FINERENONE: A PARADIGM SHIFT IN MANAGEMENT OF DIABETIC KIDNEY DISEASE

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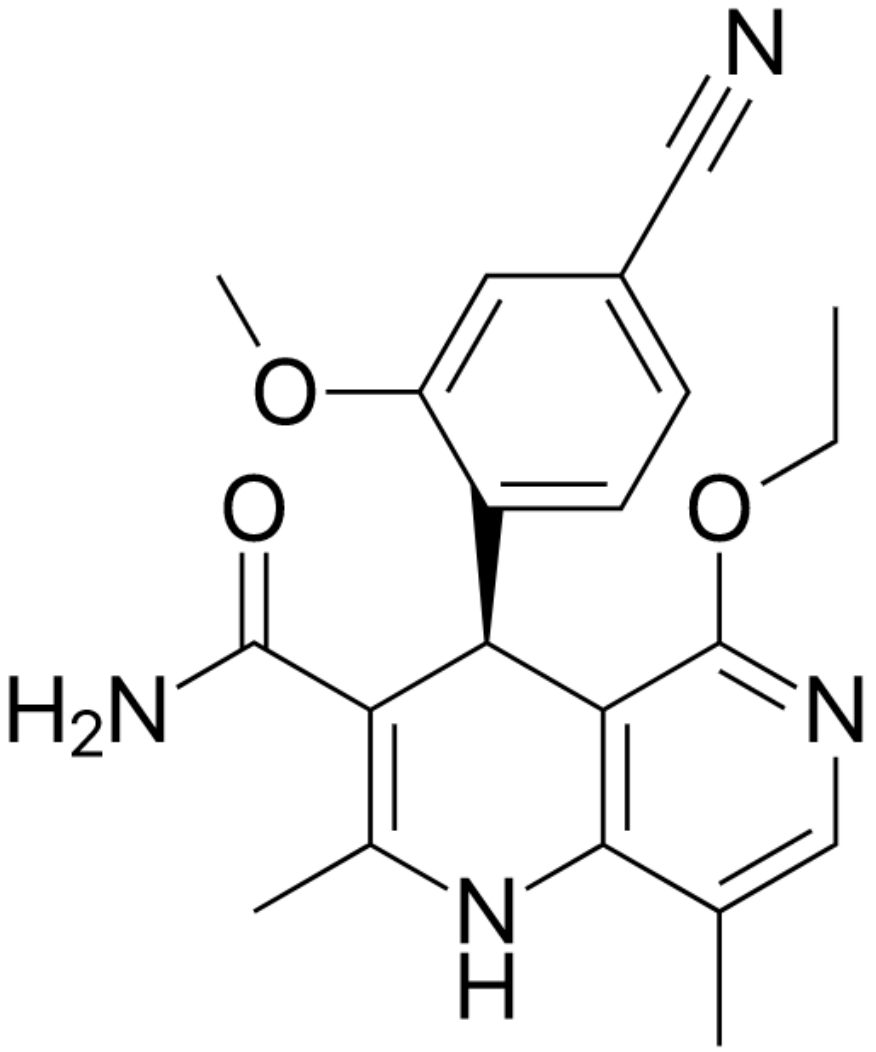
Profile

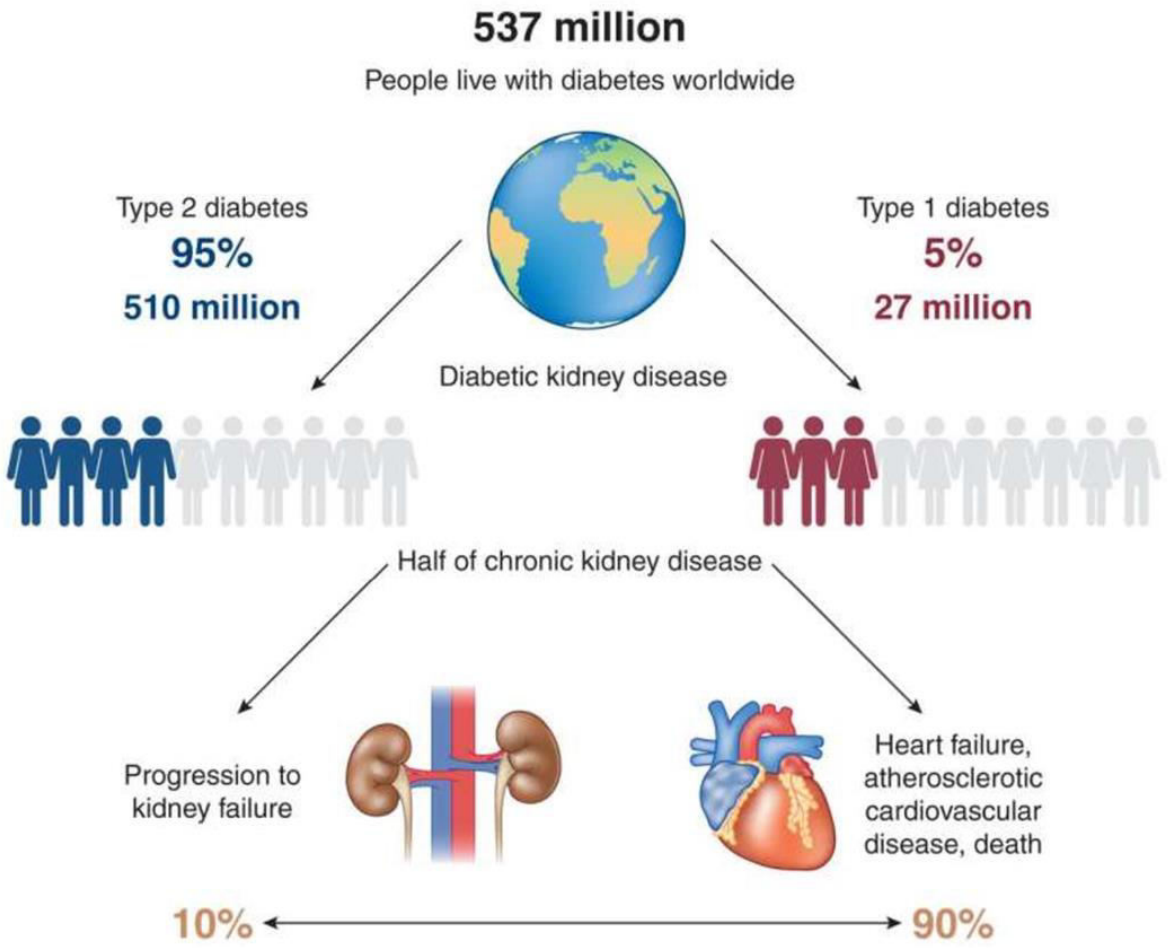
- MBBS : AFMC (Pune)
- MD GENERAL MEDICINE : AHRR (Delhi)
- DrNB NEPHROLOGY : Jaslok Hospital,(Mumbai), MNAMS
- MBA HHSM :2021- (BITS PILANI)
- Involved in active kidney transplant programme,CAPD Programme
- Prof. (Medicine) : Delhi Univ.
- Research Projects :
  - AKI ; role of newer Biomarkers
  - IL-6 in CAPD peritonitis
  - Cognitive Function in Hemodialysis
- PUBLICATIONS:14

OUTLINE

- EPIDEMIOLOGY
- PATHOGENESIS
- UNMET NEEDS
- EXISTING ARMAMENTA
- MR ANTAGONISM
- NEWER MR ANTAGONIS
- FIDELIO TRIAL



Epidemiology



Prevalence CKD in Type 2 DM

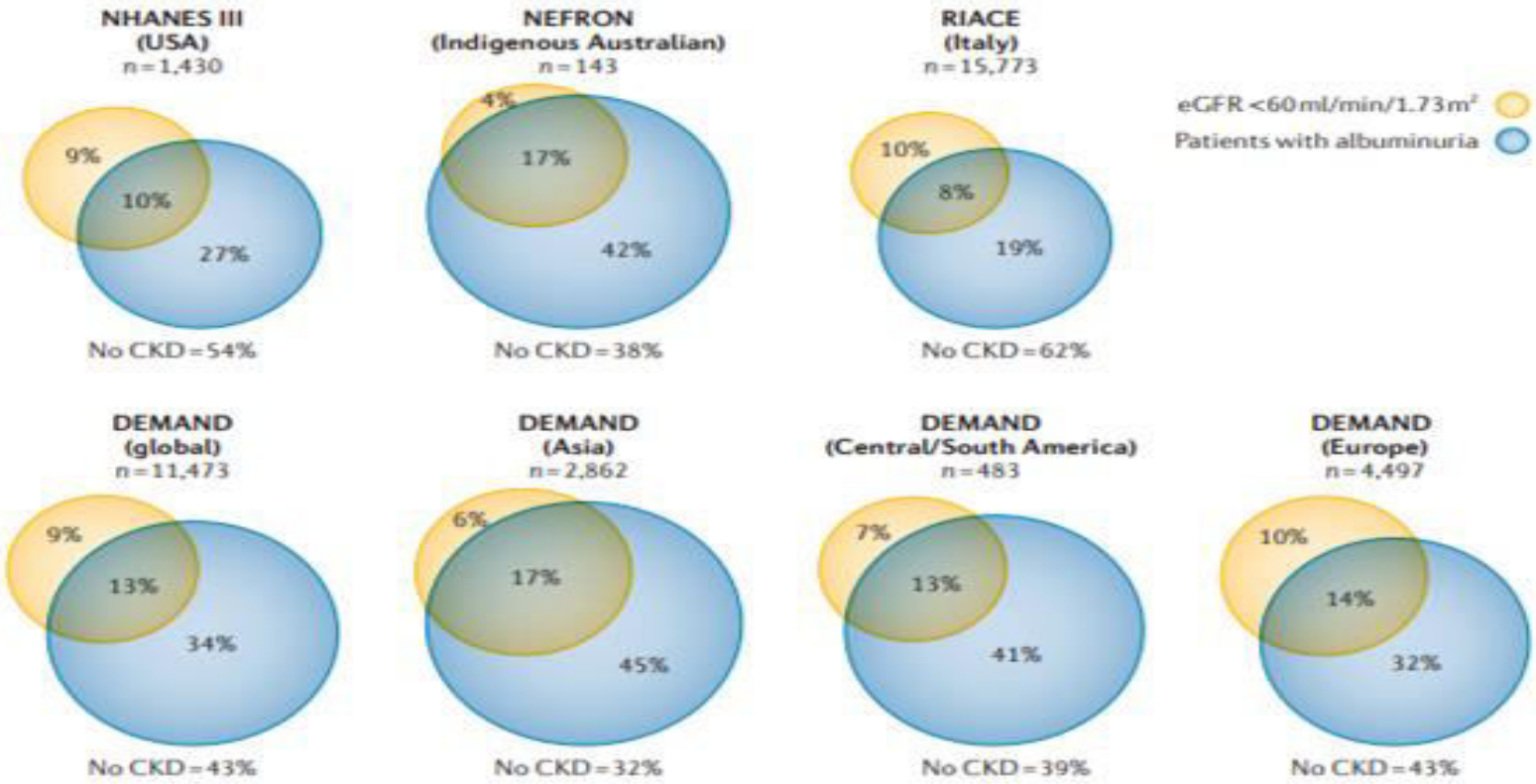
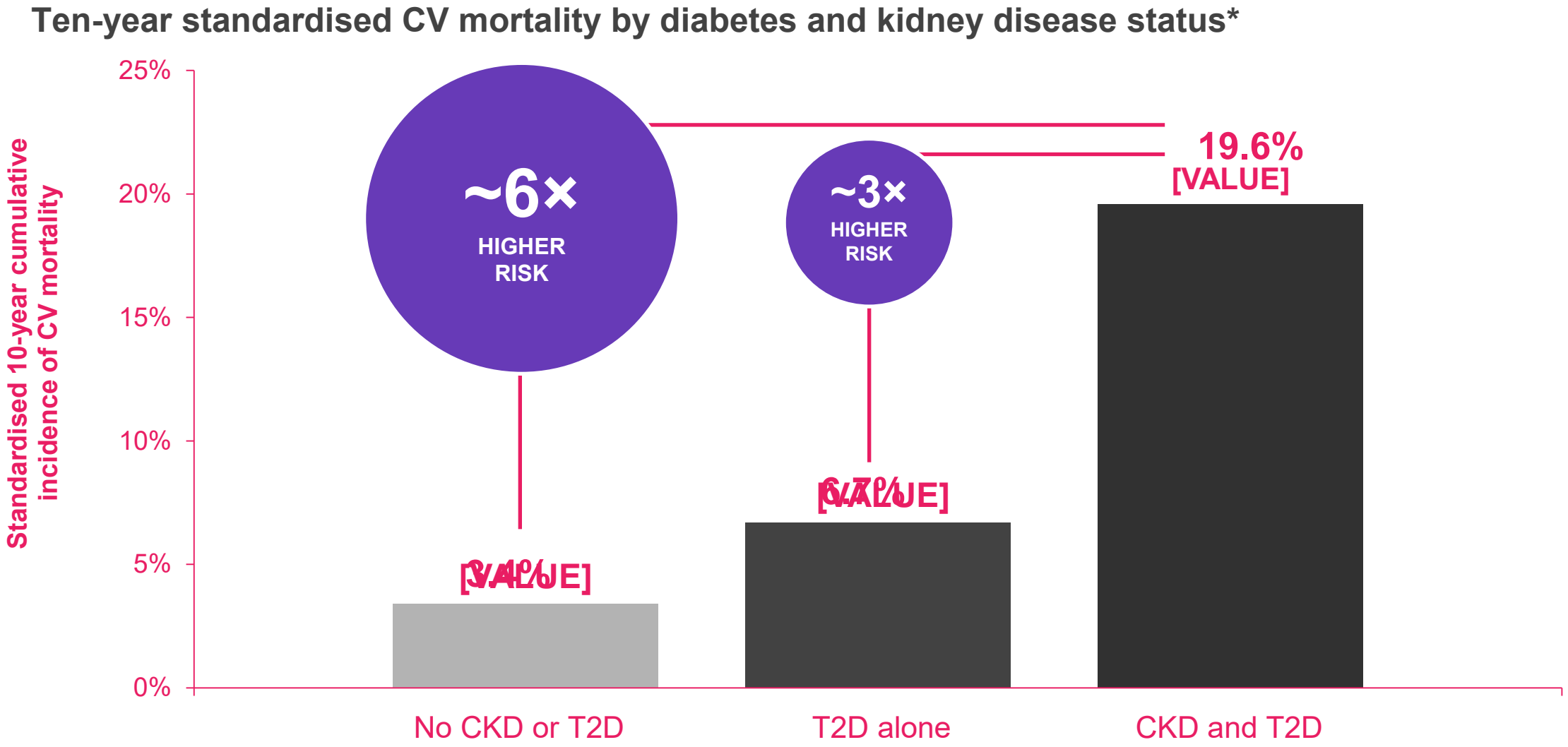


Figure 1 | **The prevalence of CKD in different populations with type 2 diabetes.** Data from patients with type 2 diabetes surveyed in the US NHANES III[4], the Australian NEFRON study[5], the Italian RIACE study[6,240] and the DEMAND study[21]. Yellow circles denote the percentage with an estimated glomerular filtration rate (eGFR) of <60 ml/min/1.73 m². Blue circles denote patients with albuminuria. The percentage not included in either circle denotes patients without chronic kidney disease (CKD).

Thomas C, *et al. Natures Review* 2015;24:302-308

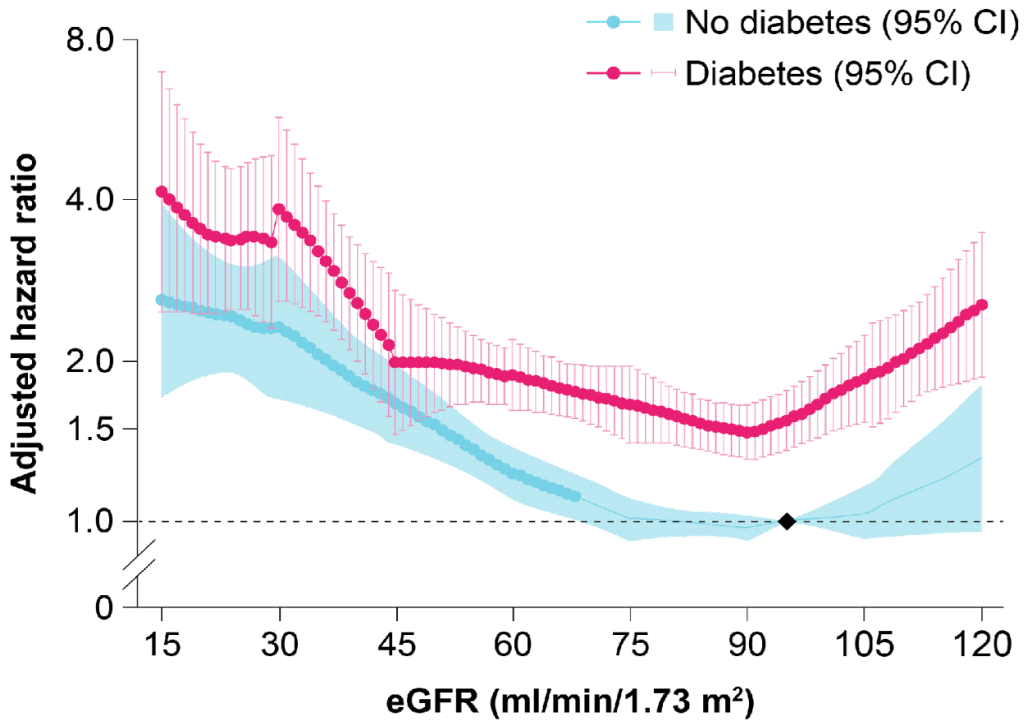
Compared with T2DM Alone, Comorbid CKD Increases CV Mortality



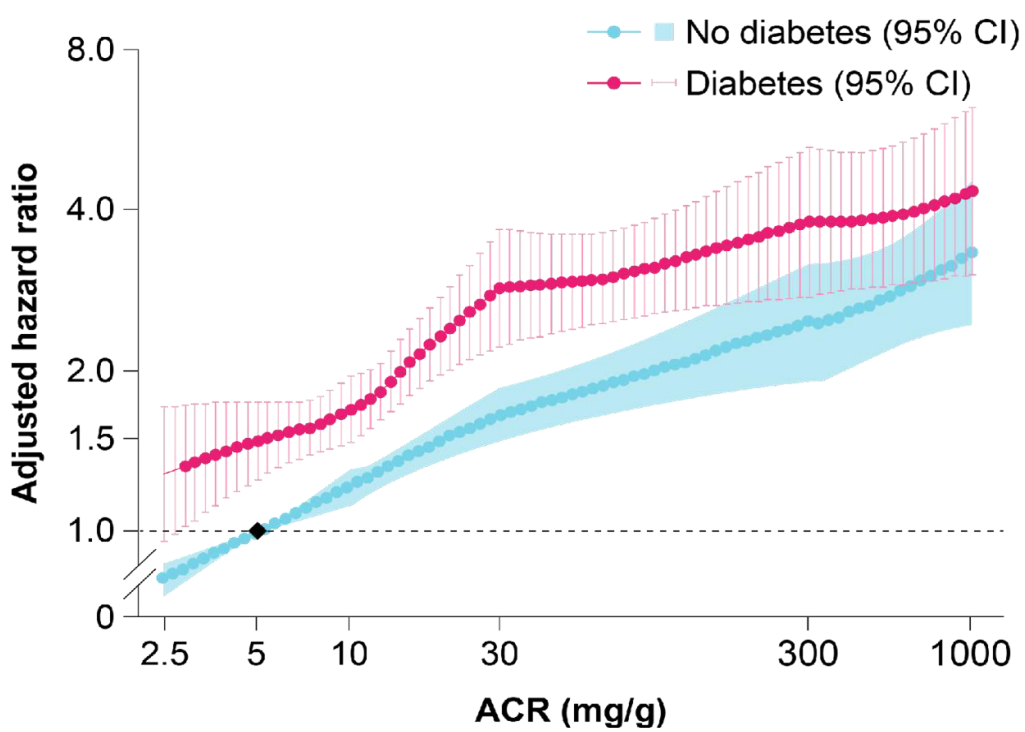
Afkarian M, *et al. J Am Soc Nephrol* 2013;24:302-308

Risk of CV Events Increases as Kidney Function Declines

CV mortality according to eGFR



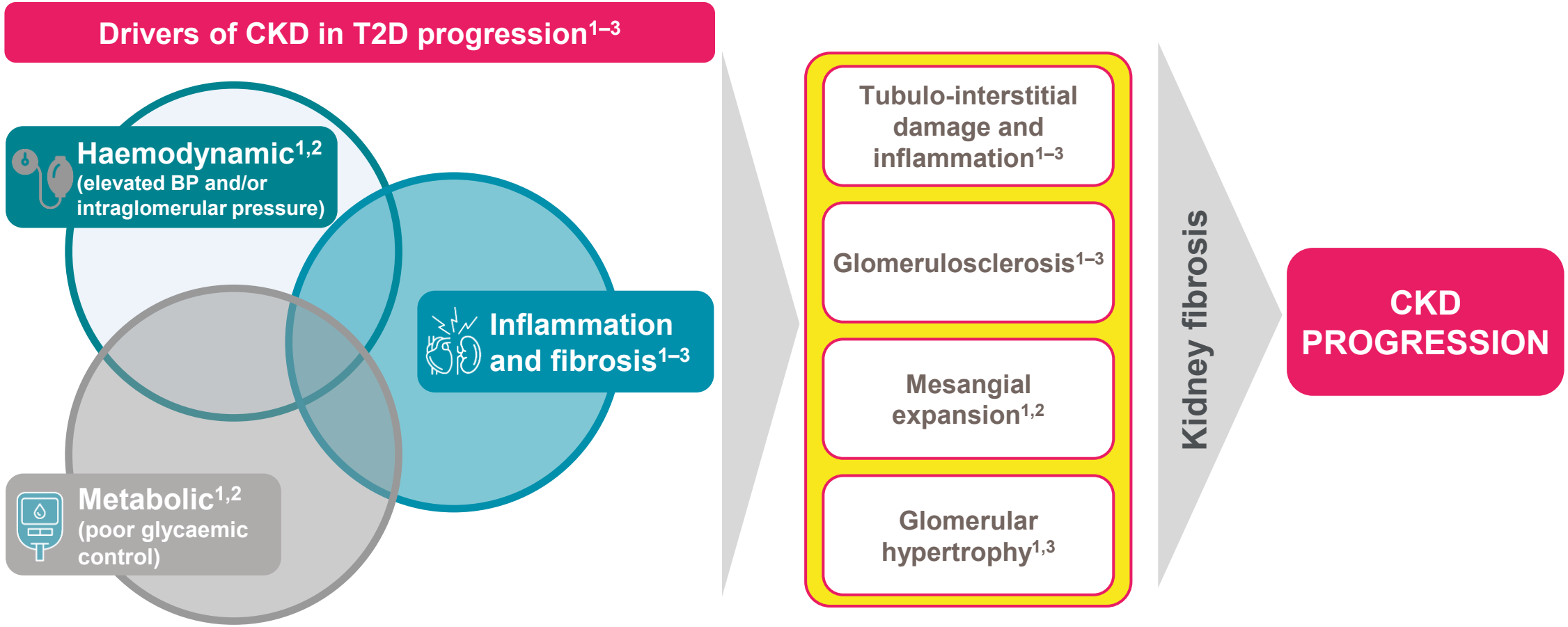
CV mortality according to ACR



Reduced eGFR and worsening albuminuria levels are independent predictors of CV mortality, irrespective of diabetes status

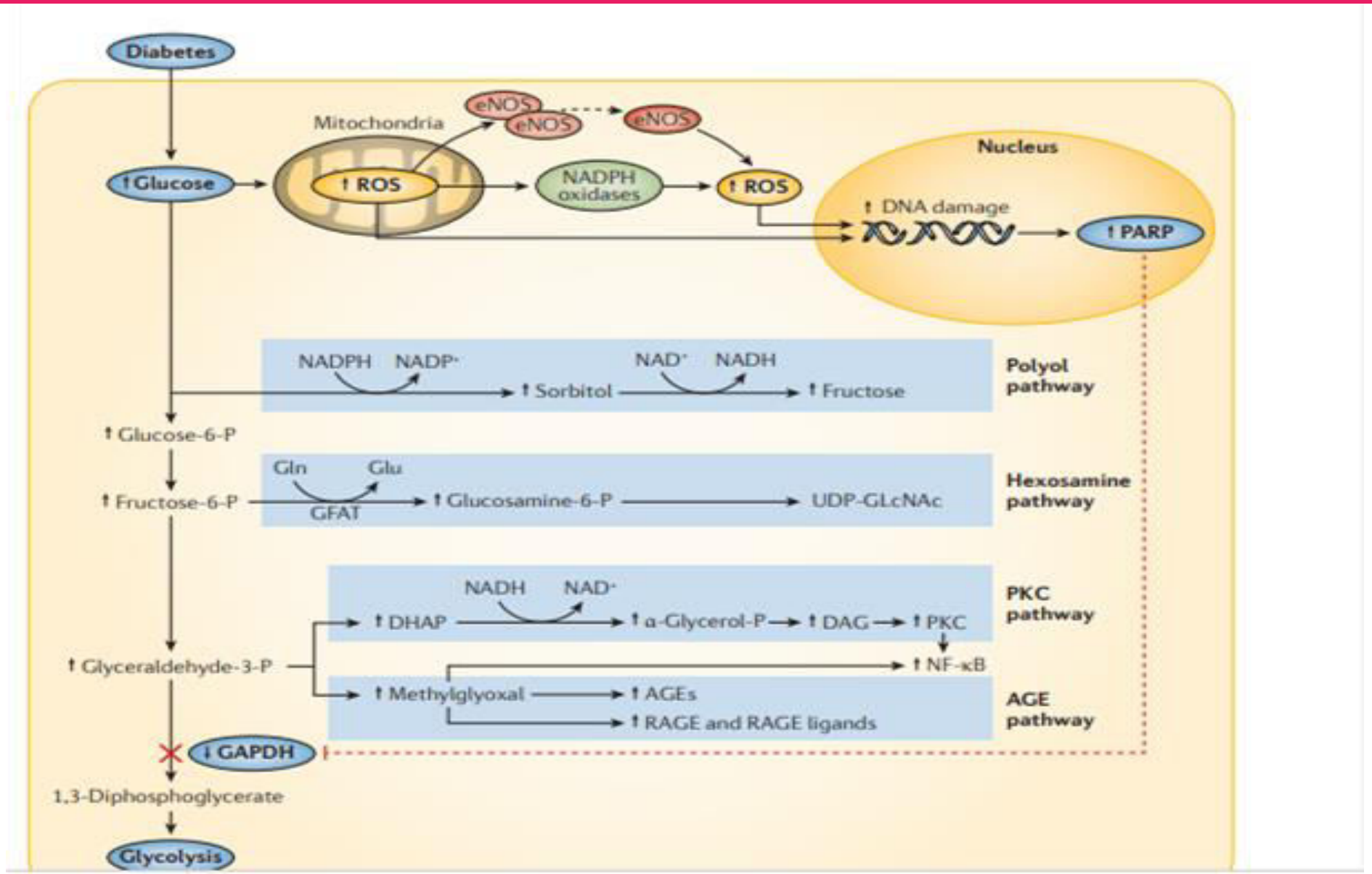
Fox CS. *Lancet* 2012;380:1662–1673

CKD progression in T2D is driven by the combined effects of metabolic, haemodynamic and inflammatory and fibrotic factors

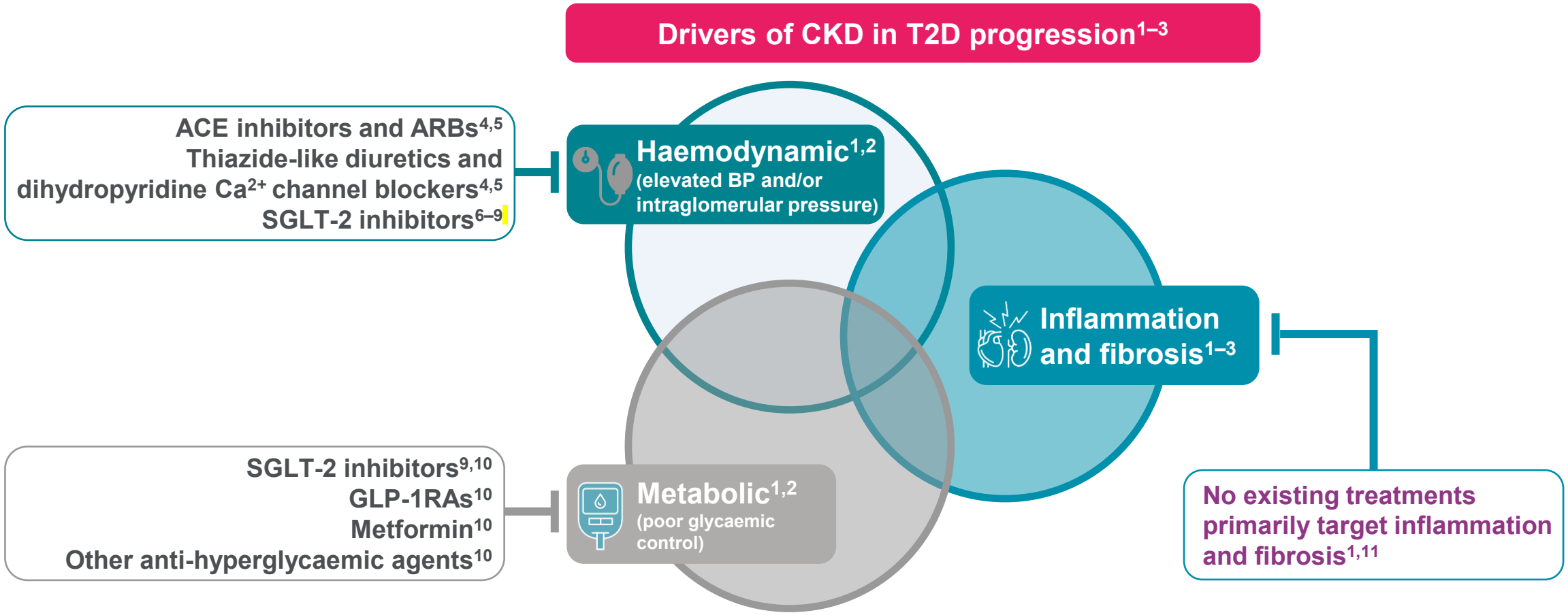


1. Alicic RZ, *et al. Clin J Am Soc Nephrol* 2017;12:2032-2045;

Pathogenesis



Current therapies for patients with CKD and T2D primarily target haemodynamic and metabolic factors



1. Alicic RZ, *et al. Clin J Am Soc Nephrol* 2017;12:2032–2045; 2. Mora-Fernández C, *et al.*

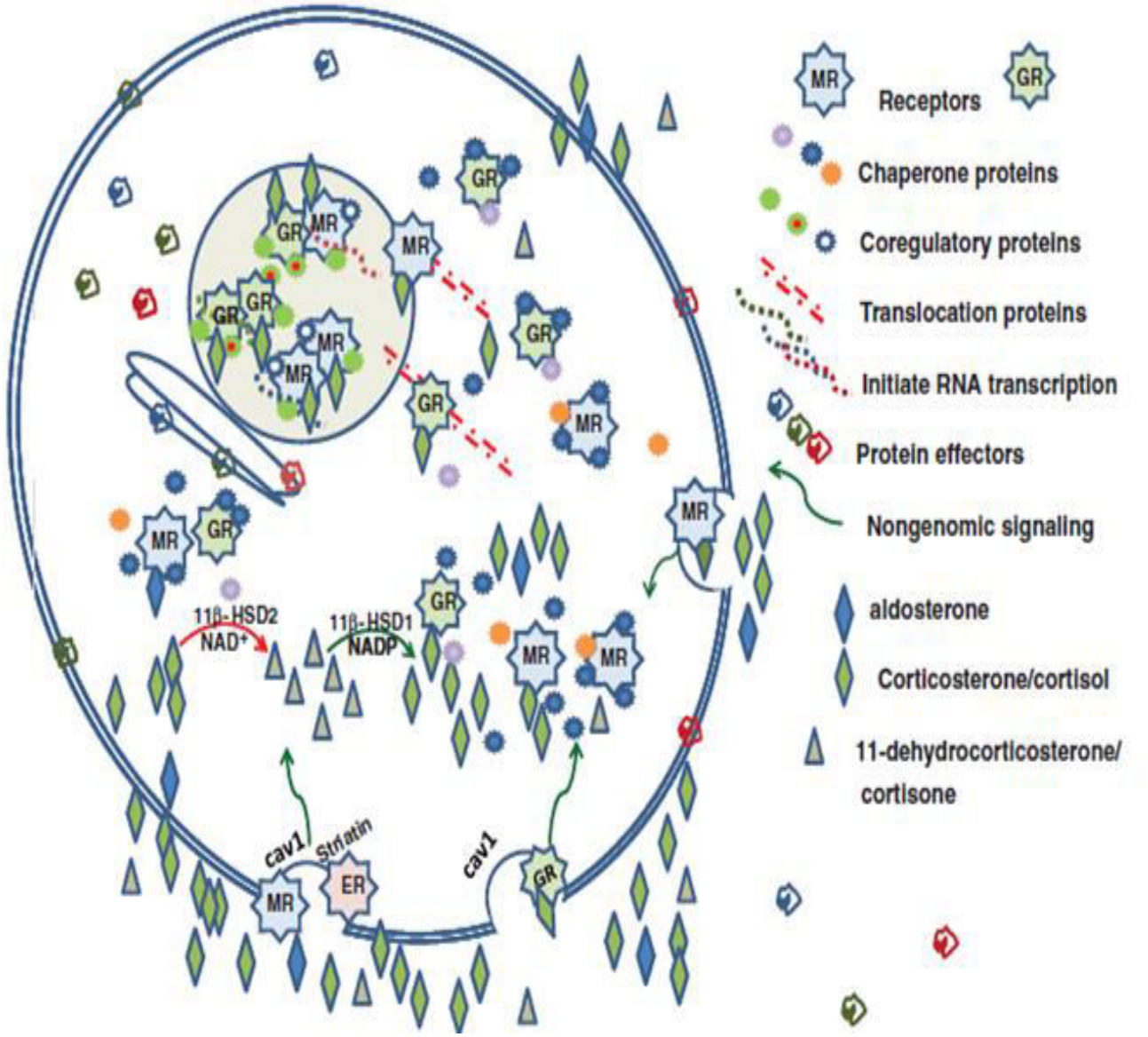
RAASi

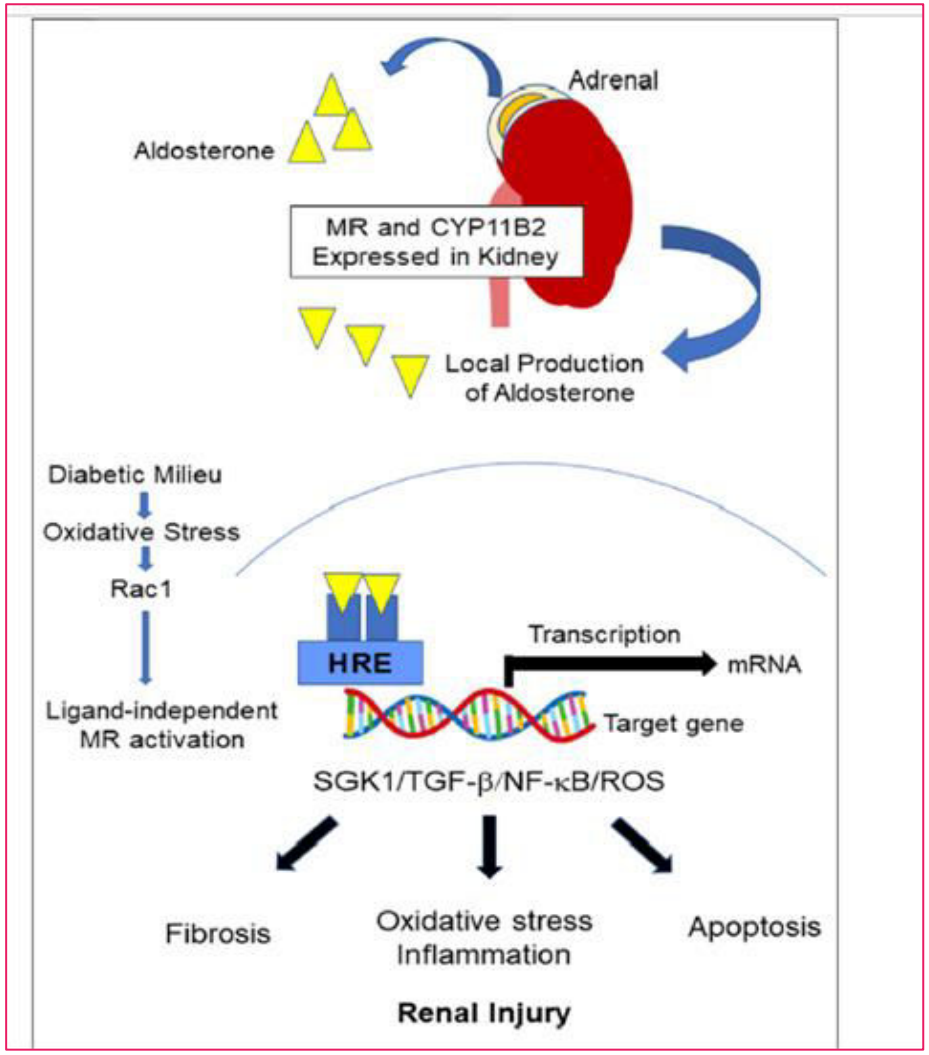
TRIALS	RISK OF PROGRESSION OF CKD
IRMA 2	• Reduction in albuminurea
IDNT	-do-
RENAAL	• Composite renal end point of doubling of creatinine, • Kidney failure and death

Inspite of RAASi

- Aldosterone escape
- 11βHSD expression
  - Absent in heart
- Ligand independant activation
  - Rac1 & oxidative stress

Molecular mechanisms of Mineralocorticoid Receptor Activation





MRKO Models

MODEL	EFFECT
Complete MRKO	Death < 10 days
MRKO principal cells	Survive to adulthood ; salt required
Cardiomyocyte MRKO	• Increased infarct healing, • Improved cardiac remodelling
Myeloid MRKO	• Reduced inflammation & Fibrosis • M1 macrophage suppression • M2 macrophage activation

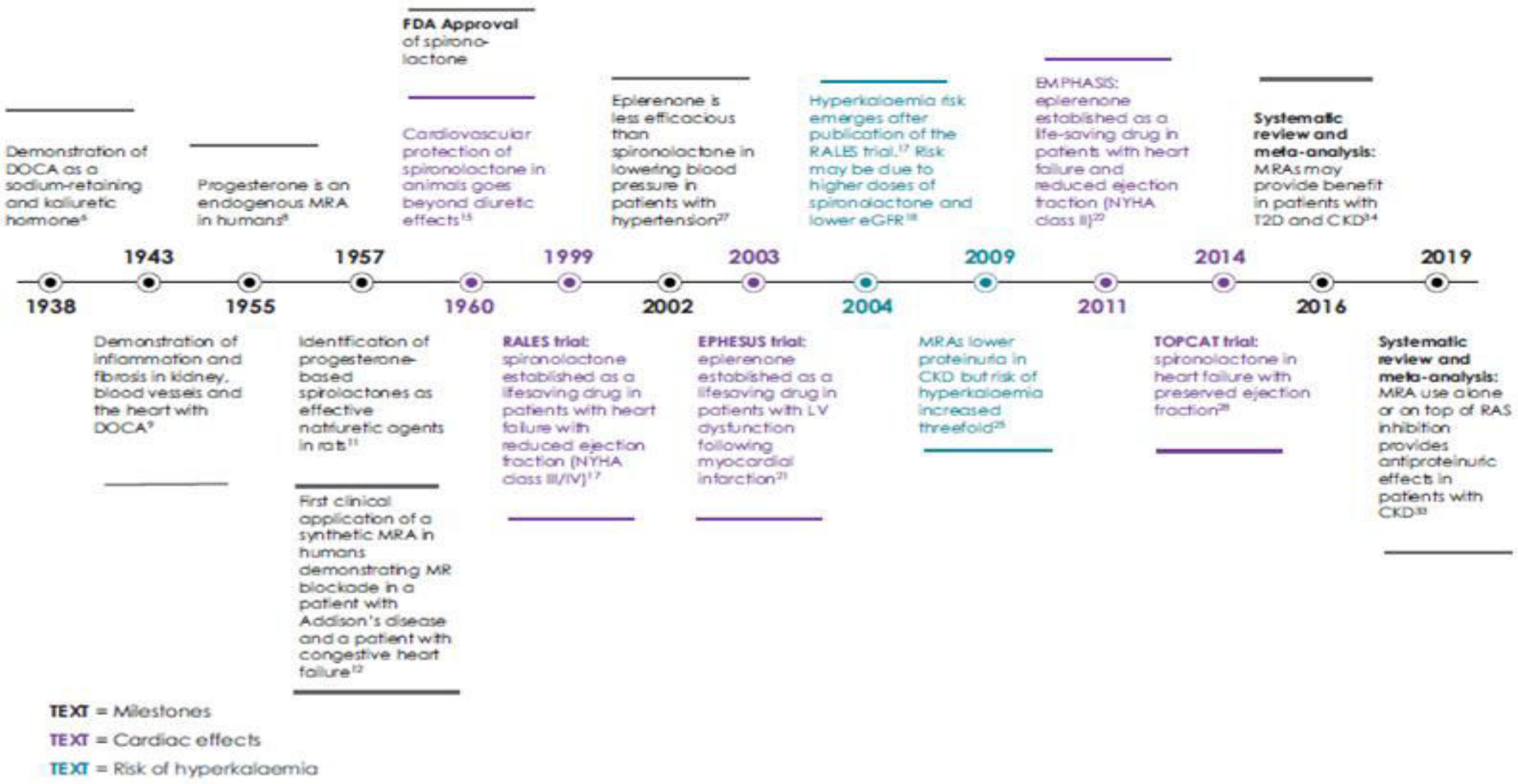
Barrera-Chimal J, Girerd S, Jaisser F. Mineralocorticoid receptor antagonists and kidney diseases: pathophysiological basis. *Kidney Int*. 2019;96(2):302-319. doi:10.1016

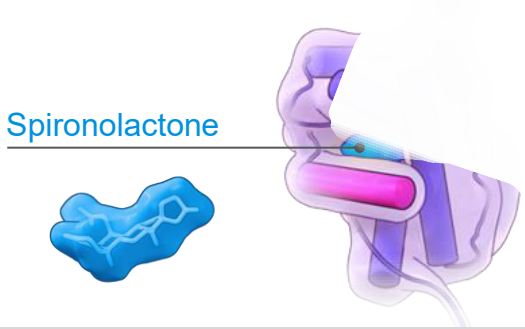
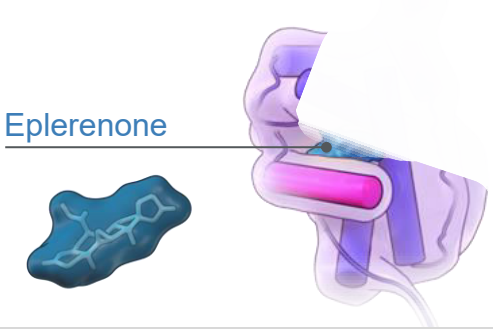
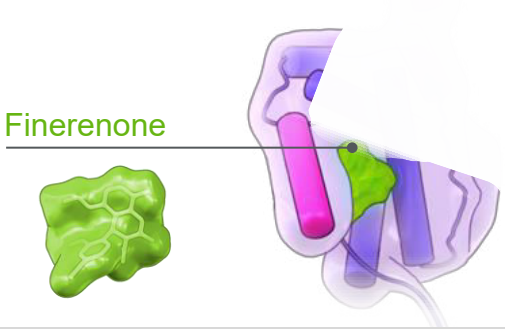
MRA : Rat Models

Eplrenone	Effects
Glom volume	Reduced
Albuminurea	Reduced
Mesangial cell expansion	Reduced
Glom fibrosis	Reduced
Collagen deposition	Reduced
TGF-β	Reduced
Concomitant ACEi	Additive

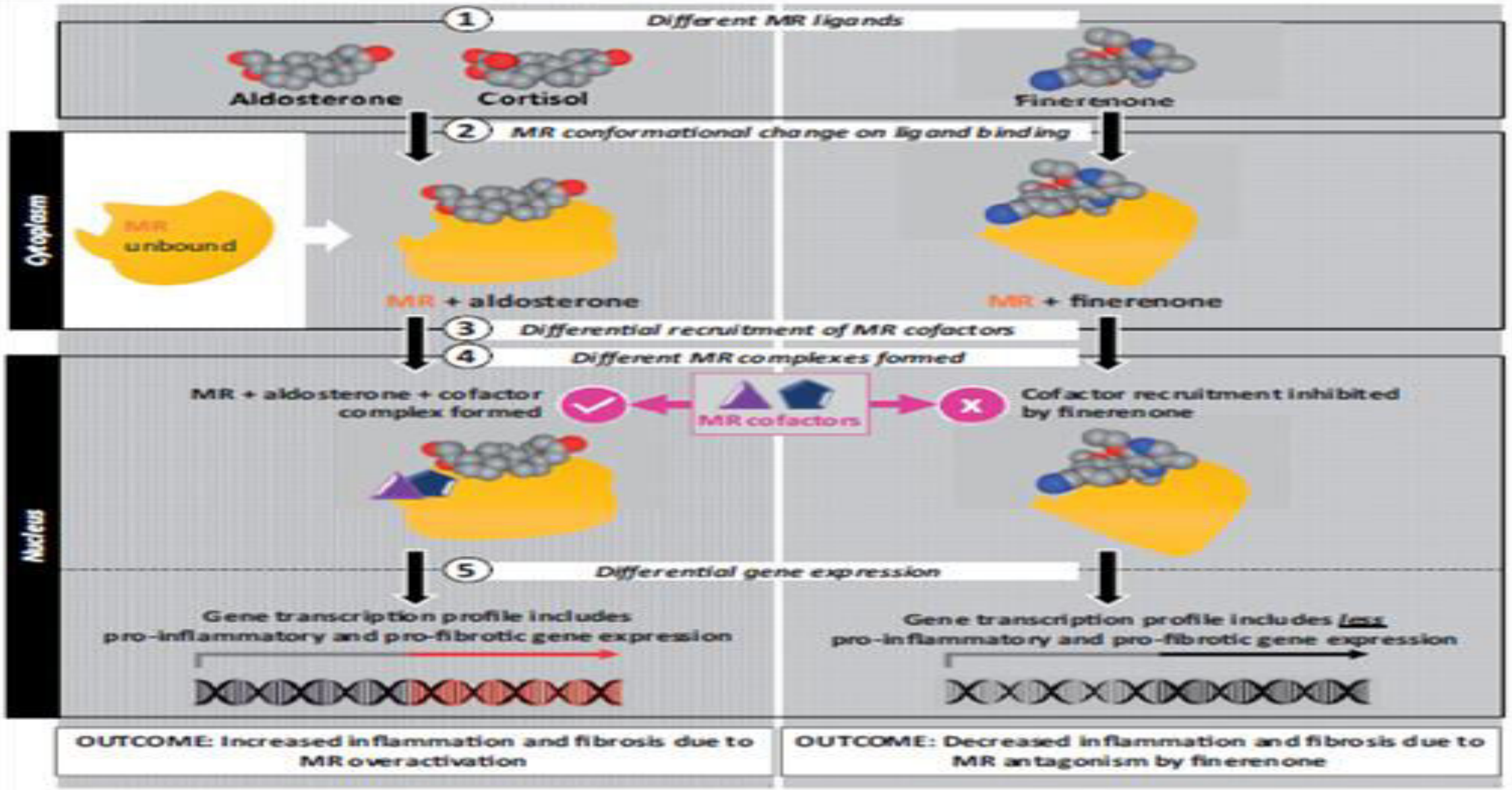
Barrera-Chimal J, Girerd S, Jaisser F. Mineralocorticoid receptor antagonists and kidney diseases: pathophysiological basis. *Kidney Int*. 2019;96(2):302-319. doi:10.1016

KEY STUDIES IN MRAS

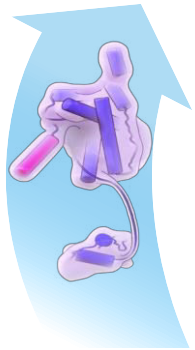


	Aldosterone antagonists		Finerenone
			
Structural properties	Flat (steroidal)	Flat (steroidal)	Bulky (nonsteroidal)
Antagonism	Unselective	More selective	More selective
Potency to MR	High	Moderate	High
Selectivity to MR	Low	Moderate	High
Sexual side effects	Yes (gynecomastia)	Less than spironolactone	No signal in phase II studies
Hyperkalaemia	Yes[4]	Yes	Moderately increased
Tissue distribution	Kidney > heart (at least 6-fold)	Kidney > heart (~3-fold)	Balanced kidney : heart (1:1)
Pharmockinetics	Multiple metabolites long half life	Half life 4 hrs- 6 hrs	No active metabolites: short halflife
Cofactor Recruitment in Absence of ALDO	Partial agonistic	Partial agonist	Inverse agonist
Presence of ALDO	Inhibition	Inhibition	More potent
Inflammation & fibrosis	-	Less significant	Strong

FINERENONE : GENOMIC EFFECTS



MR overactivation causes kidney and cardiovascular damage through inflammation and fibrosis



In kidney and heart diseases, the **MR pathway becomes overactivated** through multiple mechanisms

Increased gene expression of NADPH oxidase, pro-inflammatory cytokines, and pro-fibrotic mediators

Kidney damage
- Glomerular damage
- Proteinuria
- Tubular injury
- Reduced renal blood flow
- Kidney injury

Vascular damage
- Vascular remodeling
- Endothelial dysfunction
- Increased vascular stiffness

Heart damage
- Myocardial hypertrophy
- Ventricular remodeling/fibrosis
- Reduced coronary blood flow
- Ischaemia/infarction
- Myocardial injury

FIDELIO-DKD

To investigate the safety and efficacy of finerenone, in addition to standard of care, in reducing cardiorenal mortality and morbidity in patients with T2D and CKD

Bakris GL, *et al. Am J Nephrol* 2019;50:333–344

Criteria

Key inclusion criteria

- Aged ≥18 years with CKD and T2D
- Pretreated with optimised therapy, including an ACEi or ARB at a max tolerated dose for ≥4 weeks
- Serum potassium ≤4.8 mmol/L
- Diabetic retinopathy for patients with A2 albuminuria

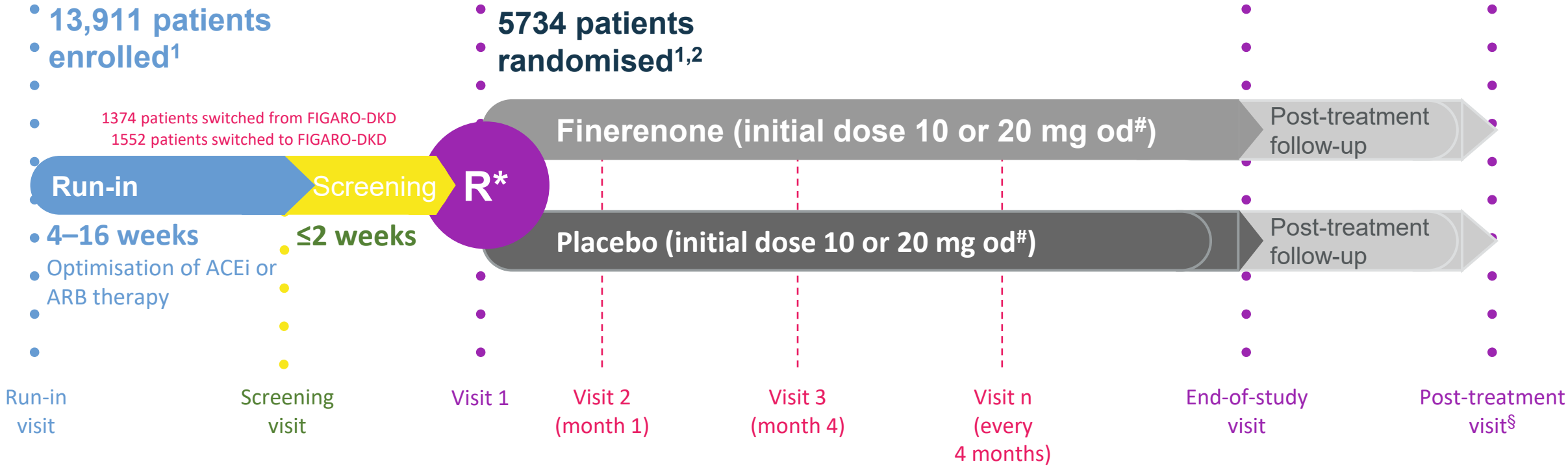
Key exclusion criteria

- Non-diabetic kidney disease, including clinically relevant renal artery stenosis
- HFrEF with NYHA class II–IV
- HbA1c >12%
- Uncontrolled arterial hypertension*

GFR categories (mL/min/1.73 m²)			Albuminuria categories (mg albumin/g creatinine)		
			A1 Normal to mildly increased	**A2** Moderately increased	**A3** Severely increased
			0–29	30–299	≥300–≤5000
	G1	>90			
	G2	60–89			
	G3a	45–59			
	G3b	30–44			
	G4	15–29			
	G5	<15			

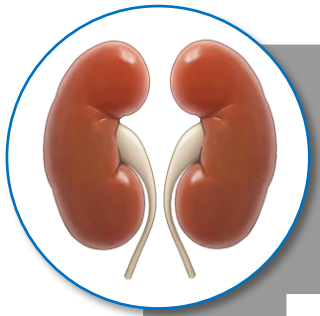
Patients with either high persistent albuminuria (UACR 30 to <300 mg/g) and eGFR 25–<60 ml/min/1.73 m² and history of diabetic retinopathy, or persistent very high albuminuria (UACR ≥300 mg/g) and an eGFR of 25–<75 ml/min/1.73 m² were included in FIDELIO-DKD

FIDELIO-DKD was a randomised, double-blind, event-driven, placebo-controlled phase III trial



*Randomisation was stratified by region (North America, Latin America, Europe, Asia or Other), eGFR category at screening visit (25–<45, 45–<60, or ≥60 ml/min/1.73 m²) and albuminuria category at screening visit ('moderately increased' or 'severely increased'); #Up-titration of study drug was encouraged after visit 2 provided potassium value was 4.8 mmol/l or less and eGFR was stable; down-titration was allowed any time after treatment initiation for safety reasons; ‡ 4 weeks and 5 days after last dose of study drug

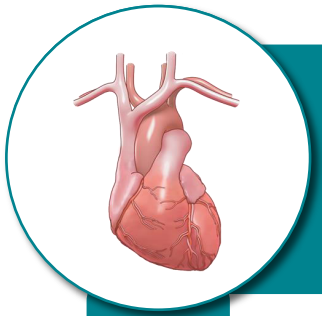
Efficacy outcomes included kidney- and CV-specific composites



Primary kidney-specific outcome[1,2]*

Time to first occurrence of:

- Onset of kidney failure:
  - ESKD (initiation of chronic dialysis for ≥90 days or kidney transplantation)
  - Sustained eGFR <15 ml/min/1.73 m^{2}#
- A sustained ≥40% decrease of eGFR from baseline#
- Renal death‡



Key secondary CV outcome[1,2]

Time to first occurrence of 4-point MACE, defined as:

- CV death
- Nonfatal MI
- Non-fatal stroke
- Hospitalisation for HF

Other secondary outcomes[1,2]

- Time to death from any cause
- Time to hospitalisation for any cause
- Change in UACR from baseline to month 4
- Time to first occurrence of onset of kidney failure, a sustained ≥57% decrease of eGFR from baseline#, or renal death‡

BASELINE CHARACTERISTICS

Table 1. Demographic and Clinical Characteristics of the Patients at Baseline.*

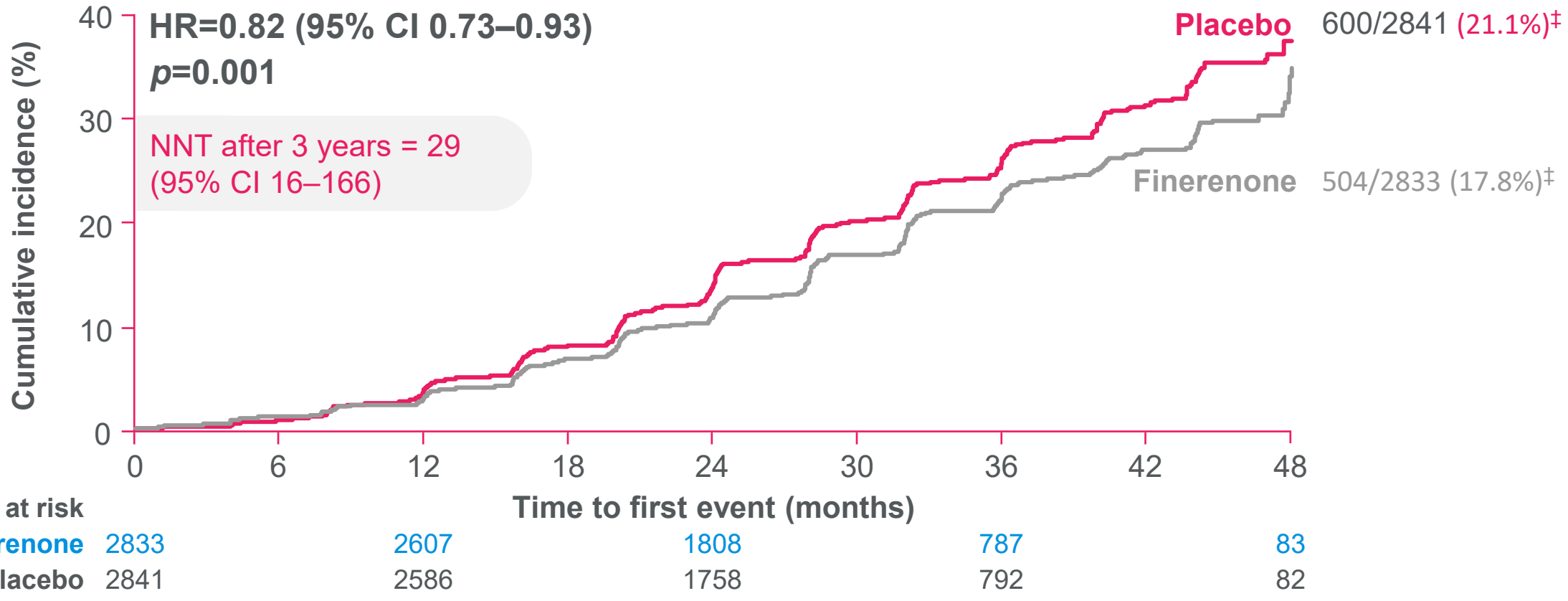
Characteristic	Finerenone (N=2833)	Placebo (N=2841)	Total (N=5674)
Age — yr	65.4±8.9	65.7±9.2	65.6±9.1
Male sex — no. (%)	1953 (68.9)	2030 (71.5)	3983 (70.2)
Race — no. (%)†			
White	1777 (62.7)	1815 (63.9)	3592 (63.3)
Black	140 (4.9)	124 (4.4)	264 (4.7)
Asian	717 (25.3)	723 (25.4)	1440 (25.4)
Other	199 (7.0)	179 (6.3)	378 (6.7)
Duration of diabetes — yr	16.6±8.8	16.6±8.8	16.6±8.8
Glycated hemoglobin — %	7.7±1.3	7.7±1.4	7.7±1.3
Systolic blood pressure — mm Hg	138.1±14.3	138.0±14.4	138.0±14.4
Estimated glomerular filtration rate			
Mean	44.4±12.5	44.3±12.6	44.3±12.6
Distribution — no. (%)			
≥60 ml/min/1.73 m^2	318 (11.2)	338 (11.9)	656 (11.6)
45 to <60 ml/min/1.73 m^2	972 (34.3)	928 (32.7)	1900 (33.5)
25 to <45 ml/min/1.73 m^2	1476 (52.1)	1505 (53.0)	2981 (52.5)
<25 ml/min/1.73 m^2	66 (2.3)	69 (2.4)	135 (2.4)
Missing data	1 (<0.1)	1 (<0.1)	2 (<0.1)
Urinary albumin-to-creatinine ratio‡			
Median (IQR)	833 (441–1628)	867 (453–1645)	852 (446–1634)
Distribution — no. (%)			
<30	11 (0.4)	12 (0.4)	23 (0.4)
30 to <300	350 (12.4)	335 (11.8)	685 (12.1)
≥300	2470 (87.2)	2493 (87.8)	4963 (87.5)
Missing data	2 (<0.1)	1 (<0.1)	3 (<0.1)
Serum potassium — mmol/liter	4.37±0.46	4.38±0.46	4.37±0.46
Baseline medications — no. (%)			
ACE inhibitor§	950 (33.5)	992 (34.9)	1942 (34.2)
Angiotensin-receptor blocker§	1879 (66.3)	1846 (65.0)	3725 (65.7)
Diuretic	1577 (55.7)	1637 (57.6)	3214 (56.6)
Statin	2105 (74.3)	2110 (74.3)	4215 (74.3)
Potassium-lowering agent¶	70 (2.5)	66 (2.3)	136 (2.4)
Glucose-lowering therapy	2747 (97.0)	2777 (97.7)	5524 (97.4)
Insulin	1843 (65.1)	1794 (63.1)	3637 (64.1)
GLP-1 receptor agonist	189 (6.7)	205 (7.2)	394 (6.9)
SGLT2 inhibitor	124 (4.4)	135 (4.8)	259 (4.6)

EGFR < 45 ml/min
1476(52.1)

UAC > 300 mg/g
2470(87.2)

RAASi
950(33.5)
1879(66.3)

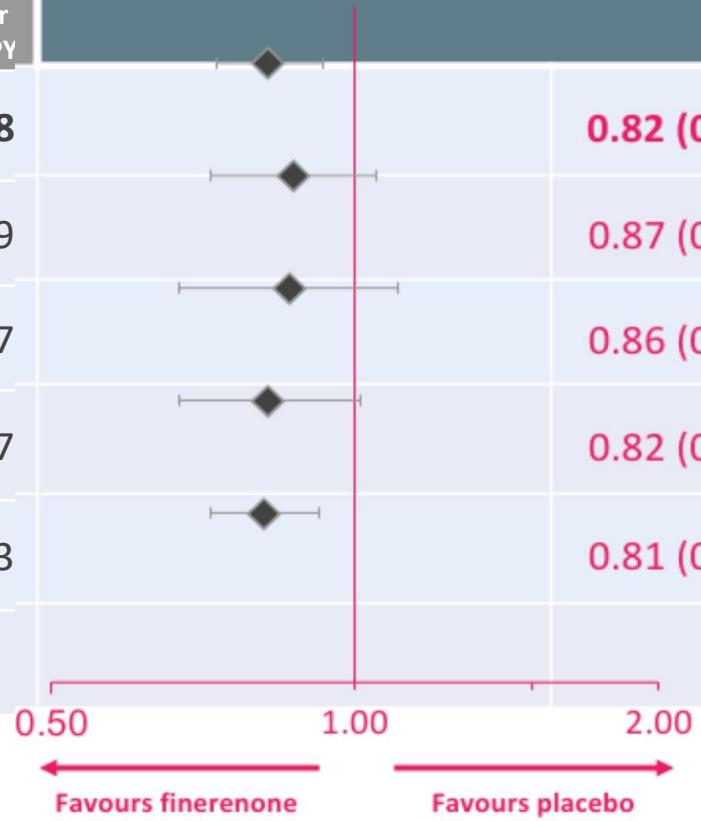
Primary kidney outcome reduced by 18%



Kidney failure, sustained ≥40% decrease in eGFR from baseline, or renal death

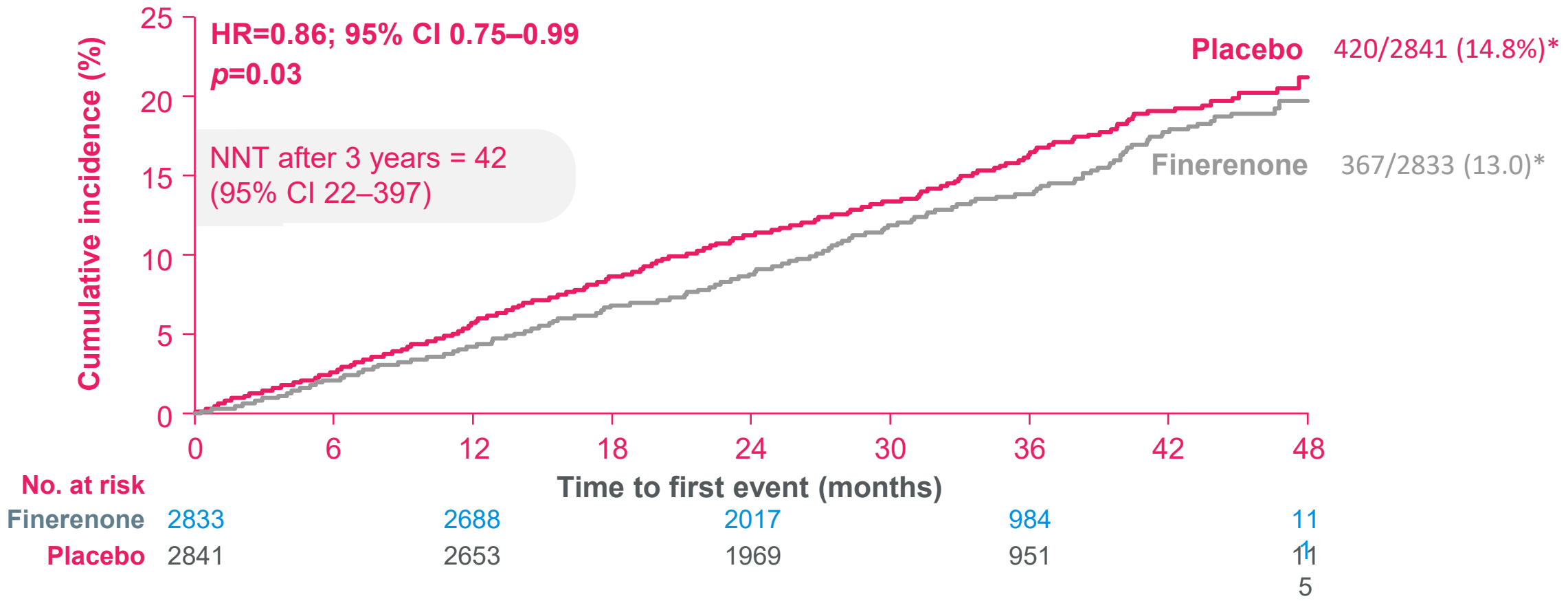
Finerenone had consistent effects on the components of the primary kidney-specific composite outcome

Outcome	Finerenone (n=2833)		Placebo (n=2841)		HR (95% CI)	*p*-value
	n (%)	n per 100 PY	n (%)	n per 100 PY		
Primary composite kidney outcome	**504 (17.8)**	**7.59**	**600 (21.1)**	**9.08**	**0.82 (0.73-0.93)**	**0.001**
Kidney failure*	208 (7.3)	2.99	235 (8.3)	3.39	0.87 (0.72-1.05)	–
End-stage kidney disease	119 (4.2)	1.60	139 (4.9)	1.87	0.86 (0.67-1.10)	–
Sustained# decrease in eGFR to <15 ml/min/1.73 m^2	167 (5.9)	2.40	199 (7.0)	2.87	0.82 (0.67-1.01)	–
Sustained# ≥40% decrease in eGFR from baseline	479 (16.9)	7.21	577 (20.3)	8.73	0.81 (0.72-0.92)	–
Renal death	2 (<0.1)	–	2 (<0.1)	–	–	–



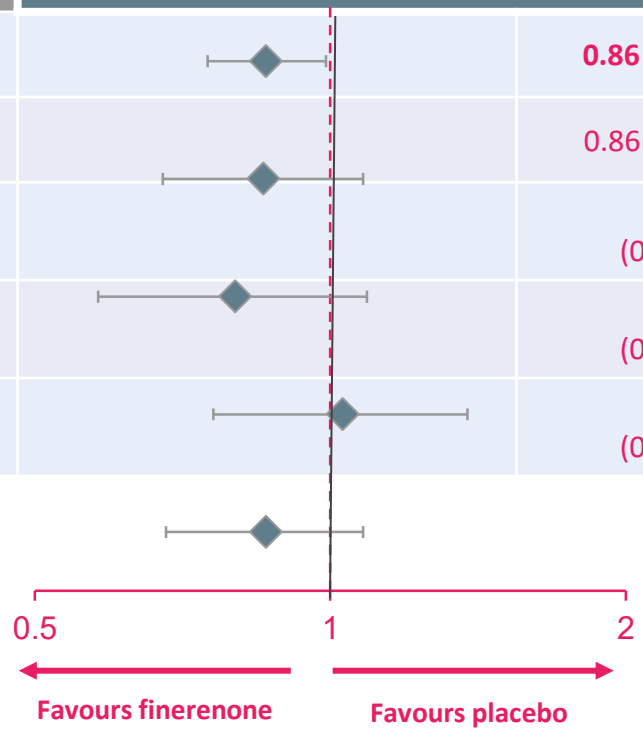
On top of max tolerated RAS therapy, finerenone significantly reduced the risk of the key secondary CV outcome by 14%

Time to CV death, non-fatal MI, non-fatal stroke or HHF



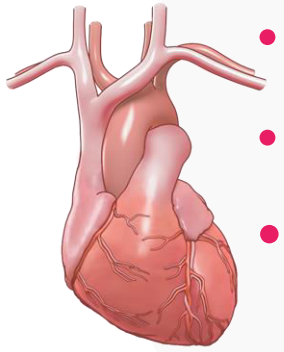
Finerenone had consistent effects on cardiovascular death, myocardial infarction and hospitalisation for heart failure

Outcome	Finerenone (n=2833)		Placebo (n=2841)		Hazard ratio (95% CI)	*p*-value
	n (%)	n per 100 PY	n (%)	n per 100 PY		
Key secondary CV outcome*	**367 (13.0)**	**5.11**	**420 (14.8)**	**5.92**	**0.86 (0.75–0.99)**	**0.03**
CV death	128 (4.5)	1.69	150 (5.3)	1.99	0.86 (0.68–1.08)	–
Non-fatal MI	70 (2.5)	0.94	87 (3.1)	1.17	0.80 (0.58–1.09)	–
Non-fatal stroke	90 (3.2)	1.21	87 (3.1)	1.18	1.03 (0.76–1.38)	–
Hospitalisation for HF	139 (4.9)	1.89	162 (5.7)	2.21	0.86 (0.68–1.08)	–



42 patients needed to be treated to prevent one key secondary CV outcome event at month 36

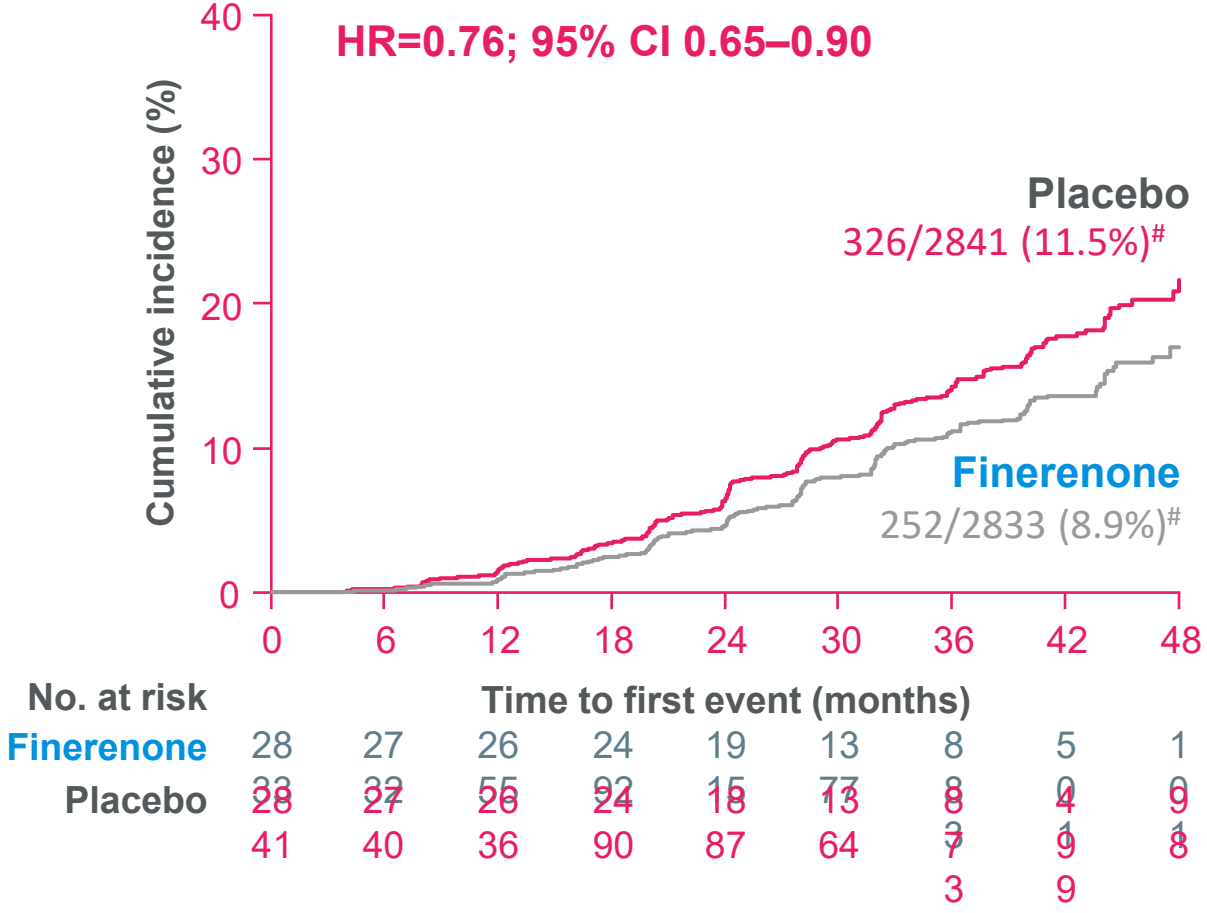
HR (95% CI)	ARR (95% CI) at 36 months	NNT (95% CI) at 36 months
0.86 (0.75–0.99)	–2.4% (–4.5 to –0.3)	42 (22 to 397)



- **Hazard ratio = 0.86** – equivalent to a **14% relative risk reduction**
- **Absolute risk reduction = 2.4%** at 36 months
- **NNT** to **prevent one key secondary outcome event** was **42** at 36 months

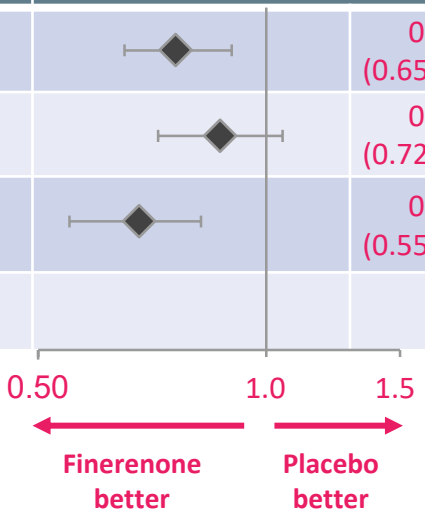
The incidence of the exploratory, secondary kidney-specific composite outcome was 24% lower with finerenone

Secondary kidney-specific composite outcome*



Components of the secondary kidney composite

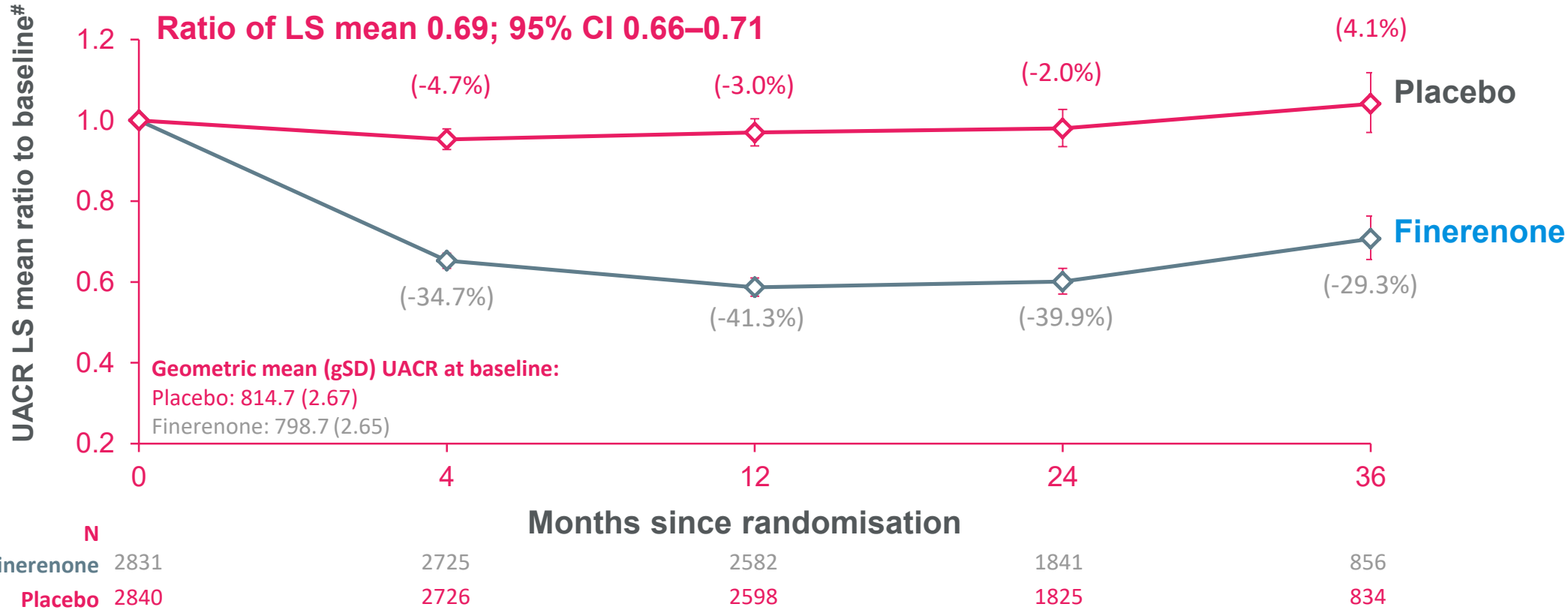
	Finerenone (N=2833)	Placebo (N=2841)	HR (95% CI)
Secondary kidney composite*	252 (8.9)	326 (11.5)	0.76 (0.65–0.90)
Kidney failure‡	208 (7.3)	235 (8.3)	0.87 (0.72–1.05)
≥57% ⍰ in eGFR§	167 (5.9)	245 (8.6)	0.68 (0.55–0.82)
Renal death	2 (<0.1)	2 (<0.1)	–



A 57% decrease in eGFR from baseline is equivalent to doubling of serum creatinine

Finerenone reduced UACR by 31% between baseline and month 4 vs placebo

A lower mean UACR with finerenone vs placebo was maintained throughout the study



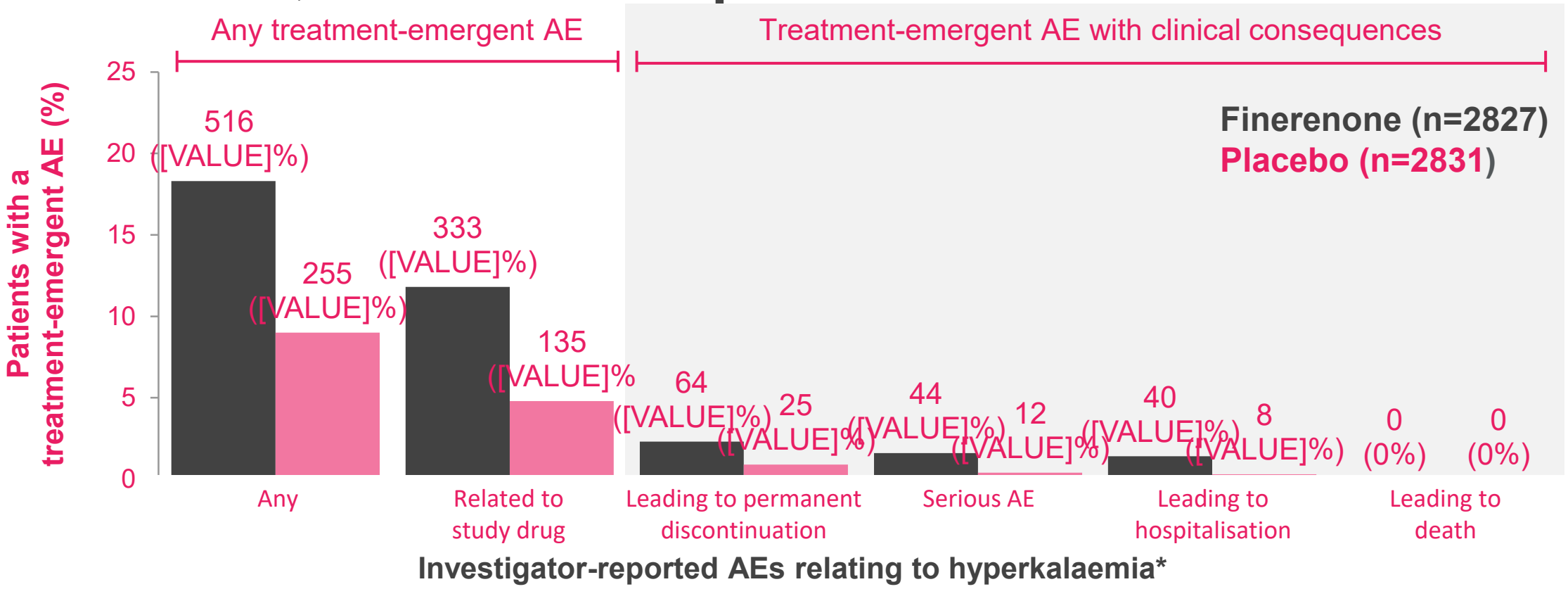
N					
Finerenone	2831	2725	2582	1841	856
Placebo	2840	2726	2598	1825	834

The overall incidence of treatment-emergent adverse events was similar between the finerenone and placebo groups

Treatment-emergent adverse events, n (%)	Finerenone (N=2827)	Placebo (N=2831)
Any AE	2468 (87.3)	2478 (87.5)
AE related to study drug	646 (22.9)	449 (15.9)
AE leading to treatment discontinuation	207 (7.3)	168 (5.9)
Any serious AE	902 (31.9)	971 (34.3)
Serious AE related to study drug	48 (1.7)	34 (1.2)
Serious AE leading to treatment discontinuation	75 (2.7)	78 (2.8)

Treatment-emergent adverse events, n (%)	Finerenone (N=2827)	Placebo (N=2831)
Kidney-related AEs		
Acute kidney injury	129 (4.6)	136 (4.8)
Hospitalisation due to acute kidney injury	53 (1.9)	47 (1.7)
Treatment discontinuation due to acute kidney injury	5 (0.2)	7 (0.2)
Hospitalisation due to acute renal failure*	70 (2.5)	71 (2.5)
Treatment discontinuation due to acute renal failure*	31 (1.1)	36 (1.3)
Reproductive system and breast disorders		
Breast hyperplasia	0	3 (0.1)
Gynaecomastia	6 (0.2)	6 (0.2)

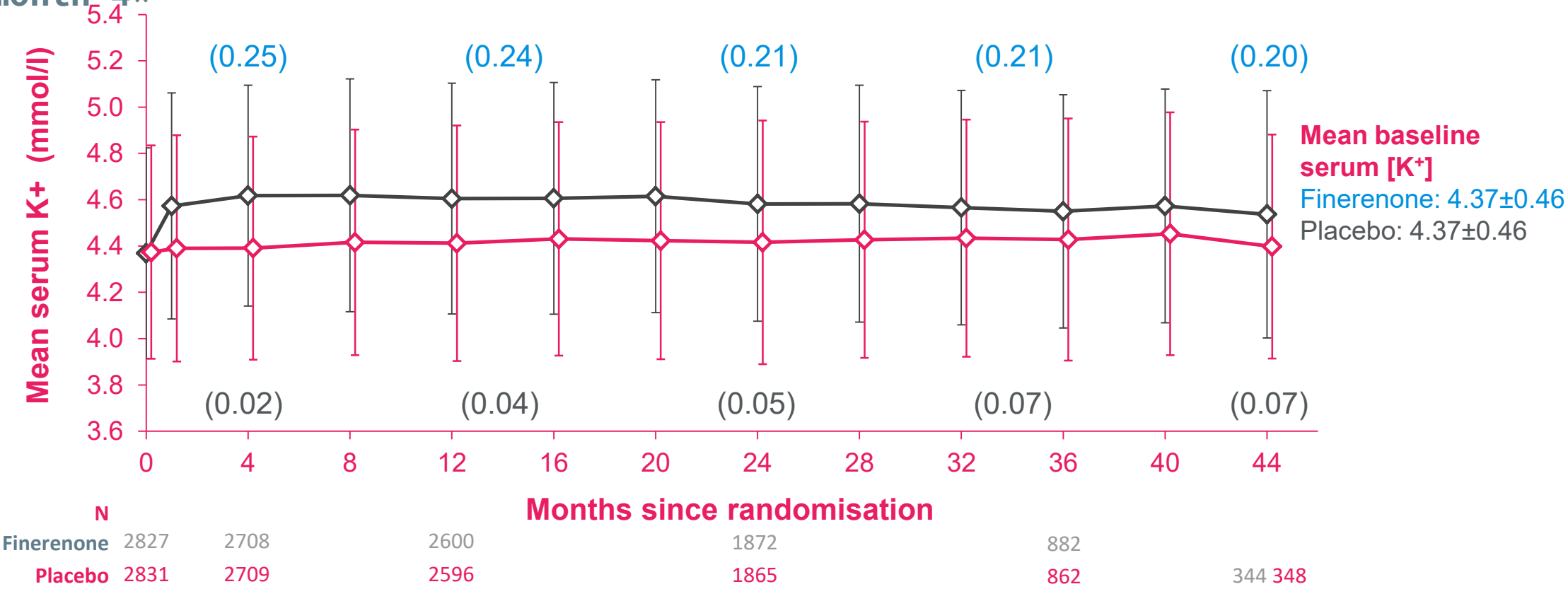
Although investigator-reported hyperkalaemia was increased, the clinical impact was minimal



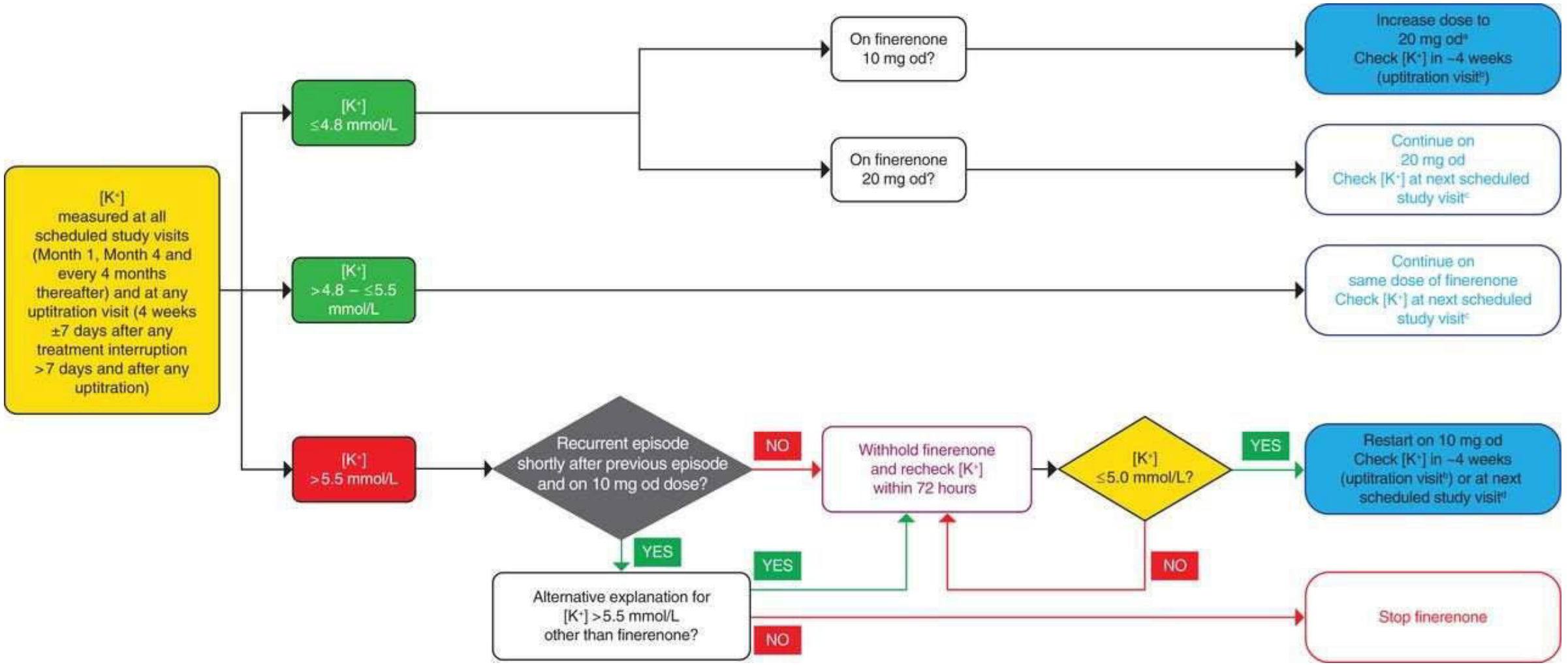
There were no deaths due to hyperkalaemia, and the incidences of treatment discontinuation or hospitalisation due to hyperkalaemia were low

Finerenone had a predictable impact on serum potassium

The maximum difference in mean serum [K⁺] between groups was 0.23 mmol/l at month 4*

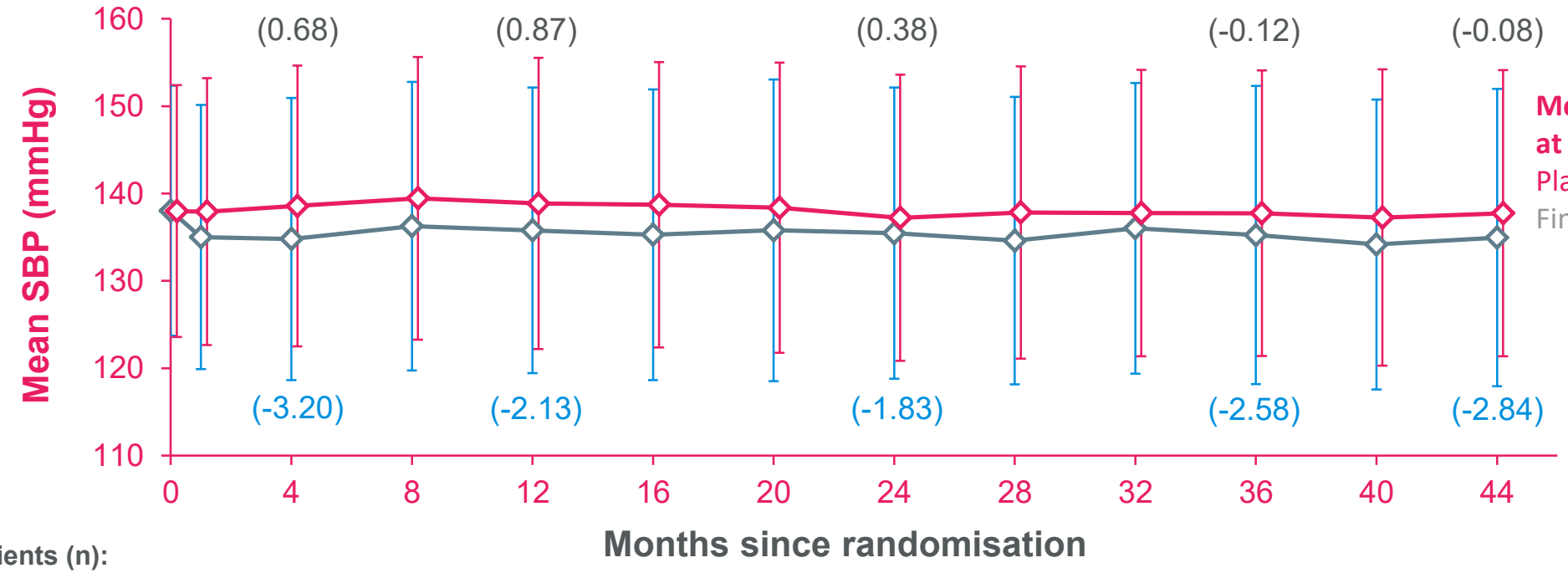


Management of hyperkalemia in Fidelio DKD



Finerenone had a modest impact on blood pressure

The difference in mean SBP between groups was −2.9 mmHg at month 1 and −3.0 mmHg at month 12#



Mean SBP at baseline (mmHg):
Placebo: 137.98 ±14.42
Finerenone: 138.02 ±14.31

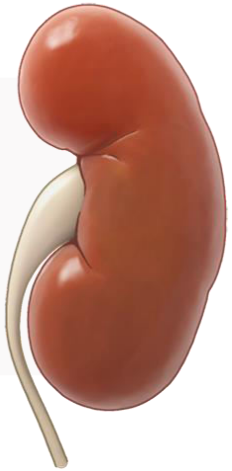
Patients (n):

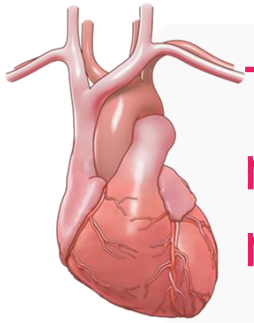
Finerenone	2826	2746	2628	1906	902	348
Placebo	2831	2751	2636	1895	884	353

Summary

In a patient population with advanced CKD in T2D, well-controlled blood pressure and HbA1c, and treated with a maximally tolerated dose of an ACEi or ARB, finerenone significantly reduced:

The risk of CKD progression by 18%





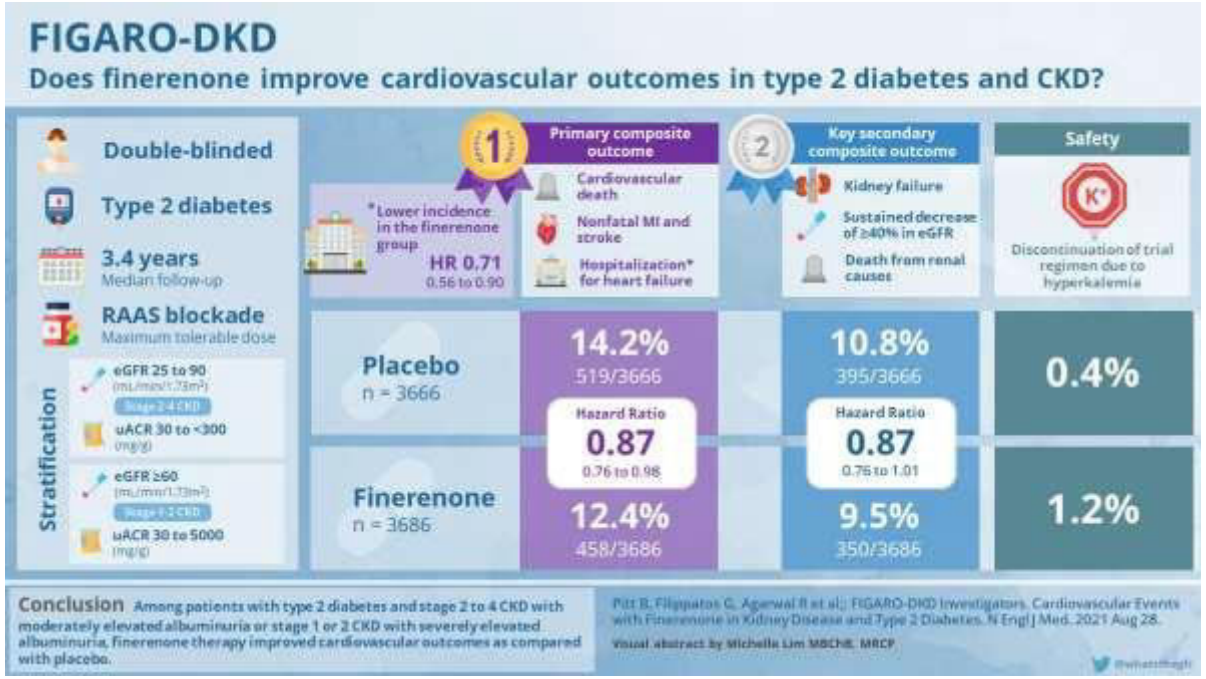
The risk of CV morbidity and mortality by 14%

Cardiovascular Outcomes of Finerenone in less severe Diabetic Kidney Disease: the FIGARO-DKD trial

- Pts with T2D and CKD :
  - **UACR > 300 mg/g &**

    eGFR > 60ml/min/1.73m2
  - **UACR in 30-300 mg/g &**

    eGFR in 25-90 ml/min/1.73m2



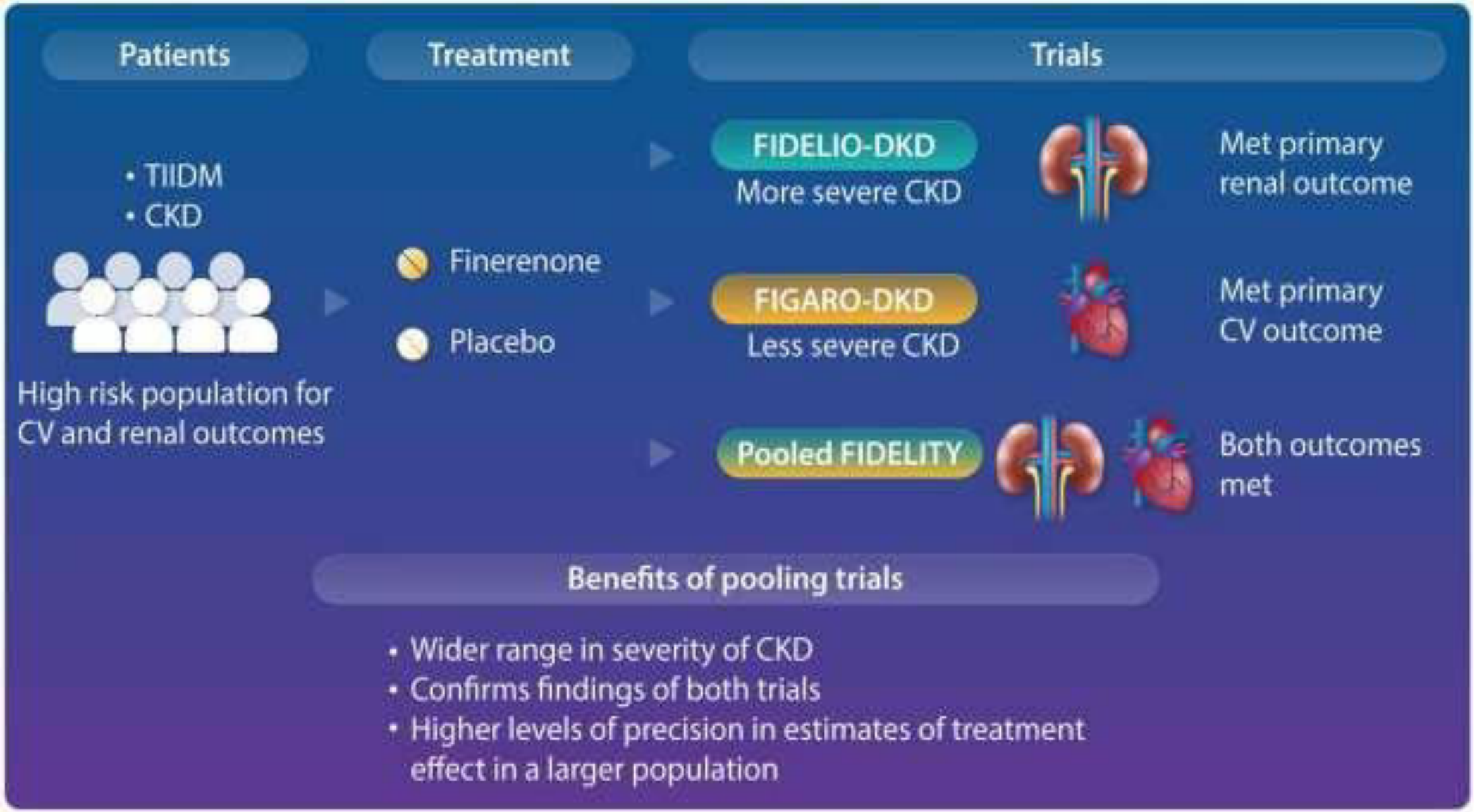
SAE: 31.4% (Finerenone) vs 33.2% (placebo)
Incidence of hyperkalemia was higher with finerenone than with placebo (10.8% vs. 5.3%)

www.nejm.org/doi/full/10.1056/NEJMoa211095

FIDELIO & FIGARO-DKD trial

	FIDELIO-DKD	FIGARO-DKD
Drug	Finerenone	Finerenone
Total number of participants	5734	7437
% with CVD	45.4	44.7
eGFR and ACR criteria for enrollment	25–<60 ml/min per 1.73 m² and ACR 30–<300 mg/g [3–<30 mg/mmol] OR 25–<75 ml/min per 1.73 m² and ACR 300–5000 mg/g [30–500 mg/mmol]	25–90 ml/min per 1.73 m² and ACR 30–<300 mg/g [3–<30 mg/mmol] OR ≥60 ml/min per 1.73 m² and ACR 300–5000 mg/g [30–500 mg/mmol]
Mean eGFR at enrollment (ml/min per 1.73 m²)	44	68
% with eGFR <60 ml/min per 1.73 m²	88.4	38.2
Median ACR at enrollment (mg/g [mg/mmol])	850 [85.0]	309 [30.9]
% with ACR ≥300 mg/g (30 mg/mmol)	87.5	50.7
Follow-up time (median, yr)	2.6	3.4
Primary outcome	Kidney composite: kidney failure, a sustained decrease ≥40% in GFR, renal death	CV composite: death from CV causes, nonfatal MI, nonfatal stroke, or hospitalization for HF
Main secondary outcome	CV composite: death from CV causes, nonfatal MI, nonfatal stroke, or hospitalization for HF	Kidney composite: kidney failure, a sustained decrease ≥40% in GFR, renal death
Kidney composite outcome result	HR: 0.82; 95% CI: 0.73–0.93	HR: 0.87; 95% CI: 0.76–1.01
Cardiovascular composite outcome result	HR: 0.86; 95% CI: 0.75–0.99	HR: 0.87; 95% CI: 0.76–0.98

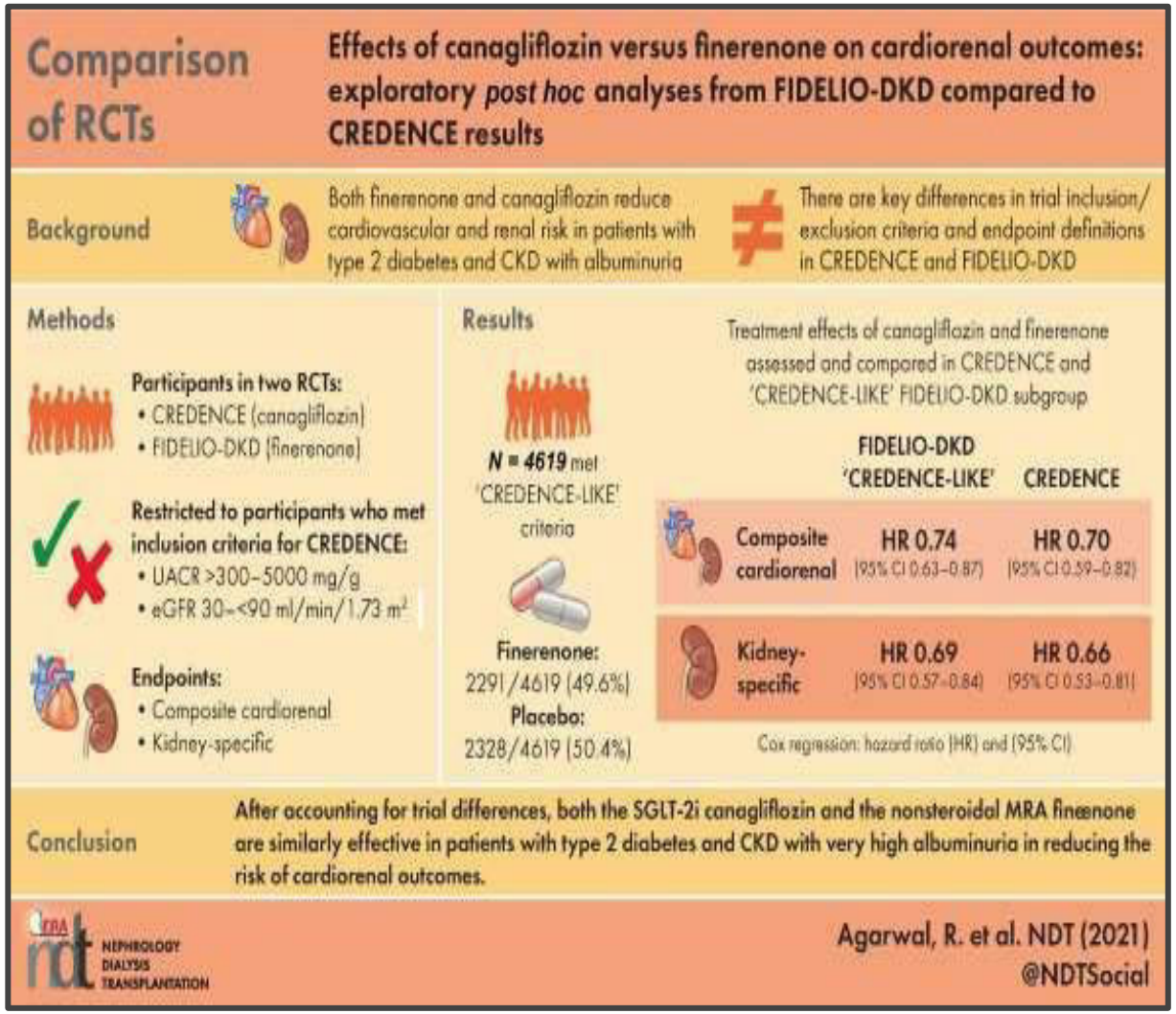
Pooled Analysis



MRA v.s. SGLT2i in the management of CKD

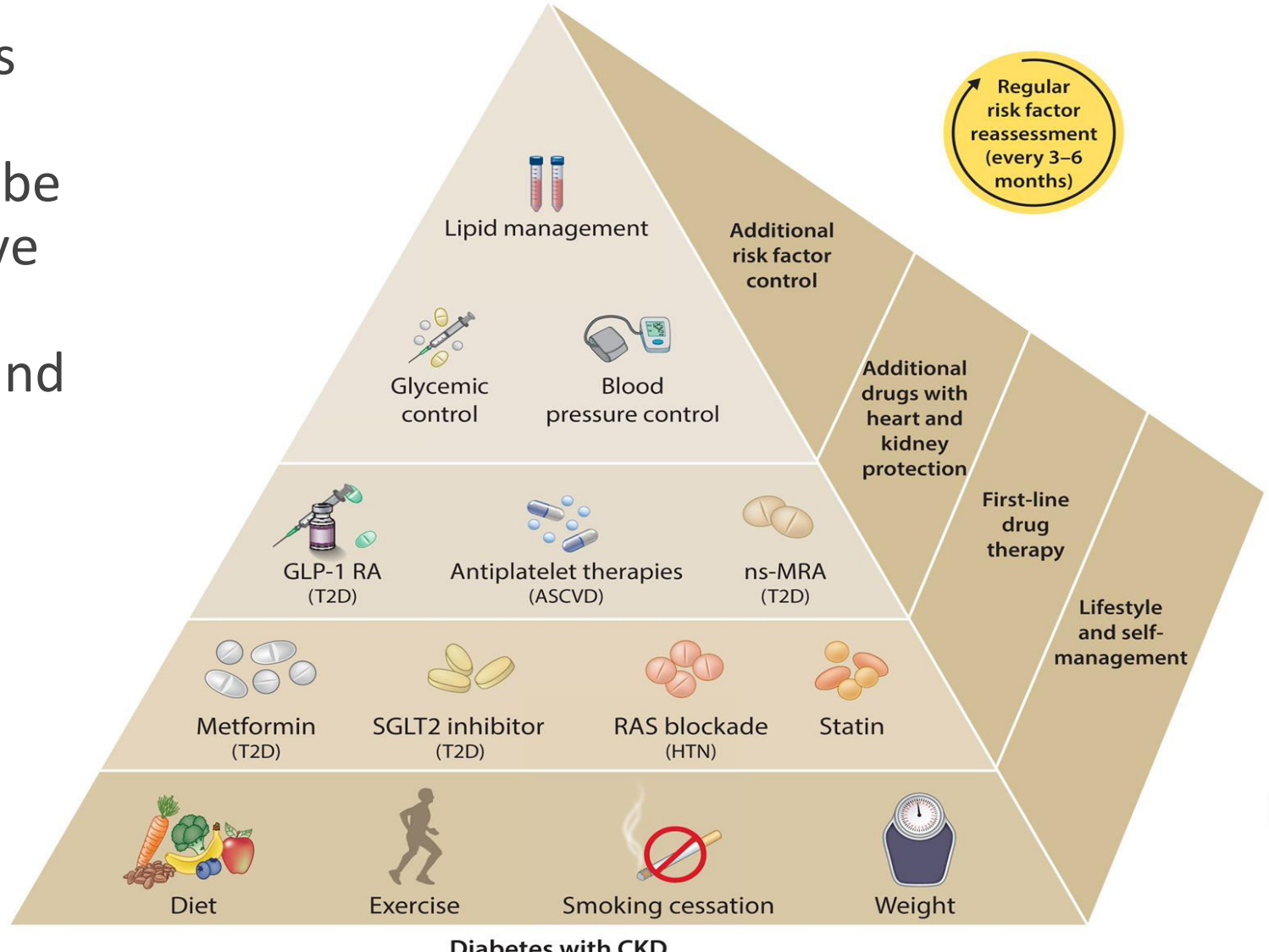
ARE MRAs LESS POTENT?

	Fielio -K "Credence like	Credence
Composite cardiorenal	HR 0.74 (95% CI 0.63-0.87)	HR 0.70 (95% CI 0.59-0.82)
Kidney specific	HR 0.69 (95% CI 0.57-0.84)	HR 0.66 (95% CI 0.53-0.81)



Comprehensive Care in Patients with Diabetes and CKD

Practice Point 1.1.1: Patients with diabetes and chronic kidney disease (CKD) should be treated with a comprehensive strategy to reduce risks of kidney disease progression and cardiovascular disease .



Comprehensive Care in Patients with Diabetes and CKD

Recommendation 1.4.1: We suggest a nonsteroidal mineralocorticoid receptor antagonist with proven kidney or cardiovascular benefit for patients with T2D, an eGFR ≥25 ml/min per 1.73 m^2, normal serum potassium concentration, and albuminuria (≥30 mg/g [≥ 3mg/mmol]) despite maximum tolerated dose of RAS inhibitor (RASi) *(2A)*.

K^+ ≤4.8 mmol/l

- Initiate finerenone
  - 10 mg daily if eGFR 25–59 ml/min per 1.73 m^2
  - 20 mg daily if eGFR ≥60 ml/min per 1.73 m^2
- Monitor K^+ at 1 month after initiation and then every 4 months
- Increase dose to 20 mg daily, if on 10 mg daily
- Restart 10 mg daily if previously held for hyperkalemia and K^+ now ≤5.0 mmol/l

K^+ 4.9–5.5 mmol/l

- Continue finerenone 10 mg or 20 mg
- Monitor K^+ every 4 months

K^+ >5.5 mmol/l

- Hold finerenone
- Consider adjustments to diet or concomitant medications to mitigate hyperkalemia
- Recheck K^+
- Consider reinitiation if/when K^+ ≤5.0 mmol/l

Comprehensive Care in Patients with Diabetes and CKD

Practice Point 1.4.1: Nonsteroidal MRA are most appropriate for patients with T2D who are at high risk of CKD progression and cardiovascular events, as demonstrated by persistent albuminuria despite other standard-of-care therapies.

Practice Point 1.4.2: A nonsteroidal MRA can be added to a RASi and an SGLT2i for treatment of T2D and CKD.

Practice Point 1.4.3: To mitigate risk of hyperkalemia, select patients with consistently normal serum potassium concentration and monitor serum potassium regularly after initiation of a nonsteroidal MRA.

Practice Point 1.4.4: The choice of a nonsteroidal MRA should prioritize agents with documented kidney or cardiovascular benefits.

Practice Point 1.4.5: A steroidal MRA should be used for treatment of heart failure, hyperaldosteronism, or refractory hypertension, but may cause hyperkalemia or a reversible decline in glomerular filtration, particularly among patients with a low GFR.

New recommendations include the use of finerenone for the reduction of CKD progression and CV events

AHA 2022 scientific statement 2022[1]	AACE 2022 Clinical practice guidelines 2022[4]	ADA/KDIGO consensus statement 2022[5]	KDIGO Guidelines 2022[6]	ADA 2023 guidelines CVD and risk management[7]	ADA 2023 guidelines CKD and risk management[2]	ADA 2023 guidelines CKD and risk management[3]
Along with SGLT-2is and GLP-1RAs, results with **finerenone** from **FIDELIO-DKD** are noted as **critical advancements** in **delaying the progression of CKD** in T2D	**A non-steroidal MRA (finerenone)** with **proven kidney and CVD benefit is recommended** for persons with T2D, an eGFR ≥25 mL/min, normal serum potassium and albuminuria (ACR ≥30 mg/g) despite a maximum tolerated dose of a RAASi **Level 1A** **Recommendation**	*A **nonsteroidal MRA** with proven **kidney and CV benefit** is recommended for patients with T2D, eGFR ≥25 ml/min/1.73 m^2, normal serum [K^+], and albuminuria (ACR ≥30 mg/g) despite maximum tolerated dose of RASi*	**A nonsteroidal MRA with proven kidney or CV benefit for patients with T2D,** an eGFR ≥25 ml/min per 1.73 m2, normal serum potassium concentration, and albuminuria (≥ 30 mg/g [≥3 mg/mmol]) despite maximum tolerated dose of RAS inhibitor RASi **Level 2A** **Recommendation**	For people with T2D and CKD with albuminuria treated with maximum tolerated doses of ACEi or ARB, **addition of finerenone is recommended to improve CV outcomes and reduce the risk of CKD progression** ***Level of recommendation: A***	In people with T2D and DKD, consider use of SGLT2i (if e GFR is ≥ 20 mL/min/1.73 m2), **a** GLP1a, or **a nonsteroidal MRA (if e GFR is ≥ 25 mL/min/1.73 m2) additionally for CV risk reduction** ***Level of recommendation: A***	For people with T2D with CKD and albuminuria who are at increased risk for CV events or CKD progression, **a nonsteroidal MRA shown to be effective in clinical trials is recommended to reduce CKD progression and CV events** ***Level of recommendation: A***

Prevent kidney disease progression and improve cardiac remodelling

This artwork was created with the help of Artificial Intelligence