Interim Results from FINE-REAL: A Prospective Study Providing Insights into the Use of Finerenone in Routine Clinical Settings

Poster number SA-PO481

Susanne B. Nicholas,[1] Ricardo Correa-Rotter,[2] Nihar Desai,[3] Lixin Guo,[4] Sankar D. Navaneethan,[5] Kevin M. Pantalone,[6] Christoph Wanner,[7] Stefanie Hamacher,[8] Andrea Horvat-Broecker,[9] Alain Gay,[10] Martin Merz,[10] David C. Wheeler[11]

[1]David Geffen School of Medicine at UCLA, Los Angeles, California, USA; [2]Department of Nephrology and Mineral Metabolism, Instituto Nacional de Ciencias Médicas y Nutricion Salvador Zubiran, Ciudad de Mexico, Mexico; [3]Section of Cardiovascular Medicine, Yale School of Medicine, Yale New Haven Hospital, New Haven, Connecticut, USA; [4]Department of Endocrinology, Beijing Hospital, National Center of Gerontology, Institute of Geriatric Medicine, Chinese Academy of Sciences, Beijing, China; [5]Section of Nephrology, Baylor College of Medicine, Houston, Texas, USA; [6]Endocrinology and Metabolism Institute, Cleveland Clinic, Cleveland, Ohio, USA; [7]Department of Medicine, Division of Nephrology, University Hospital Würzburg, Würzburg, Germany; [8]ClinStat GmbH, Huerth, Germany; [9]Pharmaceuticals R&D, Pharmacovigilance, Bayer AG, Wuppertal, Germany; [10]Medical Affairs & Pharmacovigilance, Pharmaceuticals, Bayer AG, Berlin, Germany; [11]Department of Renal Medicine, University College London, London, UK

Introduction

- Finerenone, a selective non-steroidal mineralocorticoid receptor antagonist (MRA), is approved for the treatment of chronic kidney disease (CKD) associated with type 2 diabetes (T2D) worldwide, including the European Union, United States, China, and Japan.[1,2]
- Finerenone is included as a recommended treatment for CKD associated with T2D in guidance from the American Diabetes Association, American Association of Clinical Endocrinologists, European Society of Cardiology, and the Kidney Disease Improving Global Outcomes (KDIGO) work group.[3-6]
- The FINE-REAL study (NCT05348733) aims to evaluate the characteristics and treatment patterns of participants with CKD associated with T2D, who were enrolled across many countries and treated with finerenone in routine clinical practice. An interim analysis of FINE-REAL with a median 7 months' follow-up observation (initiation of finerenone treatment to last recorded observation) is presented.

Methods

- Eligible participants were aged ≥18 years with a diagnosis of CKD associated with T2D based on physician assessment.[7]
- Participants were receiving finerenone (10 or 20 mg) in accordance with the local marketing authorization.
- The primary endpoint was to describe clinical characteristics and treatment patterns in participants with CKD and T2D treated with finerenone.
- Secondary endpoints were the occurrence of treatment emergent adverse events (TEAEs) and serious TEAEs, particularly hyperkalemia.
- The data cutoff for this interim analysis was June 13, 2023.

Results

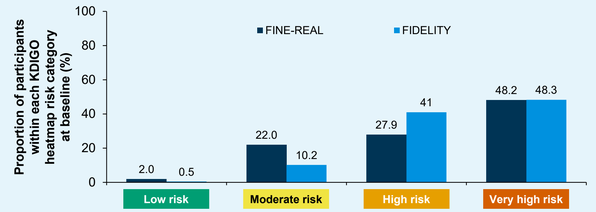
- Of 556 participants enrolled in the study at the cutoff date, 504 were included in the full analysis set. Eleven participants did not meet all inclusion criteria or met an exclusion criterion, four withdrew their consent, and one was excluded due to medical reasons. Another 35 participants had not yet started their finerenone treatment by the cutoff date.
- Baseline demographics and disease characteristics, including estimated glomerular filtration rate (eGFR), urine albumin:creatinine ratio (UACR), and prior/concomitant therapies are shown in **Table 1**.
- The proportions of participants in the low-risk, moderate-risk, high-risk, and very high-risk KDIGO risk categories in FINE-REAL and FIDELITY (a pooled analysis of patients with CKD and T2D from the phase 3 FIDELIO-DKD and FIGARO-DKD studies)[8] are shown in **Figure 1**.
- At the cutoff date, participants in the full analysis set had been followed for a median (interquartile range [IQR]) of 211.5 (104.0-301.5) days.
- A total of 443 (87.9%) participants were prescribed finerenone 10 mg and 61 (12.1%) participants were prescribed finerenone 20 mg at the cutoff date.
- After initiation of finerenone, treatment was defined as either continuously administered, interrupted, or withdrawn in 465 (92.3%), 27 (5.4%), and five (1.0%) participants, respectively (per participant evaluation at the last available visit).

Table 1. Baseline demographics and disease characteristics†

Characteristic	All participants (N=504)
Age, mean (SD), years	66.1 (11.0)
Sex, n (%)	
Male	306 (60.7)
Female	198 (39.3)
Race or ethnic group, n (%)	
White	269 (53.4)
Asian	112 (22.2)
Black/African American	65 (12.9)
Other/not reported‡	58 (11.5)
Duration of T2D, median (IQR), years	14.0 (8.0-22.0)
History of heart failure, n (%)	67 (13.3)
UACR, median (IQR), mg/g,§	295.0 (85.9-897.0)
UACR category, n (%)	
<30	40 (8.0)
30 to <300	143 (28.6)
≥300	176 (35.2)
eGFR, mean (SD), mL/min/1.73 m^2,‖	52.0 (24.3)
eGFR category, n (%)	
<15	3 (0.6)
15-29	72 (14.7)
30-44	154 (31.4)
45-59	119 (24.3)
60-89	93 (19.0)
≥90	49 (10.0)
Serum potassium, mean (SD), mmol/L	4.4 (0.4)
HbA1c, mean (SD), %	7.5 (1.5)
Systolic blood pressure, mean (SD), mmHg	138.0 (18.7)
Prior/concomitant medication, n (%)	
Statins	387 (76.8)
ACEi/ARB	362 (71.8)
Insulin	241 (47.8)
SGLT2 inhibitor	235 (46.6)
GLP-1 receptor agonist	168 (33.3)

†Baseline demographics and disease characteristics are captured from medical records or by interviewing the participant. Clinical variables of interest are shaded green. ‡American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and not reported. §71.23% of participants had UACR measurements at baseline. ‖Calculated using the CKD-EPI 2009 formula without adjustment for race. 97.22% of participants had eGFR measurements at baseline.
ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; eGFR, estimated glomerular filtration rate; CKD-EPI, Chronic Kidney Disease Epidemiology Collaboration; GLP-1, glucagon-like peptide-1; HbA1c, glycated hemoglobin; IQR, interquartile range; SD, standard deviation; SGLT2, sodium–glucose cotransporter 2; T2D, type 2 diabetes; UACR, urine albumin:creatinine ratio.

Figure 1. Proportion according to KDIGO heatmap CKD risk categories in FINE-REAL and FIDELITY at baseline†,8



FINE-REAL

eGFR categories (mL/min/1.73 m^2)	Data presented as n (%)	A1 Normal to mildly increased (<30)	A2 Moderately increased (30 to ≤300)	A3 Severely increased (>300)
G1	≥90	2 (0.6)	28 (7.9)	13 (3.7)
G2	60-89	5 (1.4)	39 (11.0)	30 (8.5)
G3a	45-59	11 (3.1)	43 (12.1)	32 (9.0)
G3b	30-44	13 (3.7)	37 (10.4)	54 (15.2)
G4	15-29	8 (2.3)	8 (2.3)	30 (8.5)
G5	<15	1 (0.3)	0	1 (0.3)

FIDELITY

eGFR categories (mL/min/1.73 m^2)	Data presented as n (%)	A1 Normal to mildly increased (<30)	A2 Moderately increased (30 to <300)	A3 Severely increased (≥300‡)
G1	≥90	13 (<0.1)	198 (1.5)	1108 (8.5)
G2	60-89	51 (0.4)	1043 (8.0)	2780 (21.4)
G3a	45-59	82 (0.6)	1389 (10.7)	1962 (15.1)
G3b	30-44	68 (0.5)	1230 (9.4)	2206 (16.9)
G4	15-29	16 (0.1)	239 (1.8)	635 (4.9)
G5	<15	–	–	–

†Pooled analysis of patients with CKD and T2D from the phase 3 FIDELIO-DKD and FIGARO-DKD studies. ‡Only participants with a UACR with an upper limit of ≤5000 mg/g were permitted into the FIDELIO DKD or FIGARO DKD studies. CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; KDIGO, Kidney Disease Improving Global Outcomes; T2D, type 2 diabetes; UACR, urine albumin:creatinine ratio.

- Safety information is shown in **Table 2**.

Table 2. Summary of TEAEs overall

Event, n (%)	Participants (N=504)
Any TEAE	110 (21.8)
Any serious TEAE	27 (5.4)
Any TEAE with fatal outcome	1 (0.2)

TEAE, treatment-emergent adverse event.

- TEAEs were reported in 112 participants (22.2%). The three most frequently reported TEAEs were hyperkalemia/blood potassium-increased (25 participants; 5.0%), urinary tract infection (6 participants; 1.2%), and vitamin D deficiency (6 participants; 1.2%).
- Serious TEAEs were reported in 27 participants (5.4%). The three most frequently reported serious TEAEs were acute kidney injury (5 participants; 1.0%), coronary artery disease (2 participants; 0.4%), and urinary tract infections (2 participants; 0.4%).
- One patient with concomitant hepatic cancer died during the study because of hepatic failure.
- Information on hyperkalemia TEAEs is shown in **Table 3**.

Table 3. Number (percentage) of participants with hyperkalemia† TEAEs

Outcome, n (%)	All participants (N=504)
Any event	25 (5.0)
Symptomatic event	1 (0.2)
Clinical signs/symptoms (multiple answers possible)	
Paresthesia	1 (0.2)
Leading to dialysis	0
Leading to hospitalization	0
Serum potassium >5.5 mmol/L	21 (4.2)
Serum potassium >6.0 mmol/L	2 (0.4)

†The term hyperkalemia refers to the combined MedDRA PTs hyperkalemia and blood potassium increased.
MedDRA, Medical Dictionary for Regulatory Activities; PT, preferred term; TEAE, treatment-emergent adverse event.

Conclusions

- FINE-REAL is the first global prospective observational study investigating the use of a non-steroidal MRA in routine clinical care in patients with CKD and T2D.
- At baseline, most participants were classified as very high risk per the KDIGO CKD risk categories, >70% of participants were prescribed an ACEi/ARB, and 48% of participants were prescribed a SGLT2 inhibitor.
- Relative to FIDELITY,[8] at the time of this interim analysis, FINE-REAL included a greater proportion of participants in the moderate KDIGO risk category, fewer participants in the high-risk category, and a similar number of participants in the very high-risk category.
- This interim analysis showed that the occurrence of hyperkalemia in the real-world setting was low, with no fatal hyperkalemia and no hyperkalemia leading to dialysis or hospitalization.
- Results from FINE-REAL will help to inform decision-making with respect to initiation of finerenone in patients with CKD and T2D.
- Future analyses should provide insights into the dynamics of new therapy adoption across different geographies.

References

1. Bayer HealthCare Pharmaceuticals Inc. KERENDIA (finerenone) tablets, for oral use: US prescribing information. https://labeling.bayerhealthcare.com/html/products/pi/Kerendia_PI.pdf. Accessed Oct 16, 2023.
2. Bayer HealthCare Pharmaceuticals Inc. Kerendia summary of product characteristics. https://www.ema.europa.eu/en/documents/product-information/kerendia-epar-product-information_en.pdf. Accessed Oct 16, 2023.
3. de Boer IH, et al. *Kidney Int.* 2022;102:974-989
4. Blonde L, et al. *Endocr Pract.* 2022;28:923-1049.
5. Draznin B, et al. *Diabetes Care.* 2022;45:S175-S184.
6. Marx N, et al. *Eur Heart J.* 2023;ehad192.
7. Desai NR, et al. *J Diabetes Complications.* 2023;37:108411.
8. Agarwal R, et al. *Eur Heart J.* 2022;43:474-484

Acknowledgments

The authors would like to thank the participants, their families, and all investigators involved in this study. Medical writing support was provided by Charlotte Simpson, PhD, and editorial support, including formatting, proofreading, and e-poster upload, was provided by Melissa Ward, BA, both of Scion, London, UK, supported by Bayer according to Good Publication Practice guidelines (https://www.acpjournals.org/doi/10.7326/M22-1460).

Disclosures

This study is sponsored by Bayer AG. The authors developed the poster with the assistance of a medical writer funded by the sponsor. The sponsor was involved in the study design and the writing of the report. **SBN** received research support from Bayer AG for the submitted work.

Contact details: Name: Susanne B. Nicholas; Email: SuNicholas@mednet.ucla.edu