Clinical Characteristics and Outcomes in a Cohort of Patients Starting Treatment with Vericiguat in the United States

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Background and purpose

- Vericiguat is a soluble guanylate cyclase stimulator, which has been available in the United States (US) since 2021.
- ESC guidelines recommend vericiguat for patients with chronic HFrEF, NYHA class II–IV, who had a worsening event, despite receiving guideline-directed medical therapy (GDMT), to reduce the risk of cardiovascular mortality or heart failure hospitalization (HFH).
- Limited data are available about the characteristics and outcomes of vericiguat users in real-world clinical practice.

Methods

- Using two large, closed claims data sources from Health Verity in the US, we identified patients with a first ambulatory prescription for vericiguat (the index date) from 20 January 2020 to 30 June 2023.
- For inclusion, patients needed ≥1 year of continuous database enrollment, ≥1 GDMT prescription between 3 months before and 1 month after the first vericiguat prescription, and a baseline period of ≥3 months before the first vericiguat prescription.
- We evaluated patients' clinical characteristics (in the year before the index date) and other HFrEF treatments and comedications (in the 3 months before the index date).
- Outcomes during follow-up (mean 290 days, SD ±158) were all-cause mortality and first HFH (defined as an inpatient claim with a heart failure diagnosis code with a duration of >1 day. The two outcomes were also combined in a composite endpoint (all-cause mortality/first HFH).

Acknowledgement

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Results

- Among 1391 new users of vericiguat (mean age 64.7 years, 67.5% male, 23.9% smokers), 17.6% had undergone a coronary artery bypass graft and 47.1% had received an implantable cardioverter defibrillator.
- HFH before the index date occurred in 27.8% (within 3 months before) and 35.9% (within 6 months before).

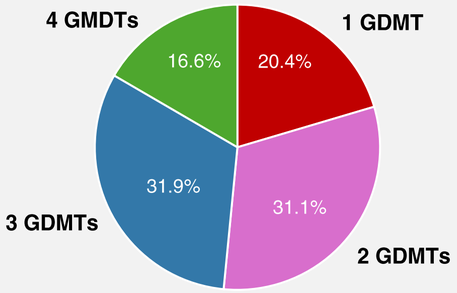

Fig 1. Number of GDMTs among the vericiguat study cohort.

- Most patients received either two or three GDMTs (Fig 1), the most common being beta blockers (80.2%; Fig 2). Oral loop diuretics and statins were other commonly used medications (Fig 3).
- Hypertension and hyperlipidemia were the most common comorbidities (Fig 4).

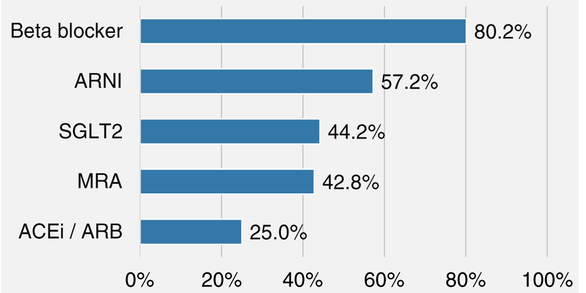

Fig 2. Type of GDMTs among the vericiguat study cohort.

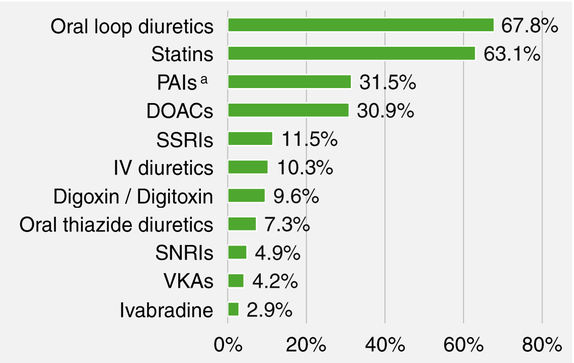

Fig 3. Other medications among the vericiguat study cohort.
[a] Including aspirin. PAI, platelet aggregation inhibitor; SNRI, serotonin-norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor

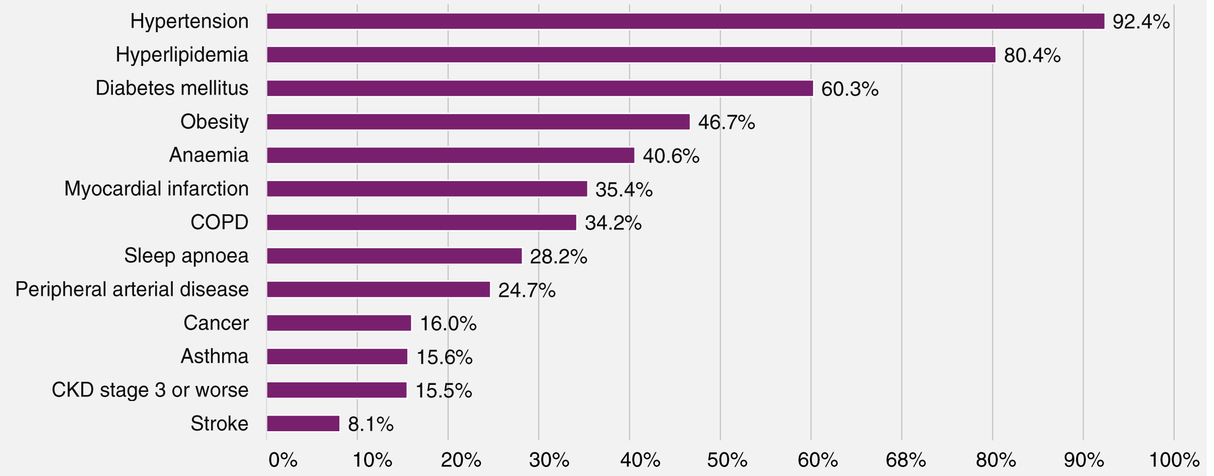

Fig 4. Comorbidities among the vericiguat study cohort.

- During follow-up, 45 patients (3.2%) died; mortality rate of 4.1 per 100 person-years (95% CI: 3.0–5.5), and 382 patients (27.5%) had ≥ 1 HFH (incidence rate of 44.9 per 100 person-years, 95% CI: 40.6–49.7).
- Approximately 29% (403 patients) reached the composite endpoint (all-cause mortality/first HFH); an incidence rate of 47.4 per 100 person-years (95% CI: 42.9–52.2).

Conclusions

- Vericiguat users had a high level of comorbidities.
- Approximately half of the cohort had vericiguat added to existing triple or quadruple GDMT; the other half received only mono or dual GDMT when starting vericiguat. This could indicate intolerance to other GDMTs among these patients and/or vericiguat was added early in the treatment pathway.
- Mortality was low among vericiguat new users, and the combined endpoint was mainly driven by the HFH rate.
- Comparisons with clinical trial data should consider the broader definition of HFH used in this study.

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