



ANZMOSS

Australian & New Zealand
Metabolic and Obesity Surgery Society



The Future of Bariatric Surgery in the Era of a Medical frenzy



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• Disclosure

- Juan Pablo Pantoja MD FACS
- I have NO relevant disclosures
 - Proctor J&J/Medtronic









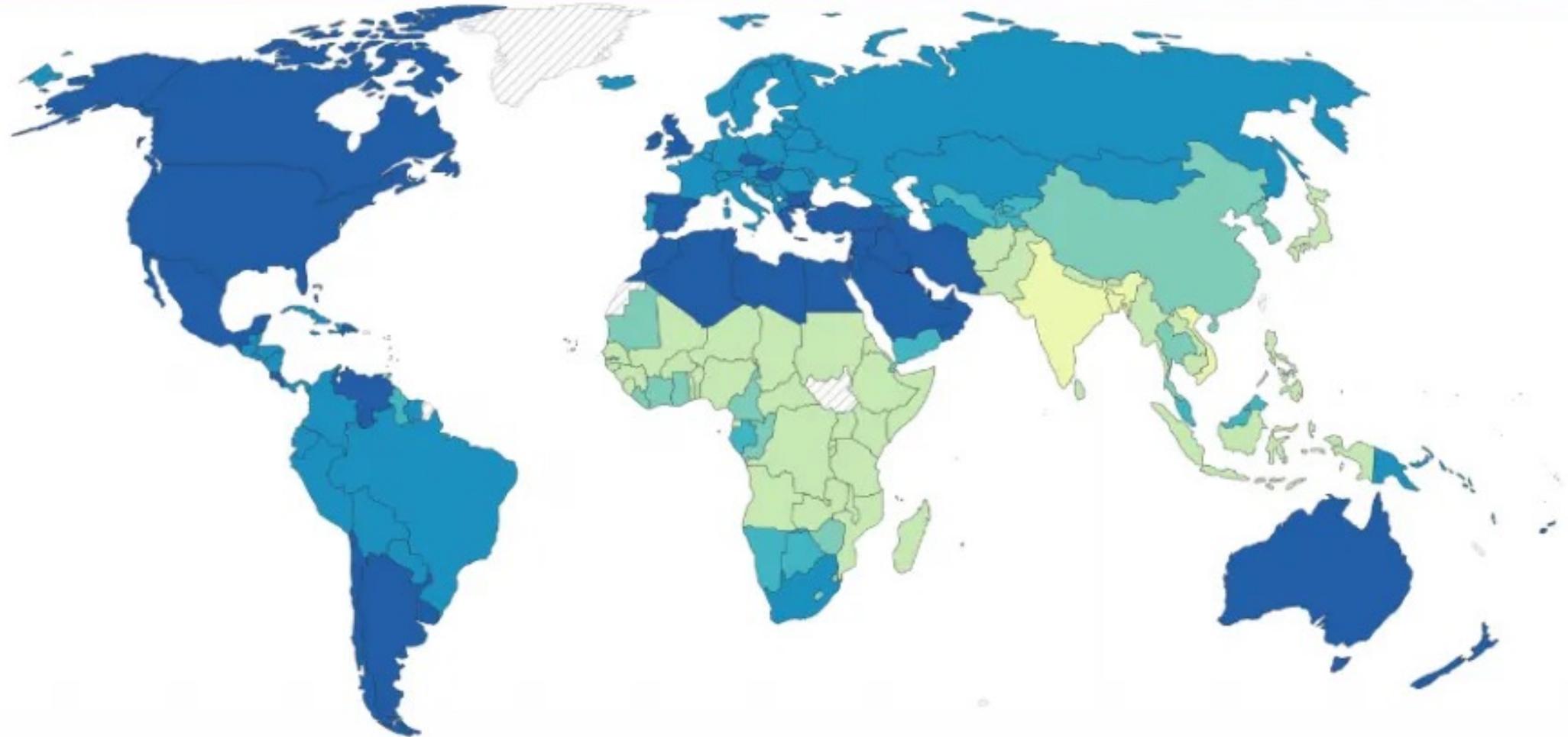


• Learning Objectives

- GLP1R Analogs
 - What's new
- Surgery Role
 - Synergism
- Future
- Personal philosophical perspective

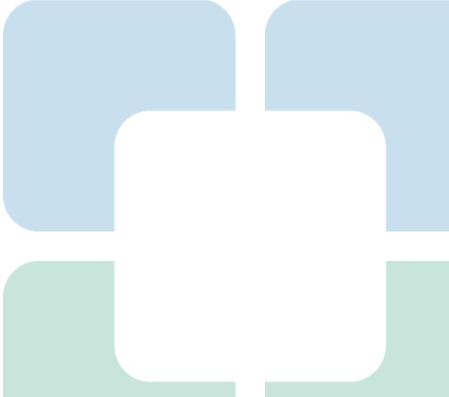
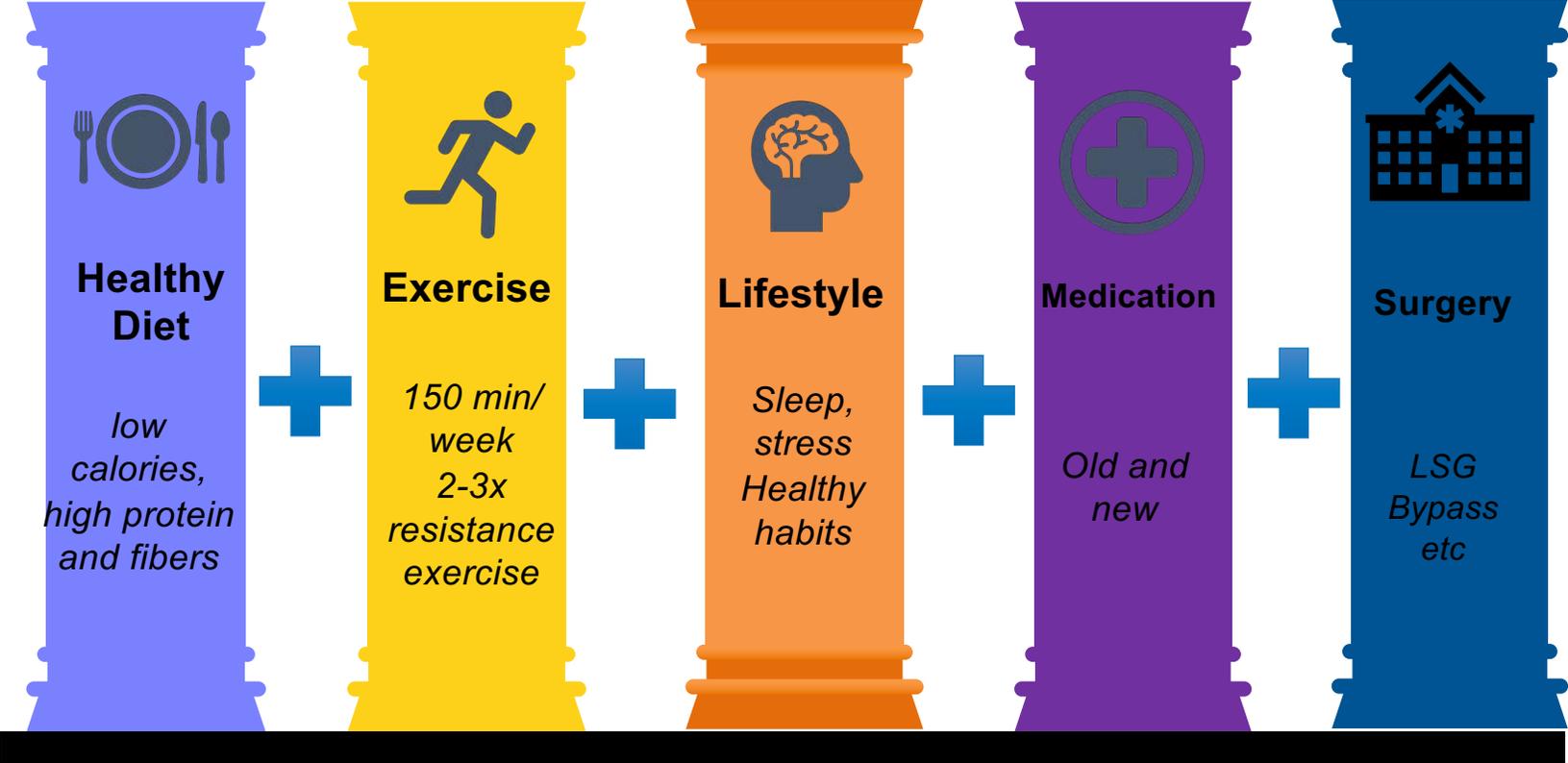


TOP OBESE COUNTRIES IN THE WORLD



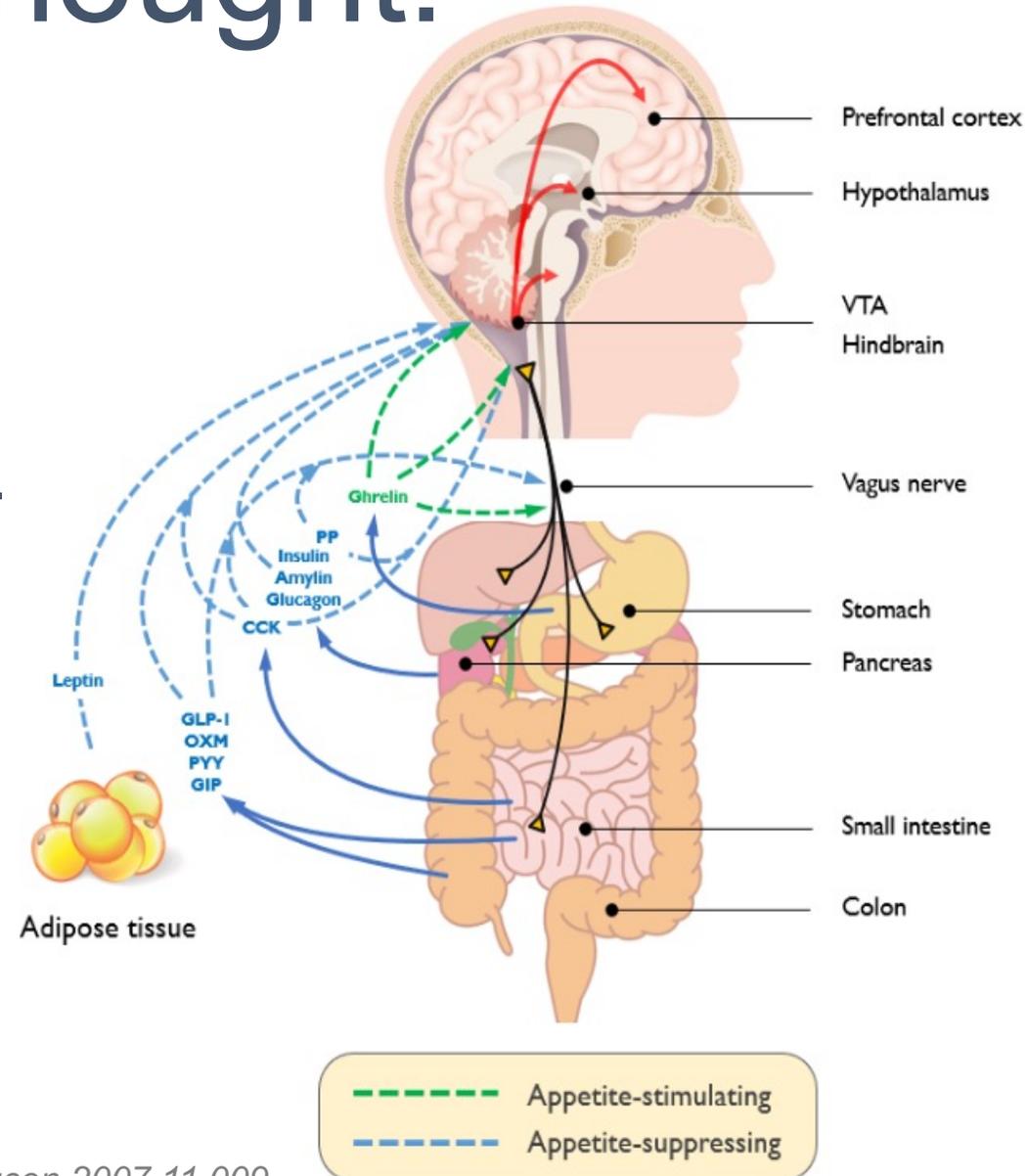
Classic Approach

Pillars



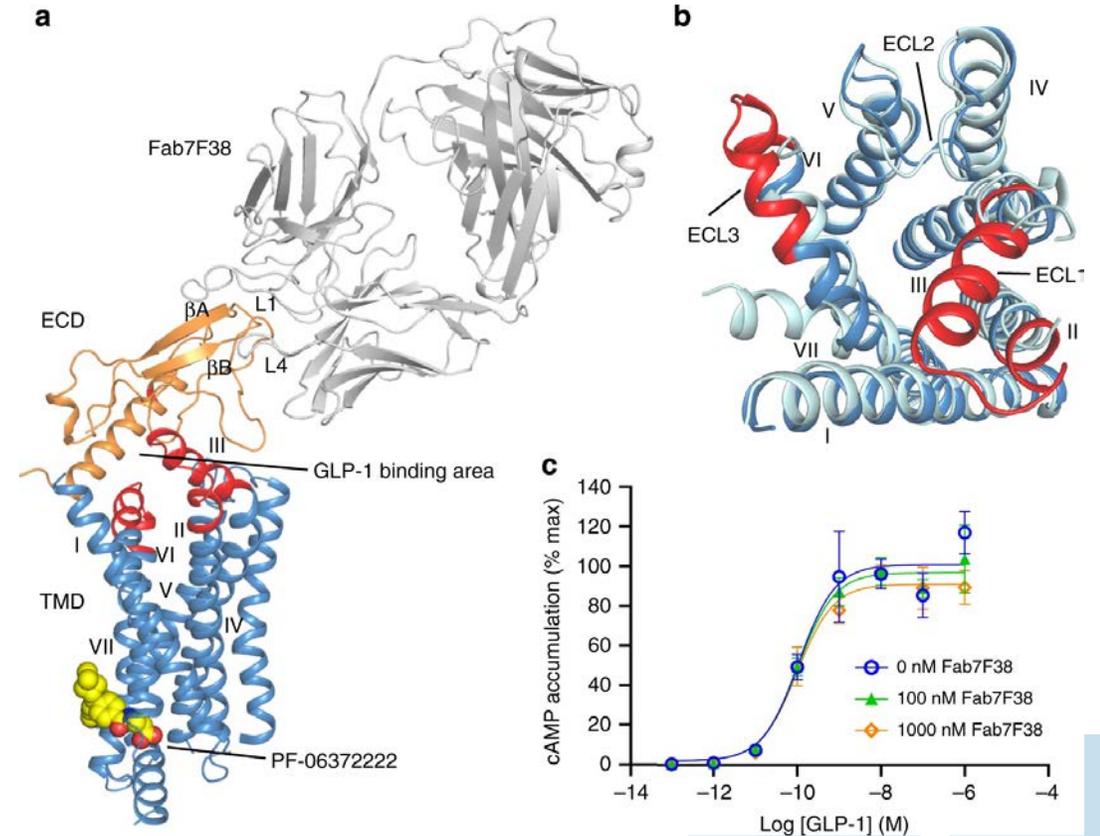
Obesity, Not what we thought!

- Anorexogenic pathway
- Orexigenic pathway
- Amylin, insulin, glucagon- From the pancreas.
- GIP, GLP-1, PYY, Oxyntomodulin- From the small intestine.
- Ghrelin from the stomach.
- Leptin, secreted from fat cell, level is proportional white adipose tissue mass.



GLP-1 RAs — What Are They?

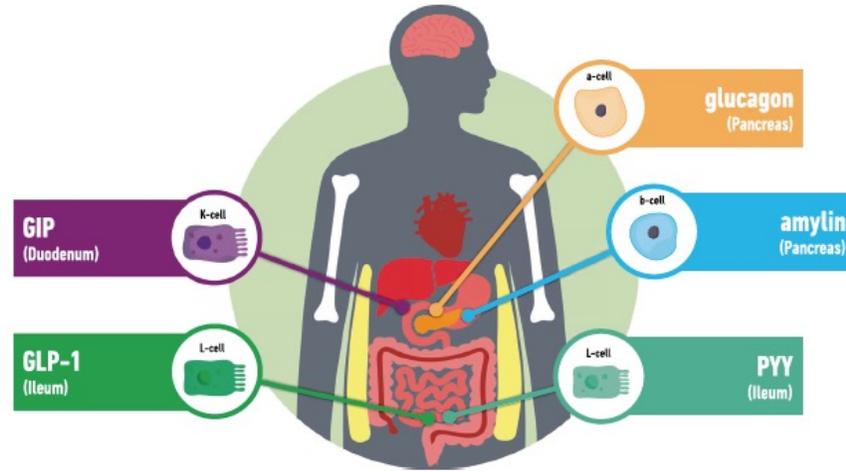
- - Mimic endogenous GLP-1 to:
 - Enhance insulin secretion
 - Suppress appetite
 - Delay gastric emptying
- Examples:
 - Semaglutide (Wegovy/Ozempic)
 - Tirzepatide (Zepbound/Mounjaro)



Pipeline, Targets



| GIP | | |
|-----|--------------------------|---------------|
| | ↓ appetite* | ↓ nausea |
| | ↑ insulin | ↑ glucagon |
| | ↓ gastric acid secretion | |
| | ↑ lipid deposition | ↑ lipogenesis |
| | ↓ bone resorption | |



| Glucagon | | |
|----------|------------------------------|--|
| | ↓ appetite ↓ food intake | ↑ nausea |
| | ↑ insulin | |
| | ↑ hepatic glucose production | ↑ lipid oxidation ↓ hepatic lipid synthesis |
| | ↓ gastric emptying | |
| | ↑ energy expenditure | |
| | ↑ heart rate | |

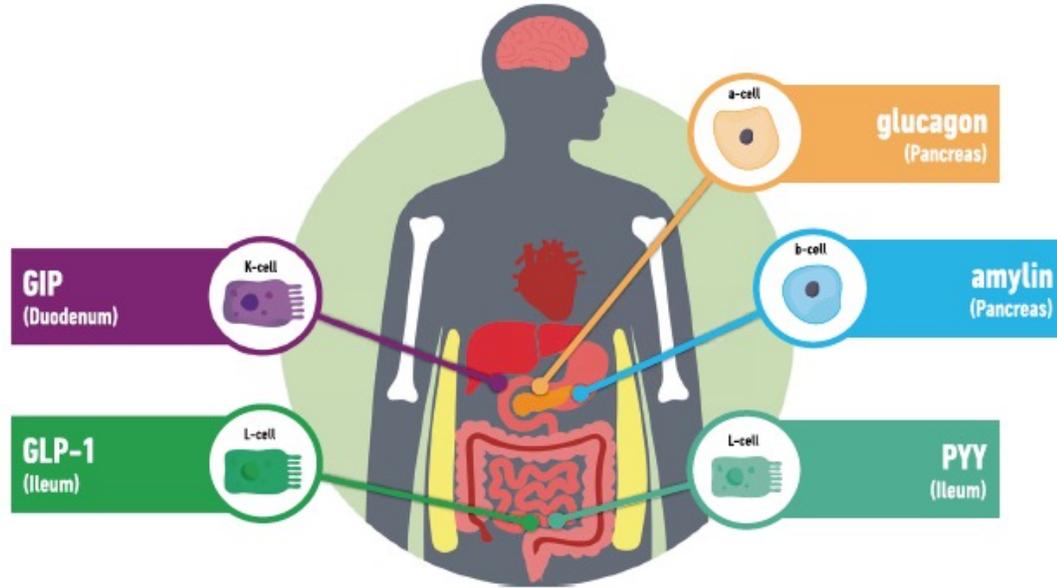
| GLP-1 | | |
|-------|-----------------------------|--------------|
| | ↓ appetite ↓ food intake | ↑ nausea |
| | ↑ insulin, | ↓ glucagon |
| | ↓ gastric emptying | |
| | ↑ lipolysis | |
| | ↑ cardioprotection | ↑ heart rate |

| Amylin | | |
|--------|-----------------------|-----------------------|
| | ↓ appetite | ↓ food intake |
| | ↓ glucagon | |
| | ↑ energy expenditure* | |
| | ↓ gastric emptying | |
| | ↓ osteoclast activity | ↑ osteoblast activity |

| PYY | | |
|-----|-----------------------------|----------|
| | ↓ appetite ↓ food intake | ↑ nausea |
| | ↓ gastric emptying | |
| | ↑ energy expenditure* | |

Pipeline, Targets

Key:
 3 Phase 3
 2 Phase 2
 1 Phase 1
 Pre clinical



GLP-1 agonists

GLP-1 Injectable

- 3 Semaglutide 7.2mg - NN

GLP-1 Oral

- 3 Semaglutide 50mg* - NN
- 3 Orforglipron - Eli Lilly
- 2 Danulipron - Pfizer
- 1 CT996 - Carmot Therapeutics

GLP-1 + GIP agonists

- 3 Tirzepatide* - Eli Lilly
- 1 SCO-094 - Scohia Pharma
- 1 VK2735 oral/subcut - Viking Therapeutics
- 1 CT388 - Carmot Therapeutics

GLP-1 + GIP antagonist

- 2 AMG 133 - Amgen

GIP agonist

- Pre ZP6590 - Zealand Pharma

amylin agonists

- 2 Cagrilintide - NN
- 1 Long acting amylin agonist - Eli Lilly
- 1 ZP8396 - Zealand Pharma
- 1 AZD6234 - AstraZeneca

GLP-1 + amylin agonists

- 3 CagriSema - NN
- 1 Oral amycretin - NN

GLP-1 + GIP + Glucagon agonist

- 3 Retatrutide - Eli Lilly
- 1 HM15211 - Hanmi Pharmaceutical

GLP-1 + glucagon agonists

- 3 Survodutide - Boehringer Ingelheim
- 2 Efinopegdutide - Hanmi Pharmaceutical
- 2 Mazdutide - Eli Lilly
- 2 Pemvidutide ALT-801 - Altimune

Glucagon agonist

- 1 HM15136 - Hanmi Pharmaceutical

PYY agonists

- 2 NNC0165-1875 - NN
- 1 NNC0165-1562 - NN
- 1 Y-14 - Zhipp

GLP-1 + PYY agonists

- 2 NNC0165-1875 + Semaglutide - NN
- 1 NNC0165-1562 + Semaglutide - NN

International Journal of Obesity www.nature.com/ijo

REVIEW ARTICLE OPEN

Clinical Research

What is the pipeline for future medications for obesity?

Eka Melson ^{1,4}, Uzma Ashraf ^{1,4}, Dimitris Papamargaritis ^{1,2,3,5} and Melanie J. Davies ^{1,2}

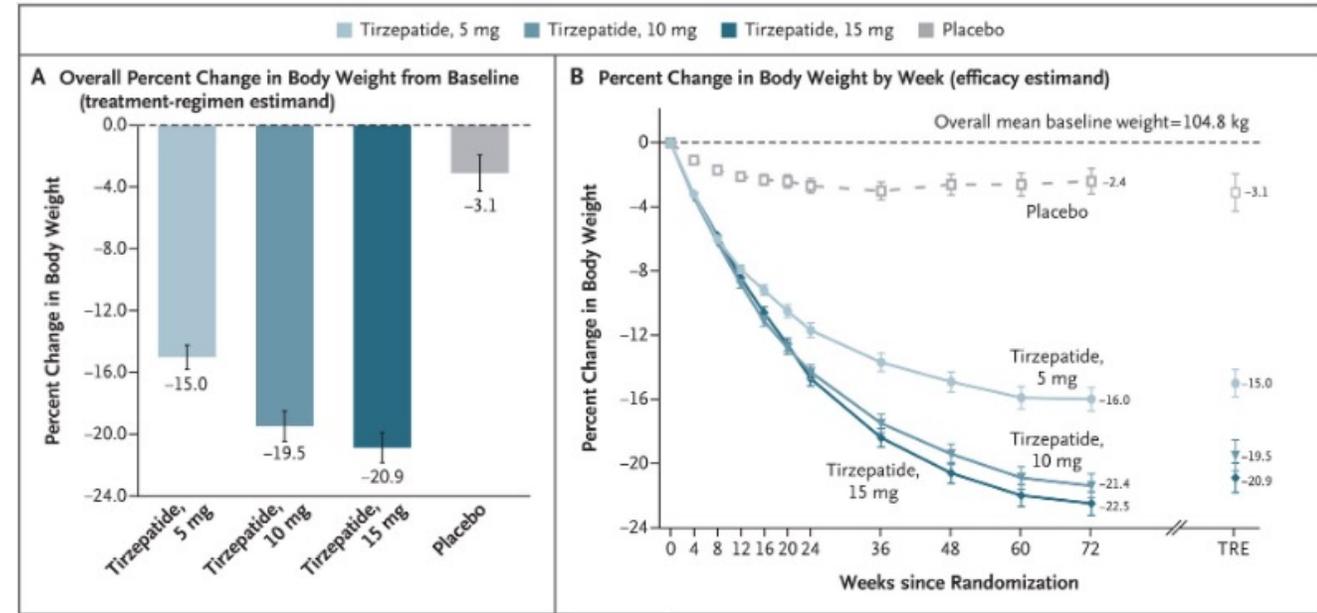
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Tirzepatide (Surmont 1)

Tirzepatide Once Weekly for the Treatment of Obesity

Ania M. Jastreboff, M.D., Ph.D., Louis J. Aronne, M.D., Nadia N. Ahmad, M.D., M.P.H., Sean Wharton, M.D., Pharm.D., Lisa Connery, M.D., Breno Alves, M.D., Akihiro Kiyosue, M.D., Ph.D., Shuyu Zhang, M.S., Bing Liu, Ph.D., Mathijs C. Bunck, M.D., Ph.D., and Adam Stefanski, M.D., Ph.D. for the SURMOUNT-1 Investigators*

- GIP Ra and GLP-1 Ra
 - Double-blind
 - Randomized, controlled trial
 - 2539 adults w/o DM
- Once-weekly, subc
 - Tirzepatide (5 mg, 10 mg, or 15 mg)
 - Placebo
 - 72 weeks (20-week d-e period)

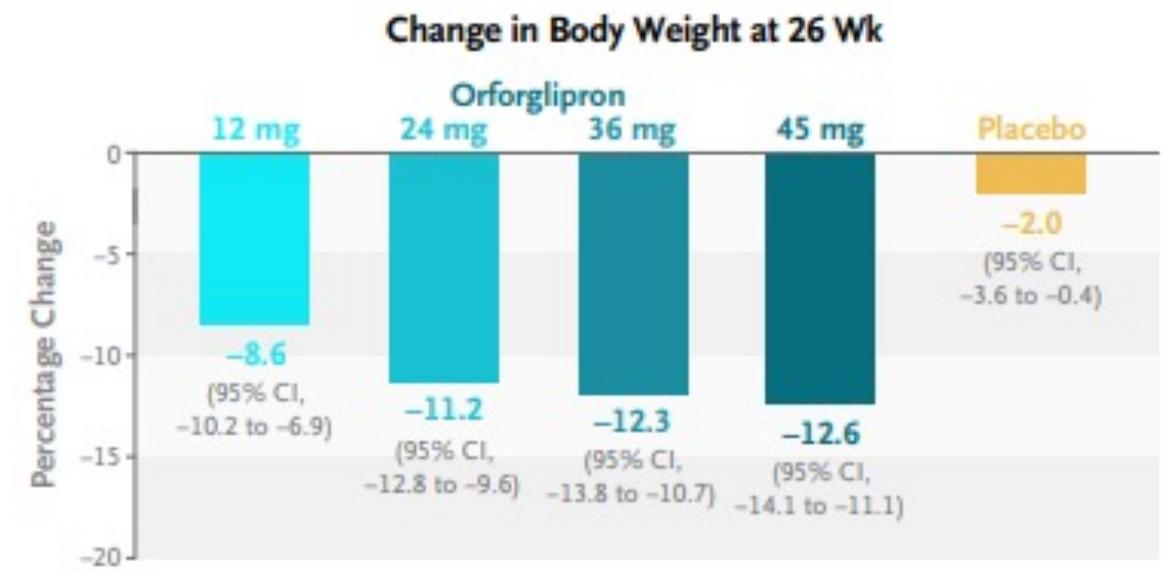
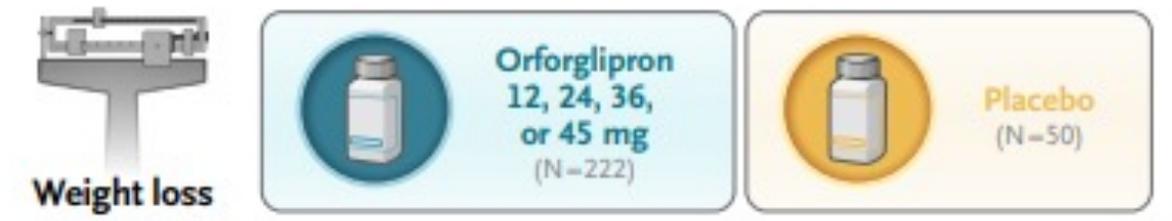


- Average BW reductions:
 - 15.0% (5 mg)
 - 19.5% (10 mg)
 - 20.9% (15 mg)
 - 3.1% with placebo.

Orfoglipron

- 272 Patients
 - Randomized
 - Double-blind
 - Weight Loss at W36:
 - Orforglipron 9.4 - 14.7% BWL
 - Placebo 2.3% BWL

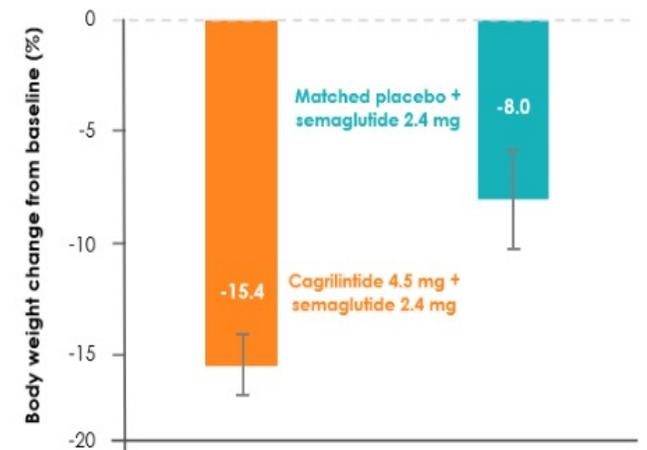
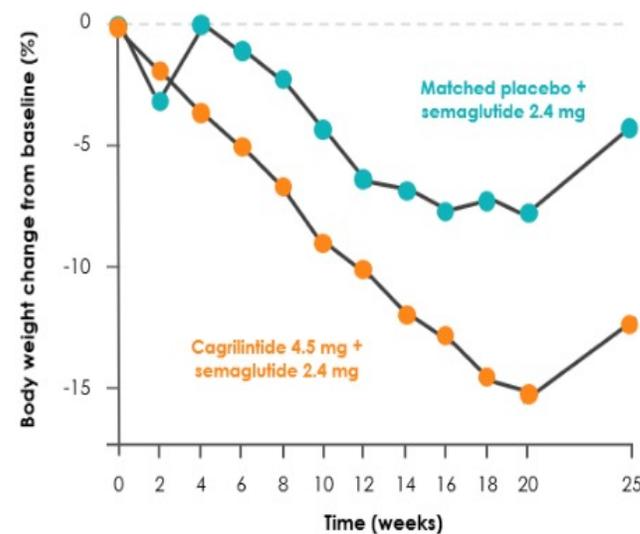
ORIGINAL ARTICLE
Daily Oral GLP-1 Receptor Agonist Orforglipron for Adults with Obesity
Sean Wharton, M.D., Thomas Blevins, M.D., Lisa Connery, M.D., Julio Rosenstock, M.D., Sohini Raha, Ph.D., Rong Liu, Ph.D., Xiaosu Ma, Ph.D., Kieren J. Mather, M.D., Axel Haupt, M.D., Deborah Robins, M.S., Edward Pratt, M.D., Christof Kazda, M.D., et al., for the GZGI Investigators*



Cagrisema (cagrilintide + semaglutide)

- Amylin analogue (Cagrilintide) + Semaglutide 2.4 mg.
 - OW injection
 - No plateau at 48 w
 - 15.4% TBWL at 20
 - 2x than Semaglutide alone

Safety, tolerability, pharmacokinetics, and pharmacodynamics of concomitant administration of multiple doses of cagrilintide with semaglutide 2.4 mg for weight management



Retatrutide

- 338 Patients

- Double-blind
- Randomized
- Placebo-controlled

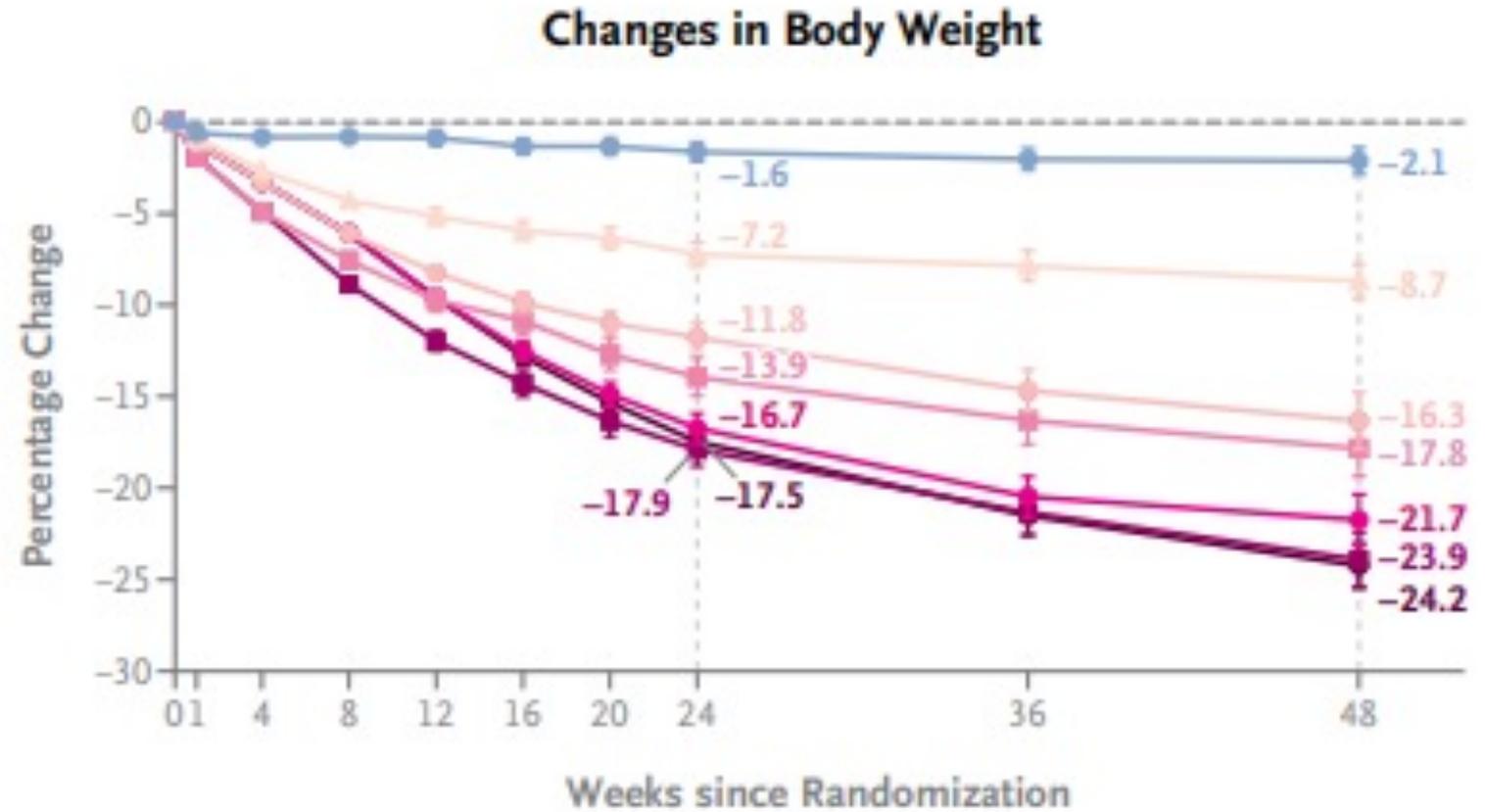
- OW 48

- 1 mg 8.7%
- 4 mg 17.1%
- 8 mg 22.8%
- 12 mg 24.2%
- Pb 2.1%

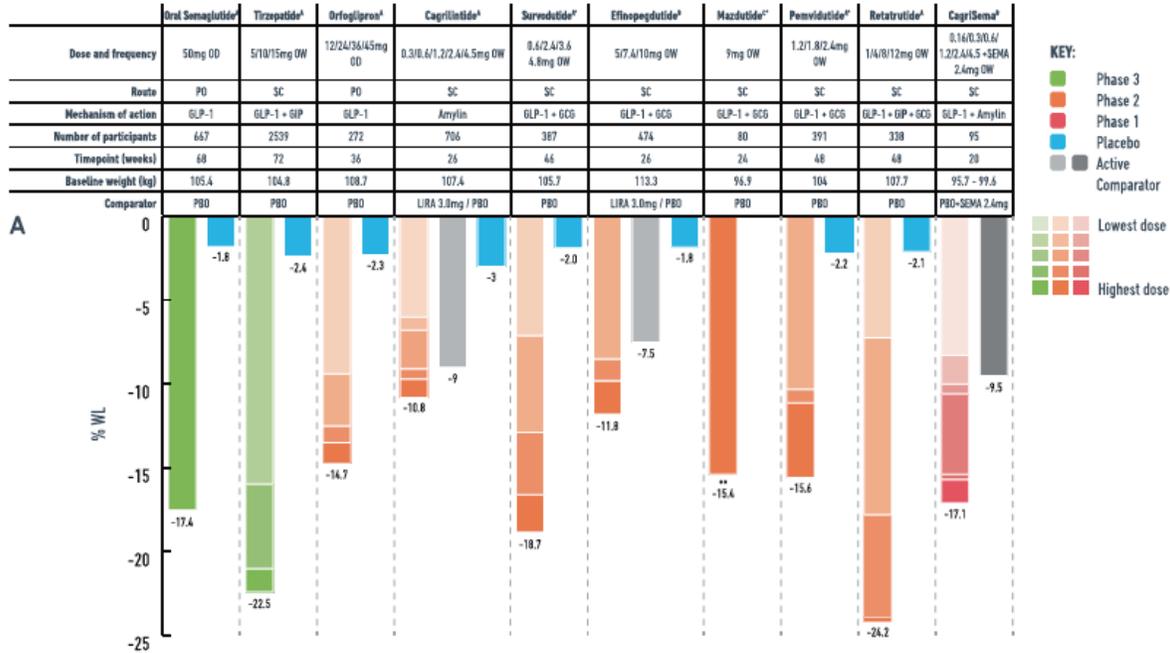
ORIGINAL ARTICLE

Triple-Hormone-Receptor Agonist Retatrutide for Obesity — A Phase 2 Trial

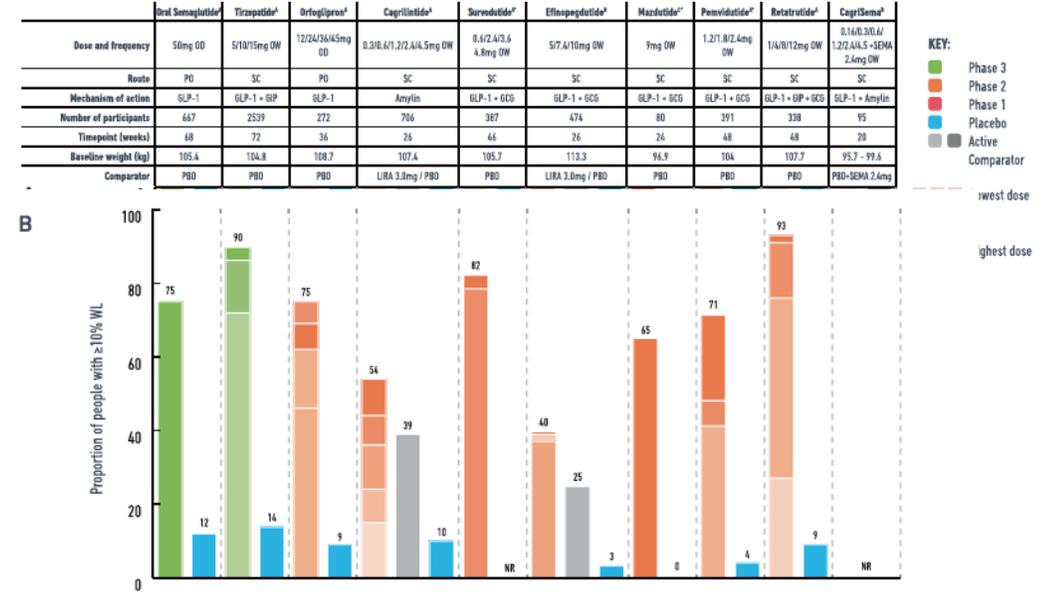
Ania M. Jastreboff, M.D., Ph.D., Lee M. Kaplan, M.D., Ph.D., Juan P. Frías, M.D., Qiwei Wu, Ph.D., Yu Du, Ph.D., Sirel Gurbuz, M.D., Tamer Coskun, M.D., Ph.D., Axel Haupt, M.D., Ph.D., Zvonko Milicevic, M.D., and Mark L. Hartman, M.D. for the Retatrutide Phase 2 Obesity Trial Investigators*



Medical Treatment, Targets

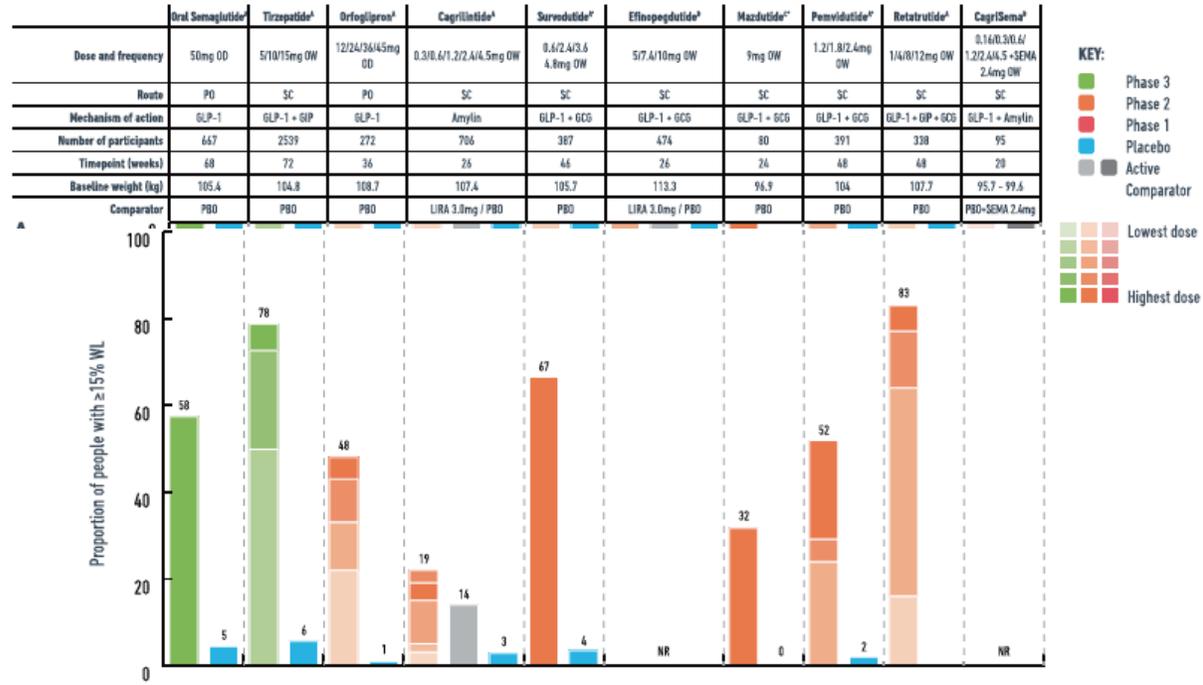


24% TBWL

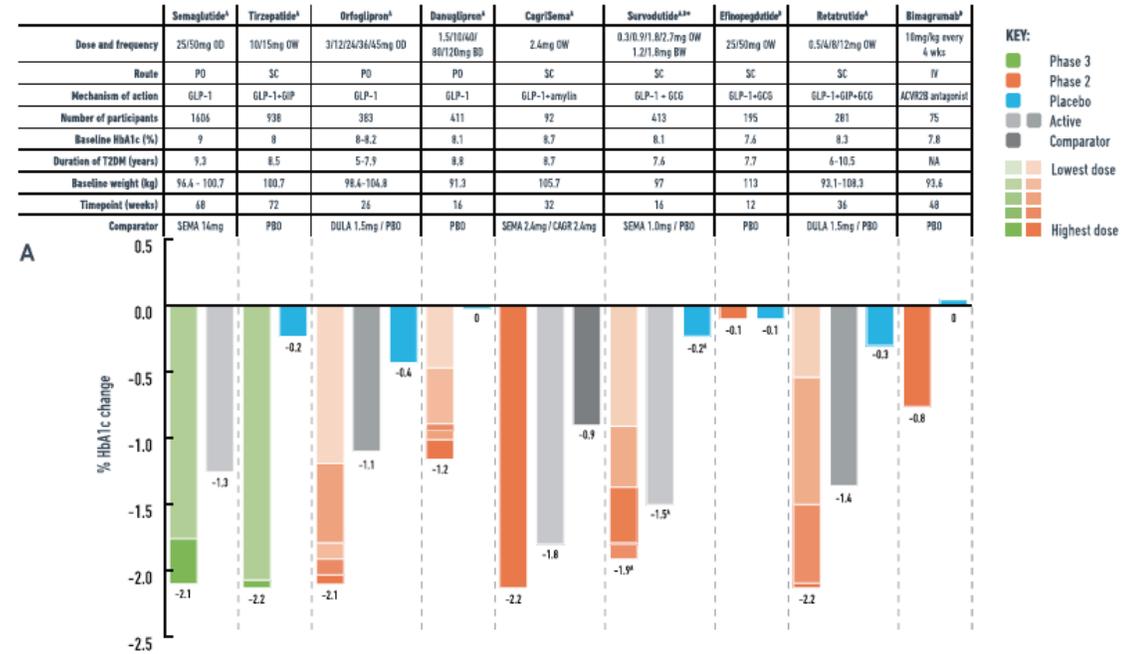


93% >10% TBWL

Medical Treatment, Targets

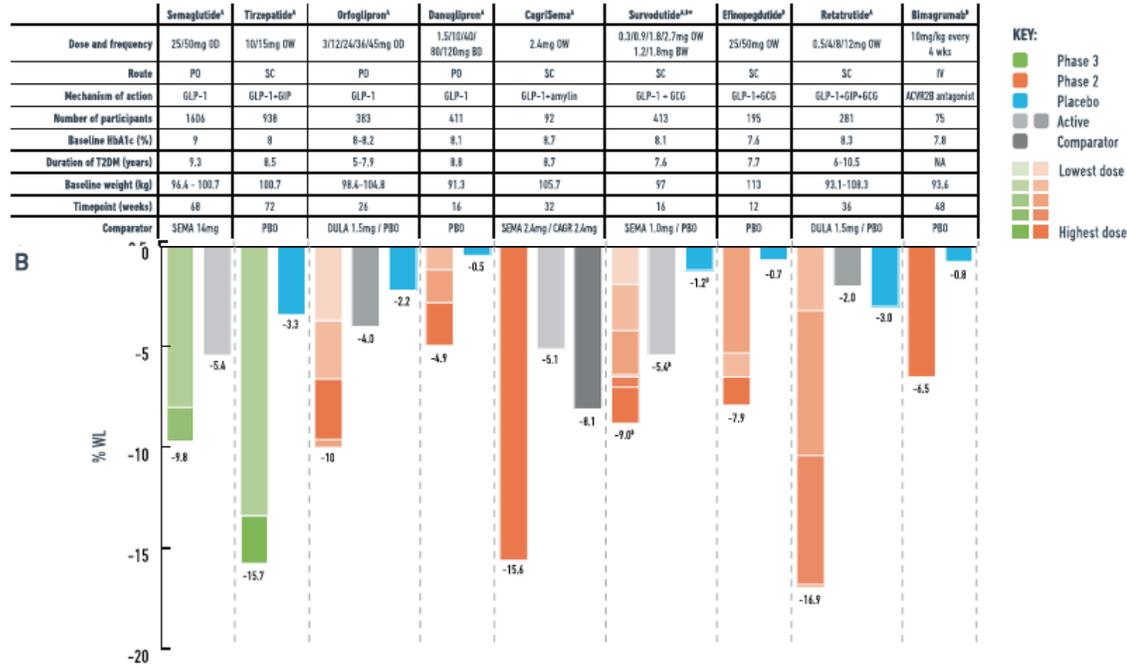


83% >15% TBWL

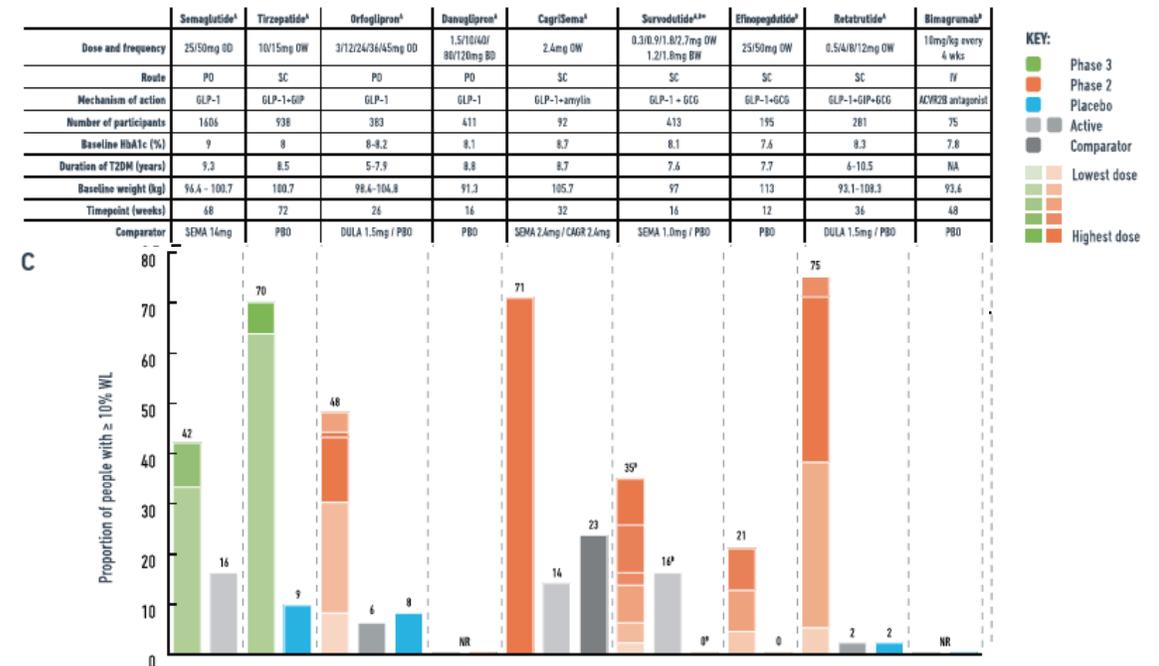


-2.2 % Change HbA1c

Medical Treatment, Targets

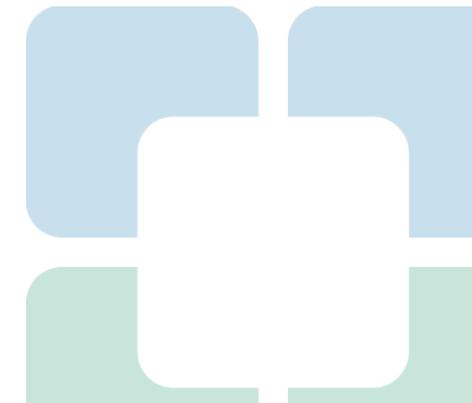
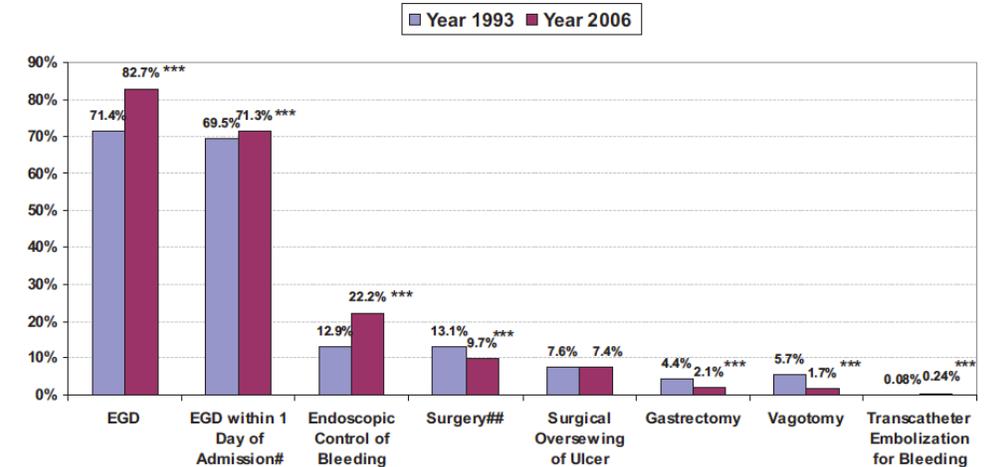
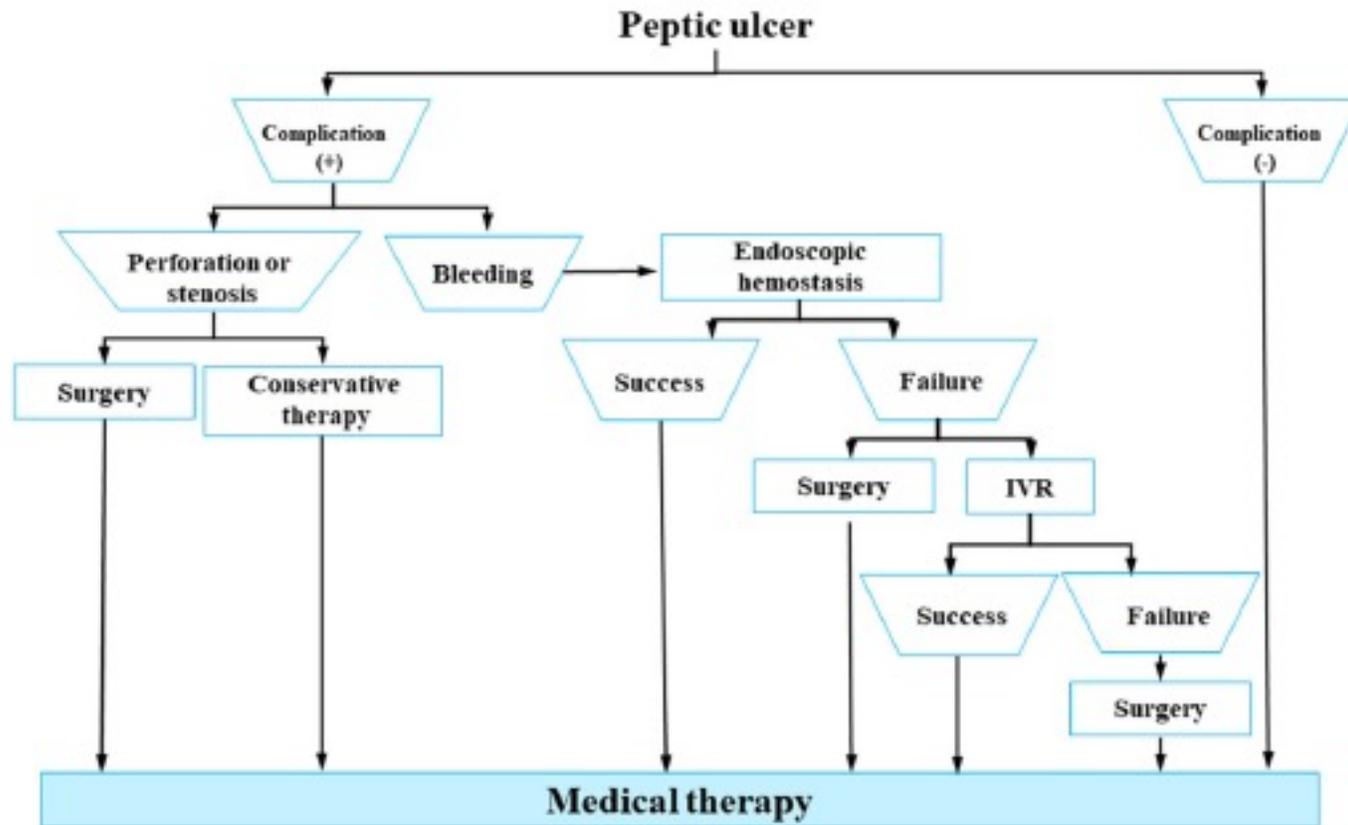


16.9% TBWL



75% >10% TBWL

Peptic Ulcer Story



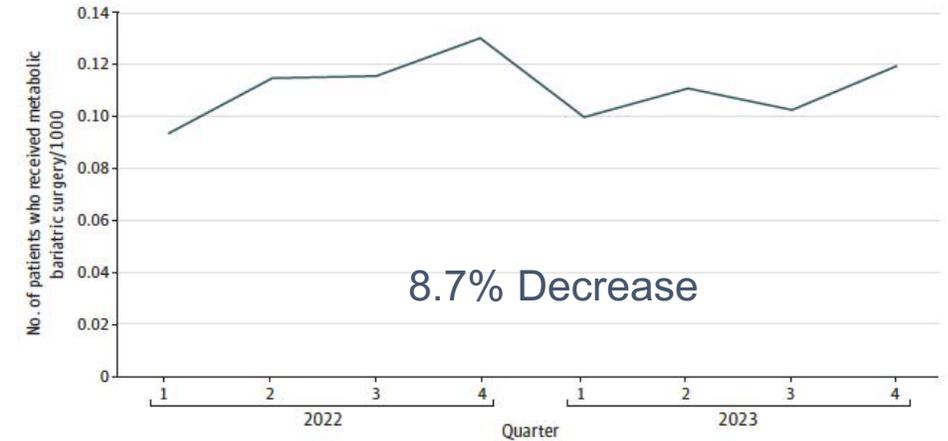
Medical Treatment

Table. Characteristics of Patients Without Diabetes Prescribed GLP-1 RA, Undergoing Metabolic Bariatric Surgery, or Neither in 2023

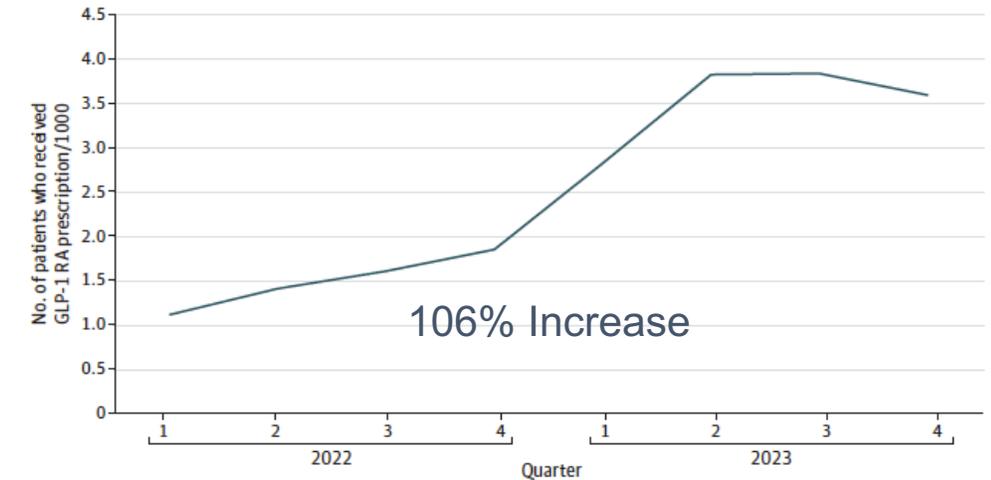
| Characteristic | Patients, No. (%) (N = 13 448 870) ^a | | | P value |
|---------------------------|---|------------------------------------|---|---------|
| | Metabolic bariatric surgery (n = 4662) | GLP-1 RA prescription (n = 58 193) | Neither treatment (n = 13 386 015) ^b | |
| Age, y | | | | |
| 18-35 | 863 (17.9) | 6976 (12.0) | 3 718 580 (27.8) | <.001 |
| 36-50 | 1624 (33.6) | 16 683 (28.6) | 2 928 520 (21.9) | |
| 51-65 | 1151 (23.8) | 17 323 (29.7) | 2 637 300 (19.7) | |
| ≥66 | 1024 (21.2) | 17 211 (29.5) | 4 101 620 (30.6) | |
| Sex^c | | | | |
| Female | 3681 (76.2) | 44 858 (76.9) | 6 939 920 (51.8) | <.001 |
| Male | 977 (20.2) | 13 294 (22.8) | 6 435 320 (48.1) | |
| Unknown | 4 (0.1) | 41 (0.1) | 10 780 (0.1) | |
| Comorbidities, No. | | | | |
| 0 | 482 (10.0) | 17 397 (29.8) | 7 867 380 (58.8) | <.001 |
| 1 | 1171 (24.2) | 19 333 (33.1) | 2 932 120 (21.9) | |
| 2-3 | 2146 (44.4) | 17 420 (29.8) | 1 952 940 (14.6) | |
| ≥4 | 863 (17.9) | 4043 (6.9) | 633 580 (4.7) | |

0.5% of patients w/o DM receiving GLP-1 Ras
0.01% receiving Surgery

A Metabolic bariatric surgery



B GLP-1 RA prescription

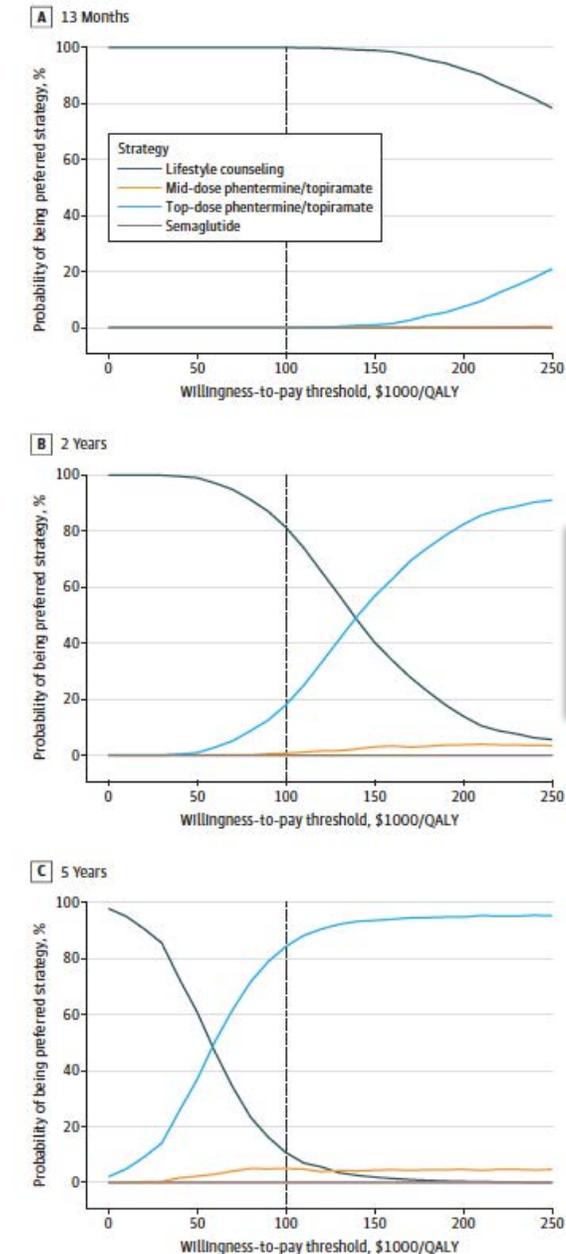


Costs

Table 2. Cost-Effectiveness Results Over Each Time Horizon

| Measure | Lifestyle counseling | Liraglutide | Phentermine and topiramate | | |
|-----------------------------------|----------------------|---------------------------------|-----------------------------------|----------|-------------|
| | | | Mid-dose | Top-dose | Semaglutide |
| 13 mo | | | | | |
| Costs, mean, \$ | 5052 | 20 828 | 7082 | 7212 | 21 610 |
| Incremental costs, mean, \$ | 0 [Reference] | 15 776 | 2030 | 2160 | 16 557 |
| QALY, mean | 0.714 | 0.718 | 0.719 | 0.721 | 0.726 |
| Incremental QALYs, mean | 0 [Reference] | 0.003 | 0.005 | 0.007 | 0.012 |
| ICER, \$/QALY gained ^a | 0 [Reference] | Strictly dominated ^b | Extendedly dominated ^c | 317 010 | 3 029 080 |
| 2 y | | | | | |
| Costs, mean, \$ | 9043 | 34 665 | 11 860 | 11 641 | 37 287 |
| Incremental costs, mean, \$ | 0 [Reference] | 25 622 | 2816 | 2597 | 28 244 |
| QALY, mean | 1.298 | 1.307 | 1.312 | 1.316 | 1.332 |
| Incremental QALYs, mean | 0 [Reference] | 0.010 | 0.014 | 0.019 | 0.035 |
| ICER, \$/QALY gained ^a | 0 [Reference] | Strictly dominated ^b | Strictly dominated ^b | 138 045 | 1 598 963 |
| 5 y | | | | | |
| Costs, mean (\$) | 21 732 | 74 769 | 26 404 | 25 086 | 84 064 |
| Incremental costs, mean, \$ | 0 [Reference] | 53 037 | 4672 | 3354 | 62 333 |
| QALY, mean | 3.068 | 3.100 | 3.117 | 3.127 | 3.181 |
| Incremental QALYs, mean | 0 [Reference] | 0.032 | 0.050 | 0.059 | 0.113 |
| ICER, \$/QALY gained ^a | 0 [Reference] | Strictly dominated ^b | Strictly dominated ^b | 56 876 | 1 094 349 |

Figure 3. Cost-Effectiveness Acceptability Curves



JAMA Network | **Open**

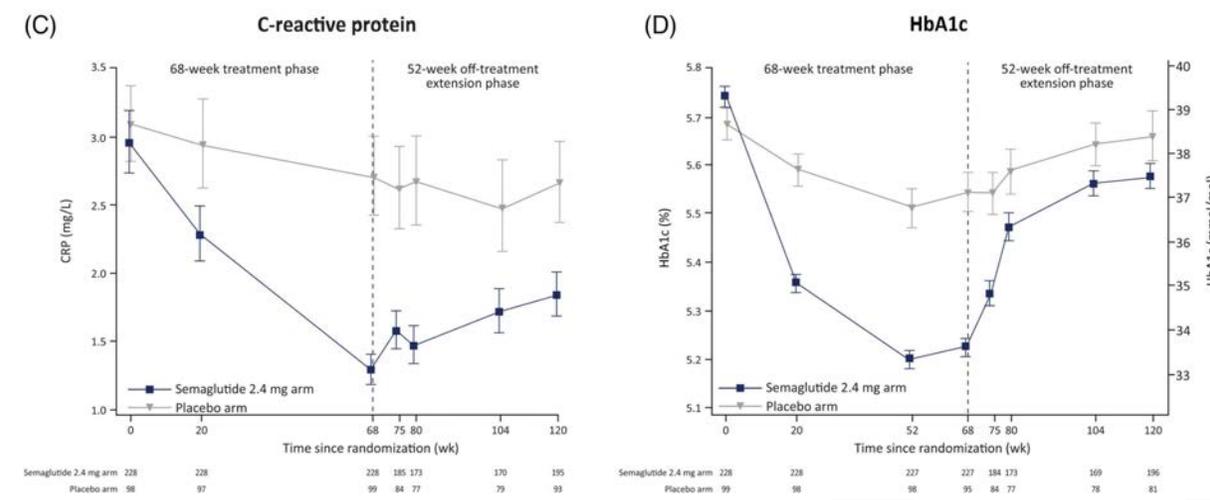
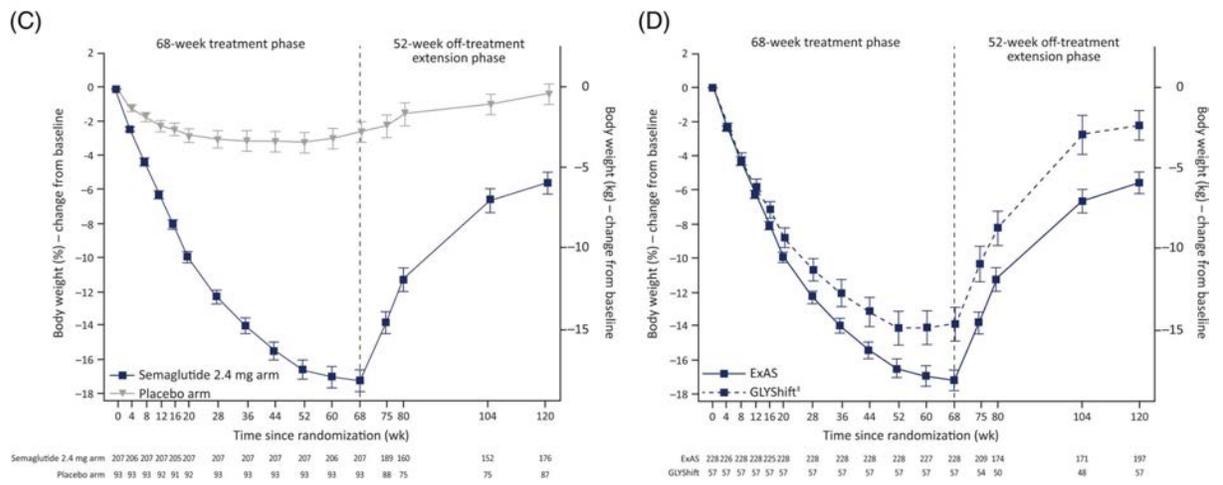
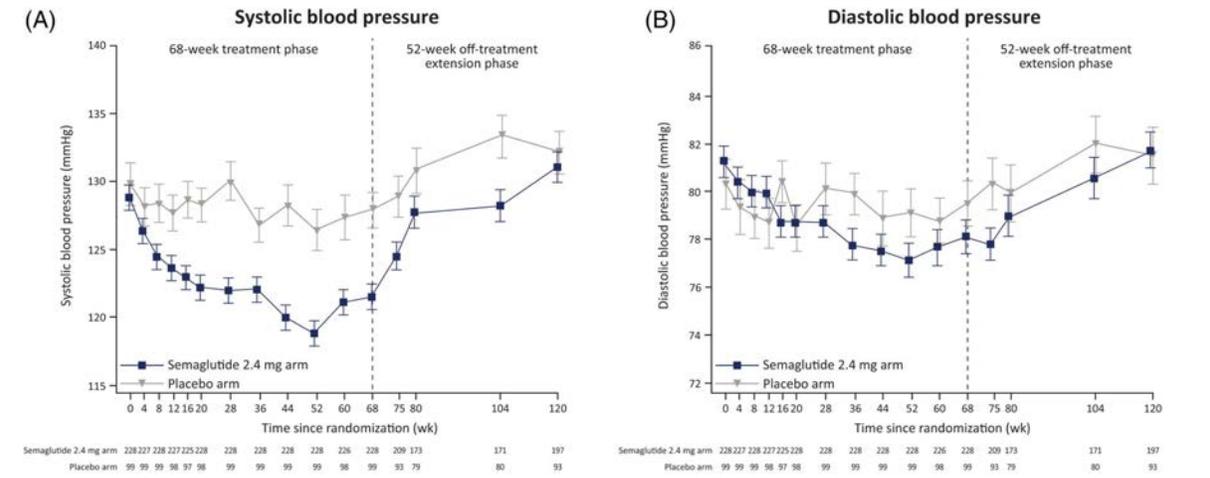
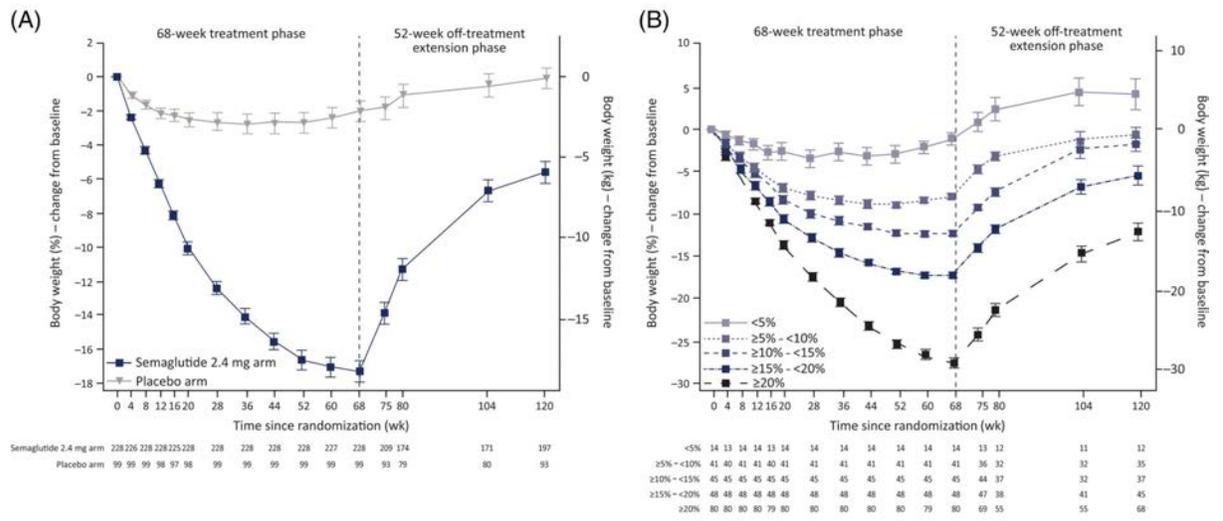
Original Investigation | Nutrition, Obesity, and Exercise
Cost-Effectiveness of Pharmacotherapy for the Treatment of Obesity in Adolescents

Francesca Lim, MS; Brandon K. Bellows, PharmD, MS; Sarah Xinhui Tan, BS; Zainab Aziz, BS; Jennifer A. Woo Baidal, MD, MPH; Aaron S. Kelly, PhD; Chin Hur, MD, MPH

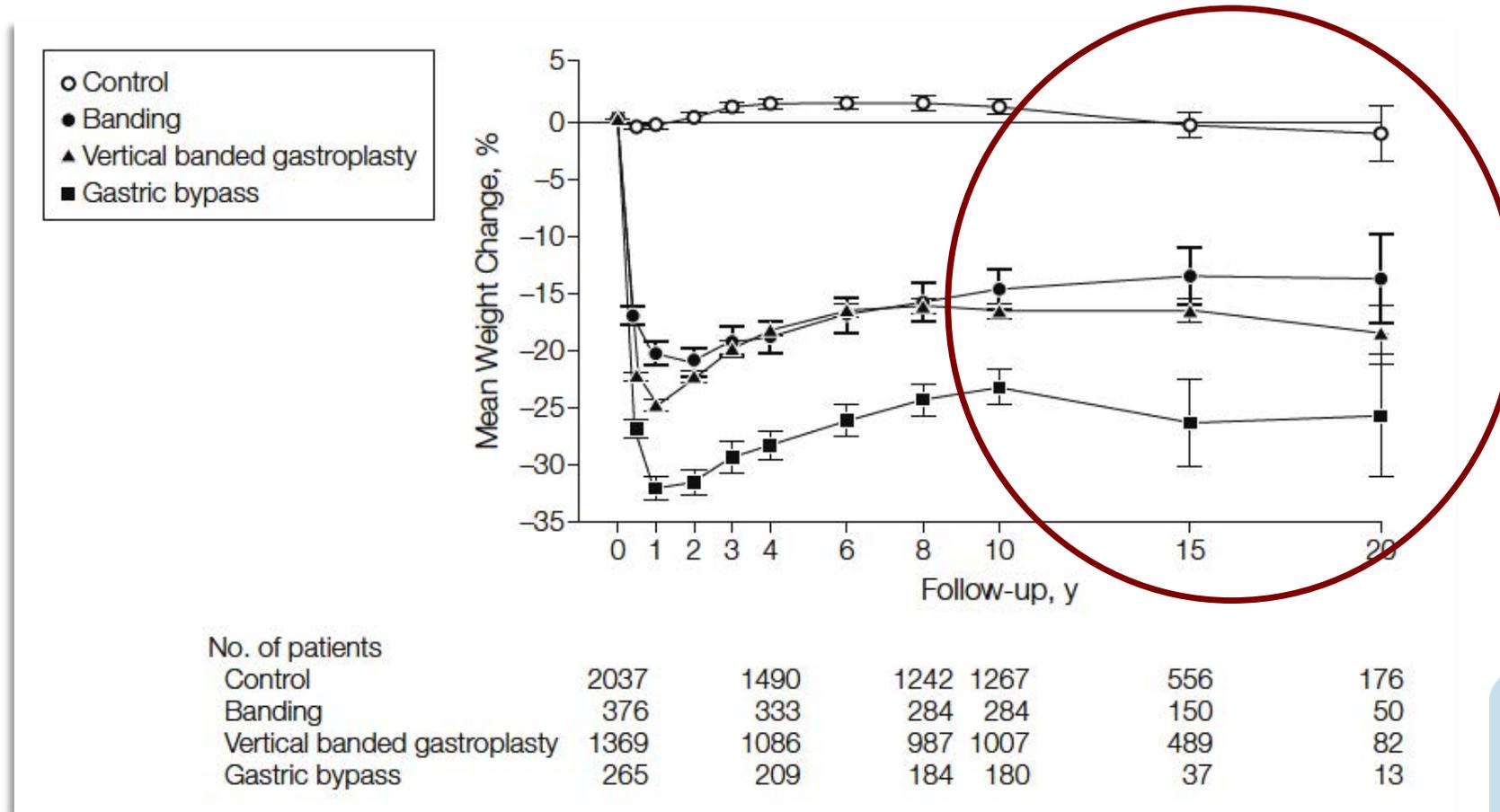
Weight Recurrence

Weight regain and cardiometabolic effects after withdrawal of semaglutide: The STEP 1 trial extension

John P. H. Wilding D.M.¹ | Rachel L. Batterham MBBS^{2,3,4} |
Melanie Davies M.D.^{5,6} | Luc F. Van Gaal M.D.⁷ | Kristian Kandler M.D.⁸ |
Katerina Konakli PhD⁹ | Ildiko Lingvay M.D.⁹ | Barbara M. McGowan MD¹⁰ |
Tugce Kalayci Oral MD⁹ | Julio Rosenstock M.D.¹¹ |
Thomas A. Wadden Ph.D.¹² | Sean Wharton M.D.¹³ | Koutaro Yokote MD¹⁴ |
Robert F. Kushner M.D.¹⁵ | STEP 1 Study Group

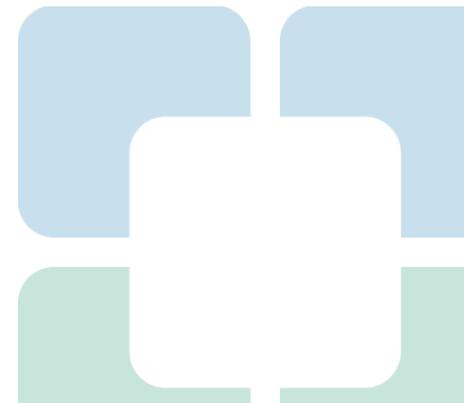


Weight Recurrence, BS



Weight Loss Outcomes

- GLP-1 Ras
 - Weight loss: 15–22%
 - Most effective non-surgical treatment to date
- Bariatric Surgery
 - Average weight loss: 25–35%
 - More durable results, especially for very high BMI



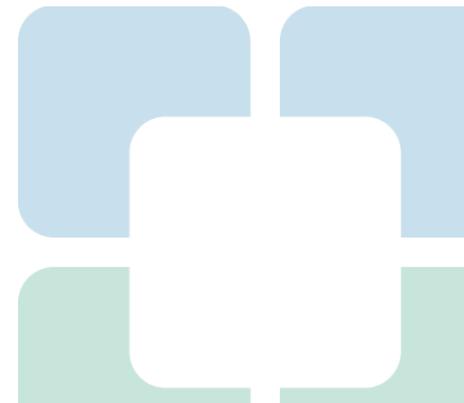


The Future of the Obesity Epidemic

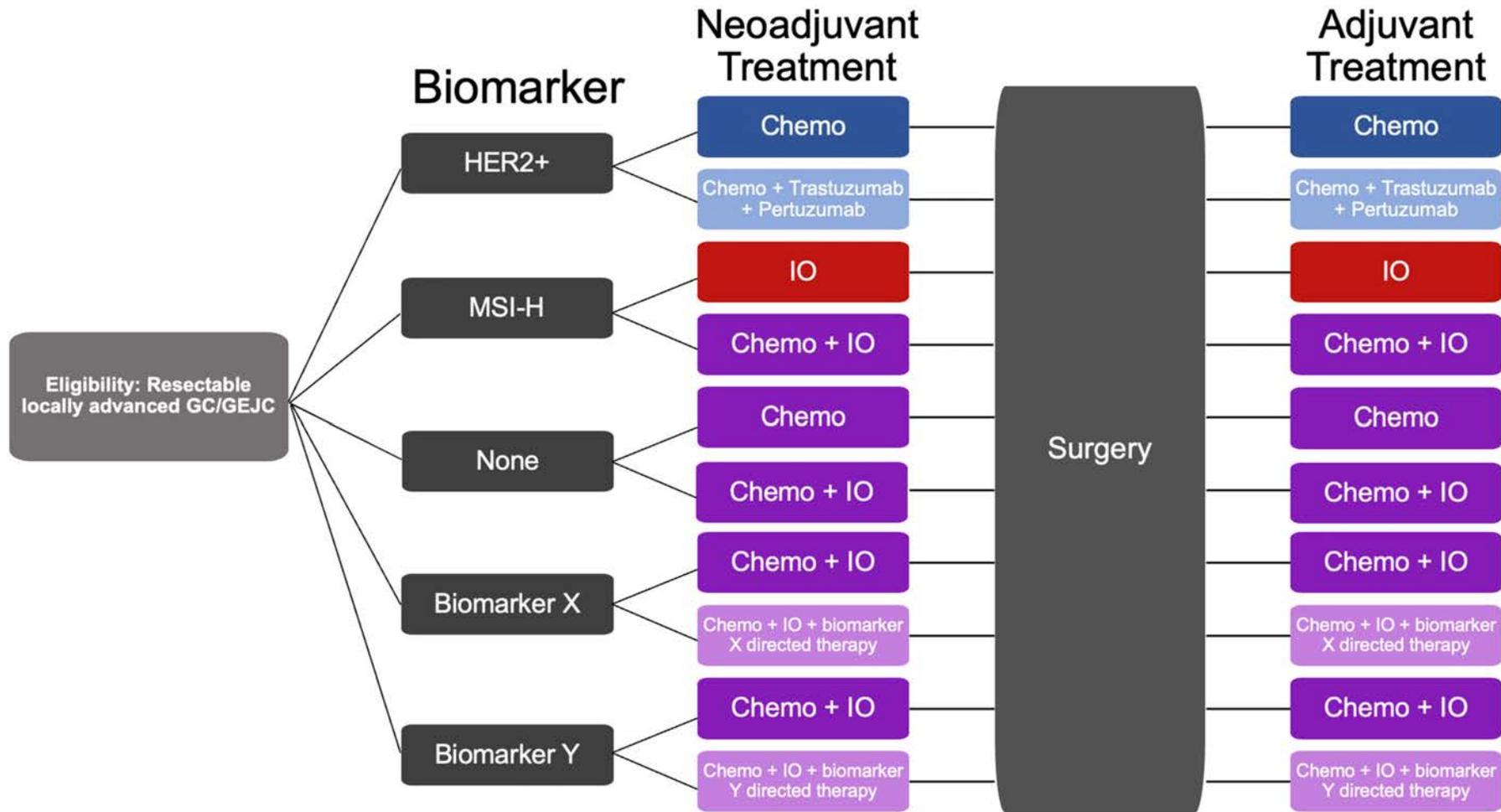


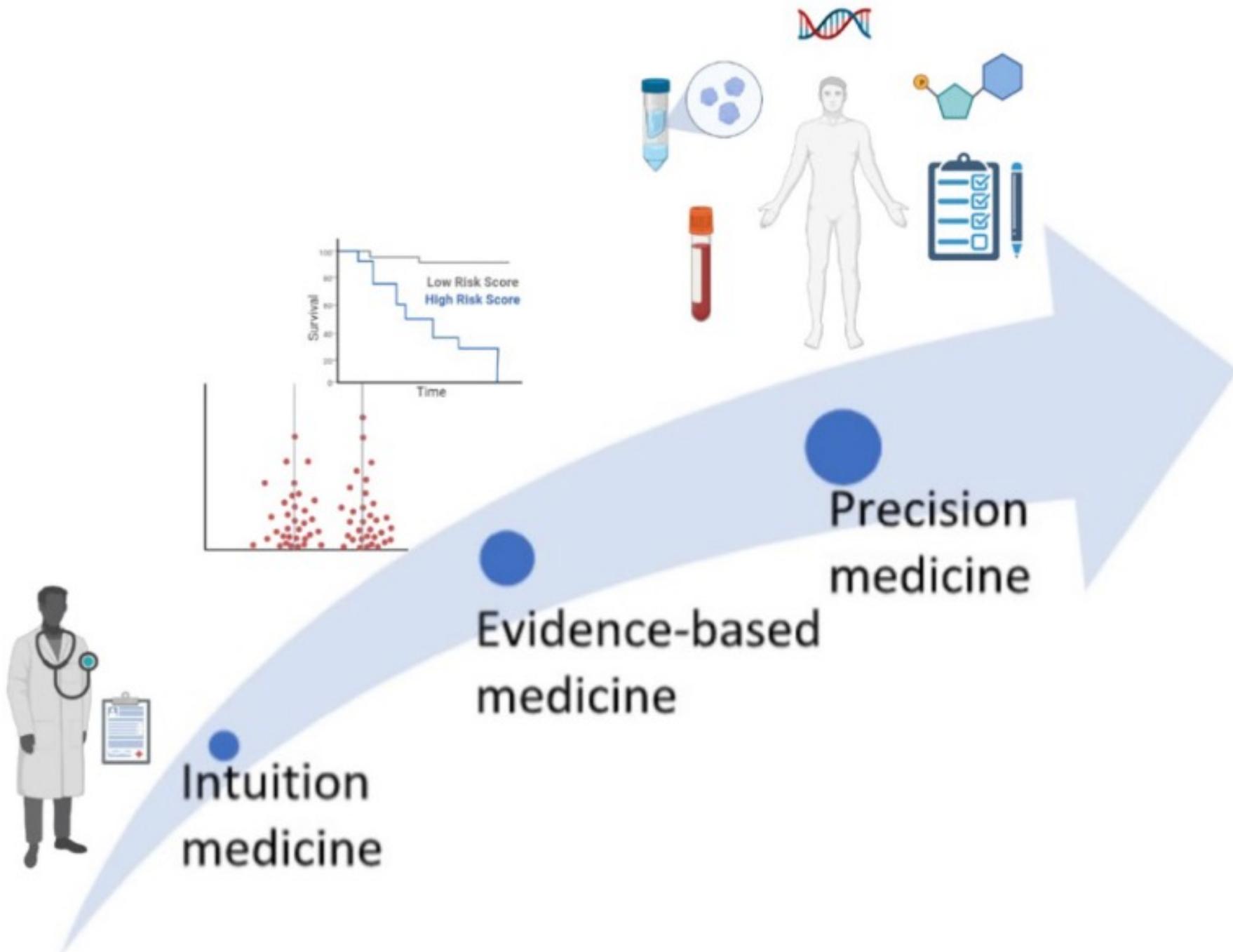
Rethinking

- "A chronic neuro-hormonal disease"
 - Not a lifestyle failure
 - Policy changes, reimbursement reform, and widespread de-stigmatization.
 - Global disparities will grow before they shrink
 - The Global South will still rely on surgery
 - Adolescent and early intervention surgery will expand
 - Waiting will no longer be ethical
 - WL no longer the sole metric of success
 - Remission, durability, cardiovascular outcomes, QL

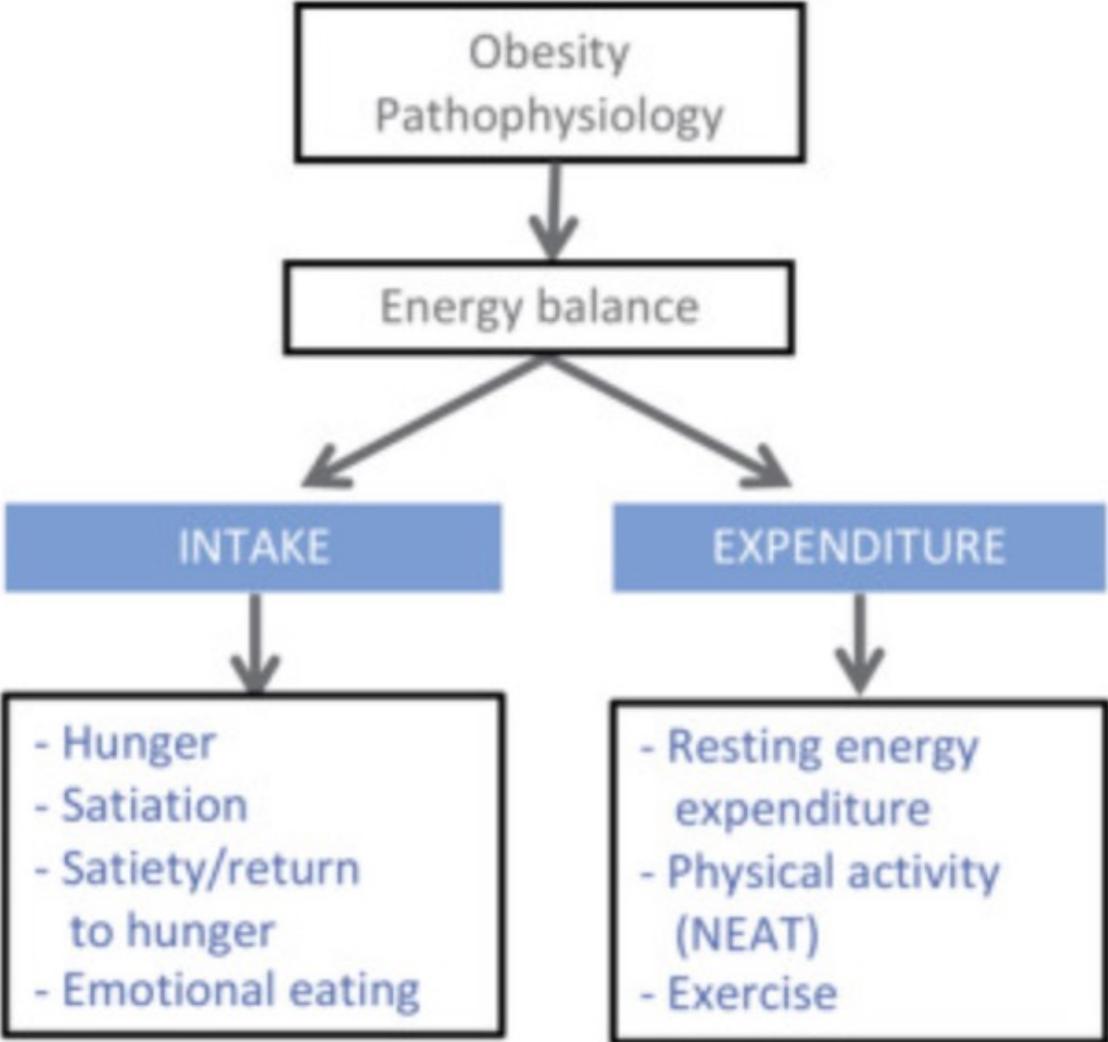


Rethink Obesity

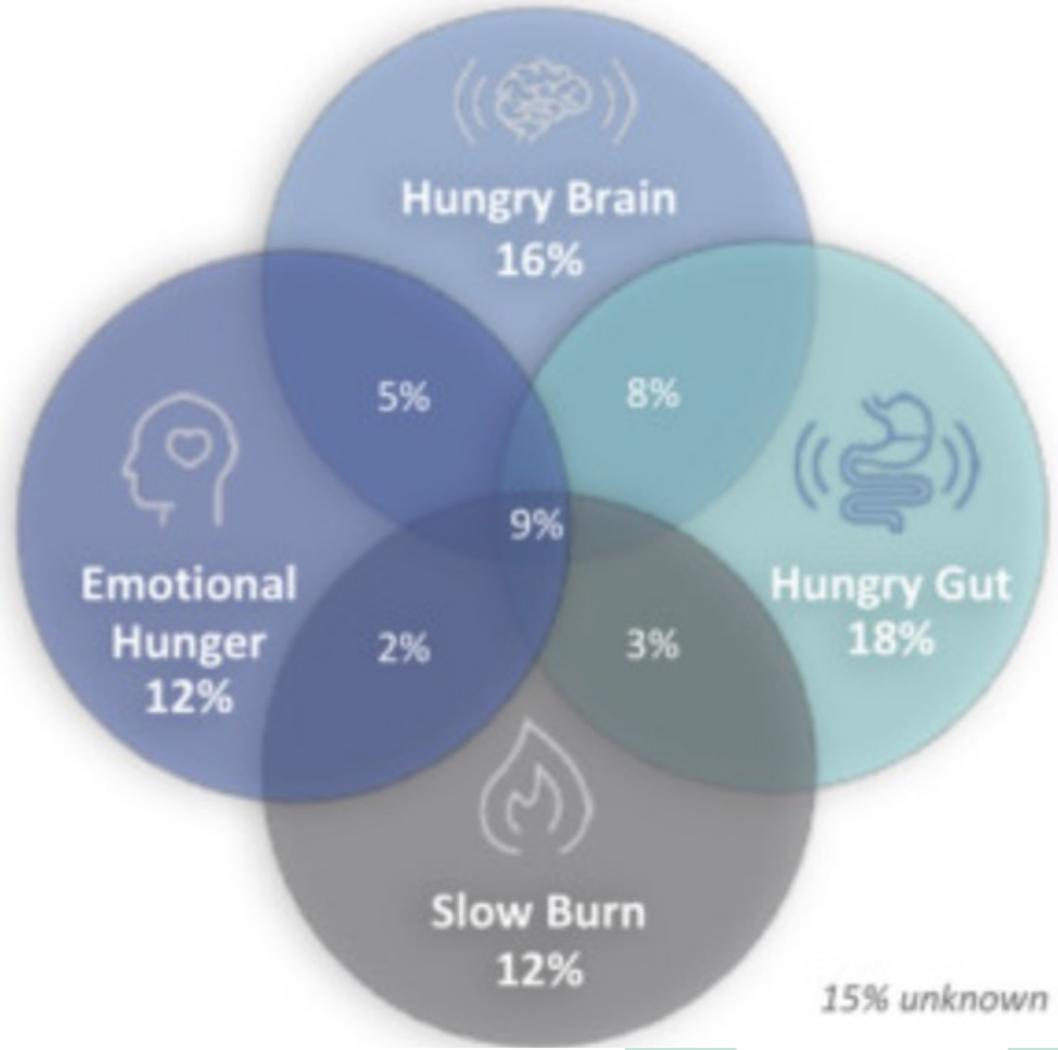




New Approach (Precision Medicine)



B



Precision Medicine

Obesity comorbidities

- Type 2 Diabetes
- Non-alcoholic fatty liver disease
- Gastroesophageal reflux disease
- Obstructive sleep apnea
- Polycystic ovarian syndrome

Psychosocial and economic factors

- Mental health conditions
- executive control
- Cognitive control
- Economic status
- Residence

Genetic background

- Monogenic obesity
- Presence of SNPs
(e.g., SNPs in genes
FTO, *POMC*, *MC4R*,
LEP, *LEPR*)

Eating behaviours

- Food addiction
- Binge eating

Anthropometric factors

- Age
- Gender
- Body mass index

Circulating biomarkers

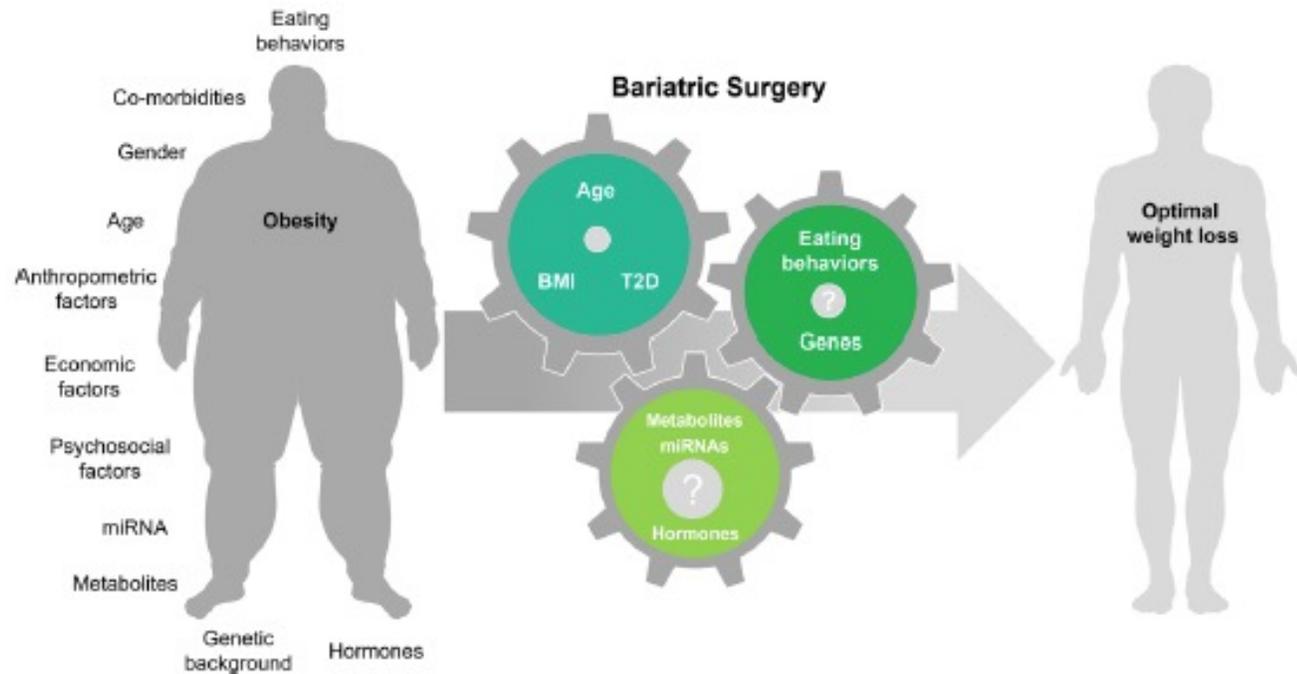
- microRNAs
- Metabolites
- Enteroendocrine hormones

The Next Era in Bariatrics

Towards precision medicine in bariatric surgery prescription

Sofia S. Pereira^{1,2} · Marta Guimarães^{1,2,3} · Mariana P. Monteiro^{1,2}

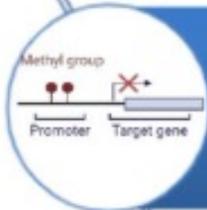
- Phenotype-driven care
- “morbid obesity” disappeared
- Classify patients
 - Not by BMI
 - Metabolic subtype
 - Visceral adiposity
 - Insulin resistance
 - Hepatic phenotype.
- AI-driven decision
 - will guide procedure selection
 - Not surgeon preference.





Genomics

Studies the structure, function, evolution, and mapping of genomes and their effect on health and disease.



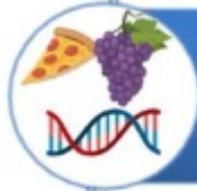
Epigenomics

Studies the complete set of epigenetic modifications on the genetic material. Epigenetic modifications are posttranslational modifications that affect protein synthesis and cell function.



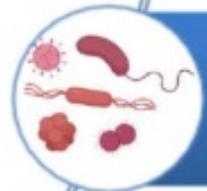
Pharmacogenomics

Studies the individual's genetic attributes and their effect on the response to therapeutic drugs.



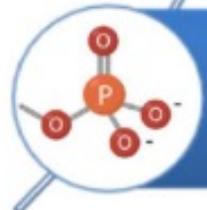
Nutrigenomics

Studies the role of nutrients and bioactive food components in gene expression.



Microbiomics

Studies the structure, function, and dynamics of a microbial community and its interaction with its host.



Metabolomics

Studies the chemical processes within cells, biofluids, and tissues. These processes are influenced by genetic and environmental factors.

Guidelines IFSO/ASMBS

- NIH 1991
 - Eminence (expert-consensus) based
 - Open Surgery
 - Small case series
 - Few, small size RCTs
 - Pure “weight loss” surgery

- ASMBS/IFSO 2022
 - Evidence based
 - MIS (lap, robot, endoscopic)
 - Big data (registries), high volume centers
 - Multicenter RCTs, Metaanalyses
 - Metabolic surgery

Guidelines IFSO/ASMBS

Results

Age limits expanded

Age ≥ 70

Frailty

Risk Vs Benefit

Children/Adolescents

BMI >120% 95th Pc + Related medical problems

BMI >140% 95th Pc



Results

Special population

Bridge to joint replacement > 2 yrs prior

Bridge to abdominal wall hernia

Bridge to organ transplant



Results

Higher risk population: Surgery is still safe

BMI >60

Patients with cirrhosis

Patients in need for LVAD

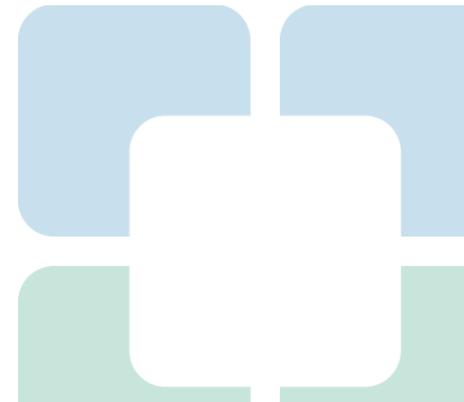


New ASMBS / IFSO Guidelines on Indications for Metabolic and Bariatric Surgery 2022
Developed to Replace the NIH Consensus Guidelines from 1991

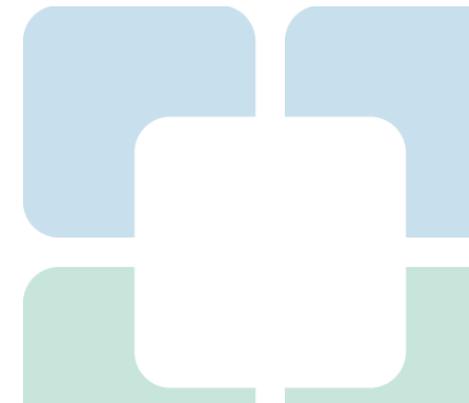
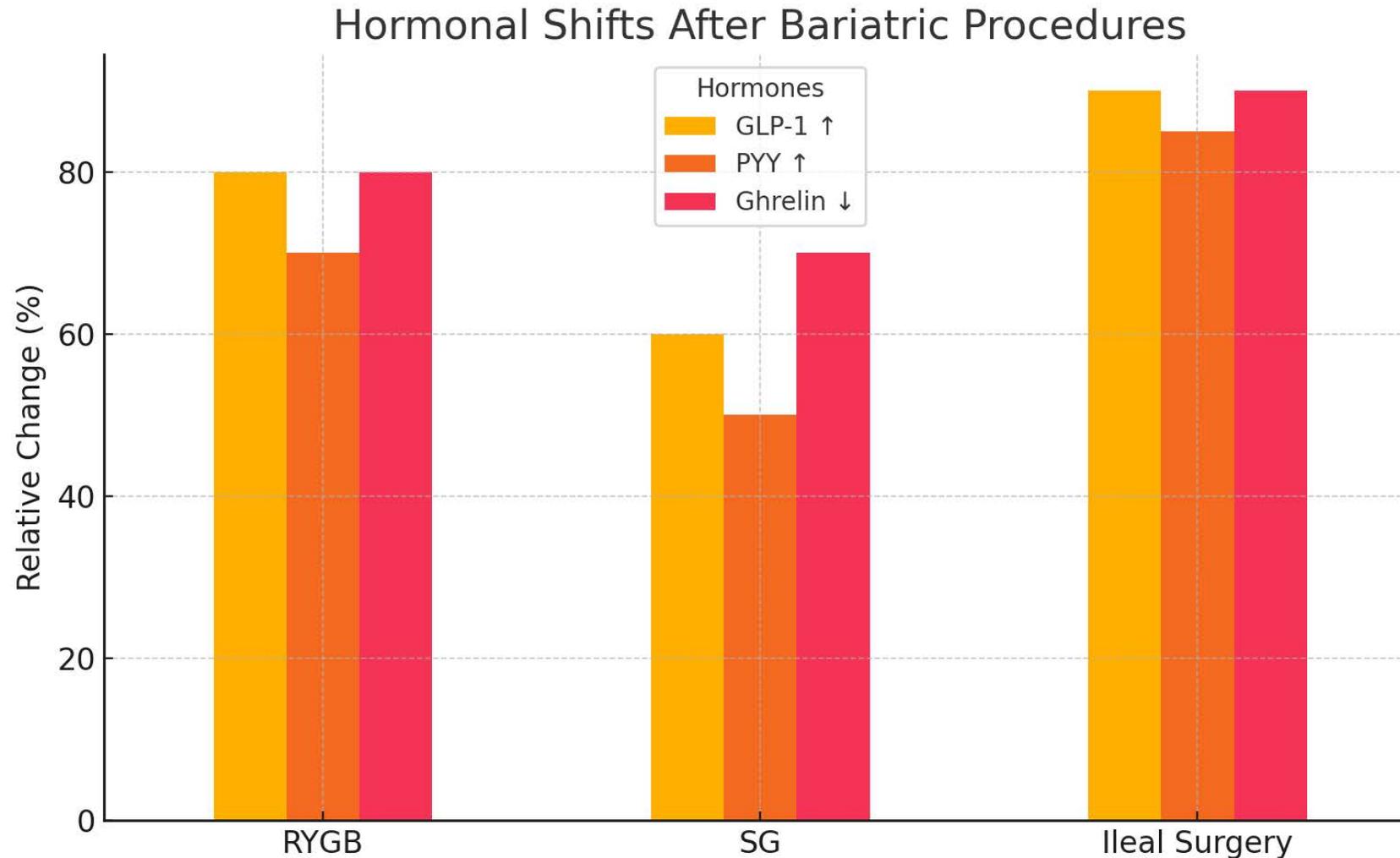
Bariatric Procedures



- Established
 - LSG
 - RYGB
 - DS
 - SADI-s
 - OAGB
- Emergent
 - SASI
 - TB

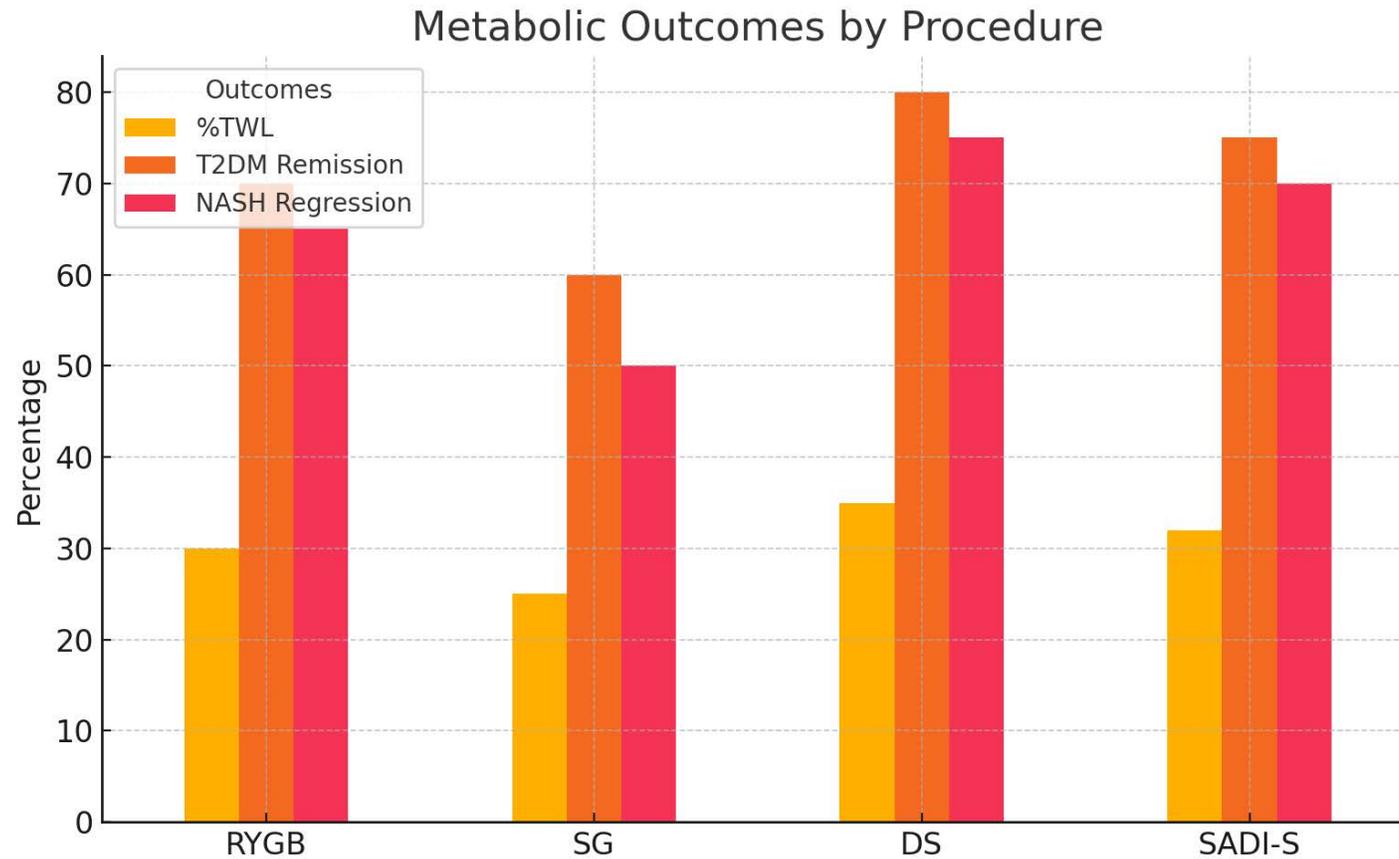


From Restriction to Endocrine Reprogramming



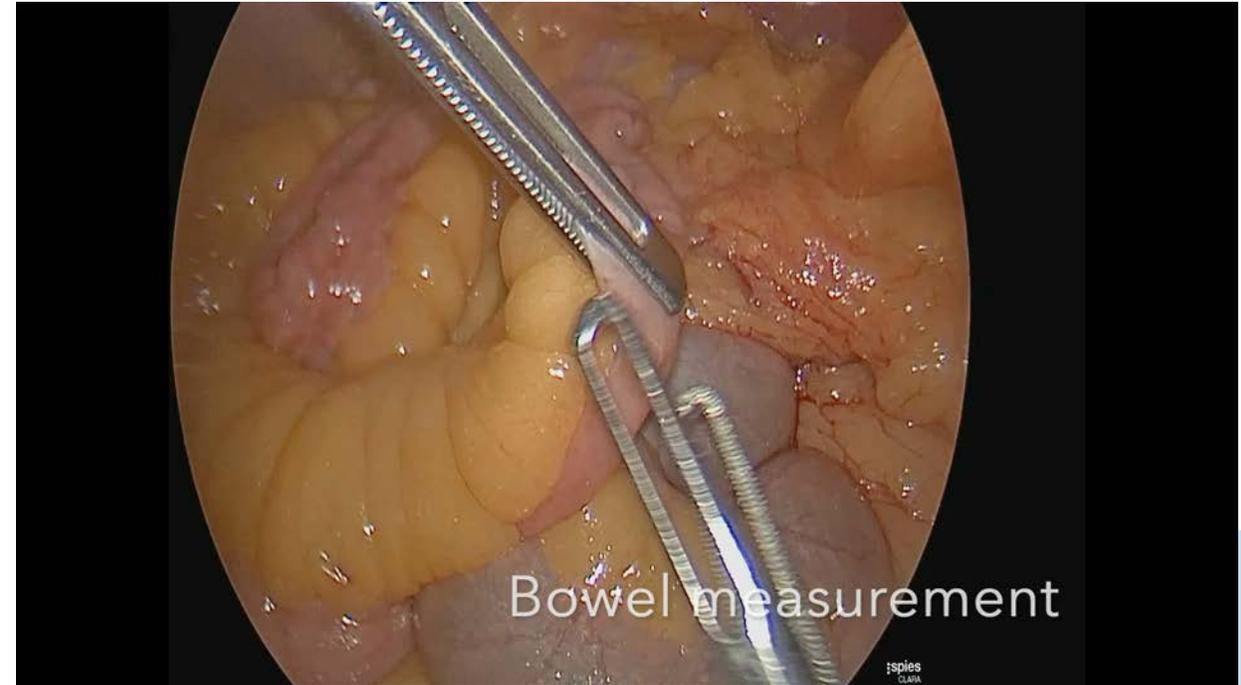
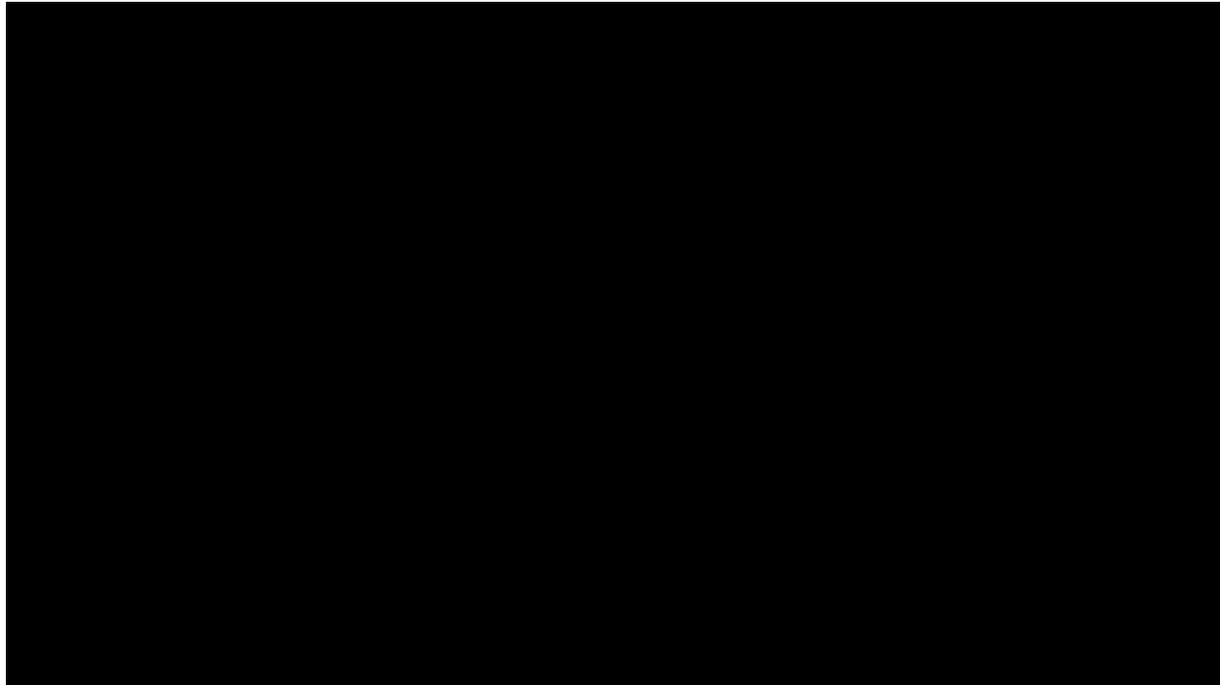
What Works and What Doesn't

- %TWL, Diabetes Remission, NASH across procedures



Ileal-Based Surgery: The New Frontier

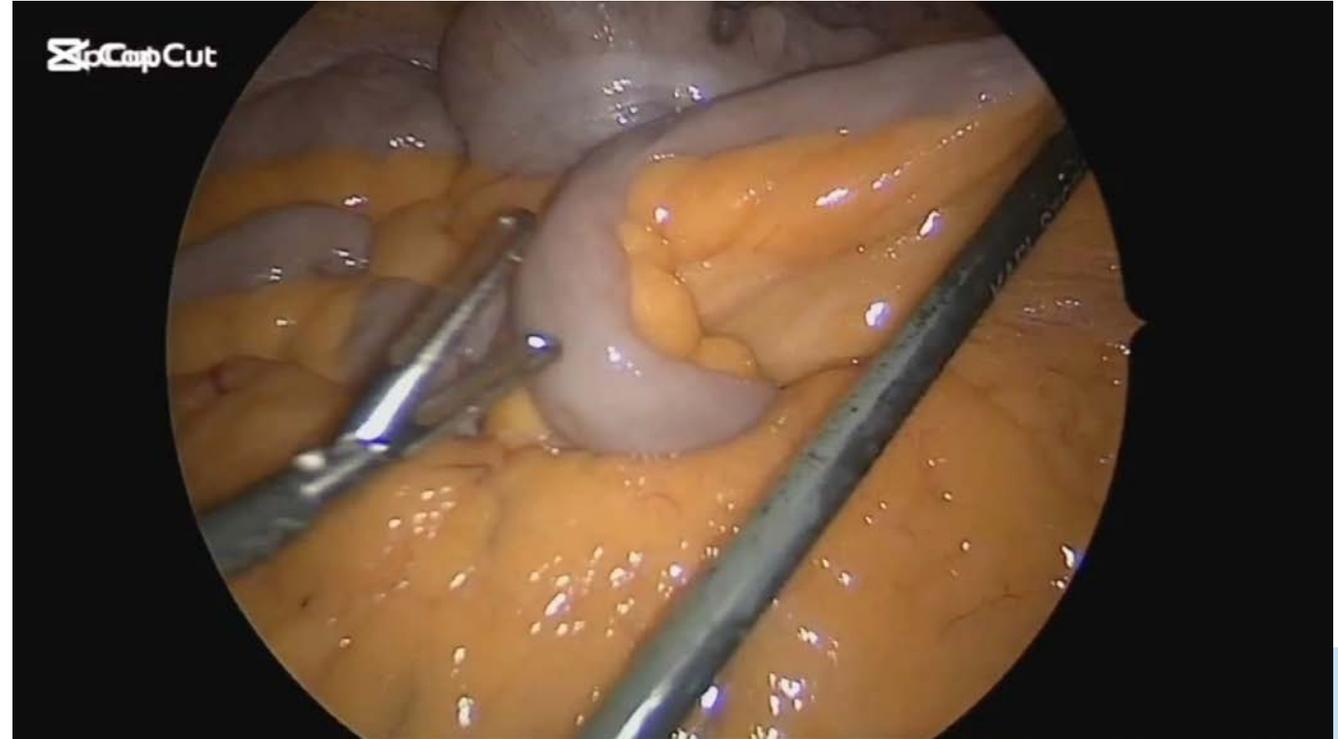
- Stimulation of GLP-1 and PYY via early ileal exposure



The Next Era in Bariatric Surgery:

1. Targeted hormonal interventions

- Surgical techniques will continue moving distally, aiming to trigger early ileal stimulation and enhance PYY, GLP-1, FGF19, and GIP antagonism.
- New procedures like ileal interposition, duodenal diversion without gastric manipulation, and loop hybrids



| | RYGB | OAGB | SADI-s | TB | SASI |
|------------------------------|-------------|-------------|---------------|-----------|-------------|
| complications | ++ | ++ | ++ | ++ | ++ |
| serious complications | + | + | +++ | + | + |
| weight loss | + | ++ | +++ | +++ | +++ |
| T2DM remission | + | ++ | +++ | ++ | ++ |
| HTN remission | ++ | ++ | +++ | ++ | ++ |
| Hyperlipidemia | ++ | +++ | ++ | ++ | ++ |
| weight recurrence | +++ | ++ | + | + | + |
| GERD | - | +++ | ++ | ++ | ++ |
| malnutrition | + | ++ | + | + | + |
| learning curve | ++ | +++ | + | ++ | ++ |
| op time | ++ | + | +++ | ++ | ++ |
| reproducibility | ++ | +++ | + | ++ | ++ |
| reversibility | ++ | + | + | +++ | +++ |
| conversion | ++ | ++ | + | + | ++ |
| Revision | ++ | +++ | + | + | +++ |

Future Trends: 2025–2035

Hybrid
hormonal
surgeries

AI
phenotype
profiling

Endoluminal
devices

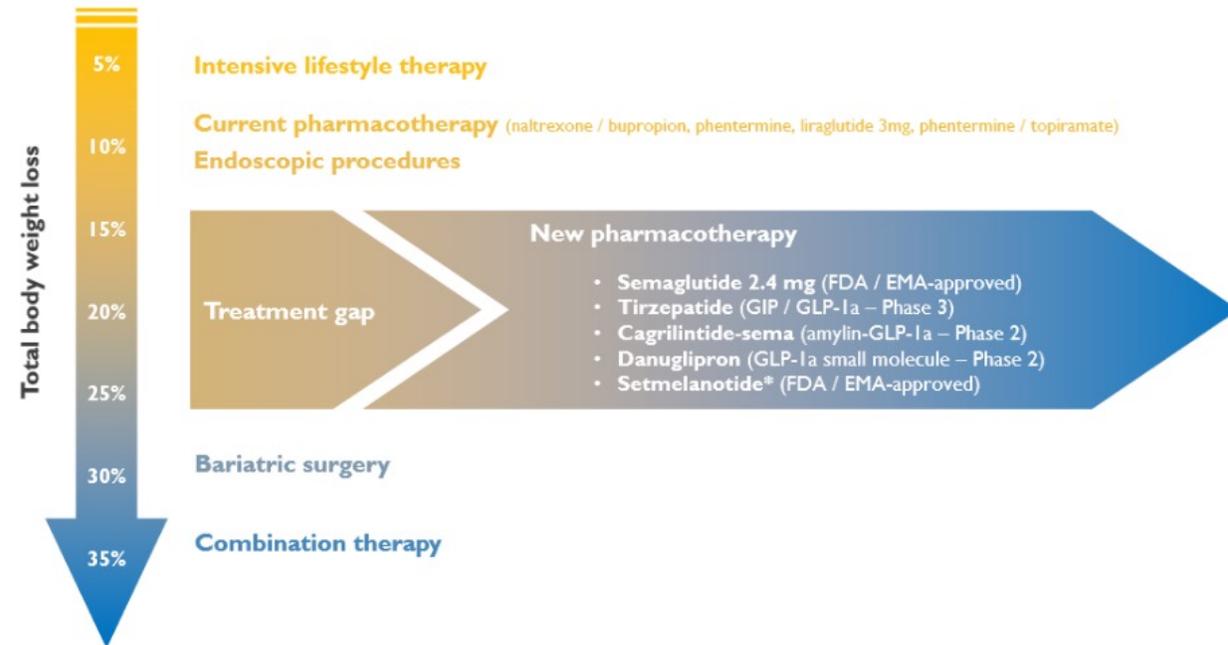
Adolescent
early
interventions



The Next Era in Bariatric Surgery

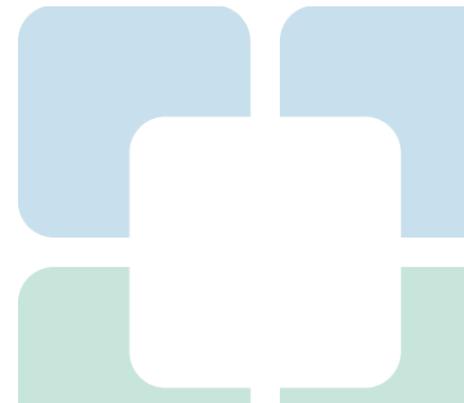
Surgery–Drug synergy

- GLP-1 analogs
 - No competition
 - Allies.
- Combination
 - Minimally invasive procedures
 - Incretin-based therapies
 - Tailoring them to
 - Patient phenotype
 - Metabolic fingerprint



The Next Era in Bariatric Surgery:

- Endoluminal and Robotic precision:
 - EndoBarrier
 - Duodenal mucosal resurfacing
 - Intraluminal liners
 - Re-emerge Stronger / Better design / Longer durability / Personalized
 - Democratization of Robotic platforms
 - Magnetic assisted surgery



Robotics in Gastrointestinal Endoscopy

by Sang-Hyun Kim ✉, Hyuk-Soon Choi * ✉, Bora Keum ✉ and Hoon-Jai Chun ✉

Figure 3. Flex Robotic System (Medrobotics, Raynham, MA, USA) [18]. (a) The robot's flexible distal end including two working channels with a needle-knife and grasper. (b) Performing ESD with the robotic system using three-dimensional high-definition visualization. A—Console with the physician controller. B—3-Dimensional high-definition monitor. C—Base and drive of the robot. D—Instrument support assembly.

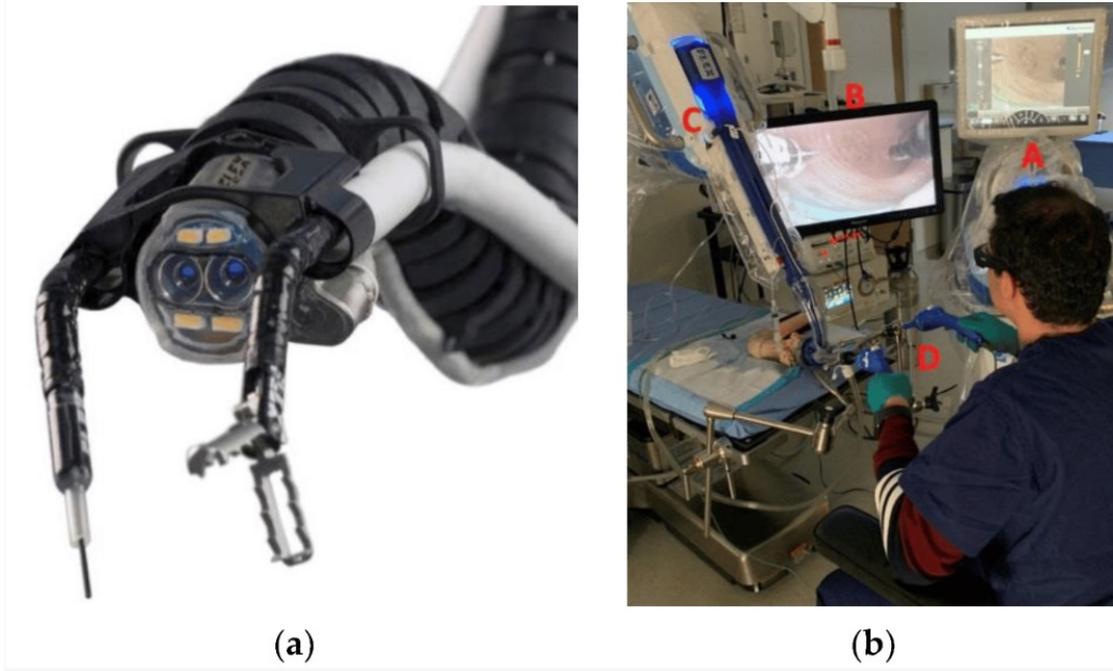
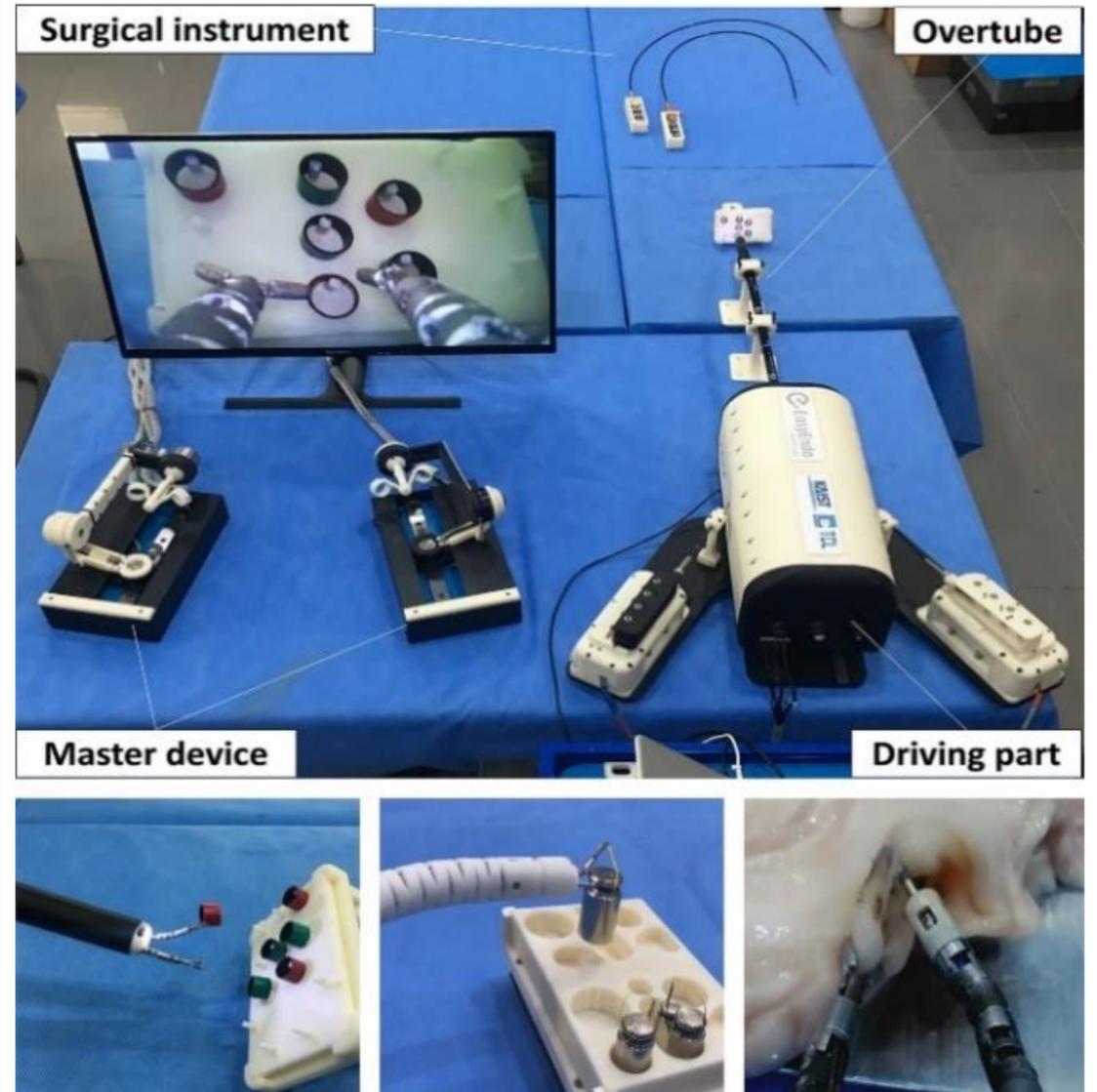
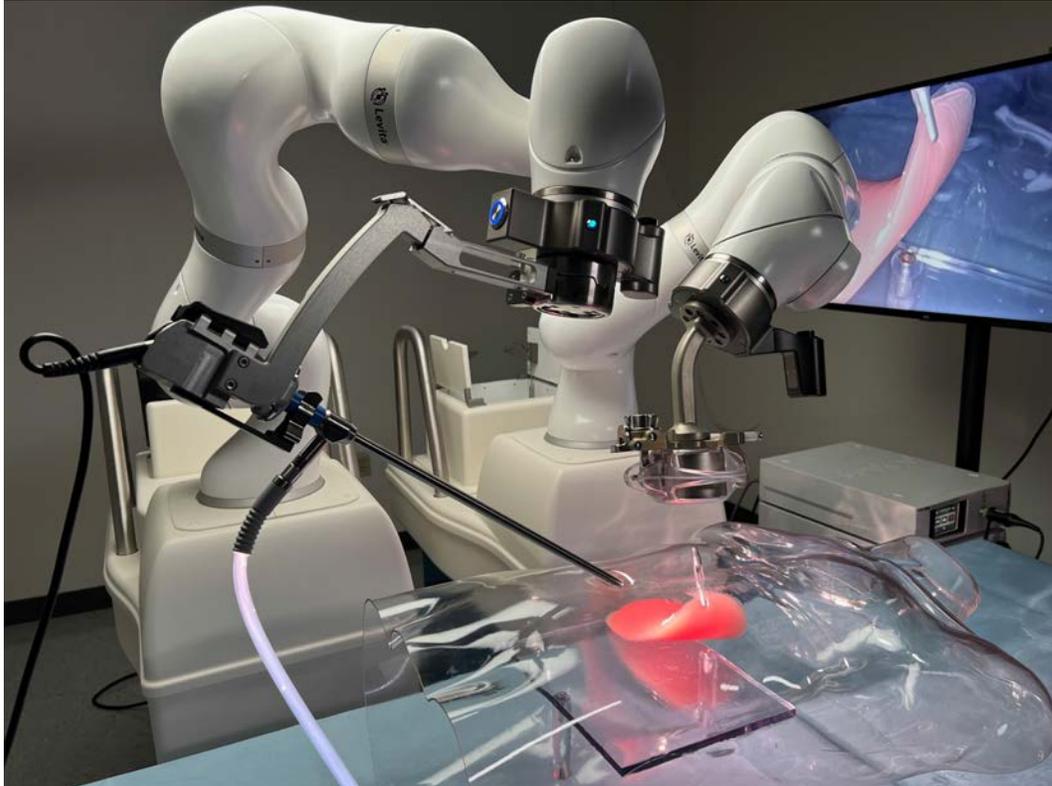


Figure 4. K-FLEX (EasyEndo Surgical, Daejeon, Korea). The K-FLEX system is composed of two surgical instruments, overtube, driving robot arm, and a master console [20].



Levita - MARS



> *J Laparoendosc Adv Surg Tech A*. 2021 Feb;31(2):194-202. doi: 10.1089/lap.2020.0388. Epub 2020 Jul 14.

Magnetic Liver Retraction Decreases Postoperative Pain and Length of Stay in Bariatric Surgery Compared to Nathanson Device

Leonard K Welsh ¹, Gerardo Davalos ¹, Ramon Diaz ¹, Andres Narvaez ¹, Juan Esteban Perez ¹, Melissa Castro ¹, Maragatha Kuchibhatta ², Thomas Risoli ², Dana Portenier ¹, Alfredo D Guerron ¹

Affiliations + expand
PMID: 32678701 PMCID: PMC7885817 DOI: 10.1089/lap.2020.0388

[Clinical Trial](#) > *Surg Obes Relat Dis*. 2021 Jan;17(1):147-152. doi: 10.1016/j.soard.2020.08.017. Epub 2020 Aug 26.

First prospective clinical trial of reduced incision bariatric procedures using magnetic liver retraction

Rafael Luengas ¹, Jose Galindo ¹, Melissa Castro ², Andres Marambio ³, Guillermo Watkins ⁴, Mario Rodriguez Del Rey ³, Cristobal Davanzo ³, Dana Portenier ², Alfredo D Guerron ⁵

Affiliations + expand
PMID: 33011073 DOI: 10.1016/j.soard.2020.08.017

> *Obes Surg*. 2019 Mar;29(3):1068-1073. doi: 10.1007/s11695-018-03655-w.

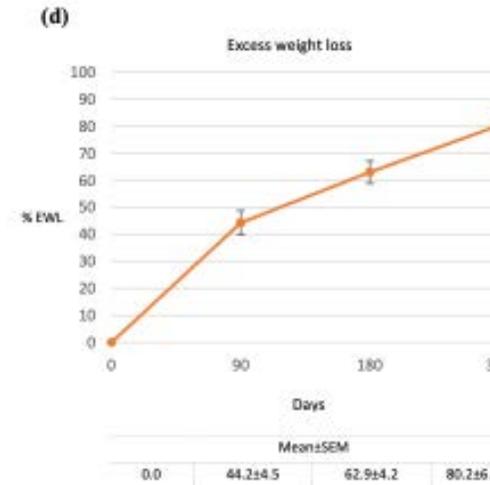
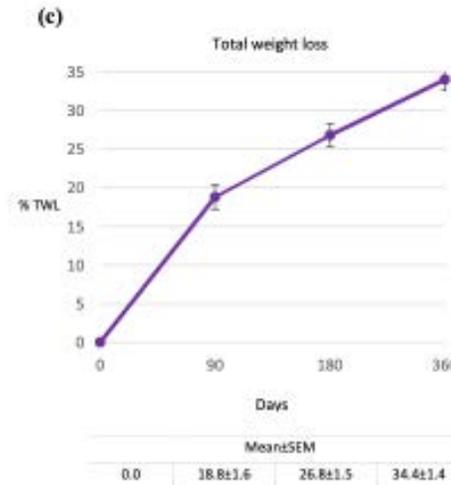
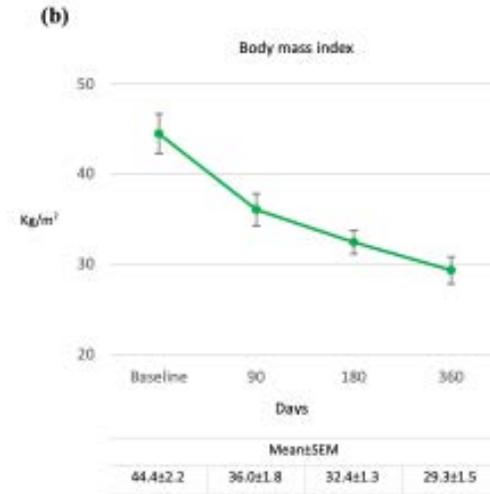
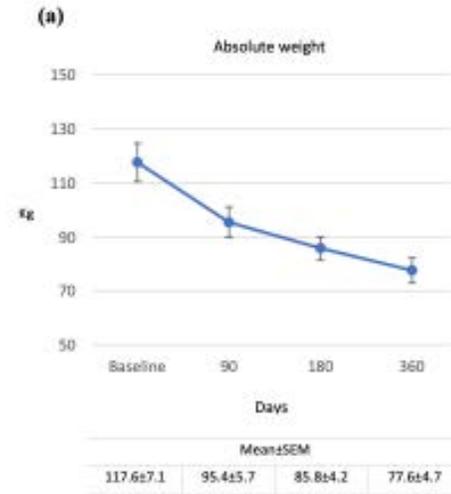
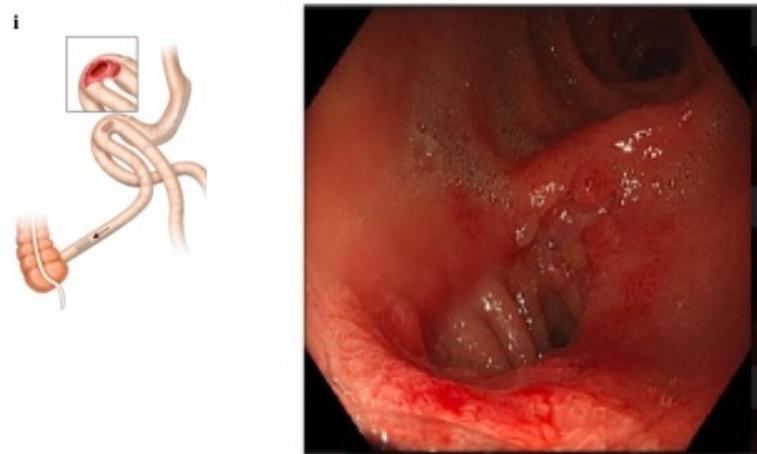
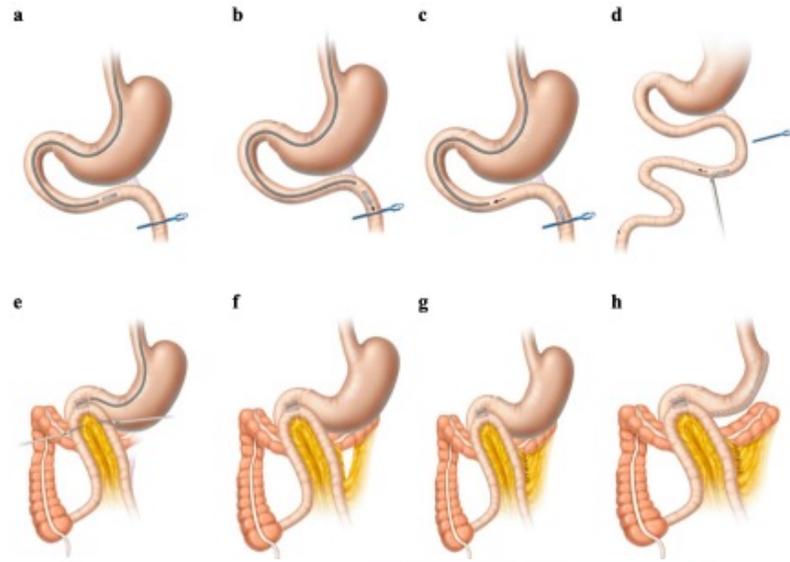
Magnetic Liver Retraction: an Incision-Less Approach for Less Invasive Bariatric Surgery

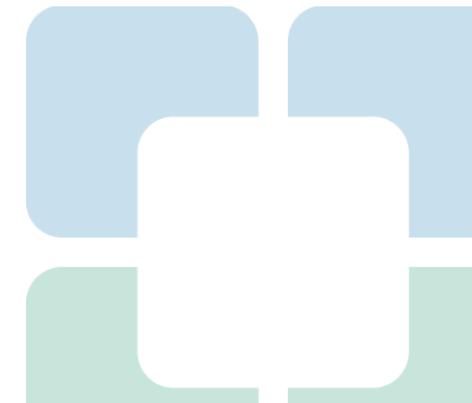
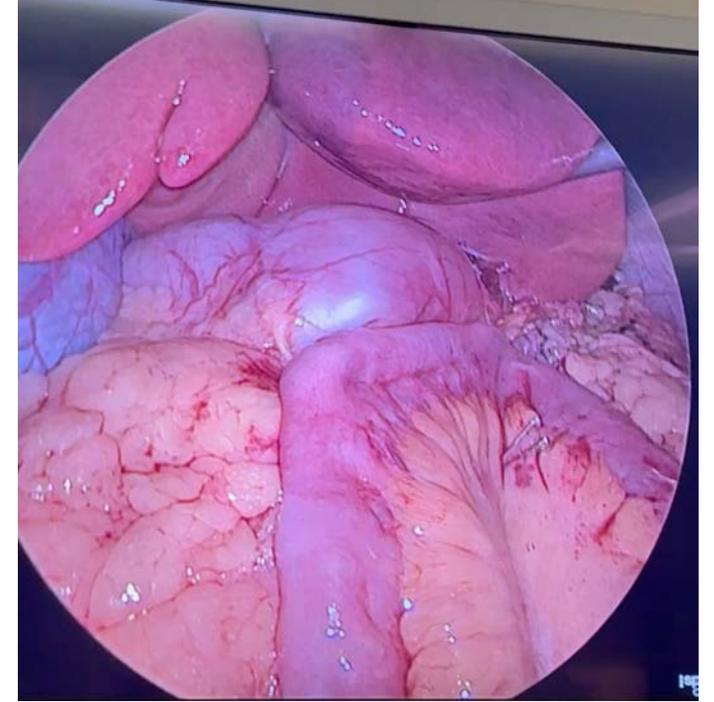
Matthew Davis ¹, Gerardo Davalos ¹, Camila Ortega ¹, Sugong Chen ¹, Scott Schimpke ¹, Kunoor Jain-Spangler ¹, Jin Yoo ¹, Keri Seymour ¹, Ranjan Sudan ¹, Dana Portenier ¹, Alfredo D Guerron ²

Affiliations + expand
PMID: 30604079 DOI: 10.1007/s11695-018-03655-w

First-in-Human Side-to-Side Magnetic Compression Duodeno-ileostomy with the Magnet Anastomosis System

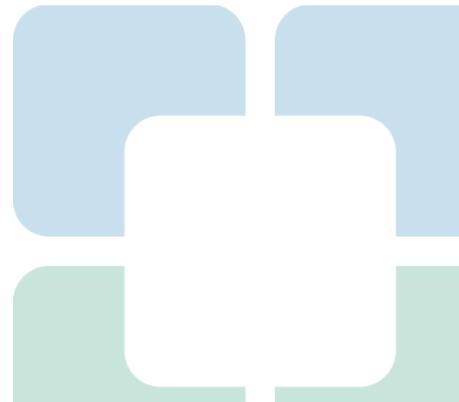
Michel Gagner¹  · David Abuladze² · Levan Koiava² · J. N. Buchwald³ · Nathalie Van Sante⁴ · Todd Krinke⁵





Vision for the Future

“The future of bariatric surgery is not about making the stomach smaller. It’s about making the Patient’s metabolic future bigger.”











"The Thinking Surgeon"
Oil on Canvas Dan Schein

