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Faculty of
Medicine,
Nursing and
Health Sciences

BARIATRIC SURGERY REGISTRY

REVISIONAL SURGERY FOR RECURRENT WEIGHT GAIN?

NO! IT SHOULD BE FOR HEALTH REASONS ONLY

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Clinical Director, Bariatric Surgery Registry

theAlfred

Funding disclosures:

The Bariatric Surgery Registry receives funding from the Commonwealth Government of Australia as well as our industry partners:

PLATINUM BARIATRIC SURGERY REGISTRY SPONSOR

GORE Creative Technologies Worldwide

ETHICON PART OF THE Johnson&Johnson FAMILY OF COMPANIES Shaping the future of surgery

GOLD BARIATRIC SURGERY REGISTRY SPONSOR

Medtronic

ANZMOSS Australian & New Zealand Metabolic and Obesity Surgery Society

Professor Brown has received speakers or advisory board fees from Novo Nordisk, Gore and Merck Sharpe and Dohme

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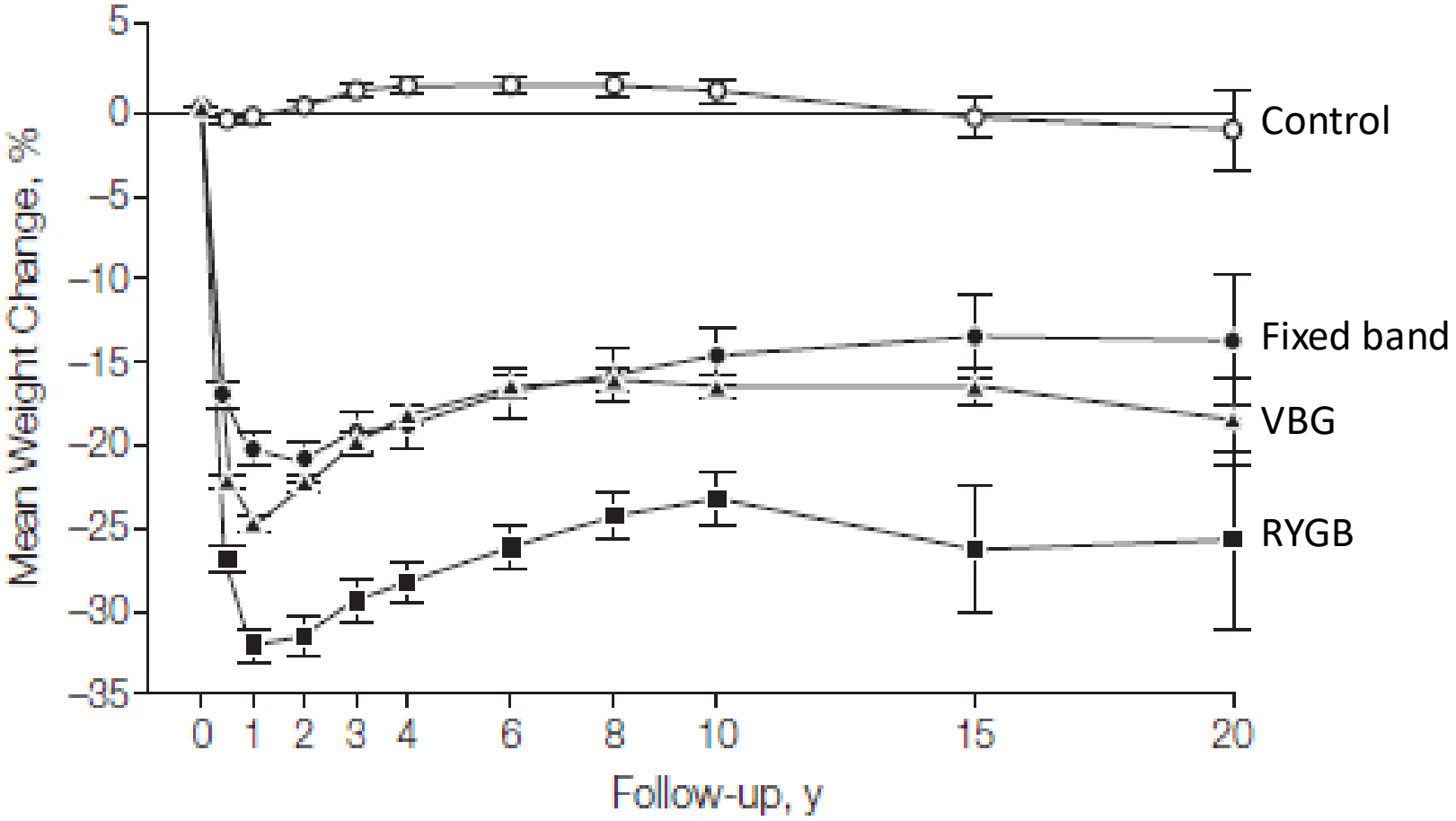
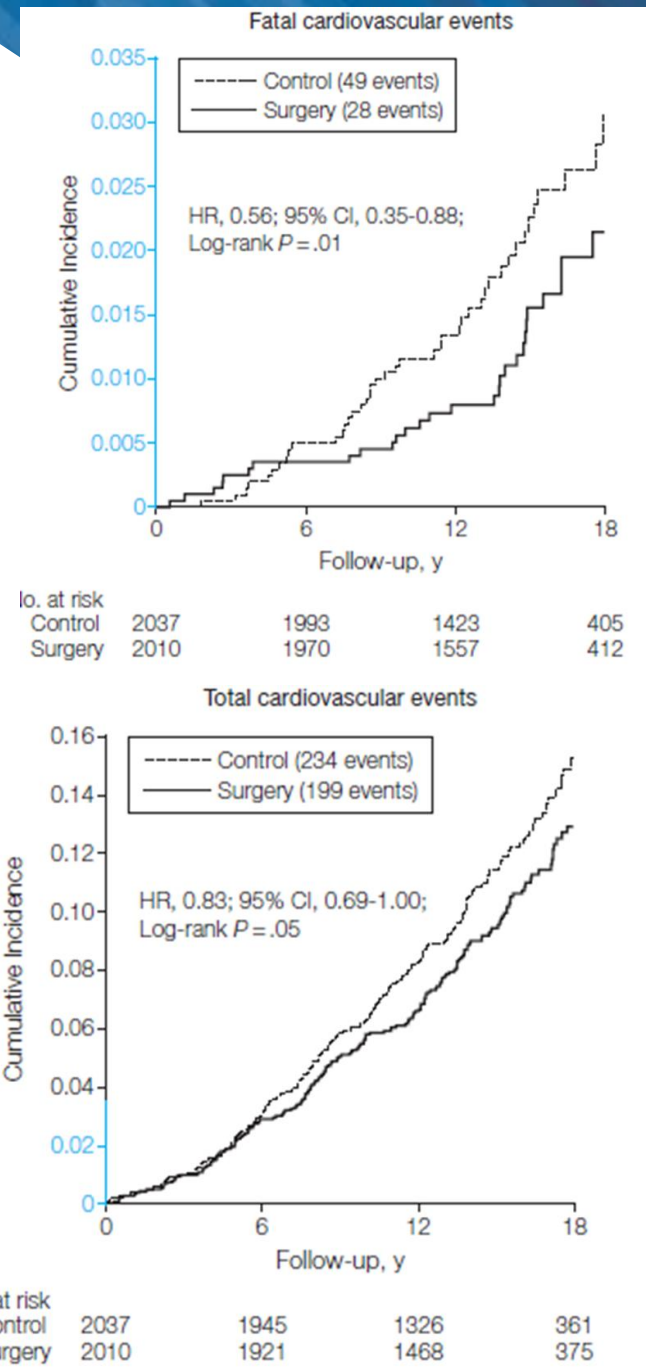
METABOLIC BARIATRIC SURGERY

Not just weight loss – health gain



JAMA, 2012.307:56-65



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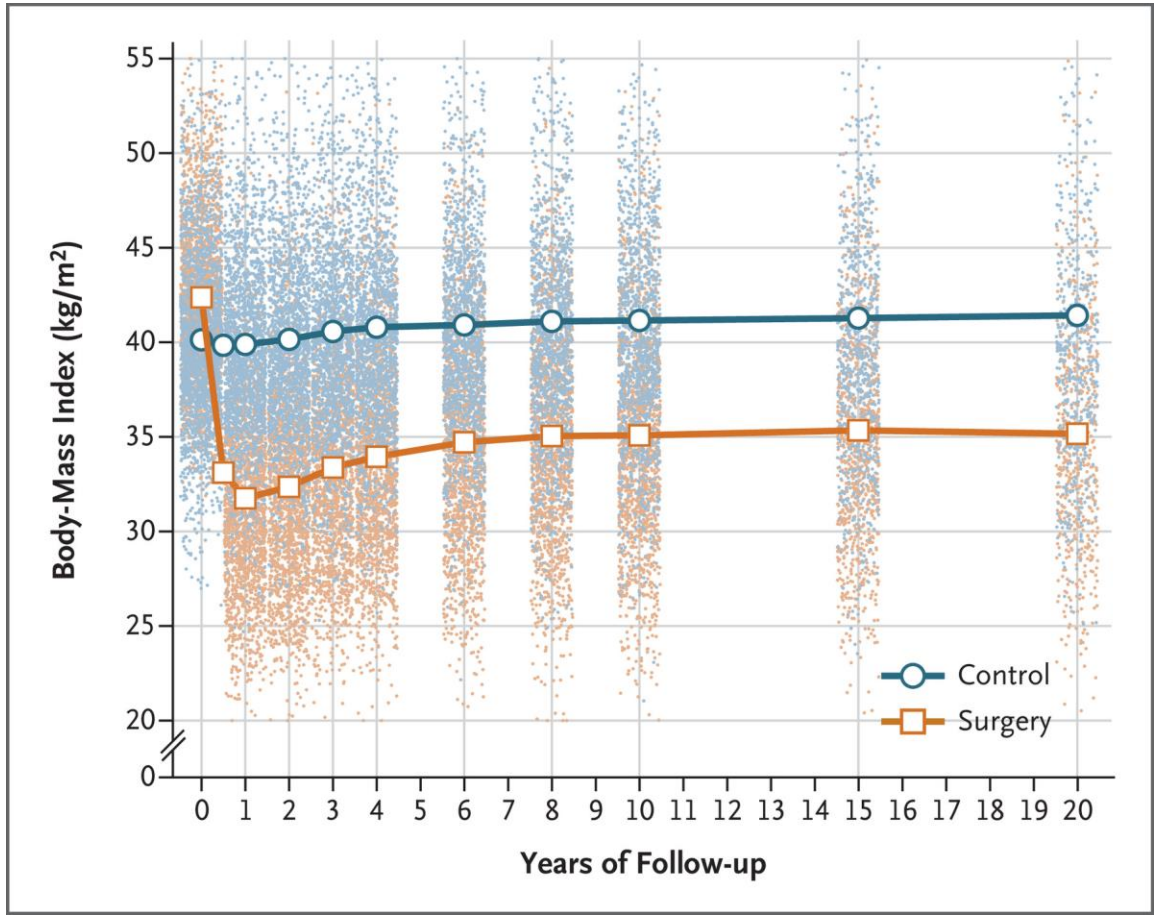
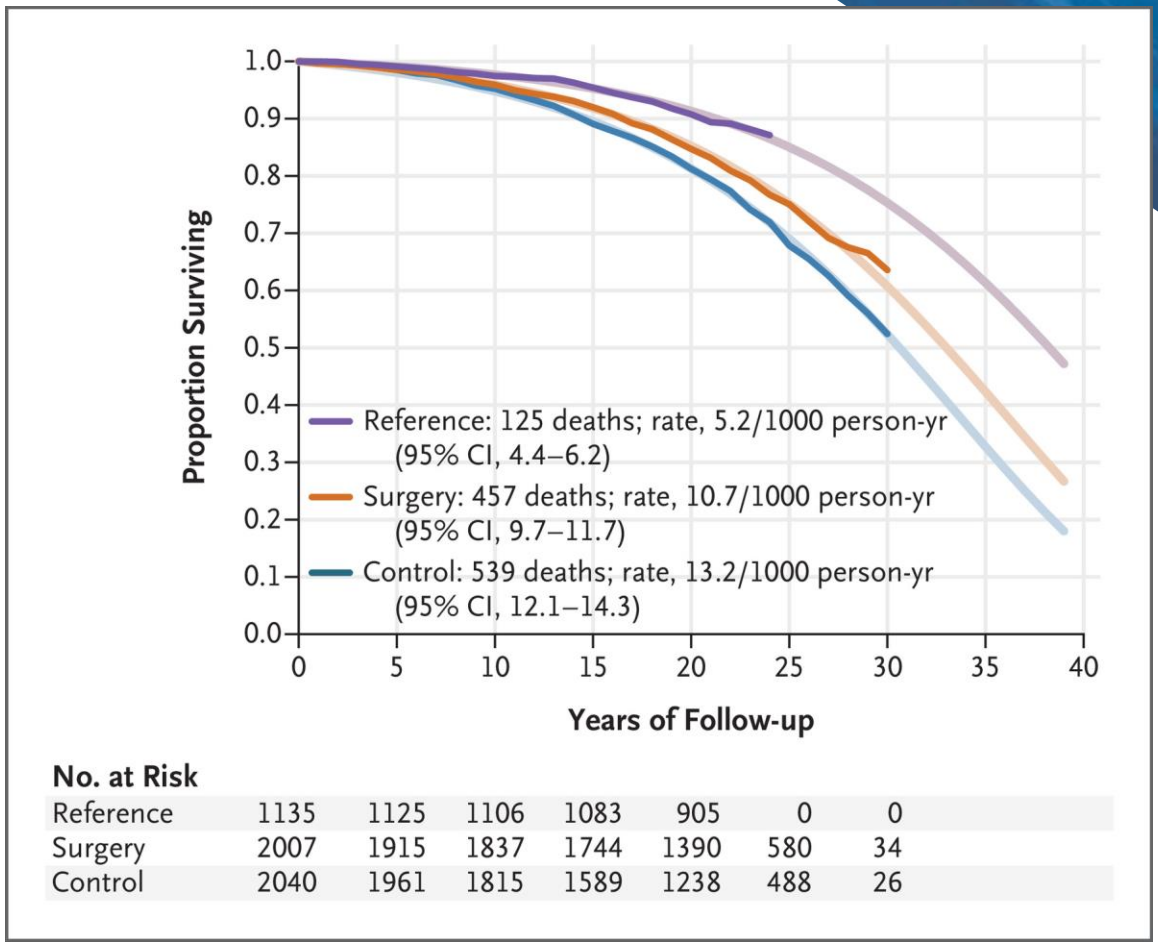
MBS IMPROVES LONGEVITY





No. at Risk

Reference	1135	1125	1106	1083	905	0	0
Surgery	2007	1915	1837	1744	1390	580	34
Control	2040	1961	1815	1589	1238	488	26

N Engl J Med 2020; 383:1535-1543

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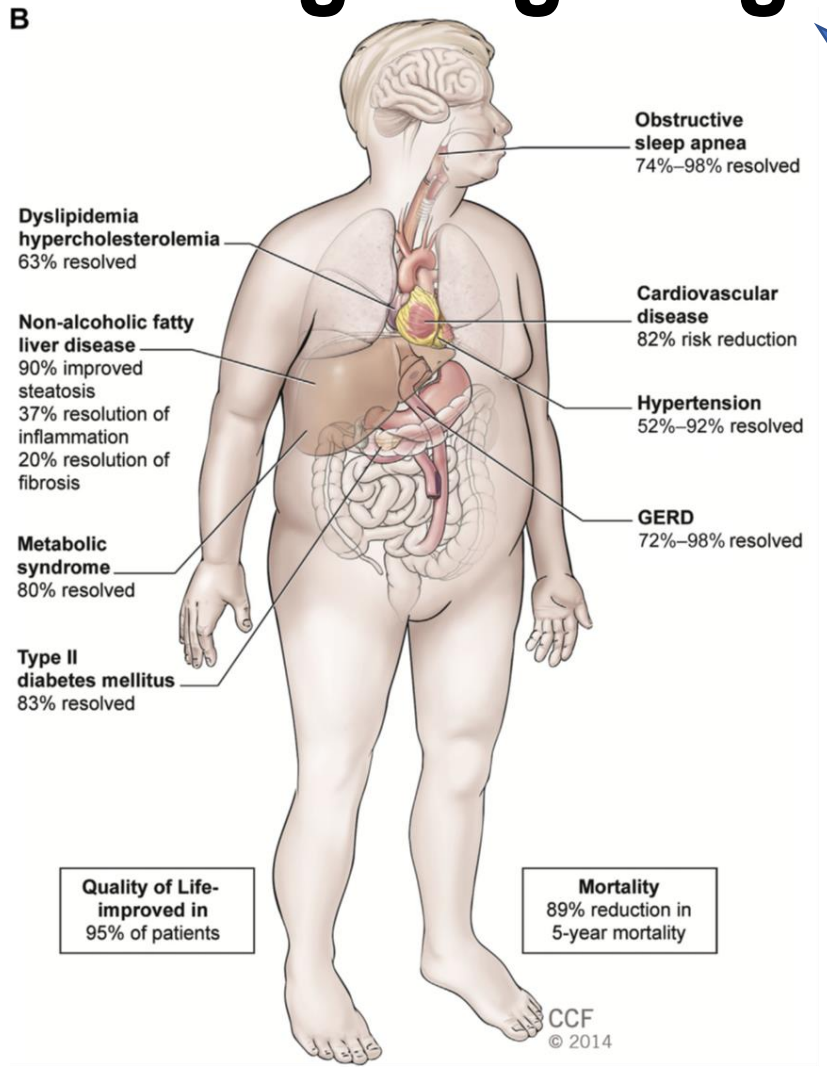
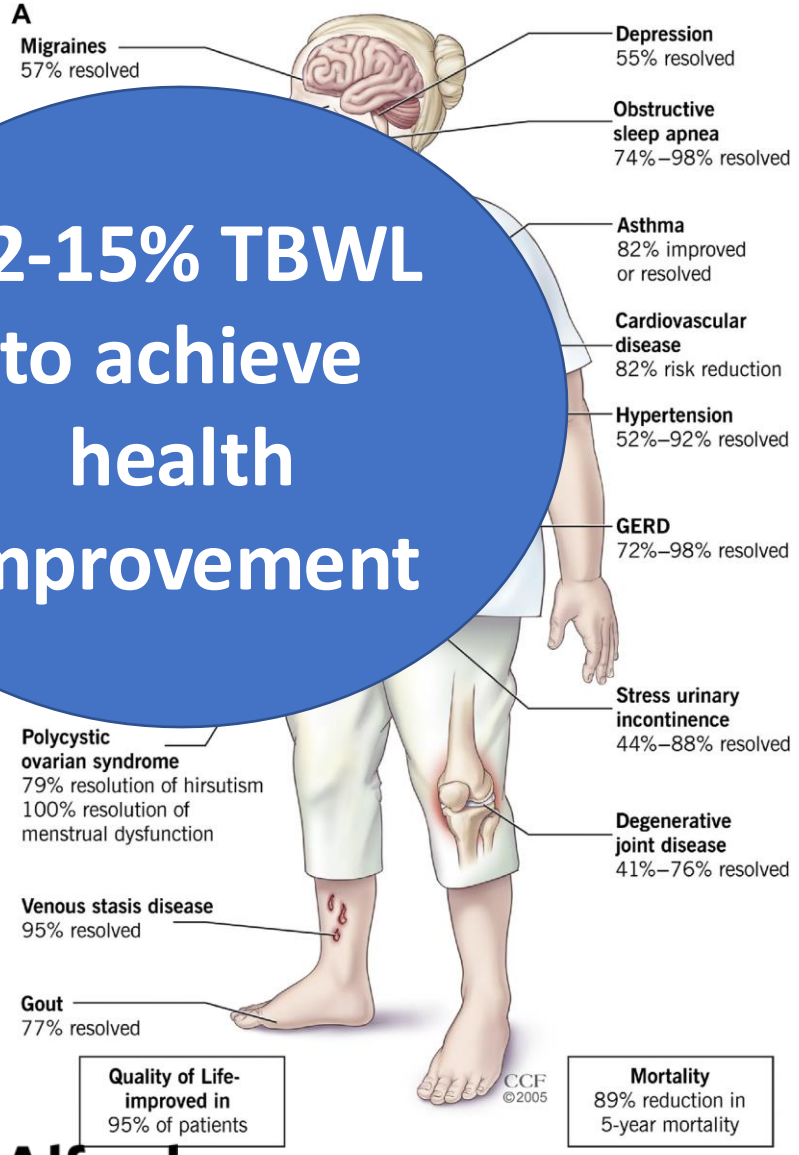
Health giving surgery



12-15% TBWL to achieve health improvement



Fouse & Brethauer, Surgical Clin Nth America, 2016

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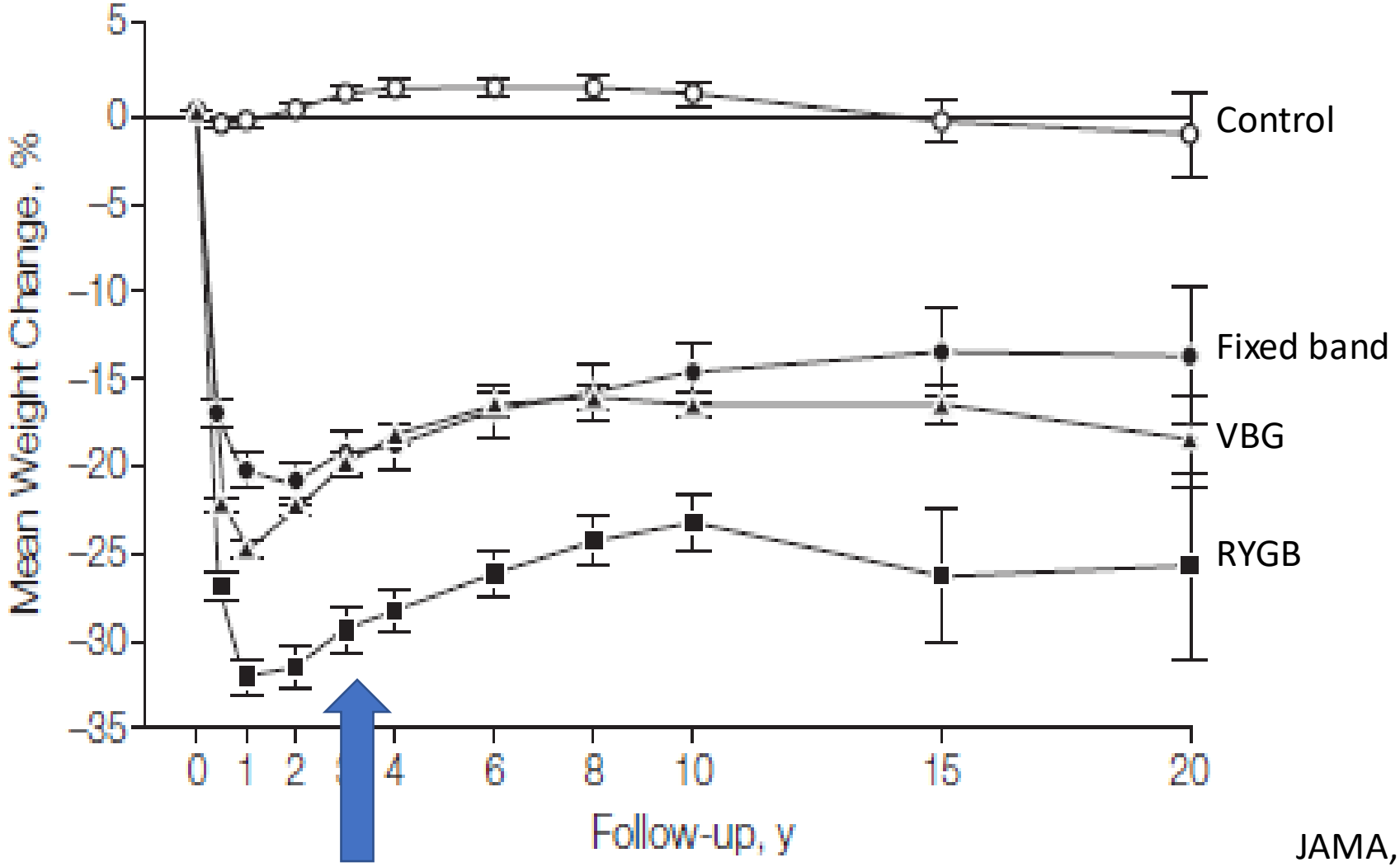
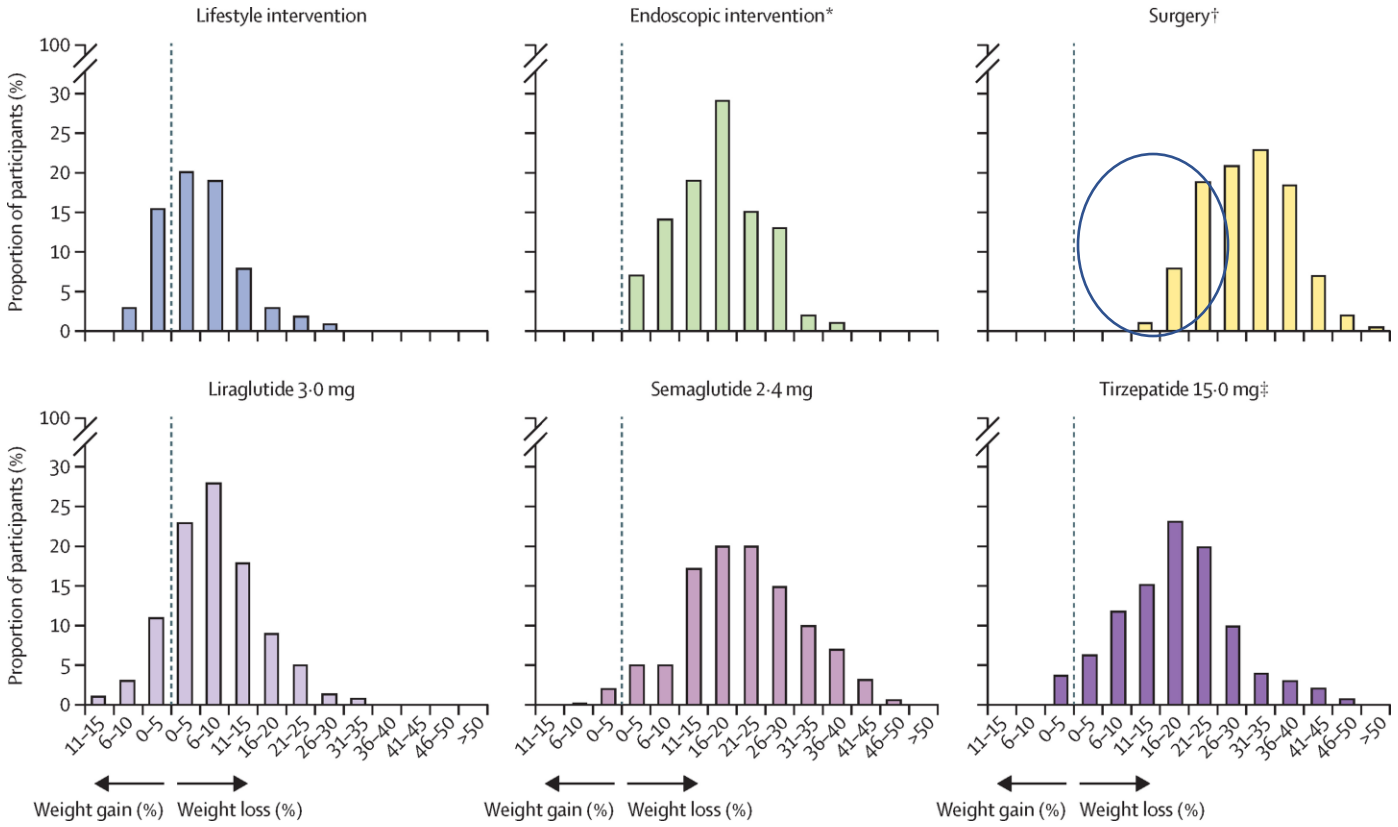
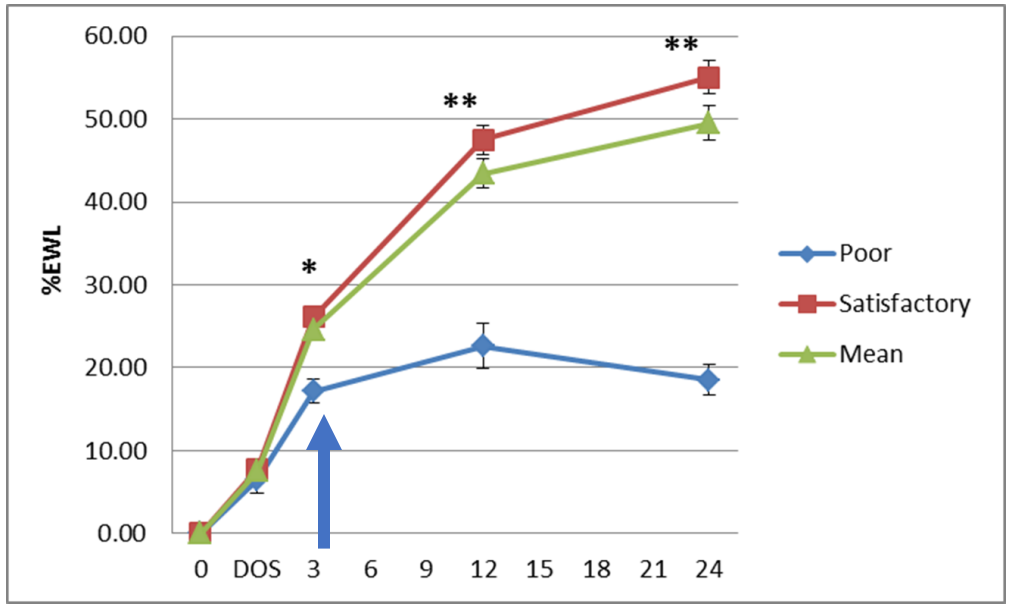
SOME REGAIN OF WEIGHT INEVITABLE



JAMA, 2012.307:56-65

SURGICAL NON-RESPONDERS





The Lancet, 2023; 401, 1116-1130

Obes Surg. 2013 Oct;23(10):1611-5.

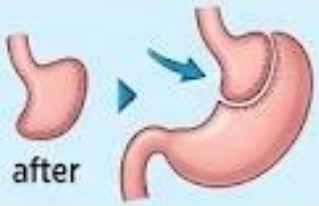
REVISION SURGERY

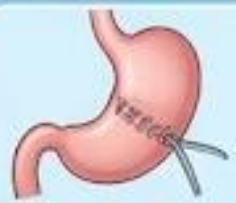
1. REVISION

Alteration or repair of primary anatomical layout

GOAL: Fix structural changes or anatomical degradation.

Resizing a stretched gastric pouch or stoma (e.g., after Roux-en-Y Gastric Bypass)





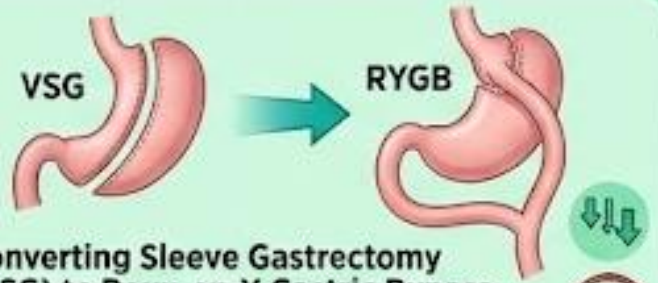
Repairing a staple line disruption or gastric fistula

Adjusting or repositioning a **slipped adjustable gastric band**

2. CONVERSION

Complete modification into a different surgical type

GOAL: Increase metabolic efficacy or eliminate severe long-term side effects.



Converting Sleeve Gastrectomy (VSG) to Roux-en-Y Gastric Bypass (RYGB) to treat severe acid reflux

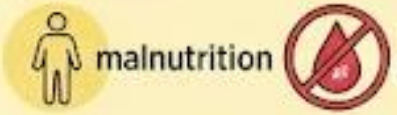
Converting Sleeve Gastrectomy or Gastric Band to Duodenal Switch (DS / SADI-S) to address inadequate weight loss or weight regain

3. REVERSAL

Restoring gastrointestinal anatomy back to original state

GOAL: Manage severe, refractory complications (not manageable by other means).

Reversing a Roux-en-Y Gastric Bypass or Jejunoileal Bypass due to severe complications like chronic malnutrition, intractable hypoglycemia, or unmanageable dumping syndrome



Takedown of an **adjustable gastric band** (band removal) without replacing with another procedure

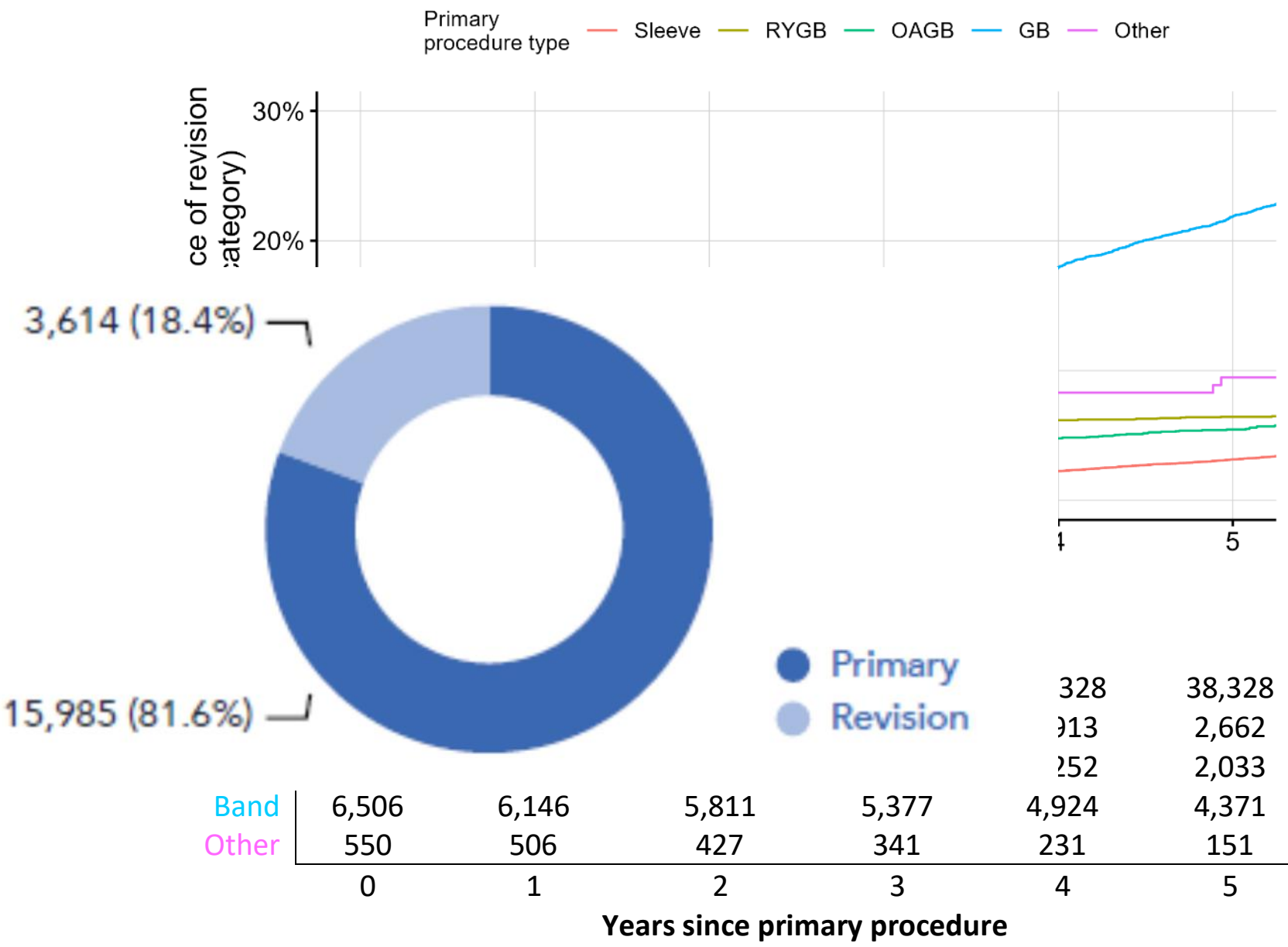
ALL REVISIONS

130,778 patients

29,950 revisional bariatric procedures

127 sites

193 surgeons



					328	38,328
					913	2,662
					252	2,033
Band	6,506	6,146	5,811	5,377	4,924	4,371
Other	550	506	427	341	231	151
	0	1	2	3	4	5

Years since primary procedure

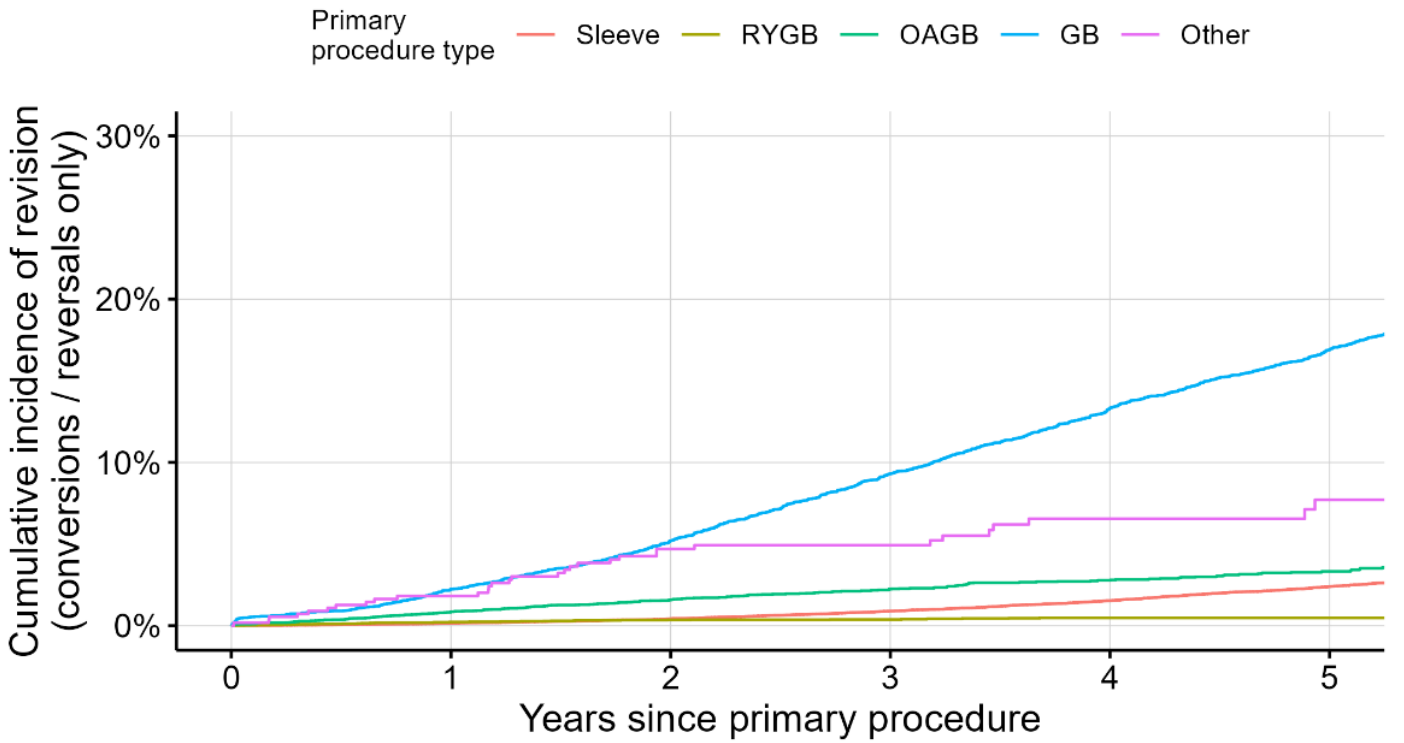
Risk of conversion

130,778 patients

29,950 revisional bariatric procedures

127 sites

193 surgeons



Number at risk

	0	1	2	3	4	5
Sleeve	104,849	97,612	83,260	68,019	53,783	38,705
RYGB	9,404	8,688	7,218	5,481	4,202	2,901
OAGB	9,469	8,507	6,656	4,841	3,332	2,081
Band	6,506	6,331	6,057	5,649	5,204	4,652
Other	550	515	433	346	237	155

Years since primary procedure

SHOULD WE REOPERATE FOR REGAIN OF WEIGHT?

What is the risk of revisional surgery?

What is the risk of weight regain?

How effective is revisional MBS?

Are there other options?

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REVISION SURGERY CARRIES MORE RISK

Australia

Primary	128	17	179
Revision	345	16	104

Any AE

Primary 2.0%

Revision 10.4%

Aotearoa NZ

Primary	24	1	28
Revision	29	0	29

Any AE

Primary 5.0%

Revision 36.7%

ANZBSR 2022 report

RISK OF REVISIONAL SURGERY

Primary versus revisional bariatric and metabolic surgery in patients with a body mass index ≥ 50 kg/m² – 90-day outcomes and risk of perioperative mortality

METHODS

Retrospective analysis of 263 patients with BMI ≥ 50 kg/m² undergoing BMS

Primary (n=220)

Revisional (n=43)

RESULTS

	Primary N=220	Revisional N=43	P value
90-day mortality, n (%)	2 (0.9%)	1 (2.3%)	0.424
Conversion to laparotomy, n (%)	2 (0.9%)	1 (2.3%)	0.424
Grade 3-5 complication, n (%)	7 (3.2%)	4 (9.3%)	0.067
Leaks, n (%)	1 (0.45%)	(4.6%)	0.018
LOS, days, mean±SD	2.90±1.30	3.70±3.02	0.006

CONCLUSIONS

Revisional BMS in BMI ≥ 50

Leak rate, length of say

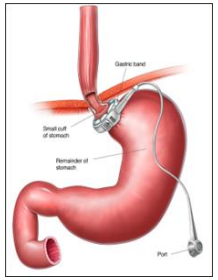
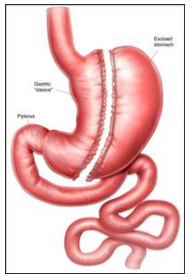
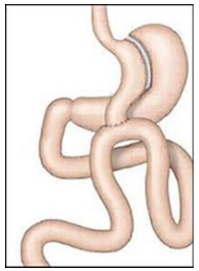
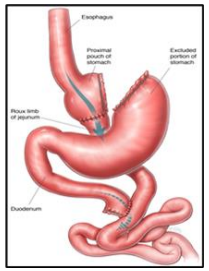
Mortality rate

IFSO

Adam Abu-Abeid, Nadav Dvir, Yonatan Lessing, Shai Eldar, Guy Lahat, Andrei Keidar, Jonathan B. Yuval

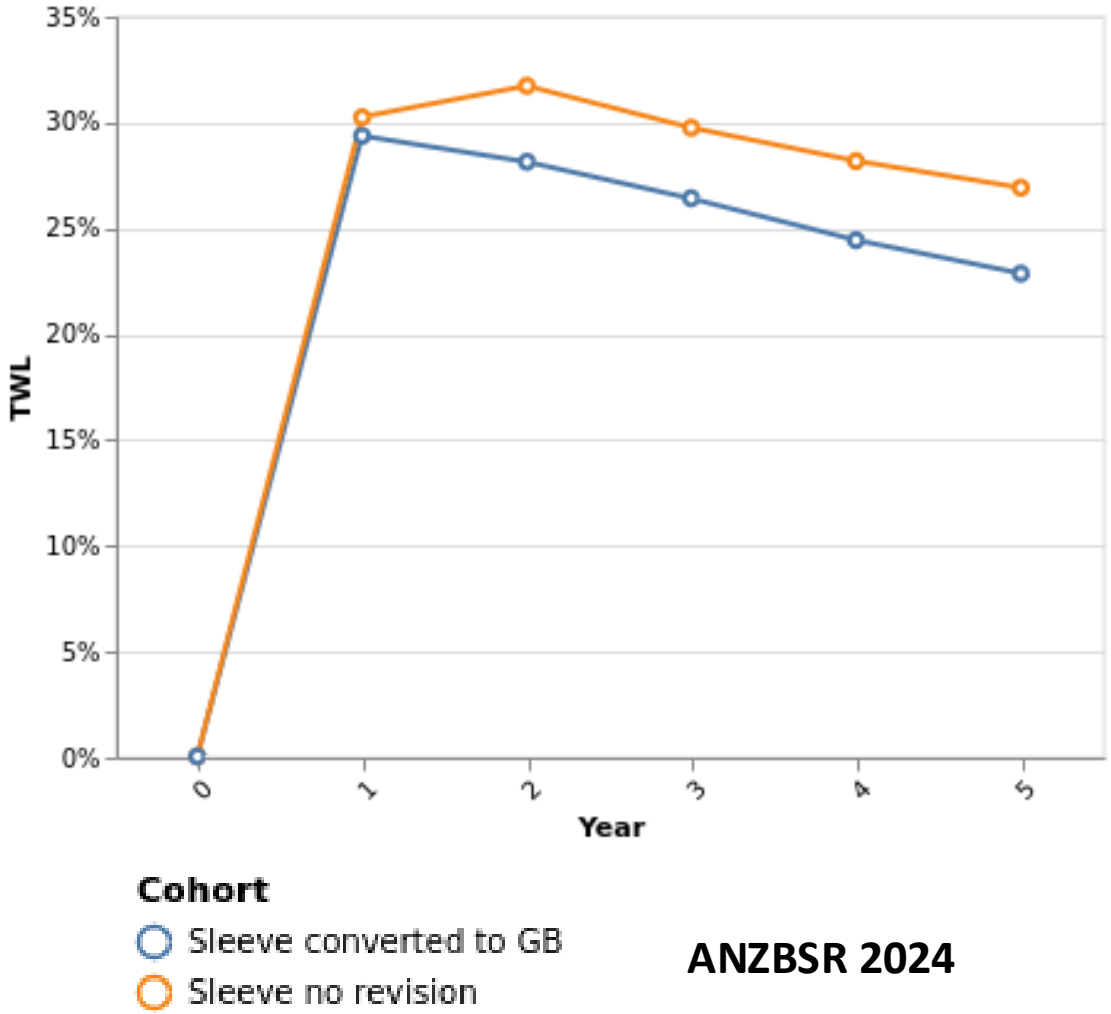
OBESITY SURGERY
The Journal of Metabolic Surgery and Allied Care

EVEN WITH WEIGHT REGAIN – STILL HEALTH BENEFIT

<5% TBWL	5-10% TBWL	10-15% TBWL	15-20% TBWL	20-25% TBWL	>25% TBWL
Diet and Exercise	*Metformin Bupropion & naltrexone Phentermine Orlistat*	*Exenatide Liraglutide Phentomine & Topiramate Endoscopic*	 **Endoscopic Rx Semaglutide**	 **Tirzepatide**	  **Retatrutide**

Int J Obes (Lond). 2017 Jun;41(6):902-908.

LESS WEIGHT LOSS AFTER CONVERSION



ANZBSR 2024

RESULTS

28 observational studies (n=2,213 patients) were included

Meta-analysis:

%TWL = 27.2 (95%CI 23.7 to 30.6)

Drop in **BMI = 10.2** kg/m² (95%CI -11.6 to -8.7)

%EWL = 54.8 (95%CI 47.2 to 62.4)

%EBMIL = 37.1 (95%CI 19.95 to 54.3)

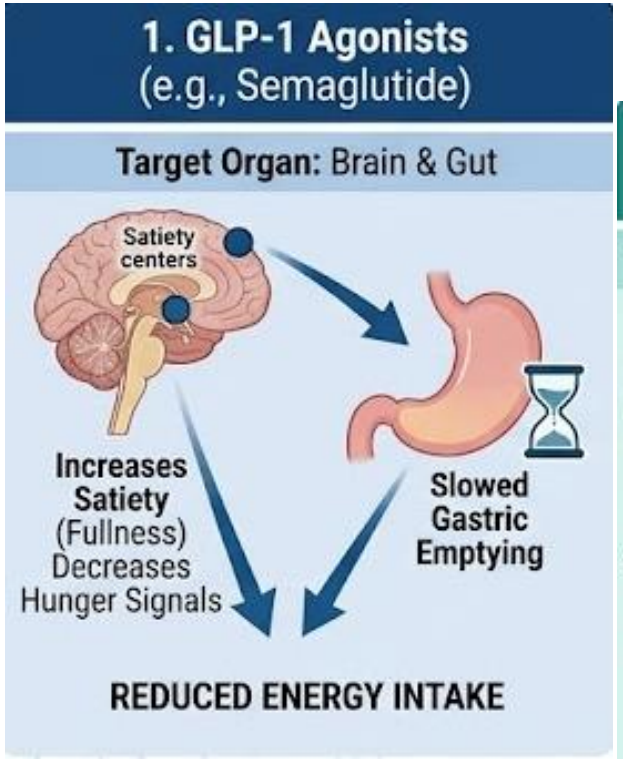
%EWL outcome – high risk of publication bias

High heterogeneity in all meta-analyzed outcomes

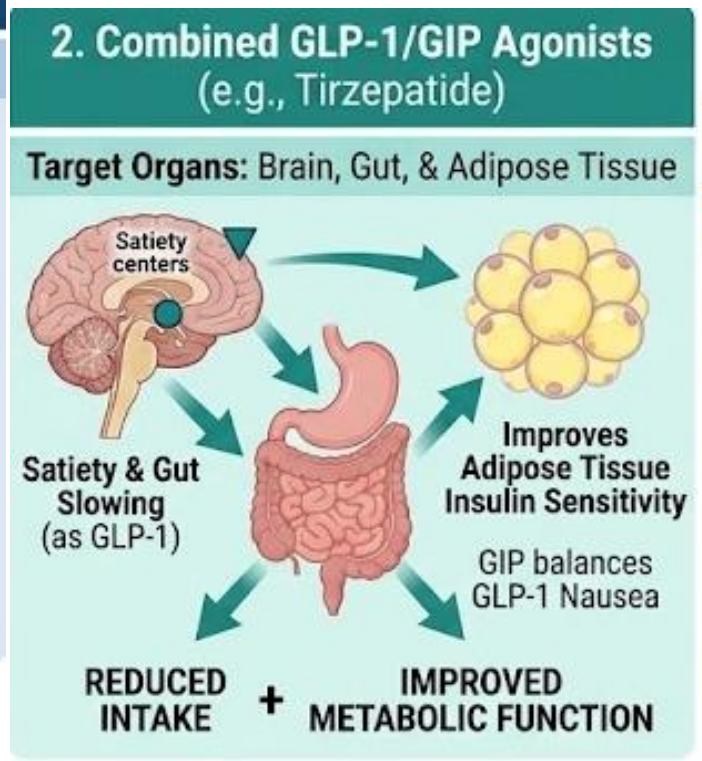
GRADE: **Very low certainty of evidence**

Eduardo L. S. Bastos, Ph.D.; Wilson Salgado-Jr, Ph.D.; Anna C. B. Dantas, M.D.; Tiago R. Onzi, M.Sc.; Lyz B. Silva, Ph.D.; Álvaro Albano, M.D.; Luca S. Tristão; Clara L. Santos; Antonio Silvinato, Ph.D.; Wanderley M. Bernardo,

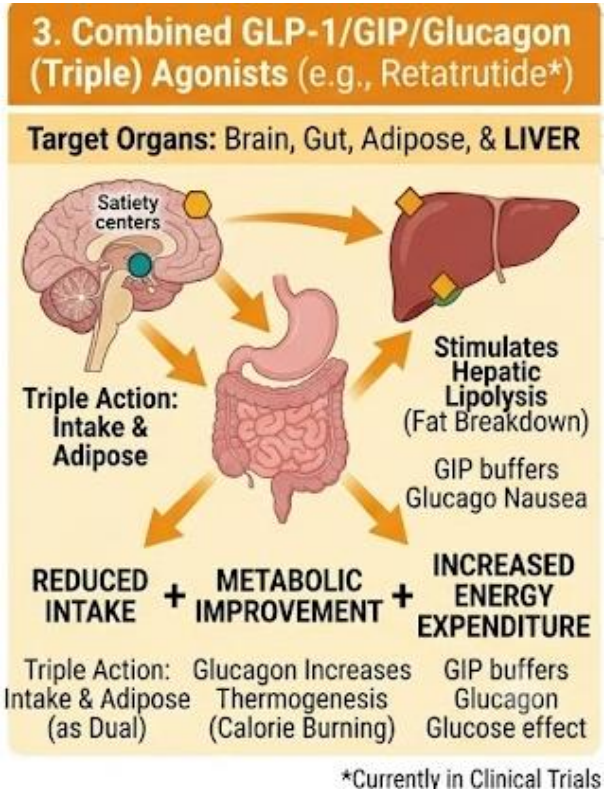
IF NOT SURGERY – THEN WHAT?



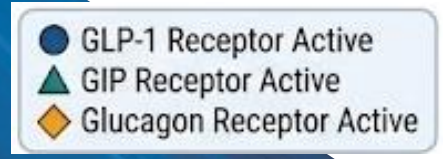
10-20% TBWL



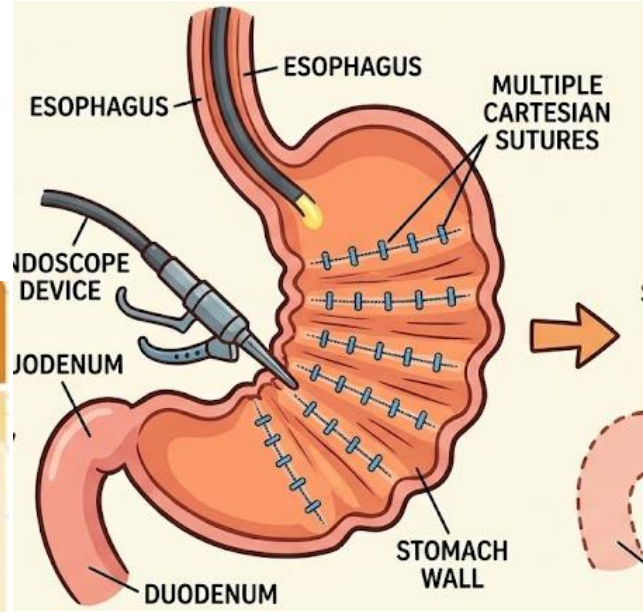
20-25% TBWL

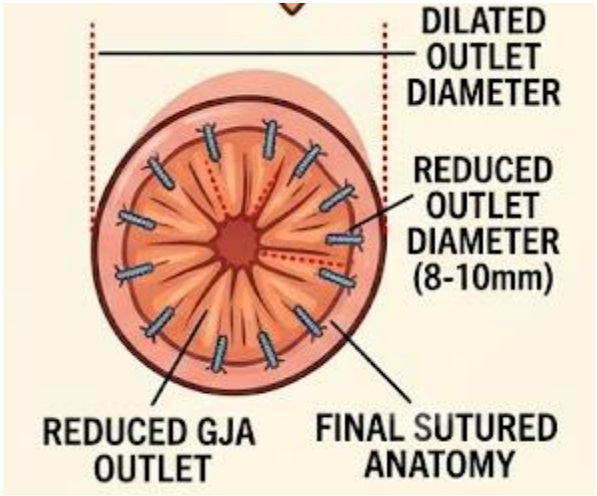


>30% TBWL



Endoscopic





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COMBINING OMM & MBS

(A) change in body weight (kg) at 6 months.

Studies	GLP−1 RA mean	SD	Total	Placebo mean	SD	Total	Weight	MD	95% CI
Brown 2025	−4.53	4.85	24	−0.32	5.39	24	26.0%	−4.21	[−7.11; −1.31]
GLIDE 2023	−2.78	8.05	11	−3.05	11.71	11	9.5%	0.26	[−8.13; 8.66]
Miras 2019	−4.91	3.01	53	−0.95	2.94	27	31.8%	−3.96	[−5.34; −2.58]
Mok 2023	−9.49	5.07	32	−0.39	3.88	34	28.9%	−9.10	[−11.29; −6.91]
Thakur 2021	−33.50	21.30	12	−23.90	14.40	11	3.8%	−9.60	[−24.35; 5.15]
Total (95% CI)			**132**			**107**	**100.0%**	**−5.33**	**[−9.42; −1.23]**

Heterogeneity: $Tau^2 = 7.0618$; $Chi^2 = 17.74$, df = 4 (P = 0.0014); $I^2 = 77.5\%$
Test for overall effect: $t_4 = -3.61$ (P = 0.02)

Mean Difference IV, Random, 95% CI

−20 −10 0 10 20
Favours GLP−1 RA Favours Placebo

(B) change in body weight (kg) at 12 months.

Studies	GLP−1 RA mean	SD	Total	Placebo mean	SD	Total	Weight	MD	95% CI
Brown 2025	−5.70	5.29	24	1.40	5.88	24	37.9%	−7.10	[−10.26; −3.94]
GLIDE 2023	−1.02	11.35	10	−6.37	12.21	11	22.3%	5.35	[−4.73; 15.43]
Lofton 2025	−8.40	7.80	89	0.50	3.80	43	39.8%	−8.90	[−10.88; −6.92]
Total (95% CI)			**123**			**78**	**100.0%**	**−5.05**	**[−22.14; 12.05]**

Heterogeneity: $Tau^2 = 31.2078$; $Chi^2 = 7.85$, df = 2 (P = 0.0198); $I^2 = 74.5\%$
Test for overall effect: $t_2 = -1.27$ (P = 0.33)

Mean Difference IV, Random, 95% CI

−20 −10 0 10 20
Favours GLP−1 RA Favours Placebo

(C) change in HbA1c (%) at 6 months.

Studies	GLP-1 RA Mean	SD	Total	Placebo Mean	SD	Total	Weight	MD	95% CI
Miras 2019	-1.03	0.74	53	0.36	0.78	27	22.9%	-1.39	[-1.75; -1.03]
Mok 2023	-0.27	0.37	26	-0.03	0.22	27	24.4%	-0.24	[-0.40; -0.08]
Hany 2024	-1.01	0.81	38	-0.82	0.67	31	23.0%	-0.19	[-0.54; 0.16]
GLIDE 2023	-0.11	1.23	12	-0.34	1.06	13	16.0%	0.23	[-0.67; 1.13]
Thakur 2021	-0.90	1.32	12	-1.20	1.35	11	13.7%	0.30	[-0.79; 1.39]
Total (95% CI)			**141**			**109**	**100.0%**	**-0.34**	**[-1.18; 0.50]**

Heterogeneity: $Tau^2 = 0.3844$; $Chi^2 = 38.19$, df = 4 (P < 0.0001); $I^2 = 91.2\%$
Test for overall effect: $t_4 = -1.13$ (P = 0.32)

Mean Difference IV, Random, 95% CI

-1.5 -1 -0.5 0 0.5 1 1.5
Favours GLP-1 RA Favours Placebo

(D) change in HbA1c (%) at 12 months.

Studies	GLP−1 RA mean	SD	Total	Placebo mean	SD	Total	Weight	MD	95% CI
Brown 2025	−0.20	0.30	24	0.00	0.36	24	38.4%	−0.20	[−0.39; −0.01]
GLIDE 2023	0.75	0.29	8	−0.32	1.49	10	22.9%	1.07	[0.12; 2.02]
Lofton 2025	−0.30	0.50	89	0.00	0.40	43	38.7%	−0.30	[−0.46; −0.14]
Total (95% CI)			**121**			**77**	**100.0%**	**0.05**	**[−1.64; 1.74]**

Heterogeneity: $Tau^2 = 0.3198$; $Chi^2 = 8.10$, df = 2 (P = 0.0174); $I^2 = 75.3\%$
Test for overall effect: $t_2 = 0.13$ (P = 0.91)

Mean Difference IV, Random, 95% CI

−2 −1 0 1 2
Favours GLP−1 RA Favours Placebo

Acta Diabetol (2026). https://doi.org/10.1007/s00592-026-02730-4

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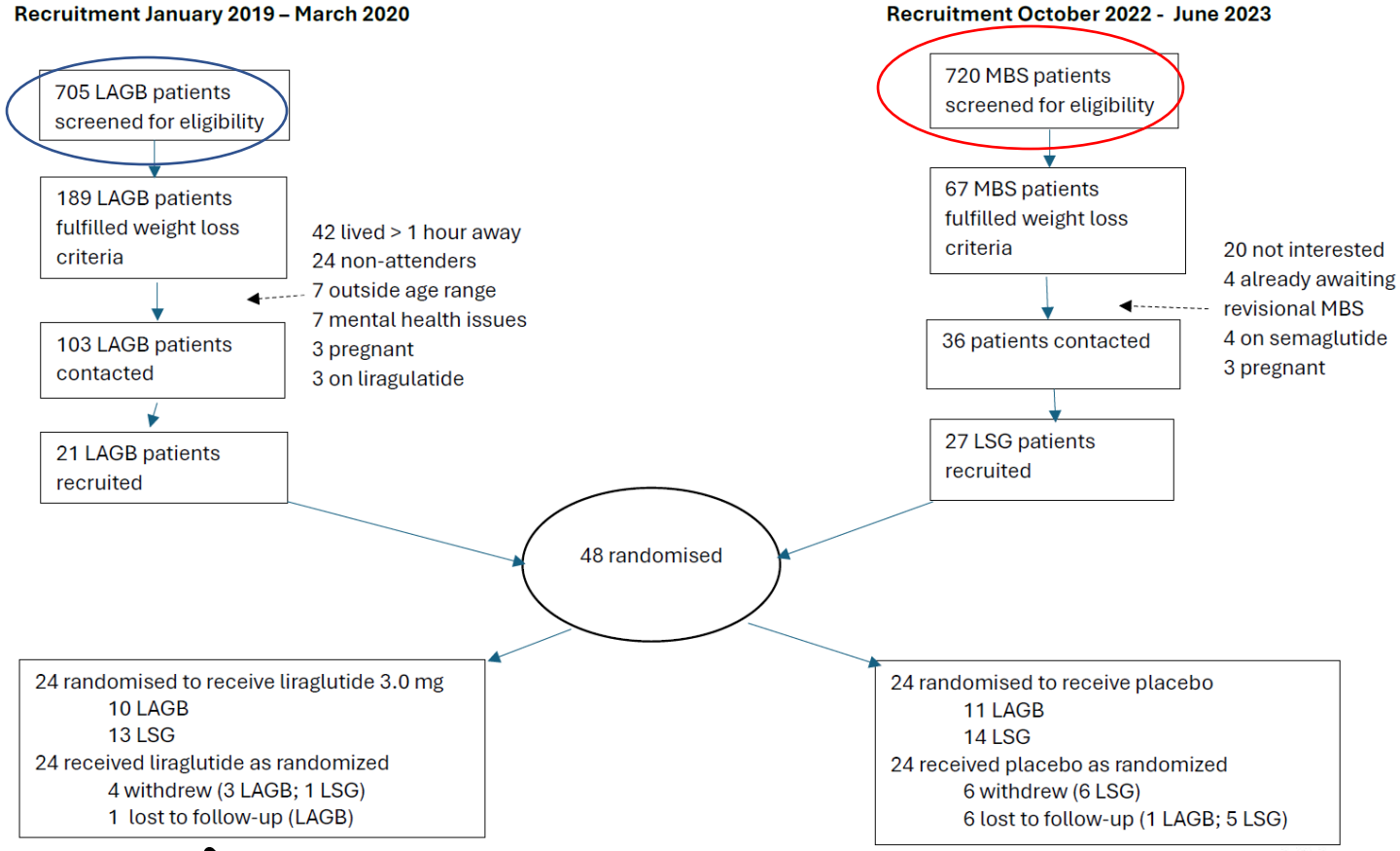
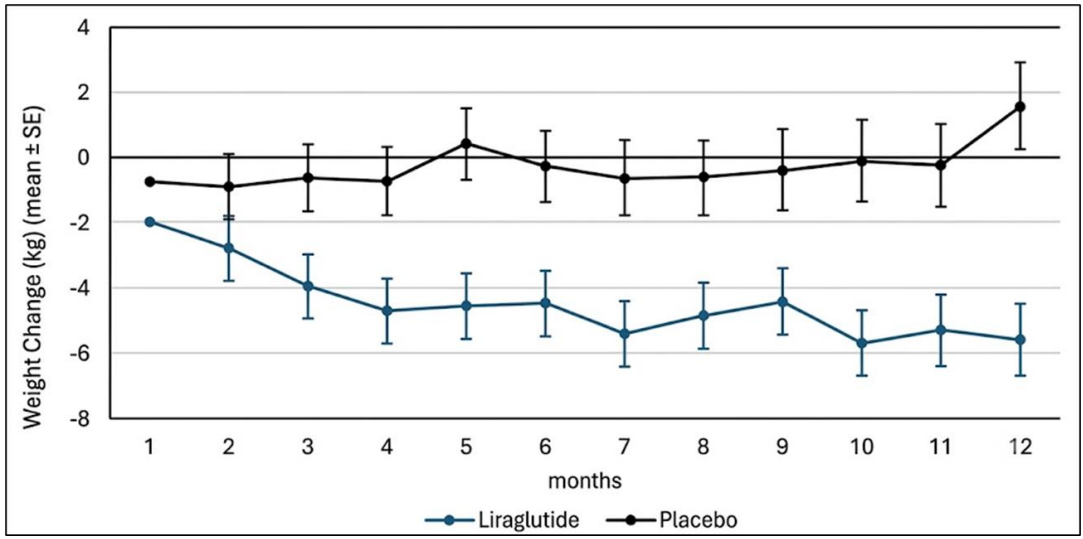
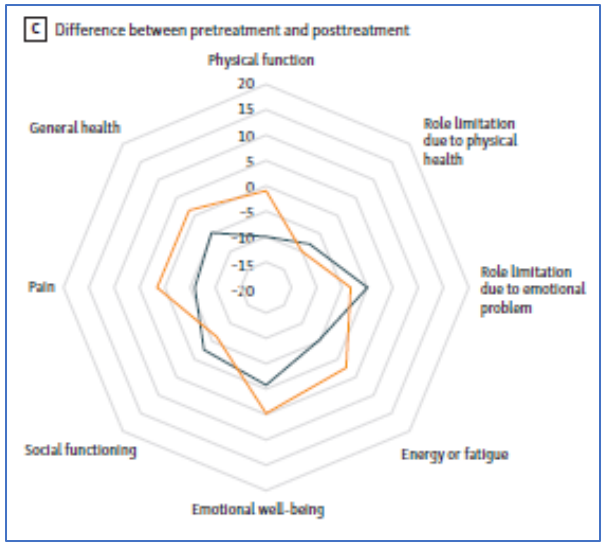
LAMBS trial

Liragulatide 3 mg vs Placebo







Mean dose 2.43 (0.65) mg

30% reached full 3mg dose

JAMA Network Open. 2025;8(10):e2539848. doi:10.1001/jamanetworkopen.2025.39848

ENDOSCOPIC Rx FOR WEIGHT REGAIN

Gastric pouch resizing for recurrent weight gain after Roux-en-Y Gastric Bypass

METHODS

RYGB
Roux-en-Y Gastric Bypass

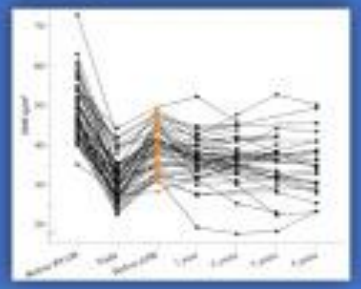
Recurrent weight gain + Enlarged Gastric Pouch → GPR
Gastric Pouch Resizing

1. Analysis of weight course
2. Analysis of mortality and morbidity
3. Survey on patients' satisfaction

Study period: 2016 to 2020

RESULTS

Weight stabilization



Patients' satisfaction

Remission of comorbidities

Mean Follow-Up after GPR: 5 years

CONCLUSION

- GPR leads to weight stabilization and resolution of obesity-associated comorbidities
- GPR is a safe procedure with a low complication rate
- GPR reaches patients' satisfaction as valuable option for secondary metabolic surgery

Take home message

IFSO

Stefanie Josefine Hehl, Dominique Lisa Birrer, Renward Hauser, Daniel Gero, Andreas Thalheimer, Marco Bueter, Jeannette Widmer

OBESITY SURGERY
The Journal of Metabolic Surgery and Allied Care

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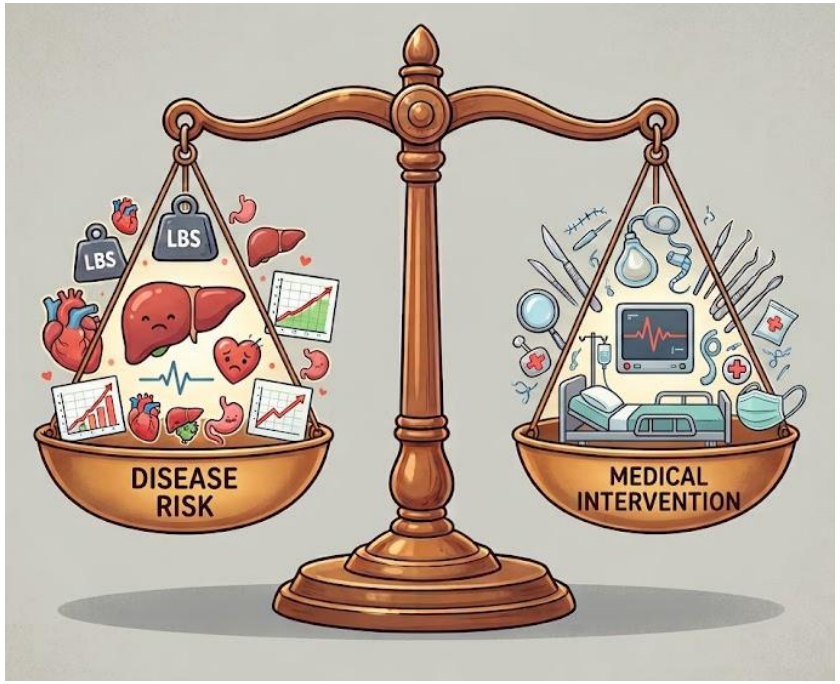
RISK VS BENEFIT

- How much weight has been regained cw:
  - *Heaviest pre-operative*
  - *Nadir post-operative*
- What is the trajectory?
- What impact is this having on health and well-being?



- Is any treatment needed at all?
- Will an OMM improve outcomes?
- What is the risk of revisional surgery?

CONCLUSION

REVISIONAL SURGERY SHOULD BE FOR HEALTH INDICATIONS

- The goal of MBS is health improvement, not weight loss *per se*
- Some regain of weight after MBS is normal
  - Still provides weight loss that translates to improved health
- All revisional MBS carries a higher risk of complication
- Weight loss after revisional MBS is likely to be lower than with primary surgery
- OMM & endoscopy maybe a reasonable alternative
- Only offer revisional MBS when the risk is justified by health benefits

Acknowledgements

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