

Hashimoto's thyroiditis with subclinical hypothyroidism, but severe growth delay in a prepubertal boy

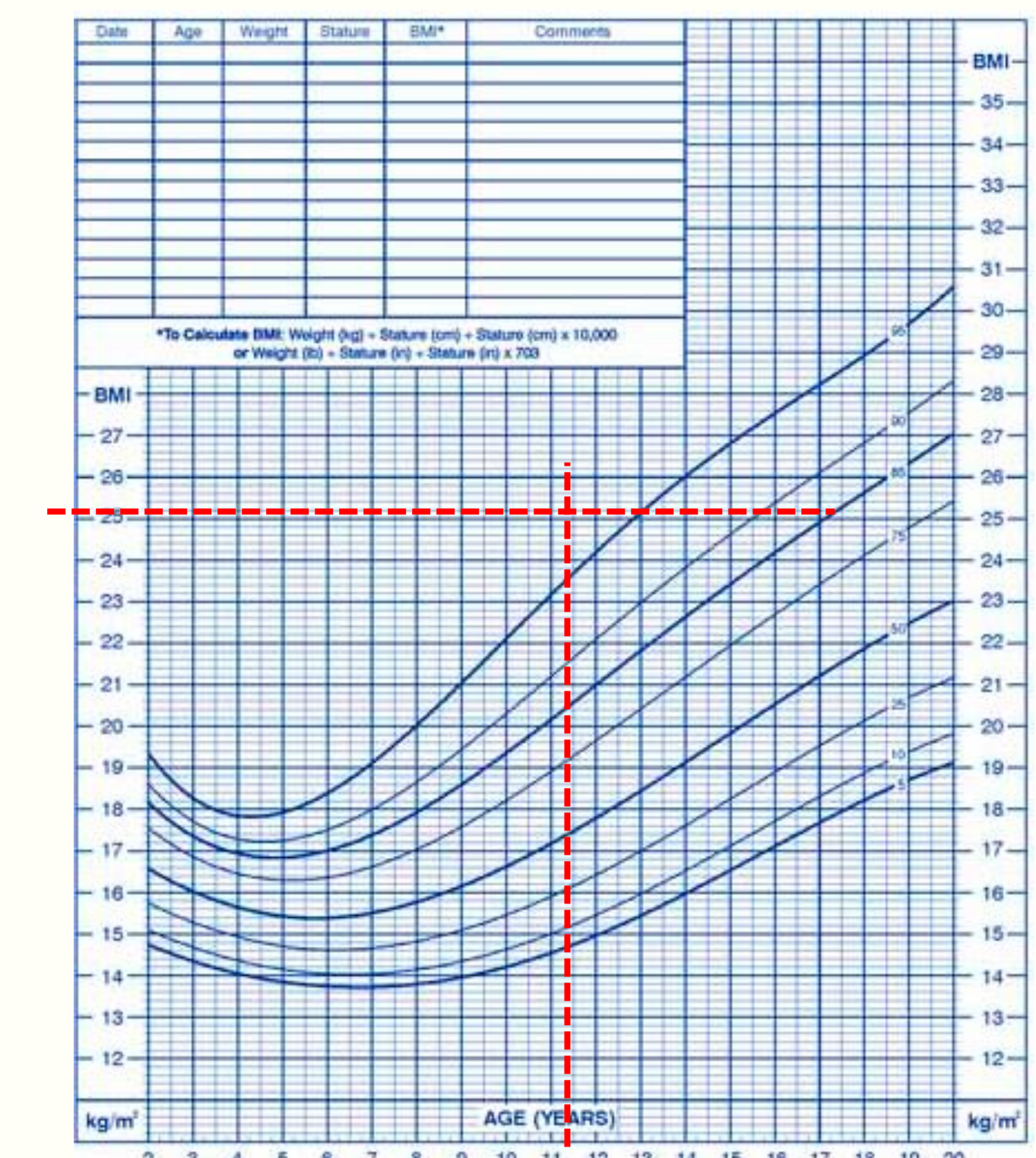
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Introduction

Hashimoto's thyroiditis is an autoimmune condition most common in females but can be also found in children with a prevalence of 1,2%. Hypothyroidism in children is associated with severe growth delay.

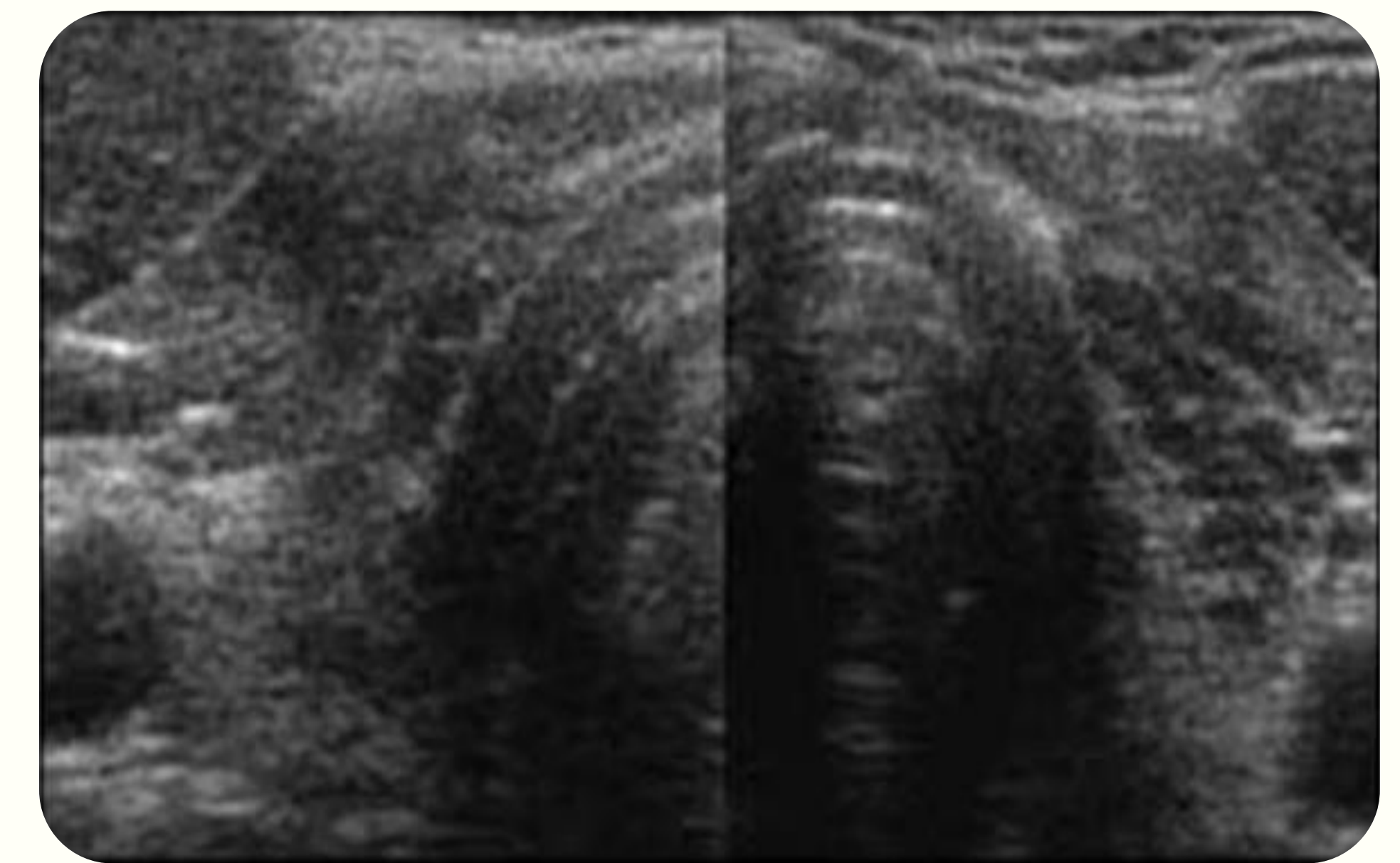
Case report

- 11 6/12-year old boy presenting with
- ❖ small height for age (123 cm, < -3SD)
 - ❖ important weight gain
 - ❖ fatigue
 - ❖ growing rate of less than 2 cm/year

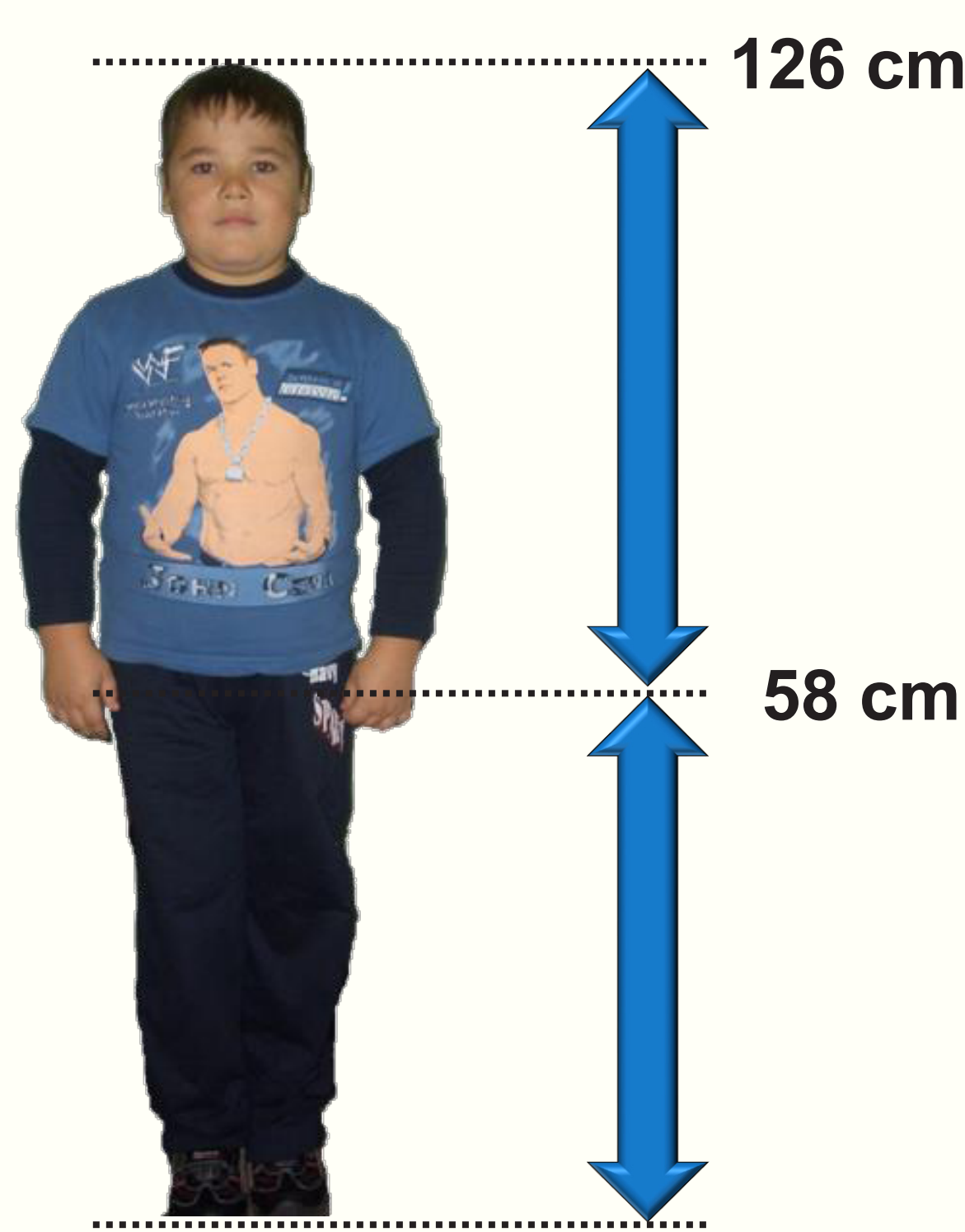


- H = 123 cm (-3 DS)
- W = 40 kg (+3 DS)
- BMI = 25.2 kg/m²

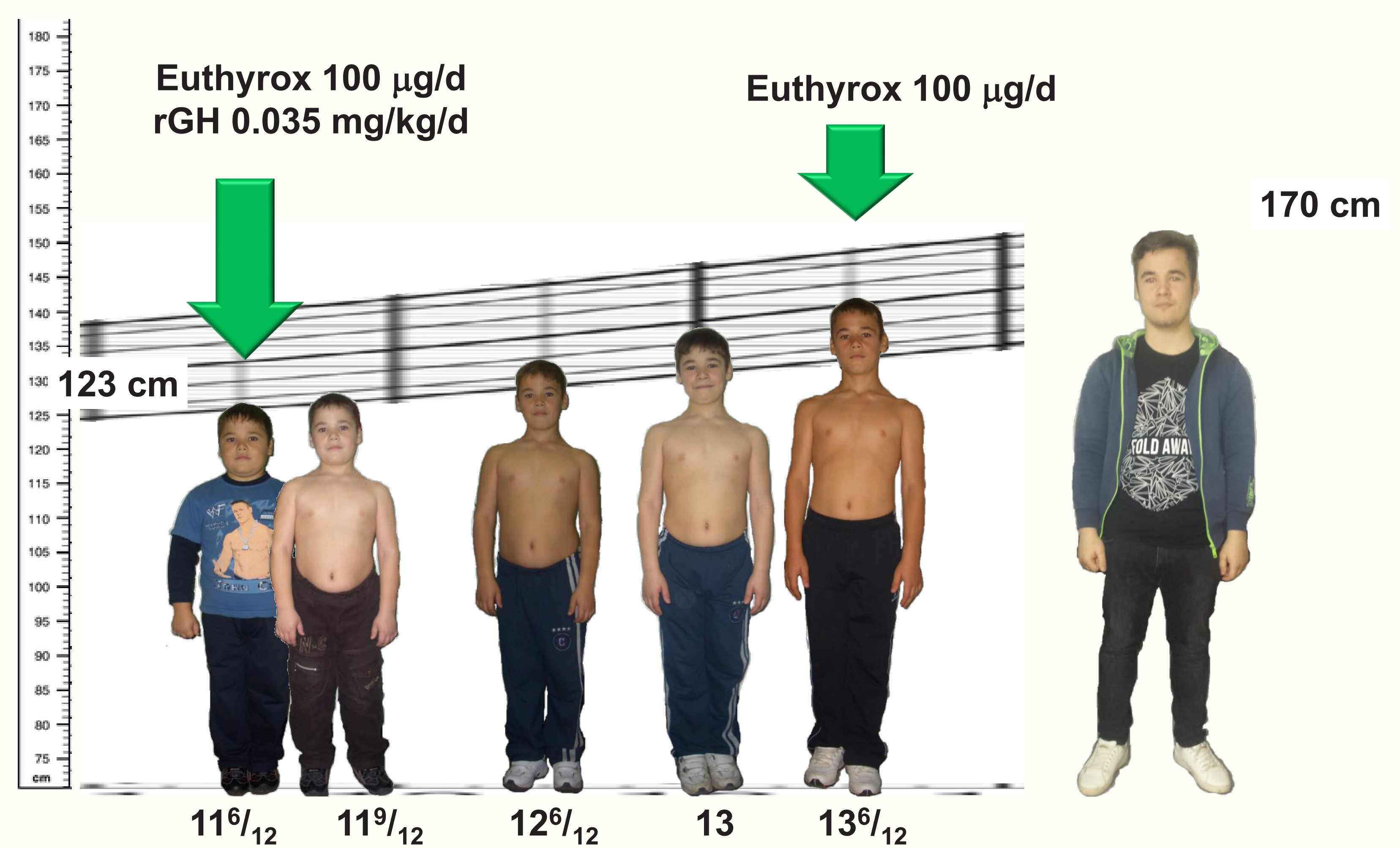
- ❖ fT4=0.3ng/ml (normal 0.9-1.9ng/ml)
- ❖ TSH= 35mIU/L (normal 0.4-6mIU/L)
- ❖ anti TPO - 326U/L (positive when >50U/L)
- ❖ basal GH - 0.8 ng/ml
- ❖ insulin hypoglycemia test - 6.2 ng/ml (>10)
- ❖ clonidin test - 5.8 ng/ml (>10)
- ❖ arginin test - 3.1 ng/ml (>10)
- ❖ IGF 1 – 97 ng/ml (111-996)



Ultrasound: small, hypoechoic thyroid



Slightly dysmorphic growth delay



Patient evolution under therapy

Discussions

- juvenile onset hypothyroidism has an insidious onset
- late onset of severe growth deceleration should be accompanied by evaluation of thyroid function, especially when bone age is importantly delayed
- important stature handicap in patients with juvenile onset hypothyroidism may be an indication for substitution coupled with rGH therapy, with excellent outcome

Selected references:

1. Long-term growth in juvenile acquired hypothyroidism: the failure to achieve normal adult stature. Rivkees SA, Bode HH, Crawford JD. N Engl J Med. 1988;318(10):599-602.
2. Use of growth hormone and gonadotropin releasing hormone agonist in addition to L-thyroxine to attain normal adult height in two patients with severe Hashimoto's thyroiditis. Quintos JB, Salas M. J. Pediatr Endocrinol Metab. 2005 ;18(5):515-21.
3. Catch-up growth after childhood-onset substitution in primary hypothyroidism: is it a guide towards optimal growth hormone treatment in idiopathic growth hormone deficiency?
4. Ranke MB et al. Horm Res. 1998;50(5):264-70.
5. Severe juvenile hypothyroidism: treatment with GH and GnRH agonist in addition to thyroxine. Watanabe T et al. Endocr J. 1998;45 Suppl:S159-62.

