Blood Cell Identification Corner
Part #1

- Erythocyte
- Large lymphocyte with purplish-blue granules
- Neutrophilic segmented
- Eosinophil
- Neutrophilic segmented
- Lymphocyte
- Monocyte with gray-blue cytoplasm
- Thrombocyte
- Neutrophilic band
- Basophil
Case History #1
The patient is 1 1/2 year old male referred for evaluation of anemia.

Laboratory results include:

- Hgb = 8.1 g/dL
- Hct = 22%
- MCV = 63.0 fL
- PLT = 420x10^9/L
- WBC = 8.5x10^9/L

Please identify the cell indicated by the arrow in the following five slides and check your responses next week with posted detail about each cell at www.doctorsforafghanistan.com
What is the correct identification of the arrowed cell?
A) Ovalocyte  
B) Fragmented cell  
C) Microcyte (with central pallor)  
D) Platelet, normal  
E) Platelet, giant (macrothrombocyte)  
F) Target Cell  
G) Erythrocyte with platelet  
H) Pre-Keratocyte
What is the correct identification of the arrowed cell?

A) Ovalocyte  B) Fragmented cell  C) Microcyte (with central pallor)
D) Platelet, normal  E) Platelet, giant (macrothrombocyte)
F) Target Cell  G) Erythrocyte with platelet  H) Pre-Keratocyte
HS#3

What is the correct identification of the arrowed cell?

A) Ovalocyte  
B) Fragmented cell  
C) Microcyte (with central pallor)  
D) Platelet, normal  
E) Platelet, giant (macrothrombocyte)  
F) Target Cell  
G) Erythrocyte with platelet  
H) Pre-Keratocyte
What is the correct identification of the arrowed cell?

A) Ovalocyte  B) Fragmented cell  C) Microcyte (with central pallor)
D) Platelet, normal  E) Platelet, giant (macrothrombocyte)
F) Target Cell  G) Erythrocyte with platelet  H) Pre-Keratocyte
HS#5

What is the correct identification of the arrowed cell?

A) Ovalocyte  B) Fragmented cell  C) Microcyte (with central pallor)
D) Platelet, normal  E) Platelet, giant (macrothrombocyte)
F) Target Cell  G) Erythrocyte with platelet  H) Pre-Keratocyte
Blood Cell Identification Corner
Part 2

- Morphology of Granulocytes or Granular Leukocytes

**Terminology based on indentation of nuclei**

- Myelocyte
- Metamyelocyte
- Band
- Segmented

**NONSEGMENTED**

**SEGMENTED**
MYELOCYTIC (GRANULOCYTIC) SYSTEM

C: Basophilic myelocyte
D: Basophilic metamyelocyte
E: Basophilic band
F: Basophilic segmented

G: Neutrophilic myelocyte
H: Neutrophilic metamyelocyte
I: Neutrophilic band
J: Neutrophilic segmented

K: Eosinophilic myelocyte
L: Eosinophilic metamyelocyte
M: Eosinophilic band
N: Eosinophilic segmented
Case History #2
The patient is a 58 years old man with persistent generalized dermatitis.

Laboratory results include:

Peripheral blood analysis includes examination of a Wright-Giemsa stained smear slides.

Please identify the cell indicated by the arrow in the following five slides and check your responses next week with posted detail about each cell and diagnosis at www.doctorsforafghanistan.com
HS#6

What is the correct identification of the arrowed cell?

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<table>
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<tbody>
<tr>
<td>A</td>
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<tr>
<td>B</td>
<td>Lymphocyte, Reactive</td>
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<td>C</td>
<td>Lymphoma cell</td>
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<td>D</td>
<td>Monocyte</td>
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<td>G</td>
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<td>H</td>
<td>Platelet, hypogranular</td>
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<td>I</td>
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<td>J</td>
<td>Sezary cell</td>
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What is the correct identification of the arrowed cell?

A) Lymphocyte  B) Lymphocyte, Reactive  C) Lymphoma cell  
D) Monocyte  E) Monocyte, Immature (promonocyte,”monoblast)  
F) Myelocyte  G) Platelet, normal  H) Platelet, hypogranular  
I) Target Cell  J) Sezary cell
HS#8

What is the correct identification of the arrowed cell?

A) Lymphocyte   B) Lymphocyte, Reactive   C) Lymphoma cell
D) Monocyte     E) Monocyte, Immature (promonocyte, "monoblast"
F) Myelocyte    G) Platelet, normal       H) Platelet, hypogranular
I) Target Cell  J) Sézary cell
**HS#9**

What is the correct identification of the arrowed cell?

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![Blood smear image](image)

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A) Monocytes

a) Monocyte with "ground-glass" appearance, evenly distributed fine granules, occasional azurophilic granules, and vacuoles in cytoplasm

B) Monocyte with opaque cytoplasm and granules and with lobulation of nucleus and linear chromatin

C) Monocyte with prominent granules and deeply indented nucleus

D) Monocyte without nuclear indentations

E) Monocyte with gray-blue color, band type of nucleus, linear chromatin, blunt pseudopods, and granules

F) Monocyte with gray-blue color, irregular shape, and multi lobulated nucleus

G) Monocyte with segmented nucleus

H) Monocyte with multiple blunt nongranular pseudopods, nuclear indentations, and folds

I) Monocyte with vacuoles and with nongranular ectoplasm and granular endoplasm
B) LYMPHOCYTES

A) Small mature lymphocyte
B) Lymphocyte of intermediate size
C) Lymphocyte with indented nucleus
D) Lymphocyte of intermediate size
E) Lymphocyte with pointed cytoplasmic projections (frayed cytoplasm); typical nucleus
F) Spindle-shaped lymphocyte with indented nucleus
G) Large lymphocyte with indented nucleus and pointed cytoplasmic projections
H) Large lymphocyte
I) Large lymphocyte with purplish-red (azurophilic) granules
J) Large lymphocyte with irregular cytoplasmic contours
K) Large lymphocyte with purplish-red (azurophilic) granules and with indentations caused by pressure of erythrocytes
L) Large lymphocyte with purplish-red (azurophilic) granules
Case History #3

The patient is a 39 years old female with no previous health problem. The complete blood count (CBC) was performed as part of an infertility work-up.

Laboratory results include:

- WBC = 5.0x 10^9/L
- Hgb = 13.5 g/dL
- Plt = 275x 10^9/L
- Wright-Giemsia stained smear slides.

Please identify the cell indicated by the arrow in the following five slides and check your responses with posted detail about each cell and diagnosis at www.doctorsforafghanistan.com
HS#11
A) Erythrocyte, normal   B) Lymphocyte, Reactive   C) Microcyte
D) Monocyte   E) Monocyte, Immature (promonocyte,"monoblast"
F) Neutrophil with Pelger-Huet nucleus   G) Neutrophil, segmented or band
H) Neutrophil Necrobiosis (Degenerated Neutrophil)   I) Platelet, normal
J) Stain precipitate
A) Erythrocyte, normal     B) Lymphocyte, Reactive     C) Microcyte
D) Monocyte     E) Monocyte, Immature (promonocyte,”monoblast)
F) Neutrophil with Pelger-Huet nucleus     G) Neutrophil, segmented or band
H) Neutrophil Necrobiosis (Degenerated Neutrophil)     I) Platelet, normal
J) Stain precipitate
HS#13
A) Erythrocyte, normal    B) Lymphocyte, Reactive   C) Microcyte
D) Monocyte     E) Monocyte, Immature (promonocyte, "monoblast")
F) Neutrophil with Pelger-Huet nucleus    G) Neutrophil, segmented or band
H) Neutrophil Necrobiosis (Degenerated Neutrophil)  I) Platelet, normal
J) Stain precipitate
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<td>J)</td>
<td>Stain precipitate</td>
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HS#15

A) Erythrocyte, normal  B) Lymphocyte, Reactive  C) Microcyte
D) Monocyte  E) Monocyte, Immature (promonocyte, “monoblast)
F) Neutrophil with Pelger-Huet nucleus  G) Neutrophil, segmented or band
H) Neutrophil Necrobiosis (Degenerated Neutrophil)  I) Platelet, normal
J) Stain precipitate