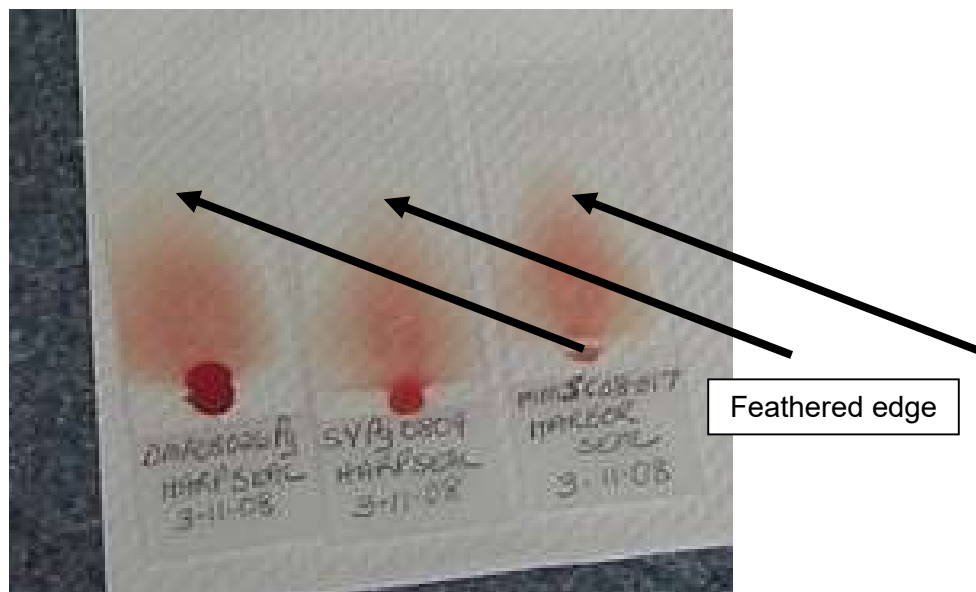


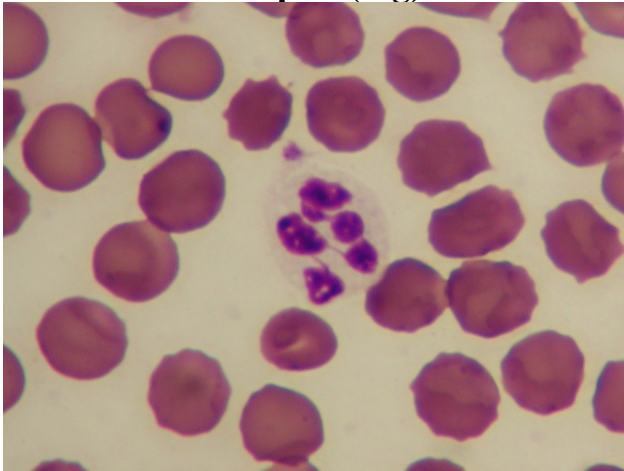
Blood Smear Preparation and Differential Procedure

1. Place slide on microscope and use the stage control knobs to move the sample on the slide to the area where the light is shining into the objective.
2. Use the coarse focus knob to focus under 4x magnification.
3. Without moving the stage, turn the objectives to 10X magnification and use the fine focus knob to get under focus.
4. Again without moving the stage, switch to the 40x objective. Then move lens to the 40x and fine focus the slide. When you have it under focus, call the instructor over.
5. Once the instructor places a drop of oil on your slide, switch to the 100x objective and use the fine focus. **Once you start using the 100x objective, you must not change magnification levels (e.g. 40x, 10x). Call the instructor for assistance.**
6. Fine focus again to view the slide and perform a differential count.
7. Count white blood cells for 3 to 5 minutes (normally 100 cells would be counted on each smear).
8. Start counting at the feathered edge where the red blood cells are not too far apart from one another and move the slide slowly to the right. To keep track of where you have already counted you can start at the top, scan down to the bottom, move the slide slightly to the right, start at the bottom and scan to the top and repeat as necessary. Take turns counting white blood cells.
9. Record on your datasheet the number of each type of WBC. Calculate the % of each type of WBC (Formula: $[\# \text{ of lymphocytes} / \text{Total number of cells counted}] \times 100$).



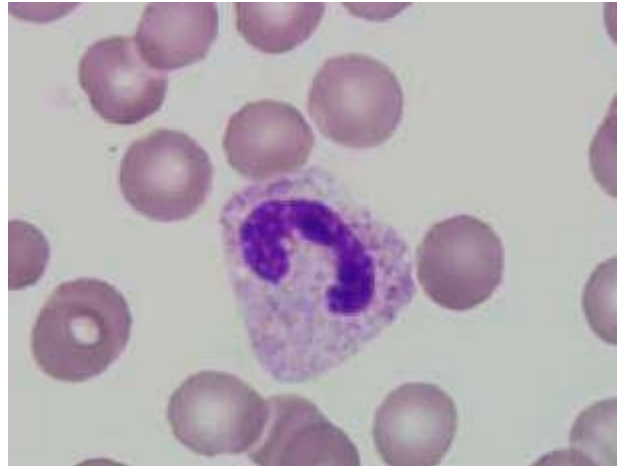
Examples of WBC Types

Neutrophil (seg)

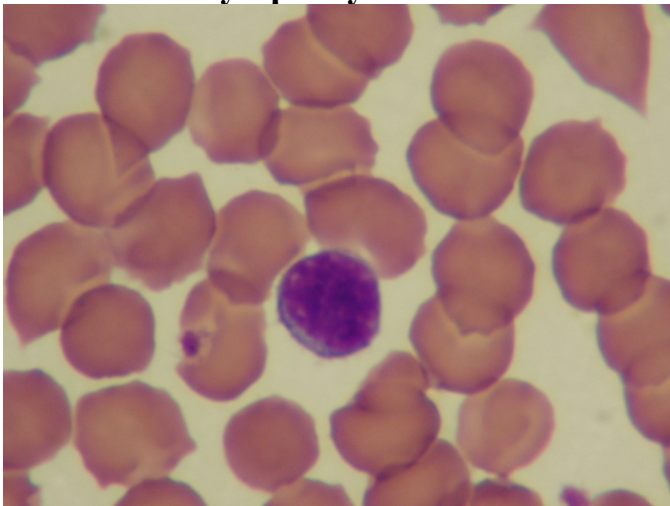


Multilobed nuclei, faint pink or clear cytoplasm

Immature neutrophil (band)

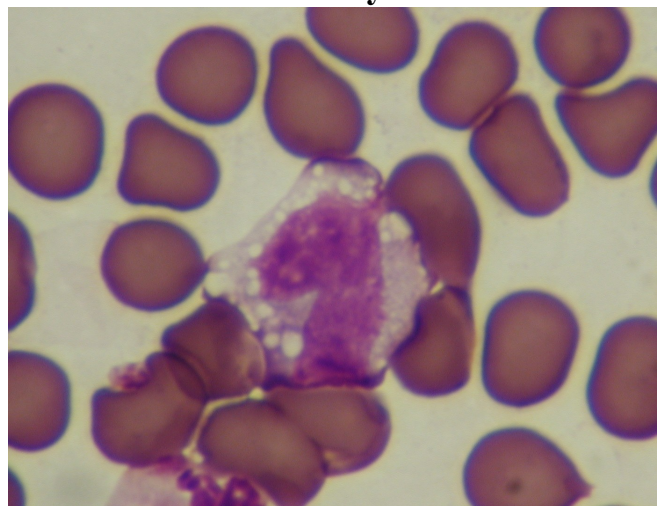


Lymphocyte



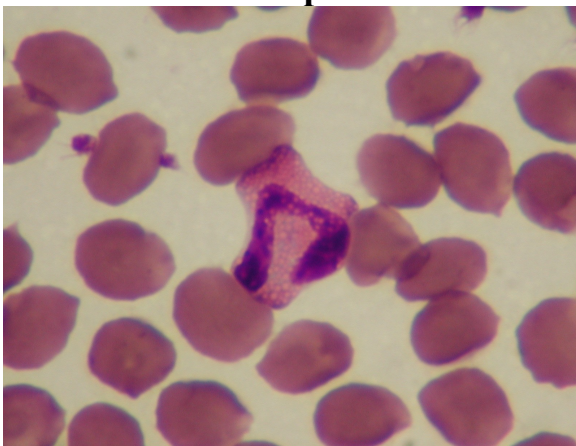
Deeply staining nuclei, little to no visible cytoplasm

Monocyte



Bilobed nucleus, large with foamy cytoplasm

Eosinophil



Cytoplasm stains orange pink

Data Sheet

Names: _____

Date: _____

Differential

Cell type	# cells counted	% cells
Neutrophils (segs)		
Lymphocytes		
Monocytes		
Eosinophils		
TOTAL		

* See Procedure for example calculation (show your work)