MCT2D
MICHIGAN COLLABORATIVE FOR TYPE 2 DIABETES

ADA Primary Care Update 2026

Jonathan Gabison, MD, DABOM, FAAFP

3-19-2026

Two Steps to Receive CME/CE Credit

STEP 1:

Scan me to open a text message!

Text in CE Code 89634 to 833-256-8390

by 1:00 PM on March 22nd

This activates your online evaluation in the CE portal (new users follow prompts after texting to set up account).

For CME Credit Troubleshooting, visit **https://tinyurl.com/CMEInstructions**

STEP 2:

Complete the required online evaluation

by April 2, 2026

In the Cloud CME portal at https://corewellhealtheast.cloud-cme.com [Sign In > select **My CME** > select **Evaluations & Certificates**] – or – via the free CloudCME mobile app (organization code *COREWELLHEALTHEAST)*

Refer to full CE document for additional CE information.

For assistance, email CHEcme@corewellhealth.org

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The following speakers and/or planning committee members have identified the following relevant financial relationship(s) with ineligible companies.

All other individuals involved with this activity have no relevant financial relationships with ineligible companies to disclose.

- **Jonathan Gabison, M.D.:** Consultant- Eli Lilly.
- **Lauren Oshman, M.D. (Course Co-Director):** Stocks in publicly traded companies or stock options, excluding diversified mutual funds-Abbott, AbbVie, Johnson & Johnson, Merck & Co., Organon.

MCT2D Learning Community Series 2026
Updates to the ADA Standards of Care 2026

CME/CE credit is available

In support of improving patient care, this activity has been planned and implemented by Corewell Health Southeast Michigan and Michigan Collaborative for Type 2 Diabetes. Corewell Health Southeast Michigan is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

This activity was planned by and for the healthcare team, and learners will receive 1.0 Interprofessional Continuing Education (IPCE) credit for learning and change.

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Dietetic CPEU:

Commission on Dietetic Registration
the credentialing agency for the Academy of Nutrition and Dietetics

Completion of this RD/DTR profession-specific or IPCE activity awards CPEUs (One IPCE credit = One CPEU).

If the activity is dietetics-related but not targeted to RDs or DTRs, CPEUs may be claimed which are commensurate with participation in contact hours (One 60 minute hour = 1 CPEU).

RD's and DTRs are to select activity type 102 in their Activity Log. Sphere and Competency selection is at the learner's discretion.

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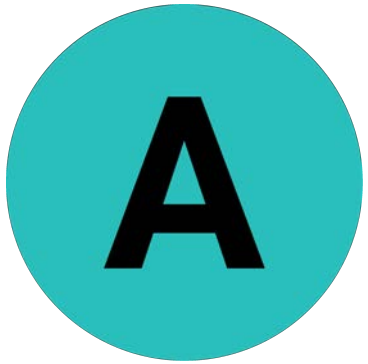
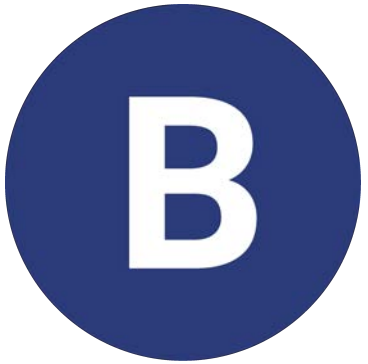
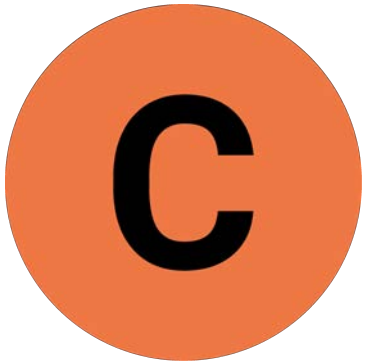
How to Interpret ADA Evidence Grades



Well-powered
RCTs / meta-analyses



RCTs with limitations /
well-conducted
cohort studies



Poorly controlled
or uncontrolled
studies

Expert consensus /
clinical experience

What We Will Cover Today

Algorithm Updates (Medications)

- Heart Failure
- MASLD/MASH

Kidney Disease

- Early combination therapy for CKD
- SGLT Inhibitor and ESRD

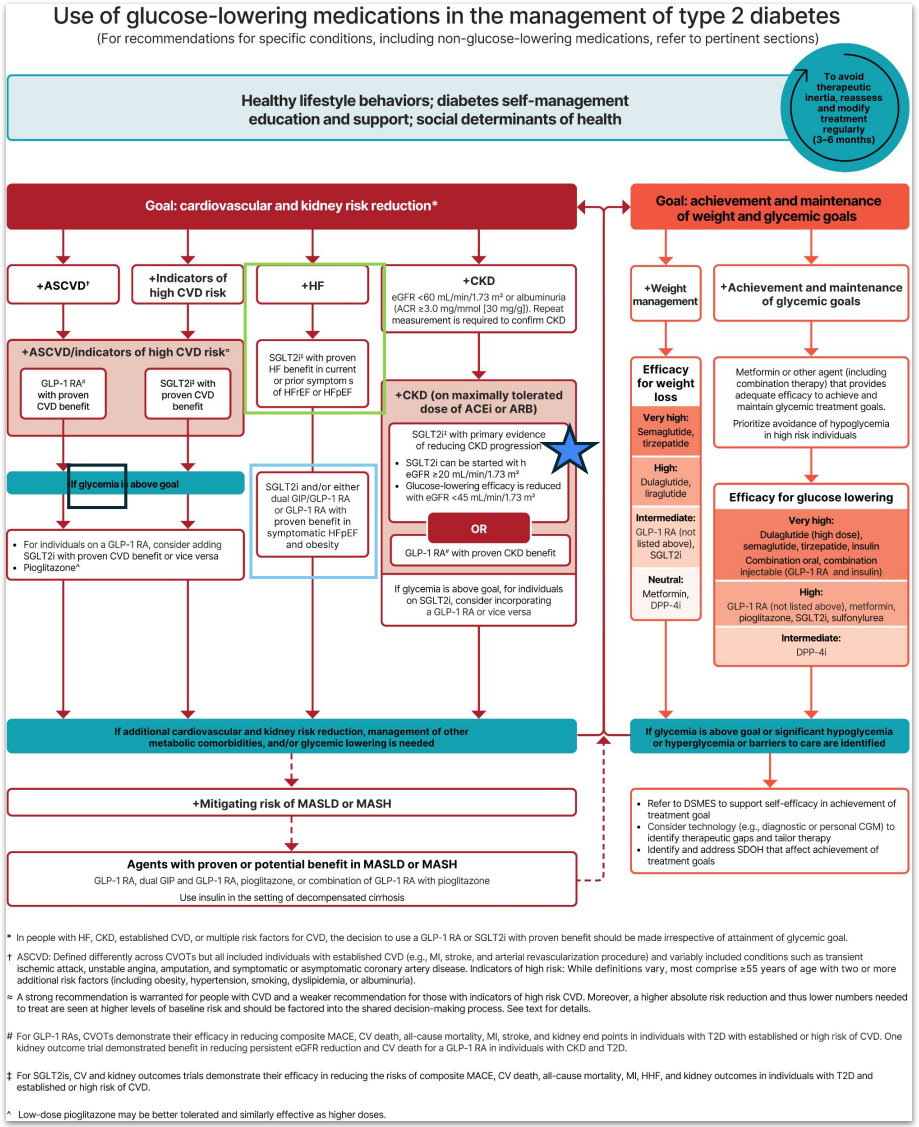
Obesity Management

- Individualized dosing
- in T1D

Additional Updates

- GLPs in preconception phase
- CGM Update
- Metformin for Medication Induced Hyperglycemia

Updated Algorithm



Use of glucose-lowering medications in the management of type 2 diabetes

(For recommendations for specific conditions, including non-glucose-lowering medications, refer to pertinent sections)

Healthy lifestyle behaviors; diabetes self-management education and support; social determinants of health

To avoid therapeutic inertia, reassess and modify treatment regularly (3–6 months)

Goal: cardiovascular and kidney risk reduction*

+ASCVD†

+Indicators of high CVD risk

+ASCVD/indicators of high CVD risk≈

- GLP-1 RA# with proven CVD benefit
- SGLT2i‡ with proven CVD benefit

If glycemia is above goal

- For individuals on a GLP-1 RA, consider adding SGLT2i with proven CVD benefit or vice versa
- Pioglitazone^

+HF

SGLT2i‡ with proven HF benefit in current or prior symptom s of HFrEF or HFpEF

SGLT2i and/or either dual GIP/GLP-1 RA or GLP-1 RA with proven benefit in symptomatic HFpEF and obesity

+CKD

eGFR <60 mL/min/1.73 m² or albuminuria (ACR ≥3.0 mg/mmol [30 mg/g]). Repeat measurement is required to confirm CKD

+CKD (on maximally tolerated dose of ACEi or ARB)

SGLT2i‡ with primary evidence of reducing CKD progression

- SGLT2i can be started wit h eGFR ≥20 mL/min/1.73 m²
- Glucose-lowering efficacy is reduced with eGFR <45 mL/min/1.73 m²

OR

GLP-1 RA# with proven CKD benefit

Goal: achievement and maintenance of weight and glycemic goals

+Weight management

Efficacy for weight loss

Very high: Semaglutide, tirzepatide

High: Dulaglutide, liraglutide

Intermediate: GLP-1 RA (not listed above), SGLT2i

+Achievement and maintenance of glycemic goals

Metformin or other agent (including combination therapy) that provides adequate efficacy to achieve and maintain glycemic treatment goals.

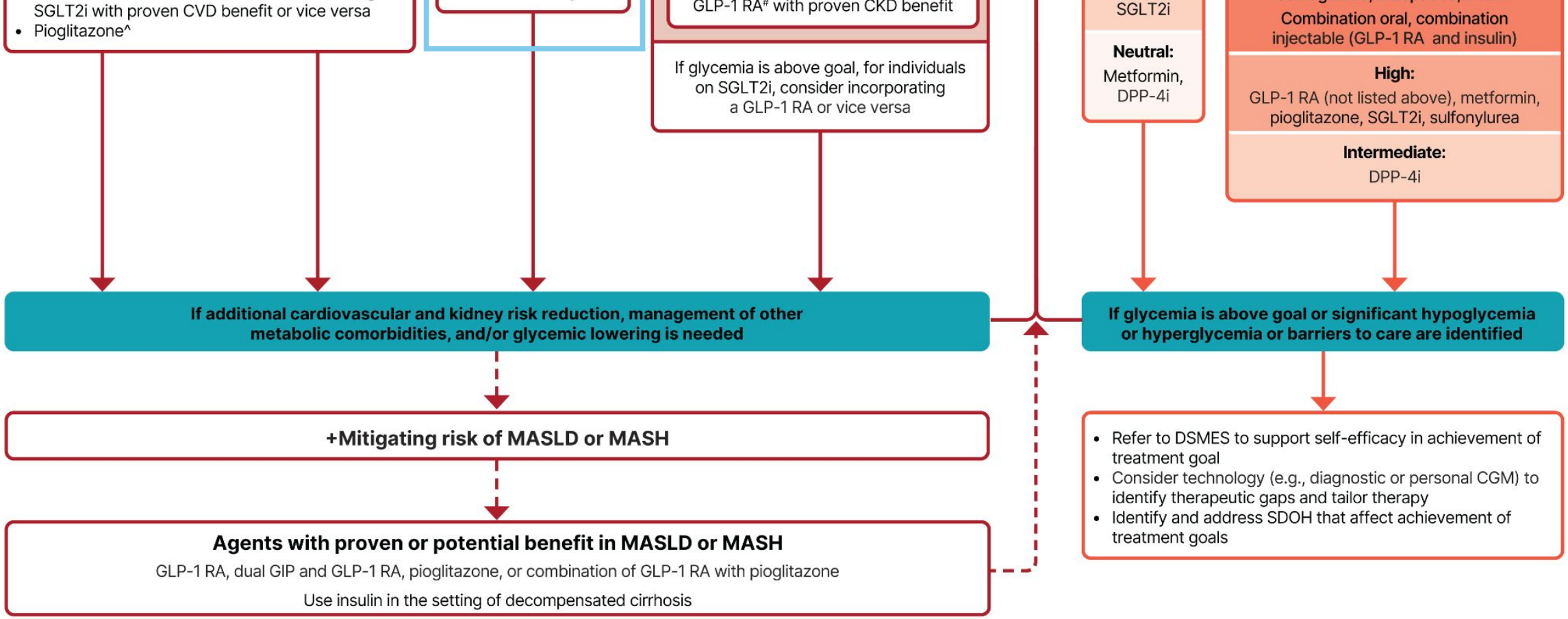
Prioritize avoidance of hypoglycemia in high risk individuals

Efficacy for glucose lowering

Very high:

Dulaglutide (high dose), semaglutide, tirzepatide, insulin

Combination oral, combination injectable (GLP-1 RA and insulin)



* In people with HF, CKD, established CVD, or multiple risk factors for CVD, the decision to use a GLP-1 RA or SGLT2i with proven benefit should be made irrespective of attainment of glycemic goal.

† ASCVD: Defined differently across CVOTs but all included individuals with established CVD (e.g., MI, stroke, and arterial revascularization procedure) and variably included conditions such as transient ischemic attack, unstable angina, amputation, and symptomatic or asymptomatic coronary artery disease. Indicators of high risk: While definitions vary, most comprise ≥55 years of age with two or more additional risk factors (including obesity, hypertension, smoking, dyslipidemia, or albuminuria).

≈ A strong recommendation is warranted for people with CVD and a weaker recommendation for those with indicators of high risk CVD. Moreover, a higher absolute risk reduction and thus lower numbers needed to treat are seen at higher levels of baseline risk and should be factored into the shared decision-making process. See text for details.

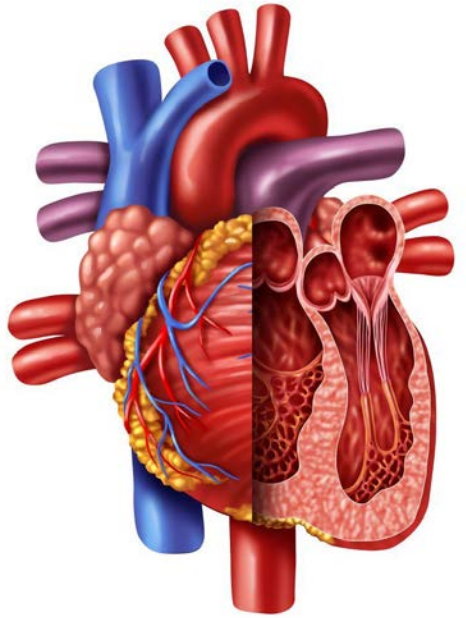
For GLP-1 RAs, CVOTs demonstrate their efficacy in reducing composite MACE, CV death, all-cause mortality, MI, stroke, and kidney end points in individuals with T2D with established or high risk of CVD. One kidney outcome trial demonstrated benefit in reducing persistent eGFR reduction and CV death for a GLP-1 RA in individuals with CKD and T2D.

‡ For SGLT2is, CV and kidney outcomes trials demonstrate their efficacy in reducing the risks of composite MACE, CV death, all-cause mortality, MI, HHF, and kidney outcomes in individuals with T2D and established or high risk of CVD.

^ Low-dose pioglitazone may be better tolerated and similarly effective as higher doses.

GLPs for Heart Failure
New ADA Recommendations

A B



For T2DM + Obesity + Symptomatic HFpEF:

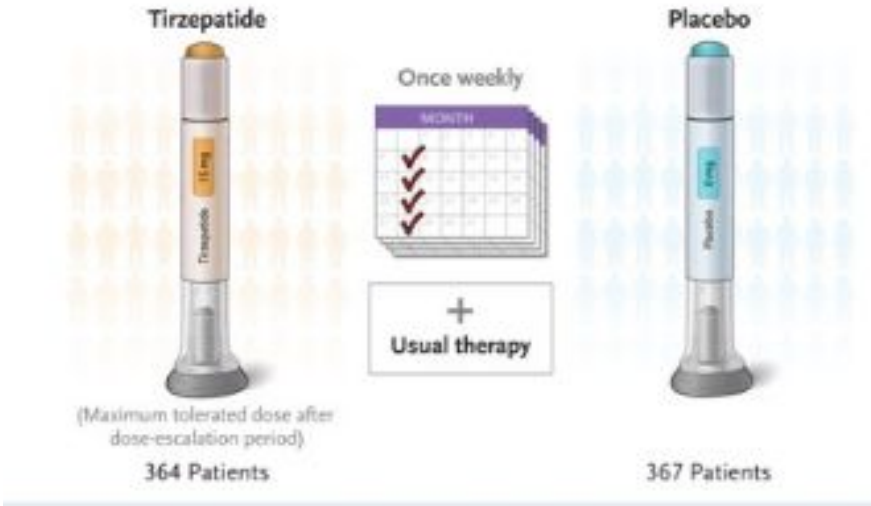
- Dual GIP/GLP-1 RA or GLP-1 RA with demonstrated benefit
- HF symptoms: Grade A (both)
- HF events: Grade A (dual) / Grade B (GLP-1 RA)
- Irrespective of A1c

SUMMIT Trial
Tirzepatide for Heart Failure

Population:

- 731 adults with T2DM, BMI ≥30, symptomatic HFpEF (EF ≥50%).
- Significant function impairment (Mean KCCQ 53.5, mean 6MWD 303m)
- Nearly 50% hospitalized for HF in prior year.
- Elevated BNP was NOT required for enrollment.

Intervention: Tirzepatide up to 15 mg subcutaneously weekly vs placebo. Median follow-up: 2 years (104 weeks).



Packer M, et al. N Engl J Med. 2025;392:427-437

SUMMIT Trial
Tirzepatide for Heart Failure - Outcomes

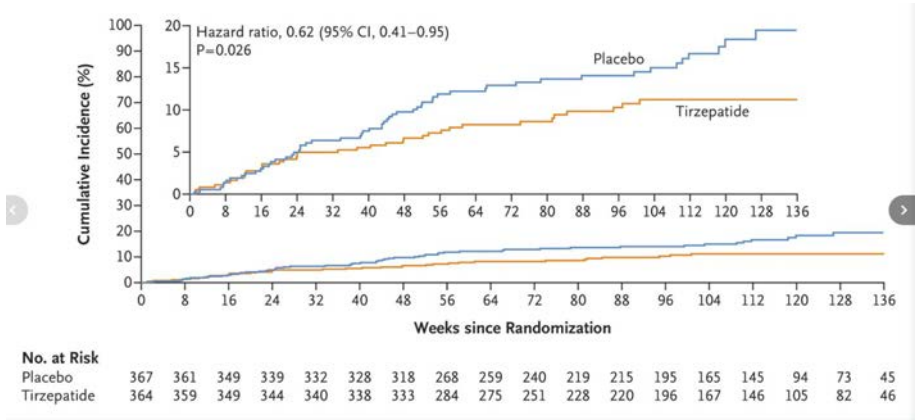
Primary Outcomes:

- CV death or worsening HF: 9.9% vs 15.3% (HR 0.62).
- HF hospitalizations: HR 0.44.
- Symptom improvement (KCCQ): +6.9 points vs placebo

Secondary Outcomes:

- Weight: -13.9% vs -2.2%
- Walk Distance: +18.3 meters
- CRP: -38.8% vs -5.9%

Composite Death from Cardiovascular Cause or a worsening heart failure event



Packer M, et al. N Engl J Med. 2025;392:427-437

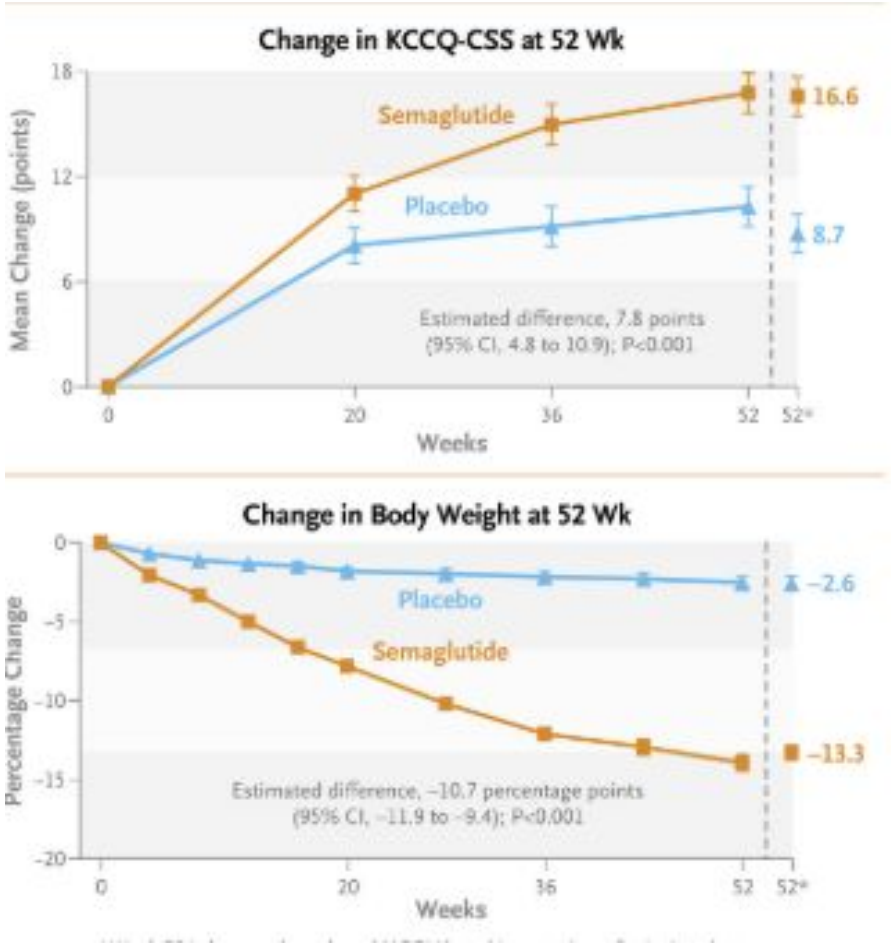
Heart Failure with Preserved Ejection Fraction

Approximately 45% of people admitted for HFpEF have diabetes[2]

10.46d In T2D, obesity, and symptomatic HFpEF, therapy with a GLP-1 RA with demonstrated benefit for reduction of heart failure–related symptoms, physical limitations, and exercise function is recommended. **A**

STEP-HFpEF[1]

- **Population:** Adults with BMI 30 or BMI > 27 with weight-related comorbidity AND symptomatic HFpEF (EF > 45%)
- **Intervention:** Weekly semaglutide 2.4 mg vs Placebo for 52 weeks
- **Primary Outcome:** Significant improvement in KCCQ-CSS – indicating better symptom relief and quality of life
- **Secondary Outcome:** Improved 6 minute walk distance



Kosiborod MN, et al. *N Engl J Med*. 2024;390(15):1394-1407.

Identifying Symptomatic HFpEF

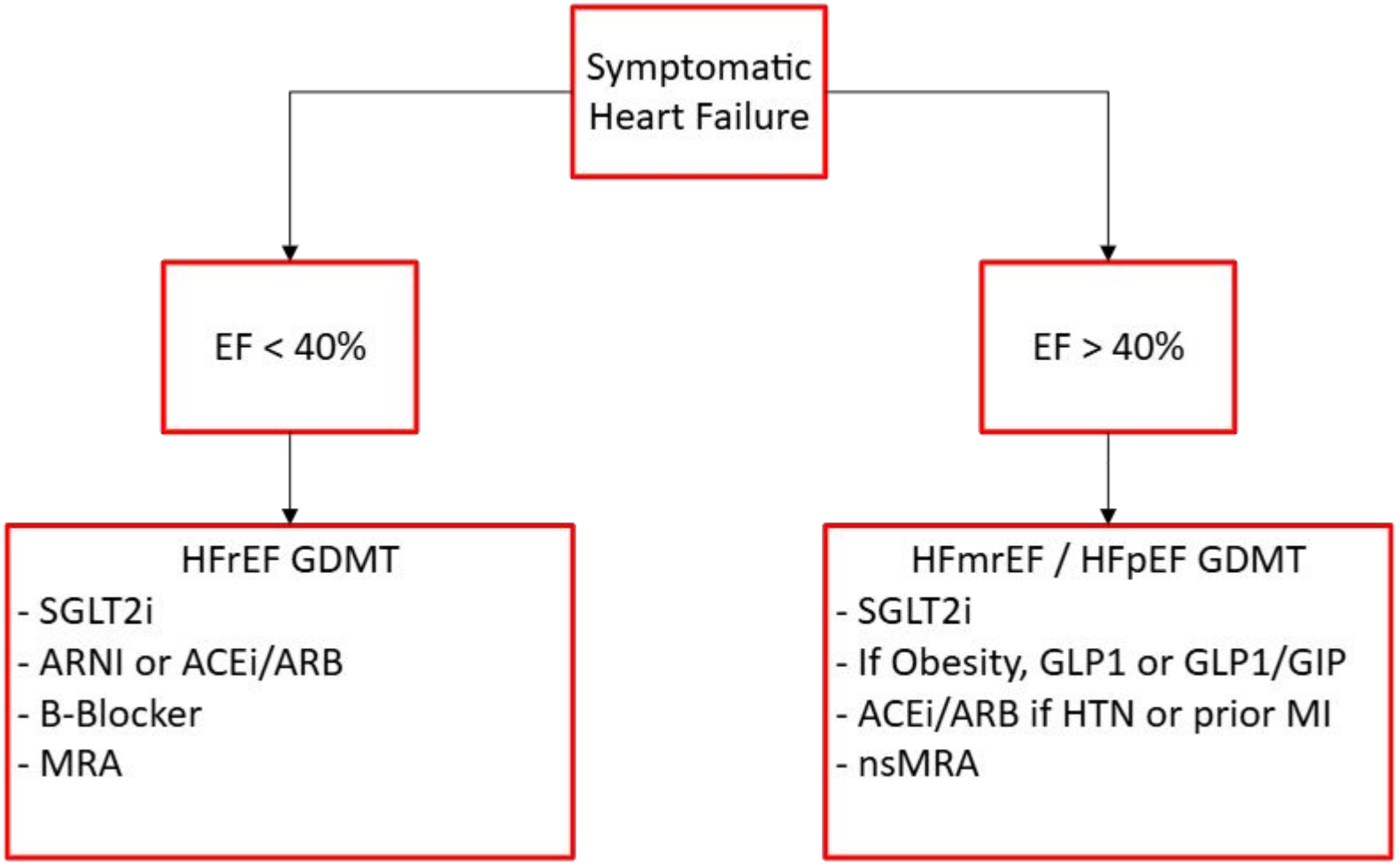
Common symptoms:

- Exertional dyspnea (shortness of breath with activity)
- Fatigue and exercise intolerance
- Lower extremity edema
- Orthopnea / paroxysmal nocturnal dyspnea

Key diagnostic features:

- Preserved ejection fraction (EF ≥50%)
- Often normal BNP (especially in obesity)
- Echocardiographic evidence of diastolic dysfunction

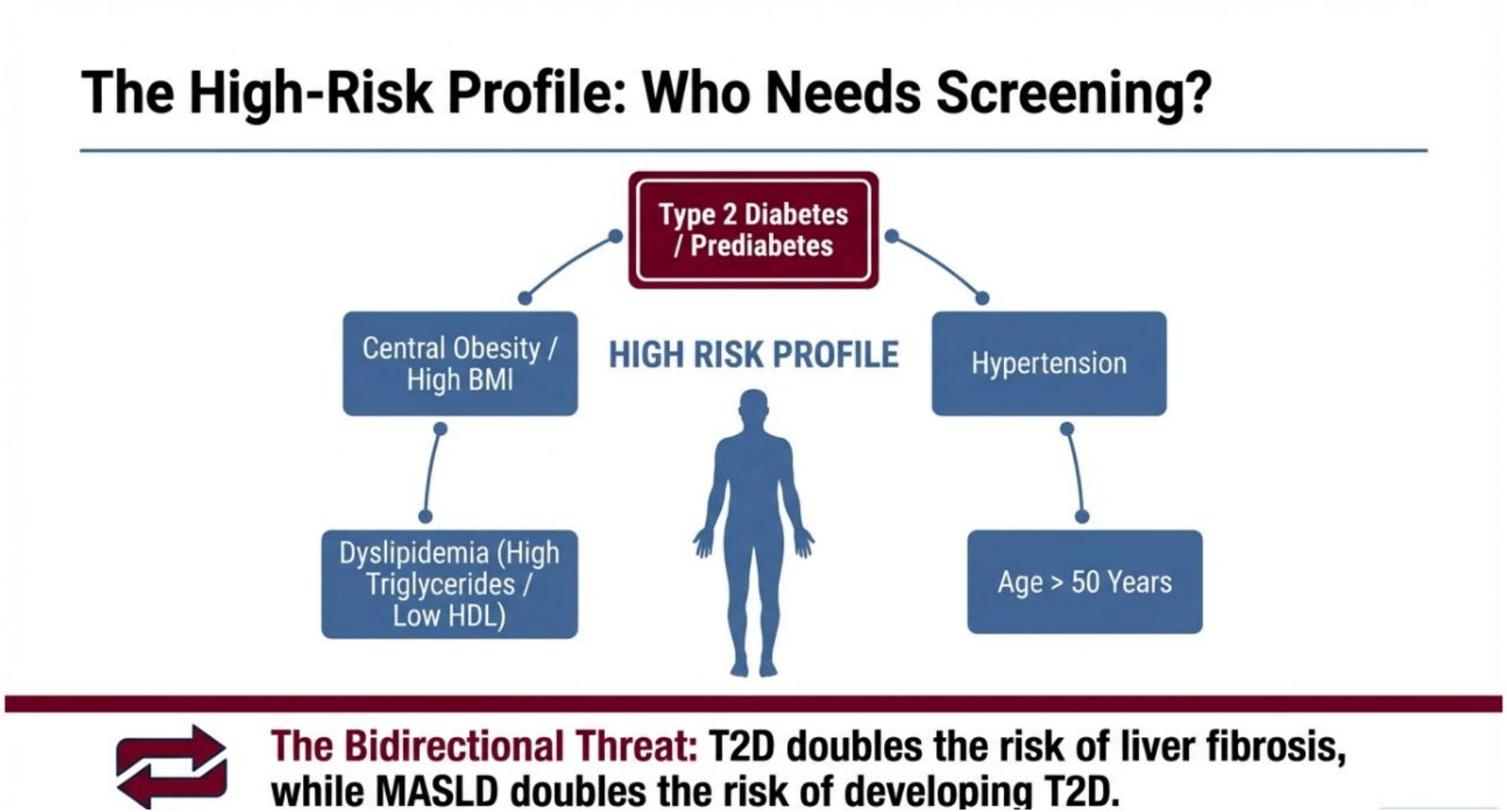
Approach to patients with T2D and Heart Failure



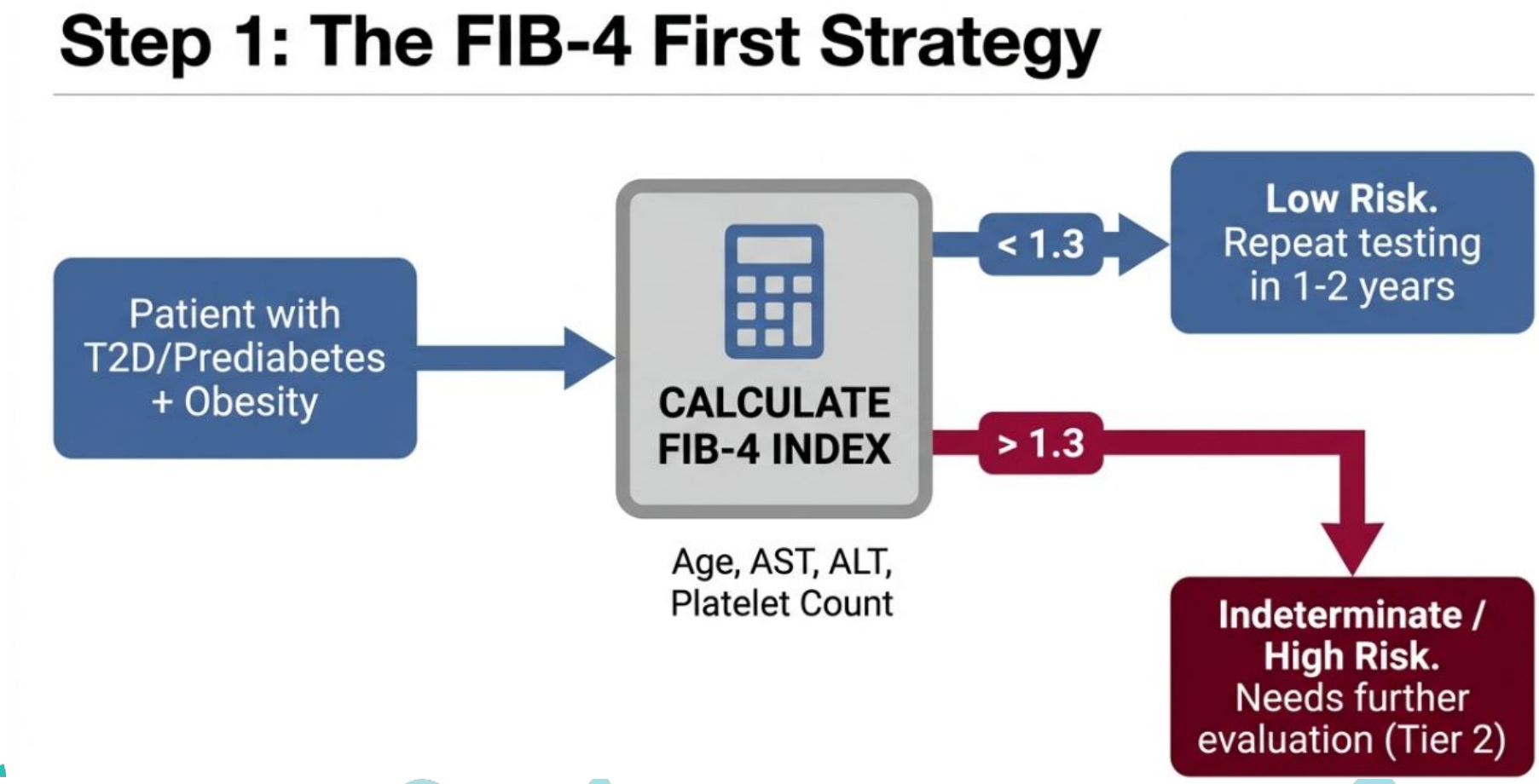
Adapted from ADA 2026 Standards of Care, Figure 10.5.

MASLD/MASH

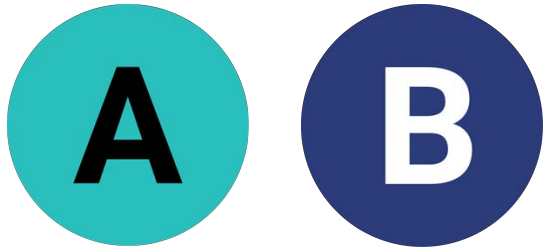
MASLD/MASH - Who is at high risk?



MASLD/MASH - Screening for risk



MASLD / MASH – Updated ADA Recommendations



T2DM + MASLD + Overweight/Obesity (9.12):

- GLP-1 RA (Grade A) or dual GIP/GLP-1 RA (Grade B)

T2DM + MASH or High Fibrosis Risk (9.13a):

- GLP-1 RA preferred (Grade A)
- Pioglitazone or dual GIP/GLP-1 RA as alternatives (Grade B)

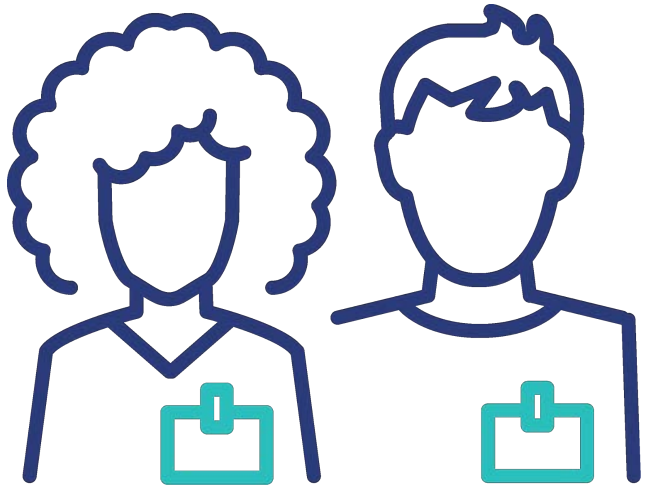
Combination option (9.13b):

- Pioglitazone + GLP-1 RA for MASH with fibrosis risk (Grade B)

ESSENCE Trial – Semaglutide and MASH

1197

patients with biopsy-confirmed MASH and fibrosis stage 2 or 3

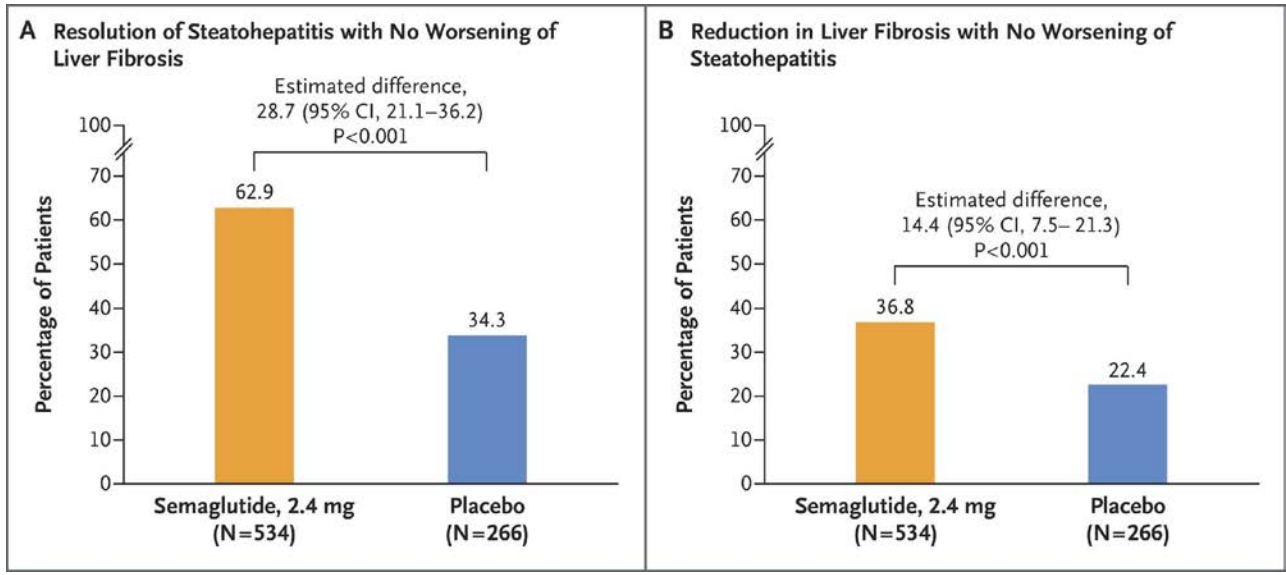


Intervention: 2:1 ratio to receive Semaglutide 2.4 mg weekly vs placebo for 72 weeks (interim analysis)

ESSENCE Trial – Semaglutide and MASH
Outcomes

Primary Outcomes:
- MASH resolution without worsening fibrosis: 62.9% vs 34.3%
- Fibrosis improvement ≥1 stage without worsening MASH: 36.8% vs 22.4%

Secondary Outcomes:
- Both MASH resolution + fibrosis improvement: 32.7% vs 16.1%
- Weight loss: -10.5% vs -2.0%
- ALT reduction: -52% vs -8%
- Liver stiffness reduction ≥25%: 60% vs 35%



Sanyal AJ, Newsome PN, Kliers I, et al. *N Engl J Med*. 2025;392(21):2089-2099.

ESSENCE Trial – Important Caveats

Accelerated approval only

- Based on histologic surrogates, not clinical outcomes
- Part 2 (240 weeks) needed to confirm reduced liver events

Weight loss or direct liver effect?

- 10.5% weight loss makes it difficult to separate mechanisms
- Separate cirrhosis trial: reduced fat but no fibrosis improvement

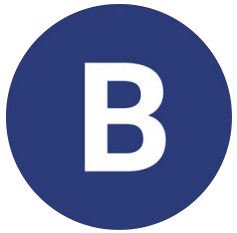
Practice gaps

- Trial used biopsy for enrollment; real world will use noninvasive testing
- Limited diversity; few Black patients or lean individuals enrolled
- Body composition changes (sarcopenia risk) not assessed

Obesity Management Updates

Obesity Management: Individualized dosing (8.20)

Individualize the dose and the dose titration approach of obesity pharmacotherapy to balance effectiveness, health benefits, and tolerability; the optimal treatment dose may not be the maximum approved dose. **B**



The Problem:

- GI side effects are the #1 reason patients discontinue GLP-1 RAs
- Over 50% of patients stop GLP-1 therapy within one year
- Standard label titration schedules were designed for clinical trials, not real-world practice

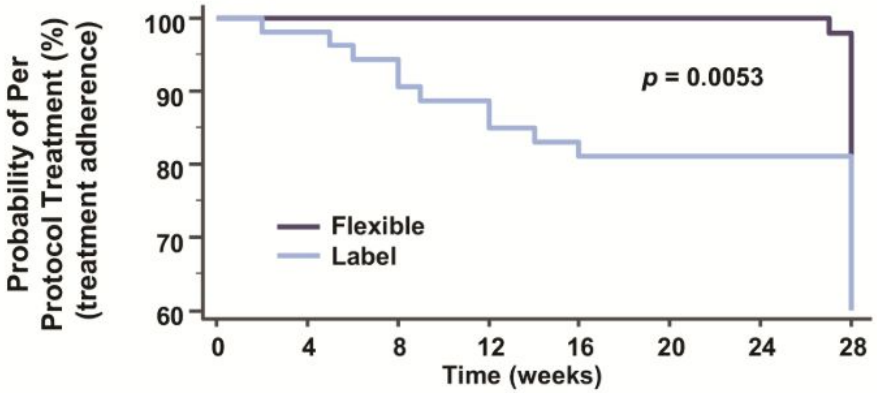
The Update:

- Slower titration and smaller dose increments are now explicitly supported
- Target dose does not have to be the maximum approved dose
- Prioritize keeping patients on therapy over reaching max dose and increasing side effects

Evidence for Flexible Titration

Flexible Titration: Same Efficacy, Better Tolerability

- Open-label RCT: 104 patients with T2DM on semaglutide
- Flexible (16 weeks to 1 mg) vs label (8 weeks to 1 mg)
- Better adherence (p=0.005)
- Fewer nausea days (p=0.017)
- No difference in efficacy



The best dose is the one your patient will actually take!

Obesity Management Strategies in T1D

Recommendation 8.29 (NEW): Apply obesity management strategies used in the general population, including GLP-1 RA-based therapy (Grade B) and metabolic surgery (Grade C), to adults with T1DM and obesity (BMI ≥30, or ≥27.5 in Asian American individuals).

Why this matters:

- Overweight (30-40%) and obesity (15-30%) prevalence in T1DM mirrors general population
- Obesity in T1DM increases CV and microvascular complication burden
- ~6.5% of T1DM patients already prescribed GLP-1 RAs by 2023
- Practice was ahead of guidelines; now guidelines have caught up

GLP-1 RAs in T1DM

B

Randomized Trials: ADJUNCT ONE & TWO (Liraglutide)

- 52-week and 26-week trials in adults with T1DM
- Liraglutide 1.8 mg daily: ~6% weight reduction
- Weight loss was fat mass, not lean mass
- But: hypoglycemia increased 20-30%, ketosis risk doubled[2]

1. ADA Professional Practice Committee. *Diabetes Care*. 2025;49(Suppl. 1).
2. Van der Schueren B, et al. *Lancet Diabetes Endocrinol*. 2021.
3. Purcell AR, et al. *Diabetes Obes Metab*. 2025.
4. Al Ozairi E, et al. *Diabetes Obes Metab*. 2025.

GLP-1 RAs in T1DM

Real-World and Meta-Analysis Data:

- 2026 meta-analysis (13 studies): weight -4.3 kg, A1c -0.25%, insulin reduced by 9.2 U/day[3]
- 2025 comparative study (250 patients): tirzepatide -10.9%, semaglutide -9.9%, liraglutide -7.1% at 12 months; no severe hypoglycemia or DKA[4]

1. ADA Professional Practice Committee. *Diabetes Care*. 2025;49(Suppl. 1).
2. Van der Schueren B, et al. *Lancet Diabetes Endocrinol*. 2021.
3. Purcell AR, et al. *Diabetes Obes Metab*. 2025.
4. Al Ozairi E, et al. *Diabetes Obes Metab*. 2025.

GLP-1 RAs in T1DM - Evidence Limitations

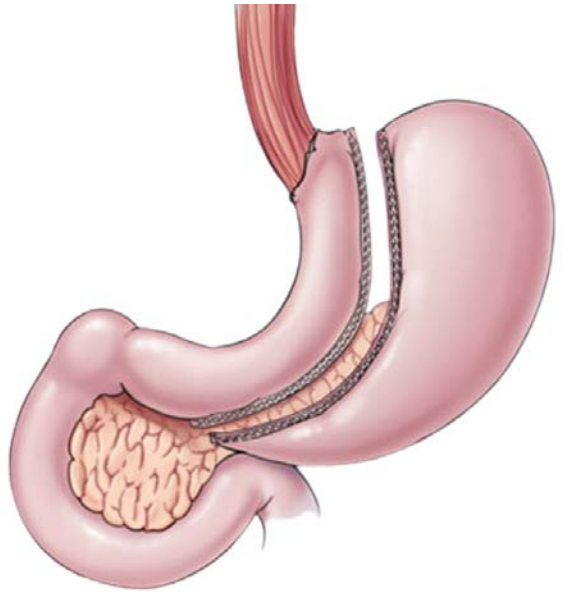
- T1DM patients excluded from major weight loss RCTs (STEP, SURMOUNT)
- No FDA-approved GLP-1 RA indication specific to T1DM
- ADA describes evidence as preliminary
- Prospective CV and kidney outcome trials in T1DM are ongoing

1. ADA Professional Practice Committee. *Diabetes Care*. 2025;49(Suppl. 1).
2. Van der Schueren B, et al. *Lancet Diabetes Endocrinol*. 2021.
3. Purcell AR, et al. *Diabetes Obes Metab*. 2025.
4. Al Ozairi E, et al. *Diabetes Obes Metab*. 2025.

Metabolic Surgery in T1DM - Evidence

C

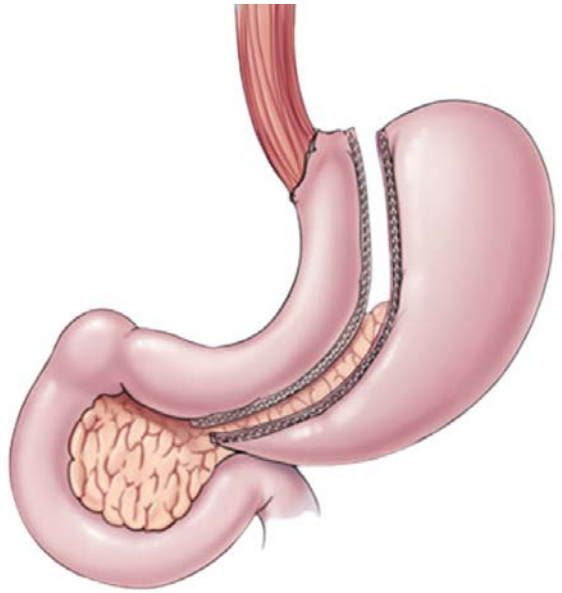
- 162 patients with T1DM and obesity (multicenter retrospective)
- Total weight loss: 29.7% at 1 year
- Insulin requirements: 0.75 → 0.32 units/kg/day (57% reduction)
- HbA1c: modest but significant improvement
- LDL, HDL, total cholesterol, and triglycerides all significantly improved
- Greater weight loss associated with greater insulin reduction



van der Meer R, et al. *Diabetes Care*. 2026. doi:10.2337/dc25-2295.

Metabolic Surgery in T1DM - Limitations

- Retrospective data only; no RCTs for metabolic surgery in T1DM
- HbA1c improvement modest despite significant weight loss
- Long-term outcomes beyond 1 year are limited
- A1c effects have been inconsistent across prior studies



van der Meer R, et al. *Diabetes Care*. 2026. doi:10.2337/dc25-2295.

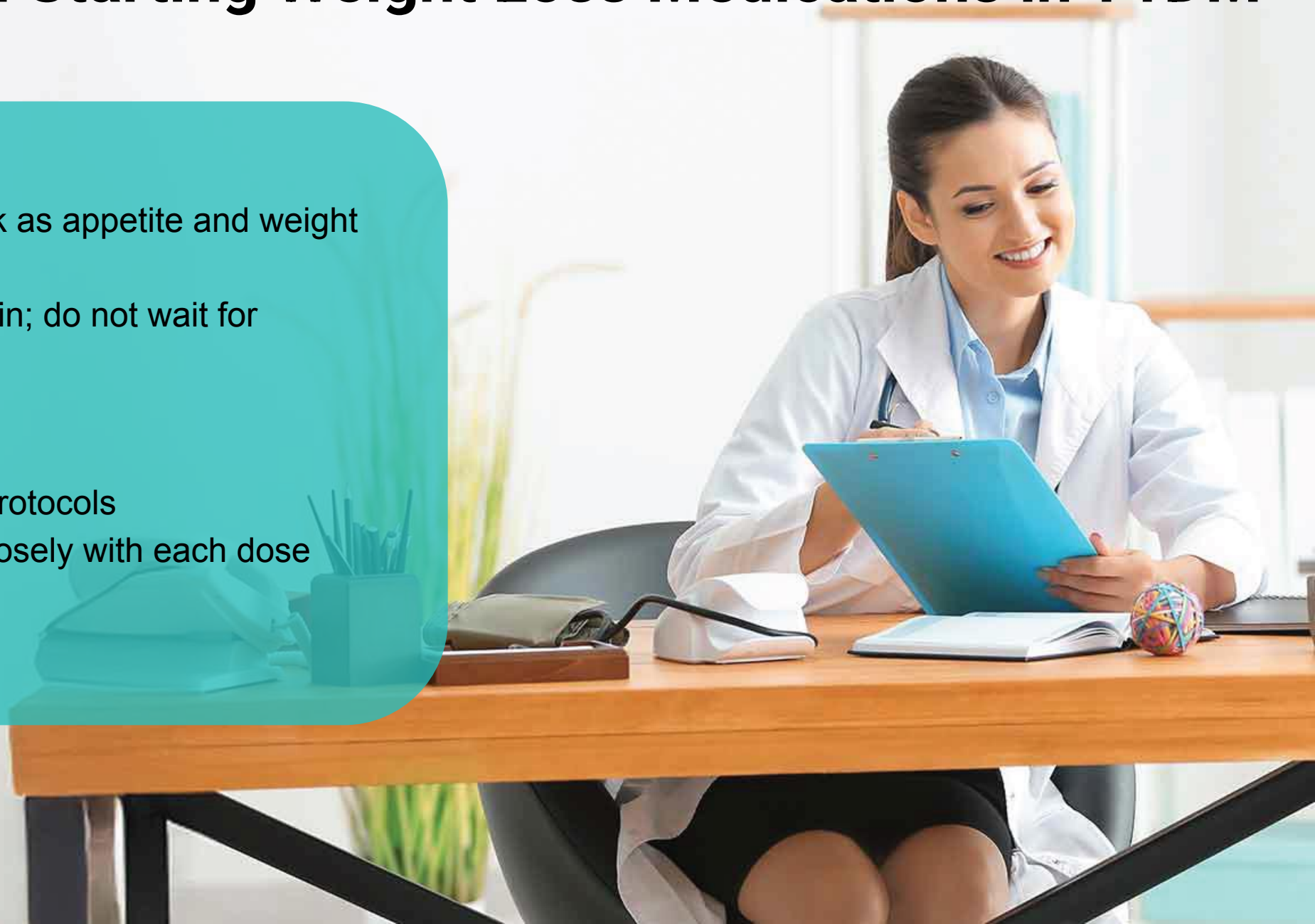
Cautions When Starting Weight Loss Medications in T1DM

Hypoglycemia

- Anticipate increased risk as appetite and weight decrease
- Proactively reduce insulin; do not wait for hypoglycemia to occur

Titration

- Go slower than T2DM protocols
- Monitor insulin needs closely with each dose increase



Nutritional Risk

- Ensure adequate carbohydrate intake despite reduced appetite
- Monitor for excess ketone production

Discontinuation Planning

- Over 50% stop GLP-1 therapy within one year
- Expect rising insulin requirements if therapy is stopped
- Plan for long-term treatment to prevent weight regain

Chronic Kidney Disease Updates

New Recommendation:
Early Combination Therapy for CKD (11.9)

B

Who: T2DM + UACR ≥100 mg/g + eGFR 30-90 + already on ACEi/ARB

What: Simultaneous initiation of SGLT2i + finerenone (nonsteroidal MRA)

Why: Additive albuminuria reduction beyond either agent alone

Evidence: Grade B

The Case for Combination:

- SGLT2i and finerenone have distinct, complementary mechanisms
- Both independently reduce CKD progression and CV events
- Kidney protection is independent of glucose lowering
- Albuminuria is the strongest modifiable predictor of CKD progression
- Sequential therapy means patients spend more time undertreated

Finerenone (Kerendia)

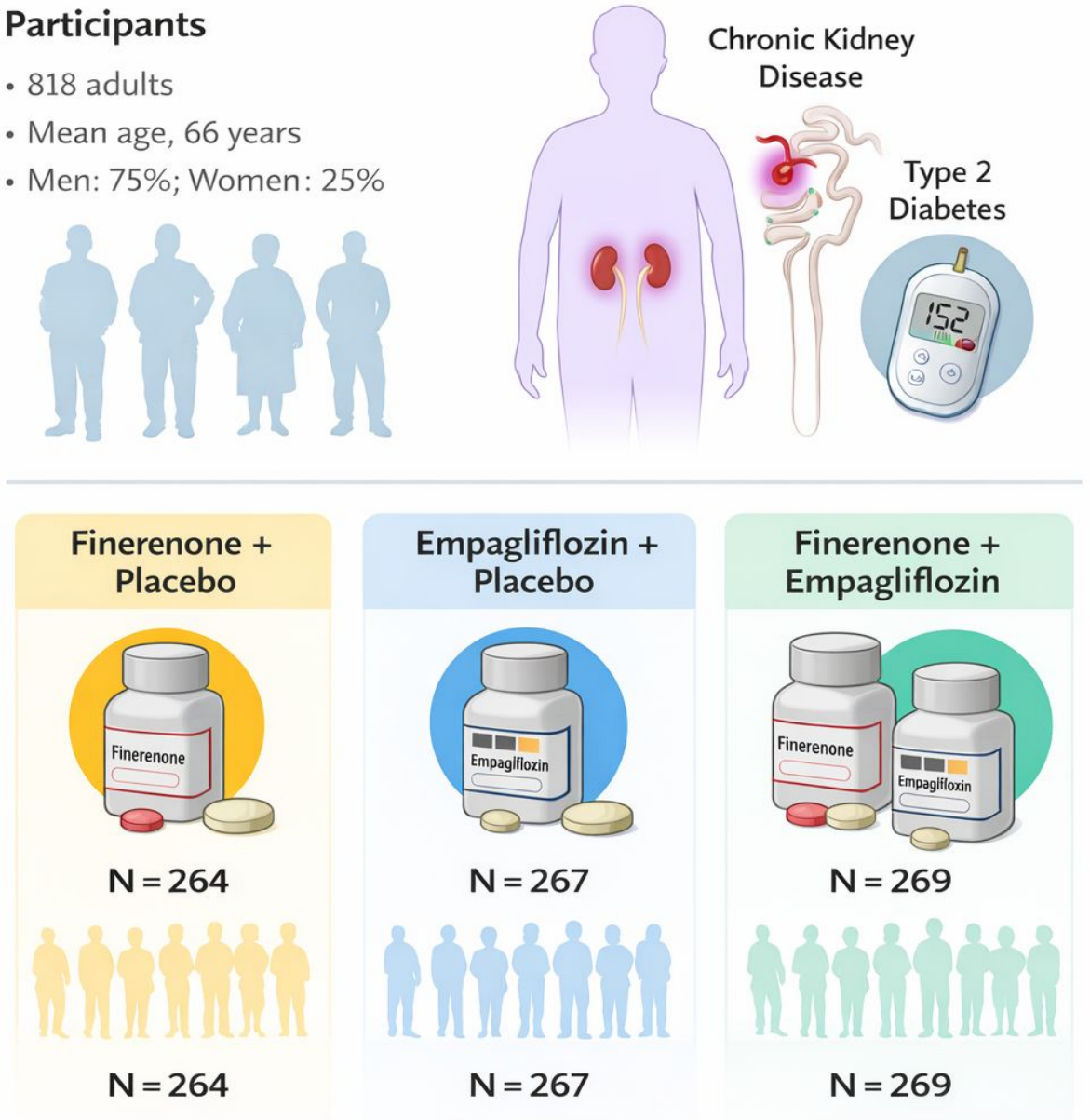
- First in class non-steroidal mineralocorticoid receptor antagonist (nsMRA) ➡ 3rd gen after spironolactone and eplerenone
- 2 large RCTs (FIDELIO and FIGARO; >13k pts) demonstrated reduction in adverse CV and renal outcomes in patients with T2D and CKD
  - Also recent FINEARTS RCT showed benefit in CHF
- Approved 7/9/21, included in ADA and KDIGO guidelines since 2022

MRA Comparison

	Spironolactone (steroidal)	Eplerenone (steroidal)	Finerenone (non-steroidal)
Receptor Selectivity	Low	Medium	High
Tissue Distribution	Kidney>>Heart	Kidney>Heart	Kidney = Heart
Hyperkalemia	++	++	+
Effect on Lowering BP	++	+	Minimal
Anti-Androgenic	++	+	None
Clinical Evidence*	-	-	+
Cost	$	$$	$$$

* Demonstrated outcome benefit in patients with diabetic kidney disease

CONFIDENCE trial



Agarwal R, et al. *N Engl J Med*. 2025;393(6):533-543.

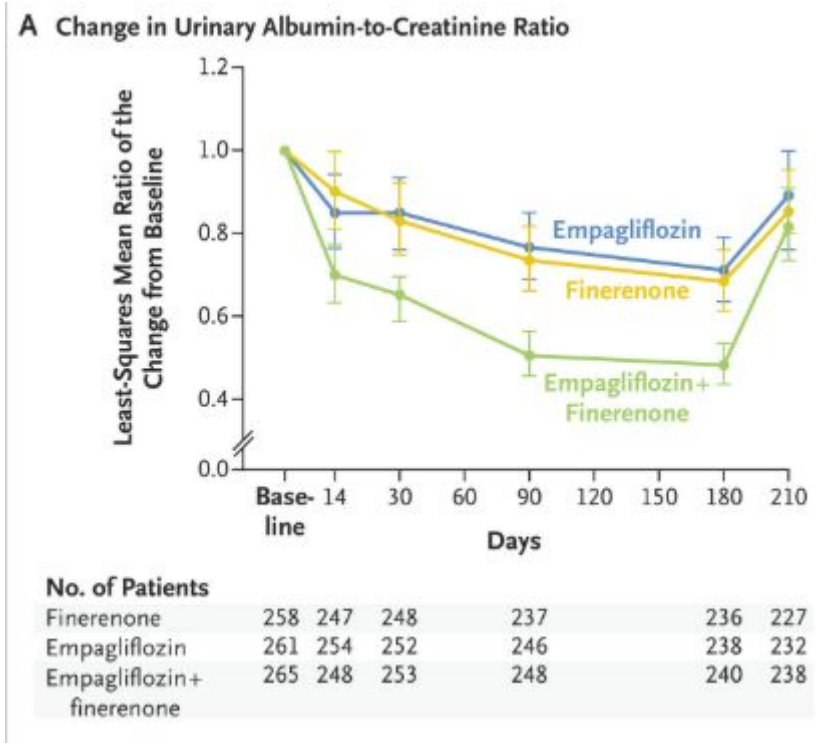
CONFIDENCE trial

Primary Outcome: Change in UACR at day 180.

- Combination: 52% reduction in UACR
- 29% greater reduction than finerenone alone
- 32% greater reduction than empagliflozin alone

Safety:

- Serum potassium increased ~0.27 mmol/L with combination (stabilized over time)
- Hyperkalemia incidence ~9% with combination
- Initial eGFR dip of ~5-6 mL/min (reversed after discontinuation)



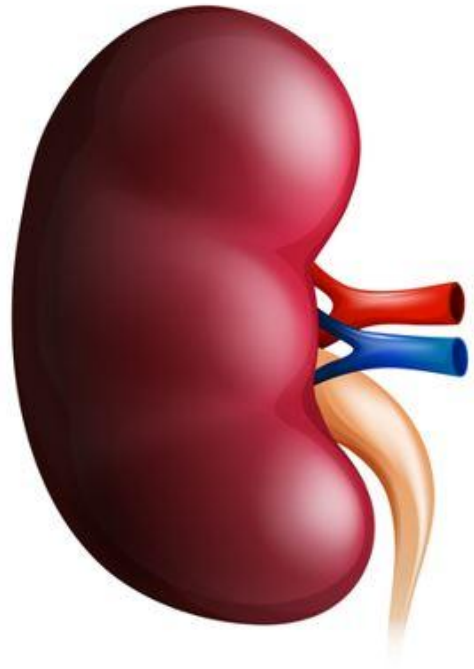
Practical Tips: Combination Therapy for CKD

Foundation first:

- Maximize ACEi/ARB before layering additional therapies
- All major CKD outcomes trials were conducted on background of maximally tolerated RAS blockade

Layer based on your patient:

- SGLT2i and GLP-1 RA have complementary mechanisms, independent of glucose lowering
- Adding one to the other reduces CV and kidney events beyond monotherapy
- CONFIDENCE trial supports simultaneous SGLT2i + finerenone initiation for albuminuria reduction



Don’t Stop Kidney Protective Therapies as eGFR Declines - GLP-1 RAs

B C

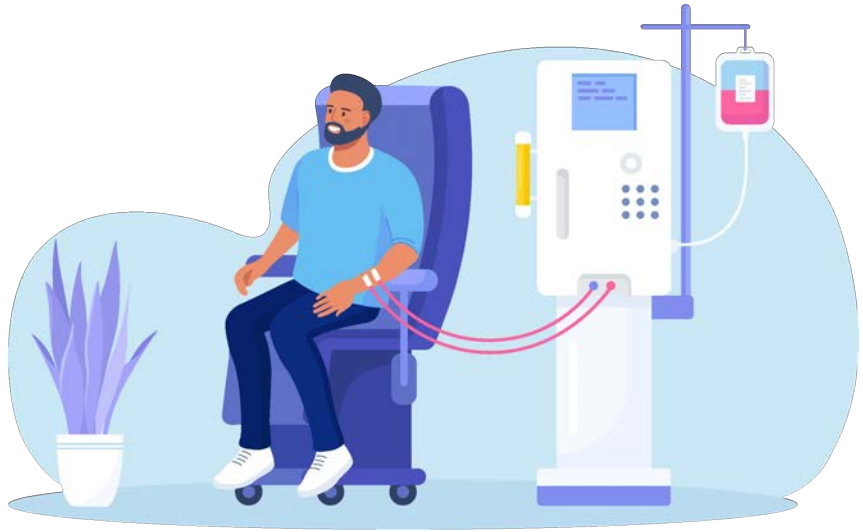
GLP-1 RAs (Rec 9.11):

- **Preferred for glycemic management in advanced CKD (eGFR <30)**
- Can safely initiate or continue through dialysis
- Use agents not dependent on kidney clearance
- Grade B for CV reduction, Grade C for dialysis

Don’t Stop Kidney Protective Therapies as eGFR Declines - SGLT2 Inhibitors

SGLT2 Inhibitors:

- Can initiate with eGFR ≥20
- **Continue until dialysis begins, even as eGFR drops below initiation threshold**
- Kidney and CV protection persists independent of glucose-lowering effect
- **Stop only when dialysis starts or if not tolerated**



Additional Updates

GLPs in the Preconception Period

ADA Recommendation: Discontinue 2 months prior to pregnancy

- No RCTs in pregnancy
- animal studies showed fetal growth restriction and skeletal abnormalities
- FDA has not approved use during pregnancy
- Emerging reassurance (but not enough):
- Largest cohort study (50,000+ pregnancies): no increased risk of major congenital malformations with periconceptional exposure[1]

Treatment	No. of exposed cases/No. of exposed (%)[b]	Crude relative risk (95% CI)	Adjusted relative risk (95% CI)[c]
Any major congenital malformation			
Insulin	400/5078 (7.8)	1 [Reference]	1 [Reference]
Sulfonylureas	121/1362 (9.7)	1.14 (0.91-1.42)	1.18 (0.94-1.48)
DPP-4 inhibitors	50/687 (6.1)	0.91 (0.67-1.24)	0.83 (0.64-1.06)
GLP-1 receptor agonists	75/938 (8.2)	1.02 (0.78-1.33)	0.95 (0.72-1.26)
SGLT2 inhibitors	30/335 (7.0)	1.13 (0.76-1.67)	0.98 (0.65-1.46)[d]
Cardiac malformations			
Insulin	212/5078 (4.2)	1 [Reference]	1 [Reference]
Sulfonylureas	50/1362 (4.8)	1.05 (0.75-1.47)	1.05 (0.75-1.48)
DPP-4 inhibitors	24/687 (3.3)	0.91 (0.59-1.41)	0.90 (0.58-1.39)
GLP-1 receptor agonists	23/938 (3.2)	0.67 (0.42-1.06)	0.68 (0.42-1.12)
SGLT2 inhibitors	15/335 (3.9)	1.22 (0.70-2.13)	1.10 (0.63-1.92)[d]

1. Cesta CE, et al. *JAMA Intern Med*. 2024;184(2):144-152.
3. Wyckoff JA, et al. *J Clin Endocrinol Metab*. 2025;110(9):2405-2452.

The Practical Concern:
What Happens When We Stop?

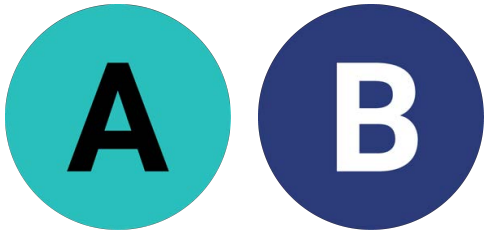
- Women who stopped GLP-1 RAs before pregnancy gained ~3 kg more during pregnancy than unexposed women
- Associated with increased rates of:
- Preterm delivery
- Gestational diabetes
- Hypertensive disorders

Clinical Implications:

- Stopping the GLP-1 is not the end of the conversation
- Have a transition plan: contraception, insulin titration, glycemic targets
- Build in time before conception to achieve glycemic goals on insulin
- Counsel patients that weight rebound during pregnancy is a real risk

2. Maya J, et al. *JAMA*. 2025;334(24):2186-2196.

CGM Updates



Recommendation 9.25 (updated): CGM is now recommended at diabetes onset and anytime thereafter for:

- Adults on insulin therapy (Grade A)
- Adults on noninsulin therapies that can cause hypoglycemia (Grade B)
- Adults on any diabetes treatment where CGM aids in management (Grade B)

What changed:

- CGM recommended at diagnosis, not just "considered"
- Expanded beyond insulin users to broader T2DM population
- CGM elevated to primary glycemic assessment tool alongside A1c (Rec 6.1)
- Time in range, time above range, and time below range now co-equal with A1c

CGM – The Evidence Behind the Expansion

Efficacy across populations Meta-analysis (12 RCTs, 1,248 patients with T2DM)[1]:

- CGM reduced A1c by 0.31% regardless of medication type
- Benefits seen in patients on insulin, GLP-1 RAs, and oral medications

Safety:

- RCT (224 patients on insulin): CGM reduced time below 70 mg/dL by 0.47 hours/day[2]

1. Jancev M, et al. *Diabetologia*. 2024;67(5):798-810.
2. Haak T, et al. *Diabetes Ther*. 2017;8(1):55-73.
3. Okuno T, et al. *Diabetes Care*. 2025;48(10):1794-1802.

CGM – The Evidence Behind the Expansion

Long-term outcomes:

- VA study (2,752 CGM users, 5-year follow-up): higher time in range associated with lower all-cause mortality (HR 0.77)
- Higher mean glucose and time above 180 associated with increased mortality[3]

The gap: Insurance coverage for CGM in patients not on insulin remains limited despite growing evidence.

1. Jancev M, et al. *Diabetologia*. 2024;67(5):798-810.
2. Haak T, et al. *Diabetes Ther*. 2017;8(1):55-73.
3. Okuno T, et al. *Diabetes Care*. 2025;48(10):1794-1802.

CGM in Older Adults

- Benefits demonstrated even in those not on insulin, particularly for reducing hypoglycemia
- Allow extra time for learning new technology
- Engage caregivers early in the process
- Assess cognitive and functional capacity for independent use
- Remote data sharing with care partners can extend the benefit

Metformin for certain Medication Induced Hyperglycemia

Cancer therapies (Rec 9.34, 9.35a-b):

- PI3Kα inhibitors and mTOR inhibitors commonly cause hyperglycemia
- Metformin recommended as first-line treatment
- Prophylactic metformin prevents severe hyperglycemia (METALLICA trial[1])
- Avoid insulin/sulfonylureas with PI3K inhibitors (may counteract antitumor effect)

Glucocorticoid-induced hyperglycemia (3.9):

- Metformin can be considered to prevent hyperglycemia in high-risk individuals on glucocorticoids
- Higher doses, longer duration, existing diabetes risk factors

1. Llombart-Cussac A, et al. *eClinicalMedicine*. 2024;71:102520.

Practical Takeaway

Think of metformin as a tool for medication-induced metabolic disruption:

- Cancer therapies: metformin first-line, coordinate with oncology
- Glucocorticoids: think prevention in high-risk patients, not just treatment
- Antipsychotics (olanzapine, clozapine): consider metformin for metabolic effects (extrapolated, not in ADA recs)

Common thread: These medications cause insulin resistance. Metformin addresses the mechanism.

Conclusion

- **Heart Failure:** Incretin therapy now recommended for T2DM + obesity + symptomatic HFpEF, irrespective of A1c
- **MASLD/MASH:** GLP-1 RA is preferred in T2DM with MASH or high fibrosis risk (ESSENCE trial, FDA approval)
- **CKD:** Consider simultaneous SGLT2i + finerenone initiation; do not stop kidney protective therapies as eGFR declines
- **Obesity:** Individualize dosing, go slower, and GLP-1 RAs now explicitly recommended in T1DM
- **Preconception:** Discontinue GLP-1s before conception; plan the transition, do not just stop
- **CGM:** Recommended at diagnosis and for broader populations; now co-equal with A1c
- **Metformin:** Think beyond glucose; use for medication-induced metabolic disruption

Questions?

MCT2D