Ambulatory Sleeve Gastrectomy: A Non-inferior Option for Bariatric Patients

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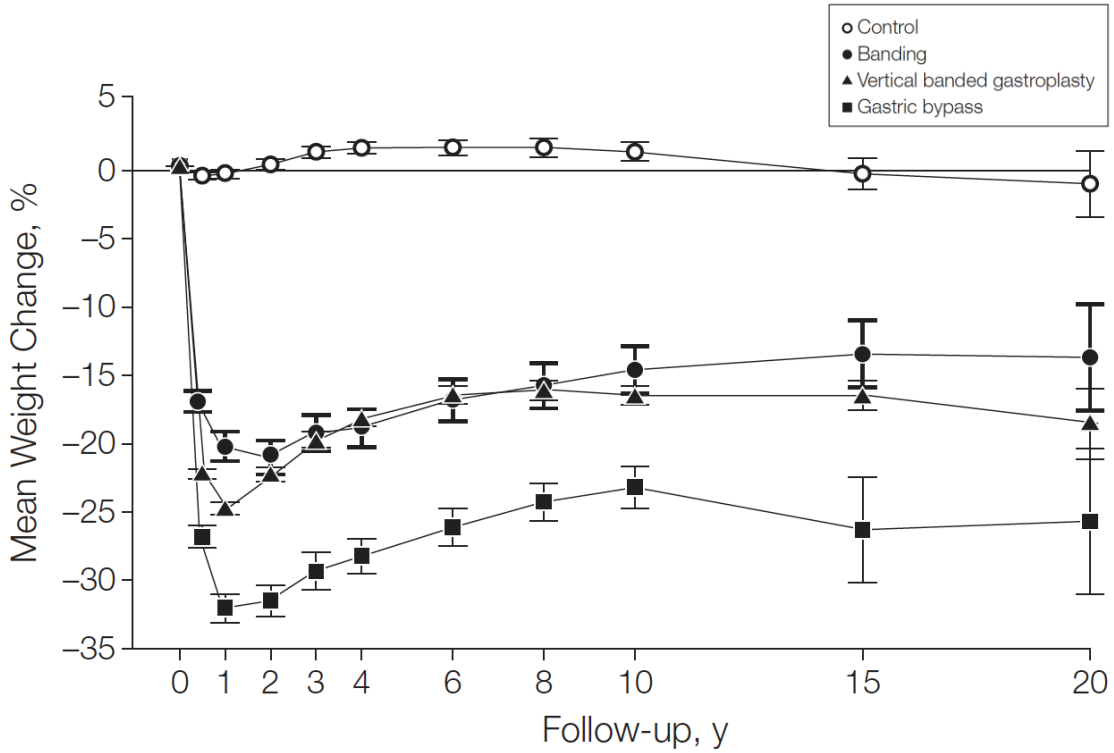
CONFLICT OF INTEREST DISCLOSURE

I have the following potential conflict(s) of interest to report:

- Travel support
  - Gore
  - Intuitive

Benefits of Metabolic and Bariatric Surgery (MBS)

- Safe, effective treatment for obesity and related co-morbidities



- Reported mortality rate 0.14% from Bariatric Outcomes Longitudinal Database (BOLD) study
- Factors that influence these results:
  - Standardization of care
  - Multi-disciplinary approach
  - Pre-operative optimization
  - Minimal invasive techniques
  - **Enhanced recovery after surgery (ERAS) protocols**
  - Outcomes review and accreditation

DeMaria EJ et al. Surg Obes Rel Dis 2010;6(4):347-55
Sjöström et al. JAMA 2012;307(1):56-65.

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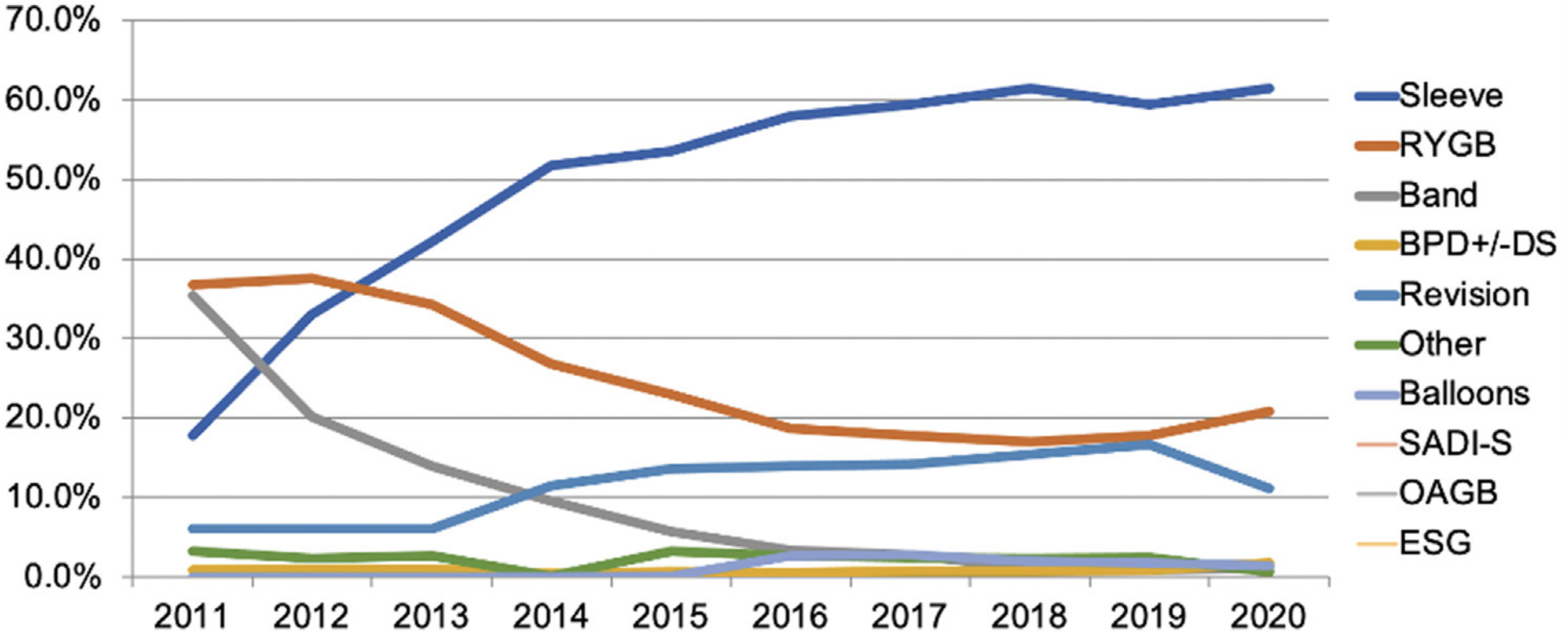
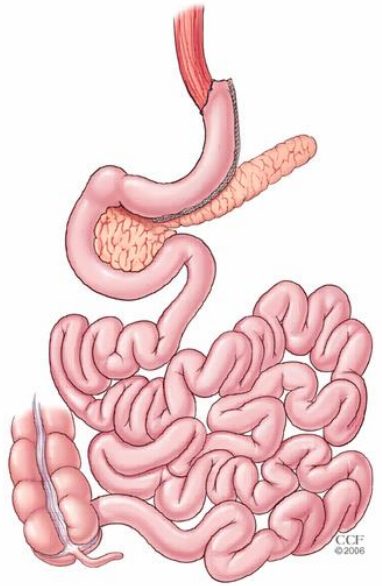
Sleeve Gastrectomy

- Accounts for almost 70% of all bariatric procedures performed in the United States





Clapp et al SOARD 2022;18:1134-1140
https://asmbs.org/condition_procedures/sleeve-gastrectomy/

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Methods

- Study Setting:
  - Single, high-volume, MBSAQIP-accredited institution with fellowship-trained surgeons
- Patient Selection:
  - Primary, elective sleeve gastrectomy, January 2020 – May 2023
  - Age ≥ 18 years
  - BMI ≥ 35 kg/m^2
  - Absence of significant cardiac or pulmonary disease
  - Able to ambulate
  - Adequate support at home
  - Stay within one hour of the hospital

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Methods

- Exclusion criteria:
  - Uncontrolled diabetes or untreated sleep apnea
  - Cardiac disease without prior revascularization
  - End-stage renal or severe liver disease or listed for transplant
  - Revisional surgery
  - Inadequate follow-up at 30 days post-operatively

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Methods

Pre-operative consultation
- Education and expectations

Clinical weight management program

Surgery
- ERAS
- Early case start
- Nutritionist
- Discharge criteria*
- Verify meds at home

Check-in via telephone
- Within 24 hours and on POD3/4
- Return for IVF if needed

❖Discharge criteria:
- 3-hour min stay in recovery
- Blood glucose controlled, <180
- Able to follow instructions
- Passed water trial and tolerating clear liquid diet

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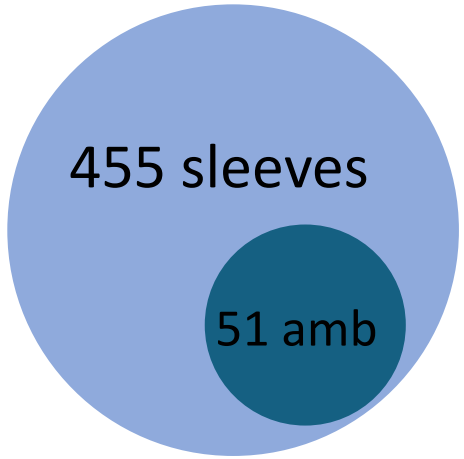
Results



Propensity matching

Baseline Demographics of Matched Cohort

Characteristics	Ambulatory Group	Control Group	*p* value
Total Number of Patients (n)	51	177	
BMI (Pre-op, kg/m^2) – median [IQR]	43.4 [40.2, 49.4]	43.5 [39.8, 48.8]	0.831
Age at Surgery – median [IQR]	32.0 [28.5, 42.5]	35.0 [30.0, 41.0]	0.311
Sex = Female – n (%)	49 (96.1)	165 (93.2)	0.676
Race – n (%)			0.916
White	25 (49.0)	86 (48.6)	
Black or African American	24 (47.1)	86 (48.6)	
unknown	2 (3.9)	5 (2.8)	
Current Smoker – n (%)	8 (15.7)	16 (9.0)	0.27
Diabetes Mellitus – n (%)	9 (17.6)	46 (26.0)	0.298
Sleep Apnea – n (%)	19 (37.3)	60 (33.9)	0.782
Hypertension – n (%)	13 (25.5)	60 (33.9)	0.335
Hyperlipidemia – n (%)	12 (23.5)	38 (21.5)	0.903
ASA Classification – n (%)			0.872
ASA 2	4 (7.8)	16 (9.0)	
ASA 3	46 (90.2)	159 (89.8)	
ASA 4	1 (2.0)	2 (1.1)	

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No Significant Differences in Adverse Outcomes

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Variable	Ambulatory Group	Control Group	*p* value
Operative time (min) (median [IQR])	121.2 [87.6, 140.4]	75.6 [64.2, 127.8]	<0.001
Composite adverse event (%)	0 (0.0)	12 (6.8)	0.12
Post-operative VTE (%)	0 (0.0)	2 (1.1)	1.0
Post-operative UTI (%)	0 (0.0)	2 (1.1)	1.0
Outpatient IVF infusion visits (%)	2 (3.9)	8 (4.5)	1.0
Emergency room (ER) visits (%)	7 (13.7)	22 (12.4)	0.813
30-day readmission (%)	0 (0.0)	11 (6.2)	0.129
30-day reintervention (%)	0 (0.0)	6 (3.4)	0.342

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Regression Analysis

- ER visits associated with 3 variables:

Variable	Coefficient (*p*-value (std error))
Private insurance	0.0142* (0.43839)
History of reflux	0.0253* (0.56272)
Robotic approach	0.0162* (0.59608)

- R^2 = 0.135
- Sample size, n = 228

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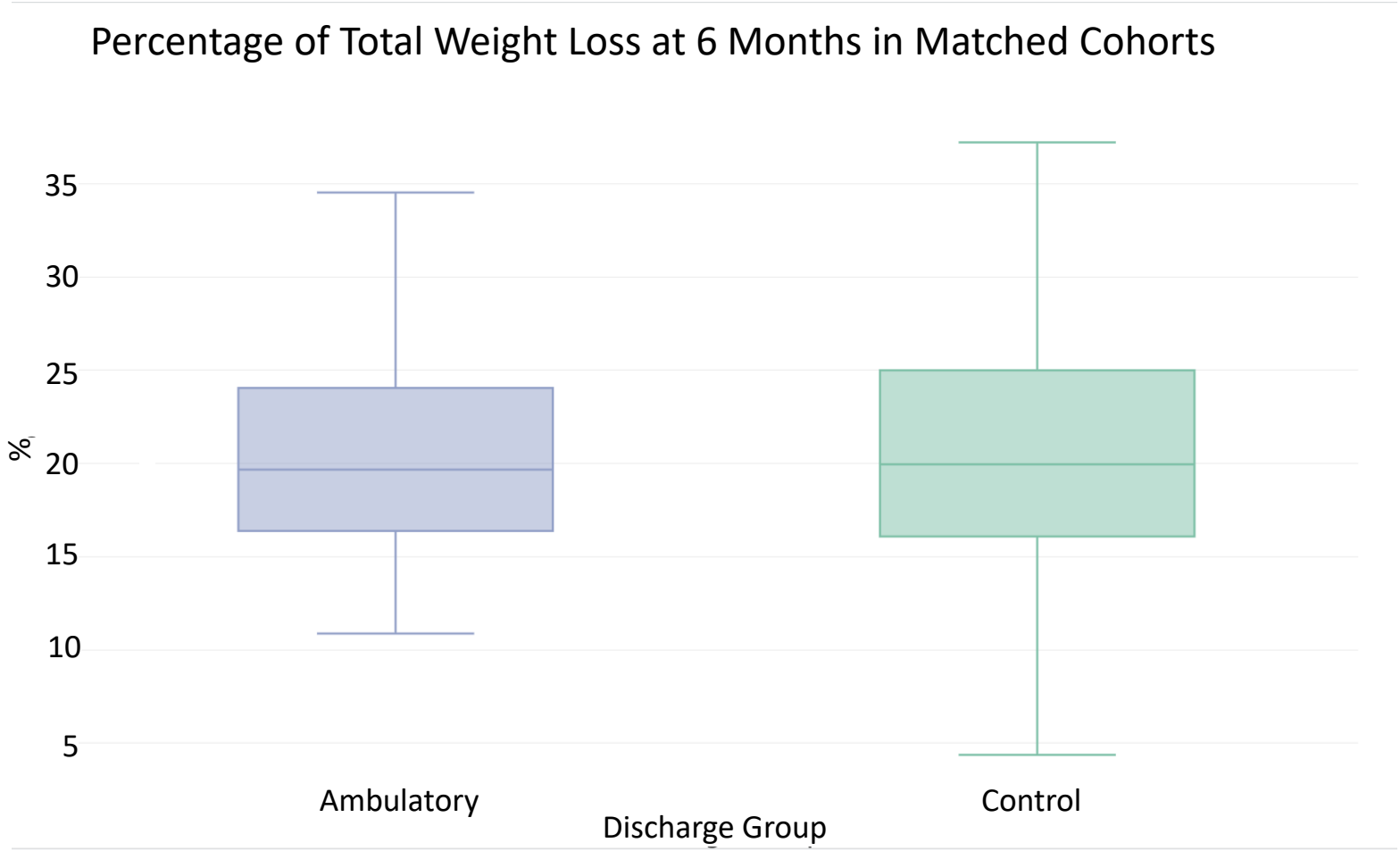
Equivalent Weight Loss



	Ambulatory Group	Control Group	*p* value
%TWL at 3 mo – mean (SD)	14.27 (4.20)	15.13 (4.40)	0.296
%TWL at 6 mo – mean (SD)	20.41 (5.85)	20.51 (6.32)	0.937

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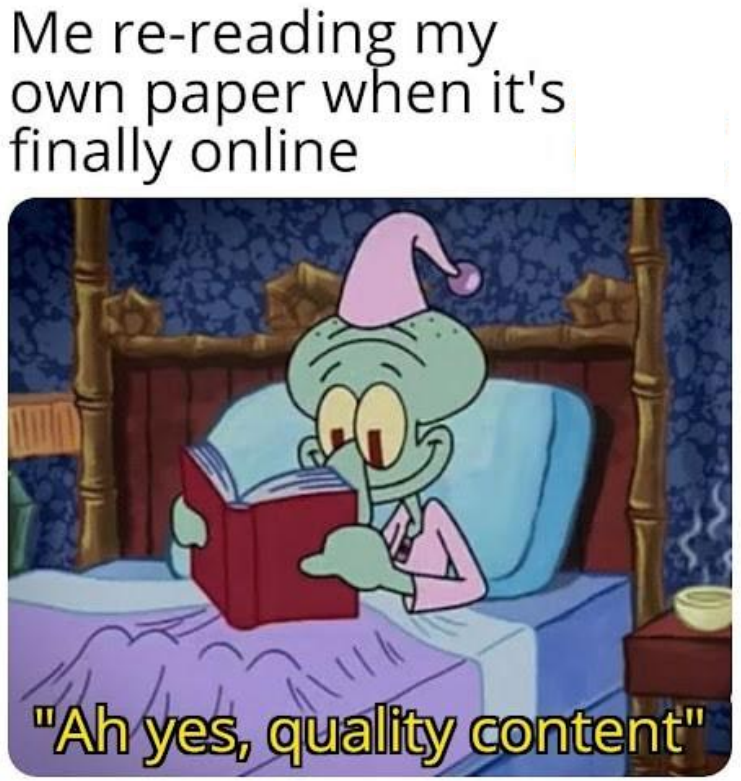
Limitations

- Single center, small sample size
- No randomization; selection bias
- Potential confounders:
  - Over-representation of robotic approach among ambulatory cases
  - High proportion of government insurance coverage



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Conclusions

- Ambulatory sleeve gastrectomy can be safely performed in the bariatric population
- Same-day discharge does not affect early-term weight loss results
- These findings may be translatable to other bariatric procedures

Questions?

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