

TABLE 4
Selected Anthropometric Data, Vital Signs, and Hematology and Clinical Chemistry Values^a

	Preoperative	1 wk	2 wk	5 wk	12 wk	18 wk	26 wk
Body mass index, kg/m ²							
Placebo	24.8 ± 1.5	26.2 ± 2.4	25.1 ± 1.6	24.6 ± 2.0	25.5 ± 1.9 ^b	25.3 ± 1.7 ^b	25.5 ± 1.5 ^b
HGH	26.5 ± 1.9	26.5 ± 2.2	26.4 ± 1.8	26.0 ± 1.7 ^b	26.5 ± 1.9	26.7 ± 1.9	26.6 ± 2.0
Body surface area, m ²							
Placebo	1.96 ± 0.03	1.96 ± 0.07	1.95 ± 0.04	1.95 ± 0.05	1.98 ± 0.05 ^b	1.98 ± 0.04 ^b	1.98 ± 0.03 ^b
HGH	2.09 ± 0.10 ^c	2.10 ± 0.12 ^c	2.09 ± 0.10 ^c	2.08 ± 0.10 ^{b,c}	2.09 ± 0.10 ^d	2.10 ± 0.10 ^c	2.09 ± 0.11 ^d
Resting heart rate, bpm							
Placebo	70.0 ± 7.0	68.0 ± 8.0	68.0 ± 4.0	69.0 ± 7.0	67.0 ± 4.0	68.0 ± 5.0	66.0 ± 4.0
HGH	61.0 ± 3.0 ^c	69.0 ± 7.0 ^e	72.0 ± 8.0 ^b	71.0 ± 6.0 ^b	66.0 ± 4.0	69.0 ± 5.0 ^e	63.0 ± 4.0
Systolic blood pressure, mm Hg							
Placebo	121.0 ± 3.0	124.0 ± 3.0	123.0 ± 4.0	121.0 ± 3.0	120.0 ± 3.0	121.0 ± 2.0	121.0 ± 2.0
HGH	121.0 ± 3.0	124.0 ± 3.0	125.0 ± 4.0 ^b	123.0 ± 3.0	122.0 ± 4.0	125.0 ± 4.0 ^b	127.0 ± 3.0 ^{b,c}
Diastolic blood pressure, mm Hg							
Placebo	75.0 ± 3.0	76.0 ± 2.0	76.0 ± 4.0	71.0 ± 2.0	72.0 ± 2.0 ^e	72.0 ± 3.0	73.0 ± 3.0
HGH	76.0 ± 3.0	77.0 ± 2.0	76.0 ± 4.0	77.0 ± 3.0 ^c	76.0 ± 3.0	79.0 ± 5.0 ^c	79.0 ± 5.0 ^c
Hematocrit [40-50], %							
Placebo	45.3 ± 1.1	44.8 ± 2.3	42.6 ± 1.8 ^b	44.4 ± 1.4	44.5 ± 1.1	44.9 ± 1.1	44.4 ± 0.8
HGH	45.7 ± 1.2	45.2 ± 2.4	42.4 ± 2.0 ^b	44.1 ± 1.6 ^e	44.7 ± 1.3	44.5 ± 1.4	45.1 ± 1.4
Hemoglobin [13.5-17.0], g/dL							
Placebo	15.5 ± 0.5	15.3 ± 0.8	14.6 ± 0.6 ^b	15.0 ± 0.5 ^e	15.2 ± 0.6	15.4 ± 0.5	15.2 ± 0.4
HGH	15.7 ± 0.4	15.5 ± 0.8	14.8 ± 0.6 ^b	15.1 ± 0.5 ^b	15.4 ± 0.4	15.4 ± 0.5	15.5 ± 0.4

Red blood cells [4.4-5.7], M/ μ L								
Placebo	5.2 $\pm$ 0.1	5.2 $\pm$ 0.2	4.9 $\pm$ 0.2 ^b	5.1 $\pm$ 0.1	5.1 $\pm$ 0.1	5.2 $\pm$ 0.2	5.1 $\pm$ 0.1	
HGH	5.3 $\pm$ 0.1	5.2 $\pm$ 0.3	5.0 $\pm$ 0.3 ^b	5.1 $\pm$ 0.2 ^e	5.2 $\pm$ 0.2	5.2 $\pm$ 0.2	5.2 $\pm$ 0.2	
White blood cells [4.0-10.0], K/ μ L								
Placebo	6.1 $\pm$ 0.7	8.0 $\pm$ 1.4 ^b	6.6 $\pm$ 0.9	6.2 $\pm$ 0.9	5.7 $\pm$ 0.8	6.1 $\pm$ 0.7	6.3 $\pm$ 1.5	
HGH	6.1 $\pm$ 1.0	8.0 $\pm$ 1.0 ^b	6.6 $\pm$ 1.1	5.0 $\pm$ 0.5 ^{b,d}	5.5 $\pm$ 0.6	5.7 $\pm$ 0.9	5.4 $\pm$ 0.5	
Alanine aminotransferase [$\leq$ 35], IU/L								
Placebo	23.6 $\pm$ 3.3	42.8 $\pm$ 14.2 ^b	24.4 $\pm$ 4.8	23.6 $\pm$ 8.3	30.6 $\pm$ 4.0	40.1 $\pm$ 18.2 ^b	25.1 $\pm$ 5.6	
HGH	30.4 $\pm$ 5.5	41.4 $\pm$ 15.0 ^e	52.0 $\pm$ 22.4 ^{b,c}	42.6 $\pm$ 11.3 ^{c,e}	34.3 $\pm$ 10.5	26.3 $\pm$ 4.6 ^d	27.1 $\pm$ 4.3	
Alkaline phosphatase [30-130], IU/L								
Placebo	74.9 $\pm$ 13.1	84.3 $\pm$ 24.0 ^e	85.1 $\pm$ 17.2 ^e	75.3 $\pm$ 10.4	67.4 $\pm$ 10.0	69.8 $\pm$ 10.6	72.6 $\pm$ 12.6	
HGH	71.7 $\pm$ 10.2	66.3 $\pm$ 10.6 ^d	63.4 $\pm$ 8.1 ^c	67.5 $\pm$ 8.1	76.1 $\pm$ 7.5	74.3 $\pm$ 8.8	73.4 $\pm$ 10.1	
Aspartate aminotransferase [8-30], IU/L								
Placebo	21.9 $\pm$ 2.5	31.9 $\pm$ 6.1	22.8 $\pm$ 1.8	21.2 $\pm$ 3.2	26.3 $\pm$ 3.3	87.6 $\pm$ 84.7 ^b	23.6 $\pm$ 3.1	
HGH	31.0 $\pm$ 7.2	35.7 $\pm$ 7.8	34.8 $\pm$ 9.6	28.5 $\pm$ 5.2	28.6 $\pm$ 5.9	26.8 $\pm$ 3.3 ^c	27.9 $\pm$ 3.7	
Creatinine [0.7-1.3], mg/dL								
Placebo	0.9 $\pm$ 0.1	0.9 $\pm$ 0.1	0.9 $\pm$ 0.1	0.9 $\pm$ 0.1 ^b	1.0 $\pm$ 0.1	1.0 $\pm$ 0.1	1.0 $\pm$ 0.1 ^b	
HGH	1.0 $\pm$ 0.1 ^d	1.0 $\pm$ 0.1 ^e	1.0 $\pm$ 0.1 ^b	1.0 $\pm$ 0.1 ^{b,d}	1.0 $\pm$ 0.1 ^e	1.0 $\pm$ 0.1	1.0 $\pm$ 0.1 ^e	
Glucose [$<$ 130], mg/dL								
Placebo	92.7 $\pm$ 4.8	88.4 $\pm$ 4.1	87.1 $\pm$ 3.7	91.8 $\pm$ 6.3	91.0 $\pm$ 6.7	93.3 $\pm$ 11.1	86.7 $\pm$ 5.0	
HGH	95.9 $\pm$ 4.6	94.9 $\pm$ 5.4	96.5 $\pm$ 3.6 ^c	95.0 $\pm$ 4.8	89.8 $\pm$ 4.6 ^e	91.3 $\pm$ 4.1	89.0 $\pm$ 4.1 ^b	
Hemoglobin A1c [4.2-5.6], %								
Placebo	5.2 $\pm$ 0.2	5.2 $\pm$ 0.2	5.2 $\pm$ 0.2	5.1 $\pm$ 0.2	5.1 $\pm$ 0.2	5.3 $\pm$ 0.1	5.1 $\pm$ 0.2	
HGH	5.1 $\pm$ 0.1	5.1 $\pm$ 0.2	5.1 $\pm$ 0.2	5.0 $\pm$ 0.1 ^b	5.1 $\pm$ 0.1	5.1 $\pm$ 0.1	5.1 $\pm$ 0.2	
hs-CRP, mg/L								
Placebo	0.7 $\pm$ 0.3	11.5 $\pm$ 3.5 ^b	6.8 $\pm$ 3.2 ^b	1.2 $\pm$ 0.6	0.9 $\pm$ 0.5	1.3 $\pm$ 0.9	0.9 $\pm$ 0.6	
HGH	1.9 $\pm$ 1.2	13.7 $\pm$ 4.5 ^b	5.5 $\pm$ 3.6 ^b	0.8 $\pm$ 0.6	1.3 $\pm$ 0.6	0.8 $\pm$ 0.4	1.2 $\pm$ 0.8	
HDL cholesterol [$>$ 40], mg/dL								

Placebo	59.4 ± 8.4	55.0 ± 10.4	53.9 ± 11.1	60.8 ± 11.7	58.9 ± 7.8	56.4 ± 10.1	57.9 ± 11.6
HGH	51.4 ± 8.1	42.8 ± 6.9	39.9 ± 4.8	46.8 ± 5.6 ^d	52.0 ± 5.3	65.0 ± 25.2 ^b	50.5 ± 7.0
LDL cholesterol [<160], mg/dL							
Placebo	96.3 ± 19.1	100.9 ± 19.7	92.1 ± 15.4	87.8 ± 15.4	92.4 ± 15.1	93.9 ± 15.3	86.6 ± 14.0
HGH	104.6 ± 12.2	95.5 ± 12.5	86.5 ± 17.1 ^e	102.2 ± 10.9	110.0 ± 20.4	90.4 ± 21.8	103.6 ± 16.4
Total cholesterol [<240], mg/dL							
Placebo	170.1 ± 23.7	175.9 ± 27.1	159.0 ± 18.4	165.3 ± 23.5	167.4 ± 18.3	165.3 ± 18.5	161.1 ± 18.3
HGH	176.0 ± 17.2	166.5 ± 14.5	158.4 ± 13.4 ^b	167.5 ± 16.7	180.0 ± 20.2	176.3 ± 21.9	172.3 ± 22.7
Triglycerides [<200], mg/dL							
Placebo	72.0 ± 16.4	100.3 ± 18.5 ^b	64.6 ± 9.2	85.9 ± 22.3	80.3 ± 21.1	76.6 ± 18.2	82.6 ± 33.2
HGH	99.2 ± 28.5	126.3 ± 26.3 ^b	109.8 ± 36.3 ^c	93.1 ± 39.4	90.8 ± 15.8	87.0 ± 22.4	91.1 ± 34.6

^aValues are presented as mean ± 90% CI. Measures that have clinical normative values used by the study are shown in brackets. Differences were tested with a mixed-effects model. HDL, high-density lipoprotein; HGH, human growth hormone; hs-CRP, high-sensitivity C-reactive protein; LDL, low-density lipoprotein.

^b $P < .05$ comparing the postoperative time point to the preoperative time point within the same treatment group.

^c $P < .05$ comparing HGH with placebo at a given time point.

^d $.05 \leq P < .10$ comparing HGH with placebo at a given time point.

^e $.05 \leq P < .10$ comparing the postoperative time point to the preoperative time point within the same treatment group.