Taller

OBESIDAD:

de eje hormonal a la práctica diaria

BARIATRIC & METABOLIC SURGERY
in the era of Pharmacotherapy

Dr Marcelo Lo

CELEBRANDO 50 ANIVERSARIO

Disclosure

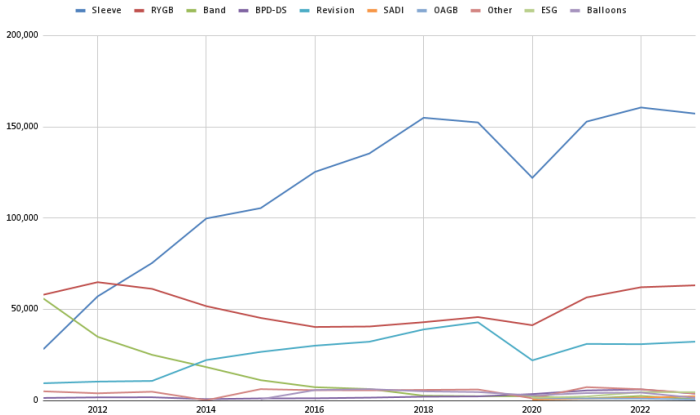

Agenda
1. BMS evolution
2. Incretins
3. GLP-1 analogs
4. Multimodal & Colaborative treatment
5. Future outlook
6. Conclusion
7. Home message

Is There Still a **Place** for Bariatric & Metabolic Surgery?

What is the future of Bariatric & Metabolic Surgery?


Bariatric & Metabolic Surgery
Pharmacotherapy

	2023	2022	2021	2020	2019	2018	2017
Sleeve	157,254	160,609	152,866	122,056	152,413	154,976	135,401
RYGB	63,132	62,097	56,527	41,280	45,744	42,945	40,574
Band	773	2,500	1,121	2,393	2,375	2,660	6,318
BPD-DS	3,775	6,096	5,525	3,555	2,272	2,123	1,588
Revision	32,267	30,894	31,021	22,022	42,881	38,971	32,238
SADI	2,387	1,567	1,025	488	—	—	—
OAGB	555	1,057	1,149	1,338	—	—	—
Other	3,898	6,189	7,339	1,221	6,060	5,847	5,606
ESG	4,587	4,600	2,220	1,500	—	—	—
Balloons	1,461	4,358	4,100	2,800	4,655	5,042	6,280
Total	**270,089**	**279,967**	**262,893**	**198,651**	**256,000**	**252,564**	**228,005**

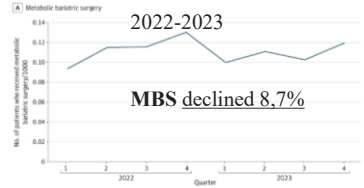


Source - https://asmbs.org/resources/estimate-of-bariatric-surgery-numbers/

JAMA Netw Open
Published Online: October 25, 2024
2024;7(10):e2441380.
doi:10.1001/jamanetworkopen.2024.41380

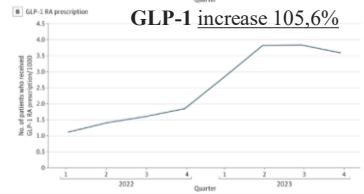
Metabolic Bariatric Surgery in the Era of GLP-1 Receptor Agonists for Obesity Management

Kevin Lin, BA[1]; Ateev Mehrotra, MD, MPH[2]; Thomas C. Tsai, MD, MPH[3]



2022-2023

MBS declined 8,7%

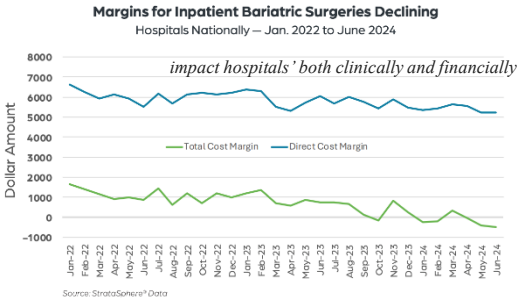


GLP-1 increase 105,6%

809 hospitals nationwide
Aug 2022 to Aug 2024

MBS decreased by over 32%

Semaglutide increased over 400% (Jan 2021 to Dec 2023) according to a JAMA study



Comparative Analytics offers access to near real-time data drawn from more than 135,000 physicians from over 10,000 practices and 139 specialty categories, and from 500+ unique departments across more than 1,600 hospitals.

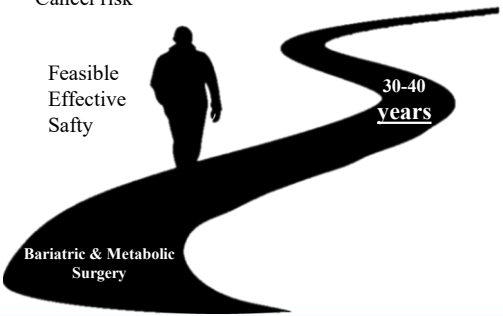
Source: Strata´s analysis of data https://hitconsultant.net/2024/11/15/bariatric-surgeries-decline-as-glp-1s-use-rises/

PARAGUAY	other countries in South America
2024 MBS decreased by over 40-50%	20-30%
2025 MBS decreased by over 70-80%	30-40%

NO study. Personal perception and congress comments

Bariatric & Metabolic Surgery Evolution

DECREASE
- Weight (effective and durable)
- Cardiometabolic desease
- MACE
- All-cause of mortality
- Cancer risk



Real World

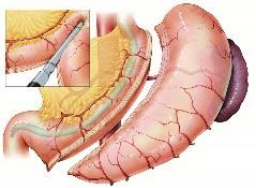
↑

RCT

GLP-1 (Sema, Tirze, Reta..) MariTide
Cagrilintide Orforglipron Amycretin

Lesson learned Surgical strategies in 1980

Adjustable Gastric Band

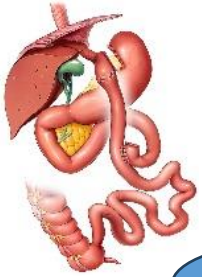


Sleeve Gastrectomy

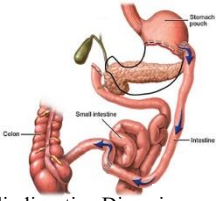
RESTRICTION

Gastric Plication

Vertical Banded Gastroplasty

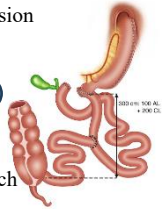


Roux en Y
Gastric Bypass



Biliodigestive Diversion

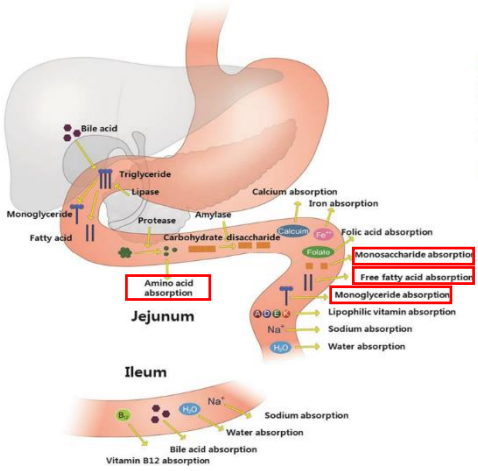
MAL ABSORPTION



Duodenal Switch

Mini Gastric Bypass

INCRETINS



Duodenum
Minerals: Iron, phosphorus, calcium, magnesium, copper, selenium

Vitamins: Riboflavin, folic acid, biotic, niacin

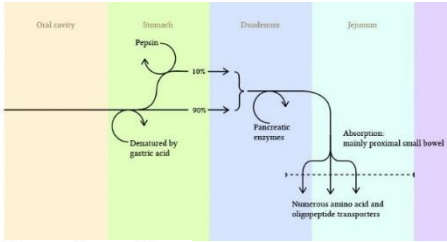
Ileum
Vitamins: Vitamin B12, B9, D, and K

Bile salts

Jejunum
Minerals: Zinc, manganese, chromium

Vitamins:
Vitamin A, C, D, E, K

Protein: Amino acids, peptides



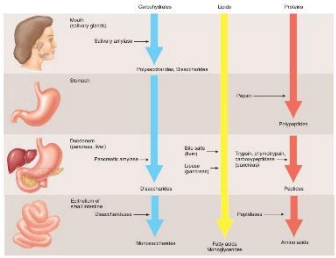
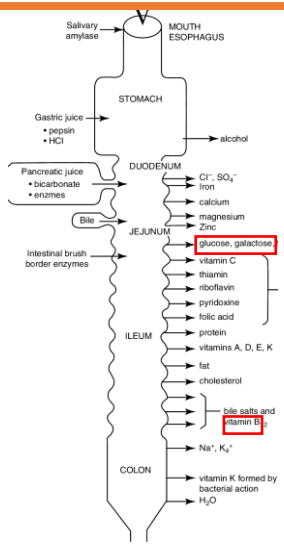
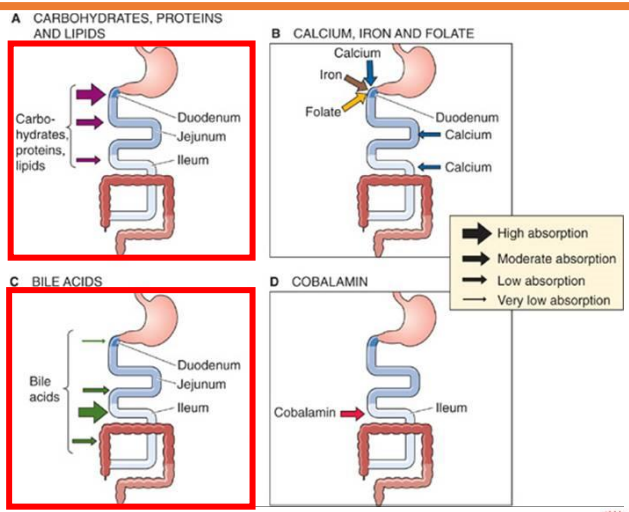


Figure Digestion of Carbohydrates, Lipids, and Proteins
The enzymes involved in digesting carbohydrates, lipids, and proteins are depicted in relation to the region of the digestive tract where each functions.

Digestive System





https://doctorlib.info/physiology/medical-physiology-molecular/46.html

GI hormones/ Incretins

Insulinotropic factors released by gastrointestinal tract that **stimulate insulin** secretion and **inhibit glucagon** secretion, also inhibited appetite and food intake.

Name(s)	Contribution	Year	References
1. Mering and Minkowski	Pancreas as the site of diabetes	1889	(14)
2. Bayliss and Starling	Discovery of secretin; the first hormone	1902	(5)
3. Starling	A gut hormone may stimulate the endocrine pancreas	1905	(6)
4. La Barre and Still	Evidence of an insulinotropic gut hormone	1930	(22)
5. La Barre	Coining the word incretin	1932	(8)
6. Yalow and Berson	Invention of the radioimmunoassay	1960	(30)
7. McIntyre et al. and Elrick et al.	Demonstration of a glucose-dependent incretin mechanism	1964	(33, 34)
8. Unger et al.	Gut glucagon-like immunoreactivity	1966	(52)
9. Brown et al.	Identification of GIP	1971	(46, 47)
10. Dupré and Brown	GIP as an incretin	1973	(48)
11. Bell et al.	Identification of GLP-1	1983	(55, 56)
12. Habener et al. and Holst et al.	Truncated GLP-1 as an incretin	1987	(59, 60)

Adrenomedullin
Apelin
Calcitonin Gene-Related Peptide (CGRP)
Cholecystokinin
Galanin
Gastrin
Gastrin-Releasing Peptide (GRP)
Ghrelin
Leptin
Motilin
Neurotensin
Neuropeptide Y (NPY)
Obestatin
Opioids
Pituitary Adenylate Cyclase Polypeptide (PACAP)
Peptide YY (PYY)
Vasoactive Intestinal Polypeptide (VIP)
Xenin

**Full examination requires studies of the isolated effect on basal and stimulated islet-hormone secretion as well as studies of synergistic effects in combination with the other gastrointestinal hormones (including GIP and GLP-1).*

Review > Front Endocrinol (Lausanne). 2018 Jul 16;9:387. doi: 10.3389/fendo.2018.00387. eCollection 2018.

The Origin and Understanding of the Incretin Concept

Jens F Rehfeld [1]

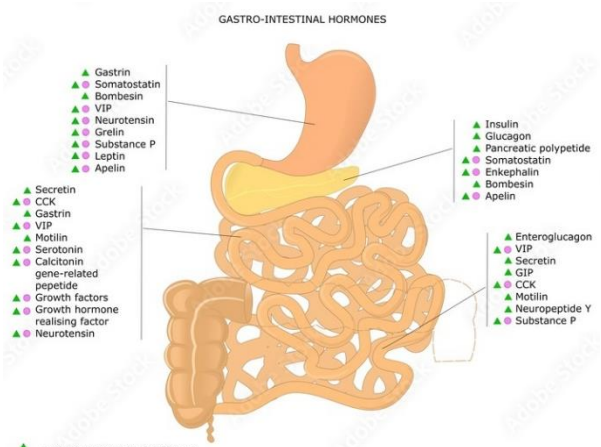
Affiliations + expand

PMID: 30061863 PMCID: PMC6054964 DOI: 10.3389/fendo.2018.00387

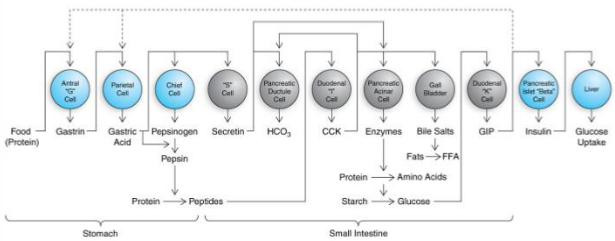
GIP: glucose-dependent insulinotropic polypeptide
GLP-1: glucagón like peptide - 1

https://www.researchgate.net/figure/Twelve-milestones-in-the-first-century-of-the-history-of-the-incretin-concept_tbl1_326418263

GI hormones/ Incretins



Summary scheme of hormone-metabolite control of GI function



Solid lines indicate **STIMULATORY** influences
Dashed lines indicate **INHIBITORY** stimuli

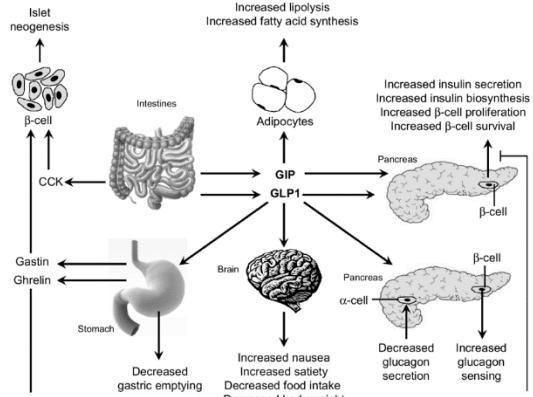
https://www.researchgate.net/figure/Twelve-milestones-in-the-first-century-of-the-history-of-the-incretin-concept_tbl1_326418263

GI hormones/ Incretins

Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy Dovepress

REVIEW

Type 2 diabetes mellitus and the cardiometabolic syndrome: impact of incretin-based therapies



Journal of Neuroendocrinology 18, 863–894

REVIEW ARTICLE

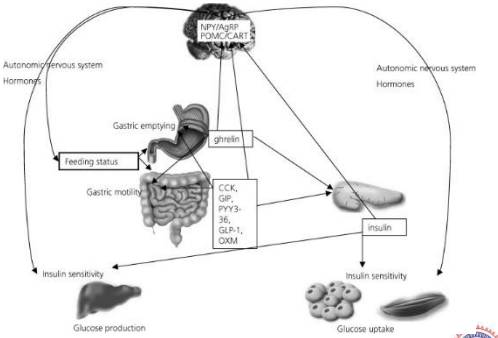
Gut–Brain Axis: Regulation of Glucose Metabolism

A. C. Heijboer,* N. Pijl,* A. M. Van den Hoek,*† L. M. Havekes,*†‡ J. A. Romijn* and E. P. M. Corssmit*

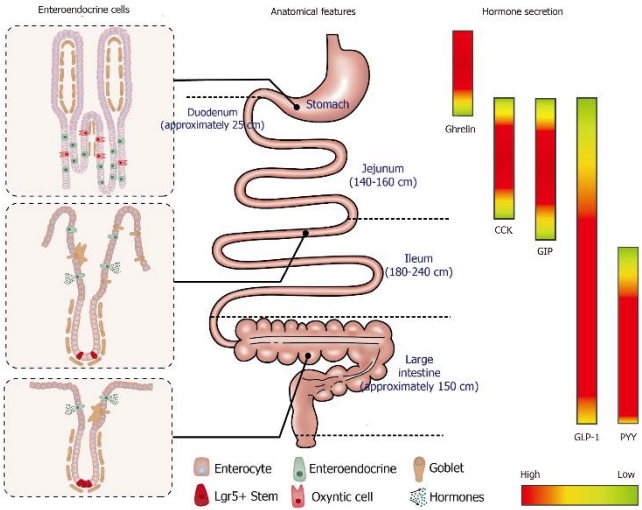
*Department of Endocrinology and Metabolic Diseases, Leiden University Medical Center, Leiden, The Netherlands.

†TNO-Quality of Life, Gaubius Laboratory, Leiden, the Netherlands.

‡Department of Cardiology, Leiden University Medical Center, Leiden, the Netherlands



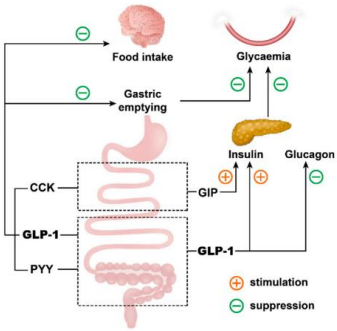
Incretins Sites



pharmaceutics
MDPI
Review

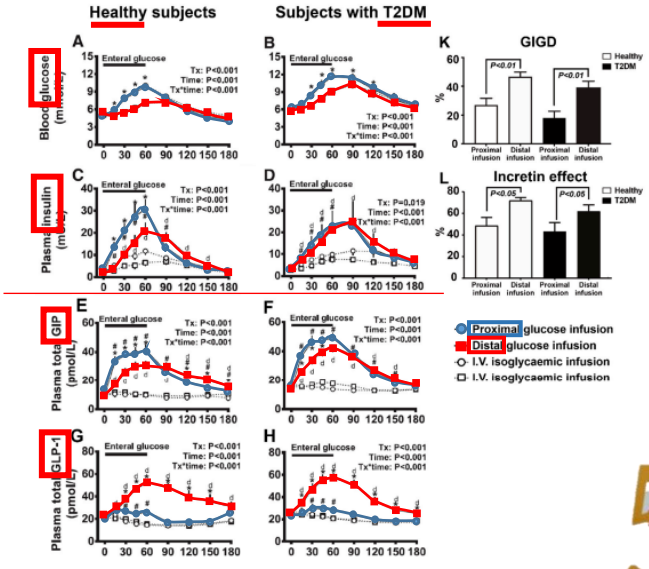
Enteroendocrine Hormone Secretion and Metabolic Control: Importance of the Region of the Gut Stimulation

Cong Xie [1], Karen L. Jones [1,2], Christopher K. Rayner [1,3] and Tongzhi Wu [1,2,4,*]



https://pubmed.ncbi.nlm.nih.gov/32825608/

GIP (proximal) vs GLP (distal)



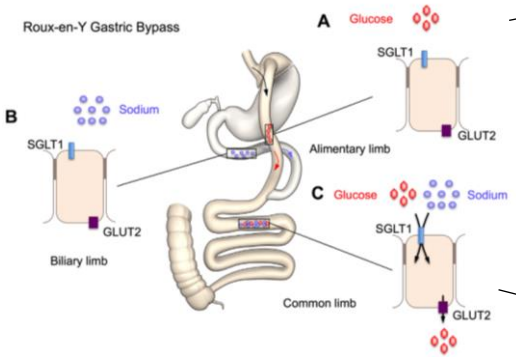
Cong Xie et al. Enteroendocrine Hormone Secretion and Metabolic Control: Importance of the Region of the Gut Stimulation. Pharmaceutics (2020), 12 (9), 790

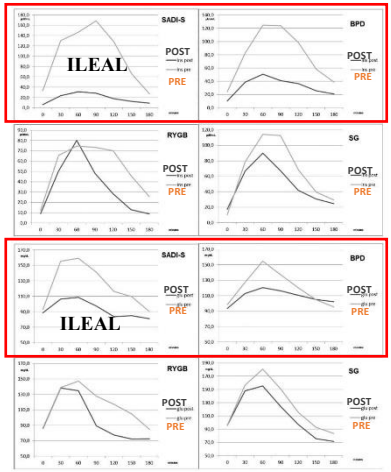
Proximal vs Distal

VOLUME 15 NUMBER 7 JULY 2019
ASMBS SURGERY FOR OBESITY AND RELATED DISEASES
THE OFFICIAL JOURNAL OF THE AMERICAN SOCIETY FOR METABOLIC AND BARIATRIC SURGERY and the MEXICAN SOCIETY FOR BARIATRIC SURGERY

Effect of single anastomosis duodenal-ileal bypass with sleeve gastrectomy on glucose tolerance test: comparison with other bariatric procedures

Luca Sessa, M.D., Caterina Guidone, M.D., Pierpaolo Gallucci, M.D., Esmeralda Capristo, M.D., Geltrude Mingrone, M.D., Marco Raffaelli, M.D.





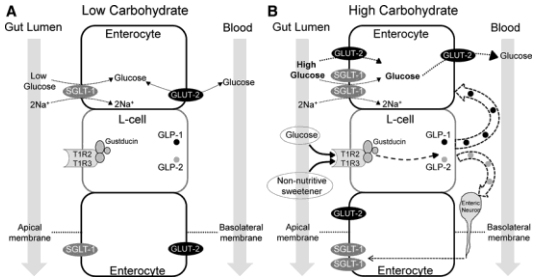
INSULIN

GLUCOSE

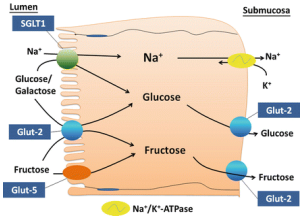
Luca Sessa et al. / Surgery for Obesity and Related Diseases 15 (2019) 1091–1097

https://www.soard.org/article/S1550-7289%2816%2930053-3/pdf

Enterocells Glucose Transporter



GLUT2: glucose transporter 2
SGLT1: sodium-dependent glucose transporter



CLINICAL–ALIMENTARY TRACT · Volume 124, Issue 1, P34-39, January 2003

Intestinal glucose transport: Evidence for a membrane traffic–based pathway in humans

René Santer * · Georg Hillebrand * · Beat Steinmann ‡ · Jürgen Schaub *

Affiliations & Notes · Article Info

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Show Outline

Abstract

Background & Aims: The presence of glucose transporter 2 (GLUT2) molecules in the basolateral membrane of enterocytes has long been considered to be of major importance for intestinal glucose absorption. The aim of this study was to reevaluate the role of GLUT2 in a patient with congenital GLUT2 deficiency (Fanconi-Bickel syndrome, FBS). **Methods:** Oral mono- and disaccharide tolerance tests including gaschromatographic determination of breath hydrogen concentrations were performed in an FBS patient. For comparison, a patient with a microsomal carbohydrate transport defect, glucose-6-phosphate translocase 1 (G6PT1) deficiency, and a control individual were investigated. **Results:** No increase in breath hydrogen concentration was found in the GLUT2-deficient patient after a glucose load. In G6PT1 deficiency, basal hydrogen concentrations were repeatedly found to be elevated. **Conclusions:** From the fact that a GLUT2-deficient patient does not show any impairment of intestinal monosaccharide transport measurable by the hydrogen breath test, we conclude that mechanisms other than facilitative glucose transport by GLUT2 must be involved in the transport of monosaccharides at the basolateral membrane of enterocytes. When relating this observation to the high intestinal expression of human hexokinase, G6PT1, and glucose-6-phosphatase and to our results of oral carbohydrate tolerance tests in a G6PT1-deficient patient, there is evidence that a microsomal membrane traffic-based transport pathway, as recently suggested for GLUT2-deficient animals, also plays a major role in transcellular monosaccharide transport of the human intestine.

GASTROENTEROLOGY 2003;124:34-39

https://www.soard.org/article/S1550-7289%2816%2930053-3/pdf

https://www.gastrojournal.org/article/S0016-5085(03)50016-6/fulltext

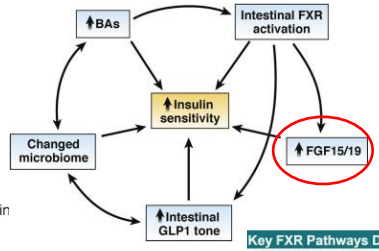
Farsenoid X Receptor & FGF-19

nature reviews gastroenterology & hepatology
Review Article | Published: 10 February 2021

The role of farnesoid X receptor in metabolic diseases, and gastrointestinal and liver cancer

Lulu Sun, Jie Cai & Frank J. Gonzalez

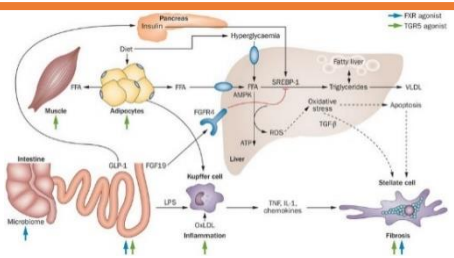
Nature Reviews Gastroenterology & Hepatology 18, 335–347 (2021) | Cite this article

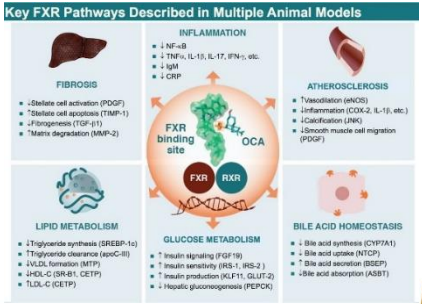


Bile acids,
Synthetic agonist (GW4046, fexaramin

FXR

Dyslipidemia	Insulin resistance	Endothelial dysfunction Atherosclerosis
↑ Adipocyte function (adiponectin)	↑ Peripheral insulin sensitivity (p-IRS1/2) ↑ Glucose uptake (GLUT4, p-Akt)	
↓ Plasma TG levels ↓ Plasma FFA levels	↓ Gluconeogenesis (PEPCK, G6P) ↓ Hepatic insulin resistance	↓ Endothelin-1, TNFα ↓ Atherosclerosis in *Apoe-/-* mice





Metabolic Regulation of Nuclear Receptors. Jan 2008. Journal of Korean Endocrine Society 23(3)

https://www.journal-of-hepatology.eu/action/showPdf?pii=S0168-8278%2817%2932045-7

Lesson learned

Hunger/satiety and glicemic control

EARLY - FGF 19 control as independent pathway by bile stimulation
LATE – weight loss decrease insulin-IR by incretins GLP-1

Lesson learned Surgical strategies in 2026

BIPARTITION Y

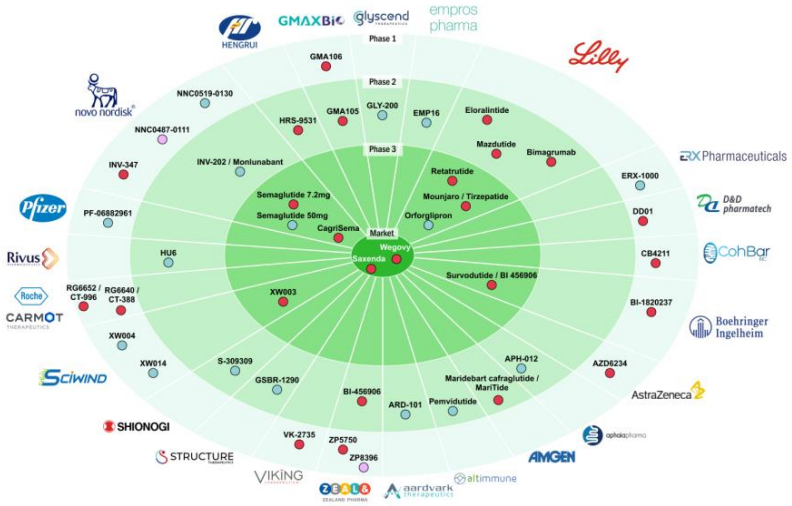
BIPARTITION SASI

Sleeve-Jejunoileal

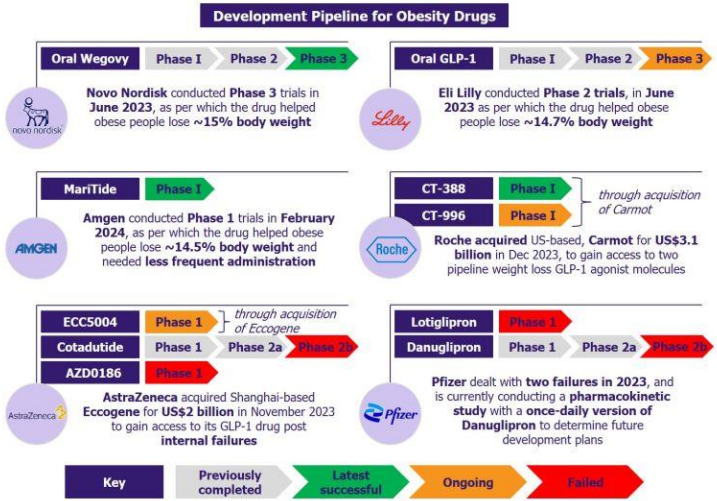
SADIS

OAGB

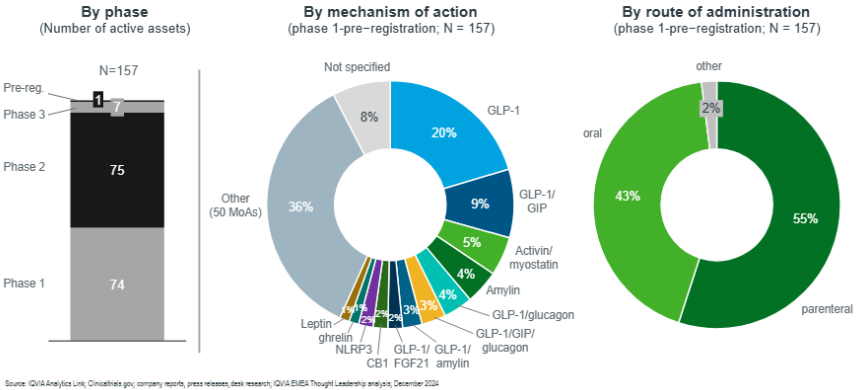
GLP-1 analogs



GLP-1 analogs



Pipeline of obesity assets



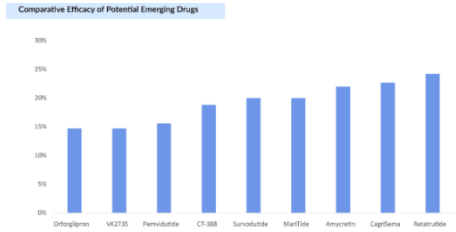
Source: IQVIA Analytics Link; Clinicaltrials.gov; company reports, press releases, desk research; IQVIA EMEA Thought Leadership analysis; December 2024

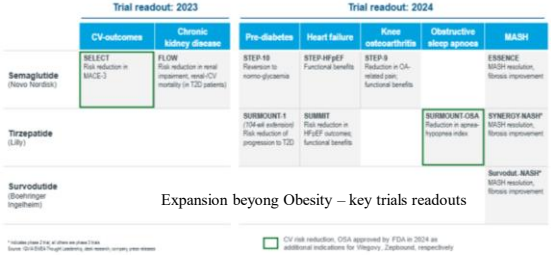
www.iqvia.com/locations/emea/blogs/2025/01/outlook-for-obesity-in-2025-more-than-a-transition-year

Emerging Therapies for Obesity

Emerging Obesity Therapies by 2027

Company	Drug	MoA	Expected Launch Date	RoA	Phase I	Phase II	Phase III
Lilly	Orforglipron	GLP-1 agonist	2026				
novo nordisk	CagriSema	GLP-1 agonist + amylin analogue cagrilintide	2027				
Boehringer Ingelheim	Survodutide	Glucagon/GLP-1 receptor dual agonist	2027				
Lilly	Retatrutide	GLP-1/GIP/glucagon tri-agonist	2027				
AMGEN	AMG-133	GLP-1 agonist	2027				
Pfizer	Danuglipron	GLP-1 agonist	2026				
VIKING	VK-2735	GLP-1 + GIP dual agonist	2027				





Expansion beyong Obesity – key trials readouts

https://www.delveinsight.com/blog/top-obesity-trends

https://www.delveinsight.com/blog/obesity-drugs-launch

GLP-1 analogs - LIMITATION

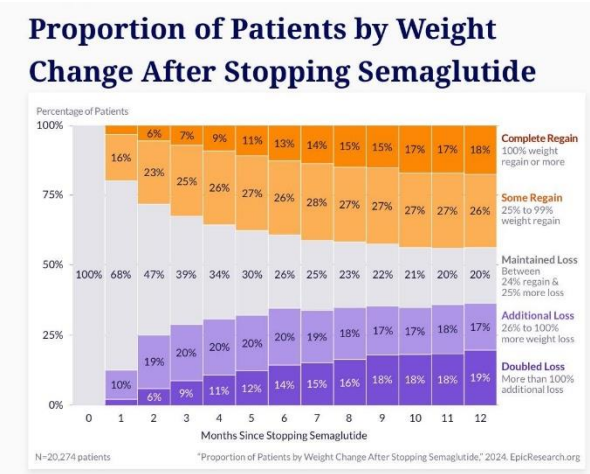
Open Access Review Article

Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists in Obese Patients Without Diabetes: A Systematic Review and Meta-Analysis

Roaa Mohamed Ali Elbashir [1], Azza Elbashir [2], Robert Urimuke Basake [3], Amna Zakaria Ahmed Mohieldin [4], Najla I A Elhaj [5], Fatima Ebrahim Mohamed Ebrahim [6], Waad Gase Ahmed [4], Ola Abdelrahim Mohamed Mahgoub [7]

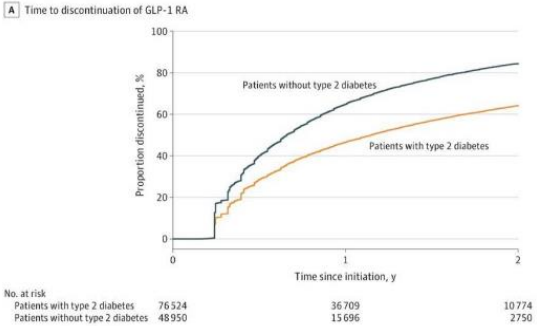
1. General Practice, Barnsley Hospital NHS Foundation Trust, Barnsley, GBR 2. Department of Medicine, Barnsley District General Hospital, Barnsley, GBR 3. Department of Acute Medicine, Aberdeen Royal Infirmary, Aberdeen, GBR 4. Department of Medicine, Ahfad University for Women, Omdurman, SDN 5. Pediatric Department, Royal Edinburgh Hospital, Edinburgh, GBR 6. Emergency Medicine, SABA Clinic, Jeddah, SAU 7. Department of Medicine, University of Khartoum, Khartoum, SDN

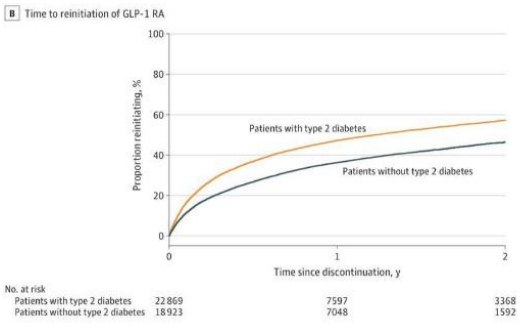
GLP-1 LIMITATIONS



GLP-1 analogs - LIMITATION

Proportions Discontinuing and Reinitiating Glucagon-Like Peptide-1 Receptor Agonist (GLP-1 RA) Within 2 Years

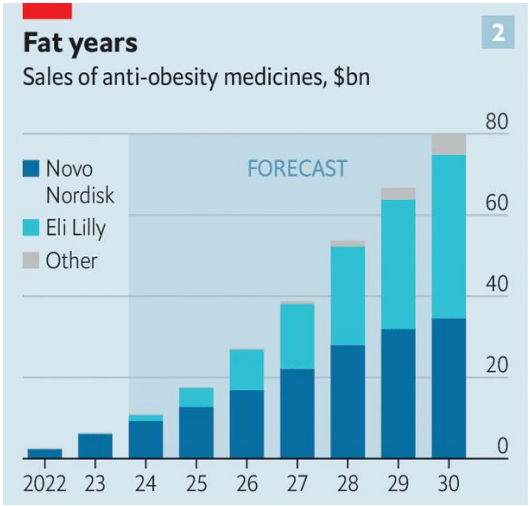




JAMA Network Open. 2025;8(1):e2457349. doi:10.1001/jamanetworkopen.2024.57349

GLP-1 LIMITATIONS

Pharmaceutical Industry Revenue

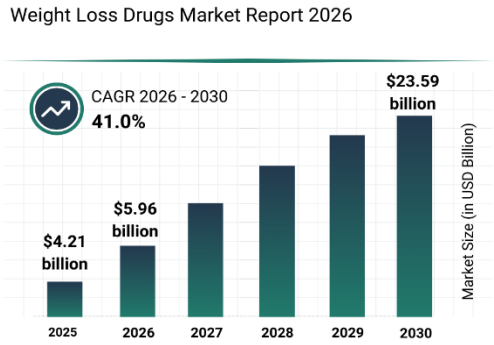


source: Bloomberg

source: Morgan Stanley Research (sept/2023)

GLP-1 LIMITATIONS

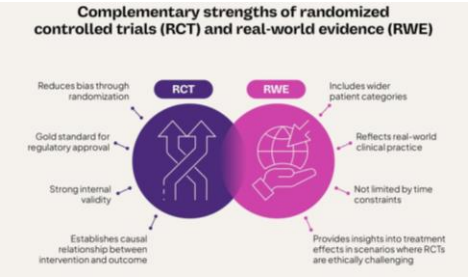
Pharmaceutical Industry Revenue

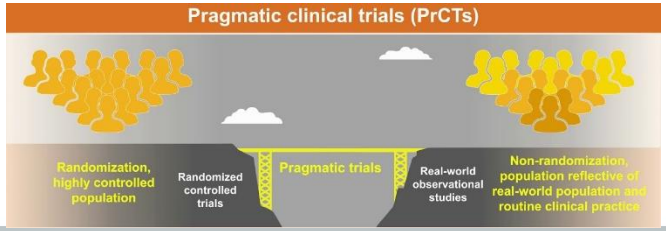


CAGR: compound annual growth rate

source: www.fnfresearch.com

Trials vs Reality





IFSO - STATEMENT

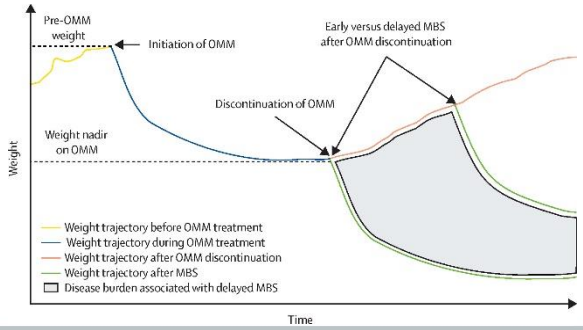
THE LANCET
Diabetes & Endocrinology

COMMENT · Volume 13, Issue 9, P733-736, September 2025

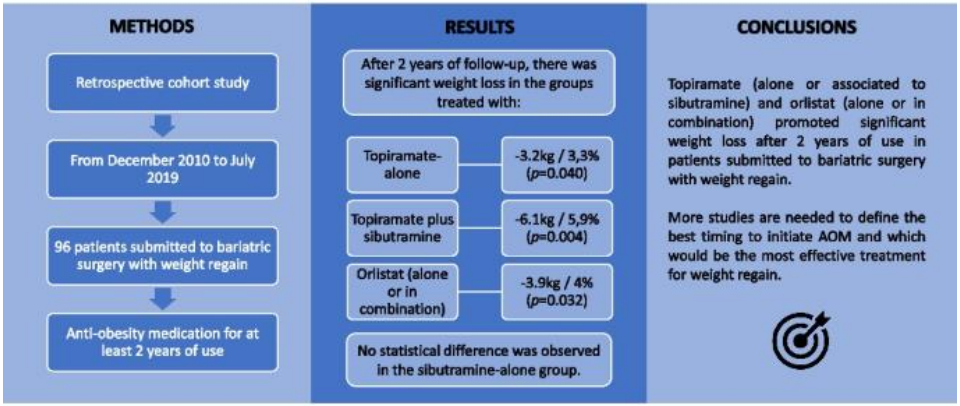
International Federation for the Surgery of Obesity statement on metabolic bariatric surgery after pharmacotherapy-induced weight loss in clinical obesity

Ricardo V Cohen [a] · Gerhard Prager [b] · Carel W le Roux [c,d] · Ildiko Lingvay [e] · Paulina Salminen [f,g]

Affiliations & Notes · Article Info



Treatment with antiobesity drugs in weight regain after bariatric surgery: a retrospective cohort study

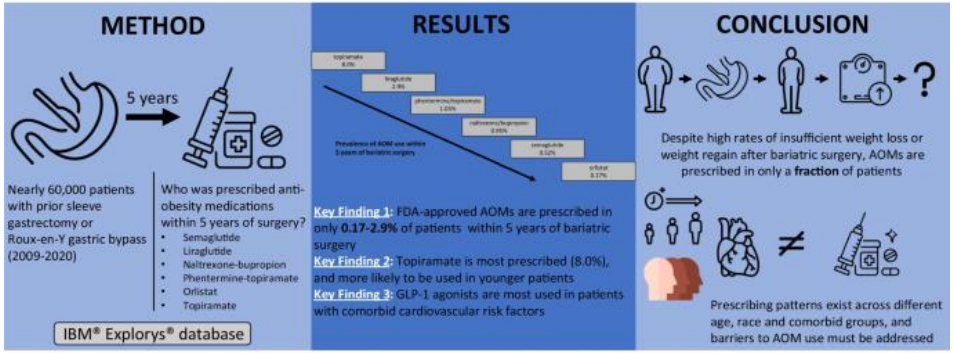


IFSO

Bibiana de Souza Boger, Nara Lima de Queiroz, Paulo Enrique Peinado Noriega, Maicon Cesar Canuto, Matheo Augusto Morandi Stumpf, Cintia Cercato, Marcio Corrêa Mancini, Maria Edna de Melo

OBESITY SURGERY
The Journal of Metabolic Surgery and Allied Care

Utilization of Anti-obesity Medications After Bariatric Surgery: Analysis of a Large National Database



IFSO

Authors: Firkins SA, Chittajallu V, Yoo H, Flora B, Simons-Linares R
Obesity Surgery 2023 Sept
DOI:

OBESITY SURGERY
The Journal of Metabolic Surgery and Allied Care

Multimodal & Colaborative Treatment

Langenbeck's Archives of Surgery (2025) 410:295
https://doi.org/10.1007/s00423-025-03831-4

SYSTEMATIC REVIEW

GLP-1 receptor agonists as an adjunct to bariatric surgery for weight loss and metabolic outcome improvement: a systematic review and meta-analysis

Yee Wen Tan[1,3] · Mengge Shang[1] · Sean Davis[1] · Sivakumar Gananadha[1,2]

Received: 3 November 2024 / Accepted: 25 July 2025

Nov.2023 to Feb.2025

2.304 studies
- 344 duplicates
- 1.854 irrelevant
- 87 dismissed

19 included
3 RCT
13 retrospective cohort
2 retrospective observational
1 prospective cohort

Liraglutide
Semaglutide
Dulaglutide
Exenatide
tirzepatide

GLP-1 + Surgery
3 weeks to 21 months

Weight loss
BMI
Metabolic changes

Pre Op

Liraglutide 8,77% (~10kg)
Semaglutide 12,92%

Post Op 3rd and 6th months

Semaglutide 6% and 10,3% $p < 0.05$
Tirzepatide 9,3% and 15,5% $p < 0.05$

Non responders to GLP-1 (< 5% TWL)

Liraglutide 27,12%
Semaglutide 19,1%
Tirzepatide 2,9%

Multimodal & Colaborative Treatment

THE LANCET
Diabetes & Endocrinology

ARTICLES · Volume 7, Issue 7, P549-559, July 2019

Adjunctive liraglutide treatment in patients with persistent or recurrent type 2 diabetes after metabolic surgery (GRAVITAS): a randomised, double-blind, placebo-controlled trial

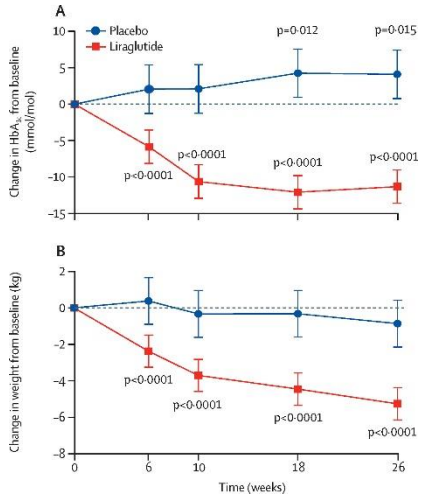
Alexander Dimitri Miras, PhD [A,†] · Belén Pérez-Pevida, MD [A,†] · Madhawi Aldhwayan, MSc [a] · Anna Kamocka, MD [a] · Emma Rose McGlone, MD [a] · Werd Al-Najim, PhD [A,‡] · et al. Show more

Affiliations & Notes · Article Info · Linked Articles (1)

Jan 29, 2016, and May 2, 2018

80 patients with persistent or recurrent type 2 diabetes after metabolic surgery

liraglutide (n=53)
placebo (n=27).



Semaglutide and Tirzepatide for the Management of Weight Recurrence after Sleeve Gastrectomy: A Retrospective Cohort Study

IFSO

Mohammad Jamal, Mohsen Alhashemi, Carol Dsouza, Sara Al-hassani, Wafa Qasem, Sulaiman Almazeedi, Salman Al-Sabah.

OBESITY SURGERY
The Journal of Metabolic Surgery and Allied Care

OBESITY SURGERY
The Journal of Metabolic Surgery and Allied Care

Effects of Semaglutide and Tirzepatide on Recurrent Weight Gain After Bariatric Surgery: A Systematic Review and Meta-analysis

Published: 28 November 2025

Volume 35, pages 5596–5605. (2025)

44% of patients experience recurrent weight gain (RWG)

8 retrospective studies
964 patients were included

SEMAGLUTIDE: − 10.97% of weight loss (TWL)

TIRZEPATIDE: - 13.63% of weight loss (TWL)

Comorbidities

Table 2
Weight-Loss Targets Associated With Clinical Benefits for Different Adiposity-Based Chronic Disease Complications

Obesity Complication or Related Disease	Percent Weight Reduction Resulting in Clinically Meaningful Benefit	Percent Weight Reduction Resulting in Additional Benefit
T2D prevention[76-82]	7%-10% (may vary if medication has glycemic benefits independent of weight loss)	>10% (may vary if medication has glycemic benefits independent of weight loss)
T2D remission[83-87]	10%	>10%
Improved hyperglycemia[88-94]	5%-15%	>15%
Hypertension[88,95,96]	5%-15%	>15%
Dyslipidemia[88,97,98]	5%-15%	>15%
Hepatic steatosis[5,99-101]	5%-10%	>10%
MASH[66,102-106]	≥10% (may vary if medication has benefits independent of weight loss)	≥15% (may vary if medication has benefits independent of weight loss)
OSA[107-110]	7%-10%	>10%
OA[5]	5%-10%	>10%
Stress incontinence[111-114]	5%-10%	>10%
GERD[115-117]	5%-10%	>10%
PCOS[118-123]	5%-15%	>15%
Cancer prevention[124-128]	Requires additional research	
ASCVD and MACE[90,129-139]	10% (may vary if medication has benefits independent of weight loss)	>10% (may vary if medication has benefits independent of weight loss)

Abbreviations: ASCVD = atherosclerotic cardiovascular disease; GERD = gastroesophageal reflux disease; MACE = major adverse cardiovascular events; MASH = metabolic dysfunction-associated steatohepatitis; OA = osteoarthritis; OSA = obstructive sleep apnea; PCOS = polycystic ovary syndrome; T2D = type 2 diabetes.

Comorbidities

Abbreviations: **ABCD**, adiposity-based chronic disease; **BMI**, body mass index; **CVD**, cardiovascular disease; **GERD**, gastroesophageal reflux disease; **HLD**, hyperlipidemia; **HTN**, hypertension; **MASH**, metabolic dysfunction-associated steatohepatitis; **MASLD**, metabolic dysfunction-associated steatotic liver disease; **OA**, osteoarthritis; **ORCD**, obesity-related complications and diseases; **OSA**, obstructive sleep apnea; **PCOS**, polycystic ovary syndrome; **T2D**, type 2 diabetes

Treatment goal

- better metabolic condition (5-10%): lower mortality, MACE, cardio renal disease

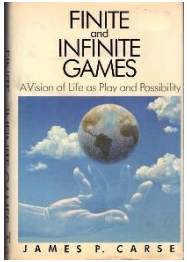
- re stablish endocrine balance (better WL): avoid WR and comorbidities

Treatment directions

A.) surgery eliminated by better pharmacotherapies (hunger game)

B.) co-existing working system (competitive game)

C.) co-working as collaborative therapy (infinitive game)
- surgery as “rescue” treatment
- primary in complex cases
- “oncologic” model (adjuvant/ neo adjuvant)



Conclusion

Bariatric & Metabolic Surgery is NOT becoming obsolete

Instead, it is becoming more specialized and integrated into a broader, more effective, and personalized treatment continuum for obesity, supported by potent pharmacological tools.

Home message

•**Next-Generation Drugs:** Emerging drugs (e.g., retatrutide, cagri-sema) are approaching the weight loss efficacy of sleeve gastrectomy (SG).

•**Combined Approaches:** Future treatment protocols will likely involve combining lower-risk surgery with lifelong medication for complex, relapsing, or high-BMI cases.

•**Ending "Weight Cycling":** The long-term management of obesity aims to stop the cycle of loss and gain, treating it with a combination of structural (surgery) and pharmacological (AOMs) tools

Pharmacotherapy

•**Preoperative Optimization:** AOMs are used to induce weight loss *before* surgery, which can reduce liver volume and surgical complexity.

•**Postoperative "Rescue" Therapy:** AOMs are highly effective for managing weight regain (often 15–25% of patients) or treating insufficient weight loss following surgery, helping to boost loss by an additional 5–10%

•**Bridge Therapy:** patients awaiting surgery, AOMs can prevent the progression of metabolic diseases.

•**Limitations:** high rates of weight regain upon cessation of medication, high cost, and unknown potential long-term side effects, necessitate continuous adherence

Bariatric & Metabolic Surgery

Efficacy: head-to-head studies show that metabolic surgery leads to five times more weight loss than weekly GLP-1 injections at 2 years

"One and Done" Durability: surgery provides superior long-term, sustained weight loss and higher remission rates of type 2 diabetes (T2D) compared to medical therapies

Role in High-BMI/Complex Cases: patients with severe obesity (BMI > 40–50 kg/m²) or severe comorbidities, surgery is considered necessary to achieve long-term, life-saving outcomes.

Safety Profile: modern MBS is very safe, with complication rates comparable to, or lower than, common, low-risk procedures like appendectomy or gallbladder removal

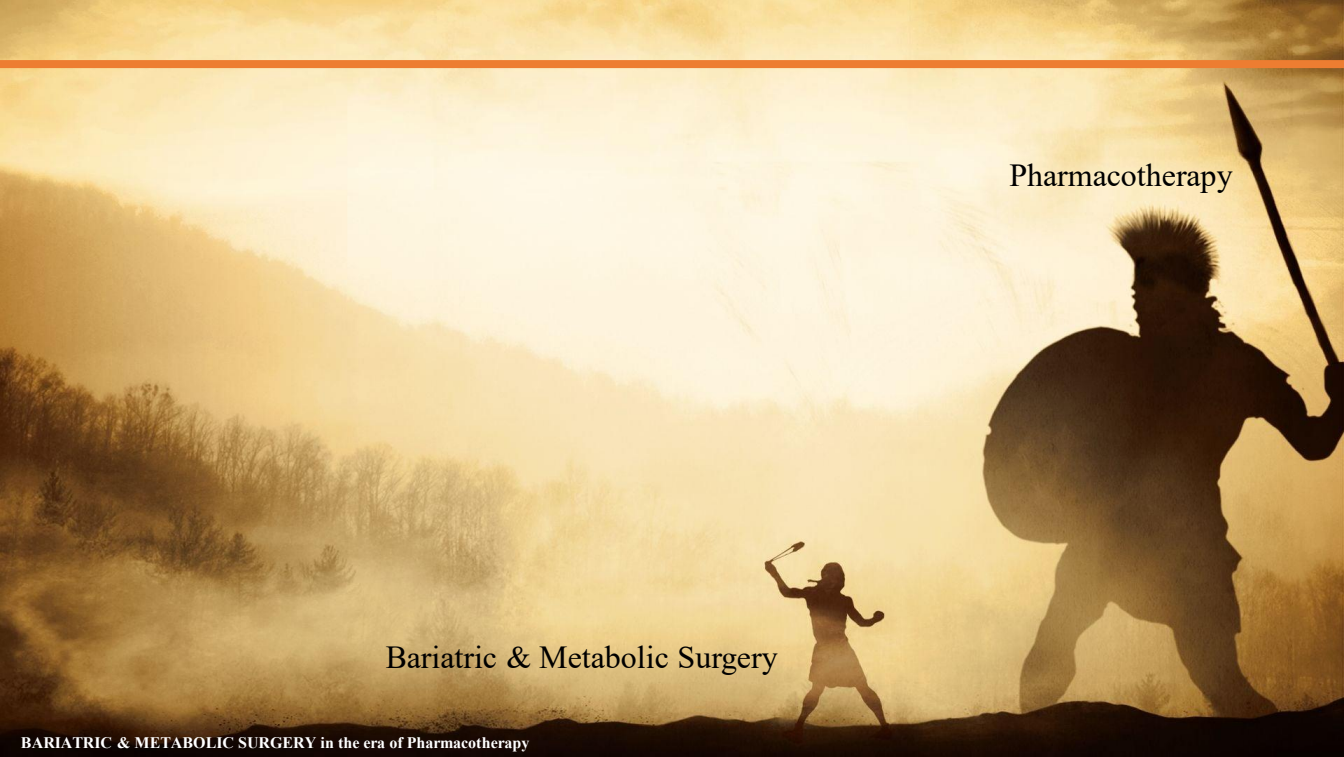
Home message

Clinical Practice

•**Synergy, Not Competition:** The focus is on integrating, rather than comparing these methods. Pharmacotherapy is used to optimize the perioperative phase and treat long-term recurrences.

•**Re-evaluating Eligibility:** The 2022 ASMBS/IFSO guidelines, which expanded access to surgery (BMI > 35, or BMI > 30 with comorbidities). Suggest - trying medication first for lower-BMI (30-35) patients, while reserving surgery for those who fail, and using surgery early for higher-BMI (40+) patients.

•**Personalized Care:** A "phenotype-guided" approach is developing, where treatment is tailored to the patient's specific metabolic profile, rather than just their BMI.


Pharmacotherapy
Bariatric & Metabolic Surgery

Exercise and behavioral strategies

Bariatric & Metabolic Surgery

Pharmacotherapy

Nutrition


Union gives strength
to the humble.
MUCHAS GRACIAS
quotefancy

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