

# **Case discussion - Anaemia**

Dr Asma Bibi

# Case 1

- 21 yr old female patient with complaints of fatigue and weakness.

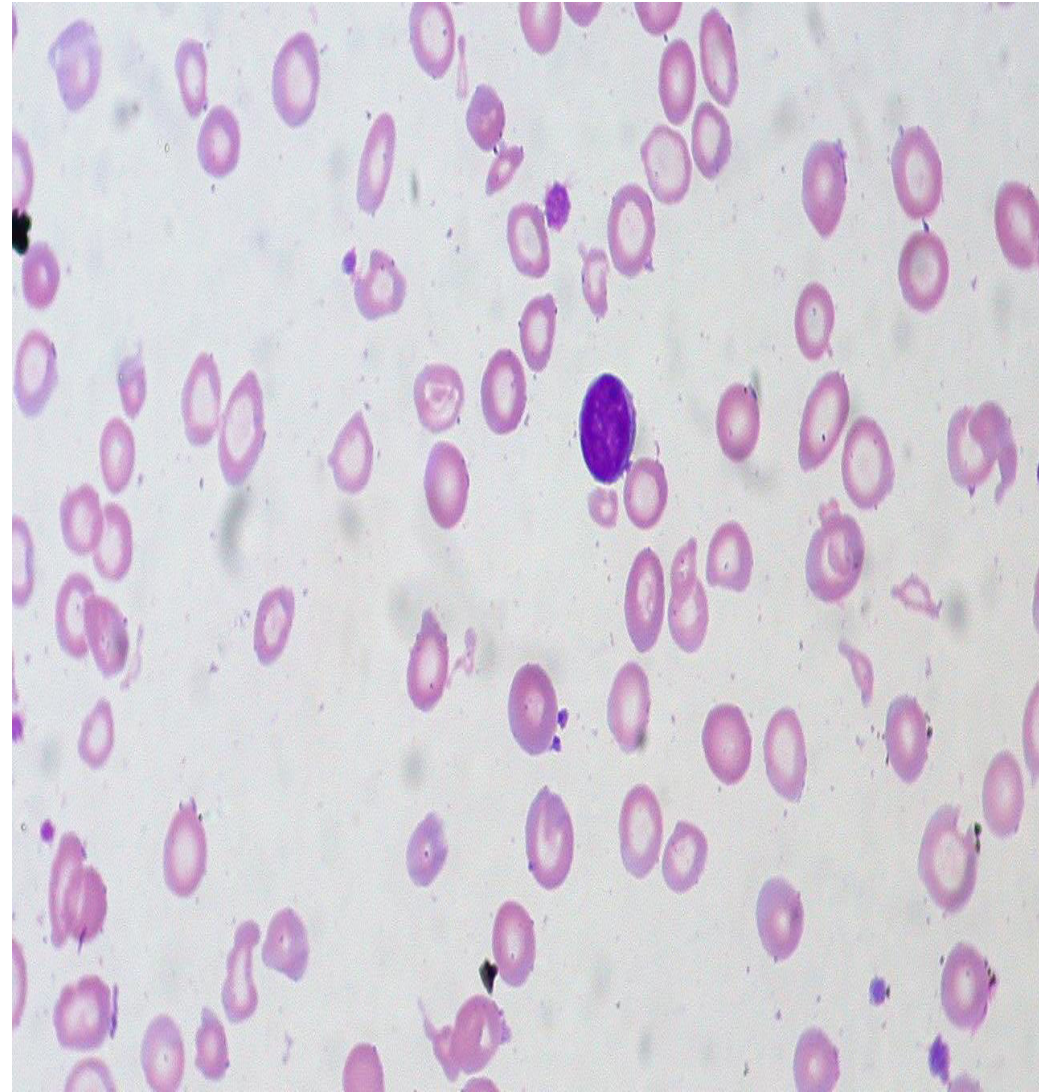
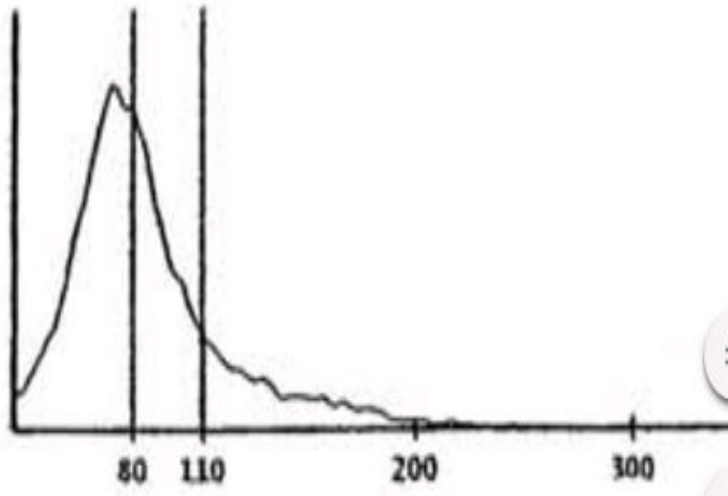
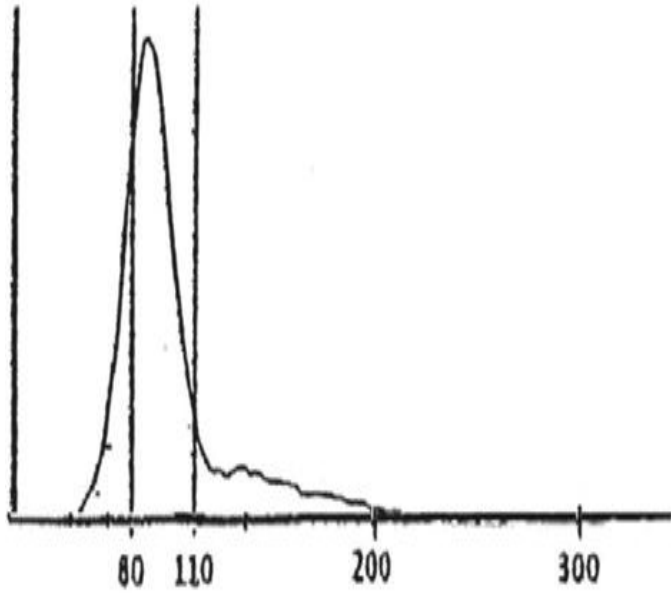
# Case 1

## CBC –

	Patient value	Normal range
Hb	7.3	12-16 g/dL
Hct	25.2	36-48 %
RBC count	3.6	3.8-4.8 x 10 <sup>12</sup> /L
MCV	70	82-92 fL
MCH	20.3	27-32 pg
MCHC	29	32-36 g/dL
RDW -CV	20.3	11.6-14 %
Total WBC count	6	4-10 x 10 <sup>9</sup> /L
Platelet count	210	150-400 x 10 <sup>9</sup> /L
Reticulocyte Count	1	0.5-2.5 %

$$\begin{aligned}\text{Mentzer's index} &= \text{MCV}/\text{RBC} \\ &= 70/ 3.6 \\ &= 19.4\end{aligned}$$

# Case 1



# Case 1



Microcytic hypochromic anaemia –  
*s/o Iron deficiency*

# Case 2

- 26 yr old female patient, 12 weeks pregnant, came for routine antenatal check-up

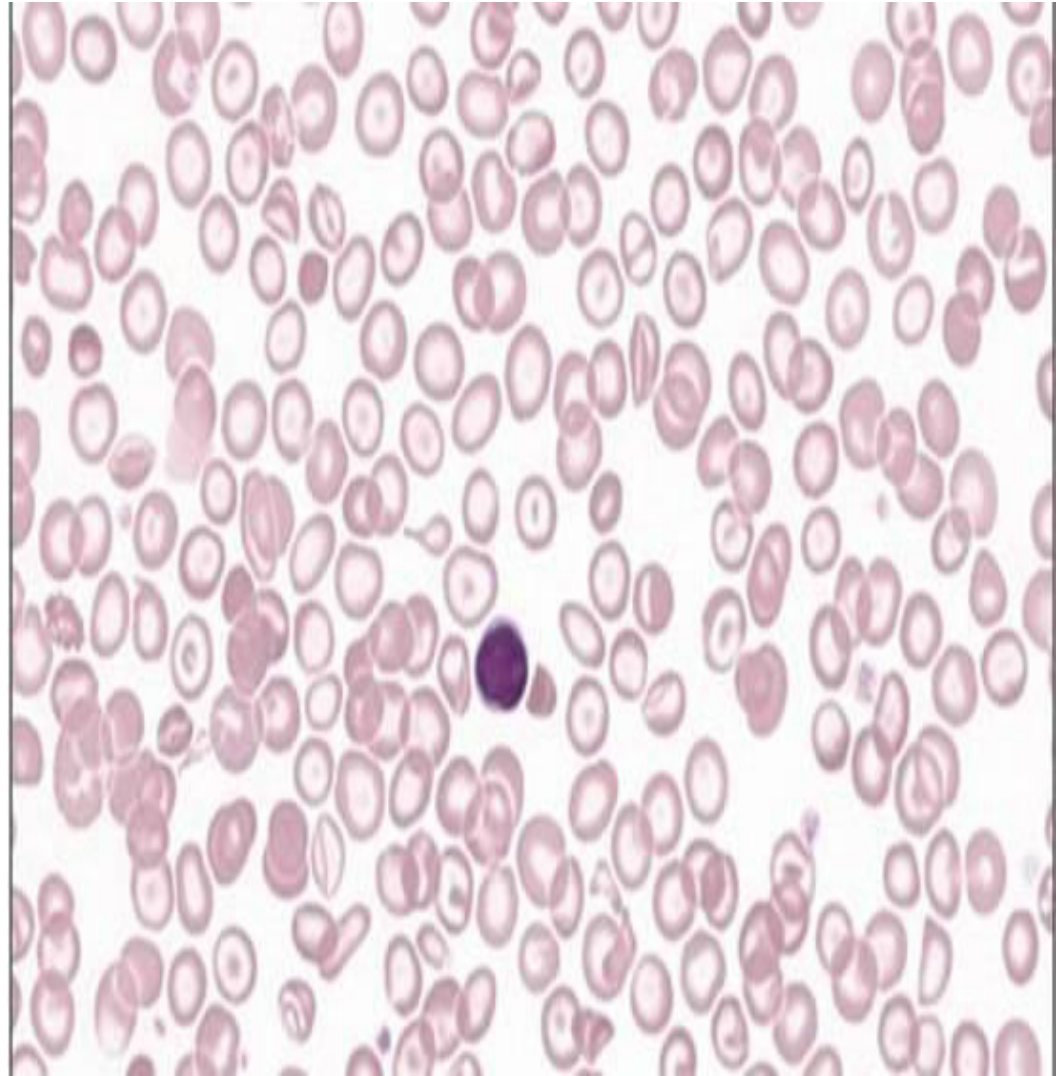
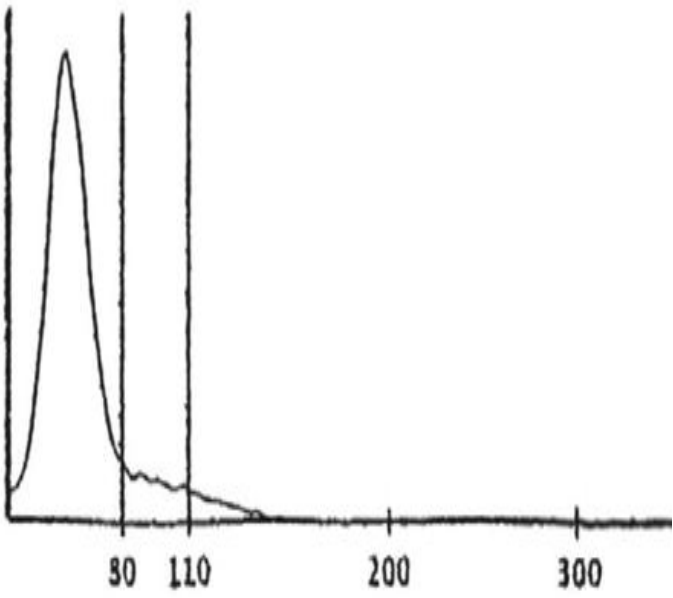
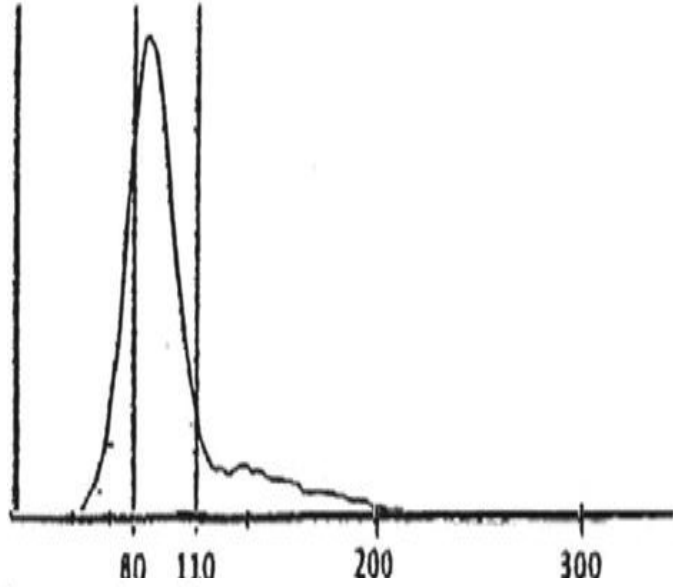
# Case 2

## CBC –

	Patient value	Normal range
Hb	10.7	12-16 g/dL
Hct	35.8	36-48 %
RBC count	5.5	3.8-4.8 x 10 <sup>12</sup> /L
MCV	65	82-92 fL
MCH	19.5	27-32 pg
MCHC	30	32-36 g/dL
RDW	14.6	11.6-14 %
Total WBC count	7.5	4-10 x 10 <sup>9</sup> /L
Platelet count	310	150-400 x 10 <sup>9</sup> /L
Reticulocyte Count	1.5	0.5-2.5 %

**Mentzer's index** = MCV/RBC  
= 65/ 5.5  
= **11.8**

# Case 2





## Case 2



Microcytic hypochromic anaemia –  
*s/o  $\beta$ -Thalassemia trait*

## Case 1

- Mentzer's index = 19.4  
( > 13)
- *s/o Iron deficiency*

## Case 2

- Mentzer's index = 11.8  
( < 13)
- *s/o Beta - Thalassemia Trait*

# Case 3

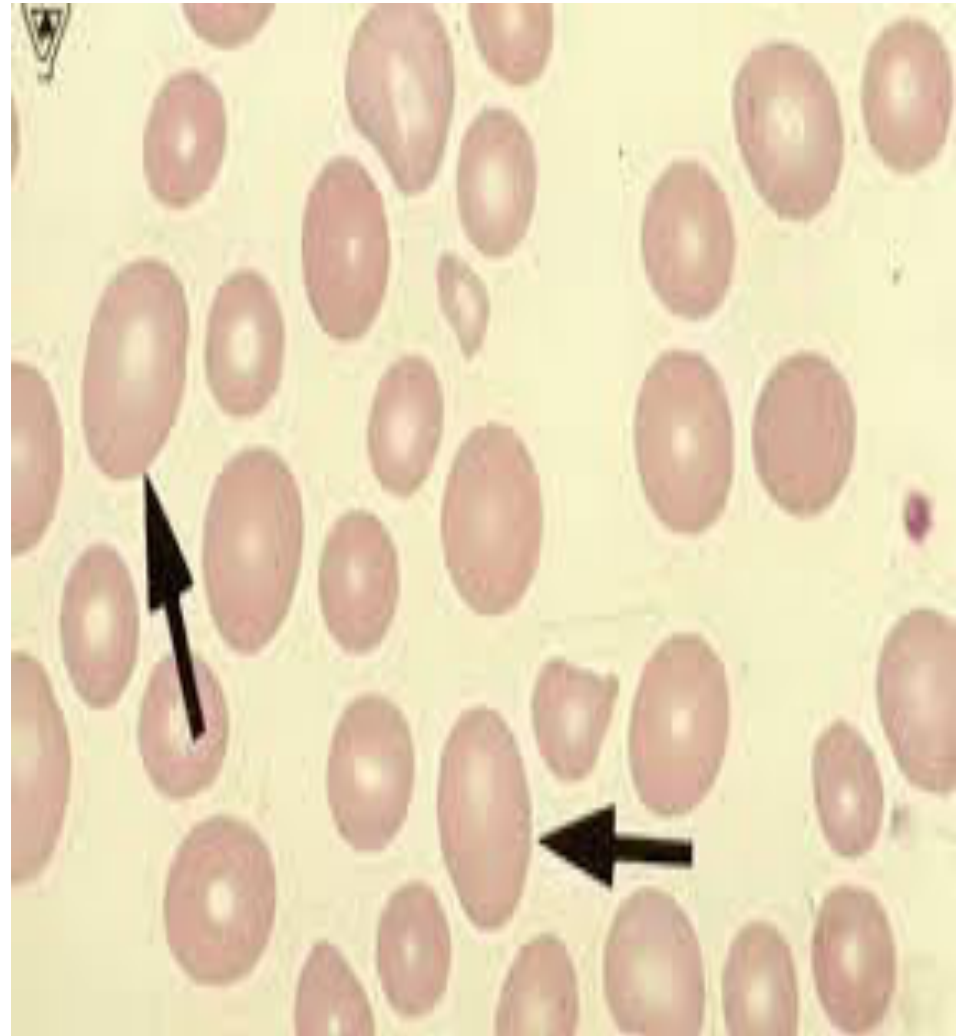
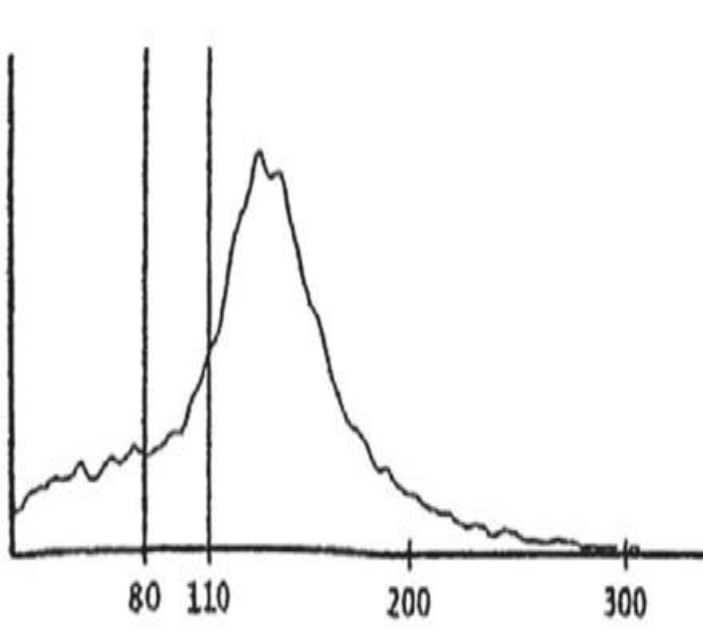
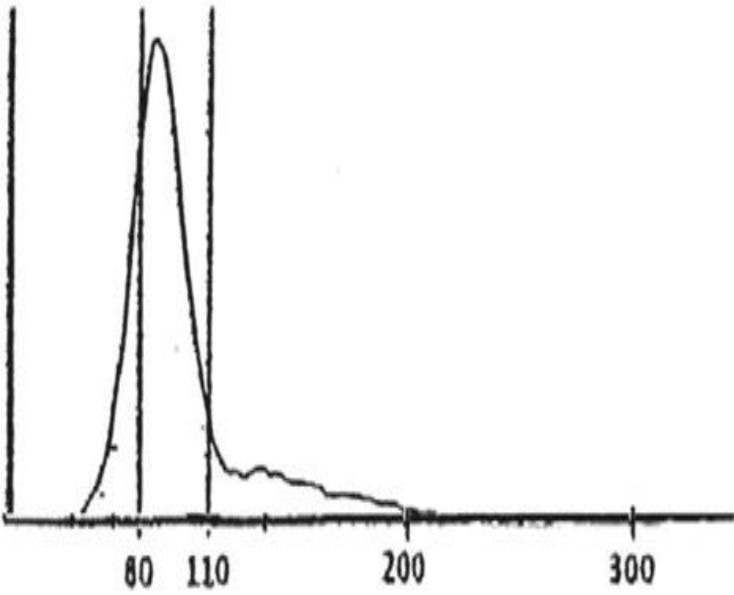
- 50 yr old vegetarian male with fatigue and tingling sensation in feet.

# Case 3

## CBC –

	Patient value	Normal range
Hb	<b>7.7</b>	12-16 g/dL
Hct	<b>29.2</b>	36-48 %
RBC count	<b>2.65</b>	3.8-4.8 x 10 <sup>12</sup> /L
MCV	<b>110</b>	82-92 fL
MCH	29	27-32 pg
MCHC	<b>26.4</b>	32-36 g/dL
RDW	<b>19.1</b>	11.6-14 %
Total WBC count	<b>3.5</b>	4-10 x 10 <sup>9</sup> /L
Platelet count	<b>110</b>	150-400 x 10 <sup>9</sup> /L
Reticulocyte Count	0.5	0.5-2.5 %

# Case 3



# Case 3



Dimorphic anemia –  
*s/o Mixed Iron and Vit B12 / Folate  
deficiency*

***Thank You***