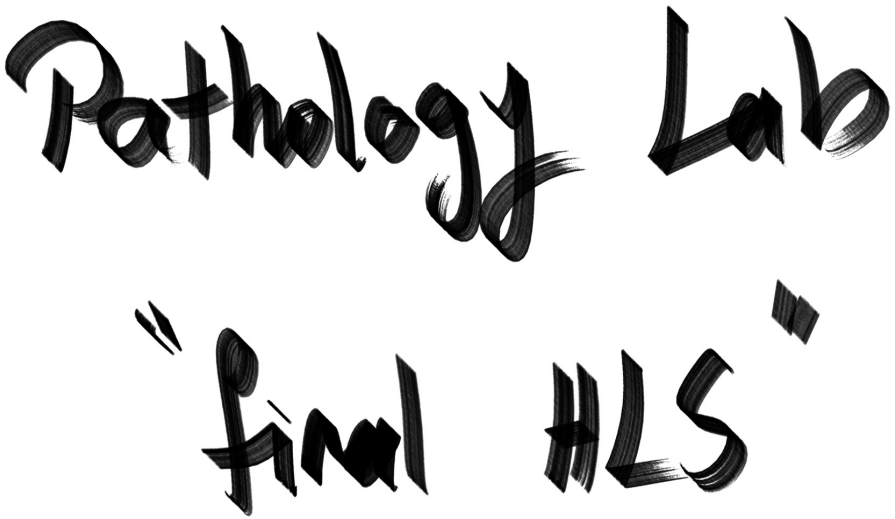
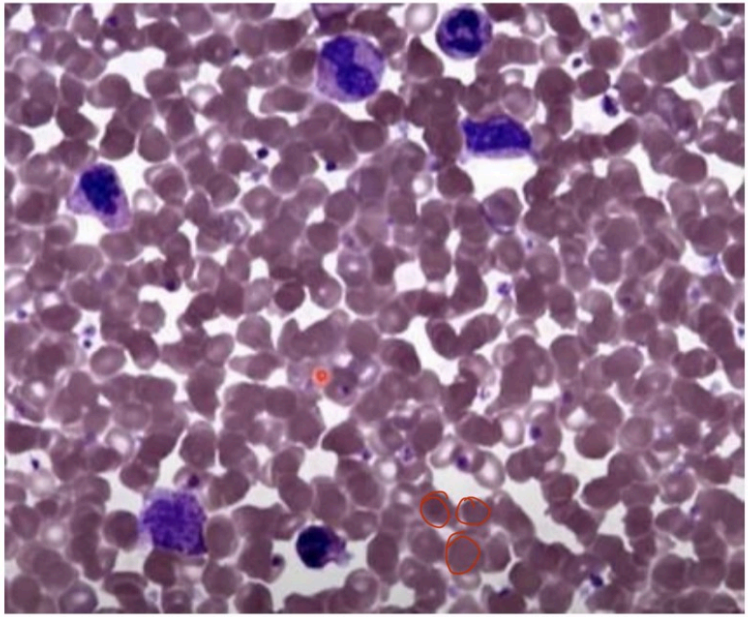


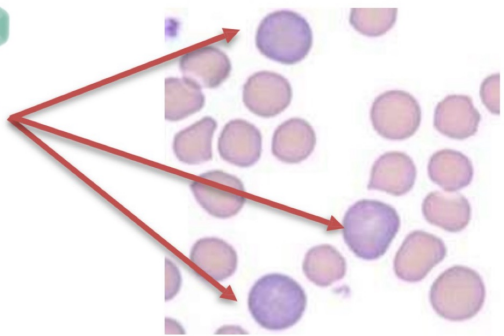
«اللهم إني أستودعك ما قرأت وما حفظت وما تعلمت، فردّه لي عند حاجتي إليه، إنك على كل شيء قدير».



Compact, crowded, dense RBCs. A single RBC's contouring and biconcave shape cannot be seen.

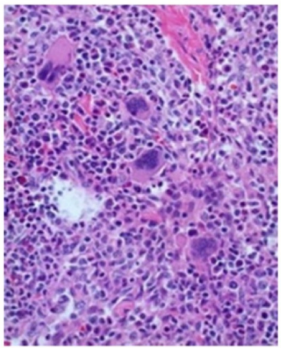
- Peripheral blood smear in polycythemia: packed RBCs, boundaries can't be seen

These are Reticulocyte they are large and blue in color because of streaks of DNA so you can count them from blood film





Large abdomen due to hepato/splenomegaly.
Growth retardation; they're short.
Skeletal deformities.

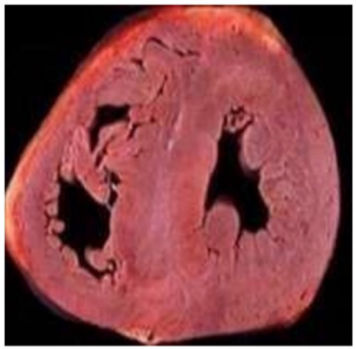


Bone biopsy; erythropoeitic cells.

sickle face



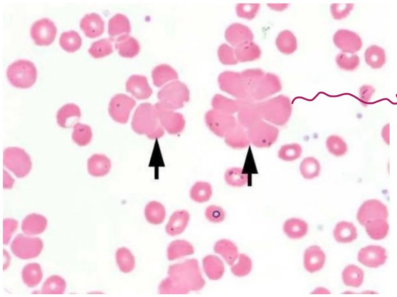
cheek bone is protruded



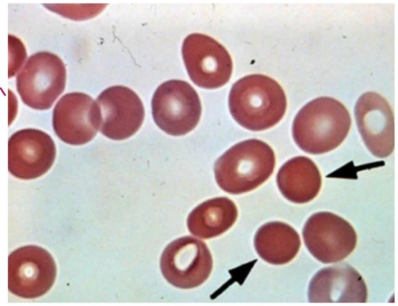
Very thick wall
cardiomegaly

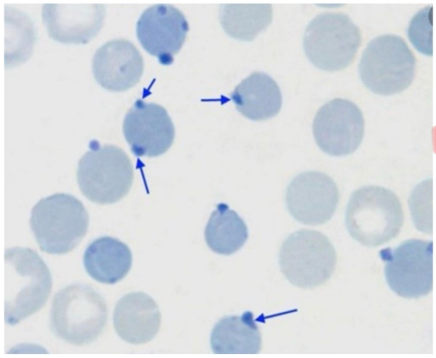
Thalassemia Major & sickle cell

immune Hemolytic anemia



in vivo agglutination occur in cold type

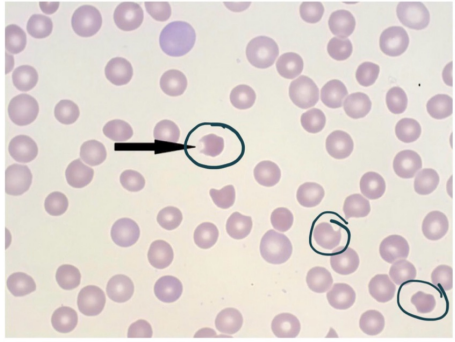




Heinz Bodies

G6PD difficiency

- Left: RBC agglutination: RBC clumps in different directions
- Right: spherocytes appear as small, round hyperchromatic RBC



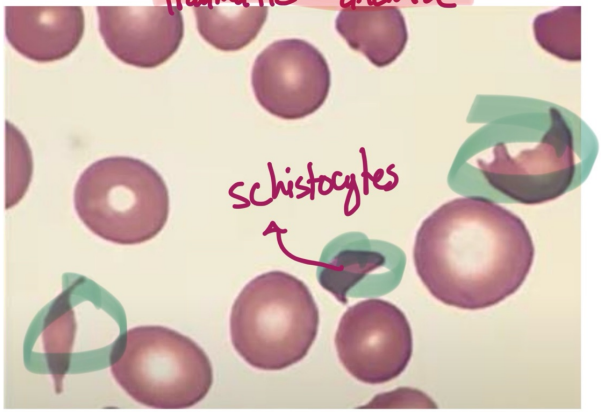
Bite cells

G6PD dif.

hereditary spherocytosis

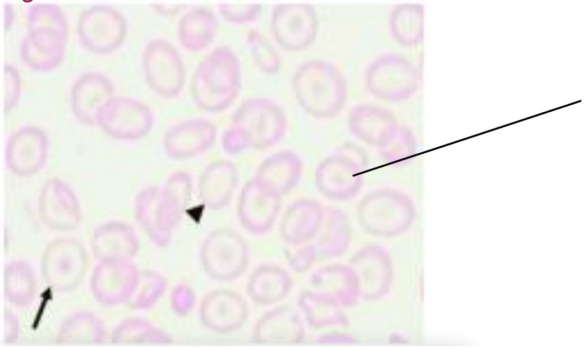


Traumatic anemia

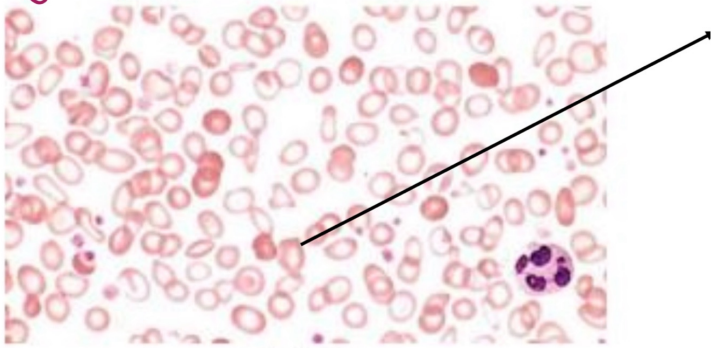


Target cell

here it's iron. def anemia



Hypochromic
+ microcytic
+ poikilocytosis
→ iron. def anemia

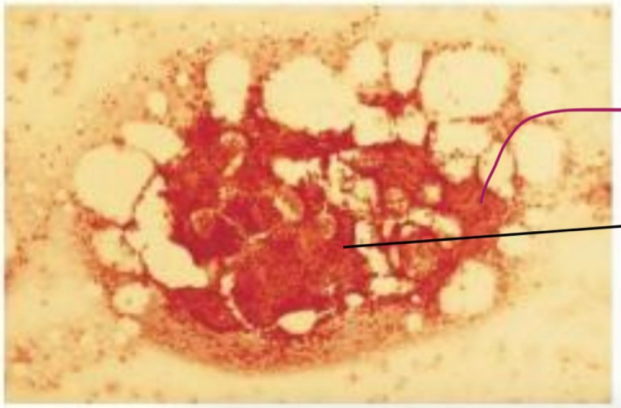




Normal

Aspirate of normal bone marrow (BM): bluish-black iron (haemosiderin) in macrophages in a fragment. Perls' stain ×40.

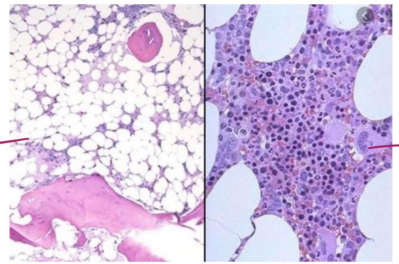
These black dots represent normal hemosiderin levels in the bone marrow aspirate, which is stained using the Prussian blue stain.



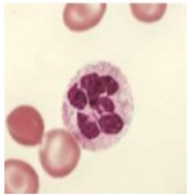
Iron def. Anemia

Aspirate of normal BM: a fragment with no stainable iron. Perls' stain ×40.

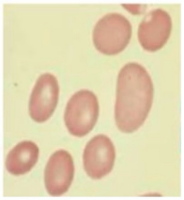
In this picture, the absence of the black dots—which represent hemosiderin—indicates a severe iron deficiency.



Morphology of megaloblastic anemia



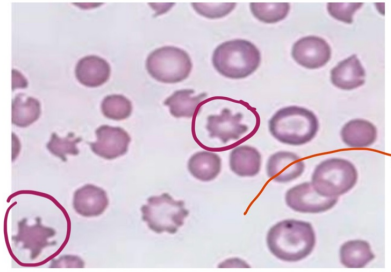
Hypersegmented neutrophils → the earliest sign of megaloblastic anemia (seen in vitamin B12 or folate deficiency) due to delayed nuclear maturation.

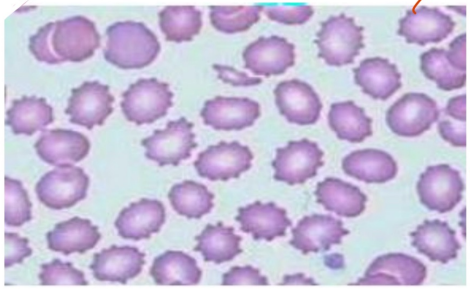


Macro-ovalocytes: large, elongated RBCs; MCV > 110 fL; hyperchromatic → typical of megaloblastic anemia.

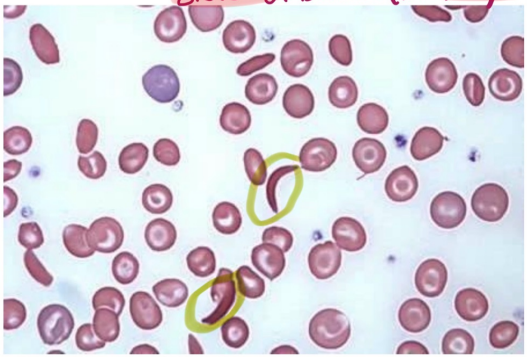


Bone marrow aspirate shows markedly increased iron stores, which can be identified using Prussian blue stain.

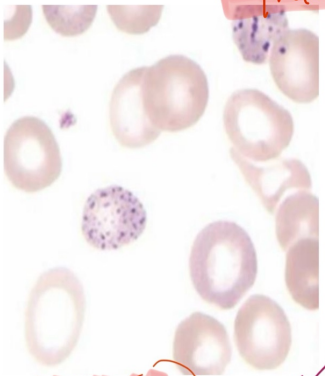


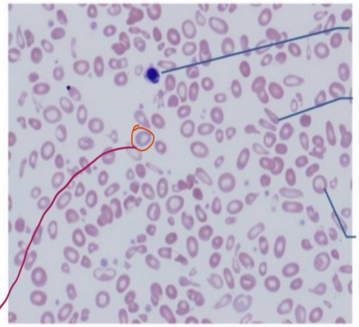


Sickle cell Disease (not trait)



Thalassemia Major



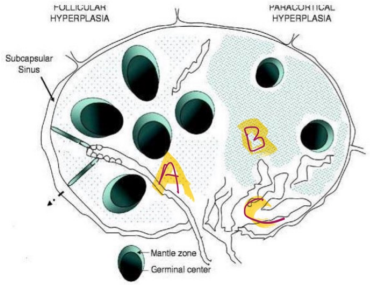


Basophilic stippling of RBCs

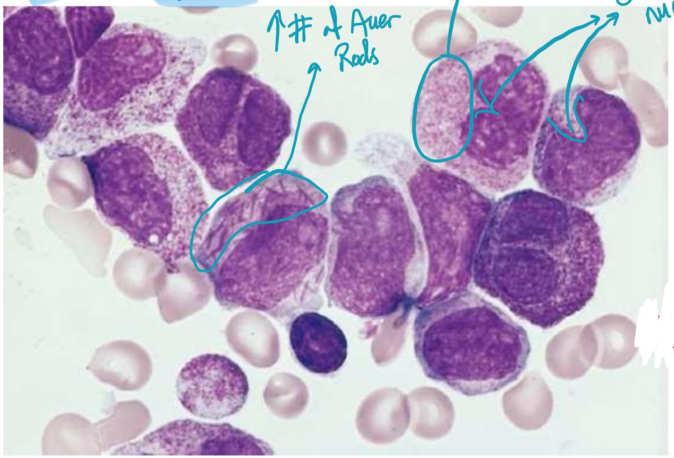
Thalassemia major blood film

CHRONIC NON-SPECIFIC LYMPHADENITIS

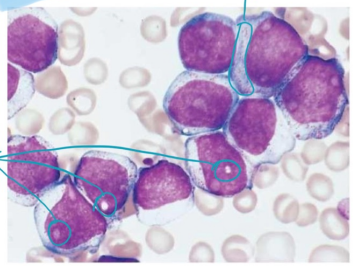
- This is a histologic diagram of reactive lymphadenitis. In the picture you can see many lymphoid follicles on the left, they're very large and crowded as well, this indicates follicular hyperplasia. A
- On the right, however, there's a significant decrease in the number of follicles, and we can see the area between them expanded by T lymphocytes from the paracortex, which indicates paracortical hyperplasia. B
- On the bottom right of the picture, you can notice sinus hyperplasia. C

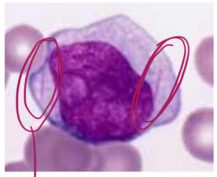


Acute promyelocyte leukemia

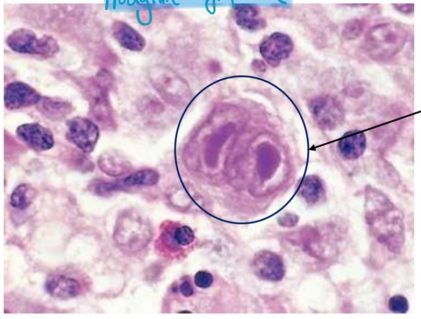


Acute Myeloid leukemia





Hodgkin- lymphoma



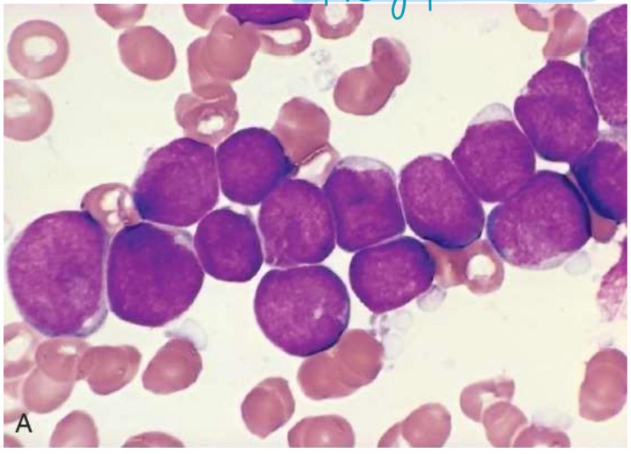
Reed-Sternberg cells.

(notice binucleation and the pink prominent nucleoli)

owl-eye

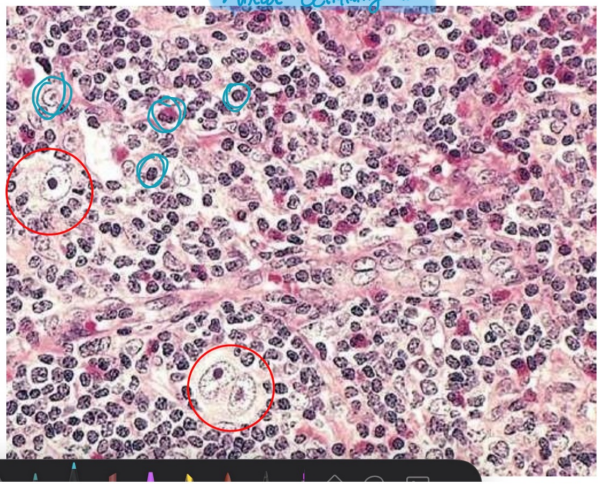
#very high N/C ratio + No granulation

Acute lymphoblastic leukemia

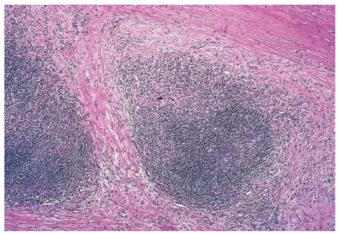


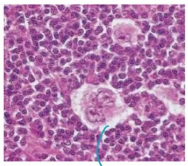
Multiple types of cells in Background + Presence of RS cells

Mixed cellularity H.L



Nodular sclerosis HL – first subtype

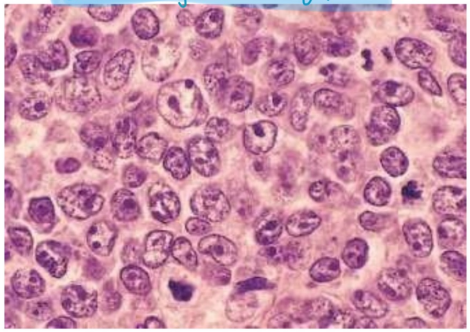




Here there are 2 large cells, with multinucleation and prominent nucleoli.

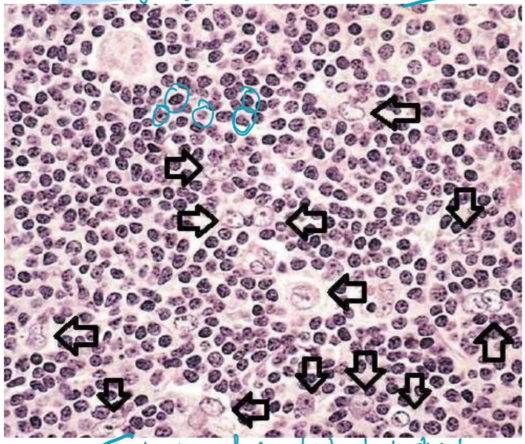
lacunar cells (formalin artifact)

Diffuse Large B-cell lymphoma NHL



Nodular-lymphocyte predominant H.L

Popcorn cells

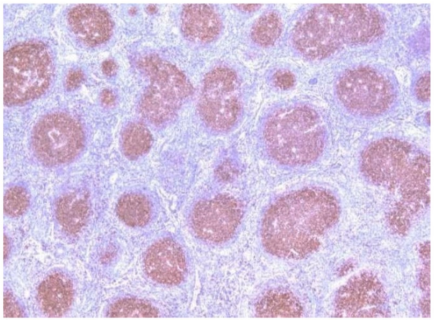


The background is almost only lymphocytes

logy of FL

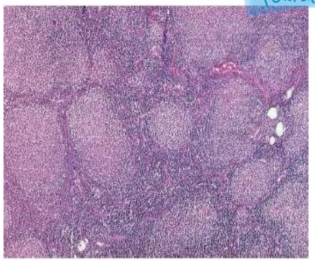
*t(14, 18)

BCL2 ⊕ cells ⇒ follicular lymphoma [not reactive follicular hyperplasia]



Bcl2 appears brown in color. More brown, more expression.

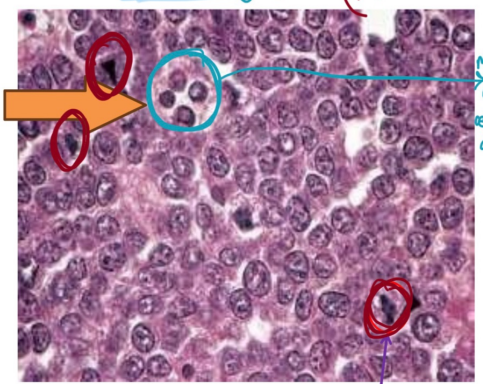
Follicular lymphoma





y

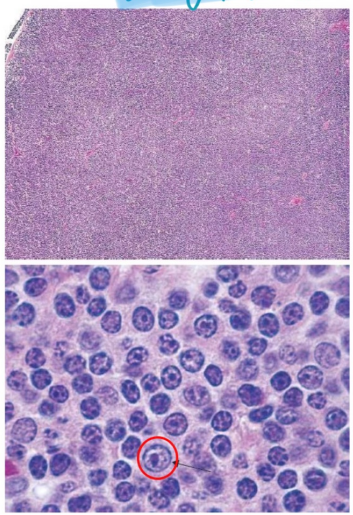
Burkitt lymphoma (numerous mitotic figures)



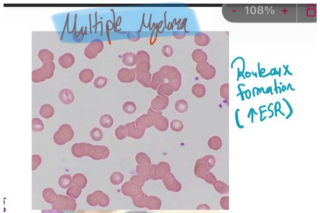
Mitotic figure; very dark spots

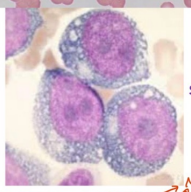
effacement of L.N structure

SMall lymphocytic lymphoma

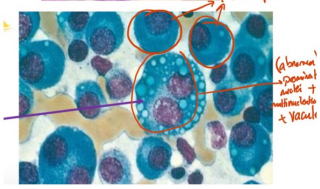


A large cell, prolymphocytes.

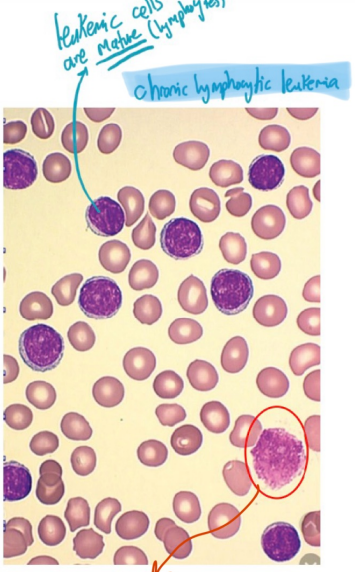




Visible nucleolus suggesting malignant plasma cells.







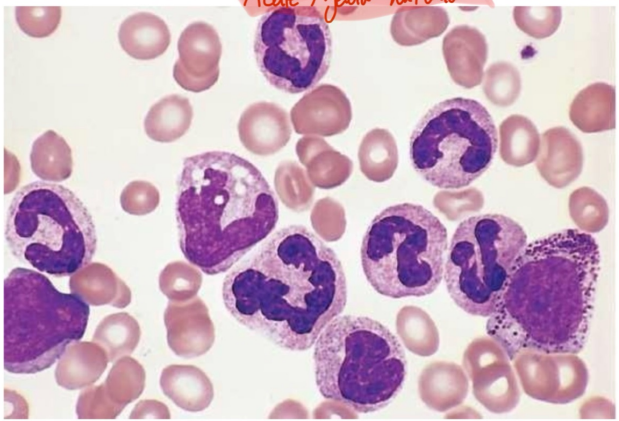
Smudge cells, appearing as a **broken or smeared cell**.



& notice few blasts

Most of cells are nearly mature

Acute Myeloid leukemia

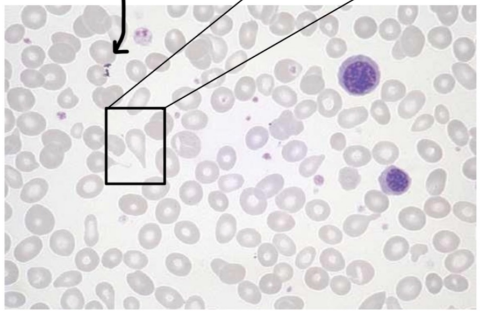


Darcocyte, or tear-shaped RBCs.

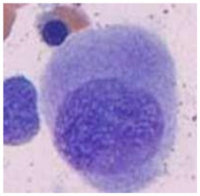
Primary Myelofibrosis

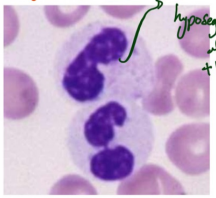
Bone Marrow cries from fibrosis

Peripherally-nucleated RBCs.

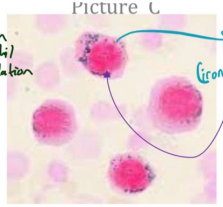


Myelodysplastic syndrome





Picture C



megakaryocytes.

