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Empowering hospitalists.
Transforming patient care.

Rapid Clinical Updates: GLP-1 and Obesity Management for Hospital Medicine

Speakers

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Internal Medicine and Obesity Medicine Physician
Johns Hopkins Healthful Eating, Activity & Weight Program

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Clinical Associate Professor of Medicine
Division of Hospital Medicine, Thomas Jefferson University

Moderated by

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System Chief of Hospital Medicine, Regional Chief Medical Officer, Chief Quality Officer
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Disclosures

All speakers and planners have no relevant financial or advisory relationships with corporate organizations related to this activity.

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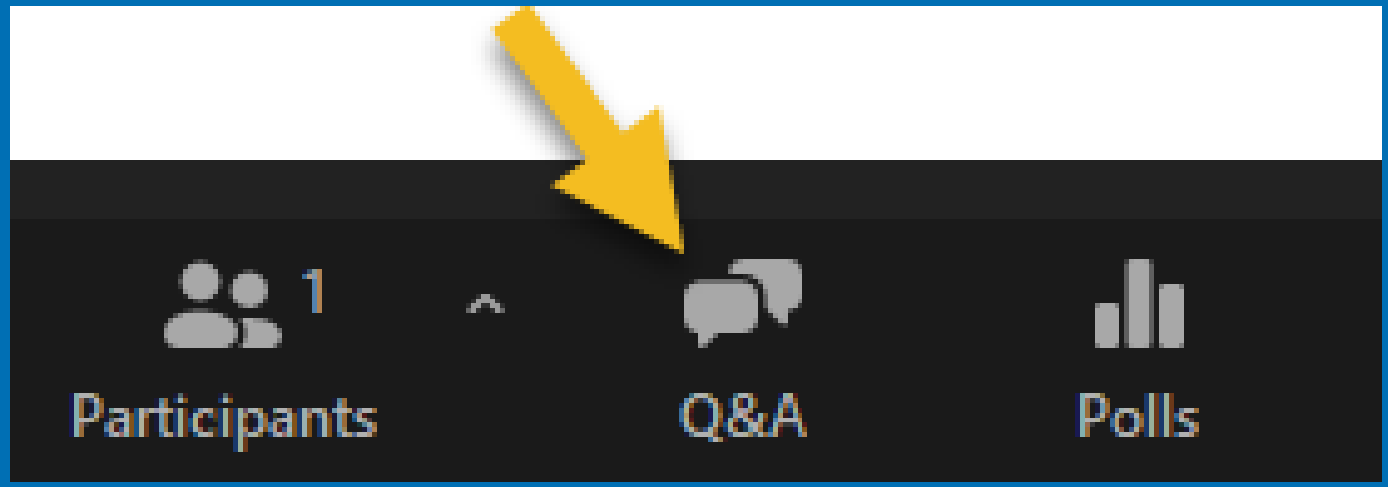
Please submit questions using Q&A feature

We will have Q&A time after



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POLL QUESTIONS

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Question 1

1. **What are the clinical benefits seen in studies with GLP1-RA?**
    A. Reduction in death from cardiovascular causes, non-fatal MI, non-fatal stroke
    B. Reduction in MASH fibrosis
    C. Reduction in progression of diabetic kidney disease
    D. All of the above
    E. A and C only

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Question 2

2. 60 year old woman presents for an elective cholecystectomy and is on once weekly exenatide, last dose 5d ago. She has had no oral intake for the past 8 hours. In the preoperative holding area, she has nausea, vomiting, retching, abdominal pain, and bloating. **What is the next best step?**
    A. Delay the procedure and discuss potential risks for aspiration with the patient, the anesthesiologist and the surgeon
    B. Assess stomach contents with ultrasound
    C. Proceed with surgery
    D. A and B

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Obesity Medicine Essentials for the Hospitalist

Marci Laudenslager, MD, MHS, DABOM
Assistant Professor of Medicine
Johns Hopkins University School of Medicine
May 22, 2025

Agenda

- Discuss the pathophysiology of weight gain
- Review diagnoses and treatment pearls for hospitalized patients
- Review the role of anti-obesity medications in the treatment of overweight & obesity
- Compare mechanisms and efficacy of currently available anti-obesity medications
- Discuss common management challenges with incretin mimetics – review solutions
- Review barriers to care & strategies to improve healthcare quality & access for patients with obesity

What causes obesity?

Most commonly identified etiologies of weight gain

NUTRITION

ACTIVITY

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Commonly *missed* etiologies of weight gain

MEDICATIONS

MENOPAUSE

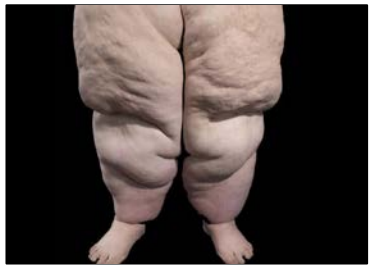
GENETICS

FOOD SYSTEM

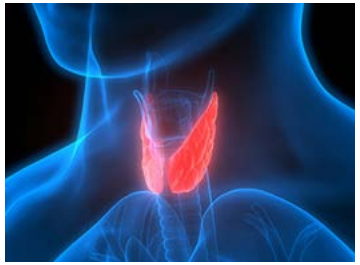
STRESS

SLEEP

LIPEDEMA



HORMONES



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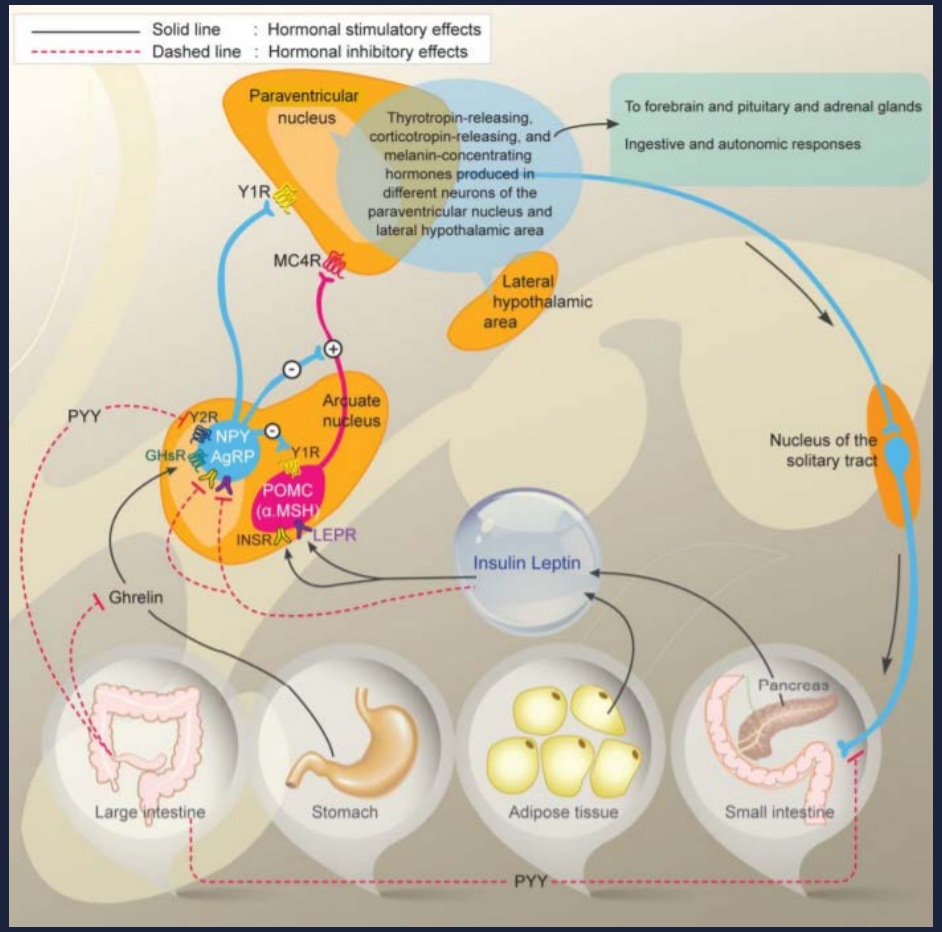
Obesity is a chronic metabolic disease with complex pathophysiology



Apovian CM et al. Endocrine Society. Pharmacological management of obesity: an endocrine Society clinical practice guideline. J Clin Endocrinol Metab. 2015.

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Dispelling the “Eat Less, Move More” Paradigm: The pathophysiology of weight gain

Etiology	Mechanism
Medications	↓ REE, ↑ Appetite, Insulin Resistance, Fluid Retention, ↓ Exercise Tolerance, ↑ Adipogenesis
Sleep	↑ Ghrelin, ↓ Leptin
Genetics	Metabolic dysfunction 2/2 impaired hypothalamic signaling; Monogenic (Leptin, POMC, MC4R) & polygenic disorders and syndromes
Food Environment (Food processing & quality)	Impaired satiety & gut microbiome effects
Stress	↑ Cortisol; Leptin & insulin resistance
Menopause	↓ RMR; Changes in body composition
Lipedema	Dysregulated adipogenesis
Endocrine	Thyroid, PCOS, Cushing’s, hypothalamic obesity
Social Determinants of Health	Food insecurity, safety, air quality, stress, healthcare access

Medication-Associated Weight Gain

Medication class	Proposed weight gain mechanism	Alternatives
Antihistamines	Increased appetite	Leukotriene inhibitors, Loratadine, Flonase
Atypical antipsychotics	Increased appetite and binge eating	Ziprasidone, Aripiprazole
Beta-blockers (esp selective β1)	Reduced REE & thermogenesis; Fatigue; Reduced exercise tolerance; Increased insulin resistance	ACE inhibitors, ARBs, CCBs
Corticosteroids	Impaired glucose tolerance; Increased truncal fat	NSAIDs (if appropriate)
Insulin	Anabolic effects; Increased appetite; Fluid retention	Biguanides, GLP-1 receptor agonists, GLP-1/GIP dual agonist, SGLT2 inhibitors
SSRIs	Increased appetite; Increased food cravings	Bupropion
Sulfonylureas	Anabolic effects; Increased appetite; Fluid retention	Same as insulin
TCAs	Increased appetite	Bupropion
TZDs	Increased adipogenesis; Fluid retention; Increased appetite	Same as insulin
Antiepileptics	Increased appetite; Insulin resistance; Fluid retention	Felbamate, topiramate, zonisamide

** Basal insulin preferred over combo/premixed; Coreg typically causes least amount of weight gain*

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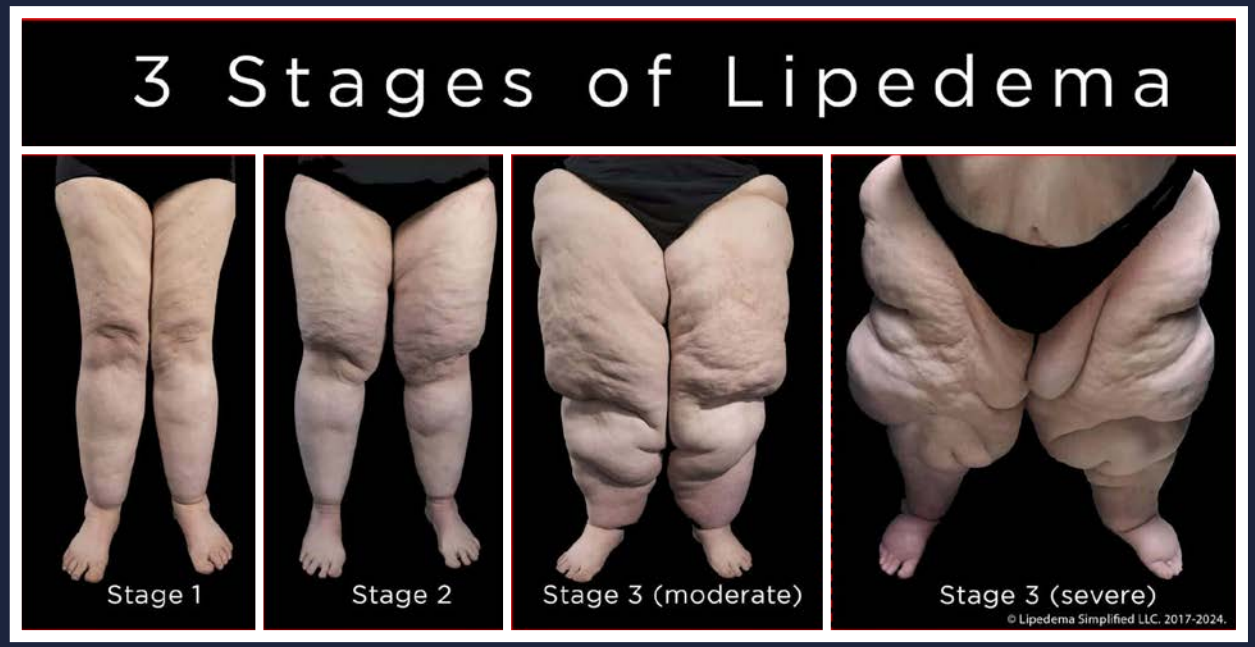
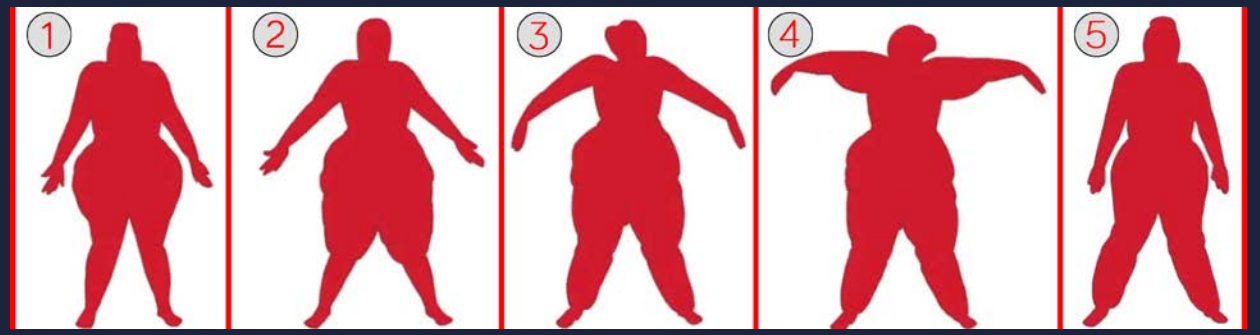
Lipedema

- **Subcutaneous lipodystrophy**
- **Etiology poorly understood**
  - Germline mutation
  - Autosomal dominant w/ incomplete penetrance
  - Manifests during phases of hormonal change
- **Classic presentation:**
  - Females
  - Symmetric B/L overgrowth of extremities
  - Spares feet
  - Pain
  - Easy bruising
- ***Often misdiagnosed as lymphedema or obesity***





Source: The Lipedema Project

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Sleep disorders

- **Sleep rhythm disorders**
- **Sleep apnea**
- **Poor sleep leads to**
  - ↑ Ghrelin
  - ↓ Satiety hormones
- **Acute sleep deprivation study**
  - Participants consumed an extra 300-550 calories/day

Sleep health = metabolic health

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The role of anti-obesity medications in the treatment of overweight & obesity

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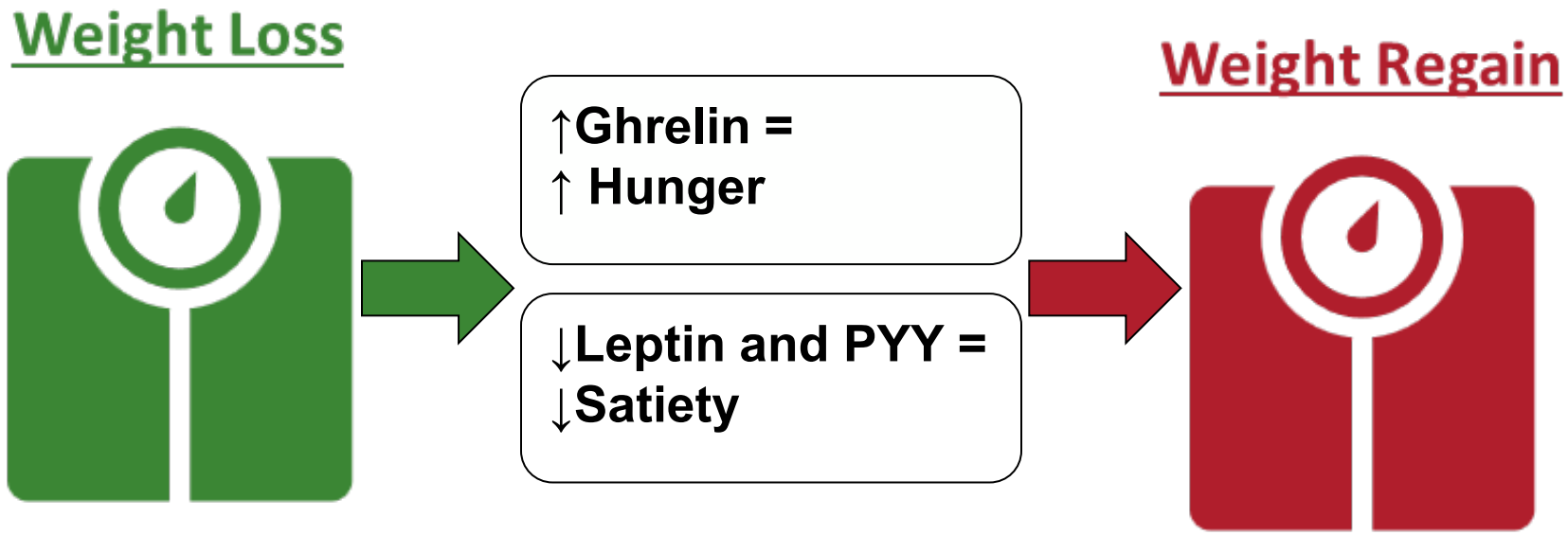
Physiologic response to weight loss with lifestyle measures



Hunger increases with weight loss

&

Metabolic rate decreases!!!

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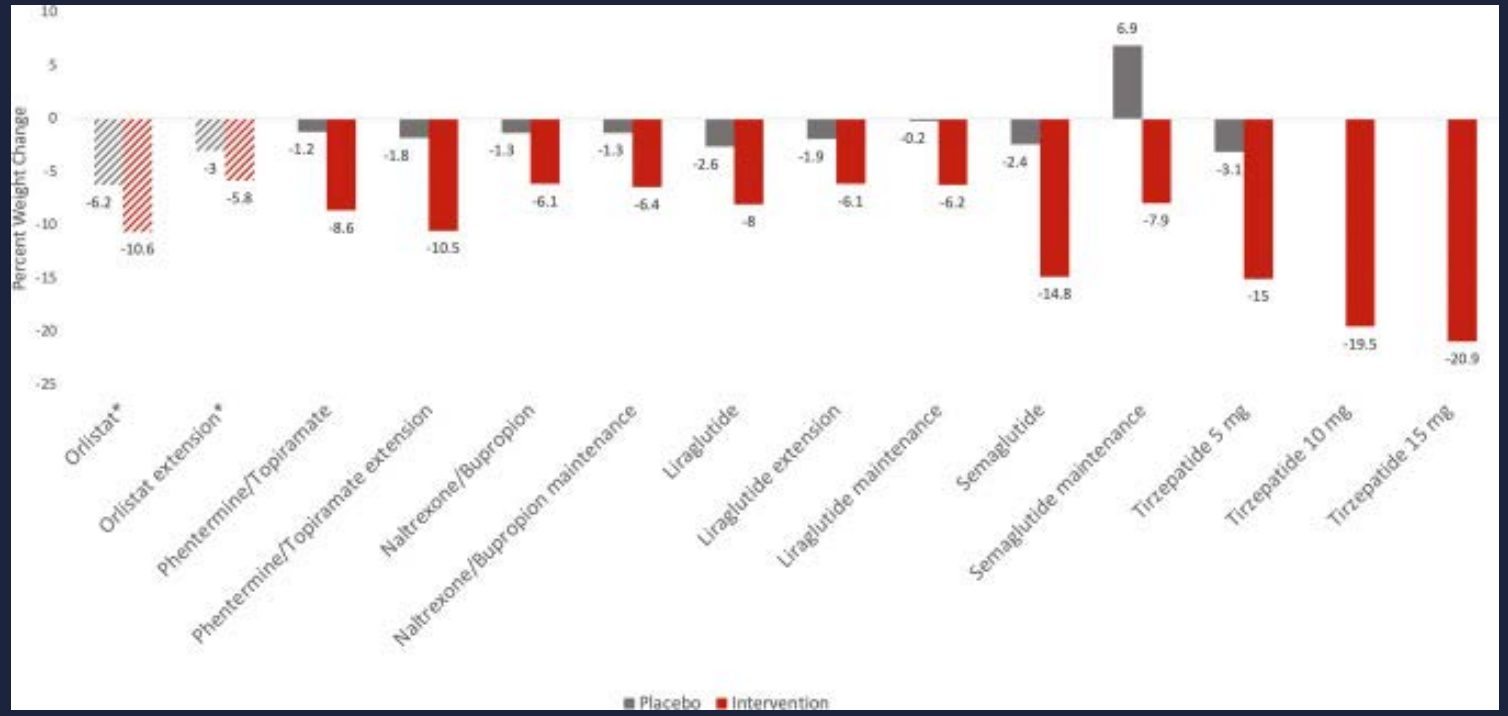
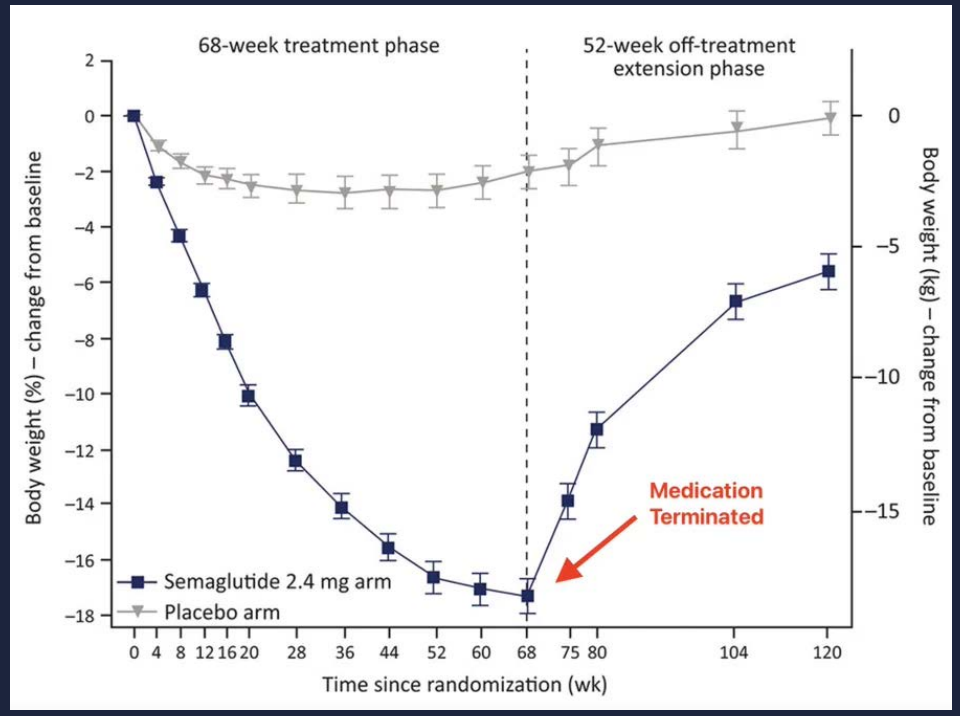
Sumithran P et al. 2011 (PMID: 22029981); Anderson et al., 2001 (PMID: 11684524).

All AOMs cause clinically significant weight loss

Weight regain occurs with AOMs are discontinued



Chakhtoura M et al. Pharmacotherapy of obesity. Lancet, 2023



Wilding JPH et al. STEP 1 Ext. Diabetes Obesity Metabolism, 2022

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Available Anti-Obesity Medications

FDA-APPROVED ANTI-OBESITY MEDICATIONS	
Medication	**Mechanism**
Orlistat	Intestinal lipase inhibitor
Phentermine	Sympathomimetic amine
Phentermine/Topiramate	Sympathomimetic amine + GABA augmentation
Naltrexone/Bupropion	POMC neuron stimulation
Liraglutide & Semaglutide	GLP-1 receptor agonist
Tirzepatide	GLP-1 & GIP dual receptor agonist

OFF-LABEL ANTI-OBESITY MEDICATIONS	
Medication	**Mechanism**
Metformin	Central hypothalamic signaling, incretin secretion, gut microbiome
Bupropion	Stimulates POMC, inhibits norepinephrine & dopamine reuptake
Topiramate	GABA modulation, inhibits orexigenic signaling in hypothalamus

Anti-obesity medications increase likelihood of clinically significant weight loss *and weight loss maintenance*

Strategy	Average Weight Loss	Proportion w/ 10% Weight Loss	Proportion w/ 15% Weight Loss
Lifestyle	6%	~20%	<10%
2nd Gen AOMs*	8%	~40%	~20%
Semaglutide	15%	~70%	50%
Tirzepatide	21%	~80%	70%
Metabolic Surgery	25-35%	~90%	80%

**phentermine, phentermine-topiramate, orlistat, naltrexone-bupropion, liraglutide*

Newer generation medications are approaching weight loss efficacy seen with metabolic surgery

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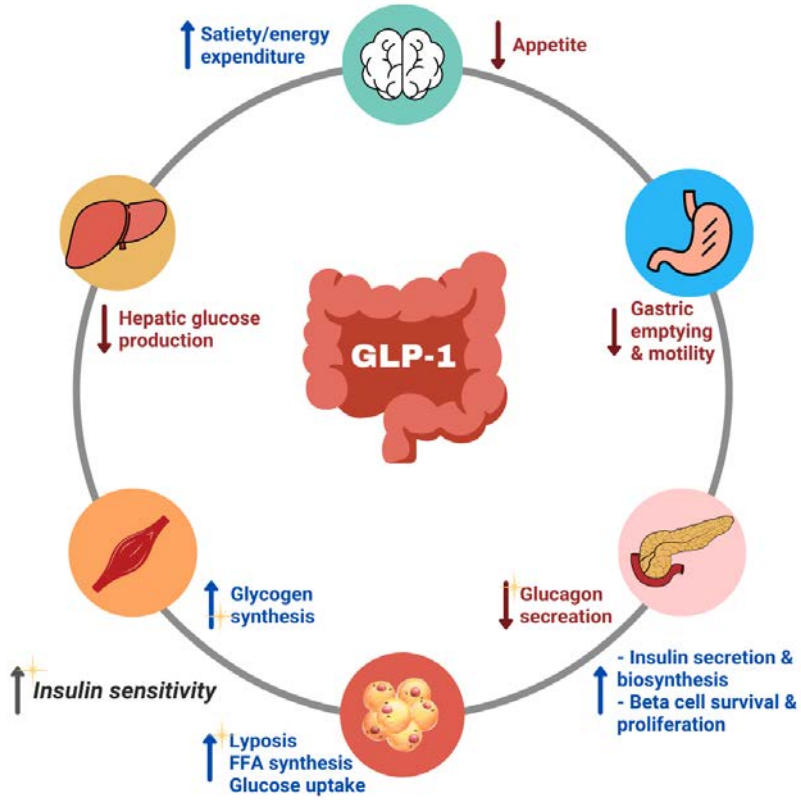
Beyond Satiety: Mechanisms of GLP-1 receptor stimulation

- Inhibits orexigenic NPY in the hypothalamus
- Increases REE
- Favors utilization of stored fat as energy
- Reduces pro-inflammatory visceral fat
- Modulates mesolimbic pathway (impacts dopamine signaling)
- Reduced cardiac remodeling
- Stimulates production of endothelial NO
- May modulate RAAS
- Reduced albuminuria
- Improves insulin sensitivity
- Reduces neuroinflammation
- Enhances synaptic plasticity
- Interferes with formation of amyloid plaques and tau tangles



Incretin Mimetic Prescribing & Management Snapshot

- **Side Effects: Nausea/emesis, constipation, hypoglycemia (patients w/ T2DM)**
  - Typically manageable with lifestyle strategies and dose escalation schedule
  - Nausea: Eat slowly and have ½ typical portion
  - Constipation: Hydration, movement, and bowel regimen PRN
  - **Choose medication dose based on response and tolerance**
    - ***No need to increase systematically until max dose is reached***
    - Manage medication resumption appropriately if doses are missed/held
- **Contraindications: Medullary thyroid cancer, MEN2, pancreatitis, cholecystitis**
- **Cost & Coverage:**
  - Significant barriers to care
  - Victoza, Ozempic & Mounjaro no longer covered for off-label use
  - Many plans increased tier for incretins and will no longer allow tier exceptions
  - Many plans require prior authorization re-approval for dose increases
  - Zepbound approved for OSA though few plans offering coverage

Affordability & Access Tips

1. Prescribe phentermine or use off-label options

2. Prescribe generic components of combination pills

- Contrave: Naltrexone 32 mg/Bupropion 360 mg (8/90 per tablet)
  - Generic bupropion up to 450 mg
  - Generic naltrexone – 25 or 50 mg (1/2 or full tab)
- Qsymia: Phentermine 7.5/15 mg + topiramate 46/92 mg
  - Generic phentermine up to 37.5 mg
  - Generic topiramate up to 100 mg

3. Prescribe 1mg or 2mg Ozempic pen and count clicks

- 1 mg pen (4 mg/3mL): 0.25 mg=18 clicks; 0.5 mg=36 clicks
- 2 mg pen (8 mg/3mL): 0.25 mg=9 clicks; 0.5 mg=18 clicks; 1 mg=36 clicks

4. Use discount pharmacies/coupons

5. Avoid compounded medications

Medication	Discount Pharmacy/Program
Wegovy	Novocare - $500/mo
Zepbound	Lilly Direct - $350-500/mo
Qsymia	MedVantx/Lifeline/GoodRx - $100/mo
Contrave	Ridgeway/Lombard - $100/mo

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Correcting the narrative: Reducing weight bias in clinical care

- **Increase awareness of weight bias**
  - Explicit bias self-assessment: University of Connecticut Rudd Center
  - Implicit bias self-assessment: Harvard Weight Implicit Association Test (*https://implicit.harvard.edu/implicit/takeatest.html*)
- **Environmental awareness**
  - Office furniture, examination tables & imaging tables should accommodate patients of any size
  - Conversations about weight should be held in private
- **Language**
  - Avoid stigmatizing terms (“obese” “morbid obesity”)
  - Use people-first language in visits and in documentation (“patient w/ obesity” “class III obesity”)
- ***Understand and appreciate the complexity of obesity pathophysiology***
  - ***Recognize etiologies of weight gain outside of nutrition and activity***
  - ***Understand why weight loss is difficult and why we use anti-obesity medications in clinical care***
  - ***Recognize the challenges patients face*** *when seeking treatment for obesity*
    - *Increasing weight bias and stigma*
    - *Impact of “The Ozempic Effect” on weight stigma and medication access*

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Improving evidence-based obesity care: Reflection and summary points

- Obesity is a **complex chronic metabolic disease** with myriad etiologies
- We are **physiologically programmed to regain weight** lost with lifestyle measures
- Anti-obesity medications are an important tool and weight loss *and long-term weight maintenance*
- **Semaglutide and tirzepatide** are currently the most effective AOMs
- **Access to highly effective medications has been limited** by weight stigma, medication shortages, drug costs, and insurance policies
- Improving education and dispelling common misconceptions of obesity will …
  - *Help to reduce bias and stigma*
  - *Improve access to compassionate evidence-based care*
  - *Correct our cultural narrative on health and weight*
- Education and advocacy initiatives are underway to reduce drug costs and improve insurance coverage

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Connecting Patients with an Obesity Medicine Provider

ABOM-certified physician database available at: (https://abom.learningbuilder.com/public/membersearch)

Refer to Johns Hopkins Healthful Eating, Activity & Weight Program (https://www.hopkinsmedicine.org/general-internal-medicine/clinical-services/lifestyle-weight)

Evidence-based lifestyle programs: WW, Jenny Craig, DPP

shm
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Thank you

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GLP-1 and Inpatient Considerations

Lily Ackermann ScM, MD, FACP, SFHM

Clinical Associate Professor of Medicine

Division of Hospital Medicine

Section Lead for Faculty Development and Co-Management

Thomas Jefferson University Hospital, Philadelphia PA

Objectives

1. Review the latest cardiovascular and other outcomes data in the management of type 2 diabetes and obesity
2. Review common periprocedural and inpatient management considerations

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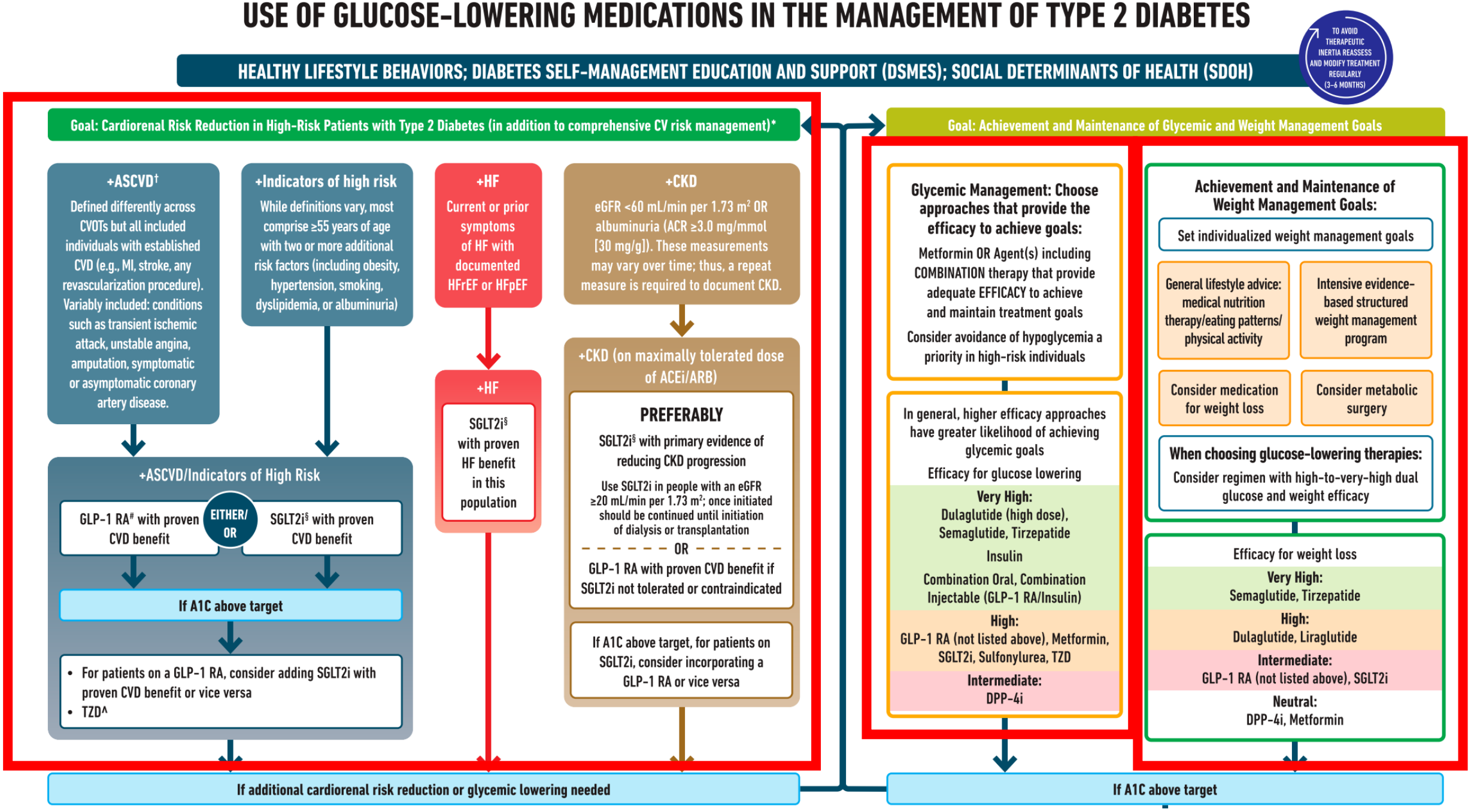
ElSayed N et al. Diabetes Care 1 January 2023; 46 (Supplement_1): S140–S157.

USE OF GLUCOSE-LOWERING MEDICATIONS IN THE MANAGEMENT OF TYPE 2 DIABETES



Cardiovascular Benefits in T2DM

Summary: CV Benefits in Diabetes

Dulaglutide

Linaglutide

Semaglutide (Weekly)

		Liraglutide (s.c. 3 mg)[68] – (s.c. 0.5 and 1.0 mg)[53]	Semaglutide (s.c. 2.4 mg)[71] – (s.c. 0.5 and 1.0 mg)[54]	Tirzepatide (s.c. 5, 10 and 15 mg)[78]	Dulaglutide (s.c. 1.5 mg)[59]
Weight loss *(mean % change in body weight)* Data from people with obesity/overweight without T2D	GLP-1 RA / Placebo	-8.0% / -2.6%	-14.9% / -2.4%	-15.0% -19.5% / -3.1% -20.9%	-- / --
MACE *(% of patients with primary composite outcome of time to first occurrence of MACE)* Data from people with T2D	GLP-1 RA / Placebo	13.0% / 14.9%	6.6% / 8.9%	-- / --	12.0% / 13.4%

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Michos E et al. J Am Heart Assoc. 2023 Jun 6;12(11):e029282

Cardiovascular Benefits in Obesity & CHF

SEMAGLUTIDE	3-POINT MACE	CHF
SELECT (NEJM 2023) Obesity, CV disease, (N = 17, 604)	**20% reduction CV death, MI, Stroke**	**54% HFpEF, 31% HFrEF, N = 4300 Reduction CV-related death, HF hospitalization , (Lancet 2024)**
SELECT, FLOW, STEP-HFpEF, and STEP-HFpEF DM trials (Lancet 2024) (N=3473)		**HFpEF: Reduction in CV death + HF hospitalization**

TIRZEPATIDE	CHF
SUMMIT (NEJM 2024) HFpEF, Obesity (N = 731)	**Reduced combined risk of worsening heart failure events and cardiovascular death (9.9% vs 15.3%)** Improved health status and physical function (KCCQ-CSS)

Deanfield J et al. Lancet 2024 Aug 24;404:773

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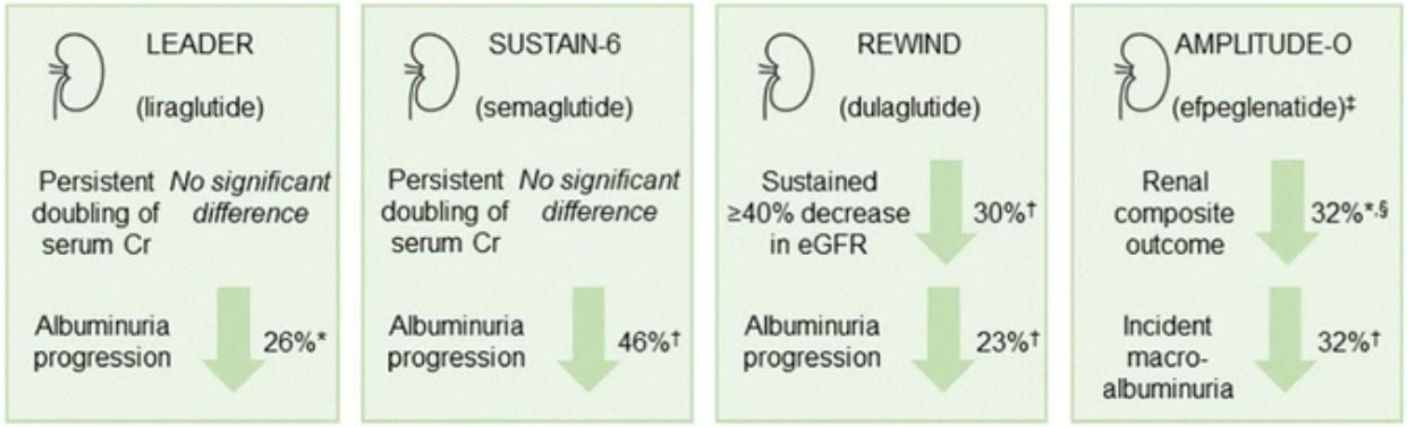
Kosiborod MN, *et al. Lancet 2024 Sept 7,* 2024 Sep 7;404(10456):949-961.
Lincoff AM et al, N Engl J Med. 2023 Dec 14;389(24):2221-2232
Deanfield J et al. Lancet 2024 Aug 24;404:773
Packer M, et al. N Engl J Med. 2024 Nov 16.

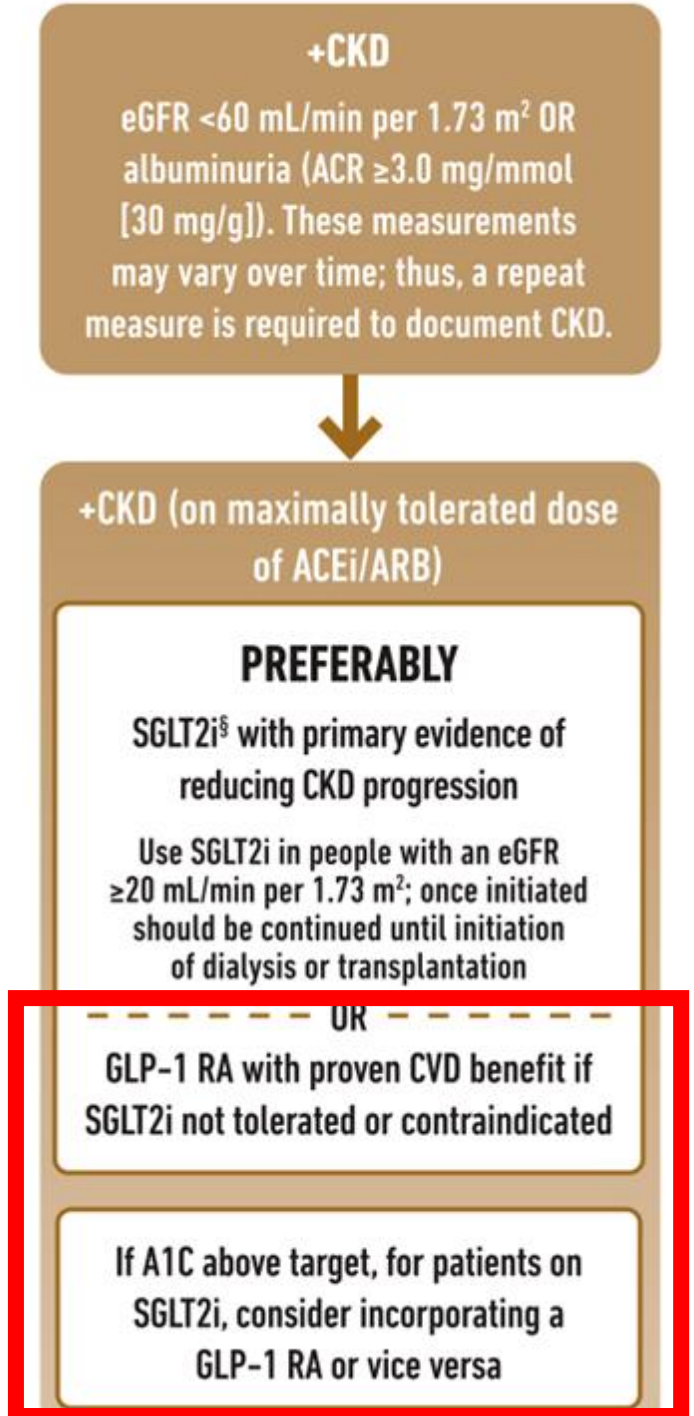
Diabetic kidney disease

GLP-1 RA have direct effects on the kidney

T2DM: reduced albuminuria and decline in GFR seen in CV trials

Add as 2nd line after SGLT-2i





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Morales J et al J Am Coll Cardiol. 2023 Jul, 82 (2) 161−170
Sattar N et al, Lancet Diabetes Endocrinol . 2021;9:653-662.
ElSayed et al *Diabetes Care* 2023;46(Supplement_1):S140–S157

ESTABLISHED IN 1812 JULY 11, 2024 VOL. 391 NO. 2

Effects of Semaglutide on Chronic Kidney Disease in Patients with Type 2 Diabetes

Vlado Perkovic, M.B., B.S., Ph.D., Katherine R. Tuttle, M.D., Peter Rossing, M.D., D.M.Sc., Kenneth W. Mahaffey, M.D., Johannes F.E. Mann, M.D., George Bakris, M.D., Florian M.M. Baeres, M.D., Thomas Idorn, M.D., Ph.D., Heidrun Bosch-Traberg, M.D., Nanna Leonora Lausvig, M.Sc., and Richard Pratley, M.D., for the FLOW Trial Committees and Investigators*

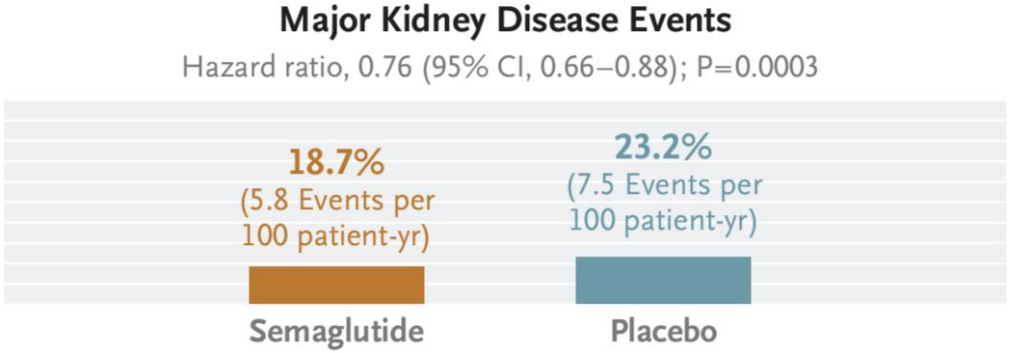
Double blind, RCT, 3,533 pts
T2DM and CKD: eGFR of 25 to 75 mL/minute/1.73 m^2 + albuminuria
CV disease: 22% prior MI or stroke, 19% had CHF

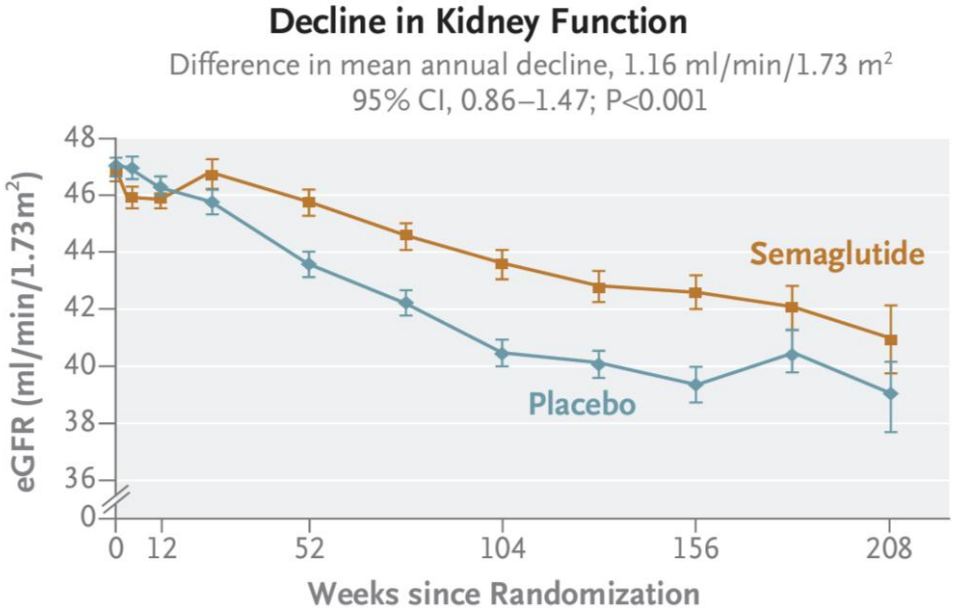
Composite primary outcome:
a sustained ≥50% reduction in eGFR, ESRD, or death from CV- or renal-related causes

Also

- Total eGFR slope
- MACE (CV-death, non-fatal MI or non-fatal stroke)
- All cause death

Reduction in CV-related death was most of the benefit 7% vs 9.6%





Perkovic V et al. N Engl J Med 2024 May 24.

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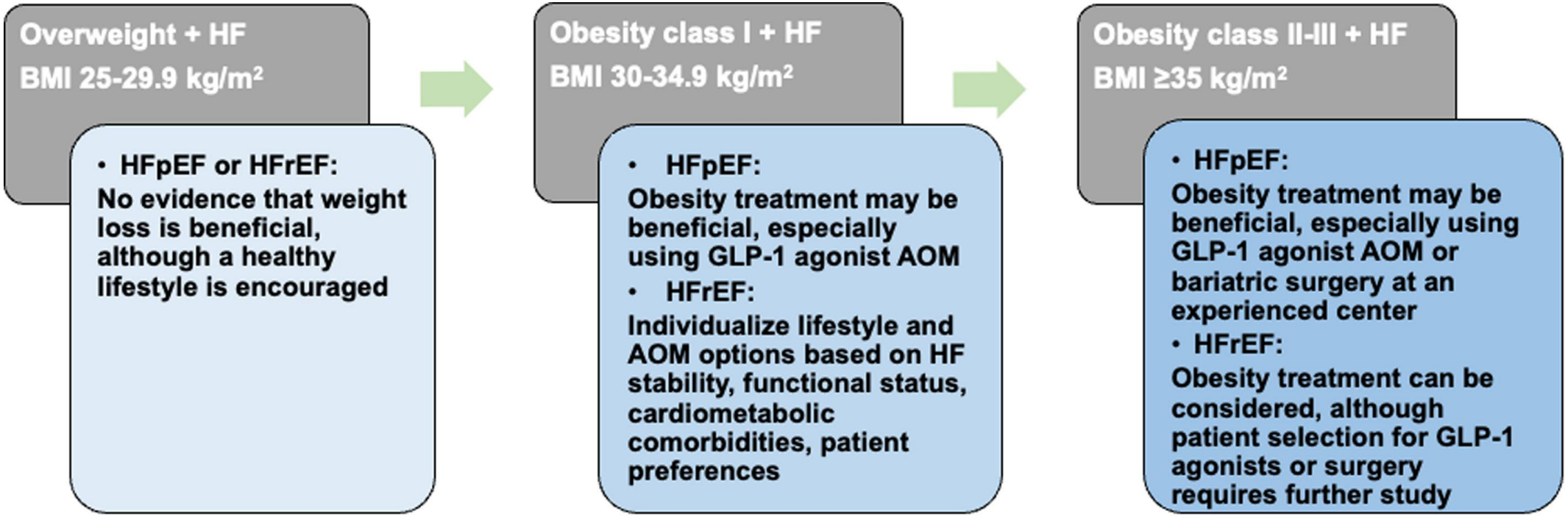
GLP-1 and HpEF vs HFrEF



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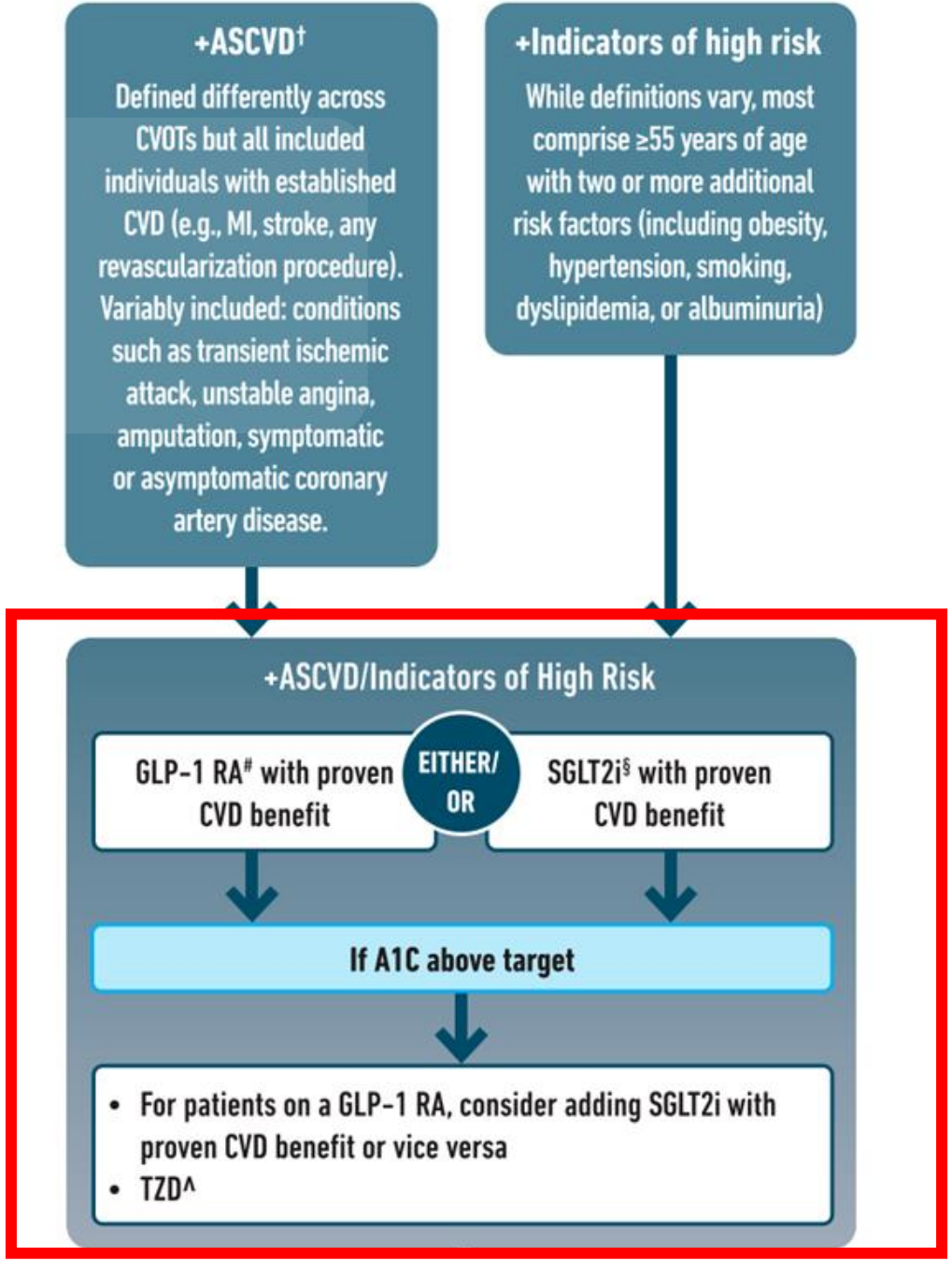
Vest AR, et al JACC Heart Fail. 2024 Sep;12(9):1509-1527
Neves JS, et al. J Am Coll Cardiol. 2024 Sep 17;84(12):1119-1122.

Long-acting GLP-1 RAs significantly reduced MACE

<u>With established CVD or multiple risk factors, CHF, CKD :</u>
Use of GLP-1 or SGLT2i should be considered

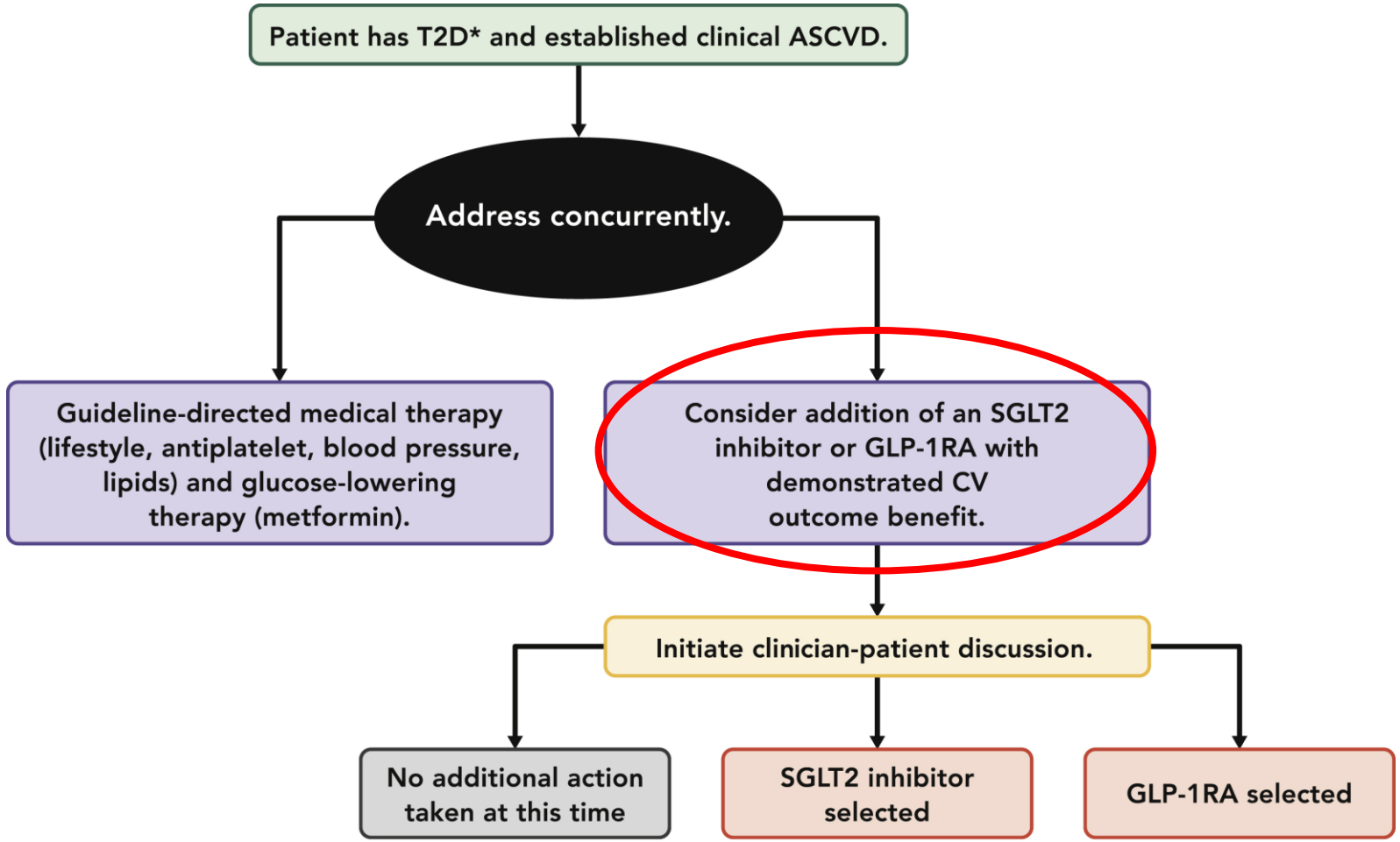
Strong recommendation for already established ASCVD

Weaker recommendation for high CV risk



ElSayed N et al. *Diabetes Care* 1 January 2023; 46 (Supplement_1): S140–S157.

2020 ACC – Expert Consensus CV Risk Reduction Recommendations



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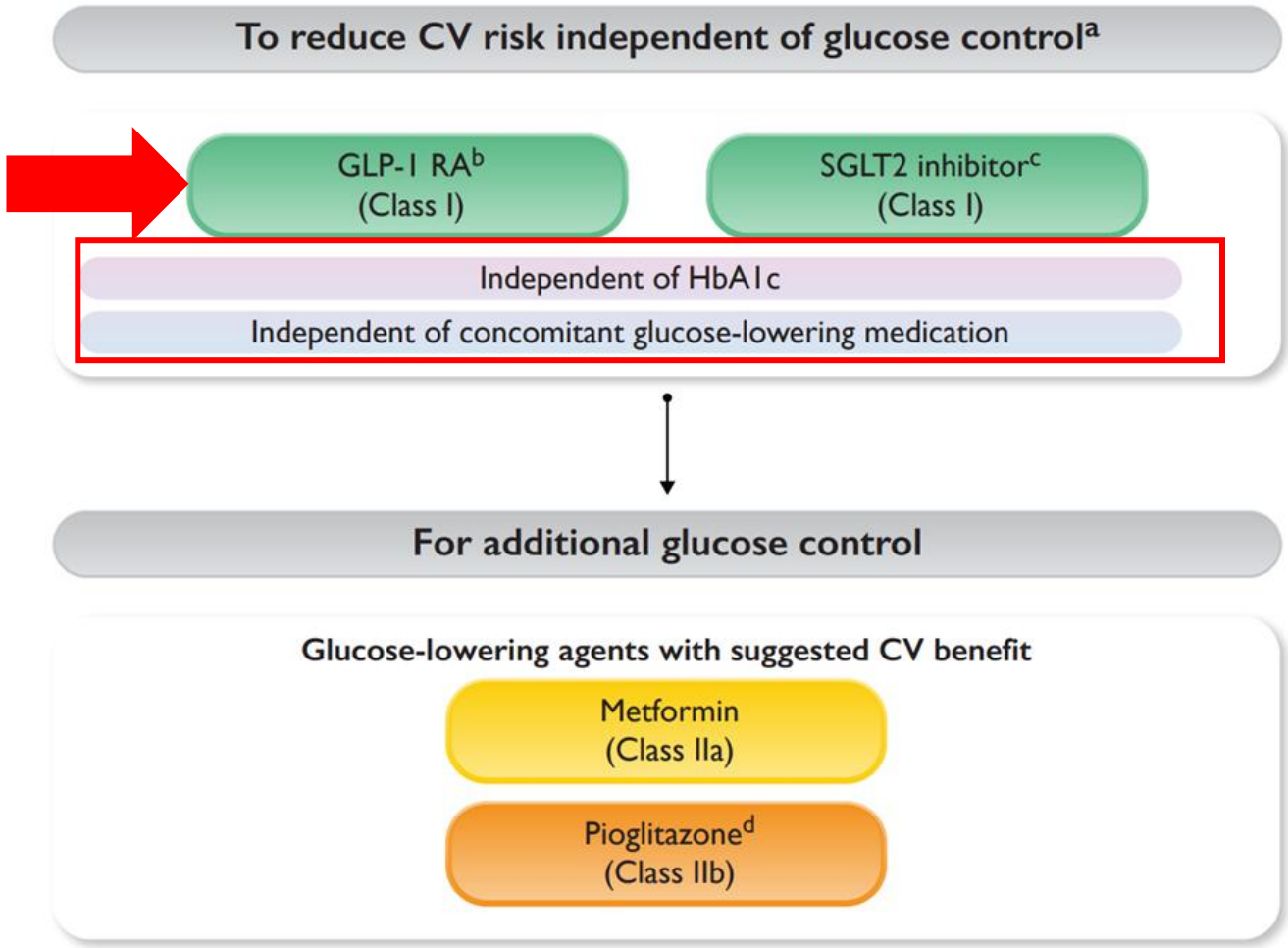
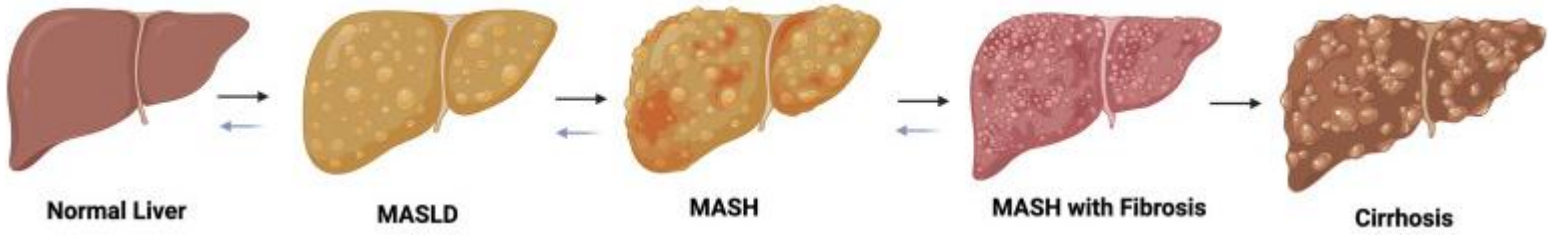
Das S et al, J Am Coll Cardiol. 2020 Sep, 76 (9) 1117–1145

2023 ESC Guidelines for Treatment of T2DM and CVD



Marx. European Heart Journal, 2023; ehad192.

Other Benefits



MASLD + T2DM GLP-1 or DPP4i	MASH		MASH + Cirrhosis
14% lower cirrhosis 11% lower mortality 22% lower composite (cirrhosis, HCC, transplant) Retrospective Cohort VA study, 2006-2022, 60, 020 pts	**Liraglutide** MASH resolution 33% vs 9% Fibrosis 36% vs 9% (N=52) **Semaglutide** MASH resolution 59% vs 17% No fibrosis improvement (N=320)	**Tirzepatide SYNERGY-NASH** (N=190), RCT, Phase 2 1ºMASH + Stage 2-3 Fibrosis: 44-62% MASH resolution vs 10% 2º: 50% with decrease liver fibrosis vs 30%	**Semaglutide** did not improve histologic outcomes in cirrhosis (N=79)

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Loomba R, et al. N Engl J Med. 2024 Jul 25;391(4):299-310.

Armstrong MJ et al, Lancet. 2016 Feb 13;387(10019):679-690.
Armstrong MJ et al, N Engl J Med. 2021 Mar 25;384(12):1113-1124

Kanwal F, et al . JAMA Intern Med. 2024 Sep 16:e244661
Loomba R, et al. The lancet. 2023;8(6):511-522
Abushamat L et al. Clin Gastro Hepat. 2024 (22) 1565=74

Metabolic Dysfunction Associated Liver Disease

Semaglutide reversed steatohepatitis in 63% vs 34% placebo
N = 1197
MASH + stage 2 or 3 fibrosis

10.5% reduction in body weight

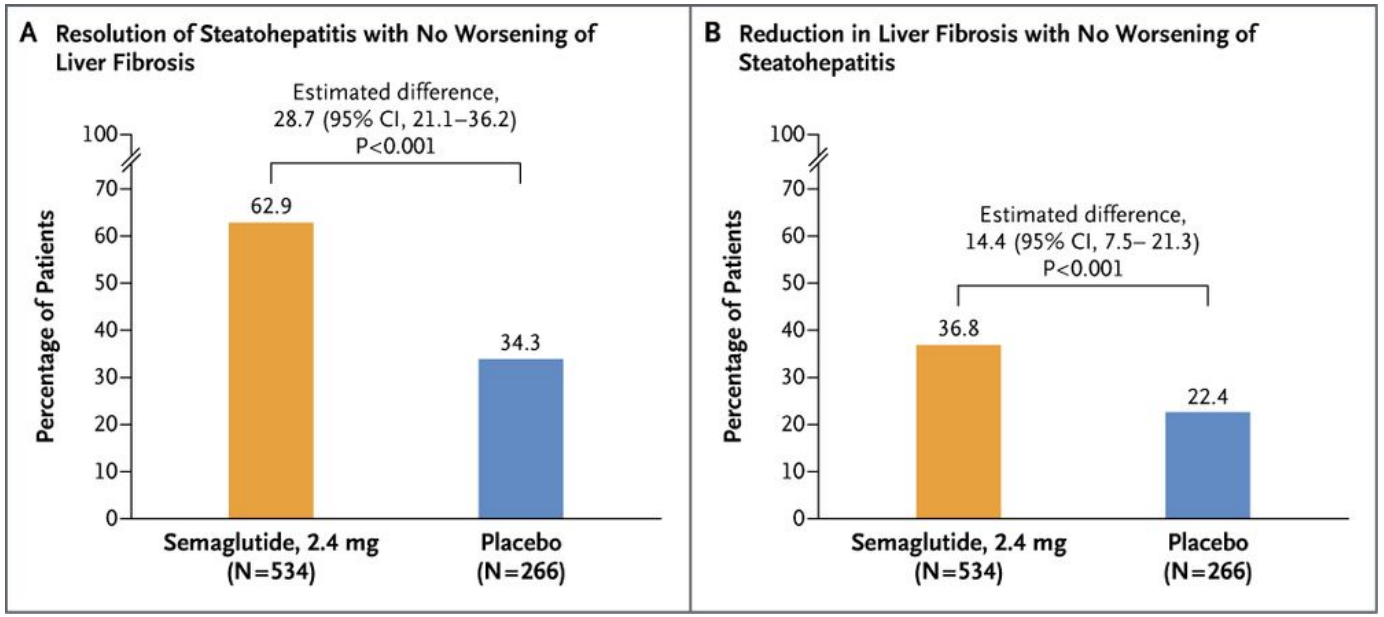
Over 1/3 improved fibrosis

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Phase 3 Trial of Semaglutide in Metabolic Dysfunction–Associated Steatohepatitis

Arun J. Sanyal, M.D.,[1] Philip N. Newsome, M.B., Ch.B., Ph.D.,[2,3] Iris Kliers, M.D.,[4] Laura Harms Østergaard, M.Sc.,[4] Michelle T. Long, M.D.,[4] Mette Skalshøi Kjær, M.D., Ph.D.,[4] Anna M.G. Cali, M.D.,[4] Elisabetta Bugianesi, M.D., Ph.D.,[5] Mary E. Rinella, M.D.,[6] Michael Roden, M.D.,[7] [9] and Vlad Ratziu, M.D., Ph.D.,[10] for the ESSENCE Study Group*



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Sanyal et al. N Engl J Med. 2025 Apr 30

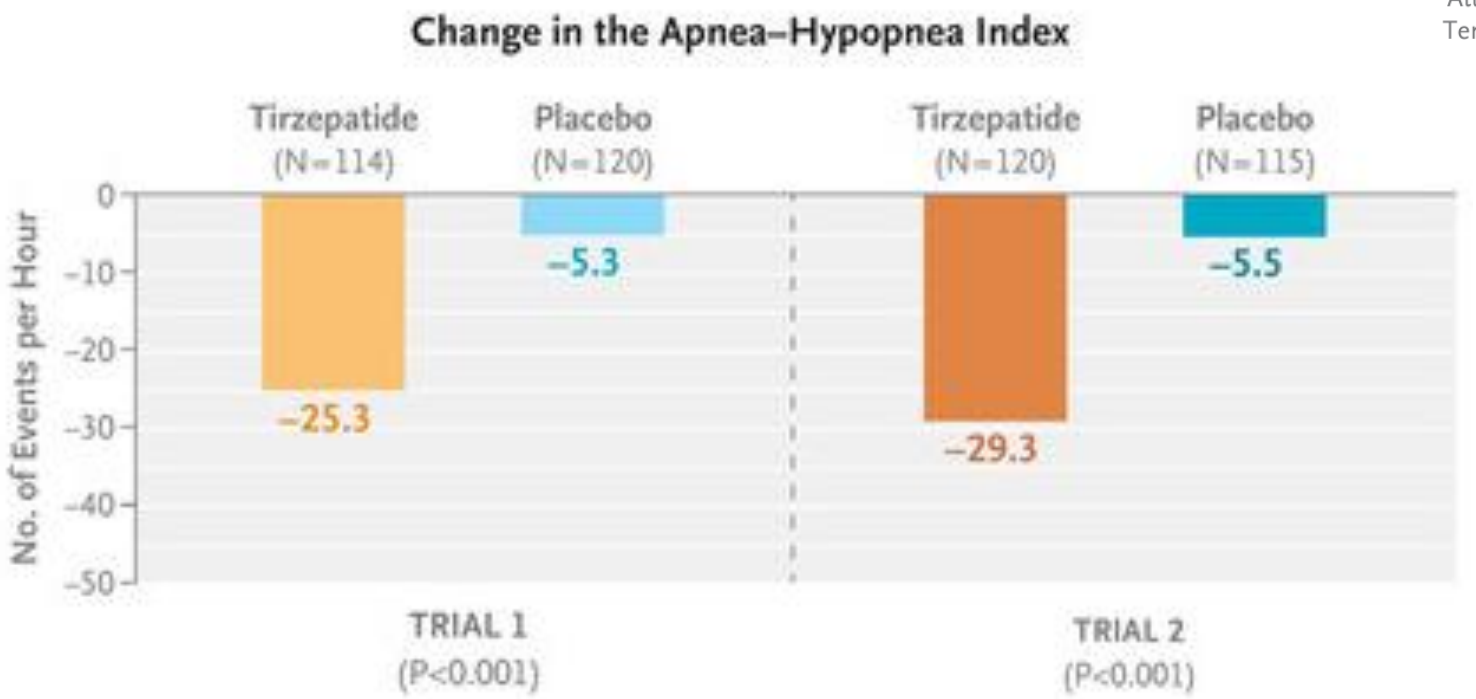
Moderate to Severe OSA & Obesity

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Tirzepatide for the Treatment of Obstructive Sleep Apnea and Obesity

Atul Malhotra, M.D., Ronald R. Grunstein, M.D., Ph.D., Ingo Fietze, M.D., Terri E. Weaver, Ph.D., Susan Redline, M.D., M.P.H., Ali Azarbarzin, Ph.D., Scott A. Sands, Ph.D., Richard J. Schwab, M.D., Julia P. Dunn, M.D., Sujatro Chakladar, Ph.D., Mathijs C. Bunck, M.D., Ph.D., and Josef Bednarik, M.D., for the SURMOUNT-OSA Investigators*



Tirzepatide reduced the AHI, body weight, hypoxic burden, hsCRP concentration, and systolic blood pressure and improved sleep-related patient-reported outcomes.

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Malhotra A,. N Engl J Med. 2024 Jun 21.

Periprocedure Considerations

Case Report: Regurgitation and Aspiration

A 50-year-old female, hx BMI 38, T2DM, OSA scheduled to undergo robotic-assisted hysterectomy

On tirzepatide, last dose 2 days before surgery

Fasting since the night before surgery

Uneventful general anesthesia and intubation

After intubation, and gastric contents suctioned (Fig1)

Uncomplicated case, before extubation, large volume emesis consistent with what she reported eating several days prior to surgery (Fig 2)

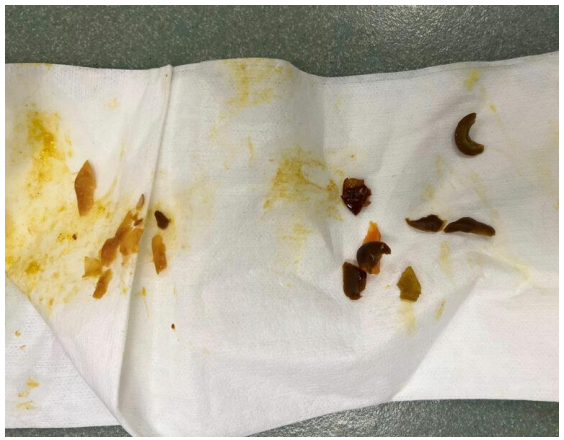

Fig 1

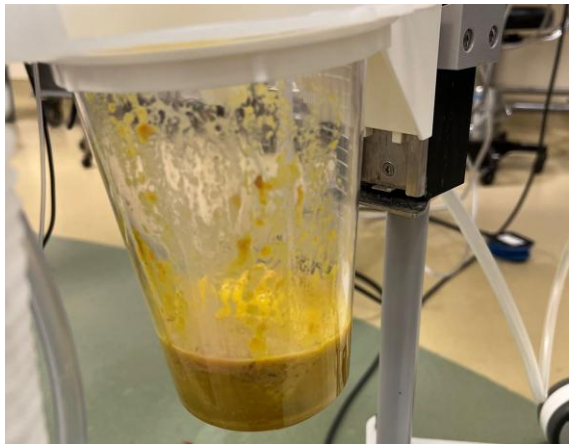

Fig 2

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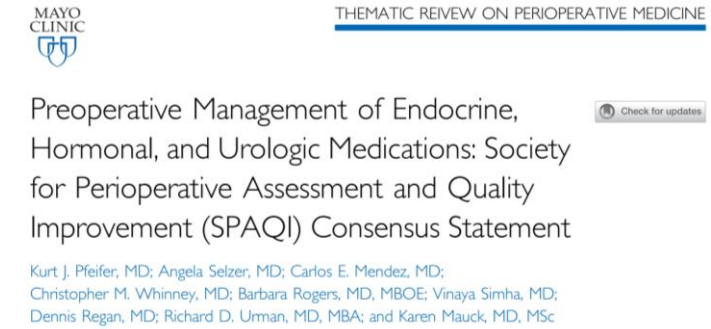
Beam WB ,et al. APSF Newsletter. 2023;38:67,69–71.


American Society of Anesthesiologists Consensus-Based Guidance on Preoperative Management of Patients (Adults and Children) on Glucagon-Like Peptide-1 (GLP-1) Receptor Agonists

Girish P. Joshi, M.B.B.S., M.D., Basem B. Abdelmalak, M.D., Wade A. Weigel, M.D., Sulpicio G. Soriano, M.D., Monica W. Harbell, M.D., Catherine I. Kuo, M.D., Paul A. Stricker, M.D., Karen B. Domino, M.D., M.P.H., American Society of Anesthesiologists (ASA) Task Force on Preoperative Fasting


MAYO CLINIC

THEMATIC REIVEW ON PERIOPERATIVE MEDICINE

Preoperative Management of Endocrine, Hormonal, and Urologic Medications: Society for Perioperative Assessment and Quality Improvement (SPAQI) Consensus Statement

Check for updates

Kurt J. Pfeifer, MD; Angela Selzer, MD; Carlos E. Mendez, MD; Christopher M. Whinney, MD; Barbara Rogers, MD, MBOE; Vinaya Simha, MD; Dennis Regan, MD; Richard D. Urman, MD, MBA; and Karen Mauck, MD, MSc

Prior to Procedure

- **Daily dosing:** hold GLP-1 agonists on the day of the procedure/surgery.
- **Weekly dosing**: hold GLP-1 agonists a week prior to the procedure/surgery.
- If GLP-1 agonists are held for longer than the dosing schedule: endocrine consult for alternate diabetes treatment
- No evidence to suggest the optimal duration of fasting

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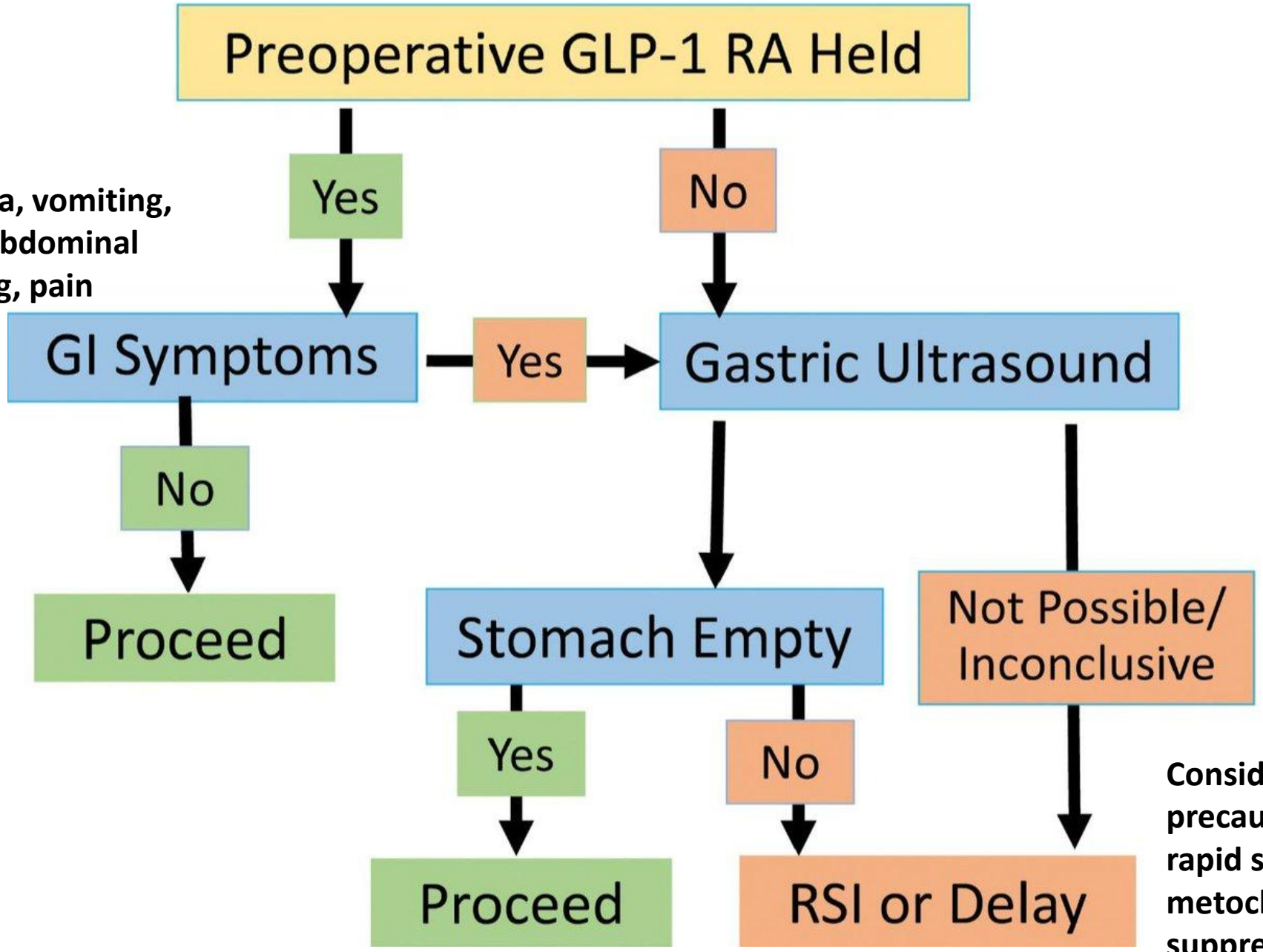
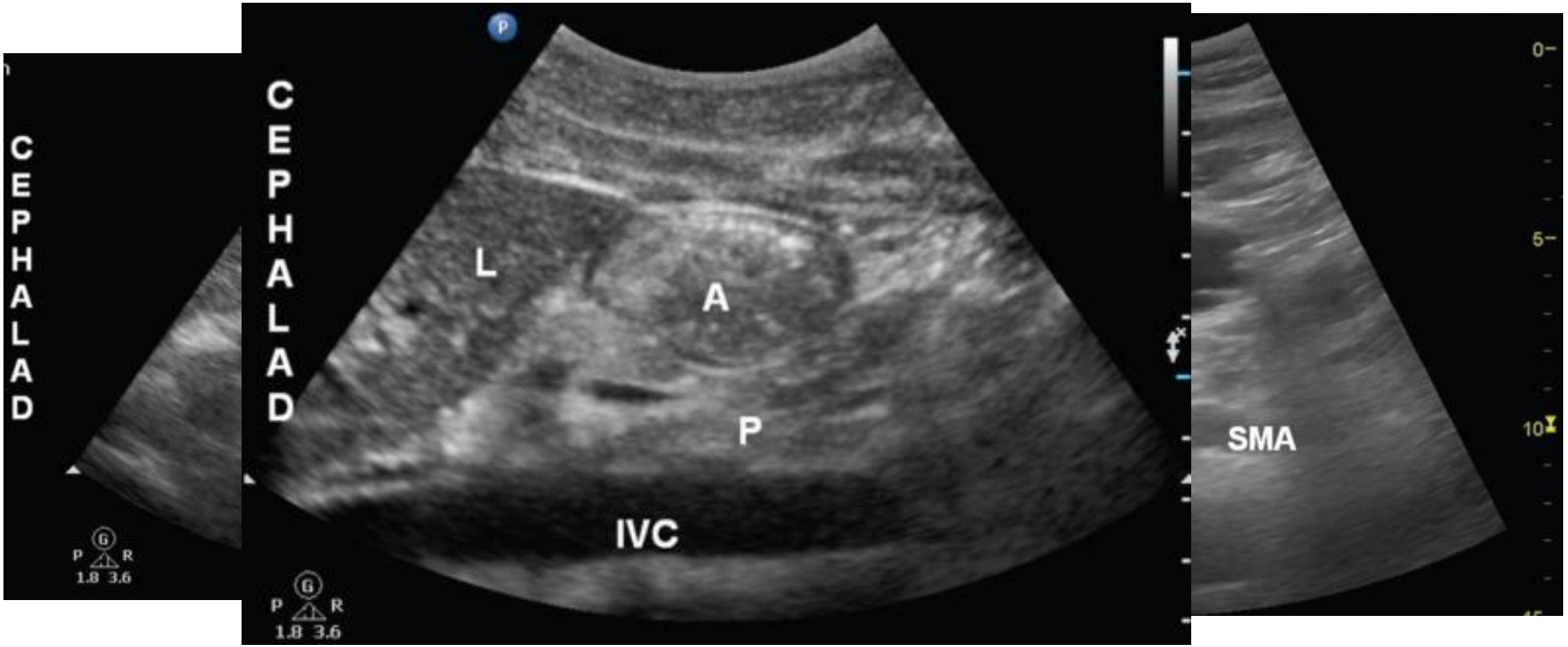
Joshi GP, et al. https://www.asahq.org/about-asa/newsroom/news-releases/2023/06/american-society-of-anesthesiologists-consensus-based-guidance-on-preoperative. Accessed Feb 10, 2024
Deepu S. et al. *Anesthesiology* 2024; 140:346–348
Pfeifer KJ, et al. Mayo Clin Proc. 2021 Jun;96(6):1655-1669



Consider 'full stomach' precautions (NG aspiration, rapid sequence intubation, metoclopramide, acid suppression, cuffed ETT….)

Joshi, G et al. Anesthesia & Analgesia 138(1):p 216-220, January 2024.

Gastric Ultrasound



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Van de Putte P, et al. Br J Anaesth. 2014 Jul;113(1):12-22.

Clinical Gastroenterology and Hepatology 2023;■:■–■

AGA Society Statement

AGA Rapid Clinical Practice Update on the Management of Patients Taking GLP-1 Receptor Agonists Prior to Endoscopy: Communication

Jana G. Hashash,[1] Christopher C. Thompson,[2] and Andrew Y. Wang[3]

"No data to support stopping GLP-1 agonists prior to elective endoscopy"; suggest a more individualized approach

- **Proceed if pts**
  - (1) followed pre-procedure fasting instructions AND
    - no solid food 8h, no liquid for 2h
  - (2) no nausea, vomiting, dyspepsia or abdominal distention.

Instead of stopping GLP-1 RAs, liquid diet one day prior to EGD

Unclear if holding a dose normalizes gastric motility

- If symptoms suggesting retained gastric contents: consider rapid-sequence intubation.

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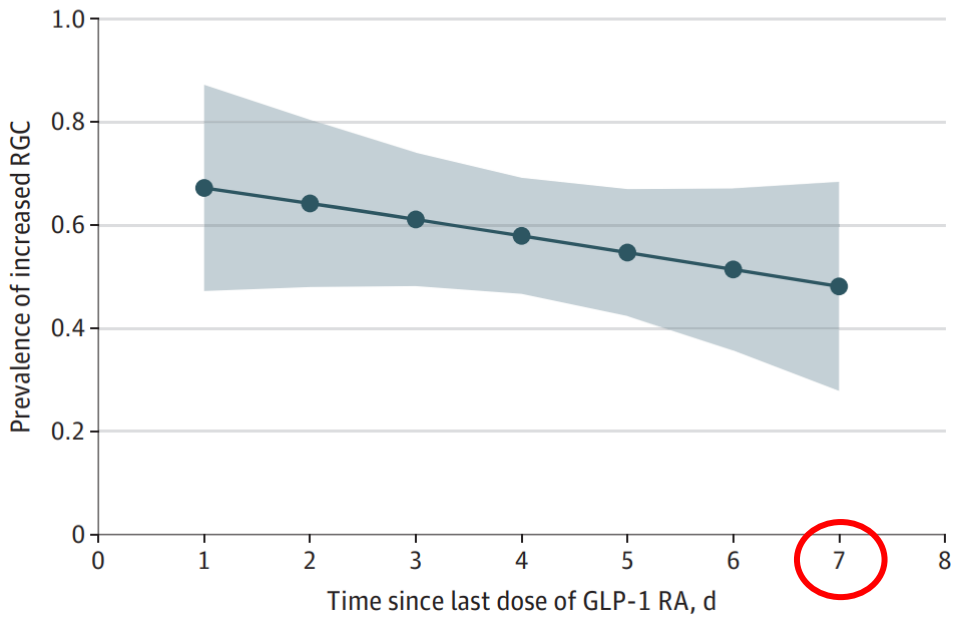
Hashash JG et al Clin Gastroenterol Hepatol. 2023 Nov 7:S1542-3565(23)00869-8

JAMA Surgery | Original Investigation

Glucagon-Like Peptide-1 Receptor Agonist Use and Residual Gastric Content Before Anesthesia

Figure 2. Time Since Glucagon-Like Peptide-1 Receptor Agonist (GLP-1 RA) Drug Interruption and Prevalence of Increased Residual Gastric Content (RGC) Measured by Gastric Ultrasonography



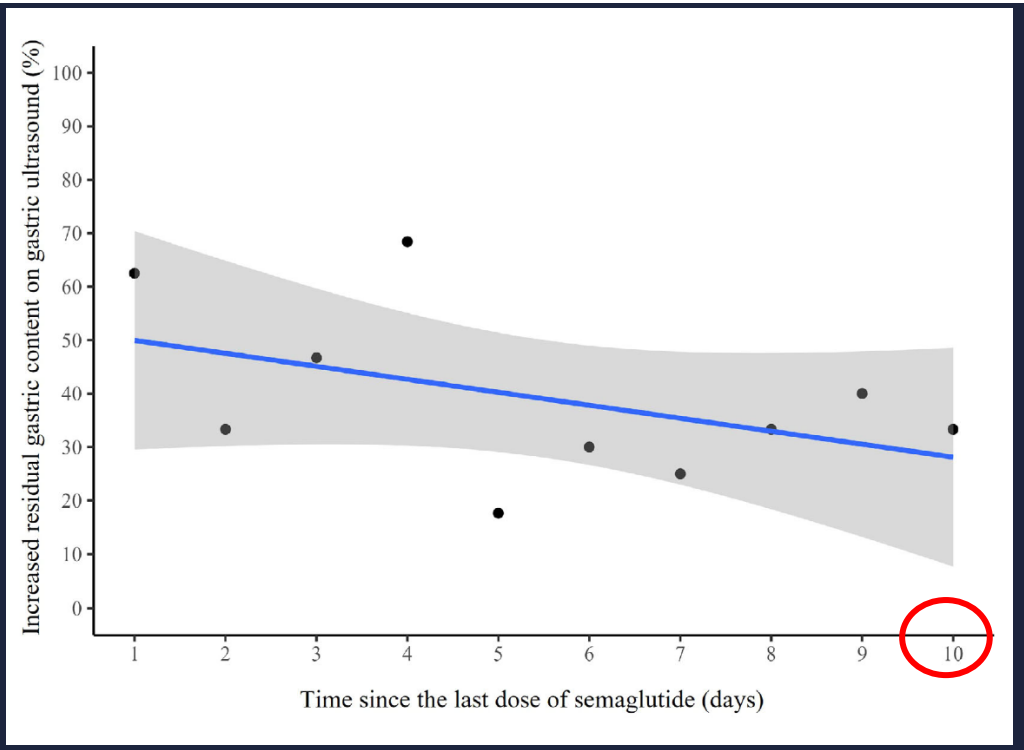
56% of pts on GLP-1 had residual gastric contents on ultrasound (vs. 19% no GLP-1)

Sen S. et al JAMA Surg. 2024;159(6):660–667

Anaesthesia 2024 doi:10.1111/anae.

Original Article

Relationship between residual gastric content and peri-operative semaglutide use assessed by gastric ultrasound: a prospective observational study



Holding 1-7 days same risk as 8-10 days
No aspiration events

Increased gastric content 40% vs 3% with semaglutide (OR 36.97, 95%CI 16.54–99.32)

Nersessian R, et al. Anaesthesia. 2024 Oct 22.

ASMBS guidelines/statements

Multisociety clinical practice guidance for the safe use of glucagon-like peptide-1 receptor agonists in the perioperative period

American Society for Metabolic and Bariatric Surgery, American Society of Anesthesiologists, International Society of Perioperative Care of Patients with Obesity, and the Society of American Gastrointestinal and Endoscopic Surgeons

(1) May be continued in patients who don't have elevated risk of delayed gastric emptying and aspiration, shared decision making

- Assess for
  - Escalating dose
  - Weekly dose
  - Symptoms
  - Medical conditions that decrease gastric emptying (gastroparesis, Parkinson's)
- Appropriate duration of interruption is unknown, can use guidance from the ASA to hold GLP-1, assess for symptoms

(2) Minimize aspiration : liquid diet 24h prior, consider rapid sequence intubation, use gastric ultrasound

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Kindel TL, et al. Surg Obes Relat Dis. 2024 Oct 29:S1550-7289

Summary : GLP-1, GLP-1/GIP and procedures

Half life 4.5-7 days, takes about 4 weeks to reach steady state,

Most symptoms after first dose or dose increase

Tachyphylaxis at 4-20 weeks at the same dose (weekly dose)

If no symptoms: unclear benefit if stopping for just 1 half life

If a recent dose increase or symptoms → may need to reduce

Solids: longer fasting times, liquids: 24h prior

May be ok to continue but more studies needed

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Chien. Diabetes. 2010:59,
Geiser. Clin. Pharmakokinet. 2016 May;55(5):625-34

BJA

British Journal of Anaesthesia, xxx (xxx): xxx (xxxx)

doi: 10.1016/j.bja.2025.04.001
Advance Access Publication Date: xxx
Special Article

SPECIAL ARTICLE

Perioperative management of patients taking glucagon-like peptide 1 receptor agonists: Society for Perioperative Assessment and Quality Improvement (SPAQI) multidisciplinary consensus statement☆

Adriana D. Oprea[1,*], Laura J. Ostapenko[2], BobbieJean Sweitzer[3,4], Angela Selzer[5], Joan M. Irizarry-Alvarado[6], Maria D. Hurtado Andrade[7,8], Carlos E. Mendez[9], Kristen D. Kelley[10], Erin Stewart[11], Claudia R. Fernandez Robles[1], Ryan M. Chadha[12], Michael Camilleri[8], Ruchi Mathur[13], Guillermo E. Umpierrez[14] and David L. Hepner[15]

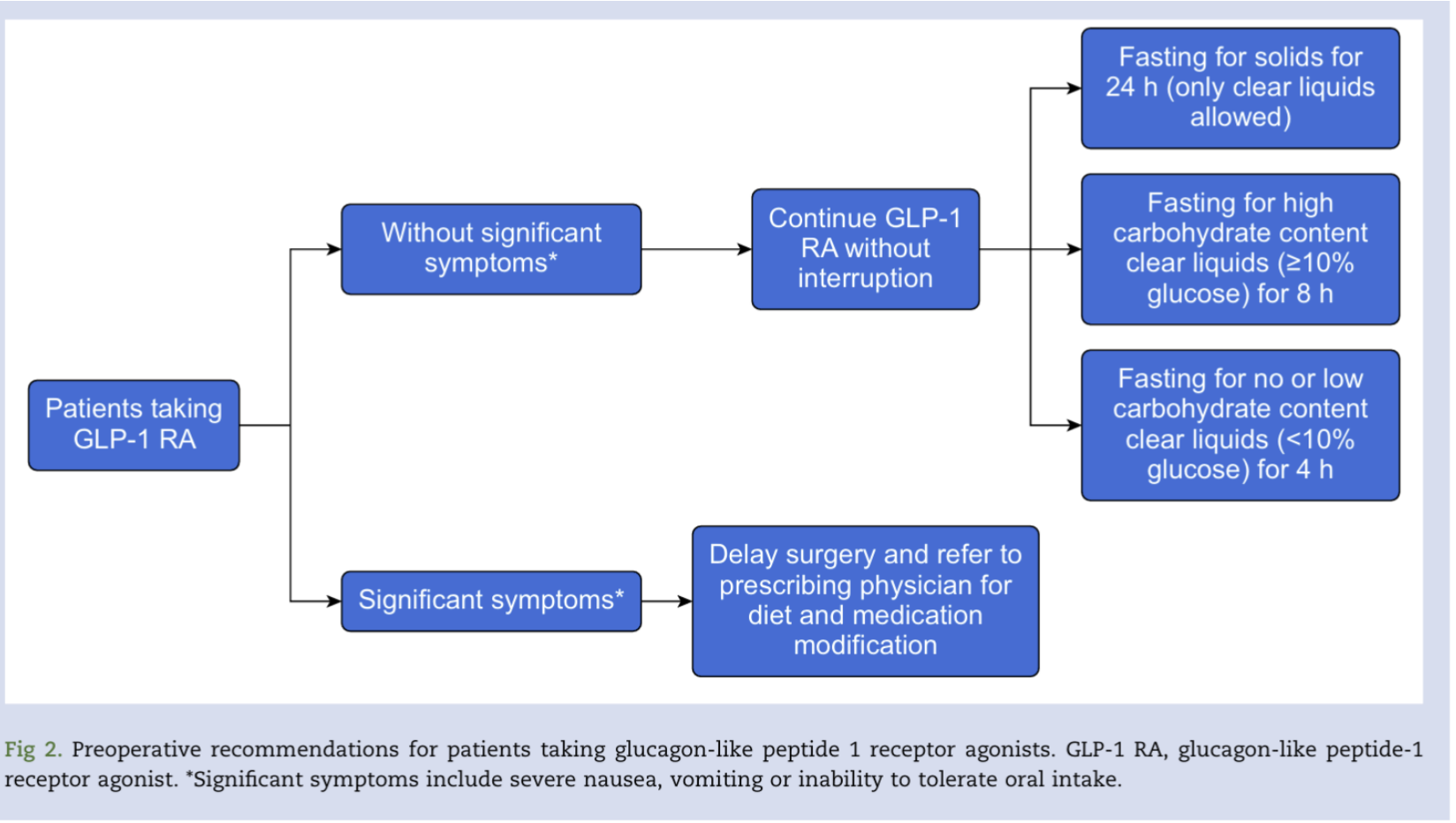

Fig 2. Preoperative recommendations for patients taking glucagon-like peptide 1 receptor agonists. GLP-1 RA, glucagon-like peptide-1 receptor agonist. *Significant symptoms include severe nausea, vomiting or inability to tolerate oral intake.

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Oprea AD et al Br J Anaesth. 2025 May 15:S0007-0912(25)00214-4..

Summary – GLP1 RA

1. Long-acting GLP-1 RAs significantly reduce MACE—primary and secondary prevention in those with T2DM and obesity with CVD
2. Benefits in MASH, diabetic kidney disease, and weight loss
3. Be aware of the risks of aspiration as retained food may still be present even after fasting, ask about symptoms, consider gastric ultrasound, liquid diet 24h prior
4. Many current guidelines recommend holding GLP-1 RA prior to elective surgical procedures, further studies are needed

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QUESTION AND ANSWER SESSION

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