Late effects after hematopoietic stem cell transplantation for β-thalassemia major: the French national experience

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**Supplementary Methods:**

**Details on endpoints definitions**

Overweight in adults was defined as a Body Mass Index (BMI) over 25 kg/m².
Puberty delay was defined as lack of puberty onset in boys aged 14 or more and in girls aged 13 or more. Hypogonadism was defined in females as low estradiol levels or long-term sex hormone replacement therapy and in males as low levels of testosterone or long-term sex hormone replacement therapy. According follicle stimulating hormone (FSH) and luteinising hormone (LH) basal values, hypogonadism was classified as hypergonadotrophic or hypogonadotropic.

Hypothyroidism was defined as elevated thyroid-stimulating hormone (TSH) concentration with normal (subclinical) or decreased (overt) levels of serum free thyroxin (FT4) concentration.

Cardiac function was impaired when the echocardiographic ejection fraction (EF) was reduced (EF≤50%). Diabetes was diagnosed through blood tests (fasting glucose test >7mmol/l or glycosylated haemoglobin test HbA₁c>6.5%) and insulin or oral antidiabetic medication requirement.
Table S1: Multivariate longitudinal analysis of factors influencing height and weight SDS evolution after HSCT

| Characteristics                   | Coefficient (β) | 95% CI          | p-value |
|-----------------------------------|-----------------|-----------------|---------|
| **Height**                        |                 |                 |         |
| Age at transplantation (per year) | -0.12           | -0.15 to -0.1   | <0.001  |
| Serum ferritin level before HSCT (per 100 µg/L) | -0.007          | -0.01 to -0.003 | <0.001  |
| Follow-up duration (per year)     | -0.02           | -0.03 to -0.01  | <0.001  |
| **Weight**                        |                 |                 |         |
| Age at transplantation (per year) | -0.24           | -0.28 to -0.2   | <0.001  |
| Sex                               |                 |                 |         |
| - Males vs females                | -0.42           | -0.7 to -0.14   | 0.003   |
| Serum ferritin level before HSCT (per 100 µg/L) | -0.01           | -0.01 to -0.005 | <0.001  |
| Follow-up duration (per year)     | 0.05            | 0.03 to 0.07    | <0.001  |

HSCT: Hematopoietic Stem Cell Transplantation; CI: confidence interval
Supplementary Table 2

Table S2: Multivariate longitudinal analysis of factors influencing serum ferritin levels evolution after HSCT

| Characteristics                              | Coefficient (β) | 95% CI        | p-value |
|----------------------------------------------|-----------------|---------------|---------|
| Phlebotomy/chelation therapy                 | -327.9          | -577. to -78.8| 0.011   |
| - Yes vs No                                  |                 |               |         |
| Follow-up duration (per year)                | -78             | -90 to -66    | <0.001  |
| Serum Ferritin level at HSCT (µg/L)          | 0.15            | 0.056 to 0.261| <0.001  |
| Age at transplantation (per year)            | 35.8            | 15.6 to 56    | 0.001   |

HSCT: Hematopoietic Stem Cell Transplantation; CI: confidence interval