Is Side-to-Side Magnetic Duodeno-Ileostomy the future of outpatient anastomotic bariatric Surgery?

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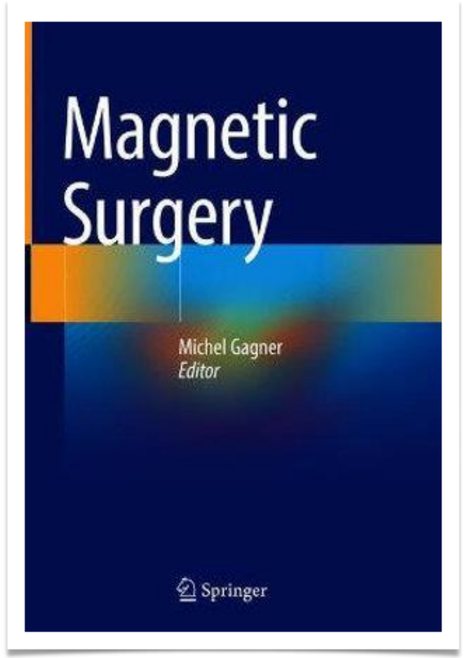
Financial Disclosures

Lexington Medical	Stock Ownership/consultant
GT Metabolic Solutions Inc	Stock Ownership/consultant/Board



Creation of Side-to-Side Compression Anastomosis Using the Linear Magnetic Anastomosis System (LMAS) to Achieve Duodeno-Ileostomy Diversion in Adults with Obesity with or without Type-2 Diabetes Mellitus.

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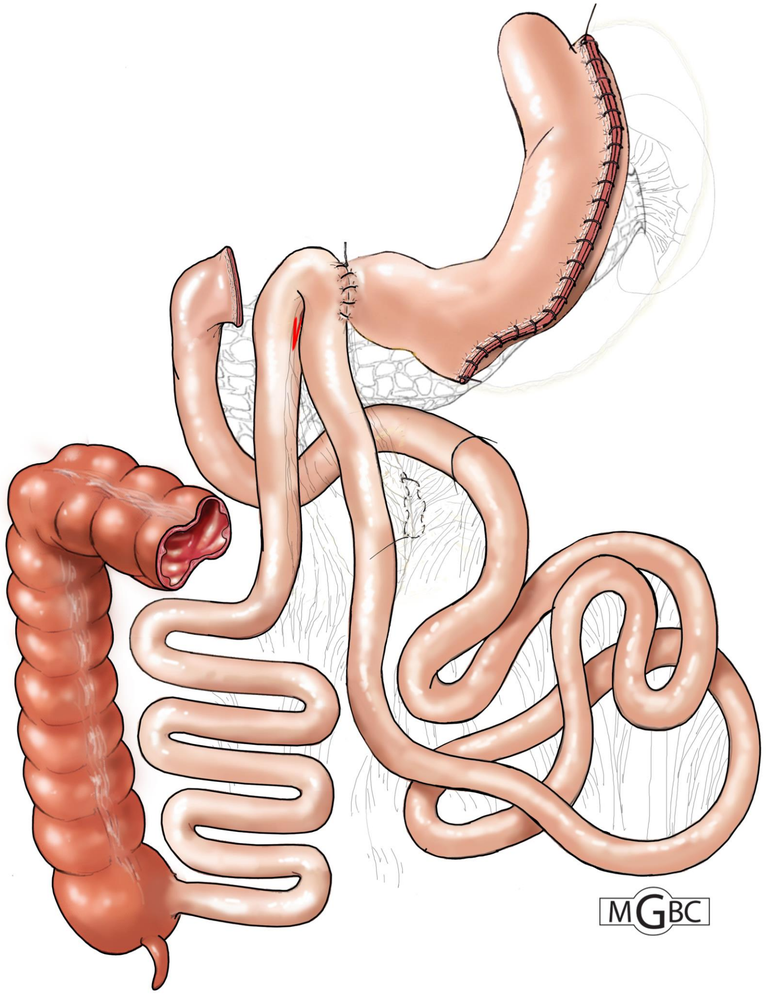
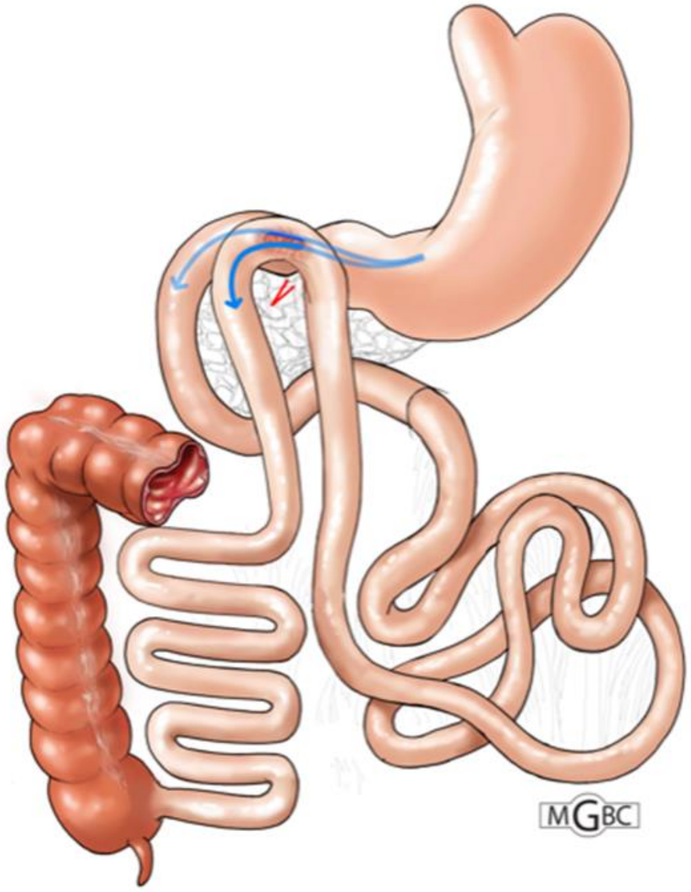
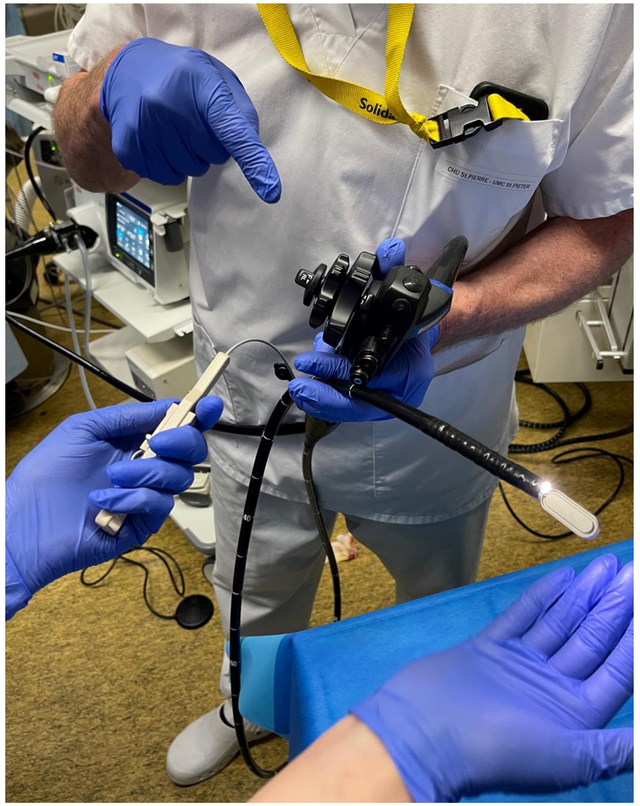
SADI vs MAGDI





The MAGNET System
Creation of Side-to-Side Compression Anastomosis Duodeno-Ileostomy



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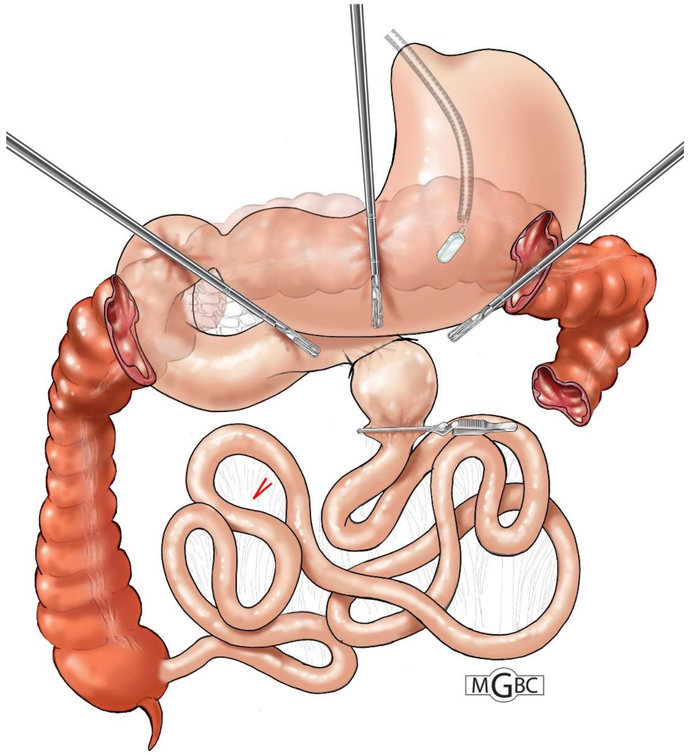

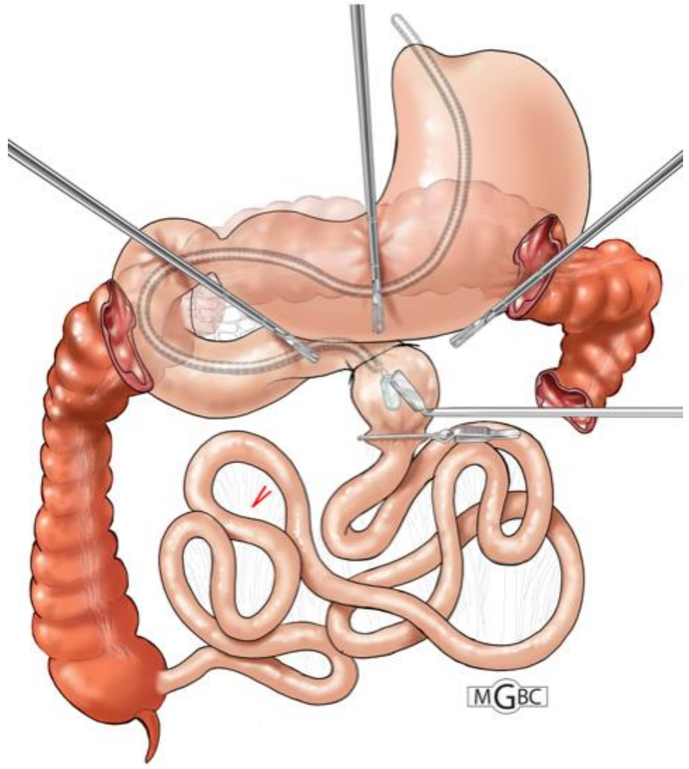

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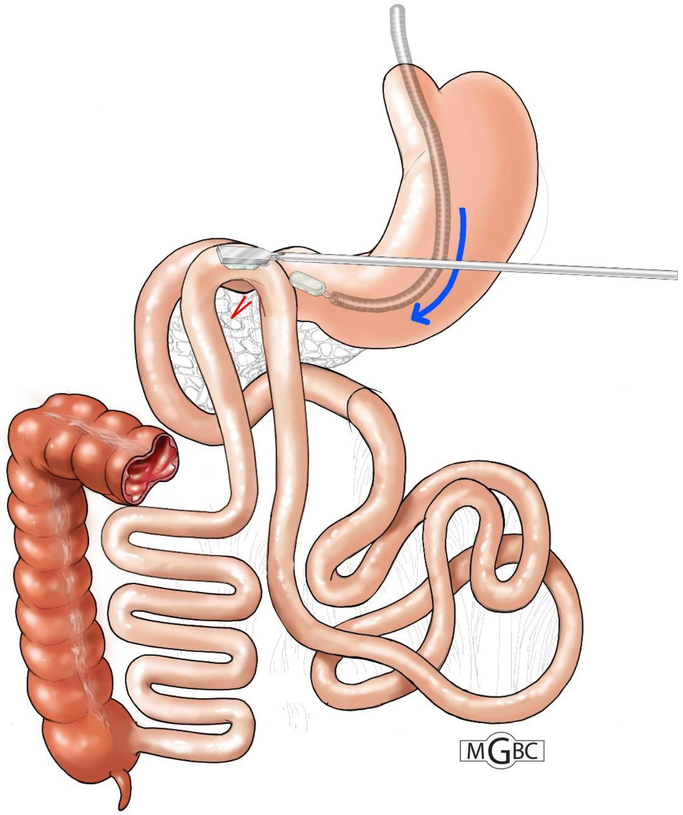

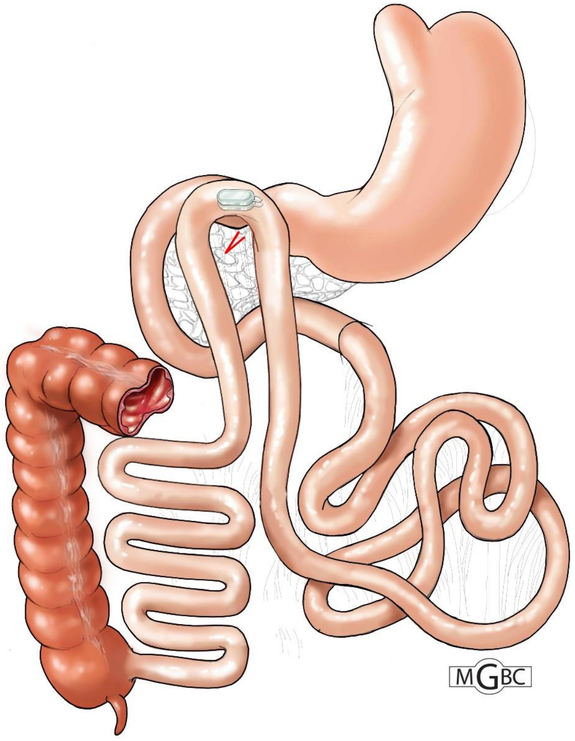

ELSEVIER

Surgery for Obesity and Related Diseases 20 (2024) 341–353

SURGERY FOR OBESITY AND RELATED DISEASES

Original article

Side-to-side magnetic duodeno-ileostomy in adults with severe obesity with or without type 2 diabetes: early outcomes with prior or concurrent sleeve gastrectomy

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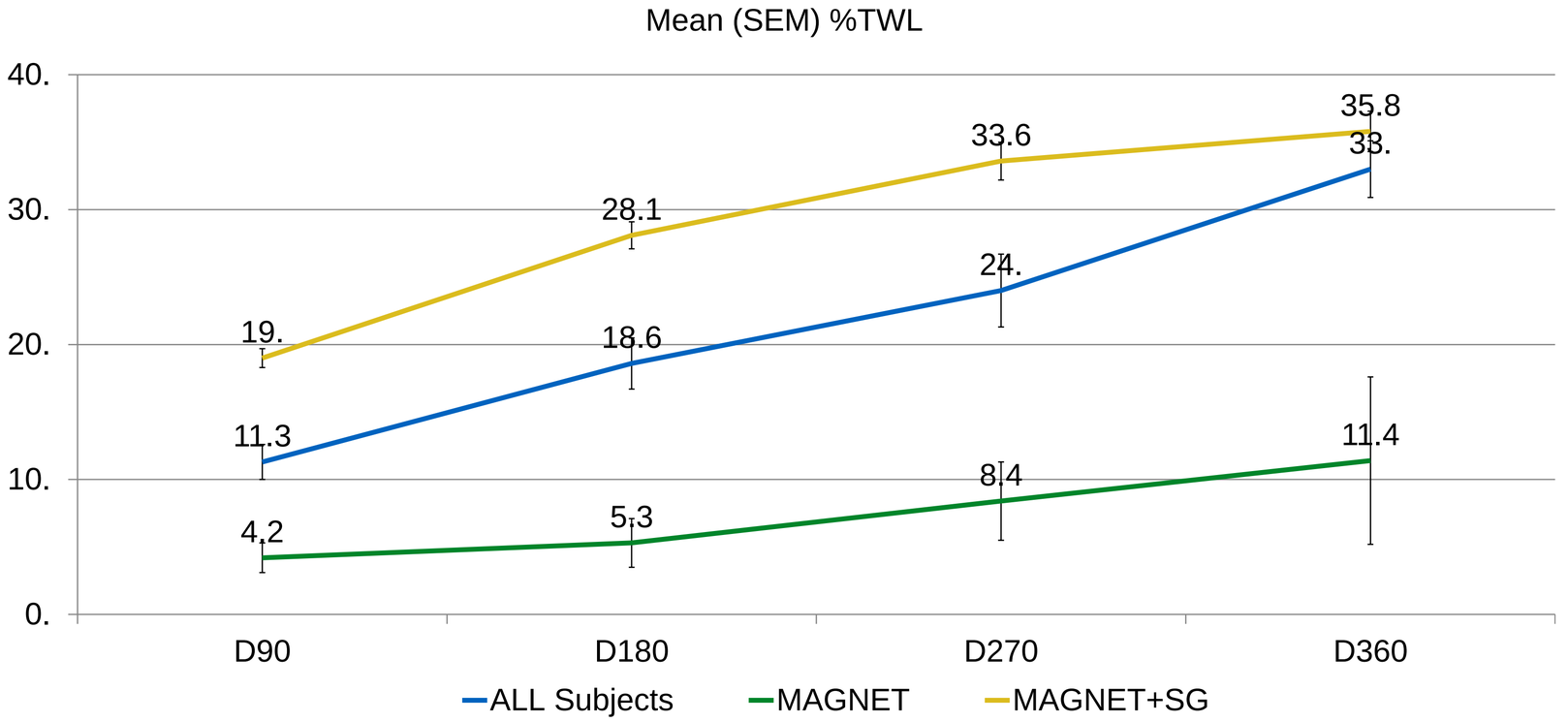
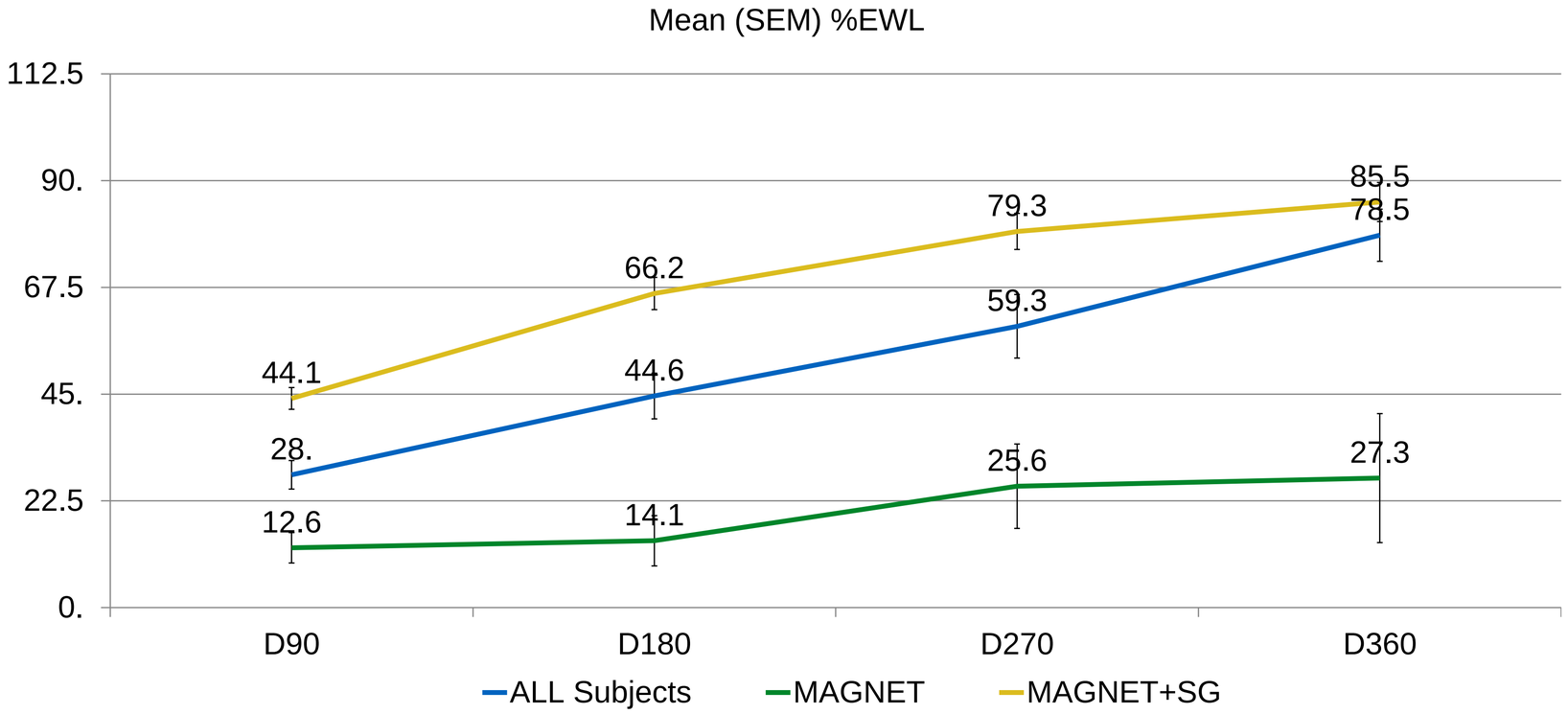
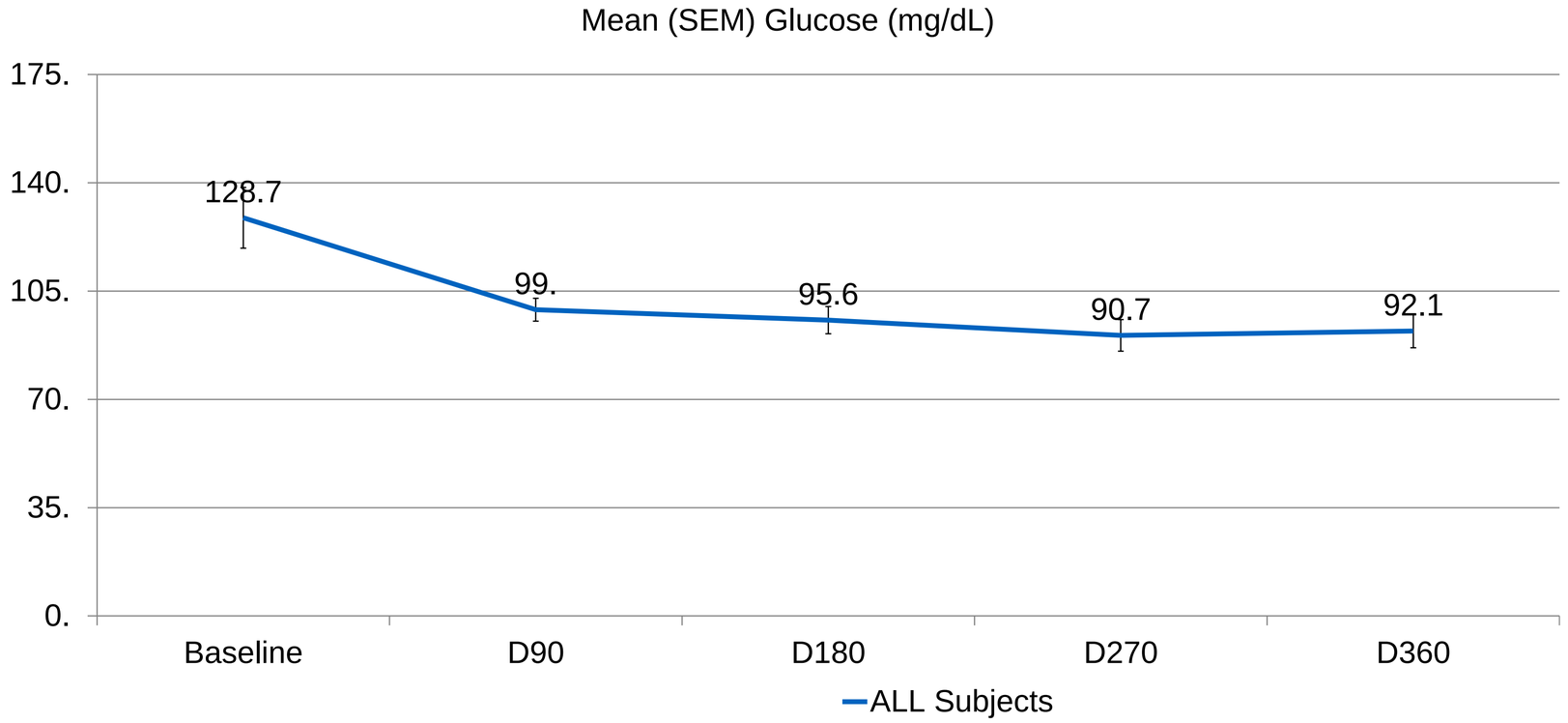
Percent Total Weight Loss (%TWL) over one year



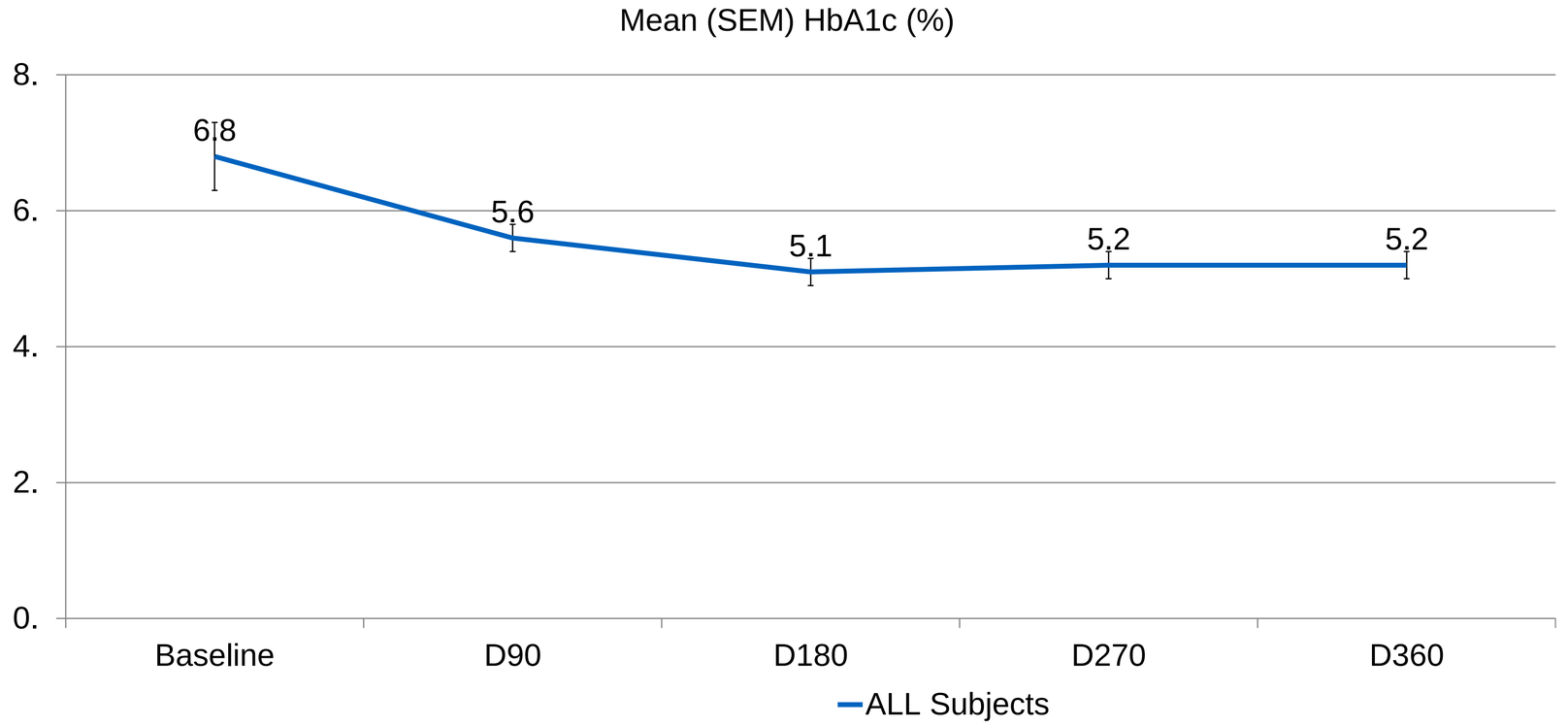
Percent Excess Weight Loss (%EWL) over one year



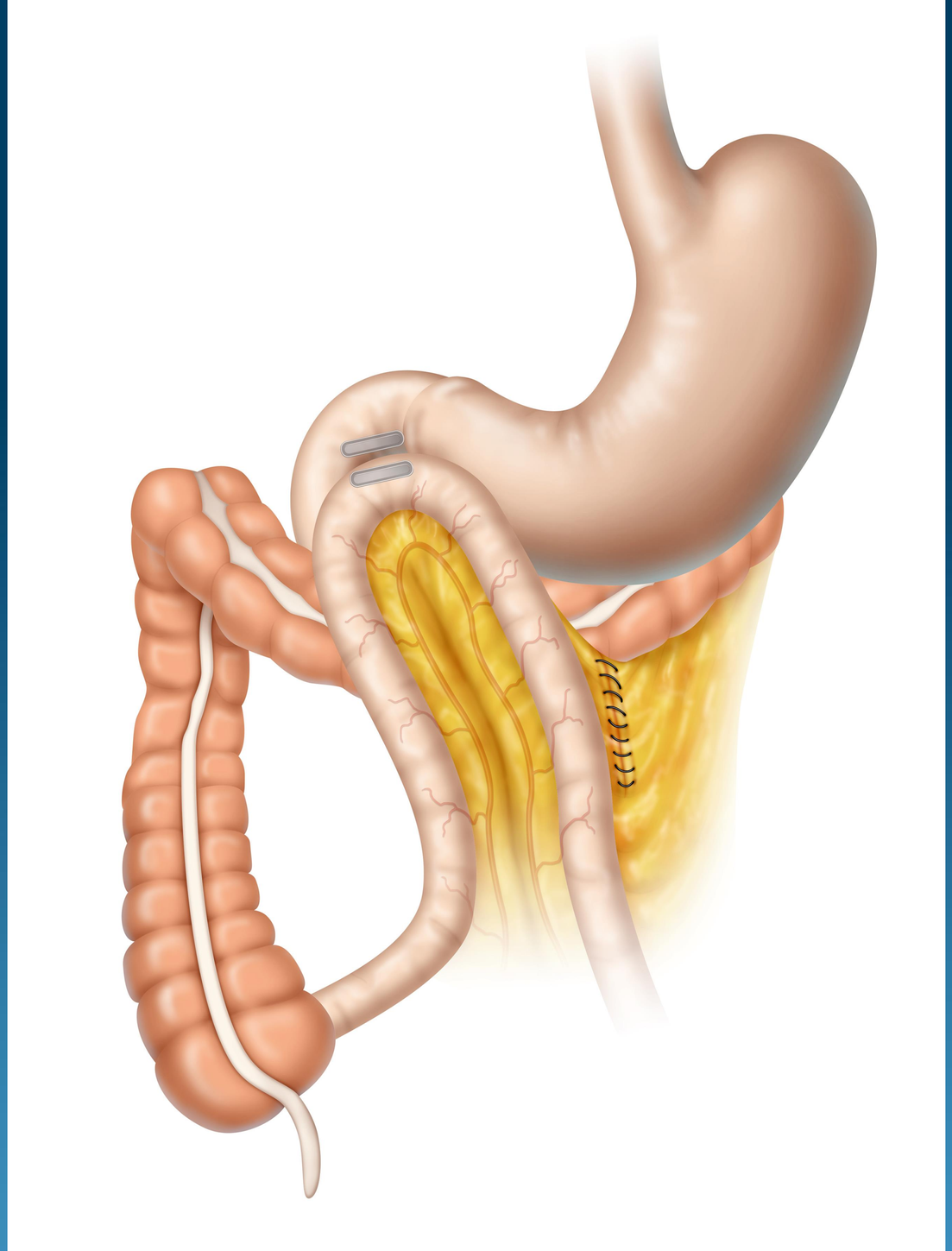
Glucose (mg/dL) changes over one year



HbA1c (%) changes over one year



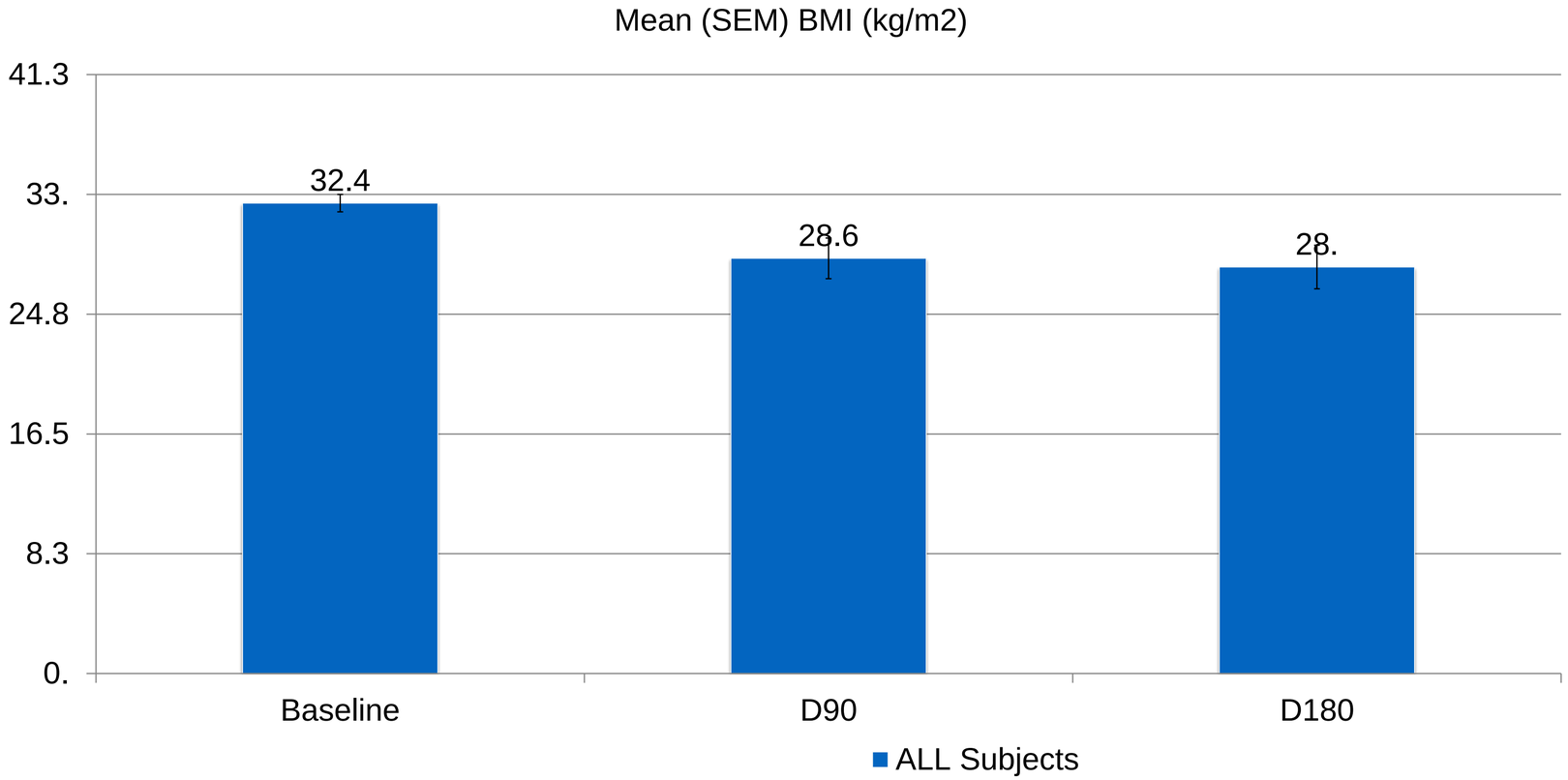
Easy to Swallow, version 2.0



Characteristic	All Subjects (n=9)
Age (Years)	
Mean (SEM)	53.4 (1.9) years
Min, Max	42 years, 61 years
Gender n (%)	
Female	5 (55.6%)
Male	4 (44.4%)

Characteristic	All Subjects (n=9)
Weight (kg) Mean (SEM)	97.6 (3.9)
Body Mass Index (kg/m^2) Mean (SEM)	33.0 (0.4)
Type 2 diabetes mellitus (T2DM) n (%)	9 (100%)
Glucose (mg/dL) Mean (SEM)	186.0 (16.4)
HbA1c (%) Mean (SEM)	7.8 (0.4)

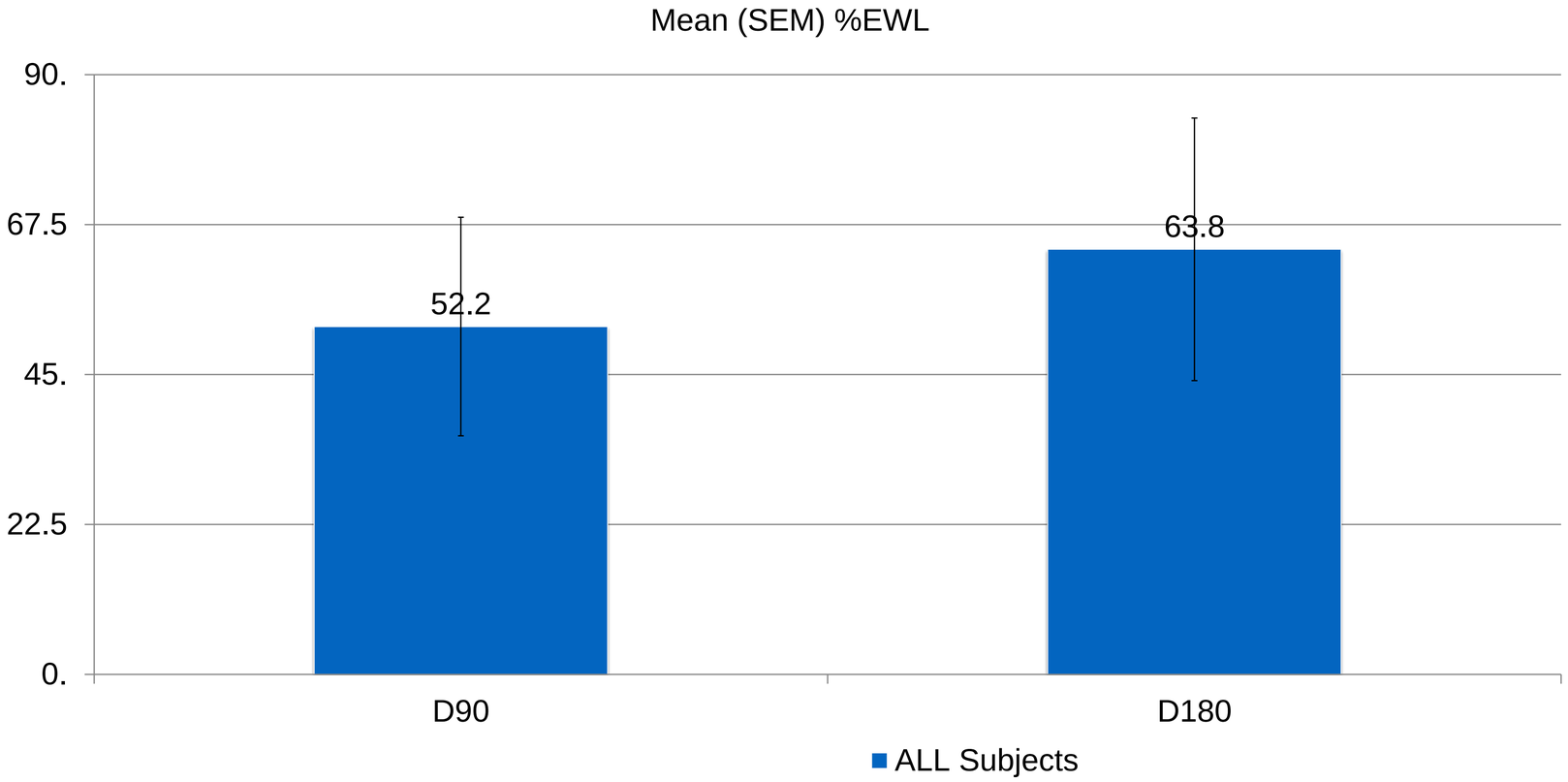
BMI (kg/m^2) changes over six months



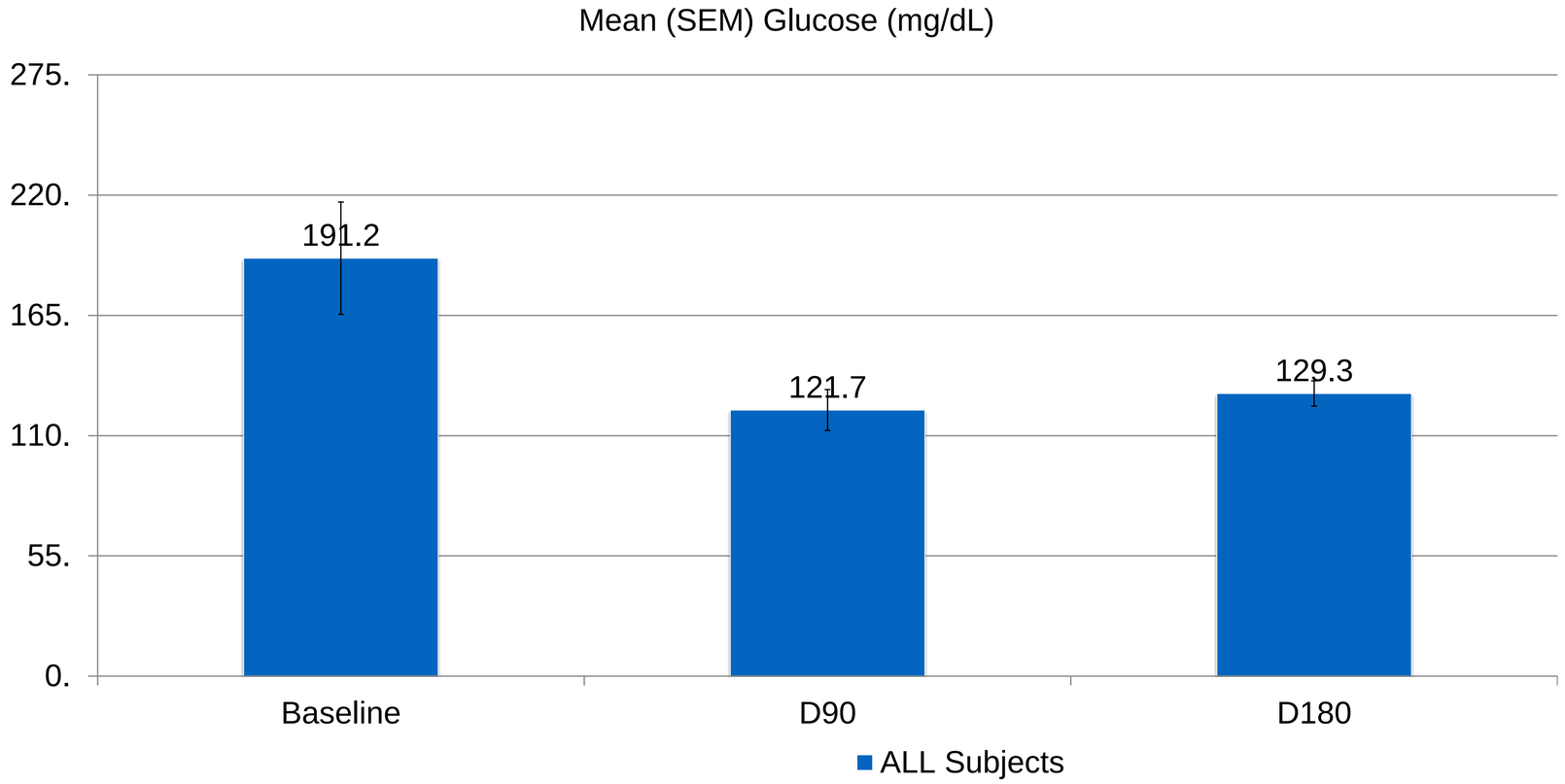
ALL Subjects

Obesity Indicator	**Baseline** n=9	**D30** n=9	**D90** n=4	**D180** n=4	**D360** n=3
Body Weight, kg Mean (SEM)	97.6 (3.9)	92.6 (3.8)	81.8 (5.3)	79.8 (5.5)	78.3 (5.8)
BMI (kg/m^2) Mean (SEM)	33.0 (0.4)	31.3 (0.5)	28.6 (1.4)	28.0 (1.5)	28.5 (1.8)

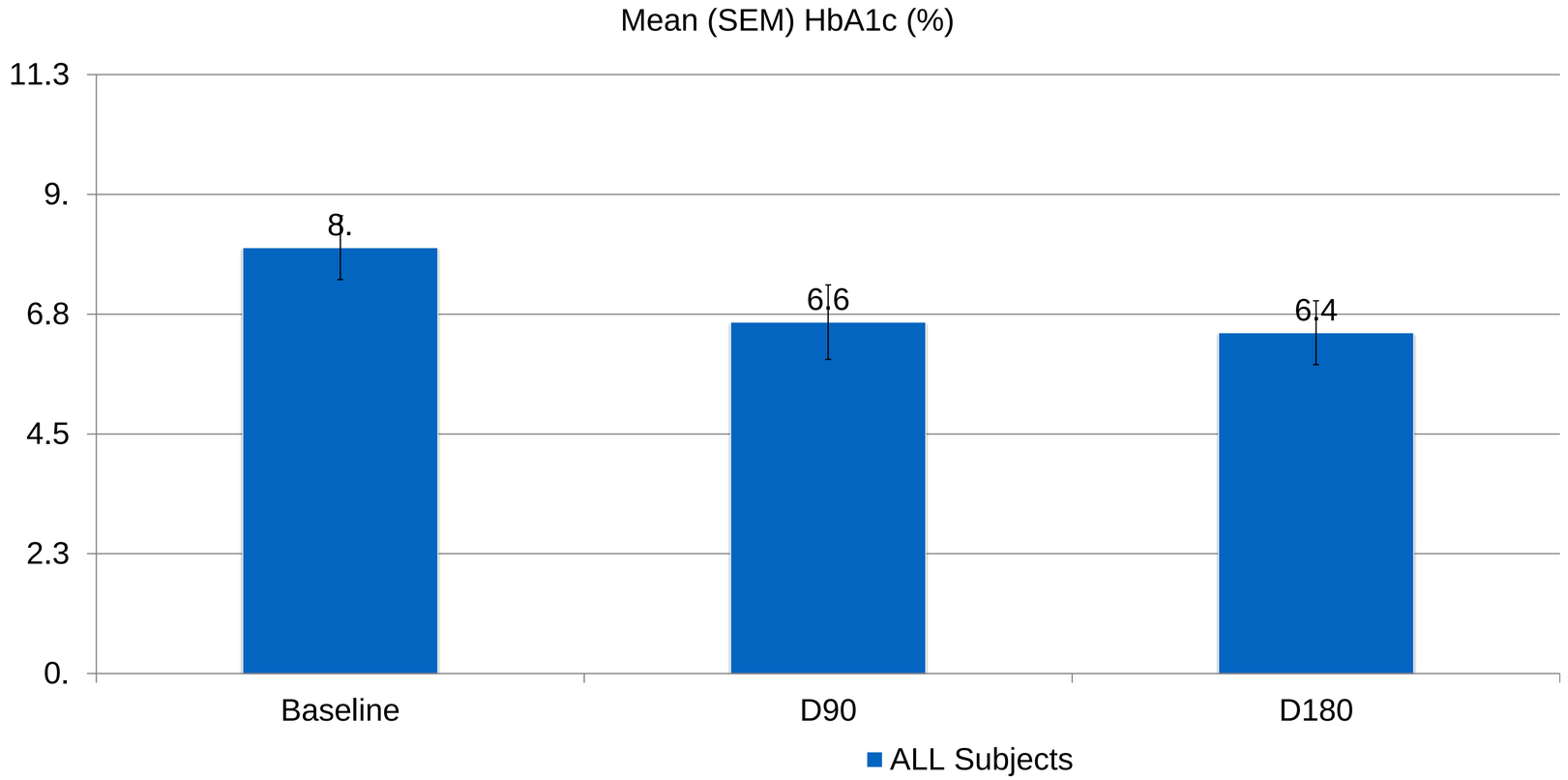
Percent Excess Weight Loss (%EWL) over six months



Glucose (mg/dL) changes over six monts



HbA1c (%) changes over six months



ALL Subjects

Diabetes Indicator	**Baseline** n=9	**D30** n=9	**D90** n=4	**D180** n=4	**D360** n=3
Glucose (mg/dL) Mean (SEM)	186.0 (16.4)	168.1 (15.5)	121.7 (9.4)	129.3 (5.8)	131.4 (5.5)
HbA1c (%) Mean (SEM)	7.8 (0.4)	7.5 (0.4)	6.6 (0.7)	6.4 (0.6)	6.3 (0.2)

Adverse Event Summary

Adverse Event (AE) Category	All Subjects (n=9)
Unique subjects with AEs – (n (% of Cohort))	5 (55.6%)
Total AEs – (n (% of Total AEs))	15 (100%)
AEs Related to the Magnet (n (% of Total AEs))	1 (6.7%)
AEs Related to Procedure* (n (% of Total AEs))	3 (20.0%)
SAEs – (n (% of Total AEs))	2 (13.3%)

Adverse Events by Clavien-Dindo Classification Grading

Clavien-Dindo Classification	All Subjects (n=5)
Grade I: (n (% of Cohort AEs)) Deviation from the normal postoperative course without the need for pharmacological treatment or surgical, endoscopic, and radiological interventions. Antiemetics, antipyretics, analgesics, diuretics and electrolytes, and physiotherapy allowed.	5 (33.3%)
Grade II: (n (% of Cohort AEs)) Requiring pharmacological treatment with drugs other than such allowed for grade I complications. Blood transfusions and total parenteral nutrition included.	8 (53.3%)
Grade III: (n (% of Cohort AEs)) Requiring surgical, endoscopic, or radiological intervention.	2 (13.3%)
Grade IV: (n (% of Cohort AEs)) Life-threatening complication (including certain CNS complications) requiring Intermediate Care/Intensive Care Unit-management.	0 (0%)
Grade V: (n (% of Cohort AEs)) Death of a patient.	0 (0%)
TOTAL Adverse Events	**15 (100%)**

Summary

Side-to-side DI compression anastomosis with a Swallowable Magnet is possible

100% successful alignment of the two Magnets with passage of the device naturally without migration or separation and none (0%) required invasive re-intervention

All anastomoses were confirmed patent radiologically and remained patent through six months of follow-up

Summary (2)

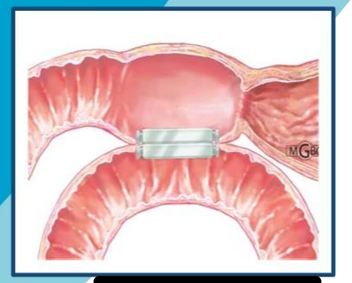
There were no reports of anastomotic bleeds, leaks, obstruction, or infection and no deaths, known risks with conventional techniques (sutures or staples).

The secondary outcomes of weight loss and functional improvement in metabolic indicators are promising at six months.

We should propose Swallowable Magnets in Duodeno-Ileostomy without gastrectomy for Type-2 Diabetes Resolution

SAVE THE DATE

May 30-31, 2025



3rd

Annual International Symposium on Magnetic Gastro-Intestinal & Colon Surgery

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Michel Gagner,
MD, FRCSC, FACS

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