HEMATOLOGY SLIDE REVIEW PROCEDURE

☒ St. Joseph Medical Center, Tacoma, WA	☒ St. Anthony Hospital Gig Harbor, WA	☐ Harrison Medical Center, Bremerton, WA
☒ St. Francis Hospital, Federal Way, WA	☒ St. Elizabeth Hospital Enumclaw, WA	☐ Harrison Medical Center, Silverdale, WA
☒ St. Clare Hospital Lakewood, WA	☐ Highline Medical Center Burien, WA	☐ PSC

PURPOSE

To provide instructions for peripheral smear slide review and reporting of results.

RELATED DOCUMENTS

M-PO-HEM-1438	CBC Review Criteria
J-W-HEM-2010	Cellavision – Reviewing and Editing Results
R-W-HEM-1404	Cell Morphology Grading
J-W-HEM-2017	SMS – Sample Processing
J-PO-HEM-1577	DXH CBC Review Criteria
J-W-HEM-1581	DXH – WBC Interferences
M-W-HEM-1320	LH – Cellular Interference
R-W-HEM-1418	Peripheral Smear Preparation
R-W-HEM-1421	Platelet Count Estimates
J-W-HEM-1416	Using the Midas Stainer
R-PO-HEM-0108	Pathologist Review of Blood and Body Fluids- Criteria
R-F-HEM-0110	Pathologist Review of Blood and Body Fluids- Worksheet
R-W-HEM-0109	Pathologist Review of Blood and Body Fluids- Instructions

SPECIMEN/ EQUIPMENT REQUIREMENTS

Wright's or Wright-Giemsa stained EDTA- peripheral blood smear
Hematology analyzer result printout
Microscope and Immersion oil

INSTRUCTIONS

1. Review the instrument results.

2. If a slide review is indicated by the work instruction for CBC Review Criteria, prepare a push slide and stain with Wright-Giemsa, or place specimen on the SMS which will make the slide and stain it with Wright stain.

3. Review the slide and results at the microscope bench or at the Cellavision, paying special attention to patient samples from Oncology or Critical Care units.

4. Review the slide as indicated below.

Using the 10x (low) Objective:

5. Scan for fibrin, platelet clumps, and NRBC's. The specimen may need recollection if large platelet clumps are present.

Using the 50x (Oil) Objective:

6. Scan the WBCs and perform an estimate to confirm the WBC count.

   LH750/DXH users only: The LH and DXH will correct the WBC count if a Cellular Interference flag is present. A slide estimate is essential to confirm if the WBC or UWBC is correctly reported.

7. Review the WBC cell types on the slide and confirm they are in proportion to the percentages on the printout.

8. Look for unusual, atypical or abnormal WBCs. If WBC inclusions are present, order a path review.

9. Evaluate and document WBC morphology. See Cell Morphology Grading procedure.

Using the 100x (Oil) Objective:

10. Estimate the platelet count from the slide and confirm the printed count.

11. Evaluate and document platelet morphology. See Cell Morphology Grading procedure.

12. Evaluate and document RBC Morphology. See Cell Morphology Grading procedure.

    Note: For LH750/Remisol users: Definitive Flags for Aniso, Hypo, Macro and Micro do not print and are reviewed on the slide using the Indices and RDW.
    Note: If blood parasites are seen, call as a critical value and order a path review.

13. If no morphology entries are made, the results default to normal.

14. If extracellular bacteria or yeast are seen, confirm presence with a repeated slide to rule out stain contamination before reporting. Scan for intracellular bacteria or yeast, if present, call critical value and order a path review

REPORTING RESULTS

- Perform and document WBC estimate, platelet estimate, and morphology for WBCs, RBCs and Platelets on all slide reviews. Evaluate whether the automated differential may be reported based on the following criteria. If the results do not meet the auto-diff reporting criteria, a manual differential must be performed.

Auto-Diff Reporting Criteria
WBCs are proportional to percentages for each cell type.
A manual differential 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 NRBC's (Check if WBC count needs correction).
5 or fewer Variant Lymph.
1 or fewer Plasma Cell.

- Add and perform a slide review in the LIS if the results meet the above Auto Diff Reporting Criteria.

Manual-Diff Reporting Criteria
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 2 Plasma Cell
More than 5 Variant Lymph
Pro's, Blasts, Unidentifiable, Abnormal Cells, Any Type

- Add and perform a Manual Diff in the LIS if the results do not meet the above Auto Diff Reporting Criteria.

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.