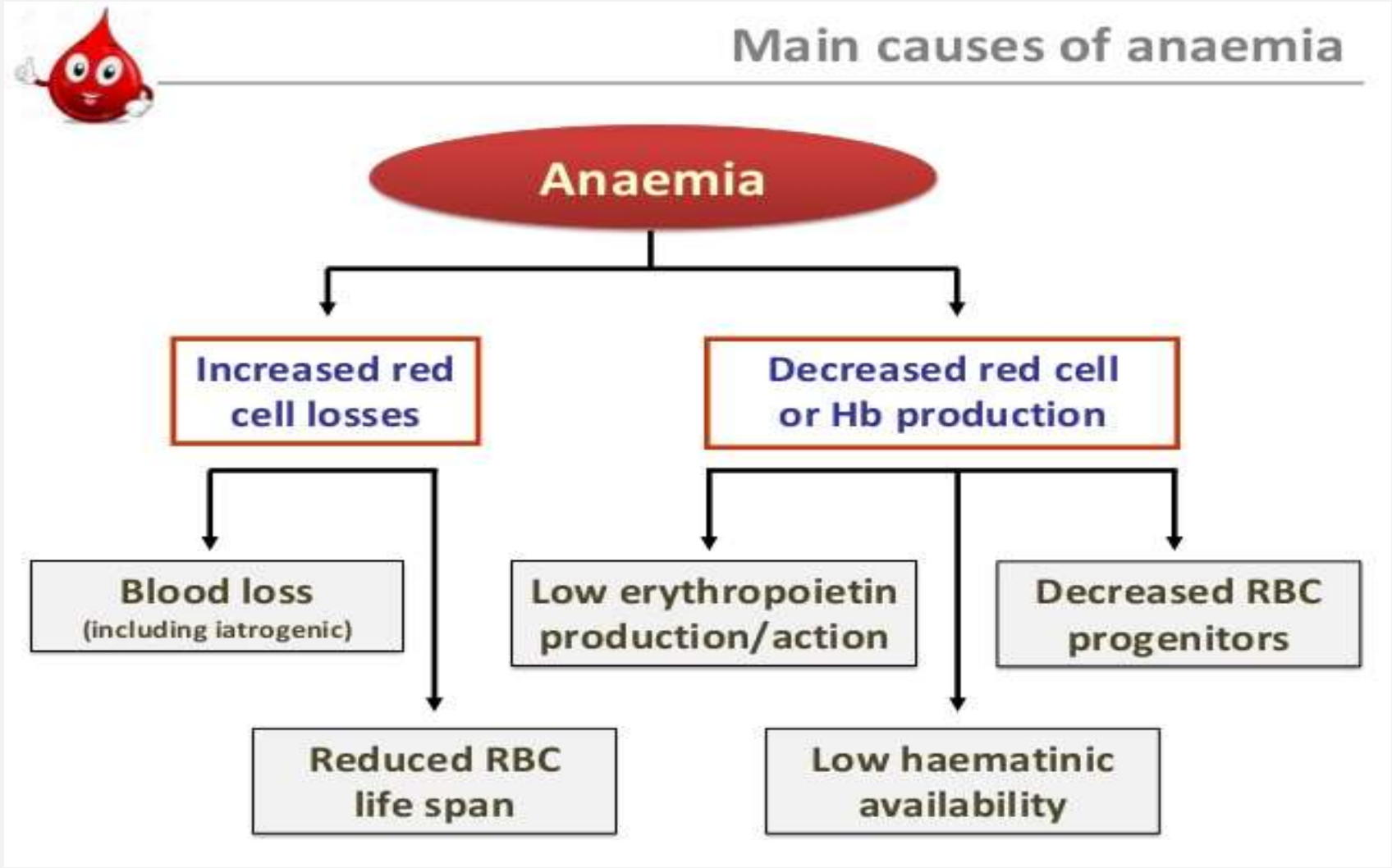
MANAGEMENT OF ANAEMIA

Mai Khalifa

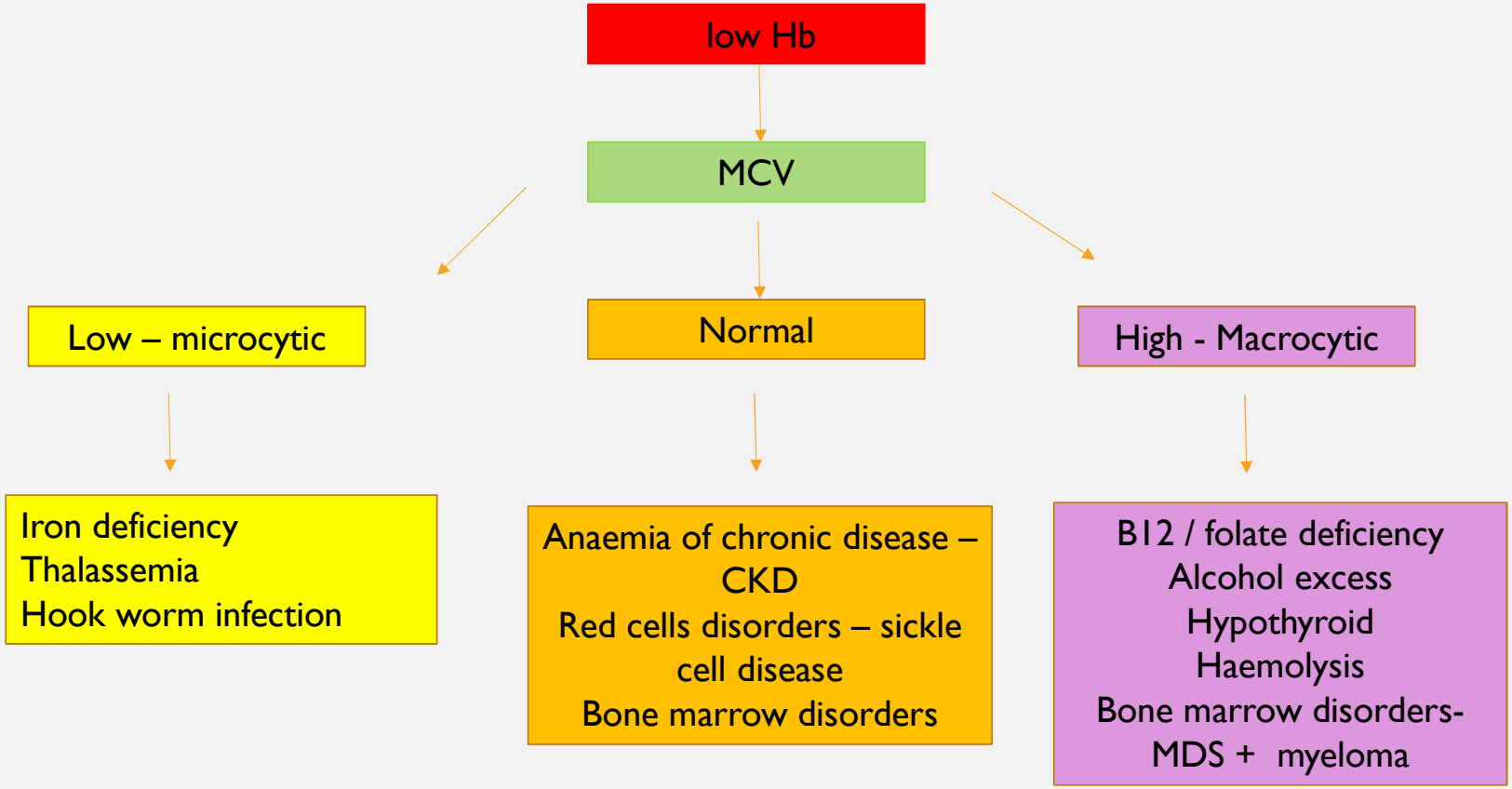
BY THE END OF TODAY…

- Can define the types of anaemia
- Knows when to refer patients for further investigation and treatment
- Knows how to order appropriate investigations
- Understands the different types of therapies as alternatives to transfusions for each type of anaemia


Main causes of anaemia
Anaemia
Increased red cell losses
Decreased red cell or Hb production
Blood loss
(including iatrogenic)
Reduced RBC life span
Low erythropoietin production/action
Low haematinic availability
Decreased RBC progenitors

PATIENT BLOOD MANAGEMENT (2012)

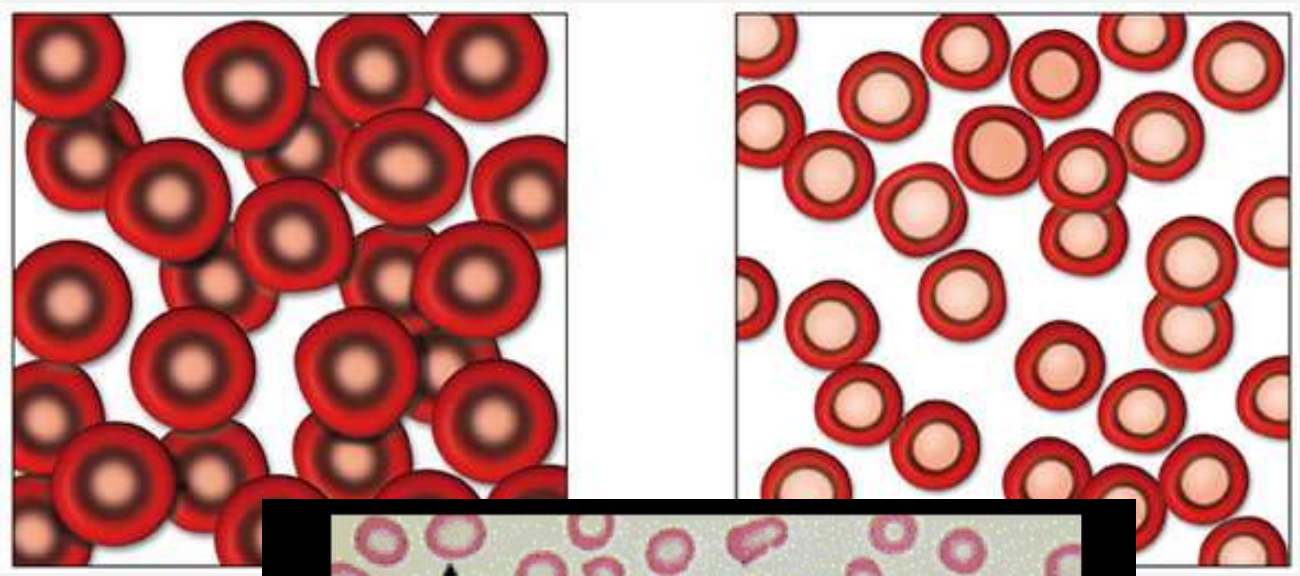
- Patient and staff education
- Active management of anaemia
- Minimise the volume of blood samples taken
- Use restrictive threshold values
- In non-bleeding patients transfuse one dose of blood component, then reassess
- Active management of abnormal haemostasis
- Use alternatives to transfusion where appropriate
- Surgical Patients
- a. Detect and treat pre-operative anaemia
  b. Minimise blood loss and bleeding
  c. Be aware of drug interactions that can increase risk of anaemia

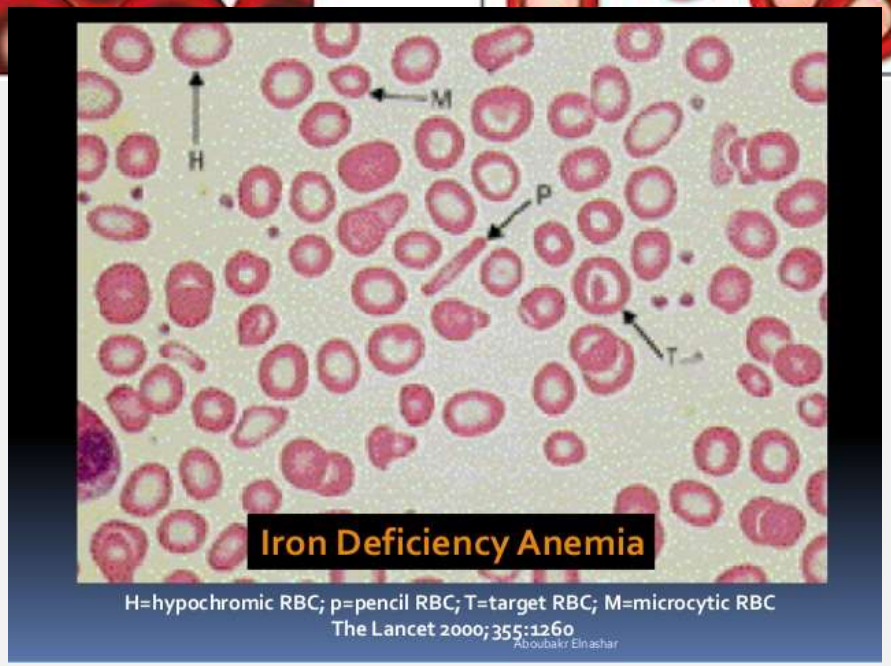

low Hb
MCV
Low – microcytic
Normal
High - Macrocytic
Iron deficiency
Thalassemia
Hook worm infection
Anaemia of chronic disease – CKD
Red cells disorders – sickle cell disease
Bone marrow disorders
B12 / folate deficiency
Alcohol excess
Hypothyroid
Haemolysis
Bone marrow disorders- MDS + myeloma

CASE 1

- Ms Purple 25
- Hb 70g/l (female: 115
- WCC 4.6
- Plt 400
- MCV 65
- MCH 25

- List the abnormalities?
- Further tests?





Microcytic anaemia

IRON DEFICIENCY IS NOT A DIAGNOSIS

- Female – periods
- BLOOD LOSS –GI blood loss
- U&E, LFTs, Ferritin (false normal)
- GI investigations
- Diet
- Start oral iron/ IV Fe
- Vitamin C to enhance absorption
- Exclude malabsorption symptoms

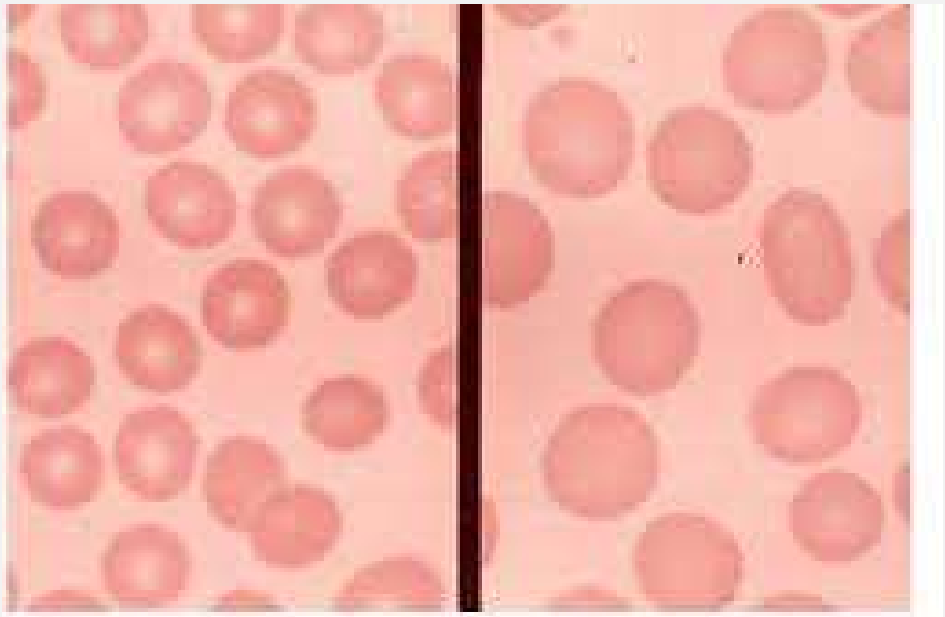
CASE 2

- Mr Green 40
- Hb 84g/l
- WCC 4
- Plt 100
- MCV 105
- MCH 30

- List the abnormalities ?
- Further tests ?

CASE 2

- Macrocytic anaemia
- Thrombocytopenia
- B12, folate, LFTS, TFT
- Replace if low B12/ folate
- Diet
- Alcohol intake



CASE 3

- Mr yellow admitted with a pyrexia and bleeding from the gums.
- Hb 65 g/l
- WCC 0.4
- Plt 10
- MCV 70
- MCH 27

CASE 3

- Anaemia – normochromic normocytic
- Leucopenia
- Thrombocytopenia
- Pancytopenia
- Routine blood tests U&E, LFT, CRP, Ferritin, B12 folate
- Haematology referral

- 45 year old lady attended pre- op clinic as she is due to have a cholecystectomy
- Her FBC shows Hb 112/l WCC 6 Plt 350 MCV MCH normal
- She is not keen to have a blood transfusion when she has surgery as she wants to continue to donate blood and she is worried about the risks of transfusions.
- What measures will you take to prevent anaemia and reduce this lady's risk of receiving a transfusion?

PRE / INTRA/ POST OP CARE

- Check haematinics – optimize
- Review drugs – Aspirin, NSAIDs, anti-coagulation.
- Cell salvage, tranexamic acid
- Iron supplements (PO/ IV)
- EPO
- Reduce the volume/ frequency of blood tests taken
- Discuss potential need for transfusion pre op
- Leaflets and consent