The background of the slide is a microscopic image of a blood smear. It features numerous red blood cells, which appear as small, pinkish-red discs with a lighter center (biconcave disc). A single white blood cell is also visible, characterized by a large, dark purple nucleus and a thin, light blue cytoplasmic rim.

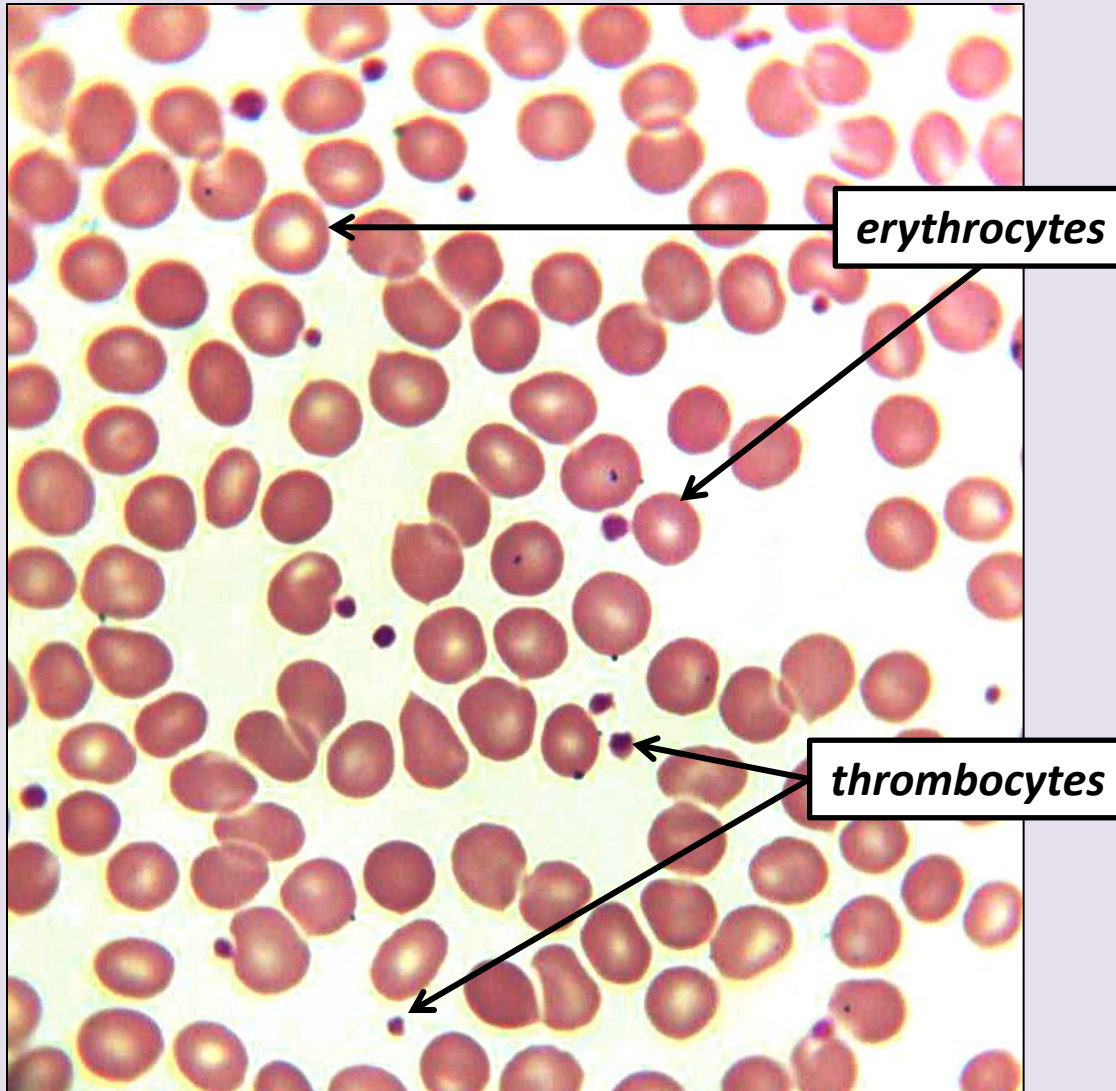
BIOL 2402 Unit 1 Lab Formed Elements of Blood Study Guide

***Use this study guide to review the
formed elements of blood for Lab Exam 1***

***Information in this study guide corresponds to the
“Blood” section of the lab-exam review***

Erythrocytes & Thrombocytes

Use the slide to identify the formed elements
Photomicrograph of erythrocytes and thrombocytes shown



- **Erythrocyte**

- Whole cell that contains hemoglobin
- Functions to transport respiratory gases (oxygen and carbon dioxide)

- **Thrombocyte**

- Cell fragment of a megakaryocyte
- Functions in hemostasis (preventing blood loss) and blood coagulation (blood clotting)

Leukocytes

- **Agranular leukocytes (agranulocytes)**

Agranulocytes contain cytoplasmic granules not visible using a light microscope due to their small size and poor staining qualities

- *Monocytes*

- *Monocytes that exit the blood and enter tissues enlarge and differentiate into macrophages*

- *Lymphocytes*

- *T lymphocytes (T cells)*
 - *B lymphocytes (B cells)*

- **Granular leukocytes (granulocytes)**

Granulocytes contain cytoplasmic granules visible after staining using a light microscope

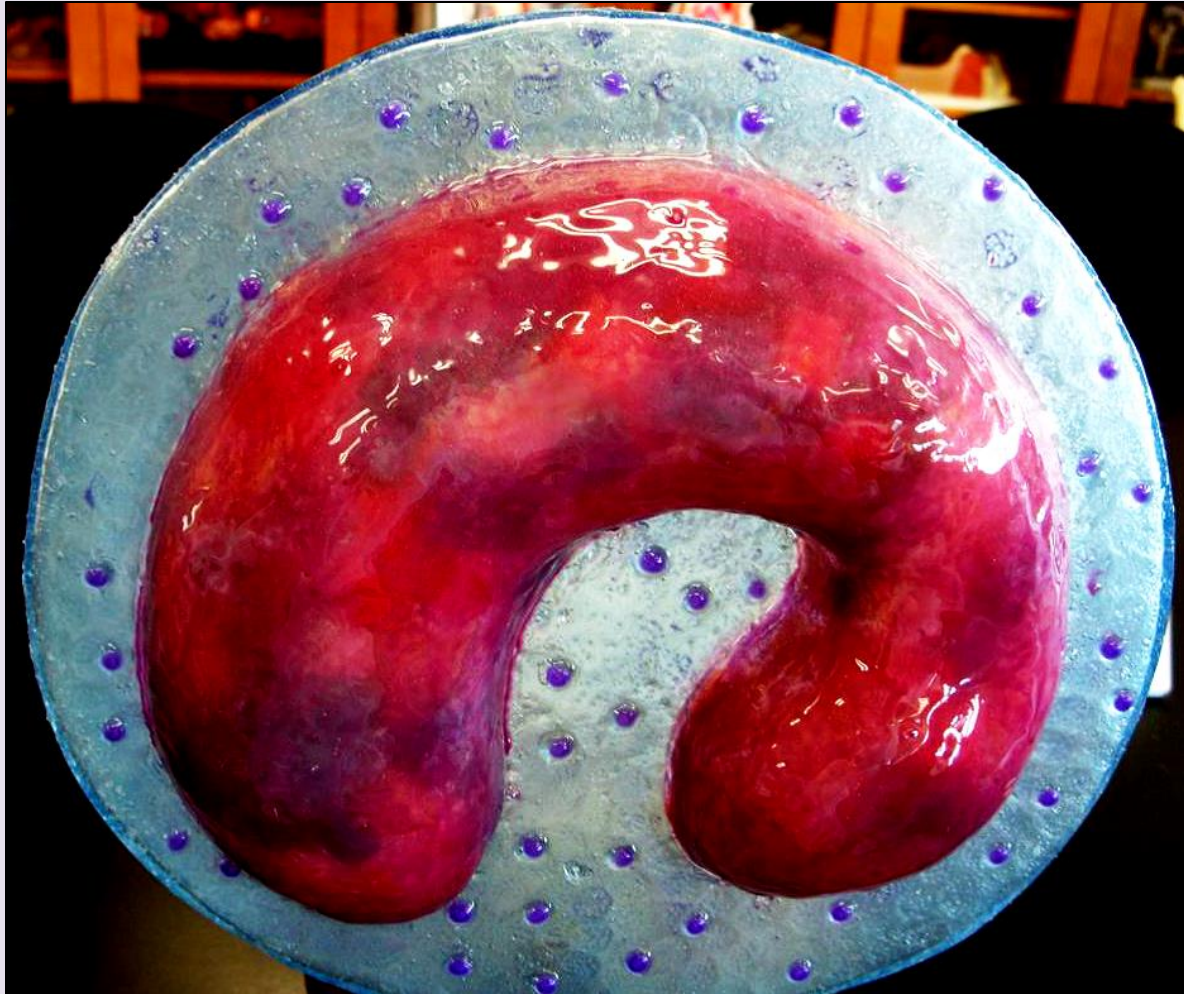
- *Neutrophils*

- *Eosinophils*

- *Basophils*

Monocyte

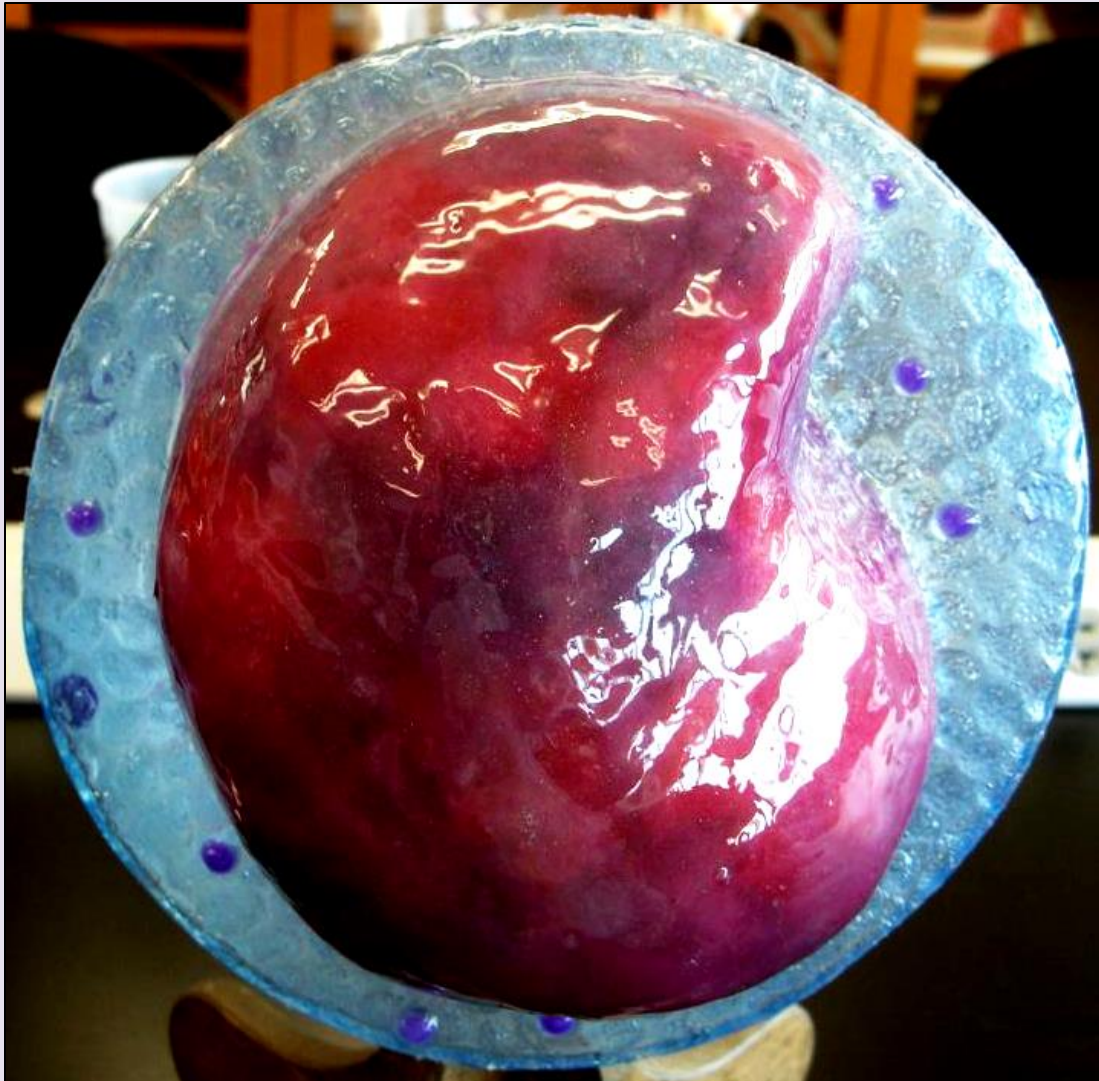
*Use the model to identify the formed element
Anterior view shown*



- *Agranular leukocyte (agranulocyte)*
- *Whole cell with a curved nucleus without lobes*
- *Functions in phagocytosis*

Lymphocyte

*Use the model to identify the formed element
Anterior view of shown*



- *Agranular leukocyte (agranulocyte)*
- *Whole cell with a spherical nucleus*
- *Functions in immune responses with antibodies or by directly attacking antigens*

Neutrophil

*Use the model to identify the formed element
Anterior view of shown*



- *Granular leukocyte (granulocyte)*
- *Whole cell with a multilobed nucleus in the form of segments*
- *Functions to phagocytize bacteria*

Eosinophil

*Use the model to identify the formed element
Anterior view of shown*



- *Granular leukocyte (granulocyte)*
- *Whole cell with a bilobed nucleus connected by a thick chromatin strand*
- *Functions in immune responses against helminth infections (infections caused by parasitic worms)*

Basophil

*Use the model to identify the formed element
Anterior view of shown*



- *Granular leukocyte (granulocyte)*
- *Whole cell with a multilobed nucleus connected by thick chromatin strands*
- *Functions to release histamine causing inflammation and vasodilation*