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The Future of Obesity Management:
From Weight Loss to Health Gain



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Determinants of metabolic recovery following bariatric surgery in individuals with type 2 diabetes: 2-year results from the REMISSION trial

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Disclosure

CIHR, FRQS funded research

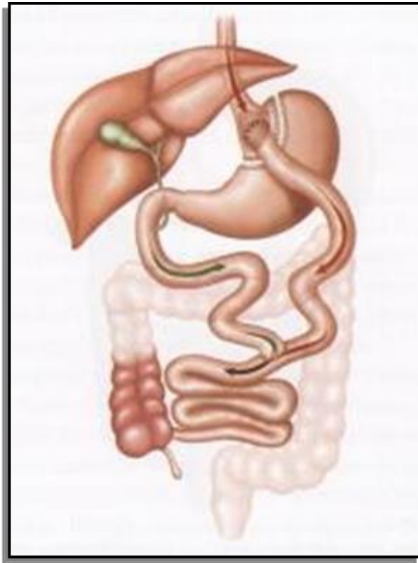
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Research grant/ Advisory Board

Medtronic, Novo-Nordisk, GI-Window, Eli-Lilly, Bausch Health

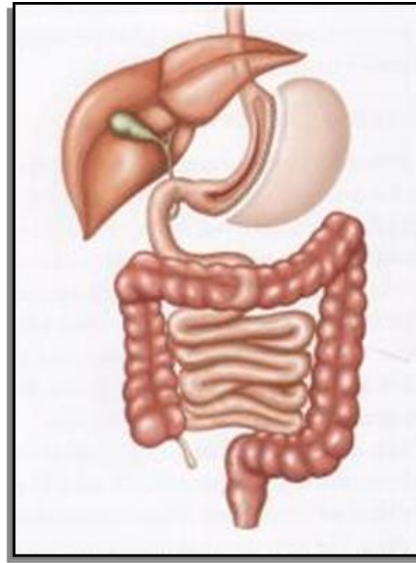
2-Years Interim results - Clinical Core component

- **Objective:** To investigate the determinants of metabolic recovery following surgical weight loss procedures
- **Design:** Prospective non-randomized study, patients matched for Age, sex, severity and duration of T2D



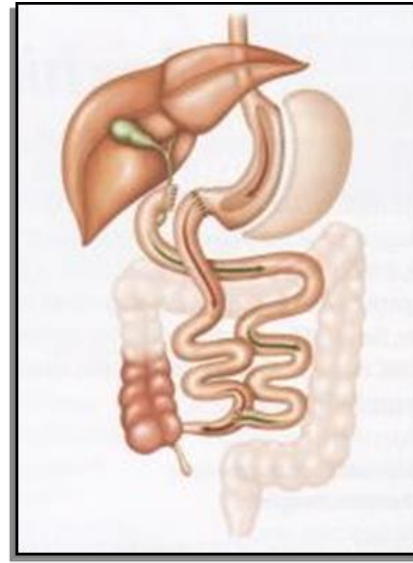
**Roux-en-Y
Gastric Bypass**

N=100



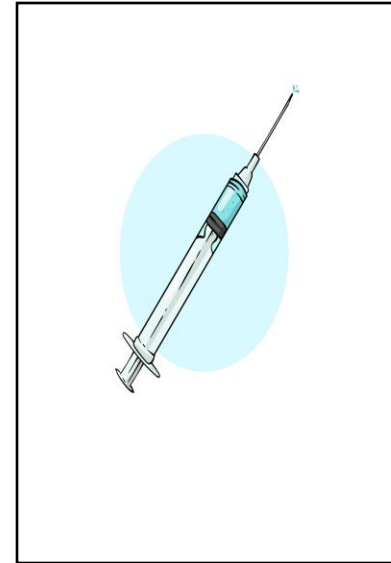
**Vertical Sleeve
Gastrectomy**

N=100



**Biliopancreatic
Derivation
Duodenal Switch**

N=100



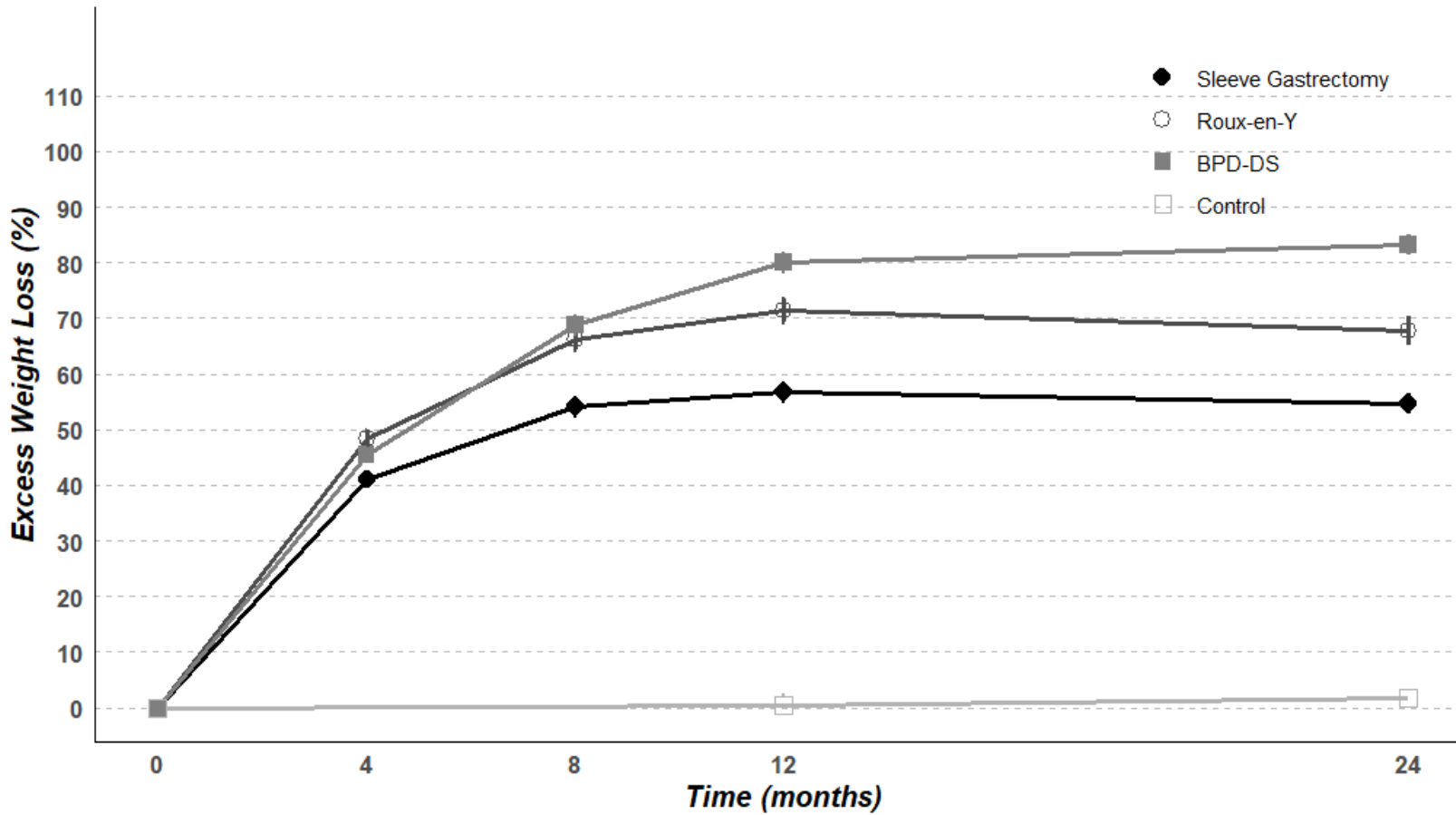
**Best medical
management**

N=100

Demographic Data (n=294)

	Sleeve	RYGB	BPD-DS	Control	p
n	107	61	91	35	
Sex (M :F)	51:56	23:38	44:47	20:15	0.30
Age (y)	50.4±7.5	49.7±7.7	47.2±7.8	48.2±8.5	0.02
Weight (kg) preop	124.3±21	110.8±15.4	135.5±17.4	124.7±28.2	<0.001
Height (cm) preop	166.8±9.2	167.1±9.4	169.9±9.4	172±9.8	<0.001
BMI (kg/m ²) preop	44.5±5.4	39.7±3.1	46.9±4.9	41.8±6.8	<0.001
HbA1c (%)	7±1.1	7.2±1.3	7.1±1.2	6.6±1.2	0.06

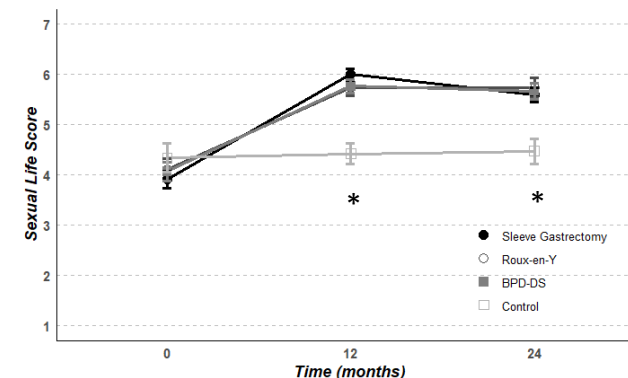
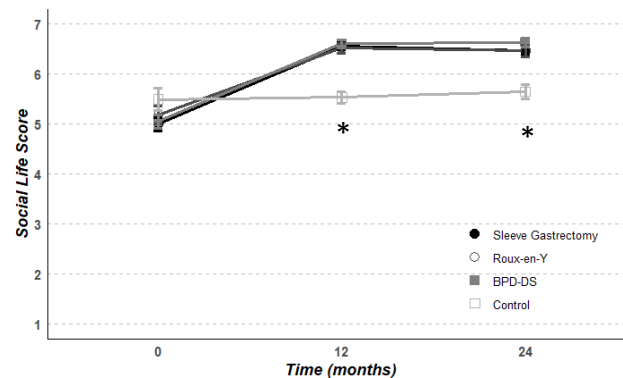
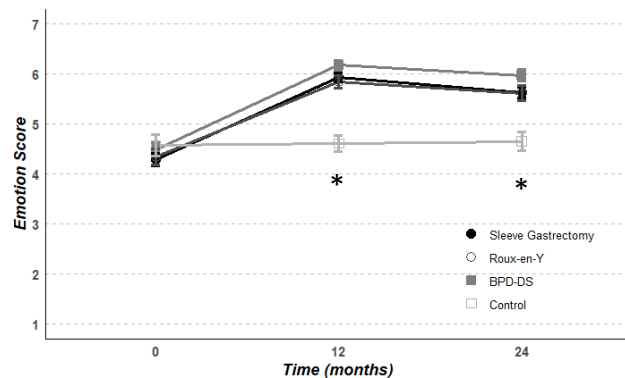
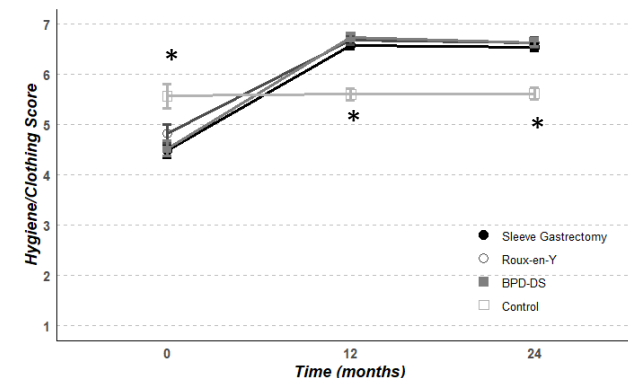
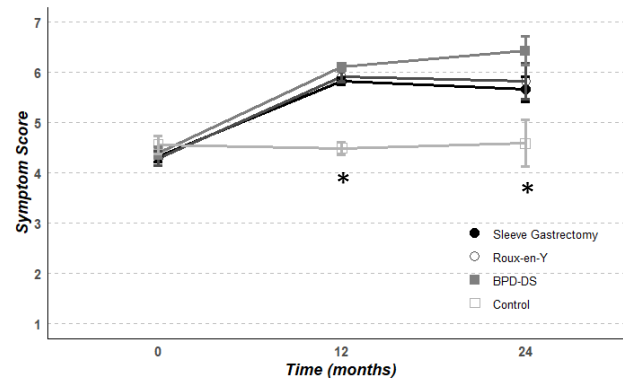
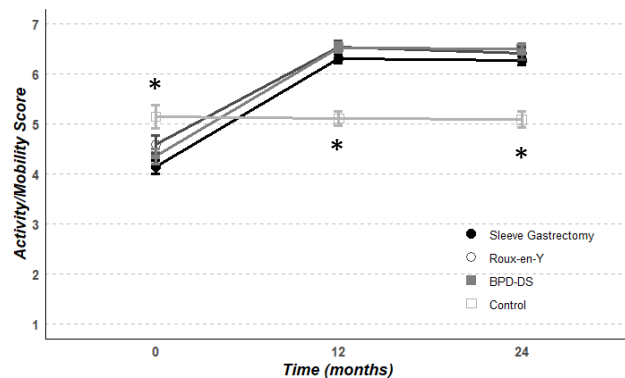
% Excess Weight loss



Weight change was analyzed using a mixed model for repeated measures with an unstructured covariance matrix and Kenward–Roger adjustment.

Changes in Quality of Life vs Medical group

Laval Questionnaire - 44 items, 7-point Likert scale



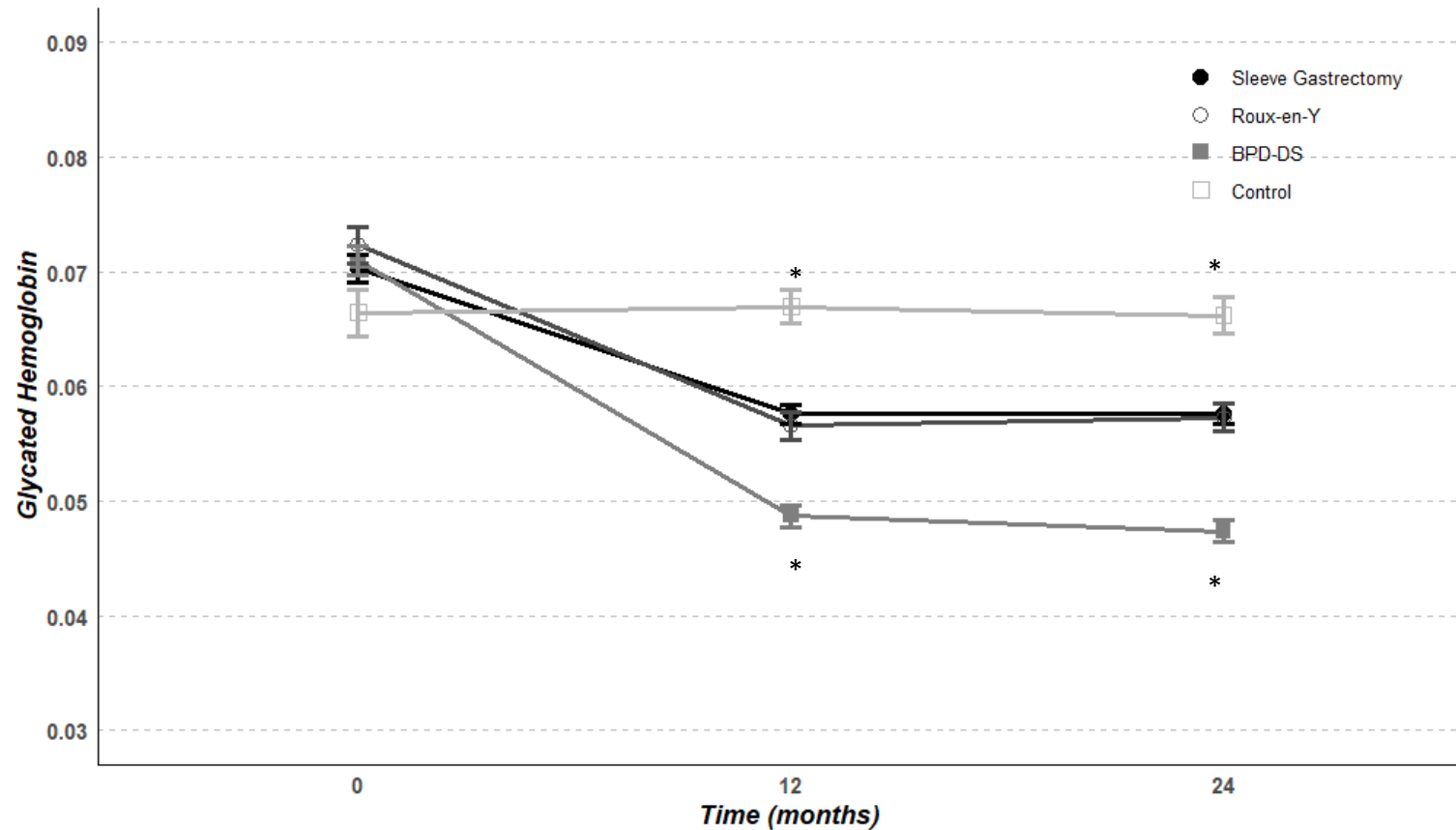
Values adjusted for preoperative BMI and age

Time x Surgery interaction $p < 0.0001$

* $p < 0.05$ Tukey Kramer

Analyzed using a mixed model for repeated measures with an unstructured covariance matrix and Kenward–Roger adjustment.

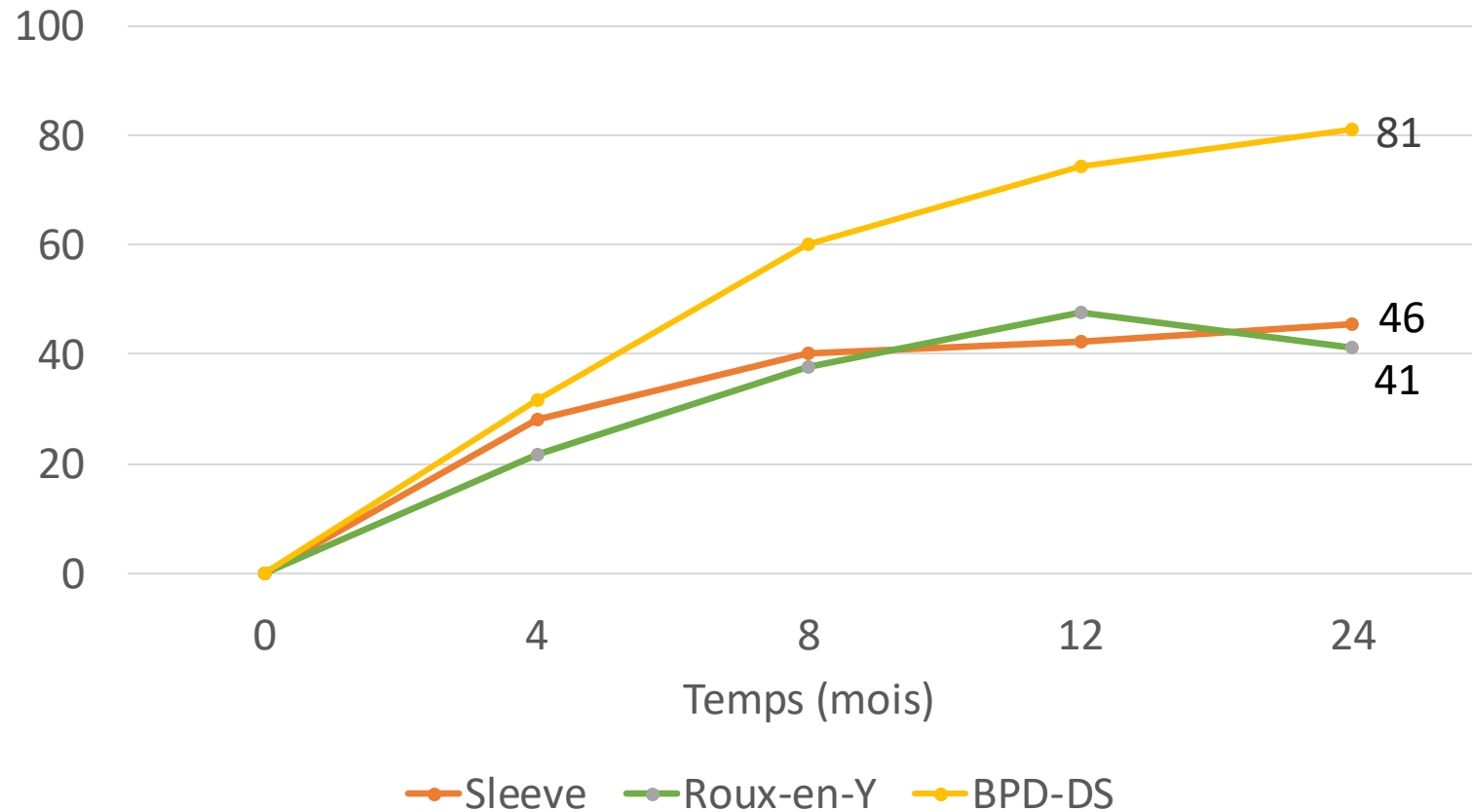
Evolution of HbA1C over time



Values adjusted for preoperative BMI and age Time x Surgery interaction $p < 0,0001$ * $p < 0,05$ Tukey Kramer

Analyzed using a mixed model for repeated measures with an unstructured covariance matrix and Kenward–Roger adjustment.

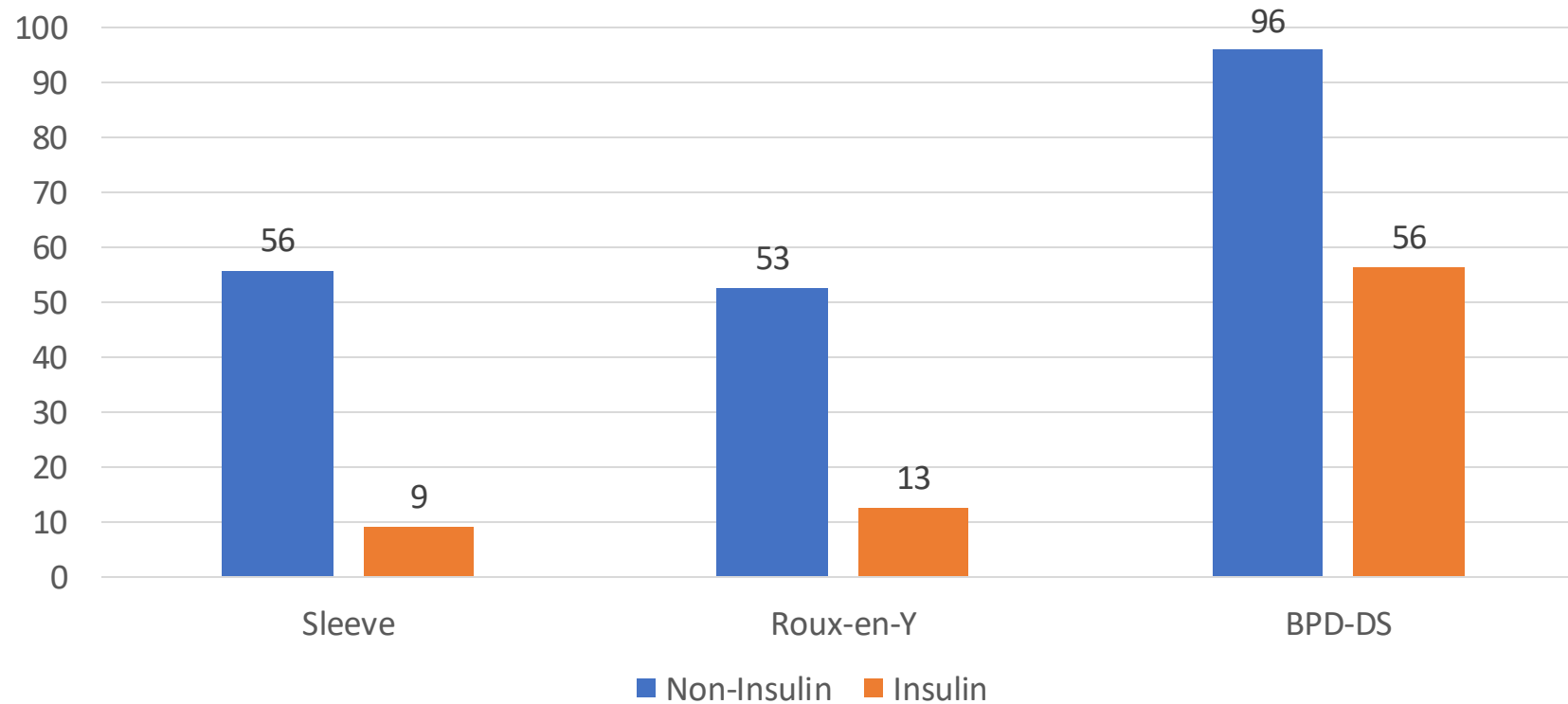
Complete T2D Remission rate (%)



No patient in the Control group achieved complete T2D remission

Complete remission: No medication and HbA1C <6.0%

Remission rate of T2D according to Insulin use at 2 years



Conclusion

- The three bariatric operations are significantly superior to medical treatment for weight loss, T2D remission and quality of life
- Quality of life significantly improves after surgery
 - QoL becomes significantly better than that of patients undergoing medical treatment after 1 Yr
 - No significant difference between the three procedures

Conclusions

- Compared to RYGB and SG, DS offers
 - Significantly better weight loss
 - Higher T2D remission in non-insulin-dependent patients (DS 96% vs RYGB 56% vs SG 53%)
 - Higher T2D remission in insulin-treated patients (DS 56% vs RYGB 9% vs SG 13%)

Acknowledgements

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