Finerenone (chronic kidney disease in type 2 diabetes, stages 3 and 4 with albuminuria)

Resolution of: 17 August 2023/16 November 2023 valid until: unlimited
Entry into force on: 17 August 2023/16 November 2023
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Therapeutic indication (according to the marketing authorisation of 6 February 2023):

Kerendia is indicated for the treatment of chronic kidney disease (with albuminuria) associated with type 2 diabetes in adults.

Therapeutic indication of the resolution (resolution of 17 August 2023):

Kerendia is indicated for the treatment of chronic kidney disease (stages 3 and 4 with albuminuria) associated with type 2 diabetes in adults.

1. Additional benefit of the medicinal product in relation to the appropriate comparator therapy

Adults with chronic kidney disease (stages 3 and 4 with albuminuria) associated with type 2 diabetes

Appropriate comparator therapy:

An optimised standard therapy for the treatment of chronic kidney disease and type 2 diabetes mellitus, taking into account the underlying disease(s) and common comorbidities (such as dyslipoproteinaemia, hypertension, anaemia, heart failure).

Extent and probability of the additional benefit of finerenone compared to the appropriate comparator therapy:

An additional benefit is not proven.

Study results according to endpoints:[1]

Adults with chronic kidney disease (stages 3 and 4 with albuminuria) associated with type 2 diabetes

1 Data from the dossier assessment of the IQWiG (A23-15) and from the addendum (A23-70), unless otherwise indicated.

Summary of results for relevant clinical endpoints

Endpoint category	Direction of effect/ risk of bias	Summary
Mortality	↔	No relevant differences for the benefit assessment
Morbidity	↔	No relevant differences overall for the benefit assessment. Advantage with eGFR decrease ≥ 57%, which, however, cannot be assessed due to uncertainties in the implementation of CRVO.
Health-related quality of life	↔	No relevant differences for the benefit assessment
Side effects	n.a.	There are no assessable data.

Explanations:
↑: statistically significant and relevant positive effect with low/unclear reliability of data
↓: statistically significant and relevant negative effect with low/unclear reliability of data
↑↑: statistically significant and relevant positive effect with high reliability of data
↓↓: statistically significant and relevant negative effect with high reliability of data
↔: no statistically significant or relevant difference
∅: There are no usable data for the benefit assessment.
n.a.: not assessable

FIDELIO-DKD and FIGARO-DKD studies: Finerenone vs placebo (each in addition to optimised standard therapy[2])

Mortality

Endpoint category Endpoint Study	Finerenone		Placebo		Finerenone vs placebo
	N	Median time to event in months [95% CI] Patients with event n (%)	N	Median time to event in months [95% CI] Patients with event n (%)	HR [95% CI]; p value[a]
Overall mortality					
FIDELIO-DKD	2,622	n.r. 202 (7.7)	2,620	n.r. 230 (8.8)	0.87 [0.72; 1.05]; 0.157
FIGARO-DKD	1,359	n.r. 167 (12.3)	1,362	n.r. 159 (11.7)	1.05 [0.85; 1.31] 0.648
Total[b]					0.94 [0.82; 1.09]; 0.421

[2] Patient-individual standard therapy according to local guidelines for the treatment of both kidney disease and other comorbidities such as cardiovascular disease or type 2 diabetes mellitus

Morbidity

Endpoint category Endpoint Study	Finerenone		Placebo		Finerenone vs placebo
	N	Median time to event in months [95% CI] Patients with event n (%)	N	Median time to event in months [95% CI] Patients with event n (%)	HR [95% CI]; p value[a]
Renal morbidity with eGFR decrease ≥ 57% (composite endpoint)					
FIDELIO-DKD	2,622	n.r. 245 (9.3)	2,620	n.r. 310 (11.8)	0.78 [0.66; 0.92]; 0.004
FIGARO-DKD	1,359	n.r. 35 (2.6)	1,362	n.r. 31 (2.3)	1.15 [0.71; 1.87]; 0.569
Total[b]					0.82 [0.70; 0.96]; 0.014
Kidney failure[c, d]					
FIDELIO-DKD	2,622	n.r. 206 (7.9)	2,620	n.r. 227 (8.7)	0.89 [0.74; 1.08]; 0.228
FIGARO-DKD	1,359	n.r. 24 (1.8)	1,362	n.r. 24 (1.8)	0.96 [0.54; 1.70] 0.887
Totalb					0.90 [0.75; 1.07] 0.233
Persistent decrease in eGFR to < 15 ml/min/1.73 m² [c]					
FIDELIO-DKD	2,622	n.r. 166 (6.3)	2,620	n.r. 193 (7.4)	0.84 [0.69; 1.04]; 0.108
FIGARO-DKD	1,359	n.r. 16 (1.2)	1,362	n.r. 17 (1.2)	0.90 [0.45; 1.81] 0.772
Total[b]					0.85 [0.70; 1.04]; 0.105
ESRD[c, e]					
FIDELIO-DKD	2,622	n.r. 118 (4.5)	2,620	n.r. 134 (5.1)	0.88 [0.69; 1.13]; 0.316
FIGARO-DKD	1,359	n.r. 15 (1.1)	1,362	n.r. 15 (1.1)	0.98 [0.48; 2.01] 0.964
Total[b]					0.89 [0.70; 1.12]; 0.325
eGFR decrease ≥ 57%[c]					
FIDELIO-DKD	2,622	n.r. 161 (6.1)	2,620	n.r. 229 (8.7)	0.70 [0.57; 0.85]; < 0.001
FIGARO-DKD	1,359	n.r. 21 (1.5)	1,362	n.r. 19 (1.4)	1.11 [0.59; 2.07]; 0.746
Total[b]					0.73 [0.60; 0.89]; 0.001

Endpoint category Endpoint Study	Finerenone		Placebo		Finerenone vs placebo
	N	Median time to event in months [95% CI] Patients with event n (%)	N	Median time to event in months [95% CI] Patients with event n (%)	HR [95% CI]; p value[a]
Renal death[c, f]					
FIDELIO-DKD	2,622	n.r. 2 (< 0.1)	2,620	n.r. 2 (< 0.1)	1.02 [0.14; 7.24]; 0.985
FIGARO-DKD	1,359	n.r. 0 (0)	1,362	n.r. 1 (< 0.1)	n.c. 0.296
Total[b]					0.69 [0.12; 4.14]; 0.685
Confirmed deterioration of CKD to stage 4 or 5[p]					
FIDELIO-DKD	*2,622*	*n.r.* *386 (14.7)*	*2,620*	*n.r.* *445 (17.0)*	*0.86 [0.75; 0.98];* *0.024*
FIGARO-DKD	*1,359*	*n.r.* *104 (7.7)*	*1,362*	*n.r.* *81 (5.9)*	*1.30 [0.97; 1.75]* *0.074*
Total[b]					*0.92 [0.82; 1.05];* *0.215*
Cardiovascular morbidity (composite endpoint[g]) (presented additionally)					
FIDELIO-DKD	*2,622*	*n.r.* *333 (12.7)*	*2,620*	*n.r.* *387 (14.8)*	*0.84 [0.73; 0.97];* *0.020*
FIGARO-DKD	*1,359*	*n.r.* *195 (14.3)*	*1,362*	*n.r.* *228 (16.7)*	*0.84 [0.69; 1.02]* *0.072*
Totalb					0.84 [0.74; 0.94]; 0.003
Cardiovascular death[c]					
FIDELIO-DKD	*2,622*	*n.r.* *115 (4.4)*	*2,620*	*n.r.* *138 (5.3)*	*0.83 [0.65; 1.06];* *0.140*
FIGARO-DKD	*1,359*	*n.r.* *89 (6.5)*	*1,362*	*n.r.* *90 (6.6)*	*0.99 [0.74; 1.32];* *0.932*
Total[b]					0.89 [0.74; 1.08]; 0.234
Non-fatal myocardial infarction[c]					
FIDELIO-DKD	*2,622*	*n.r.* *62 (2.4)*	*2,620*	*n.r.* *78 (3.0)*	*0.78 [0.56; 1.09];* *0.146*
FIGARO-DKD	*1,359*	*n.r.* *48 (3.5)*	*1,362*	*n.r.* *53 (3.9)*	*0.89 [0.60; 1.31]* *0.548*
Total[b]					0.83 [0.64; 1.06]; 0.138

Endpoint category Endpoint Study	Finerenone		Placebo		Finerenone vs placebo
	N	Median time to event in months [95% CI] Patients with event n (%)	N	Median time to event in months [95% CI] Patients with event n (%)	HR [95% CI]; p value[a]
Non-fatal stroke[c]					
FIDELIO-DKD	*2,622*	*n.r.* *82 (3.1)*	*2,620*	*n.r.* *76 (2.9)*	*1.06 [0.78; 1.45]; 0.700*
FIGARO-DKD	*1,359*	*n.r.* *32 (2.4)*	*1,362*	*n.r.* *46 (3.4)*	*0.70 [0.44; 1.10] 0.116*
Total[b]					0.92 [0.71; 1.19]; 0.531
Severe heart failure events (operationalised as hospitalisation due to heart failure)[c]					
FIDELIO-DKD	*2,622*	*n.r.* *130 (5.0)*	*2,620*	*n.r.* *149 (5.7)*	*0.87 [0.69; 1.10]; 0.242*
FIGARO-DKD	*1,359*	*n.r.* *58 (4.3)*	*1,362*	*n.r.* *72 (5.3)*	*0.79 [0.56; 1.12] 0.187*
Total[b]					0.84 [0.69; 1.02]; 0.085
Serious cardiovascular events (presented additionally)[g]					
FIDELIO-DKD	*2,622*	*n.d.*[h]	*2,620*	*n.d.*[h]	*n.d.*
FIGARO-DKD	*1,359*	*n.d.*[h]	*1,362*	*n.d.*[h]	*n.d.*
Total[d]					*0.90 [0.81; 0.99]; 0.028*
Total hospitalisation					
FIDELIO-DKD	*2,622*	*38.9 [36.5; 41.1]* *1176 (44.9)*	*2,620*	*34.9 [32.7; 37.9]* *1227 (46.8)*	*0.95 [0.87; 1.03]; 0.184*
FIGARO-DKD	*1,359*	*43.2 [39.4; 49.1]* *670 (49.3)*	*1,362*	*41.2 [37.5; 45.7]* *687 (50.4)*	*0.97 [0.87; 1.07] 0.521*
Total[b]					*0.95 [0.89; 1.01]; 0.116*

Study Endpoint category Endpoint	Finerenone			Placebo			Finerenone vs placebo
	N[i]	Values at start of study MV (SD)	Mean change in the course of the study MV[j] [95% CI]	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	MD [95% CI]; p value[j]
Health status (EQ-5D VAS)[k]							
FIDELIO-DKD	2,386	73.58 (16.77)	–[l]	2,366	72.94 (16.80)	–[l]	–[l]
FIGARO-DKD	1,245	73.78 (15.96)	-0.58 [-1.42; 0.26]	1,234	72.92 (17.07)	-0.42 [-1.29; 0.46]	-0.16 [-1.18; 0.86]; 0.758
Total							-

Health-related quality of life

Study Endpoint category Endpoint	Finerenone			Placebo			Finerenone vs placebo
	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	MD [95% CI]; p value[j]
KDQOL-36[m]							
PCS							
FIDELIO-DKD	2,360	42.04 (10.09)	-0.81 [-1.26; -0.35]	2,333	42.09 (9.99)	-1.29 [-1.75; -0.83]	0.49 [0.04; 0.93] 0.032
FIGARO-DKD	1,237	41.35 (10.22)	-1.30 [-1.79; -0.80]	1,223	41.60 (10.30)	-1.39 [-1.89; -0.90]	0.10 [-0.49; 0.68]; 0.748
Total[n]							0.38 [0.04; 0.72]; 0.030 SMD: 0.04 [0.00; 0.09]
MCS							
FIDELIO-DKD	2,360	51.30 (9.66)	-1.14 [-1.64; -0.64]	2,333	51.20 (9.70)	-1.03 [-1.52; -0.53]	-0.11 [-0.59; 0.37] 0.650
FIGARO-DKD	1,237	52.18 (9.39)	-0.98 [-1.51; -0.45]	1,223	51.83 (9.59)	-1.50 [-2.03; -0.98]	0.53 [-0.10; 1.15]; 0.100
Total[n]							0.02 [-0.34; 0.39]; 0.894
Disease burden of kidney disease							
FIDELIO-DKD	2,381	71.62 (25.77)	0.93 [-0.34; 2.21]	2,361	71.51 (26.46)	0.67 [-0.59; 1.94]	0.26 [-0.96; 1.48] 0.674
FIGARO-DKD	1,247	77.96 (24.02)	-0.68 [-1.92; 0.56]	1,236	77.20 (24.07)	-0.30 [-1.52; 0.91]	-0.37 [-1.81; 1.07]; 0.613
Total[n]							0.08 [−0.83, 0.99]; 0.863

Study Endpoint category Endpoint	Finerenone			Placebo			Finerenone vs placebo
	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	MD [95% CI]; p value[j]
Symptoms and problems of kidney disease							
FIDELIO-DKD	2,383	82.69 (14.54)	-2.15 [-2.82; -1.49]	2,366	82.58 (14.56)	-1.93 [-2.59; -1.26]	-0.23 [-0.87; 0.41] 0.485
FIGARO-DKD	1,248	82.88 (14.36)	-1.54 [-2.20; -0.88]	1,238	83.24 (13.95)	-1.68 [-2.36; -1.00]	0.14 [-0.65; 0.93]; 0.722
Total[n]							-0.18 [-0.67; 0.30]; 0.454
Effects of kidney disease on daily life							
FIDELIO-DKD	2,375	85.78 (15.94)	-0.40 [-1.17; 0.38]	2,358	85.89 (15.60)	-1.04 [-1.83; -0.24]	0.64 [-0.13; 1.41] 0.102
FIGARO-DKD	1,246	87.79 (15.15)	-0.92 [-1.69; -0.15]	1,236	87.48 (14.87)	-0.74 [-1.49; 0.00]	-0.18 [-1.07; 0.71]; 0.694
Total[n]							0.29 [−0.29; 0.87]; 0.331[o]

a. HR [95% CI] for the individual studies from the Cox regression model, stratified by region, eGFR category at the time of screening, and for the FIDELIO-DKD study additionally by UACR at the time of screening or for the FIGARO-DKD study additionally by cardiovascular history; p value: Log-rank test stratified by the same factors

b. Calculation from IPD meta-analysis with study factor as fixed effect (for model, see footnote "a"); stratified by region, eGFR category at time of screening, UACR at time of screening and cardiovascular history

c. The presentation of the individual components does not include the qualifying events, but all events that occurred during the study.

d. Renal failure was defined as the occurrence of ESRD or an eGFR < 15 ml/min/1.73 m², confirmed by a 2nd measurement ≥ 4 weeks after the 1st measurement.

e. An ESRD was defined according to Module 4 A as:

- Kidney transplant
- Peritoneal or haemodialysis required for at least 30 days and for which it is not apparent that treatment can be stopped after 90 days.
- Acute kidney damage leading to dialysis or death and occurring during dialysis treatment
- Renal replacement therapy indicated for symptomatic uraemia (eGFR of < 15 ml/min/1.73m2 for at least 30 days) or asymptomatic uraemia (eGFR of < 8 ml/min/1.73m2) but not available or accessible, rejected or considered futile; ESRD is then diagnosed even without initiation of renal replacement therapy.

f. A death was classified as renal if the patient dies and has not received clinically indicated renal replacement therapy and there is no other probable cause of death.

g. Composite endpoint consisting of hospitalisation due to heart failure, other cardiovascular hospitalisation (unstable angina pectoris, arrhythmias, peripheral artery occlusive disease) or adjudicated cardiovascular event associated with hospitalisation (cardiovascular death, new onset of atrial fibrillation or flutter, non-fatal myocardial infarction, non-fatal stroke, transient ischaemic attack)

h. In the IPD meta-analysis, 780 (19.6%) patients in the intervention arm and 849 (21.3%) patients in the comparator arm had an event.

i. Number of patients who were taken into account in the evaluation for calculating the effect estimate; the values at start of study can be based on other patient numbers.

j. Changes and mean difference of the individual studies: MMRM with the covariates treatment group, region, eGFR at the time of screening, time, interaction between treatment and time, baseline value and interaction between baseline value and time, and for the FIDELIO-DKD study, additionally the covariate UACR at the time of screening or for the FIGARO-DKD study, additionally the covariate history of cardiovascular disease

Study Endpoint category Endpoint	Finerenone			Placebo			Finerenone vs placebo
	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	N[i]	Values at start of study MV (SD)	Mean change in the course of study MV[j] [95% CI]	MD [95% CI]; p value[j]
k. Higher (increasing) values mean better symptomatology; positive effects (intervention minus control) mean an advantage for the intervention (scale range 0 to 100). l. According to the pharmaceutical company, no results are available due to convergence problems. m. Higher (increasing) values mean better symptomatology/ health-related quality of life; positive effects (intervention minus control) mean an advantage for the intervention (scale range: PCS 13 to 69 points; MCS 10 to 70 points; kidney disease burden, symptoms and problems of kidney disease, and impact of kidney disease on daily life each 0 to 100 points). n. Calculation from IPD meta-analysis: MMRM with covariates study, treatment group, region, eGFR at time of screening, UACR at time of screening, history of cardiovascular disease, time, interaction between treatment and time, baseline value and interaction between baseline value and time. o. Own calculation from aggregated data. Results from IPD meta-analysis are not available. p. Decrease in eGFR by ≥ 25% to < 30 ml/min/1.73 m^2 or to < 15 ml/min/1.73m^2 compared to baseline, which had to be confirmed in a 2nd measurement, ≥ 4 weeks after the 1st measurement							
Abbreviations used: eGFR: estimated glomular filtration rate; ESRD: end-stage renal disease; HR: hazard ratio; IPD: individual patient data; KDQOL: Kidney Disease Quality of Life; CI: confidence interval; MCS: mental component summary score; MD: mean difference; MMRM: mixed model for repeated measures; MV: mean value; n: number of patients with (at least 1) event; N: Number of patients evaluated; n.c.: not calculable; n.r. = not reached; PCS: physical component summary score; RCT: randomised controlled trial; SD: standard deviation; SMD: standardised mean difference; UACR: urine albumin-creatinine ratio; VAS: visual analogue scale							

Side effects

No suitable data available.

2. Number of patients or demarcation of patient groups eligible for treatment

Adults with chronic kidney disease (stages 3 and 4 with albuminuria) associated with type 2 diabetes

approx. 304,500 – 322,500 patients

3. Requirements for a quality-assured application

The requirements in the product information are to be taken into account. The European Medicines Agency (EMA) provides the contents of the product information (summary of product characteristics, SmPC) for Kerendia (active ingredient: finerenone) at the following publicly accessible link (last access: 5 July 2023):

https://www.ema.europa.eu/en/documents/product-information/kerendia-epar-product-information_en.pdf

No patients with symptomatic chronic heart failure with reduced left ventricular ejection fraction (HFrEF; NYHA stages II to IV) were studied.

4. Treatment costs

Annual treatment costs:

Adults with chronic kidney disease (stages 3 and 4 with albuminuria) associated with type 2 diabetes

Designation of the therapy	Annual treatment costs/ patient
Medicinal product to be assessed:	
Finerenone	€ 1,195.71
+ optimised standard therapy	Different from patient to patient
Appropriate comparator therapy:	
Optimised standard therapy	Different from patient to patient

Costs after deduction of statutory rebates (LAUER-TAXE®) as last revised: 1 August 2023

Costs for additionally required SHI services: not applicable

5. Medicinal products with new active ingredients according to Section 35a, paragraph 3, sentence 4 SGB V that can be used in a combination therapy with the assessed medicinal product

In the context of the designation of medicinal products with new active ingredients pursuant to Section 35a, paragraph 3, sentence 4 SGB V, the following findings are made:

Adults with chronic kidney disease (stages 3 and 4 with albuminuria) associated with type 2 diabetes

No medicinal product with new active ingredients that can be used in a combination therapy that fulfils the requirements of Section 35a, paragraph 3, sentence 4 SGB V.

The designation of combinations exclusively serves the implementation of the combination discount according to Section 130e SGB V between health insurance funds and pharmaceutical companies. The findings made neither restrict the scope of treatment required to fulfil the medical treatment mandate, nor do they make statements about expediency or economic feasibility.