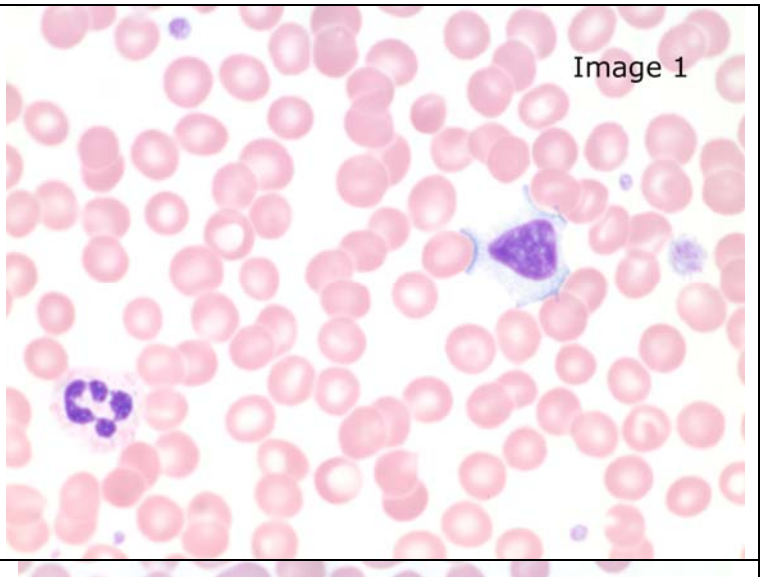
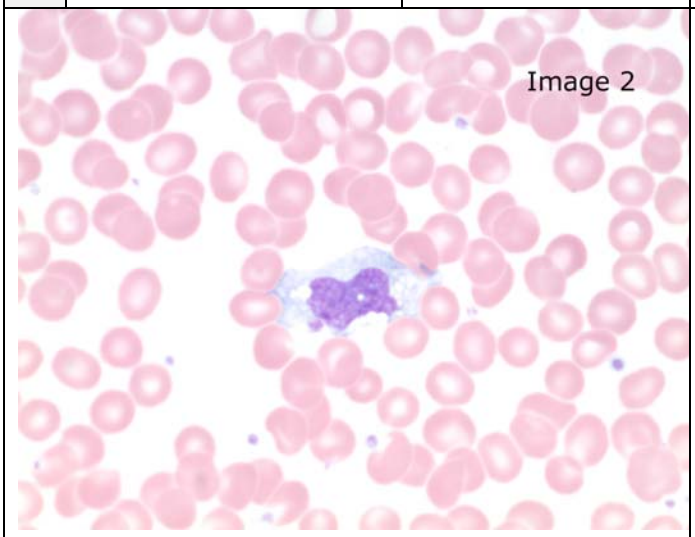
NEW YORK STATE CYTOHEMATOLOGY PROFICIENCY TEST PROGRAM
Glass Slide - November 2016

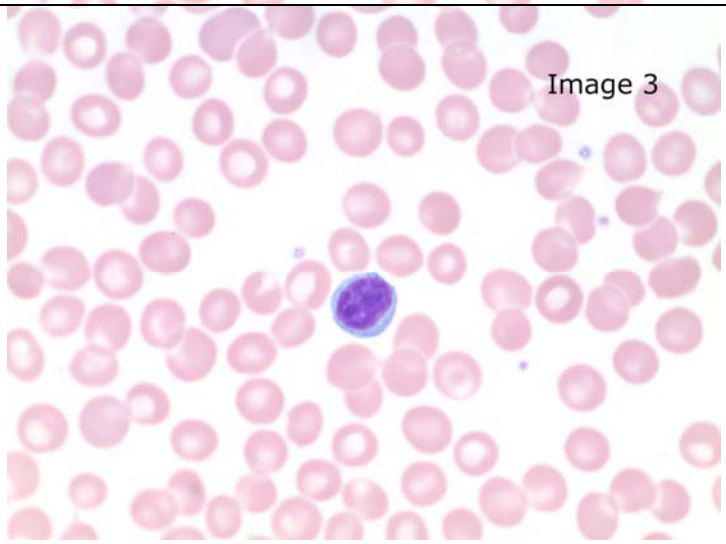
Results from this proficiency test event are available at:
http://www.wadsworth.org/regulatory/clep/pt/summaries

SLIDE 016
59 year-old male
DIAGNOSIS: Asymptomatic

WBC (10^9/L)	7.4
RBC (10^{12}/L)	4.78
Hemoglobin (g/dL)	15.1
Hematocrit (%)	43.6
MCV (fL)	91.2
MCH (pg)	31.6
MCHC (g/dL)	34.6
RDW (%)	12.2
Platelet count (10^9/L)	308







Slide 016 was prepared from the peripheral blood obtained from a 59 year-old asymptomatic male. The complete blood cell count values, shown above, were within accepted reference intervals. The automated differential included 51.7% neutrophils and 34.0% lymphocytes. The three images above depict the types of cells present in the case, there were no significant findings reported by participants. Image 1 includes a segmented neutrophil and a reactive/atypical lymphocyte. The central 79 percentile for the participant range for reactive/atypical lymphocyte in this case was 1 -14 and the median count was four. Participants that reported no reactive/atypical lymphocytes and those that reported greater than fourteen should review the smear.

Slide: 016

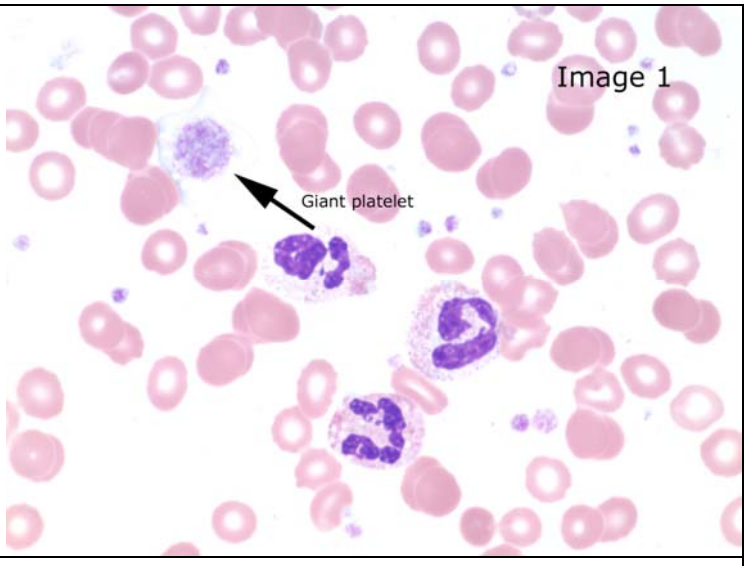
Cell Classification or Finding	Expected Range	Participant Median	Participant Range
Blast cell not classified	0 - 0	0	0 - 0
Myeloblast/Promyelocyte	0 - 0	0	0 - 0
Lymphoblast/Prolymphocyte	0 - 0	0	0 - 0
Monoblast/Promonocyte	0 - 0	0	0 - 0
Erythroblast	0 - 0	0	0 - 0
Lymphoma/Sezary cell	0 - 0	0	0 - 0
Hairy cell	0 - 0	0	0 - 0
Myelocyte	0 - 0	0	0 - 0
Metamyelocyte	0 - 0	0	0 - 0
Band neutrophil	0 - 3	0	0 - 3
Segmented neutrophil	44 - 61	53	44 - 62
*[Total neutrophils]	44 - 61	53	44 - 62
Eosinophil	0 - 6	3	0 - 6
Basophil	0 - 2	1	0 - 2
Lymphocyte	19 - 40	30	19 - 42
Atypical lymphocyte	1 - 14	4	0 - 14
Monocyte	1 - 13	8	1 - 13
Plasma cell	0 - 0	0	0 - 0
NRBC / 100 WBC	0 - 0	0	0 - 0

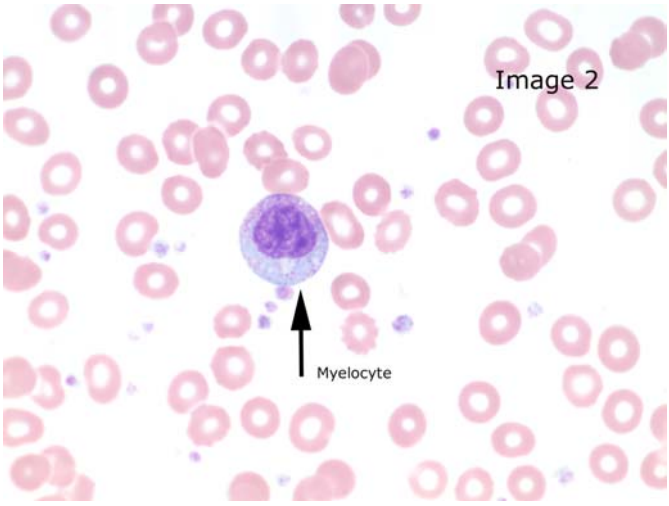
Erythrocyte Morphology	Expected Result	Participant Results			
Anisocytosis	None	None (87%)	Slight (9%)	Moderate (0%)	Marked (0%)
Poikilocytosis	None	None (92%)	Slight (3%)	Moderate (0%)	Marked (0%)
Macrocytosis	None	None (90%)	Slight (5%)	Moderate (0%)	Marked (0%)
Microcytosis	None	None (94%)	Slight (2%)	Moderate (0%)	Marked (0%)
Hypochromia	None	None (97%)	Slight (3%)	Moderate (0%)	Marked (0%)
Polychromasia	None	None (100%)	Slight (0%)	Moderate (0%)	Marked (0%)

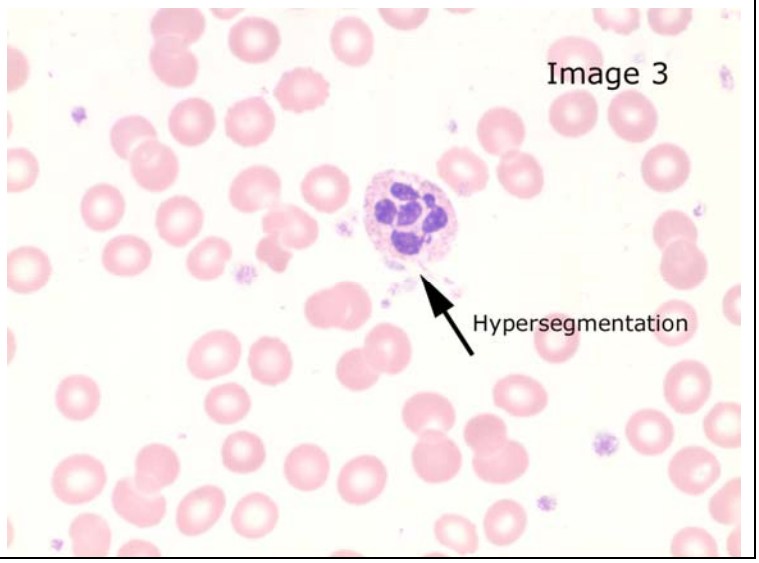
Cell Classification or Finding	Expected Result	Participant Results	
Reduced number of platelets	Absent	Absent(100%)	Present(0%)
Increased number of platelets	Absent	Absent(95%)	Present(5%)
Phagocytosis of platelet(s)	Absent	Absent(100%)	Present(0%)
Bizarre or irregular platelets	Absent	Absent(100%)	Present(0%)
Clumped platelets	Absent	Absent(99%)	Present(1%)
Giant platelets	Absent	Absent(81%)	Present(19%)
Platelet satellitosis	Absent	Absent(100%)	Present(0%)
Auer rods	Absent	Absent(100%)	Present(0%)
Dohle bodies	Absent	Absent(100%)	Present(0%)
Hypersegmentation	Absent	Absent(99%)	Present(1%)
Pelger Huet anomaly	Absent	Absent(100%)	Present(0%)
Smudge / Basket cells	Absent	Absent(97%)	Present(3%)
Toxic granulation	Absent	Absent(99%)	Present(1%)
Acanthocytes	Absent	Absent(99%)	Present(1%)
Basophilic stippling	Absent	Absent(100%)	Present(0%)
Blister cells (pre keratocytes)	Absent	Absent(100%)	Present(0%)
Cabot rings	Absent	Absent(100%)	Present(0%)
Echinocytes (crenated/burr cells)	Absent	Absent(99%)	Present(1%)
Elliptocytes (ovalocytes)	Absent	Absent(98%)	Present(2%)
Howell-Jolly bodies	Absent	Absent(100%)	Present(0%)
Pappenheimer bodies	Absent	Absent(100%)	Present(0%)
Red cell agglutinates	Absent	Absent(100%)	Present(0%)
Rouleaux	Absent	Absent(99%)	Present(1%)
Schistocytes	Absent	Absent(100%)	Present(0%)
Schuffner's granules	Absent	Absent(100%)	Present(0%)
Sickle cells (drepanocytes)	Absent	Absent(100%)	Present(0%)
Spherocytes	Absent	Absent(99%)	Present(1%)
Stomatocytes	Absent	Absent(100%)	Present(0%)
Target cells (codocytes)	Absent	Absent(100%)	Present(0%)
Tear drop cells (dacrocytes)	Absent	Absent(100%)	Present(0%)
Bacteria	Absent	Absent(100%)	Present(0%)
Fungi/yeast	Absent	Absent(100%)	Present(0%)
Malaria/Babesiosis	Absent	Absent(100%)	Present(0%)
Stain precipitate	Absent	Absent(98%)	Present(2%)
Phagocytosis of red cell(s)	Absent	Absent(100%)	Present(0%)

SLIDE 017
54 year-old male
DIAGNOSIS: Unknown

WBC (10^9/L)	27.2
RBC (10^{12}/L)	2.12
Hemoglobin (g/dL)	6.1
Hematocrit (%)	18.0
MCV (fL)	84.9
MCH (pg)	28.8
MCHC (g/dL)	33.9
RDW (%)	13.8
Platelet count (10^9/L)	546







Slide 017 was prepared from the peripheral blood obtained from a 54 year-old male. The diagnosis was unknown at the time of specimen collection. The complete blood cell count results, shown above, include increased white blood cell and platelet counts. The automated differential included eighty-nine percent neutrophils (participant median in this proficiency test was 87). Few immature white blood cells were reported by participants, the participant range for both myelocyte (Image 2) and metamyelocyte was 0 – 2. The platelet count was increased (546,000) as correctly identified by seventy-one percent of participants and giant platelets (Image 1) were present as reported by 54% of the participants. Additional findings reported by participating laboratories included Döhle bodies, hypersegmentation (Image 3), and elliptocytes. The majority of participants did not report the presence of these findings, further review of several quality control slides confirmed their presence in low volume.

The red blood cell count in this case is low and the mean corpuscular volume (MCV) is within acceptable limits suggestive of a normocytic anemia. Common causes of normocytic anemia with normal morphology include hemorrhage (blood loss), unstable hemoglobins, infections, and chronic disease. While not the definitive diagnosis in this case, anemia of chronic disease (ACD), also known as anemia of inflammatory response, is the second most common form of anemia second to iron-deficiency anemia.

Slide: 017

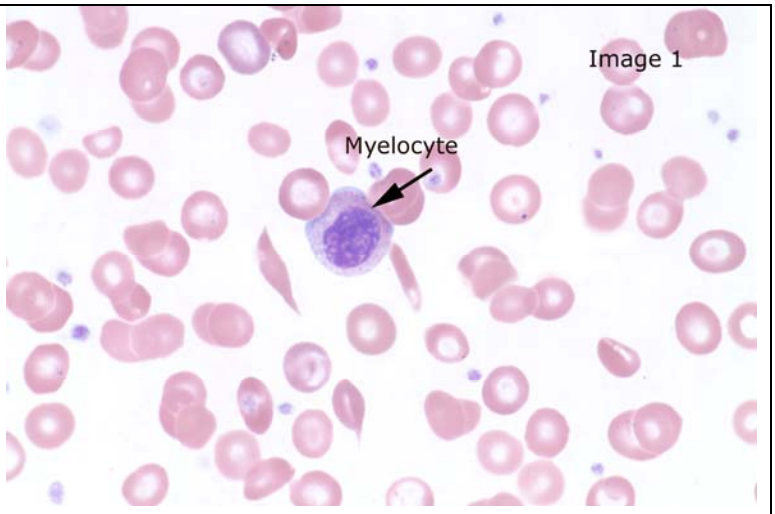
Cell Classification or Finding	Expected Range	Participant Median	Participant Range
Blast cell not classified	0 - 0	0	0 - 0
Myeloblast/Promyelocyte	0 - 0	0	0 - 0
Lymphoblast/Prolymphocyte	0 - 0	0	0 - 0
Monoblast/Promonocyte	0 - 0	0	0 - 0
Erythroblast	0 - 0	0	0 - 0
Lymphoma/Sezary cell	0 - 0	0	0 - 0
Hairy cell	0 - 0	0	0 - 0
Myelocyte	0 - 2	0	0 - 2
Metamyelocyte	0 - 2	0	0 - 2
Band neutrophil	0 - 13	4	0 - 14
Segmented neutrophil	73 - 94	87	71 - 95
*[Total neutrophils]	86 - 97	91	85 - 97
Eosinophil	0 - 1	0	0 - 1
Basophil	0 - 1	0	0 - 1
Lymphocyte	0 - 7	4	0 - 7
Atypical lymphocyte	0 - 2	0	0 - 2
Monocyte	0 - 6	3	0 - 6
Plasma cell	0 - 0	0	0 - 1
NRBC / 100 WBC	0 - 1	0	0 - 1

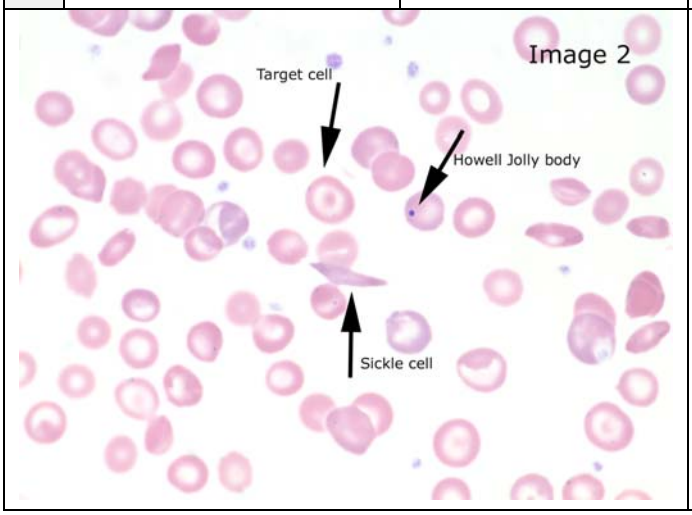
Erythrocyte Morphology	Expected Result	Participant Results			
Anisocytosis	None	None (46%)	Slight (44%)	Moderate (7%)	Marked (0%)
Poikilocytosis	None	None (67%)	Slight (26%)	Moderate (3%)	Marked (0%)
Macrocytosis	None	None (86%)	Slight (8%)	Moderate (2%)	Marked (0%)
Microcytosis	None	None (66%)	Slight (29%)	Moderate (3%)	Marked (0%)
Hypochromia	Slight	None (21%)	Slight (45%)	Moderate(32%)	Marked (3%)
Polychromasia	None	None (63%)	Slight (37%)	Moderate (0%)	Marked (0%)

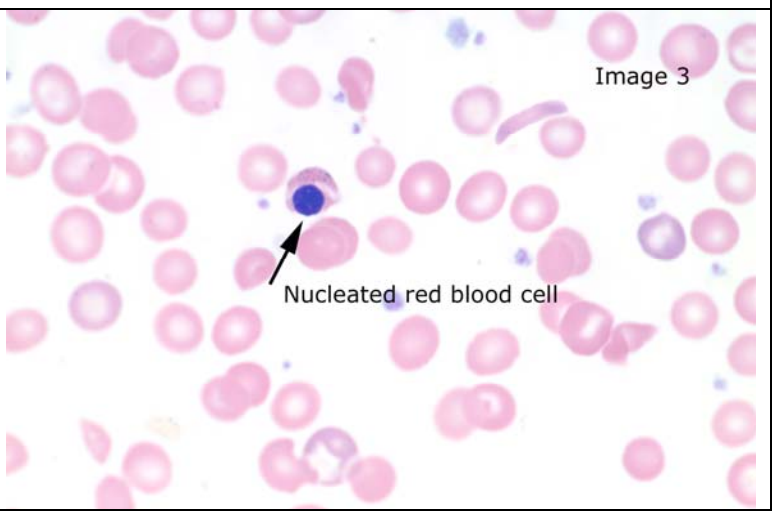
Cell Classification or Finding	Expected Result	Participant Results	
Reduced number of platelets	Absent	Absent(100%)	Present(0%)
Increased number of platelets	Present	Absent(29%)	Present(71%)
Phagocytosis of platelet(s)	Absent	Absent(100%)	Present(0%)
Bizarre or irregular platelets	Absent	Absent(97%)	Present(3%)
Clumped platelets	Absent	Absent(82%)	Present(18%)
Giant platelets	Present	Absent(46%)	Present(54%)
Platelet satellitosis	Absent	Absent(100%)	Present(0%)
Auer rods	Absent	Absent(100%)	Present(0%)
Dohle bodies	Absent	Absent(89%)	Present(11%)
Hypersegmentation	Absent	Absent(89%)	Present(11%)
Pelger Huet anomaly	Absent	Absent(100%)	Present(0%)
Smudge / Basket cells	Absent	Absent(96%)	Present(4%)
Toxic granulation	Absent	Absent(94%)	Present(6%)
Acanthocytes	Absent	Absent(99%)	Present(1%)
Basophilic stippling	Absent	Absent(93%)	Present(7%)
Blister cells (pre keratocytes)	Absent	Absent(100%)	Present(0%)
Cabot rings	Absent	Absent(100%)	Present(0%)
Echinocytes (crenated/burr cells)	Absent	Absent(74%)	Present(26%)
Elliptocytes (ovalocytes)	Absent	Absent(89%)	Present(11%)
Howell-Jolly bodies	Absent	Absent(100%)	Present(0%)
Pappenheimer bodies	Absent	Absent(100%)	Present(0%)
Red cell agglutinates	Absent	Absent(100%)	Present(0%)
Rouleaux	Absent	Absent(80%)	Present(20%)
Schistocytes	Absent	Absent(88%)	Present(12%)
Schuffner's granules	Absent	Absent(100%)	Present(0%)
Sickle cells (drepanocytes)	Absent	Absent(100%)	Present(0%)
Spherocytes	Absent	Absent(93%)	Present(7%)
Stomatocytes	Absent	Absent(100%)	Present(0%)
Target cells (codocytes)	Absent	Absent(92%)	Present(8%)
Tear drop cells (dacrocytes)	Absent	Absent(97%)	Present(3%)
Bacteria	Absent	Absent(100%)	Present(0%)
Fungi/yeast	Absent	Absent(100%)	Present(0%)
Malaria/Babesiosis	Absent	Absent(100%)	Present(0%)
Stain precipitate	Absent	Absent(99%)	Present(1%)
Phagocytosis of red cell(s)	Absent	Absent(100%)	Present(0%)

SLIDE 018
35 year-old male
DIAGNOSIS: Sickle Cell Anemia

WBC (10^9/L)	16.8
RBC (10^{12}/L)	2.53
Hemoglobin (g/dL)	7.3
Hematocrit (%)	21.9
MCV (fL)	86.6
MCH (pg)	28.9
MCHC (g/dL)	33.3
RDW (%)	18.7
Platelet count (10^9/L)	365







Slide 018 was prepared from the peripheral blood obtained from a 35 year-old male with sickle cell disease. The clinically significant findings in this case as reported by participants and as would be expected in such a case included sickle cells, Howell-Jolly bodies, target cells, and nucleated red blood cells (Images 2 & 3). Seventy-four participants (31%) did not report the presence of sickle cells and should review the case.

Also reported by participants were band neutrophils, metamyelocytes and myelocytes (Image 1). Erythrocyte morphological findings were expected and reported by participants. The findings included polychromasia as reported “slight” by sixty-five percent (154) of the participants, hypochromia as reported “moderate” by forty-two percent (100) of the participants. Both findings can be seen in the images above.

Slide: 018

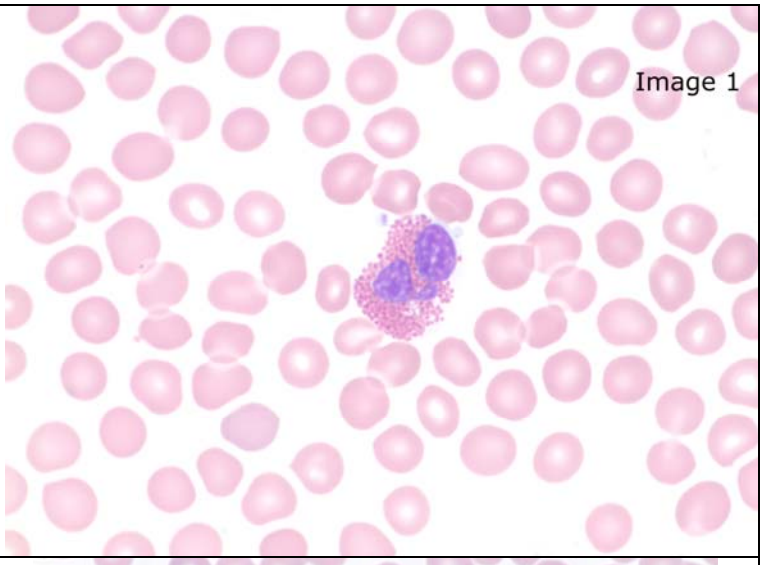
Cell Classification or Finding	Expected Range	Participant Median	Participant Range
Blast cell not classified	0 - 0	0	0 - 0
Myeloblast/Promyelocyte	0 - 0	0	0 - 0
Lymphoblast/Prolymphocyte	0 - 0	0	0 - 0
Monoblast/Promonocyte	0 - 0	0	0 - 0
Erythroblast	0 - 0	0	0 - 0
Lymphoma/Sezary cell	0 - 0	0	0 - 0
Hairy cell	0 - 0	0	0 - 0
Myelocyte	0 - 1	0	0 - 1
Metamyelocyte	0 - 1	0	0 - 1
Band neutrophil	0 - 1	0	0 - 2
Segmented neutrophil	46 - 65	56	45 - 65
*[Total neutrophils]	47 - 65	57	45 - 65
Eosinophil	4 - 14	9	4 - 15
Basophil	0 - 2	0	0 - 2
Lymphocyte	16 - 34	25	16 - 34
Atypical lymphocyte	0 - 3	0	0 - 3
Monocyte	1 - 12	8	1 - 12
Plasma cell	0 - 0	0	0 - 0
NRBC / 100 WBC	0 - 8	4	0 - 8

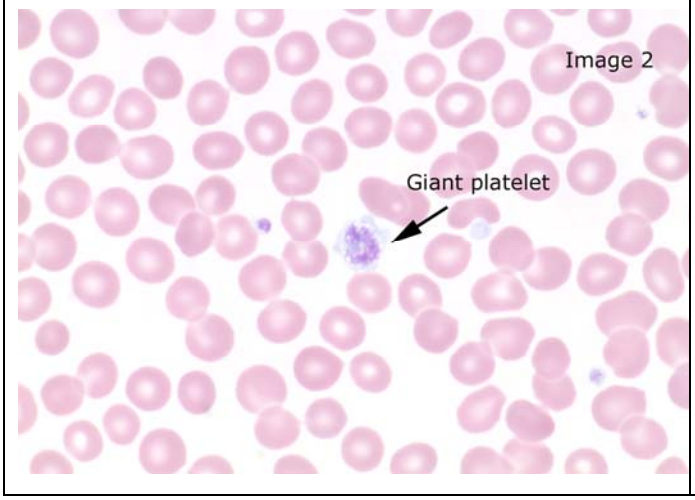
Erythrocyte Morphology	Expected Result	Participant Results			
Anisocytosis	Moderate	None (4%)	Slight (34%)	Moderate (58%)	Marked (3%)
Poikilocytosis	Moderate	None (16%)	Slight (34%)	Moderate (44%)	Marked (2%)
Macrocytosis	None	None (48%)	Slight (39%)	Moderate (10%)	Marked (0%)
Microcytosis	None	None (54%)	Slight (36%)	Moderate (8%)	Marked (0%)
Hypochromia	Moderate	None (18%)	Slight (34%)	Moderate (42%)	Marked (6%)
Polychromasia	Slight	None (16%)	Slight (65%)	Moderate (18%)	Marked (1%)

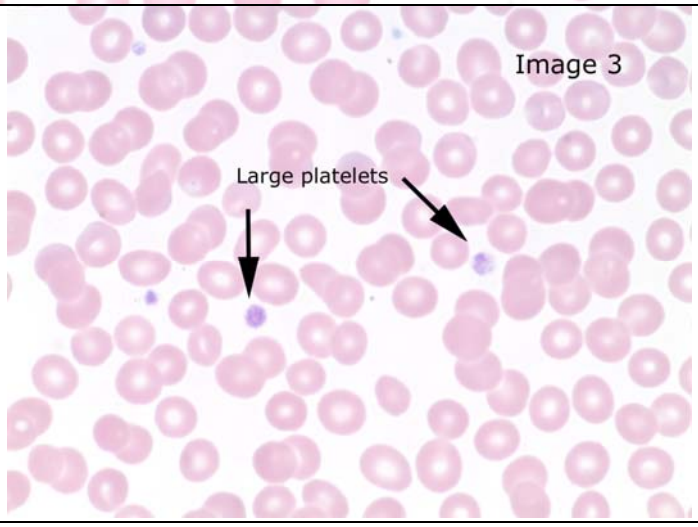
Cell Classification or Finding	Expected Result	Participant Results	
Reduced number of platelets	Absent	Absent(99%)	Present(1%)
Increased number of platelets	Absent	Absent(82%)	Present(18%)
Phagocytosis of platelet(s)	Absent	Absent(100%)	Present(0%)
Bizarre or irregular platelets	Absent	Absent(98%)	Present(2%)
Clumped platelets	Absent	Absent(100%)	Present(0%)
Giant platelets	Absent	Absent(58%)	Present(42%)
Platelet satellitosis	Absent	Absent(100%)	Present(0%)
Auer rods	Absent	Absent(100%)	Present(0%)
Dohle bodies	Absent	Absent(99%)	Present(1%)
Hypersegmentation	Absent	Absent(96%)	Present(4%)
Pelger Huet anomaly	Absent	Absent(100%)	Present(0%)
Smudge / Basket cells	Absent	Absent(98%)	Present(2%)
Toxic granulation	Absent	Absent(99%)	Present(1%)
Acanthocytes	Absent	Absent(97%)	Present(3%)
Basophilic stippling	Absent	Absent(74%)	Present(26%)
Blister cells (pre keratocytes)	Absent	Absent(99%)	Present(1%)
Cabot rings	Absent	Absent(100%)	Present(0%)
Echinocytes (crenated/burr cells)	Absent	Absent(97%)	Present(3%)
Elliptocytes (ovalocytes)	Present	Absent(32%)	Present(68%)
Howell-Jolly bodies	Present	Absent(38%)	Present(62%)
Pappenheimer bodies	Absent	Absent(76%)	Present(24%)
Red cell agglutinates	Absent	Absent(100%)	Present(0%)
Rouleaux	Absent	Absent(96%)	Present(4%)
Schistocytes	Absent	Absent(58%)	Present(42%)
Schuffner's granules	Absent	Absent(100%)	Present(0%)
Sickle cells (drepanocytes)	Present	Absent(31%)	Present(69%)
Spherocytes	Absent	Absent(88%)	Present(12%)
Stomatocytes	Absent	Absent(93%)	Present(7%)
Target cells (codocytes)	Present	Absent(4%)	Present(96%)
Tear drop cells (dacrocytes)	Absent	Absent(90%)	Present(10%)
Bacteria	Absent	Absent(100%)	Present(0%)
Fungi/yeast	Absent	Absent(100%)	Present(0%)
Malaria/Babesiosis	Absent	Absent(100%)	Present(0%)
Stain precipitate	Absent	Absent(100%)	Present(0%)
Phagocytosis of red cell(s)	Absent	Absent(100%)	Present(0%)

SLIDE 019
65 year-old male
DIAGNOSIS: Asymptomatic

WBC (10^9/L)	6.9
RBC (10^{12}/L)	5.34
Hemoglobin (g/dL)	15.5
Hematocrit (%)	46.1
MCV (fL)	86.3
MCH (pg)	29.0
MCHC (g/dL)	33.6
RDW (%)	14.0
Platelet count (10^9/L)	215







Slide 019 was prepared from the peripheral blood obtained from a 65 year-old asymptomatic male. No clinically significant findings were reported by the majority of participants with the exception of giant platelets, reported present by forty-two percent (100) of the participating laboratories. The widely accepted definition of a giant platelet is one that is greater in size than that of a normal red blood cell. There were many large platelets present in this case and few giant platelets as shown in images two and three above. Giant platelets are associated with many disease conditions including myelodysplastic syndromes, leukemia, splenectomy, severe leukemoid reaction and rare inherited conditions including May-Hegglin anomaly and Bernard-Soulier syndrome.

Slide: 019

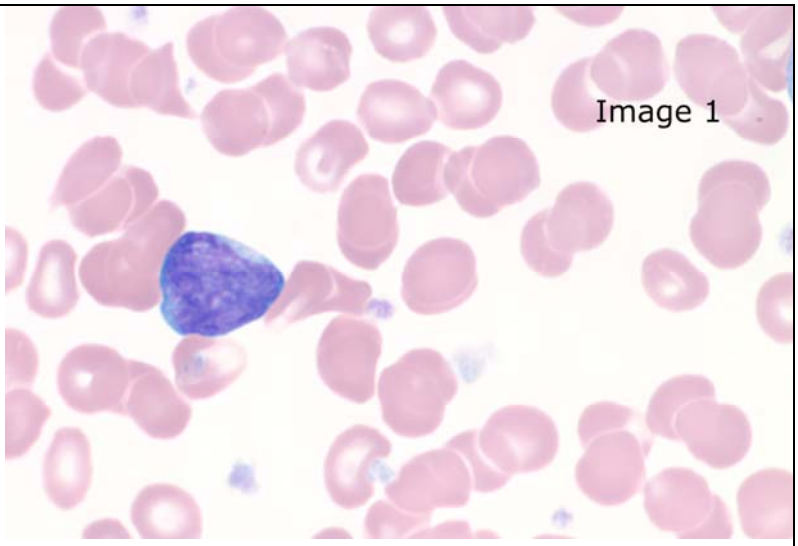
Cell Classification or Finding	Expected Range	Participant Median	Participant Range
Blast cell not classified	0 - 0	0	0 - 0
Myeloblast/Promyelocyte	0 - 0	0	0 - 0
Lymphoblast/Prolymphocyte	0 - 0	0	0 - 0
Monoblast/Promonocyte	0 - 0	0	0 - 0
Erythroblast	0 - 0	0	0 - 0
Lymphoma/Sezary cell	0 - 0	0	0 - 0
Hairy cell	0 - 0	0	0 - 0
Myelocyte	0 - 0	0	0 - 0
Metamyelocyte	0 - 0	0	0 - 0
Band neutrophil	0 - 2	0	0 - 2
Segmented neutrophil	48 - 67	57	48 - 68
*[Total neutrophils]	49 - 67	57	48 - 68
Eosinophil	0 - 5	2	0 - 5
Basophil	0 - 2	0	0 - 2
Lymphocyte	18 - 37	28	16 - 37
Atypical lymphocyte	0 - 10	3	0 - 13
Monocyte	1 - 13	8	1 - 13
Plasma cell	0 - 0	0	0 - 0
NRBC / 100 WBC	0 - 0	0	0 - 0

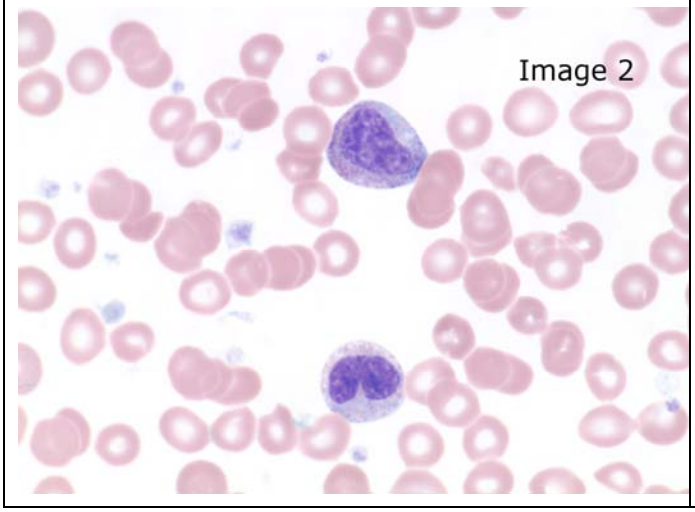
Erythrocyte Morphology	Expected Result	Participant Results			
Anisocytosis	None	None (82%)	Slight (13%)	Moderate (1%)	Marked (0%)
Poikilocytosis	None	None (90%)	Slight (3%)	Moderate (0%)	Marked (0%)
Macrocytosis	None	None (91%)	Slight (5%)	Moderate (0%)	Marked (0%)
Microcytosis	None	None (89%)	Slight (7%)	Moderate (0%)	Marked (0%)
Hypochromia	None	None (97%)	Slight (3%)	Moderate (0%)	Marked (0%)
Polychromasia	None	None (90%)	Slight (10%)	Moderate (0%)	Marked (0%)

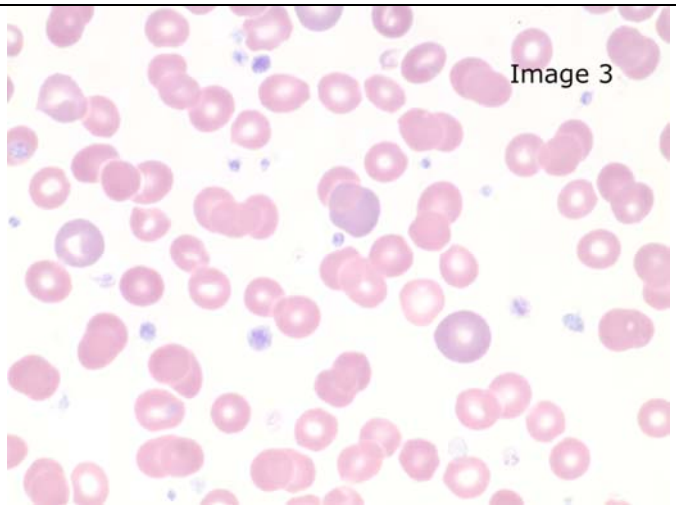
Cell Classification or Finding	Expected Result	Participant Results	
Reduced number of platelets	Absent	Absent(94%)	Present(6%)
Increased number of platelets	Absent	Absent(99%)	Present(1%)
Phagocytosis of platelet(s)	Absent	Absent(100%)	Present(0%)
Bizarre or irregular platelets	Absent	Absent(99%)	Present(1%)
Clumped platelets	Absent	Absent(99%)	Present(1%)
Giant platelets	Absent	Absent(58%)	Present(42%)
Platelet satellitosis	Absent	Absent(100%)	Present(0%)
Auer rods	Absent	Absent(100%)	Present(0%)
Dohle bodies	Absent	Absent(100%)	Present(0%)
Hypersegmentation	Absent	Absent(99%)	Present(1%)
Pelger Huet anomaly	Absent	Absent(100%)	Present(0%)
Smudge / Basket cells	Absent	Absent(96%)	Present(4%)
Toxic granulation	Absent	Absent(99%)	Present(1%)
Acanthocytes	Absent	Absent(100%)	Present(0%)
Basophilic stippling	Absent	Absent(99%)	Present(1%)
Blister cells (pre keratocytes)	Absent	Absent(100%)	Present(0%)
Cabot rings	Absent	Absent(100%)	Present(0%)
Echinocytes (crenated/burr cells)	Absent	Absent(99%)	Present(1%)
Elliptocytes (ovalocytes)	Absent	Absent(96%)	Present(4%)
Howell-Jolly bodies	Absent	Absent(100%)	Present(0%)
Pappenheimer bodies	Absent	Absent(100%)	Present(0%)
Red cell agglutinates	Absent	Absent(100%)	Present(0%)
Rouleaux	Absent	Absent(99%)	Present(1%)
Schistocytes	Absent	Absent(100%)	Present(0%)
Schuffner's granules	Absent	Absent(100%)	Present(0%)
Sickle cells (drepanocytes)	Absent	Absent(100%)	Present(0%)
Spherocytes	Absent	Absent(98%)	Present(2%)
Stomatocytes	Absent	Absent(100%)	Present(0%)
Target cells (codocytes)	Absent	Absent(99%)	Present(1%)
Tear drop cells (dacrocytes)	Absent	Absent(100%)	Present(0%)
Bacteria	Absent	Absent(100%)	Present(0%)
Fungi/yeast	Absent	Absent(100%)	Present(0%)
Malaria/Babesiosis	Absent	Absent(100%)	Present(0%)
Stain precipitate	Absent	Absent(98%)	Present(2%)
Phagocytosis of red cell(s)	Absent	Absent(100%)	Present(0%)

SLIDE 020
46 year-old male
DIAGNOSIS: Acute Myelogenous Leukemia (AML)

WBC (10^9/L)	6.2
RBC (10^{12}/L)	3.40
Hemoglobin (g/dL)	9.8
Hematocrit (%)	29.7
MCV (fL)	87.4
MCH (pg)	28.8
MCHC (g/dL)	33.0
RDW (%)	15.2
Platelet count (10^9/L)	533







Slide 020 was prepared from the peripheral blood obtained from a 46 year-old male with a history of acute myelogenous leukemia (AML). The automated differential results included 63% segmented neutrophils, 12% lymphocytes, 4% metamyelocytes, and 3% abnormal white blood cells. The participant median from this proficiency test for both myelocyte and metamyelocyte was two and the median count for band neutrophil was four. Image 2 shows the immature cell forms of the myeloid cell lineage present in this case and supports the identification of the rare blast cells (Image 1) present as myeloblasts as reported by the majority of the participants. There were very few participants that identified lymphoblast (3 participants), monoblast (2 participants), lymphoma cell (1 participant), and plasma cell (3 participants) present and should review the case.

Clinically significant findings correctly identified by the majority of the participants included increased number of platelets, polychromasia (Image 3), and giant platelets. Additional noteworthy findings reported by participants included toxic granulation, reported present by thirty-four percent (80) of the participants and basophilic stippling reported by twenty-nine percent (69) of the participating laboratories.

Slide: 020

Cell Classification or Finding	Expected Range	Participant Median	Participant Range
Blast cell not classified	0 - 5	1	0 - 5
Myeloblast/Promyelocyte	0 - 5	0	0 - 5
*[Myleblasts+Blasts not classified]	0 - 5	2	0 - 5
Lymphoblast/Prolymphocyte	0 - 0	0	0 - 0
Monoblast/Promonocyte	0 - 0	0	0 - 0
Erythroblast	0 - 0	0	0 - 0
Lymphoma/Sezary cell	0 - 0	0	0 - 0
Hairy cell	0 - 0	0	0 - 0
Myelocyte	0 - 6	2	0 - 6
Metamyelocyte	0 - 5	2	0 - 6
Band neutrophil	0 - 10	4	0 - 10
Segmented neutrophil	45 - 67	55	44 - 68
*[Total neutrophils]	48 - 69	59	48 - 69
Eosinophil	0 - 1	0	0 - 1
Basophil	0 - 2	0	0 - 2
Lymphocyte	12 - 30	20	11 - 30
Atypical lymphocyte	0 - 6	0	0 - 7
Monocyte	4 - 20	11	2 - 20
Plasma cell	0 - 0	0	0 - 0
NRBC / 100 WBC	0 - 3	0	0 - 3

Erythrocyte Morphology	Expected Result	Participant Results			
Anisocytosis	Slight	None (23%)	Slight (59%)	Moderate(16%)	Marked (0%)
Poikilocytosis	None	None (78%)	Slight (15%)	Moderate (2%)	Marked (0%)
Macrocytosis	None	None (50%)	Slight (39%)	Moderate (8%)	Marked (0%)
Microcytosis	None	None (74%)	Slight (21%)	Moderate (2%)	Marked (0%)
Hypochromia	None	None (58%)	Slight (34%)	Moderate (6%)	Marked (2%)
Polychromasia	Slight	None (15%)	Slight (72%)	Moderate(13%)	Marked (0%)

Cell Classification or Finding	Expected Result	Participant Results	
Reduced number of platelets	Absent	Absent(100%)	Present(0%)
Increased number of platelets	Present	Absent(30%)	Present(70%)
Phagocytosis of platelet(s)	Absent	Absent(100%)	Present(0%)
Bizarre or irregular platelets	Absent	Absent(87%)	Present(13%)
Clumped platelets	Absent	Absent(89%)	Present(11%)
Giant platelets	Present	Absent(24%)	Present(76%)
Platelet satellitosis	Absent	Absent(100%)	Present(0%)
Auer rods	Absent	Absent(100%)	Present(0%)
Dohle bodies	Absent	Absent(100%)	Present(0%)
Hypersegmentation	Absent	Absent(99%)	Present(1%)
Pelger Huet anomaly	Absent	Absent(99%)	Present(1%)
Smudge / Basket cells	Absent	Absent(96%)	Present(4%)
Toxic granulation	Absent	Absent(66%)	Present(34%)
Acanthocytes	Absent	Absent(100%)	Present(0%)
Basophilic stippling	Absent	Absent(71%)	Present(29%)
Blister cells (pre keratocytes)	Absent	Absent(100%)	Present(0%)
Cabot rings	Absent	Absent(100%)	Present(0%)
Echinocytes (crenated/burr cells)	Absent	Absent(99%)	Present(1%)
Elliptocytes (ovalocytes)	Absent	Absent(97%)	Present(3%)
Howell-Jolly bodies	Absent	Absent(100%)	Present(0%)
Pappenheimer bodies	Absent	Absent(100%)	Present(0%)
Red cell agglutinates	Absent	Absent(98%)	Present(2%)
Rouleaux	Absent	Absent(92%)	Present(8%)
Schistocytes	Absent	Absent(95%)	Present(5%)
Schuffner's granules	Absent	Absent(100%)	Present(0%)
Sickle cells (drepanocytes)	Absent	Absent(100%)	Present(0%)
Spherocytes	Absent	Absent(94%)	Present(6%)
Stomatocytes	Absent	Absent(99%)	Present(1%)
Target cells (codocytes)	Absent	Absent(97%)	Present(3%)
Tear drop cells (dacrocytes)	Absent	Absent(95%)	Present(5%)
Bacteria	Absent	Absent(100%)	Present(0%)
Fungi/yeast	Absent	Absent(100%)	Present(0%)
Malaria/Babesiosis	Absent	Absent(100%)	Present(0%)
Stain precipitate	Absent	Absent(99%)	Present(1%)
Phagocytosis of red cell(s)	Absent	Absent(100%)	Present(0%)