Table of Contents – Print Version

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- Iatrogenic
  - Ampicillin crystals
  - Sulfonamide crystals
  - Radiographic dye crystals

Urine Sediment – Organisms
- Bacteria
- *Trichomonas vaginalis*
- Yeast/Fungi

Urine Sediment – Other
- Fad droplets or globules, free
- Fiber/fecal contamination
- Mucus strands
- Pollen grain
- Starch granule

Vaginal Wet Preparation – Cells
- Clue cell
- Erythrocyte
- Leukocyte
- Squamous epithelial cell

Vaginal Wet Preparation – Organisms
- Bacteria
- *Trichomonas Vaginalis*
- Yeast/fungi

Vaginal Wet Preparation – Other
- Fiber/fecal contamination
- Mucus strand
- Pollen grain
- Spermatozoa
- Starch granules

Stool Fecal Leukocytes

Nasal Smears

Skin KOH Preparation
- Hair Nit
- Lice
- Mite
- Scabies
- Yeast/Fungal elements

Pinworm Preparation

Blood Cell Identifications

Granulocytic Series
- Auer rod
- Band neutrophil
- Basophil
- Eosinophil
- Hypersegmented neutrophil
- Myelocyte
- Metamyelocyte (juvenile)
- Pelger Huet
- Segmented neutrophil
- Segmented neutrophil with Dohle body
- Segmented neutrophil with toxic granulation
- Vacuoles

Lymphocytic or Plasmacytic Series
- Lymphocyte
- Lymphocyte, reactive (atypical, variant, Downey cell)
- Plasma cell

Monocytic Series
- Monocyte

Cellular Artifacts
- Basket cell/Smudge cell
- Degenerated neutrophil

Functional Disorders of WBCs

Erythrocytic Series
- Red Blood Cell Indices
- Acanthocyte
- Anisocytosis
- Bite cell
- Blister cell
- Echinocyte (burr cell, crenated cell)
- Erythrocyte, normal
- Fragmented cell (schistocyte, helmut cell, keratocyte)
- Hypochromasia
- Macrocyte
- Microcyte
- Nucleated red cell
- Ovalocyte (elliptocyte)
- Poikilocytosis
- Polychromatophilic red cell
- Rouleaux
- Sickle cell
- Spherocyte
- Stomatocyte
- Target cell
- Tear drop cell

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Learning Objectives

The overall objective of the *POL Microscopy Atlas* is to gain microscopic identification skills through studying the written material and correlating that information to the photographs featuring the various cellular elements.

Following completion of the self-instructional material, the participant will be able to:

1. Identify the cellular elements found in urine sediment and discuss their clinical associations.
2. Identify the casts found in urine sediment and discuss their clinical associations.
3. Identify the crystals found in urine sediment and discuss their clinical associations.
4. Identify the organisms found in urine sediment.
5. Identify the cells found in vaginal wet preparation and discuss their clinical associations.
6. Identify the organisms found in vaginal wet preparation and discuss their clinical associations.
7. Identify other elements found in vaginal wet preparation and discuss their clinical associations.
8. Identify the presence or absence of leukocytes in a stool specimen and discuss their clinical associations.
9. Identify the presence or absence of eosinophils in nasal specimens and discuss their clinical associations.
10. Identify the presence or absence of yeast/fungal elements in a skin preparation and discuss their clinical associations.
11. Identify the granulocytic cells found in a peripheral blood smear and discuss their clinical associations.
12. Identify the lymphocytic cells found in a peripheral blood smear and discuss their clinical associations.
13. Identify the monocytic cells found in a peripheral blood smear and discuss their clinical associations.
14. Identify the granulocytic cells found in a peripheral blood smear and discuss their clinical associations.

15. Explain the various functional disorders of white blood cells.
16. Identify the erythrocytic cells found in a peripheral blood smear and discuss their clinical associations.
17. Identify the megakaryocytic cells found in a peripheral blood smear.
18. Perform an examination of urine sediment according to the specified procedure.
19. Perform an examination of a vaginal wet preparation according to the specified procedure.
20. Perform an examination of a manual differential.

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