Inflammation

Lab – 1

Inflammation

Its vascular and cellular response of tissue to injury

Signs of inflammation

1-Redness

Occur due to accumulation of the blood in the inflammation area.

2-Heat

Occur due to warm blood reach in the inflammation area.

3-Swelling

Occur due to accumulation of the inflammatory exudates in the inflammation area

3-Pain

Occur due to pressure of inflammatory exudates on the nerve ending.

5-Loss of function

Occur due to destruction of tissue-

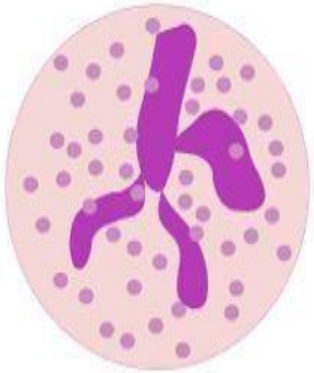
Causes of inflammation

1-Biological agent such as bacteria, virus, parasite, fungus.

2-Non living agent like chemical poisoning, mechanical injury, physical injury (radiation, heat). 3-Immune reaction.

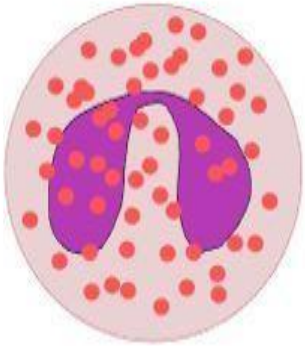
Classification of inflammatory cells

WHITE BLOOD CELLS



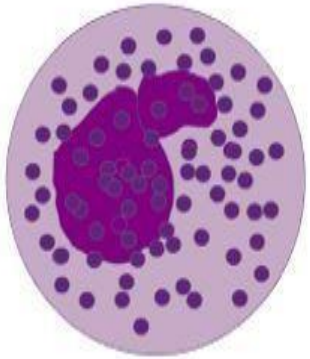
NEUTROPHIL

- Multi-lobed Nucleus
- Pale Red and Blue Cytoplasmic Granules



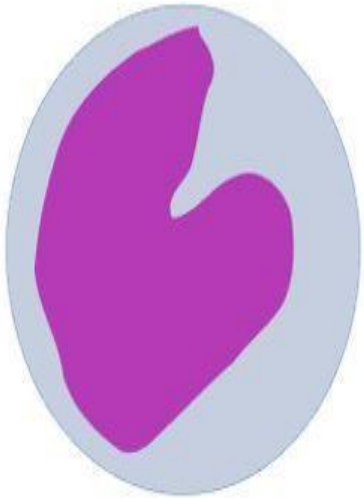
EOSINOPHIL

- Bi-lobed Nucleus
- Dark Pink Stained Cytoplasmic Granules



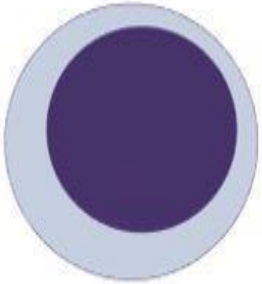
BASOPHIL

- Bi-lobed Nucleus *(usually can't be seen)*
- Lots of Dark Purple Stained Cytoplasmic Granules that Take up the Entire Cell



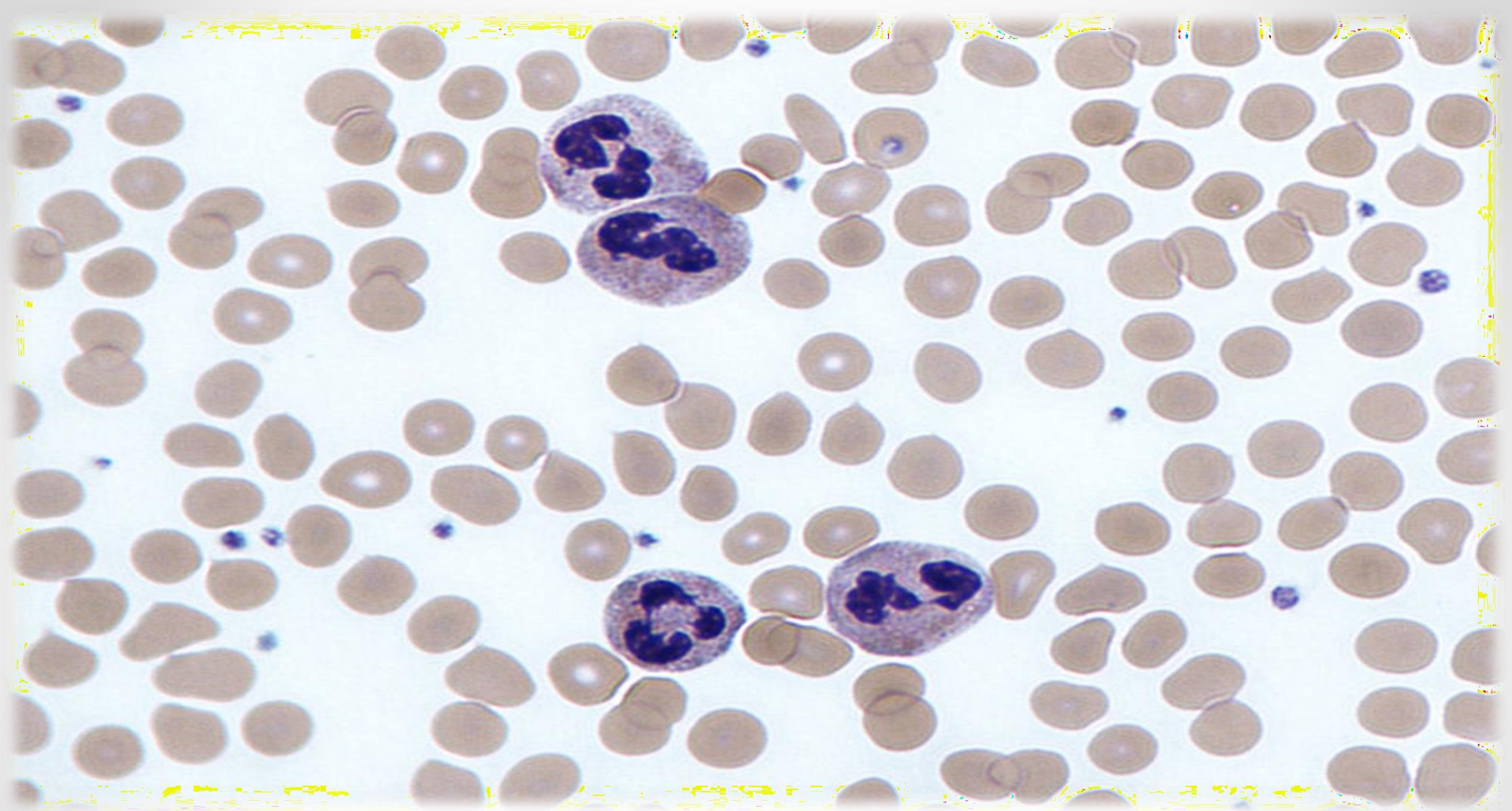
MONOCYTE

- Kidney-Shaped Nucleus that May Appear Lobed
- No Granules
- Cytoplasm is Very Faintly Stained Blue

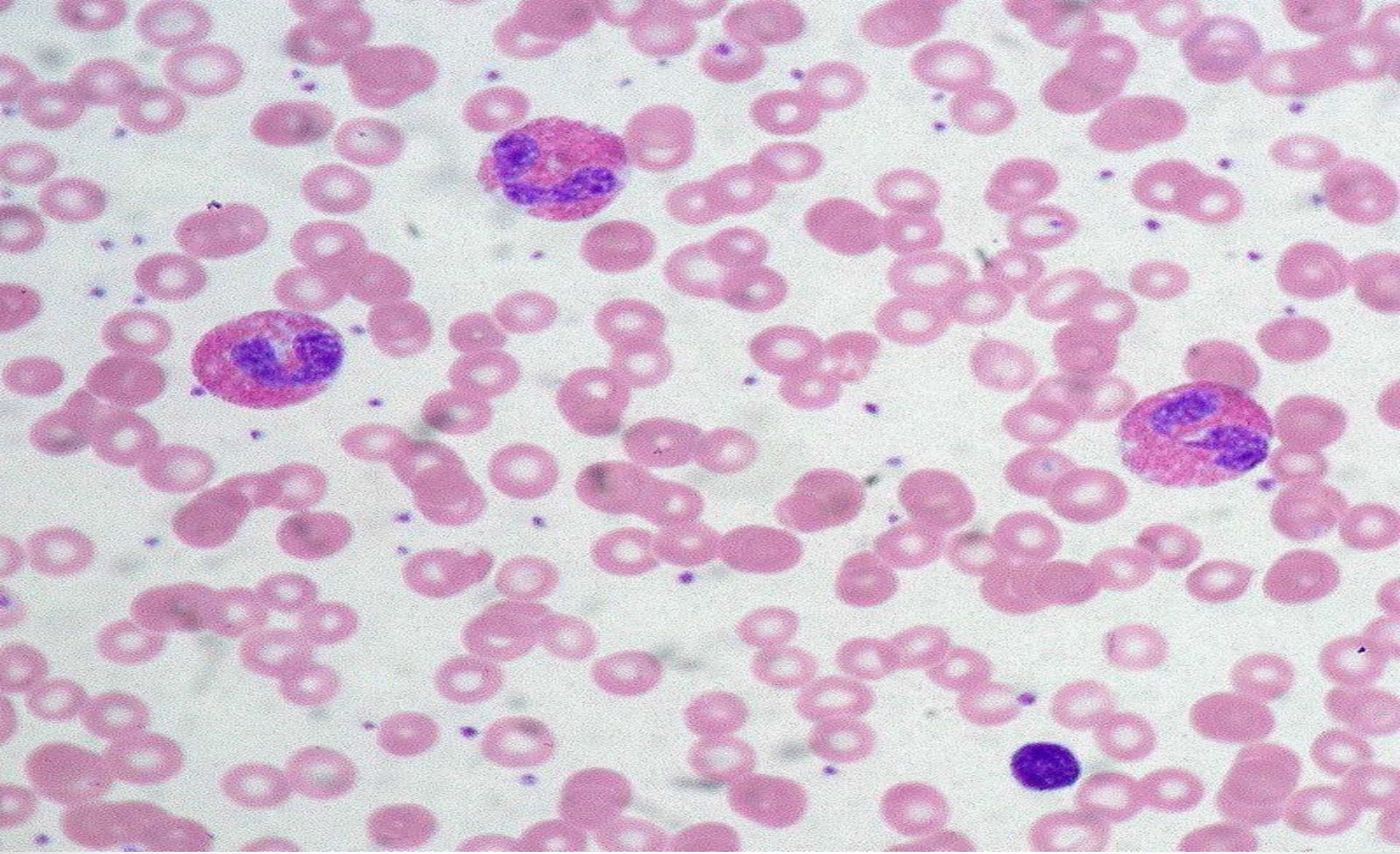


LYMPHOCYTE

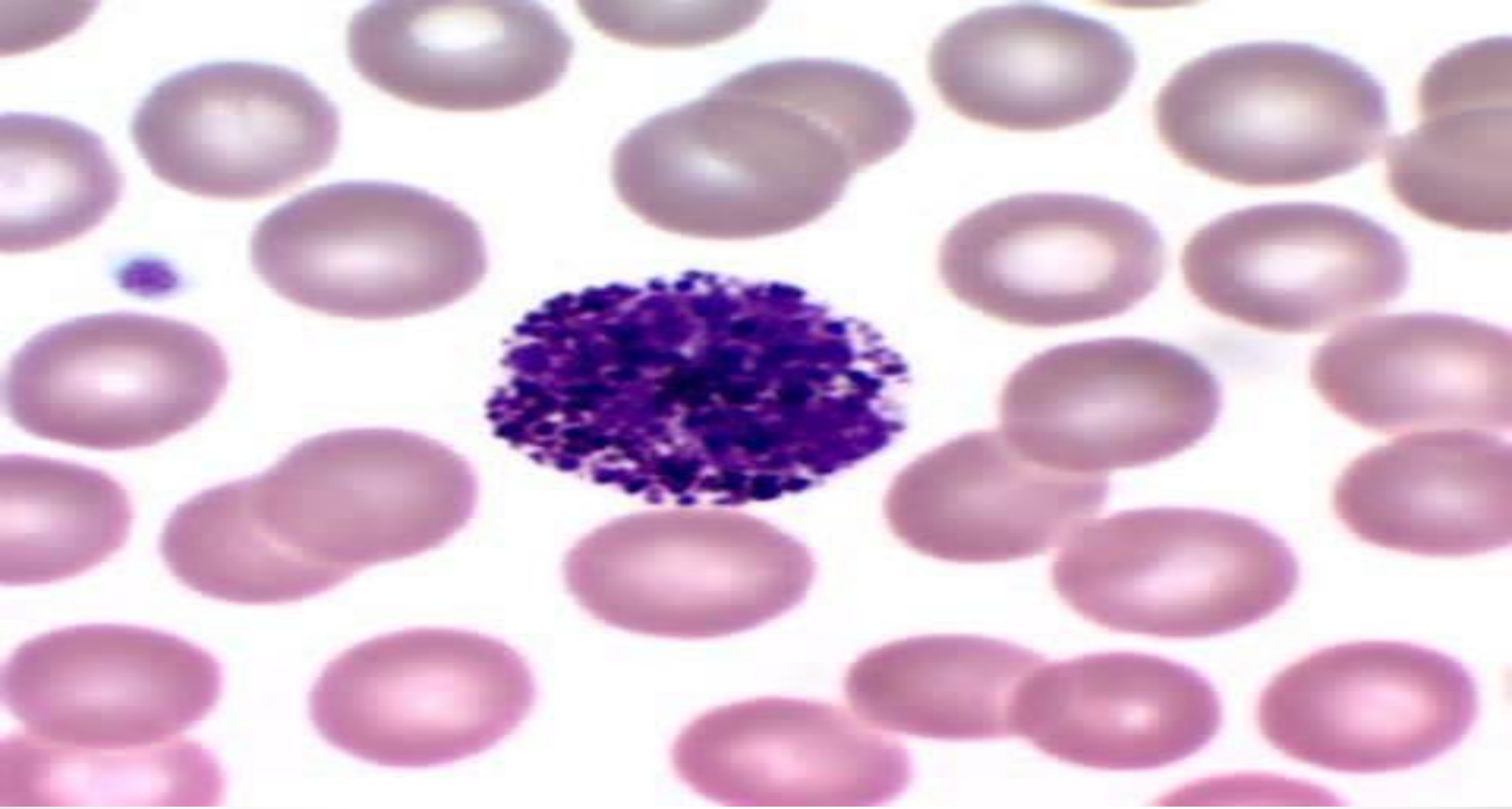
- Large Spherical Nucleus
- No Granules
- Thin Outer Rim of Faintly Blue-Stained Cytoplasm



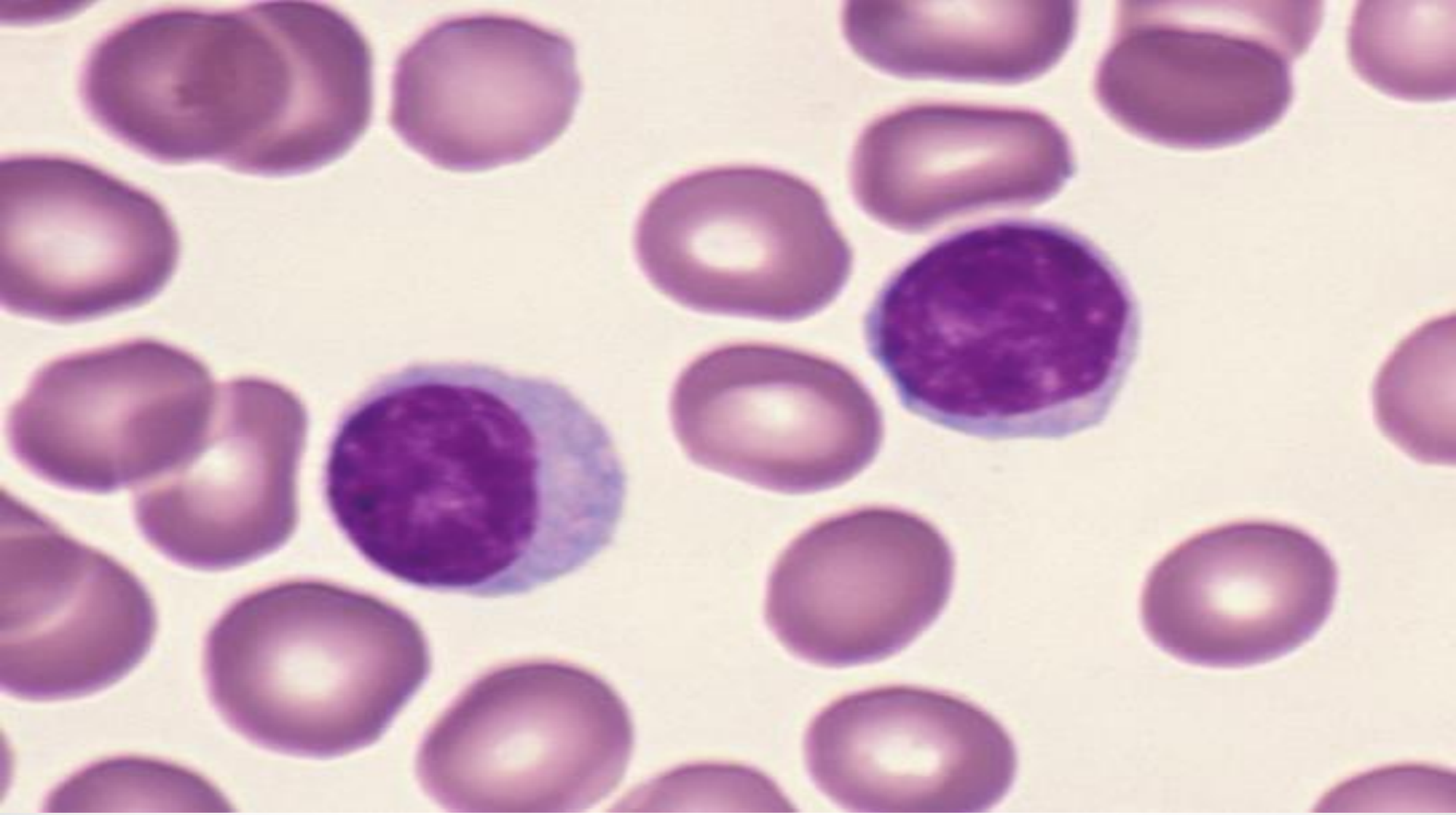
Neutrophils : it is the most important type of white blood cells in most mammals , During the beginning of inflammation . it is first-responders of inflammatory cells migrate towards the site of inflammation area



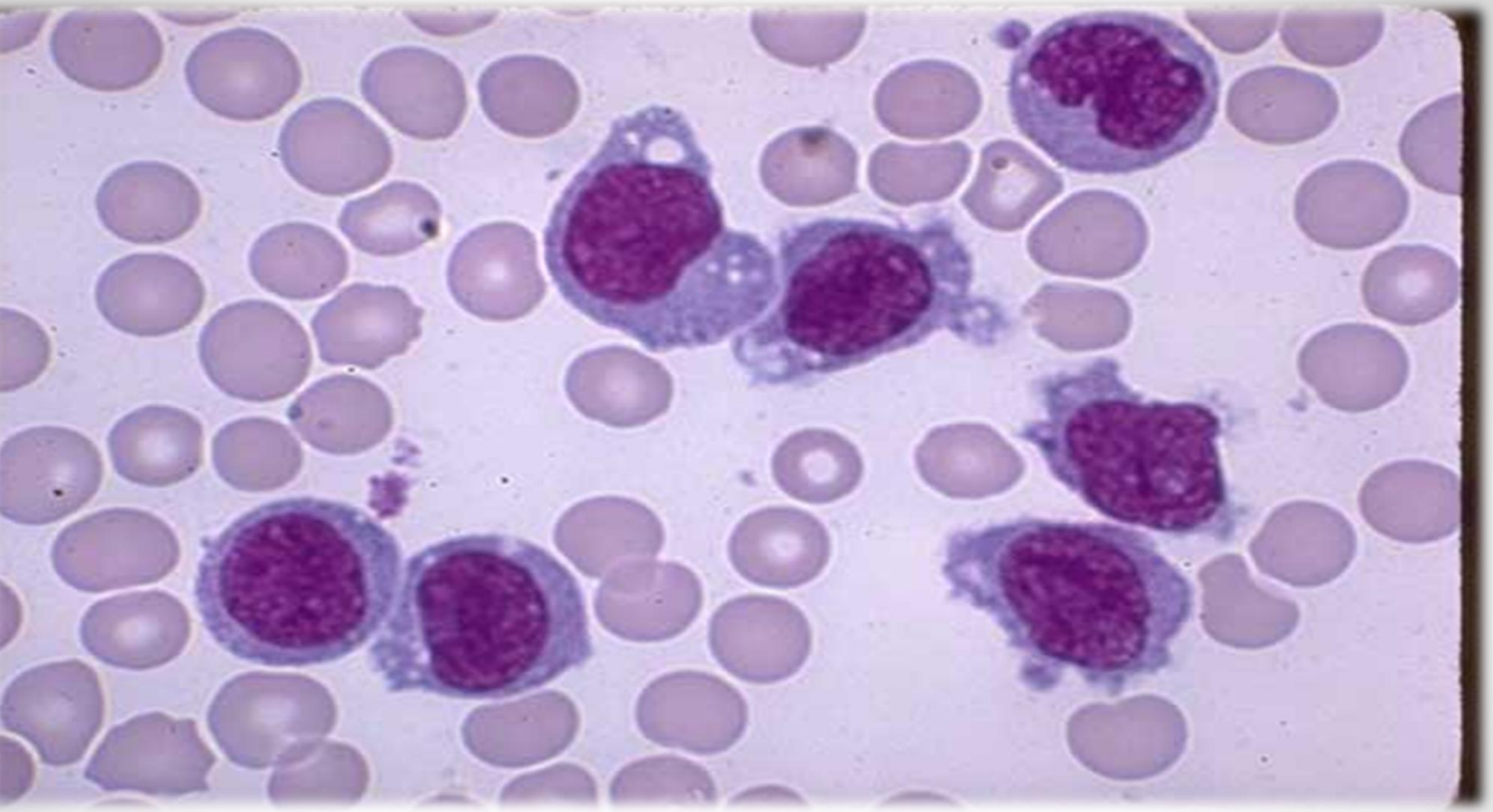
Eosinophil : it is responsible for fight multicellular parasites and associated with allergic condition



Basophils : it is contain anticoagulant heparin prevents blood from clotting , and also contain the vasodilator histamine, which promotes blood flow to tissues. prevents blood from clotting



Lymphocyte: are one type of white blood cells in immune system. which function are synthesis of immune defense cell , T cells (for cell-mediated, cytotoxic immunity), and B cells (for humeral immunity).



Monocytes : They are the largest type of white blood cell. and it is function synthesis of macrophages in the phase of chronic inflammation

THANX