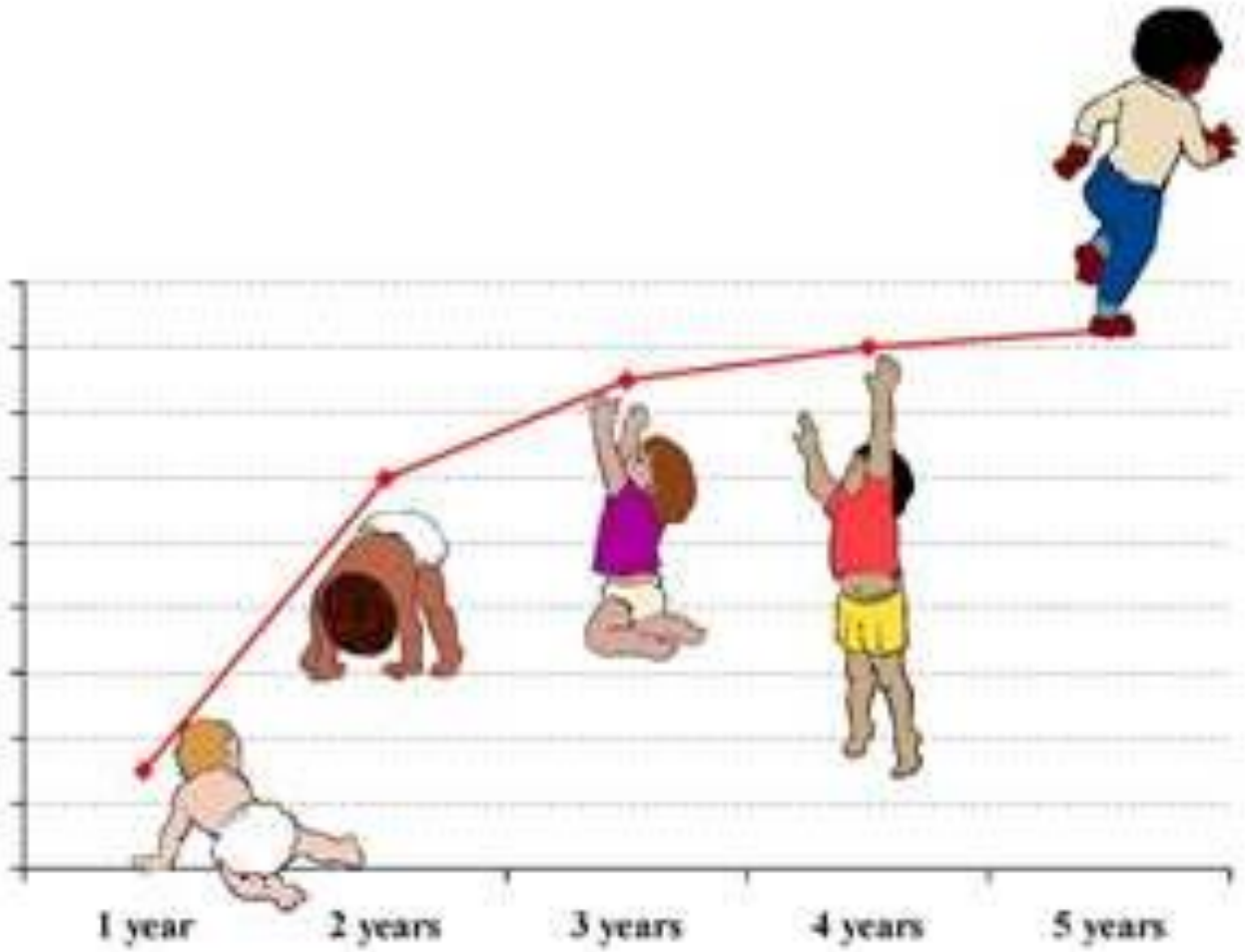
Nutrition Assessment

Virtual Clinical Session on 9/6/2020

Sixth Year Medical Students

Reference WHO booklets guideline

Dr . Sawsan Issa Habeeb



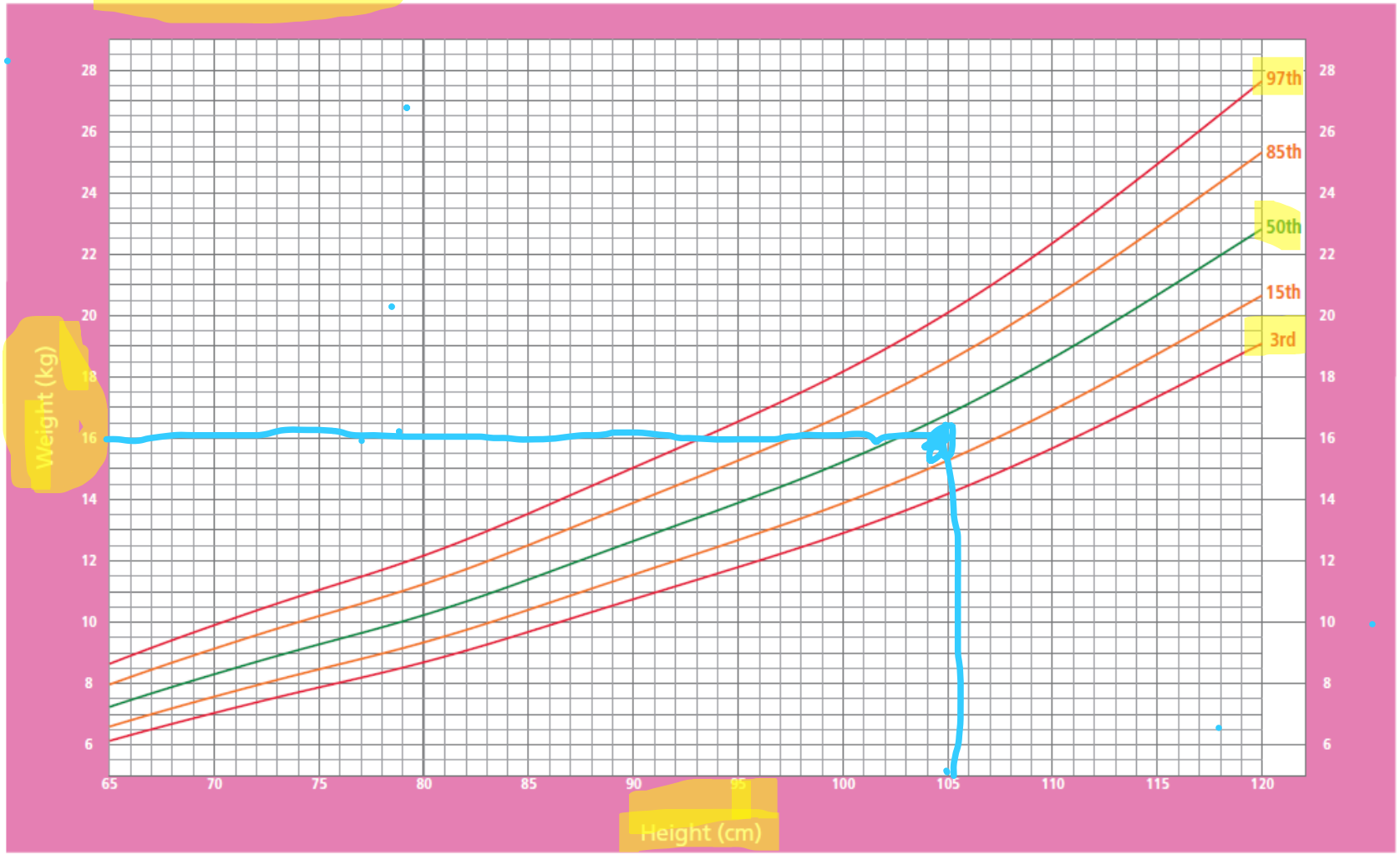
The child’s age, sex, and measurements of weight and length or height will be used to calculate the following growth indicators, which will be described in the next slides :

- length/height-for-age (stunting)
- weight-for-age (underwt)
- weight-for-length/height (wasting)
- BMI (body mass index)-for-age (wasting)

Weight-for-height GIRLS

2 to 5 years (percentiles)

World Health Organization

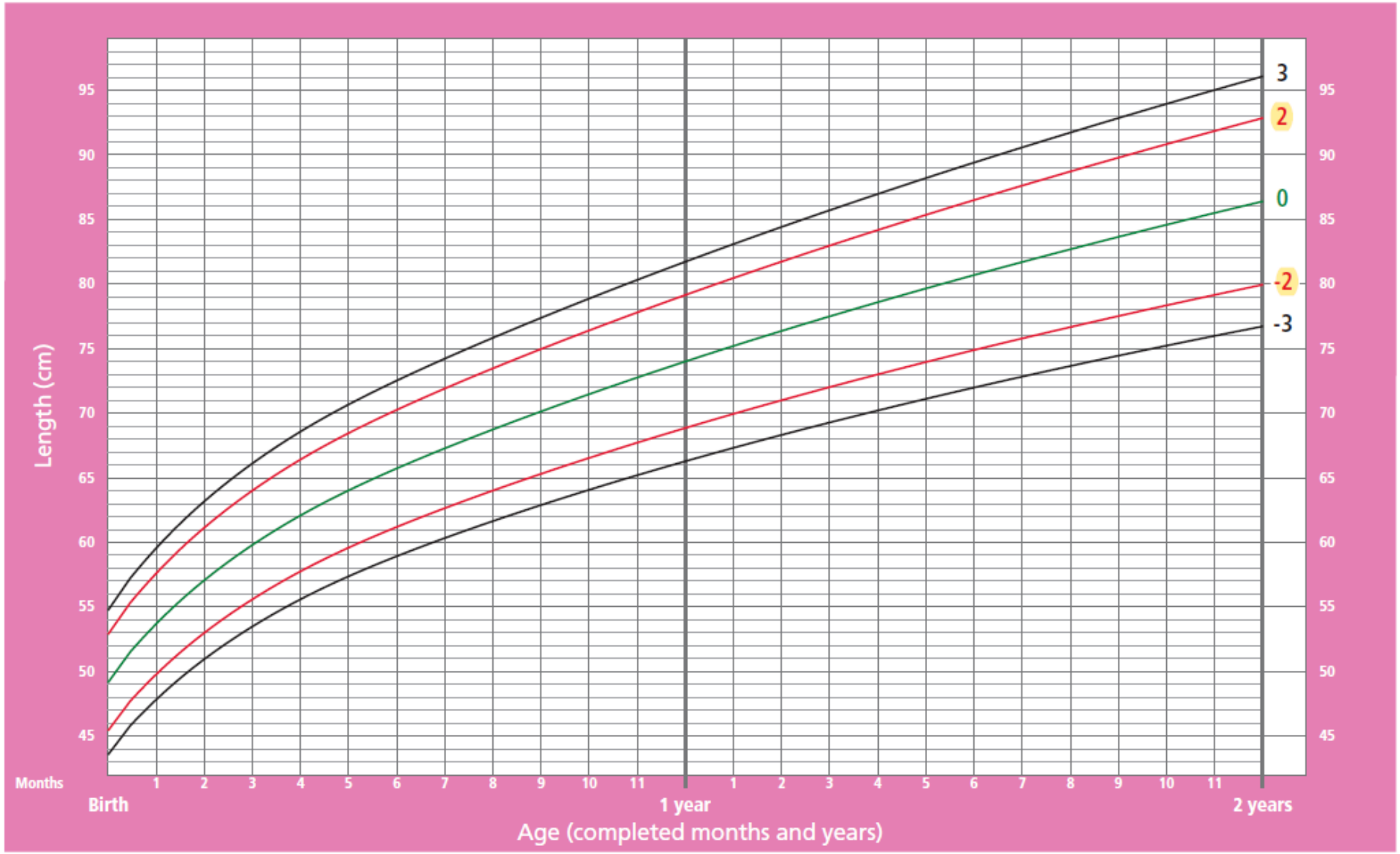


WHO Child Growth Standards

Length-for-age GIRLS

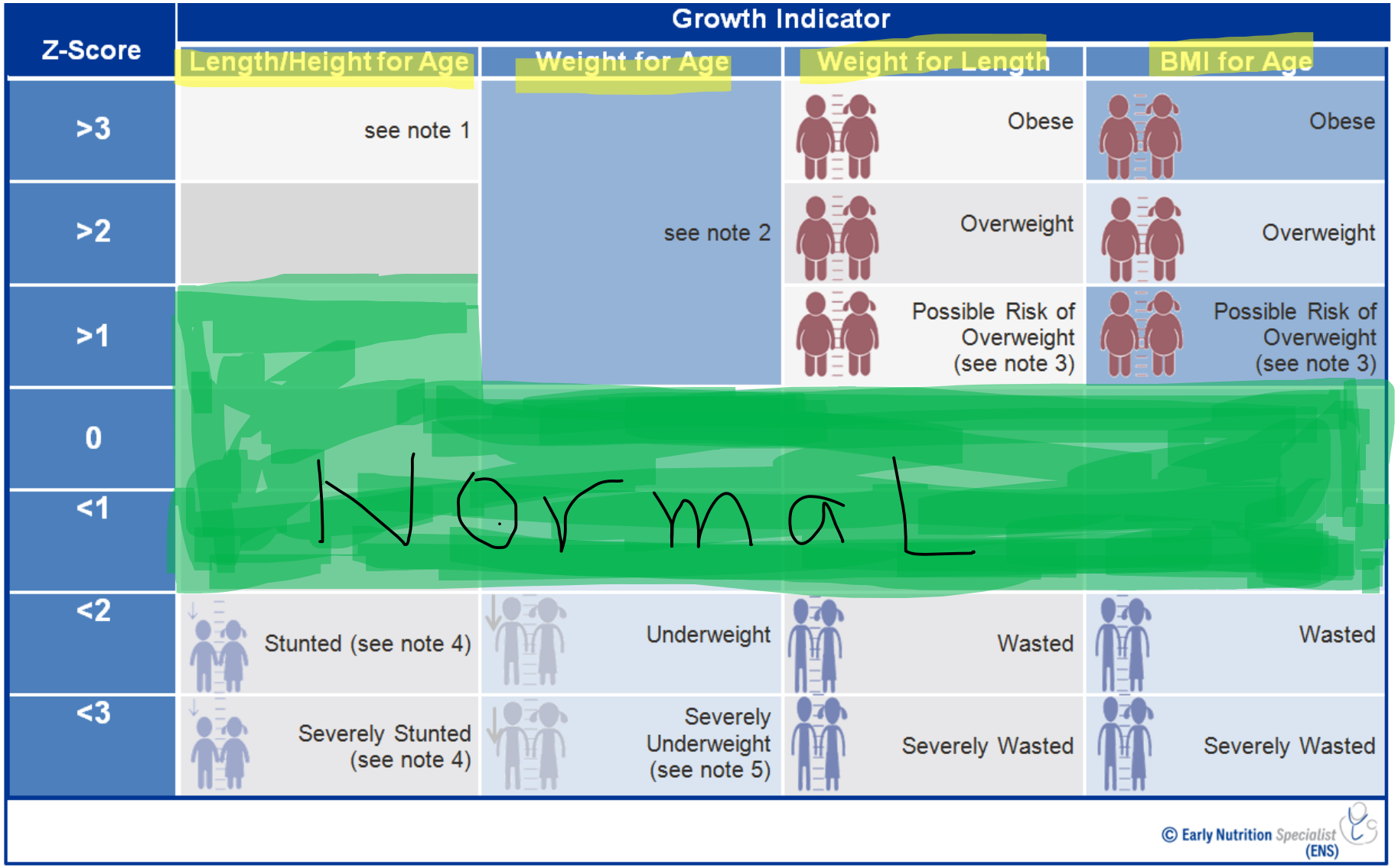
Birth to 2 years (z-scores)

World Health Organization



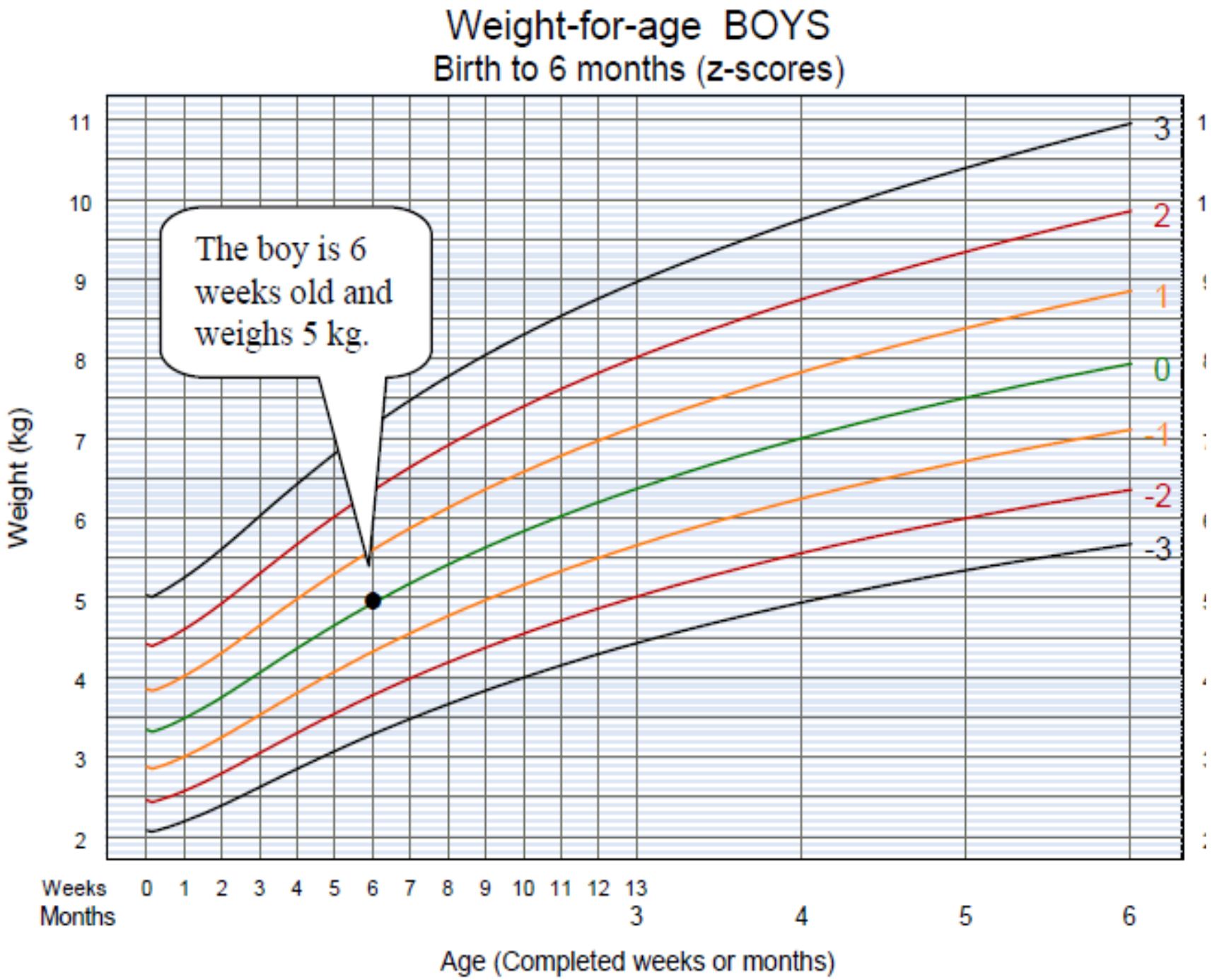
WHO Child Growth Standards

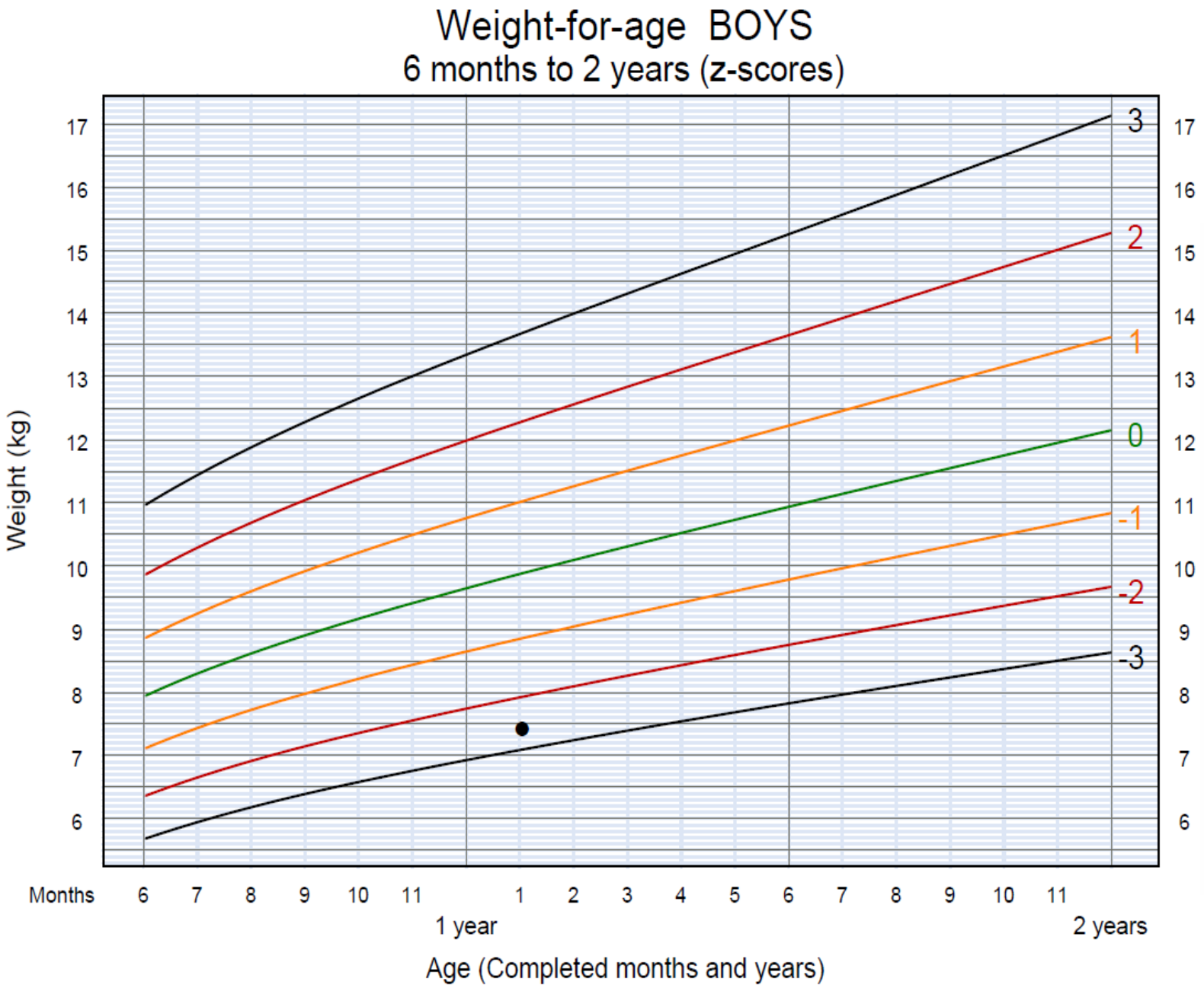
Growth indicators



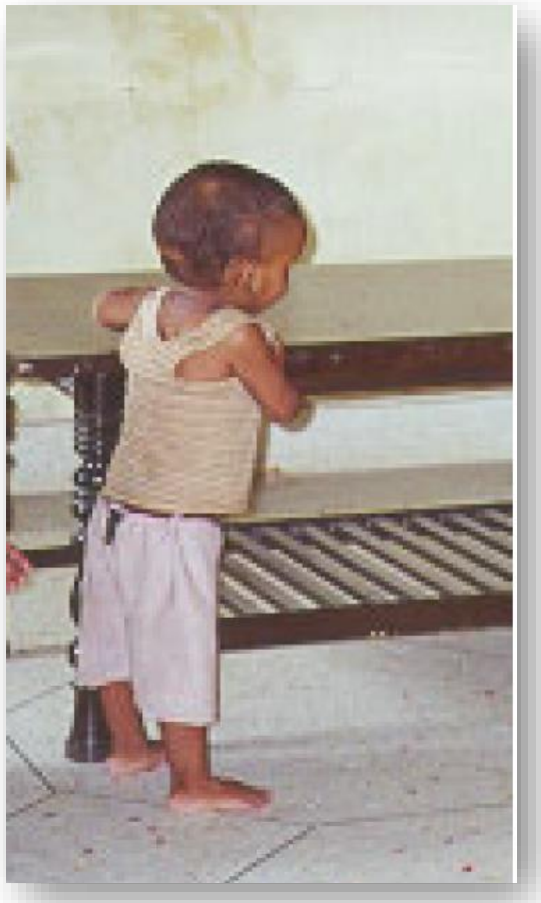
Z-score	Growth indicators			
	Length/height-for-age	Weight-for-age	Weight-for-length/height	BMI-for-age
Above 3	*See note 1*	*See note 2*	*Obese*	*Obese*
Above 2			*Overweight*	*Overweight*
Above 1			*Possible risk of overweight (See note 3)*	*Possible risk of overweight (See note 3)*
0 (median)				
Below –1				
Below –2	*Stunted (See note 4)*	*Underweight*	*Wasted*	*Wasted*
Below –3	*Severely stunted (See note 4)*	*Severely underweight (See note 5)*	*Severely wasted*	*Severely wasted*

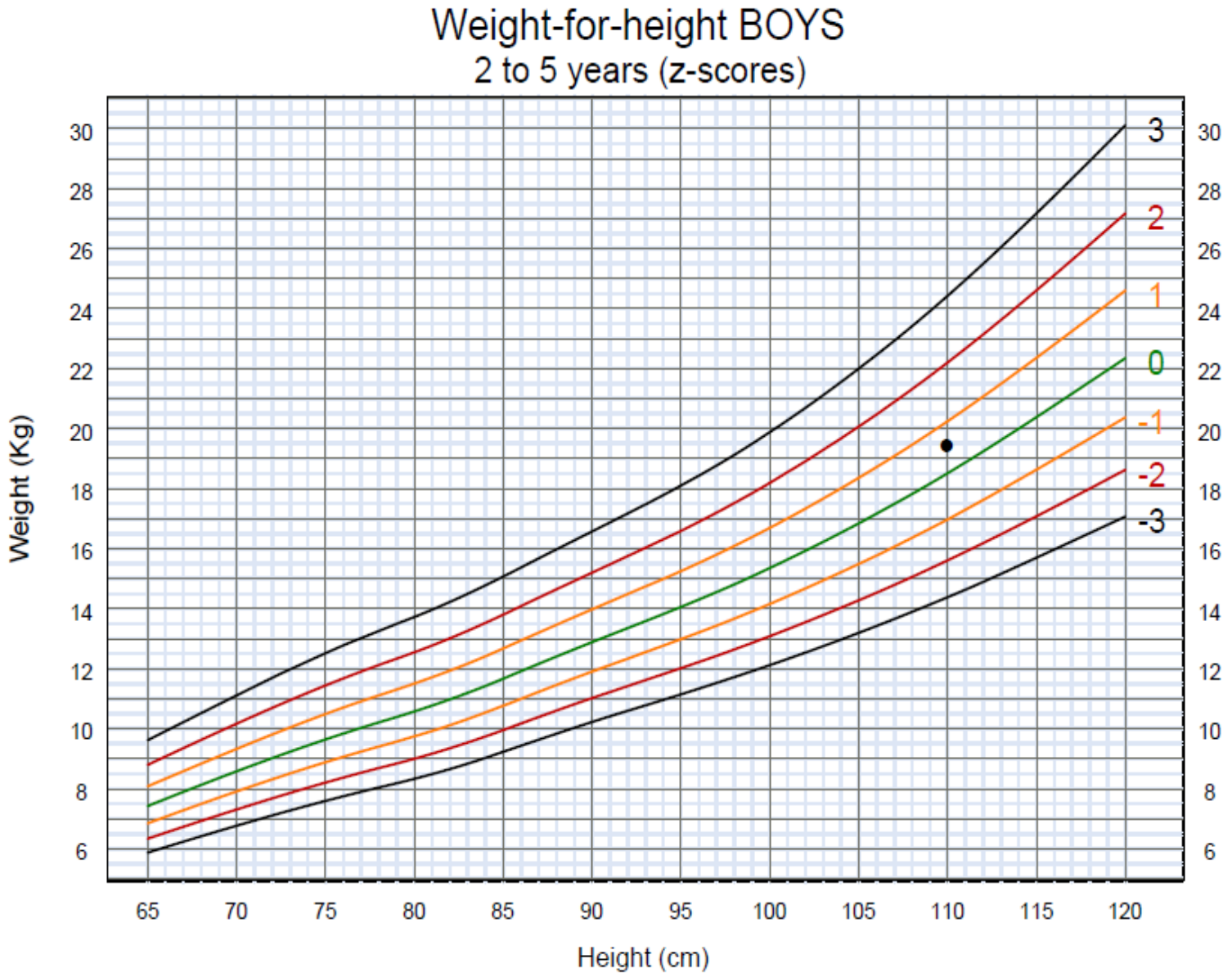
Interpreting plotted points for growth indicators



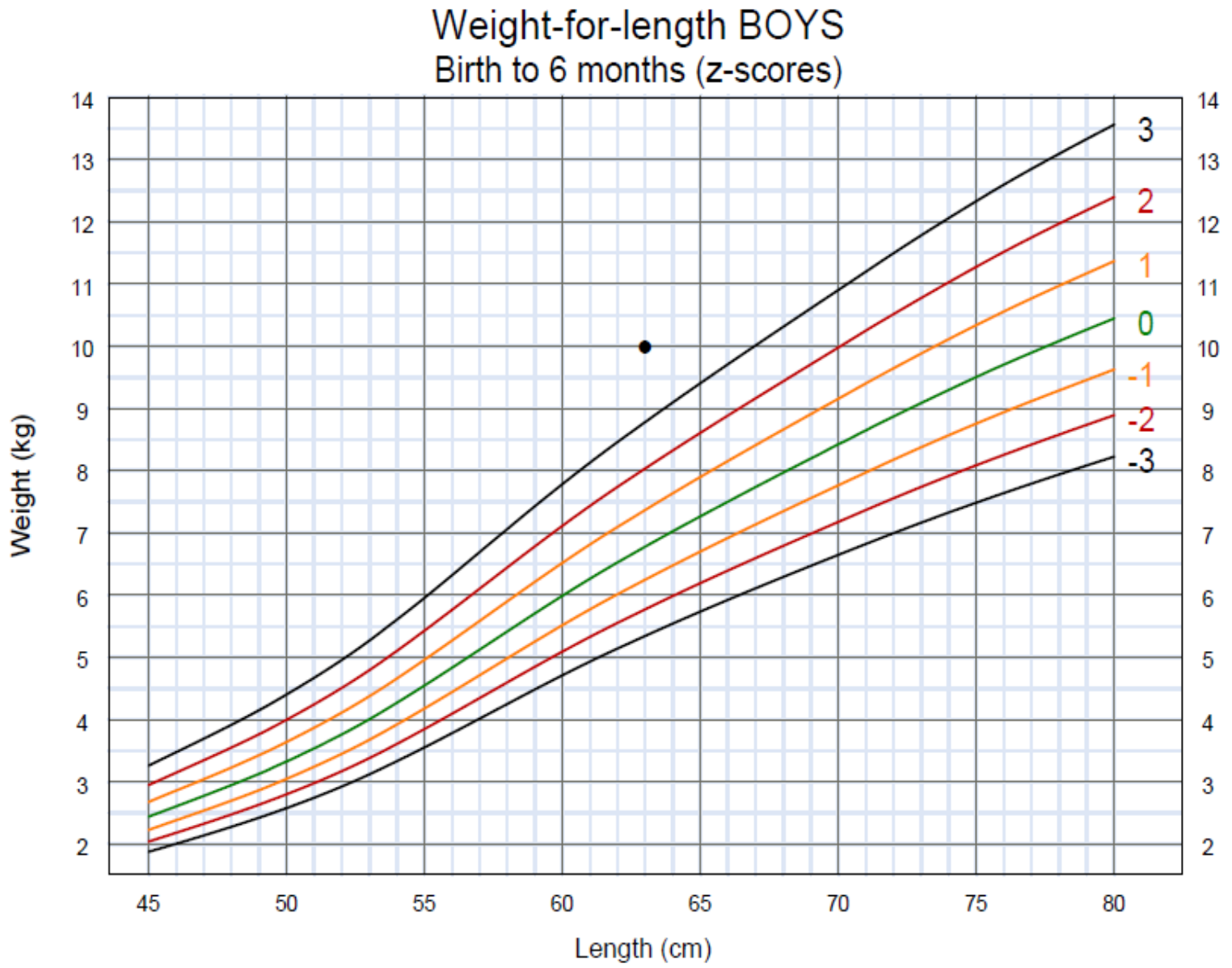

Weight-for-age BOYS
6 months to 2 years (z-scores)
Weight (kg)
17
16
15
14
13
12
11
10
9
8
7
6
3
2
1
0
-1
-2
-3
Months
6 7 8 9 10 11 1 2 3 4 5 6 7 8 9 10 11
1 year
2 years
Age (Completed months and years)

Under wt



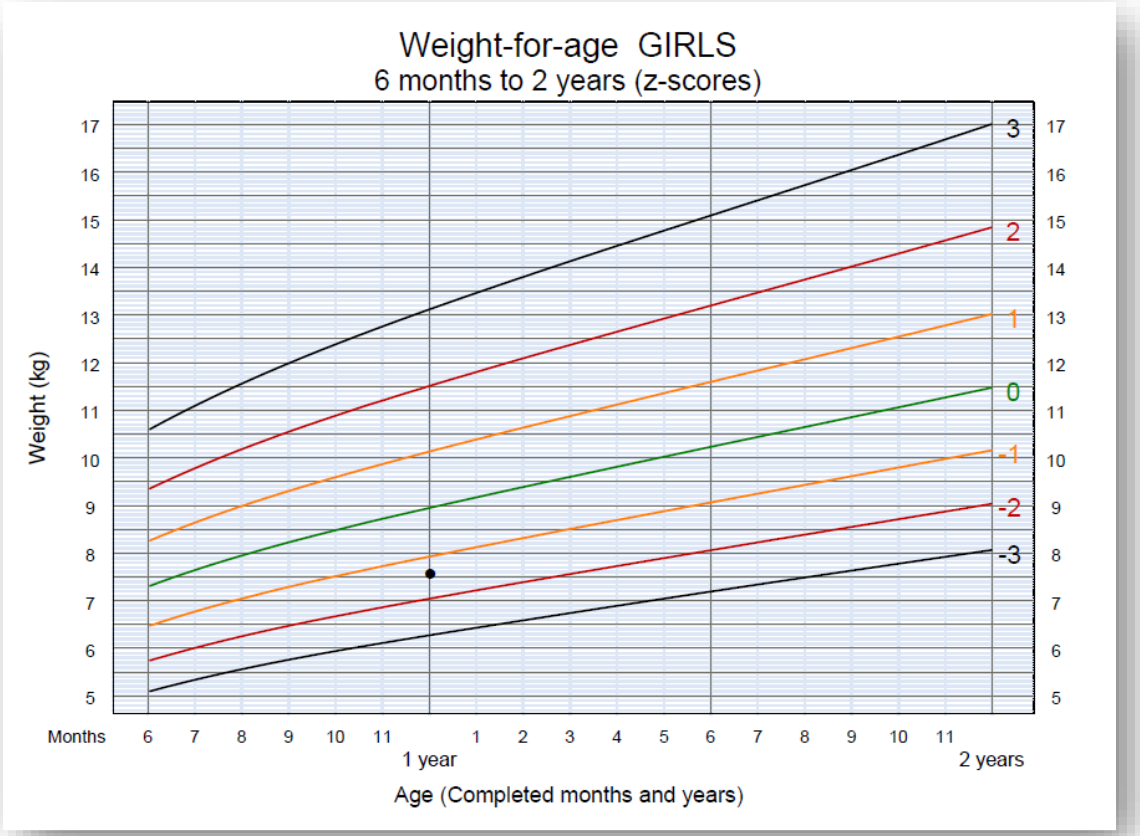

Weight-for-height BOYS
2 to 5 years (z-scores)
Weight (Kg)
30
28
26
24
22
20
18
16
14
12
10
8
6
3
2
1
0
-1
-2
-3
65
70
75
80
85
90
95
100
105
110
115
120
Height (cm)

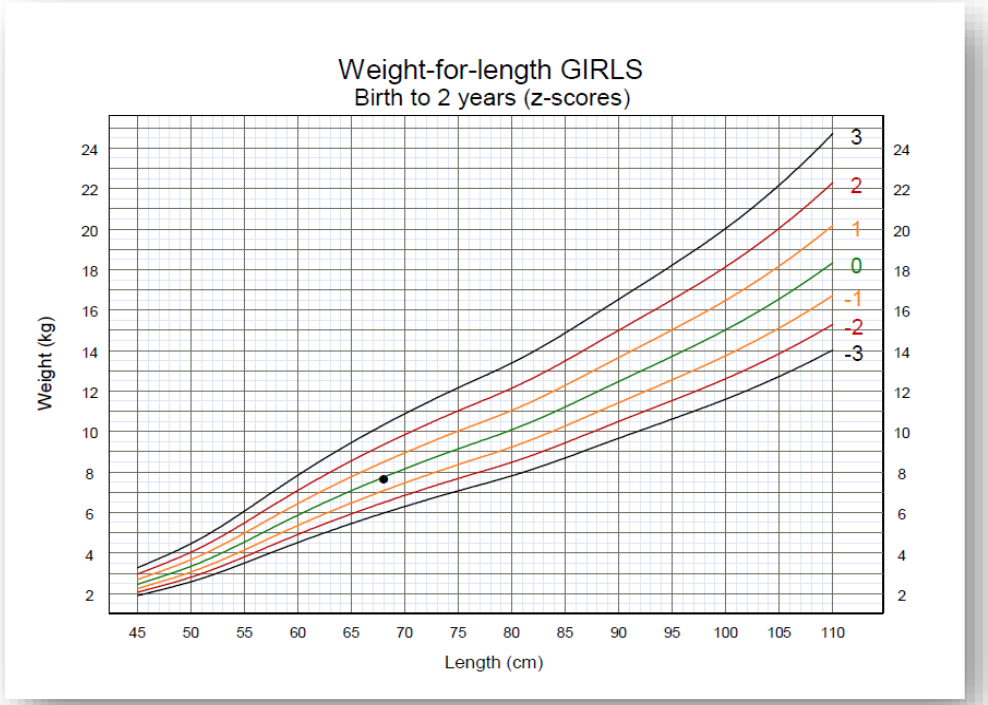
normal

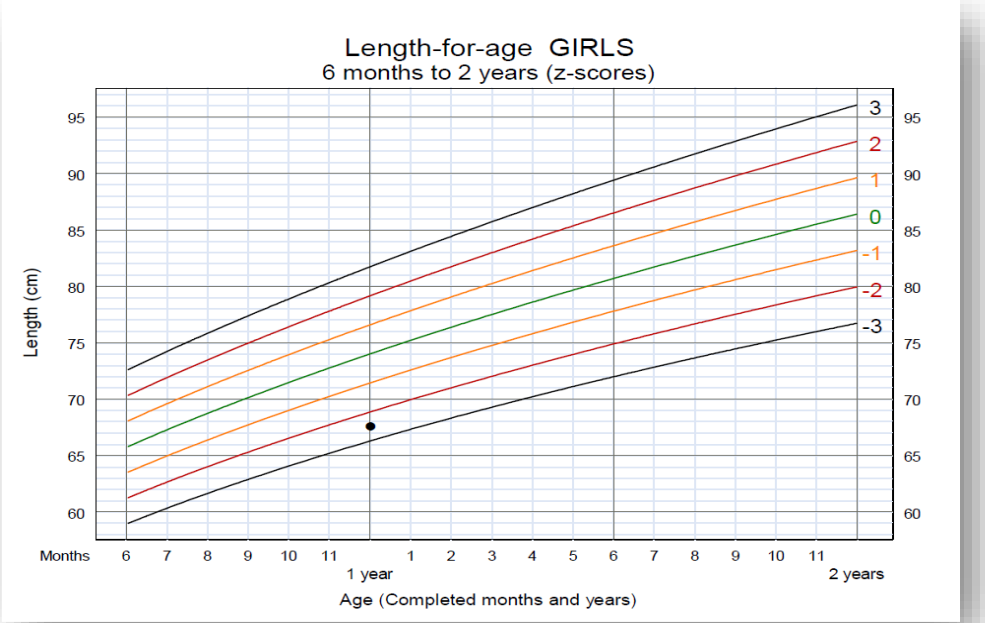

Weight-for-length BOYS
Birth to 6 months (z-scores)
Weight (kg)
Length (cm)
14
13
12
11
10
9
8
7
6
5
4
3
2
45
50
55
60
65
70
75
80
3
2
1
0
-1
-2
-3

obese

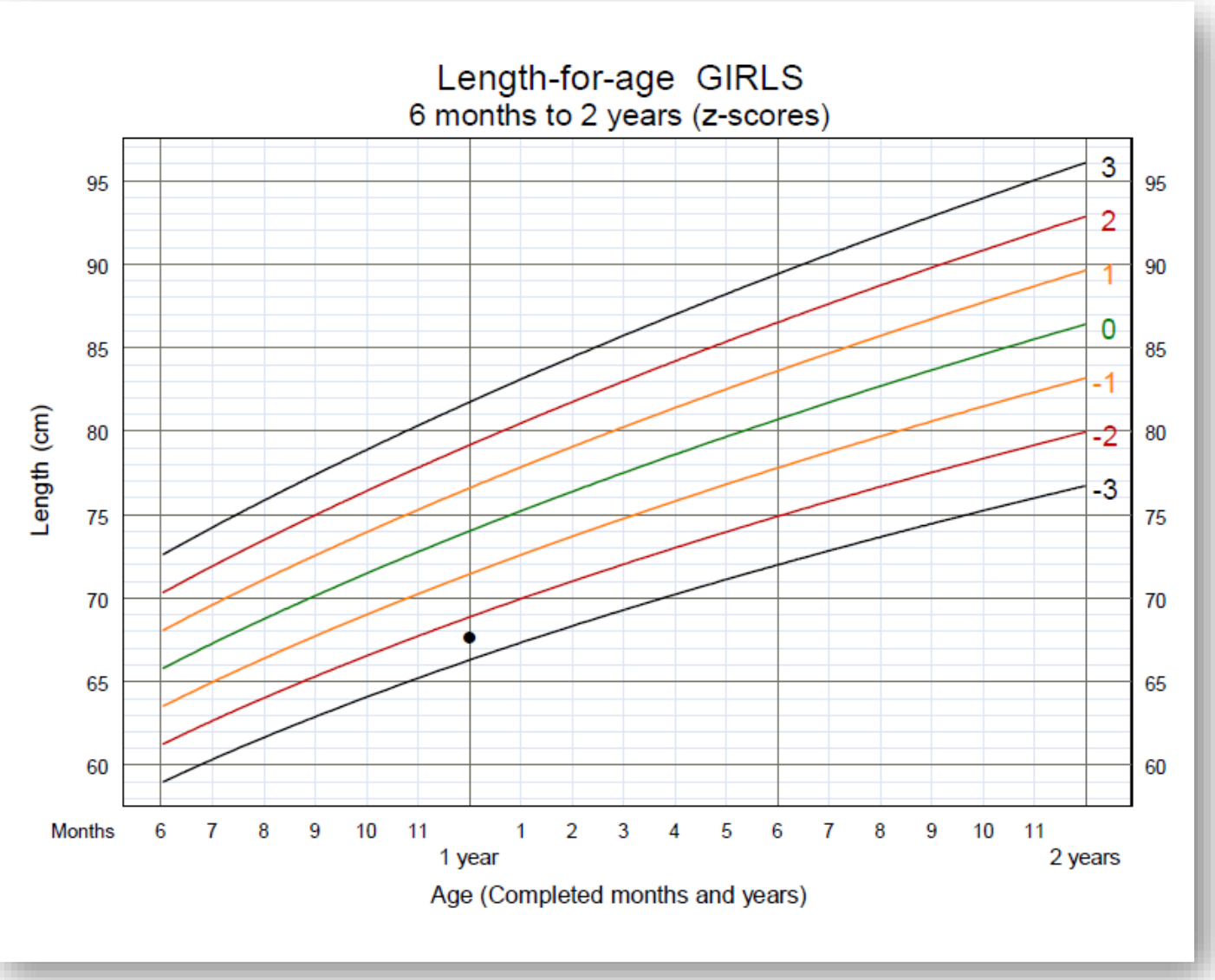
low WFA, normal WFL but low LFA shows stunting





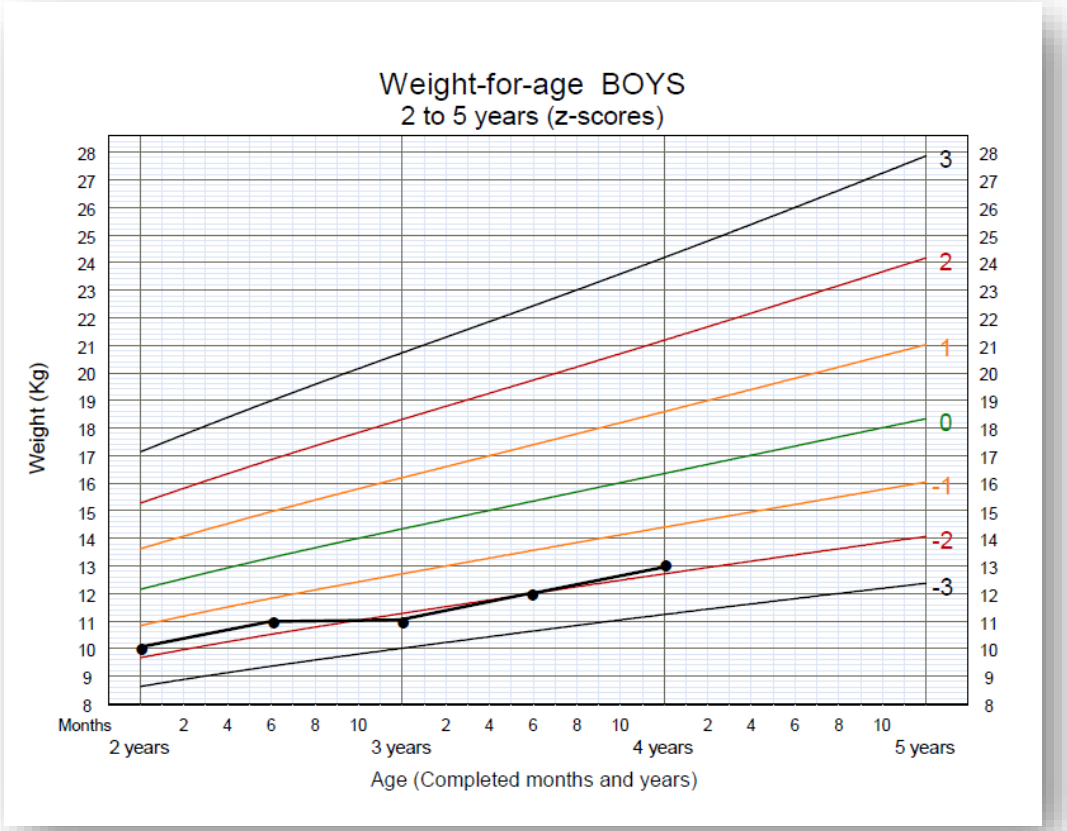


Stunted


Length-for-age GIRLS
6 months to 2 years (z-scores)
Length (cm)
95
90
85
80
75
70
65
60
3
2
1
0
-1
-2
-3
Months
6 7 8 9 10 11
1 year
1 2 3 4 5 6 7 8 9 10 11
2 years
Age (Completed months and years)

Interpret trends on growth charts

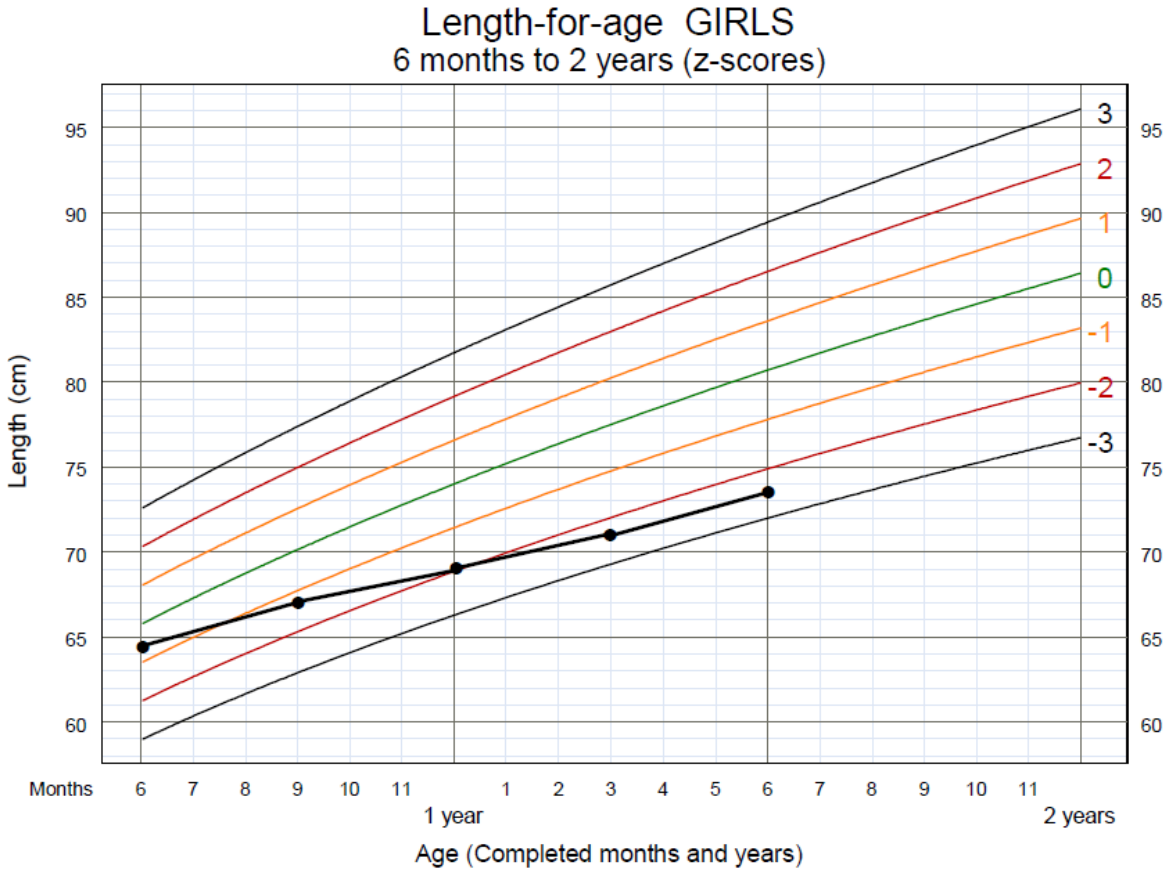
- "Normally" growing children follow trends that are, in general, parallel to the median and z-score lines.
- Most children will grow in a "track," that on or between z-score lines
- Roughly parallel to the median; the track may be below or above the median.

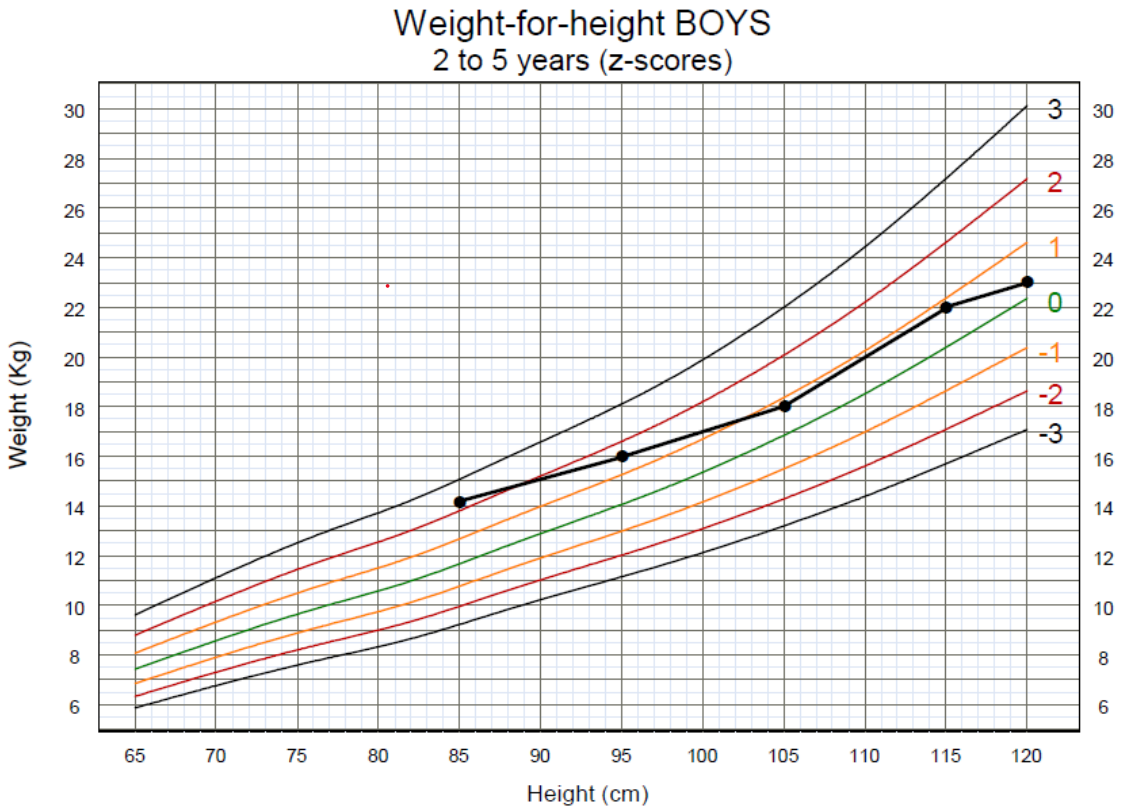


A problem when :

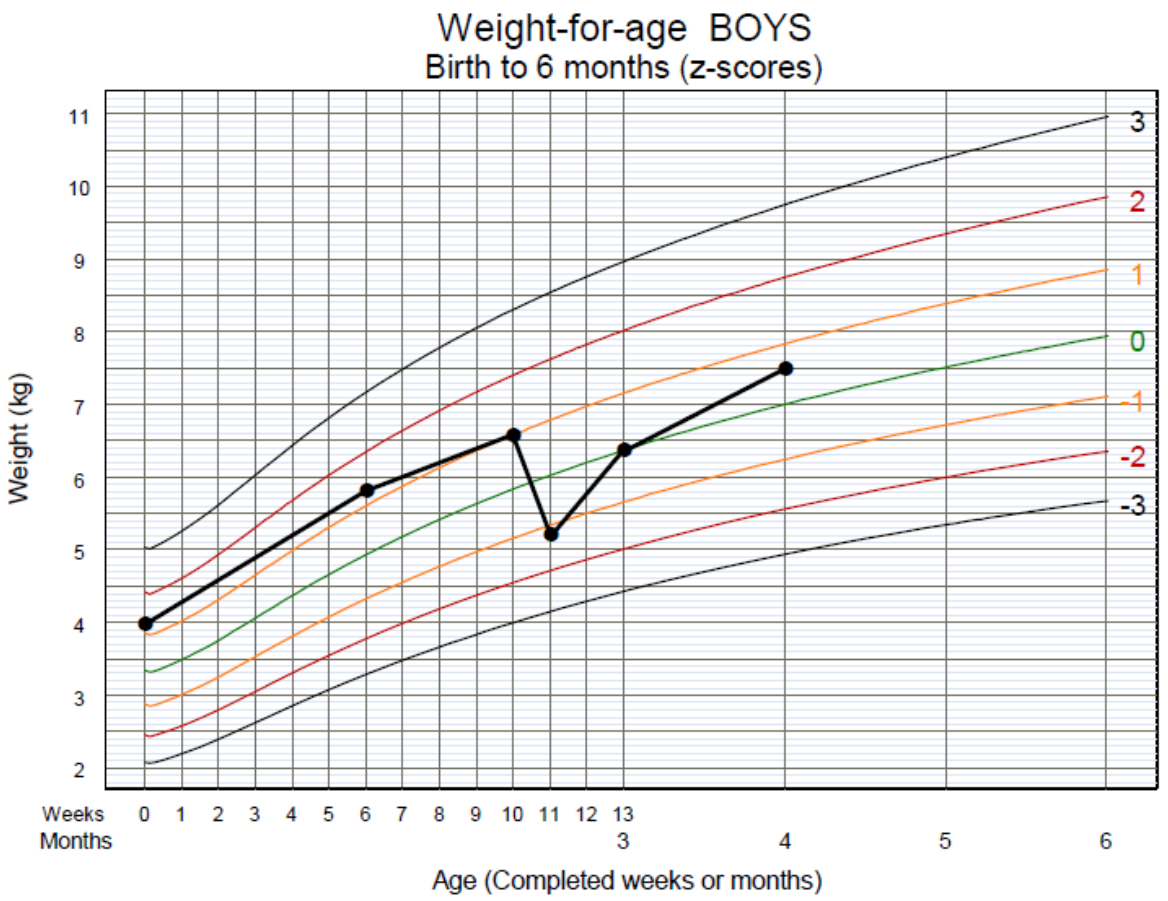
- A child's growth line crosses a z-score line.
- There is a sharp incline or decline in the child's growth line.
- The child's growth line remains flat (stagnant); i.e. there is no gain in weight or length/height.

Crossing z-score lines

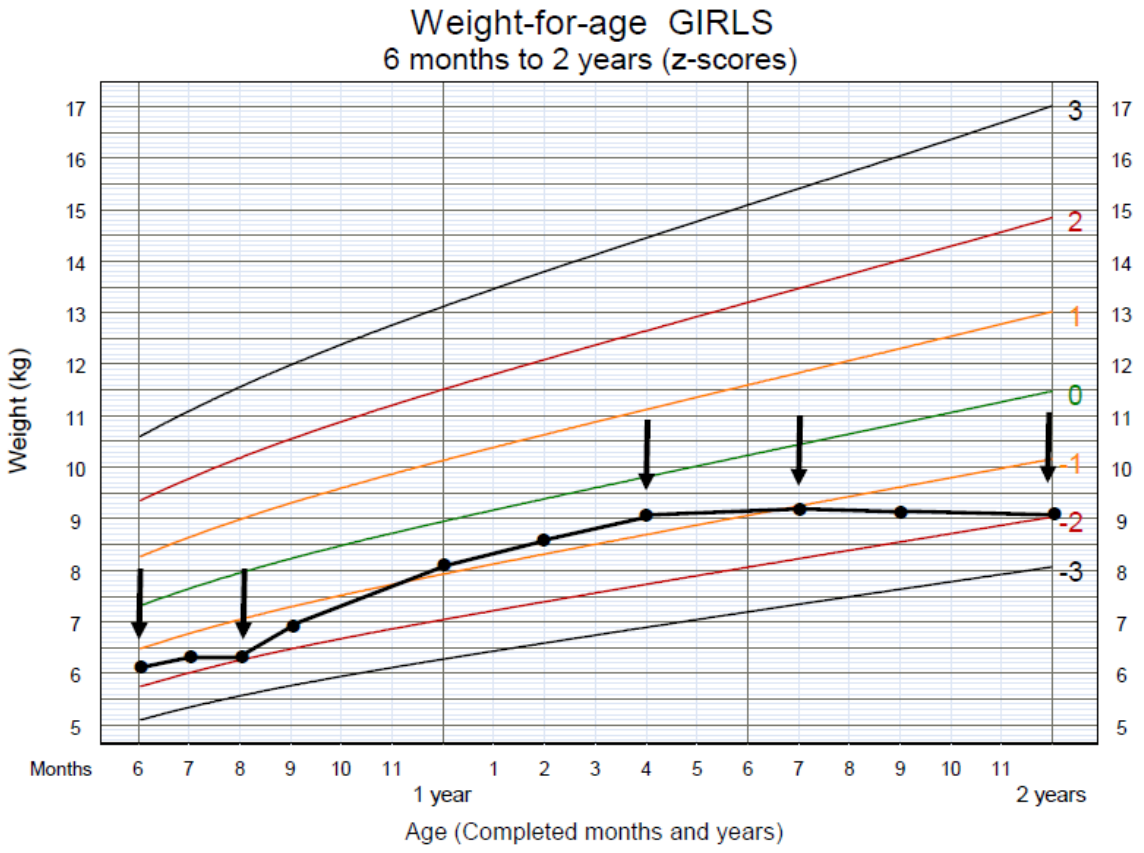




Sharp incline or decline in the growth line

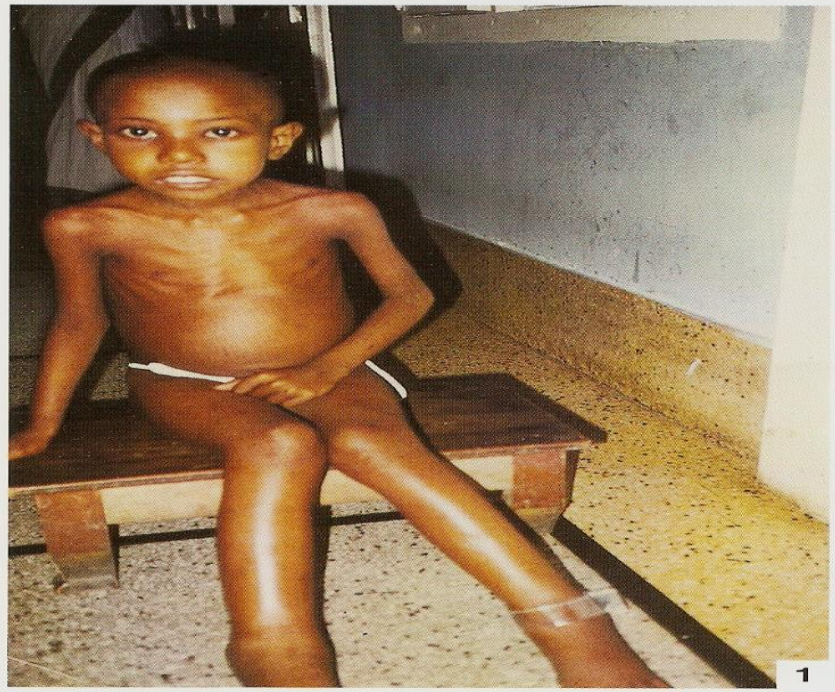


Flat growth line (stagnation)



Recognize signs of severe malnutrition

Severe wasting
Oedema
Dermataosis
Eye signs



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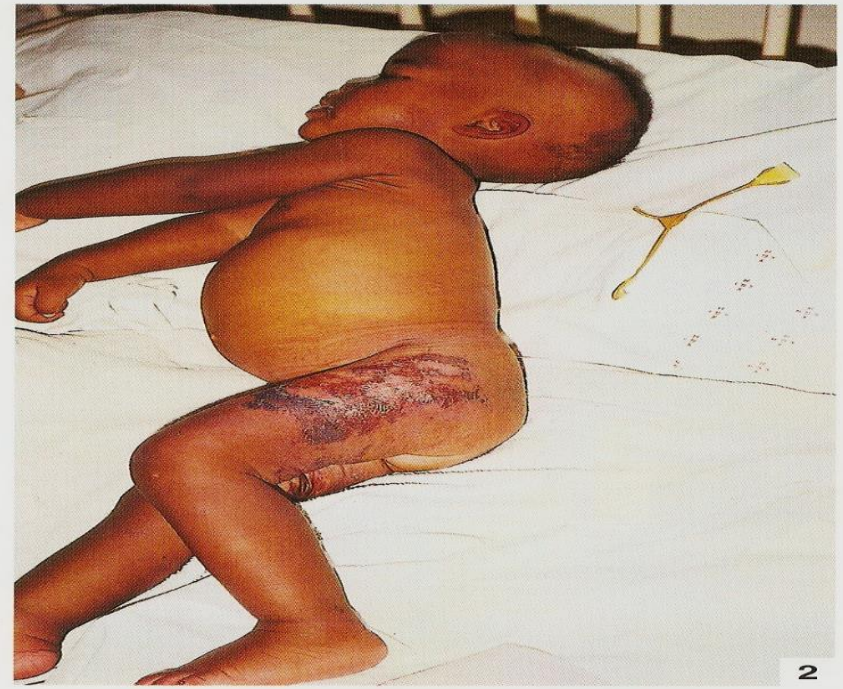


2

3

4

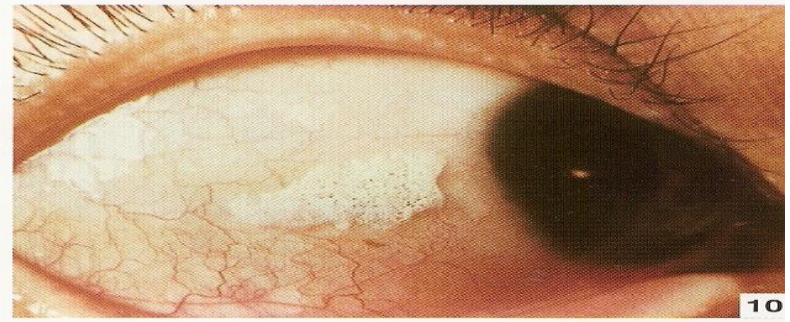
5

6

7

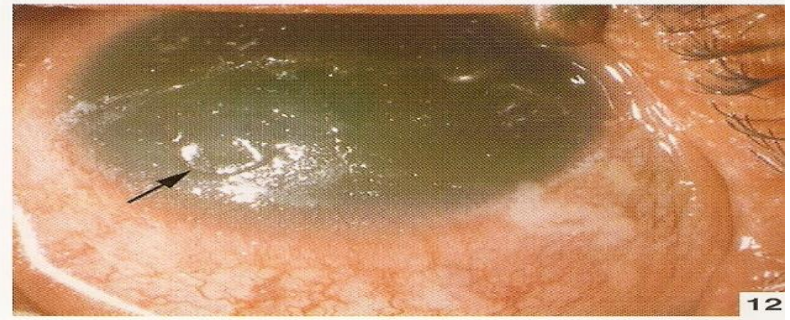
8

9



10

11



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Examination

Recognize signs of malnutrition: remove the child's clothes.

Look at the front view and the back for:

a. **Wasting (child's ribs, skin of the upper arms and thighs is loss)**
b. **Edema (+ mild , + + moderate and + + + severe)**
c. **Dermatosis (+ mild , + + moderate and+ + + severe)**
d. **Eye signs (Bitot's spots, Pus and inflammation, Corneal clouding and ulceration).**
e. **Others**

- **Hair changes, ease of pluckability, sparse and depigmented**
- **Skin (pallor) , mouth (angular stomatitis, cheilosis)**