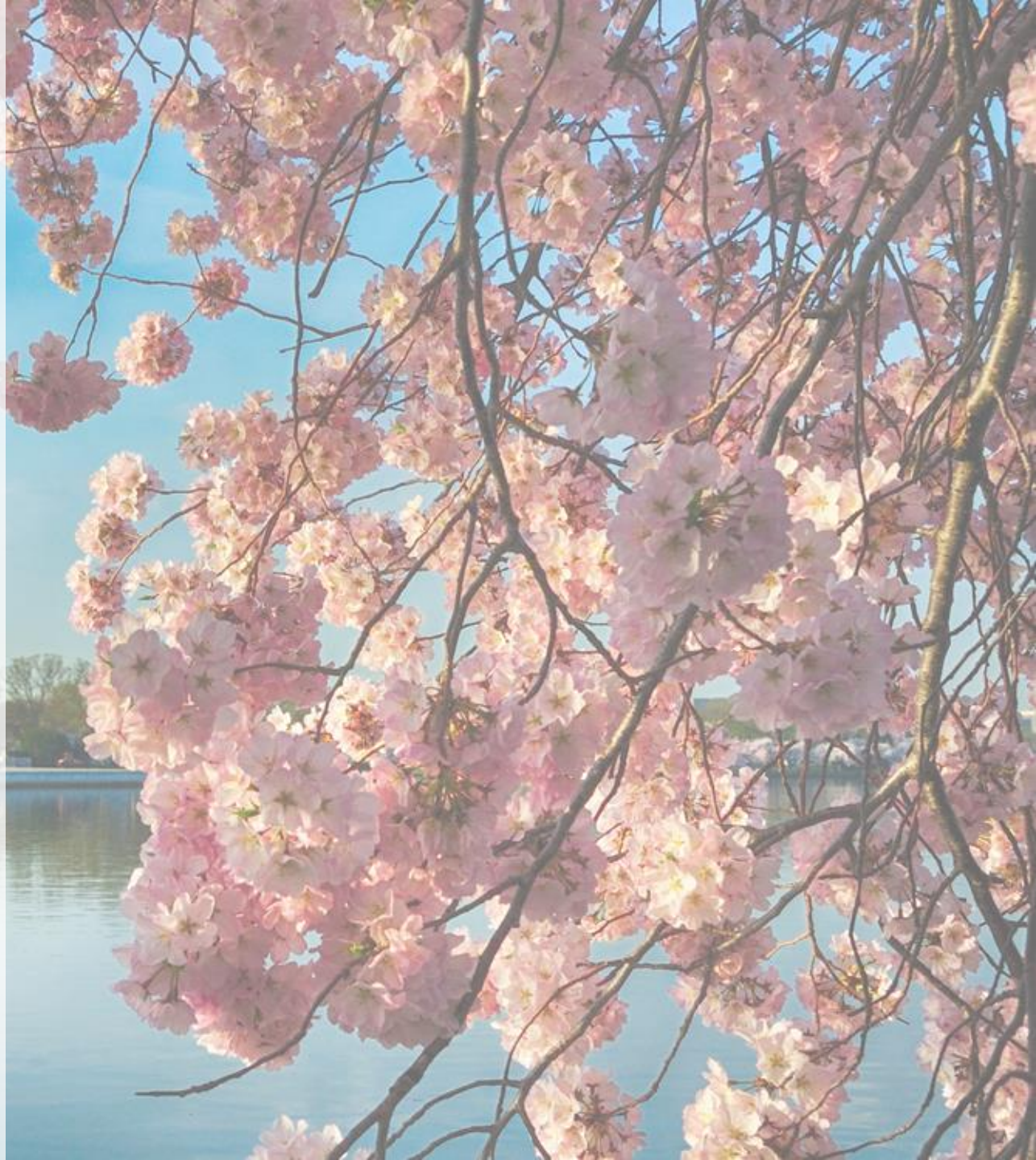
APRIL 10-11, 2026 • FRENCH EMBASSY, WASHINGTON D.C.

KIDNEY DISEASE CLINICAL TRIALISTS

Ian de Boer, MD, MS

KDIGO/KDCT Joint Session

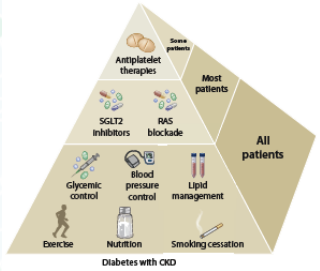
The 2026 Guideline on the Management of CKD in diabetes – What's new?



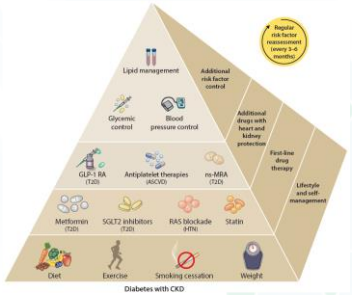
DISCLOSURES

- Consulting: Abbott, Alnylam, AstraZeneca, Boehringer-Ingelheim, GSK, Lexicon, Lilly, Mitre, Novo Nordisk
- Grant/Research Support: NIDDK, Breakthrough T1D, DexCom, Abbott, Novo Nordisk
- Volunteer: KDIGO Diabetes/CKD Clinical Practice Guideline Co-Chair, AHA/ACC Cardiovascular-Kidney-Metabolic Syndrome Clinical Practice Guideline Member

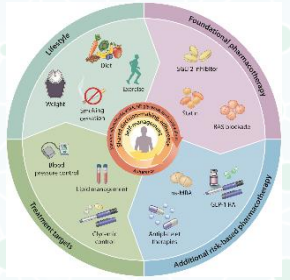
TIMELINE OF KDIGO GUIDELINES FOR DIABETES & CKD



2020



2022



2026

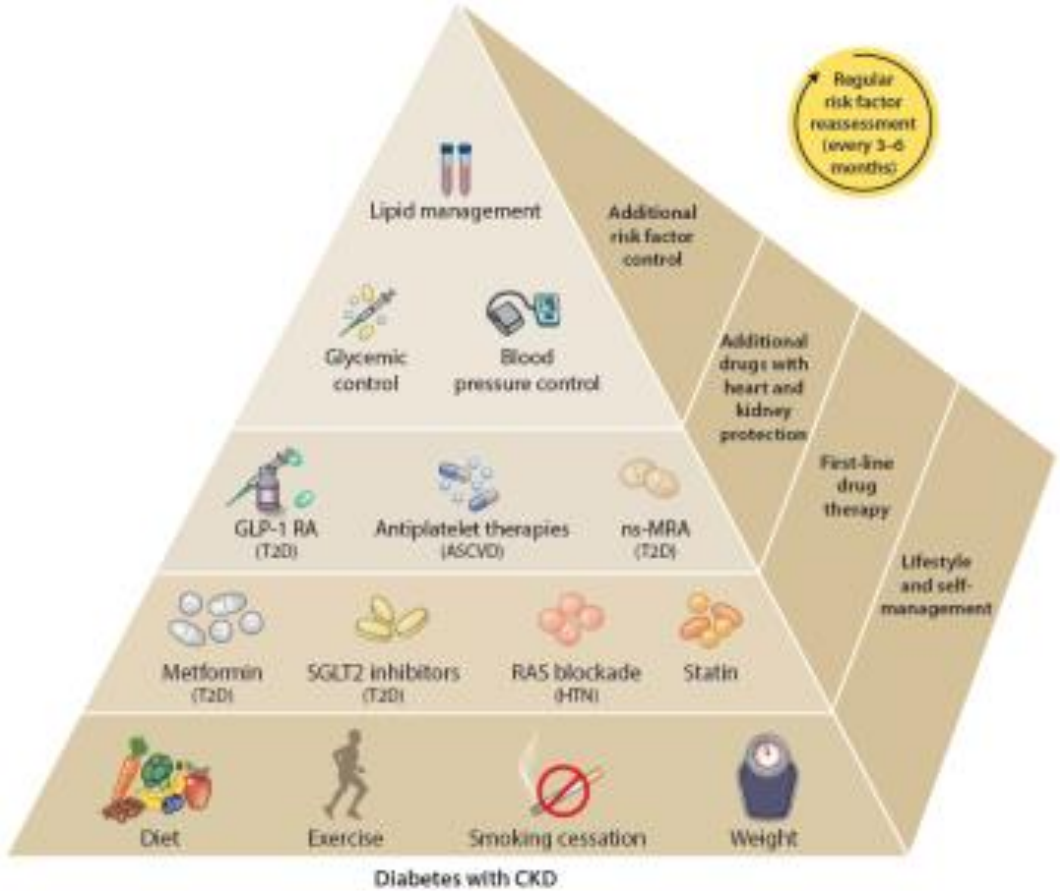
DAPA-CKD
SCORED
EMPEROR-Reduced
EMPEROR-Preserved
SOLOIST-WHF
AMPLITUDE-O
FIDELIO-DKD
FIGARO-DKD

EMPA-KIDNEY
DELIVER
FLOW
SELECT
FINE-ONE

SGLT2i
GLP1RA/incretin
nsMRA

2022 KDIGO Clinical Practice guideline for diabetes management in CKD

1. Comprehensive care
2. Glycemic monitoring & targets
3. Lifestyle interventions
4. Antihyperglycemic therapy
5. Approaches to management

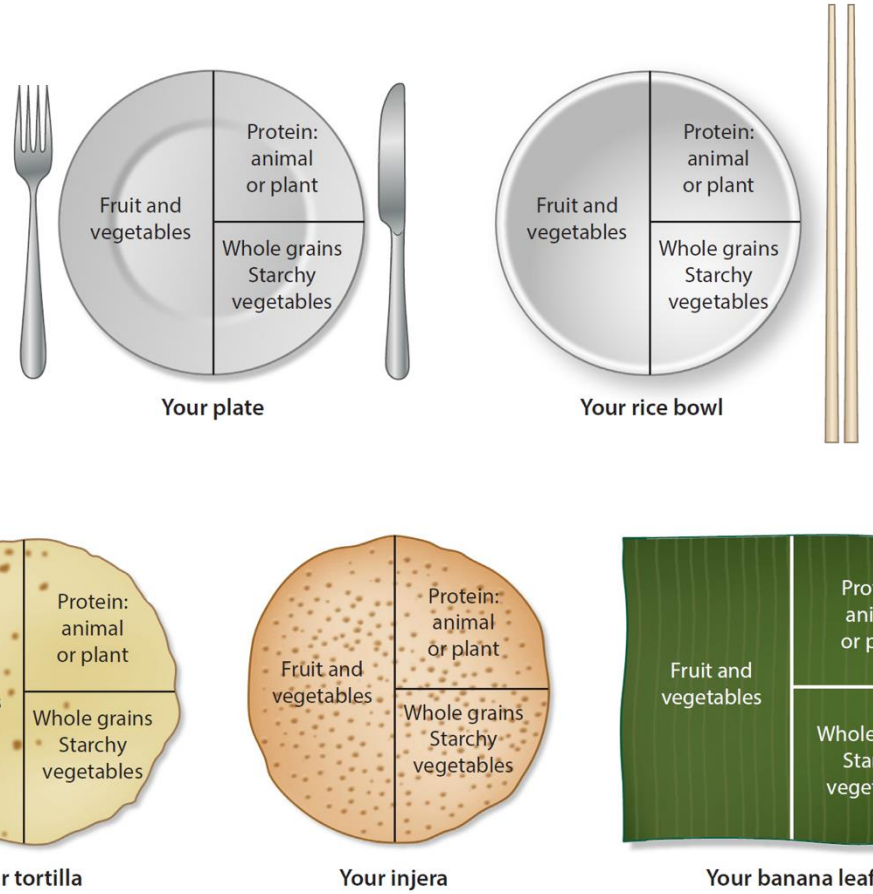


LIFESTYLE MANAGEMENT IS FOUNDATIONAL FOR CKD MANAGEMENT

- **We recommend that patients with diabetes and CKD be advised to undertake moderate-intensity physical activity for a cumulative duration of at least 150 minutes per week, or to a level compatible with their cardiovascular and physical tolerance *(1D).***
- **We recommend advising patients with diabetes and CKD who use tobacco to quit using tobacco products *(1D).***

LIFESTYLE MANAGEMENT IS FOUNDATIONAL FOR CKD MANAGEMENT – DIETARY RECOMMENDATIONS

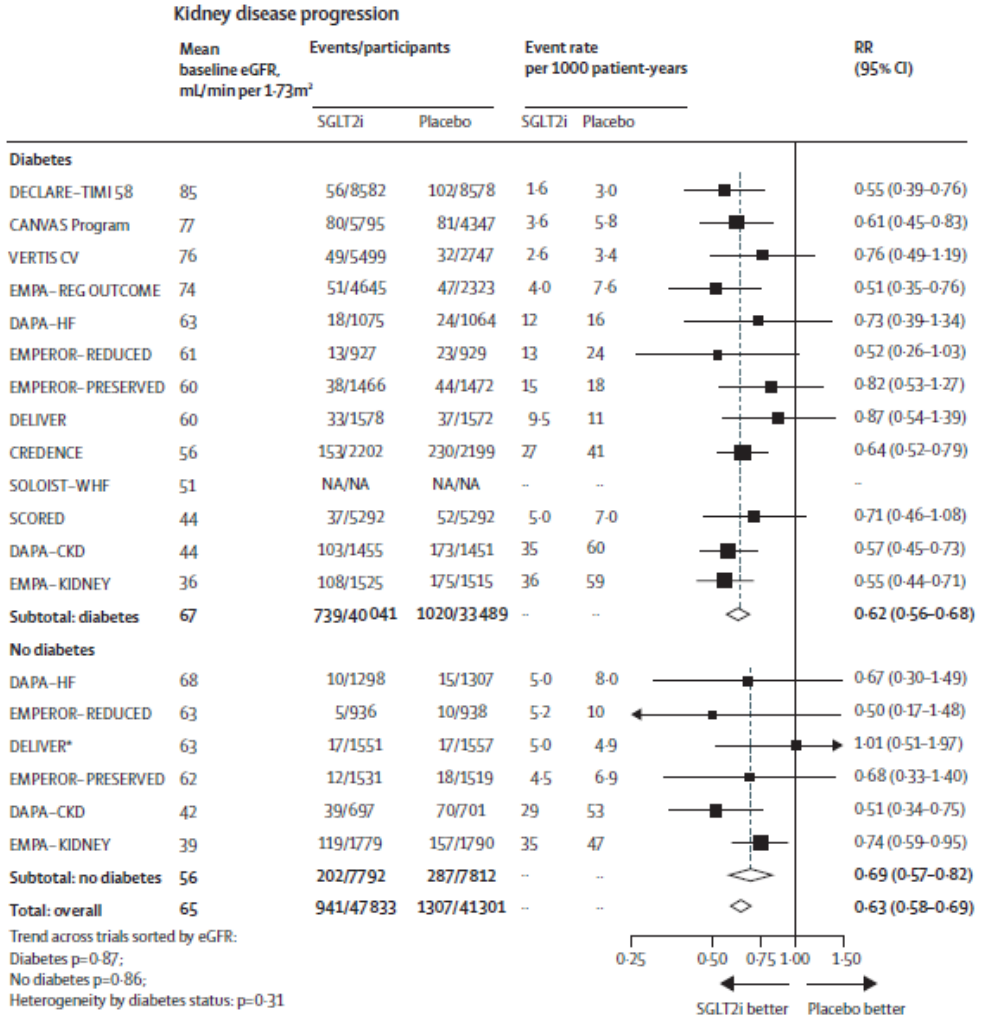
- Patients with diabetes and CKD should consume an individualized diet high in vegetables, fruits, whole grains, fiber, legumes, plant-based proteins, unsaturated fats, and nuts; and lower in processed meats, refined carbohydrates, and sweetened beverages (PP).
- **We suggest maintaining a protein intake of 0.8 g/kg body weight/d for those with CKD diabetes and CKD not treated with dialysis (2C).**
- **We suggest that sodium intake be <2 g of sodium per day (or <90 mmol of sodium per day, or <5 g of sodium chloride per day) in people with CKD (2C).**



PHARMACOTHERAPY: UNCHANGED RECOMMENDATIONS

- **We recommend that treatment with an angiotensin-converting enzyme inhibitor (ACEi) or an angiotensin II receptor blocker (ARB) be initiated in people with diabetes, hypertension, and albuminuria, and that these medications be titrated to the highest approved dose that is tolerated *(1B)*.**
- **We recommend treating adults with type 2 diabetes (T2D), CKD, and an eGFR ≥20 ml/min per 1.73 m^2 with a sodium-glucose cotranporter-2 inhibitor (SGLT2i) *(1A)*.**

SGLT2i MARKEDLY IMPROVE KIDNEY & CARDIOVASCULAR OUTCOMES



↓37% CKD progression

↓23% AKI

↓23% Hospitalization for HF or cardiovascular death

↓14% cardiovascular death

(90,413 participants in 13 trials)

Lancet 2022

Semaglutide for CKD in Patients with Type 2 Diabetes: "FLOW"ing with the Semaglu"TIDE"

#NephJC

METHODS

International, double-blind, placebo-controlled
28 countries

Type 2 DM and CKD:
GFR 50-75 ml/min +
ACR 300-5000 mg/g
or
GFR 25-<50 ml/min +
ACR 100-5000 mg/g

Median follow-up,
3.4 years

	Major kidney disease events	Death from any causes	Adverse event leading to discontinuation
Major kidney disease events- kidney failure, ≥50% reduction in GFR, death from CV or kidney-related causes			
Placebo n = 1766	7.5 events per 100 patient-years	279(15.8%)	211(11.9%)
	HR 0.76 (95% CI, 0.66-0.88)	HR 0.80 (95% CI, 0.67-0.95)	
Semaglutide n = 1767	5.8 events per 100 patient-years	227(12.8%)	233(13.2%)

HR= Hazard ratio

Reference: Perkovic,V et al. Effects of Semaglutide on Chronic Kidney Disease in Patients with Type 2 Diabetes. NEJM, May 2024.

VA by Anjana Gopal @anjanagopal9

Conclusion: Semaglutide reduced the risk of clinically important kidney outcomes and death from cardiovascular causes in patients with type 2 diabetes and chronic kidney disease.

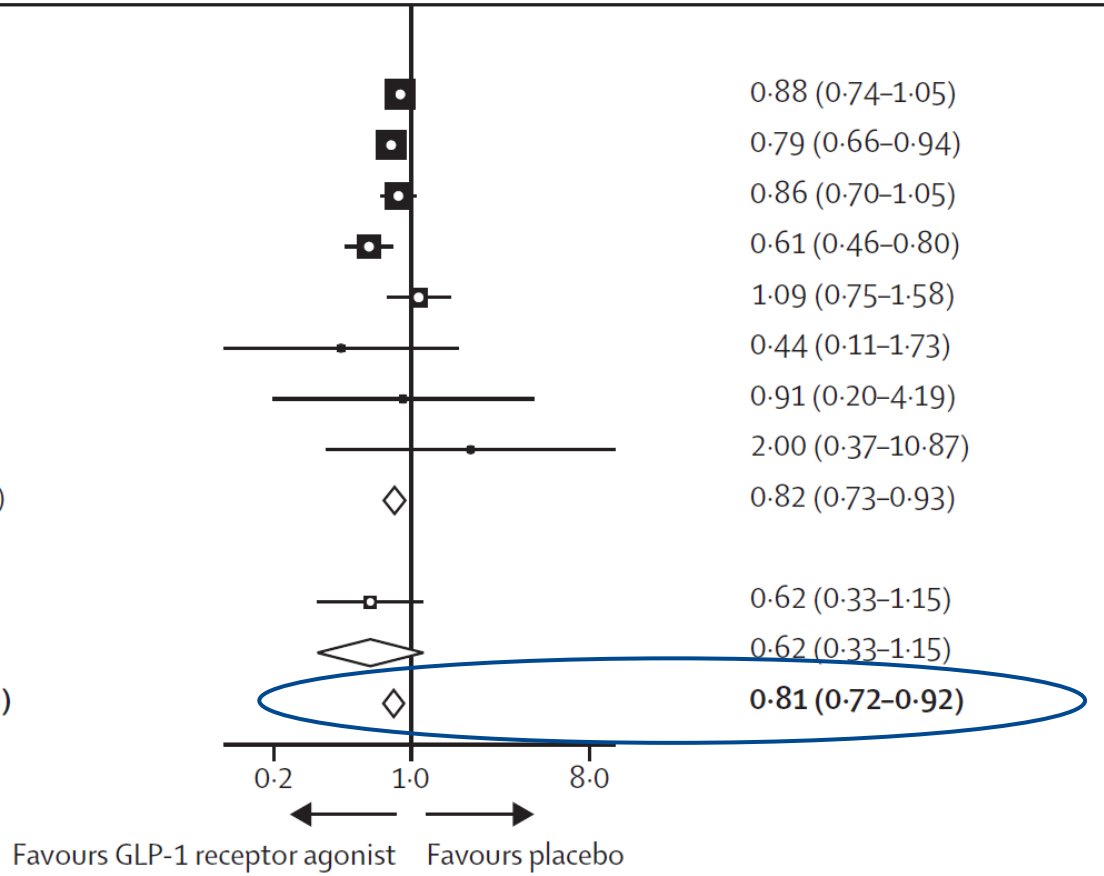
INCRETIN MIMETICS REDUCE CKD PROGRESSION

(50% GFR DECLINE, KIDNEY FAILURE, KIDNEY DEATH)

A Composite kidney outcome

	GLP-1 receptor agonist (n/N [%])	Placebo (n/N [%])	Hazard ratio (95% CI)	Weight (%)
With diabetes				
EXSCEL[40]	246/6459 (3·8%)	273/6466 (4·2%)	0·88 (0·74–1·05)	25·22%
FLOW[26]	218/1767 (12·3%)	260/1766 (14·7%)	0·79 (0·66–0·94)	24·94%
LEADER[24,33]	184/4668 (3·9%)	212/4672 (4·5%)	0·86 (0·70–1·05)	21·36%
REWIND[23,35]	84/4949 (1·7%)	136/4952 (2·7%)	0·61 (0·46–0·80)	14·08%
SUSTAIN-6[25,41]	58/1648 (3·5%)	57/1649 (3·5%)	1·09 (0·75–1·58)	8·94%
ELIXA[37]	3/2702 (0·1%)	7/2793 (0·3%)	0·44 (0·11–1·73)	0·77%
AMPLITUDE-O[39]	9/2717 (0·3%)	3/1359 (0·2%)	0·91 (0·20–4·19)	0·62%
Harmony Outcomes[38]	4/4731 (0·1%)	2/4732 (<0·1%)	2·00 (0·37–10·87)	0·51%
Subtotal	806/29 441 (2·7%)	950/28 389 (3·3%)	0·82 (0·73–0·93)	
Without diabetes				
SELECT[27,42]	17/8803 (0·2%)	27/8801 (0·3%)	0·62 (0·33–1·15)	3·56%
			0·62 (0·33–1·15)	
Overall	**823/38 244 (2·2%)**	**977/37 190 (2·6%)**	**0·81 (0·72–0·92)**	

With diabetes p<0·001, I^2=26·41%
Without diabetes p=0·13
Overall p<0·001, I^2=23·11%
Heterogeneity by diabetes status p=0·38



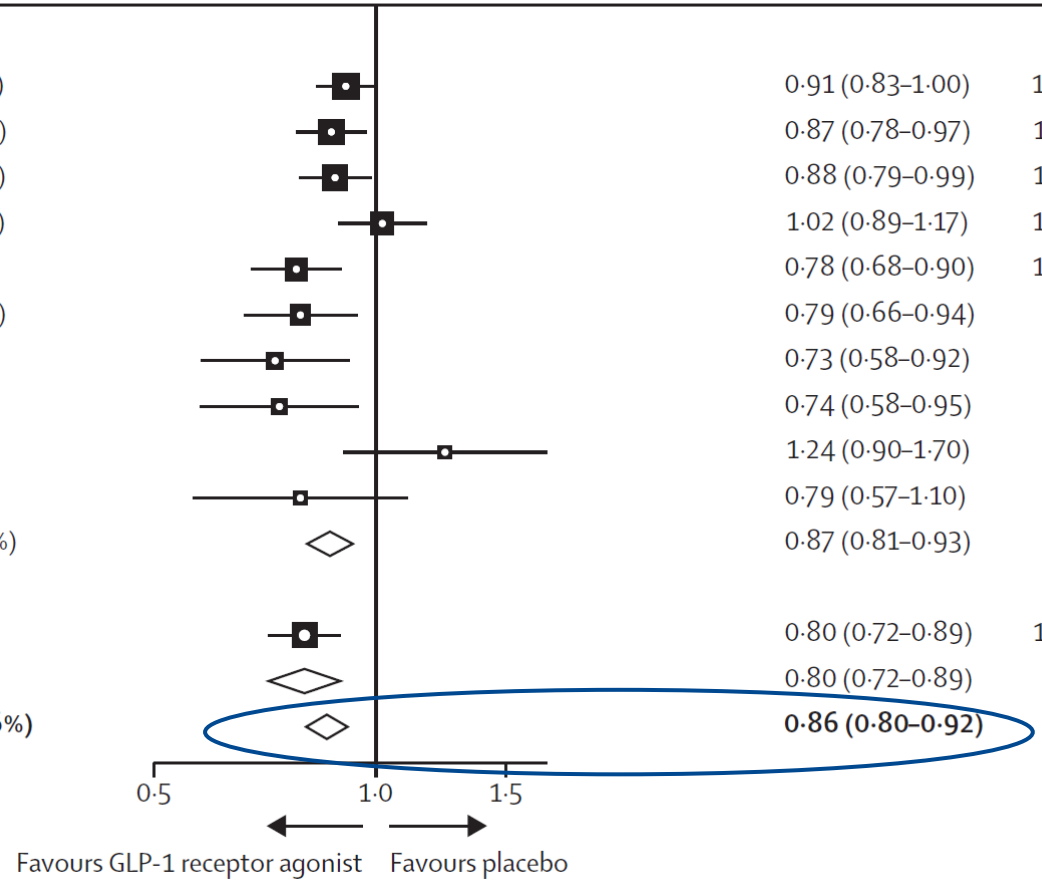
Badve SV *et al, Lancet Diabetes Endocrinol* 2024

INCRETIN MIMETICS REDUCE CARDIOVASCULAR EVENTS

A Major adverse cardiovascular events

	GLP-1 receptor agonist (n/N [%])	Placebo (n/N [%])	Hazard ratio (95% CI)	Weight (%)
With diabetes				
EXSCEL[40]	839/7356 (11·4%)	905/7396 (12·2%)	0·91 (0·83–1·00)	14·51%
LEADER[24,33]	608/4668 (13·0%)	694/4672 (14·9%)	0·87 (0·78–0·97)	13·06
REWIND[23,35]	594/4949 (12·0%)	663/4952 (13·4%)	0·88 (0·79–0·99)	12·72%
ELIXA[37]	400/3034 (13·2%)	392/3034 (12·9%)	1·02 (0·89–1·17)	10·76%
Harmony Outcomes[38]	338/4731 (7·1%)	428/4732 (9·0%)	0·78 (0·68–0·90)	10·51%
FLOW [26]	212/1767 (12·0%)	254/1766 (14·4%)	0·79 (0·66–0·94)	8·13%
AMPLITUDE-O[39]	189/2717 (7·0%)	125/1359 (9·2%)	0·73 (0·58–0·92)	5·70%
SUSTAIN-6[25,41]	108/1648 (6·6%)	146/1649 (8·9%)	0·74 (0·58–0·95)	5·16%
FREEDOM-CVO[36]	85/2075 (4·1%)	69/2081 (3·3%)	1·24 (0·90–1·70)	3·45%
PIONEER 6[34]	61/1591 (3·8%)	76/1592 (4·8%)	0·79 (0·57–1·10)	3·19%
Subtotal	3434/34536 (9·9%)	3752/33233 (11·3%)	0·87 (0·81–0·93)	
Without diabetes				
SELECT[27,42]	569/8803 (6·5%)	701/8801 (8%)	0·80 (0·72–0·89)	12·83%
			0·80 (0·72–0·89)	
Overall	**4003/43339 (9·2%)**	**4453/42034 (10·6%)**	**0·86 (0·80–0·92)**	

With diabetes p<0·001, I^2=49·75%
Without diabetes p<0·001
Overall p<0·001, I^2=48·9%
Heterogeneity by diabetes status p=0·24



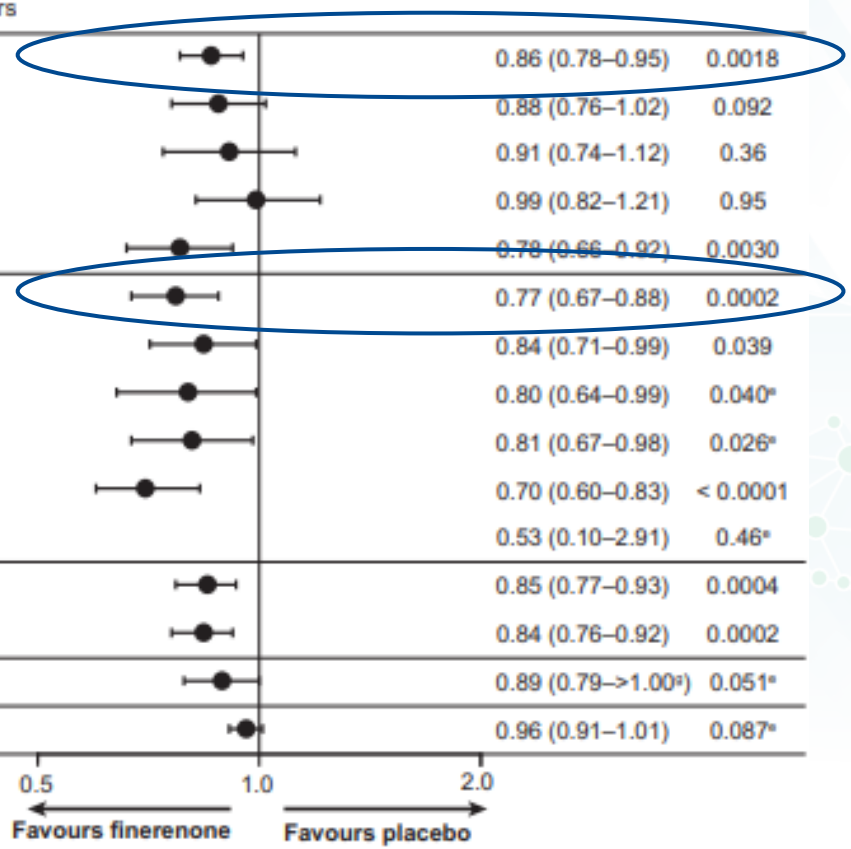
Badve SV *et al, Lancet Diabetes Endocrinol* 2024

EXPANDED INCRETIN MIMETIC RECOMMENDATION (2026)

- **We recommend a long-acting GLP-1-based therapy for people with T2D and CKD who are at high risk of major adverse cardiovascular or kidney events or who have not achieved individualized glycemic targets (*1A*).**
- Offer GLP-1-based therapy to people with T2D and CKD who have established atherosclerotic cardiovascular disease or urine albumin-creatinine ratio (UACR) ≥100 mg/g despite foundational therapies for diabetes and CKD (PP).
- Offer GLP-1-based therapy to people with T2D and CKD who have not met individualized HbA1c- or CGM-based glycemic targets or who have met such targets using less desirable glucose-lowering drugs, which could be dose-reduced or discontinued in favor of GLP-1-based therapy (PP).

FINERENONE IMPROVES KIDNEY & CARDIOVASCULAR OUTCOMES – FIDELITY POOLED ANALYSIS

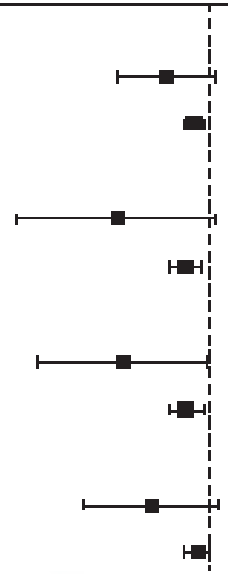
Outcome	Finerenone (n = 6519)		Placebo (n = 6507)		Hazard ratio (95% CI)	*P*-value[a]
	Number of patients with event (%)	Number of patients with event per 100 patient-years	Number of patients with event (%)	Number of patients with event per 100 patient-years		
Composite cardiovascular outcome[b]	825 (12.7)	4.34	939 (14.4)	5.01	0.86 (0.78–0.95)	0.0018
Death from cardiovascular causes	322 (4.9)	1.61	364 (5.6)	1.84	0.88 (0.76–1.02)	0.092
Non-fatal myocardial infarction	173 (2.7)	0.88	189 (2.9)	0.97	0.91 (0.74–1.12)	0.36
Non-fatal stroke	198 (3.0)	1.01	198 (3.0)	1.02	0.99 (0.82–1.21)	0.95
Hospitalization for heart failure	256 (3.9)	1.31	325 (5.0)	1.68	0.78 (0.66–0.92)	0.0030
eGFR ≥57% composite kidney outcome[c]	360 (5.5)	1.96	465 (7.1)	2.55	0.77 (0.67–0.88)	0.0002
Kidney failure	254 (3.9)	1.38	297 (4.6)	1.62	0.84 (0.71–0.99)	0.039
End-stage kidney disease[d]	151 (2.3)	0.76	188 (2.9)	0.96	0.80 (0.64–0.99)	0.040[e]
Sustained decrease in eGFR to <15 mL/min/1.73 m²	195 (3.0)	1.06	237 (3.6)	1.29	0.81 (0.67–0.98)	0.026[e]
Sustained ≥57% decrease in eGFR from baseline	257 (3.9)	1.40	361 (5.5)	4.03	0.70 (0.60–0.83)	< 0.0001
Renal death	2 (<0.1)	0.01	4 (<0.1)	0.02	0.53 (0.10–2.91)	0.46[e]
eGFR ≥40% composite kidney outcome[f]	854 (13.1)	4.81	995 (15.3)	5.64	0.85 (0.77–0.93)	0.0004
Sustained ≥40% decrease in eGFR from baseline	817 (12.5)	4.60	962 (14.8)	5.45	0.84 (0.76–0.92)	0.0002
Death from any cause	552 (8.5)	2.76	614 (9.4)	3.10	0.89 (0.79–>1.00[g])	0.051[e]
Hospitalization for any cause	2836 (43.5)	19.04	2926 (45.0)	19.91	0.96 (0.91–1.01)	0.087[e]



Agarwal R *et al, European Heart Journal* 2001

FINERENONE IMPROVES KIDNEY & CARDIOVASCULAR OUTCOMES INDEPENDENT OF SGLT2I (FIDELITY)

	Finerenone	Placebo	Finerenone	Placebo	HR (95% CI)	$P_{interaction}$
	n/*N* (%)		*n* per 100 PY			
Analysis for outcomes in patients receiving/not receiving an SGLT2i at baseline						
Cardiovascular composite						
SGLT2i at baseline	39/438 (8.9)	52/439 (11.8)	2.95	4.08	0.67 (0.42–1.07)*	0.46†
No SGLT2i at baseline	786/6,081 (12.9)	887/6,068 (14.6)	4.44	5.08	0.87 (0.79–0.96)*	
Kidney composite						
SGLT2i at baseline	9/438 (2.1)	17/439 (3.9)	0.70	1.37	0.42 (0.16–1.08)*	0.29†
No SGLT2i at baseline	351/6,081 (5.8)	448/6,068 (7.4)	2.06	2.64	0.80 (0.69–0.92)*	
Hospitalization for heart failure						
SGLT2i at baseline	10/438 (2.3)	22/439 (5.0)	0.74	1.68	0.44 (0.19–0.99)*	0.18†
No SGLT2i at baseline	246/6,081 (4.0)	303/6,068 (5.0)	1.35	1.68	0.80 (0.68–0.95)*	
All-cause death						
SGLT2i at baseline	20/438 (4.6)	30/439 (6.8)	1.46	2.23	0.58 (0.30–1.10)*	0.24†
No SGLT2i at baseline	532/6,081 (8.7)	584/6,068 (9.6)	2.86	3.16	0.90 (0.80–1.02)*	



Rossing P *et al, Diabetes Care* 2022

Finerenone and empagliflozin: is the combination better than either agent alone in CKD and Type 2 Diabetes?

#NephJC

Methods

- Randomized, double-blind trial
- CKD + T2D
- 14 countries
- 98% ACEi/ARB users
  23% GLP-1RA users
- Stratified according to eGFR and UACR

	UACR drop at day 180	Hyperkalemia	> 30% eGFR drop at day 30
Empagliflozin	29% ↓	3.8%	1.1%
Finerenone	32% ↓	11.4%	3.8%
Empagliflozin & Finerenone	**52%** ↓	9.3%	6.3%

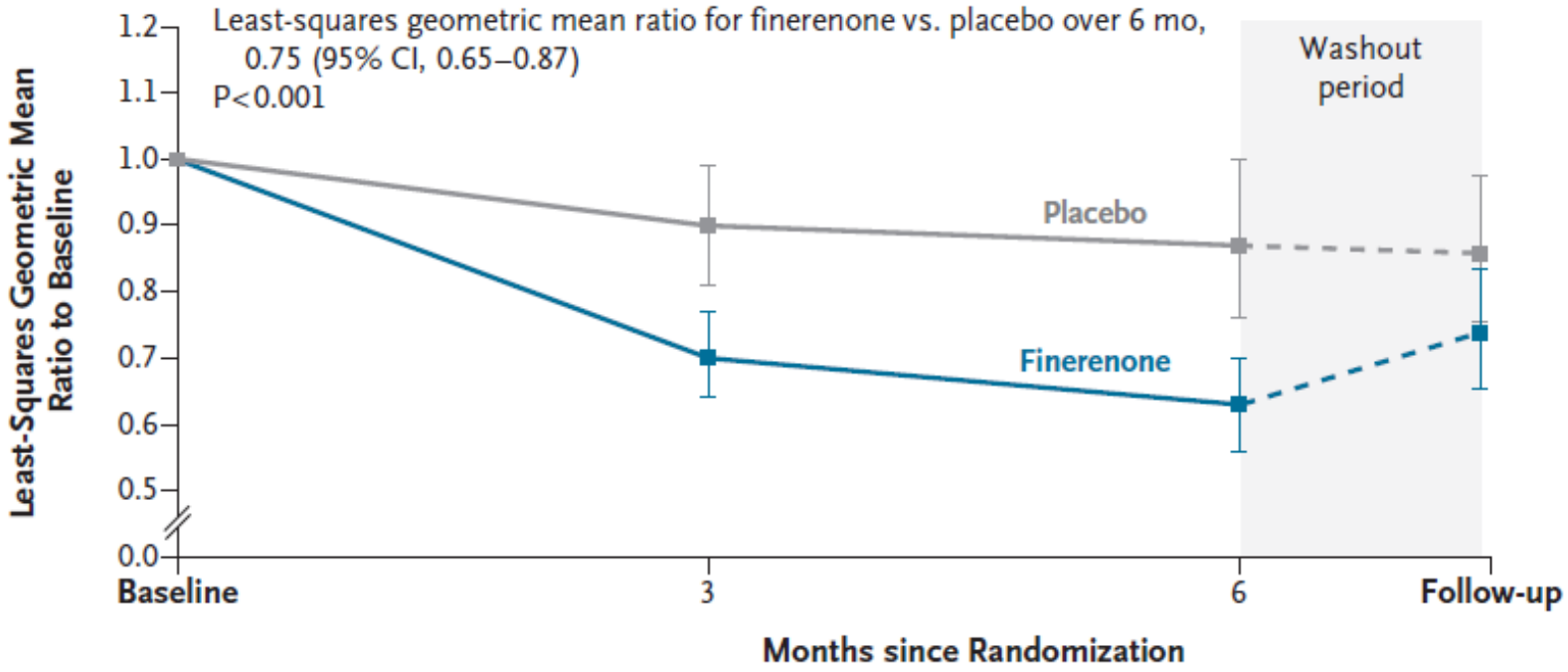
No unexpected adverse events

Conclusion: Among persons with both chronic kidney disease and type 2 diabetes, initial therapy with finerenone plus empagliflozin led to a greater reduction in the urinary albumin-to-creatinine ratio than either treatment alone.

VA by Michelle Fravel

Agarwal R, Green JB, Heerspink HJL, et al; CONFIDENCE Investigators. Finerenone with Empagliflozin in Chronic Kidney Disease and Type 2 Diabetes. N Engl J Med. 2025 Jun 5.

FINERENONE REDUCES ALBUMINURIA IN T1D (FINE-ONE)



No. of Patients				
Placebo	122	122	122	106
Finerenone	120	120	120	114
Least-Squares Geometric Mean Percentage Difference vs. Placebo		21	28	14

Heerspink HJ *et al, NEJM* 2026

CHANGES TO NSMRA RECOMMENDATIONS (2026)

- **We recommend adding a nonsteroidal mineralocorticoid receptor antagonist (nsMRA) with proven kidney or cardiovascular benefit for people with T2D, an eGFR ≥25 ml/min per 1.73 m^2, normal serum potassium concentration, and albuminuria (≥30 mg/g [≥3 mg/mmol]) while on maximum tolerated dose of RAS inhibitor (RASi) *(1A)*.**
- Nonsteroidal MRA are most appropriate for people with T2D who are at high risk of CKD progression and cardiovascular events, as demonstrated by persistent albuminuria despite other foundational therapies (PP).
- For people with T2D treated with RASi who have persistent albuminuria and normal serum potassium, an SGLT2i and nsMRA can be initiated simultaneously (PP).
- Practice Point 4.4.3: To mitigate risk of hyperkalemia, select people with consistently normal serum potassium concentration and monitor serum potassium regularly after initiation of a nsMRA (PP).
- **We suggest adding an nsMRA with proven kidney or cardiovascular benefit for people with T1D, eGFR ≥25 ml/min per 1.73 m^2, normal serum potassium concentration, and albuminuria (≥200 mg/g [≥20 mg/mmol]) while on maximum tolerated dose of RASi *(2C)*.**

WHAT ABOUT STATINS?

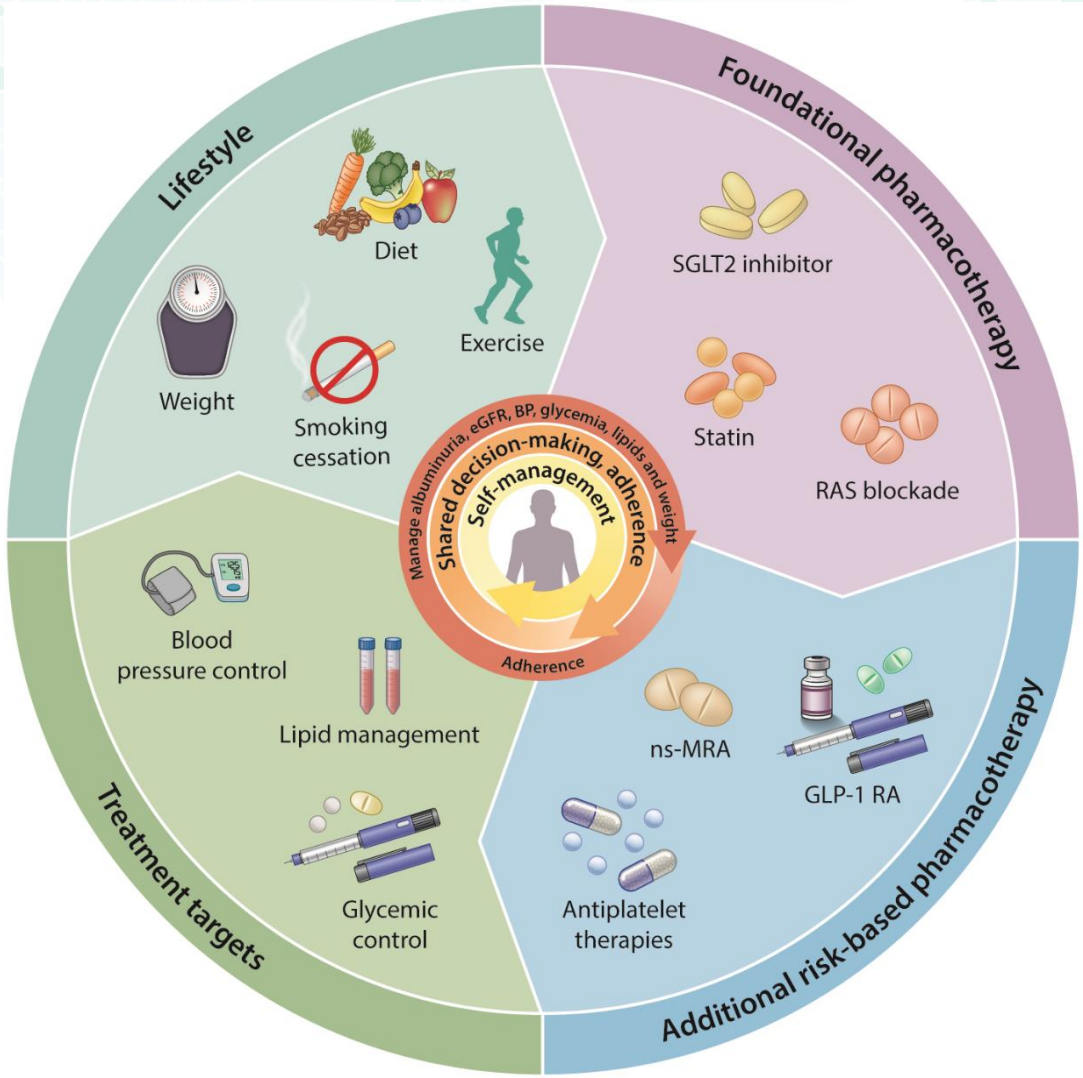
- In people with diabetes and CKD, initiate statin-based regimens for atherosclerotic cardiovascular disease (ASCVD) risk reduction with more intensive low-density lipoprotein cholesterol (LDL-C) targets for people with diabetes and CKD at higher ASCVD risk (PP).
- Add non-statin, lipid-lowering therapy with proven cardiovascular benefit, alone or in combination, to people with diabetes and CKD who are unable to achieve their risk-based LDL-C targets with maximally tolerated statin alone (PP).
- Consider measuring lipoprotein (a) (Lp(a)) cholesterol levels at least once, as higher Lp(a) levels are associated with higher cardiovascular risk and help guide intensity of preventive therapies (PP).

Meta-analysis effects of statins in CKD:

- MACE: RR 0.72 (0.66–0.79), high certainty
- All-cause mortality: RR 0.83 (0.73–0.96), high certainty
- Cardiovascular death: RR 0.77 (0.69–0.87), high certainty
- Myocardial infarction: RR 0.55 (0.42–0.73), moderate certainty

Tunnicliffe D *et al, Cochrane Database Syst Rev* 2023

2026 KDIGO GUIDELINE PARADIGM



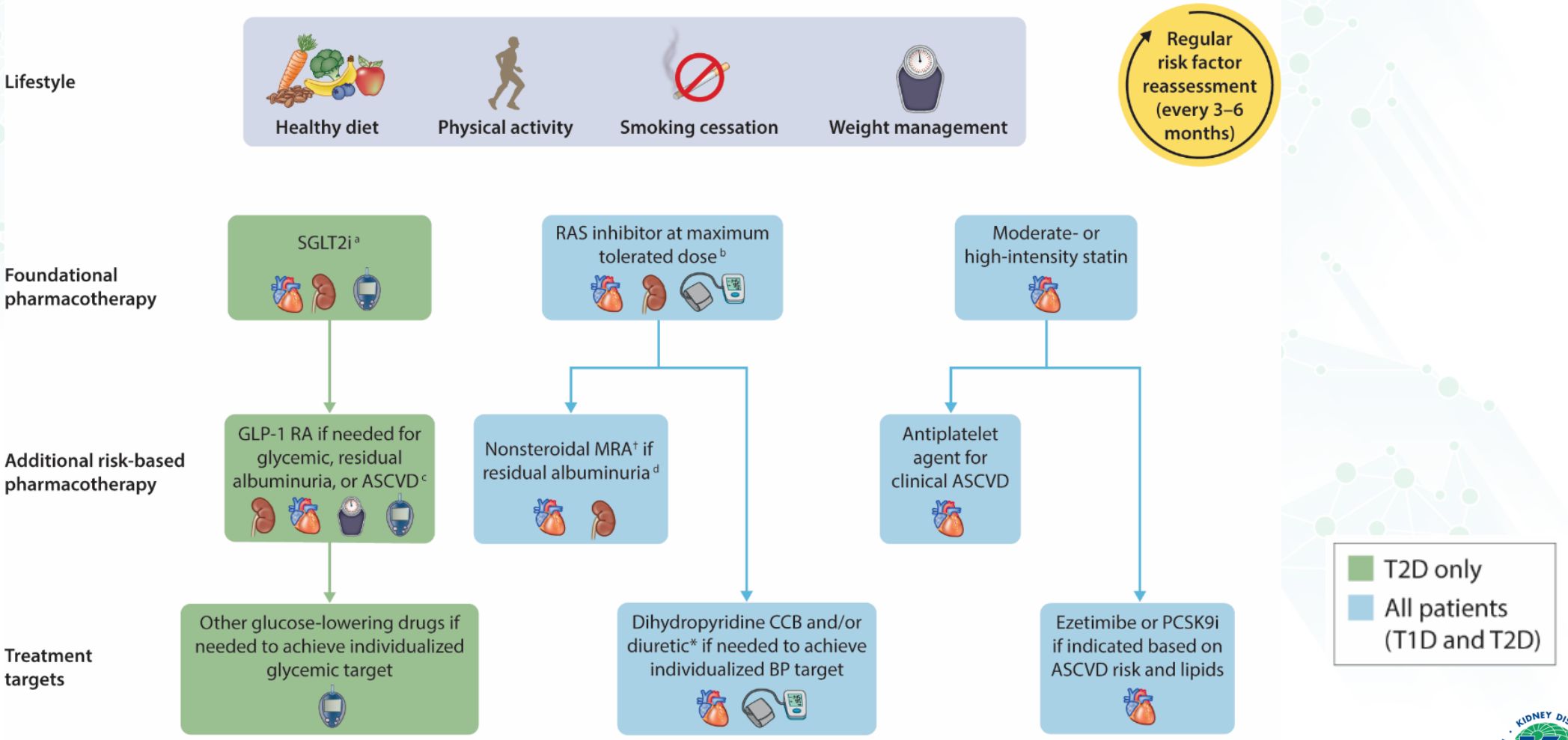
Comprehensive approach to therapy:

- Personalized
- Accelerated
- Iterative

COMBINATION THERAPY IS THE EXPECTATION

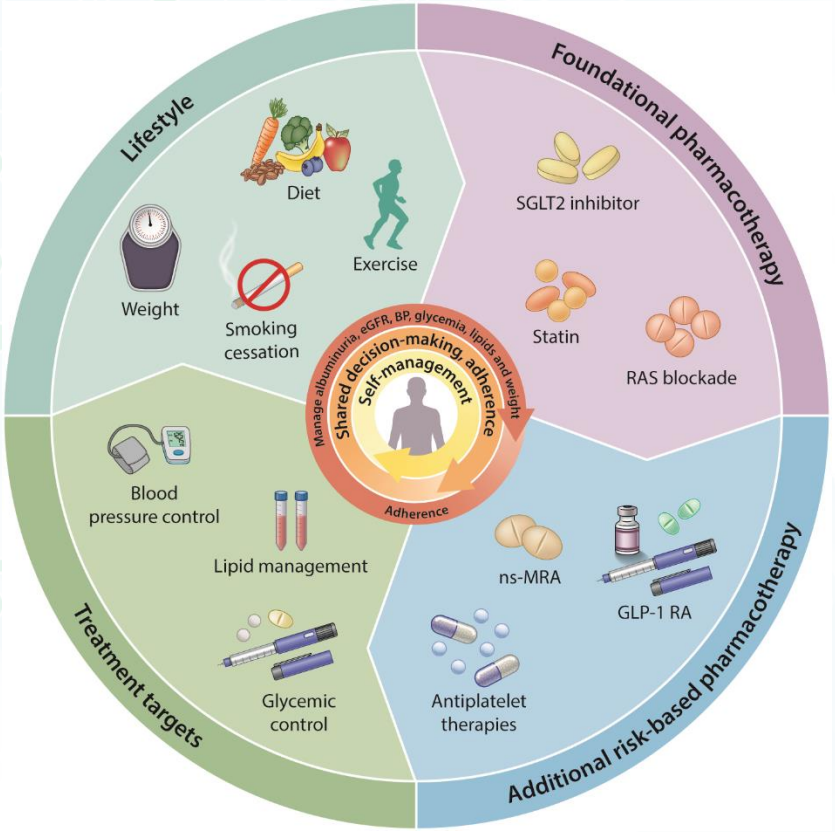
- Treat people with diabetes and CKD with a comprehensive strategy to reduce risks of kidney disease progression and cardiovascular disease (PP).
- Use a personalized approach to implement combinations of lifestyle and pharmacologic interventions for individual people with diabetes and CKD with a goal to maximize kidney and cardiovascular protection by reaching an optimal combined regimen as quickly as possible (PP).
- Use a personalized approach to determine the best treatment plan, based on baseline and ongoing reassessments of risk factors. Prioritize interventions that are expected to provide the greatest benefit early on, optimize doses, and sequence treatments in a way that minimizes adverse effects and supports long-term adherence (PP).
- Assess adherence at each clinical encounter to maximize benefits of effective lifestyle and pharmacologic interventions. Identify and mitigate barriers to adherence, including access to treatments and adverse effects, whenever possible (PP).
- Initiating multiple interventions simultaneously may accelerate achievement of optimal individualized combination regimens when adverse effect profiles are nonoverlapping or studies suggest safety of simultaneous initiation (PP).

2026 KDIGO GUIDELINE PARADIGM



2026 KDIGO Clinical Practice guideline for management of Diabetes & CKD

1. Definitions, prevention, case-finding, staging, and cardiovascular risk
2. Glycemic monitoring & targets
3. Lifestyle interventions
4. Comprehensive management
5. Approaches to management



THANK YOU!

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Comments: