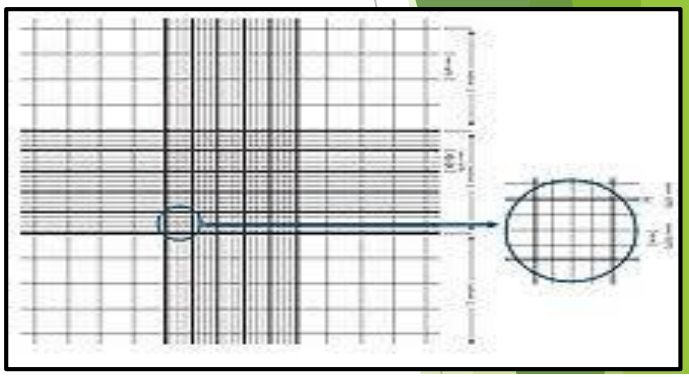
BLOOD& B.M

(Lab)

- DR. Heba Hassan

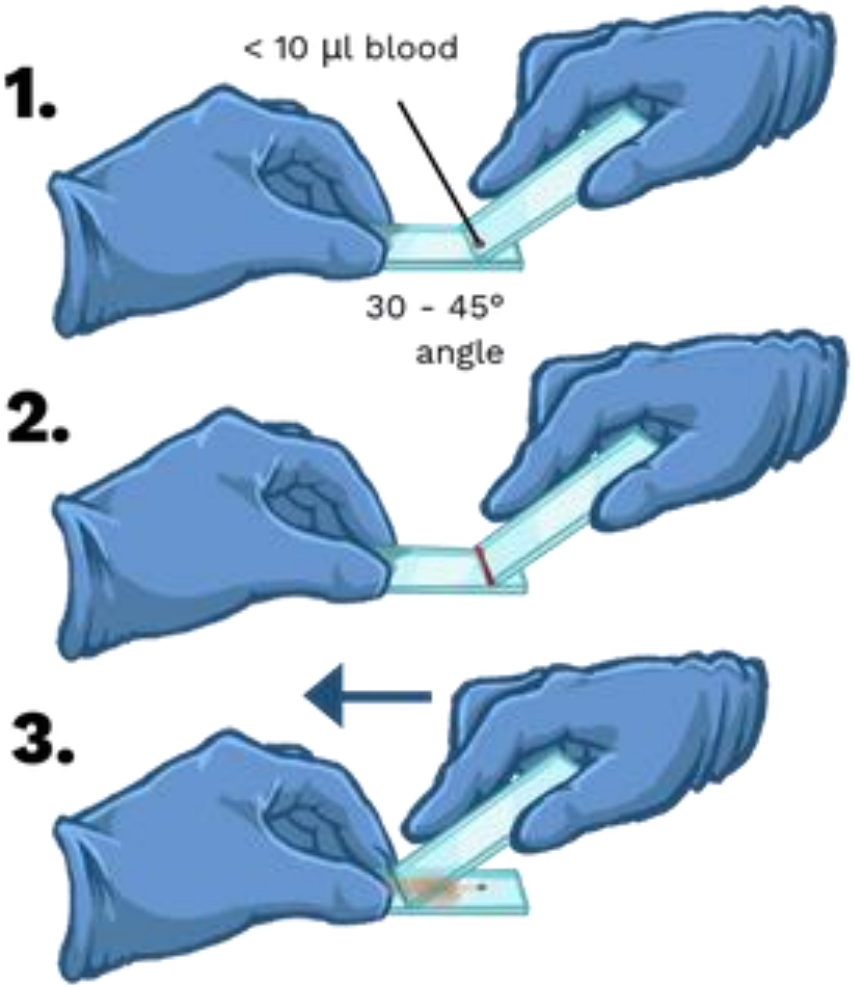
Complete blood count (CBC)

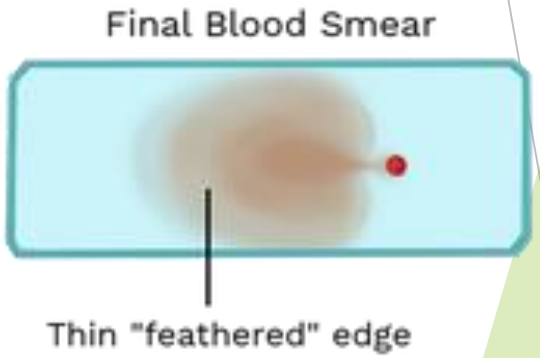
- 1- Total count: It is the total number of blood elements (RBCs, WBCs, or Platelets) per cubic millimeter Measured by
  - Hemocytometer
  - Or Automatic counter



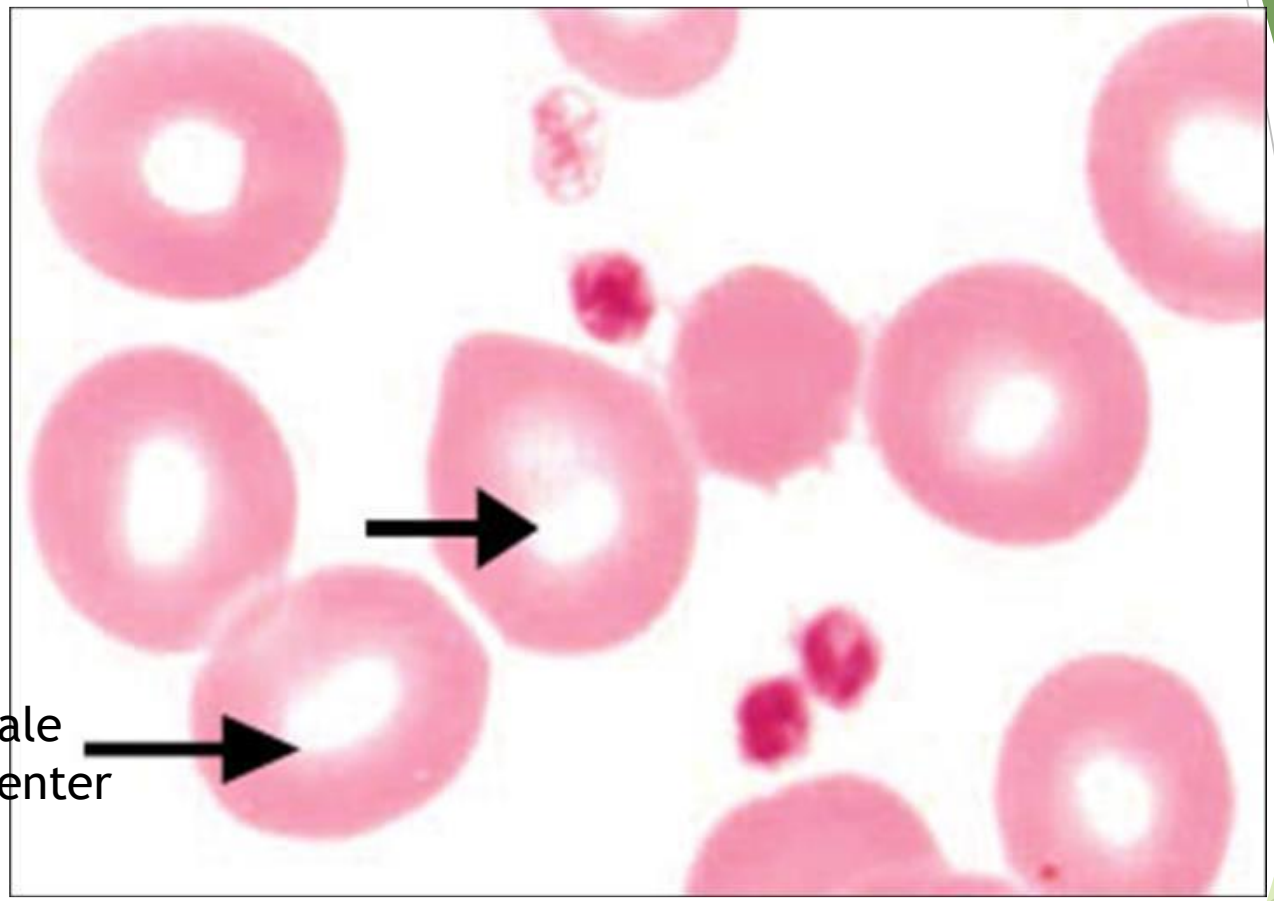
- 2- Differential leukocytic count The percentage of each type of leucocytes to the total count

Blood smear (Leishman stain)



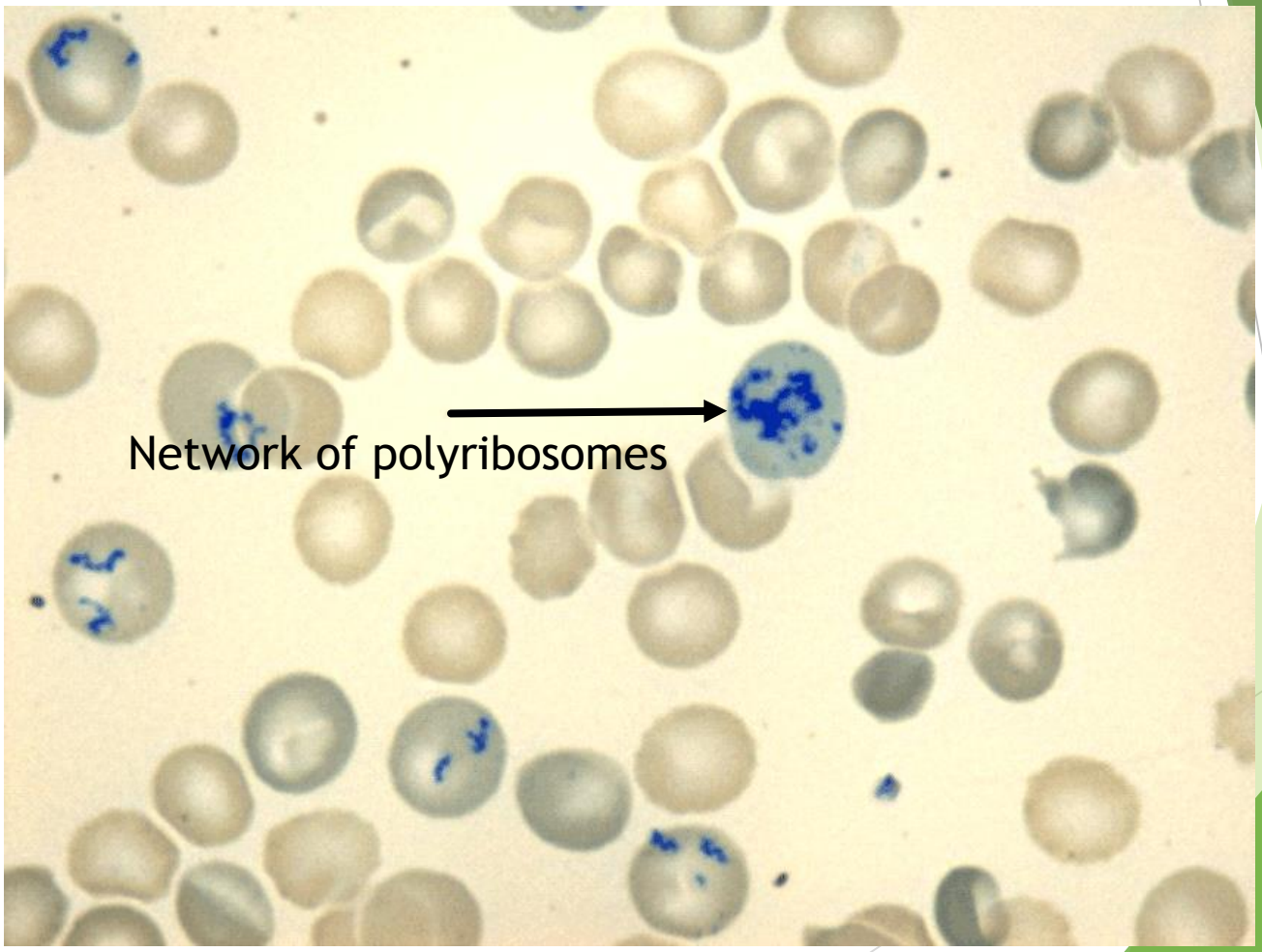


Red Blood Cells (RBCS)

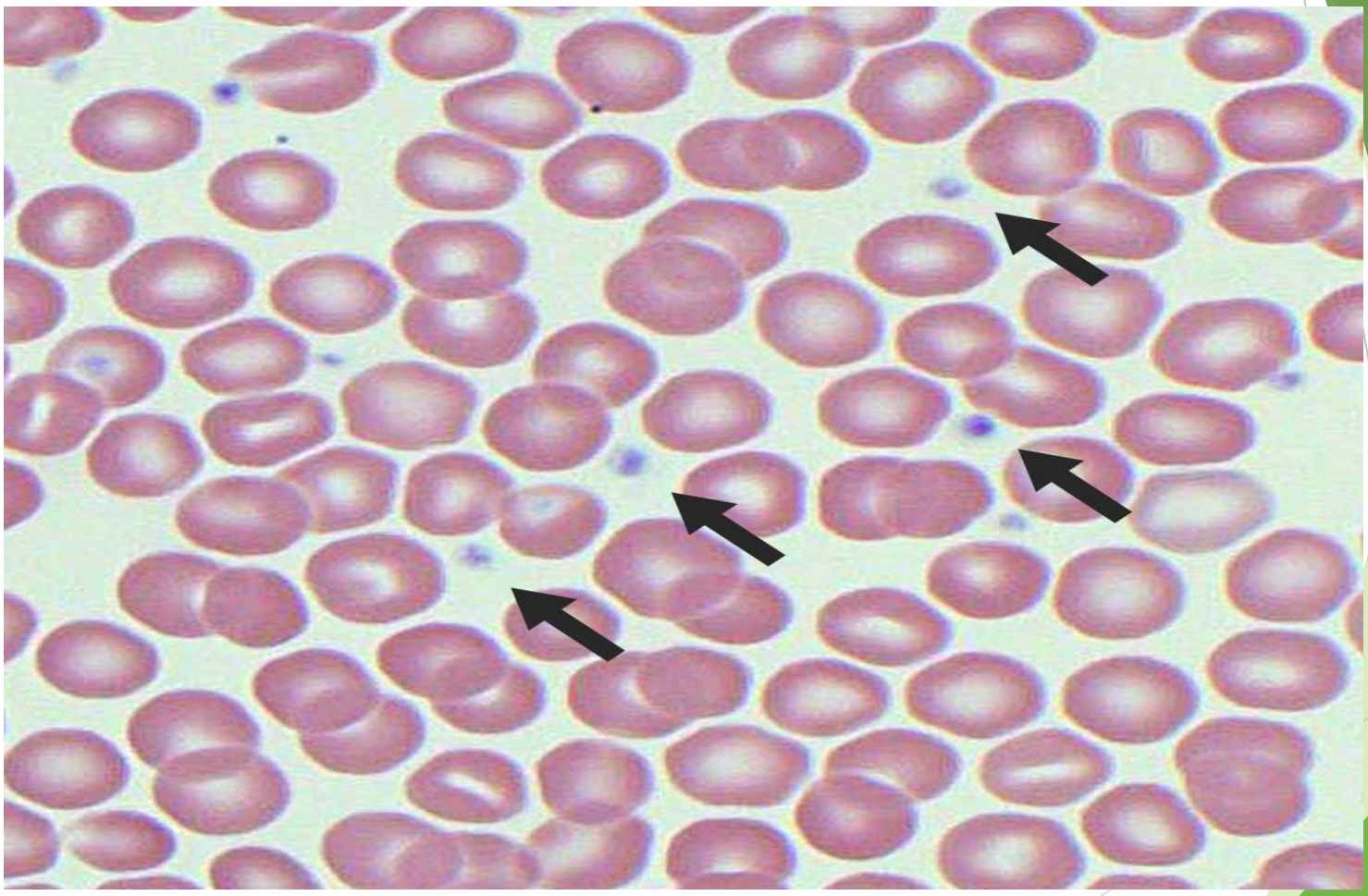


- ***RBCs that display rounded biconcave discs.***

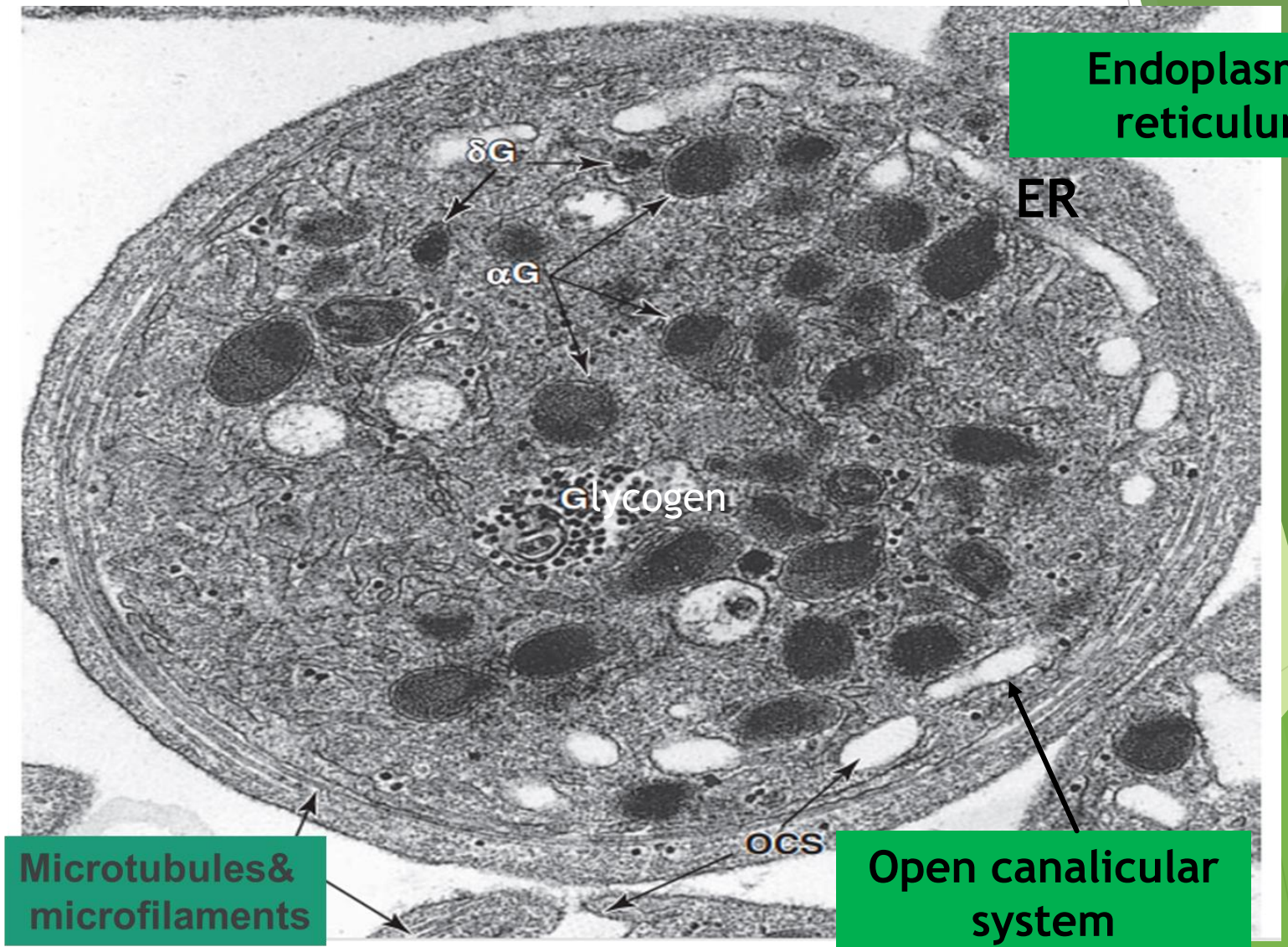
Reticulocyte (brilliant cresyl blue)



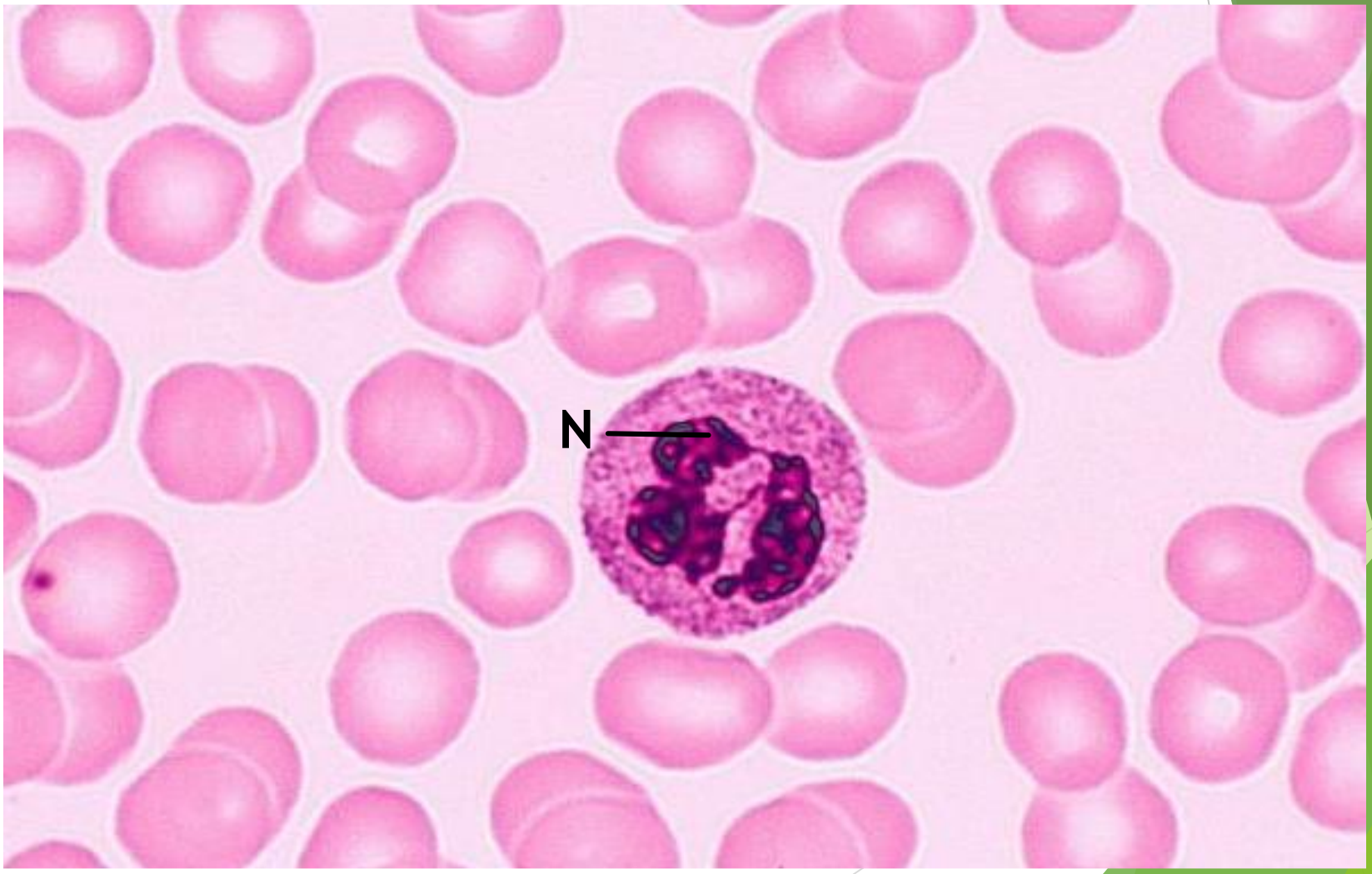
Platelets



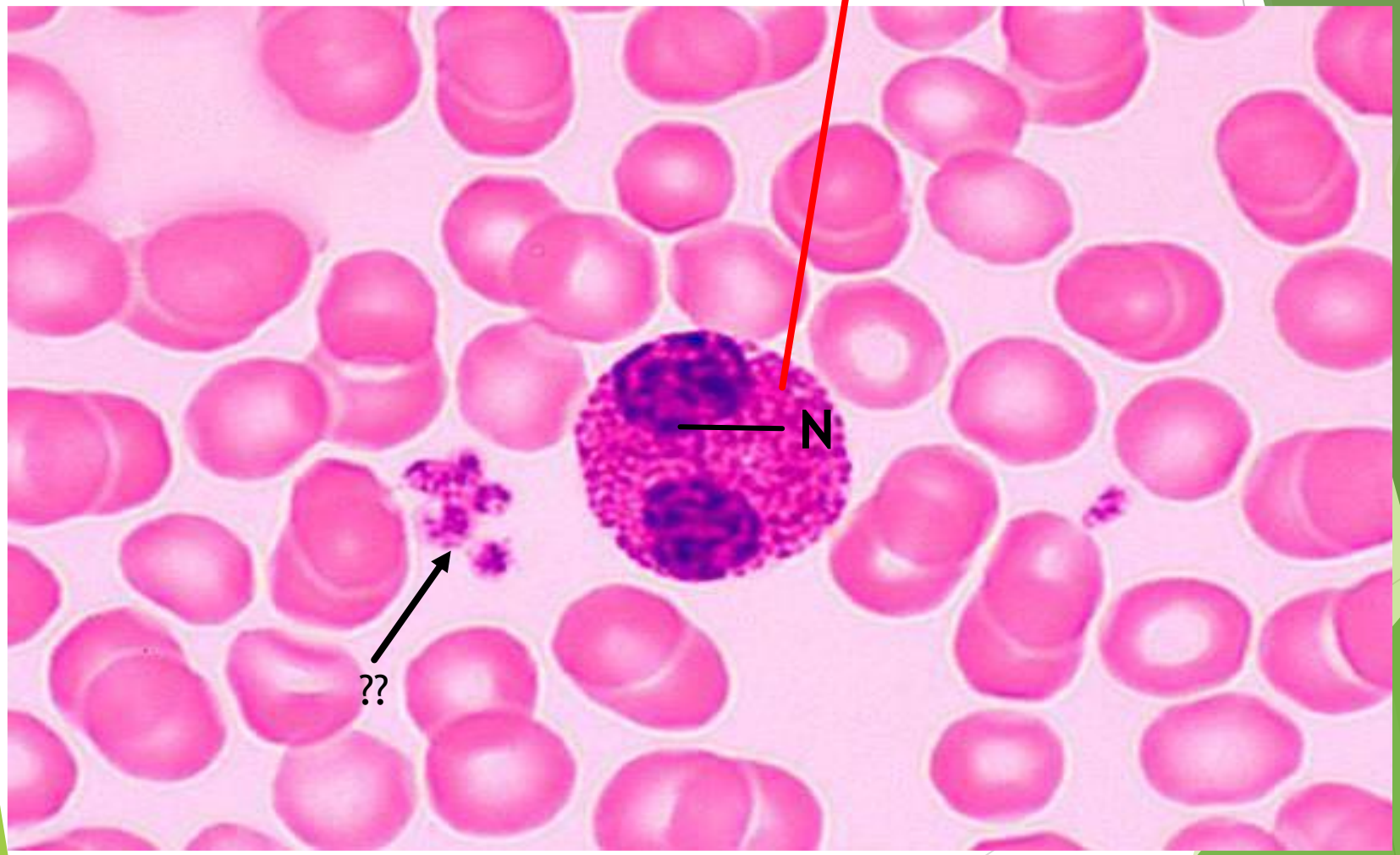
EM of Platelets



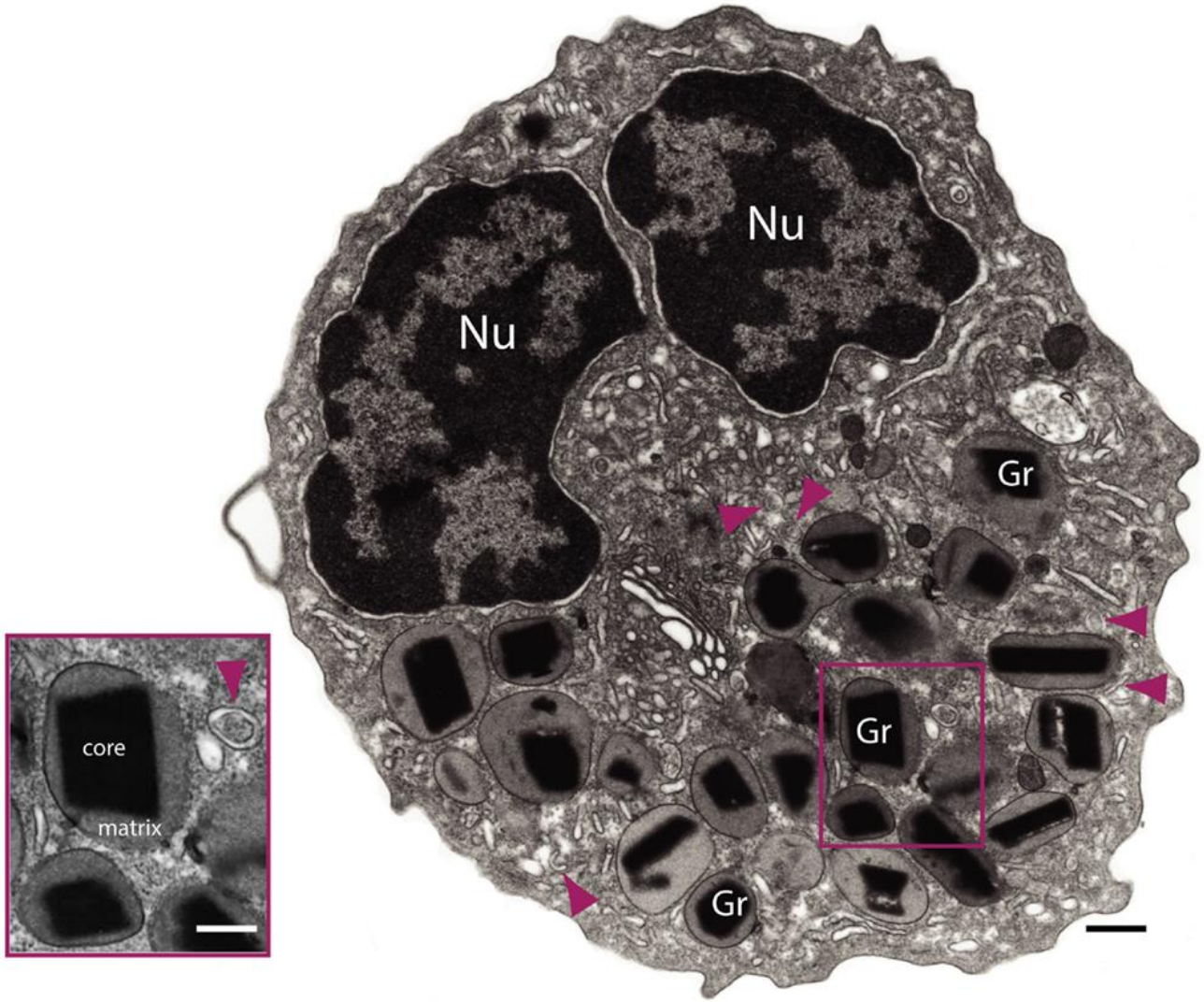
1-**Neutrophils** with **segmented** nucleus (N) and **neutrophilic** granules.



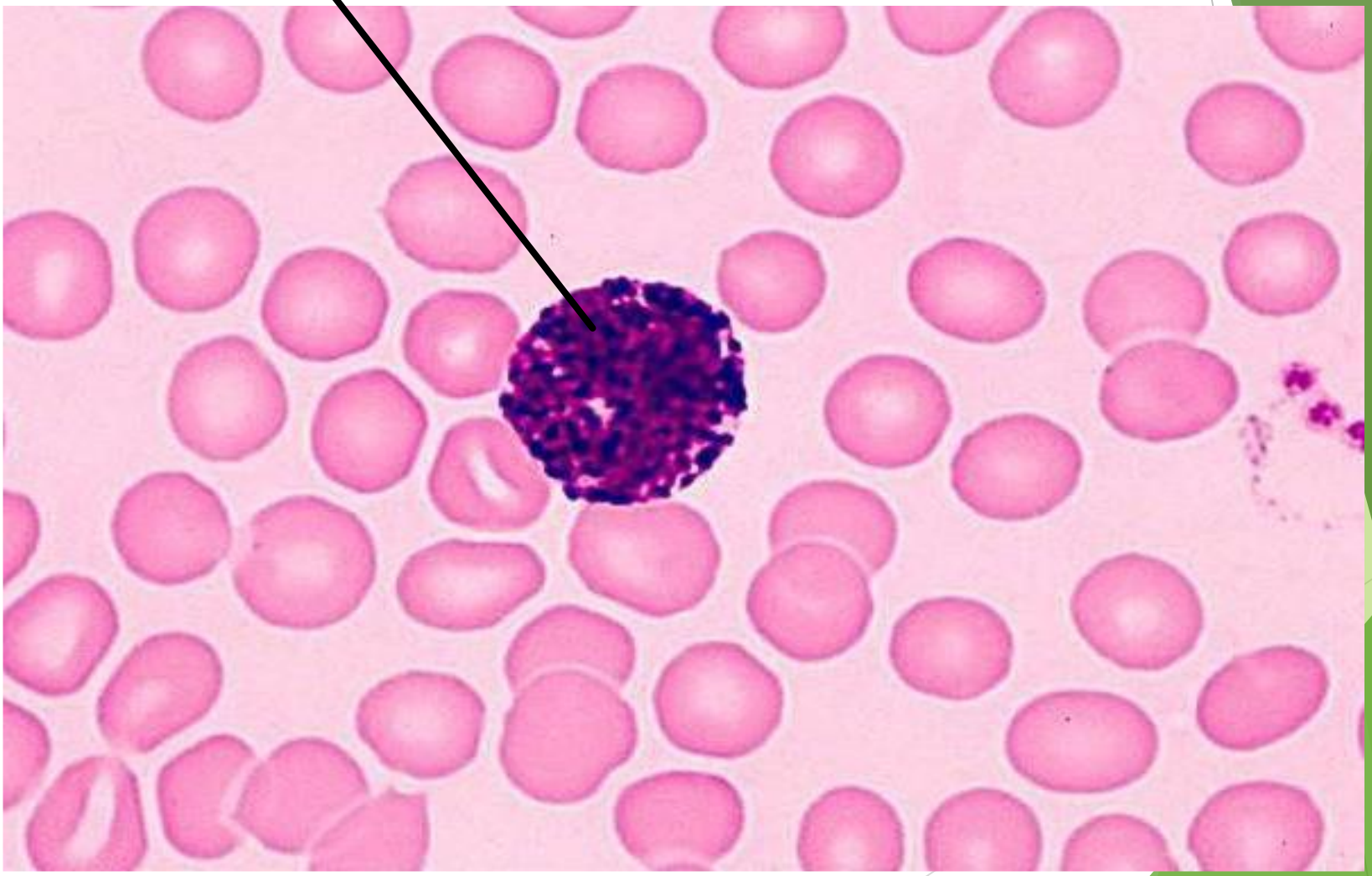
2- **Eosinophils** with **horse-shoe** shaped nucleus (N) and **eosinophilic** granules.



EM of Eosinophils

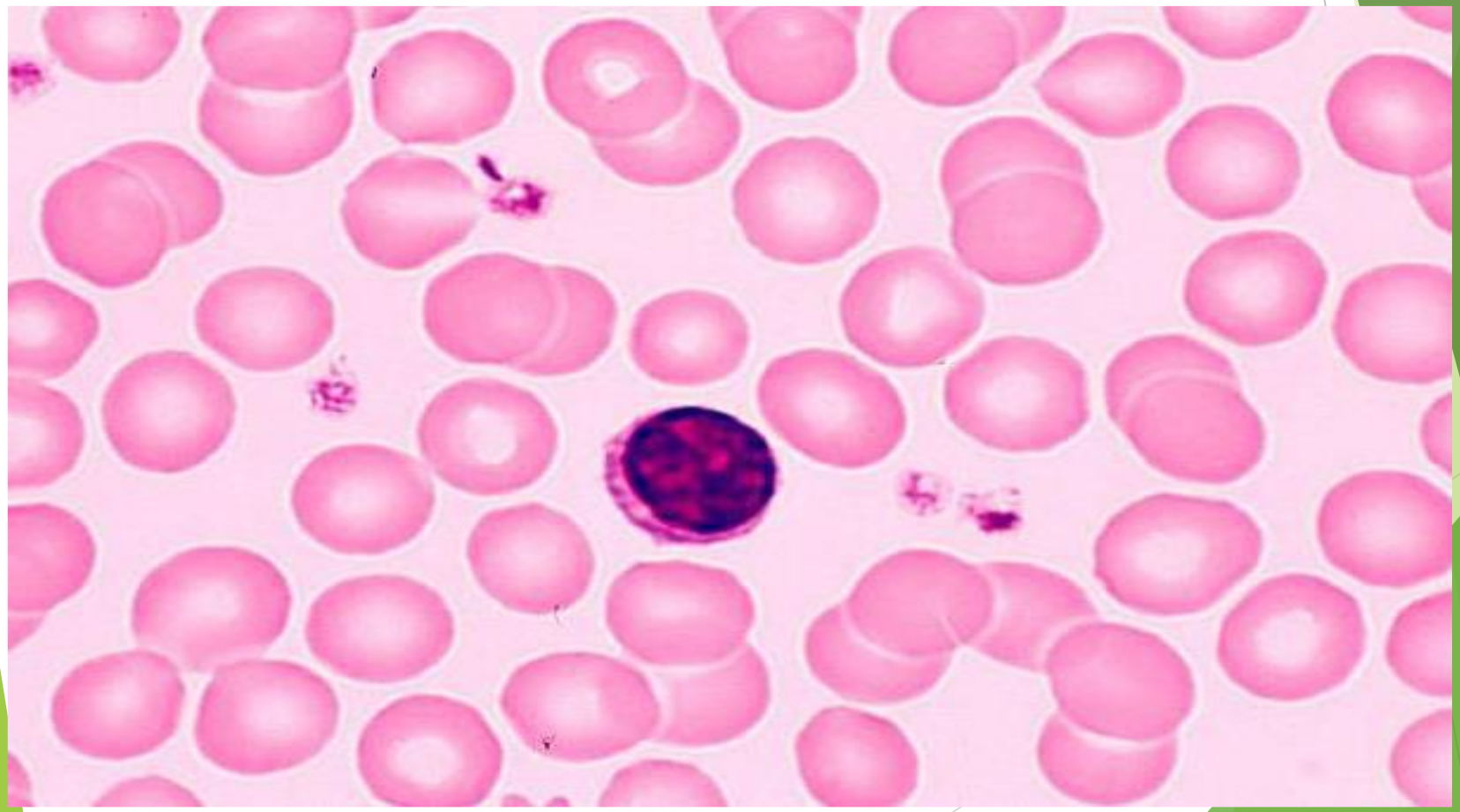


3- **Basophils** with **basophilic** granules.



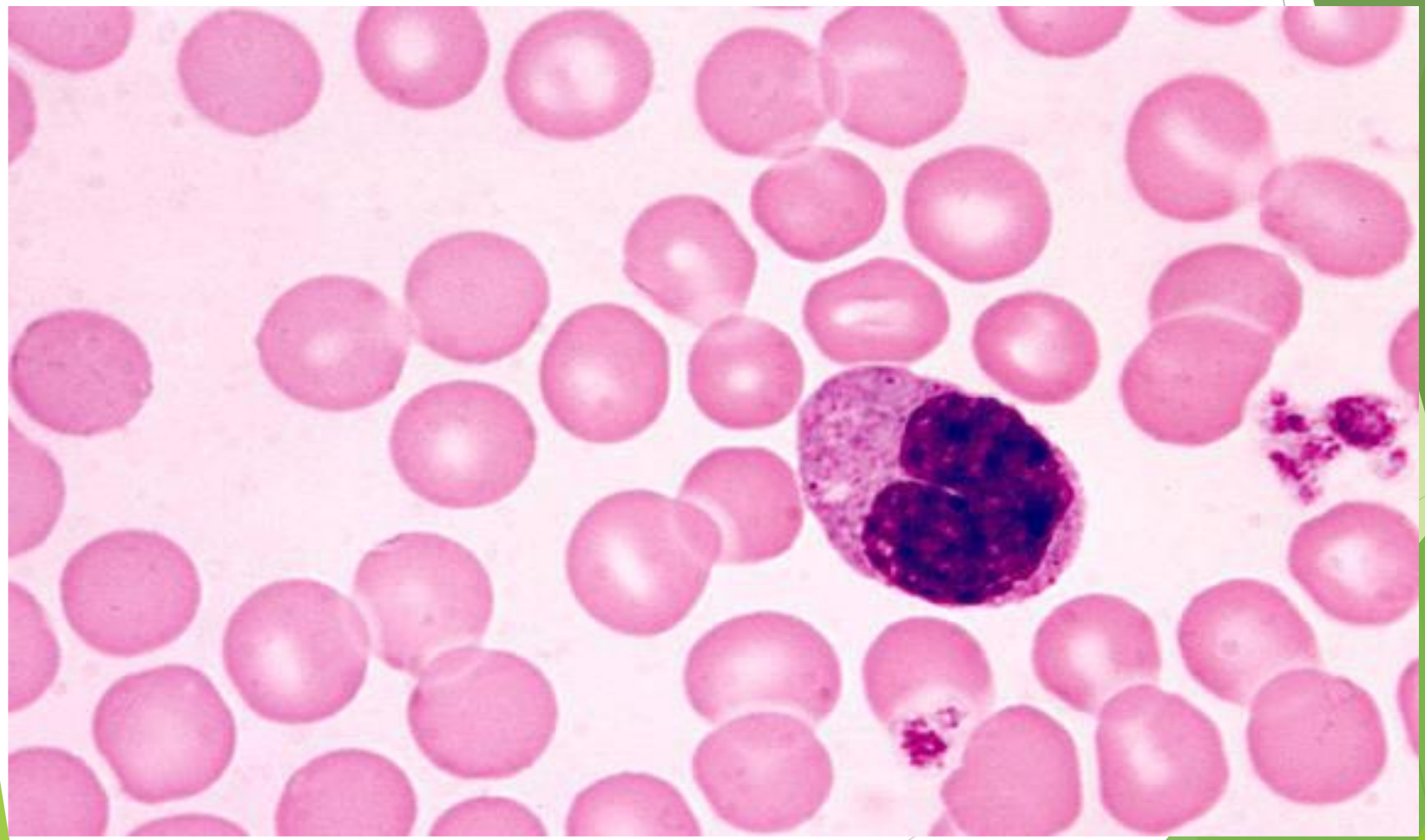
Agranulocytes

1- **Lymphocytes:** with **large** nucleus and basophilic thin rim of cytoplasm.



Agranulocytes

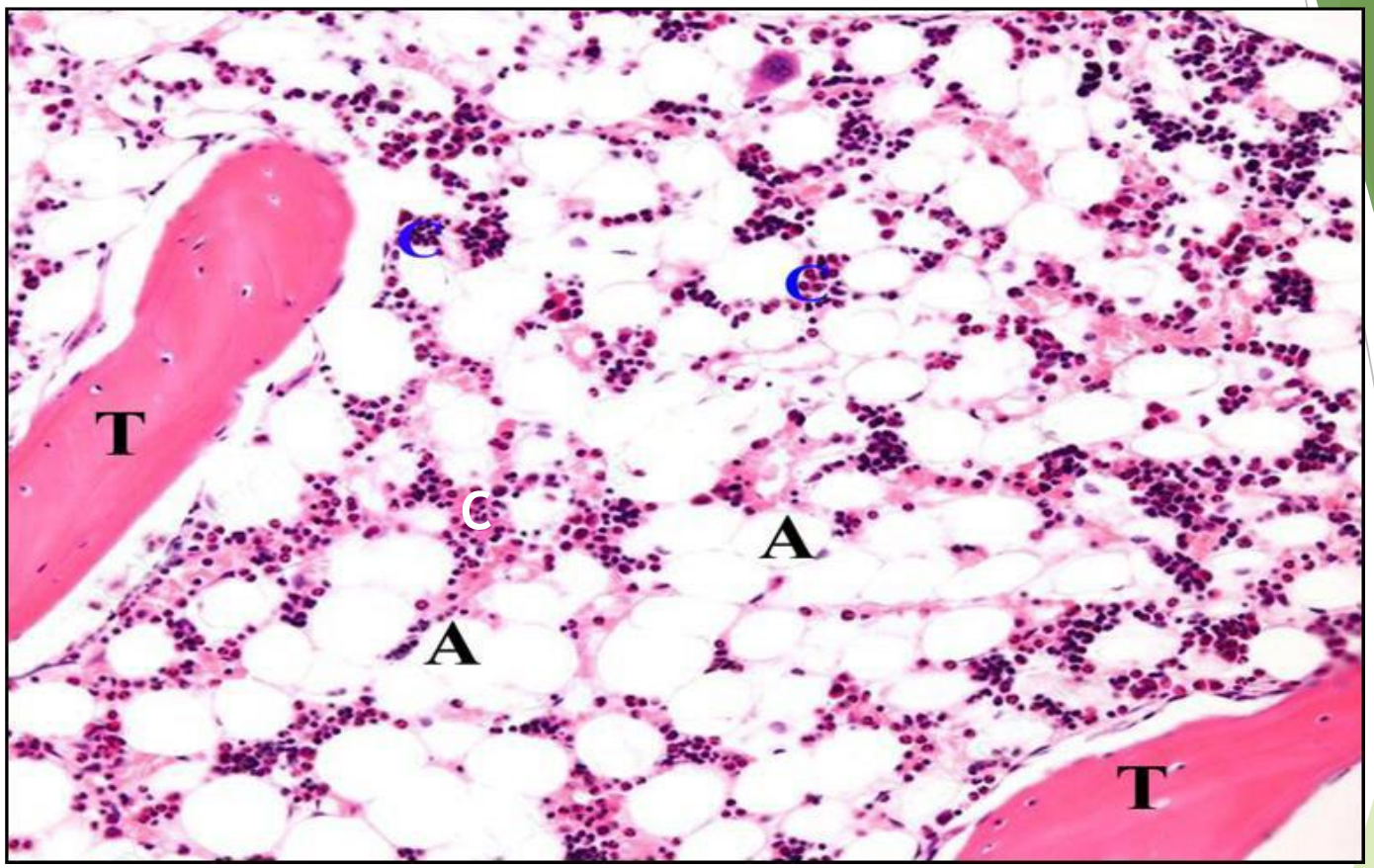
2- **Monocytes:** with **kidney-shaped** eccentric nucleus and pale basophilic cytoplasm.



LM picture of red bone marrow

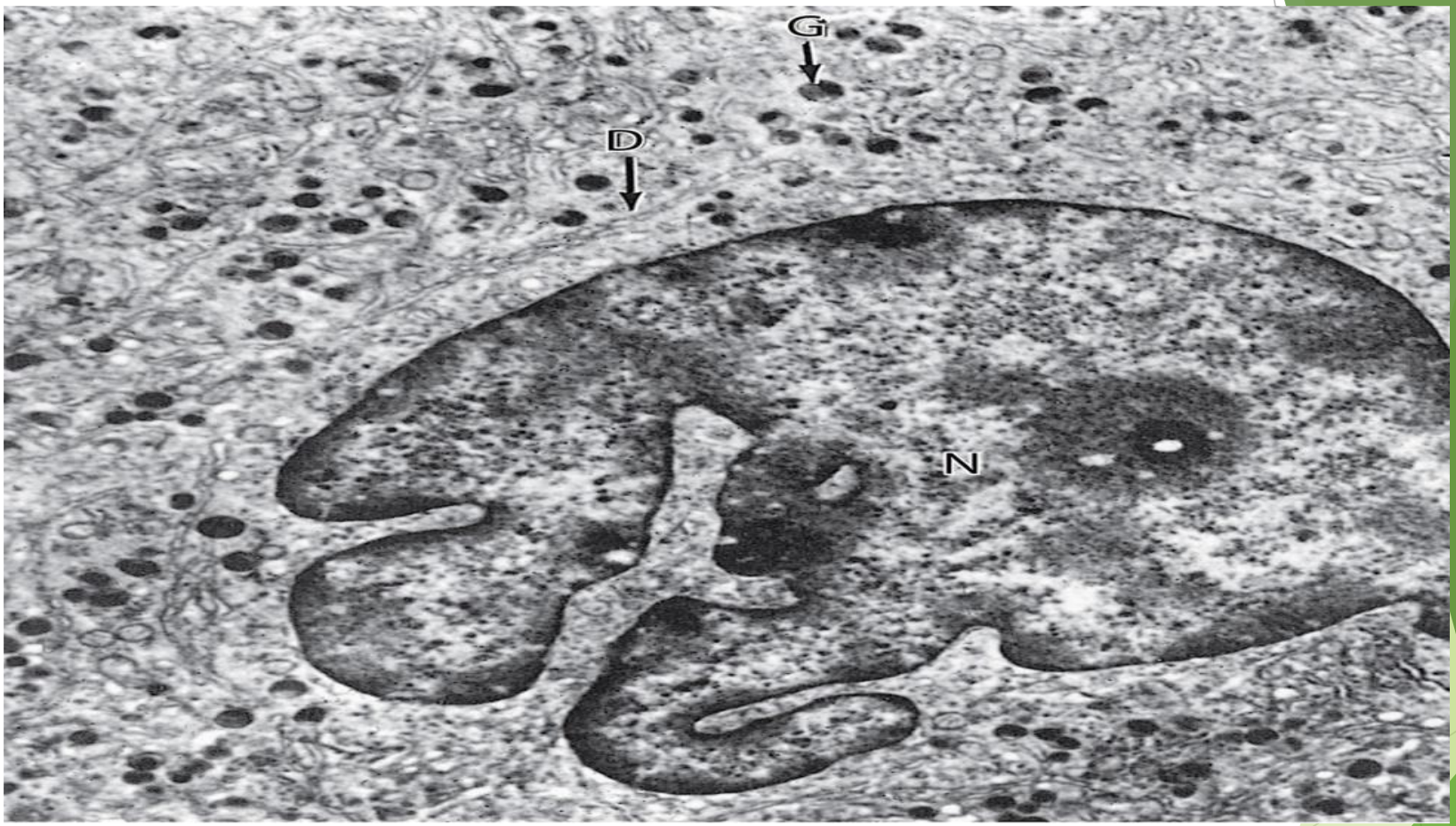
Hematopoietic cells (C) bony trabeculae (T).
Sinusoidal capillaries (S) and Adipocytes (A)

LM picture of yellow bone marrow



Adipocytes (A) occupy the bone marrow spaces and there is decrease in the ratio of hematopoietic cells (C).

TEM of a megakaryocyte



lobulated nucleus (N),
numerous cytoplasmic granules (G),
demarcation lines (D)

GOOD LUCK
&
THANK YOU