

Beaumont Laboratory

Clinical Pathology

Effective Date:10/08/2019Supersedes:06/01/2016Related Documents:

LIS DOWNTIME PLAN – STAT LAB

RC.CH.LOP.LIS.PR.004r07

Principle

The purpose of this document is to define laboratory protocol for times when the Network, One Chart/EPIC (HIS), Middleware (IM) or SOFT (LIS) is unavailable to process orders for STAT Lab testing.

Definitions

LIS - Laboratory Information System, currently SOFT IM – Instrument Manager, middleware software HIS – Hospital Information System, currently One Chart/EPIC

Network, Core Lab Down - there are communication problems in the Core Laboratory, which manifest as the inability to access e-mail or LIS. Stat Lab operations are unaffected. Toxicology and Sendout labs are unaffected.

Network, Hospital Down - there are communication problems in the hospital, which manifest as the inability to access e-mail or LIS in the STAT Lab. Nursing cannot order tests or access any results in One Chart/EPIC. Core Lab operations are not affected.

Network, Completely Down - there are communication problems, which affect both the STAT Lab (main hospital) and Core Lab (Research Building) operations.

SOFT Down - there is a problem with SOFT, either scheduled or unscheduled, whereby we cannot access the LIS to input/retrieve laboratory orders and results.

SOFT ID Wireless Down – Soft ID is the specimen collection system used by Nursing and Inpatient Phlebotomists. This module supports positive patient identification barcode technology (PPID). When down, collection labels cannot be printed for specimens ordered thru One Chart/EPIC. Specimens must be collected/received in Soft Lab.

One Chart/EPIC Down - Order or result interfaces between One Chart/EPIC and SOFT or ADT (Admission/Discharge/Transfer) registration interfaces are down. There may be new patient registration problems that impact Emergency Center (EC), preOP and Outpatient Labs. EC and Nursing Units cannot order labs or review results. Documentation and delivery of lab STAT results on SOFT Instant Report, downtime paper requisition or instrument printout is required.

SOFT Downtime Label - pre-printed generic specimen label with barcode downtime number (DT #) only. These labels are printed from SOFT. Each specimen type (e.g. SST, PST, EDTA, UA etc.) must receive its own downtime number to maintain ability for specimen

tracking. The patient's name, MRN, and test(s) requested are handwritten prior to labeling the specimen. The downtime number (DT#) is also assigned to the requisition.

IM Down: there is a problem with IM, scheduled or unscheduled, whereby we cannot access the middleware to input/retrieve laboratory orders, calculations, and results.

Downtime (DT) requisition - pre-printed requisition form used to order tests and report results. The DT requisition must accompany the specimen and be minimally complete with demographics of

- patient's name
- MRN
- location
- test(s) requested
- date/time of collection
- collector ID
- phone or p-Tube station number for returning results

When collection time is not provided, the requisition must be time-stamped or date/time of specimen receipt in the laboratory should be noted as "rcd_____".

The DT requisition for EC and Inpatients is carbon 4-ply for results to be separated into copies for requestor (white), shared samples (yellow/pink) and lab file (goldenrod). Outreach supplies downtime requisitions for their samples.

Specimen Collection and Handling

- Specimens received in the STAT Lab must be labeled with either the LIS collection barcode label, or a patient chart sticker.
- To maintain specimen integrity, samples for Blood gas testing and Ammonia must be received on ice.
- Stat specimens should be reported within defined TAT from specimen receipt.
- Nursing units are expected to supply a downtime requisition complete w/ patient demographics, test order(s), and p-tube station or phone number.
- Stat Lab processor must prepare a downtime requisition, if not received from requesting Unit.
- Add-On requests will NOT be honored during downtime.

| Downtime Possibilites | | | | | |
|-----------------------|---------------------|----|--|--|--|
| Epic | SOFT IM | | Description | Lab Report/Recovery | |
| Down | Up | Up | Existing orders in Epic are available for collection For existing orders in EPIC - (ie specimens 2/ SOFT ID label) New orders submitted on paper requisition NOTE: Lab Staff collects if SOFT ID down Unregistered patients - on paper w/ DT label For new orders on registered patients only - Order/Collect/Receive/Print in SOFT lab w/collection information provided on requisition | Interfaced instrument or manual results to into SOFT Document results on SOFT Instant Report, downtime paper requisition or instrument printout to report Download results (existing orders) when EPIC connection is restored Manually enter results (new/unregistered orders) to SOFT and send to OneChart | |
| Up | Up, SOFT ID Down | Up | Unable to pull specimen labels in SOFT ID EC/Nursing will continue to order in EPIC EC/Nursing - also submit orders on paper Order/Collect/Receive/Print in SOFT Lab STAT lab: Collect and receive Phleb draws Phlebs - Order/Print in SOFT Lab, note collection times on label EC/Nursing access Epic for results | Interface instruments are on-line Results flow back to EPIC No lab recovery required! Nursing to reconcile orders | |

| Up | Totally Down | Up | No orders can be placed in SOFT Nursing/EC may continue to order in EPIC Lab must receive all orders on DT requisitions. Use DT labels on specimens or requisitions Lab will process requests following downtime procedure | All testing run off-line Document results on paper requisition or instrument printout to report Call ABGs and criticals. P-Tube others No nursing recovery required! Recovery - Order using DT order # Results resubmitted through instrument interface or manual entry | |
|------|-----------------|----|--|---|--|
| Down | Totally Down | Up | No orders can be placed in SOFT or EPIC Same as directly above except -> | Nursing reconcile orders | |
| Up | Up | Up | **ADT Registration interfaces behind** Orders placed in EPIC will transmit to SOFT | Lab receives barcode labeled specimens and will process them as usual | |
| Up | Up | Up | **Orders Interface Behind** Orders entered in EPIC by EC/Nursing If delays to SOFT ID, no collection labels Lab may receive downtime requests If orders exist in SOFT - Lab can process If no order exists in SOFT - Order/Collect/Receive/Print in SOFT Lab | See EPIC UP/SOFT UP/SOFT ID DOWN/IM UP Interfaced instruments are on-line Results flow back to EPIC No lab recovery required! Nursing reconcile orders | |
| Up | Up | Up | | Results delayed SOFT -> EPIC | |

| Up | Up | Down | Existing orders in EPIC are available for collection For existing orders in EPIC - (i.e. specimens w/SOFT ID label) Receive in SOFT lab Orders will not download to IM, so they will need to me manually programmed on the instrument | All testing run off-line Document results on paper requisition or instrument printout to report All instruments that do not run through IM will be as normal No nursing recovery required! Recovery - Order using DT order # Results resubmitted through instrument interface or manually |
|------|------|------|--|--|
| Up | Down | Down | Unable to pull specimen labels in SOFT ID EC/Nursing will continue to order in EPIC Follow DT procedure Orders will not download to IM, so they will need to be manually programmed on the instrument | All testing run off-line Document results on paper requisition or instrument printout to report All instruments will be run on Downtime procedure Interfaced instruments are back on- line, results will flow back to EPIC Nursing to reconcile orders |
| Down | Down | Down | No orders can be placed in SOFT or EPIC Lab must receive all orders on DT requisitions. Use DT labels on specimens or requisitions Lab will process requests following downtime procedure | All testing run off-line Document results on paper requisition or instrument printout to report Call ABGs and criticals. P-Tube others Interfaced instruments are back on- line, results will flow back to EPIC Nursing to reconcile orders |

Supplies

All supplies are located in the STAT Lab Processing Area, downtime drawer and cupboard.

- 1. Downtime Procedure Manuals (red binders)
- 2. SOFT downtime labels
 - Chemistry, Urinalysis, Toxicology, Coagulation (6 barcode labels printed/set)
 - Hematology 'L0' labels (4 barcode labels printed/set)
- 3. Downtime Requisitions (Chemistry, LA, Hematology, Urinalysis, Toxicology, Miscellaneous)
- 4. Time Stamper
- 5. Staplers and staples
- 6. Calculators
- 7. Printer paper for instruments and IM printer
- 8. File box with alphabetized folders for lab (goldenrod) file copies to be entered into LIS
- 9. P-Tube and Phone Number List by Unit/Room # (posted at P-Tube station)
- 10. Critical (Panic) Values Lists Beaumont Laboratory
- 11. Stat (Emergency) Laboratory Test List Beaumont Laboratory
- 12. Auto Chemistry Reference Ranges and Critical List
- 13. Recovery buckets
- 14. Outreach Downtime Result envelopes

Quality Control

- 1. Run and print all QC generated from instruments.
- 2. Review all QC vs posted/printed ranges for acceptability. Sign and date printouts.
- 3. Log ALL manual QC on respective Manual Worksheets. Initial worksheet entry.
- 4. SAVE all QC printouts in respective folders at instruments.

Procedure

- 1. Determine what is "down"
 - a. Call Helpdesk (x12448) to report problems.
 - b. SOFT issues can be called to x77607
 - c. Call Hotline (x13437) for periodic updates.
- 2. Begin Downtime Protocol when LIS and/or HIS has been down for 15 minutes.
- 3. Designate a Lead person to organize workstation assignments for available staff.
 - Assign one Tech to each analytical station, if possible
 - Assign three staff to Processing station, if possible
 - Request additional staff (refer to Auto Chem Staff Phone Lists) as needed.
 - Refer to Downtime Procedure Manual for responsibilities by workstation.

PROCESSOR

- MT/MLT
- Empty pneumatic tubes
- Answer phones
- Process specimens
- Deliver specimens
- Deliver and file results
- Architects
- Manuals/CBC/Coag
- Radiometer ABL 825
- Quality Check of Requisitions
- Sending completed results to ordering location

Printed copies of this document are not considered up-to-date. Please verify current version date with online document.

Clinical Pathology: *Automated Chemistry* BEAUMONT LABORATORY, Royal Oak, MI 48073 DATE: 10/08/2019 RC.CH.LOP.LIS.PR.004r07

Processing

- 1. Prepare specimens and paperwork for downtime reporting.
- 2. Use ball point pen when preparing DT requisition and press HARD so all information is legible on all (4) copies of the requisition!

NOTE: There must be a separate DT number for each of the same tube types that are going on the same analyzer.

| IF sample arrives in STAT Lab | Then |
|--|---|
| w/ SOFT label | Prepare DT requisitions for results. Include Patient Name, MRN, DOB, Location. Write "ORD # [i.e. SOFT assigned MMDDXXXX-ZZ] through all copies. Mark test(s) requested. |
| w/ patient chart label and DT requisition(s) | Prepare one DT label <u>for each specimen</u> type w/ Name, MRN, date/time and test(s). Write DT # through all copies of requisition. |

- 3. Specimen Receipt: (Empty Pneumatic Tubes)
 - a. Remove specimens and requisitions from bio bags as specimens are received.
 - b. Check specimen(s) against requisition(s) to ensure specimen types are correct and orders are complete.
 - c. Time stamp receipt for all requisitions or note as "rcd_____"
 - d. Date and Time of collection on all requisitions is critical. If this information is missing from the requisition, check for collection time on the specimen tube and copy to the requisition.
 - e. Keep specimens and requisitions together.
 - f. Send specimens and requisitions to Core Lab if testing is to be done there.
 - g. Call the ordering unit to resolve any problems (e.g. wrong orders, missing or wrong specimens) and set these bio bags aside.
 - h. Deliver specimens for Blood Gases directly to the Blood Gas section Tech and put in FIFO (first-in-first-out) order as received.
 - i. Immediately process orders that are received from Cancer Center, Trauma patients or orders that arrive on ice.
- 4. Specimen Processing
 - a. Work with one patient at a time, matching specimen(s) with requisition(s).
 - b. Prepare appropriate DT requisition(s) if required for test(s) as shown in Table above.
 - c. Note: Downtime requisition is required whenever
 - EPIC/One Chart Down, SOFT Up (Can report w/ SOFT Instant Report)
 - EPIC/One Chart Up, SOFT totally down
 - IM Down
 - EPIC/One Chart Down, SOFT totally down (both SOFT and SOFT ID)

- d. Use SOFT downtime barcode labels for specimens as required. These labels are pre-printed and stored in the Downtime cabinet. Write "DT # _____" through all copies of the requisition.
 - 6/set Chemistry, Urinalysis, Toxicology, Coagulation
 - 4/set w/ WAM extension (Hematology)
- e. Note: SOFT downtime barcode label is required when neither SOFT ID nor Soft Lab can generate labels.
- f. Use a new DT barcode label for each specimen type (PST, SST, Red-top, EDTA, Coag, Urine) for order entry and to maintain tracking ability.
- g. Write the patient name, MRN, test(s) and Date/Time collected for each individual specimen on the DT barcode label.
- h. See procedure RC.CH.LOP.SH.RG.004 Chemistry Panels: Availability and Tests.
- i. Prepare any additional Downtime Requisitions for multiple orders.
- j. Place DT label to the goldenrod copy of the requisition
- k. Send any specimen and requisition w/ shared Coagulation orders (PT/ PTT/D-Dimer with Fibrinogen) to the Core Lab for Coagulation section. Place specimen and requisition in a red Bio bag labeled with "Send Directly to Coagulation" sticker.
- I. Orders for STAT testing in the Core Lab (e.g. Digoxin, Therapeutic Drugs, Drugs of Abuse, Lithium) require a separate sample, separate requisition and separate DT#. The processor is responsible to complete a separate requisition if one is not received.
- m. The Stat Lab processor is responsible to centrifuge SST specimens and keep DT requisitions at the centrifuge with the specimens prior to delivery to the testing sections.
- 5. Specimen Delivery
 - a. Deliver samples and DT requisitions to appropriate workstations.
 - b. If there are tests ordered for both the IL TOP and XN3100, shared requisition should be delivered with the specimens to first workstation. Hematology specimen should receive its own DT # for WAM order entry and specimen tracking. Coag specimen requires DT # from Chemistry N=5 label set.
- 6. Result Delivery
 - a. When testing is complete, verify results are transcribed or stapled to the requisition.
 - b. Place the completed requisition in the File Box labeled "To Send" under the file letter that corresponds with the patient's last name.
 - c. Quality MT/MLT will compile all Stat Lab testing together and send to ordering location via pneumatic tube system
 - d. Outreach: Tube the top white copy to the Core Lab in an envelope labeled "To Outreach Downtime results". File the goldenrod copy of requisition in the file folder under "Outreach"
 - e. All subsequent copies with handwritten results or attached printouts from the IM, ABL, Architect, XN3100, IL TOP or Manual tests are filed in the File Box labeled "To Enter in LIS". These are filed for phone queries and lab recovery.

A. Abbott Architect

1. Set instrument printers to print patient results.

Abbott Architect Printer "ON"

- a. System may be in "Ready" or "Running"
- b. Select "System" from top menu bar and click "Configuration".
- c. Under System Settings, click Reports-Printing
- d. Click Configure (F6)
 - i. Select Sample Laboratory Reports "on"
 - ii. Choose "Done"

Abbott Architect Printer "OFF"

- a. System may be in "Ready" or "Running"
- b. Select "System" from top menu bar and click "Configuration".
- c. Under System Settings, click Reports-Printing
- d. Click Configure (F6)
 - i. Select Sample Laboratory Reports "off"
 - ii. Choose "Done"

2. Manually order tests in IM

Manually program SOFT ORD # or DT#, Patient Name, MRN and tests using Orders – Patient Orders.

- Click Specimen Management from the top bar and select Patient and Order Management
- Scan barcode, which is either a SOFT order # or DT# and enter Patient Name and MRN.
- Click the "Order Tests" button next to the Specimen ID box to add tests to the order.
- Click close at the bottom right to save.
- 3. Load samples so that the barcode is read by the instrument.
- 4. One instrument report will automatically print once results are complete. You may force the report to print by selecting "Print Specimen" from the POM screen.
- 5. Staple a second printout complete w/ demographics to back of top white copy of requisition OR transcribe results (single or few results) onto the requisition, pressing firmly so results transfer thru to all copies
- 6. Check printout for any "Critical High" flags. Confirm that the critical result is actually critical using the age related "Critical Value List" located in the red downtime binder.
- 9. Call critical values during SOFT downtime. Document the following on DT requisition:
 - Employee ID# of caller of the results.
 - Note "readback received"
- 10. Sign tech # or initials and date/time on bottom of the downtime requisition when your testing is complete.
- 11. If other tests need to be done, pass requisition to next workstation.
- 12. When all tests ordered on requisition are complete, send paper results to their destination. Place subsequent requisition forms with results in File Box labeled "To Enter in LIS."

Alternate Option for Architect if IM is not functioning

To manually order tests at the Architect:

- Manually program SOFT ORD # or DT#, Patient Name, MRN and tests using Orders Patient Orders.
- Type in SID and select tests individually or use the "PANELS" key and choose the correct panel
- Select Sample Details and type in last name, first name, and PID
- Select Add order

B. Manual Tests

- 1. Use worksheet to log results.
- 2. Transcribe patient result directly onto the DT requisition:
 - Urine hCG
 - Monospot
 - Osmolality
 - Occult Blood
 - o Fetal Fibronectin
- 3. Edit reference ranges on downtime requisition as required. (See Downtime Manual for AutoChem Reference and Critical Ranges).
- 4. Sign tech # or initials and date/time on bottom of the downtime requisition when testing is complete.
- 5. Pass requisition to next workstation if other tests are required.
- 6. Place completed results/requisition in the "To Send" File Box.
- 7. Place Lab copies or results/requisition in the "To Enter in LIS" File Box.

C. XN3100

Set the IPU (Information Processing Unit) to print all patient results.

XN PRINTER "ON" (To Print All Patient Results)

- Must be in Admin mode (Log on in book)
- Click IPU Settings from the main screen
- Click Auto Output
- Select "simple settings"
- Apply
- OK

XN PRINTER "OFF" (Print Positive Patients Results Only)

- Must be in Admin mode
- Click IPU Settings from the main screen
- Click Auto Report
- Select "simple settings"
- Apply
- OK
- 1. Verify that sample DT label has L0 extension and place specimen in rack so that instrument reads barcode.
- 2. XN will automatically print one copy of results when testing complete.
- 3. Print a second copy of results for a lab copy.
 - Using the IPU:
 - Select "Explorer"
 - Highlight patient results by finding the DT #
 - Select Output Report
 - Select "Report GP"
 - Prints 1 report
- 4. Clearly write patient full name on both result copies.
- 5. Edit reference ranges on downtime requisition as required. (See Downtime Manual for AutoChem Reference and Critical Ranges).
- 6. Call critical values during SOFT downtime.
 - Document the following on Downtime requisition:
 - "called critical _(test)_", along with the date and time
 - employee ID# of the phone recipient or beeper # for physician recipient (To:_____ By:____)
 - employee ID# of caller of the results
 - Note "readback received"
- 7. Staple one copy of results to the top white copy of requisition (face up) and staple the other copy of the results to the back of the goldenrod copy (face up).
- 8. Sign tech # or initials and date/time on bottom of the downtime requisition when your testing is complete.
- 9. If other tests need to be done, pass requisition to next workstation.
- 10. When all tests ordered on requisition are complete, place requisition in the "Completed Results" bucket for separation and delivery of top copy.

- 11. If a CBC has to be sent to Hematology for a differential or verification- Print a 3rd copy of results.
 - Copy 1- Results to EC/Unit Black out any result that will be verified by Hematology, and stamp "Results to Follow" on report, staple to white copy.
 - Copy 2- Lab copy to (A-Z) file. Black out any result that will be verified by Hematology and staple results to goldenrod.
 - Copy 3- Hematology copy. Staple results to yellow/pink. Send paperwork and specimen via p-tube to Hematology.
 - Sign and date downtime requisition when testing is complete.
- **12.** Processors will retrieve completed requisitions, send and file copies.
- 13. **Shared specimens** with Hematology, (e.g. ESR): Document "_____ to follow" on white and goldenrod copies only.
- **14.** Pink and Yellow copies follow primary tube to the Core Lab. Whenever possible, a separate requisition will be prepared by processing when sending shared specimens to the Core lab.
- **15. Orders for Reticulocytes:** Results of Retic must be calculated X1000 so result is noted as (bil/L)
- Ex: 0.0261 (10mil/uL) x 1000 = 26 (bil/L)

D. IL TOP 550

To Print a result off the IL TOP 550

- 1. On sample list, put a red check mark next to the sample to print
- 2. Click the printer at the top of the screen
- 3. 1 sample report will print

Procedure:

The Work Load List screen is used to register order information:

- 1. Load sample with barcode.
- 2. Click onto the sample screen.
- 3. The sample will show up as a purple dot with a white question mark, which means it is an unknown sample.
- 4. Double click each unknown sample and a box will pop up to order PT, PTT, or D-Dimer.
- 5. Chose tests to order by clicking once.
- 6. The test will appear on the sample, and once it turns purple and Italic, it is running.

You may load another sample in the next rack. Program it the same way as above.

- 1. Print a report.
- 2. <u>Transcribe</u> results on DT requisition.
- 3. Staple printout to <u>back</u> of the goldenrod copy.
- 4. Edit reference ranges on downtime requisition as required (See Downtime Manual for AutoChem Reference and Critical Ranges).
- 5. Call critical values during SOFT downtime. Document the following on DT requisition:
 - "called critical (test)", along with the date and time

 - employee ID# of caller of the results
 - Note "readback received"
- 6. Sign tech # or initials and date/time on bottom of the downtime requisition when testing is complete.
- When all tests ordered on requisition are complete, place white copy of requisition with results in File Box labeled "To Send." Place subsequent requisition forms with results in File Box labeled "To Enter in LIS."
- 8. For Coagulation Verification, Send the white, yellow and pink copies of requisition and CA1500 printout together with specimen to coagulation.
- 9. Note "Coagulation verification results to follow" on goldenrod copy and file in the Stat Lab (A-Z) file box.

E. Blood Gases

Radiometer ABL 825

- 1. Analyze blood gas specimen.
- 2. Enter Patient ID # using the numerical key pad.
- 3. Print 2 copies of results
- 4. Staple 1st copy to the white requisition
- 5. Staple 2nd copy to back goldenrod copy of the downtime requisition.
- 6. Note "Arterial or Venous" on respective Cord gas printouts.
- 7. Edit reference ranges on downtime requisition as required. (See Downtime Manual for AutoChem Reference and Critical Ranges).
- 8. *Call all blood gas results during SOFT downtime*. Note any criticals called. Document the following on DT requisition:
 - "called (test)", along with the date and time
 - employee ID# of the phone recipient or beeper # for physician recipient (To:_____ By:____)
 - employee ID# of caller of the results
 - Note "readback received"
- 9. Sign tech # or initials and date/time on bottom of the downtime requisition when testing is complete.
- 10. When all tests ordered on requisition are complete, place white copy of requisition with results in File Box labeled "To Send." Place subsequent requisition forms with results in File Box labeled "To Enter in LIS."

F. Quality Check and Completed Results

- 1. As results are placed in the "To Send" File Box, compile results them and do a quality check for clarity and completeness before sending.
- 3. If patient location or P-Tube station is noted, send ENTIRE packet of patient's results and physician requisitions through the pneumatic tube system.
- 4. If patient location unknown, place entire packet in 'unknown location' file.

MN Responsibility

- 1. Start a new folder set (A-Z) for next date, if downtime goes past midnight.
- 2. Rubber-band previous date folder set (A-Z) and place at back of box.
- 3. Start new storage box if necessary.

G. Recovery

- 1. Turn instrument printers "OFF". (See individual instrument procedures)
- 2. Interfaces may need to be restarted
- 3. Order/Collect/Receive by DATE, moving through the alphabet folders in order.
- 4. When possible, pull order numbers from SOFT and match with DT orders
- 5. Resubmit or manually enter results into
- 6. Use the Recovery Buckets during each stage of recovery process located in the downtime cupboard for
 - Problems
 - To be Resulted
 - Outreach to Result
 - Completed.
- 7. Document critical calls with actual date/time, caller ID# and recipient ID # information from goldenrod lab copy.
- 8. Goldenrod copies are retained for a minimum of 2 years.

NOTE: Add-on test requests will not be honored during LIS Downtime

Authorized Reviewers

Section Medical or Technical Director.

Document Control

Location of Master: Master electronic file stored on the Beaumont Laboratory server under S:/Document Control Library/LOP/Masters Master printed document stored in Stat Lab General Policy and Procedures Number of Controlled Copies posted for educational purposes0 Number of circulating Controlled Copies:4 Location of circulating Controlled Copies: Stat Lab Downtime Red Binders, 1 in Manager office

Document History

| Signature | Date | Revision # | | Related Documents Reviewed/ Updated |
|--|------------|-------------------|---|--|
| Prepared by: A. Oddi, V. Peterson | 06/30/2005 | | | |
| Approved by: E. Sykes, MD Medical Director | 06/30/2005 | | | |
| Reviewed by: (Signature) | Date | Revi sion # | Modification | Related Documents Reviewed/ Updated |
| V. Peterson MT(ASCP) SC | 01/14/2006 | 01 | LX20 changed to DXc800 | |
| V. Peterson MT (ASCP) SC | 12/20/2007 | 02 | New DT requisitions | |
| R. Karcher, PhD. | 12/04/2008 | | | |
| V. Peterson MT(ASCP) SC | 09/21/2009 | 03 | Includes more step by step directions and EPIC downtime information | |
| V. Peterson MT(ASCP) SC | 12/01/2009 | | | |
| Vivek Kumar, PhD | 12/07/2010 | | | |
| Elizabeth Sykes, MD | 09/08/2011 | 04 | Revised for SOFT LIS | |
| Mark Kolins, MD | 09/08/2011 | | | |
| Elizabeth Sykes, MD | 02/16/2012 | | | |
| Elizabeth Sykes, MD | 03/13/2014 | 05 | Edits for VISTA, Hematology, Troponins | |
| Steven Truscott | 7/21/2016 | 06 | Workflow updates | |
| Elizabeth Sykes, MD | 02/09/2018 | | | |
| Peter Millward, MD | 09/17/2018 | | New medical director | |
| Peter Millward, MD | 11/19/2018 | | | |
| Steven Truscott, PhD | 09/09/2019 | 07 | Updated for Abbott instruments and IM | |
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