Prescribing pearls: Finerenone for managing CKD in type 2 diabetes

What is finerenone?

Finerenone (Kerendia®) is a non-steroidal, selective mineralocorticoid receptor antagonist (MRA) used for the treatment of **chronic kidney disease (CKD)** in adults with **type 2 diabetes**.

Unlike traditional steroidal MRAs, such as spironolactone and eplerenone, finerenone has a more targeted effect and is thus associated with fewer endocrine-related side effects.[1,2]

Mechanism of action

Finerenone blocks mineralocorticoid receptors in the kidney, heart and vascular system. This action reduces inflammatory and fibrotic processes, improving outcomes in people with CKD and type 2 diabetes by reducing proteinuria and slowing CKD progression. This effect also provides cardiovascular protection, as shown in clinical studies including FIDELIO-DKD and FIGARO-DKD.[1,3]

Finerenone selectively blocks mineralocorticoid receptors in the kidney, heart and vascular system. This has the following effects:

- Reduces inflammatory and fibrotic processes.
- Decreases albuminuria.
- Slows CKD progression.
- Provides cardiovascular protection.

Finerenone's distinctive non-steroidal structure gives it higher selectivity for mineralocorticoid receptors over androgen and progesterone receptors, thus reducing the risk of endocrine-related adverse effects such as gynaecomastia.[4]

Licensed indication[5]

In the UK, finerenone is indicated for the treatment of CKD (stage 3 and 4 with albuminuria) associated with type 2 diabetes in adults.

Positioning in guidelines

NICE guidance (TA877)[2]

NICE recommends finerenone as an option for treating stage 3 and 4 chronic kidney disease associated with type 2 diabetes in adults.

It is recommended only if:

- Albumin:creatinine ratio is persistently ≥3 mg/mmol (30 mg/g), ***and:***
- The person is on optimised standard of care, including (if suitable) the highest tolerated doses of:
  - An ACE inhibitor or ARB.
  - An SGLT2 inhibitor.
- eGFR is ≥25 mL/min/1.73 m².

Other guidelines

The **KDIGO guideline**[6] and **ADA Standards of Care**[7] also advocate for the use of finerenone in people with type 2 diabetes, an eGFR ≥25 mL/min/1.73 m², normal serum potassium concentration and albuminuria despite the maximum tolerated dose of ACEi/ARB.

Principal effects

Finerenone has been shown to reduce the risk of renal and cardiovascular outcomes in people with type 2 diabetes and CKD, as shown in *Table 1*.

Table 1. Key results of finerenone outcome trials.

Trial name	Study population	Key outcomes
FIDELIO-DKD[1]	5734 adults with type 2 diabetes and CKD eGFR 25–75 mL/min/1.73 m² uACR 30–5000 mg/g (~3–565 mg/mmol)	↓18% primary composite kidney outcome (kidney failure, sustained ≥40% decrease in eGFR, or renal death)
FIGARO-DKD[3]	7437 adults with type 2 diabetes and CKD eGFR 25–90 mL/min/1.73 m² uACR 30–5000 mg/g (~3–565 mg/mmol)	↓13% primary composite CV outcome (CV death, non-fatal MI, non-fatal stroke, HHF) ↓29% HHF ↓36% composite kidney outcome in patients with uACR ≥300 mg/g (~34 mg/mmol)
FIDELITY[8]	13 171 participants (pooled analysis of the previous two trials)	↓14% composite CV outcome across full spectrum of CKD ↓23% HHF ↓23% composite kidney outcome (≥57% eGFR decline, kidney failure or renal death)

CKD=chronic kidney disease; CV=cardiovascular; eGFR=estimated glomerular filtration rate; HHF=hospitalisation for heart failure; MI=myocardial infarction; uACR=urinary albumin:creatinine ratio.

Other effects

- Weight: Finerenone has a neutral effect on weight.
- Blood pressure: Modest reduction in systolic blood pressure (2–3 mmHg).

Contraindications

Hypersensitivity to lactose

- Do not prescribe in people with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption.

Interactions with CYP3A4

- Do not prescribe if taking **strong inhibitors** of CYP3A4 (e.g. itraconazole, ketoconazole, ritonavir, nelfinavir, cobicistat, clarithromycin, telithromycin, nefazodone).
- Do not prescribe if taking **strong inducers** of CYP3A4 (e.g. carbamazepine, phenytoin, phenobarbital, St John's Wort.
- Grapefruit or grapefruit juice should not be consumed during finerenone treatment.

Addison's disease

- Do not prescribe in patients with Addison's disease (risk of hyperkalaemia).

Severe CKD

- Avoid initiation if eGFR <25 mL/min/1.73 m².
- Discontinue if eGFR is persistently <15 mL/min/1.73 m².

Hyperkalaemia

- Do not start if serum potassium is ≥5.0 mmol/L.
- Finerenone should not be given with:
  - Potassium-sparing diuretics (e.g. amiloride, triamterene).
  - Other MRAs (e.g. eplerenone, esaxerenone, spironolactone, canrenone).

Hepatic impairment

- Severe hepatic impairment: Do not initiate (lack of data).

Pregnancy and breastfeeding

- Women of childbearing potential should use effective contraception during treatment.
- Avoid in pregnancy unless clinically warranted (no data on use in pregnant women; animal studies show reproductive toxicity).
- Avoid breastfeeding whilst taking finerenone (unknown whether finerenone or its metabolites are excreted in human breast milk; evidence of excretion in animal milk and adverse reactions in exposed offspring).

Cautions

Hyperkalaemia

- Patients with a low eGFR (particularly <45 mL/min/1.73 m²)[9] are at higher risk of hyperkalaemia and require frequent monitoring (see **Initiating and monitoring** section).
- Use with caution and monitor serum potassium when taken concomitantly with:
  - Potassium supplements.
  - Trimethoprim or trimethoprim/sulfamethoxazole (temporary discontinuation of finerenone may be necessary).
- If serum potassium rises above 5.5 mmol/L, finerenone treatment must be withheld (see **Initiating and monitoring** section).
- Local guidelines for the management of hyperkalaemia have to be followed.
- Once serum potassium falls to ≤5.0 mmol/L, finerenone treatment can be restarted at 10 mg once daily. Thereafter, serum potassium should be remeasured periodically and as needed based on patient characteristics and serum potassium levels.

Hepatic impairment

- Moderate hepatic impairment: No initial dose adjustment required. Additional potassium monitoring should be considered according to patient characteristics, due to an increase in finerenone exposure.
- Mild hepatic impairment: No initial dose adjustment required.

Heart failure

- Patients with NYHA class II–IV heart failure with reduced ejection fraction were excluded from the Phase III clinical studies.

Other antihypertensives

- Hypotension risk increases with concomitant use of multiple other antihypertensives; blood pressure monitoring is recommended.

Adverse effects

Adverse effect	Frequency	Management
Hyperkalaemia	Very common (≥10%)	Monitor potassium levels Dietary potassium restriction if necessary Withhold finerenone if potassium >5.5 mmol/L and repeat potassium after 4 weeks. Restart if ≤5.0 mmol/L
Hypotension	Common (1–10%)	Monitor blood pressure Adjust doses or rationalise antihypertensives as necessary
Hyponatraemia	Common (1–10%)	Monitor sodium levels and rule out alternative causes
Hyperuricaemia	Common (1–10%)	Consider baseline urate level and withhold in cases of gout
Pruritus	Common (1–10%)	Manage symptomatically
Reduced GFR	Common (1–10%)	Monitor eGFR 4 weeks after initiation or change in dose
Haemoglobin decreased	Uncommon (0.1–1.0%)	Monitor haemoglobin and seek specialist advice if necessary

Initiating and monitoring

Confirm **eGFR** and **serum potassium** before starting

eGFR ≥60: Start with 20 mg once daily

eGFR 25–59: Start with 10 mg once daily

eGFR <25 mL/min/1.73 m²: **DO NOT INITIATE**

Potassium ≥5.0 mmol/L: **DO NOT INITIATE**

Reassess potassium and **eGFR** after **4 weeks**

Potassium level	Action
≤4.8 mmol/L	Increase to 20 mg daily
>4.8 to 5.5 mmol/L	Maintain current dose
>5.5 mmol/L	Interrupt therapy until <5.0 mmol/L, then consider restarting at 10 mg daily

Ongoing monitoring

Potassium

Monitor 4 weeks after initiation, restart or increase in dose of finerenone. Thereafter, monitor periodically and as needed based on patient characteristics and potassium levels

eGFR

Monitor 4 weeks after initiation, restart or increase in dose of finerenone. Thereafter, monitor every 3–6 months to assess CKD progression. **Discontinue if eGFR is persistently <15**

Prescribing tips

- The recommended target dose and maximum recommended dose of finerenone is 20 mg daily.
- Tablets may be taken with a glass of water and with or without food.
- Grapefruit or grapefruit juice should be avoided.
- Tablets may be crushed and mixed with water or soft foods, such as apple sauce, directly before oral use.
- **Dietary advice:** Counsel patients about moderating potassium intake – provide list of high-potassium foods to limit.
- Morning dosing may be preferred, to avoid nocturia.
- **NSAID caution:** Advise patients to avoid or minimise use of NSAIDs, which can increase potassium levels.
- **Medication review:** Evaluate all medications for potential potassium-raising effects.
- **Sick day rules:** Consider temporary withholding during severe illness, dehydration or procedures with contrast media.
- **Transition from steroidal MRAs:** No washout period is required when switching from spironolactone or eplerenone to finerenone.
- **Missed doses:**
  - A missed dose should be taken as soon as the patient notices, but only on the same day.
  - The patient should not take two doses to make up for a missed dose.

Key summary table

Hyperkalaemia risk	Commonly causes hyperkalaemia
Blood pressure effects	Small reductions (2–3 mmHg)
Renal benefits	Reduces renal events and slows renal progression
CV safety/benefit	Reduces cardiovascular events
Renal concerns	Initiate if eGFR ≥25 mL/min/1.73 m² Discontinue if eGFR <15 mL/min/1.73 m²
Hepatic concerns	Avoid in severe hepatic impairment
Use in elderly	No dose adjustment needed; monitor potassium

References

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