بنام خداوند جان و خرد

Finerinone

from clinical needs to clinical application

M Siavash
Professor of endocrinology
Isfahan University of medical sciences
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Background

- Type 2 diabetes is the leading cause of chronic kidney disease (CKD) worldwide.
- International guidelines for the management of CKD in patients with type 2 diabetes recommend control of hypertension and hyperglycemia, as well as the use of a renin–angiotensin system (RAS) blocker (an angiotensin-converting–enzyme [ACE] inhibitor or angiotensin-receptor blocker [ARB]) and, more recently, a sodium–glucose cotransporter 2 (SGLT2) inhibitor.
- Nonetheless, despite recommended treatment, a risk of CKD progression remains, and newer therapies are needed.

Introduction

- Evidence supports a pathophysiological role for overactivation of the mineralocorticoid receptor in cardiorenal diseases, including CKD and diabetes, through inflammation and fibrosis that lead to progressive kidney and cardiovascular dysfunction.
- Although a meta-analysis showed a 31% reduction in urinary protein or albumin excretion after treatment with a steroidal mineralocorticoid receptor antagonist in patients with CKD, data on hard clinical outcomes are lacking.
- Finerenone, a nonsteroidal, selective mineralocorticoid receptor antagonist, had more potent antiinflammatory and antifibrotic effects than steroidal mineralocorticoid receptor antagonists in preclinical models.

Introduction

- In the Finerenone in Reducing Kidney Failure and Disease Progression in Diabetic Kidney Disease (FIDELIO-DKD) trial, finerenone improved kidney outcomes in patients with predominantly stage 3 or 4 CKD with severely elevated albuminuria and type 2 diabetes, a population with high kidney risk.
- In the Finerenone in Reducing Cardiovascular Mortality and Morbidity in Diabetic Kidney Disease (FIGARO-DKD) trial, they evaluated whether treatment with finerenone would lead to lower risks of cardiovascular events and death from cardiovascular causes among patients with either stage 2 to 4 CKD and moderately elevated albuminuria or stage 1 or 2 CKD and severely increased albuminuria — a patient population at high cardiovascular risk that was excluded from or understudied in the FIDELIO-DKD trial.

Table I **Pooled analysis study details**

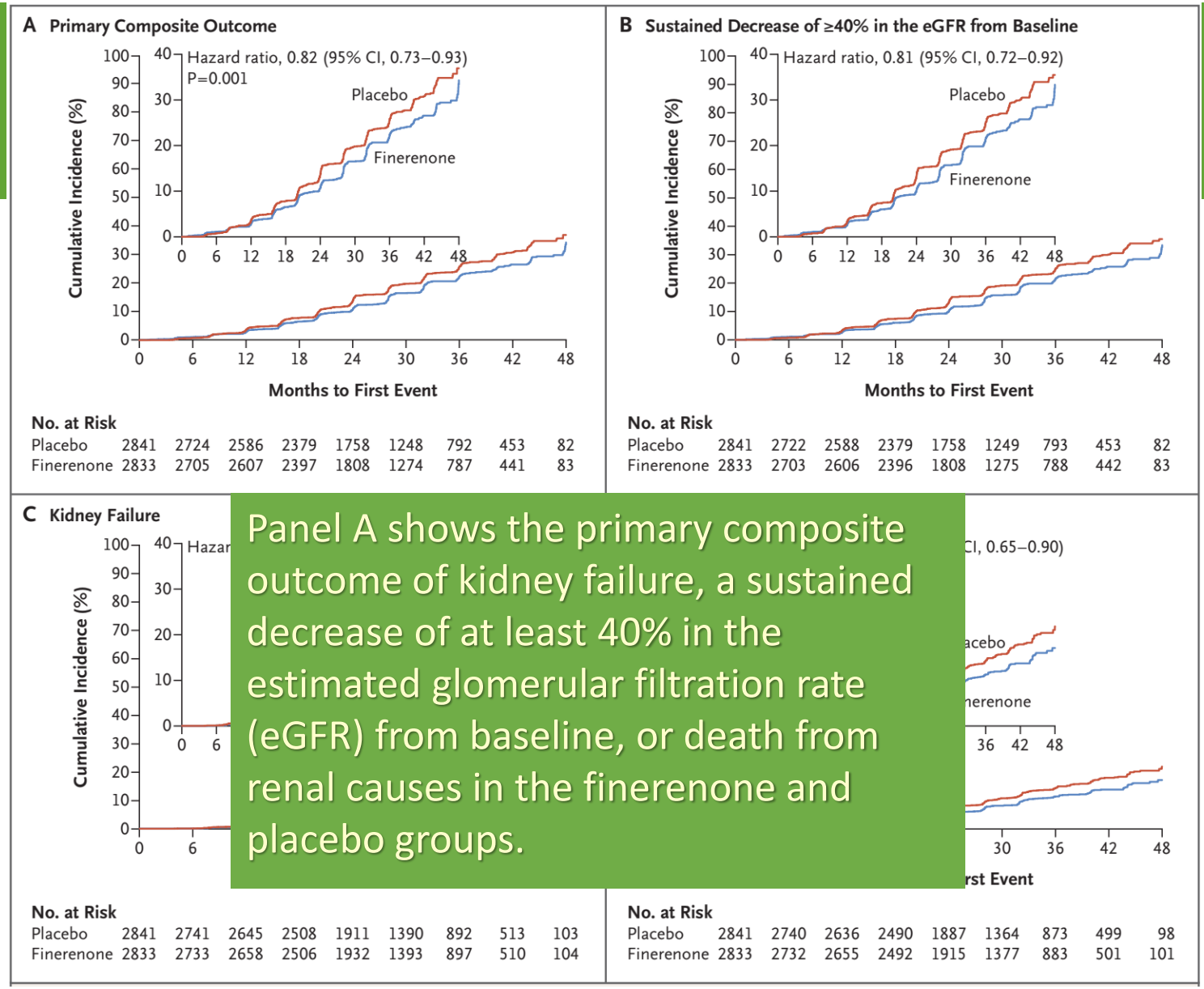
Study name	FIDELIO-DKD[7]	FIGARO-DKD[10]
Publication year	2020	2021
Study design	Phase III, randomized, double-blind, placebo-controlled, multicentre clinical trial	Phase III, randomized, double-blind, placebo-controlled, multicentre clinical trial
Sample size[a]	5734	7437
Inclusion criteria	• Age ≥18 years • T2D and CKD defined as UACR 30–<300 mg/g, eGFR 25–<60 mL/min/1.73 m^2, and diabetic retinopathy, *or* UACR 300–5000 mg/g and eGFR 25–<75 mL/min/1.73 m^2 • Maximum tolerated dose of an RAS inhibitor • Serum potassium ≤4.8 mmol/L	• Age ≥18 years • T2D and CKD defined as UACR 30–<300 mg/g and eGFR 25–90 mL/min/1.73 m^2, *or* UACR 300–5000 mg/g and eGFR ≥60 mL/min/1.73 m^2 • Maximum tolerated dose of an RAS inhibitor • Serum potassium ≤4.8 mmol/L
Exclusion criteria	• Non-diabetic kidney disease • Uncontrolled hypertension[b] • HbA1c >12% • SBP <90 mmHg • Chronic symptomatic HFrEF[c] • Recent CV event • Dialysis for acute kidney failure • Kidney transplant	• Non-diabetic kidney disease • Uncontrolled hypertension[b] • HbA1c >12% • SBP <90 mmHg • Chronic symptomatic HFrEF[c] • Recent CV event • Dialysis for acute kidney failure • Kidney transplant
Follow-up period, median	2.6 years	3.4 years
Primary outcome	Time to kidney failure, sustained ≥40% decrease in eGFR from baseline, or renal death	Time to CV death, non-fatal MI , non-fatal stroke, or HHF
Secondary outcome	Time to CV death, non-fatal MI , non-fatal stroke, or HHF	Time to kidney failure, sustained ≥40% decrease in eGFR from baseline, or renal death
Trial registry information	NCT02540993	NCT02545049

Effect of Finerenone on Chronic Kidney Disease Outcomes in Type 2 Diabetes(FIDELIO-DKD)

FIDELIO-DKD

- Finerenone has been shown to reduce the urinary albumin-to-creatinine ratio in patients with CKD treated with an RAS blocker, while having smaller effects on serum potassium levels than spironolactone.
- The Finerenone in Reducing Kidney Failure and Disease Progression in Diabetic Kidney Disease (FIDELIO-DKD) trial was designed to test the hypothesis that finerenone slows CKD progression and reduces cardiovascular morbidity and mortality among patients with advanced CKD and type 2 diabetes.

Outcomes were assessed in time-to-event analyses.
Panel A shows the primary composite outcome of kidney failure, a sustained decrease of at least 40% in the estimated glomerular filtration rate (eGFR) from baseline, or death from renal causes in the finerenone and placebo groups.
Panel B shows a sustained decrease of at least 40% in the eGFR from baseline maintained for at least 4 weeks (a component of the primary composite outcome).
Panel C shows kidney failure (defined as end-stage kidney disease or a sustained eGFR of <15 ml per minute per 1.73 m2 of body-surface area, confirmed by a second measurement ≥4 weeks after the initial measurement); endstage kidney disease was defined as the initiation of long-term dialysis or kidney transplantation.
Panel D shows the secondary composite kidney outcome of kidney failure, a sustained decrease of at least 57% in the eGFR from baseline (equivalent to a doubling of the serum creatinine level) maintained for at least 4 weeks, or death from renal causes. Insets show the same data on an enlarged y axis. CI denotes confidence interval.



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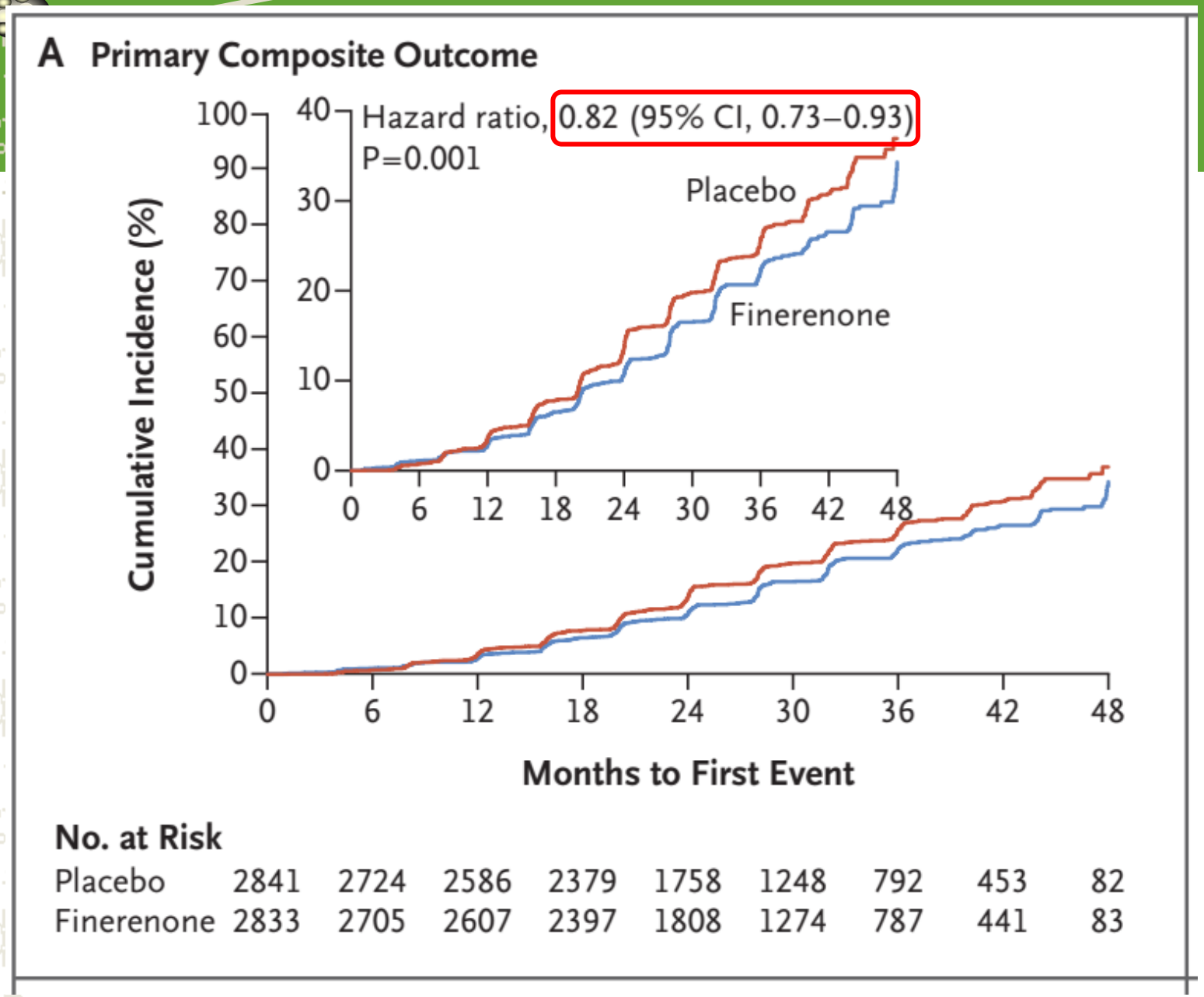
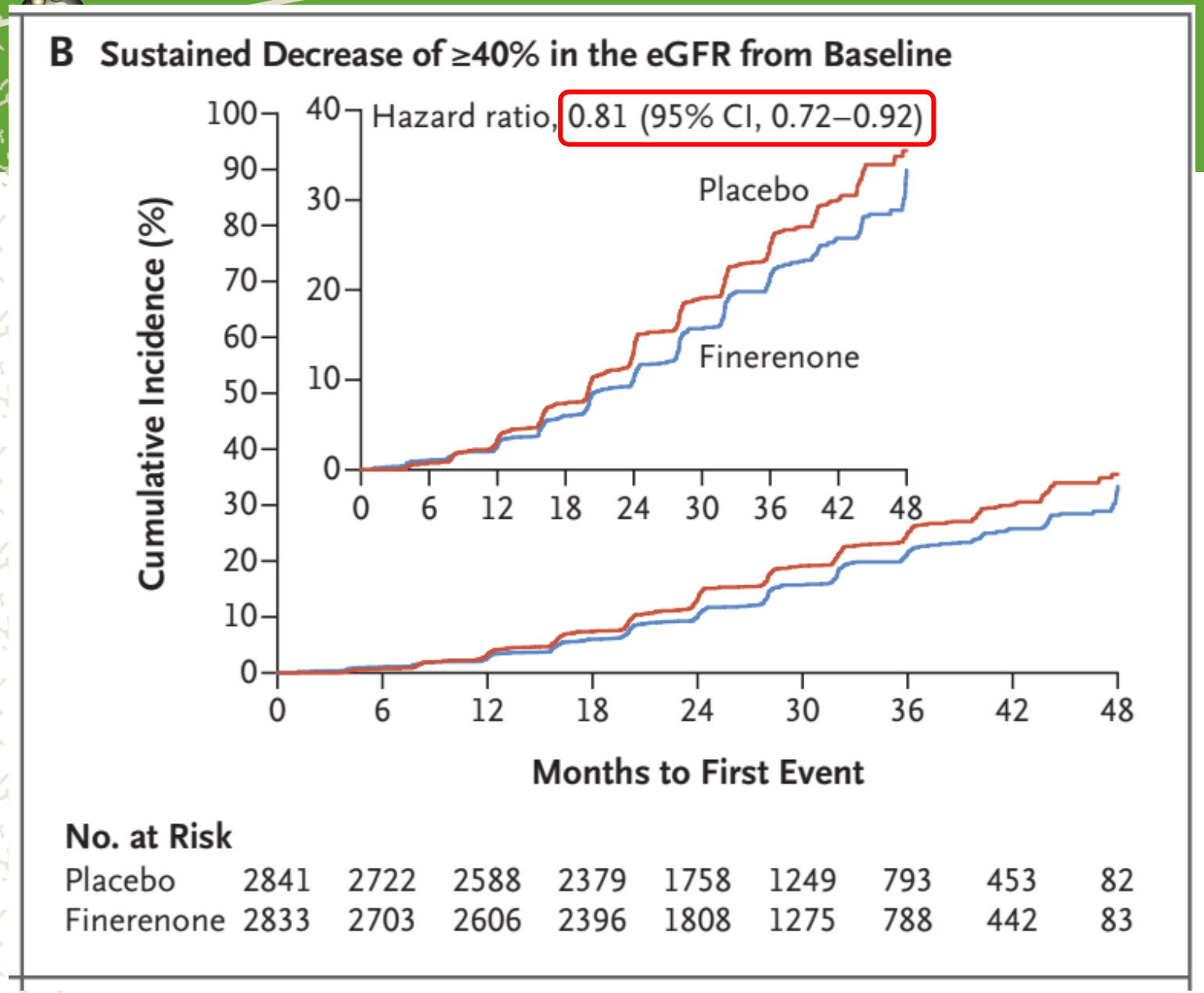
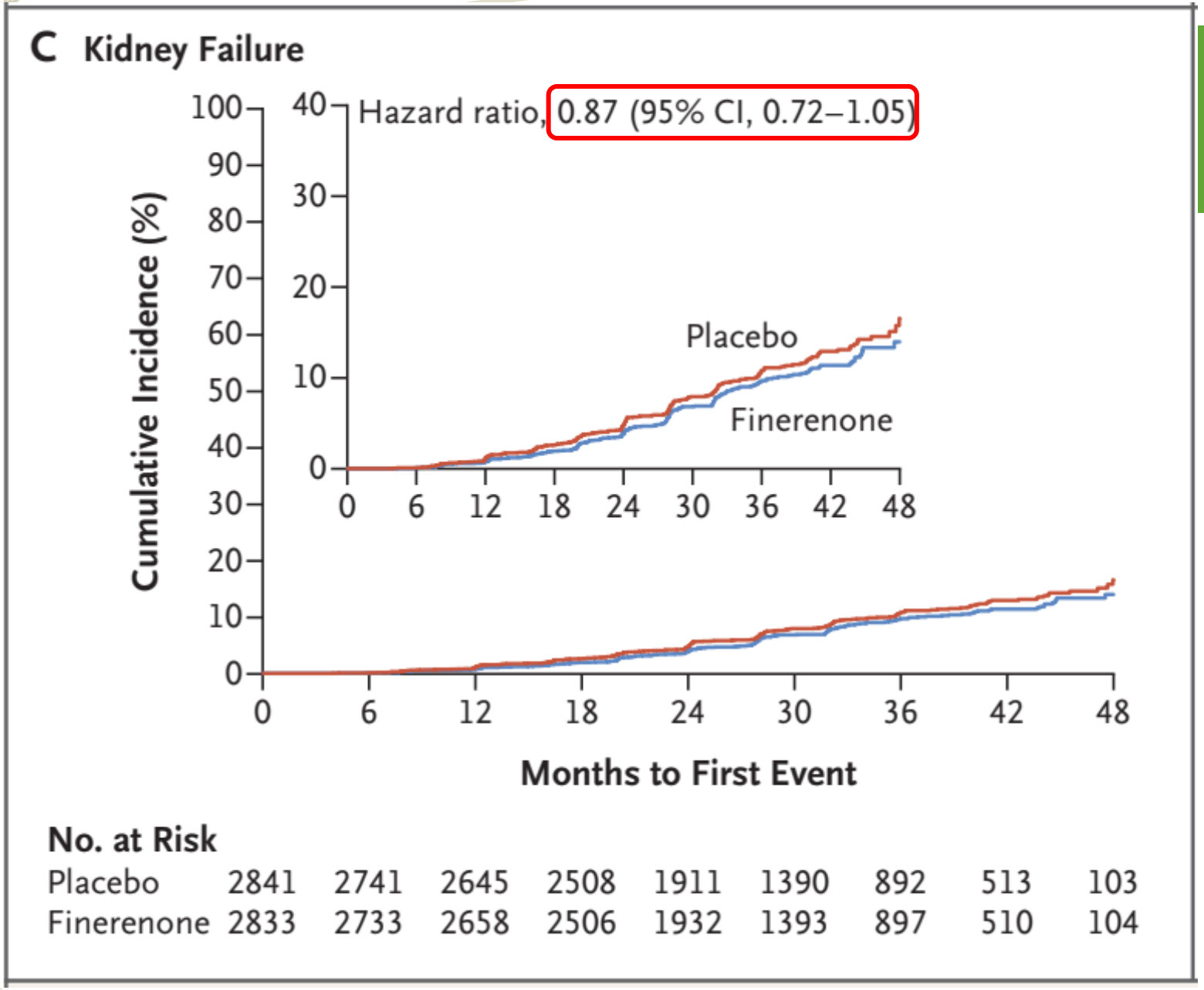
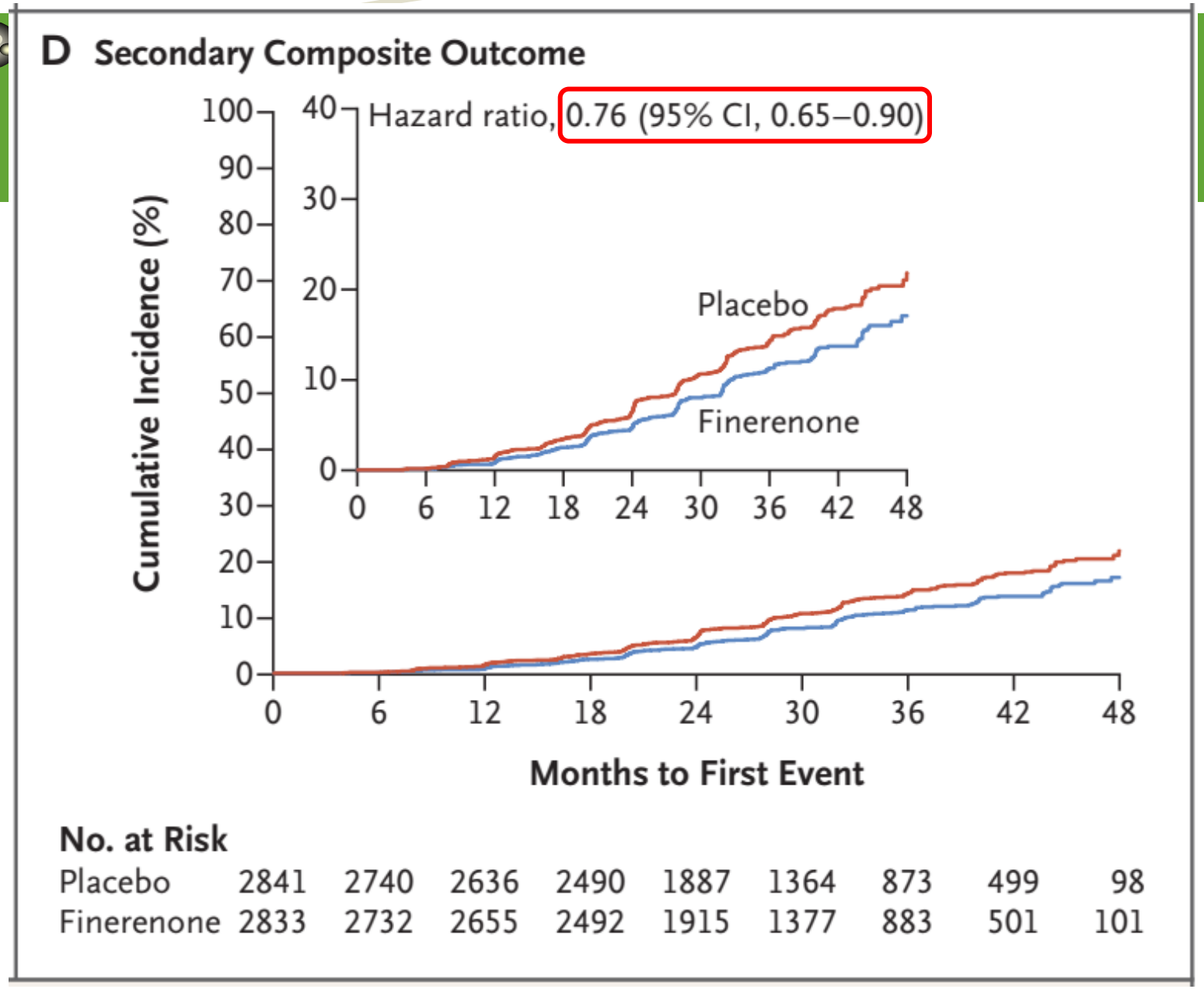

A Primary Composite Outcome
Hazard ratio, 0.82 (95% CI, 0.73–0.93)
P=0.001
Placebo
Finerenone
Cumulative Incidence (%)
Months to First Event
No. at Risk
Placebo 2841 2724 2586 2379 1758 1248 792 453 82
Finerenone 2833 2705 2607 2397 1808 1274 787 441 83


B Sustained Decrease of ≥40% in the eGFR from Baseline
Hazard ratio, 0.81 (95% CI, 0.72–0.92)
Placebo
Finerenone
Cumulative Incidence (%)
Months to First Event
No. at Risk
Placebo 2841 2722 2588 2379 1758 1249 793 453 82
Finerenone 2833 2703 2606 2396 1808 1275 788 442 83

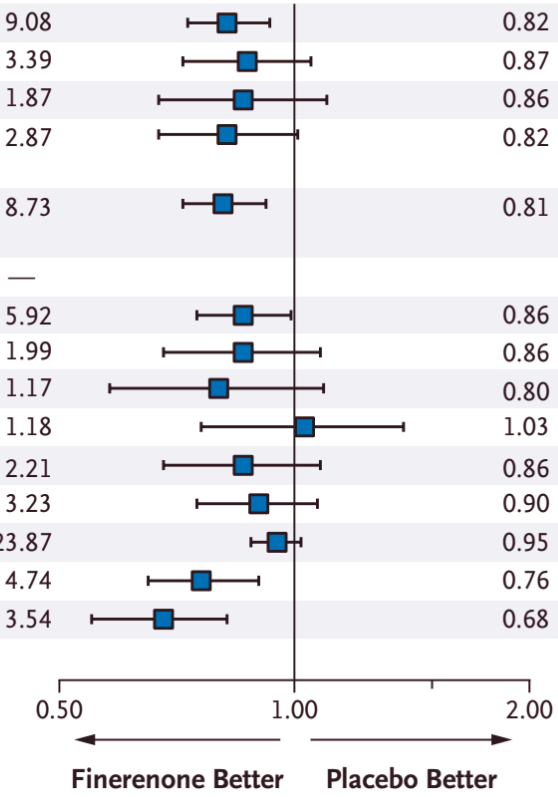

C Kidney Failure
Hazard ratio, 0.87 (95% CI, 0.72–1.05)
Cumulative Incidence (%)
Placebo
Finerenone
Months to First Event
No. at Risk
Placebo 2841 2741 2645 2508 1911 1390 892 513 103
Finerenone 2833 2733 2658 2506 1932 1393 897 510 104

Panel D shows the secondary composite kidney outcome of kidney failure, a sustained decrease of at least 57% in the eGFR from baseline (equivalent to a doubling of the serum creatinine level) maintained for at least 4 weeks, or death from renal causes.

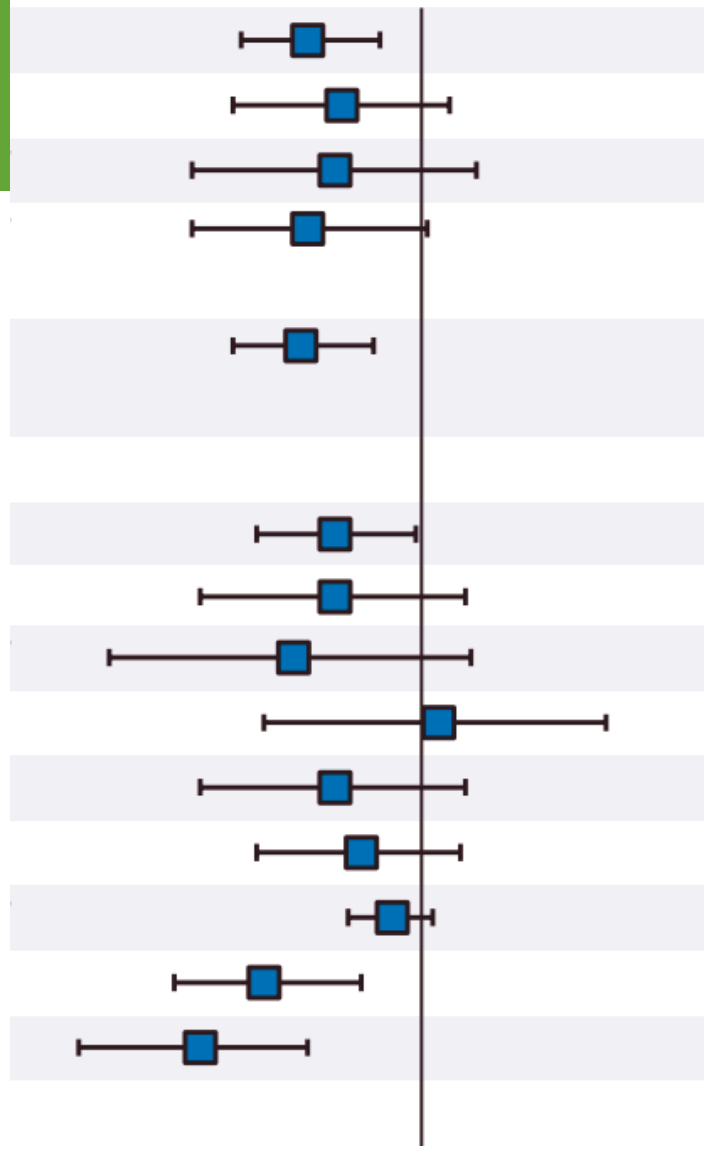


Shown are the hierarchical prespecified efficacy outcomes of the trial, including the components of the composite outcomes. Outcomes were assessed in time-to-event analyses. The key secondary outcome was a composite of death from cardiovascular causes, nonfatal myocardial infarction, nonfatal stroke, or hospitalization for heart failure.

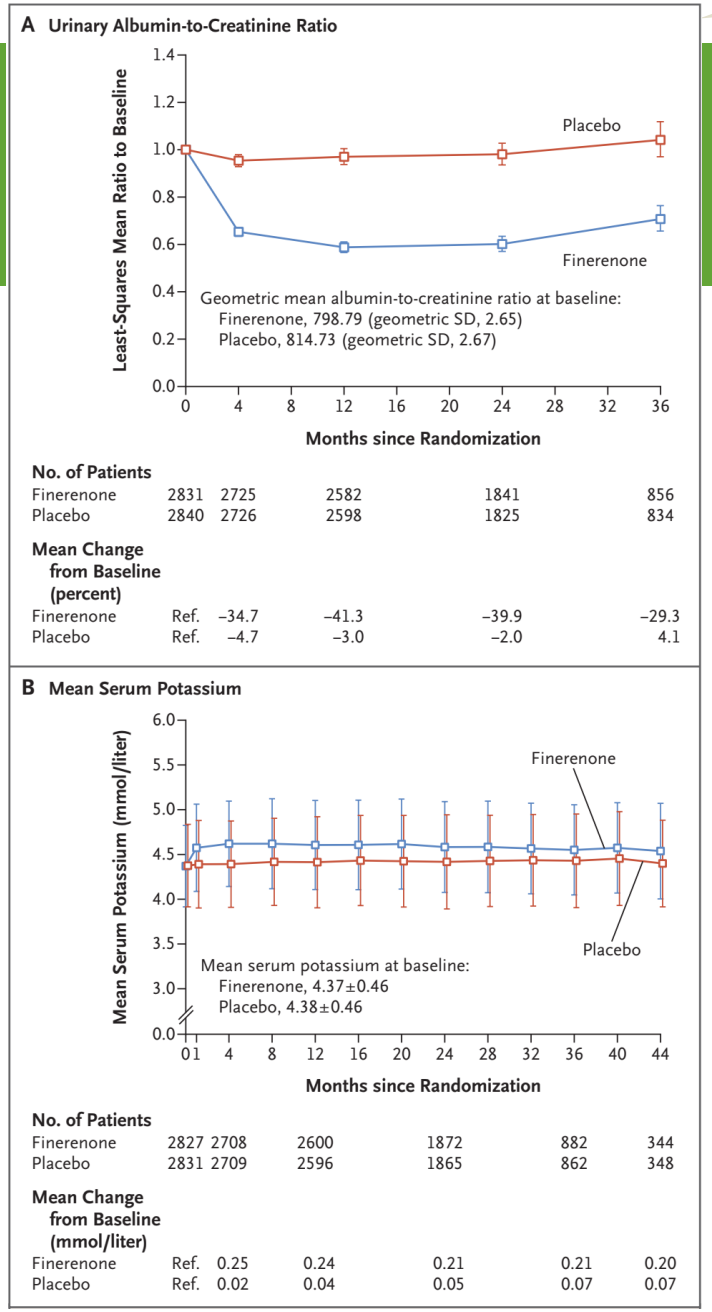
Outcome	Finerenone (N=2833)	Placebo (N=2841)	Finerenone (N=2833)	Placebo (N=2841)	Hazard Ratio (95% CI)	P Value
	no. of patients with event (%)		*no. of patients with event per 100 patient-yr*			
Primary composite outcome	504 (17.8)	600 (21.1)	7.59	9.08	0.82 (0.73–0.93)	0.001
Kidney failure	208 (7.3)	235 (8.3)	2.99	3.39	0.87 (0.72–1.05)	—
End-stage kidney disease	119 (4.2)	139 (4.9)	1.60	1.87	0.86 (0.67–1.10)	—
Sustained decrease in eGFR to <15 ml/min/1.73 m^2	167 (5.9)	199 (7.0)	2.40	2.87	0.82 (0.67–1.01)	—
Sustained decrease of ≥40% in eGFR from baseline	479 (16.9)	577 (20.3)	7.21	8.73	0.81 (0.72–0.92)	—
Death from renal causes	2 (<0.1)	2 (<0.1)	—	—	—	—
Key secondary composite outcome	367 (13.0)	420 (14.8)	5.11	5.92	0.86 (0.75–0.99)	0.03
Death from cardiovascular causes	128 (4.5)	150 (5.3)	1.69	1.99	0.86 (0.68–1.08)	—
Nonfatal myocardial infarction	70 (2.5)	87 (3.1)	0.94	1.17	0.80 (0.58–1.09)	—
Nonfatal stroke	90 (3.2)	87 (3.1)	1.21	1.18	1.03 (0.76–1.38)	—
Hospitalization for heart failure	139 (4.9)	162 (5.7)	1.89	2.21	0.86 (0.68–1.08)	—
Death from any cause	219 (7.7)	244 (8.6)	2.90	3.23	0.90 (0.75–1.07)	—
Hospitalization for any cause	1263 (44.6)	1321 (46.5)	22.56	23.87	0.95 (0.88–1.02)	—
Secondary composite kidney outcome	252 (8.9)	326 (11.5)	3.64	4.74	0.76 (0.65–0.90)	—
Sustained decrease of ≥57% in eGFR from baseline	167 (5.9)	245 (8.6)	2.41	3.54	0.68 (0.55–0.82)	—



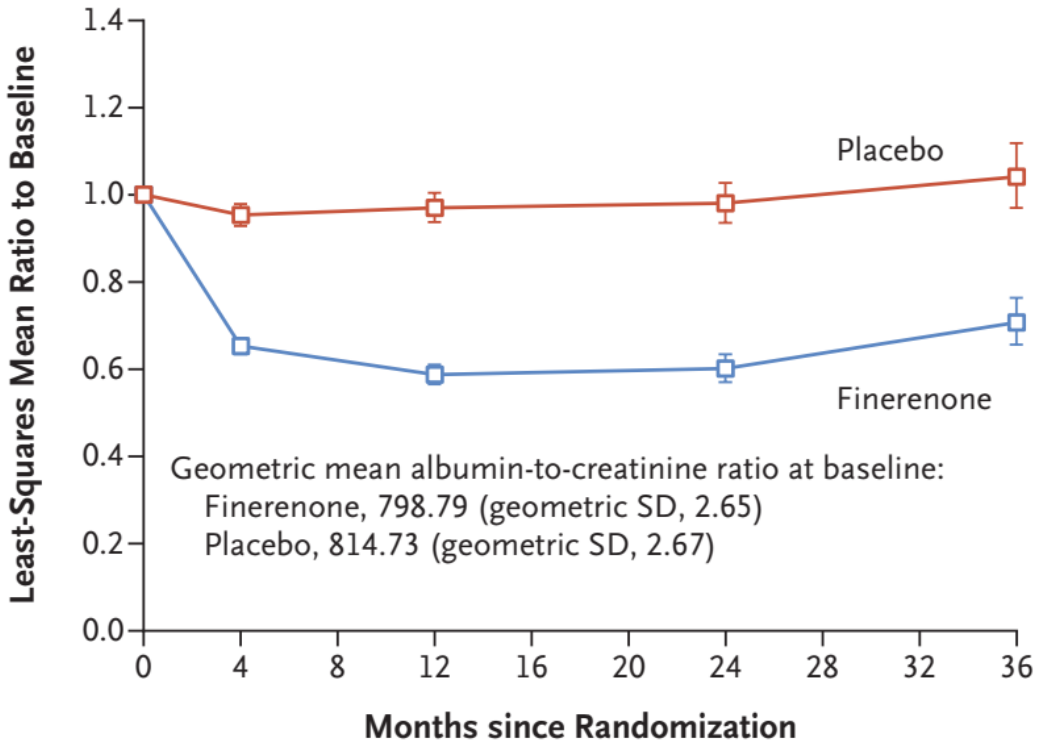
Primary composite outcome
Kidney failure
End-stage kidney disease
Sustained decrease in eGFR to <15 ml/min/1.73 m^2
Sustained decrease of ≥40% in eGFR from baseline
Death from renal causes
Key secondary composite outcome
Death from cardiovascular causes
Nonfatal myocardial infarction
Nonfatal stroke
Hospitalization for heart failure
Death from any cause
Hospitalization for any cause
Secondary composite kidney outcome
Sustained decrease of ≥57% in eGFR from baseline



Effects on Albuminuria and Serum Potassium over Time. Panel A shows the effects of finerenone and placebo on the urinary albuminto-creatinine ratio in the full analysis set. The urinary albumin-to-creatinine ratio was calculated with albumin measured in milligrams and creatinine measured in grams. Shown is the ratio of the urinary albumin-to-creatinine ratio at specific time points to the urinary albumin-to-creatinine ratio at baseline. Panel B shows the effects of finerenone and placebo on serum potassium levels in the safety analysis set. Plus–minus values are means ±SD. The I bars indicate 95% confidence intervals.

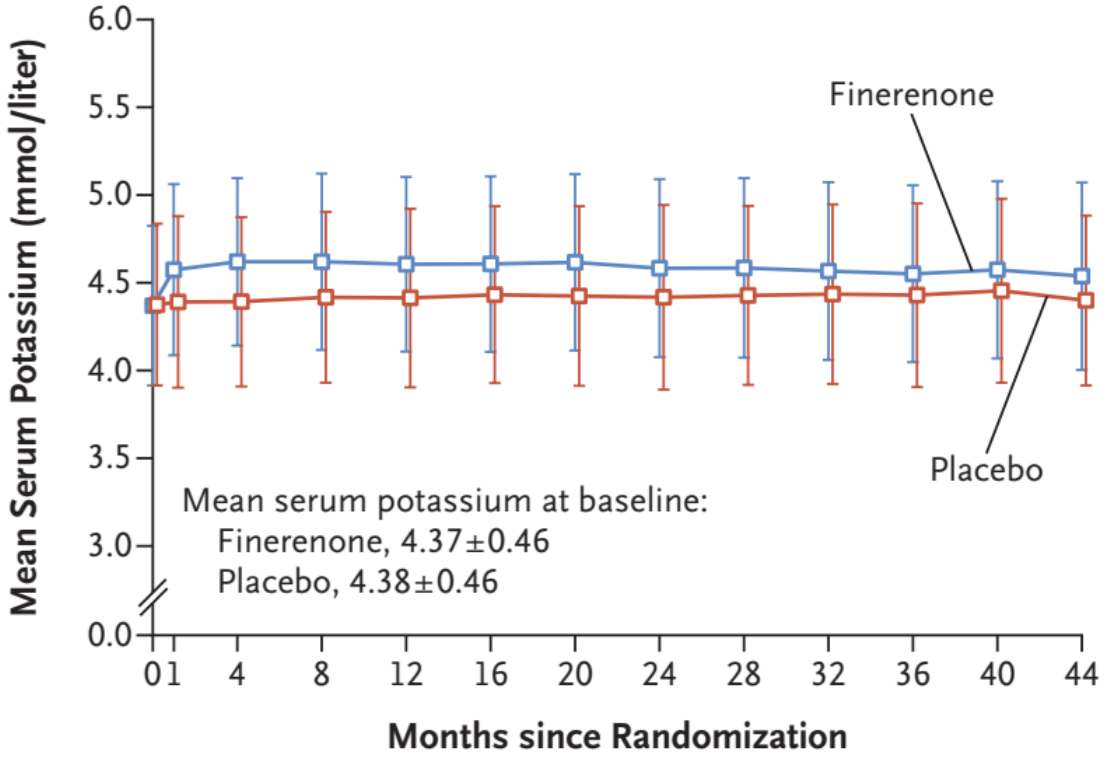


A Urinary Albumin-to-Creatinine Ratio



No. of Patients					
Finerenone	2831	2725	2582	1841	856
Placebo	2840	2726	2598	1825	834
Mean Change from Baseline (percent)					
Finerenone	Ref.	−34.7	−41.3	−39.9	−29.3
Placebo	Ref.	−4.7	−3.0	−2.0	4.1

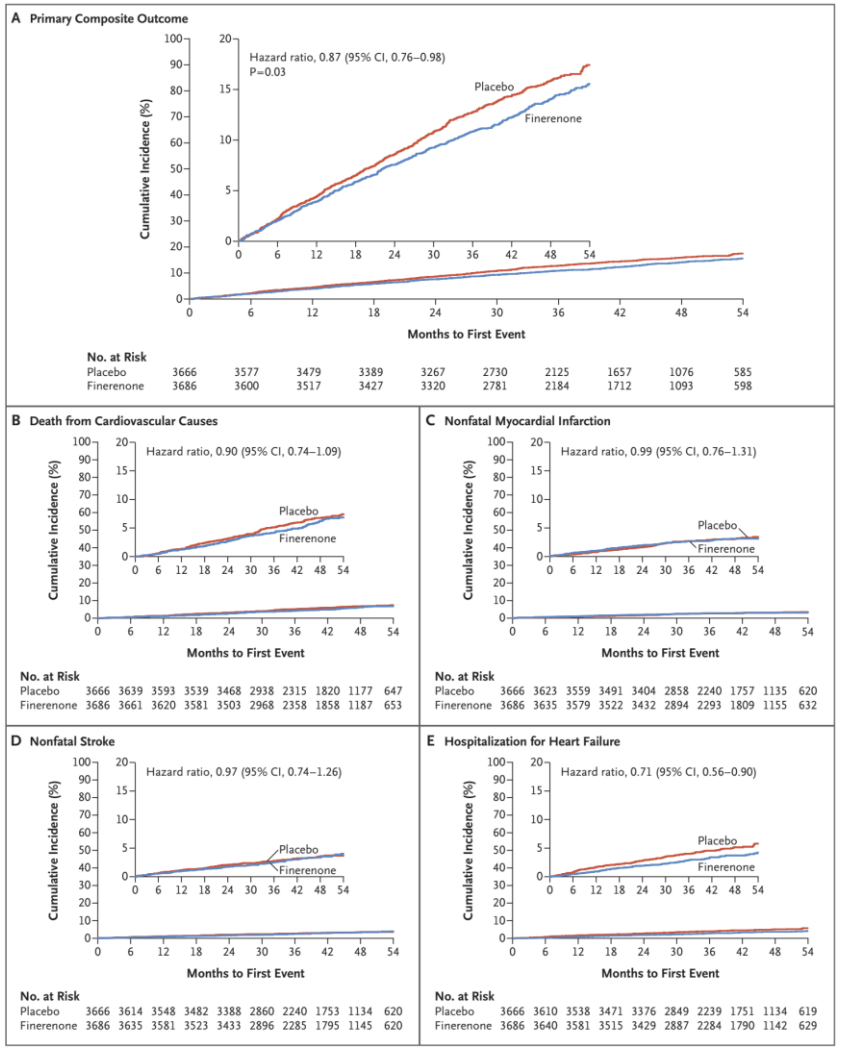
B **Mean Serum Potassium**



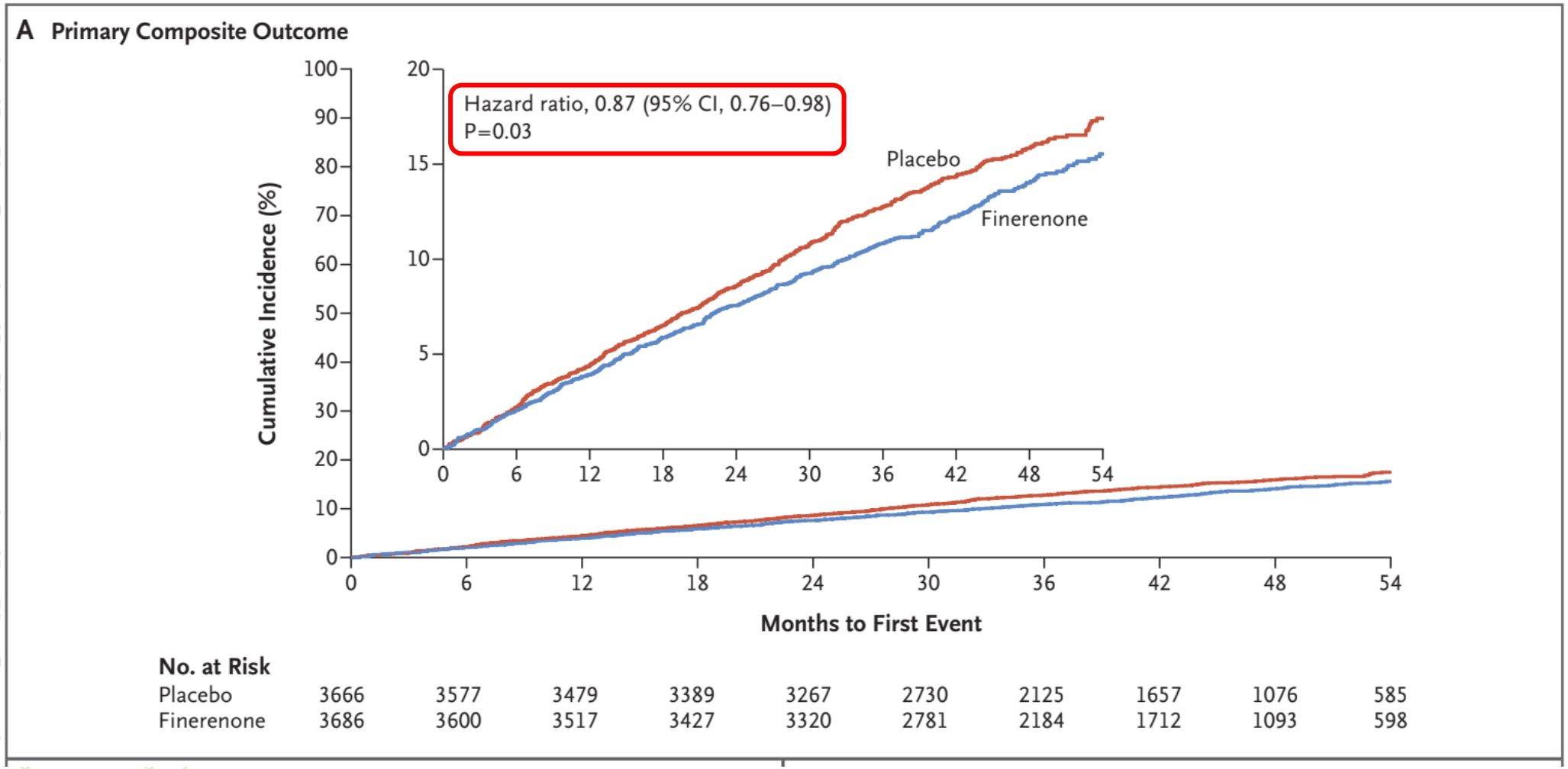
No. of Patients						
Finerenone	2827	2708	2600	1872	882	344
Placebo	2831	2709	2596	1865	862	348
Mean Change from Baseline (mmol/liter)						
Finerenone	Ref.	0.25	0.24	0.21	0.21	0.20
Placebo	Ref.	0.02	0.04	0.05	0.07	0.07

FIGARO DKD

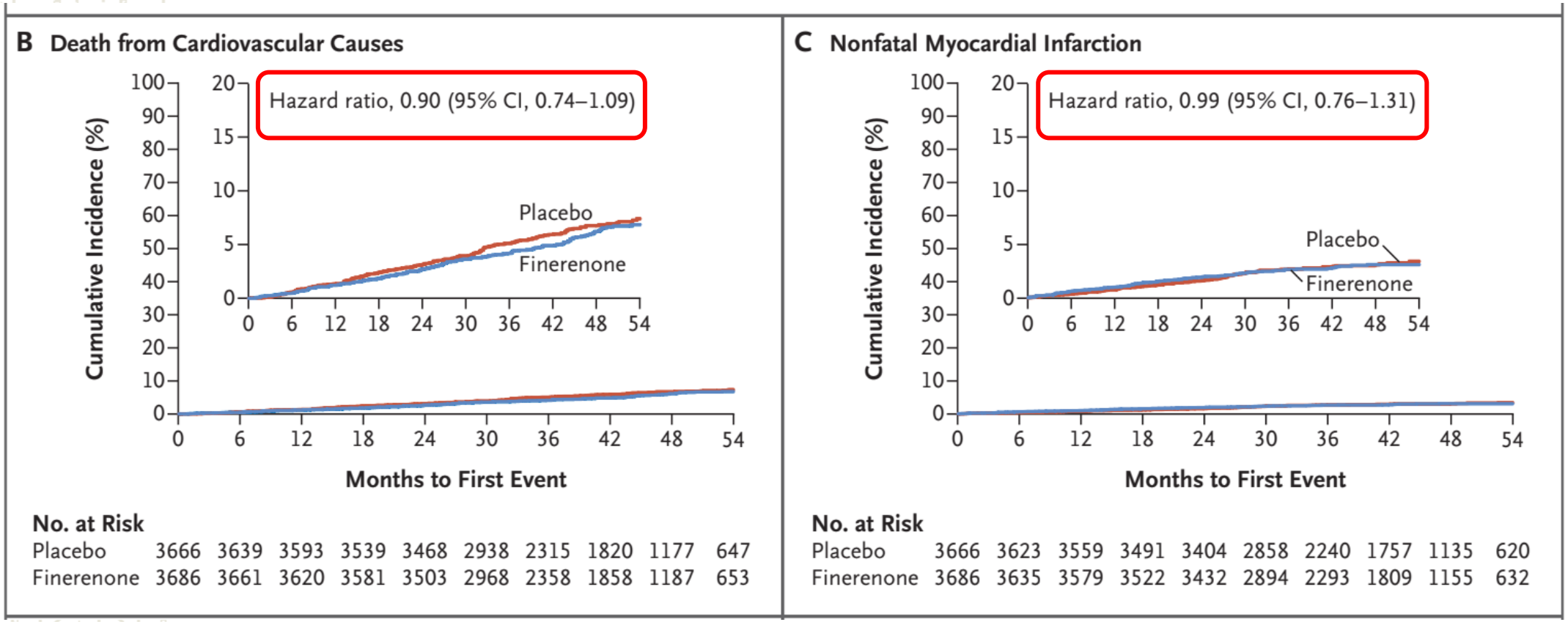
Cardiovascular Outcomes.
Outcomes were assessed in time-to-event analyses.
The primary outcome was a composite of death from cardiovascular causes, nonfatal myocardial infarction, nonfatal stroke, or hospitalization for heart failure. Insets show the same data on an enlarged y axis.



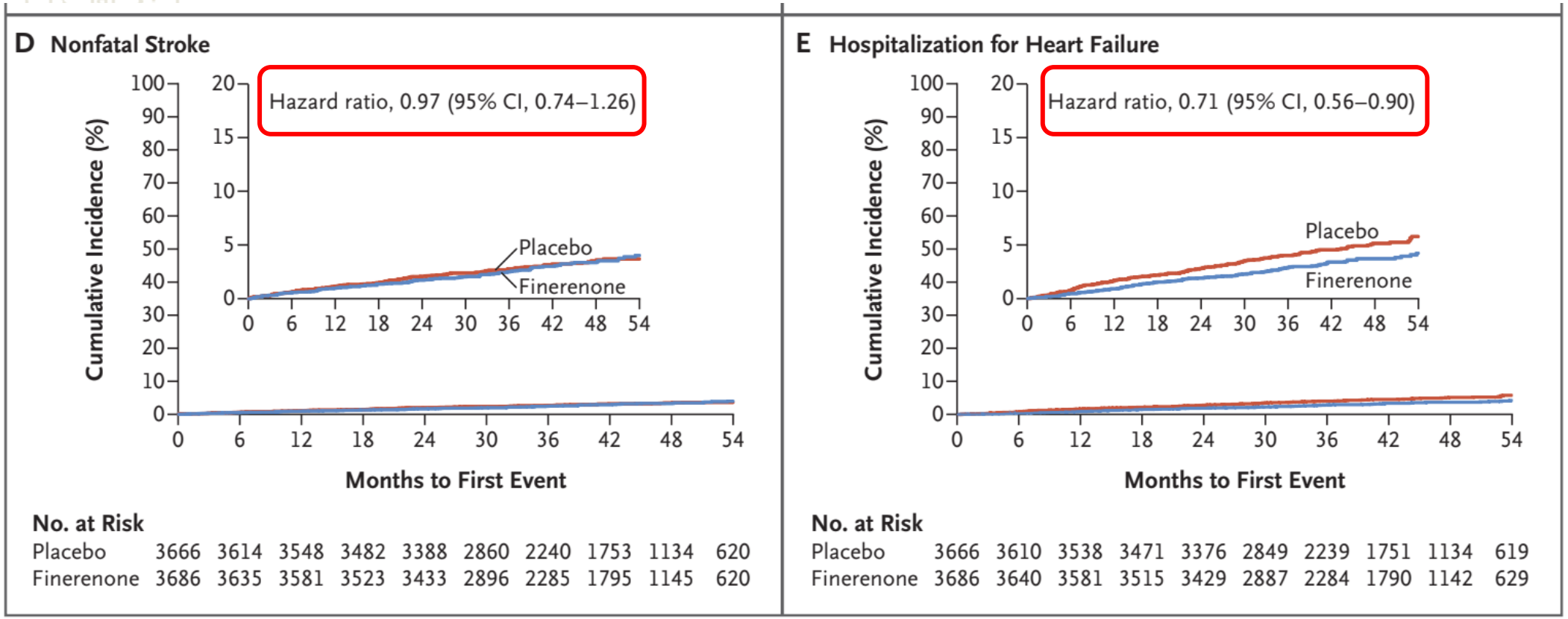
FIGARO DKD


A Primary Composite Outcome
Hazard ratio, 0.87 (95% CI, 0.76–0.98)
P=0.03
Placebo
Finerenone
Cumulative Incidence (%)
Months to First Event
No. at Risk
Placebo 3666 3577 3479 3389 3267 2730 2125 1657 1076 585
Finerenone 3686 3600 3517 3427 3320 2781 2184 1712 1093 598

FIGARO DKD


B Death from Cardiovascular Causes
Hazard ratio, 0.90 (95% CI, 0.74–1.09)
Placebo
Finerenone
Cumulative Incidence (%)
Months to First Event
No. at Risk
Placebo 3666 3639 3593 3539 3468 2938 2315 1820 1177 647
Finerenone 3686 3661 3620 3581 3503 2968 2358 1858 1187 653
C Nonfatal Myocardial Infarction
Hazard ratio, 0.99 (95% CI, 0.76–1.31)
Placebo
Finerenone
Cumulative Incidence (%)
Months to First Event
No. at Risk
Placebo 3666 3623 3559 3491 3404 2858 2240 1757 1135 620
Finerenone 3686 3635 3579 3522 3432 2894 2293 1809 1155 632

FIGARO DKD


D Nonfatal Stroke
Hazard ratio, 0.97 (95% CI, 0.74–1.26)
Cumulative Incidence (%)
Placebo
Finerenone
Months to First Event
No. at Risk
Placebo 3666 3614 3548 3482 3388 2860 2240 1753 1134 620
Finerenone 3686 3635 3581 3523 3433 2896 2285 1795 1145 620
E Hospitalization for Heart Failure
Hazard ratio, 0.71 (95% CI, 0.56–0.90)
Cumulative Incidence (%)
Placebo
Finerenone
Months to First Event
No. at Risk
Placebo 3666 3610 3538 3471 3376 2849 2239 1751 1134 619
Finerenone 3686 3640 3581 3515 3429 2887 2284 1790 1142 629

FIDELITY pooled analysis

- The FIDELIO-DKD trial was designed to detect a treatment effect of finerenone on kidney failure endpoints, whereas the FIGARO-DKD trial aimed to detect an effect on a cardiovascular composite primary endpoint.
  The FInerenone in chronic kiDney diseasE and type 2 diabetes: Combined FIDELIO-DKD and FIGARO-DKD Trial programme analYsis (FIDELITY) pools these complementary studies with similar designs, assessments, and conduct.
- The aim of the FIDELITY prespecified pooled analysis was to provide more robust estimates of finerenone efficacy and safety across the spectrum of patients with CKD and type 2 diabetes, to provide reassurance regarding outcomes in a wide range of patients with a degree of precision that was not possible to obtain by considering the two trials separately.

Inclusion/exclusion

- ✓ T2D + CKD
  eGFR ≥25 mL/min/1.73m²
  Serum [K⁺] ≤ 4.8 mmol/L
  Maximum tolerated labeled dose of RAS
- ✗ HFrEF (NYHA class II-IV)

Protocol

6519 → Finerenone 10 mg or 20 mg od

R → Median follow-up 3 years

6507 → Placebo

Outcomes

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

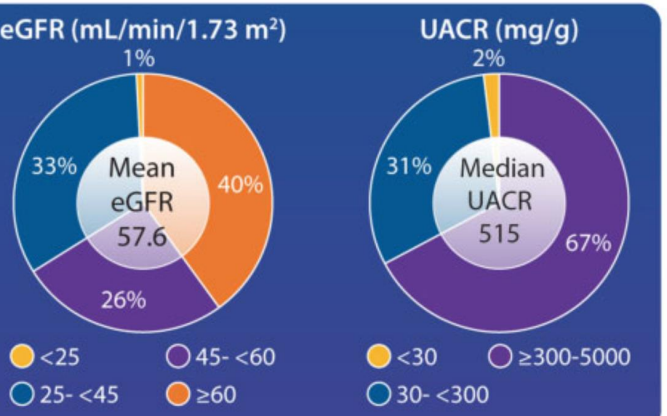
≥57% kidney composite:
Time to kidney failure, sustained ≥57% decrease in eGFR, or renal death

Baseline characteristics

Median age: 65 years
♂ 70% ♀ 30%

RAS inhibitors: 99.8%
Statins: 72.2%

HbA1c: 7.7%
BP: 137/76 mmHg
Prior HF: 7.7%



Few hyperkalemia-related discontinuations occurred

(n=110) — 0.66

(n=38) — 0.22

Discontinuation rate (IR/100 PY)

Results

	HR (95% CI)	p-value	Risk ↓
Endpoint CV composite	0.86 (0.78 – 0.95)	0.0018	14%
HHF	0.78 (0.66 – 0.92)	0.0030	22%
Kidney composite	0.77 (0.67 – 0.88)	0.0002	23%
Dialysis	0.80 (0.64 – 0.99)	0.040	20%

Conclusion

Finerenone on top of standard of care reduces the risk of clinically meaningful cardiovascular and kidney outcomes in patients with type 2 diabetes over a broad spectrum of chronic kidney disease

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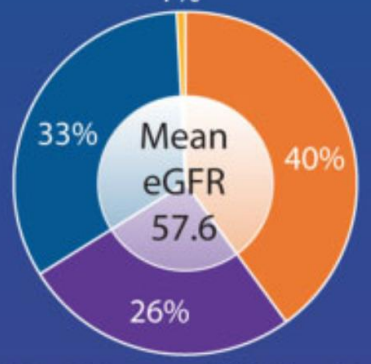
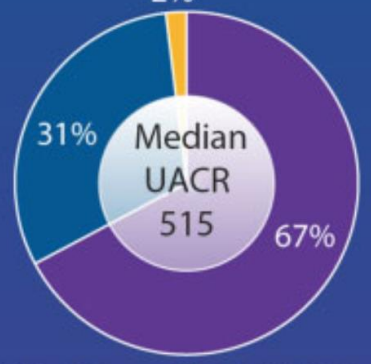


UACR (mg/g)



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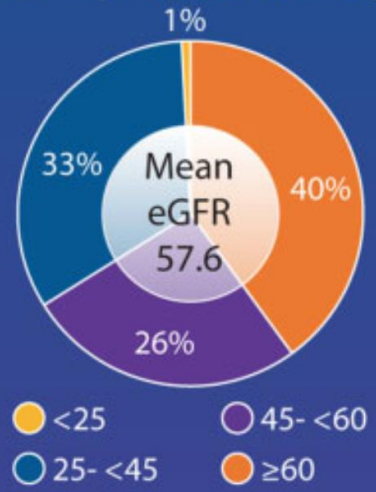
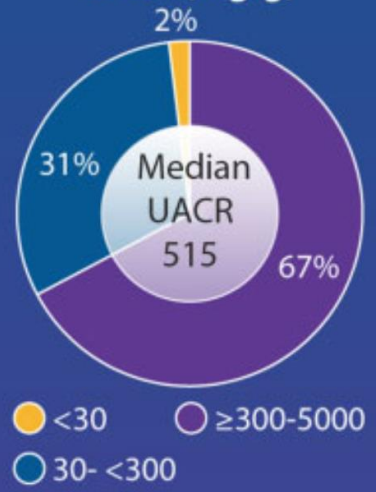
eGFR (mL/min/1.73 m²)



UACR (mg/g)



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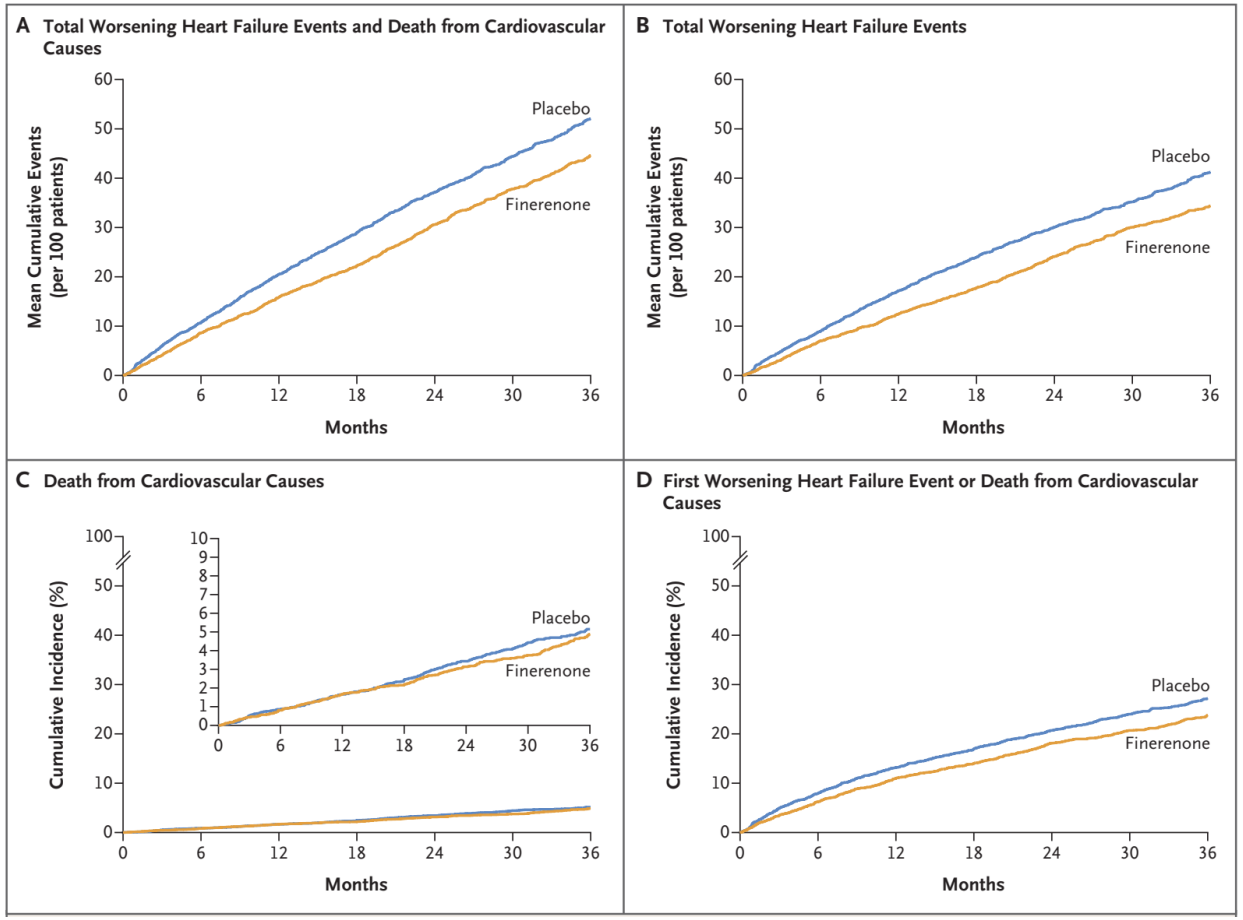
FINEARTS HF

Finerenone in Heart Failure with Mildly Reduced or Preserved Ejection Fraction

- Steroidal mineralocorticoid receptor antagonists reduce morbidity and mortality among patients with heart failure and reduced ejection fraction, but their efficacy in those with heart failure and mildly reduced or preserved ejection fraction has not been established.
- Data regarding the efficacy and safety of the nonsteroidal mineralocorticoid receptor antagonist finerenone in patients with heart failure and mildly reduced or preserved ejection fraction are needed.
- In this international, double-blind trial, patients with heart failure and a left ventricular ejection fraction of 40% or greater, were randomly assigned in a 1:1 ratio, to receive finerenone (at a maximum dose of 20 mg or 40 mg once daily) or matching placebo, in addition to usual therapy.
- The primary outcome was a composite of total worsening heart failure events (with an event defined as a first or recurrent unplanned hospitalization or urgent visit for heart failure) and death from cardiovascular causes.
- The components of the primary outcome and safety were also assessed.

FINEARTS HF

Primary Outcome and Its Components.
Panel A shows the cumulative-incidence plot for the composite of total worsening heart failure events and death from cardiovascular causes (the primary outcome).
Panel B shows the cumulative-incidence plot for total worsening heart failure events.
Panel C shows the Kaplan–Meier plot for death from cardiovascular causes. The inset shows the same data on an enlarged y axis.
Panel D shows the Kaplan–Meier plot for the composite of the first worsening heart failure event or death from cardiovascular causes.



FINEARTS HF

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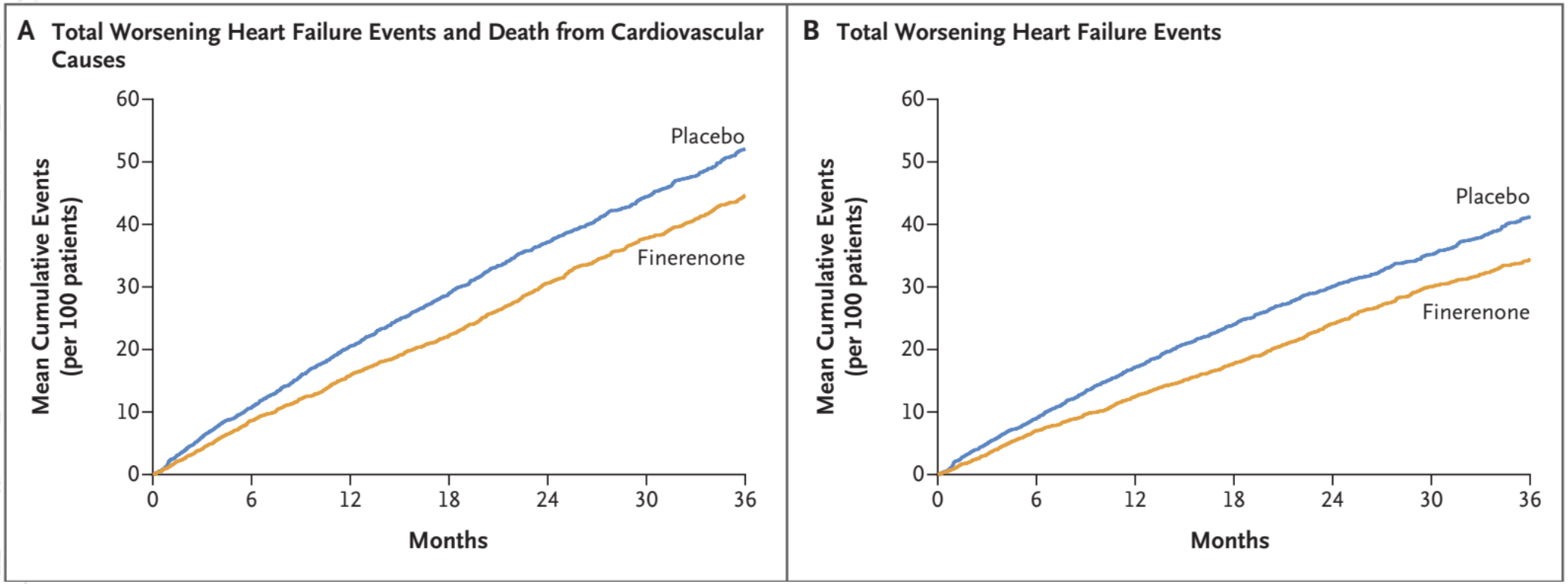
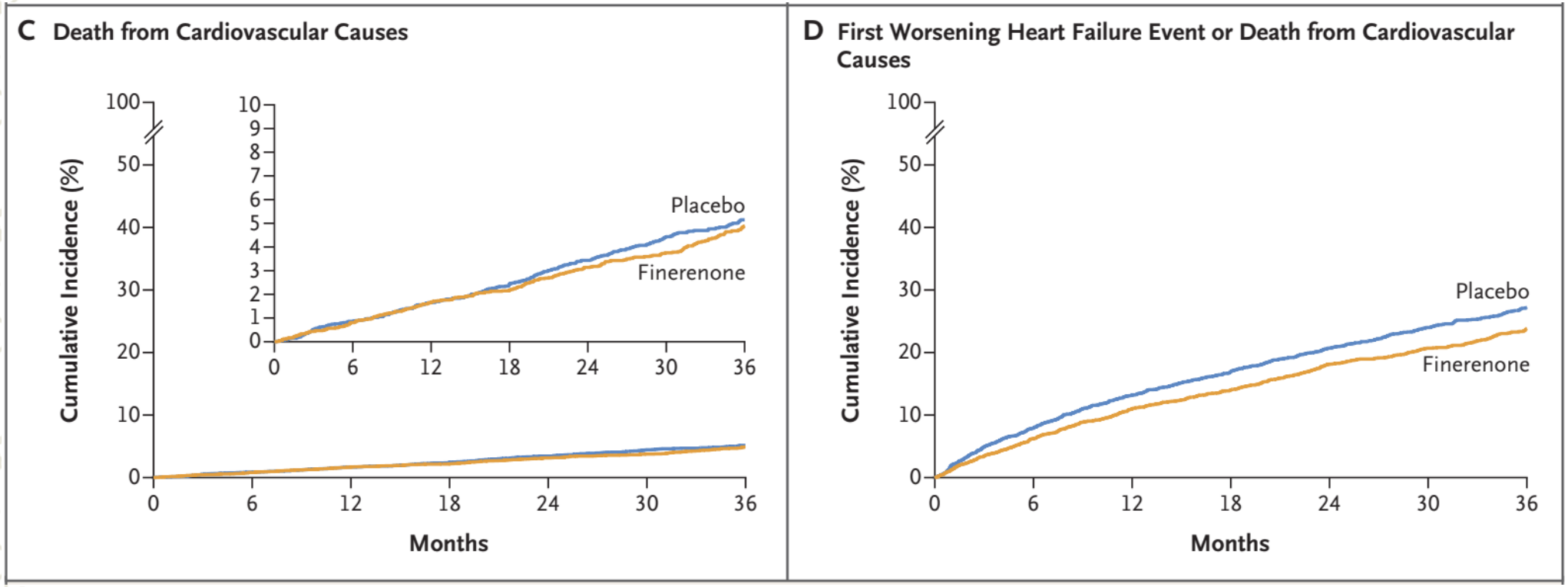
Panel C shows the Kaplan–Meier plot for death from cardiovascular causes. The inset shows the same data on an enlarged y axis.
Panel D shows the Kaplan–Meier plot for the composite of the first worsening heart failure event or death from cardiovascular causes.



FINEARTS HF

Primary Outcome and Its Components.
Panel A shows the cumulative-incidence plot for the composite of total worsening heart failure events and death from cardiovascular causes (the primary outcome).
Panel B shows the cumulative-incidence plot for total worsening heart failure events.
Panel C shows the Kaplan–Meier plot for death from cardiovascular causes. The inset shows the same data on an enlarged y axis.
Panel D shows the Kaplan–Meier plot for the composite of the first worsening heart failure event or death from cardiovascular causes.



FINEARTS HF

Primary and Secondary Outcomes.

Table 2. Primary and Secondary Outcomes.*

Outcome	Finerenone (N = 3003)	Placebo (N = 2998)	Finerenone vs. Placebo
Primary outcome and components			
Total worsening heart failure events and death from cardiovascular causes			
Total no. of events†	1083	1283	—
Events per 100 patient-yr	14.9	17.7	—
Rate ratio (95% CI)	—	—	0.84 (0.74–0.95)
P value	—	—	0.007
Total worsening heart failure events			
Total no. of events	842	1024	—
Rate ratio (95% CI)	—	—	0.82 (0.71–0.94)
P value	—	—	0.006
Death from cardiovascular causes			
No. of patients (%)	242 (8.1)	260 (8.7)	—

Rate ratio (95% CI)	—	—	0.82 (0.71–0.94)
P value	—	—	0.006
Death from cardiovascular causes			
No. of patients (%)	242 (8.1)	260 (8.7)	—
Hazard ratio (95% CI)	—	—	0.93 (0.78–1.11)
Secondary outcomes			
Change from baseline in KCCQ total symptom score at 6, 9, and 12 mo‡			
Estimate across 6, 9, and 12 mo	8.0±0.3	6.4±0.3	—
Difference (95% CI)	—	—	1.6 (0.8–2.3)
P value	—	—	<0.001
Improvement in NYHA functional class at 12 mo			
No. of patients/total no. (%)	557/3002 (18.6)	553/2998 (18.4)	—
Odds ratio (95% CI)	—	—	1.01 (0.88–1.15)
Kidney composite outcome§			
No. of patients (%)	75 (2.5)	55 (1.8)	—
Hazard ratio (95% CI)	—	—	1.33 (0.94–1.89)
Death from any cause			
No. of patients (%)	491 (16.4)	522 (17.4)	—
Hazard ratio (95% CI)	—	—	0.93 (0.83–1.06)
First worsening heart failure event or death from cardiovascular causes			
No. of patients (%)	624 (20.8)	719 (24.0)	—
Hazard ratio (95% CI)	—	—	0.84 (0.76–0.94)

Dosage Guidelines (Patients with Diabetes + CKD)

- Indication: Adults with Type 2 diabetes mellitus and chronic kidney disease (with albuminuria), already on maximally tolerated ACE inhibitor or ARB.
- Administration, Oral, once daily, With or without food, Tablets should not be crushed or split

Baseline eGFR (mL/min/1.73 m²)	Starting Dose	Target / Max Dose
≥ 60	20 mg once daily	20 mg once daily
25 to < 60	10 mg once daily	Increase to 20 mg once daily if K^+ allows
< 25	✗ Not recommended	—

Serum Potassium (mmol/L)	Action
≤ 4.8	Initiate or up-titrate
> 4.8 to ≤ 5.5	Maintain current dose
> 5.5	Withhold finerenone
≤ 5.0 after withholding	Restart at 10 mg once daily

Potassium-Based Dose Adjustment

Baseline eGFR (mL/min/1.73 m²)	Starting Dose	Target / Max Dose
≥ 60	20 mg once daily	20 mg once daily
25 to < 60	10 mg once daily	Increase to 20 mg once daily if K^+ allows
< 25	✗ Not recommended	—

Serum Potassium (mmol/L)	Action
≤ 4.8	Initiate or up-titrate
> 4.8 to ≤ 5.5	Maintain current dose
> 5.5	Withhold finerenone
≤ 5.0 after withholding	Restart at 10 mg once daily

Monitoring Recommendations (Diabetic Patients)

- Baseline (Before Initiation)
  - Serum potassium
  - eGFR / serum creatinine
  - Urine albumin-to-creatinine ratio (UACR)
  - Confirm patient is on ACEi or ARB (unless contraindicated)
- After Initiation
  - Serum potassium & eGFR:
    - At 4 weeks
    - After any dose change
    - Periodically thereafter (every 3–4 months in stable patients)

- High-Risk Patients (require closer monitoring)
  - eGFR < 45 mL/min/1.73 m^2
  - Baseline potassium > 4.8 mmol/L
  - Elderly patients
  - Concomitant potassium-raising drugs

Contraindications (Critical for Diabetic Patients)

Absolute Contraindications

Condition	Reason
Serum potassium > 5.0 mmol/L at initiation	High risk of life-threatening hyperkalemia
eGFR < 25 mL/min/1.73 m²	Insufficient safety data; increased risk
Concomitant use of strong CYP3A4 inhibitors (e.g., ketoconazole, itraconazole, clarithromycin, ritonavir)	Markedly increases finerenone levels
Adrenal insufficiency	Risk of worsening mineralocorticoid deficiency

Contraindications (Critical for Diabetic Patients)

Relative Contraindications / Use With Caution

- History of recurrent hyperkalemia
- Concomitant potassium supplements
- Potassium-sparing diuretics (e.g., amiloride, triamterene)
- Advanced heart failure with unstable renal function
- Severe hepatic impairment (Child-Pugh C)

Drug Interactions Relevant to Diabetes Care

Drug Class	Recommendation
ACE inhibitors / ARBs	✅ Required background therapy
SGLT2 inhibitors	✅ Safe and additive cardiorenal benefit
GLP-1 receptor agonists	✅ No significant interaction
NSAIDs (chronic use)	⚠ Increased risk of renal dysfunction
Potassium supplements	❌ Avoid unless absolutely necessary

Adverse Effects (Diabetic Population)

- Hyperkalemia (most common, dose-dependent)
- Mild decline in eGFR early (usually stabilizes)
- Hypotension (uncommon)
- No significant effects on:
  - HbA1c
  - Body weight
  - Lipids

Comparison: Finerenone vs Spironolactone vs Eplerenone

As a clinical decision point, when we should prescribe Spironolactone, Eplerenone or Finerenone?

Feature	Finerenone	Spironolactone	Eplerenone
Class	Non-steroidal mineralocorticoid receptor antagonist (MRA)	Steroidal MRA	Steroidal MRA (selective)
FDA-approved indication in diabetes	CKD associated with T2D (renal + CV risk reduction)	✗ None specific to diabetes	✗ None specific to diabetes
Primary clinical role	Cardiorenal protection	Resistant hypertension, HF	HF (HFrEF, post-MI)
Blood pressure reduction	Mild (≈2–4 mmHg SBP)	Strong (≈10–20 mmHg SBP in resistant HTN)	Moderate
Renal outcomes in diabetes	↓ CKD progression, ↓ albuminuria	No outcome-driven CKD data	No outcome-driven CKD data
Cardiovascular outcomes in diabetes	↓ CV death, ↓ HF hospitalization	HF benefit (non-diabetic trials)	HF benefit (non-diabetic trials)
Effect on albuminuria	Significant, early and sustained	Reduces albuminuria but limited long-term data	Modest
Mechanism emphasis	Anti-inflammatory, anti-fibrotic	Natriuresis + aldosterone blockade	Selective aldosterone blockade
Endocrine side effects	None	Gynecomastia, impotence, menstrual irregularities	Minimal
Hyperkalemia risk	Moderate	High (especially CKD, diabetes)	Moderate
Use in advanced CKD	Approved down to eGFR 25	Limited by hyperkalemia	Limited by hyperkalemia
Dosing frequency	Once daily	Once or twice daily	Once or twice daily
Drug interactions	CYP3A4 inhibitors	Few CYP interactions	CYP3A4 substrates
Effect on glucose metabolism	Neutral	May worsen insulin resistance	Neutral

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Drug interactions	CYP3A4 inhibitors	Few CYP interactions	CYP3A4 substrates
Effect on glucose metabolism	Neutral	May worsen insulin resistance	Neutral

Dosage and Administration*

For Adult Patients with CKD Associated with T2DM

The target daily dose of Finerenone in patients with DKD is

20 mg orally once daily

Initiate

Measure Serum Potassium

Do not initiate in serum potassium **> 5.0 mEq/L**

Measure eGFR Determine Recommended Starting Dose

≥60 mL/min/1.73m²	20 mg
≥25 to <60 mL/min/1.73m²	10 mg
<25 mL/min/1.73m²	Not recommended

Check Serum Potassium After 4 Weeks

Current Serum Potassium (mEq/L)	Current Dose 10 mg Once Daily	Current Dose 20 mg Once Daily

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20 mg orally once daily

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Do not initiate in serum potassium **> 5.0 mEq/L**

Measure eGFR Determine Recommended Starting Dose

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<25 mL/min/1.73m²	Not recommended

Check Serum Potassium After 4 Weeks

Current Serum Potassium (mEq/L)	Current Dose 10 mg Once Daily	Current Dose 20 mg Once Daily
≤ 4.8	Increase to 20 mg	Maintain 20 mg
> 4.8 to 5.5	Maintain 10 mg	Maintain 20 mg
> 5.5	Withhold Finerenone, Consider Restarting at 10 mg when Serum Potassium ≤ 5.0 mEq/L	Withhold Finerenone, Restart at 10 mg when Serum Potassium ≤ 5.0 mEq/L

Dosage and Administration*

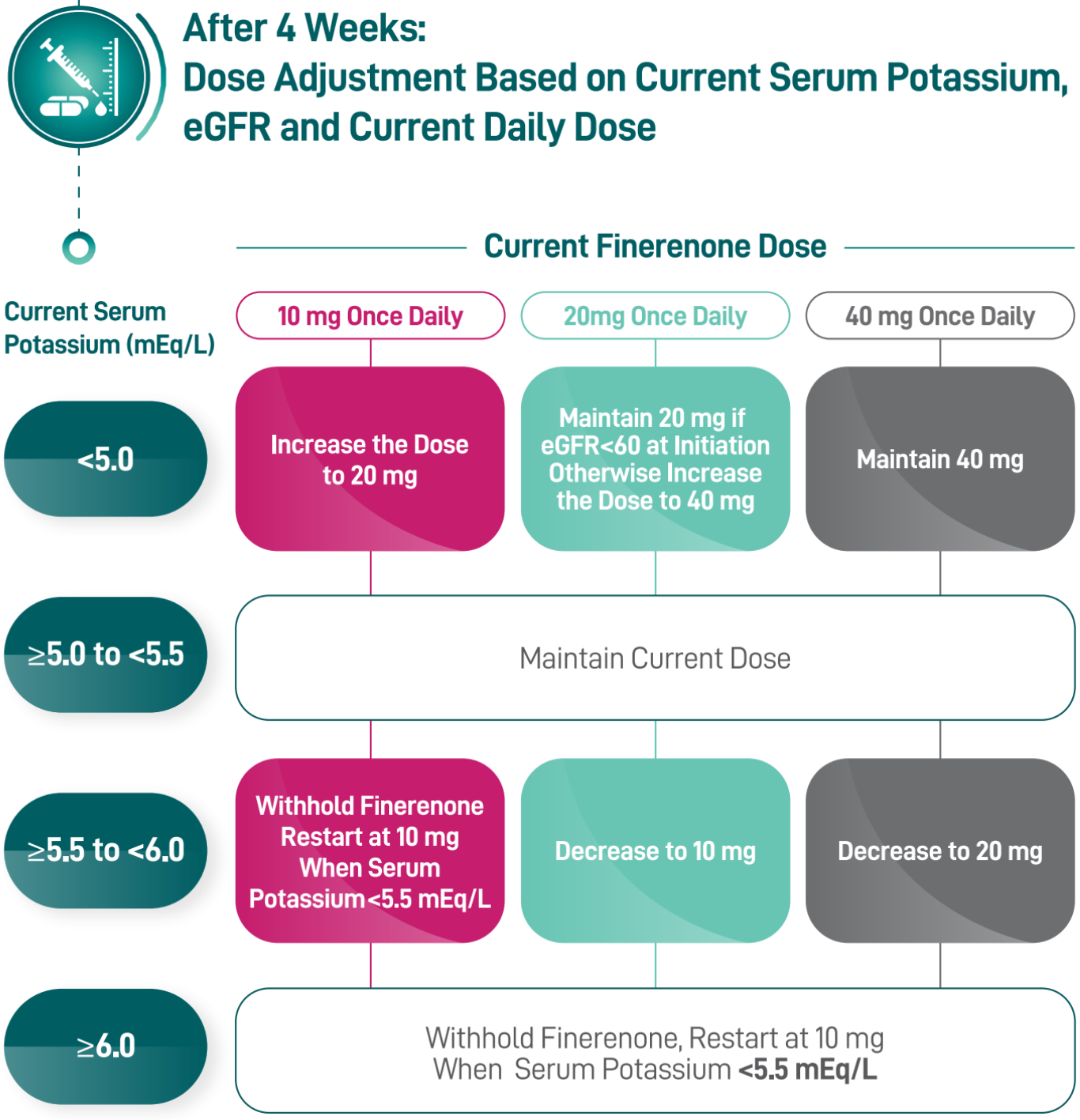
For Adult Patients with HF LVEF ≥ 40%

- The target daily dose is **40 mg orally** once daily if eGFR at initiation is **≥ 60 mL/min/1.73m²**
- The target daily dose is **20 mg orally** once daily if eGFR at initiation is **≥ 25 to < 60 mL/min/1.73m²**

After 4 Weeks:
Dose Adjustment Based on Current Serum Potassium, eGFR and Current Daily Dose

Current Serum Potassium (mEq/L)	Current Finerenone Dose: 10 mg Once Daily	Current Finerenone Dose: 20mg Once Daily	Current Finerenone Dose: 40 mg Once Daily
<5.0	Increase the Dose to 20 mg	Maintain 20 mg if eGFR<60 at Initiation Otherwise Increase the Dose to 40 mg	Maintain 40 mg

After 4 Weeks:
Dose Adjustment Based on Current Serum Potassium, eGFR and Current Daily Dose



Key Clinical Take-Home Points

- Finerenone is not a glucose-lowering drug
- It is used for renal and cardiovascular protection
- Benefits occur independent of blood pressure reduction
- Careful potassium monitoring is essential
- Particularly useful in diabetic patients with:
  - Persistent albuminuria
  - High cardiovascular risk
  - CKD progression despite ACEi/ARB ± SGLT2 inhibitor

Thank you and hope for a good rain