# Effects of Finerenone in Renin-Angiotensin System Inhibitor-Naïve Participants in the FINEARTS-HF Trial

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## INTRODUCTION

- Renin-angiotensin system (RAS) inhibitors are considered foundational therapy for patients with several cardio-kidney-metabolic conditions.
- Finerenone, a non-steroidal mineralocorticoid receptor antagonist, was initially tested among patients with type 2 diabetes and CKD who were on maximally tolerated doses of RAS inhibitors.[1,2]
- Whether the effects of finerenone differ by background use of RAS inhibitors among patients with heart failure (HF) is not clear.

## AIMS

- Explore for differential treatment effects of finerenone according to baseline use of RAS inhibitors among participants of the Finerenone Trial to Investigate Efficacy and Safety Superior to Placebo in Patients with Heart Failure (FINEARTS-HF)[3]; a randomized trial of finerenone vs. placebo among patients with HF with mildly reduced or preserved ejection fraction.

## METHODS

- We performed a prespecified analysis of the FINEARTS-HF trial (N=6,001), using semi-parametric models, stratified by left ventricular ejection fraction (<60, ≥60%) and region.
- RASi inhibitors included angiotensin-converting enzyme inhibitors (ACEi), angiotensin receptor blockers (ARBs), and angiotensin receptor-neprilysin inhibitors (ARNI) at baseline.
- The primary outcome was the composite of cardiovascular death and total HF events. We also examined total and first worsening HF events.

## RESULTS

Table 1. Baseline characteristics according to baseline use of RASi.

| | No RASi | RASi |
|---|---|---|
| | n=1,242 | n=4,759 |
| Age, years | 74 ± 10 | 71 ± 10 |
| Female, n(%) | 623 (50.2%) | 2109 (44.3%) |
| | | |
| Race, n(%) | | |
| Asian | 277 (22.3%) | 719 (15.1%) |
| Black | 23 (1.9 %) | 65 (1.4 %) |
| Other | 20 (1.6 %) | 162 (3.4 %) |
| White | 922 (74.2%) | 3813 (80.1%) |
| | | |
| Geographic Region, n(%) | | |
| Asia | 270 (21.7%) | 713 (15.0%) |
| Eastern Europe | 385 (31.0%) | 2265 (47.6%) |
| Latin America | 92 (7.4 %) | 549 (11.5%) |
| North America | 172 (13.8%) | 299 (6.3 %) |
| Western Europe, Oceania and Others | 323 (26.0%) | 933 (19.6%) |
| | | |
| Any prior hospitalization for HF, n(%) | 809 (65.1%) | 2810 (59.0%) |
| Systolic blood pressure, mmHg | 127 ± 16 | 130 ± 15 |
| Body-mass index, kg/m2 | 29.2 ± 6.3 | 30.1 ± 6.1 |
| Serum creatinine, mg/dL | 1.2 ± 0.4 | 1.1 ± 0.4 |
| eGFR, mL/min/1.73 m2 | 59 ± 20 | 63 ± 20 |
| Urine albumin:creatinine ratio, mg/g | 19 [8, 77] | 18 [7, 65] |
| Serum potassium, mmol/L | 4.3 ± 0.5 | 4.4 ± 0.5 |
| Left ventricular ejection fraction, (%) | 54 ± 8 | 52 ± 8 |
| NT-proBNP, pg/mL | 1294 [591 , 2427] | 980 [424, 1833] |
| | | |
| History of hypertension, n(%) | 951 (76.6%) | 4374 (91.9%) |
| History of Diabetes, n(%) | 450 (36.2%) | 1989 (41.8%) |
| History of stroke, n(%) | 164 (13.2%) | 544 (11.4%) |
| History of myocardial infarction, n(%) | 243 (19.6%) | 1298 (27.3%) |
| | | |
| Beta-blocker, n(%) | 1008 (81.2%) | 4087 (85.9%) |
| Loop diuretic, n(%) | 1141 (91.9%) | 4098 (86.1%) |
| Thiazide diuretic, n(%) | 77 (6.2 %) | 754 (15.8%) |
| SGLT2i, n(%) | 143 (11.5%) | 674 (14.2%) |
| ACE inhibitor, n(%) | - | 2155 (45.3%) |
| ARB, n(%) | - | 2102 (44.2%) |
| ARNI, n(%) | - | 513 (10.8%) |

Figure 1. Treatment effect on CV outcomes according to baseline RASi use.

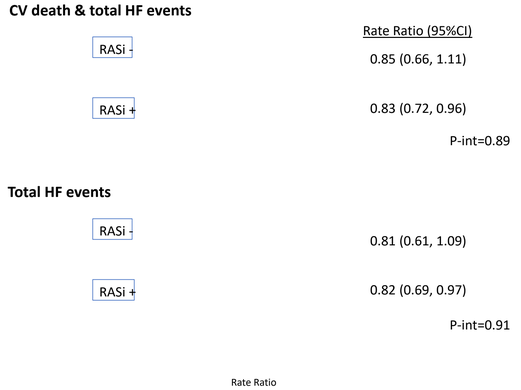


Table 2. Treatment effect on hyperkalemia according to baseline RASi use.

| | No RASi | | RASi | | |
|---|---|---|---|---|---|
| Outcome | Placebo | Finerenone | Placebo | Finerenone | P-int |
| **Hyperkalemia >5.5** | | | | | |
| No. events/No. patients | 36/591 | 64/592 | 163/2298 | 349/2306 | |
| Rate/100 PY (95% CI) | 2.7 (1.8, 3.7) | 4.8 (3.6, 6.1) | 3.0 (2.5, 3.5) | 6.9 (6.1, 7.6) | |
| Hazard Ratio (95%CI) | **1.75 (1.16, 2.65)** | | **2.27 (1.89, 2.74)** | | **0.28** |
| | | | | | |
| **Hyperkalemia >6.0** | | | | | |
| No. events/No. patients | 4/591 | 10/592 | 37/2298 | 76/2306 | |
| Rate/100 PY (95% CI) | 0.3 (0.0, 0.6) | 0.7 (0.3, 1.2) | 0.7 (0.4, 0.9) | 1.4 (1.1, 1.7) | |
| Hazard Ratio (95%CI) | **2.38 (0.74, 7.66)** | | **2.11 (1.43, 3.13)** | | **0.86** |

Fig 2. Kaplan-Meier analyses for first HF event according to randomized treatment and baseline RASi use

## CONCLUSIONS

- Cardiovascular event rates were higher among those not taking (vs. taking) RASi at baseline.
- Finerenone reduced the composite of CV death and total HF events irrespective of baseline RASi use.
- The risk of hyperkalemia with finerenone was similar according to baseline RASi use.
- Baseline RASi use should not influence initiation of finerenone for patients with HFmrEF/HFpEF.

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