR		N/A	M/F		< 1M	Reactive	
Spinal Fluid Direct stain or Culture		N/A	M/F		*	Positive	

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TEST	UNIT	SEX	AGE	COMMENTS
Spinal Fluid – PCR testing	N/A	M/F	*	Positive – Herpes Simplex Virus (HSV) Positive – Varicella Zoster Virus (VZV)
Malaria Rapid Antigen	N/A	M/F	*	Positive
Clostridium species (Stain or Culture)	N/A	M/F	*	If isolated from ANY SOURCE or direct Gram stain showing GPR staining typical of Clostridium species
Culture (ANY STERILE SOURCE)	N/A	M/F	*	Positive – <i>Neisseria meningitidis</i>
Direct Gram Stain or Culture (ANY SOURCE) suspect for bioterrorism agent	N/A	M/F	*	<u>Any organism listed on the Bioterrorism list</u>
Culture Results on: (Inpatients) All sources non-throat (Outpatient, ED) Deep seated wounds, bloods, CSF, other normally sterile sites	N/A	M/F	*	Positive for Group A, <i>Streptococcus pyogenes</i>
Gram Stain Direct specimen or Culture Isolate on: Wounds, bloods, spinal fluid, and other normally sterile sites	N/A	M/F	*	Gram negative diplococci (GNDC)
Culture Susceptibility Result	N/A	M/F	*	VISA (Vancomycin intermediate <i>Staph.aureus</i>) VRSA (Vancomycin resistant <i>Staph.aureus</i>) <i>M.tuberculosis</i> if any resistance is encountered from susceptibility or molecular testing
Culture	N/A	M/F	*	Positive for: <u>VRSA (Vancomycin-resistant <i>Staphylococcus aureus</i>)</u> <u>VISA (Vancomycin intermediate <i>Staphylococcus aureus</i>)</u> <u><i>Bacillus anthracis</i></u> <u><i>Yersinia pestis</i></u> <u><i>Francisella tularensis</i></u> <u><i>Brucellosis- causing Brucella spp., not Brucella spp. previously classified as Ochrobactrum spp.</i></u> <u><i>Clostridium botulinum</i></u> <u>Any organism on the Bioterrorism Listing</u>

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Appendix 3: LSA Courtesy Notification for Highly Elevated or Decreased Results

Cerner Definitions: **RCT** = “results called to” **CTP** = “called to provider”

If the result is...	And...	Then ...
ALT & AST – Delta		
>300% increase		1. Call caregiver to report value. 2. Document the call by adding a Result Comment in middleware or Cerner. Type in Results called to (<i>Cerner ID, Lawson #, or first and last name</i>) at (<i>time/date and Tech Cerner ID or Lawson #</i>).
Lactic Acid		
≥ 4.0 mmol/L	First positive for current patient encounter	1. Call Caregiver to report value. 2. Document the call adding a Result Comment in Cerner using the coded comment FLA. The first positive LA was reported to (<i>Cerner ID, Lawson # or first and last name</i>) by (<i>Tech Cerner ID or Lawson #</i>).
≥4.0 mmol/L for current patient encounter	Previous positive result was called to Caregiver	1. Release results.
Troponin T, High Sensitivity (Roche)		
≥100 ng/L	First positive for current patient encounter.	1. Call Caregiver to report value. 2. Document the call adding a Result Comment in Cerner using the coded comment FTROP. The first positive Troponin was reported to (<i>Cerner ID, Lawson # or first and last name</i>) by (<i>Tech Cerner ID or Lawson #</i>)
≥100 ng/L	Previous positive result was called to Caregiver.	1. Release results.
Troponin I (Ortho, Siemens)		
≥0.5 units	First positive for current patient encounter	1. Call Caregiver to report value. 2. Document the call adding a Result Comment in Cerner using the coded comment FTNI. The first positive Troponin I was reported to (<i>Cerner ID, Lawson # or first and last name</i>) by (<i>Tech Cerner ID or Lawson #</i>)
≥0.5 units	Previous positive result was called to Caregiver	1. Release results.

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Ultra Troponin (WYMC Ortho)		
>0.119 ng/mL (0.120)	First positive for current patient encounter	1. Call Caregiver to report value. 2. Document the call adding a Result Comment in Cerner using the coded comment FTROP. The first positive Troponin was reported to <i>(Cerner ID, Lawson # or first and last name)</i> by <i>(Tech Cerner ID or Lawson #)</i>
>0.119 ng/mL (0.120)	Previous positive result was called to Caregiver	1. Release results.
WBC – North and Orange Grove Cancer Centers		
<1.5 K/MM ³		1. Call Caregiver to report value. 2. Document the call by adding a Result Comment in middleware using code CTP.
WBC - Western Division		
<1.0 K/MM ³		1. Call Caregiver to report value. 2. Document the call by adding a Result Comment in Cerner using code RCT. Results called to <i>(Cerner ID, Lawson #, or first and last name)</i> at <i>(time/date)</i>.
>50.0 K/MM ³		1. Call Caregiver to report value. 2. Document the call by adding a Result Comment in Cerner using code RCT. Results called to <i>(Cerner ID, Lawson # or first and last name)</i> at <i>(time/date)</i>.
Platte County Hospital		
HGB g/dL	<7.0	1. Call Caregiver to report value. 2. Document the call in Caresphere with a test level comment. Results called to <i>(Cerner ID, Lawson #, or first and last name)</i> at <i>(time/date)</i>.
HCT %	<21.0	1. Call Caregiver to report value. 2. Document the call in Caresphere with a test level comment. Results called to <i>(Cerner ID, Lawson #, or first and last name)</i> at <i>(time/date)</i>.
PLT K/MM ³	<35.0 (PCH)	1. Call Caregiver to report value. 2. Document the call in Caresphere with a test level comment. Results called to <i>(Cerner ID, Lawson #, or first and last name)</i> at <i>(time/date)</i>.
Wyoming Medical Center – Central and East		
HGB g/dL	<7.0	1. Call Caregiver to report value. 2. Document the call in Caresphere with a test level comment. Results called to <i>(Cerner ID, Lawson #, or first and last name)</i> at <i>(time/date)</i>.