Shifts in KDIGO risk category with finerenone in patients with T2D and CKD: A FIDELITY analysis

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FIDELITY

FInerenone in chronic kiDney diseasE and type 2 diabetes: Combined FIDELIO-DKD and FIGARO-DKD Trial programme analYsis

Disclosures

- **Grant funding:** NIDDK
- **Clinical Trial Steering/Executive Committees:** AstraZeneca, Boehringer Ingelheim/Lilly, Novo Nordisk
- **Consultant:** Bayer, Merck, Pfizer
- **Lectures:** AstraZeneca, Boehringer Ingelheim

This analysis aimed to investigate the effect of finerenone versus placebo on improvement or worsening of KDIGO risk category in FIDELITY

The **KDIGO heat map** categorises kidney function based on **GFR and UACR** and provides a **clinical tool** to identify CKD progression[1,2]

In this post hoc analysis:

Improvement or worsening of KDIGO risk category in patients from FIDELITY were analysed at 4, 12, 24 and 36 months

Odds ratios for improvement or worsening were calculated using **logistic regression** models, adjusted for randomised treatment, HbA1c, sex, region, age and BMI

FIDELITY randomised 13,171* patients to receive finerenone or placebo with **3 years' median follow-up**[3–5]

FIDELITY included over **4000 patients with UACR 30–<300 mg/g**[3–5]

Key eligibility criteria

- **T2D**
- **CKD**
- **On maximum tolerated dose of RASi**
- **Serum [K^+] ≤4.8 mmol/l**[#]

- **Symptomatic HFrEF**[‡]

FIDELIO-DKD

- UACR 30–<300 mg/g + eGFR 25–<60 ml/min/1.73 m^2 + DR
- *or* UACR 300–5000 mg/g + eGFR 25–<75 ml/min/1.73 m^2

FIGARO-DKD

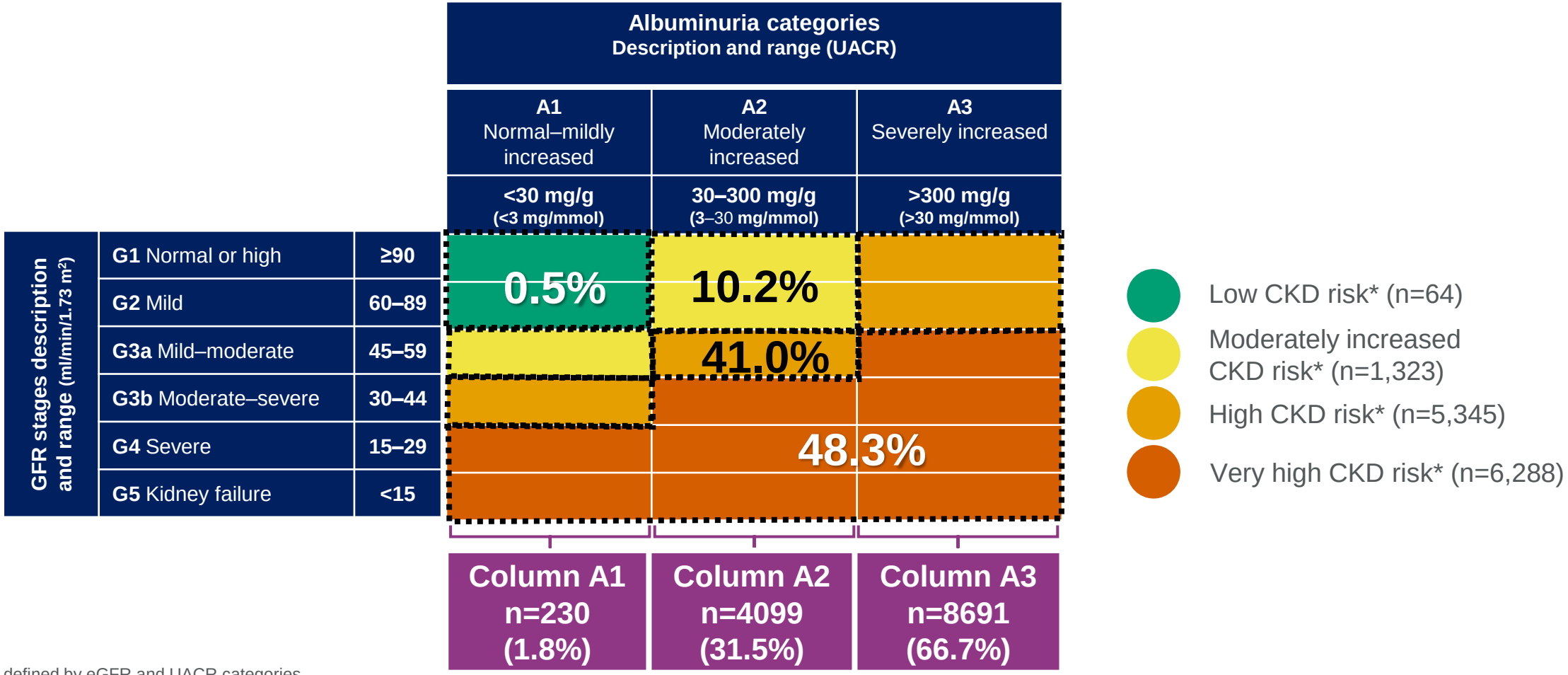
- UACR 30–<300 mg/g + eGFR 25–90 ml/min/1.73 m^2
- *or* UACR 300–5000 mg/g + eGFR ≥60 ml/min/1.73 m^2

*13,026 patients were included in the statistical analysis (145 were excluded due to critical GCP violations); [#]at run-in or screening visit; [‡]run-in only;
BMI, body mass index; CKD, chronic kidney disease; DR, diabetic retinopathy; eGFR, estimated glomerular filtration rate; GCP, good clinical practice; GFR, glomerular filtration rate; HbA1c, glycated haemoglobin; HFrEF, heart failure with reduced ejection fraction; KDIGO, Kidney Disease Improving Global Outcomes; [K^+], potassium concentration; RASi, renin–angiotensin system inhibitor; T2D, type 2 diabetes; UACR, urine albumin-to-creatinine ratio

1. Kidney Disease: Improving Global Outcomes. *Kidney Int* 2022;102:S1–S128; 2. de Boer IH, *et al*. *Diabetes Care* 2022;45:3075–3090; 3. Bakris GL, *et al. N Engl J Med* 2020;383:2219–2229;
4. Pitt B, *et al. N Engl J Med* 2021;385:2252–2263; 5. Agarwal R, *et al. Eur Heart J* 2022;43:474–484

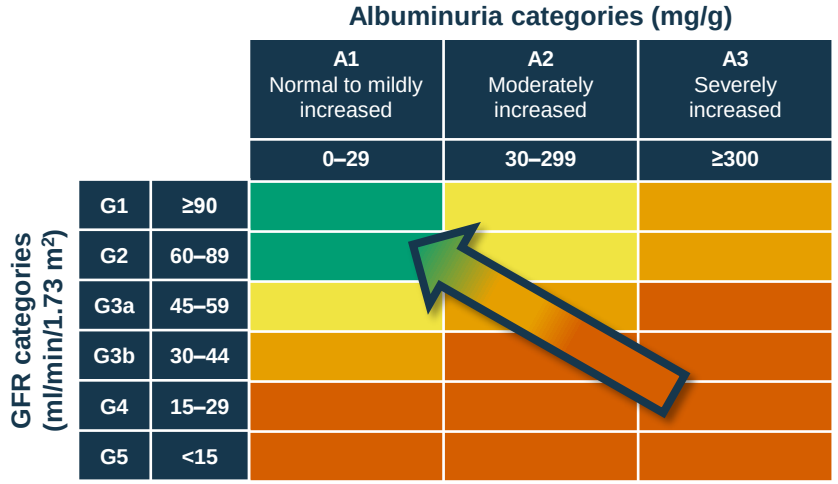
In this analysis, patients in FIDELITY were categorised based on their KDIGO risk category at baseline

At baseline, 89% of patients (N=13,020) were in the high or very high KDIGO risk categories



*As defined by eGFR and UACR categories

There were higher odds of improvement in KDIGO risk category with finerenone than with placebo

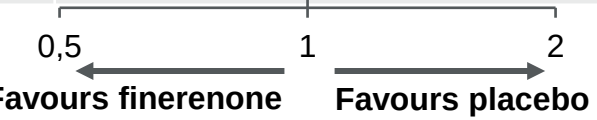


A shift in KDIGO risk category was considered **improvement** if it was accompanied by a **≥20% increase in eGFR or ≥30% decrease in UACR from baseline**

82.9% and **84.1%** of patients in the finerenone and placebo groups, respectively, were in the **high and very high KDIGO risk categories at month 36**

OR for improvement in KDIGO risk category with finerenone versus placebo

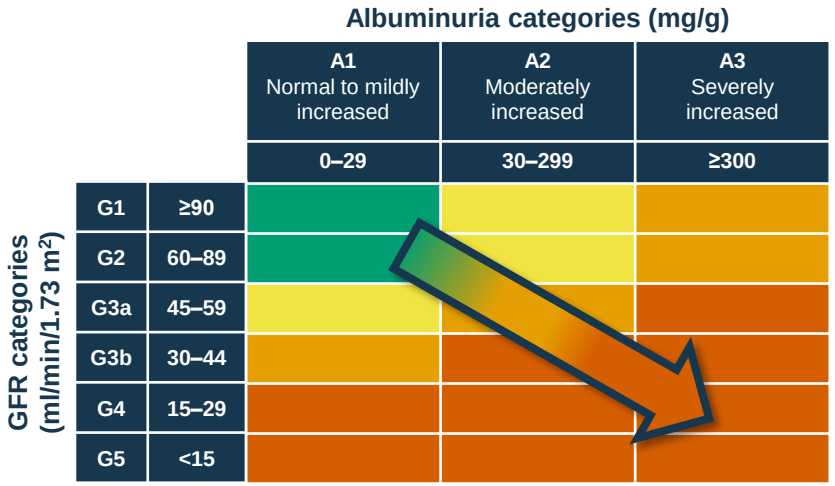
Visit	Finerenone (N=6519) n/n model	Placebo (N=6507) n/n model	OR (95% CI)	*p*-value
Visit 3 (month 4)	1073/6484	825/6485	1.36 (1.23–1.50)	<0.0001
Visit 5 (month 12)	1166/6484	833/6485	1.49 (1.35–1.64)	<0.0001
Visit 8 (month 24)	991/6484	749/6485	1.38 (1.24–1.53)	<0.0001
Visit 11 (month 36)	845/6484	630/6485	1.39 (1.24–1.55)	<0.0001



There was a **39% greater odds of improvement** with finerenone versus placebo at month 36

n model represents the number of subjects with non-missing values for all covariates. Logistic regression models include baseline variables for randomized treatment, HbA1c, sex, region, age and BMI. Except for last on-treatment visit, missing eGFR and UACR values are extrapolated through prediction using mixed models. A subject is considered as not able to improve from timepoint of death. HbA1c, glycated haemoglobin; OR, odds ratio

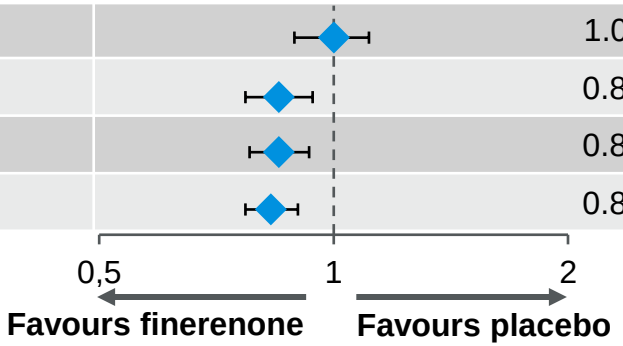
There were lower odds of worsening in KDIGO risk category with finerenone than with placebo



A shift in KDIGO risk category was considered **worsening** if it was accompanied by **≥20% decrease in eGFR or ≥30% increase in UACR from baseline**

OR for worsening in KDIGO risk category with finerenone versus placebo

Visit	Finerenone (N=6519) n/n model	Placebo (N=6507) n/n model	OR (95% CI)	*p*-value
Visit 3 (month 4)	716/6484	720/6485	1.00 (0.89–1.11)	0.927
Visit 5 (month 12)	863/6484	993/6485	0.85 (0.77–0.94)	0.001
Visit 8 (month 24)	1240/6484	1407/6485	0.85 (0.78–0.93)	<0.001
Visit 11 (month 36)	1574/6484	1802/6485	0.83 (0.77–0.90)	<0.001



There was a **17% lower odds of worsening** with finerenone versus placebo at month 36

n model represents the number of subjects with non-missing values for all covariates. Logistic regression models include baseline variables for randomized treatment, HbA1c, sex, region, age and BMI. Except for last on-treatment visit, missing eGFR and UACR values are extrapolated through prediction using mixed models. A subject is considered as not able to worsen from timepoint of death.

Summary

At baseline, **89%** of patients included in the FIDELITY analysis were in the **high or very high KDIGO risk categories**

Patients with T2D and CKD receiving finerenone experienced a **39% greater likelihood of improving in** KDIGO risk category and a **17% lower likelihood of worsening in risk category** than those receiving placebo

These data, illustrated on the **KDIGO heat map**, may prove helpful in conversations about the **risk of kidney disease progression with or without treatment**