

WBC LOW COUNT PROCEDURE

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| <input checked="" type="checkbox"/> St. Joseph Medical Center, Tacoma, WA | <input checked="" type="checkbox"/> St. Anthony Hospital Gig Harbor, WA | <input type="checkbox"/> Harrison Medical Center, Bremerton, WA |
| <input checked="" type="checkbox"/> St. Francis Hospital, Federal Way, WA | <input checked="" type="checkbox"/> St. Elizabeth Hospital Enumclaw, WA | <input type="checkbox"/> Harrison Medical Center, Silverdale, WA |
| <input checked="" type="checkbox"/> St. Clare Hospital Lakewood, WA | <input type="checkbox"/> Highline Medical Center Burien, WA | <input type="checkbox"/> PSC |

PURPOSE

To provide instructions for reporting CBC results with WBC counts less than 1.0 K/mcl.

SPECIMEN/EQUIPMENT REQUIREMENTS

Wrights or Wright-Giemsa stained EDTA peripheral blood smear
Microscope and immersion oil
Cellavision, SMS prepared blood smears, and SMS Wright Stain (SJMC only)

RELATED DOCUMENTS

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| R-W-HEM-1326 | Hematology Slide Review |
| R-PO-AD-0551 | Critical Value Policy |
| R-PO-HEM-0108 | Pathologist Review or Blood and Body Fluids-Criteria |
| R-W-HEM-0109 | Pathologist Review of Blood and Body Fluids-Instructions |
| R-F-HEM-0110 | Pathologist Review of Blood and Body Fluids- Worksheet |
| J-W-HEM-2010 | CellaVision – Reviewing and Editing Results |
| J-W-HEM-2017 | DxH SMS – Sample Processing |
| R-W-HEM-1431 | Manual Differential |

INSTRUCTIONS

- Follow instructions for scanning the slide in work instruction, Hematology Slide Review Procedure.
- Perform a WBC estimate, if needed to validate the instrument WBC count.

WBC COUNTS 0.4 OR GREATER

- Determine if an Auto-Diff with Slide Review or Manual Diff will be reported as indicated by the criteria below and add the appropriate test in the LIS.
- Special care must be taken in this assessment for patient specimens from oncology and critical care units.

REPORTING RESULTS

Differential Criteria

- The AUTO-DIFF (with a Slide Review) may be reported if:
 - WBCs are sufficient to identify each cell type that has results on the printout.

- WBCs are proportional to the percentages for each cell type.
- A MAN DIFF is not indicated using slide review criteria.
- The WBC count has been validated by a slide estimate.
- 2 or fewer Meta seen
- 2 or fewer Myelo seen
- 2 or fewer NRBCs (Check if WBC count needs correction).
- 5 or fewer Variant Lymph
- 1 or fewer Plasma Cell

2. A MANUAL DIFF is required if:

- WBCs are QNS to identify each cell type on the printout.
- WBCs appear out of proportion to the percentages.
- Unusual or Abnormal cells are present.
- more than 2 Meta or Myelo seen
- more than 2 NRBC's (Check if WBC count needs correction).
- more than 5 Variant Lymph
- more than 2 Plasma Cell
- Pro's, Blasts, Unidentifiable, Abnormal cells, Any Type

WBC COUNTS LESS THAN 0.4 ON THE MICROSCOPE (All Sites)

- Determine if there are sufficient cells to perform a 50 cell differential.
 - The default number of cells to count when performing a manual differential is 100. To change this, click on the "Change" button to change the number of cells to count.
 - Type the total number of cells counted in the differential (50) into the "Number of Cells to Count" field.
 - Perform the WBC differential using the keys that are assigned to each cell type on the numeric keypad.
 - The LIS will automatically correct the differential by calculating the Relative Percent for each WBC type.
 - For example, if 20 lymphocytes were counted and the total WBCs counted in the differential was 50, the LIS will correct the Relative Lymphocytes % to be reported as 40.
 - Add a chartable comment to the results "Differential performed on 50 cells."
- If a differential is not able to be performed, perform the following steps:
 - Modify the Diff in LIS as "No Diff"
 - Add a Slide Review and report according to Hematology Slide Review procedure
- If NO abnormal or immature cells were seen on the slide:
 - Enter the following chartable phrases into the LIS at the test level on the WBC result line:
 - TFC (Too Few Cells to Perform Differential)
 - IMNO (No immature or abnormal cells seen.)
- If Immature or abnormal cells were seen on the slide, enter the following chartable phrases into the LIS at the test level on the WBC result line:
 - TFC (Too Few Cells to Perform Differential)
 - IMPR (Abnormal or Immature cells present)

Note: While in the Slide Review result screen, select "Yes" for path review. This will add a path review and the path review mnemonic, "Slide submitted for pathologist review".

Note: If requested by the provider, you may give an indication of the predominant cell type (example, lymphocytes) as a chartable comment in the LIS.

WBC COUNTS LESS THAN 0.4 ON THE CELLAVISION (SJMC only)

1. Load all three patient slides from the SMS onto the Cellavision.
2. Perform WBC differentials on all three slides.
3. Perform RBC and Plt analysis on one slide, and choose “Exclude RBC Analysis” and then “Exclude PLT Analysis” on the remaining 2 slides.
 - Do not select the green check mark to “agree with instrument “in any field, or you will not be able to merge the slides.
4. Sign all slides.
5. Once all slides are signed, the Cellavision will now prompt you to sign the order. This will merge all three differentials together.
6. If the number of cells in the merged differential is <95 , but ≥ 50 , report the differential with a comment: “Due to low WBC count, differential performed on (#) cells.”
7. Transmit the results to the LIS.
8. If <50 cells are seen, refer to the procedure above for WBC counts less than 0.4 on the microscope.

PROCEDURE NOTE

All Critical Values must be called, see Critical Value Policy.
Order a pathologist slide review, if indicated.

REFERENCES

Suggested Criteria for Action Following Automated CBC and WBC Differential Analysis, The International Consensus Group for Hematology Review, International Society for Laboratory Hematology, 2007.
Operation Manual, LH750, Beckman Coulter.

