PURPOSE

Non-normal peripheral blood smears meeting certain criteria will be reviewed by a pathologist for differential verification, additional workup, and/or specific diagnoses.

DEFINITIONS N/A

PROCEDURE:

1. Refer cases to the pathologist for **INITIAL PRESENTATION** of any of the following:
2. WBC Parameters:

|  |  |
| --- | --- |
| **PARAMETER** | **PATH REVIEW CRITERIA** |
| WBC (x 109/L) | > 40.0 or < 2.0 on non-Oncology patient |
| Monocytes (x 109/L) | ≥ 2.0 |
| Lymphocytes (x 109/L) | ≥ 5.0 AND patient age > 50 years |
| Basophils (%) | ≥4% |
| Promyelocytes | Any |
| Blasts or Unknown cells | Any |
| Smudge cells | Many |

1. RBC Parameters:

|  |  |
| --- | --- |
| **PARAMETER** | **PATH REVIEW CRITERIA** |
| Hgb (g/dL) | ≤6.0 |
| Any RBC morphology | 3+ AND MCV <70 |
| NRBC | ≥ 2 AND patient age ≥ one week |
| Sickle cells | Any |
| Schistocytes | ≥ 2+ |

1. Platelet Parameters:

|  |  |
| --- | --- |
| **PARAMETER** | **PATH REVIEW CRITERIA** |
| Platelets (x 109/L) | ≤ 50 AND Hgb ≤8.0 g/dL |

1. Any time a microorganism is seen within the peripheral smear (parasites).
2. Any time the physician requests Pathology Review.
3. Any time the physician requests flow cytometry, cytogenetic assay(s), or molecular assay(s) to evaluate hematologic or lymphoproliferative neoplasms.
4. Any time the tech is uncomfortable with the smear morphology or thinks the patient would benefit from path review.
5. Refer cases to pathologist for **REPEAT REVIEW** for the following criteria:
   1. A newly abnormal parameter or combination of parameters triggers review.
   2. If there is a substantial change AWAY FROM NORMAL in any parameter.
   3. If an abnormal smear meets criteria for initial pathologist review AND it has been six months or more since being reviewed by a pathologist.
6. Any time blasts are suspected in a new patient; it is considered a **CRITICAL VALUE** and the pathologist must be notified immediately; during off hours, notify the “on-call” pathologist.
7. Perform a manual differential on all slides sent for pathologist review.
8. Add a Path Review onto the original CBC accession.
9. Always notify the pathologist if a physician is waiting for results or if the differential is not verified.
10. When submitting to Pathology, be sure to include a completely filled out Pathologist Review Worksheet with the original accession label, the printout from the DxH, and a well-stained slide. VVMC will send their Path Reviews to FMC for review. FMC will log into Histology.
    1. If performing differential on the Cellavision, save the case in the PATH REVIEW database, and include the Cellavision printout along with the rest of the paperwork.
11. The technologist that submitted the slide should review the pathologist comment after review, initial the review form, and file appropriately.

RELATED DOCUMENTS N/A

REFERENCES GL Gulati, M Alomari, W Kocher, R Schwarting. Criteria for Blood Smear Review. Laboratory Medicine 2002;5(33):374-377.

PW Barnes, SL McFadden, SJ Machin, E Simson. The International Consensus Group for Hematology Review: Suggested Criteria for Action Following Automated CBC and WBC Differential Analysis. Laboratory Hematology 2005; 11:83-90.