

AUTOMATED DIFFERENTIAL REPORTING CRITERIA

REPORTING AUTOMATED DIFFERENTIAL

You may report the automated differential when the following conditions are met:

- No Abnormal Interpretative Program (IP) Messages
- No suspect flags on scatter plot
- A normal and well-defined scatter plot

When the above conditions are met

Under ARE Instrument Queue, press “Verify” to release all results in Cerner.

SLIDE REVIEW PROCEDURE

A manual differential count or slide/smear review is required if any of the above parameters are not met.

Any automated Complete Blood Count (CBC) with abnormal scatter plots or histograms, suspect flags, or missing differential results will have a slide review.

Step	Action	
1.	Scan a minimum of 10 fields at 40 or 50X magnification	
	If	Then
	Slide review confirms Automated Diff	Under Hemogram comment button, follow smear review protocol and report the differential
	Slide review doesn't match Automated Diff	Perform Manual Differential
	Abnormal or Immature WBC's are present	Perform Manual Differential
	NRBC's are present	Perform Manual Differential

ABNORMAL OR IMMATURE WBC'S

Immature WBC's (band, metamyelocyte, promyelocyte, myelocyte or blast) require a slide review.

Abnormal WBC's (i.e., reactive lymphs, hyper segmented neutrophils, etc.) require a slide review.

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**ASSIGNED
 ACTION
 HIGH/LOW
 LIMITS**

Manual differential count or slide/smear review is required when High/Low flags are triggered.

Note: These are parameter ranges that have been defined by our laboratories. Action High/Low Flags are set in the XN-550 for these values.

Analyte	Action Low	Action High
WBC (White Blood Count)	<2,000	>30,000
MCV (Mean Corpuscular Volume)	<75 fl	>105
MCHC (Mean Corpuscular Hemoglobin Concentration)	<31	>37
RDW		>22.0
Platelet Count	<100	>1000
Auto Differential: Segs	<0.5	>20.0
Lymph	<1.00	>5.0
Mono		>1.5
Eos		>2.0
Baso		>0.5
Ig		>0.5

**Controlled
 Documents**

The following controlled documents support this policy.

References
Technical Hematology_Arthur Simmons, 2nd edition, J.B. Lippencott Company, Philadelphia. p.103.
Laboratory Medicine Hematology, John B. Miale, 6th edition, O.V. Mosby Company, St. Louis. p.475, 869.
American Journal of Clinical Pathology, Committee for Clarification of the nomenclature of Cells and Diseases of the Blood and Blood Forming Organs: second report, 56:19 (1949).
Technical Improvement Service, "What is a Band", Thomas F. Deutcher, MD., Commission on Continuing Education of the Society of Clinical Pathologists, No. 15 (1973) pg. 10-19.

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Document History Page

Change type: New, Major, Minor etc.	Changes Made to SOP – describe	Name of responsible person/date	Med. Dir. Reviewed/ Date	Director of Lab Ops. reviewed/ date	Date change Implemented
Minor	Page 1. Under Reporting Automated Differentials, Immature Gran 1 is omitted. LMS releasing procedure is replaced by Cerner. Under Slide Review Procedure; Smear Review protocol is added. Page 2. Under Assigned/Low Limits; WBC lower limits is updated from <3,000 to <2,000, and Platelet Count is updated from <37,000 to <20,000	Alex De Castro 08/29/2013			
Major	Page 1. Under Reporting Automated Differentials, Criteria is clarified, No High/Low Flags is changed into Action High/Low Flags Page 2. Assigned High/Low Limits are renamed to Assigned Action High/Low Limits. Lower Limit and Higher Limit are renamed to Action Low (aL) and Action High (aH). The whole chart is updated.	Alex De Castro 02/27/2014			
MAJOR	1. Regional Template Update 2. Revised index no. 3. Updated Low/High table based on Sysmex Rules	Yvette Lingat 3/20/2020		Mary Lou Beaumont	4/28/2020