Why GLP-1 RAs will *not* replace metabolic bariatric surgery

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Efficacy you can count on

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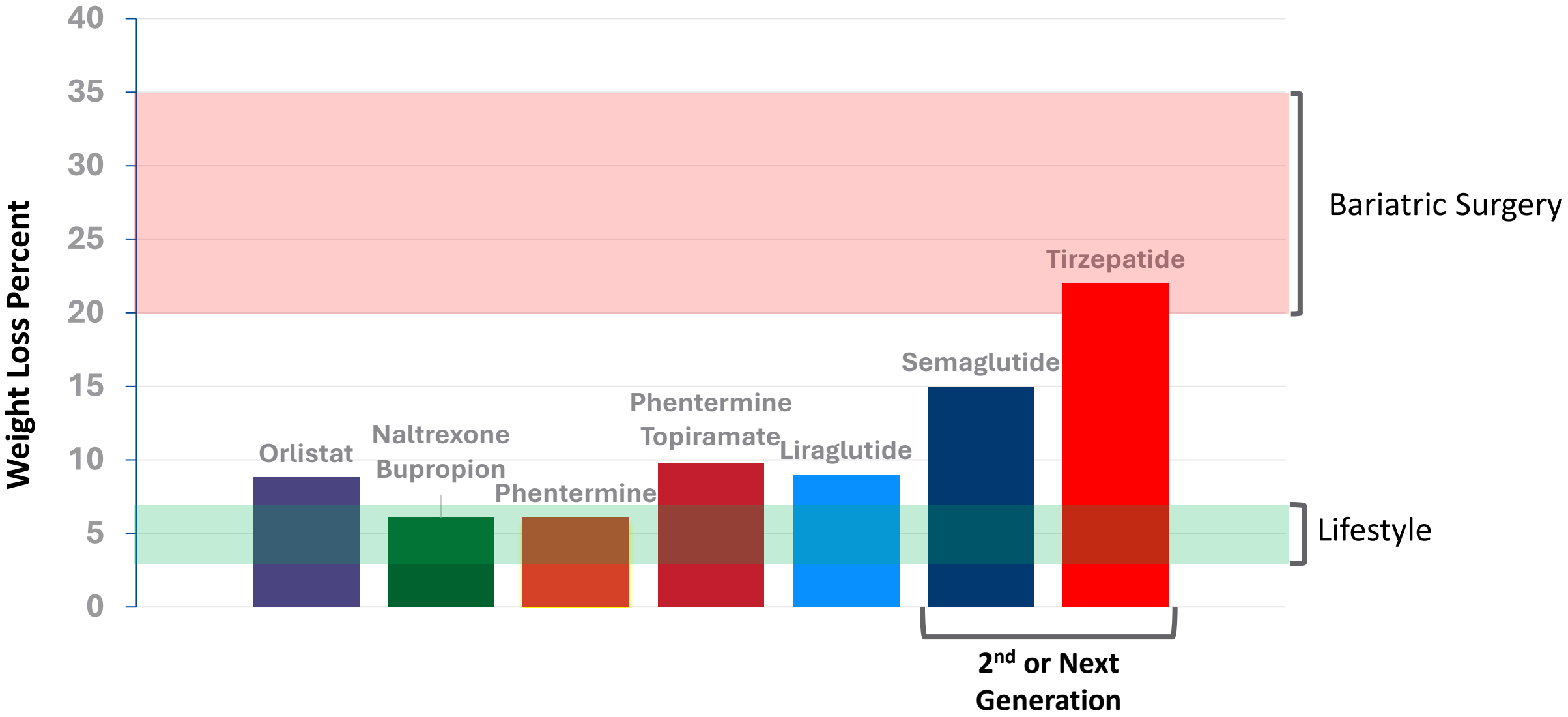
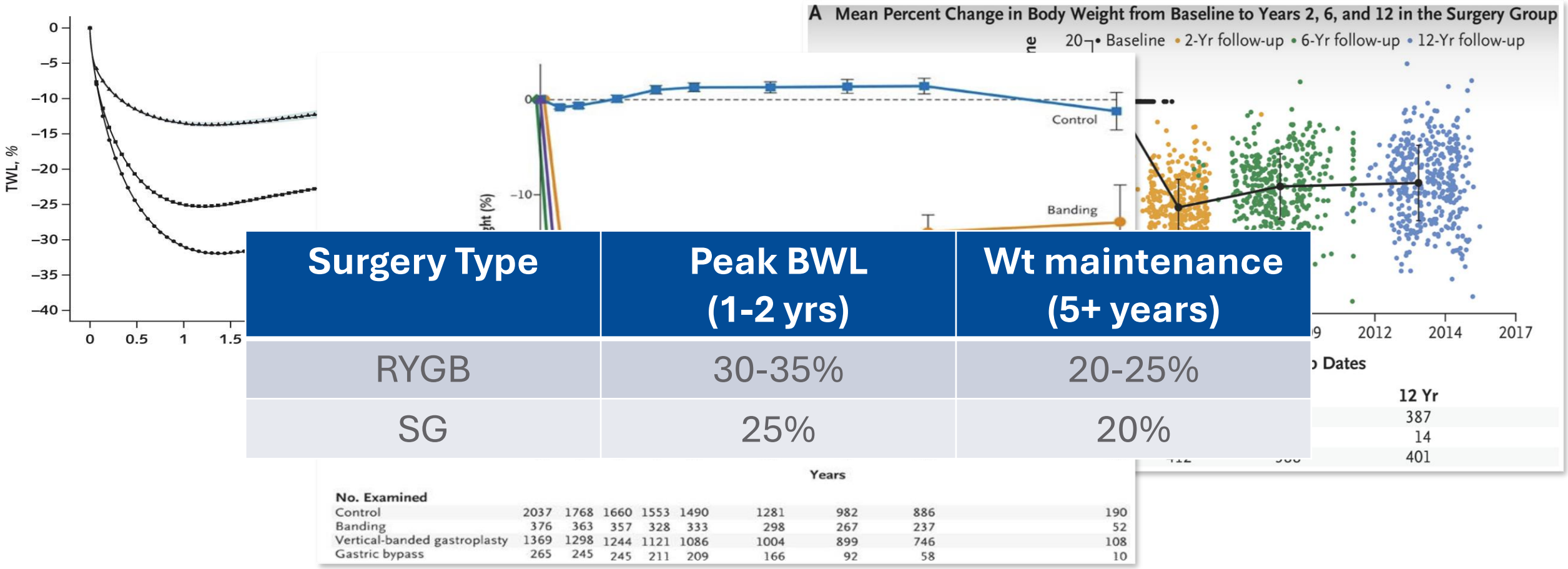
Effectiveness of FDA-Approved Obesity Medications vs. Lifestyle and Bariatric Surgery for Treating Obesity



MBS: Proven Efficacy



Surgery Type	Peak BWL (1-2 yrs)	Wt maintenance (5+ years)
RYGB	30-35%	20-25%
SG	25%	20%

Arterburn D et al. Ann int Med 2018;169(11): 741
Adams TD et al. NEJM 2017;377:1143
Sjostrom L et al NEJM 2007;357:741

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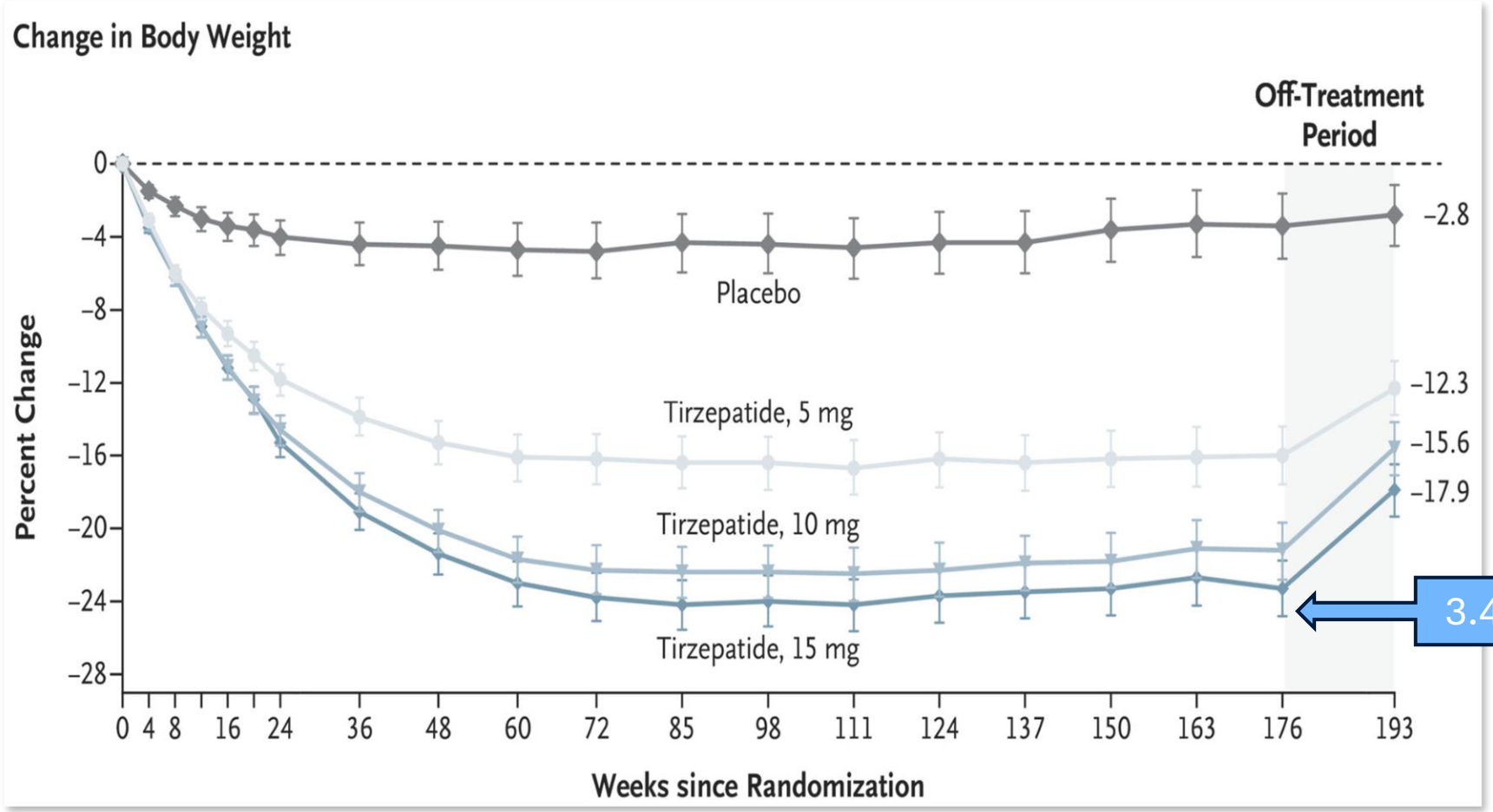
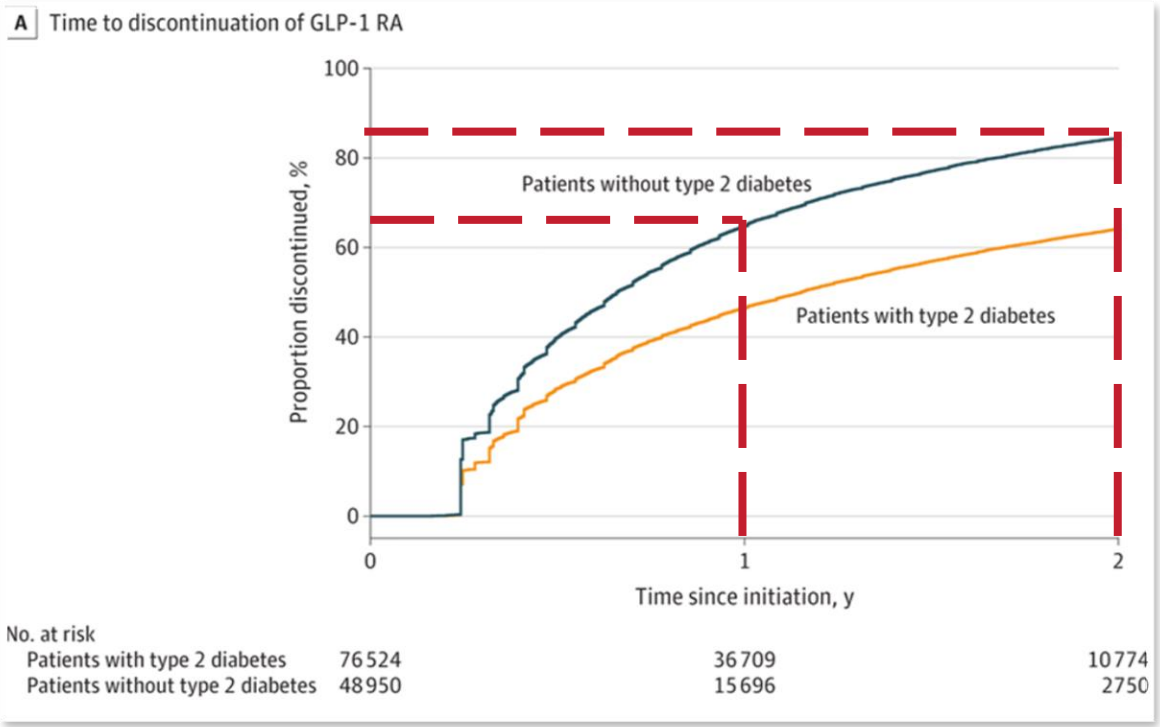
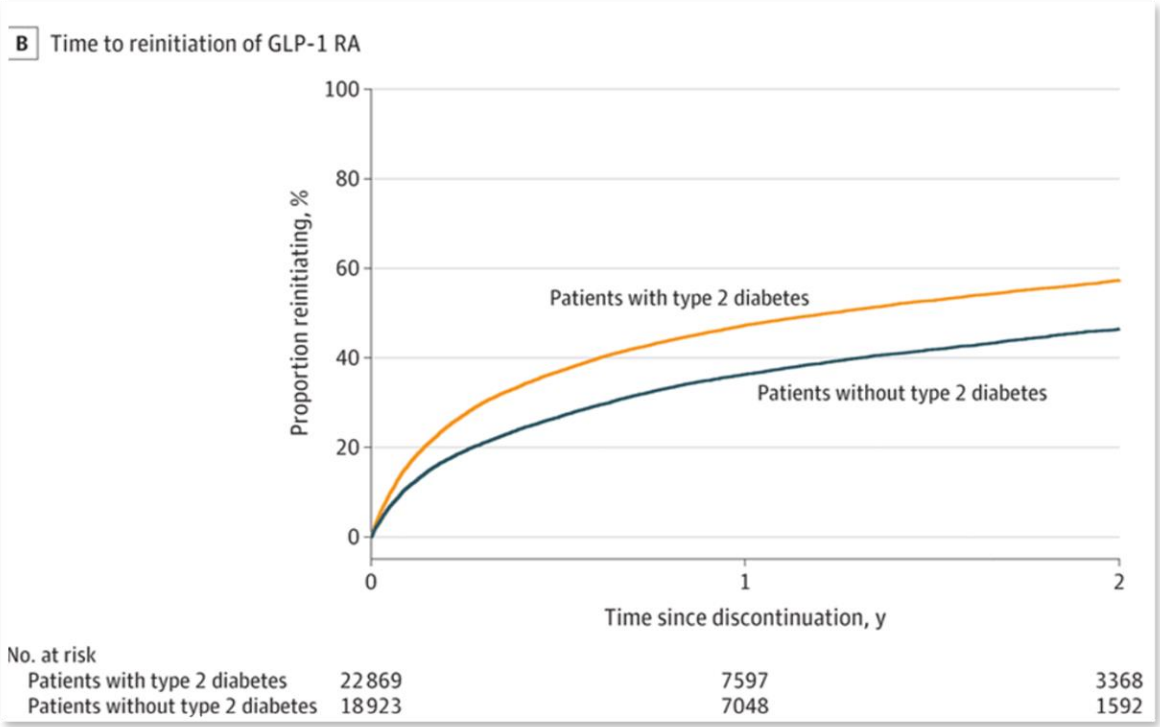
OMMs have high effectiveness and better durability?



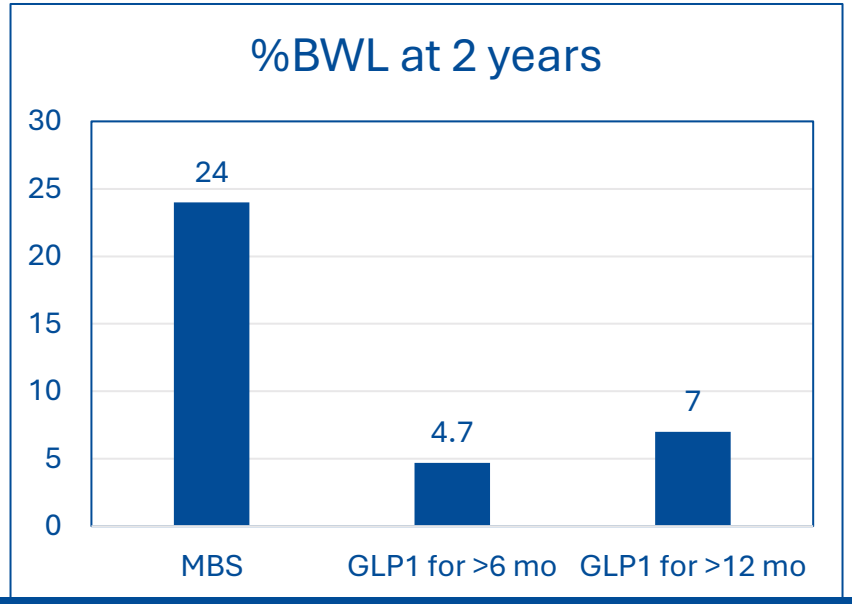
Real World Persistence and Re-initiations of GLP-1RAs





Real-world study: MBS vs OMM

- NYU Langone; BMI>35;
- Two groups: MBS (RYGB or SG) or GLP1RA (sema or tirze) – during 2018-2024
- N=51,085 (GLP-1 group and surgical group)
- Analyses adjusted for age, BMI and co-morbidities using average treatment effect weighting



Cost Effectiveness

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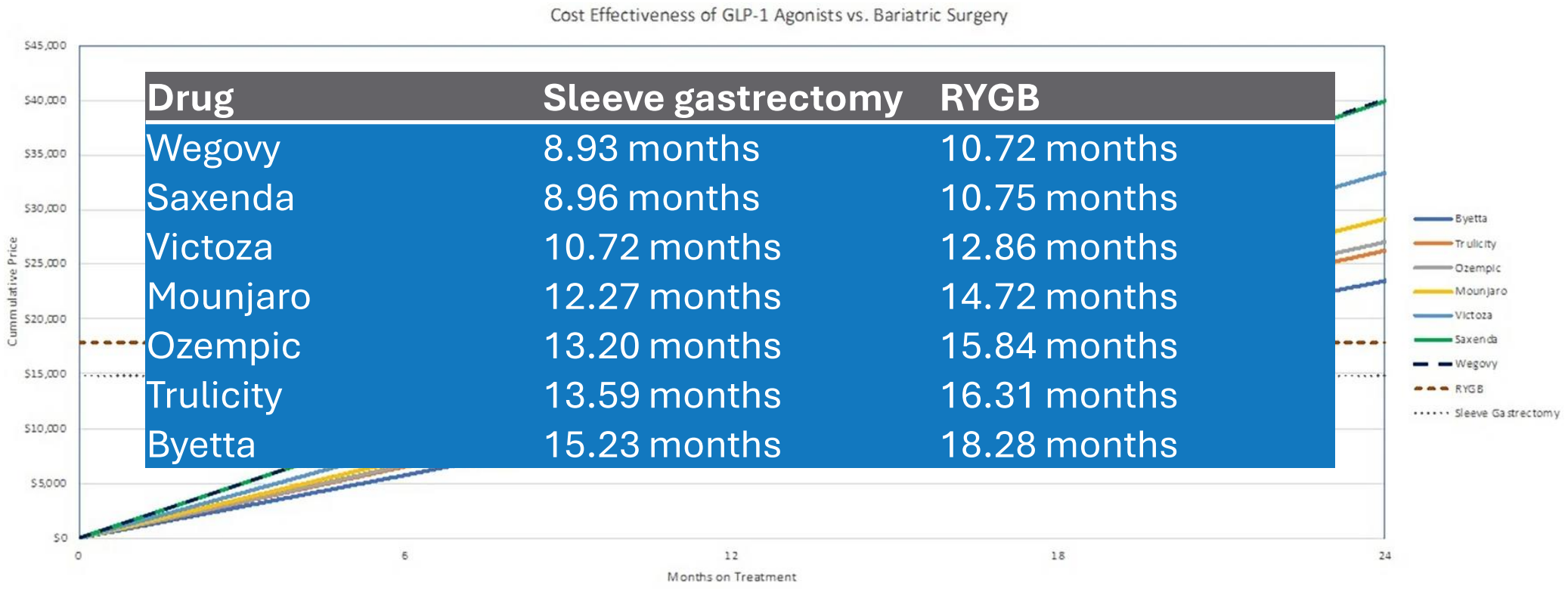
Time to break even $



Drug	Sleeve gastrectomy	RYGB
Wegovy	8.93 months	10.72 months
Saxenda	8.96 months	10.75 months
Victoza	10.72 months	12.86 months
Mounjaro	12.27 months	14.72 months
Ozempic	13.20 months	15.84 months
Trulicity	13.59 months	16.31 months
Byetta	15.23 months	18.28 months

Docimo, S. et al. Surg Endosc 2024;38:6560–6565

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Long-term Outcome Data

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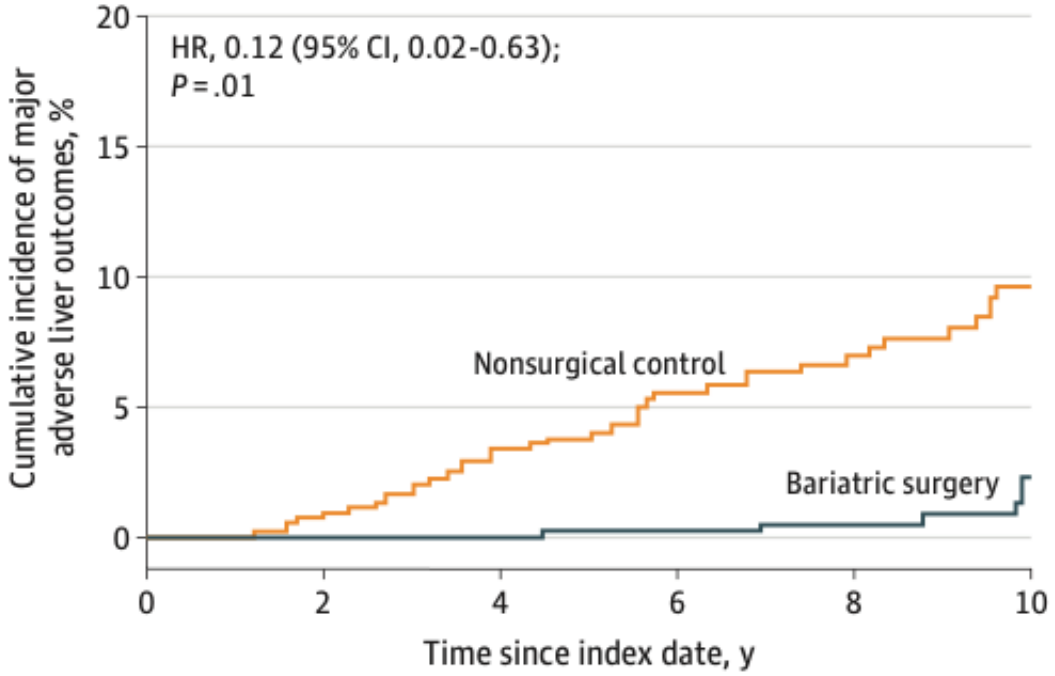
MBS: Liver and CV Outcomes

SPLENDOR (Surgical Procedures and Long-term Effectiveness in NASH Disease and Obesity Risk)

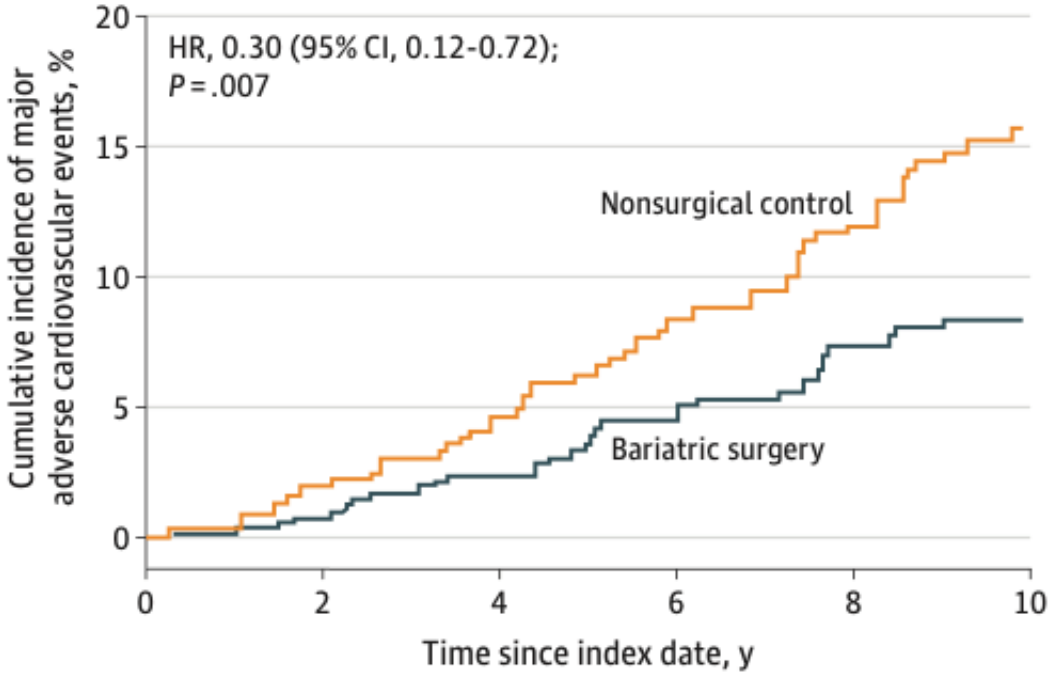
Major Adverse Liver Outcomes



No. at risk

Nonsurgical control	508	422	376	283	211	146
Bariatric surgery	650	525	463	381	252	153

Major Adverse Cardiovascular Events

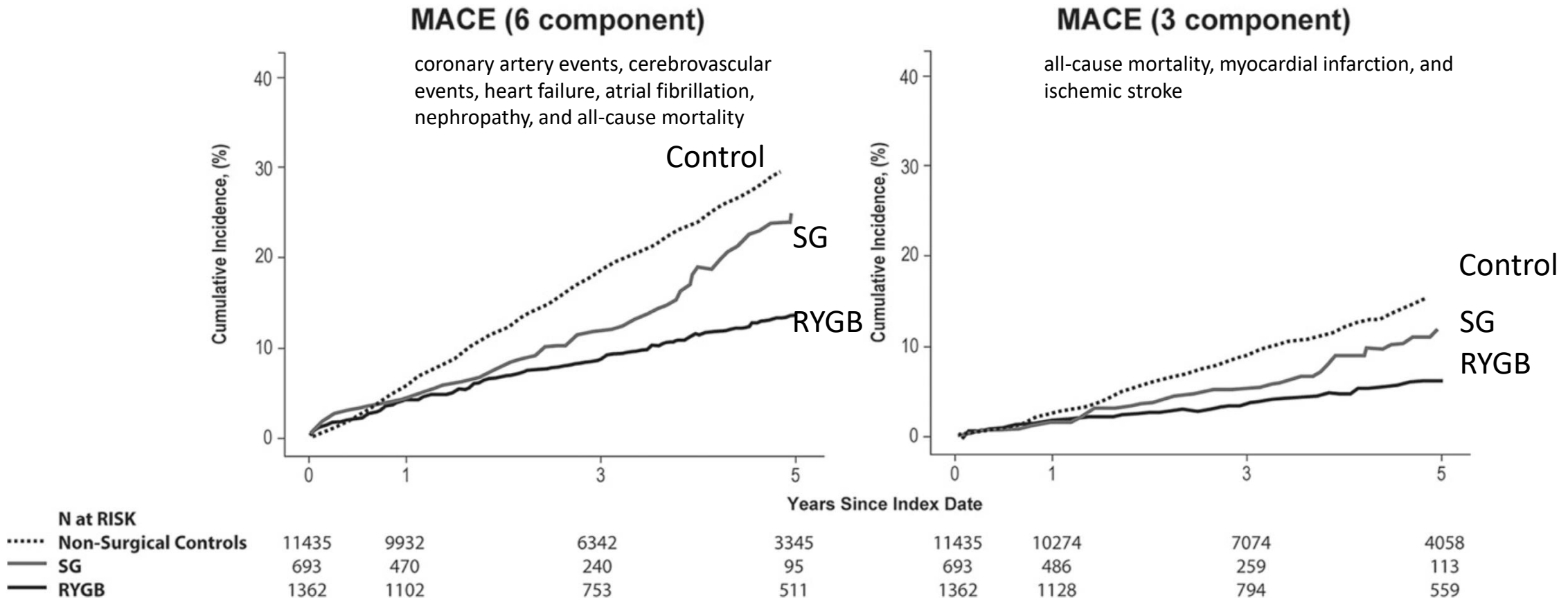


	508	417	370	270	202	136
	650	523	455	365	234	141

Aminian et al. JAMA. 2021 Nov 23;326(20):2031-2042

MBS: Cardiovascular Outcomes in Type 2 Diabetes

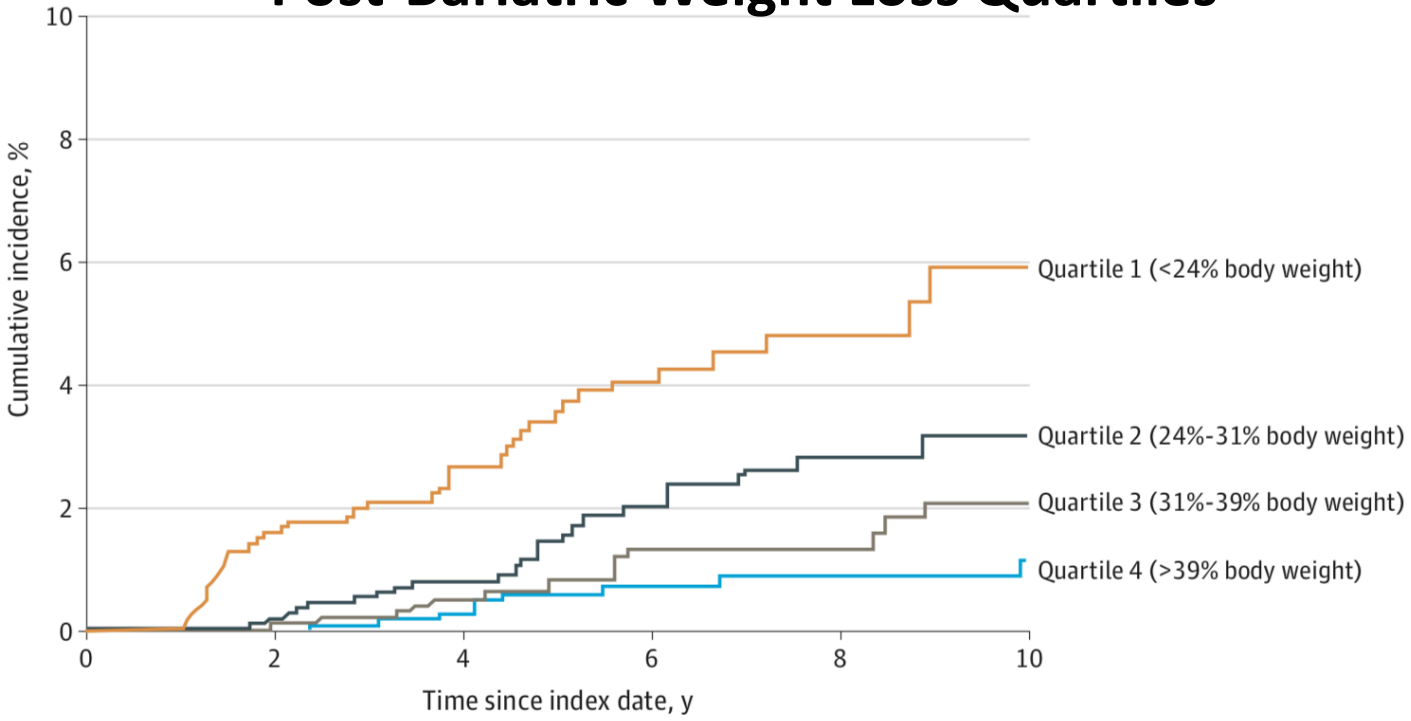
Comparison of Gastric Bypass, Sleeve Gastrectomy, and Usual Care



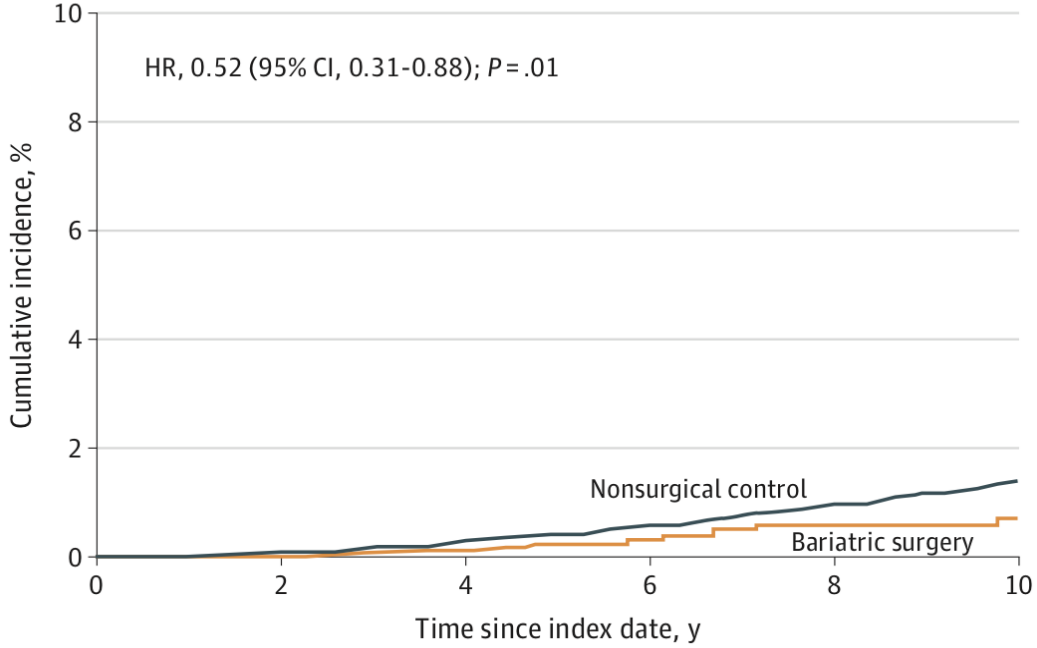
Diabetes Care 2021;44:2552–2563

MBS: Reduced Cancer Risk and Mortality

Obesity-Associated Cancer Cases by Post-Bariatric Weight Loss Quartiles



Cancer-Related Mortality



JAMA. 2022;327(24):2423-2433

Prioritization, personalization, & combination

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Prioritize and personalize

MBS:

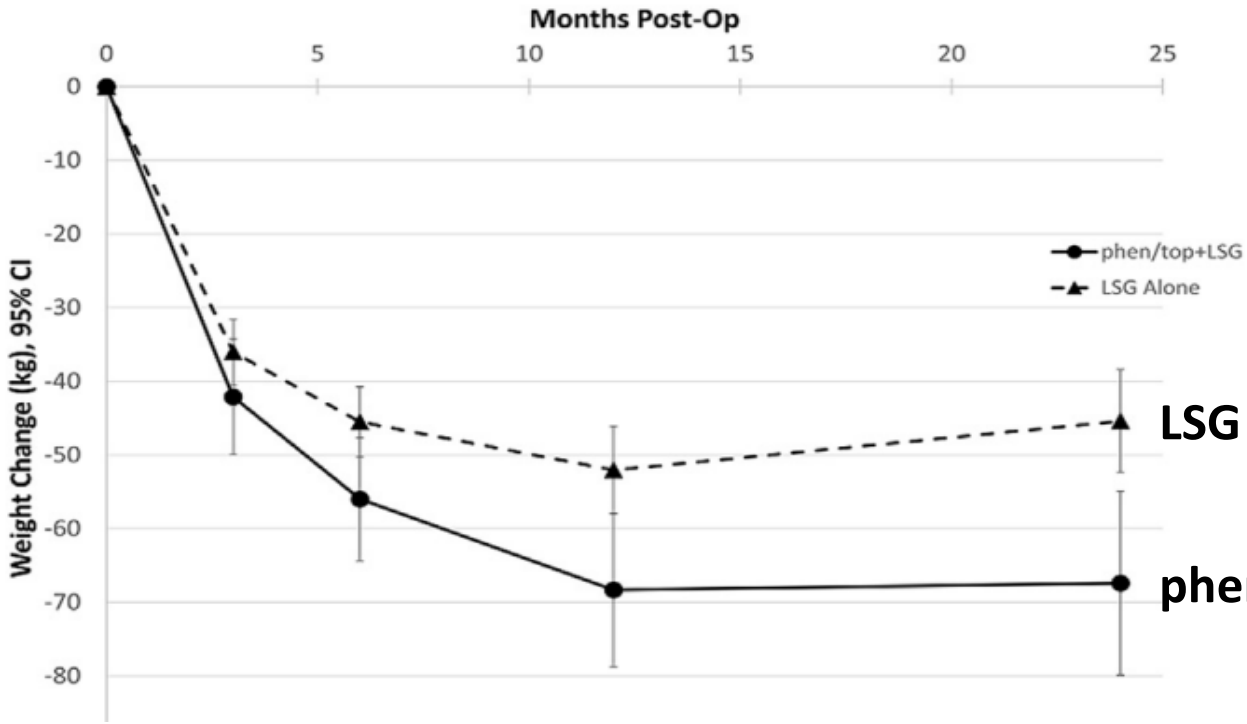
- Severe obesity
- Substantial weight loss needed
- High number of obesity-related comorbidities
- Comorbidities not controlled by medical management
- Intensive medical management insufficient to achieve health outcome
- Values long-term data (safety and efficacy)

OMMs:

- Lower BMI
- Lower weight loss target
- Few (and well controlled) obesity-related comorbidities
- Unwilling or unable to undergo surgery

Synergism: Before and After MBS

Pre- and Post-Sleeve Phentermine Topiramate
LSG vs. Phentermine/Topiramate + LSG – BMI ≥50



LSG alone -27.0%

phen/top + LSG -38.2%

Ard et al. Surg Obes Relat Dis. 2019 Jul;15(7):1039

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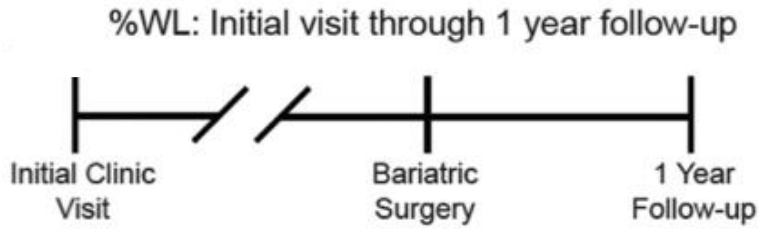
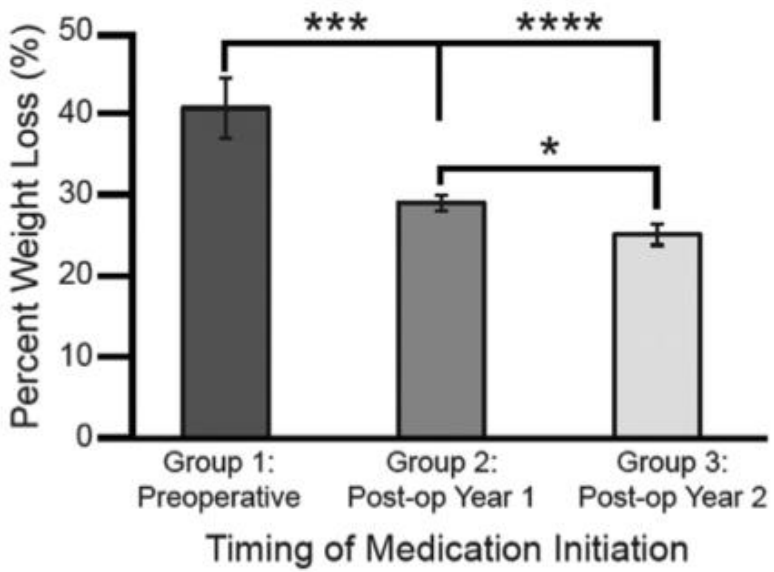
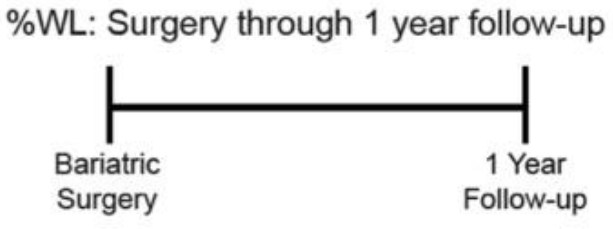
Pre-MBS and Early Adjuvant Obesity Meds

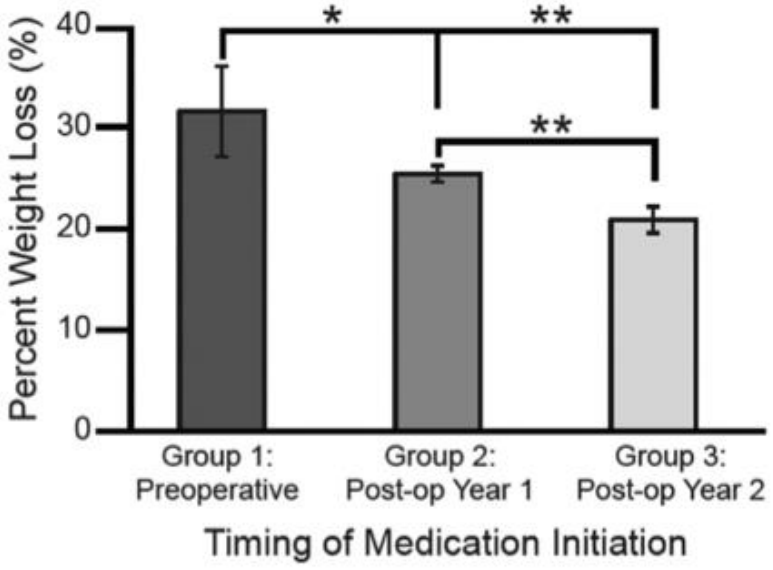
Patients BMI ≥60 receiving phentermine +/- topiramate earlier lost more weight by the 1-year follow-up

Starting a medication before surgery may lead to greater weight loss









Cuningham et al. Surg Obes Relat Dis. 2023 832-842

Pre-MBS and Early Adjuvant Obesity Meds

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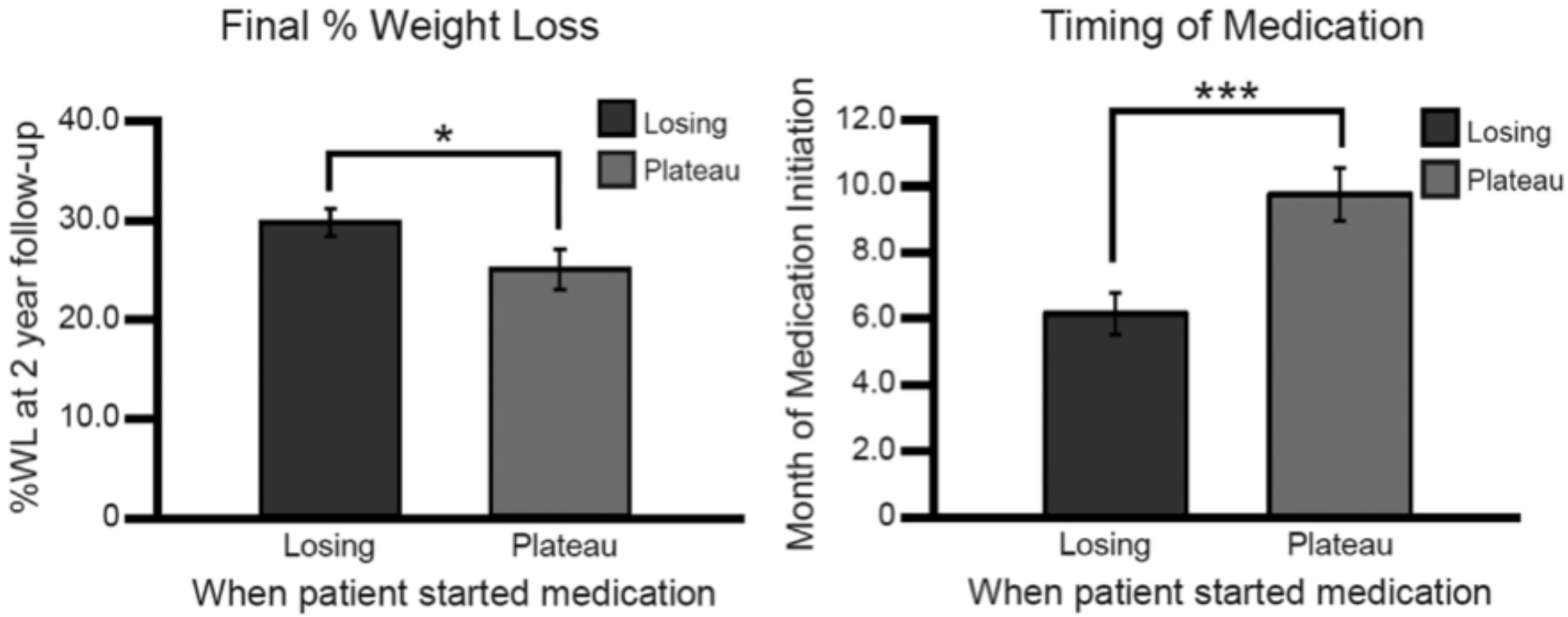
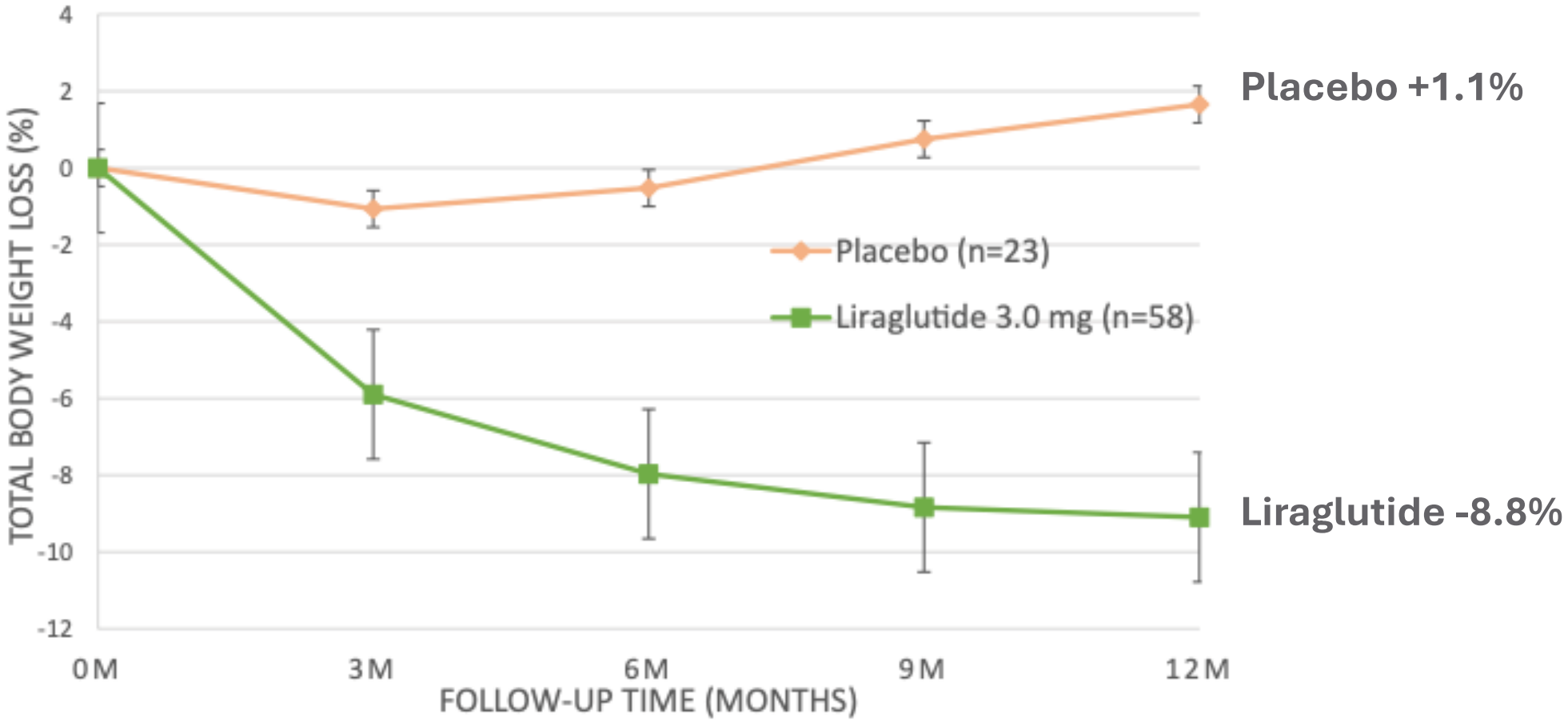


Cuningham et al. Surg Obes Relat Dis. 2023 832-842

Liraglutide 3 mg for Post-RYGB Weight Recurrence

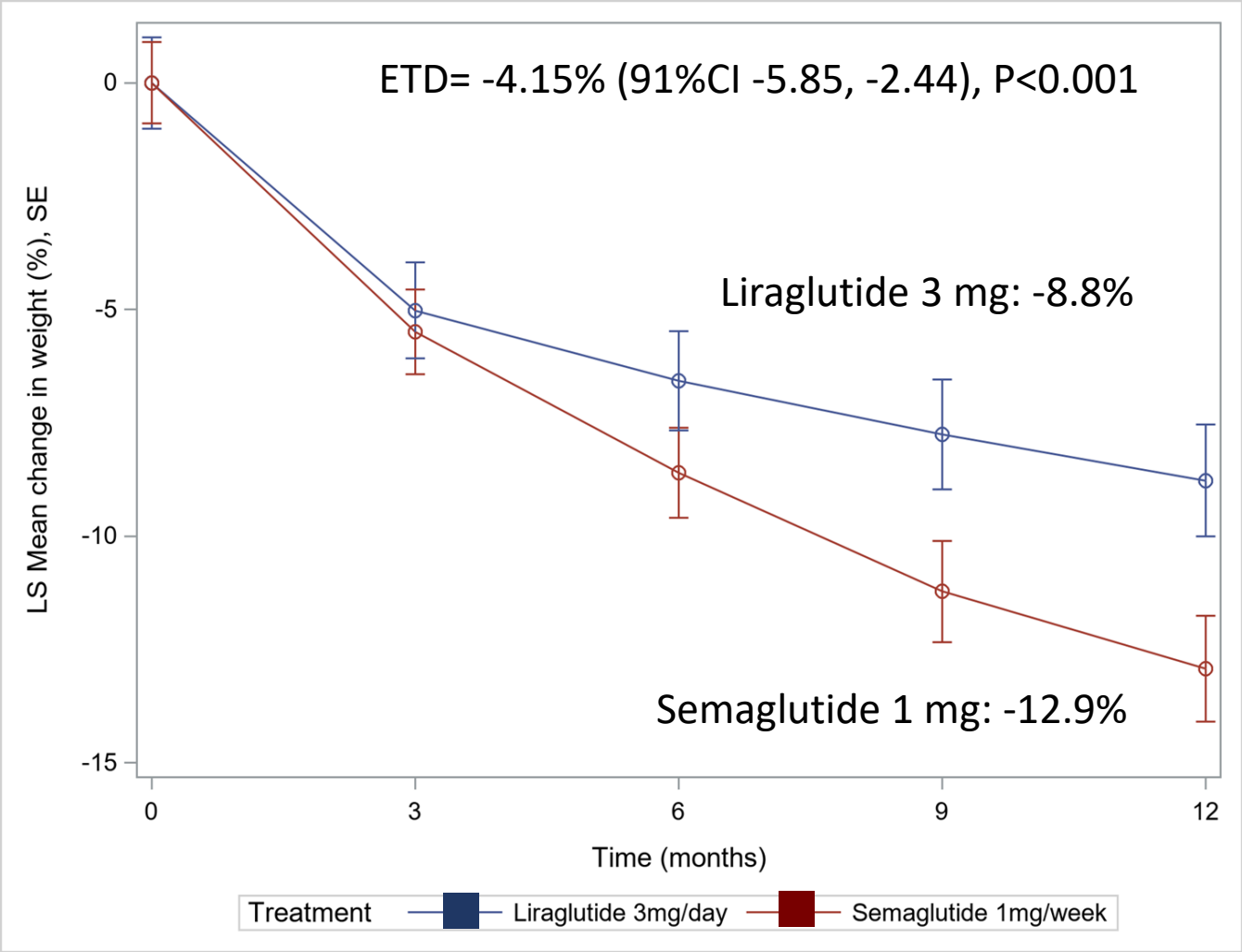
Randomized, double-blind, placebo-controlled trial



Lofton et al. Surg Obes Relat Dis. 2025 Feb;21(2):135-145

GLP-1 RA OM for Post-Bariatric Recurrence

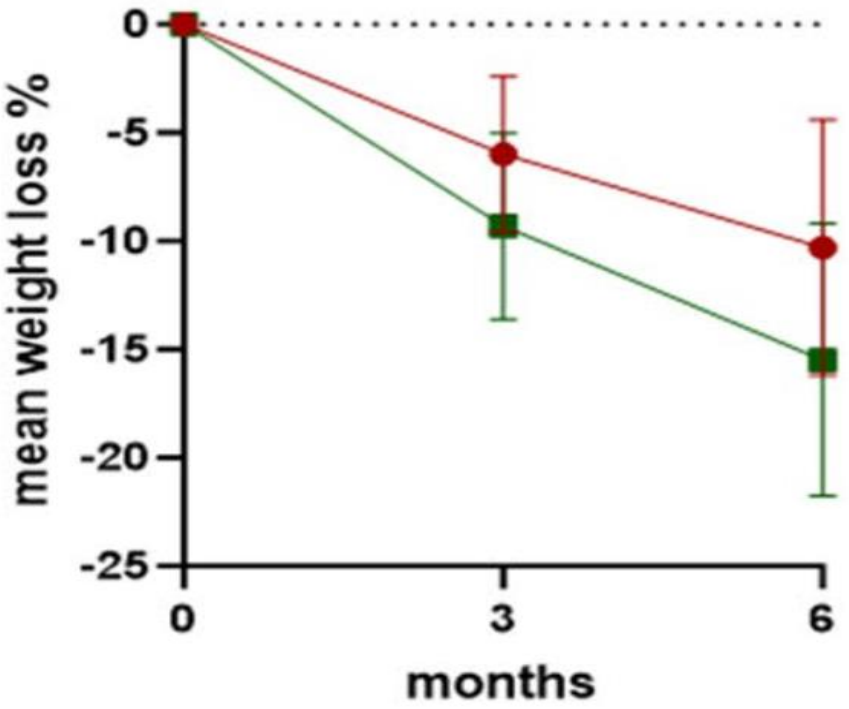
Semaglutide 1 mg vs. Liraglutide 3 mg



Murvelashvili et al. Obesity. 2023 31(5):1280-1289

Pharmacotherapies for Post-Sleeve Recurrence

Semaglutide vs. Tirzepatide

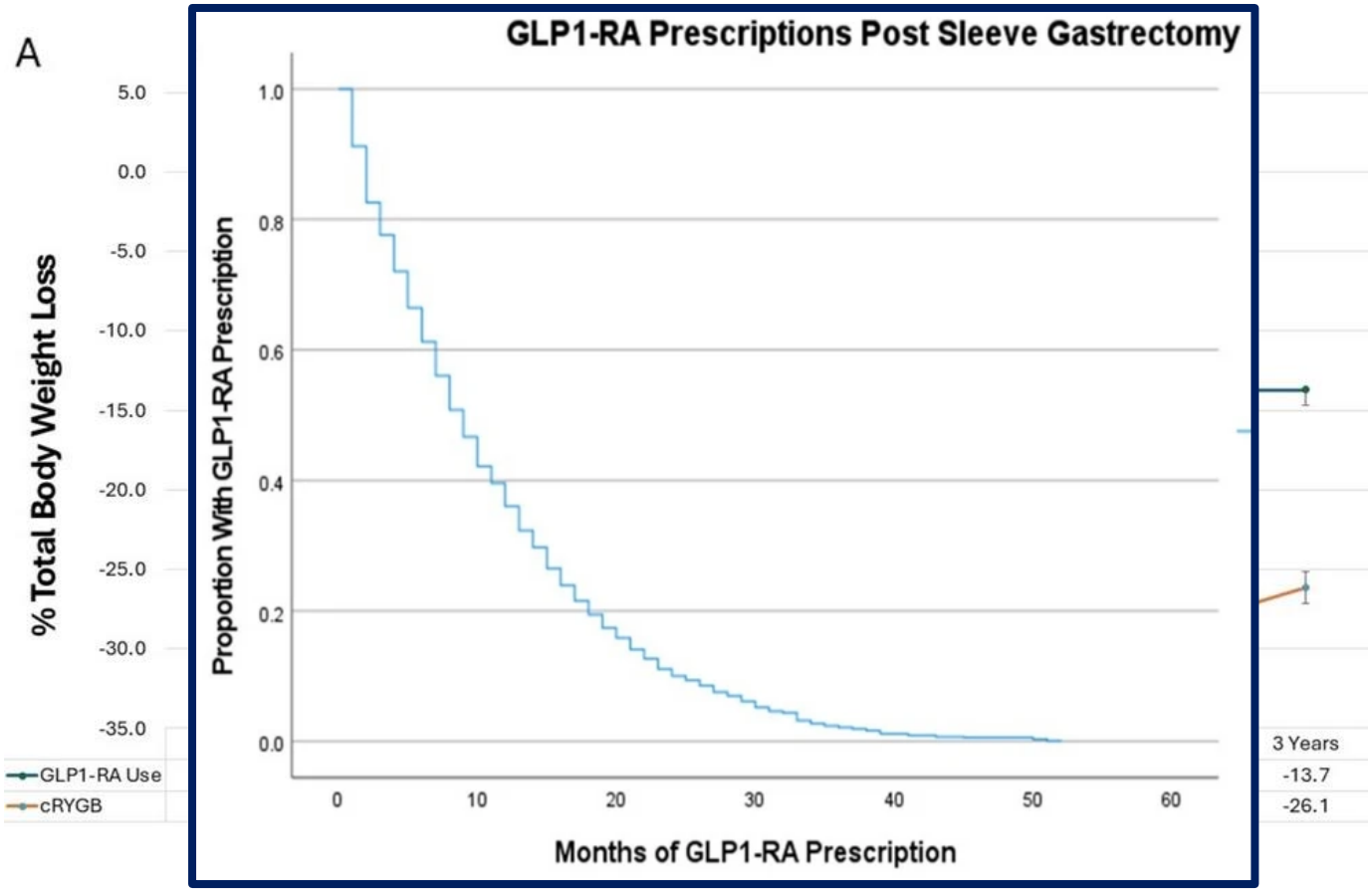


Semaglutide: -10.3% (N=70)

Tirzepatide: -15.5% (N=45)

Jamal M et al., Obes Surg. 2024 Apr;34(4):1324-1332

Post-MBS (Sleeve) Treatment of Weight Regain



Brown A et al. Surg Endo; 2025 https://doi.org/10.1007/s00464-025-11942-8

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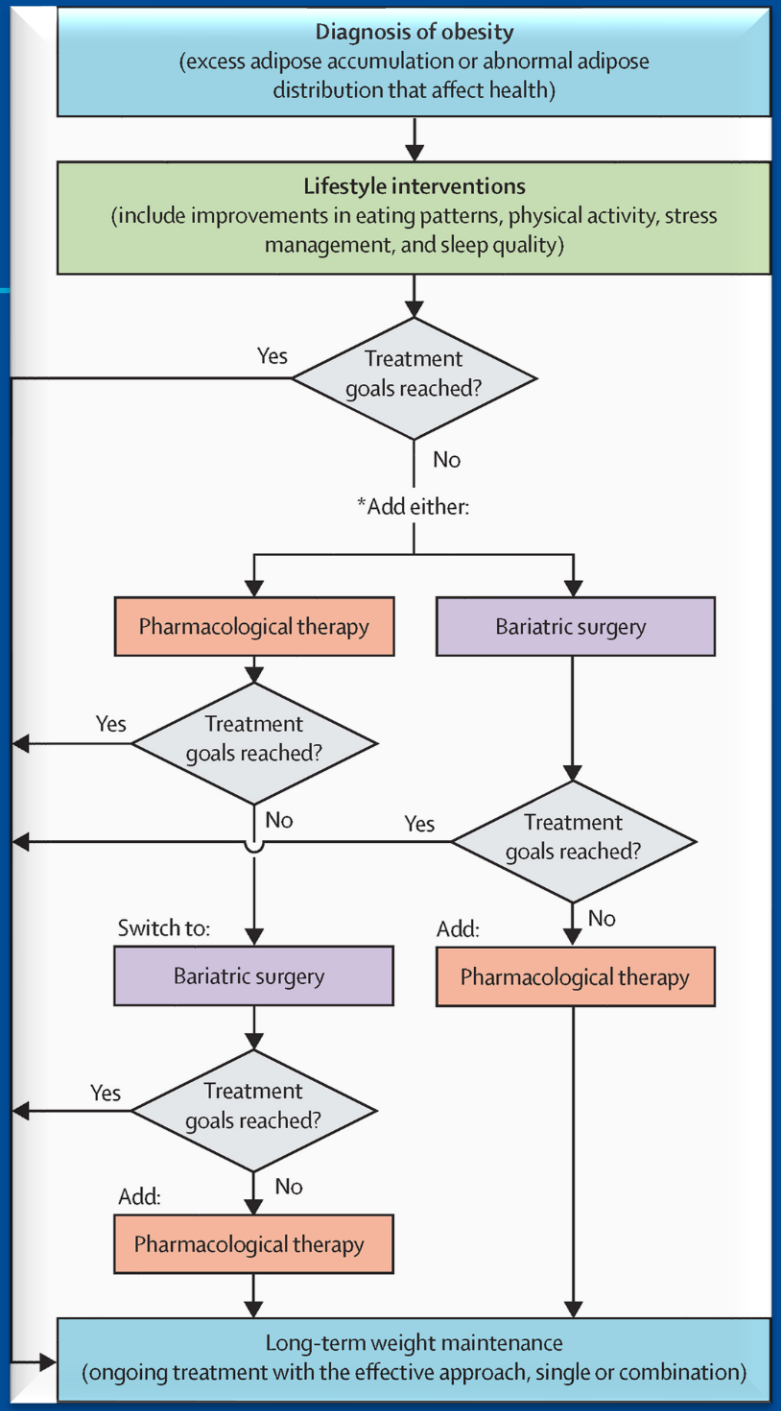
Combine

- Pre-MBS:
  - Surgical de-risking
  - Enhance post-MBS weight loss
- Post-MBS:
  - Maximize weight loss
  - Minimize weight regain
  - Treat weight regain

Combine Early → The earlier the better



- All weight management treatment modalities are needed and have an important place in the treatment algorithm for patients with obesity.
- Treatment personalization is essential to long-term success, and it often involves combinations of multiple approaches.

Lingvay I. et al. 2024, The Lancet;404:P972

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MBS remains a key approach for chronic weight management

1. Efficacy you can count on
2. Not dependent on people complying with ongoing medical management
3. Cost-effective (beyond the initial investment) at current GLP-1RA cost
4. Extensive long-term data on its effect on obesity-related comorbidities and mortality
5. It’s not a competition – prioritization and combination

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