Extracorporeal Nephrology Group
Journal Review

FOUNTAIN STUDY

Compiled by

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References

1. Kovesdy CP, Layton JB, Thapa B, Curhan G, Farjat AE, Liu F, Johannes C, Vizcaya D, Oberprieler NG. Clinical outcomes in US patients initiating finerenone – a report from the FOUNTAIN platform. Nephrology Dialysis Transplantation. 2024;39(Supplement_1):gfae069-1416-2022. Available from: https://doi.org/10.1093/ndt/gfae069.1416
2. Agarwal R, Filippatos G, Pitt B, Anker SD, Rossing P, Joseph A, Kolkhof P, Nowack C, Gebel M, Ruilope LM, et al. Cardiovascular and kidney outcomes with finerenone in patients with type 2 diabetes and chronic kidney disease: the FIDELITY pooled analysis. Eur Heart J. 2022;43(6):474-484. Available from: https://doi.org/10.1093/eurheartj/ehab777 .

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FinerenOne mUlti-database Network for daTA generatIoN

FOUNTAIN study

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A platform to produce RWE that can support decision-making among health authorities and inform clinical practice to improve the care of patients with CKD and T2D

Aims

- Generate RWE and provide comprehensive evidence on the effectiveness and safety of finerenone in clinical practice

Patient population

- Nine research partner collaborations
- Eight CDM-mapped data sources
- Seven countries

Objectives

- Harmonize RWE generation across different research partners and data sources and build long-term research partnerships
- Describe utilization of different treatment options and event rates of clinical and laboratory outcomes
- Assess the real-world effectiveness and safety of finerenone

FOUNTAIN research programs

Drug utilization program	Effectiveness and safety program
Multi-country description of SoC in patients with CKD and T2D	Assessment of safety and effectiveness of finerenone in clinical practice across countries and regions

CDM, common data model; CKD, chronic kidney disease; RWE, real-world evidence; SoC, standard of care; T2D, type 2 diabetes
Bayer. Data on file

FOUNTAIN study :Clinical scenario

•Mr. John,
72 years

•**Medical History:** Type 2 Diabetes Mellitus, Hypertension, History of Myocardial Infarction, CKD Stage 4

•**Current Medications:** Insulin, Carvedilol, Aspirin

He reports worsening kidney function and significant proteinuria. His recent lab results show:

•**Proteinuria:** Urine albumin-to-creatinine ratio (ACR) of 35 mg/mmol

•**Creatinine:** Serum creatinine level of 2.5 mg/dL

•**eGFR:** 25 mL/min/1.73 m^2

•**Diagnosis:** Advanced chronic kidney disease (CKD) associated with type 2 diabetes and a history of cardiovascular disease.

Treatment Plan :

1. **ARB Addition:** The nephrologist adds Telmisartan (an ARB) for renin-angiotensin system blockade.

2. **SGLT2 Inhibitor Addition:** After 1 month of stable kidney function and blood pressure control with Telmisartan, the nephrologist adds Canagliflozin, an SGLT2 inhibitor.
3. **Finerenone Addition:** Finerenone is added 3 months after the introduction of the SGLT2 inhibitor to further reduce the risk of kidney function decline and cardiovascular events.

Follow-Up: Frequent monitoring of kidney function, cardiovascular health, and electrolyte levels.

Outcome: Mr. John's kidney function stabilizes, proteinuria decreases, and his cardiovascular risk is better managed.

The FOUNTAIN platform helps understand the practical benefit of Finerenone with real world evidence

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Finerenone initiators in US clinical practice: A FOUNTAIN report on the US Cohort (N=15,948 patients)

To describe patient characteristics and assess the early safety and effectiveness of finerenone used for the treatment of patients with CKD and T2D in routine clinical practice

Data sources	US database*	**Study period**	July 2021–August 2023
Patients	Adults with CKD[#] and T2D[‡] who initiated treatment with finerenone within the study period		
Design[1,2]	Observational, retrospective, longitudinal single-arm cohort study		

Key outcomes

- Baseline characteristics including demographics, comorbidities and comedications
- Incidence rates of hyperkalaemia
- Changes in UACR over time

The data shown here should not be compared with RCT data due to differences in study designs and patient populations

*OM1 RWDC; [#]defined as either having one diagnostic code for CKD stage 2–4 or unspecified stage, two eGFR measurements of 15–60 ml/min/1.73 m² separated by at least 90 days, or two UACR measurements >30 mg/g separated by at least 90 days; [‡]T2D was defined as having a diagnostic code for T2D

RWDC, Real-World Data Cloud™

FIDELITY (Trial) Vs FOUNTAIN (US RWE)

Recent data have provided valuable insights into the usage and effects of finerenone

Subanalyses from FIDELITY

Finerenone increased improvement and **reduced worsening in KDIGO risk category** versus placebo[1]

Finerenone reduced CV risk* compared with placebo **irrespective of CKD stage**[2]

Finerenone improved mortality outcomes versus placebo **irrespective of baseline UACR**[3]

Finerenone in RWE

Finerenone is used **alongside other drugs** indicated for kidney and CV risk reduction in patients with CKD and T2D[4,5]

In real-world studies, the **incidence of hyperkalaemia with finerenone appeared low**[4,5]

Finerenone was associated with substantial reductions in UACR from baseline to month 4, which were sustained at month 12[5]

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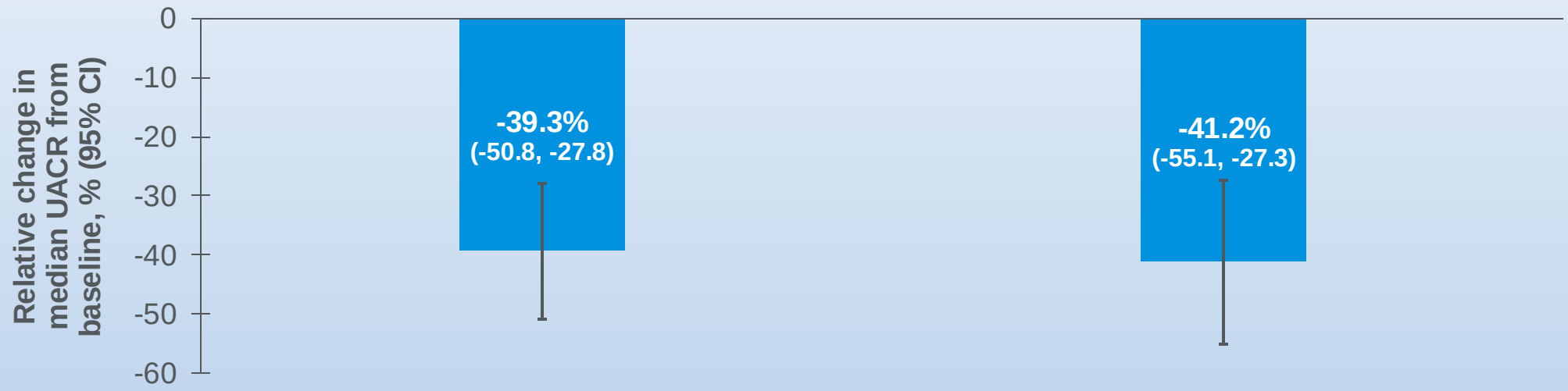
Finerenone was associated with a 39% relative reduction in UACR after 4 months, which was sustained at 12 months (41%)

Relative change in median UACR from baseline



	Baseline	Month 4	Month 12
Number of patients	2137	1617	900
UACR, mg/g, median (Q1–Q3)	211 (56–750)	128 (31–551)	124 (26–544)

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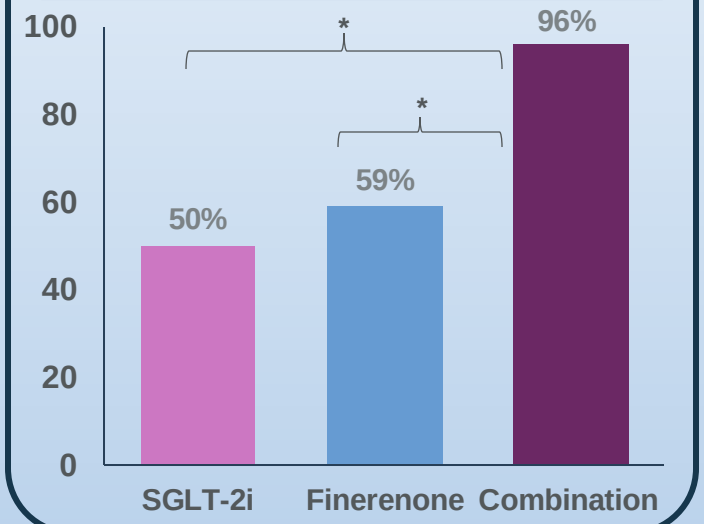
Kovesdy C, *et al*. ERA 2024; poster (abstract 2022)

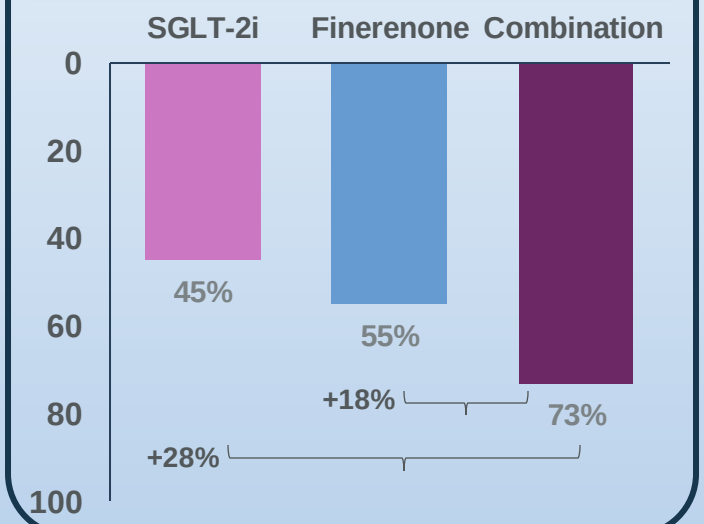
US RWE demonstrated a greater reduction in UACR with combined use of Finerenone and SGLT-2i among patients with CKD

Retrospective analysis of patients from a US specialty CKD clinic

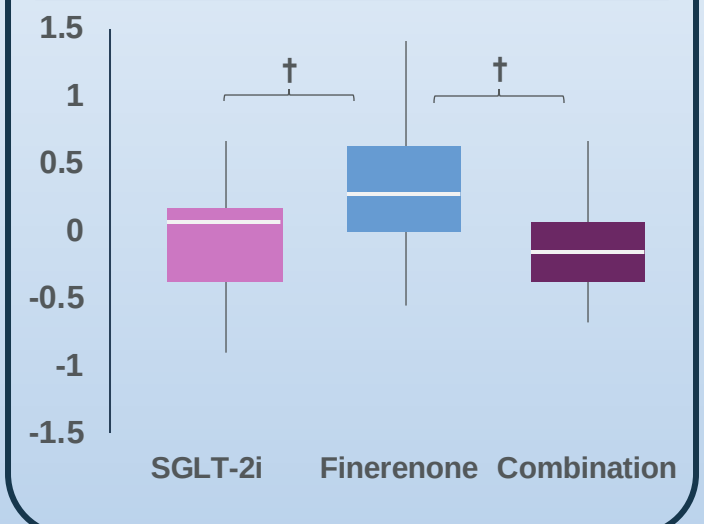
Proportion of patients with >50% reduction in UACR from baseline



Percentage reduction in UACR from baseline



Change in K^+ level (mEq/L)



Significant and clinically relevant reduction with combination

Reduced risk of hyperkalemia with combination

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*p<0.01 with Fisher's exact test with post-hoc pairwise comparisons; †p<0.01 with multivariable linear regression (statistically but not clinically significant change in mean potassium levels).

Hanouneh M, et al. *Diagnostics (Basel)* 2024;14(13):1357.

Summary

In clinical practice, finerenone is mainly used in patients across albuminuria categories A2 (39%) and A3 (41%).

For key comedications, a prevalence 49% ACE/ARB, 38% SGLT2i, and 26% GLP-1 RA is observed at baseline.

In clinical practice, 86% of patients initiate finerenone using the 10mg dose. After 12 months of observation time, 70% of patients are using the 10mg dose.

The cumulative incidence of hyperkalemia 12 months after finerenone initiation appears to be low (1.2%).

After finerenone initiation, we observe a 39% reduction of median UACR from baseline at 4 months which was sustained after 12 months (41%).

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