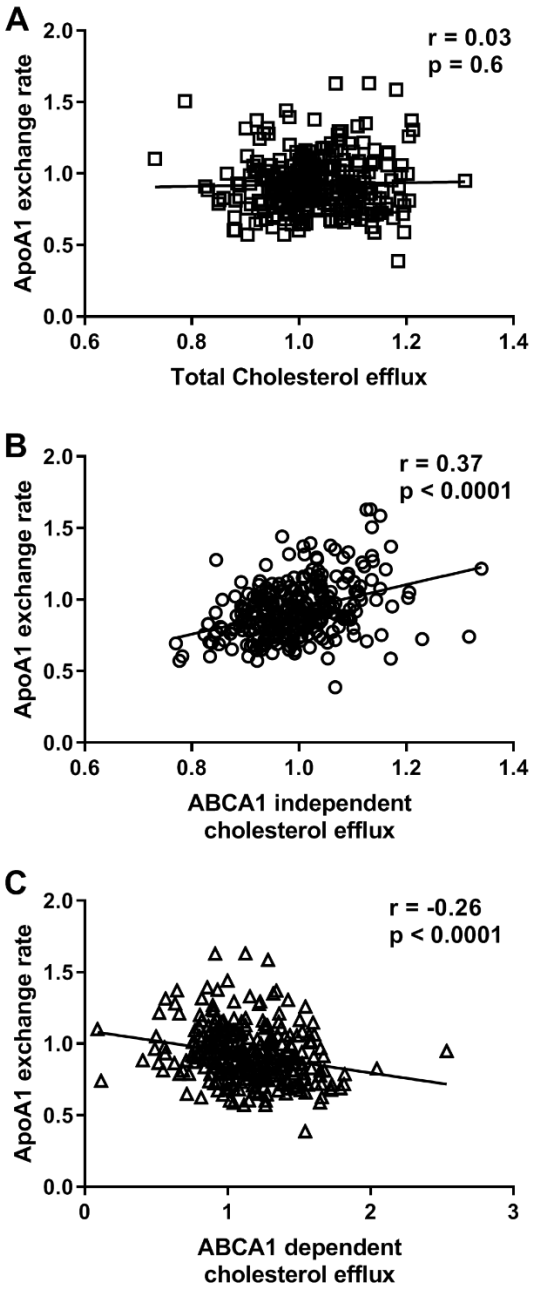
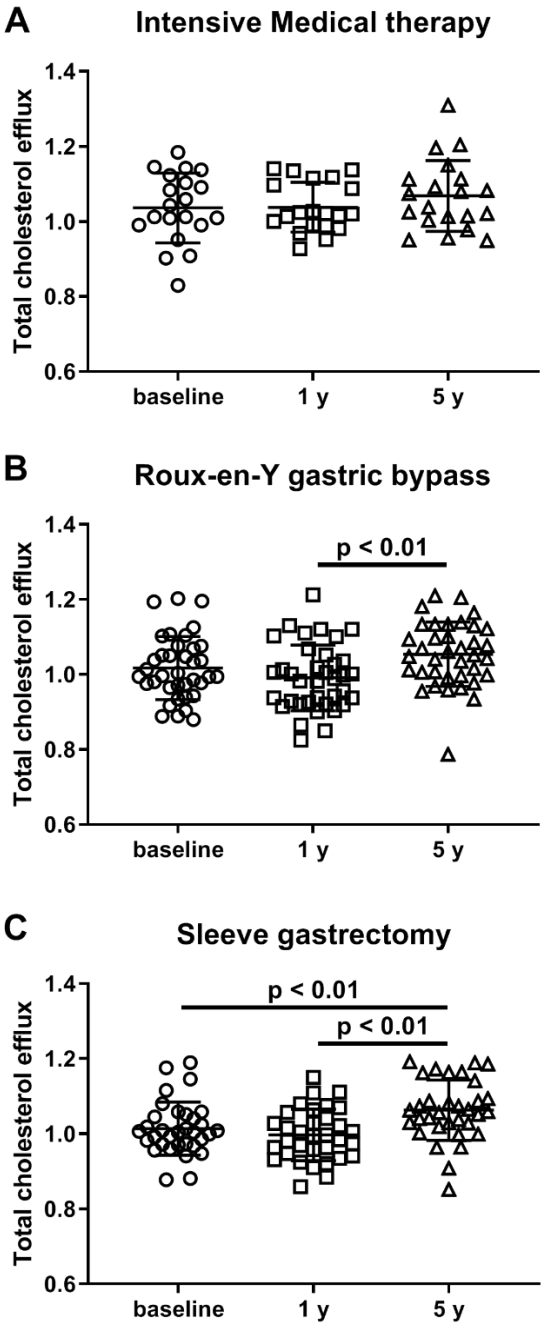
**Supplemental Figure S1**



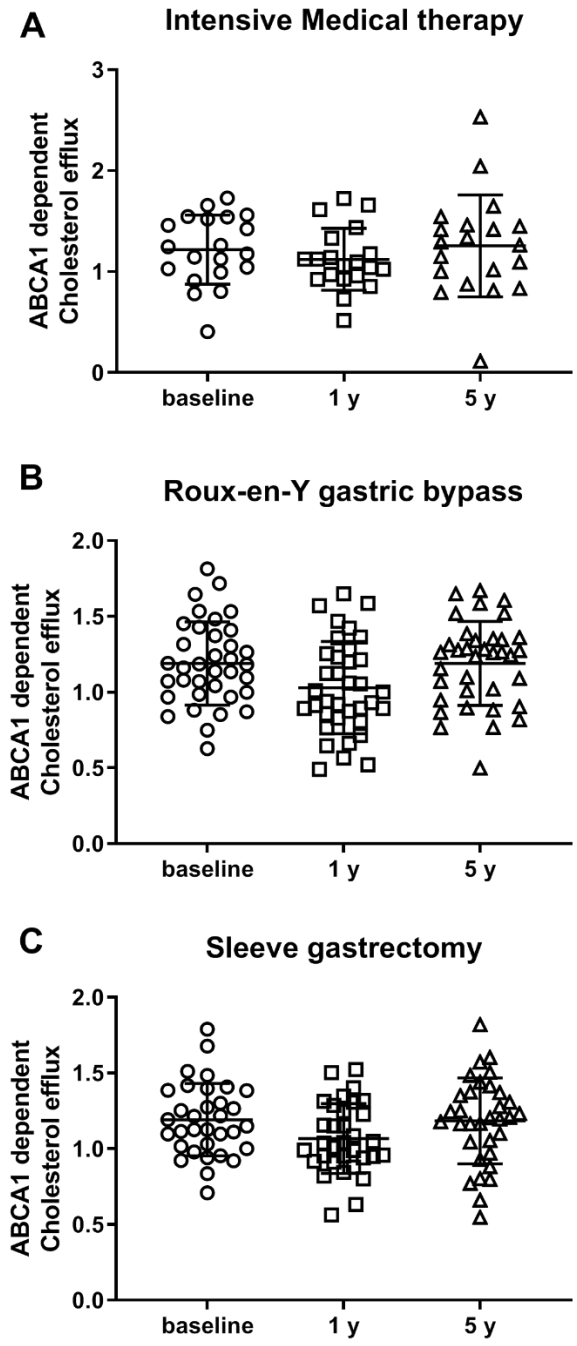

**Supplemental Figure S1. Correlation of apoA1 exchange rate to cholesterol efflux capacity.** ApoA1 exchange rate and cholesterol efflux capacity were assayed in 270 human serum samples from 90 Stampede patients. The total cholesterol efflux capacity which was measured when ABCA1 is induced (**A**), deducts ABCA1-independent efflux which was measured without ABCA1 induction (**C**), is the ABCA1 dependent cholesterol efflux capacity (**B**).

**Supplemental Figure S2**




**Supplemental Figure S2. Changes of total cholesterol efflux capacity after different treatments.** The total cholesterol efflux capacity was measured in serum samples from patients who received intensive medical therapy (**A**, n=20), Roux-en-Y gastric bypass (**B**, n=37) or sleeve gastrectomy (**C**, n=33) surgeries at baseline, 1 year, and 5 years after the treatments.

**Supplemental Figure S3**




**Supplemental Figure S3. Changes of ABCA1-dependent cholesterol efflux capacity after different treatments.** ABCA1-dependent cholesterol efflux capacity was measured in serum samples from patients who received intensive medical therapy (**A**, n=20), Roux-en-Y gastric bypass (**B**, n=37) or sleeve gastrectomy (**C**, n=33) surgeries at baseline, 1 year, and 5 years after the treatments.

**Supplemental Table 1.** Multiple linear regression of changes of apoA1 exchange rate assay (AER) with changes in clinical variables at 1 year

| Term | Coefficient | Std. Err. | T-statistic | p value |
|---|---|---|---|---|
| Intercept | -0.005 | 0.052 | -0.098 | 0.92 |
| Medical Therapy vs RYGB | -0.031 | 0.092 | -0.337 | 0.74 |
| Medical Therapy vs SB | -0.023 | 0.086 | -0.262 | 0.79 |
| HbA1c | -0.008 | 0.013 | -0.609 | 0.54 |
| BMI | -0.016 | 0.008 | -1.897 | 0.061 |
| log(TG) | 0.027 | 0.044 | 0.622 | 0.54 |
| **HDL** | **0.005** | **0.002** | **2.023** | **0.046** |

**Supplemental Table 2.** Multiple linear regression of changes of ABCA1-independent CEC with changes in clinical variables at 1 year

| Term | Coefficient | Std. Err. | T-statistic | p value |
|---|---|---|---|---|
| Intercept | 0.033 | 0.02 | 1.629 | 0.11 |
| Medical Therapy vs RYGB | -0.044 | 0.036 | -1.219 | 0.23 |
| Medical Therapy vs SB | -0.048 | 0.033 | -1.441 | 0.15 |
| HbA1c | -0.002 | 0.005 | -0.476 | 0.64 |
| BMI | -0.003 | 0.003 | -1.05 | 0.3 |
| **log(TG)** | **0.059** | **0.017** | **3.467** | **< 0.001** |
| **HDL** | **0.002** | **0.001** | **2.543** | **0.013** |

**Supplemental Table 3.** Multiple linear regression of changes of apoA1 exchange rate assay (AER) with changes in clinical variables at 5 years

| Term | Coefficient | Std. Err. | T-statistic | p value |
|---|---|---|---|---|
| Intercept | 0.06 | 0.044 | 1.363 | 0.18 |
| Medical Therapy vs RYGB | -0.079 | 0.058 | -1.372 | 0.17 |
| Medical Therapy vs SB | -0.025 | 0.058 | -0.438 | 0.66 |
| HbA1c | -0.009 | 0.009 | -0.945 | 0.35 |
| **BMI** | **-0.012** | **0.006** | **-2.086** | **0.041** |
| log(TG) | 0.027 | 0.034 | 0.8 | 0.43 |
| **HDL** | **0.004** | **0.002** | **2.809** | **0.006** |

**Supplemental Table 4.** Multiple linear regression of changes of ABCA1-independent CEC with changes in clinical variables at 5 years

| Term | Coefficient | Std. Err. | T-statistic | p value |
|---|---|---|---|---|
| **Intercept** | **0.054** | **0.027** | **2.046** | **0.045** |
| Medical Therapy vs RYGB | -0.059 | 0.035 | -1.706 | 0.093 |
| Medical Therapy vs SB | -0.055 | 0.035 | -1.587 | 0.12 |
| HbA1c | -0.007 | 0.005 | -1.28 | 0.2 |
| BMI | -0.004 | 0.003 | -1.067 | 0.29 |
| **log(TG)** | **0.049** | **0.021** | **2.352** | **0.022** |
| **HDL** | **0.003** | **0.001** | **3.398** | **0.001** |