

DOWNTIME PROCEDURE
Department of Clinical Laboratories
The Ohio State University Wexner Medical Center

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Document Author:	Document Owner:	Acknowledgement / Required Copy Holders*:
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Approval*:	
Laboratory Administration Division Director	Laboratory Medical Directors
University Hospitals Laboratory Medical Director, East Hospital Laboratory Medical Director, Morehouse Laboratory Medical Director, Spielman Laboratory Medical Director, Outpatient Care East Laboratory Medical Director, Outpatient Care Lewis Center Laboratory Medical Director, Outpatient Care Gahanna Laboratory Medical Director, Stoneridge II Laboratory Medical Director, Upper Arlington Medical Director, James Molecular Laboratory Medical Director, Ackerman Laboratory Medical Director Histology LLC Medical Directors at Doan, East, Morehouse and Chambers Road	University Hospitals Laboratory Medical Director, East Hospital Laboratory Medical Director, Morehouse Laboratory Medical Director, Spielman Laboratory Medical Director, Outpatient Care East Laboratory Medical Director, Outpatient Care Lewis Center Laboratory Medical Director, Outpatient Care Gahanna Laboratory Medical Director, Stoneridge II Laboratory Medical Director, Upper Arlington Medical Director, James Molecular Laboratory Medical Director, Ackerman Laboratory Medical Director Histology LLC Medical Directors at Doan, East, Morehouse and Chambers Road

Approval and Acknowledgements
Refer to QPulse system and Document Details report for laboratory directors(s)' electronic signature approval, employee acknowledgment and effective date.

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1. POLICY

- 1.1. General instructions for laboratory personnel during a scheduled or unscheduled LIS downtime.

2. PURPOSE OF DOCUMENT

- 2.1. To ensure reporting of patient results occurs in a prompt and efficient manner during partial or complete IHIS downtime until recovery of the system.

3. SCOPE OF DOCUMENT

- 3.1. This document applies to all personnel in any Clinical, Pathology, or URL Laboratories throughout the Ohio State University Wexner Medical Center, as well as direct support services to the laboratories (i.e. IT, Pathology Support Services, etc.).

4. RESPONSIBILITY

- 4.1. The Medical Directors of the Laboratories are responsible for establishing the Downtime Procedure.
- 4.2. Laboratory Compliance is responsible for maintaining the document and ensuring biennial review.

5. DEFINITIONS

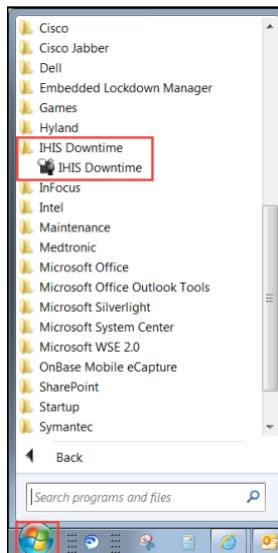
- 5.1. Unscheduled Outage: Any unplanned interruption to the availability of a major hospital system that supports critical patient care functions.
- 5.2. Scheduled Outage: Planned/maintenance outage that typically occurs the second Sunday of the month from 1:30AM-3:30AM.
- 5.3. GroupMe: Application used to notify key individuals of the status of a scheduled or unscheduled IHIS or ancillary clinical system outage.

6. PROCESS

6.1. For a scheduled downtime:

- 6.1.1. Prepare all testing areas for downtime by setting analyzers to print all results (see area specific procedure).
- 6.1.2. Locate downtime box or binder with downtime labels and extra Downtime Requisitions. Requisitions can be purchased through RR Donnelley (<https://www.rrdonnelley.com/>) by the patient care unit/department. Inpatient processing areas, ambulatory phlebotomy sites, and Laboratory Compliance keep a limited number of forms in case of emergency.
- 6.1.3. If only live (production) IHIS is down, the Downtime (shadow) version of IHIS may be available. This is read only but allows searching and reviewing patient information similar to the live environment.
 - a. To access:
 - 6.1.3.a.1. IHIS Downtime can be accessed by clicking the Start Menu > All Programs > IHIS Downtime (folder) > IHIS Downtime.

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6.1.3.a.2. Log in with your IHIS user name and password.

6.1.3.a.3. Alternatively, from the OneSource home page, click **View More**.

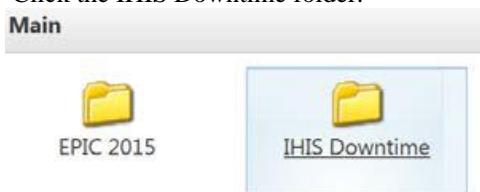


6.1.3.a.3.1. Scroll down to Citrix and click the web address link.

Citrix	Allied Medical Professions, Education, Leaders, Nursing, Physicians, Researchers, Shared Services, Auto-Login	http://access.osumc.edu
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6.1.3.a.3.2. Log in to Citrix with your IHIS username and password.

6.1.3.a.3.3. Click the IHIS Downtime folder.



6.1.3.a.3.4. Click the IHIS Downtime icon.

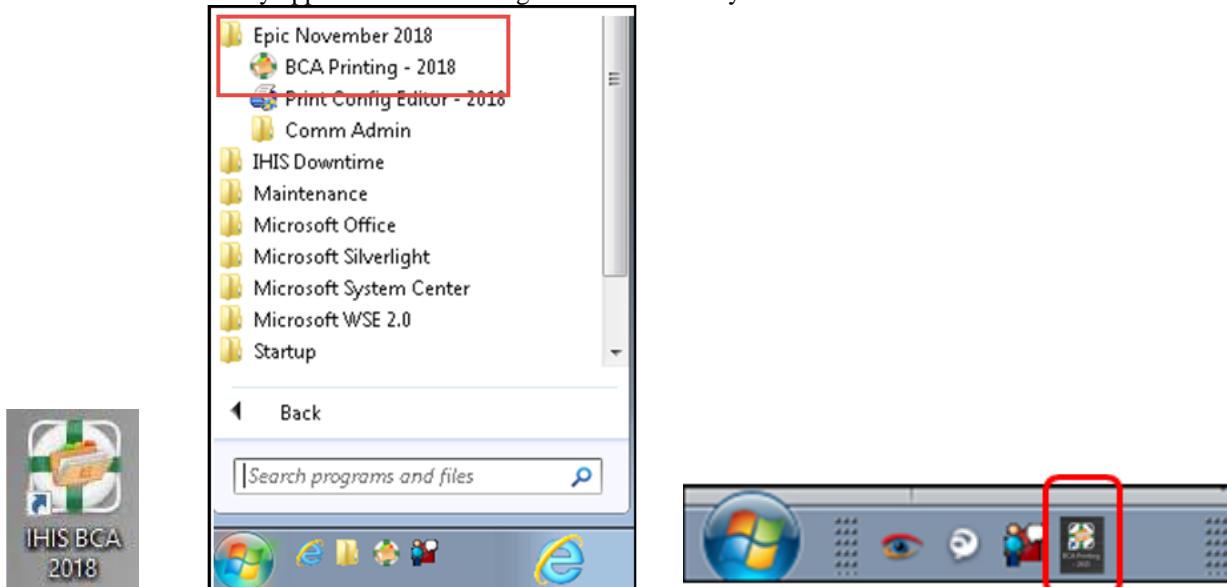
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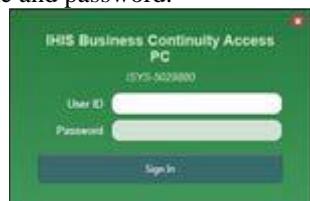
6.1.3.a.3.5. Log in with your IHIS username and password.

6.1.4. Print downtime report(s) by laboratory area (see [Accessing IHIS Downtime Tip Sheet](#)). The Business Continuity Access (BCA) computer is designated by a red keyboard.

- a. Depending on your location, the BCA Printing icon may be located on the desktop, the Start Menu or may appear as an icon along the bottom left of your screen.



- b. Click the icon to open BCA.
- c. Enter your IHIS username and password.



- d. If you are using a shared BCA PC (generally ambulatory areas), select the appropriate department(s) on the left side of the screen.

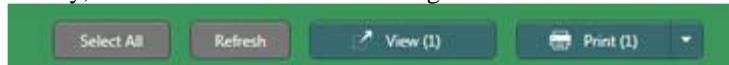
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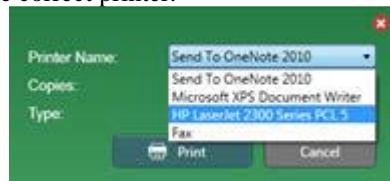
- e. You may also select a specific report type from the bottom, left side of the screen as needed.
- f. The available reports appear in the center of the screen. Reports are titled “Lab BCA (Department) Outstanding List.” If you do not see your department’s report listed, use the left side of the screen to filter and locate your laboratory’s information (seen in the image for section 6.1.4.d above).

Report Title	Date Created	Report Name
HRF BCA Outstanding Send Out tests - Detail List	April 3 4:35 AM	HRF BCA Outstanding Send Out tests
HRF BCA Outstanding tests - Detail List	April 3 4:35 AM	HRF BCA Outstanding tests
HRF BCA Outstanding tests - Detail List	April 3 5:00 AM	HRF BCA Outstanding tests
HRF BCA Comm Log - Detail List	April 3 4:35 AM	HRF BCA Comm Log

- g. Select the report(s) you want to print. (Hint: Hold the shift key to select multiple documents.)
- h. Alternatively, click the Select All button along the bottom of the screen.



- i. Click Print.
- j. If prompted, select the correct printer.



- k. Click Print.

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1. Log out when finished.

6.2. For an unscheduled downtime:

- 6.2.1. Contact the Help Desk at 614-293-HELP (4357).
- 6.2.2. Prepare all testing areas for downtime by setting analyzers to print all results (see area specific procedure).
- 6.2.3. Print downtime report(s) by laboratory area (see 6.1.4).
- 6.2.4. Timeline and actions to take (designate an employee as the communication liaison):
 - a. At 30 minutes, fax and/or tube all stat results. Begin processing routine samples.
 - b. At 45 minutes, notify the laboratory manager, administrative director, and division(s) directors.

6.3. During the downtime:

- 6.3.1. Types of specimens received during a downtime:
 - a. Specimen has an IHIS order and has been collected and received.
 - 6.3.1.a.1. Will have an uptime barcoded label. This will still need to be manually programmed on the analyzer. Results will be held until the downtime is over. Results will not be electronically transmitted until the downtime is over.
 - b. Specimen has an IHIS order and is collected only (not received).
 - 6.3.1.b.1. Will have an uptime barcoded label. This will still need to be manually programmed on the analyzer. Results will be held until the downtime is over. Results will not be electronically transmitted until the downtime is over.
 - c. Specimen has an IHIS order only (neither collected nor received).
 - 6.3.1.c.1. Requires a manual/downtime requisition and a downtime barcode label. Results will be held until the downtime is over. Results will not be electronically transmitted until the downtime is over.
 - d. Specimen does not have an IHIS order.
 - 6.3.1.d.1. Requires a manual/downtime requisition and a downtime barcode label. Results will be held until the downtime is over. Results will not be electronically transmitted until the downtime is over.

6.3.2. Processing Areas:

- a. When IHIS is down, orders already placed will be on the downtime report available via the BCA computer. Orders placed prior to the downtime will have an uptime barcode label. Orders placed at the start of the downtime and after will be sent to the laboratory with a manual/downtime requisition (found in the patient care unit/department's downtime box) and chart/bedside labels on the tubes.

6.3.2.a.1. Information required for a downtime/manual requisition:

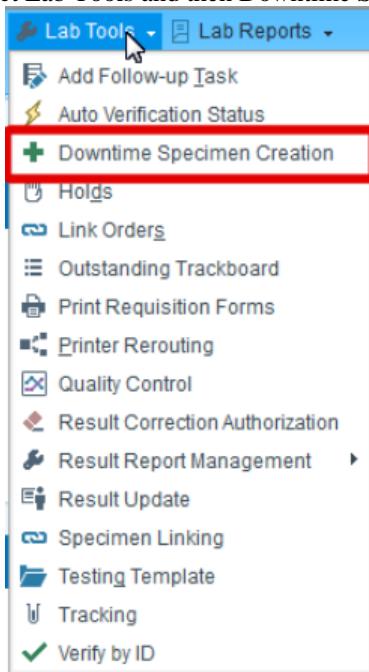
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Requisition Requirements	First and Last Name	MRN or DOB	Physician Name Printed	Physician Signature	Patient Location	Tests Requested	Call Back Phone Number	Tests Requested	ICD10 Diagnosis Codes
Inpatient	✓	✓	✓	✓	✓	✓	✓	✓	X
Outpatient	✓	✓	✓	✓	✓	✓	✓	✓	✓

b. Each laboratory is responsible for preprinting and maintaining downtime labels. 299 labels can be printed at a time. Continue to follow the below instructions until the amount necessary for your area is achieved. These are to be printed every calendar year and should be checked periodically for deterioration/loss of adhesive ability.

6.3.2.b.1. To print labels:

6.3.2.b.1.1. Select Lab Tools and then Downtime Specimen Creation.



6.3.2.b.1.2. The Laboratory field will automatically populate.

6.3.2.b.1.3. Enter Number of Specimens to print (maximum of 299).

6.3.2.b.1.3.1. NOTE: Prior to printing large quantities of downtime labels, print one test label to ensure formatting and alignment is satisfactory.

6.3.2.b.1.4. Enter “2” in the Labels per Specimen field. One label is for the specimen and the other is for the requisition.

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Downtime Specimen Creation

Laboratory:	CLINICAL LAB UH
Number of Specimens:	100
Print Labels:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Labels Per Specimen:	2
Label Printer:	P-DN-357-PC41-X1
Summary:	
<input type="button" value="Create"/> <input type="button" value="Close"/>	

6.3.2.b.1.5. Select your department's printer.

6.3.2.b.1.6. Select Create.

6.3.2.b.1.7. Repeat until the desired number of labels are printed.

6.3.2.b.2. Labels are kept in a box labeled "DOWNTIME LABELS". One label is to be placed on the specimen.

6.3.2.b.3. A second label is put on the requisition. This label provides a place to record the test(s) associated with that particular barcode and container type.

6.3.2.b.4. When IHIS is down, begin by writing downtime labels for all STAT tests. If there is an **EXTENDED** downtime (greater than 30 minutes) use this procedure for all tests. Always process stat specimens first.

6.3.2.b.5. On the specimen barcode label write: patient legal name, MRN, Test(s) ordered, Nursing Unit or Location. (If tests are to be run STAT, STAT needs to be noted on the label).

6.3.2.b.6. Put the specimen barcode label on the tube.

6.3.2.b.7. Centrifuge all tubes that need to be spun.

6.3.2.b.8. Repeat the process for each tube type on a single requisition.

6.3.2.b.9. Deliver all tubes to appropriate testing areas.

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6.3.3. Place the second barcode label corresponding to a particular tube type on the requisition.

- a. Write the tests associated with the barcode and tube type on this label.
- b. Repeat this process for each tube type on a single requisition.

6.3.4. Requisition:

- a. Keep the original requisition in the processing area to be used for entering the tests into the computer when downtime is over.
- b. Make a copy of all requisitions with the downtime barcode labels and associated tests indicated on each label. These copies will be given to each testing area to link results when the downtime is over.

6.3.5. Results for extended down time periods:

- a. Hard copy results will be provided to the processing area with the patient name and location provided on the results. Use either your laboratory's specific form or instrument printouts. Either form must have the appropriate patient and required regulatory information. Ensure reference ranges are current if they are provided on the patient result report. Original copies of results will be kept in the laboratory. Any results sent via tube system or dumb waiter will be a copy of the original results.
- b. Processing will return the original hard copy of the patient results to the bench testing area for each specialty (e.g., manual testing, hematology, immunochemistry, etc.).
- c. All STAT results will be delivered immediately in real time.

6.3.5.c.1. All routine results will be delivered expeditiously every 30 minutes to one hour after testing.

6.4. When the downtime is over:

6.4.1. Processing personnel:

- a. Specimen has an IHIS order and has been collected and received.
 - 6.4.1.a.1. Does not need further processing.
- b. Specimen has an IHIS order and is collected only (not received).
 - 6.4.1.b.1. Receive the specimen(s) as a normal uptime sample. Refer to Admin-147 Beaker Activities Overview (Receiving Activities section).
- c. Specimen has an IHIS order only (neither collected nor received).
 - 6.4.1.c.1. Receive the specimen(s) using Order Entry (inpatient) or Order Inquiry (outpatient). Refer to Admin-147 Beaker Activities Overview and the Placing Order in the Lab Tip Sheet.
- d. Specimen does not have an IHIS order.

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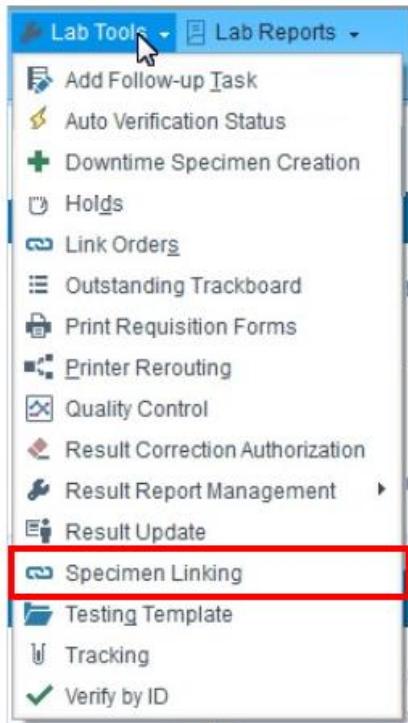
6.4.1.d.1. Receive the specimen(s) using Order Entry (inpatient) or Order Inquiry (outpatient). Refer to Admin-147 Beaker Activities Overview and the Placing Orders in the Lab Tip Sheet.

- e. Provide the testing personnel with the completed requisition.

6.4.2. Testing personnel:

- a. Link the patient results ensuring the uptime barcode container type and test orders match the downtime barcode container type and test orders placed on the requisition.

6.4.2.a.1. Select Lab Tools and then Specimen Linking.



6.4.2.a.2. The left pane will list all pending samples that were tested on the analyzer with a downtime label. The right pane is used to view the uptime barcode information.

6.4.2.a.2.1. NOTE: If the Specimen Linking worklist is extensive, a specific downtime CID can be quickly located on the list by highlighting any specimen, clicking Ctrl+F, scanning or entering the downtime CID, then clicking [Next]

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6.4.2.a.3. Scan the uptime label into the Specimen field in the right pane.

6.4.2.a.4. Using the requisition, confirm the uptime label and downtime label match for patient information (legal name and MRN) and test(s) ordered.

6.4.2.a.5. Select Link.

Specimen Linking - Lab Specimen Linking - 1 of 2477 selected	
 Refresh	 Views
	 Link

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- 6.4.2.a.6. Once the uptime and downtime information is linked the specimen is moved to the Outstanding List.
- 6.4.2.a.7. A second technologist must review and verify the results using the downtime requisition to confirm all information matches (patient legal name and MRN, uptime label, downtime label, and test(s) ordered). Refer to Admin-147 Beaker Activities Overview.
 - b. Return the requisition to the processing area. All manual/downtime requisitions will be scanned into IHIS. Refer to Admin-147 Beaker Activities Overview (Requisition Entry section).

7. FIGURES

- 7.1. Clinical Pathology general downtime/manual requisition.

8. RELATED DOCUMENTS

- 8.1. **Refer to QPulse System or Document Detail Report for related Laboratory Policies, Procedures, and Master Forms**

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Figure 7.1 Clinical Pathology general downtime/manual requisition

THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER DEPARTMENT OF CLINICAL LABORATORIES			LABORATORY REQUISITION FOR MANUAL/DOWNTIME TEST ORDERS FORM		
AFFIX PATIENT BEDSIDE LABEL HERE					
Location/Room Number:	Collect Date/Time:	Priority (circle one): ROUTINE STAT ADD-ON	Patient Name and Medical Record Number:		
Contact Phone # (RN): For results delivery during a downtime: In House Tube Station #			DOB:	Gender:	
Unit/Floor: or Ambulatory Fax Number:			Ordering Provider (NAME REQUIRED):		
ICD-10 Code(s):			Ordering Provider Signature (REQUIRED):		
Required for Emergency Department and Ambulatory patients (including clinic).					
Blood Tube Codes: L=Lavender G=Gold B=Blue KG=Dark Green M=Mint Green R=Plain Red Top GY=Grey S=Syringe T=Tissue/Swab Urine Tube Codes: U=Yellow Top UG=Urine Gray Top AA=Acetic Acid BA=Barbituric Acid HC=Hydrochloric Acid FR=Fresh, Refrigerated ***ED/STAT/frequently ordered tests listed in gray***					
NOTE: All tests should be MEDICALLY NECESSARY, as supported by the medical record, for diagnosis or treatment, NOT FOR SCREENING. OUTPATIENT requests require Clinical Indications for tests: PLEASE INCLUDE ICD10 CODE (S) FOR SIGN, SYMPTOM, OR DEFINITIVE DIAGNOSIS.					
X CHEMISTRY X BLOOD GAS X MICROBIOLOGY/VIROLOGY X URINE Basic Metabolic Panel (w/ Glucose) M BLOOD GAS: S AFFIRM - Vaginitis Screening U Dip with Reflex to microscopic (Na, K, Cl, CO ₂ , BUN, Creat, Glc, and Cr) Liter O ₂ or %O ₂ BNAB - Vaginal for GC, Chlamydia U COMPLETE URINALYSIS (wth Micro) BMP no Glucose M METHEMOGLOBIN U Rapid STREP U Urine Dip Only Chem 7 M PH ONLY (SEND ON ICE) S Rapid FLU (A/B) U Urine Culture Comprehensive Metabolic Panel (BMP + KTP) M LACTATE (W/HOLE BLOOD - SEND ON ICE) U MONOSPOT G Urine Culture COAGULATION M CARBOXYHEMOGLOBIN U INFLUENZA A/B & RSV (PCR) U FOR URINE TESTS BELOW, PLEASE INDICATE IF: RANDOM or TIMED TROponin-I M PTT B Culture BACTERIAL ANAEROBIC T/S #HOURS: _____ TOTAL VOL: _____ BNP L D-DIMER B **REQUIRED: Indicate collection site. U E-HIAA (IA preferred, BA, HC) AA ACETONE G FIBRINOGEN B BLOOD CULTURES: U BETA 2 MICROGLOBULIN FR AMMONIA (SEND ON ICE) M THROMBIN TIME B **REQUIRED: Indicate collection site. U CATECHOLAMINES AA AMYLASE M THYROID TESTING M MRSA SCREEN: U CITRATE BA C-REACTIVE PROTEIN (CRP) G TSH M **REQUIRED: Indicate collection site. U CORTISOL (BA preferred, AA accepted) AA LACTATE (PLASMA - SEND ON ICE) GY FREE T4 (THYROXINE) M ANCA (Uter & pattern if pos) G LEGIONELLA ANTIGEN FR LIPASE M TSHOR - TSH w/PT4 reflex M ANCA (Uter & pattern if pos) G MICROALBUMIN/CREATININE Ratio FR MAGNESIUM M FREE T3 M IMMUNOLOGY G METANEPHRINES (AA or BA preferred, HC) AA PHOSPHORUS M TOTAL T3 G ANCA (Uter & pattern if pos) G MICROALBUMIN FR SERUM PREGNANCY (QUALITATIVE) G TOXICOLOGY TESTING M ANCA (Uter & pattern if pos) G MYOGLOBIN FR BHcg (QUANTITATIVE) G ACETAMINOPHEN M BETA-2 MICROGLOBULIN G OSMOLALITY, Urine FR URINE PREGNANCY TEST U ETHANOL (NON-FORENSIC) M/G CMV IGG ANTIBODY G OXALATE (HC preferred, AA, BA) HC ALKALINE PHOSPHATASE (ALP) M ETHYLENE GLYCOL G CMV IGM ANTIBODY G PROTEIN/CREATININE with RATIO FR ALT M PAIN MANAGEMENT DRUG SCREEN U EBV-IGG & IGM G S. PNEUMONIAE ANTIGEN FR AST M SALICYLATE M EN A: SSA, SSB, SSM, AB, RNP G Urine AMYLASE BA BUN M SERUM TOXICOLOGY SCREEN G ERYTHROPOIETIN G Urine CALCIUM HC CALCIUM M URINE 10 DRUG SCREEN U HAPTOGLOBIN G Urine CREATININE FR CK M URINE TOXICOLOGY SCREEN U HIV-1/HIV-2 (with Confirm if pos) G Urine ELECTROLYTES FR CREATININE M VOLATILE PANEL G HIV-1/HIV-2 (with Confirm if pos) G Urine GLUCOSE (BA or FR) BA FERRITIN G THERAPEUTIC DRUG TESTING G HSV IGG G Urine PHOSPHORUS HC POLYACID, SERUM G AMIKACIN M HSV IGM G Urine PROTEIN FR GGT M CARBAMAZEPINE M IMMUNOGLOBULINS (IgG, IgM, IgA) G Urine URSA FR GLUCOSE M CYCLOSPORINE L MONOCLONAL PROTEIN IMMUNOPLEX G Urine URIC ACID FR IONIZED CALCIUM: NO ADD ON M DIGOXIN M WITH INTERPRETATION - please specify G VMA (AA preferred, BA, HC) AA IRON, TIBC M FREE PHENYTOIN M URINE U HEPATITIS TESTING FR LACTATE DEHYDROGENASE (LD) M GENTAMICIN (Circle PEAK or TROUGH) M SERUM G ACUTE Hepatitis: HBSAG, HBCIG, HBCIM, HABM, HCAB G LIPID PANEL M LIDOCAIN M MYELOPEROXIDASE G HBCIG, HABM, HCAB X2 OSMOLALITY, SERUM G LITHIUM G PROTEINASE 3 AB G IMMUNE STATUS Hepatitis: HBCIG, G POTASSIUM M METHOTREXATE (IN FOIL) M RHEUMATOID FACTOR G HBSAG, HBCIG, HABM, HCAB G PREALBUMIN G PHENOBARBITOL M RPR (with titer, FTA if pos) G X2 SODIUM M PHENYTOIN (DILANTIN) M RUBELLA IGG Immune Status G MOLECULAR TESTING FR TOTAL PROTEIN M SIROLIMUS L SERUM PROTEIN ELECTROPHORESIS G AML Panel (CEBPA, FLT3, MYLNGS) L URIC ACID M THEOPHYLLINE M with Interpretation G BCR-ABL1- qPCR L VITAMIN B12 G TOBRAMYCIN (Circle: PEAK or TROUGH) M TUMOR MARKERS G BTKR L HEMATOLOGY M VALPROIC ACID M Factor V Leiden L CBC (Includes Platelet count) L VANCOMYCIN (Circle: PEAK or TROUGH) M CA 125 G Prothrombin L CBC with DIFF L CEREBROSPINAL FLUID (INDICATE TUBE # ON SAMPLES) M CA 15-3 G Hemochromatosis L Sedimentation Rate (ESR) L CSF CELL COUNT - with Differential CSF CA 19-9 G IDH1/2 L HGB and HCT L CSF GLUCOSE and PROTEIN CSF CEA G IDH1/2 (FFPE) L PLATELET L BIOFIRE - Respiratory/Urinary/Metabolic Panel CSF HCC Tumor Marker G MYLNGS L RETIC COUNT (% and absolute) L CSF SCREEN G PSA DIAGNOSTIC Tumor Marker G CERPA L BODY FLUIDS M EBV (Kapton/Elka/Monogram Panel) CSF PSA SCREEN G FLT3 L SPECIFY FLUID TYPE AND SITE: M CSF CELL COUNT ONLY (no DIFF) CSF B-cell/IGH L CSF LACTIC ACID CSF CSF T-cell/TCRB L CRYPTOCOCCAL ANTIGEN CSF CSF ADDITIONAL TEST REQUESTS/COMMENTS L OLIGOCLONAL BANDS + SERUM CSF FLUID BATTERY: CELL COUNT & DIFF VDR CSF CELL COUNT ONLY HSV (PCR) CSF CRYSTALS (SYNOVIAL FLUID ONLY) EBV (PCR) CSF FLUID AMYLASE STOOLS FLUID GLUCOSE OCULT BLD, FECAL - IMMUNOLOGICAL (PURPLE) FLUID TOTAL PROTEIN OCULT BLD, STOOL (CARD) FLUID LD FLUID SPECIFIC GRAVITY CLOSTRIDIUM DIFFICILE Questions? Contact: (614) 293-8375					

Questions? Contact: (614) 293-8375

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