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Beaumont

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Document Contact	Megan Masakowski: Mgr, Division Laboratory
Area	Laboratory-Hematology
Applicability	All Beaumont Hospitals

Hematology Autoverification Policy

Document Type: Policy

I. PURPOSE AND OBJECTIVE:

It is the department policy that all normal results from the hematology analyzers will be autoverified using software in the middleware designed specifically for this purpose. In addition, selected abnormal results that fulfill the following criteria will also be autoverified in the middleware.

II. POLICY STATEMENT:

It is the policy of Corewell Health to provide autoverification guidelines for a CBCND, CBCWD, Absolute Eosinophil Count, Reticulocyte or ESR.

III. ACRONYMS:

A. Complete Blood Count (CBC)
B. Complete Blood Count with Differential (CBCWD)
C. Reticulocyte (Retic)
D. Erythrocyte Sedimentation Rate (ESR)
E. White Blood Cell (WBC)
F. Hemoglobin (HGB)
G. Mean Corpuscular Volume (MCV)
H. Mean Corpuscular Hemoglobin Concentration (MCHC)
I. Red Cell Distribution Width- Coeficient of Variation (RDW-CV)

J. Platelet (PLT)
K. Nucleated Red Blood Cell (NRBC)
L. Neutrophil Absolute (Neut #)
M. Lymphocyte Absolute (Lymph #)
N. Monocyte Absolute (Mono #)
O. Eosinophil Absolute (Eos #)
P. Immature Granulocyte (IG)
Q. Laboratory Information System (LIS)

IV. AUTO VERIFICATION CRITERIA:

A. Values outside of the limits below will require tech intervention. (Check previous values; look at trend).

B. When all of the following criteria evaluate as "True", then the middleware or LIS will autoverify a CBCND, CBCWD, Absolute Eosinophil Count, Reticulocyte or ESR:

C.

Criteria Name	Range
WBC (10*9/L)	2.0-20.0
HGB (g/dL)	8.0-18.0
HCT (%)	24.0-60.0
MCV (fL)	60.0-114.0
MCHC (g/dL)	30.0-38.0
RDW-CV (%)	0.0-25.0
PLT (10*9/L)	75-1000
NRBCs	0-600
Neut # (10*9/L)	≥ 0.50
Lymph # (10*9/L)	0.00-10.00
Mono # (10*9/L)	0.00-3.00
Eos # (10*9/L)	0.00-4.00
IG (%)	0.00-10.00
Retic (%)	0-30
Suspect Flags	None
Delta Checks	None
ESR (mm/hr)	0-129

D. Any sample with instrument flags and/or Op Alerts will stop autoverification so that the tech can review the instrument results and sample to properly identify the best course of action for resulting the patient.

V. DELTA CHECK RULES:

A. In addition, an assay will not be autoverified in the middleware if the following delta checks are triggered:

B.

Criteria Name	Range
HGB	Difference Between Previous HGB and Current HGB Greater Than ± 3.0 g/dL
MCV	Difference Between Previous MCV and Current MCV Greater Than ± 3.0 fL
WBC	50% Change Between Previous WBC and Current WBC (bill/L)
PLT	50% Change Between Previous PLT and Current PLT (bill/L)

VI. QUALITY CONTROL:

A. Validation of autoverification will be performed initially and whenever there is a change to the system that could affect the autoverification logic. This is done by using selected patient samples including samples that have been previously tested and are expected to either pass or fail the criteria stated above.

B. If multiple sites use the same LIS, middleware, and server, only one site needs to perform the autoverification validation. If there are any site specific rules, those rules must be validated per site. All labs must retain a copy of the autoverification validation.

C. Evaluation will be performed on routine patient samples to document auto verification of samples that passed criteria and lack of autoverification for samples, which failed the criteria. Each analyte must be ordered individually or all other analytes in the panel must be within reportable range with no delta checks or flags.

D. If unable to fulfill auto verification testing criteria with routine specimens, a test patient may be ordered for a particular analyte or by using the XN emulator software.

E. This is a zero tolerance system for errors in the software application. Any detected failure of the software system to detect appropriate samples for autoverification will be immediately reported to Sysmex America or Corewell Health Laboratory Information Technology group as applicable for correction/ modification of the software.

VII. REFERENCES:

A. Cornbleet J, et al: Streamline your automated hematology laboratory. MLO 68-73, (April) 1997.

Attachments

Attachment A – Hematology Autoverification Validation Worksheet 7-18-2024.pdf

Attachment B - Caresphere Rule Definition_09182024.pdf

Approval Signatures

Step Description	Approver	Date
	Hassan Kanaan: OUWB Clinical Faculty	10/29/2024
	Muhammad Arshad: Chief, Pathology	10/29/2024
	Jeremy Powers: Chief, Pathology	10/29/2024
	Ann Marie Blenc: System Med Dir, Hematopath	10/26/2024
	Masood Siddiqui: Staff Pathologist	10/25/2024
	Ryan Johnson: OUWB Clinical Faculty	10/25/2024
	John Pui: Chief, Pathology	10/25/2024
Policy and Forms Steering Committee Approval (if needed)	Megan Masakowski: Mgr, Division Laboratory	10/25/2024
	Udayasree Bartley: Medical Technologist Lead	10/25/2024
	Helga Groat: Supv, Laboratory	10/22/2024
	Jennifer Yaker: Mgr, Laboratory	10/22/2024
	Kristen DiCicco: Mgr, Laboratory	10/16/2024
	Sharon Cole: Mgr, Laboratory	10/14/2024
	Ashley Beesley: Mgr, Laboratory	10/14/2024
	Katherine Persinger: Mgr, Laboratory	10/14/2024
	Megan Masakowski: Mgr, Division Laboratory	10/10/2024

Applicability

Dearborn, Farmington Hills, Grosse Pointe, Royal Oak, Taylor, Trenton, Troy, Wayne