

# POLYCYTHEMIA VERA (PCV)

- Myeloproliferative neoplasm

- PCV is characterised by

}	in Bone marrow & (Panmyelosis)	→ ↑ Red cells
		→ ↑ Granulocytes
		→ ↑ platelets

in peripheral blood

## # Summary! - Myeloproliferative Neoplasms

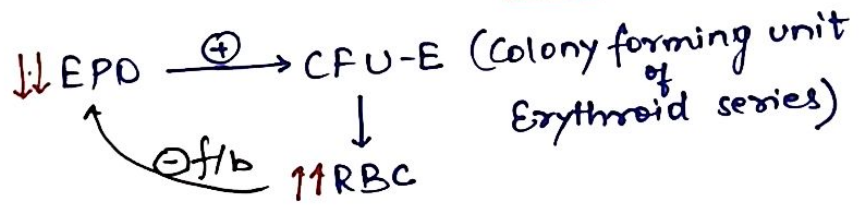
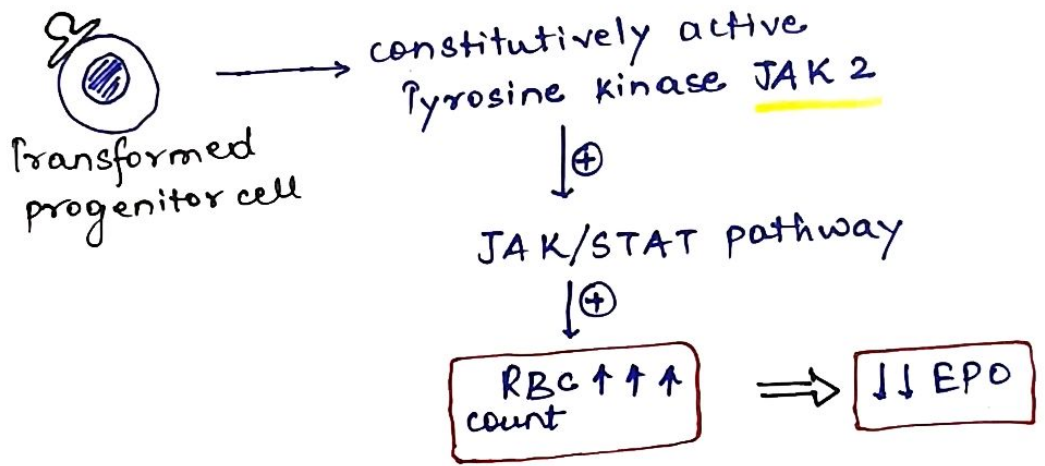
- CML (Chronic myeloid leukemia) - BCR-ABL fusion gene
- PCV (Polycythemia vera) - JAK 2 mutation
- ET (Essential thrombocythemia) - JAK 2, CALR, MPL mutations
- Primary myelofibrosis - JAK 2, CALR, MPL mutations

# Pathogenesis :-

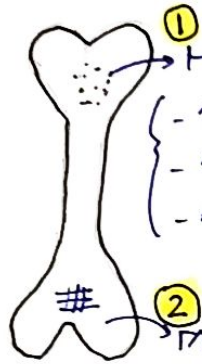
Normally,



PCV,



# Morphology :-



① Hypercellular (Panmyelosis)

- ↑ RBC progenitors + RBC
- ↑ granulocytic progenitors + granulocytes
- ↑ megakaryocytic progenitors + megakaryocytes

② Marrow fibrosis  
(in late/spent phase)

→ Extramedullary  
hematopoiesis →

③ Organomegaly

## Diagnosis :-

### Major criteria :-

① Hb count

♂ > 16.5 g/dl

♀ > 16 g/dl

② Panmyelosis on Bone Marrow  
Bx

③ Presence of JAK-2 mutation

### Minor criteria :-

① ↓ EPO

### For Diagnosis,

• 3 major

OR

• 2 major + 1 minor

