Sesion bibliografica,

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24-11-23

Sobre LA OBESIDAD

RESEARCH SUMMARY

Global Effect of Modifiable Risk Factors on Cardiovascular Disease and Mortality

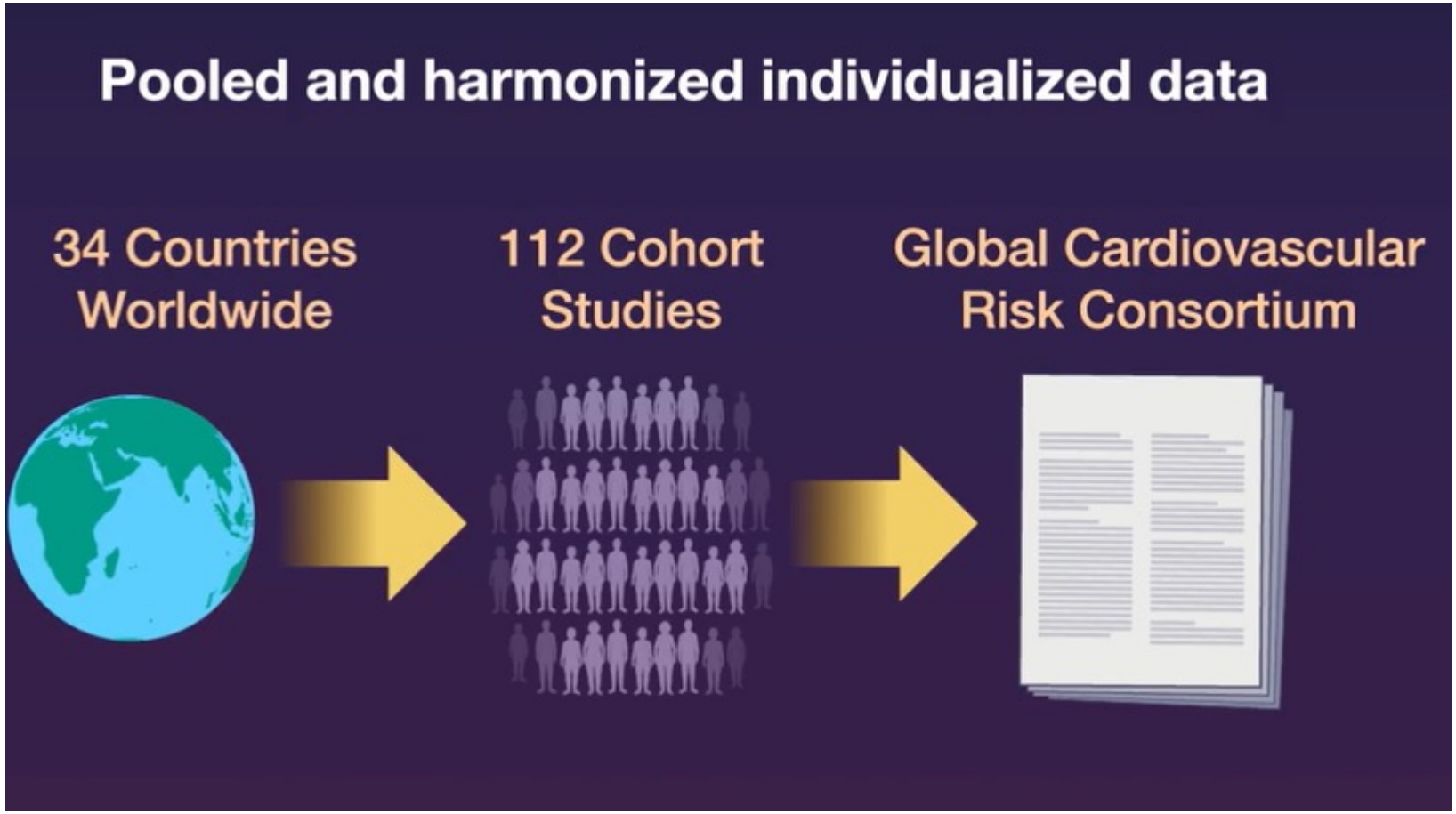
Global Cardiovascular Risk Consortium DOI: 10.1056/NEJMoa2206916

CLINICAL PROBLEM

Five modifiable risk factors — body-mass index (BMI), systolic blood pressure, non–high-density lipoprotein (non-HDL) cholesterol level, current tobacco smoking, and diabetes — are associated with cardiovascular disease and death from any cause. Studies using individual-level data to evaluate the regional and sex-specific associations of these risk factors with the development of cardiovascular disease are lacking.

study was designed by the Global Cardiovascular Risk Consortium Management Group

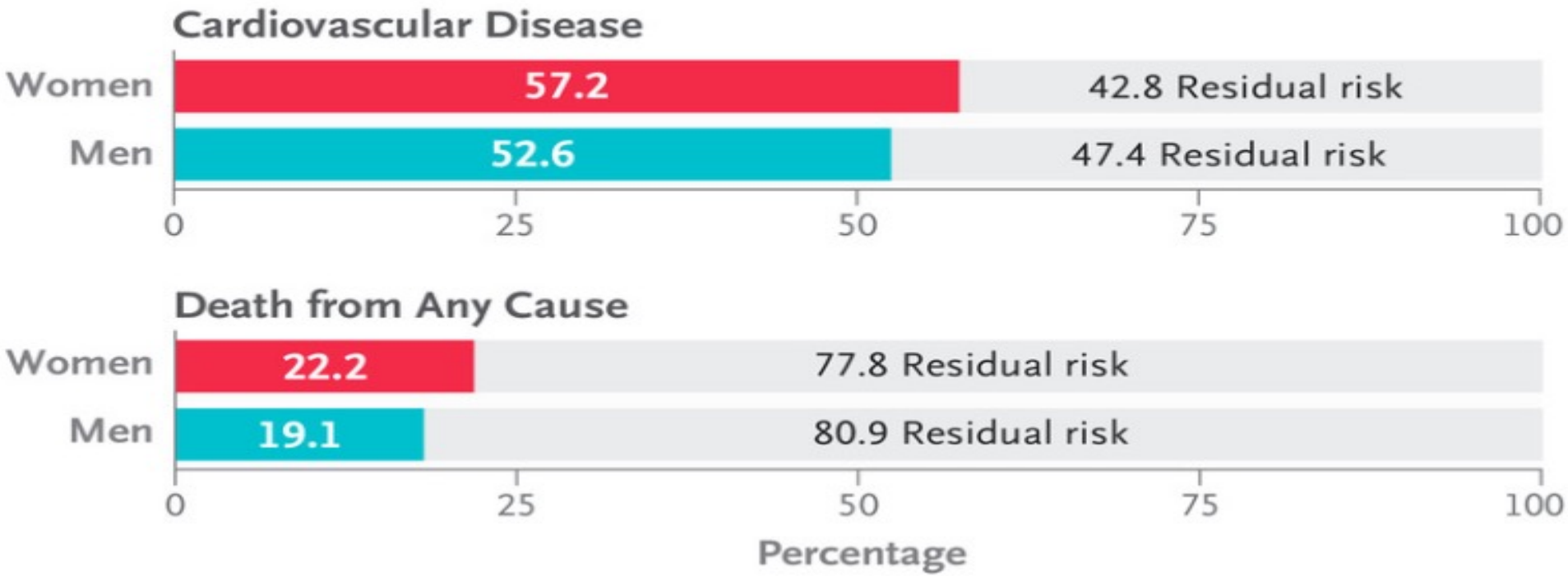
Data were harmonized by applying the variable definitions used by the MORGAM (MONICA [Multinational Monitoring of Trends and Determinants in Cardiovascular Diseases] Risk, Genetics, Archiving, and Monograph)



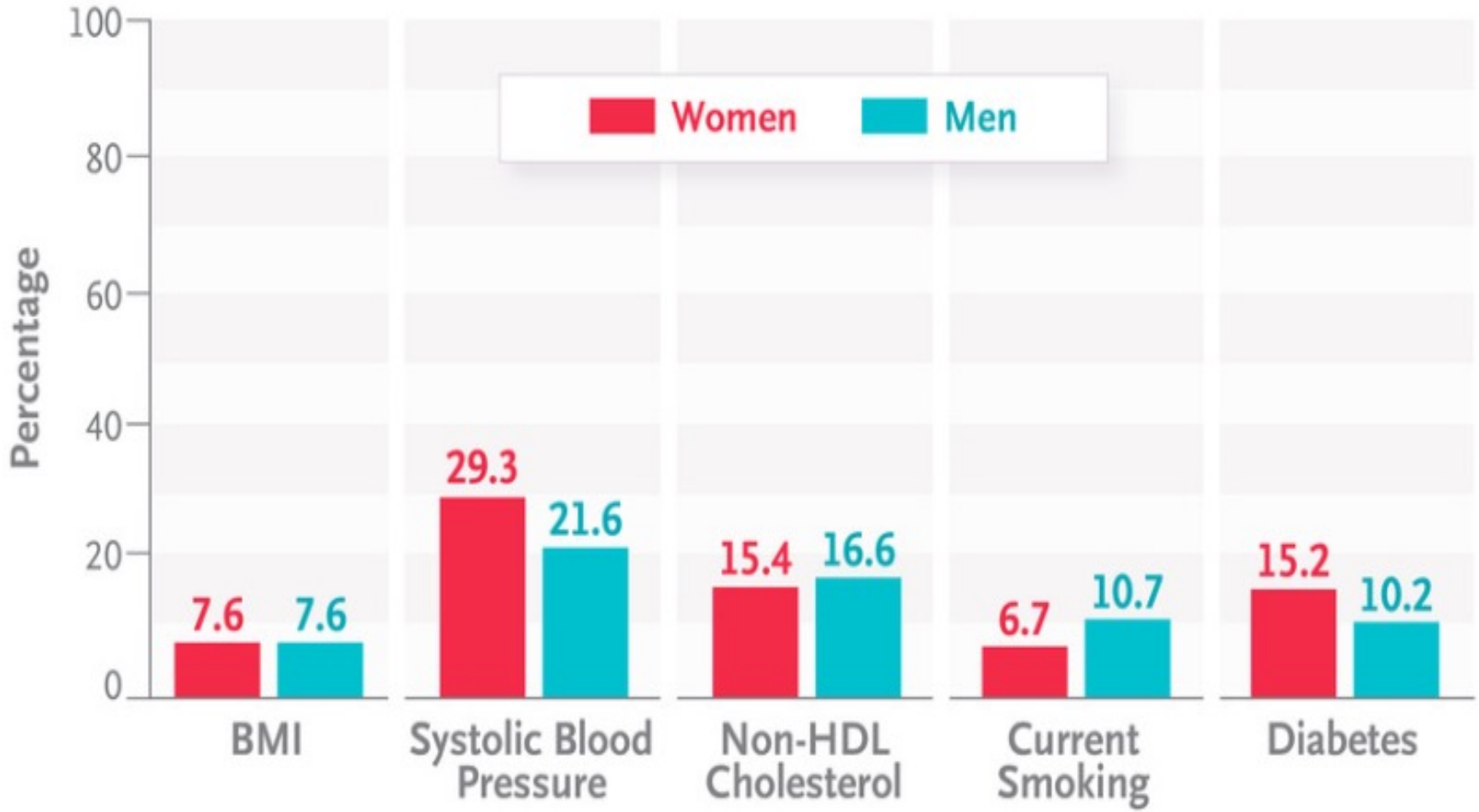
- Over 10 yr
- >1.5 Million adults
- Median age ~54 yr

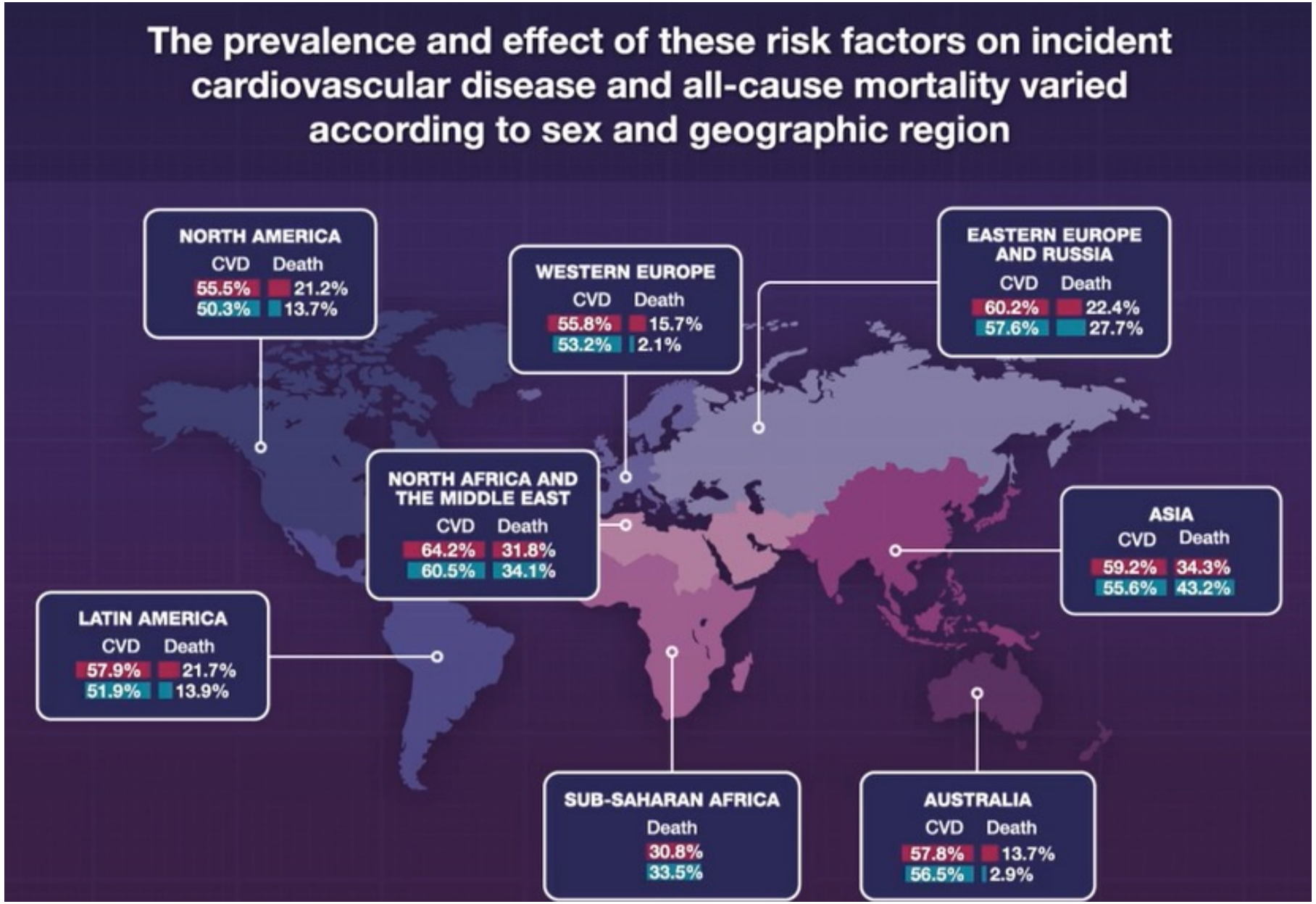
For the five modifiable risk factors, region- and sex-specific population-attributable fractions were estimated for the 10-year incidence of cardiovascular disease and 10-year all-cause mortality

Population-Attributable Fractions for the Risk Factors Combined



Population-Attributable Fractions for the Individual Risk Factors for Cardiovascular Disease




The prevalence and effect of these risk factors on incident cardiovascular disease and all-cause mortality varied according to sex and geographic region
NORTH AMERICA
CVD Death
55.5% 21.2%
50.3% 13.7%
WESTERN EUROPE
CVD Death
55.8% 15.7%
53.2% 2.1%
EASTERN EUROPE AND RUSSIA
CVD Death
60.2% 22.4%
57.6% 27.7%
NORTH AFRICA AND THE MIDDLE EAST
CVD Death
64.2% 31.8%
60.5% 34.1%
ASIA
CVD Death
59.2% 34.3%
55.6% 43.2%
LATIN AMERICA
CVD Death
57.9% 21.7%
51.9% 13.9%
SUB-SAHARAN AFRICA
Death
30.8%
33.5%
AUSTRALIA
CVD Death
57.8% 13.7%
56.5% 2.9%

CONCLUSIONS

Harmonized individual-level data from a global cohort showed that over 10 years, more than half the cases of incident cardiovascular disease and one fifth of deaths in adults may be attributable to five modifiable risk factors.

AVANCES EN EL TRATAMIENTO FARMACOLOGICO DE LA OBESIDAD

New Frontiers in Obesity Treatment: GLP-1 and Nascent Nutrient-Stimulated Hormone-Based Therapeutics

Annual Review of Medicine

Vol. 74:125-139 (Volume publication date January 2023)
https://doi.org/10.1146/annurev-med-043021-014919

Annual Review of:	Rank	Category Name	Ranked Journals in Category	Impact Factor	Cited Half-Life	Immediacy Index	Journal Citation Indicator (JCI)	5-Year Impact Factor
Medicine	16	Medicine, Research & Experimental	136	10.5	8.7	7.9	1.71	13

OBESIDAD:

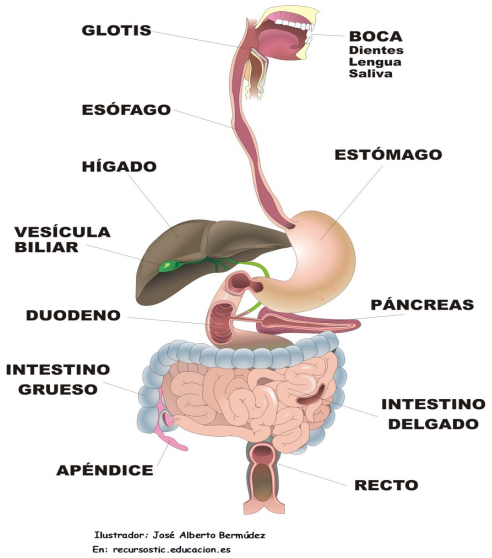
Problema de salud:

- Gran prevalencia (sobrepeso y obesidad)
- > 70% poblacion USA
- > 50% poblacion mundial

- Etipatogenia desconocida

- Desajuste homeostático con masa grasa elevada

Eje: intestino cerebro



Areas cerebrales

Nucleo tracto solitario troncoencefalico
Centros hipotalámicos hambre y saciedad,
Nucleo arqueado
Cuerpo estriado
Insula
Corteza orbitofrontal

Adjunctive drug therapy options include:

- Sibutramine
- Orlistat
- Phentermine
- Diethylpropion
- Fluoxetine
- Bupropion

Pérdida de peso de 2,3 a 8,8 kg el año.

REGULACION DE LA ABSORCION INTESTINAL:

Sistema neuroendocrino intestinal

Hormonas incretinas intestinales

Hormonas incretinas pancreáticas

GLP-1

Nuevo paradigma de enfermedad de regulación energética

Posibilidad de intervención farmacologica sobre incretinas intestinales y pancreaticas:
FAMILIA peptidos Agonistas GLP-1

Notable mejoría de resultados previos pérdida de peso

GLP-1

polipéptido insulotropico dependiente de glucosa:
ejerce un papel central en el control de la ingesta de alimentos
Es una diana terapéutica en la regulación de la glucemia y el control del peso: fármacos agonistas del receptor GLP-1

Por otra parte los efectos adversos de tipo gastrointestinal que provoca, son probablemente acción directa
de los receptores GLP-1 sobre el Sistema nervioso

Hormone (references)	Source	Receptor and locations	Physiological function[a]	Therapeutic implications
Glucagon-like peptide-1 (GLP-1) (79, 80)	Major: entero-endocrine L cells Minor: pancreatic α cells, CNS (NTS)	GLP-1 receptor Locations: ■ CNS (hypothalamus, NTS, AP, striatum) ■ pancreatic β cells ■ heart ■ lung ■ gastrointestinal tract ■ kidney	↑ Satiety (via CNS mechanism) ↓ Gastric emptying ↓ Gastric motility ↑ Postprandial insulin secretion	FDA-approved GLP-1 RAs for obesity: ■ liraglutide 3 mg SC daily (2014) ■ semaglutide 2.4 mg SC weekly (2021) ■ multiple other GLP-1 RAs approved for T2D also used for weight reduction benefit ■ oral GLP-1 RAs in development for obesity treatment (**Figure 1**, oral GLP-1 RAs)

LIRAGLUTIDA

- AR GLP-1 con un 97% homología. Dosificacion SC 1 vez al dia con vida media 11-15 h.
- Aprobada
  - 2010 en DM2, dosis hasta 1,8 mg/d.
  - 2014 en Obesidad, dosis hasta 3 mg/d
- 5 ensayos aleatorizados:
  - SCALE
  - SCALE DIABETES
  - SCALE IBT
  - SCALE OBESIDAD Y PREDIABETES
  - SCALE TEENS

- En general reducion de peso 3,4-6%
- Efectos adversos nauseas, diarrea, estreñimiento y vómitos

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JULY 2, 2015 VOL. 373 NO. 1

A Randomized, Controlled Trial of 3.0 mg of Liraglutide in Weight Management

Xavier Pi-Sunyer, M.D., Arne Astrup, M.D., D.M.Sc., Ken Fujioka, M.D., Frank Greenway, M.D., Alfredo Halpern, M.D., Michel Krempf, M.D., Ph.D., David C.W. Lau, M.D., Ph.D., Carel W. le Roux, F.R.C.P., Ph.D., Rafael Violante Ortiz, M.D., Christine Bjørn Jensen, M.D., Ph.D., and John P.H. Wilding, D.M., for the SCALE Obesity and Prediabetes NN8022-1839 Study Group*

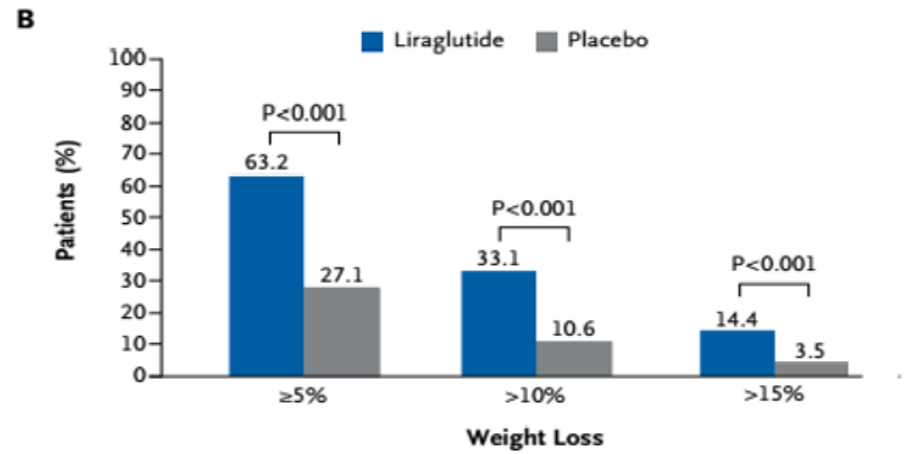
Columbia Univ.

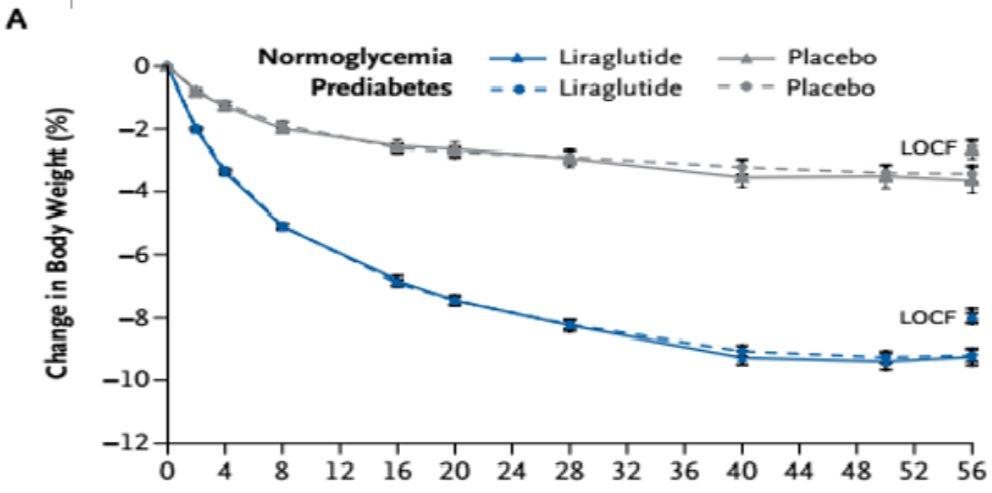
liraglutida 3,0 mg (Saxenda ®)

resultados

perdida

eso





SEMAGLUTIDA

- AR GLP-1 modificado con vida media larga para administracion SC semanal
- 2017 (USA) Aprobada en DM2 dosis hasta 1 mg/semana y en dosis 2 mg/semana en 2022.
- 2022 Aprobada en Obesidad dosis hasta 2,4 mg/semana
- Programa STEP (semaglutide treatmente effect people obesity), n= 5000 pacientes, 2,4 mg/semana versus placebo a 68 semanas
  - STEP1 Reduccion de peso 14,9% versus 2,4% placebo
  - SETP2 (incluye pacientes con DM2): reduccion peso 9,6%
  - STEP3 (adicción de IBT, intensive behavioral therapy)
  - STEP4 perdida de peso 10,6% a 48 semanas y durante fase de mantenimiento adelgazamiento de 7,9% adicional
  - STEP8 comparativo liraglutide 3 mg/d: superioridad de semaglutida con diferencia perdida peso -9,4%

SEMAGLUTIDA

ORIGINAL ARTICLE

Semaglutide and Cardiovascular Outcomes in Obesity without Diabetes

A. Michael Lincoff, M.D., Kirstine Brown-Frandsen, M.D., Helen M. Colhoun, M.D., John Deanfield, M.D., Scott S. Emerson, M.D., Ph.D., Sille Esbjerg, M.Sc., Søren Hardt-Lindberg, M.D., Ph.D., G. Kees Hovingh, M.D., Ph.D., Steven E. Kahn, M.B., Ch.B., Robert F. Kushner, M.D., Ildiko Lingvay, M.D., M.P.H., Tugce K. Oral, M.D., et al., for the SELECT Trial Investigators*

November 11, 2023
DOI: 10.1056/NEJMoa2307563

- SELECT: Semaglutide effect on Cardiovascular Outcomes in People with Overweight or Obesity. estudio valorando semaglutida 2,4 mg semanal en prevención secundaria de pacientes con obesidad y enf cardiovascular establecida.

Cardiovascular inclusion criteria — no. (%)
Myocardial infarction only
Stroke only
Peripheral arterial disease only
Two or more inclusion criteria

Table 1. Baseline Characteristics of the Patients.*

Characteristic	Semaglutide (N=8803)	Placebo (N=8801)
Age — yr	61.6±8.9	61.6±8.8
Male sex — no. (%)	6355 (72.2)	6377 (72.5)
Race or ethnic group — no. (%)†		
White	7387 (83.9)	7404 (84.1)
Asian	720 (8.2)	727 (8.3)
Black	348 (4.0)	323 (3.7)
Other	253 (2.9)	273 (3.1)
Hispanic or Latino	914 (10.4)	908 (10.3)
Body weight — kg	96.5±17.5	96.8±17.8
BMI‡	33.3±5.0	33.4±5.0
Waist circumference — cm	111.3±13.1	111.4±13.1
Glycated hemoglobin level — %	5.78±0.34	5.78±0.33
Distribution — no. (%)		
<5.7%	2925 (33.2)	2980 (33.9)
≥5.7%	5877 (66.8)	5819 (66.1)
Median high-sensitivity CRP level (IQR) — mg/liter	1.87 (0.89–4.18)	1.80 (0.86–4.06)
Cardiovascular inclusion criteria — no. (%)		
Myocardial infarction only	5962 (67.7)	5944 (67.5)
Stroke only	1578 (17.9)	1556 (17.7)
Peripheral arterial disease only	376 (4.3)	401 (4.6)
Two or more inclusion criteria	718 (8.2)	719 (8.2)
Other§	169 (1.9)	181 (2.1)
eGFR — ml/min/1.73 m^2	82.4±17.5	82.5±17.3
Median lipid level (IQR) — mg/dl		
Total cholesterol	153 (131–182)	153 (131–183)
HDL cholesterol	44 (37–52)	44 (37–52)
LDL cholesterol	78 (61–102)	78 (61–102)
Triglycerides	134 (99–188)	135 (100–190)
Systolic blood pressure — mm Hg	131.0±15.6	130.9±15.3
Diastolic blood pressure — mm Hg	79.4±10.0	79.2±9.9
Pulse — beats/min	68.9±10.6	68.6±10.7
EQ-5D-5L index score¶	0.88±0.15	0.88±0.15

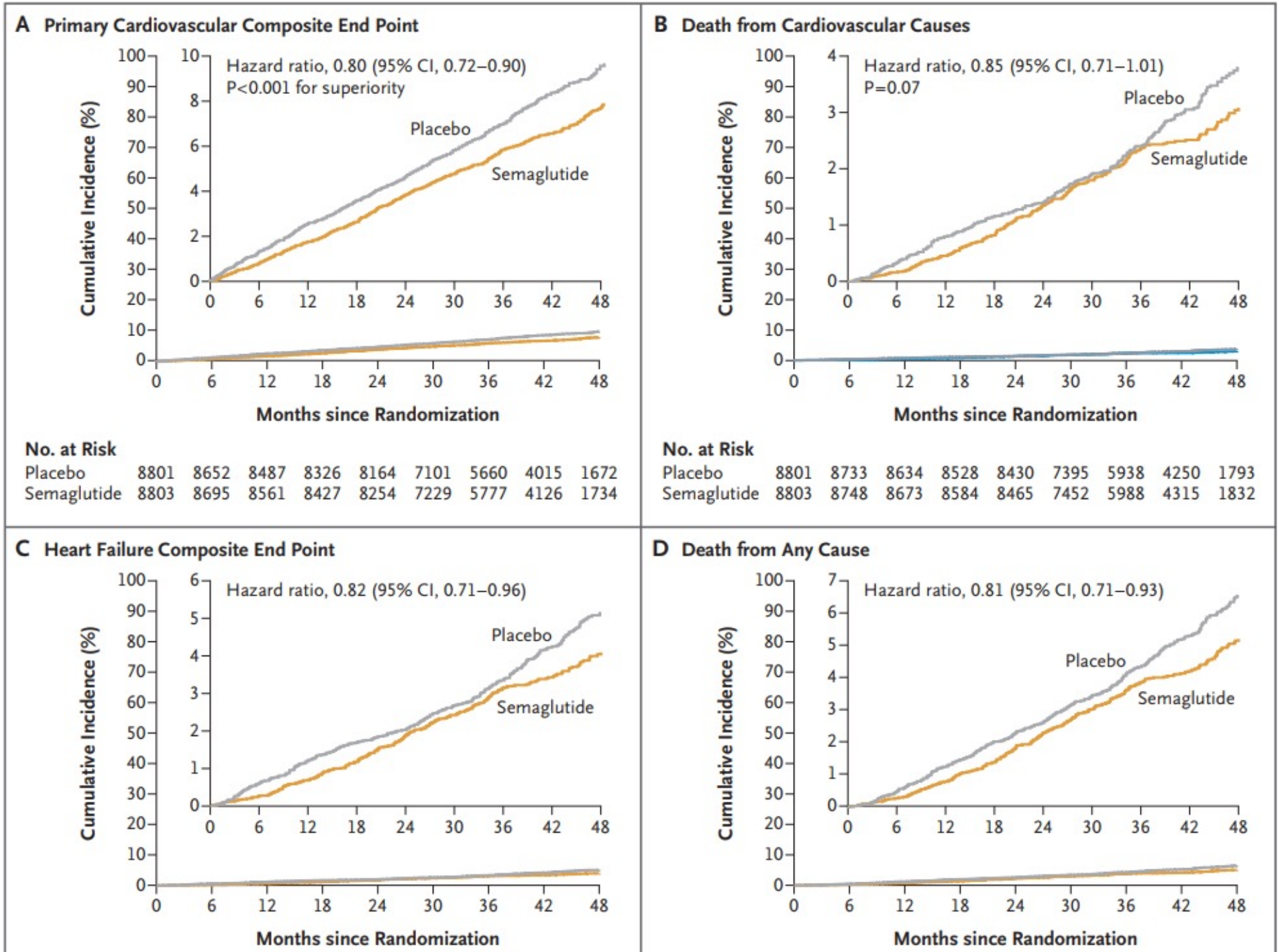

A Primary Cardiovascular Composite End Point
Hazard ratio, 0.80 (95% CI, 0.72–0.90)
P<0.001 for superiority
Placebo
Semaglutide
Cumulative Incidence (%)
Months since Randomization
No. at Risk
Placebo 8801 8652 8487 8326 8164 7101 5660 4015 1672
Semaglutide 8803 8695 8561 8427 8254 7229 5777 4126 1734
B Death from Cardiovascular Causes
Hazard ratio, 0.85 (95% CI, 0.71–1.01)
P=0.07
Placebo
Semaglutide
Cumulative Incidence (%)
Months since Randomization
No. at Risk
Placebo 8801 8733 8634 8528 8430 7395 5938 4250 1793
Semaglutide 8803 8748 8673 8584 8465 7452 5988 4315 1832
C Heart Failure Composite End Point
Hazard ratio, 0.82 (95% CI, 0.71–0.96)
Placebo
Semaglutide
Cumulative Incidence (%)
Months since Randomization
D Death from Any Cause
Hazard ratio, 0.81 (95% CI, 0.71–0.93)
Placebo
Semaglutide
Cumulative Incidence (%)
Months since Randomization

Table 3. Supportive Binary and Continuous Secondary End Points.*

End Point	Semaglutide (N=8803)	Placebo (N=8801)	Difference (95% CI)†
Glycated hemoglobin level of <5.7% among patients with baseline glycated hemoglobin level of ≥5.7% — no./total no. (%)‡			
At week 52	3848/5831 (66.0)	1136/5748 (19.8)	10.15 (9.18 to 11.23)
At week 104	3775/5750 (65.7)	1211/5663 (21.4)	8.74 (7.91 to 9.65)
Mean change from randomization to week 104			
Body weight — %	−9.39±0.09	−0.88±0.08	−8.51 (−8.75 to −8.27)
Waist circumference — cm	−7.56±0.09	−1.03±0.09	−6.53 (−6.79 to −6.27)
Glycated hemoglobin level — percentage points	−0.31±0.00	0.01±0.00	−0.32 (−0.33 to −0.31)
Systolic blood pressure — mm Hg	−3.82±0.16	−0.51±0.16	−3.31 (−3.75 to −2.88)
Diastolic blood pressure — mm Hg	−1.02±0.10	−0.47±0.10	−0.55 (−0.83 to −0.27)
Heart rate — beats/min	3.79±0.11	0.69±0.11	3.10 (2.80 to 3.39)
EQ-5D-5L index score§	0.01±0.00	−0.01±0.00	0.01 (0.01 to 0.02)
EQ-5D-VAS score§	2.52±0.16	0.92±0.16	1.60 (1.16 to 2.04)
High-sensitivity CRP level — %	−39.12	−2.08	−37.82 (−39.70 to −35.90)
Total cholesterol level — %	−4.63	−1.92	−2.77 (−3.37 to −2.16)
HDL cholesterol level — %	4.86	0.59	4.24 (3.70 to 4.79)
LDL cholesterol level — %	−5.25	−3.14	−2.18 (−3.22 to −1.12)
Triglyceride level — %	−18.34	−3.20	−15.64 (−16.68 to −14.58)

Table 4. Investigator-Reported Adverse Events.*

Event	Semaglutide (N=8803)	Placebo (N=8801)	P Value†
	no. of patients (%)		
Serious adverse events‡	2941 (33.4)	3204 (36.4)	<0.001
Cardiac disorders	1008 (11.5)	1184 (13.5)	<0.001
Infections and infestations	624 (7.1)	738 (8.4)	0.001
Nervous system disorders	444 (5.0)	496 (5.6)	0.08
Surgical and medical procedures	433 (4.9)	548 (6.2)	<0.001
Neoplasms benign, malignant, and unspecified	405 (4.6)	402 (4.6)	0.94
Gastrointestinal disorders	342 (3.9)	323 (3.7)	0.48
Adverse events leading to permanent discontinuation of trial product, irrespective of seriousness‡	1461 (16.6)	718 (8.2)	<0.001
Gastrointestinal disorders	880 (10.0)	172 (2.0)	<0.001
Nervous system disorders	124 (1.4)	92 (1.0)	0.03
Metabolism and nutrition disorders	108 (1.2)	27 (0.3)	<0.001
General disorders and administration-site conditions	105 (1.2)	47 (0.5)	<0.001
Neoplasms benign, malignant, and unspecified	80 (0.9)	105 (1.2)	0.07
Infections and infestations	75 (0.9)	84 (1.0)	0.47
Prespecified adverse events of special interest, irrespective of seriousness§			
Covid-19–related events	2108 (23.9)	2150 (24.4)	0.46
Malignant neoplasms	422 (4.8)	418 (4.7)	0.92
Gallbladder-related disorders	246 (2.8)	203 (2.3)	0.04
Acute kidney failure	171 (1.9)	200 (2.3)	0.13
Acute pancreatitis¶	17 (0.2)	24 (0.3)	0.28

Table 2. Primary and Secondary Time-to-First-Event Efficacy End Points.*

End Point	Semaglutide (N=8803)	Placebo (N=8801)	Hazard Ratio (95% CI)	P Value
	number of patients (percent)			
Primary cardiovascular composite end point†	569 (6.5)	701 (8.0)	0.80 (0.72 to 0.90)	<0.001
Confirmatory secondary end points‡				
Death from cardiovascular causes	223 (2.5)	262 (3.0)	0.85 (0.71 to 1.01)	0.07
Heart failure composite end point§	300 (3.4)	361 (4.1)	0.82 (0.71 to 0.96)	NA
Death from any cause	375 (4.3)	458 (5.2)	0.81 (0.71 to 0.93)	NA

+ Death of cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke

RESEARCH SUMMARY

Semaglutide in Patients with Heart Failure with Preserved Ejection Fraction and Obesity

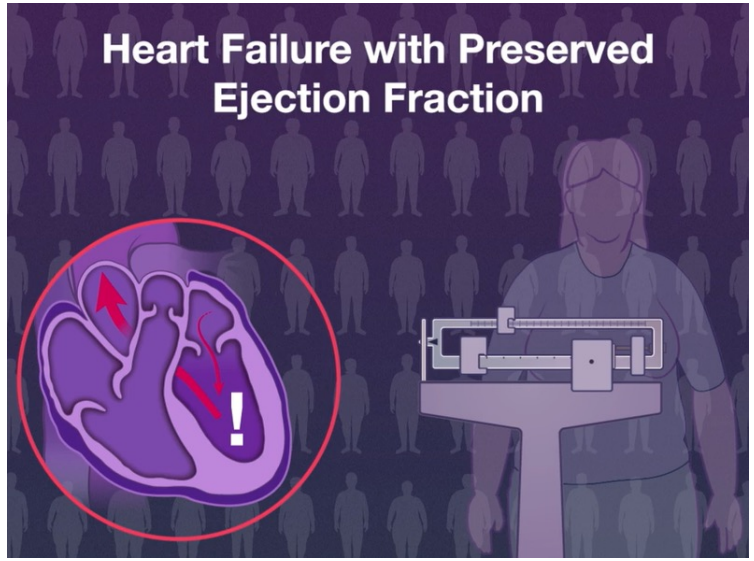
Kosiborod MN et al. DOI: 10.1056/NEJMoa2306963

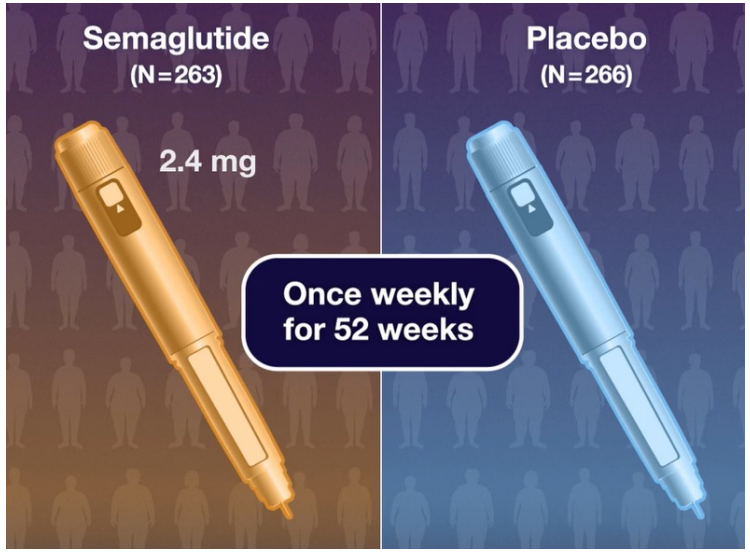
Junio 2023

STEP-HFpEF Trial

- Multinational
- Randomized
- Controlled

529 pacientes





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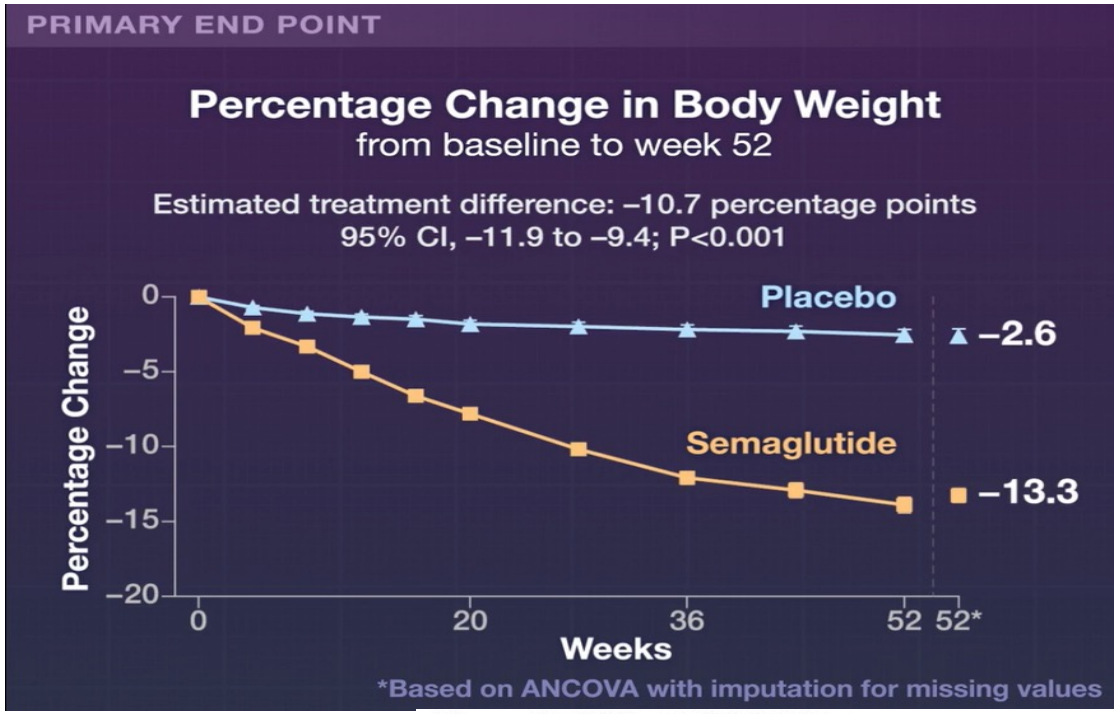
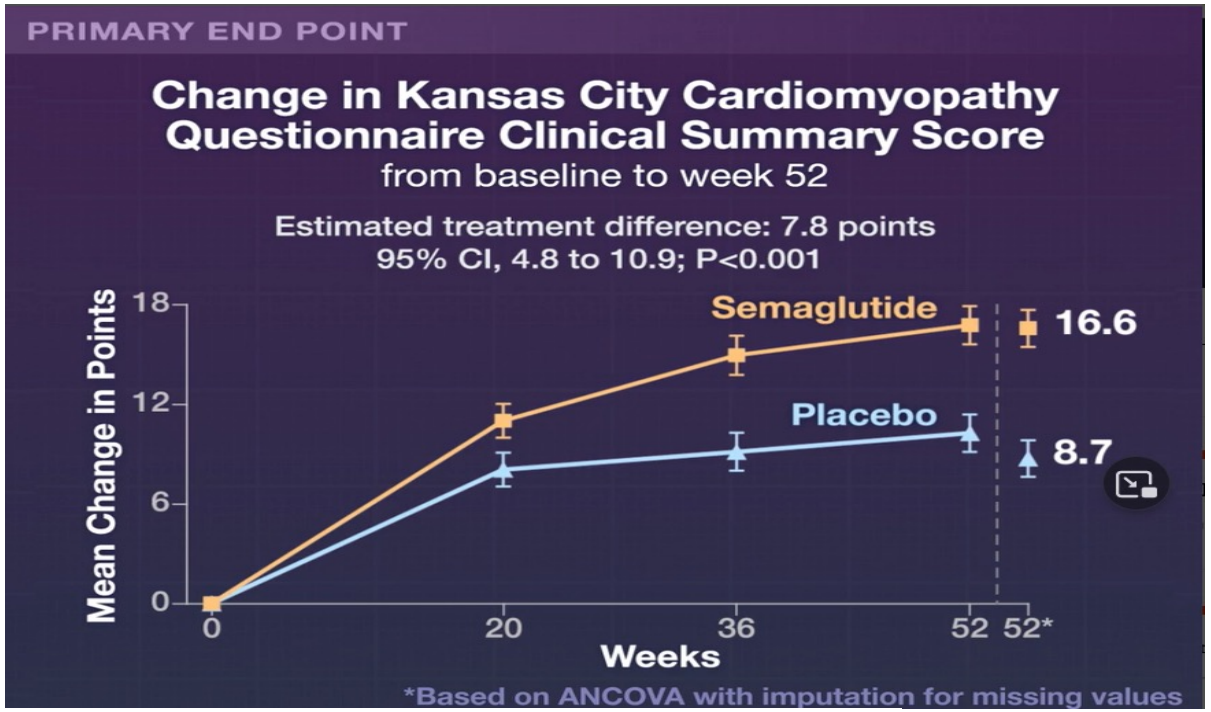
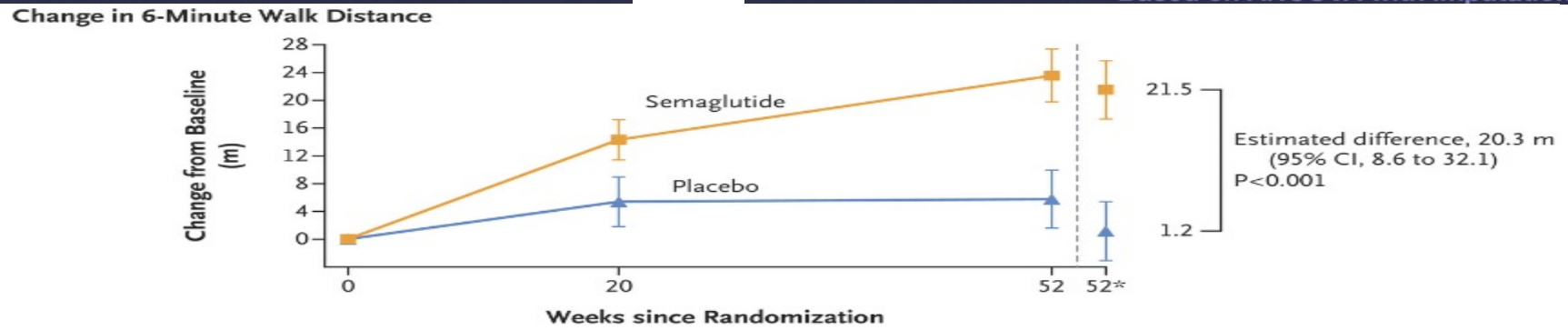




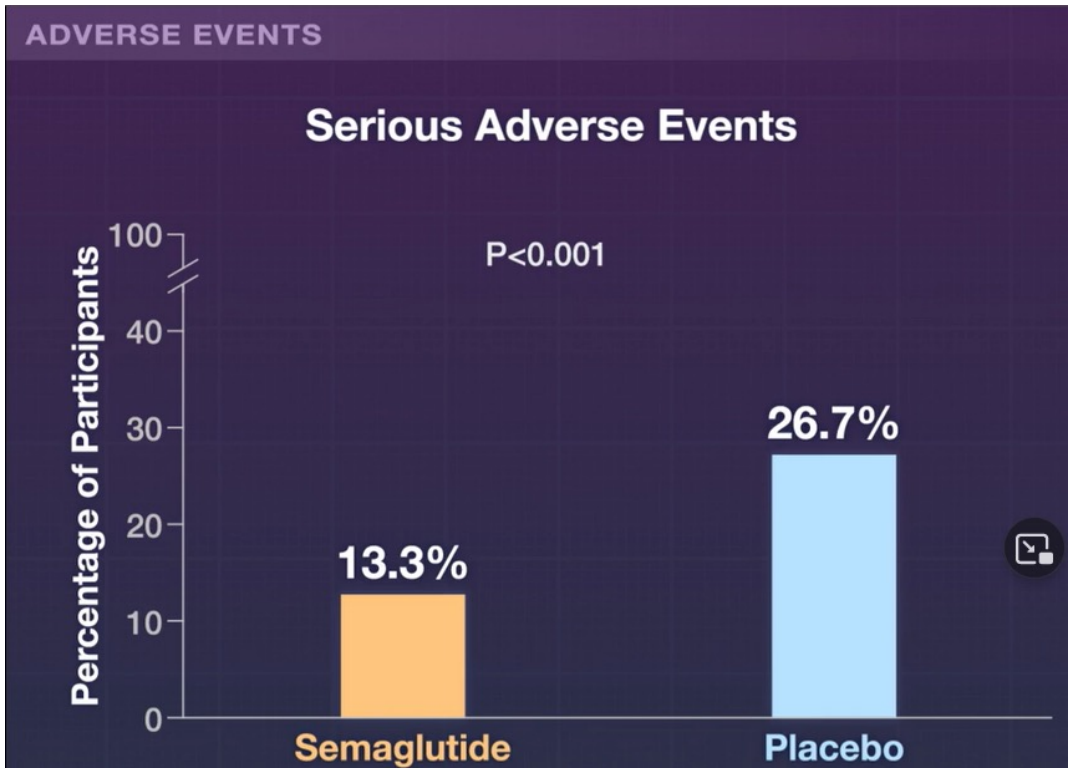


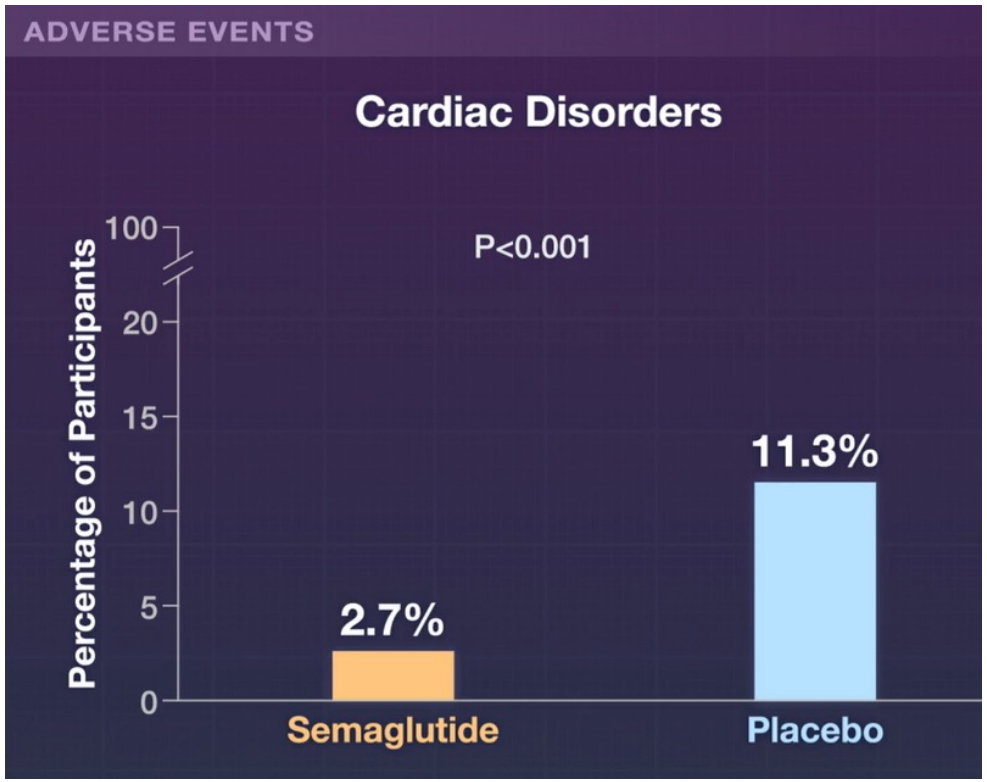
No. of Participants

RESEARCH SUMMARY

Semaglutide in Patients with Heart Failure with Preserved Ejection Fraction and Obesity

Kosiborod MN et al. DOI: 10.1056/NEJMoa2306963





ORAL MONOTHERAPY

ORAL GLP-1 receptor agonists				
Semaglutide	GLP-1 RA	Phase III	Novo Nordisk	NCT05035095
Danuglipron	sm GLP-1 RA	Phase II	Pfizer	NCT04707313
LY3502970	GLP-1R NPA	Phase II	Eli Lilly	NCT05051579

SEMAGLUTIDA oral

- Es la primera y única semaglutida oral
- Coformulacion con n-8-2 hidroxibenzoil amico caprilato de sodio: facilta la absorción transcelular a través de la mucosa gástrica
- Aprobado 2019 por FDA para tto DM2 hasta 14 mg/d (3-7-14)
- En estudio dosis 25-50 mg/d en obesidad sin DM2

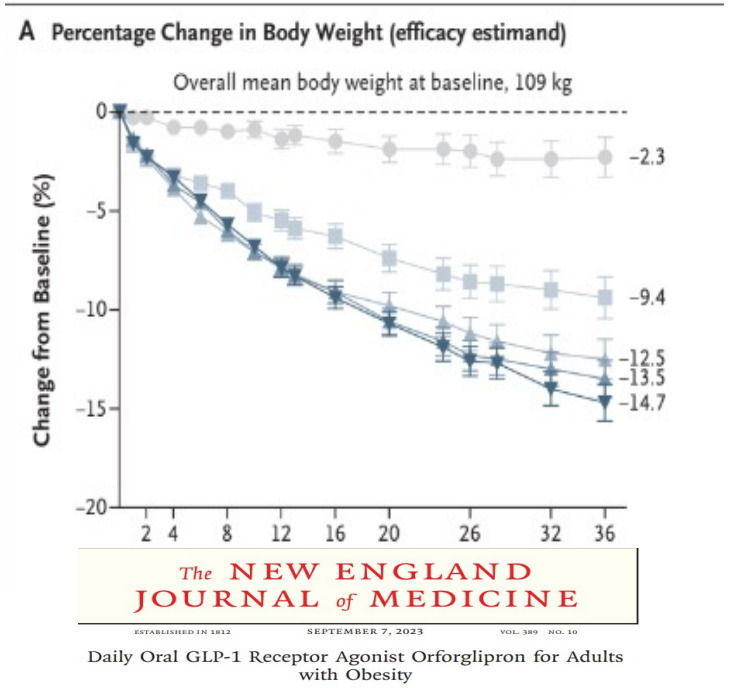
DANUGLIPRON

- biodisponible via oral,
- en desarrollo
- Estudio fase 1 10 a 200 mg/d frente a placebo
- Reduccion peso con 70 mg/d de 4,4 kg a 28 días
- Efectos adversos habituales a otros AR-GLp1, bien tolerado y de tipo dosi-dependiente

ORFORGOLIPRON

Fase II, N= 272

four doses (12, 24, 36, or 45 mg) or placebo



Daily Oral GLP-1 Receptor Agonist Orforglipron for Adults with Obesity

AGONISTAS AMILINA

ENDO-PANCREATIC receptor agonists				
Cagrilintide	AMY RA	Phase II	Novo Nordisk	NCT03856047
ZP8396	AMY RA	Phase I	Zealand Pharma	NCT05096598
Amylin agonist LA	AMY RA	Phase I	Eli Lilly	Not available
DACRA QW II	AMY/CAL RA	Phase I	Eli Lilly	Not available

Amilina: secretrada junto a insulina por islotes pancreáticos. Suprime el glucagon y retrasa vaciamiento gástrico

Amylin (AMY) (81, 82)	Pancreatic β cells	AMY receptor (heterodimer of CTR core protein with RAMPs) Location: CNS (hypothalamus, AP, VTA, striatum)	↑ Satiety ↓ Gastric emptying ↓ Food intake	Under investigation as monotherapy or in combination with GLP-1 and other hormones: ■ cagrilintide (monotherapy) (**Figure 1**) ■ cagri-sema (AMY/GLP-1 dual RA) (**Figure 1**) ■ combination with leptin

AGONISTAS AMILINA

PRAMLITIDE: primer análogo de amilina,
aprobado por FDA en 2005 en diabetes

CAGRILINTIDA

Analogo amilina inyectable semanal

Ensayo Fase II:

Cagrilintida 4,5 mg/semana → reduccion peso 10,6%

Liraglutida → reduccion peso 8,4%

Placebo → reduccion 2,4%

Ensayo Fase Ib

Cagrilintida+Semaglutida 2,4 mg/semana → reduccion peso 17,1%

Semaglutida sola → reduccion peso 9,8%

Efectos adverso comunes: nauseas, diarrea estreñimiento fatiga y reaccion local a la inyeccion

AGONISTAS DUALES: GIP / GLP1

- GIP (péptido inhibidor gástrico) es una hormona de 42 aminoácidos estimulada por nutrientes, secretada por células neuroendocrinas

funciona en concierto con GLP1 aumentando secreción de insulina dependiente de glucosa y con efectos también en tejido adiposo, hueso e hipotálamo

GIP (85, 86)	Entero-endocrine K cells	GIP receptor Locations: ■ pancreatic β cells ■ CNS (hypothalamus) ■ bone ■ heart ■ adipocytes	↓ Food intake ↑ LPL activity ↑ Postprandial insulin secretion	Under investigation as monotherapy or in combination with GLP-1 and other hormones (**Figure 1**): ■ ZP6590 (monotherapy) ■ tirzepatide (GIP/GLP-1 dual RA) FDA approved for T2D ■ AMG133 (GIP/GCG dual RA) ■ LY3437943 (GIP/GCG/GLP-1 triple RA)

AGONISTAS DUALES: GIP / GLP1

ENTERO-ENDOCRINE receptor agonists/antagonists				
Tirzepatide	GIP/GLP-1 dual RA	Phase III	Eli Lilly	NCT04184622
CT388	GIP/GLP-1 dual RA	Phase I	Carmot Therapeutics	NCT04838405
Dapiglutide	GIP/GLP-2 dual RA	Phase I	Zealand Pharma	NCT04838405
AMG133	GIP Receptor Antagonist/ GLP-1 RA	Phase I	Amgen	NCT04478708

- TIRZEPATIDE agonista inyectable del receptor GIP/GLP1 con vida media 117h.

  - Estudio SURPASS 2022, Aprobado FDA y EMA en diabetes
  - Estudio SURMOUNT-1: Fase III ->

RESEARCH SUMMARY

Tirzepatide Once Weekly for the Treatment of Obesity

Jastreboff AM et al. DOI: 10.1056/NEJMoa2206038 Julio 2022

SURMOUNT-1 Trial

- International
- Phase 3
- Double-blind, randomized
- 2539 adults
- Obese, or overweight plus weight-related complication
- Without diabetes

RESEARCH SUMMARY

Tirzepatide Once Weekly for the Treatment of Obesity

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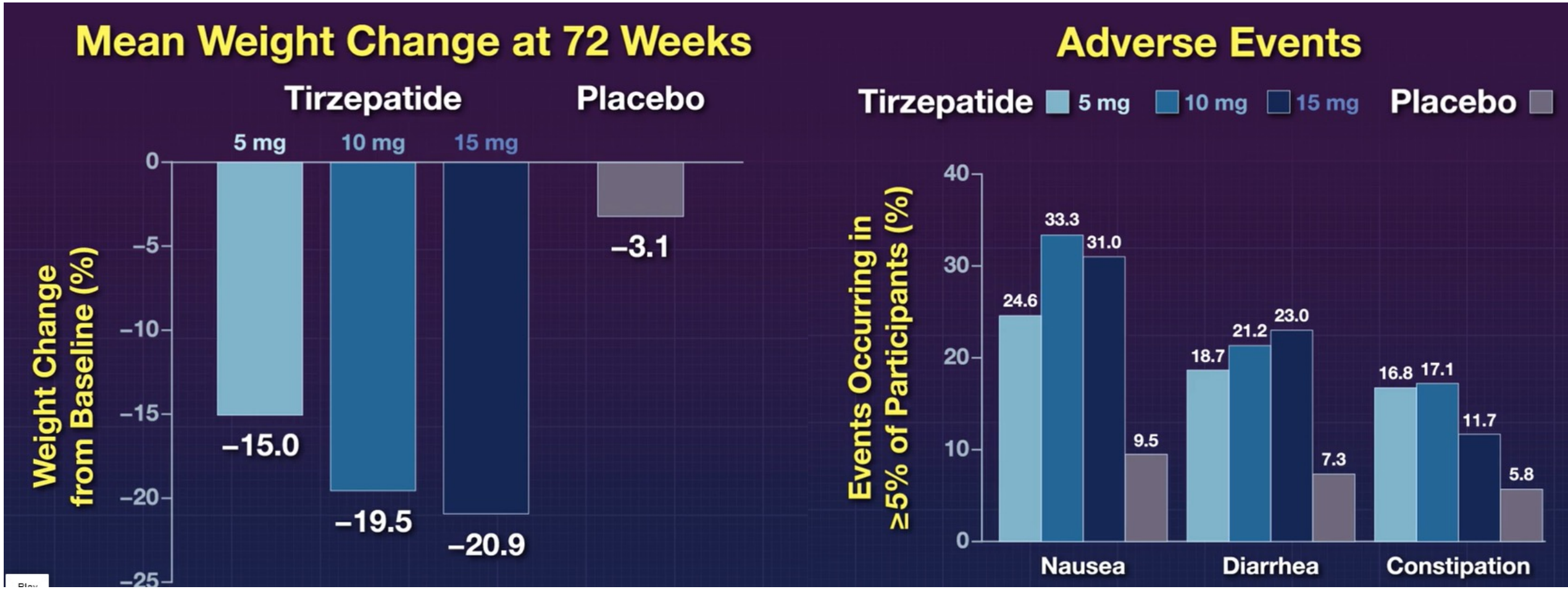


AGONISTAS DUALES: GIP / GLP1

TIRZEPATIDE Otros ensayos en curso:

- Estudio SURMOUNT-2 pacientes con DM2
- Estudio SURMOUNT-3 comparado a modificacion estilo de vida
- Estudio SURMOUNT-4 mantenimiento de perdida de peso

Resultados pendientes

AGONISTAS DUALES: Glucagon/ GLP1

El glucagón es un péptido 29 aminoácidos secretado por células alfa pancreáticas que estimula glucogenolisis, gluconeogénesis y aumenta la glucosa en sangre

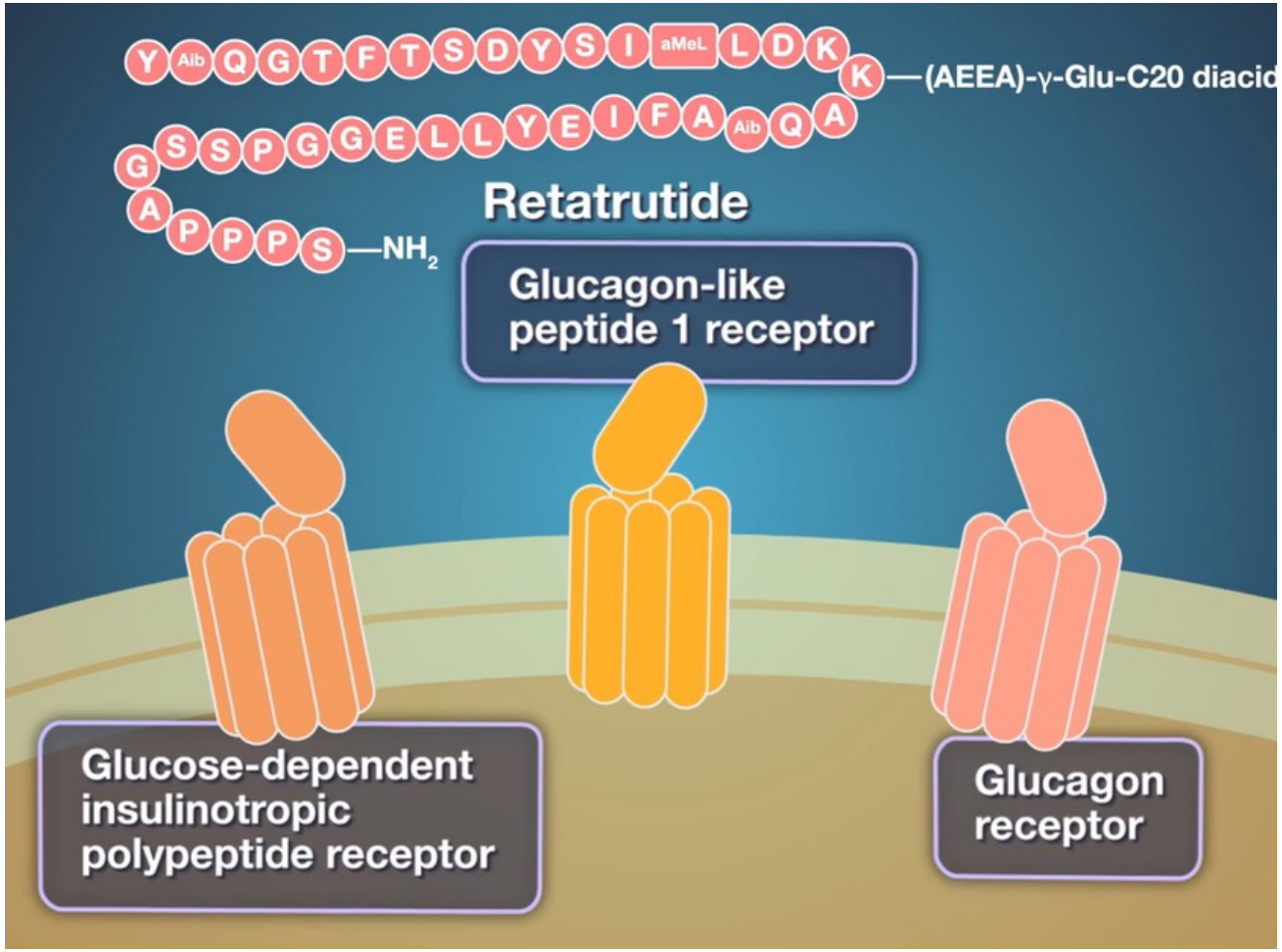
Glucagon (GCG) (87)	Pancreatic α cells	GCG receptor Locations: ■ CNS ■ pancreas ■ adipocytes ■ kidney ■ liver	↑ Satiety ↑ Glycogenolysis ↑ Gluconeogenesis	Under investigation as monotherapy or in combination with GLP-1 and other hormones for obesity (**Figure 1**): ■ HM15136 (monotherapy) ■ pemvidutide (GCG/GLP-1 dual RA) ■ BI1456906 (GCG/GLP-1 dual RA) ■ LY3437943 (GIP/GCG/GLP-1 triple RA)

El BI456906 Agonista Glucagon/GLp1 se ha valorado en estudio fase I en pacientes obesos con una reducción a 6 semanas de del 8,8-13,7%

AGONISTAS RECEPTORES TRIPLES: GLP-1/GLPE/ GLUCAGON

PANCREATIC-ENTERO-ENDOCRINE receptor				
Retatrutide	GIP/GCG/GLP-1 triple RA	Phase II	Eli Lilly	NCT04881760

- se espera que una formulación tri-agonista pueda tener mayor eficacia por suma de efectos aditivos
- Un análogo triple GIP/GLPE-3437943/Glucagon evidenció en un estudio Fase I de 45 participantes una reducción de 2,9 kg y 3,5 kg tras una sola dosis de 4, 5 y 6 mg, respectivamente
- Los efecto secundarios mas comunes fueron gastrointestinales de intensidad leve a moderada.

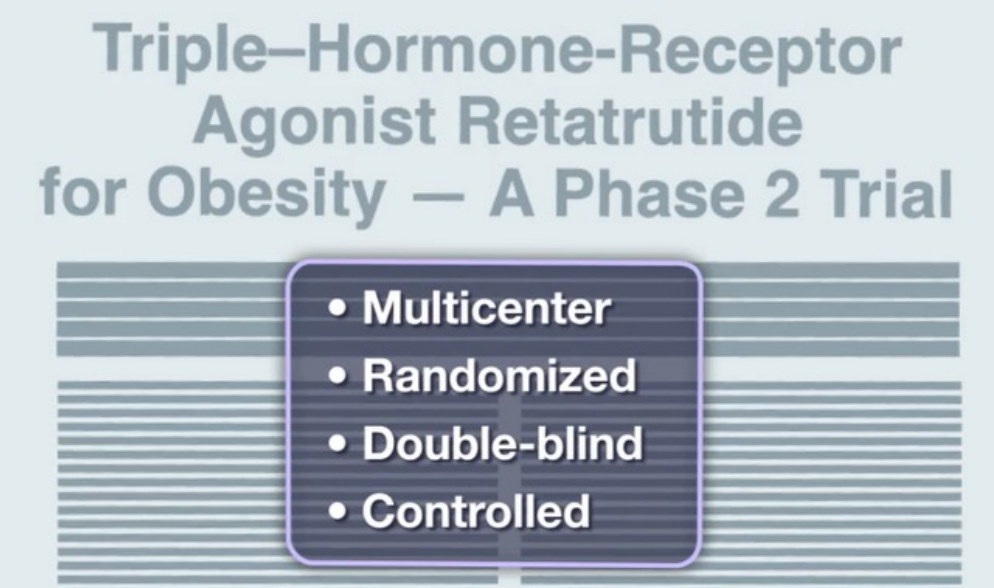


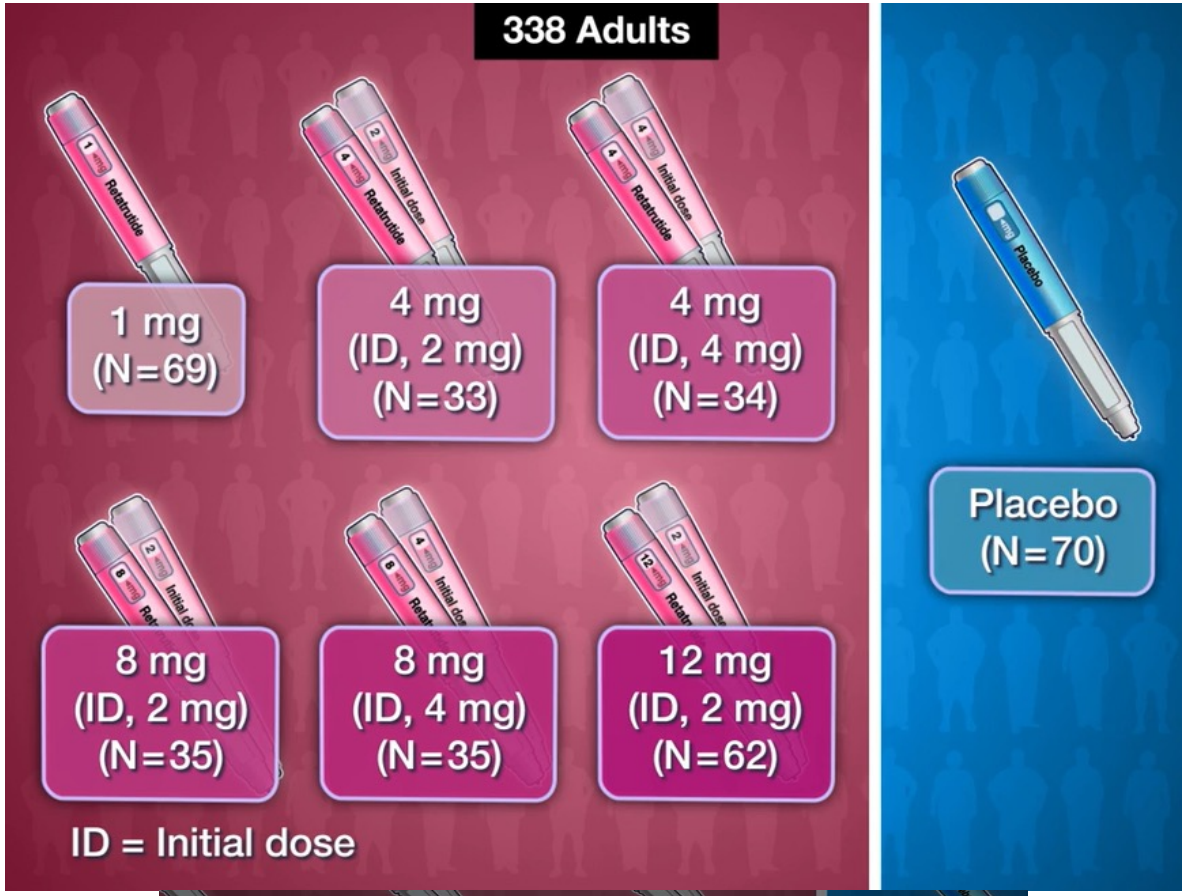
RESEARCH SUMMARY

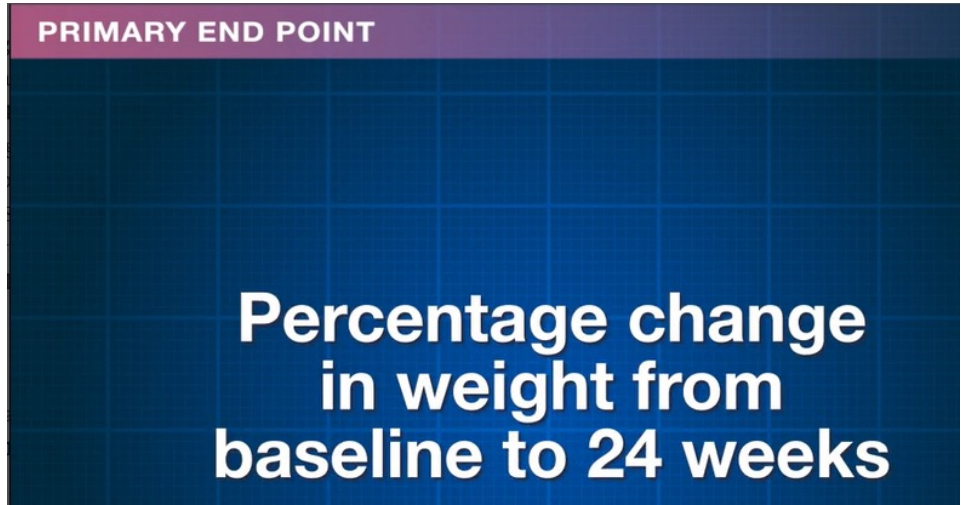
Triple–Hormone-Receptor Agonist Retatrutide for Obesity — A Phase 2 Trial

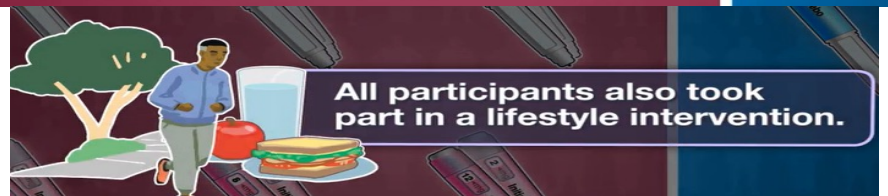
Jastreboff AM et al. DOI: 10.1056/NEJMoa2301972

August 10, 2023
N Engl J Med 2023; 389:514-526









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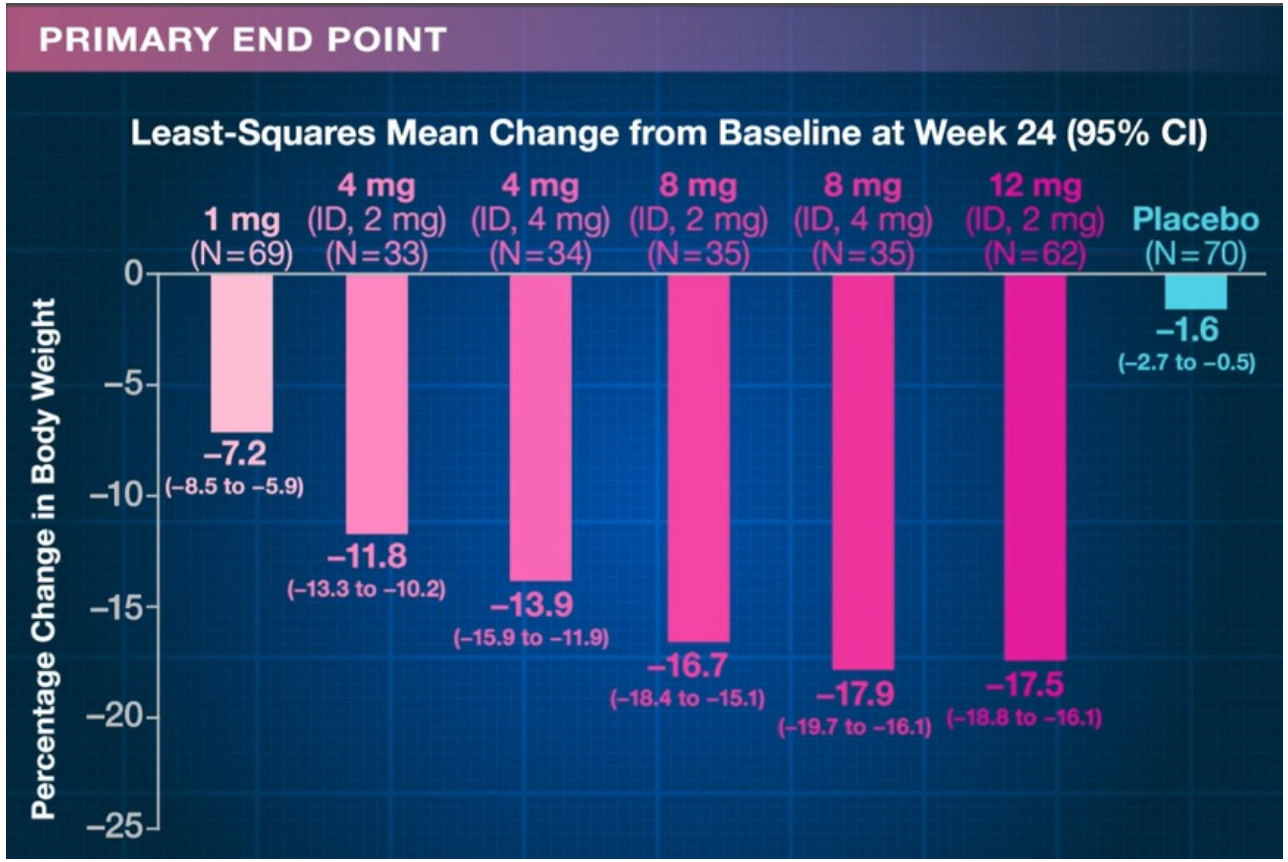
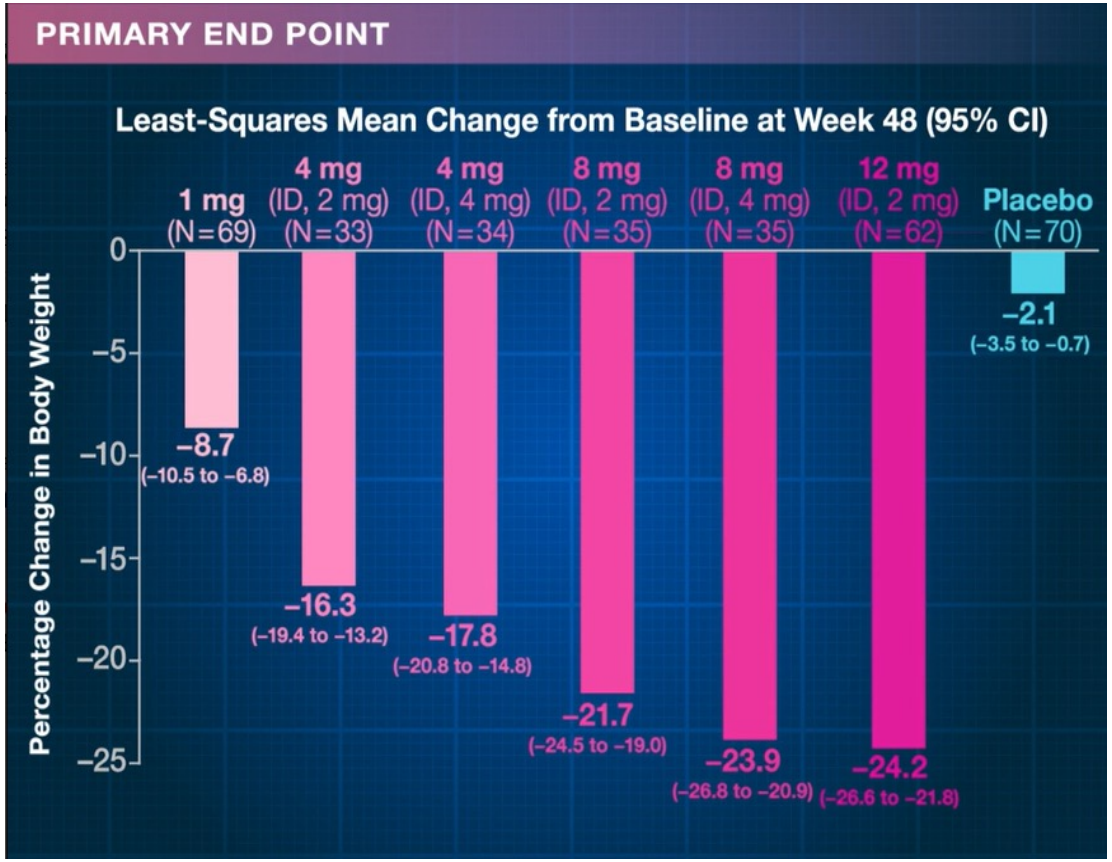
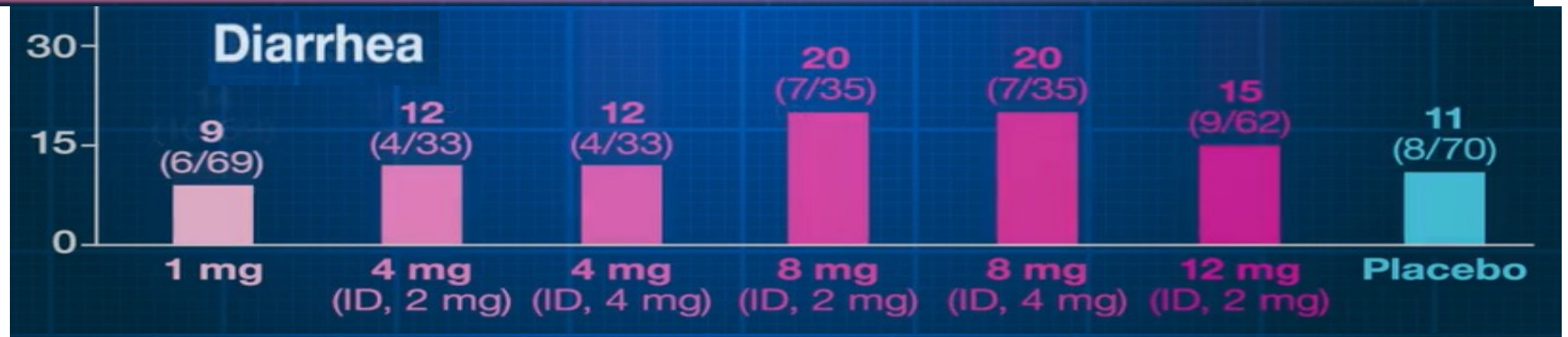
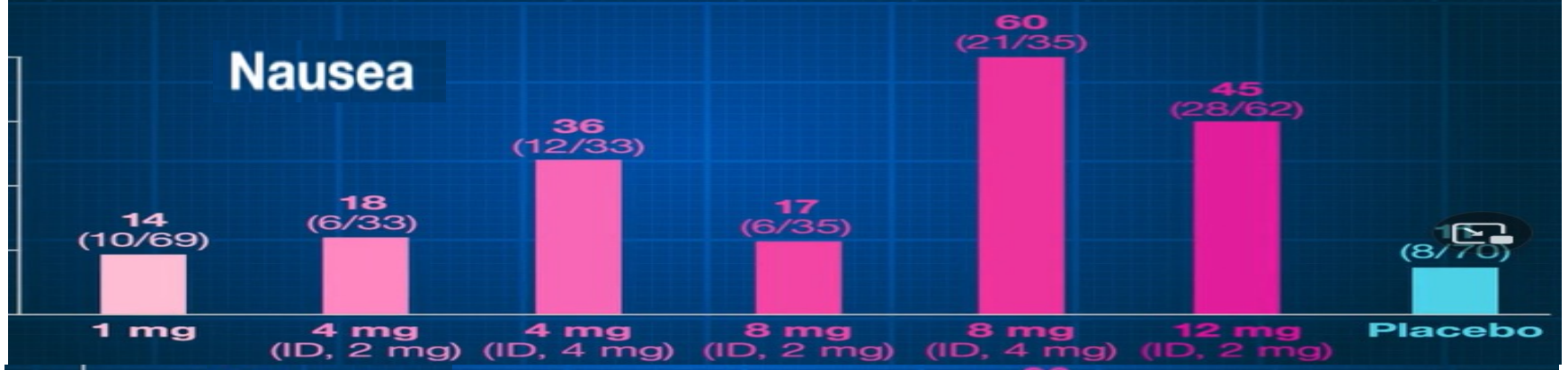
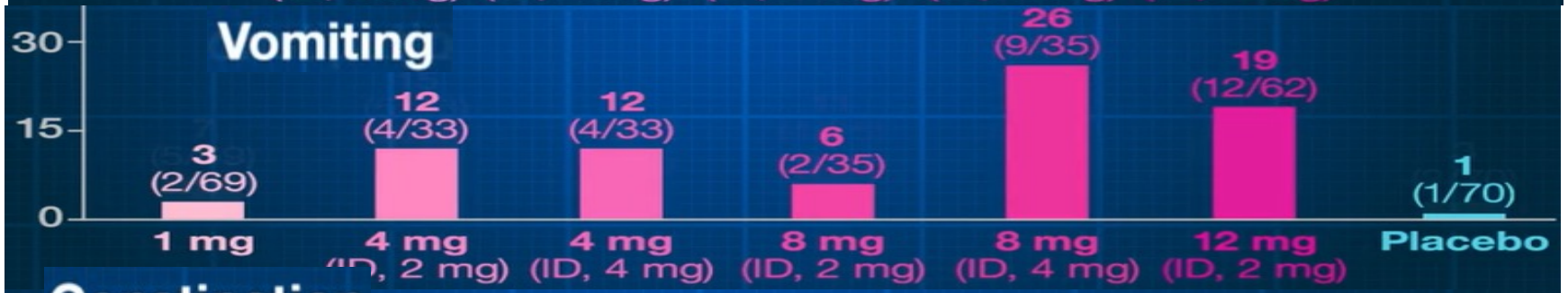


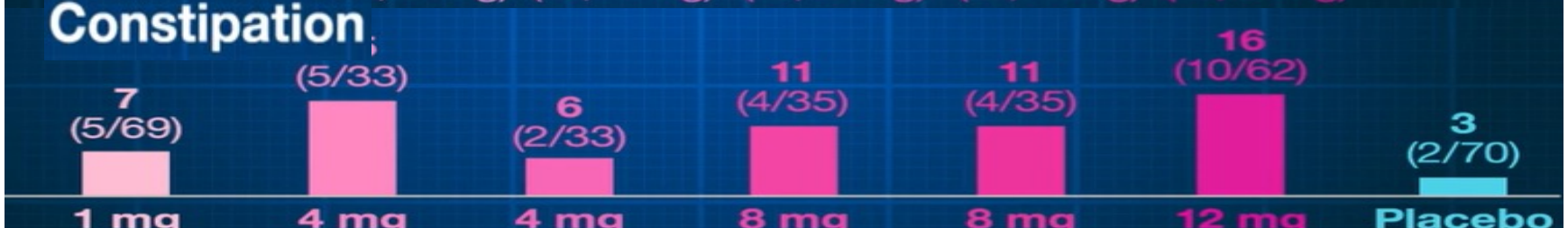


ADVERSE EVENTS AND SAFETY









Cutaneous Hyperesthesia and Skin Sensitivity

CONCLUSIONES

- Nuevo paradigma en el abordaje terapéutico de los péptidos estimulados por nutrientes enteroendocrinos
- En Monoterapia Liraglutida y Semaglutida, están actualmente aprobadas* para el tratamiento de la obesidad con reducciones de peso del 5 al 12,5%
- Abierto un campo muy dinámico de investigación que va a modificar la práctica clínica en proximos tiempos

* UP TO DATE: “we suggest using a glucagon-like peptide 1 (GLP-1) receptor agonist rather than other agents as first-line treatment (Grade 2C)”.