Finerenone reduces new diabetes and improves heart failure outcomes in the FINEARTS-HF trial

A 24% reduction in new/incident diabetes was identified in people treated with finerenone versus placebo in this pre-planned analysis involving 3222 participants without diabetes in the FINEARTS-HF trial of finerenone in people with heart failure and mildly reduced or preserved ejection fraction. New-onset diabetes in this study was associated with a higher risk of the composite primary outcome of cardiovascular death or new or recurrent worsening heart failure events, as well as each of its components, and all-cause death. People with heart failure are at higher risk of developing diabetes than the general population, as was seen in this study, and heart failure outcomes are worse in those who develop diabetes. The authors, therefore, highlight that reducing the risk of developing type 2 diabetes represents a meaningful additional clinical benefit of finerenone. They remind readers that these findings should not be extrapolated to other types of heart failure and that residual confounding cannot be excluded as a cause for the beneficial outcomes in those who do not develop diabetes. Finerenone is currently licensed in the UK for the treatment of CKD stages 3–4 in people with type 2 diabetes and albuminuria; it is not currently licensed for heart failure.

Pam Brown
GP in Swansea

People with heart failure (HF) are at greater risk of developing diabetes than those without the condition (Pop-Busui et al, 2022). The reason for this is currently unclear, although activation of the renin–angiotensin–aldosterone system may contribute and angiotensin receptor blockers (ARBs) have been shown to reduce this increased risk in people with HF, hypertension and prediabetes. Those with diabetes and HF have worse symptoms and quality of life, higher rates of hospitalisation and reduced survival, as well as a more rapid decrease in renal function, compared to those with HF but not diabetes.

Previously, there has been conflicting data on the benefits or harms of the steroidal mineralocorticoid receptor antagonists spironolactone (appeared to worsen HF outcomes) and eplerenone (no beneficial effects on HF outcomes). Finerenone is a non-steroidal mineralocorticoid receptor antagonist which has previously demonstrated beneficial effects on cardiovascular outcomes, including hospitalisation for HF, in people with diabetic kidney disease (see previous *Diabetes Distilled*). It was therefore felt appropriate to explore finerenone's effects in a population with HF.

The study

The Finerenone trial to Investigate Efficacy and Safety Superior to Placebo in Patients with Heart Failure (FINEARTS-HF) study was a randomised, double-blind, placebo-controlled trial involving 6001 people aged 40 years or older, with symptomatic HF (New York Heart Association functional class 2–4), elevated natriuretic peptide levels and an ejection fraction of at least 40% (i.e. HF with moderately reduced or preserved ejection fraction [HFmrEF or HFpEF]). The original FINEARTS-HF study demonstrated a 16% reduction in the primary outcome of total (i.e. new or recurring) HF events (defined as a first or recurrent unplanned hospitalisation or urgent visit for HF) or cardiovascular death in those treated with finerenone versus placebo, and an 18% reduction in worsening HF events (Solomon et al, 2024).

In the current, pre-planned study, Butt and colleagues explored rates of incident/new

Citation: Brown P (2025) Diabetes Distilled: Finerenone reduces new diabetes and improves heart failure outcomes in the FINEARTS-HF trial. *Diabetes & Primary Care* **27**: 21–3

Read more

Diabetes Distilled: FIDELIO, FIGARO, MAGNIFICO!

Finerenone is effective for cardiorenal protection across a wide range of CKD stages in people with type 2 diabetes.

Diabetes & Primary Care **26**: 167

Click here to access

Table 1. Diabetes status at study initiation.

Diabetes status and HbA_{1c} definition	Number of participants
Normoglycaemia (<39 mmol/mol [<5.7%])	1243 (20.7%)
Prediabetes (39–47 mmol/mol [5.7–6.4%])	1979 (33.2%)
Diabetes (≥48 mmol/mol [≥6.5%])	2779 (46.1%)

diagnosis of type 2 diabetes amongst those in the original study who did not have diabetes at baseline (*n*=3222). Of 6001 people randomised into the original trial, at baseline 21% had normoglycaemia as per US criteria, 33% had prediabetes and 46% had diabetes (*Table 1*).

New-onset diabetes was defined as an HbA_{1c} ≥6.5% on two consecutive visits, or new initiation of glucose-lowering drug therapy other than an SGLT2 inhibitor.

The results

After a median follow-up of 30.3 months, in the finerenone group, 115 participants (7.2%) developed diabetes (3.0 new cases per 100 person-years), compared with 147 (9.1%) in the placebo group (3.9 events per 100 person-years). These rates are higher than those seen in the general population, supporting previous findings that people with HF are at greater risk of developing type 2 diabetes. Treatment with finerenone reduced the hazard ratio for developing new diabetes by 24%.

These findings persisted in various sensitivity analyses, such as including or excluding people treated with SGLT2 inhibitors (including dapagliflozin, which has previously been proposed to reduce the risk of new type 2 diabetes in people with HF; Inzucchi et al, 2021), and were consistent across subgroups of participants. Those who developed diabetes were more likely to be younger, to have had prediabetes at baseline, and to have had higher BMI, urine ACR and HbA_{1c} levels.

Despite the decreased rate of new-onset diabetes with finerenone, there was no significant difference in HbA_{1c} levels between the treatment arms overall, and the authors postulate that this was due to variations in individual HbA_{1c} values. The authors highlight that the mechanisms behind the reduced levels of new diabetes are not yet clear; however, higher plasma aldosterone levels are associated with greater insulin resistance and may contribute, as may hypokalaemia from diuretic use, which is also associated with insulin resistance. Finerenone does not directly reduce weight or HbA_{1c}.

In an accompanying comment, Gerstein and Mohammedi (2025) describe the benefits of avoiding a new diagnosis of type 2 diabetes in this study, highlighting the halving of risk of the primary outcome (cardiovascular death and total worsening heart failure events) and the one-third reduction in all-cause death compared with those who did develop type 2 diabetes.

The authors of the original paper warn that these results should not be generalised to people without HFmrEF or HFpEF, or HF overall, or to people of non-white ethnicities (over 75% of participants were white). Additionally, residual confounding due to people starting glucose-lowering drugs which also have HF benefits during the study cannot be excluded.

Implications for practice

The last few years have seen exciting new evidence-based management options for people with HFmrEF and HFpEF. Within our practice, we will all have people with these conditions, with or without type 2 diabetes, who were diagnosed prior to recent studies demonstrating benefits of these newer drugs on outcomes.

Although the licences for dapagliflozin and empagliflozin have been amended to include all those with symptomatic chronic HF irrespective of ejection fraction, finerenone is currently not licensed to treat HF. Therefore, referral to specialist HF clinics for consideration of initiation and titration of finerenone should be considered.

This study demonstrates that, for those with HFmrEF or HFpEF who do not have type 2 diabetes, finerenone treatment may have the additional benefit of reducing their risk of developing new diabetes and, hence, its associated worse outcomes.

Practice audits may identify people with type 2 diabetes and stage 3–4 chronic kidney disease with an eGFR of ≥25 mL/min/1.73 m^2 and albuminuria ≥3 mg/mmol who are already on the maximum tolerated dose of ACE inhibitor or ARB, plus or minus an SGLT2 inhibitor (unless these drug classes are contraindicated), who will benefit from finerenone for renal protection as per its licence and the NICE (2023) TA877 Technology Appraisal guidance.

For those already on finerenone for CKD, careful monitoring of serum potassium levels is required at regular intervals as per the recommendations in the Summary of Product Characteristics/BNF. Serum potassium and eGFR should be measured prior to initiation:

- If potassium is ≤4.8 mmol/L, finerenone can be initiated:
  - A dose of 20 mg daily is recommended if eGFR is ≥60 mL/min/1.73 m^2.
  - A dose of 10 mg daily is recommended if eGFR is 25 to <60 mL/min/1.73 m^2.
- Measure eGFR and potassium again 4 weeks after initiation/re-start or an increase in dose.
- Finerenone should be withheld and local guidance sought if potassium levels exceed 5.5 mmol/L during treatment.

It is important for us to identify and ensure optimal drug management of people with all types of HF, as well as those with CKD. Identification may be possible by proactively using searches, but many people with HF will not have details of the ejection fraction in their summary entries, necessitating searches of specialist letters and echo reports. In a busy clinic, identifying people who may benefit from additional HF management may be difficult. Going forward, we should code letters from HF clinics accurately and review specialist letters opportunistically (including adding or amending codes) when we see people in our clinics who have HF. This will facilitate consideration for additional treatment with current or new therapies, or referral where appropriate. ■

Finerenone and new-onset diabetes in heart failure: A prespecified analysis of the FINEARTS-HF trial

Click here to read the article in full (open access)

Butt JH, Jhund PS, Henderson AD et al; FINEARTS-HF committees and investigators (2025) Finerenone and new-onset diabetes in heart failure: A prespecified analysis of the FINEARTS-HF trial. *Lancet Diabetes Endocrinol* **13**: 107–18 https://doi.org/10.1016/S2213-8587(24)00309-7

Gerstein HC, Mohammedi K (2025) Halving heart failure outcomes by finerenone-mediated type 2 diabetes prevention. Lancet *Diabetes Endocrinol* **13**: 78–9 https://doi.org/10.1016/S2213-8587(24)00317-6

Inzucchi SE, Docherty KF, Køber L et al; DAPA-HF investigators and committees (2021) Dapagliflozin and the incidence of type 2 diabetes in patients with heart failure and reduced ejection fraction: An exploratory analysis from DAPA-HF. *Diabetes Care* **44**: 586–94

NICE (2023) *Finerenone for treating chronic kidney disease in type 2 diabetes* [TA877]. Available at: https://www.nice.org.uk/guidance/ta877

Pop-Busui R, Januzzi JL, Bruemmer D et al (2022) Heart failure: An underappreciated complication of diabetes. A consensus report of the American Diabetes Association. *Diabetes Care* **45**: 1670–90

Solomon SD, McMurray JJV, Vaduganathan M et al; FINEARTS-HF committees and investigators (2024) Finerenone in heart failure with mildly reduced or preserved ejection fraction. *N Engl J Med* **391**: 1475–85

Read more

Diabetes Distilled: Heart failure consensus highlights primary care role in optimising management

Evidence-based guidance on diagnosis and management of heart failure in diabetes or prediabetes.

Diabetes & Primary Care **24**: 125–7

Click here to access