**Blood Cell Identification – Ungraded**

**BCP-08**

|  |  |  |  |
| --- | --- | --- | --- |
| **Identification** | **Referees** | **Participants** | **Evaluation** |
| **N** | **%** | **N** | **%** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Malignant lymphoid cell (other than blast) | 133 | 73.9 | 3909 | 74.6 | Educational |
| Lymphocyte, reactive (includes plasmacytoid and | 23 | 12.8 | 688 | 13.1 | Educational |
| immunoblastic forms) |  |  |  |  |  |
| Immature or abnormal cell, would refer for | 11 | 6.1 | 266 | 5.1 | Educational |
| identification |  |  |  |  |  |
| Lymphocyte | 9 | 5.0 | 195 | 3.7 | Educational |
| Plasma cell, morphologically | 2 | 1.1 | 88 | 1.7 | Educational |
| mature/abnormal/containing inclusion (eg, |  |  |  |  |  |
| Dutcher body, Russell body) |  |  |  |  |  |
| Lymphocyte, large granular | 1 | 0.6 | 55 | 1.1 | Educational |
| Basket cell/smudge cell | 1 | 0.6 | 2 | 0.0 | Educational |

The arrowed cells are malignant lymphoid cells (hairy cells), as correctly identified by 73.9% of the referees and 74.6% of the participants. Hairy cells, typical of hairy cell leukemia, are round to ovoid lymphoid cells that measure 12 to 20 μm in diameter (larger than normal, mature lymphocytes). Their N:C ratio ranges from 4:1 to 2:1, and they contain moderate to abundant pale blue to gray-blue cytoplasm. The cell borders are often indistinct, secondary to the presence of characteristic elongated, fine (hairy), cytoplasmic projections. These projections are frequently irregular and may be thick, blunted, smudged, serrated, or short. The cytoplasm typically is agranular, although occasional fine azurophilic granules may be seen. The nuclei of hairy cells are usually oval to indented, but may be folded, bean-shaped, angulated, or dumbbell-shaped and are either centrally or eccentrically located. The chromatin is usually homogeneous, finer than in normal lymphocytes, and evenly distributed with scant intervening parachromatin. Nucleoli, if present, are generally small and single. Occasional cells may have multiple small nucleoli or a single large nucleolus.

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