

RBC Indices = Absolute values blood index

★ MCV

- Volume of single RBC
- in μm^3
- Average = 90
- Range = 78-94
- PCV per 100 mL blood $\times 10$
- RBC count in million/L

All haemolytic anaemia except thalassemia

- Normocytic → Aplastic Anaemia
- Microcytic → Chronic infection
- Megacytic → All megaloblastic anaemia due to def of vit B12, Folic Acid, costle's Intrinsic factor

★ MCH

- Aug. Hb in single RBC
- In pg (picogram)
- Average = 30
- Range = 28-32
- Haemoglobin in g/dL $\times 10$
- RBC count in million/L

MCH can't be > 38% as RBC can't hold Hb beyond its saturation point

Anemia can never be hyperchromic

★ MCHC

→ most reliable as doesn't involve RBC count

- Amount of Hb as % of volume of RBC
- Average = 33
- Range = 32% - 38%
- Haemoglobin in g/dL $\times 100$
- PCV per 100 mL blood

Normochromic → After acute haemorrhage, except thalassemia, Aplastic Anaemia, megaloblastic A; chronic infection

Hypochromic → After chronic haemorrhage, 2° to liver disease, Fe deficiency Anaemia, Thalassemia

→ Iron Deficiency Anemia - microcytic hypochromic

★ Color Index

Insignificant as normal range of RBC is wide

- Ratio of Hb to RBC
- Average = 1
- Range = 0.85 to 1.15

• Neutrophil

- ↑ - Acute Infection, Tissue Destruction, Pregnancy
- ↓ - Viral Infection, Typhoid Fever, Bone marrow Depression

• Eosinophil

- ↑ - Allergy, Parasitic Infestation
- ↓ - Corticosteroid injection, Acute pyogenic infection

• Basophil

- ↑ - Chickenpox, Tb, Influenza
- ↓ - Glucocorticoid injection, Drug induced

• Monocyte

- ↑ - Tb, Syphilis
- ↓ - Hypoplastic Bone marrow

• Lymphocyte

- ↑ - Lymphatic Leukemia, Viral Infection, Tb
- ↓ - Hypoplastic Bone marrow, AIDS