

Navigating GLP1-RA and SGLT2i Use in Your Patients with Diabetes and Obesity – Incorporating the ADA, AACE and AHA CKM Perspectives

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Disclosure

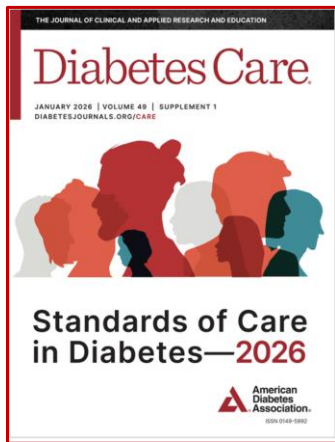
Consultant: Genentech/Roche

Independent Data Monitoring Committee:

Genentech/Roche



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American Diabetes Association

Endocrine Practice 32 (2026) 473–518

AACE **Endocrine Practice™**
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AACE Clinical Guidance

American Association of Clinical Endocrinology Consensus Statement: Algorithm for Management of Adults With Type 2 Diabetes – 2026 Update

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American Association of Clinical Endocrinology

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American Heart Association

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Outline

- Obesity tracks with Type 2 Diabetes (T2D)
- Pathophysiology of T2D: insulin resistance, beta-cell deficiency, and blunted incretin response
- Obesity drives metabolic risk
- CKM Syndrome – what is it and why is it important?
- How to choose between SGLT2i and GLP1RA in T2D
- Adjunctive use of GLP1RA in T1D



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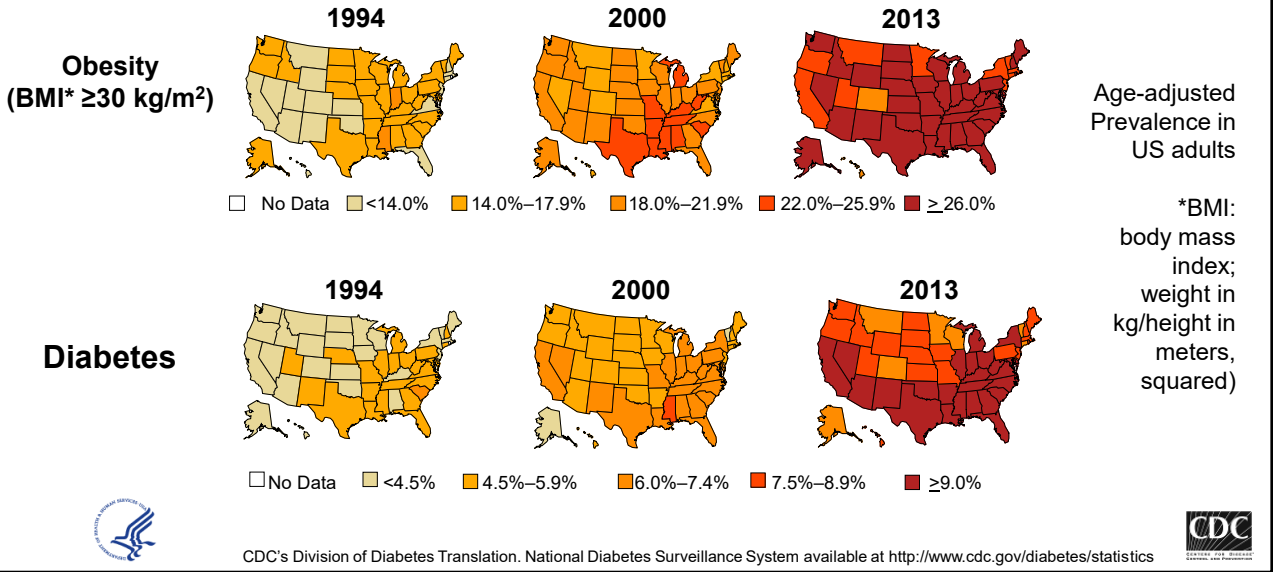
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Diagnosed Diabetes and Obesity Track Together in Parallel Epidemics

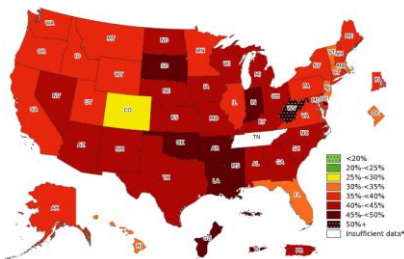


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Prevalence of Obesity Among Adults Aged 18–39 Years, BRFSS, 2024



Prevalence of Obesity Among Adults Aged 40–59 Years, BRFSS, 2024



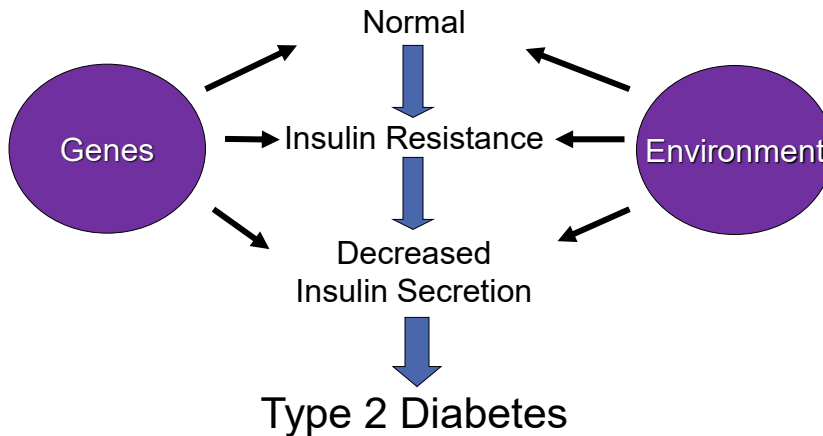
Diagnosed Diabetes Prevalence Among Adults, BRFSS, 2023



*Sample size <50, the relative standard error (dividing the standard error by the prevalence) ≥30%, or no data in a specific year.

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Pathogenesis of Type 2 Diabetes (T2D)

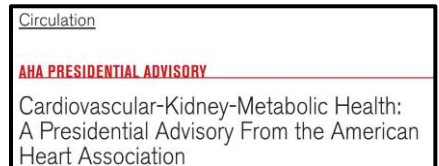
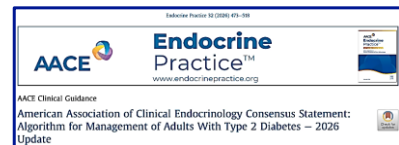


CR Kahn. *Diabetes* 43:1066-1084, 1994

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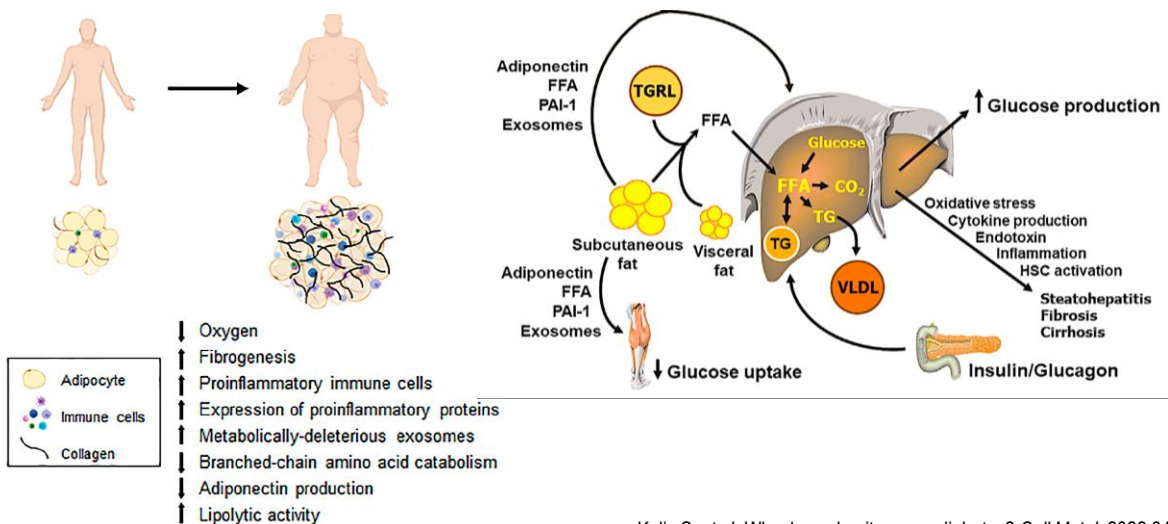
The Link Between Obesity and T2D

- Accumulation of an excessive amount of body fat can cause type 2 diabetes, and the risk of type 2 diabetes increases linearly with an increase in body mass index.
- The worldwide increase in the prevalence of obesity has led to a concomitant increase in the prevalence of type 2 diabetes.
- The cellular and physiological mechanisms responsible for the link between obesity and type 2 diabetes are complex and involve adiposity-induced alterations in beta-cell function, adipose tissue biology, and multi-organ insulin resistance, which are often ameliorated and can even be normalized with adequate weight loss.

Kelin S, et al. Why does obesity cause diabetes? *Cell Metab* 2022;34:11-20..

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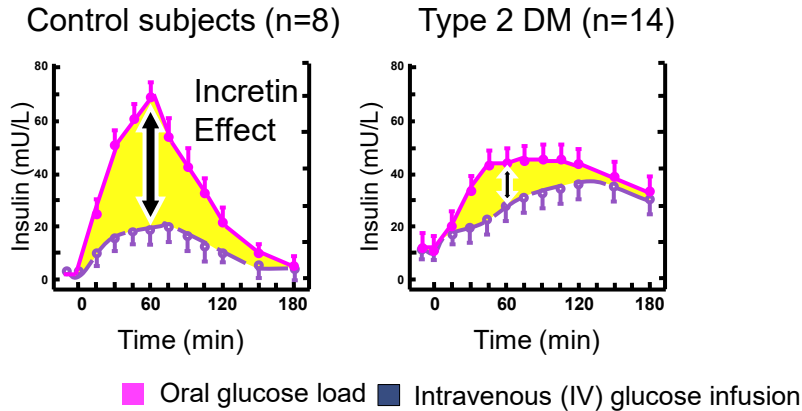
Pathophysiology of Obesity → T2D



Kelin S, et al. Why does obesity cause diabetes? *Cell Metab* 2022;34:11-20..

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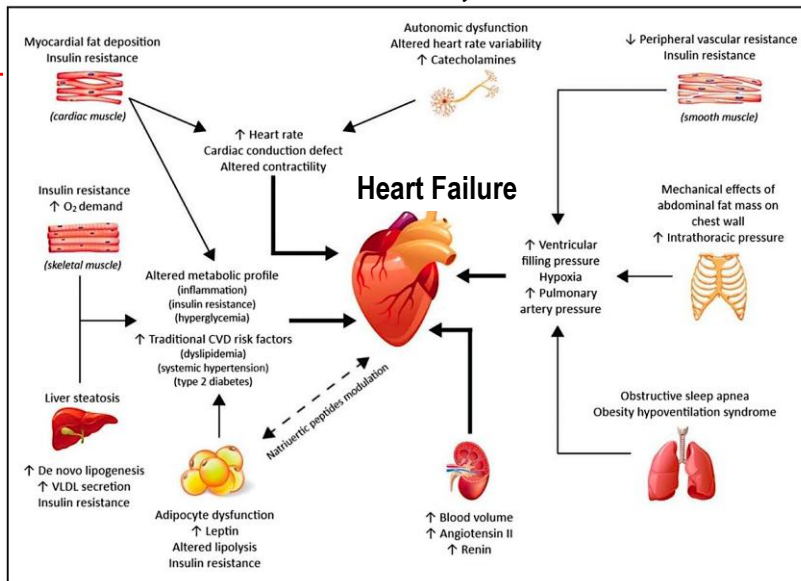
Type 2 Diabetes Is Associated with Blunting of Incretin (GLP1, GIP) Response to Oral Ingestion



Adapted from Nauck M, et al. *Diabetologia* 1986;29(1):46.

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Obesity Also Independently Increases CV Risk – HF, Sudden Cardiac Death, and Atrial Fibrillation

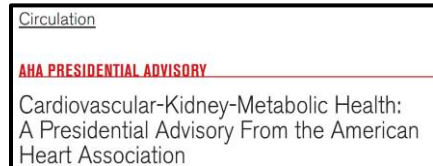
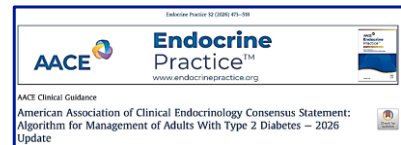


Powell-Wiley TM, et al. Obesity and Cardiovascular Disease: A Scientific Statement From the American Heart Association. *Circulation* 143:e984–e1010.

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CKM Syndrome and Dysfunctional Adiposity

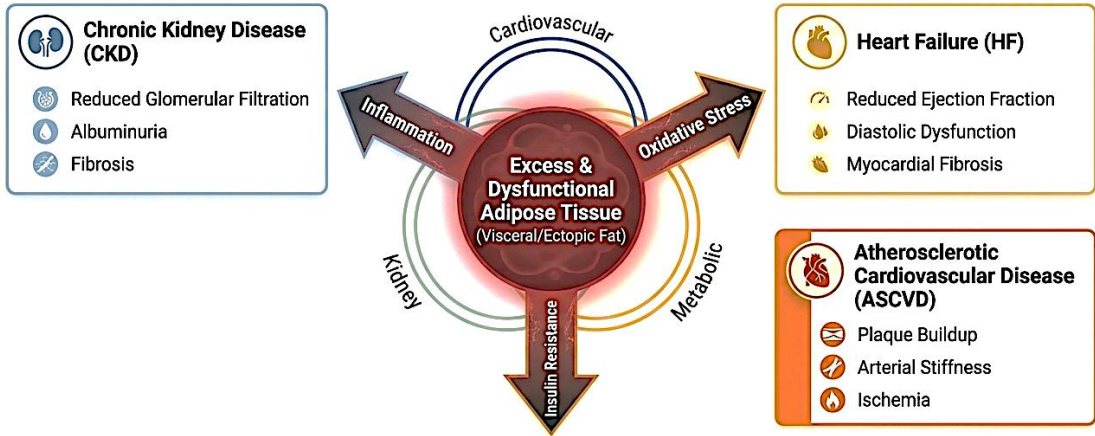
- In 2023, the American Heart Association proposed a comprehensive care model, “Cardiovascular-Kidney-Metabolic Syndrome”
 - Highlighted need for holistic approach to cardiovascular disease (CVD), metabolic syndrome, T2D, and chronic kidney disease (CKD)
 - Encompasses obesity and components of the metabolic syndrome, but also clinical and laboratory elements of kidney function, CVD, and “dysfunctional adiposity”
- Dysfunctional adiposity: excess visceral fat, ectopic fat deposition, inflammatory/adipokine dysregulation, insulin resistance.
 - Key factor for development of T2D in those with obesity

Stefanakis K, et al. . The impact of weight loss on fat-free mass, muscle, bone and hematopoiesis health: Implications for emerging pharmacotherapies aiming at fat reduction and lean mass preservation. *Metabolism* 2024;161:156057.

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Defining Cardio-Kidney-Metabolic (CKM) Syndrome

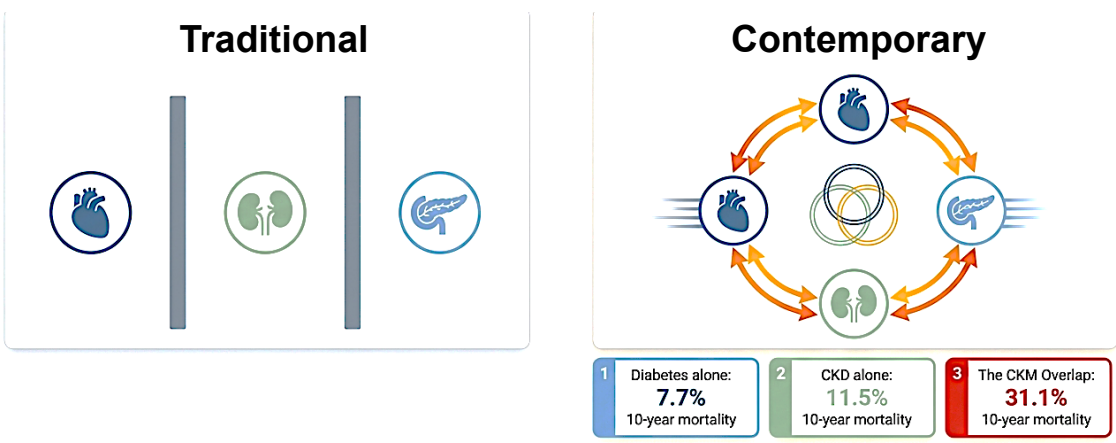


A systemic disorder characterized by pathophysiological interactions among metabolic risk factors, CKD, and the cardiovascular system leading to multiorgan dysfunction and a high rate of adverse cardiovascular outcomes.

Ndumele CE, et al. Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association. *Circ* 2023;148:1606-1635
 Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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Breaking Down Siloed Care

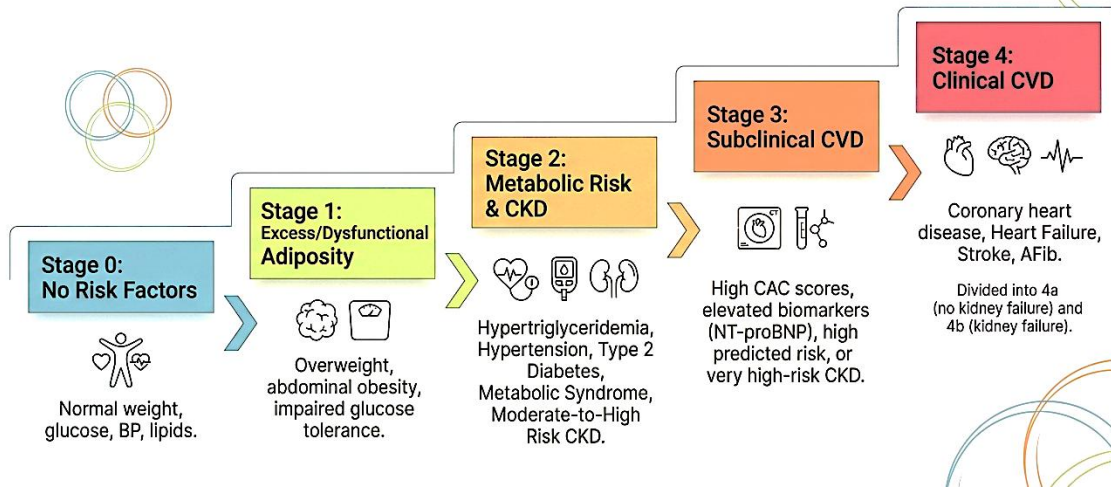


Organ dysfunction in one system actively drives destruction in the others.
 We must treat the system, not the symptom.

Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document. Ndumele CE, et al. *Circ* 2023;148:1606-1635

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Stages of CKM Syndrome



Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document.

Ndumele CE, et al. *Circ* 2023;148:1606-1635

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CKM Stages 0 and 1: Prevention and the Adiposity Trigger

Stage 0 - Primordial Prevention

Diet	Activity	Tobacco	Sleep
Weight	Cholesterol	Blood Sugar	Blood Pressure

Target: Maintain normal anthropometrics across the life span.

Stage 1 - The Trigger Points

- Excess Weight:** BMI ≥ 25 kg/m² (≥ 23 kg/m² for Asian ancestry).
- Abdominal Obesity:** Waist circumference ≥ 88 cm in women, ≥ 102 cm in men ($\geq 80/90$ cm for Asian ancestry).
- Dysfunctional Adiposity:** Impaired glucose tolerance (Fasting 100-124 mg/dL or HbA1c 5.7%-6.4%).

Note: History of gestational diabetes requires intensified screening.

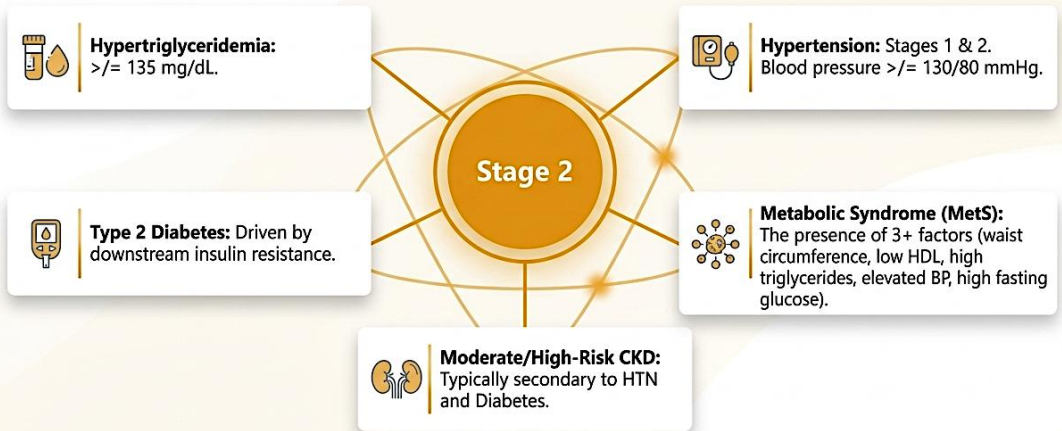
Action Rule: Persistent impaired glucose tolerance despite intensive lifestyle modification triggers consideration for **Metformin**.

Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document.

Ndumele CE, et al. *Circ* 2023;148:1606-1635

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CKM Stage 2: Advancing to Metabolic Risk



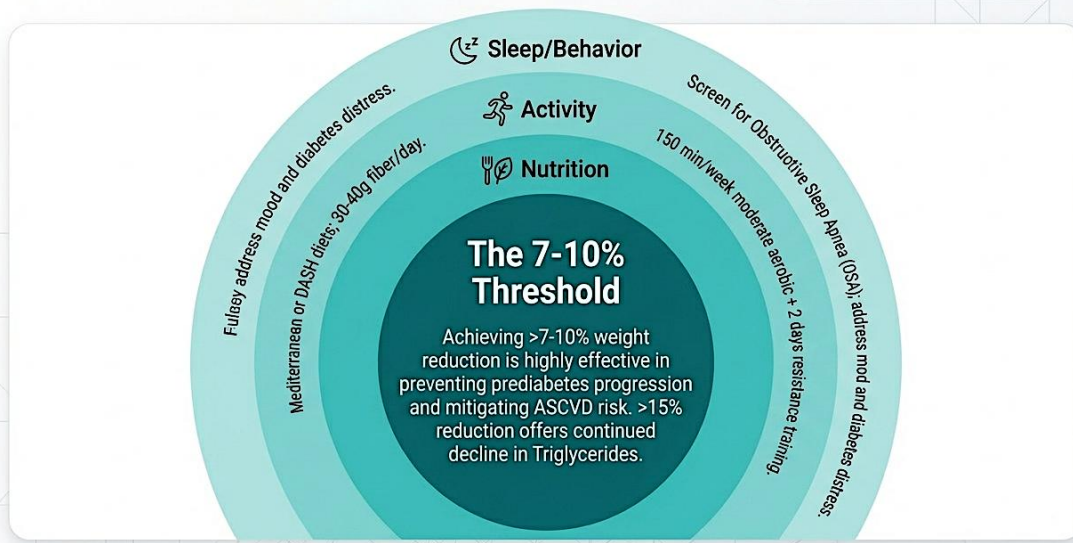
MetS is not just a cluster of symptoms; it represents active endothelial dysfunction, systemic inflammation, and a prothrombotic state. The presence of MetS must trigger intensified lifestyle interventions targeting multifactorial risk control.



Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document.

Ndumele CE, et al. *Circ* 2023;148:1606-1635

Lifestyle and Behavior Change Are Foundational



Graphic prepared with help of Notebook LM AI using AACE statement as reference document.

Samson SL, et al. *Endocr Pract* 2026;32:473-518.

Choosing Between SGLT2i vs GLP-1RA

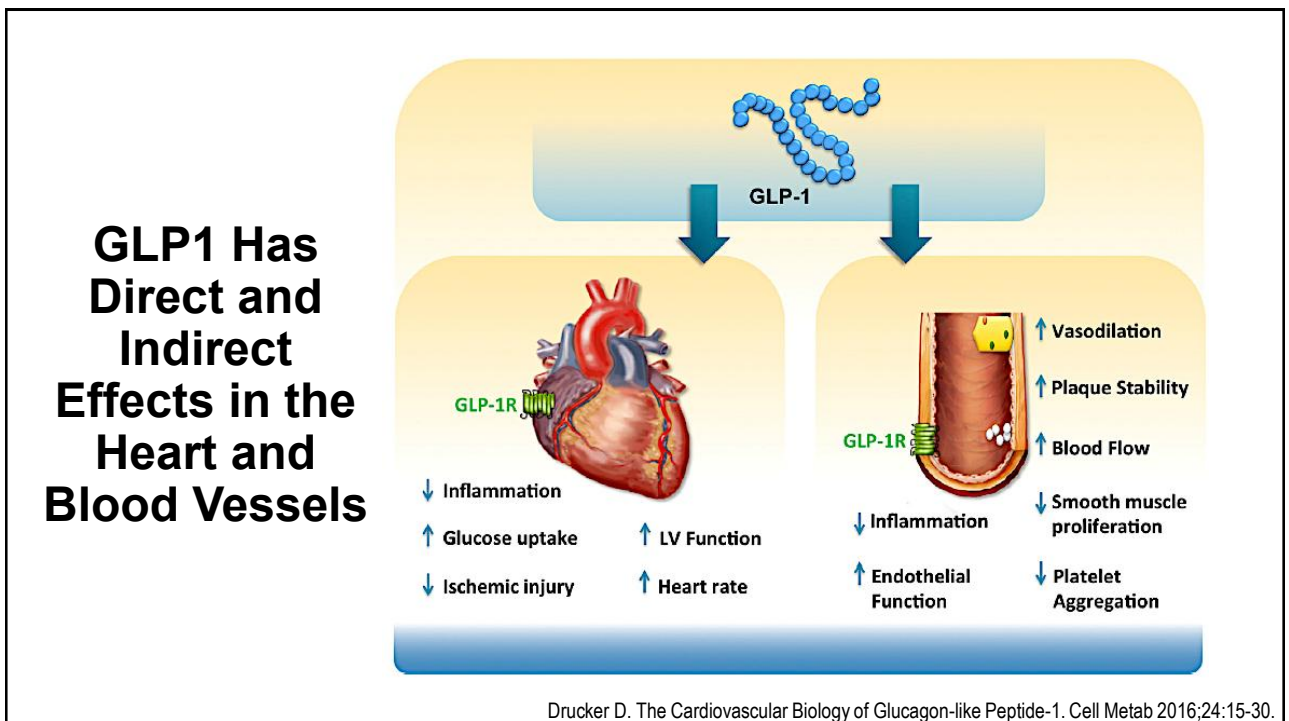
Clinical Profile	Priority	Clinical Rationale
Patient has CKD (eGFR \geq 20)	★ SGLT2i	Reduces HF hospitalizations, slows kidney decline.
Patient has Heart Failure	★ SGLT2i	Cornerstone of GDMT regardless of diabetes status.
Patient has Severe Obesity (BMI \geq 35)	★ GLP-1RA	Induces $>10\%$ intentional weight loss.
Patient has HbA1c \geq 9% or high insulin dose	★ GLP-1RA	Superior glycemic control.
Patient has ASCVD / Multiple Comorbidities	★ Synergy: Combine SGLT2i + GLP-1RA	Maximum absolute risk reduction.

Rule: Co-utilize Metformin with either agent if HbA1c \geq 7.5% to achieve targets with minimal side effects.

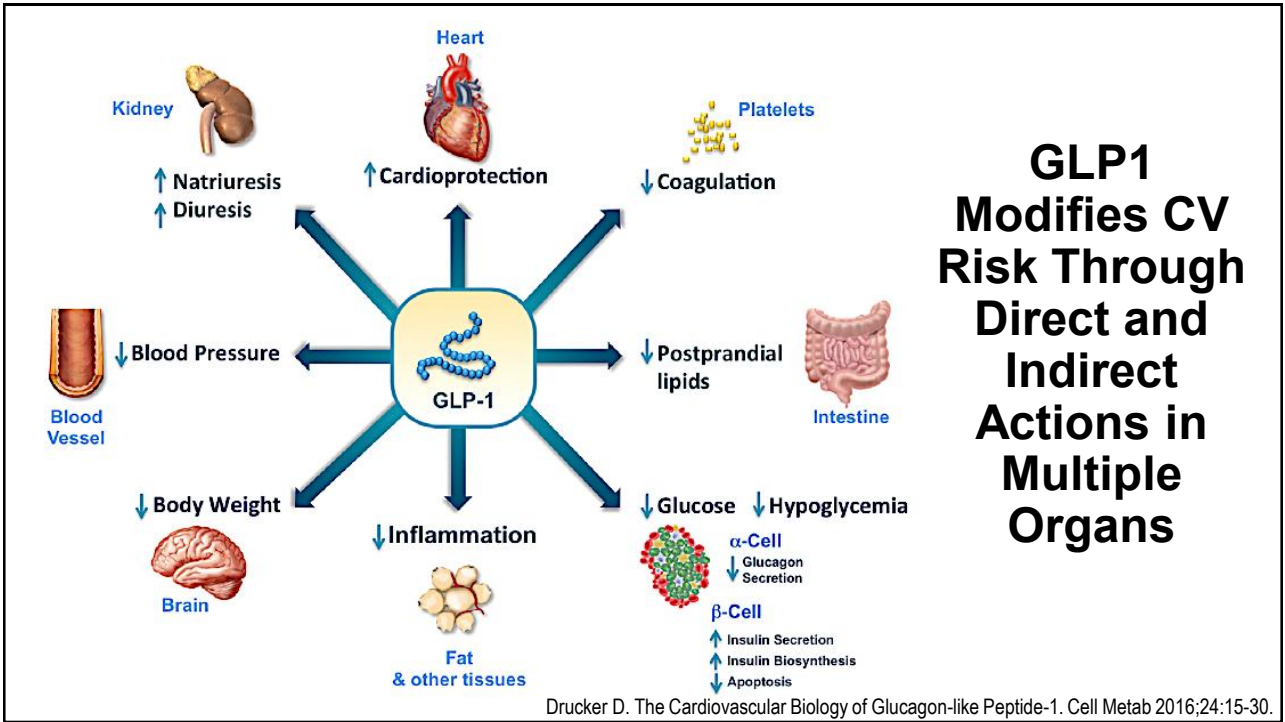
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Ndumele CE, et al. *Circ* 2023;148:1606-1635

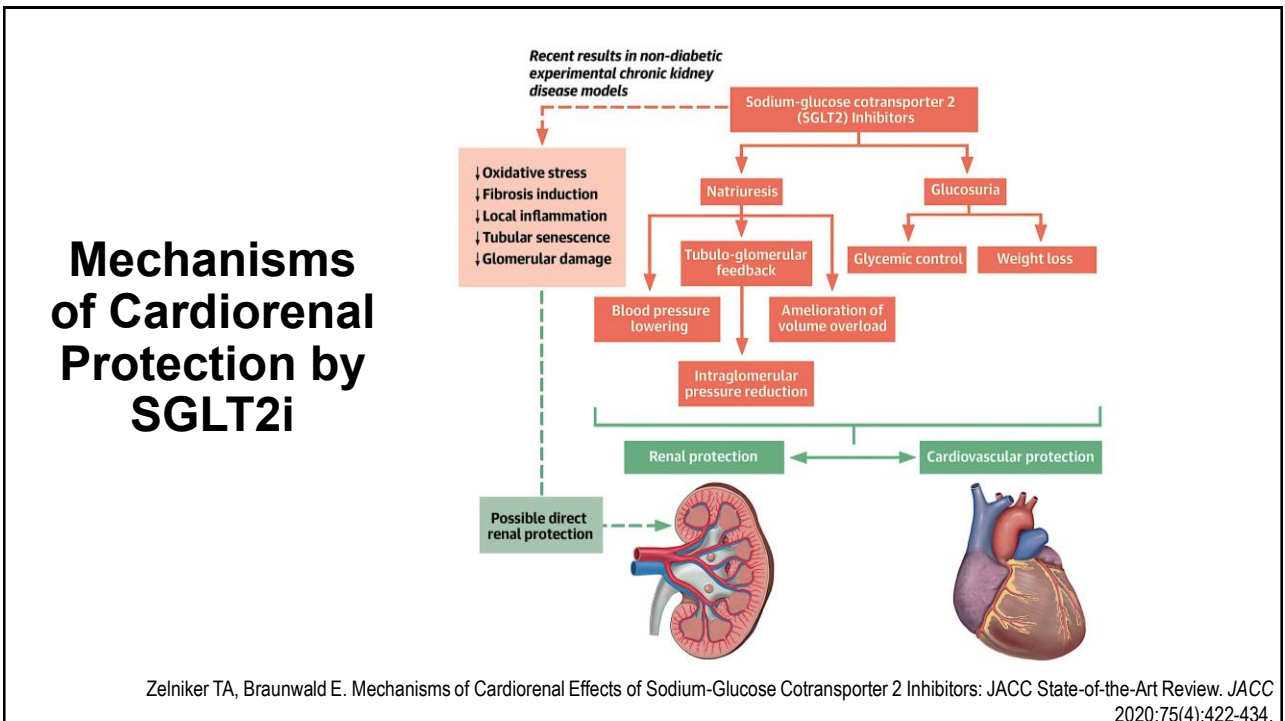
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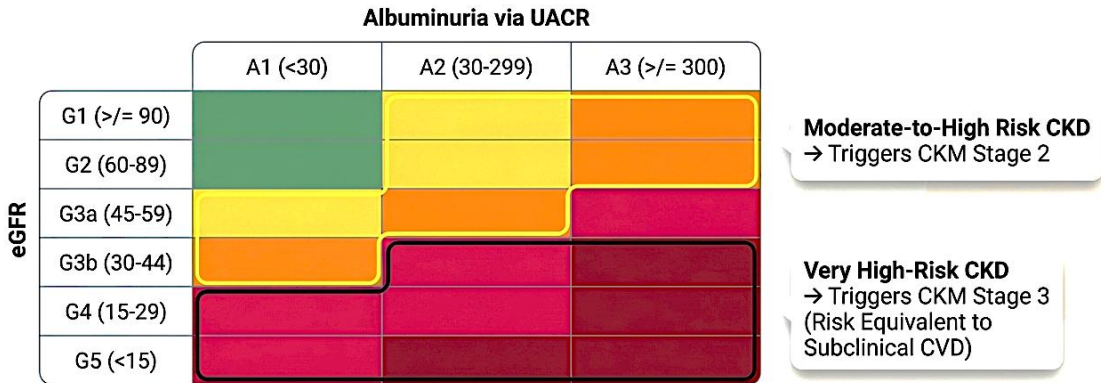


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Using the KDIGO Risk Matrix



Clinical Imperative: Routine eGFR testing is insufficient. Annual Urine Albumin-Creatinine Ratio (UACR) measurement is mandatory for all Stage 2+ adults to accurately predict HF risk and kidney failure.

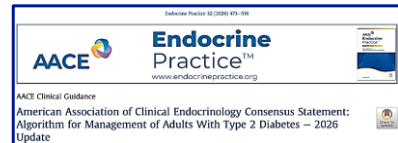
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Ndumele CE, et al. *Circ* 2023;148:1606-1635

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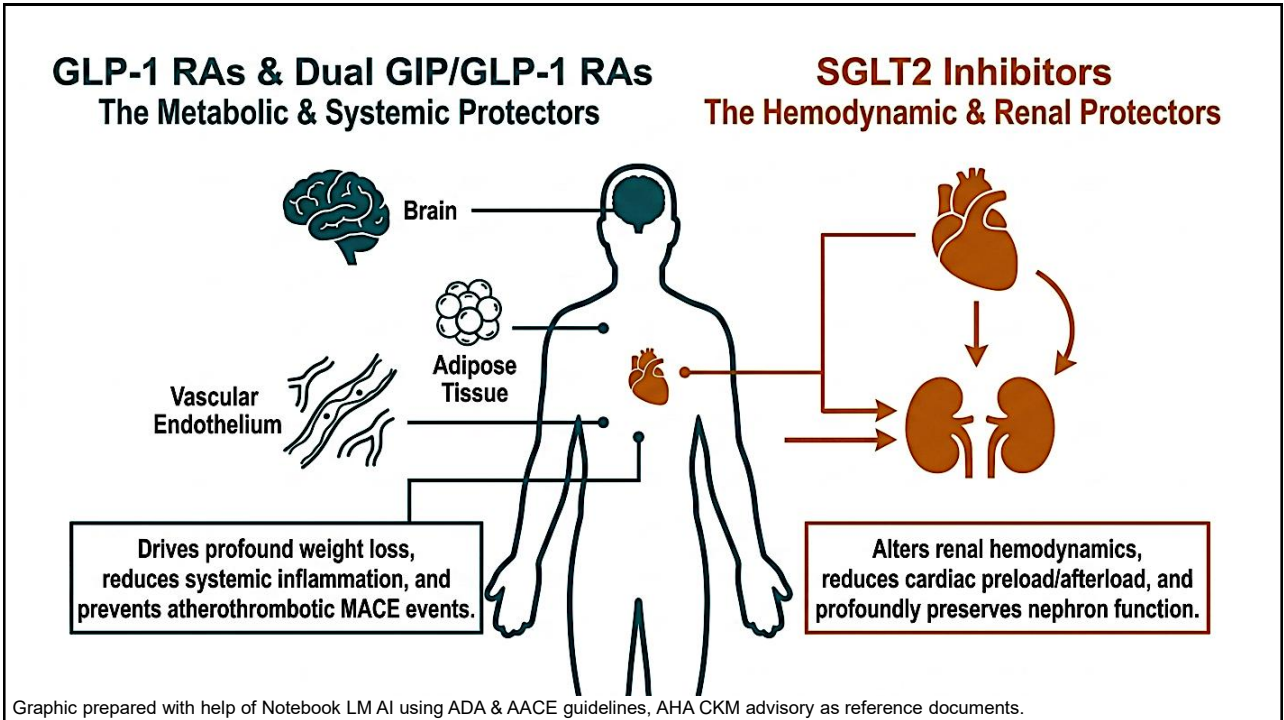


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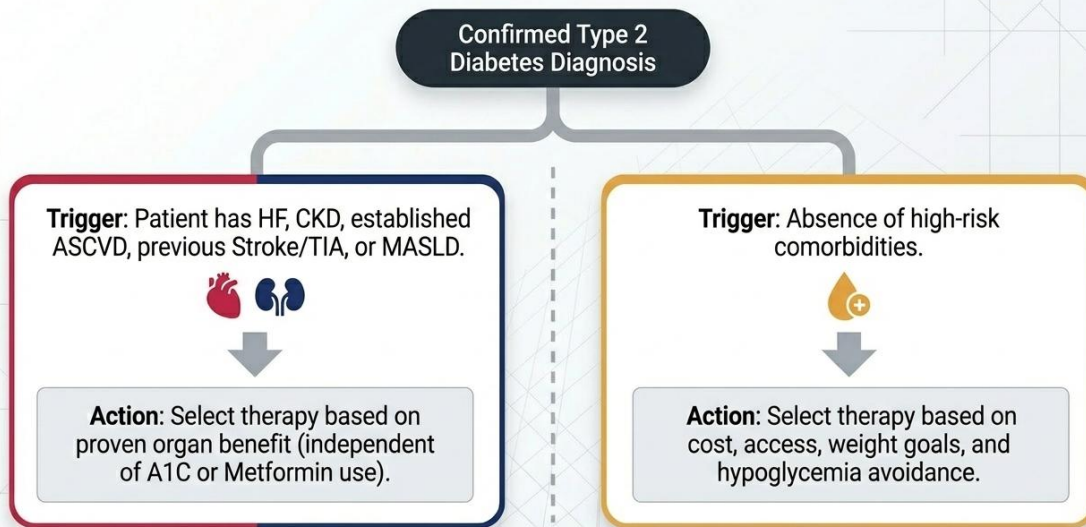
SGLT2i vs GLP1RA

	SGLT2i	GLP-1RA
Heart Failure (HFrEF)	+++ Foundational ✓	Neutral ○
Heart Failure (HFpEF + Obesity)	+++	++
Chronic Kidney Disease	+++ Foundational ✓	++ Albuminuria/FLOW trial 🫘
Atherosclerotic CVD (MACE)	+	+++ First Line 🫀
Severe Obesity	+ Modest	+++ Profound 🍔
Liver Health (MASH)	Neutral ○	++ Reverses Steatohepatitis 🍌
Primary Risks	⚠️ Genital mycotic, DKA	⚠️ GI intolerance, Muscle loss 🍌
Administration	💊 Daily Oral	📄 Weekly SubQ / Daily Oral 💊

Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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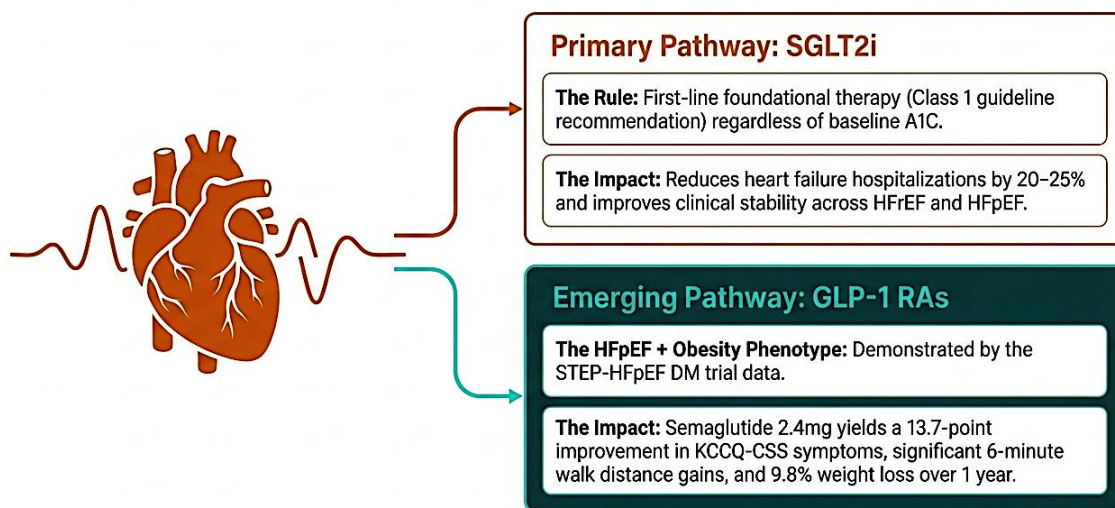
The First Decision Point



Graphic prepared with help of Notebook LM AI using AACE statement as reference document. Samson SL, et al. *Endocr Pract* 2026;32:473-518.

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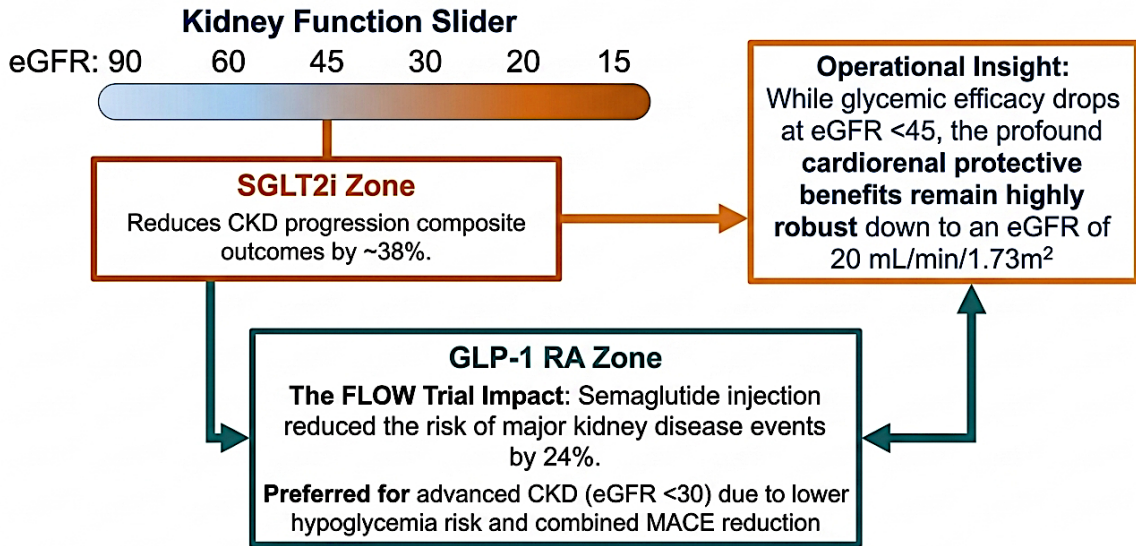
#1: Does the Patient Have Heart Failure?



Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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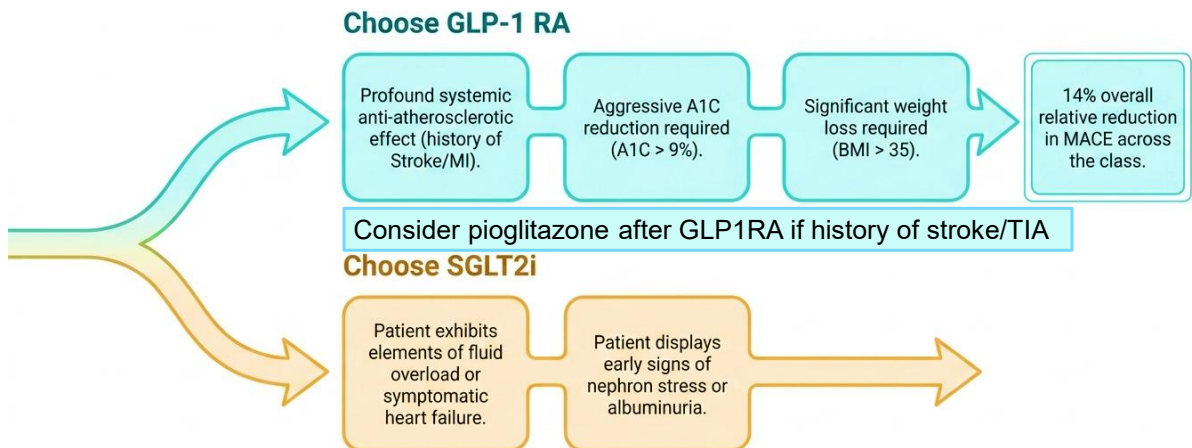
#2: Does the Patient Have CKD (eGFR, UACR)?



Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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#3: Does the Patient Have ASCVD or Are They at High Risk? Have They Had a Stroke or TIA?



Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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The Comorbidity Pathway: Heart, Kidney, and Vascular Risk



Heart Failure (HFrEF or HFpEF)

First-Line: SGLT2 inhibitor (regardless of background therapy or A1C).

Benefit: Reduces risk of HF hospitalization.



Chronic Kidney Disease (CKD)

First-Line: SGLT2 inhibitor (preferred) **OR** GLP-1 RA (proven benefit).

Note: Essential for elevated UACR (>30 mg/g).



ASCVD & Stroke/TIA Risk

First-Line: GLP-1 RA (proven MACE benefit) **OR** SGLT2i.

Details: Semaglutide, Liraglutide, or Dulaglutide significantly lower 3-point MACE and nonfatal stroke risk. Can be added even if the patient is already on an SGLT2i.

Graphic prepared with help of Notebook LM AI using AACE statement as reference document.

Samson SL, et al. *Endocr Pract* 2026;32:473-518.

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#4: Does the Patient have MASLD?



The Clinical Reality

Up to **70%** of patients with T2D have metabolic dysfunction-associated steatotic liver disease (MASLD).

Primary Choice: GLP-1 RAs (Semaglutide) & Dual GIP/GLP-1 RAs (Tirzepatide)

Preferred agents based on proven biopsy-level benefits for MASH resolution and fibrosis prevention (e.g., SYNERGY-NASH trial).

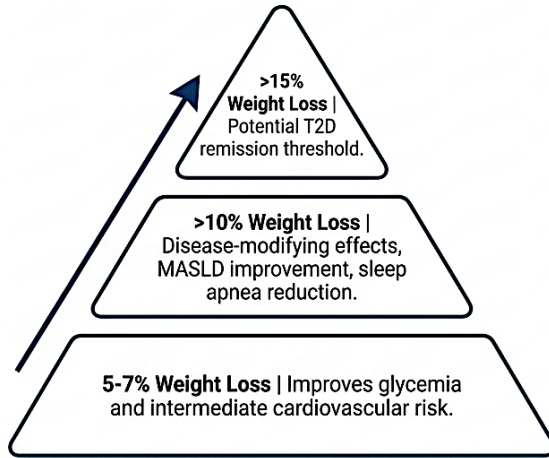
Alternative/Adjunct: SGLT2is & Pioglitazone

SGLT2is show potential MRI-based fat reduction but currently lack direct histological proof compared to GLP-1s. **Pioglitazone** can be considered for glycemic management with potential MASH benefits.

Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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#5: Is Weight Loss a Primary Goal?



The Clear Winners: GLP-1 RAs & Dual GIP/GLP-1 RAs

SURMOUNT-2 Data: Tirzepatide yields 9.6% - 11.6% weight loss over placebo. To treat the insulin resistance, you must directly treat the adipose tissue.

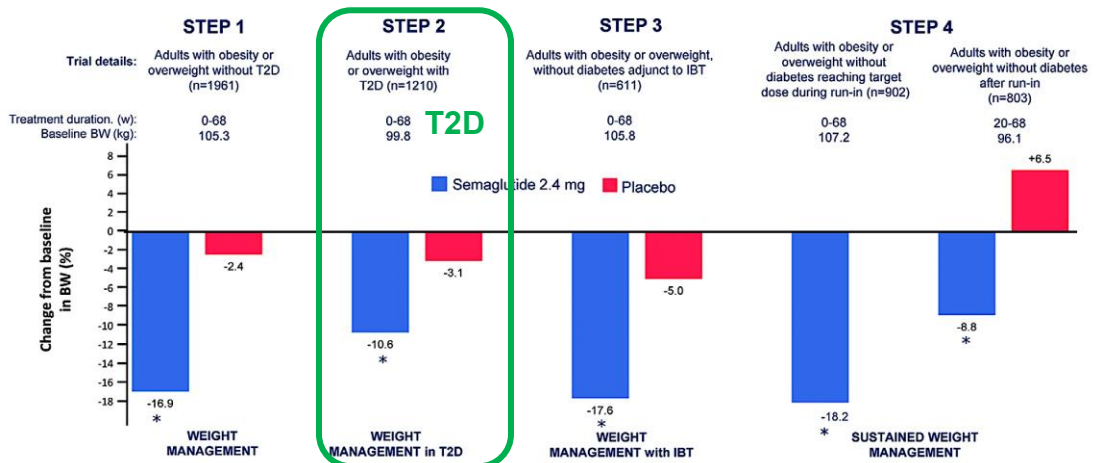
The Contrast: SGLT2 Inhibitors

SGLT2is provide only modest weight loss, typically 1-2 kg. They do not act as primary anti-obesity agents.

Graphic prepared with help of Notebook LM AI using ADA & ACE guidelines, AHA CKM advisory as reference documents.

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There Is Less Weight Loss with GLP1RA in Individuals with T2D



Drucker DJ. GLP-1 physiology informs the pharmacotherapy of obesity. Molec Metab 2022;57:101351.

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When Should Insulin Be Started Instead?

Initiate Basal Insulin immediately if:

- A1C >10%
- **OR** Blood Glucose >300 mg/dL **AND** patient exhibits catabolic symptoms (weight loss, polyuria, polydipsia).

 **Note:** Avoid starting GLP-1 RAs alone in this state; acute glucose toxicity requires immediate reduction.

Step 1

Goal: Fasting Blood Glucose <110 mg/dL (without hypoglycemia).



Step 2

Adjustment: Titrate Glargine every 2-3 days, Degludec every 3-5 days.



Step 3

Safety Check: Reduce dose by 10-20% if FBG drops below 70 mg/dL.

Samson SL, et al. *Endocr Pract* 2026;32:473-518.

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Monitor for Adverse Effects

GLP-1 RA Guardrails



Manage GI side effects via slow, flexible titration rules.



Monitor for nutritional gaps: Up to 13.6% of patients develop Vitamin D deficiency at 12 months.



Require resistance training/protein intake to prevent lean muscle mass loss.

SGLT2i Guardrails



Counsel strictly on genital mycotic infection hygiene.



Hold medication before surgery/fasting to mitigate the risk of euglycemic DKA.

Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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Don't Forget to Deprescribe

The Hypoglycemia Imperative: Introducing SGLT2is or GLP-1RAs into an outdated regimen can trigger dangerous hypoglycemia. You must deprescribe proactively.

Sulfonylureas & Meglitinides

- Stop entirely, or drastically reduce the dose. These insulin secretagogues are incompatible with the safety profile of modern CKM care.

Basal Insulin

- When adding a GLP-1RA or Dual GIP, preemptively reduce the basal insulin dose by 10-20% (especially if baseline A1C is <7.5%).

DPP-4 Inhibitors

- Discontinue immediately when starting a GLP-1RA. They target the same pathway; combining them adds cost without additional glucose-lowering benefit.

Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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Use the PREVENT Equations to Estimate Risk

The Legacy Paradigm

- **Tool:** Pooled Cohort Equations.
- **Horizon:** 10-Year Risk.
- **Blind Spots:** Only calculates ASCVD.
 - Ignores Heart Failure entirely.
 - Ignores kidney markers (eGFR/UACR).
 - Excludes adults under 40.

The New CKM Paradigm

- **Horizon:** Starts at age 30, projects 30-year lifetime risk.
- **Breadth:** Calculates absolute risk for BOTH ASCVD and Heart Failure.
- **Integrates:** Direct kidney function markers and SDOH variables.

Why it matters: Guides Specific Therapy

If HF risk outweighs ASCVD risk, **SGLT2i** is prioritized.

If ASCVD risk is paramount, **GLP-1RA** is prioritized.

Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document. Ndumele CE, et al. *Circ* 2023;148:1606-1635

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PREVENT Risk Equations

Derived from Individual-Level Participant Data from 25 Data Sets, n=3,281,919; Validated in 21 Add'l Data Sets, n=3,330,085

- Broadens outcome to heart failure (HF)
- Removes race from risk prediction – acknowledges race as a social construct, not a biological predictor
- Lowers age for risk prediction to 30 (age range 30-79)
- Predicts risk of total or global CVD (composite of ASCVD and HF) as well as each separately
- Risk estimates provided for 10-yr and 30-yr time span
- Optional models incorporating measures of kidney and metabolic health
- Includes a measure of place-based social disadvantage (social deprivation index) to acknowledge role of SDOC in CVD risk



Khan SS, et al. Development and validation of the American Heart Association's PREVENT Equations *Circulation* 2024;149:430-449.

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The American Heart Association PREVENT™ Online Calculator

<https://professional.heart.org/en/guidelines-and-statements/prevent-calculator>



CVD
ASCVD
Heart Failure

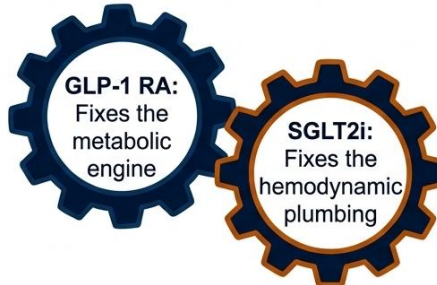
<p>Sex*</p> <p><input checked="" type="radio"/> Male <input type="radio"/> Female</p>	<p>Current Smoking</p> <p>Any cigarette use within the last 30 days</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>	<p>Lipid-lowering medication</p> <p>Current use of statin medication to lower cholesterol</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>
<p>Age (years)*</p> <p><input type="text" value="30-79"/></p>	<p>HDL Cholesterol (mg/dL)*</p> <p><input type="text" value="20-100"/></p>	<p>BMI (kg/m²)*</p> <p><input type="text" value="18.5-39.9"/></p>
<p>Total Cholesterol (mg/dL)*</p> <p><input type="text" value="130-320"/></p>	<p>SBP (mmHg)*</p> <p><input type="text" value="90-200"/></p>	<p>eGFR (mL/min/1.73m²)*</p> <p><input type="text" value="15-140"/></p>
<p>Diabetes</p> <p>Any history of diabetes.</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>	<p>Anti-hypertensive medication</p> <p>Current use of any medication for hypertension</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>	
<p>The following three predictors are optional for further personalization of risk assessment. When they are clinically indicated or available,</p> <p><small>If available or indicated, select "Yes" and enter the value.</small></p>		
<p>UACR (mg/g)</p> <p>UACR is clinically indicated for individuals with chronic kidney disease, diabetes, or hypertension</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>	<p>HbA1c</p> <p>HbA1c is clinically indicated for individuals with diabetes, prediabetes, overweight, or obesity, or those with history of gestational diabetes</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>	<p>Zip Code</p> <p>valid 5-digit zip code is needed to estimate social deprivation index [SDI]</p> <p><input checked="" type="radio"/> No <input type="radio"/> Yes</p>

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The Synergistic Approach: Combination Therapy

The Mechanism

These classes do not compete; they complement. They provide a synergistic shield via completely distinct mechanisms.



The Target Patient

High-risk CKM individuals: CKD + severe obesity, or established ASCVD + Heart Failure.

The Real-World Data



Adding an SGLT2i to a GLP-1 RA yields a **29% lower risk of MACE** compared to monotherapy.



Adding a GLP-1 RA to an SGLT2i yields a **57% lower risk of serious kidney events** compared to monotherapy.

Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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Combining GLP1RA and SGLT2i

- **10.40d** In people with type 2 diabetes and established ASCVD or multiple risk factors for ASCVD, combined therapy with an SGLT2 inhibitor with demonstrated cardiovascular benefit and a GLP-1 RA with demonstrated cardiovascular benefit may be considered for additive reduction of the risk of adverse cardiovascular and kidney events. **B**
- If A1c is $\geq 1.5\%$ above goal in a high risk patient, initiate both to address CKM risks including glycemia

(1) ADA PPC. 10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes—2026. *Diabetes Care* 2026;49(Suppl. 1):S216-S245. (2) Samson SL, et al. *Endocr Pract* 2026;32:473-518.

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The 15-Minute Consult: A 3-Step Implementation Blueprint

STEP 1: Assess the Primary CKM Threat

- Pump/Filter Failing? (HF, CKD eGFR <60, Albuminuria) → Default to **SGLT2i**.
- Pipes/Weight Failing? (ASCVD, BMI >30, MASH) → Default to **GLP-1RA/GIP**.
- Both? → Plan for **Combination**.

STEP 2: Check eGFR & Mitigate Hypoglycemia

- If eGFR < 20, **SGLT2i** is out for initiation; use **GLP-1RA**.
- **Scale back Basal Insulin** by 10-20% and **stop Sulfonylureas/DPP-4is**.

STEP 3: Initiate and Titrate

- **Initiate** chosen therapy.
- **Counsel on specific guardrails** (GI for GLP-1. hvniene/sick days for SGLT2i).
- **Reassess** within 3 months

Graphic prepared with help of Notebook LM AI using ADA & ACE guidelines, AHA CKM advisory as reference documents.

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Presence of SDOH Multiplies Risk

Baseline
Clinical Risk

×

SDOH Risk
Multipliers

=

Accelerated
Stage 4
Progression

Additional Risk-Enhancing Factors:

- South Asian ancestry
- Premature menopause
- Adverse pregnancy outcomes
- Sleep disorders & depression

Food Insecurity

Housing Instability

Financial Resource Strain

Lack of Transportation

Poor Health Literacy

Clinical Integration

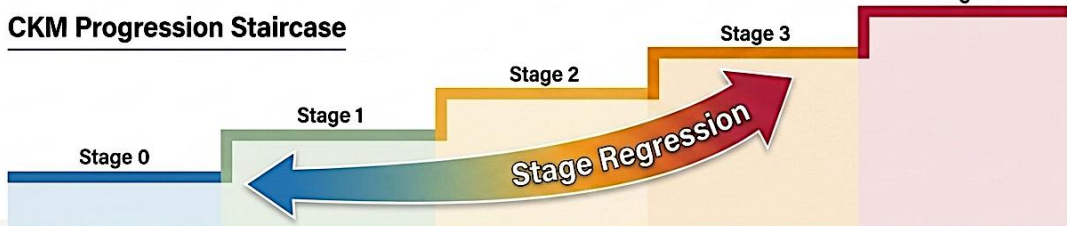
Mandates systematic screening using validated tools (e.g., AHC Health-Related Social Needs Tool, PRAPARE, OCHIN). The PCP must connect patients with Care Navigators or Community Health Workers. **You cannot out-prescribe a food desert.**

Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document. Ndumele CE, et al. *Circ* 2023;148:1606-1635

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CKM Stages 3, 2 and 1 Can Be Reversed

CKM Progression Staircase



CKM stages are reversible. Marked intentional weight loss (>10%), aggressive lifestyle modification, and the synergistic use of GLP-1RAs and SGLT2 inhibitors can remit diabetes, normalize hypertension, and reverse adverse cardiac remodeling.

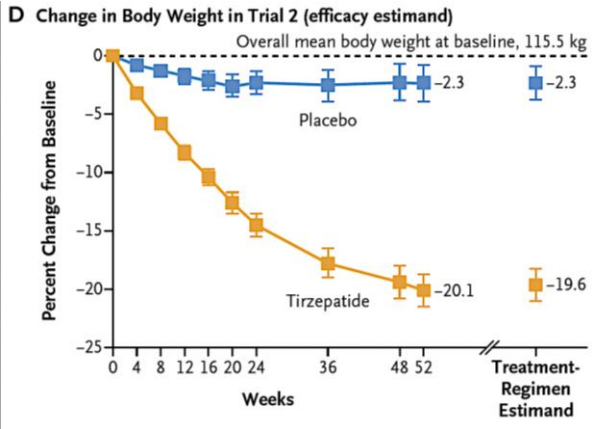
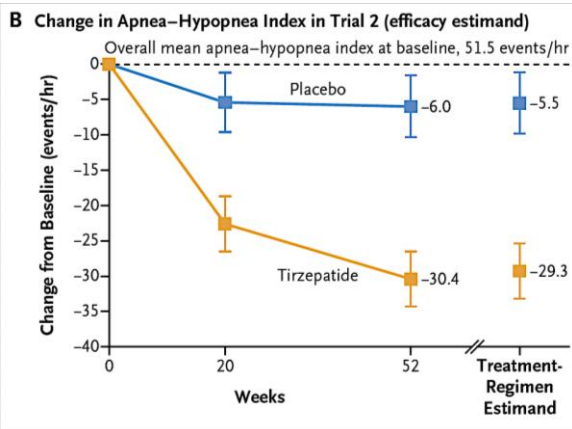
- 1. Screen Holistically**
Test UACR annually, track pediatric BMI, and actively screen for SDOH.
- 2. Prescribe Synergistically**
Match the patient's exact cardiac and kidney risk profile to SGLT2i and GLP-1RA pathways.
- 3. Treat Systemically**
Break down the clinical silos. The heart, kidney, and metabolism are a single system. Treat them as one.

Graphic prepared with help of Notebook LM AI using AHA CKM advisory as reference document.

Ndumele CE, et al. *Circ* 2023;148:1606-1635

47

Tirzepatide Treatment Resulted in Significant Reduction in AHI (25.6%) and Weight (-17.3%) in Persons With OSA and Obesity and Without Diabetes

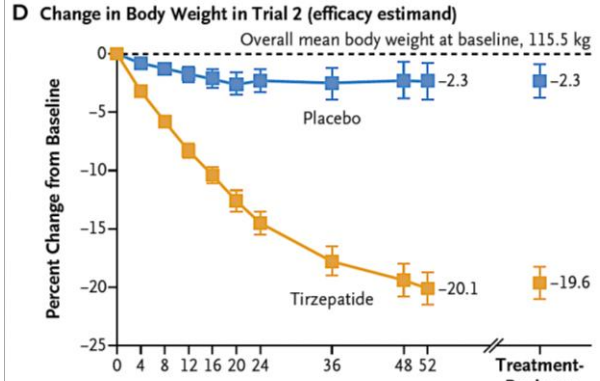
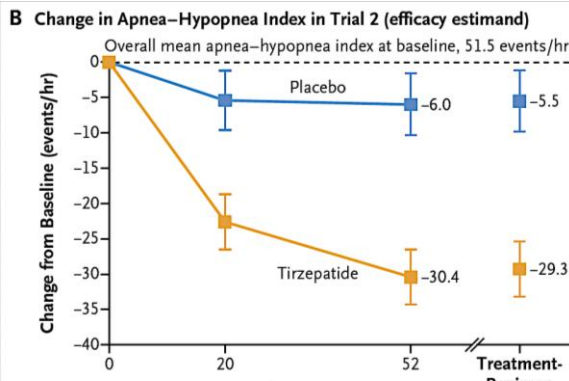


Low Wang

Malhotra A, et al. *N Engl J Med* 2024;141:107516

48

Tirzepatide Treatment Resulted in Significant Reduction in AHI (25.6%) and Weight (-17.3%) in Persons With OSA and Obesity and Without Diabetes



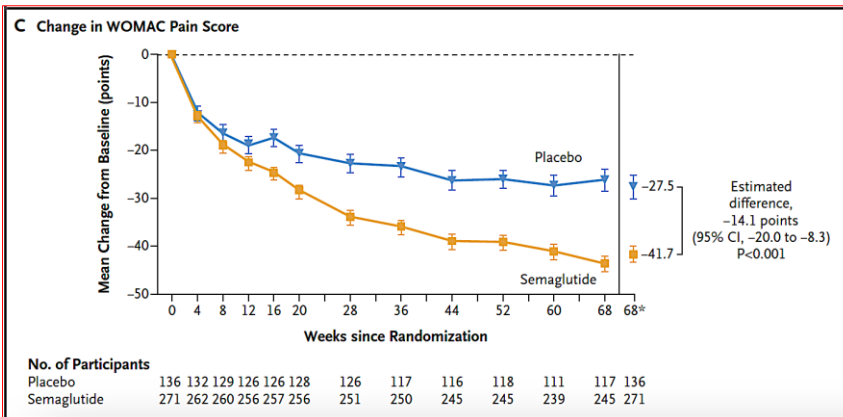
→ In 12/2024, the wt loss form was FDA-approved for moderate to severe obstructive sleep apnea (OSA) in adults with obesity

Low Wang

Malhotra A, et al. *N Engl J Med* 2024;141:107516

49

Semaglutide Treatment Reduced Pain in Persons with Obesity and Knee Osteoarthritis

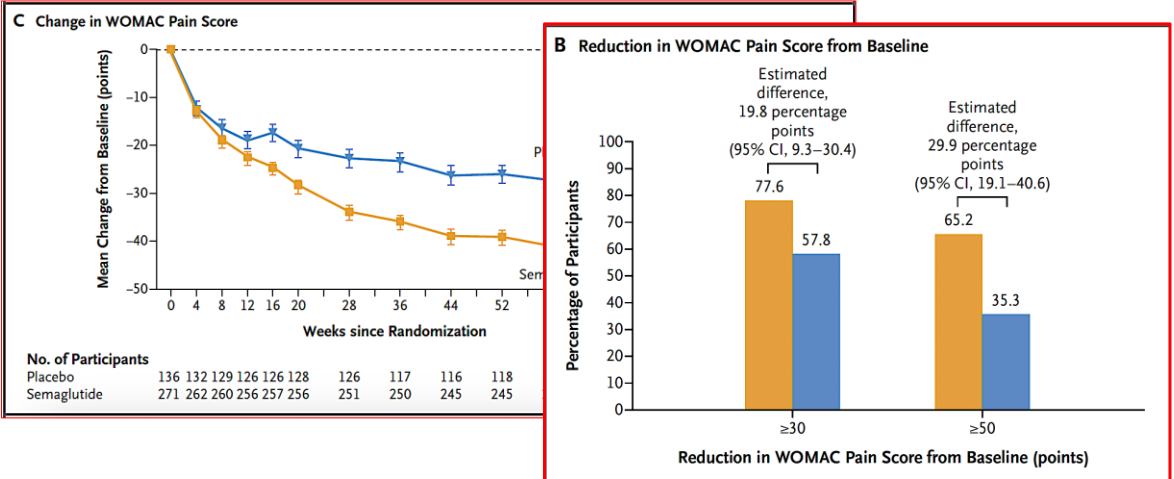


Low Wang

Bliddal H, et al. *N Engl J Med* 2024;391(17):1573-1583

50

Semaglutide Treatment Reduced Pain in Persons with Obesity and Knee Osteoarthritis



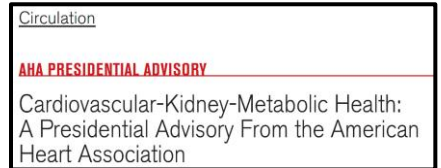
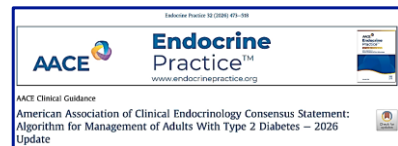
Low Wang

Bliddal H, et al. *N Engl J Med* 2024;391(17):1573-1583

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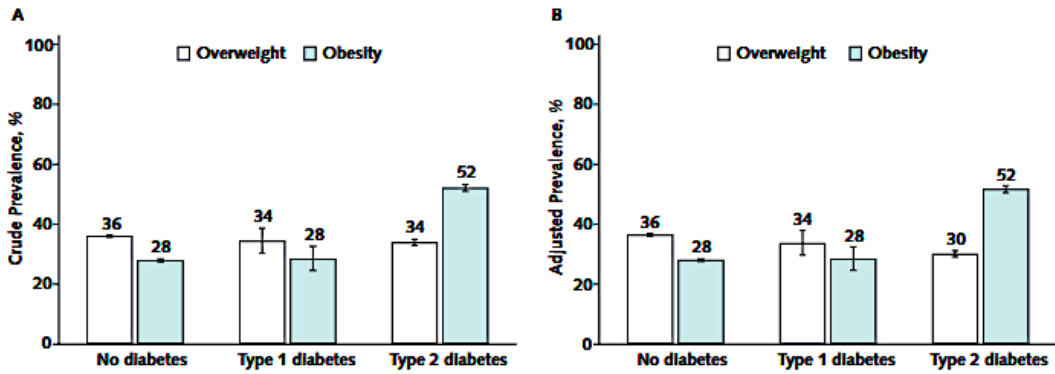
Outline

- Obesity tracks with Type 2 Diabetes (T2D)
- Pathophysiology of T2D: insulin resistance, beta-cell deficiency, and blunted incretin response
- Obesity drives metabolic risk
- CKM Syndrome – what is it? Why is it important?
- How to choose between SGLT2i and GLP1RA in T2D
- ➔ Adjunctive use of GLP1RA in T1D



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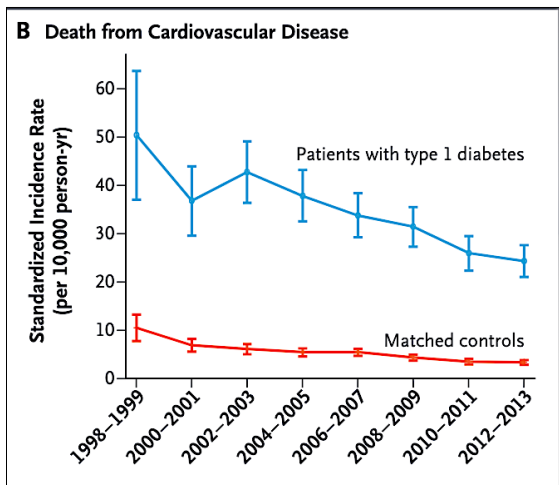
The Prevalence of Overweight and Obesity in Type 1 Diabetes Continues to Increase



Fang M, et al. Prevalence and management of obesity in US adults with type 1 diabetes. *Ann Intern Med* 2023;176(3):427-429.

53

Individuals with Type 1 Diabetes Have a Higher Incidence of CV Death, Not Just from Hyperglycemia

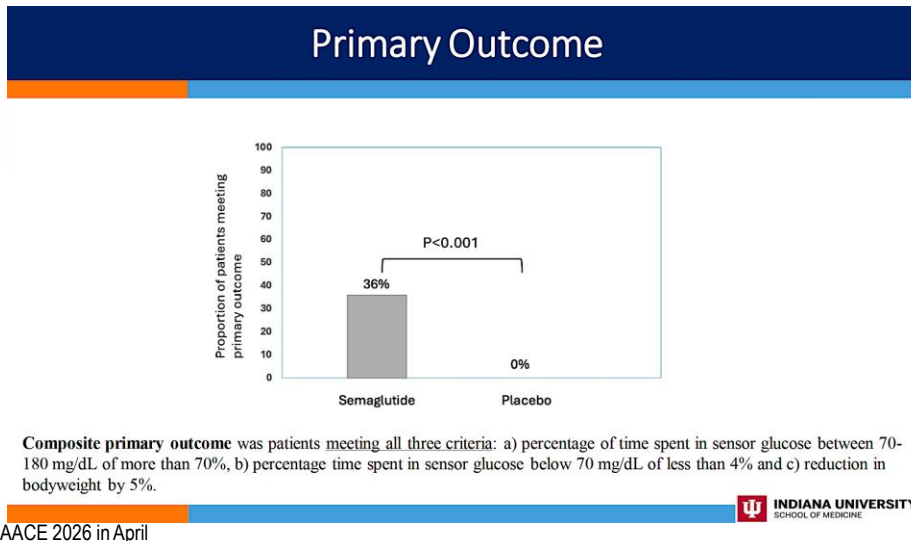


HR: CV death	
Time-updated mean A1c - # events/total #	2326/200,539
Reference (controls)	1.00
≤ 6.9%	2.92 (2.07-4.13)
7-7.8%	3.39 (2.49-4.61)
7.9-8.7%	4.44 (3.32-5.96)
8.8-9.6%	5.35 (3.94-7.26)
≥ 9.7%	10.46 (7.62-14.37)

Lind M, et al. Glycemic control and excess mortality in type 1 diabetes. *N Engl J Med* 2014;371:1972-1982.
 Rawshani A, et al. Mortality and cardiovascular disease in type 1 and type 2 diabetes. *N Engl J Med* 2017;376(15):1407-1418.

54

Semaglutide 1 mg SQ Qwk x 6 Months Allowed Patients to Achieve $\geq 70\%$ TIR and Lose $\geq 5\%$ Weight Without Unsafe Level of Time Below Range (TBR)



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The ADA Recommends Approaching Obesity Management in Type 1 Diabetes as with the General Adult Population

- **8.29** Apply obesity management strategies used in the general adult population, including GLP-1 RA–based therapy **B** and metabolic surgery **C** to adults with type 1 diabetes who have obesity (BMI ≥ 30.0 kg/m², or ≥ 27.5 kg/m² in Asian American individuals). Shared decision-making should inform individualized care.

ADA PPC. 8. Obesity and Weight Management for the Prevention and Treatment of Diabetes - Standards of Care in Diabetes - 2026. *Diabetes Care* 2026;49(Suppl. 1):S166-S182.

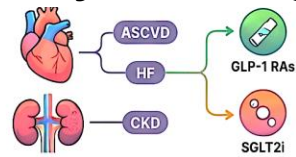
56

Step-by-Step Approach to Navigating GL1RA and SGLT2i Selection in Your Patients with Diabetes and Obesity:

1. Does your patient have vascular or renal comorbidities?
2. If so, which one(s)? (HF-CKD-ASCVD/TIA/CVA-MASLD)
3. Is weight management a primary focus?

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Type 2 Diabetes: Comorbidity- and Weight-Centric Management



Comorbidity-Independent Therapy
 Prioritize GLP-1 RAs or SGLT2i for those with ASCVD, HF, or CKD, regardless of A1C.



Weight Management as a Primary Goal
 Use high-potency GLP-1 RAs or Tirzepatide when weight loss is a key treatment objective.



GLP-1 Based Therapy vs. Insulin
 For those requiring injectable therapy, GLP-1 based options are preferred over starting insulin.

T2D Glucose-Lowering Drug Class Efficacy & Benefits

	Glucose Lowering Efficacy	Weight Effect	Primary Benefit
Tirzepatide / Semaglutide	Very High	Very High Loss	Glycemic & Weight
SGLT2 Inhibitors	Intermediate/High	Intermediate Loss	HF & CKD Protection
Metformin	High	Neutral	Cost & Safety

Graphic prepared with help of Notebook LM AI using ADA & AACE guidelines, AHA CKM advisory as reference documents.

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Obesity Pharmacotherapy Is Advancing Rapidly

- Orforglipron (Foundayo) – small molecule GLP1RA pill approved April 1, 2026, for QD dosing
- High-dose semaglutide SQ (Wegovy) 7.2 mg approved March 19, 2026 (dose increase Q4 wk: 0.25 mg → 0.5 mg → 1 mg → 1.7 mg → 2.4 mg → 7.2 mg Qwk)
- Semaglutide PO (Wegovy) approved in December 2025 (dose increase Q30 days: 1.5 mg → 4 mg → 9 mg → 25 mg QD)

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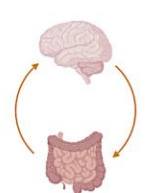

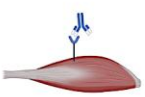

GLP-1 Agonists
 Beinsaglutide
 Utreglutide (GL0034)
 MEF-0871
 Orforglipron
 Aleriglipron (GSBR-1290)
 CT-996
 ECC5004
 TERN-901
 HRS-7535
 Semaglutide 50 mg

GLP-1/GIP Co-agonists
 CT-868
 CT-388
 VK2735
 HRS-9531

GLP-1 Agonist/GIP Antagonist
 MerTide

GLP-1/GLP-2 Co-agonists
 Dapaglutide
 PYY
 CIN-110

Bimagrumab
 Garetosmab
 Trevonumab

<p>Nutrient-stimulated Hormone Mimetics</p>  <p style="text-align: center;">A</p>	<p>Pancreatic Hormone Mimetics</p>  <p style="text-align: center;">B</p>
<p>Myostatin and Activin Receptor Antagonists</p>  <p style="text-align: center;">C</p>	<p>Controlled Metabolic Accelerators</p>  <p style="text-align: center;">D</p>

Amylin Agonists
 Petrilintide (ZP8396)
 AZD6234
 GUBamy

GLP-1/Amylin Co-agonists
 CagriSema
 Amyrelin

GLP-1/Glucagon Co-agonists
 Mazdutide
 Pemvicitide
 Survodutide
 Cotadutide
 Elinopegdutide

GLP-1/GIP/Glucagon Co-agonists
 Retatrutide
 UBT251

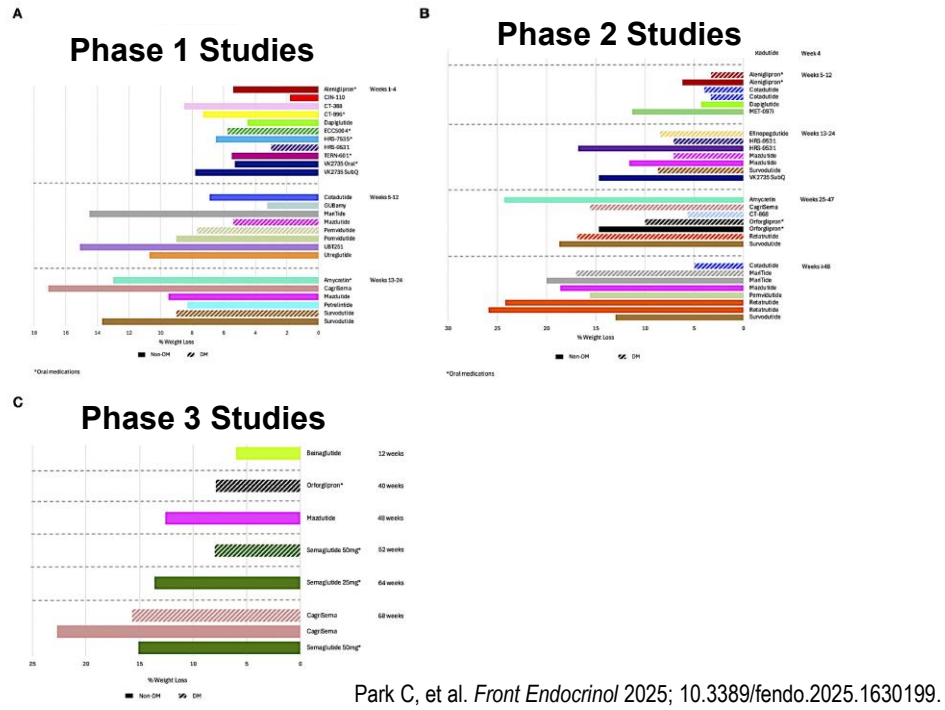
HU-6

Nutrient-Stimulated Hormone (NUSH) Mimetics in Development

Park C, et al. *Front Endocrinol* 2025; 10.3389/fendo.2025.1630199.

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Therapies on the Horizon: NUSH Clinical Trials



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ARS Question #1
In the AHA Cardio-Kidney-Metabolic Syndrome Paradigm, in Which Stage Are Individuals with Hypertension and/or Type 2 Diabetes?

- A. Stage 0
- B. Stage 1
- C. Stage 2
- D. Stage 3
- E. Stage 4

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Take-Home Points for GLP1RA and SGLT2i

- The underlying pathophysiology of type 2 diabetes is related to insulin resistance (much of it related to **obesity**), beta-cell deficiency, and blunted incretin response.
- Obesity is the main driver of metabolic risk in most T2D.
- CKM syndrome provides a useful framework that integrates metabolic, kidney, and CV risk factors and care.
- PREVENT equations quantify risk for CVD, ASCVD, & HF.
- A step-by-step approach can guide decisions about GLP1RA vs SGLT2i (or both): HF? CKD? ASCVD? Stroke? MASLD? Weight?